SEDIMENT AND SURFACE WATER QUALITY ASSESSMENT
PROPOSED BERTH AND APPROACH CHANNEL
EDGEMOOR, DELAWARE

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I. Introduction

This report is intended to assess the human health and ecological risks associated with the substances of potential environmental concern found in sediments, soil, and surface water that would be dredged or exposed by dredging for a new container port at Edgemoor, Delaware. The report also addresses the potential for reuse of dredged material based on current plans for excavation and dewatering. The sediment sampling, water sampling, and analyses performed on those samples was done in accordance with the "Plan for Additional Pre-Dredging Sediment Sampling and Analyses, Proposed Berth and Approach Channel, Edgemoor, Delaware" (referred to throughout this report as "Plan for Sediment Sampling and Analyses"). The Plan was approved by the State of Delaware Department of Natural Resources and Environmental Control (DNREC) in the Letter of Authorization LA-142/19, issued June 28, 2019. Deviations from the plan are detailed in Section VIII of this report.

An approximately 2,600-foot long pile-supported wharf structure will be constructed along the Delaware River shoreline of the former Chemours Edge Moor Plant. A retaining wall (bulkhead) will be constructed along the landward side of the wharf. The river bottom will be dredged to slope downward from the wall, beneath the wharf, to the shipping berth depth of -45 feet mean lower low water (MLLW), not including advanced maintenance, near the riverward face of the wharf. The -45 MLLW project depth will extend through the ship berthing area (adjacent to the wharf) to the federal navigation channel in the Delaware River. The area between the ship berth and the navigation channel will be the harbor access channel.

The initial dredging is anticipated to require removal of approximately 3.3 million cubic yards of river sediments and underlying soils. The excavated material is planned to be placed in an existing United States' Army Corps of Engineers (USACE) confined disposal facility (CDF) in the State of Delaware called Wilmington Harbor South (WHS) where dewatering and storage of the dredged materials will occur. The effluent from the WHS CDF, consisting of water released from the dredged materials and precipitation, will be discharged to the Delaware River.

While initial dredging of the berth and construction of the port will be performed under the auspices of DSPC, the USACE is expected to perform future maintenance dredging of the access channel in accordance with Section 204(f) of the Water Resources Development Act of 1986. DSPC would remain responsible for maintenance dredging in the ship berthing area adjacent to the wharf. DSPC is working with the USACE to develop the project in a manner that is acceptable to the U.S. Army, as required by Section 204(f). To be acceptable to the U.S. Army, the project must adhere to federal standards, comply with the National Environmental Policy Act (NEPA) and be permissible through federal, State of Delaware and local regulatory programs.

The analytic testing results reported for samples collected during October 2016 as well as those reported for samples collected during July 2019 are discussed in this report in order to evaluate the following human health and ecological risks associated with the quality of:

1. Water during dredging activities and removal of dredge material;
2. Soil exposed by dredging (new river bottom);
3. Dredged material stored in the WHS CDF;
4. Effluent water from the WHS CDF; and
5. Dredged materials for productive reuse.

The sediment and surface water sample data underwent verification and validation of the analytical procedures in order to ensure that the reported results were suitable for the intended use.

II. Site Description

The Edgemoor site referred to throughout this report encompasses the area to be dredged as part of the proposed containerized cargo port and generally does not refer to the former Chemours Edge Moor Facility also known as New Castle County Tax Parcel 0615300006, which currently is owned Diamond State Port Corporation (DSPC). A small portion of the proposed dredge site is located in the Delaware River within the DSPC property. Most of the dredging will occur in subaqueous lands owned by the State of Delaware. The site is bounded on the water-ward side by the federal navigation channel in the Delaware River. It is bounded on the landward side by the remainder of DSPC's tax parcel 0615300006.

The street address of the land owned by DSPC is 4600 Hay Road. In addition to New Castle County tax parcel 0615300006, the DSPC-owned land includes New Castle County tax parcel 0615300003, which is located to the west of Hay Road. In this report, the DSPC-owned land is often referred to as the "Chemours Edge Moor Facility" or the "property" (see Figure 1). The property previously was developed as a titanium dioxide manufacturing facility, the original portion of which reportedly was constructed in the early 1930s. From 1931 until 1996, the titanium dioxide facility was fully operational. Plant operations ceased in 2015 and The Chemours Company decommissioned and removed process and wastewater treatment systems between 2015 and 2017. The Chemours Company completed a facility wide site investigation including a human health risk assessment and facility demolition prior to selling the site to the Diamond State Port Corporation in 2017. The Port has applied to the Division of Waste and Hazardous Substances for a renewal of the Resource Conservation and Recovery Act (RCRA) Corrective Action Permit, which will continue to govern the ongoing post-closure care of the closed surface impoundments at the site. This permit specifies assuring that corrective measures such as exposure limiting ground covers over other solid waste management units (SWMU) remain in place or are replaced where warranted, continues groundwater monitoring, and adopts the contaminated material management plan (CMMP) previously prepared for the site. The CMMP will provide management during future port construction activities.

III. Prior Environmental Assessments of the Chemours Edge Moor Facility

A Phase I Resource Conservation and Recovery Act (RCRA) Facility Investigation (Phase I RFI) was submitted to DNREC in April of 2009 and a Phase II RCRA Facility Investigation (Phase II RFI) was submitted to DNREC in March of 2011 in response to DuPont Corporate Remediation Group submitting a Corrective Action Order to Delaware's DNREC – Solid and Hazardous Waste Management Section (SHWMS). DNREC approved both documents. "Risk Analysis, DuPont Edge Moor Site" was submitted to E.I. DuPont de Nemours and Company Corporate Remediation Group by Parsons during June of 2013. Duffield Associates, Inc. (Duffield) performed a Phase I Environmental Site Assessment (ESA) of the property for DSPC during August of 2016. A summary discussion of these reports is provided in the "Plan for Sediment Sampling and Analyses."

As a result of the Phase I and Phase II RFI, no further action was recommended for Solid Waste Management Units (SWMUs) 8, 15, 17A, 17B (6, 7, 8, I, J, K, & L), 21, 24, 28, and 29 due to analytical results that were non-detect or below baseline screening criteria for the identified substance of potential interest. No further investigation was recommended for SWMUs 1&3, 4, 5, 13A, 13B, 16, 17B (9 & A), 18, 20, 23, 25, and 27, due to the soil investigation being complete and yielding sufficient data to perform a Baseline Risk Assessment and Corrective Measures study. No further investigation was recommended for groundwater.

The surface soil and shallow groundwater compounds of potential concern (COPCs) from the RFIs are identified in Tables A and B below, as well as the average and the maximum reported concentrations of the identified substances.

Table A. RFI - Surface Soil COPCs

Substance	Units	Average	Maximum
Benzo(a)anthracene	µg/kg	341	12,000
Benzo(b)fluoranthene	µg/kg	346	11,000
Benzo(a)pyrene	µg/kg	267	9,100
Dibenz(a,h)anthracene	µg/kg	56.1	1,500
Indeno(1,2,3-cd)pyrene	µg/kg	151	4,500
PCB-126	mg/kg	0.00000700	0.000148

µg/kg = micrograms per kilogram mg/kg = milligrams per kilogram

Table B. RFI - Shallow Interior Groundwater COPCs

Substance	Units	Average	Maximum
Cobalt (dissolved)	µg/L	21.1	168
Cobalt (total)	µg/L	20.7	153
Iron (dissolved)	µg/L	10,500	43,900
Iron (total)	µg/L	17,100	52,700
Manganese (dissolved)	µg/L	1,950	10,200
Manganese (total)	µg/L	914	9,230
Thallium (dissolved)	µg/L	1.20	26.2
Thallium (total)	µg/L	4.40	62.5

µg/L = micrograms per liter

IV. Prior Edgemoor Site Sampling Events in the Delaware River

The US Army Corps of Engineers (USACE) and the Delaware River Basin Commission (DRBC) has sampled sediments at locations close to the Edgemoor site. During October 2016, Duffield sampled soils and sediments recovered from five Test Boring (TB) locations in the area to be dredged (TB-1 through TB-5), as well as one surface water location. An additional five test borings (TB-6 through TB-10) were performed in 2018 for geotechnical purposes, see Figure 2. A summary of the analytical results and a discussion of the previous sampling event by Duffield is available in the “Plan for Sediment Sampling and Analyses.”

As anticipated, the data indicated that removal of the current river bottom sediments would be beneficial to the local ecosystem, based on the removal of potentially harmful organic substances and reductions in the concentration of inorganic substances. The analytic testing results and subsequent risk analysis indicated that the material to be dredged would pose acceptable risks to human health if it was placed in an upland CDF, such as WHS.

V. Site Physical Characteristics

a. Site Geology

The Edgemoor site is located just south of the transition from the Piedmont to Atlantic Coastal Plain physiographic provinces. Delaware Geologic Survey (DGS) Geohydrology of the Wilmington Area, Hydrogeology Map Series, No. 3, Sheet 1 - Basic Geology Coastal maps the non-subaqueous areas of the property as Potomac Formation. More recent DGS mapping indicates a surficial presence of Delaware Bay Group sediments on the upland portions of the site.

Based on the Phase I and Phase II RFIs, the clay unit (Potomac Formation) and inconsistent groundwater indicates to Duffield that discharge of groundwater into the Delaware River from the property likely happens at a rate too slow for human created conditions on the property to have affected the environmental quality of soils and sediments in the area to be dredged based solely on groundwater discharge from the site. For more information regarding the permeability of the sediments and transport of compounds from the former Chemours Edge Moor Facility to the Edgemoor site, see the “Plan for Sediment Sampling and Analyses.”

Duffield performed 10 Standard Penetration Test (SPT) borings, TB-1 through TB-10, within the proposed dredge area to characterize riverbed conditions. Materials of a similar physical character encountered beneath the riverbed were labeled as “stratum.” The current river bottom is deeper than the intertidal zone and wave action can be described as generally consisting of very soft, silty sediment deposits of varying thickness (referred to in this report as ‘Stratum A’). This silt covers a layer primarily consisting of sandy sediments (referred to in this report as ‘Stratum B’), with some interlayered gravel and silt sediments. These sediments were underlain by apparently undisturbed clays and clayey sand typical of the Potomac Formation (referred to in this report as ‘stratum C’).

Photo 1. Typical Stratum B Material on Shore of Delaware River at the Edgemoor Site

Duffield performed a grain size distribution analysis in October of 2016 that concluded that approximately 90% of the material in Stratum A is considered fine-grained materials (silts or clays), approximately 80% of Stratum B is considered coarse sandy material, and stratum C is considered stiff sandy clays with 20-60% silt and clay content. Stratum C is an apparent Potomac Formation as mentioned above. The Geotechnical Data Report contains a Geotechnical Lab Summary in Appendix D. This data report summarizes the results of sieve and hydrometer testing conducted for both the 2016 and 2019 samples from the Edgemoor site. The summary tables also provide Unified Soil Classification System labeling for the sediment. Please refer to the Geotechnical Data Report, dated October 2019, for additional information regarding sieve and hydrometer results. The following table provides a cross reference to strata for samples collected from Standard Penetration Test (SPT) soil borings.

Table C. Test Boring Identification of Strata A and B Encountered by SPT Borings

Test Boring Number	Sample Number	Strata A and B	Visual Description
TB-1	S-2	A	Dark gray SILT, trace fine sand
	S-6	B	Light brown medium SAND, little fine sand, trace silt, trace gravel, trace coarse sand
	S-9	B	Light brown medium SAND, some coarse sand, trace fine sand, trace gravel, trace silt
	S-11	B	Light brown medium SAND, little fine sand, trace coarse sand, trace silt
	S-15	C	Gray, red, brown CLAY and fine SAND
TB-2	S-2	A	Dark gray SILT, trace fine sand to coarse sand
	S-3	B	Light brown fine SAND, some medium sand, little silt, trace coarse sand
	S-7	C	Orange, brown fine to medium SAND, little coarse sand, little gravel, little silt
	S-10	C	Orange, brown medium SAND, some gravel, little fine sand, trace coarse sand, trace silt
	S-19	C	Dark red, brown blue, gray fine SAND and CLAY, little medium sand, trace coarse sand
	S-22B	C	Green, brown fine to medium SAND, some clay, trace coarse sand
TB-3	S-2	A	Dark gray SILT, trace fine to coarse sand
	S-7	C	Orange, brown medium SAND, little fine sand, little silt, trace coarse sand, trace gravel
	S-9	C	Orange, brown medium SAND, little fine sand, little gravel, trace silt, trace coarse sand
	S-15	C	Brown, red, blue, gray fine SAND and CLAY, trace coarse sand
	S-19B	C	Green, brown fine to medium SAND, some clay, trace coarse sand, trace gravel
TB-4	S-2	A	Dark gray SILT, trace fine sand
	S-5	C	Orange, brown fine to medium SAND and CLAY, trace gravel, trace coarse sand
	S-6	C	Orange, brown, dark red CLAY, some fine sand, little medium sand, trace coarse sand
	S-8	C	Light brown fine SAND and CLAY, trace coarse sand
	S-11	C	Gray, brown, red fine to medium SAND, some clay, trace coarse
TB-5	S-4	A	Dark gray, brown SILT, trace fine sand
	S-5	A	Dark gray, brown SILT, little fine sand
	S-9	B	Gray medium SAND, some gravel, little silt, trace coarse sand, trace fine sand
	S-12	B	Light gray, red, brown fine to medium SAND, some silt, trace coarse sand
	S-15	C	Orange, brown, red, gray fine SAND and CLAY, trace coarse sand
TB-6	S-4	A	Dark gray SILT, trace fine sand
	S-6	C	Dark gray, orange, brown fine to coarse SAND, little fine gravel, little silt
	S-8	B	Orange, brown fine to coarse SAND, some fine gravel, little silt
	S-13	C	Red, brown CLAY and fine to medium SAND, trace coarse sand, trace fine gravel

Test Boring Number	Sample Number	Strata A and B	Visual Description
	S-16	C	Red, brown, blue CLAY and fine to medium SAND
	S-19	C	Brown, gray, red fine to medium SAND, some clay
TB-7	S-2	A	Dark gray SILT, trace fine sand
	S-5	B	Light brown, red fine to medium SAND and CLAY, trace fine gravel
	ST-2	C	Red, brown, gray CLAY and fine SAND
	S-8	C	Red, light brown, gray CLAY, some fine sand, trace medium sand
	S-9	C	Light brown, red, gray fine to medium SAND and CLAY
	S-11	C	Light brown, gray, red fine SAND and CLAY, trace medium sand
	S-14	C	Red, gray fine to medium SAND and CLAY
TB-7A	S-1	C	Brown, red, gray fine SAND, some clay, little medium sand
	S-4	C	Dark red, brown fine SAND and CLAY, little medium sand
	S-6	WR	WEATHERED ROCK: Blue, gray clay, trace fine sand
	S-8	WR	WEATHERED ROCK: Varicolored (blue, gray, green, purple) fine to medium sand, some clay, trace coarse sand
TB-8	S-2A	B	Dark gray fine to medium SAND, some fine gravel, little silt, trace coarse sand
	S-4	B	Orange, brown fine to coarse SAND, trace silt, trace fine gravel
	S-6	B	Blue, light gray, brown fine to medium SAND and CLAY
	ST-1	C	Blue, light gray CLAY and fine SAND
	S-10	C	Blue, gray, red fine SAND and CLAY, trace medium sand
	S-13	C	Red, blue, brown CLAY and fine SAND, trace medium sand
	ST-2	C	Brown, red, gray fine SAND and CLAY
	S-19	WR	WEATHERED ROCK: Green, brown, red clay, some fine to medium sand
TB-9	S-2	A	Dark gray SILT, little fine to medium sand, trace coarse sand, trace fine gravel
	S-5	B	Brown fine SAND, little medium to coarse sand, little fine gravel, little silt
	ST-2	C	Red, brown, gray CLAY and fine SAND
	S-9	C	Gray, blue fine SAND, some clay, some medium sand
	S-10	C	Brown, gray fine SAND and CLAY, little medium sand
	S-14	C	Brown, gray, red fine to medium SAND, some clay
	S-17	C	Dark red CLAY, trace fine sand
TB-10	ST-1	A	Dark gray SILT, little fine sand
	S-5A	A	Dark gray SILT, trace fine sand
	S-7	C	Brown, orange fine to medium SAND, some silt

Test Boring Number	Sample Number	Strata A and B	Visual Description
	S-9	C	Gray, blue, brown, orange fine SAND, some clay, little medium sand
	S-11	C	Brown, orange, gray, blue fine SAND, little clay, little medium sand
	S-14	WR	WEATHERED ROCK: Blue, gray fine sand and clay, little medium sand

Note: A = Stratum A, B = Stratum B, C = stratum C, WR = weathered rock

Vibracores VB-01 through VB-33 were performed during the July 2019 sampling event to better characterize the extents and the environmental character of strata A and B material within the area to be dredged (see Figure 2). The borings confirm that typically, Stratum A material overlays Stratum B material (Appendix A). Geologic cross-sections showing the general profile of strata can be found in Figures 3 and 4. Figures 5 and 6 illustrate the estimated thickness of Stratum A and Stratum B deposits.

Stratum A is composed generally of dark gray fluvial silt that is very fine grained with a high moisture content. This silt deposit is similar to the silt deposits dredged from the Delaware and Christina Rivers at the nearby Port of Wilmington, as well as other maintained areas within the turbidity maximum of the Delaware River Estuary. Stratum A material is found across most of the area to be dredged. Stratum A is vertically present, starting at an average elevation of -9.5 feet MLLW and is laterally present across the majority of the area to be dredged, at a thickness of approximately 5 to 15 feet, with thinning to absence nearest to the navigation channel and in the intertidal zone.

Stratum B is exposed in some of the intertidal and wave influenced areas of the site. Stratum B thins near the navigation channel, where little to no sand is found. The sand layer is present at thicknesses of 12 to 20 feet in the portion of the site where current water depths are less than 10 feet at MLLW.

By design, vibracore sampling methods did not penetrate the clay material. As such, little additional information about stratum C was provided by the 2019 vibracores.

Current projections indicate that approximately 915,000 cubic yards of Stratum A will be removed by initial dredging. The estimated volume of Stratum B material that will be removed by dredging is approximately 925,000 cubic yards. The project is estimated to remove approximately 1,485,000 cubic yards of Stratum C during initial dredging.

b. Site Hydrogeology

The Delaware River extends along the southeastern side of the property and is tidal. The normal tidal range at the site is approximately 5.6 feet, based on the tide gauge records for Marcus Hook, Pennsylvania, identified as National Oceanographic and Atmospheric Administration (NOAA) monitoring location 8540433. Monitoring during the RCRA assessments has indicated that the tidal influence on groundwater elevations has an amplitude of 0.5 to 3 feet depending on the location within the former Chemours Edge Moor Facility. Though most of the groundwater within the former Chemours Edge Moor Facility is discontinuous, tidal influence is laterally consistent. As was concluded in the geology section, the travel time for the COPCs likely is occurring at a rate too slow for COPCs to have reached the Delaware River at the present time by-way-of groundwater flow.

Based on topographic conditions and known groundwater elevations, groundwater is anticipated to flow in a net easterly direction towards the Delaware River. The Phase II RFI report has indicated that groundwater is located in isolated sandy lenses within the general clayey matrix of the site soils. See the "Plan for Sediment Sampling and Analyses" for details regarding the hydrogeology of the Chemours Edge Moor Facility and the likelihood for groundwater to influence substance concentrations within the Delaware River.

VI. Delaware River Sediment

a. Sediment Transport and Deposition

The project site is located in the turbidity maximum of the Delaware River Estuary, a portion of the estuary where freshwater begins to mix with saltwater. The interaction of saltwater and freshwater causes much of the dissolved solids, primarily metal substances in particles, being carried in the freshwater, to precipitate and flocculate with fine-grained suspended solids in the water column. The floc apparently becomes a fluidized mud near the river bottom. The fluidized mud generally moves up the river with the flood tide and down the river with the ebb tide. The head of the fluidized mud moves up-river into the Marcus Hook Reach of the federal navigation channel during incoming tides and down-river into the New Castle Reach during outgoing tides. In areas where the velocity of the current is sufficient, the sediment in the fluidized mud is unable to settle and consolidate on the river bottom. In lower velocity locations, the sediments do settle, consolidate and accumulate. The fluidized mud is the apparent source of the Stratum A fine-grained sediment deposits found at the proposed dredge site in the borings performed by Duffield.

b. Sediment Removal by Dredging

The formation and back and forth transport of fluidized mud in this portion of the Delaware River estuary tends to even-out concentrations of substances in the settled river sediments. Similarly, dredging typically creates a slurry that tends to homogenize the excavated materials. Duffield anticipates that hydraulic dredging techniques will be used to remove the fine-grained silts and sandy sediments at the Edgemoor Site and the soils of the Potomac Formation. The cutter head of the dredge will loosen the sediments and a pump will draw water and sediments into a pipeline as a slurry. Therefore, the transfer of substances from sediment to water by slurry or mixing has the potential to affect the environmental quality of the water returned to the river from the CDF.

Homogenization of the environmental characteristics of materials placed into storage by hydraulic dredging was assessed by Duffield during the planning and permitting process for the Multi-Purpose Berth (aka Autoberth) project at the Port of Wilmington. The absence of "hot spots" and the low coefficients of variation demonstrated that the slurries created by dredging homogenize the sediments as they are placed into storage as long as the grain size of the sediments is consistent. More detail regarding the Autoberth project can be found in the Plan for Sediment Sampling and Analysis.

VII. Sampling Methodology

Vibracores were collected on Monday, July 1st through Tuesday, July 9th, 2019 by AquaSurvey, Inc. (‘AquaSurvey’) using the vibracore method. AquaSurvey used a 16-foot pontoon mounted vibracore rig on the first day and a 20-foot pontoon mounted vibracore rig on the remaining days of field work (see Photos 2 through 4 for depictions of the vibracore collection process).

Photo 2. Pontoon Mounted Vibracore Rig

Photo 3. Collection of Vibracore in Delaware River through Hatch

Photo 4. Removal of Plastic Sleeve and Sample Material from Pole. Vibracoring Cone on Left.

Duffield collected material from within the designated strata of each single-use vibracore sleeve. Duffield used single-use nitrile gloves to place the material into laboratory provided bottle ware in accordance with DNREC-Standard Operating Procedures for Chemical Analytical Programs (SOPCAP, 2015). The steel bowl used for compositing both Stratum A and Stratum B material was decontaminated using tri-sodium phosphate (TSP), deionized (DI) water, and an abrasive scrubbing wand prior to each use. Duffield measured approximate strata depths and classified sediments in accordance with United States Geologic Survey Soil Classification Standards (USCS). 33 vibracores were performed and 41 samples were collected.

Surface water samples were collected using a bucket tied-off on the dock (see Photo 5). One surface water sample was collected each day from the same location along the dock.

Photo 5. Delaware River Surface Water Collected from Turbidity Maximum in Zone 5 on July 2, 2019 around Low Tide

The time of collection was varied in order to assess the variability in surface water quality at various points in the tide cycle. The bucket was decontaminated using TSP, DI water, and an abrasive scrubbing wand prior to sampling.

VIII. Deviation from the Plan for Sediment Sampling and Analyses

This section discusses the differences between the sampling event and the approved "Plan for Sediment Sampling and Analyses."

Vibracore Collection

Vibracore locations are considered approximate due to the strong winds and currents or difficulties with the vibracore mechanics. These factors also affect the angle at which the vibracore pole penetrated the river bottom and the amount of material recovered. Therefore, the depths at which material is reported to be collected are considered approximate.

Environmental Sample Collection

Vibracores were performed at 33 locations, adding 13 locations to the 20 proposed locations in the "Plan for Sediment Sampling and Analyses." The additional locations were needed to collect the required number of strata A and B composite samples. During field work, one less Stratum B sample was composited and collected than proposed in the "Plan for Sediment Sampling and Analyses" due to an accounting error. The following samples were collected:

- 20 composite samples of Stratum A;
- 19 composite samples of Stratum B;
- 1 duplicate sample of composite A;
- 1 duplicate sample of composite B;
- 1 equipment blank for sediment;
- 1 equipment blank for surface water; and
- 1 trip blank for each day of sampling.

Though one less Stratum B material was composited, analytical results returned enough data to develop a statistically representative dataset and the characterization of Stratum B material does not appear to be altered significantly by the absence of a twentieth sample. Therefore, this deviation from the "Plan for Sediment Sampling and Analyses" did not alter the usefulness of the data reported or the purpose of the assessment.

Analytical Laboratory Analyses and Reporting

After sending the environmental samples to the laboratory, Test America informed Duffield that the hold time for surface water sample SW-2 was exceeded by 1 day (8 days rather than 7 days holding) for the alkylated polynuclear aromatic hydrocarbons (PAH or PAH compound) analysis. Most alkylated PAH compounds are slow to degrade in the environmental and are unlikely to volatilize and escape the seal of a sample container held at temperatures lower than 4ºC. The exceeded hold time should not have affected the usefulness of the data.

Test America also informed Duffield that the Target Compound List (TCL) pesticides were not analyzed for SW-2 due to Test America not delivering sufficient bottle ware to perform the analysis. Due to this error and the need for additional dilution of the sample in order to run the analysis, there was an insufficient sample volume to obtain results for the TCL pesticides analysis. However, TCL pesticides were analyzed in surface water samples SW-1, SW-3, SW-4, and SW-5. Within each of the surface water samples analyzed for TCL pesticides, no pesticides were detected. Therefore, this deviation from the "Plan for Sediment Sampling and Analyses" did not significantly affect Duffield's ability to generally assess TCL pesticides in surface water.

The "Plan for Sediment Sampling and Analyses" states that five composite samples from strata A and B, respectively, would be analyzed for TCL VOCs. However, six composite samples from Stratum A and five composite samples from Stratum B were analyzed for TCL VOCs. This deviation does not affect the usefulness of TCL VOC analytical results.

A summary of the analytical testing results for sediment can be found in Tables 1.1 through 1.4. Sample VB4-COMP-A should have been labeled as VB4-COMP-B since the material that was sampled predominantly was sandy, therefore representing Stratum B. Similarly, sample VB29-COMP-A should have been labeled as VB29-COMP-B. Both of these samples have been evaluated by Duffield with the Stratum B samples. Two trip blanks were labeled with sample ID 'TB-2', though one of these samples was taken on the third day of sampling and should have been labeled as 'TB-3'.

IX. Sediment and Surface Water Analytical Results

The original analytical results for the sediment and surface water samples can be found in Test America's laboratory reports (Appendix B). The sediment samples were analyzed for the following:

- pH by EPA Method 9045C;
- Acid Volatile Sulfides/Simultaneously Extracted Metals (AVS/SEM) of Cadmium, Chromium, Copper, Lead, Nickel, Zinc and Mercury;
- Sulfate by Method D516-90;
- Sulfide by Method SM4500-S-2;
- Sulfite by Method SM4500-SO3 B;
- Alkylated PAH by EPA Method 8270D in selected ion monitoring (SIM) mode;
- TCL Pesticides by EPA Method 8081A;
- Target Analyte List (TAL) Inorganics by applicable EPA Method 6010C and 7471;
- Total Cyanide by EPA Method 9012B;
- Polychlorinated Biphenyl (PCB) Congeners by Method 1668;
- Dioxins and Furan Isomers by EPA Method 1613B; and
- Total Organic Carbon (TOC) by Lloyd Kahn Method

A sample from each boring that was sampled for environmental analyses was also collected for geotechnical testing in Duffield's in-house soils laboratory. The geotechnical samples were tested and the results for this testing can be found in the Geotechnical Data Report, dated October 2019.

The surface water samples were sent to Test America where they were analyzed for the following:

- pH by EPA Method 9045C;
- Alkylated PAH by EPA Method 8270D in SIM mode;
- TCL Pesticides by EPA Method 8081A;
- TAL Inorganics by applicable EPA Method 6010C and 7471;
- Total Cyanide by EPA Method 9012B;
- PCB Congeners by Method 1668; and
- Dioxins and Furan Isomers by EPA Method 1613B

A summary of the analytical testing results for surface water can be found in Table 2.1 and 2.2.

X. Data QA/QC Results

a. Data Assessment Objectives

The primary assessment objective established in the "Plan for Sediment Sampling and Analyses" was to develop a statistically valid dataset for evaluating risks to human health and the environment associated with sediment deposits at the proposed Edgemoor Site. The statistically valid dataset would also allow for a more defined characterization of the Stratum A and Stratum B material to explore the potential for reuse options. Duplicate samples, trip blanks, and equipment blanks were collected and analyzed as part of the quality assurance and quality control (QA/QC) plan put in place to assess the validity of the results reported by the laboratory.

The analytical results were sufficient to develop a statistically valid dataset for substances that were detected in strata A and B sediments. For surface water analytical results, mean, median, and maximum concentrations were identified since there were five samples collected, which is less than the ten samples needed for a statistically valid dataset. A summary of the standard statistical values generated for the reported data can be seen in Table 3. Reported PCB analytical results with applicable human health and ecological screening levels (concentration values) are summarized in Table 4. These screening levels were developed by DNREC for use in Hazardous Substance Cleanup Act (HSCA) programs and the concentrations values used for comparison in this report came from DNREC's November 2019 update.

b. Quality Assurance/Quality Control Samples

Two duplicate samples were collected as part of the sampling event with one sample from Stratum A and one sample from Stratum B. The Stratum A duplicate sample was of sample 'VB7-COMP-A', while the Stratum B duplicate sample was of sample 'VB23-

COMP-B'. In comparing the reported results for the duplicate samples, the reported concentrations were within the required ranges of one another. Therefore, the laboratory was capable of delivering consistent results for matrix samples and there were no apparent matrix interferences.

One equipment blank was collected from the steel mixing bowl used to prepare sediment samples. There were PAH compounds, inorganics, PCBs, and dioxins detected in the equipment blank at concentrations significantly below the concentrations of these substances found in the samples for both strata A and B. Therefore, equipment cleaning was adequate.

One equipment blank was collected from the bucket used to collect surface water samples. PAH compounds, inorganics, PCBs, and dioxins were detected in the equipment blank at concentrations below the concentrations of these substances found in the surface water samples. Therefore, equipment cleaning was adequate.

Five trip blanks were collected and analyzed for TCL VOCs. There were no TCL VOCs detected in the trip blanks. As such, site conditions apparently did not influence reported volatile organic substance concentrations.

c. <u>Data Validation with Method Blanks</u>

Laboratory analytical results are reported with a 'B' flag when a compound is detected in the applicable method blank. In order to evaluate data validity, sample analytical results marked with a 'B' flag by the laboratory were compared to the concentrations of each compound found in the applicable method blank. This method blank data validation process was performed for sediment analytical results for copper, zinc and mercury by the AVS/SEM method, PCBs by method 1668, and dioxins and furans by method 1613B, and was performed for surface water analytics results for naphthalene, PCBs, and dioxins and furans. Appendix C.1.1 summarizes the samples that were included in like-preparation batches and were compared to the same method blank. The sample results were then compared to a concentration three times and a concentration five times greater than the method blank. A result was considered valid if the sample concentration was greater than five times the amount detected in the applicable method blank. A result was used with caution if the sample concentration was between three and five times the concentration detected in the applicable method blank. A result was considered 'not valid' if the sample concentration was less than three times the amount detected in the applicable method blank. See Appendices C.1.2 through C.1.4 for detailed method blank validation tables for each applicable analyte. The toxic equivalency (TEQs) for dioxin-like PCBs was calculated by both including and excluding the results that were 'not valid' in order to compare the effect of data validation on the TEQ results. Similarly, total PCB homolog and total PCB concentrations were generated using both the valid results with the suspect results included and with all reported results included.

After determining valid and 'not valid' analytical results, a comparison between total concentrations of PCBs and TEQs with 'not valid' data included was compared to total concentrations with 'not valid' data removed (see Appendices C.2.1 and C.2.4, respectively). Total PCB concentrations above screening levels for human health in strata A and B prior to data validation were still above the screening levels after data validation. TEQ values above human health and ecological screening levels in strata A and B prior to data validation were still above screening levels after data validation with the exception of one sample in Stratum B. Based on this evaluation, interpretation of sediment and water quality conditions does not appear to be significantly altered by the removal or inclusion of results that were considered ‘not valid’.

A similar evaluation of PCB, dioxin, and furan data was done for the analytical results from the October 2016 sampling event, which can be found in Appendix D. Total PCB concentrations above human health screening levels in samples prior to data validation were still above screening levels after data validation. TEQ values above human health and ecological screening levels, the samples prior to data validation, were still above screening levels after data validation. Similarly to the results of the July 2019 evaluation, interpretation and consideration of the results do not appear to be significantly altered by the removal of results that were considered ‘not valid’.

d. Data Validation based on Laboratory Case Narratives

Additional data validation was performed based on laboratory case narratives at the beginning of the analytical laboratory reports. A summary of case narrative notes from Test America and Duffield’s comments about pertinent case narrative notes can be found in Appendix E. Data validation notes can also be found in the PCB Method Blank comparison following Appendix C.1.3. Based on the case narrative evaluation and data validation, Duffield is of the opinion that the data is of sufficient quality to support the purposes of the assessment.

XI. Statistical Evaluation of Data

A statistical evaluation was used to assess data variability and to evaluate the confidence in the data collected during the most recent sediment and surface water sampling event in July of 2019 to represent the conditions present in the Delaware River sediments at the project site. A summary of the statistics calculated can be found in Table 3.

In order to assess the uniformity of substance concentrations in the sediment samples, the coefficient of variance (CoV) was calculated for each detected substance within strata A and B. DNREC has considered a CoV less than 0.5 as indicative of relatively uniform substances concentrations in the environment. Table D below illustrates the range of CoV for the TCL VOCs, PAH, PCBs, and TAL Inorganics. Since there were five surface water samples collected, there was insufficient data to calculate the CoV.

Table D. Summary of Coefficients of Variance

Substance	Stratum A	Stratum B
TCL VOC	0.89 - 1.29	0.096 - 0.11
PAH	0.56 - 0.68	1.4 - 2.4
PCB Homologs	1.4 – 2.3	1.6 – 2.8
Pesticides	0.72 - 2.1	0.087 – 3.3
TAL Inorganics	0.130 - 0.780	0.0900 - 1.65

Based on Table D above, with the exception of TCL VOC analyses within Stratum B, the CoVs are above 0.5 and are not considered uniform in distribution. This variability suggests that use of the 95 percent upper confidence limit (95% UCL) is a more conservative concentration to use for risk analysis than the mean concentrations. Therefore, risk calculations and water quality evaluation calculations are performed using the 95% UCL concentrations.

XII. Data Assessment

Analytical results were compared with applicable DNREC screening levels for both human and ecological health, which include fresh water and surface soil screening levels. Human health sediment screening levels were used to evaluate human exposure both during the removal of material from the area to be dredged and the human exposure after placement of dredge slurry into the CDF at Wilmington Harbor South (WHS). Tables 1.1 and 1.3 contain summaries of the analytical results for both strata A and B compared to DNREC human health screening levels. Tables 1.2 through 1.4 contain summaries of the analytical results for both strata A and B compared to applicable ecological screening levels. Tables 2.1 and 2.2 contain summaries of surface water analytical results compared to human health and applicable ecological screening levels, respectively.

a. Stratum A

Compounds which are found above DNREC screening levels in Stratum A are summarized below in Table E. The count provided in the table is the number of samples reported to have concentrations of the listed substances at concentrations exceeding the applicable screening level.

Table E. Summary of Compounds above Screening in Stratum A

Analysis	Compound	Total No. of Stratum A Samples	DNREC Screening Level Ecological Sediment Fresh		DNREC Screening Levels Ecological Surface Soils		DNREC Screening Levels Soils	
			Nov 2019	count	Nov 2019	count	Nov 2019	count
TCL VOCs	Toluene	6	-	-	x	-	x	-
	Methylene Chloride	6	x	-	-	-	x	-
PAH	2-Methylnaphthalene	21	Exceeds	13	-	-	x	-
	Acenaphthene	21	Exceeds	14	x	-	x	-
	Anthracene	21	Exceeds	8	-	-	x	-
	Benzo[a]anthracene	21	Exceeds	13	-	-	x	-
	Benzo[a]pyrene	21	Exceeds	15	-	-	Exceeds	12
	Benzo[k]fluoranthene	21	Exceeds	10	-	-	x	-
	Chrysene	21	Exceeds	14	-	-	x	-
	Dibenz(a,h)anthracene	21	Exceeds	13	-	-	x	-
	Fluoranthene	21	Exceeds	8	-	-	x	-
	Fluorene	21	Exceeds	2	x	-	x	-
	Indeno[1,2,3-cd]pyrene	21	Exceeds	14	-	-	x	-
	Phenanthrene	21	Exceeds	12	-	-	x	-
	Pyrene	21	Exceeds	14	-	-	x	-
TCL Pesticides	4,4'-DDD	21	Exceeds	2	-	-	x	-
	4,4'-DDE	21	Exceeds	2	-	-	x	-
Total PCB	Refer to Table 4	21						
Dioxins and Furans	Refer to Appendices C.2.2 and C.2.3	21						
TAL Inorganics	Arsenic	21	Exceeds	16	Exceeds	16	Exceeds	16
	Cadmium	21	Exceeds	5	x	-	x	-
	Chromium	21	Exceeds	21	Exceeds	21	x	-
	Copper	21	Exceeds	14	Exceeds	4	x	-
	Iron	21	Exceeds	15	x	-	x	-
	Lead	21	Exceeds	14	Exceeds	14	x	-
	Manganese	21	Exceeds	16	-	-	x	-
	Nickel	21	Exceeds	13	Exceeds	8	x	-
	Selenium	21	x		Exceeds*	21		-
	Thallium	21	Exceeds	7	Exceeds	7	Exceeds	14
	Vanadium	21	-		Exceeds	21	x	-
	Zinc	21	Exceeds	14	Exceeds	21	x	-
	Mercury	21	Exceeds	16	Exceeds	7	x	-
	Total Cyanide	21	Exceeds		-	-	x	-

Table Notes:

Exceeds: indicates that the analyte exceeded the respective screening level

- : indicates that there was no screening level

x : indicates that the analyte was detected but below screening level.

* : indicates that the screening level is below the MDL

TCL Volatile Organic Compounds (VOCs)

Toluene and methylene chloride were the only compounds reported as detected in the Stratum A sediment samples. There were no concentrations reported above either the human health or ecological screening levels for the TCL VOCs throughout Stratum A as anticipated. Therefore, no TCL VOCs were identified as substances of potential human health or ecological concern in Stratum A.

PAH Compounds

PAH compounds were detected commonly in the Stratum A sediment samples. Benzo[a]pyrene was the only PAH reported at a concentration in excess of the human health screening level and that occurred in 12 out of 21 samples. There were 13 PAH compounds present at concentrations that exceeded DNREC ecological screening levels. The locations where PAH compounds are above ecological screening levels are scattered throughout the area to be dredged and are not concentrated in one particular portion of the dredge area. Benzo[a]pyrene was identified as a substance of potential human health and ecological concern in Stratum A.

TCL Pesticides

4,4’-DDD and 4,4’-DDE were detected in 3 out of 21 Stratum A samples. However, none of the reported concentrations exceeded the human health screening levels. Two of the concentrations did exceed the DNREC ecological screening levels for both 4,4’-DDD and 4,4’-DDE. Therefore, no TCL pesticides were identified as substances of potential human health concern. 4,4’-DDD and 4,4’-DDE were identified as substances of potential ecological concern in Stratum A.

The Screening Quick Reference Table (SQuiRT) developed by the National Oceanic and Atmospheric Administration (NOAA) were used as guidelines for assessing the potential risk that the substances detected in the site sediments pose to the health of aquatic life, specifically, to benthic organisms. Table F below summarizes the comparison of substances identified as potentially being of concerning from the screening concentrations in the sediments to SQuiRT levels.

Table F. Stratum A Impact of TCL Pesticides on Benthic Organisms

Pesticides	Lowest Effect level (LEL)	Severe Effect Level (SEL)	Mean Stratum A	Max Stratum A
Units	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
4,4'-DDD	0.008	0.06	0.0025	0.0063
4,4'-DDE	0.005	0.19	0.0063	0.030
4,4'-DDT	0.008	0.71	ND	0.0017

The mean and maximum concentrations of each compound were compared to the Lowest Effect Level (LEL) and severe effect level (SEL) values when applicable. Pesticides are not expected to be having a severe effect on benthic organisms with the possible exception of 4,4’-DDE.

PCBs, Dioxins, Furans, and TEQ Dioxin

The dioxin-like PCB-126 was detected in 2 out of 21 samples, VB15-COMP-A and VB21-COMP-A, above the DNREC human health screening levels of 0.036 ng/g at 0.068 ng/g and 0.15 ng/g, respectively. Other dioxin-like PCBs, identified as PCB-77, 81, 105, 114, 118, 123, 156/157, 167, 169, 170, 180, and 189, were not detected above the respective DNREC human health screening levels. The laboratory reported total PCB concentrations from samples VB11-COMP-A, VB15-COMP-A, and VB21-COMP-A above the DNREC human health screening level of 230 ng/g. These samples are each within the thickest areas of Stratum A material (see Figure 5). Duffield also compared the total PCB concentrations to the Bioaccumulation-Based Sediment Quality Criterion (BBSQC) of 33.2 ppb, or 0.0332 ppm, which was developed to account for the effect of contaminants in fish eaten by human receptors. None of the samples had concentrations of total PCBs above this human health screening value.

Total PCB concentrations were both reported by the lab and calculated by Duffield. The lab-reported total PCB concentrations were calculated by including each co-eluting congener concentration one time per co-eluting group. Duffield calculated the total PCB concentrations by adding the valid results, counting co-eluting PCB congener concentrations one time per co-eluting group. Separate totals were generated, both including and excluding 'not valid' results. Total PCB concentrations were above the ecological fresh water sediment screening level of 59.8 ng/g in 4 out of the 21 samples. However, there were no total PCB concentrations above the ecological surface soil screening level of 40,000 ng/g (see Table 4, Summary of PCB Human Health and Ecological evaluation). Appendix C.2.1 includes the validated analytical results by congener for each sample.

Chronic aquatic toxicity of PCBs was calculated in order to evaluate the toxicity of PCB concentrations to aquatic life in a conservative manner. Aquatic life is exposed to the sediments currently and will be exposed to sediments during dredging over an acute timeframe rather than a chronic timeframe. The chronic aquatic toxicity of PCB concentrations was calculated by a method closely following DNREC – Division of Water Resource's *2008 Delaware Estuary and Bay Initiative (DEBI) PCB Data for Sediments of the Delaware Estuary* (Greene, R. 2010), originally adapted from Fuchsman, et al. (2006). The following steps detail how chronic aquatic toxicity was evaluated based on total PCB concentrations.

1. An octanol-water partitioning coefficient (K_{ow}) was developed per sample by calculating the decimal percent of each homolog group out of the total PCB concentration in each sample (f_i) and the log K_{ow} value for each corresponding homolog group.
2. The fraction represents the decimal percent of each homolog divided by $10^{Kow.}$
3. A sum of the fractional K_{ow} values was calculated.
4. The K_{ow} value for total PCBs per sample was calculated by taking the reciprocal of $\Sigma(f_i/K_{ow,i})$.
5. A sediment quality benchmark (SQB) was developed using the chronic fresh water criteria for total PCBs: 0.014 μg/L. The following calculation was done in order to determine the μg PCB/g OC in each sample:

   SQB, μg PCB/g OC = (0.014 μg/L) x (10^{logKoc}) x (1 kg/1,000 g)

6. A ratio of the actual total PCB concentration to SQB was then calculated to determine the chronic toxicity (T.U.c) of total PCBs to aquatic life. If this value exceeds 1, the total PCB concentration is considered toxic to aquatic life. If this value is less than or equal to 1, the total PCB concentration is considered not toxic to aquatic life.

The median T.U.c was 0.0007 while the maximum was 1 and 95% UCL was 0.4. Three samples exceeded 1 T.U.c including VB11-COMP-A, VB15-COMP-A and VB21-COMP-A. Therefore, the majority of samples within Stratum A do not appear to indicate chronic toxicity of total PCBs to aquatic life. Please see Table 5.1 and Tables 5.3 for the T.U.c results for each sample and general calculations used to tabulate T.U.c values.

A toxic equivalency quotient (TEQ) was calculated in accordance with the DE SWQS by multiplying the concentration from the reported analytical results by the toxic equivalency factor (TEF) provided in the DE SWQS. These TEFs are used to equate the toxicity of several polychlorinated dibenzo-p-dioxins (dioxins), polychlorinated dibenzofurans (furans), and dioxin-like PCB concentrations to the toxicity of 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD), which is considered the most toxic of the compounds evaluated in this manner. TEQ values were calculated by multiplying the TEFs for each respective dioxin-like PCB by the concentration of each dioxin, furan, and dioxin-like PCB in each sample. A summation of the TEQs then yields the total TEQ value for each sample. The TEFs for each dioxin-like PCB is identified in Appendix C.2.2 and C.2.3.

Based on the TEQ values, the concentrations of dioxins appear to be the main contributors to the toxicity of each TEQ value for both human health and ecological health effects. In general, the furans and the dioxin-like PCB concentrations contribute equally to toxicity. Most TEQ values within Stratum A are in excess of the human health (0.0048 ng/g), ecological fresh water (0.00085 ng/g), and ecological surface soil (0.003 ng/g) screening levels provided by DNREC. The TEQs fall within a range between 0.003 ng/g and 0.04 ng/g with an average concentration of 0.01 ng/g. Appendix C.2.2 summarizes the resulting TEQs calculated based on the use of valid and the inclusion of 'not valid' analytical results for dioxins, furans, and dioxin-like PCBs.

PCB-126, total PCBs as well as dioxins, furans, and dioxin-like PCBs, were identified as substances of potential human health concern. Total PCBs as well as dioxins, furans, and dioxin-like PCBs also were identified as substances of potential ecological concern.

Inorganics

As expected, inorganic substances (metals) were detected in all 20 samples and 1 duplicate. Sixteen out of 21 samples reportedly had arsenic concentrations above the DNREC human health screening level of 11 mg/kg. The lab reported that 15 out of 21 samples had thallium concentrations in excess of the DNREC human health screening level of 0.078 mg/kg (see Table E above or Table 1.1). Therefore, arsenic and thallium were identified as substances of potential human health concern.

Overall, 13 inorganic substances were reported at concentrations in excess of the DNREC ecological screening levels for fresh water sediment and surface soils. Please refer to Table E for a summary of analytical results compared to ecological screening levels. Though 14 out of the 21 samples had detections of selenium, 21 of the 21 samples are considered to be in excess of the screening level, since Method Detection Limit (MDL) for selenium is above the DNREC ecological surface soil screening level. In the Stratum A samples, total cyanide was not reported at concentrations in excess of the human health screening value. However, 13 out of 21 samples had reported concentrations of total cyanide in excess of the ecological screening level.

Therefore, arsenic, cadmium, chromium, copper, iron, lead, manganese, nickel, selenium, thallium, zinc, mercury, and total cyanide are identified as substances of potential ecological concern.

Acid Volatile Sulfide/Simultaneously Extracted Metals (AVS/SEM) data was used to evaluate the solubility of cadmium, copper, lead, nickel, zinc, and mercury. Since these metals were detected above the DNREC fresh water ecological screening levels and/or the ecological surface soil screening levels, solubility of each metal was considered to help assess bioavailability. The SEMs were summed and divided by the sum of the AVS results (both in units of micromoles per gram (μmol/g) in order to determine the ratio of SEM to AVS, see Table 5). Metal sulfides have low solubility. The SEM:AVS ratio indicates the expected solubility of the metals. A ratio greater than 1 indicates that there is not enough sulfide to react with the metals, suggesting that the metals are soluble in sediment porewater, making them bioavailable. A ratio less than or equal to 1 indicates that the metals are not bioavailable and are likely in compounds with sulfide. Based on this evaluation, the metals evaluated do not appear to be bioavailable. Therefore, these metals are not expected to adversely impact aquatic life in the undisturbed sediment or later during dredging or in the effluent from the CDF (see Table G below).

Table G. Bioavailability of Stratum A Metals

	Cd SEM/AVS	Cu SEM/AVS	Pb SEM/AVS	Ni SEM/AVS	Zn SEM/AVS	Hg SEM/AVS
Ratio	0.001	0.1	0.09	0.07	0.6	0.000003

Following this bioavailability screening, the inorganic substances of potential ecological concern are reduced to arsenic, chromium, iron, manganese, selenium, thallium, and total cyanide.

The NOAA SQuiRT levels were used as guidelines for assessing the potential risk that the substances detected in the site sediments pose to the health of aquatic life, specifically, to benthic organisms. Table H below summarizes the comparison of substances identified as potentially being of concern from the screening concentrations in the sediments to SQuiRT levels.

Table H. Stratum A Impact of Inorganics on Benthic Organisms

Metals	Lowest Effect level (LEL)	Severe Effect Level (SEL)	Mean Stratum A	Max Stratum A
Units	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
Arsenic	6.0	33	24.2	47.3
Chromium	26	110	77.0	149
Manganese	460	1,100	819	1,530

Based on the comparisons in Table H, it appears that Stratum A may put benthic organisms at risk since the mean concentration of arsenic, chromium, and manganese are above the LEL. The inorganics identified as substances of potential ecological concern are arsenic, chromium, iron, manganese, selenium, thallium, and total cyanide.

Table I below summarizes the substances of potential human health and ecological concern based on the data assessment of Stratum A.

Table I. Summary of Substances of Potential Concern

Substances of Potential Human Health Concern	Substances of Potential Ecological Concern
Arsenic	2-Methylnaphthalene
Benzo[a]pyrene	Acenaphthene
Cyanide, Total	Anthracene
Dioxins, Furans, and Dioxin-like PCBs	Arsenic
PCB-126	Benzo[a]anthracene
PCBs, Total	Benzo[a]pyrene
Thallium	Benzo[k]fluoranthene
	Chromium
	Chrysene
	Cyanide, Total
	DDD, 4,4’-
	DDE, 4,4’-
	Dibenz(a,h)anthracene
	Dioxins, Furans, and Dioxin-like PCBs
	Fluoranthene
	Fluorene
	Indeno[1,2,3-cd]pyrene
	Iron
	Manganese
	PCBs, Total
	Phenanthrene
	Pyrene
	Selenium
	Thallium

b. Stratum B

A summary of the substances exceeding DNREC SIRS screening levels for Stratum B is illustrated in Table J below. As discussed for Table E, the count is the number of samples where the substance exceeded the screening value.

Table J. Summary of Compounds above Screening in Stratum B

Analysis	Compound	Total No. of Stratum B Samples	Ecological Screening Level		Ecological Screening Levels		Human Health Screening Levels	
			Sediment Freshwater		Surface Soils		Soils	
			Nov 2019	Count	Nov 2019	Count	Nov 2019	Count
TCL VOCs		5	Not Detected					
PAHs	2-Methylnaphthalene	20	Exceeds	1	-	-	x	-
TCL Pesticides		20	Not Reported Above Screening Levels					
Total PCB		20	Refer to Table 4					
Dioxins and Furans		20	Refer to Appendix C.2.2 and C.2.3					
TAL Inorganics	Arsenic	20	Exceeds	5	x	-	Exceeds	5
	Chromium	20	Exceeds	5	Exceeds	20	x	-
	Copper	20	Exceeds	6	Exceeds	3	x	-
	Iron	20	Exceeds	5	x	-	x	-
	Lead	20	Exceeds	6	Exceeds	5	x	-
	Manganese	20	Exceeds	2	x	-	x	-
	Selenium	20	-	-	Exceeds	5	-	-
	Thallium	20	-	-	x	-	Exceeds	5
	Zinc	20	Exceeds	4	Exceeds	20	x	-
	Total Cyanide	20	*	-	*	18	x	-

Notes:
Exceeds: indicates that the analyte exceeded the respective screening level
- : indicates that there was no screening level
x : indicates that the analyte was detected but below screening level
* : indicates that the screening level is below the MDL
Analytes detected but not reported above human health or ecological screening levels in samples are not reflected in this table.

TCL Volatile Organic Compounds (VOCs)

As was expected based on the evaluation within the "Plan for Sediment Sampling and Analysis," there were no detections of VOCs reported. Therefore, no VOCs were present at concentrations in excess of human health or ecological screening levels in Stratum B samples. No TCL VOCs were identified as substances of potential concern.

PAH Compounds

Based on reported analytic testing results, Stratum B did not contain PAH compounds at concentrations in excess of DNREC's human health screening levels. No PAH compounds of potential human health concern were identified.

In general, there were few PAH compounds detected in the Stratum B samples. 2-Methylnaphthalene was detected in sample VB31-COMP-B at a concentration of 0.035 mg/kg, which was above the DNREC ecological screening level of 0.0202 mg/kg. Therefore, 2-Methylnaphthalene was identified as a substance of potential ecological concern in Stratum B.

TCL Pesticides

4,4’-DDT and heptachlor were both detected in 2 out of 20 samples. These reported concentrations of these pesticides were not in excess of either DNREC’s human health or ecological health screening levels. The TCL pesticides identified are not substances of potential human health or ecological concern.

Likewise, based on the comparison of TCL pesticides analytical results to the SQuiRT levels shown in Table K, concentrations are less than the Lowest Effect Level (LEL). The pesticides likely are not having an adverse impact on benthic organisms and would not during dredging and storage. This evaluation confirms that there are no substances of potential ecological concern identified.

Table K. Summary of Stratum B Analytical Results for Impact on Benthic Organisms

Pesticides	Lowest Effect level (LEL)	Severe Effect Level (SEL)	Mean Stratum B	Max Stratum B
Units	mg/kg	mg/kg	mg/kg	mg/kg
4,4'-DDD	0.008	0.06	0.0024	0.022
4,4'-DDE	0.005	0.19	0.0038	0.057
4,4'-DDT	0.008	0.71	0.0017	0.0058

PCBs, Dioxins, Furans, and TEQs

No individual PCB congeners were reported at concentrations above the applicable DNREC human health soil screening levels (see Table 4). VB31-COMP-B was reported with a total PCB concentration of 328 ng/g, which is above the total PCB DNREC human health screening level of 230 ng/g. Two samples, VB5-COMP-B and VB31-COMP-B, were reported with total PCB concentrations above the ecological fresh water sediment screening level. No results were reported at concentrations above the ecological surface soil screening level of 40,000 ng/g. Duffield also compared the total PCB concentrations to the Bioaccumulation-Based Sediment Quality Criterion (BBSQC) of 33.2 ppb, or 0.0332 ppm, which was developed to account for the effect of contaminants in fish eaten by human receptors. None of the samples had concentrations of total PCBs above this human health screening value.

The chronic aquatic toxicity of PCB concentrations was assessed by the same method as is mentioned in Section XII.a above. The median T.U.c was 0.02 while the maximum was 4 and the 95% UCL was 0.7. VB31-COMP-B had the maximum T.U.c and was the only sample that exceeded 1 T.U.c. Therefore, most data in Stratum B does not indicate chronic toxicity to aquatic life as a result of the total reported PCB concentrations in the samples collected. Please see Table 5.2 and Tables 5.4 for the T.U.c results for each sample as well as general calculations used to tabulate T.U.c values.

When comparing TEQ values to the 2,3,7,8-TCDD ecological fresh water sediment screening level, 17 of the 20 samples (including the duplicate sample) were above the screening level (see Appendix C.2.3). Two samples, VB19-COMP-B and VB31-COMP-B, had a TEQ value above the 2,3,7,8-TCDD human health soil screening level out of the 20 samples. Comparing TEQ values to the 2,3,7,8-TCDD ecological surface soils screening level, 3 out of the 20 samples (including the duplicate sample) were above the screening level (see Appendix C.2.3).

Total PCBs as well as dioxins, furans, and dioxin-like PCBs were identified as substances of potential human health and ecological concern.

Inorganics

Several inorganic analytes were detected in the 20 samples analyzed, including the Stratum B duplicate sample. Reported arsenic and thallium concentrations were above the DNREC human health screening level in 5 out of the 20 samples detected. Arsenic and thallium were identified as substances of potential human health concern in Stratum B.

Seven inorganic compounds were detected at concentrations above the DNREC SIRS ecological screening levels for fresh sediment in Stratum B including arsenic, chromium, copper, iron, lead, manganese, and zinc. These inorganic substances were identified as substances of potential ecological concern in Stratum B.

There were no total cyanide concentrations reported in excess of the human health screening level of 2.3 mg/kg. The reported MDL exceeded DNREC's ecological screening level for freshwater sediments. As such, total cyanide was identified as a substance of potential ecological concern.

AVS/SEM data was used to evaluate the solubility of cadmium, copper, lead, nickel, zinc, and mercury. Since these metals were detected above the DNREC fresh water ecological screening levels and/or the ecological surface soil screening levels, solubility of each metal was considered to help assess bioavailability. The SEMs were summed and divided by the sum of the AVS results (both in units of umol/g) in order to determine the SEM:AVS ratio (see Table L below). Based on this evaluation, the metals evaluated do not appear to be bioavailable. Therefore, these metals are not expected to be impacting aquatic life currently and are not anticipated to have an adverse impact during dredging or in the effluent from the CDF (see Table 7 for more detailed results).

Table L. Bioavailability of Stratum B Metals

	Cd SEM/AVS	Cu SEM/AVS	Pb SEM/AVS	Ni SEM/AVS	Zn SEM/AVS	Hg SEM/AVS
Ratio	0.002	0.4	0.2	0.3	0.9	0.0002

Based on the evaluations of the potential risk, sediments that could have potential impact to the health of benthic organisms are summarized in and compared to NOAA SQuiRT levels in Table M below.

Table M. Summary of Stratum B Analytical Results for Impact on Benthic Organisms

Metals	Lowest Effect level (LEL)	Severe Effect Level (SEL)	Mean Stratum B	Max Stratum B
Units	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
Arsenic	6.0	33	8.9	28
Chromium	26	110	31	88
Manganese	460	1,100	230	840

Based on the NOAA SQuiRT comparison, the concentrations of manganese in Stratum B are not likely having an adverse impact on benthic organisms currently. That assessment is expected to continue during dredging and storage of Stratum B sediments. Arsenic and chromium concentrations fall between the LEL and SEL. This comparison suggests that these metals may be adversely impacting benthic organisms currently and are substances of potential ecological concern during dredging and storage of Stratum B sediments. Total cyanide also is a potential substance of ecological concern.

Table N below summarizes the substances of potential human health and ecological concern based on the data assessment of Stratum B.

Table N. Summary of Substances of Potential Concern

Substances of Potential Human Health Concern	Substances of Potential Ecological Concern
Arsenic	Arsenic
Dioxins, Furans, and Dioxin-like PCBs	Chromium
PCB-126	Cyanide, Total
Total PCBs	Dioxins, Furans, and Dioxin-like PCBs
Thallium	2-Methylnaphthalene
	Total PCBs

c. Stratum C

Based on the October 2016 sediment sampling event, the environmental quality of the Potomac Formation soils of the future river bottom has not been affected adversely by manmade substances migrating from the former Chemours Edge Moor Facility.

Total PCB, dioxin, and furan concentrations in stratum C samples were below DNREC's human health screening levels and do not appear to be of concern. The iron concentration in one of the five sediment samples detected a concentration above the respective human health screening level (see Table 1.5). Stratum C is not expected to have TCL VOC, TCL SVOC, TCL pesticide, or PCB concentrations above DNREC's respective human health soil screening levels or ecological screening levels for fresh water sediments. Chromium, iron, manganese and selenium were detected at concentrations above the ecological sediment screening levels for freshwater. Chromium, selenium, vanadium, and zinc were detected at concentrations above the DNREC ecological surface soil screening levels (see Table 1.6).

Sediments that could have potential impact to the health of benthic organisms are summarized in and compared to available NOAA SQuiRT levels in Table O below.

Table O. Summary of Stratum C Analytical Results for Impact on Benthic Organisms

Metals	Lowest Effect level (LEL)	Severe Effect Level (SEL)	Mean Stratum C	Max Stratum C
Units	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**
Chromium	26.0	110	35.0	60.3
Manganese	460	1,100	561	1,680

Based on the NOAA SQuiRT comparison, concentrations of manganese in stratum C may pose a risk to benthic organisms. Chromium concentrations in the sediment may have an adverse effect on benthic organisms. Though metal concentrations appear to be elevated, stratum C is made up of Potomac Formation soils that have been undisturbed previously. Therefore, elevated metals concentrations likely occur naturally and are not due to anthropogenic activities.

Table P below summarizes the substances of potential human health and ecological concern in stratum C as compared to DNREC soil screening levels for human health and sediment screening levels of ecological concern (last updated November 2019).

Table P. Summary of Substances of Potential Concern in Stratum C

Substances of Potential Human Health Concern	Substances of Potential Ecological Concern
Iron	Chromium
	Iron
	Manganese
	Selenium
	Vanadium
	Zinc

Stratum C material will be the new bottom of the area being dredged and will be replacing Stratum A material, which is the current bottom. Based on the substances of potential concern, the removal of Stratum A is expected to remove benzo(a)pyrene, PCBs, dioxins, furans, dioxin-like PCBs, pesticides, arsenic, thallium, and cyanide as substances of potential concern to human health and aquatic life. Such substances are not of concern in stratum C material. In addition, average concentrations of substances in stratum C within the October 2016 sediment samples appear to be similar to the bottom samples taken in "Reach B" of the Delaware River as part of the "Sediment Quality Analysis for Reach B of the Main Channel Deepening Project," prepared by Versar, Inc. (Versar). The results of the Reach B analysis were collected at a nearby site in the Delaware River. Since the concentrations from the Edgemoor sediment sampling event and the Reach B sediment sampling event are similar and the material in stratum C has remained undisturbed, elevated concentrations of metals in stratum C appear to be associated with the Potomac Formation. Therefore, reduction of the elevated metals concentrations in stratum C is not anticipated and can be categorized as background concentrations. Likewise, elevated metals concentrations likely are present in the material without influence from anthropogenic activities.

d. Summary of Human Health Risk Assessment

Risk assessment calculations were performed using Risk Assessment Information Systems (RAIS) in order to assess additional carcinogenic and non-carcinogenic risks for the exposure levels of an excavation worker and a recreator. The substances of potential human health concern mentioned in Sections XII.a, XII.b, and XII.c above were used in order to evaluate human health risk. When dioxins, furans, and dioxin-like PCBs were identified as substances of potential concern, the risk assessment was modeled using the TEQ concentration for 2,3,7,8-TCDD. The excavation worker scenario is used to model the exposure of a worker removing the material from the area to be dredged or handling the material stored in the CDF while it is being dried. The recreator scenario is used to model the exposure of a bystander unknowingly walking onto the area where dredge material will be stored and drying in the CDF. Using the State of Delaware's *Regulations Governing Hazardous Substance Cleanup* (7 Del C. §1375) as a guide, the total carcinogenic risk should be below $1x10^{-5}$, and the Total Hazard Index (HI) should be below 1 for human health risks to be acceptable.

The results of the human health risk assessment for Stratum A are summarized in Table Q below (see Appendix F for the RAIS Output). Refer to Tables 6.1 and 6.2 for a more detailed summary of the risk assessment.

Table Q. Summary of Stratum A Risk Assessment Results

Scenario	Total Carcinogenic Risk	Total Hazard Index
Excavator	1E-07	0.02
Recreator	1E-05	0.3

The Stratum A material poses an acceptable risk to an excavation worker with a total HI of 0.004 and a total carcinogenic risk of $1x10^{-7}$. Likewise, Stratum A poses acceptable hazard index of 0.04 and an acceptable carcinogenic risk of $1x10^{-5}$ for a recreator exposure scenario.

The human health risk assessment of Stratum B material also was evaluated using US EPA's RAIS calculator (see Appendix G for RAIS Outputs). The results of the risk assessment are summarized in Table R below. Refer to Tables 8.1 and 8.2 for a more detailed summary of risk assessment results.

Table R. Summary of Stratum B Risk Assessment Results

	Strata B	
Scenario	Total Carcinogenic Risk	Total Hazard Index
Excavator	4E-08	0.01
Recreator	4E-06	0.1

The Stratum B material poses an acceptable risk to an excavation worker with a total HI of 0.001 and a total carcinogenic risk of $4x10^{-8}$. Stratum B poses acceptable risk to a recreator with a total HI of 0.02 and a total carcinogenic risk of $4x10^{-6}$.

In stratum C, iron was identified at concentrations above DNREC human health screening levels. The maximum concentration was utilized as the input to RAIS in order to assess the risk of dredged material to an excavation worker or a recreator exposure level. The risk assessment calculated a total HI of 0.03 and no total carcinogenic risk for an excavation worker scenario. The risk assessment calculated a total child HI of 0.3 and no total carcinogenic risk for a recreator scenario. Based on the results of this risk assessment, the stratum C material would present acceptable human health risks if placed in a CDF in Delaware. The RAIS output sheets for both the excavation worker and recreator scenarios are included in Appendix H.

e. Summary of Ecological Risk Assessment

The mean total PCB concentration in the sediments composited by volume is approximately five times less than the mean total PCB concentration in the surface water. The PCBs are expected to bind more readily to the sediments rather than transfer to surface water. Duffield estimates that an approximate 2.7 tons of sediment are expected to be removed from the River with adsorbed PCBs during the initial dredging of the site (see calculations in Appendix I). The removal of this material is expected to reduce the availability of substances of concern within the project site. Bio magnification of substances have been demonstrated to occur in the food chain. The removal of these substances from the River sediments within the project area should help to reduce the food chain impacts, which supports the Clean Water Act goal of edible fish. In turn, restrictions on recreational fishing by sediment and water quality will decrease.

After dredged material is removed from the River and sequestered in the WHS CDF, there is the possibility of impact and exposure to terrestrial life. Therefore, the concentrations of compounds have been compared to DNREC screening levels for ecological surface soils. The results are summarized for Stratum A, B, and C in Table S below.

Table S. Summary of Analytical Results above Screening Level for Ecological Surface Soils – Exposure to Terrestrial Life

Analysis	Compound	Above Screening Level for Ecological Surface Soils (Nov 2019)		
		Stratum A	Stratum B	Stratum C
TAL Inorganics	Arsenic	16	5	0
	Chromium	21	20	5
	Cobalt	2	0	1
	Copper	4	3	0
	Lead	14	5	0
	Mercury	7	14	0
	Nickel	8	0	0
	Selenium	14	5	1
	Thallium	7	0	0
	Vanadium	21	20	5
	Zinc	21	20	1

Note: The screening criteria for the ecological surface soils can be found in Tables 1.2 and 1.4.

This screening suggests that Stratum A and Stratum B sediments may pose risks to terrestrial biota. Retention of these sediments in the active WHS CDF should minimize the potential of biota exposures. Strata A and B appear to be of more concern to terrestrial life than stratum C. Since each of the three dredge cycles will include deposits of stratum C material and stratum C likely would be the last material excavated during each cycle, stratum C will likely serve as a makeshift cover that will sequester the strata A and B material. Terrestrial life visiting or using the CDF habitat will ultimately be exposed to chromium, iron, manganese, selenium, vanadium, and zinc concentrations of potential concern, which likely also likely occur in outcrop areas of Potomac Formation soils.

f. Surface Water

Surface water analytical results were used in conjunction with sediment sample results to assess impacts on water quality at the dredge site and the effluent at the dredge storage site, current water quality, additions of substances to the water during dredging and potential for adverse human health and ecological impacts that might result from dredging. This section addresses surface water quality prior to dredging.

The Delaware River Basin Commission's (DRBC's) Water Quality Regulations for Zone 5 were used as the applicable criterion. DRBC criterion are labeled Stream Quality Objectives (SQO). The State of Delaware's Surface Water Quality Regulation are used secondarily when criterion or procedural details are not specified in the DRBC's Water Quality Regulations. Since the Delaware River is not designated as a Public Water Supply, fish and water ingestion criterion are not applicable. Therefore, the fish ingestion criterion have been used in order to assess the effect of current surface water on human health.

Benzo[a]pyrene was detected above the DRBC fish ingestion SQO in one out of the five samples (18 CFR Part 410, Water Quality Regulation, 2013). In comparison to fresh water SQOs for aquatic life, Duffield evaluated the analytical results for chronic and acute exposure. Aluminum was detected above the acute SQO in three out of five samples while copper was detected above the acute SQO in one out of five samples. Aluminum was detected in five out of the five samples at concentrations in excess of the chronic SQO while copper was detected above the chronic SQO in one out of the five samples. Iron was detected above the chronic SQO in four out of the five samples and lead was detected above the chronic SQO in two out of the five samples. TCL VOCs, and total cyanide were not detected. No TCL pesticides were detected in the five surface water samples. The MDL of each some pesticides were higher than their respective SQOs.

Two out of the five surface water samples had total PCB concentrations reported above the Delaware River Basin Commission's (DRBC's) human health fish ingestion SQO as a systemic toxicant of 0.00849 μg/L. Five out of the five surface water samples had total PCB concentrations reported above the DRBC's human health carcinogen fish ingestion SQO of 0.000016 μg/L. No surface water samples had total PCB concentrations reported above the DRBC acute aquatic life SQO of 1.0 μg/. SW-3 was reported at a concentration above the chronic aquatic life criteria of 0.014 μg/L. The results are summarized in Table T below. Further evaluation of the total PCB results is in Appendix C.2.1.3.

Table T. Summary of Total PCB Surface Water Results Comparison to DRBC SQO

Sample ID	Total PCBs (μg/L)		DRBC Freshwater SQOs (μg/L)			
	All Results	Only Valid Results	Acute Aquatic Life	Chronic Aquatic Life	Systemic Toxicants (Fish Ingestion Only)	Carcinogens (Fish Ingestion Only)
SW-1	**0.00243**	**0.00227**	**1.0**	**0.014**	**0.00849**	**0.000016**
SW-2	**0.0095**	**0.00939**				
SW-3	**0.0226**	**0.0225**				
SW-4	**0.00327**	**0.00311**				
SW-5	**0.00643**	**0.00632**				

When calculating the TEQs, dioxin appears to be the main contributor to toxicity while the furans and dioxin-like PCBs both appear to contribute equally (see Appendix C.2.4). TEQ values were compared to the DRBC's fish ingestion SQO for human health as 2,3,7,8-TCDD (5.1 x 10^{-9} µg/L). Five out of the five surface water samples collected had dioxin TEQ values above the DRBC SQO. See Table U below for a summary of the evaluation.

Table U. Summary of Dioxin TEQ Surface Water Results

Sample ID	**Dioxin TEQs (µg/L)**	**DRBC Freshwater SQOs for 2,3,7,8-TCDD (µg/L)**				
	Only Valid Results	Acute Aquatic Life	Chronic Aquatic Life	DRBC SQO Systemic Toxicants (Fish Ingestion Only)	**Carcinogens (Fish Ingestion Only)**	**DE SWQS Systemic Toxicants (Fish Ingestion Only)**
SW-1	**1.30E-07**					
SW-2	**6.74E-07**					
SW-3	**1.95E-06**	**-**	**-**	-	**5.1E-09**	**6E-07**
SW-4	**1.24E-07**					
SW-5	**7.79E-07**					

Most TAL inorganic analytes were detected in each of the surface water samples. However, there were no inorganic substances reported above the DRBC SQOs. While the method detection limit (MDL) was above the human health DRBC SQO, beryllium was not detected. Aluminum concentrations are reported above the DRBC fresh water chronic SQO for aquatic life of 87 ug/L in five out of the five samples and above the fresh water acute SQO for aquatic life of 750 ug/L in three out of the five samples. Lead concentrations are reported above the DRBC's fresh water chronic SQO in two out of the five samples. Copper concentrations are reported above the chronic SQO in one out of the five surface water samples, and above the acute SQO in three out of the five surface water samples.

The river water pH values ranged from 5.9 to 7.4. For comparison, the SWQ Standard specify a pH range of 6.5 to 8.5 with a 0.5 standard unit difference due to human-induced change as per Section 4.5.3.1 of the Clean Water Act.

Substances of potential human health and ecological concern in the surface water are summarized in Table V below.

Table V. Summary of Substances of Potential Concern

Substances of Potential Human Health Concern	**Substances of Potential Ecological Concern**
Dioxins, Furans, and Dioxin-like PCBs	Aluminum
Total PCB	Benzo[a]pyrene
	Dioxins, Furans, and Dioxin-like PCBs
	Lead
	Total PCBs

g. Comparison of 2016 to 2019 Sampling Event Results

Comparison of Sediment Analytical Results - 2016 and 2019

During the 2016 sampling event, five composite samples were collected that included strata A, B, and C. Further evaluation of the composite sample results compared to the Stratum A (referred to as mudline samples in 2016) results during the same event suggests that the composite samples generally contain fewer substances of concern and lower concentrations than the samples containing Stratum A material alone. As per the "Plan for Sediment Sampling and Analysis," Duffield anticipated that substances concentrations in Stratum B material would be found at lower concentrations than the composite samples from the 2016 sampling event. In comparing the composite samples containing both Stratum A and Stratum B to the samples containing only Stratum B, there are more PAH compounds identified above the ecological standard in the 2016 sampling event. Inorganics results in 2019 look similar to 2016 results. Manganese concentrations appear to be slightly lower in the 2016 results. Generally, selenium concentrations are lower in 2019 than 2016 results.

Mudline samples from the October 2016 sampling event are fairly consistent with the magnitude of concentrations and the compound concentrations that are elevated above ecological fresh water sediment screening levels in the Stratum A samples during the July 2019 sampling event. In general, reported PAH compounds and TAL inorganic concentrations were above screening levels. Chromium is universally present and ubiquitous in the samples analyzed in 2016 and 2019 but is not reported at concentrations above human health or ecological screening levels. A few pesticides were detected in the 2019 sampling event while no pesticides were detected in the 2016 event. Toluene was not reported above the ecological screening level in the 2019 evaluation, but was reported above the ecological screening level in the 2016 evaluation.

Testing results for 2016 stratum C samples are discussed in Section XII.c. No further evaluation of stratum C was done as part of the July 2019 sampling event.

Comparison of Surface Water Analytical Results - 2016 and 2019

The analytical results from the October 2016 surface water sampling event were compared to the July 2019 analytical results to provide a larger dataset and a view of the Edgemoor site spanning several years. This comparison also serves to emphasize consistencies and inconsistencies between these datasets so as to improve the overall understanding of the Edgemoor site water quality.

One surface water was collected during the October 2016 sampling event. TCL SVOCs and pesticides were not detected in samples from the October 2016 event. Substances from a subset grouping of TCL SVOC known as PAH compounds were detected in the July 2019 surface water samples. While most of the reported concentrations of PAHs were less than the DRBC SQOs, the concentration of benzo(a)pyrene exceeded the DRBC SQO in one out of the five samples. The benzo(a)pyrene concentration in the one sample exceeded the DRBC SQO for carcinogens through fish ingestion.

The five surface water samples collected during the July 2019 event and the surface water sample collected during the October 2016 event yielded total PCB concentrations and TEQs that were detected above the human health DRBC SQOs for human carcinogens and systemic toxicants. Concentrations of total PCBs in the July 2019 event generally were two orders of magnitude higher than during the 2016 event. TEQ values generally were of similar magnitude in both sampling events. TEQ values were driven by dioxin and furan TEQs. From an ecological perspective, one out of the five total PCB results was reported above the chronic DRBC SQO in the July 2019 event, which was not detected above aquatic DRBC SQOs in the October 2016 event.

Aluminum concentrations were reported above the chronic and acute DRBC SQOs in the July 2019 sampling event similar to the results reported from the October 2016 event, which had yielded concentrations of similar magnitude. In addition aluminum, copper, iron, and lead were reported above either the chronic or acute DRBC SQOs.

Overall, the detection of total PCBs and TEQs above human health DRBC SQOs and the detection of aluminum above the aquatic life DRBC SQOs are consistent between sampling events. These consistencies are significant when discussing compliance with DRBC SQOs both during dredging and during discharge of effluent from the CDF, discussed in section XIV.

XIII. Dredge Material Management

The Edgemoor site will be dredged in three cycles. Each dredge cycle is expected to occur in a one- to three-month time period over three consecutive years and dredging will not be continuous. The projected volume of material to be dredged during each cycle can be found in Table W within Section XIV of this report. Calculations in this report are based on the dredge cycles and volumes of material found in Table W. Currently, the project plan is to place the dredge slurry into WHS CDF, where the water can be separated from the sediment in the slurry and returned to the Delaware River. The solids will continue to dry in the CDF, a process that will take a considerable number of years to occur, especially for the silts (Stratum A) and clays (stratum C). More details regarding the composition and characteristics of the material at the project site can be found in the Geotechnical Data Report.

Based on the presence and physical nature of strata A, B, and C, there appear to be three options for reuse of dredge material at the site.

Option 1: Separate material for reuse during removal from the Delaware River.

Option 1 has been evaluated for reusing material and appears to be a feasible option for reuse in terms of the physical presence of Stratum B provided that Stratum B material is found at relatively consistent depths. Stratum B material was found at varying thicknesses across the area to be dredged. According to the July 2019 sampling event, some locations contain no Stratum B material or solely Stratum B material. However, Stratum B makes up approximately 28% of the material to be dredged and is found at a thickness of 12 to 19 feet along the shoreline extending approximately 500 feet towards the navigation channel (see Figures 5 and 6). The distribution of Stratum B suggests conditions that are feasible for separation of material for reuse.

Stratum B material is described as fine to medium sand , little to and silt, trace to some fine gravel, trace to little coarse sand (medium to very dense). USCS labels that apply to Stratum B samples generally include SM, SP, SW, SC, SP-SM, and SW-SM. Though the presence of Stratum B material suggests that the separation of Stratum B material from Stratum A material is feasible, hydraulic dredging does not easily lend itself to stable self-segregation of materials due to the need for creating separate storage and drying facilities for the separate dredged materials. Such facilities can add substantial costs to a dredging project and may also be limited by the available space for drying and storage. A smaller production capacity hydraulic dredge or a bucket dredge might reduce the water volume of storage and drying facilities for the desired material, in this case Stratum B, but might add considerable excavation and transportation costs to get the excavated material to the storage and drying location

Redevelopment of the site as a container port and raising the riverfront portion of the site to reduce threats posed by flooding and sea level rise likely will require 100,000 to 300,000 cubic yards of fill material, depending on choices made during detailed grading design. To facilitate direct use of Stratum B material as a source of this fill, facilities would need to be constructed on site to confine the wet excavated material, promote separation and drying of the material, and return water to the Delaware River in a controlled manner and suitable quality. The entire process would need to synchronize with other port construction activities. This option might include the use of a second, smaller production capacity hydraulic dredge that would be dedicated to excavating Stratum B for reuse on site. The lower capacity would ease water management requirements. Analysis of human health and ecological risks in the following section suggests that Stratum B would be acceptable for use at the port facility. The feasibility of using up to 300,000 cubic yards of the project 925,000 cubic yards of Stratum B material is being evaluated in detail as design development for the port progresses.

Option 2: Separate material within the existing CDF.

Option 2.a would use the existing CDF without significant alteration and a single hydraulic dredge and slurry pipeline. Initial evaluation of this option suggests that it probably is infeasible for supporting sediment reuse. Due to the faster settling rate and greater density of sand particles in Stratum B compared to strata A and C, the separation of Stratum B material from strata A and C would be possible when the excavated dredge material is deposited in the CDF. It should be noted that the dredging of material will be performed in three cycles each for a period of one to three months with a nine- to eleven-month waiting period between cycles. Due to the time constraints placed on the dredging of the Edgemoor site and CDF maintenance, the timeframe during which material can be extracted from Wilmington Harbor South (WHS) is a significant factor in reuse potential. The US Army Corps of Engineers (USACE) has been maintaining WHS and dewatering the CDF over a 3-year period, but have not developed a ‘crust’ that is capable of supporting the equipment (e.g., trucks, excavators, and bulldozers) necessary for the extraction of material for reuse. In addition, the cost associated with extraction of the material from the CDF is greater than the minimal cost of obtaining and transporting material from a gravel pit. Therefore, Option 2 does not appear to be feasible due to the absence of support for the equipment necessary to extract materials for reuse within a workable project schedule.

Option 2.b would include construction of separate cells within the existing CDF to receive and dry the Stratum B materials independently from strata A and C materials. The separate cells would need to be arranged to facilitate the flow of water to the existing controlled outlet to the Delaware River. The feasibility of this option is being further considered as part of the design development process for the project. The additional assessment will include an analysis of the ability to physically reconfigure the available volume of the existing CDF into multiple cells of sufficient volume to handle the separate dredge slurries. Additionally, the further assessment will evaluate the use of a single large capacity dredge and multiple dredges with different production capacities, as well as slurry pipeline configurations that would be required to transport the slurries from the dredge site and deliver them to the separate cells. Appropriate and marketable, non-residential uses for the separated Stratum B material after drying will also be considered.

Option 3: Reuse land after filling of the CDF – Wilmington Harbor South

Option 3 has been evaluated for reusing dredged material, and appears to be a feasible option for sediment reuse. The volume of material initially being dredged at the Edgemoor site will use most of the available volume of WHS. Similar to the WHS land area, the Port of Wilmington was built using miscellaneous fill and dredge material. Therefore, based on the Port of Wilmington's use of previously dredged material as a port facility, it is probable that WHS can be reused as part of the port upon completion of dredge disposal, drying, and management of the CDF. DSPC already owns one of the tax parcels of land that the CDF occupies. The other parcel is owned by USACE and would need to be transferred to DSPC under this reuse scenario.

a. Reuse Risk Assessment

Risk assessments were performed using RAIS in order to evaluate the circumstances under which strata A and B material might be suitable for reuse. In addition to the risk assessments previously discussed for the recreator and excavator scenarios, three more scenarios were evaluated using the US EPA's RAIS calculator including the outdoor worker, composite worker and resident. The composite worker simulates an adult who could potentially be exposed to shallow sediment during activities at a reuse site. The outdoor worker scenario assumes a worker in contact with both the shallow sediments and a mix of shallow and deep sediments during construction activities at a reuse site. The residential exposure scenario assumes an occupied residence on a reuse site. Under this land use, residents are expected to be in frequent, repeated contact with the sediment at a shallow depth. A summary of the results for the risk assessments evaluated for each scenario can be seen in Table W below. See Tables 6.1 through 6.4 and 8.1 through 8.4 for further details regarding the risk assessments for strata A and B, respectively, and Appendices F and G for the RAIS output details.

Table W. Summary of Material Reuse Risk Assessment Results

	Stratum A		Stratum B		Stratum C	
Scenario	**Total Carcinogenic Risk**	**Total Hazard Index**	**Total Carcinogenic Risk**	**Total Hazard Index**	**Total Carcinogenic Risk**	**Total Hazard Index**
Excavator	1E-07	0.02	4E-08	0.01	None	0.03
Recreator	1E-05	0.3	4E-06	0.1	None	0.3
Composite Worker	1E-05	0.1	4E-06	0.05	None	0.1
Outdoor Worker	1E-05	0.1	4E-06	0.04	None	0.1
Resident	**5E-05**	**2**	**2E-05**	0.6	None	**2**

On the basis of human health risk, the reuse of the strata A, B, and C material should be restricted to non-residential purposes. In strata A, B, and C, the resident is the only exposure scenario that does not pose acceptable human health risk.

Concentrations of substances in dried sediment materials also were compared to the ecological surface soil screening levels in order to determine substances that may be of concern to terrestrial life. If the sediment would remain in the CDF after drying, the potential for terrestrial biota exposures would be limited. Subsequent redevelopment of WHS at part of the Port of Wilmington likely would further reduce terrestrial biota exposure. Stratum B materials would be ecologically suitable for reuse at the Edgemoor site as structural fill where they would be confined and likely covered by pavements which would reduce terrestrial ecological exposures to the metals in the material. Stratum B material used under similar circumstances at other non-residential sites probably would be suitable as well.

XIV. Water Quality Evaluation

During hydraulic dredging of the Edgemoor site, there likely will be substances that dissolve into the water column from the sediment. Substances are also likely to dissolve into the river water used to entrain the sediment during dredging and flow as part of the dredge slurry to WHS CDF. The water flowing to WHS CDF eventually will be returned to the Delaware River as effluent from the CDF, after much of the suspended sediments have settled out from the slurry.

Water quality has been assessed based on the anticipated use of hydraulic dredging and management of dredged material within the WHS CDF. The concentrations of each substance anticipated in the water column during dredging and in the discharge from the CDF were compared to the DRBC's SQOs for the acute and chronic exposure of aquatic life to substances within a freshwater environment (DRBC, 2013). The acute SQOs are appropriate for a 1-hour exposure, while the chronic SQOs are appropriate for a 4-day exposure period. Freshwater standards were used for ecological screening since a fresh water body is defined as a water body with a salinity of 5 parts per thousand (ppt) or less (DE SWQS, 2018). The salinity of the Delaware River at the Edgemoor site, typically, is less than 1 ppt.

Evaluation of Water Quality during Dredging

During dredging, the dredge cutterhead will disturb the sediment. Potentially, some of the disturbed sediment will be released to the river water at the dredged site. Surface water was evaluated in Section XII.f for current risks to human health and aquatic life. The sediment dissolved into the river water might add to those risks. In order to estimate the concentration of each substance released to the water column, the following calculations were performed with guidance for calculations from DNREC Division of Water Resource's *Near-Field Metals Conc behind Cutterhead Dredge* calculations (Greene, R. 2010):

1. The total suspended solids (TSS) concentration at a point 200 feet down-current from the hydraulic cutterhead while material is being disturbed is an estimated 250 mg/L (Greene, R. 2010). This assumed TSS is the performance standard given to the Army Corps for the edge of a near-field mixing zone with an allowable size of 5 times the existing water depth. The estimated TSS of 250 mg/L was then used to calculate the estimated amount of each compound sorbed to sediment (C_s) using the octanol-water partitioning coefficient for each respective substance (K_{ow} or K_d) or equilibrium partitioning coefficient (K_{eq}). A

fraction of each substance expected to be in dissolved (f_d) and particulate (f_p) form was determined using the equations below. The Total Organic Carbon (TOC) values used for these calculations are derived from the 95% UCL TOC values for both Strata A and B tabulated in Table 3, Summary of Statistics:

For Organics (VOCs, Pesticides, PAH, and PCBs):

Log K_{oc} is known

$K_{oc} = 10^{Log\ Koc}$ (6)

$K_{eq} = (2 \times [TOC]_{ABC} \times K_{oc})/(1+([TSS]_{inf,1}/10^6) \times (TOC_{ABC}) \times (K_{oc}/1.4))$ (7)

$f_d = 1/(1 + (K_{eq} \times TSS)/10^6)$ (8)

$f_p = (K_{eq} \times TSS/10^6) / (1 + (K_{eq} \times TSS/10^6))$ (9)

For Inorganics (Metals except for aluminum):

Log K_d is known

$f_d = 1 / (1 + TSS/1{,}000^2 \times 10^{Log\ Kd})$ (10)

$f_p = 1 - f_d$ (11)

For Aluminum:

Based on the 95% UCL pH of 7 for each stratum, the aluminum solubility is approximately 10^{-7} M and the concentration of aluminum is approximately $10^{1.19}$ μg/L, which reduces to approximately 15.5 μg/L (Greene, R. 2010). This value is the estimated maximum dissolved concentration. The remaining concentration of aluminum is considered to still be sorbed to particulate.

2. For organics, an estimated pore water concentration (C_{pw}) was calculated by multiplying the estimated TSS concentration of 250 mg/L by the concentration of the substance in the sediment (C_{sed}), and dividing by 1,000 to account for unit conversions (Eq. 12). The pore water concentration was then divided by the fraction of the substance expected to be in the particulate form (f_p) in order to obtain the total concentration of the substance in either the particulate or dissolved form as shown in Eq. 13 below.

$C_{pw} = (TSS \times C_{sed}) / 1{,}000$ (12)

$C_T = C_{pw} / f_p$ (13)

For inorganics, the total concentration of the substance in either the particulate or dissolved form was calculated by multiplying the estimated TSS concentration by the concentration of the substance in the sediment (C_{sed}), and dividing by 1,000 to account for unit conversions (Eq. 14). SEM/AVS ratios previously calculated for bivalent metals (e.g., cadmium, copper, lead, nick, zinc, and mercury) suggest that such metals are not in soluble form. SEM/AVS ratios for bivalent metals have been neglected in order to be conservative about the bivalent metal concentrations that could be present in the slurry and effluent.

$C_T = (TSS \times C_{sed}) / 1{,}000$ (14)

3. The concentration of the substance in the dissolved form was calculated by multiplying the fraction of the substance concentration dissolved by C_T (Eq. 15). The concentration of the substance in the particulate form was calculated by multiplying the fraction of the substance concentration in the particulate form by C_T (Eq. 16).

$$C_d = f_d \times C_T \qquad (15)$$
$$C_p = f_p \times C_T \qquad (16)$$

The results of the above calculations are summarized in Tables 9.1, 9.2, and 9.3 for strata A, B, and C water quality, respectively. The dissolved concentrations attributable to substances released from sediment were compared to the DRBC SQOs for both acute and chronic exposure of substances to aquatic life in freshwater environments, as well as human health fish ingestion objectives for carcinogens and systemic toxicants.

Based on the calculations performed above, the dissolved concentrations attributable to substances released from sediment during dredging are not elevated above the acute SQOs. Stratum A material has projected concentrations of 4,4'-DDE, total PCBs, and copper above the chronic SQOs. Stratum B samples projected 4,4'-DDE concentrations elevated above the chronic SQO as well. Stratum C does not have calculated substance concentrations elevated above the chronic DRBC SQOs. Based on this evaluation, aquatic life is not expected to be impacted by acute exposures which occur over a 1-hour time period. Aquatic life is expected to be impacted by concentrations of substances through chronic exposures which occur over a 4-day time period.

In comparison to human health carcinogens through fish ingestion SQOs, Stratum A material has projected concentrations of 4,4'-DDD, 4,4'-DDE, TEQs (including dioxins, furans, and dioxin-like PCBs), total PCBs, and benzo(a)pyrene. Total PCBs concentrations also are elevated above the systemic toxicant SQO. Stratum B material has projected concentrations of 4,4'-DDD, 4,4'-DDE, heptachlor, TEQs (including dioxins, furans, and dioxin-like PCBs), and total PCBs above the human health SQOs for carcinogens through fish ingestion. Stratum C does not have calculated substance concentrations elevated above the human health DRBC SQOs for carcinogens or systemic toxicants.

Dredging conditions are temporary, occurring for one to three months during each of the three years that proposed dredging will occur and will not be continuous. However, the sediments causing exposure to dissolved substances ultimately are being removed from the river. The removal of the sediments from the river will prevent aquatic life exposure to Stratum A and B material, specifically. Stratum C material will encompass the new bottom and, thereby, minimize the long-term exposure of aquatic life to substances of potential concern that were present in Strata A and B that may transfer from sediments to water during dredging activities. The removal and sequestration of sediments containing the substances of concern ultimately will provide a net reduction in concentrations of substances in the sediments in the Delaware River.

Evaluation of CDF Effluent Water Quality

Once material has been dredged from the Edgemoor site and placed into the CDF, the material will settle and the slurry water will be separated from the sediments and be discharged back to the Delaware River. Calculations were performed in order to determine the quality of the dredge effluent compared to the current Delaware River quality and DRBC

SQOs. Both acute and chronic SQOs were used for comparison. Delaware SWQS were used for comparison when a DRBC SQO was not provided for the substance.

1. Calculated an estimated total volume of sediment to be dredged of 3.3 million cubic yards.

2. Determined a median total organic carbon (TOC) for Strata A and B separately.

3. Determined a median percent moisture for Strata A and B separately based on laboratory testing.

4. Determined volume of pore water using the following equation:

$$V_{pw} = V_{dredged} \text{ x } (\% \text{ moisture}) \quad (17)$$

5. Determined the volume of sediment particles using:

$$V_s = V_{dredged} - V_{pw} \quad (18)$$

6. Determined the mass of sediment particles using:

$$m_s = V_s \text{ x } \rho_s \text{ x } (100)^3 \quad (19)$$

7. Calculated the overall volume of water by summing the pore water and river water volumes:

$$V_w = V_{pw} + V_{rw} \quad (20)$$

8. An estimated total suspended solids concentration was then calculated:

$$\text{est TSS} = (m_s / V_w) \text{ x } 1{,}000 \text{ mg/g x } 0.001 \text{ m}^3\text{/L} \quad (21)$$

Where,

V_{pw} = volume of pore water, m^3
$V_{dredged}$ = volume of material being dredged, m^3
% moisture = percent moisture, unitless
V_s = volume of sediment particles, m^3
ρ_s = typical density of sediment particles, 2.65 g/cm^3
m_s = mass of sediment particles, g
$(100)^3$ = conversion from cm^3 to m^3
V_w = volume of water in slurry, m^3
V_{rw} = volume of river water in slurry, m^3
est TSS = estimated TSS concentration in dredge slurry, mg/L

9. Repeat steps 1 – 3 from the evaluation of water quality during dredging.

According to recent real estate approvals issued for use of the United States Army Corps of Engineers (USACE), the following two limitations are required to be placed on the effluent from the CDF: (1) an instantaneous effluent TSS concentration of 4,000 mg/L and (2) an average TSS concentration of 3,000 mg/L over the period of the project.

The estimated volume of each stratum of material being excavated during each dredge cycle has been utilized to calculate the quality of effluent to be discharged from the CDF. The sediment concentration taken into consideration for the effluent concentration of each compound was calculated in proportion to the estimated dredge volume during each dredging cycle. Calculations for this CDF effluent water quality evaluation were performed using the most recently estimated volumes of material to be dredged from strata A, B, and C. The proportions by volume considered during each dredging cycle are shown in Table X below.

Table X. Volume of Material Dredged Per Dredge Cycle

Dredging Cycle	Dredging Volume (cubic yards)
Dredge 1	
Stratum A	915,000
Stratum B	925,000
Stratum C	400,000
Dredge 2	
Stratum C	700,000
Dredge 3	
Stratum C	385,000

The effluent from the CDF was calculated using the concept of mass balance in a batch scenario at steady-state conditions as shown below. An effluent concentration was calculated without TSS limitations and with both average and instantaneous TSS limitations.

According to the DRBC Water Quality Regulations, the SQOs developed for arsenic, cadmium, chromium, copper, lead, mercury, nickel, silver, and zinc are to be compared to the total dissolved form. In the case of these metals, the substance concentration within the effluent from the CDF was calculated as follows:

[Surface Water Concentration] + [Dissolved Sediment Concentration] =
[Effluent Concentration] (22)

In the case of aluminum, iron, and selenium, the SQOs are to be compared to the total recoverable metals concentration, which, according to the US EPA, can be used to refer to the total metals concentration interchangeably (1998). The substance concentrations of aluminum, iron, and selenium within the effluent from the CDF were calculated as in Equation 23 below. Again, calculations for bivalent metals (e.g., cadmium, copper, lead, nick, zinc, and mercury) are considered conservative. Bivalent metals concentrations are expected to be lower than these estimates based on the SEM/AVS results. These estimates ignore the results of the SEM/AVS analyses that suggest that cadmium, copper, lead, nick, zinc, and mercury are not in soluble form.

[Surface Water Concentration] + [Dissolved Sediment Concentration] + 0.2 x [Sediment Concentration] = [Effluent Concentration] (23)

The calculated effluent concentrations during each cycle of dredging were then compared to the DRBC SQOs for the acute and chronic effect on aquatic life within a freshwater environment. The results for strata A, B, and C are summarized in Tables 10.1, 10.2, and 10.3, respectively, and an example calculation is in Appendix J.

Based on these results, aluminum and chromium concentrations are elevated above the DRBC SQOs during the three dredging cycles while copper concentrations are elevated above the DRBC SQO during the first dredging cycle. The elevated aluminum concentrations primarily are due to the elevated concentration that currently exists in the Delaware River water, based on the reported surface water sample analytical results. The calculations performed above for the aluminum concentration dissolved into water are based on the pH of the water. Therefore, the concentration of aluminum dissolved does not fluctuate based on the amount of TSS present. Aluminum is a naturally occurring element in the River sediments and background concentrations of aluminum are present.

The limit to the TSS concentration in the effluent was adjusted according to the most recent real estate approvals issued for use of the United States Army Corps of Engineers (USACE). The resulting concentrations of substances returning to the river ($C_{R,f}$) were then calculated at an average TSS concentration of 3,000 mg/L and an instantaneous TSS concentration of 4,000 mg/L using a mass balance equation as shown below. The worst-case scenario is the area of a mixing zone during a period when there is little to no river water movement through the mixing zone near the point of CDF discharge. A time period of 30 minutes represents the approximate duration of low velocity flow on both sides of slack tide. During that period, the volume of water in the mixing zone can be assumed to be unchanging (constant). The mass balance of mixing has been assessed on a volume basis over a fixed time period of 30 minutes.

$$(V_{R,f} \times C_{R,f}) = (V_{R,i} \times C_{R,i}) + (V_{eff} \times C_{eff}) \qquad (24)$$

Where,

$V_{R,f}$ = final volume of river mixing zone, cubic feet (ft^3)

$C_{R,f}$ = final concentration of substance in river mixing zone, µg/L

$V_{R,i}$ = initial volume of river mixing zone, ft^3

$C_{R,i}$ = initial concentration of substance in river mixing zone (equivalent to the median surface water concentration reported by analytical results), µg/L

V_{eff} = volume within effluent from CDF within fixed time frame, t, in units of ft^3

$$V_{eff} = Q_{eff} \times t \qquad (24.1)$$

Where,

t = time period in mixing zone around slack tide, seconds (assumed to be 30 minutes or 1,800 seconds)

Q_{eff} = initial flowrate of effluent from CDF, cubic feet per second (cfs) (equivalent to the broad weir flowrate)

Broad Weir Flowrate (Streeter V. and Wylie, B. (1975) *Sixth Edition Fluid Mechanics*. New York, New York: McGraw-Hill, Inc.):

$$Q_{eff} = 3.09 \times L \times H^{3/2} \qquad (24.2)$$

Where,

L = approximate length of weir, ft = 8 ft

H = assumed hydraulic head at the weir, ft = 0.2 ft

*Footnote: The discharge from the WHS CDF is controlled through an outlet structure. Flashboards are added or removed to control the flowrate from the CDF, which is adjust to maintain TSS concentrations to the allowable levels. The flowrate assumed is typical of the effluent rate needed to maintain a TSS of approximately 3,000 mg/L.

C_{eff} = concentration of substance in CDF effluent (as determined above), µg/L

In a steady-state condition,

$$V_{R,f} = V_{R,i} + V_{eff} \qquad (25)$$

Where $V_{R,i}$ and V_{eff} are known.

Substituting for $V_{R,f}$ and solving for $C_{R,f}$, the following equation was used to determine the concentration of each substance in the river mixing zone.

$$C_{R,f} = (C_{R,i} \text{ x } V_{R,i} + C_{eff} \text{ x } V_{eff}) \ / \ (V_{eff} + V_{R,i}) \qquad (26)$$

A concentration of substances at the effluent of the CDF was calculated using the average effluent TSS concentration over the period of the project, 3,000 mg/L (see Tables 11.1 through 11.3), and the instantaneous effluent TSS concentration limit of 4,000 mg/L (see Tables 12.1 through 12.3). A percent reduction from the influent to the effluent of the CDF was then calculated for substances with concentrations elevated above the DRBC SQO (see Eq. 27 below).

$$(\text{\% concentration reduction}) = (C_{inf} - C_{eff}) / (C_{inf}) \qquad (27)$$

Where,

C_{inf} = concentration of substance at influent of CDF and [TSS] slurry, µg/L
C_{eff} = concentration of substance at effluent of CDF and [TSS] = 3,000 or 4,000 mg/L

The concentrations of substances in the influent slurry have been calculated compared to DRBC SQOs for human health and aquatic life. This evaluation has been done for substances at concentrations above the DRBC SQOs for human health and aquatic life without limitations on the TSS concentration in the effluent. The influent concentrations that are elevated above the DRBC SQOs for both carcinogens and systemic toxicants from fish ingestion by humans include the following:

- After Dredge Cycle 1:
    - 4,4’-DDD,
    - 4,4’-DDE,
    - 4,4’-DDT,
    - heptachlor, and
    - total PCBs
- After Dredge Cycles 2 and 3:
    - total PCBs.

As compared to the acute DRBC SQOs, total PCBs, aluminum, and copper are calculated at concentrations in the influent slurry elevated above the SQOs during dredge cycle 1. During dredge cycle 2 and 3, aluminum and copper concentrations are elevated above the acute SQOs. As compared to the chronic DRBC SQOs, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, heptachlor, total PCBs, aluminum, cadmium, and copper are calculated at concentrations elevated above the SQOs during dredge cycle 1. Total PCB, aluminum, and copper concentrations are above chronic DRBC SQOs during dredge cycles 2 and 3.

Based on the influent slurry concentrations of substances calculated above the DRBC SQOs, the final concentration of each substance was evaluated with either the average or the instantaneous TSS concentration limit in place for the USACE CDF. Tables Y and Z below show the resulting concentrations of each substance in the river after being discharged from the CDF.

Table Y. CDF Effluent Concentrations @ TSS_{avg} = 3,000 mg/L

Substance	Calculated Effluent Concentration (C_{eff})	Calculated Final Concentration in River Mixing Zone ($C_{R,f}$)	Mean Ambient River Concentration ($C_{R,i}$)	DRBC SQOs Acute	DRBC SQOs Chronic	DRBC SQOs Carcinogens - Fish Ingestion Only	DRBC SQOs Systemic Toxicants - Fish Ingestion Only
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Dredge Cycle 1							
4,4'-DDD	0.0032	3.0E-06	ND	**1.1**	**0.001**	**0.00031**	**0.037**
4,4'-DDE	0.0110	1.0E-05	ND	**1.1**	**0.001**	**0.00022**	**0.037**
4,4'-DDT	0.00100	9.3E-07	ND	**1.1**	**0.001**	**0.00022**	**0.037**
Heptachlor	0.00100	9.3E-07	ND	**0.52**	**0.0038**	**0.000079**	**0.18**
Total PCBs	0.738	**0.006**	0.00550	**1.0**	**0.014**	**0.000016**	**0.00849**
Aluminum	8,040	**892**	885	**750**	**87**	-	-
Cadmium	0.237	0.000220	ND	**1.0**	**0.141**	-	**16**
Copper	16.8	6.01	6	**9.6**	**6.5**	-	-
Dredge Cycle 2							
Total PCBs	0.000673	**0.00550**	0.00550	**1.0**	**0.014**	**0.000016**	**0.00849**
Aluminum	6,160	**890**	885	**750**	**87**	-	-
Copper	11.5	6.01	6	**9.6**	**6.5**	-	**750**
Dredge Cycle 3							
Total PCBs	0.00673	0.00550	0.00550	**1.0**	**0.014**	**0.000016**	**0.00849**
Aluminum	6,160	**890**	885	**750**	**87**	-	-
Copper	11.5	6.01	6	**9.6**	**6.5**	-	**750**

Based on the above, aluminum concentrations during each of the three dredge cycles are estimated to be above the DRBC SQOs for acute and chronic effects on aquatic life as well as the human carcinogens and systemic toxicants absorbed through fish ingestion. The total PCB concentrations during each of the three dredge cycles appear to be above the DRBC SQO for human carcinogens absorbed through fish ingestion.

Table Z. CDF Effluent Concentrations @ TSS_{inst} = 4,000 mg/L

Substance	**Calculated Effluent Concentration (C_{eff})**	**Calculated Final Concentration in River Mixing Zone ($C_{R,f}$)**	**Mean Ambient River Concentration ($C_{R,i}$)**	**DRBC SQOs Acute**	**DRBC SQOs Chronic**	**DRBC SQOs Carcinogens - Fish Ingestion Only**	**DRBC SQOs Systemic Toxicants - Fish Ingestion Only**
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Dredge Cycle 1							
4,4'-DDD	0.0040	3.7E-06	ND	**1.1**	**0.001**	**0.00031**	**0.037**
4,4'-DDE	0.014	1.3E-05	ND	**1.1**	**0.001**	**0.00022**	**0.037**
4,4'-DDT	0.0012	1.1E-06	ND	**1.1**	**0.001**	**0.00022**	**0.037**
Heptachlor	0.0012	1.1E-06	ND	**0.52**	**0.0038**	**0.000079**	**0.18**
Total PCBs	0.957	**0.006**	0.00550	**1.0**	**0.014**	**0.000016**	**0.00849**
Aluminum	10,400	**894**	885	**750**	**87**	-	-
Cadmium	0.246	2.29E-04	ND	**1**	**0.141**	-	**16**
Copper	17.0	6.01	6	**9.6**	**6.5**	-	-
Dredge Cycle 2							
Total PCBs	0.000859	**0.00550**	0.00550	**1.0**	**0.014**	**0.000016**	**0.00849**
Aluminum	7,920	**892**	885	**750**	**87**	-	-
Copper	11.6	6.01	6	**9.6**	**6.5**	-	**750**
Dredge Cycle 3							
Total PCBs	0.000859	**0.00550**	0.00550	**1.0**	**0.014**	**0.000016**	**0.00849**
Aluminum	7,900	**892**	885	**750**	**87**	-	-
Copper	11.6	6.01	6	**9.6**	**6.5**	-	**750**

Based on the above, the total PCB concentration is estimated to be above the DRBC SQO for human carcinogens absorbed through fish ingestion while aluminum concentrations are calculated to be above the DRBC SQOs for acute and chronic effects on aquatic life, as well as the human carcinogens and systemic toxicants absorbed through fish ingestion during each of the three dredge cycles.

Though aluminum concentrations are expected to be elevated above DRBC SQOs upon entering the river mixing zone, the initial concentration of aluminum in the river water currently is elevated above the SQO. The removal efficiency of the CDF is expected to be maximized, thereby minimizing the amount by which the concentration of aluminum from the CDF effluent is anticipated to increase the river concentration. Aluminum concentrations are expected to be reduced by approximately 99.5% to 99.7% at an average

TSS limit of 3,000 mg/L over the duration of the project and 99.4% to 99.6% at an instantaneous TSS limit of 4,000 mg/L. Comparing the ambient concentration of aluminum in the river to the final concentration upon re-entry of CDF effluent into the river, the local concentrations of aluminum in the river are expected to increase by approximately 0.7% during dredge cycle 1, and by approximately 0.6% during dredge cycles 2 and 3. The existing aluminum concentration is elevated above the current DRBC SQO for acute aquatic life exposure in a freshwater environment (885 μg/L) by approximately 18% and is approximately 9 times greater than the chronic DRBC SQO for aquatic life. Therefore, Duffield does not consider the increased aluminum concentration in the river as a result of the CDF effluent discharge to be significant.

Final river concentrations of total PCBs during each of the three dredged cycles are expected to be elevated above the DRBC SQO for human health carcinogens absorbed through fish ingestion. The concentration of PCBs currently in the river water are also elevated above the DRBC SQO for human health carcinogens absorbed through fish ingestion. From influent to effluent of the CDF, PCB concentrations are expected to experience an estimated 99.4% to 99.7% removal efficiency when TSS limitations are in place. The current concentration of total PCBs in the river is approximately 340 times larger than the DRBC SQO for human carcinogens absorbed through fish ingestion and below the DRBC SQOs for systemic toxicants, acute exposure for aquatic life, and chronic exposure for aquatic life. The local river concentration of total PCBs is expected to raise the ambient river concentration by approximately 16% during dredge cycle 1, while the local river total PCB concentrations are expected to not be changed due to CDF effluent discharge during dredge cycle 2 and 3. Therefore, the increased final concentration within the river mixing zone is not considered a significant increase in concentration. This finding is further supported by the fact that approximately 2.7 tons of sediment will be removed and sequestered in the CDF with PCBs adsorbed.

XV. Summary of Findings

This report has been prepared as a supplement to the Environmental Assessment (EA) that will be submitted as part of the permitting application for Delaware Subaqueous Land Permit Application and a USACE Individual Permit Application for dredging of a proposed berth and approach channel at DSPC's Edgemoor Site. The Edgemoor site analytical results from the most recent sampling event in July 2019 align with the expected environmental condition discussed in the Plan for Sediment Sampling and Analyses. The results are also consistent with the previous sampling event in October 2016.

Due to the concentrations of PAHs, PCBs, dioxins, furans, and chlorinated pesticides in Stratum A and concentrations of metals in strata A and B that are elevated above the ecological screening levels and/or acute standards for aquatic life in freshwater environments, the removal of these sediments should be beneficial to the aquatic environment of the Delaware River. By removing the sediment and placing the material in the WHS CDF or an appropriate location for reuse, the material will be sequestered and aquatic life will no longer be exposed to substances of potential environmental concern.

In comparison to human health screening levels, the analytical results from the sediment to be dredged pose acceptable risk to human health when placed in an upland storage area. This risk assumes that humans are in contact with the material at the same exposure level as an excavation worker or recreator. The sediments, when dried, would pose acceptable human health risks to a variety of site workers in non-residential reuse applications. The potential for risks to terrestrial biota should limit reuse to locations where terrestrial biota exposure could be limited, such as through the use of pavements or buildings. It should be noted that screening criterion used for comparison were not for specific species. A more detailed risk assessment would need to be conducted to determine impacts to terrestrial biota. Since the CDF previously was an industrial site, there is not expected to be a significant presence of endangered species exposed to the substances of concern.

During dredging, concentrations of substances dissolved into the water column from the sediment are expected to remain below acute DRBC SQOs for aquatic life in a freshwater environment. Stratum A sediments are expected to transfer 4,4'-DDE, total PCBs, and copper concentrations during dredging that are above chronic DRBC SQOs. Stratum B sediments are expected to transfer 4,4'-DDE concentrations to water during dredging that are above chronic DRBC SQOs. Stratum C sediments are not expected to transfer concentrations of substances above the chronic DRBC SQOs. Based on this evaluation, aquatic life is not expected to be impacted by acute exposures which occur over a 1-hour time period. Aquatic life is expected to be impacted by concentrations of substances by chronic exposures which occur over a 4-day time period. However, the removal and sequestration of sediments containing the substances of concern ultimately will provide a net reduction in concentrations of substances in the sediments in the Delaware River.

DRBC human health quality objectives for carcinogens and systemic toxicants absorbed through fish ingestion in freshwater environments were compared to the concentration of substances transferred from sediment to water during dredging. Current recreational uses of the site are limited, and the quality of this portion of the Delaware River does not allow for fish and water ingestion. Human health SQOs were used to illustrate the potential concentrations of substances that will be removed from the river due to the initial dredging activities. Stratum C will be replacing Stratum A as the river bottom at the site. Since the quality of Stratum C material is less impactful than Stratum A to human health, comparatively, the initial dredging activity is expected to bring this portion of the Delaware River closer to the Clean Water Act goal of a swimmable and fishable waterway.

When dredge material is placed in the CDF, suspended sediment material will settle out of the influent dredge slurry while traveling to the effluent discharge location. In the CDF effluent, aluminum and total PCBs are estimated to have concentrations above the DRBC SQOs for acute and chronic exposure to aquatic life and for human health carcinogens and systemic toxicants through fish ingestion. The concentrations of substances were calculated at the anticipated instantaneous and average TSS limits of 3,000 mg/L and 4,000 mg/L, respectively.

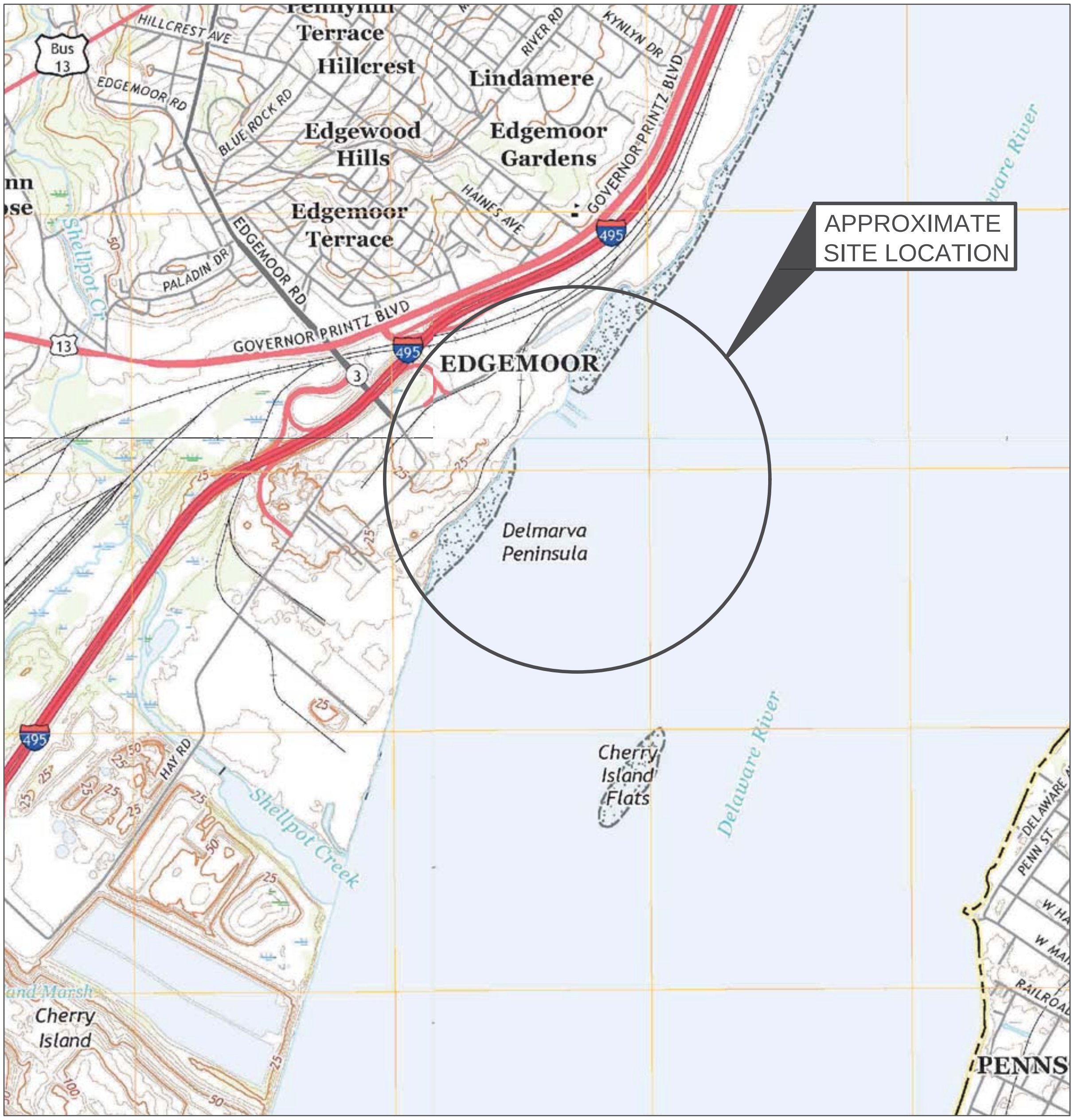
Though total PCB and aluminum concentrations are expected to be elevated above DRBC SQOs upon entering the river mixing zone, the ambient concentration of total PCBs and aluminum in the river water currently is elevated above the SQO as well. By placing the dredge slurry into the CDF, the removal efficiency of the CDF for aluminum and total PCB concentrations is expected to range between approximately 99.4 and 99.7%. Relative to the current concentrations of aluminum and total PCBs in the Delaware River, the increase in concentration due to the CDF effluent in the river mixing zone is considered a minimal impact to the river.

Additionally, the removal of sediment from the project area may aid bringing the sediment and water quality of the River closer to the long term goal of producing edible fish. Fewer substances of potential concern to the environment and aquatic life will be present in the aquatic environment after dredging. The more limited presence of substances of potential concern, specifically organic compounds and chlorinated organic compounds (i.e., polychlorinated biphenyls, dioxins, and furans), will also reduce potential bio magnification of such substances in the aquatic food chain. For instance, the project is expected to remove approximately 2.7 tons of sediment from the local aquatic environment during the initial dredging with PCBs adsorbed.

Reuse of sand material is possible due to the consistent presence of a thick layer of Stratum B material in the area to be dredged (see Figure 6). Based on the human health risk assessment done with RAIS, reuse of the material poses acceptable risks to probable site workers. It is also possible that WHS, upon completion of dredge disposal, drying, and management, has the potential to be reused as part of the Port of Wilmington. Previously, the Port of Wilmington was developed on top of miscellaneous fill and previously dredged material. The WHS CDF could be used in a similar manner. DSPC owns the land under a portion of WHS CDF. The USACE owns the remainder. A real estate transfer would be required to fully implement the reuse scenario.

JLF/MRB:hjd
11139LH.0320-Edgemoor Sediment and Surface Water Quality Assessment.RPT

FIGURES

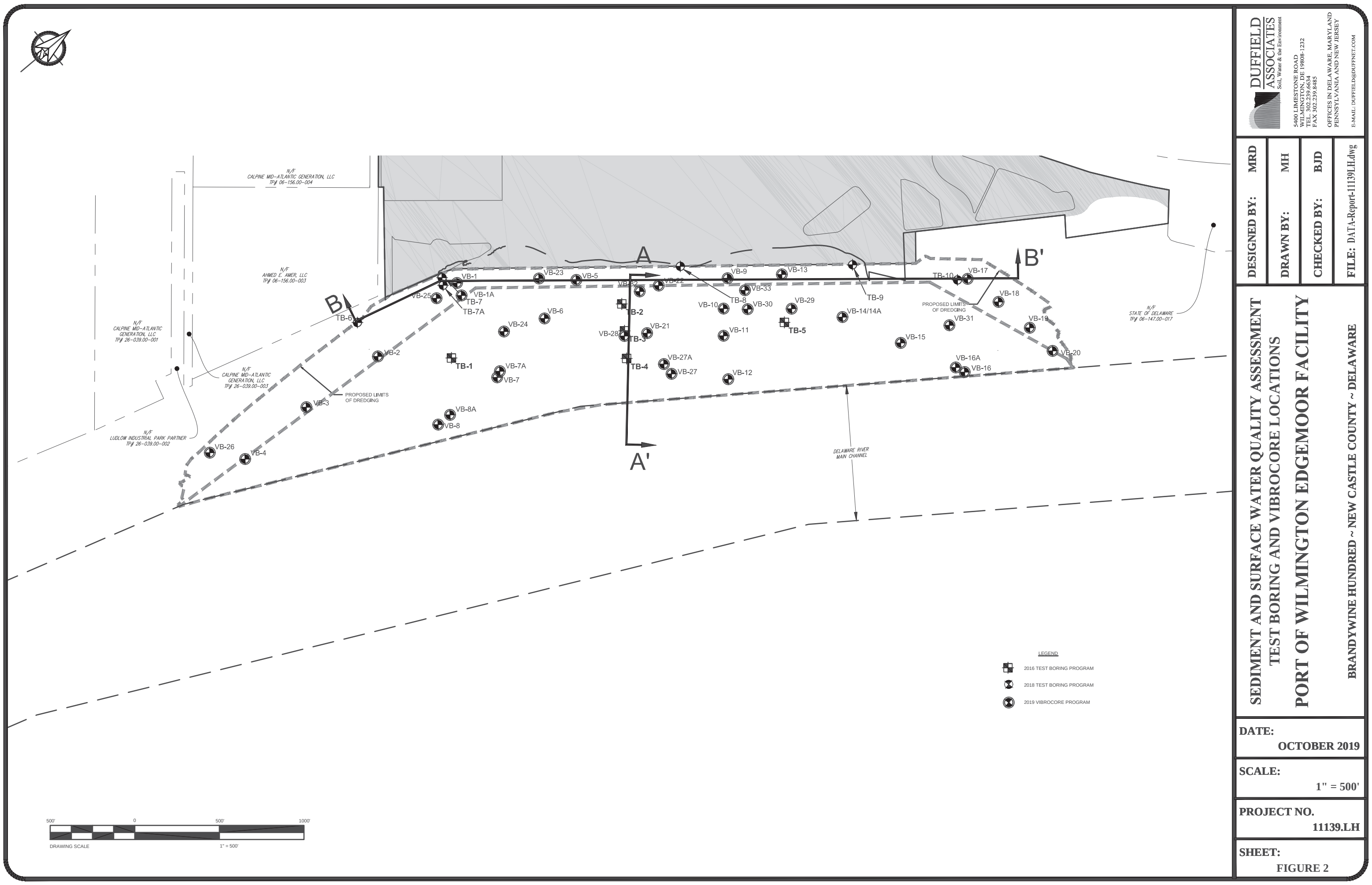


NORTH

NOTE:

THIS SKETCH IS ADAPTED FROM 7.5 MINUTE SERIES U.S.G.S. TOPOGRAPHIC MAPS TITLED "WILMINGTON NORTH, DE-PA", "WILMINGTON SOUTH, DE-NJ", "MARCUS HOOK, PA-DE-NJ", AND PENNS GROVE," DATED 2016.

DATE: 16 OCTOBER 2019	SITE LOCATION SKETCH	DESIGNED BY: IMF	DUFFIELD ASSOCIATES Soil, Water & the Environment
SCALE: 1" = 2000'	PORT OF WILMINGTON	DRAWN BY: IMF	5400 LIMESTONE ROAD WILMINGTON, DE 19808-1232 TEL. 302.239.6634 FAX 302.239.8485
PROJECT. NO. 11139.LH	EDGEMOOR FACILITY	CHECKED BY:	OFFICES IN DELAWARE, MARYLAND PENNSYLVANIA AND NEW JERSEY
SHEET: FIGURE 1	EDGEMOOR ~ NEW CASTLE COUNTY ~ DELAWARE	FILE: A-11139LH-01	E-MAIL: DUFFIELD@DUFFNET.COM


SEDIMENT AND SURFACE WATER QUALITY ASSESSMENT
TEST BORING AND VIBROCORE LOCATIONS
PORT OF WILMINGTON EDGEMOOR FACILITY
BRANDYWINE HUNDRED ~ NEW CASTLE COUNTY ~ DELAWARE
DUFFIELD ASSOCIATES
Soil, Water & the Environment
5400 LIMESTONE ROAD
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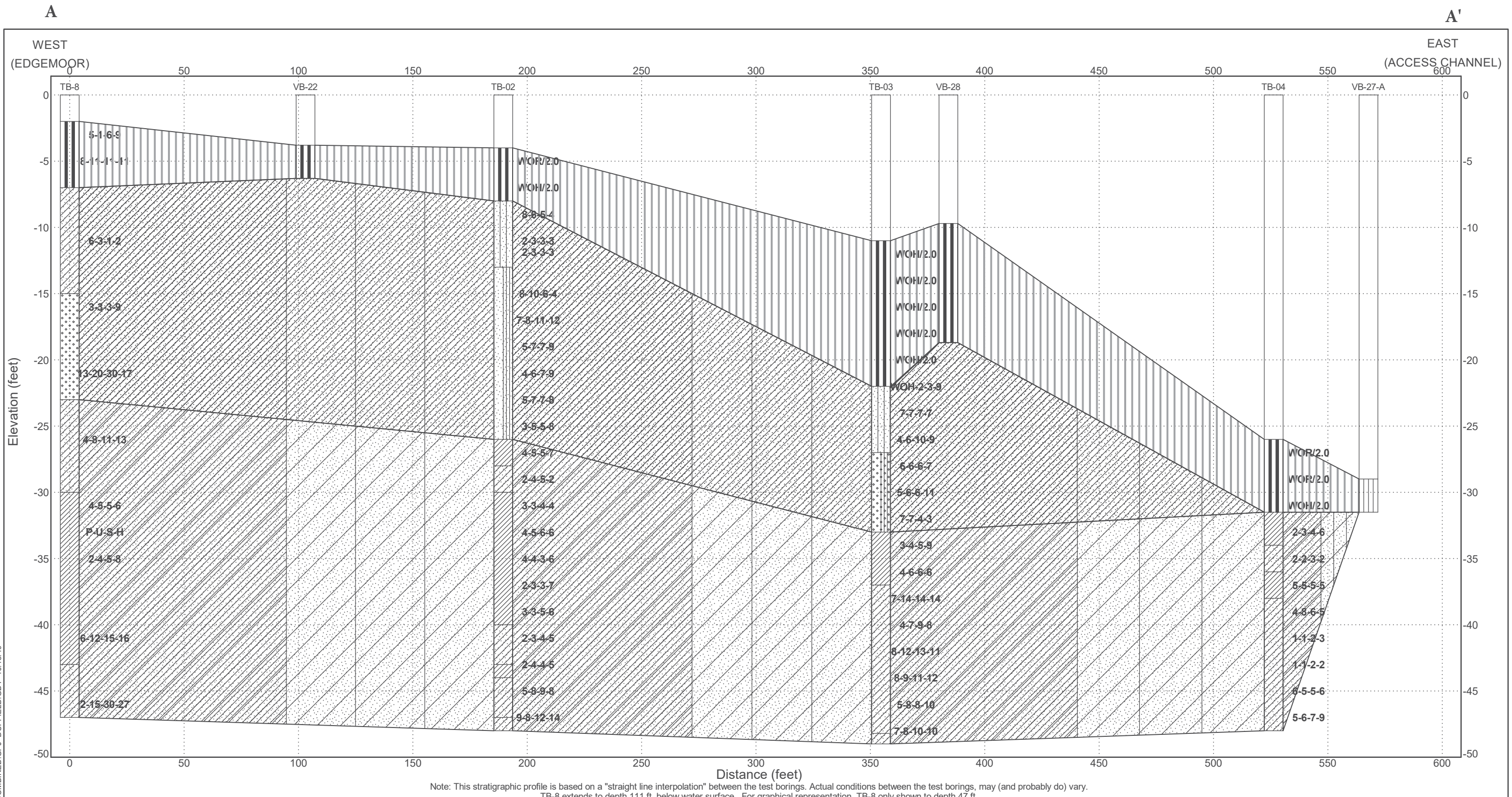
PENNSYLVANIA AND NEW JERSEY
E-MAIL: DUFFIELD@DUFFNET.COM
DESIGNED BY: MRD
DRAWN BY: MH
CHECKED BY: BJD
FILE: DATA-Report-11139LH.dwg
DATE: OCTOBER 2019
SCALE: 1" = 500'
PROJECT NO. 11139.LH
SHEET: FIGURE 2
LEGEND
2016 TEST BORING PROGRAM
2018 TEST BORING PROGRAM
2019 VIBROCORE PROGRAM
PROPOSED LIMITS OF DREDGING
DELAWARE RIVER MAIN CHANNEL
A
A'
B
B'
DRAWING SCALE
1" = 500'



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Soil, Water & the Environment

LEGEND

LITHOLOGY

(MH), (ML) — STRATUM A: High Plasticity Silt Sediment

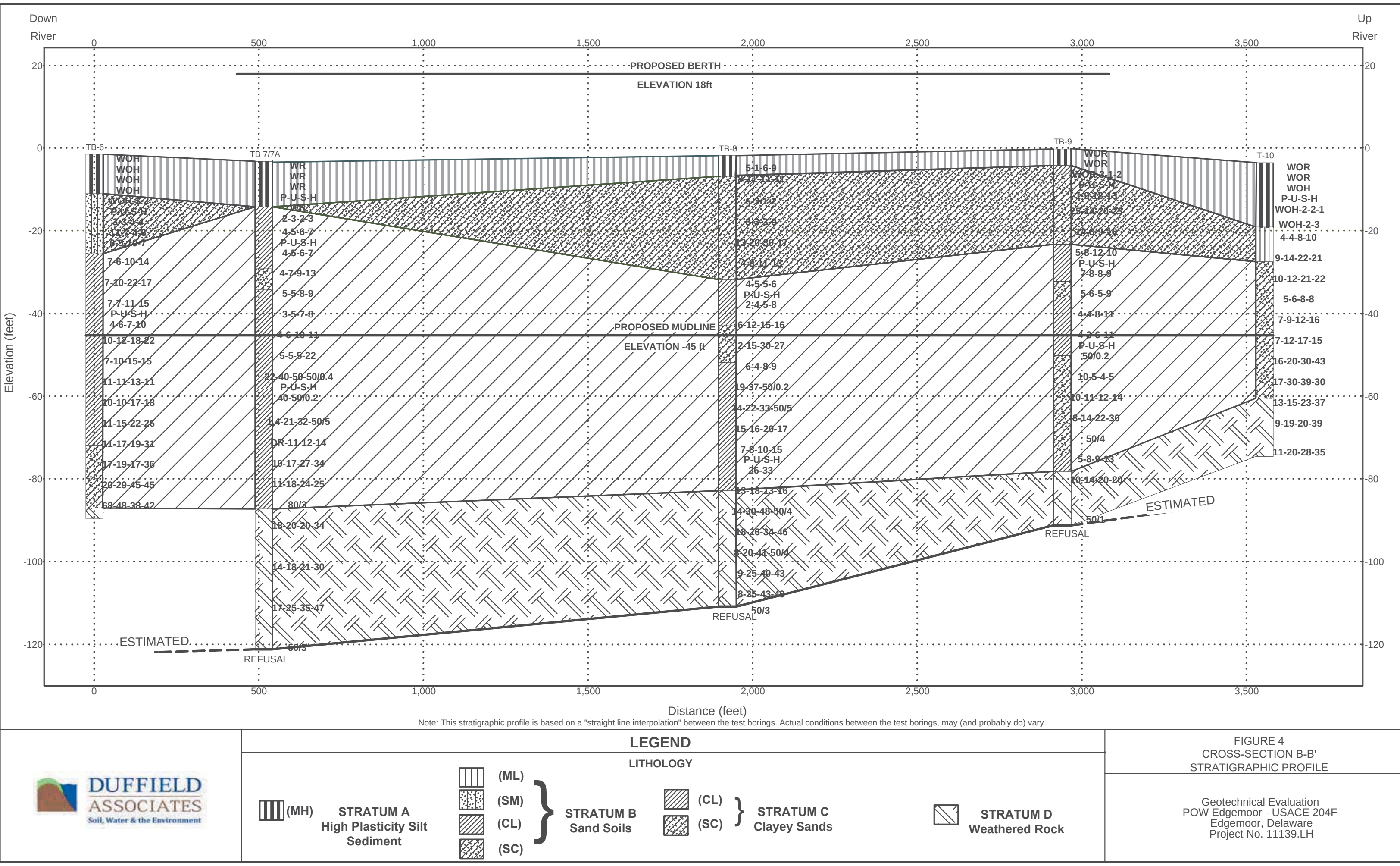
(SM), (SW-SM), (SP-SM), (SC) — STRATUM B: Sand Soils

(CL), (SC) — STRATUM C: Clayey Sands to Silty Clays

FIGURE 3
CROSS-SECTION A-A'
STRATIGRAPHIC PROFILE

Port of Wilmington
Edgemoor Facility
Edgemoor, Delaware
Project No. 11139.LH

B B'



Down River
Up River
PROPOSED BERTH
ELEVATION 18ft
TB-6
TB 7/7A
TB-8
TB-9
T-10
PROPOSED MUDLINE
ELEVATION -45 ft
ESTIMATED
REFUSAL
Elevation (feet)
Distance (feet)
Note: This stratigraphic profile is based on a "straight line interpolation" between the test borings. Actual conditions between the test borings, may (and probably do) vary.
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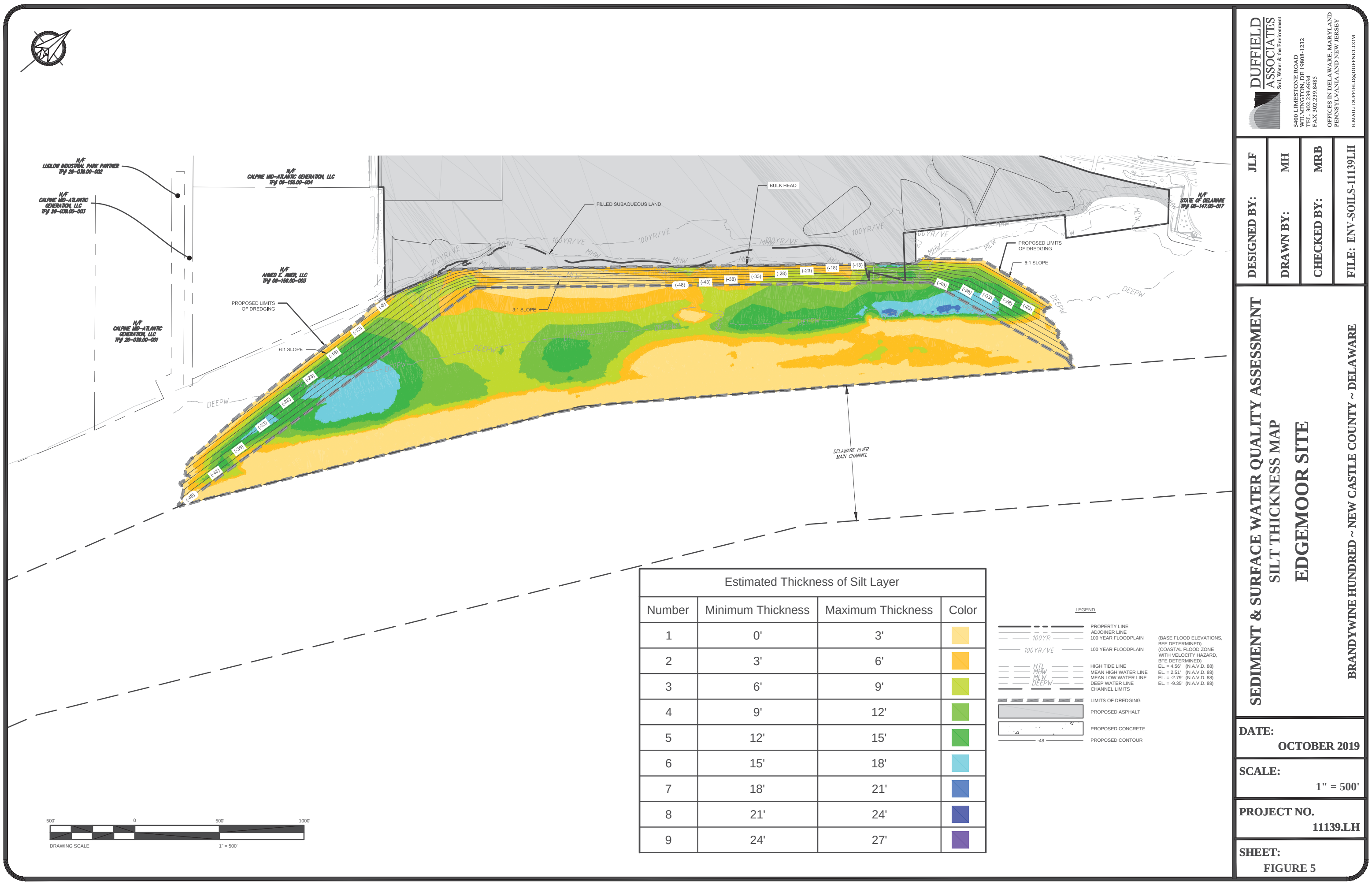
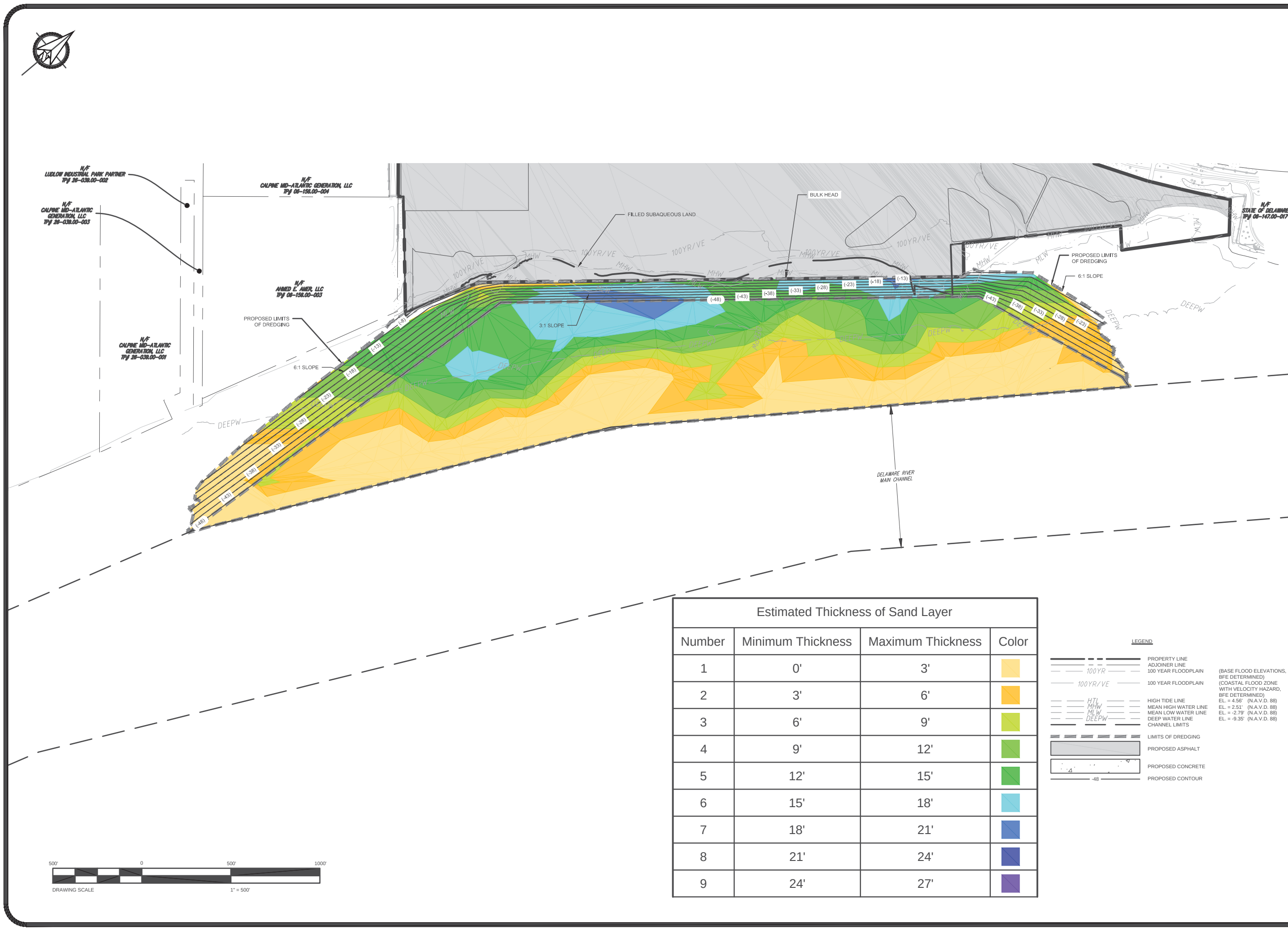
Soil, Water & the Environment
LEGEND
LITHOLOGY
(MH)
STRATUM A
High Plasticity Silt Sediment
(ML)
(SM)
(CL)
(SC)
STRATUM B
Sand Soils
(CL)
(SC)
STRATUM C
Clayey Sands
STRATUM D
Weathered Rock
FIGURE 4
CROSS-SECTION B-B'
STRATIGRAPHIC PROFILE
Geotechnical Evaluation
POW Edgemoor - USACE 204F
Edgemoor, Delaware
Project No. 11139.LH



Estimated Thickness of Silt Layer

Number	Minimum Thickness	Maximum Thickness	Color
1	0'	3'	
2	3'	6'	
3	6'	9'	
4	9'	12'	
5	12'	15'	
6	15'	18'	
7	18'	21'	
8	21'	24'	
9	24'	27'	



Estimated Thickness of Sand Layer			
Number	Minimum Thickness	Maximum Thickness	Color
1	0'	3'	
2	3'	6'	
3	6'	9'	
4	9'	12'	
5	12'	15'	
6	15'	18'	
7	18'	21'	
8	21'	24'	
9	24'	27'	

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DESIGNED BY: JLF
DRAWN BY: MH
CHECKED BY: MRB
FILE: ENV-SOILS-11139LH

SEDIMENT & SURFACE WATER QUALITY ASSESSMENT
SAND THICKNESS MAP
EDGEMOOR SITE

BRANDYWINE HUNDRED ~ NEW CASTLE COUNTY ~ DELAWARE

DATE: OCTOBER 2019
SCALE: 1" = 500'
PROJECT NO. 11139.LH
SHEET: FIGURE 6

TABLES

Table 1.1 . Summary of Stratum A Analytical Results compared to Human Health Screening Levels
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Client ID	DNREC SIRS	VB1-COMP-A		VB14-COMP-A		VB2-COMP-A		VB3-COMP-A		VB5-COMP-A		VB6-COMP-A		VB9-COMP-A		VB10-COMP-A		VB13-COMP-A		VB15-COMP-A		VB17-COMP-A	
Lab Sample ID	Screening Levels	460-185785-3		460-185785-4		460-185785-6		460-185785-7		460-186095-4		460-186095-6		460-186095-8		460-186095-10		460-186095-12		460-186095-14		460-186095-16	
Sampling Date	Human Health - Soils	07/01/2019 13:45:00		07/01/2019 12:40:00		07/01/2019 15:20:00		07/01/2019 15:50:00		07/02/2019 09:50:00		07/02/2019 11:50:00		07/02/2019 10:15:00		07/02/2019 11:30:00		07/02/2019 13:50:00		07/02/2019 13:30:00		07/02/2019 12:40:00	
Matrix	Nov 2019	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil	
Unit	mg/kg	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
		Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
VOLATILE ORGANIC COMPOUNDS BY METHOD 8260B (MG/KG)																							
Methylene Chloride	35	ND	U	0.075	J	0.47		ND	U														
Toluene	490	0.31		0.27		ND	U	ND	U														
Total Conc	--	0.353		0.345		0.528		0.108															
SEMI VOLATILE ORGANIC COMPOUNDS BY METHOD 8270D SIM (MG/KG)																							
1-Methylnaphthalene	18	0.028		0.031	F1	0.022		0.057		0.00027	J	0.033		ND	U	0.038		ND	U	0.017		ND	U
2-Methylnaphthalene	24	0.053		0.060	F1	0.039		0.10		0.00041	J	0.059		0.0019	J	0.082		ND	U	0.032		ND	U
Acenaphthene	360	0.024		0.057		0.022		0.070		0.00020	J	0.021		0.0013	J	0.041		ND	U	0.014		ND	U
Acenaphthylene	--	0.065		0.053	F1	0.039		0.10		ND	U	0.061		0.0017	J	0.079		ND	U	0.024		ND	U
Anthracene	1800	0.10		0.13		0.060		0.19		0.00052	J	0.072		0.0055	J	0.12		ND	U	0.025		0.0045	J
Benzo[a]anthracene	1.1	0.40		0.38		0.16		0.61		0.0022		0.24		0.026		0.37		ND	U	0.078		0.022	
Benzo[a]pyrene	**0.24**	**0.41**		**0.34**		0.15		**0.57**		0.0023		0.24		0.022		**0.36**		ND	U	0.087		0.019	F2 F1
Benzo[b]fluoranthene	1.11	0.29		0.24		0.11		0.45		0.0019		0.16		0.018		0.26		ND	U	0.098		0.016	F1
Benzo[e]pyrene	--	0.29		0.22		0.10		0.38		0.0016		0.16		0.013		0.24		ND	U	0.083		0.012	
Benzo[g,h,i]perylene	--	0.21		0.17		0.056		0.26		0.0015		0.12		0.0061	J	0.15		ND	U	0.036		0.0043	J
Benzo[k]fluoranthene	11	0.32		0.28		0.12		0.41		0.0016		0.18		0.022		0.27		ND	U	0.077		0.019	
Chrysene	110	0.41		0.35		0.16		0.57		0.002		0.24		0.021		0.36		ND	U	0.097		0.019	
Dibenz(a,h)anthracene	0.17	0.085		0.070	F1	0.024		0.11		0.00054	J	0.050		0.0034	J	0.067		ND	U	0.014		0.0026	J
Fluoranthene	240	0.44		0.56		0.21		0.81		0.0033		0.27		0.033		0.52		ND	U	0.15		0.026	
Fluorene	240	0.049		0.077	F1	0.035		0.11		ND	U	0.045		0.0032	J	0.071		ND	U	0.023		ND	U
Indeno[1,2,3-cd]pyrene	1.3	0.20		0.17		0.060		0.27		0.0014		0.12		0.0081		0.15		ND	U	0.033		0.0055	J
Naphthalene	3.8	0.12		0.12		0.081		0.22		0.00079	J	0.11		0.0033	J	0.17		ND	U	0.046		ND	U
Perylene	--	0.69		0.57		0.19		0.86		0.043		0.32		0.22		0.56		1.2		0.21		0.26	F2
Phenanthrene	180	0.26		0.42		0.17		0.53		0.002		0.20		0.014		0.40		ND	U	0.092		0.013	
Pyrene	180	0.58		0.61		0.24		0.96		0.0046		0.36		0.032		0.56		ND	U	0.14		0.024	
Total Conc	--	10.466		9.242		4.138		15.517		0.10343		6.298		0.5787		9.567		1.2		3.663		0.5449	
PESTICIDES BY METHOD 8081A (MG/KG)																							
4,4'-DDD	0.19	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	0.0063	J	ND	U
4,4'-DDE	2	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	0.030		ND	U

Table 1.1 . Summary of Stratum A Analytical Results compared to Human Health Screening Levels
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Client ID	DNREC SIRS	VB1-COMP-A		VB14-COMP-A		VB2-COMP-A		VB3-COMP-A		VB5-COMP-A		VB6-COMP-A		VB9-COMP-A		VB10-COMP-A		VB13-COMP-A		VB15-COMP-A		VB17-COMP-A	
Lab Sample ID	Screening Levels	460-185785-3		460-185785-4		460-185785-6		460-185785-7		460-186095-4		460-186095-6		460-186095-8		460-186095-10		460-186095-12		460-186095-14		460-186095-16	
Sampling Date	Human Health - Soils	07/01/2019 13:45:00		07/01/2019 12:40:00		07/01/2019 15:20:00		07/01/2019 15:50:00		07/02/2019 09:50:00		07/02/2019 11:50:00		07/02/2019 10:15:00		07/02/2019 11:30:00		07/02/2019 13:50:00		07/02/2019 13:30:00		07/02/2019 12:40:00	
Matrix	Nov 2019	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil	
Unit	mg/kg	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
		Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
METALS BY METHOD 6020B (MG/KG)																							
Aluminum	51,200	16800		15300		18000		18700		9920		6370		5430		12900		5960		13200		16200	
Antimony	3.1	ND	U	ND	U	0.59	J	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Arsenic	11	**39.7**		**19.4**		**36.6**		**37.6**		**12.7**		2.5		2.3		**16.1**		1.9		5.6		9.3	
Barium	1,500	97.2		92.6		119		126		27.3		47.8		18.1		34.6		23.8		58.2		74.2	
Beryllium	16	1.0		0.98		1.2		1.2		0.42	J	0.45	J	0.30	J	1.3		0.29	J	0.51	J	0.77	
Cadmium	7.1	1.1	J	0.56	U	0.77	J	0.72	J	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Calcium	--	3300		2380		4000		3040		274		2540		130	J	306		138		240		2490	
Chromium	214	83.9		63.8		117		124		17.3		20.2		15.5		57.1		11.7		24.6		40.4	
Cobalt	34	14.9		13.5		17.5		17.2		17.4		9.7		5.2		27.0		3.5		9.4		12.0	
Copper	310	49.6		32.4		48.7		49.9		9.6		29.5		8.1		14.6		6.7		13.3		15.7	
Iron	74,767	30300		26800		32600		33000		12500		15500		8240		74300		7680		17400		27400	
Lead	400	82.5		54.6		83.7		88.5		7.2		9.9		4.5		9.5		5.2		9.9		22.6	
Magnesium	--	5870		4670		6100		6410		1530		5490		1320		1150		1230		2190		5530	
Manganese	2,100	1000		879		1250		1230		60.8		489		52.1		300		61.3		79.4		722	
Nickel	150	27.2		25.2		31.3		31.9		11.7		68.3		10.2		20.6		7.4		13.1		24.3	
Potassium	--	2180		1820		2340		2470		720		1640		488		636		559		1040		2190	
Selenium	39	0.65	J	0.68	J	1.0	J	0.90	J	0.31	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Sodium	--	467		246		436		687		109		315		68.7	J	113	J	55.4	J	106	J	360	
Thallium	0.078	**0.36**	J	0.21	U	**0.29**	J	**0.30**	J	**0.14**	J	ND	U	ND	U	0.21	U	ND	U	ND	U	ND	U
Vanadium	134	41.4		34.4		43.2		44.4		24.7		26.8		20.7		41.2		16.3		38.3		38.8	
Zinc	2,300	294		132		298		292		27.2		51.9		18.9		43.3		16.0		31.2		68.2	
MERCURY BY 7471B (MG/KG)																							
Mercury	1.1	0.18		0.32		0.43		0.31		0.012	U	0.33		0.046		0.36		0.014	J	0.83		0.066	
CYANIDE BY METHOD 9012B (MG/KG)																							
Cyanide, Total	2.3	0.19	J	ND	U	0.24	J	0.29	J	ND	U	0.31	J	ND	U	0.20	J	ND	U	0.26	J	ND	U

Table 1.1 . Summary of Stratum A Analytical Results compared to Human Health Screening Levels
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Client ID	**DNREC SIRS**	**VB7-COMP-A**		**DUP1-COMP-A**		**VB11-COMP-A**		**VB18-COMP-A**		**VB21-COMP-A**		**VB28-COMP-A**		**VB26-COMP-A**		**VB22-COMP-A**		**VB24-COMP-A**		**VB25-COMP-A**	
Lab Sample ID	**Screening Levels**	460-186096-4		460-186096-5		460-186096-7		460-186096-9		460-186429-1		460-186429-3		460-186429-4		460-186302-4		460-186302-7		460-186302-8	
Sampling Date	**Human Health - Soils**	07/03/2019 09:35:00		07/03/2019 09:40:00		07/03/2019 11:20:00		07/03/2019 11:50:00		07/09/2019 09:00:00		07/09/2019 09:20:00		07/09/2019 10:20:00		07/08/2019 13:30:00		07/08/2019 15:00:00		07/08/2019 14:40:00	
Matrix	**Nov 2019**	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil	
Unit	**mg/kg**	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
		Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
VOLATILE ORGANIC COMPOUNDS BY METHOD 8260B (MG/KG)																					
Methylene Chloride	**35**	ND	U	ND	U																
Toluene	**490**	ND	U	ND	U																
Total Conc	--	0.108		0.105																	
SEMI VOLATILE ORGANIC COMPOUNDS BY METHOD 8270D SIM (MG/KG)																					
1-Methylnaphthalene	**18**	0.036		0.040		0.027		0.023		0.030		0.042		0.049		0.038		0.046		0.054	
2-Methylnaphthalene	**24**	0.071		0.078		0.049		0.052		0.055		0.082		0.091		0.070		0.084		0.11	
Acenaphthene	**360**	0.025		0.027		0.021		0.046		0.029		0.039		0.034		0.027		0.030		0.044	
Acenaphthylene	--	0.075		0.074		0.032		0.033		0.042		0.081		0.076		0.090		0.078		0.090	
Anthracene	**1800**	0.079		0.098		0.033		0.14		0.049		0.13		0.11		0.10		0.12		0.11	
Benzo[a]anthracene	**1.1**	0.27		0.30		0.13		0.38		0.19		0.37		0.32		0.45		0.31		0.45	
Benzo[a]pyrene	**0.24**	**0.27**		**0.29**		0.13		**0.32**		0.22		**0.35**		**0.34**		**0.45**		**0.32**		**0.44**	
Benzo[b]fluoranthene	**1.11**	0.18		0.20		0.14		0.28		0.21		0.27		0.27		0.32		0.23		0.31	
Benzo[e]pyrene	--	0.17		0.18		0.11		0.20		0.17		0.24		0.24		0.28		0.22		0.30	
Benzo[g,h,i]perylene	--	0.14		0.11		0.059		0.12		0.097		0.12		0.10		0.23		0.13		0.18	
Benzo[k]fluoranthene	**11**	0.21		0.22		0.11		0.27		0.19		0.30		0.25		0.34		0.24		0.34	
Chrysene	**110**	0.26		0.28		0.15		0.32		0.23		0.36		0.32		0.45		0.31		0.45	
Dibenz(a,h)anthracene	**0.17**	0.056		0.047		0.023		0.062		0.035		0.055		0.048		0.096		0.057		0.080	
Fluoranthene	**240**	0.30		0.36		0.20		0.56		0.30		0.51		0.42		0.47		0.40		0.55	
Fluorene	**240**	0.058		0.064		0.038		0.073		0.037		0.067		0.063		0.064		0.062		0.077	
Indeno[1,2,3-cd]pyrene	**1.3**	0.14		0.12		0.058		0.14		0.092		0.13		0.11		0.23		0.13		0.19	
Naphthalene	**3.8**	0.15		0.17		0.067		0.12		0.11		0.17		0.17		0.14		0.17		0.17	
Perylene	--	0.36		0.39		0.31		0.55		0.30		0.52		0.44		0.68		0.57		0.57	
Phenanthrene	**180**	0.25		0.30		0.15		0.42		0.19		0.37		0.33		0.31		0.33		0.41	
Pyrene	**180**	0.36		0.43		0.23		0.49		0.32		0.54		0.45		0.67		0.47		0.67	
Total Conc	--	6.206		7.394		5.326		7.061		8.033		9.096		8.568		10.337		8.51		12.042	
PESTICIDES BY METHOD 8081A (MG/KG)																					
4,4'-DDD	**0.19**	ND	U	ND	U	ND	U	ND	U	0.0091	J	ND	U	ND	U	ND	U	ND	U	ND	U
4,4'-DDE	**2**	ND	U	ND	U	0.028		ND	U	0.050		ND	U	ND	U	ND	U	ND	U	ND	U

Table 1.1 . Summary of Stratum A Analytical Results compared to Human Health Screening Levels
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Client ID	DNREC SIRS	VB7-COMP-A		DUP1-COMP-A		VB11-COMP-A		VB18-COMP-A		VB21-COMP-A		VB28-COMP-A		VB26-COMP-A		VB22-COMP-A		VB24-COMP-A		VB25-COMP-A	
Lab Sample ID	**Screening Levels**	460-186096-4		460-186096-5		460-186096-7		460-186096-9		460-186429-1		460-186429-3		460-186429-4		460-186302-4		460-186302-7		460-186302-8	
Sampling Date	**Human Health - Soils**	07/03/2019 09:35:00		07/03/2019 09:40:00		07/03/2019 11:20:00		07/03/2019 11:50:00		07/09/2019 09:00:00		07/09/2019 09:20:00		07/09/2019 10:20:00		07/08/2019 13:30:00		07/08/2019 15:00:00		07/08/2019 14:40:00	
Matrix	**Nov 2019**	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil	
Unit	**mg/kg**	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
		Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
METALS BY METHOD 6020B (MG/KG)																					
Aluminum	**51,200**	18500		17600		17800		18100		14700		19100		19700		11800		22800		15800	
Antimony	**3.1**	ND	U	ND	U	1.0	J	ND	U	1.5		0.51	ND	ND	U	ND	U	0.60	J	0.70	J
Arsenic	**11**	**34.7**		**33.4**		**23.4**		**22.9**		**22.8**		**36.2**		**34.6**		**23.9**		**45.5**		**47.3**	
Barium	**1,500**	118		111		114		94.3		125		130		116		87.5		146		123	
Beryllium	**16**	1.1		1.1		1.2		1.1		0.93		1.2		1.0		0.69		1.4		1.1	
Cadmium	**7.1**	0.66	J	0.64	J	1.7	J	0.58	ND	1.1	J	ND	U	0.68	J	ND	U	1.0	J	1.2	J
Calcium	**--**	3190		2910		3060		2730		3670		3060		2840		1630		3610		2420	
Chromium	**214**	111		105		103		76.1		100		112		103		71.6		149		110	
Cobalt	**34**	16.3		15.6		17.5		16.5		14.8		16.3		15.5		12.4		20.6		15.7	
Copper	**310**	43.0		42.7		82.2		41.6		94.0		46.2		42.5		35.0		59.4		58.4	
Iron	**74,767**	31900		30000		34300		31800		31800		31800		33800		21200		41200		29600	
Lead	**400**	73.2		74.6		128		67.7		134		80.2		76.8		55.4		104		101	
Magnesium	**--**	5770		5420		6020		5920		5210		5880		6630		3580		7850		5090	
Manganese	**2,100**	1260		1150		1180		1160		921		1210		1170		615		1530		883	
Nickel	**150**	30.3		28.2		41.2		30.7		32.8		30.5		29.9		21.4		38.6		28.6	
Potassium	**--**	2300		2190		2370		2160		2070		2200		2590		1270		2850		1870	
Selenium	**39**	ND	J	0.63	J	1.3	J	0.66	J	1.9	J	0.77	J	0.82	J	0.62	J	0.96	J	0.99	J
Sodium	**--**	439		396		737		369		537		394		661		241		662		413	
Thallium	**0.078**	**0.26**	J	**0.25**	J	**0.27**	J	**0.22**	J	**0.23**	J	**0.25**	J	**0.31**	J	**0.24**	J	**0.37**	J	**0.42**	J
Vanadium	**134**	41.8		39.1		84.0		41.8		77.4		40.4		44.5		27.2		53.0		38.5	
Zinc	**2,300**	246		254		353		141		279		232		285		159		382		345	
MERCURY BY 7471B (MG/KG)																					
Mercury	**1.1**	0.29		0.27		0.19		0.37		0.26		0.26		0.23		0.21		0.35		0.33	
CYANIDE BY METHOD 9012B (MG/KG)																					
Cyanide, Total	**2.3**	ND	U	0.21	J	ND	U	ND	U	0.45		0.29	J	0.43		0.33	J	0.29	J	0.42	

Notes:

ND: Compound was not detected in the sample
U : Indicates the analyte was analyzed for but not detected.
B : Compound was found in the blank and sample.
J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
-- : no applicable standard found for this compound
F1 : MS and/or MSD Recovery is outside acceptance limits.
F2 : MS/MSD RPD exceeds control limits
Highlighted Concentrations shown in bold type face exceed limits
* : LCS or LCSD is outside acceptance limits.
mg/kg: miligrams per kilogram
Q: qualifier
Screening levels are derived from the DNREC Site Investigation and Restoration Section Screening Level Tables (November, 2019).

Legend :

Result is above Human Health Screening Level

Table 1.2 . Summary of Stratum A Analytical Results compared to Ecological Screening Levels
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Client ID	DNREC SIRS	DNREC SIRS	VB1-COMP-A		VB14-COMP-A		VB2-COMP-A		VB3-COMP-A	
Lab Sample ID	Screening Level	Screening Level	460-185785-3		460-185785-4		460-185785-6		460-185785-7	
Sampling Date	Ecological Sediment Fresh	Ecological Surface Soils	07/01/2019 13:45:00		07/01/2019 12:40:00		07/01/2019 15:20:00		07/01/2019 15:50:00	
Matrix	Nov 2019	Nov 2019	Soil		Soil		Soil		Soil	
Unit	mg/kg	mg/kg	mg/kg		mg/kg		mg/kg		mg/kg	
VOA-8260B-SOIL			Result	Q	Result	Q	Result	Q	Result	Q
VOLATILE ORGANIC COMPOUNDS BY METHOD 8260B										
Methylene Chloride	35	--	ND	U	0.075	J	0.47		ND	U
Toluene	--	200	0.31		0.27		ND	U	ND	U
Total Conc	--	--	0.353		0.345		0.528		0.108	
SEMI VOLATILE ORGANIC COMPOUNDS BY METHOD 8270D SIM										
1-Methylnaphthalene	--	--	0.028		0.031	F1	0.022		0.057	
2-Methylnaphthalene	0.0202	--	0.053		0.060	F1	0.039		0.10	
Acenaphthene	0.021*	20	0.024		0.057		0.022		0.070	
Acenaphthylene	--	--	0.065		0.053	F1	0.039		0.10	
Anthracene	0.087*	--	0.10		0.13		0.060		0.19	
Benzo[a]anthracene	0.108	--	0.40		0.38		0.16		0.61	
Benzo[a]pyrene	0.15	--	0.41		0.34		0.15		0.57	
Benzo[b]fluoranthene	--	--	0.29		0.24		0.11		0.45	
Benzo[e]pyrene	--	--	0.29		0.22		0.10		0.38	
Benzo[g,h,i]perylene	--	--	0.21		0.17		0.056		0.26	
Benzo[k]fluoranthene	0.24	--	0.32		0.28		0.12		0.41	
Chrysene	0.166	--	0.41		0.35		0.16		0.57	
Dibenz(a,h)anthracene	0.046*	--	0.085		0.070	F1	0.024		0.11	
Fluoranthene	0.423	--	0.44		0.56		0.21		0.81	
Fluorene	0.0774	30	0.049		0.077	F1	0.035		0.11	
Indeno[1,2,3-cd]pyrene	0.059*	--	0.20		0.17		0.060		0.27	
Naphthalene	0.176	--	0.12		0.12		0.081		0.22	
Perylene	--	--	0.69		0.57		0.19		0.86	
Phenanthrene	0.204	--	0.26		0.42		0.17		0.53	
Pyrene	0.195	--	0.58		0.61		0.24		0.96	
Total Conc	--	--	10.466		9.242		4.138		15.517	
PESTICIDES BY METHOD 8081A (MG/KG)										
4,4'-DDD	0.00488		ND	U	ND	U	ND	U	ND	U
4,4'-DDE	0.00316		ND	U	ND	U	ND	U	ND	U

Client ID	VB5-COMP-A		VB6-COMP-A		VB9-COMP-A		VB10-COMP-A		VB13-COMP-A		VB15-COMP-A		VB17-COMP-A	
Lab Sample ID	460-186095-4		460-186095-6		460-186095-8		460-186095-10		460-186095-12		460-186095-14		460-186095-16	
Sampling Date	07/02/2019 09:50:00		07/02/2019 11:50:00		07/02/2019 10:15:00		07/02/2019 11:30:00		07/02/2019 13:50:00		07/02/2019 13:30:00		07/02/2019 12:40:00	
Matrix	Soil		Soil		Soil		Soil		Soil		Soil		Soil	
Unit	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
VOA-8260B-SOIL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
VOLATILE ORGANIC COMPOUNDS BY METHOD 8260B														
Methylene Chloride														
Toluene														
Total Conc														
SEMI VOLATILE ORGANIC COMPOUNDS BY METHOD 8270D SIM														
1-Methylnaphthalene	0.00027	J	0.033		ND	U	0.038		ND	U	0.017		ND	U
2-Methylnaphthalene	0.00041	J	0.059		0.0019	J	0.082		ND	U	0.032		ND	U
Acenaphthene	0.00020	J	0.021		0.0013	J	0.041		ND	U	0.014		ND	U
Acenaphthylene	ND	U	0.061		0.0017	J	0.079		ND	U	0.024		ND	U
Anthracene	0.00052	J	0.072		0.0055	J	0.12		ND	U	0.025		0.0045	J
Benzo[a]anthracene	0.0022		0.24		0.026		0.37		ND	U	0.078		0.022	
Benzo[a]pyrene	0.0023		0.24		0.022		0.36		ND	U	0.087		0.019	F2 F1
Benzo[b]fluoranthene	0.0019		0.16		0.018		0.26		ND	U	0.098		0.016	F1
Benzo[e]pyrene	0.0016		0.16		0.013		0.24		ND	U	0.083		0.012	
Benzo[g,h,i]perylene	0.0015		0.12		0.0061	J	0.15		ND	U	0.036		0.0043	J
Benzo[k]fluoranthene	0.0016		0.18		0.022		0.27		ND	U	0.077		0.019	
Chrysene	0.002		0.24		0.021		0.36		ND	U	0.097		0.019	
Dibenz(a,h)anthracene	0.00054	J	0.050		0.0034	J	0.067		ND	U	0.014		0.0026	J
Fluoranthene	0.0033		0.27		0.033		0.52		ND	U	0.15		0.026	
Fluorene	ND	U	0.045		0.0032	J	0.071		ND	U	0.023		ND	U
Indeno[1,2,3-cd]pyrene	0.0014		0.12		0.0081		0.15		ND	U	0.033		0.0055	J
Naphthalene	0.00079	J	0.11		0.0033	J	0.17		ND	U	0.046		ND	U
Perylene	0.043		0.32		0.22		0.56		1.2		0.21		0.26	F2
Phenanthrene	0.002		0.20		0.014		0.40		ND	U	0.092		0.013	
Pyrene	0.0046		0.36		0.032		0.56		ND	U	0.14		0.024	
Total Conc	0.10343		6.298		0.5787		9.567		1.2		3.663		0.5449	
PESTICIDES BY METHOD 8081A (MG/KG)														
4,4'-DDD	ND	U	ND	U	ND	U	ND	U	ND	U	0.0063	J	ND	U
4,4'-DDE	ND	U	ND	U	ND	U	ND	U	ND	U	0.030		ND	U

Table 1.2 . Summary of Stratum A Analytical Results compared to Ecological Screening Levels
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Client ID	DNREC SIRS	DNREC SIRS	VB1-COMP-A		VB14-COMP-A		VB2-COMP-A		VB3-COMP-A		VB5-COMP-A		VB6-COMP-A		VB9-COMP-A		VB10-COMP-A		VB13-COMP-A		VB15-COMP-A		VB17-COMP-A	
Lab Sample ID	Screening Level	Screening Levels	460-185785-3		460-185785-4		460-185785-6		460-185785-7		460-186095-4		460-186095-6		460-186095-8		460-186095-10		460-186095-12		460-186095-14		460-186095-16	
Sampling Date	Ecological Sediment Fresh	Ecological Surface Soils	07/01/2019 13:45:00		07/01/2019 12:40:00		07/01/2019 15:20:00		07/01/2019 15:50:00		07/02/2019 09:50:00		07/02/2019 11:50:00		07/02/2019 10:15:00		07/02/2019 11:30:00		07/02/2019 13:50:00		07/02/2019 13:30:00		07/02/2019 12:40:00	
Matrix	Nov 2019	Nov 2019	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil	
Unit	mg/kg	mg/kg	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
GCSVOA-8081A-SOIL			Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
METALS BY METHOD 6020B (MG/KG)																								
Aluminum	--	--	16800		15300		18000		18700		9920		6370		5430		12900		5960		13200		16200	
Antimony	2.0	5	ND	U	ND	U	0.59	J	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Arsenic	9.8	10	39.7		19.4		36.6		37.6		12.7		2.5		2.3		16.1		1.9		5.6		9.3	
Barium	--	283	97.2		92.6		119		126		27.3		47.8		18.1		34.6		23.8		58.2		74.2	
Beryllium	--	10	1.0		0.98		1.2		1.2		0.42	J	0.45	J	0.30	J	1.3		0.29	J	0.51	J	0.77	
Cadmium	0.99	3	1.1	J	ND	U	0.77	J	0.72	J	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Calcium	--	--	3300		2380		4000		3040		274		2540		130	J	306		138		240		2490	
Chromium	43.4	0.4	83.9		63.8		117		124		17.3		20.2		15.5		57.1		11.7		24.6		40.4	
Cobalt	50	20	14.9		13.5		17.5		17.2		17.4		9.7		5.2		27.0		3.5		9.4		12.0	
Copper	31.6	50	49.6		32.4		48.7		49.9		9.6		29.5		8.1		14.6		6.7		13.3		15.7	
Iron	20,000	--	30300		26800		32600		33000		12500		15500		8240		74300		7680		17400		27400	
Lead	35.8	41	82.5		54.6		83.7		88.5		7.2		9.9		4.5		9.5		5.2		9.9		22.6	
Magnesium	--	--	5870		4670		6100		6410		1530		5490		1320		1150		1230		2190		5530	
Manganese	460	--	1000		879		1250		1230		60.8		489		52.1		300		61.3		79.4		722	
Nickel	22.7	30	27.2		25.2		31.3		31.9		11.7		68.3		10.2		20.6		7.4		13.1		24.3	
Potassium	--	--	2180		1820		2340		2470		720		1640		488		636		559		1040		2190	
Selenium	2	0.2	0.65	J	0.68	J	1.0	J	0.90	J	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Sodium	--	--	467		246		436		687		109		315		68.7	J	113	J	55.4	J	106	J	360	
Thallium	--	1	0.36	J	ND	U	0.29	J	0.30	J	0.14	J	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Vanadium	--	2	41.4		34.4		43.2		44.4		24.7		26.8		20.7		41.2		16.3		38.3		38.8	
Zinc	121	8.5	294		132		298		292		27.2		51.9		18.9		43.3		16.0		31.2		68.2	
METALS BY METHOD 6020B (MG/KG)																								
Mercury	0.18	0.0005	0.18		0.32		0.43		0.31		ND	U	0.33		0.046		0.36		0.014	J	0.83		0.066	
CYANIDE BY METHOD 9012B (MG/KG)																								
Cyanide, Total (mg/kg)	0.1	--	0.19	J	ND	U	0.24	J	0.29	J	ND	U	0.31	J	ND	U	0.20	J	ND	U	0.26	J	ND	U

Table 1.2 . Summary of Stratum A Analytical Results compared to Ecological Screening Levels
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Client ID	DNREC SIRS	DNREC SIRS	VB7-COMP-A		DUP1-COMP-A		VB11-COMP-A		VB18-COMP-A		VB21-COMP-A		VB28-COMP-A		VB26-COMP-A		VB22-COMP-A		VB24-COMP-A		VB25-COMP-A	
Lab Sample ID	Screening Level	Screening Level	460-186096-4		460-186096-5		460-186096-7		460-186096-9		460-186429-1		460-186429-3		460-186429-4		460-186302-4		460-186302-7		460-186302-8	
Sampling Date	Ecological Sediment Fresh	Ecological Surface Soils	07/03/2019 09:35:00		07/03/2019 09:40:00		07/03/2019 11:20:00		07/03/2019 11:50:00		07/09/2019 09:00:00		07/09/2019 09:20:00		07/09/2019 10:20:00		07/08/2019 13:30:00		07/08/2019 15:00:00		07/08/2019 14:40:00	
Matrix	Nov 2019	Nov 2019	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil	
Unit	mg/kg	mg/kg	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
VOA-8260B-SOIL			Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
VOLATILE ORGANIC COMPOUNDS BY METHOD 8260B																						
Methylene Chloride	35	--	ND	U	ND	U																
Toluene	--	200	ND	U	ND	U																
Total Conc	--	--	0.108		0.105																	
SEMI VOLATILE ORGANIC COMPOUNDS BY METHOD 8270D SIM																						
1-Methylnaphthalene	--	--	0.036		0.040		0.027		0.023		0.030		0.042		0.049		0.038		0.046		0.054	
2-Methylnaphthalene	0.0202	--	0.071		0.078		0.049		0.052		0.055		0.082		0.091		0.070		0.084		0.11	
Acenaphthene	0.021*	20	0.025		0.027		0.021		0.046		0.029		0.039		0.034		0.027		0.030		0.044	
Acenaphthylene	--	--	0.075		0.074		0.032		0.033		0.042		0.081		0.076		0.090		0.078		0.090	
Anthracene	0.087*	--	0.079		0.098		0.033		0.14		0.049		0.13		0.11		0.10		0.12		0.11	
Benzo[a]anthracene	0.108	--	0.27		0.30		0.13		0.38		0.19		0.37		0.32		0.45		0.31		0.45	
Benzo[a]pyrene	0.15	--	0.27		0.29		0.13		0.32		0.22		0.35		0.34		0.45		0.32		0.44	
Benzo[b]fluoranthene	--	--	0.18		0.20		0.14		0.28		0.21		0.27		0.27		0.32		0.23		0.31	
Benzo[e]pyrene	--	--	0.17		0.18		0.11		0.20		0.17		0.24		0.24		0.28		0.22		0.30	
Benzo[g,h,i]perylene	--	--	0.14		0.11		0.059		0.12		0.097		0.12		0.10		0.23		0.13		0.18	
Benzo[k]fluoranthene	0.24	--	0.21		0.22		0.11		0.27		0.19		0.30		0.25		0.34		0.24		0.34	
Chrysene	0.166	--	0.26		0.28		0.15		0.32		0.23		0.36		0.32		0.45		0.31		0.45	
Dibenz(a,h)anthracene	0.046*	--	0.056		0.047		0.023		0.062		0.035		0.055		0.048		0.096		0.057		0.080	
Fluoranthene	0.423	--	0.30		0.36		0.20		0.56		0.30		0.51		0.42		0.47		0.40		0.55	
Fluorene	0.0774	30	0.058		0.064		0.038		0.073		0.037		0.067		0.063		0.064		0.062		0.077	
Indeno[1,2,3-cd]pyrene	0.059*	--	0.14		0.12		0.058		0.14		0.092		0.13		0.11		0.23		0.13		0.19	
Naphthalene	0.176	--	0.15		0.17		0.067		0.12		0.11		0.17		0.17		0.14		0.17		0.17	
Perylene	--	--	0.36		0.39		0.31		0.55		0.30		0.52		0.44		0.68		0.57		0.57	
Phenanthrene	0.204	--	0.25		0.30		0.15		0.42		0.19		0.37		0.33		0.31		0.33		0.41	
Pyrene	0.195	--	0.36		0.43		0.23		0.49		0.32		0.54		0.45		0.67		0.47		0.67	
Total Conc	--	--	6.206		7.394		5.326		7.061		8.033		9.096		8.568		10.337		8.51		12.042	
PESTICIDES BY METHOD 8081A (MG/KG)																						
4,4'-DDD	0.00488		ND	U	ND	U	ND	U	ND	U	0.0091	J	ND	U	ND	U	ND	U	ND	U	ND	U
4,4'-DDE	0.00316		ND	U	ND	U	0.028		ND	U	0.050		ND	U	ND	U	ND	U	ND	U	ND	U

Table 1.2 . Summary of Stratum A Analytical Results compared to Ecological Screening Levels
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Client ID	DNREC SIRS	DNREC SIRS	VB7-COMP-A		DUP1-COMP-A		VB11-COMP-A		VB18-COMP-A		VB21-COMP-A		VB28-COMP-A		VB26-COMP-A		VB22-COMP-A		VB24-COMP-A		VB25-COMP-A	
Lab Sample ID	Screening Level	Screening Levels	460-186096-4		460-186096-5		460-186096-7		460-186096-9		460-186429-1		460-186429-3		460-186429-4		460-186302-4		460-186302-7		460-186302-8	
Sampling Date	Ecological Sediment Fresh	Ecological Surface Soils	07/03/2019 09:35:00		07/03/2019 09:40:00		07/03/2019 11:20:00		07/03/2019 11:50:00		07/09/2019 09:00:00		07/09/2019 09:20:00		07/09/2019 10:20:00		07/08/2019 13:30:00		07/08/2019 15:00:00		07/08/2019 14:40:00	
Matrix	Nov 2019	Nov 2019	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil	
Unit	mg/kg	mg/kg	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
VOA-8260B-SOIL			Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
METALS BY METHOD 6020B (MG/KG)																						
Aluminum	--	--	18500		17600		17800		18100		14700		19100		19700		11800		22800		15800	
Antimony	2.0	5	ND	U	ND	U	1.0	J	ND	U	1.5		ND	U	ND	U	ND	U	0.60	J	0.70	J
Arsenic	9.8	10	34.7		33.4		23.4		22.9		22.8		36.2		34.6		23.9		45.5		47.3	
Barium	--	283	118		111		114		94.3		125		130		116		87.5		146		123	
Beryllium	--	10	1.1		1.1		1.2		1.1		0.93		1.2		1.0		0.69		1.4		1.1	
Cadmium	0.99	3	0.66	J	0.64	J	1.7	J	ND	U	1.1	J	ND	U	0.68	J	ND	U	1.0	J	1.2	J
Calcium	--	--	3190		2910		3060		2730		3670		3060		2840		1630		3610		2420	
Chromium	43.4	0.4	111		105		103		76.1		100		112		103		71.6		149		110	
Cobalt	50	20	16.3		15.6		17.5		16.5		14.8		16.3		15.5		12.4		20.6		15.7	
Copper	31.6	50	43.0		42.7		82.2		41.6		94.0		46.2		42.5		35.0		59.4		58.4	
Iron	20,000	--	31900		30000		34300		31800		31800		31800		33800		21200		41200		29600	
Lead	35.8	41	73.2		74.6		128		67.7		134		80.2		76.8		55.4		104		101	
Magnesium	--	--	5770		5420		6020		5920		5210		5880		6630		3580		7850		5090	
Manganese	460	--	1260		1150		1180		1160		921		1210		1170		615		1530		883	
Nickel	22.7	30	30.3		28.2		41.2		30.7		32.8		30.5		29.9		21.4		38.6		28.6	
Potassium	--	--	2300		2190		2370		2160		2070		2200		2590		1270		2850		1870	
Selenium	2	0.2	0.64	J	0.63	J	1.3	J	0.66	J	1.9	J	0.77	J	0.82	J	0.62	J	0.96	J	0.99	J
Sodium	--	--	439		396		737		369		537		394		661		241		662		413	
Thallium	--	1	0.26	J	0.25	J	0.27	J	0.22	J	0.23	J	0.25	J	0.31	J	0.24	J	0.37	J	0.42	J
Vanadium	--	2	41.8		39.1		84.0		41.8		77.4		40.4		44.5		27.2		53.0		38.5	
Zinc	121	8.5	246		254		353		141		279		232		285		159		382		345	
METALS BY METHOD 6020B (MG/KG)																						
Mercury	0.18	0.0005	0.29		0.27		0.19		0.37		0.26		0.26		0.23		0.21		0.35		0.33	
CYANIDE BY METHOD 9012B (MG/KG)																						
Cyanide, Total (mg/kg)	0.1	--	ND	U	0.21	J	ND	U	ND	U	0.45		0.29	J	0.43		0.33	J	0.29	J	0.42	

Notes:

ND: Compound was not detected in the sample
U : Indicates the analyte was analyzed for but not detected.
B : Compound was found in the blank and sample.
J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
-- : no applicable standard found for this compound
F1 : MS and/or MSD Recovery is outside acceptance limits.
F2 : MS/MSD RPD exceeds control limits
Highlighted Concentrations shown in bold type face exceed limits
* : LCS or LCSD is outside acceptance limits.
mg/kg: miligrams per kilogram
Q: qualifier
Screening levels are derived from the DNREC Site Investigation and Restoration Section Screening Level Tables (November, 2019).

Legend :

Result is above the Ecological Fresh Sediment Screening Level
Result is above the Ecological Surface Soil Screening Level
Result is above both Ecological Screening Levels
MDL is above Screening Level

Table 1.3 Summary of Stratum B Analytical Results compared to Human Health Screening Levels
Edgemoor Sediment and Surface Water Qaulity Assessment
Edgemoor, Delaware

	DNREC SIRS	VB1-COMP-B		VB4-COMP-A		VB5-COMP-B		VB6-COMP-B		VB9-COMP-B		VB10-COMP-B		VB13-COMP-B		VB15-COMP-B		VB12-COMP-B		VB11-COMP-B	
Lab Sample ID	Screening Levels	460-185785-5		460-186095-3		460-186095-5		460-186095-7		460-186095-9		460-186095-11		460-186095-13		460-186095-15		460-186096-6		460-186096-8	
Sampling Date	Soils	07/01/2019 13:50:00		07/02/2019 09:10:00		07/02/2019 09:55:00		07/02/2019 11:55:00		07/02/2019 10:20:00		07/02/2019 11:35:00		07/02/2019 13:55:00		07/02/2019 13:35:00		07/03/2019 10:20:00		07/03/2019 11:25:00	
Matrix	Nov 2019	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil	
Unit	mg/kg	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
		Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
VOLATILE ORGANIC COMPOUNDS BY METHOD 8260B																					
No Detection																					
SEMI VOLATILE ORGANIC COMPOUNDS BY METHOD 8270D SIM (MG/KG)																					
1-Methylnaphthalene	**18**	ND	U	ND	U	0.0015	J	ND	U	ND	U	ND	U	ND	U	0.00082	J	ND	U	0.0013	
2-Methylnaphthalene	**24**	ND	U	ND	U	0.0019	J	ND	U	ND	U	ND	U	ND	U	0.0015		ND	U	0.0023	
Acenaphthene	**360**	ND	U	ND	U	0.0023	J	ND	U	ND	U	ND	U	ND	U	0.00053	J	ND	U	0.00094	
Acenaphthylene	**--**	ND	U	ND	U	0.0031		ND	U	ND	U	ND	U	ND	U	0.0011		ND	U	0.0014	
Anthracene	**1800**	ND	U	ND	U	0.0096		0.00014	J	ND	U	ND	U	ND	U	0.0013		ND	U	0.0017	
Benzo[a]anthracene	**1.1**	ND	U	ND	U	0.050		0.00044	J	ND	U	ND	U	ND	U	0.0044		ND	U	0.0054	
Benzo[a]pyrene	**0.24**	ND	U	ND	U	0.054		0.00042	J	ND	U	ND	U	ND	U	0.0045		0.00032	J	0.0061	
Benzo[b]fluoranthene	**1.11**	ND	U	ND	U	0.060		0.00042	J	ND	U	ND	U	0.00042	J	0.0052		0.00037	J	0.0062	
Benzo[e]pyrene	**--**	ND	U	ND	U	0.047		0.00032	J	ND	U	ND	U	0.00019	J	0.0046		0.00022	J	0.0052	
Benzo[g,h,i]perylene	**--**	ND	U	ND	U	0.028		ND	U	ND	U	ND	U	ND	U	0.0019		0.00022	J	0.0031	
Benzo[k]fluoranthene	**11**	ND	U	ND	U	0.052		ND	U	ND	U	ND	U	ND	U	0.0043		ND	U	0.0048	
Chrysene	**110**	ND	U	ND	U	0.060		0.00043	J	ND	U	ND	U	ND	U	0.0055		0.00020	J	0.007	
Dibenz(a,h)anthracene	**0.17**	ND	U	ND	U	0.012		ND	U	ND	U	ND	U	ND	U	0.00073	J	ND	U	0.0011	
Fluoranthene	**240**	ND	U	ND	U	0.074		0.00058	J	ND	U	ND	U	ND	U	0.0089		ND	U	0.0088	
Fluorene	**240**	ND	U	ND	U	0.0031		ND	U	ND	U	ND	U	ND	U	0.00091		ND	U	0.0017	
Indeno[1,2,3-cd]pyrene	**1.3**	ND	U	ND	U	0.030		0.00016	J	ND	U	ND	U	ND	U	0.0018		0.00016	J	0.0029	
Naphthalene	**3.8**	ND	U	ND	U	0.0026	J	0.00037	J	ND	U	ND	U	ND	U	0.0022		ND	U	0.0028	
Perylene	**--**	0.14		0.011		0.028		0.002		0.0043		0.0035		0.0078		0.011		0.00038	J	0.013	
Phenanthrene	**180**	ND	U	ND	U	0.037		0.00050	J	ND	U	ND	U	ND	U	0.0052		ND	U	0.0068	
Pyrene	**180**	ND	U	ND	U	0.065		0.00066	J	ND	U	ND	U	ND	U	0.0091		ND	U	0.011	
Total Conc	**--**	0.14		0.011		0.8396		0.00721		0.0043		0.0035		0.00841		0.20879		0.00187		0.30694	
PESTICIDES BY METHOD 8081A (MG/KG)																					
4,4'-DDD	**0.19**	0.0014	U	0.0013	U	0.0015	U	0.0013	U	0.0013	U	0.0013	U	0.0014	U	0.0014	U	0.0014	U	0.0013	U
4,4'-DDE	**2**	0.00094	U	0.00089	U	0.001	U	0.00090	U	0.00093	U	0.00090	U	0.00099	U	0.00098	U	0.00097	U	0.00092	U
4,4'-DDT	**1.9**	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	0.0058	J
Heptachlor	**0.13**	0.00094		ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U

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Table 1.3 Summary of Stratum B Analytical Results compared to Human Health Screening Levels
Edgemoor Sediment and Surface Water Qaulity Assessment
Edgemoor, Delaware

Client ID	**DNREC SIRS**	**VB1-COMP-B**		**VB4-COMP-A**		**VB5-COMP-B**		**VB6-COMP-B**		**VB9-COMP-B**		**VB10-COMP-B**		**VB13-COMP-B**		**VB15-COMP-B**		**VB12-COMP-B**		**VB11-COMP-B**	
Lab Sample ID	**Screening Levels**	460-185785-5		460-186095-3		460-186095-5		460-186095-7		460-186095-9		460-186095-11		460-186095-13		460-186095-15		460-186096-6		460-186096-8	
Sampling Date	**Soils**	07/01/2019 13:50:00		07/02/2019 09:10:00		07/02/2019 09:55:00		07/02/2019 11:55:00		07/02/2019 10:20:00		07/02/2019 11:35:00		07/02/2019 13:55:00		07/02/2019 13:35:00		07/03/2019 10:20:00		07/03/2019 11:25:00	
Matrix	**Nov 2019**	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil	
Unit	**mg/kg**	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
		Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
METALS BY METHOD 6020B (MG/KG)																					
Aluminum	**51,200**	7860		4270		3640		11000		11300		12500		8750		9560		4910		7200	
Antimony	**3.1**	ND	U	ND	U	1.3		0.32	J	ND	U	0.32	J	ND	U	0.95	J	ND	U	ND	U
Arsenic	**11**	3.2		1.6		4.8		**25.0**		6.9		**26.4**		5.5		**20.4**		2.2		1.7	
Barium	**1,500**	22.7		17.2		38.7		82.0		56.3		96.4		55.3		50.1		18.8		27.6	
Beryllium	**16**	0.31	J	0.26	J	0.27	J	0.66		0.55		0.75		0.48		0.66		0.23	J	0.29	J
Cadmium	**7.1**	ND	U	ND	U	ND	U	0.51	J	ND	U	0.38	J	ND	U	0.57	J	ND	U	ND	U
Calcium	**--**	170		1880		1190		1920		1860		2030		992		1390		173		493	
Chromium	**214**	17.3		11.2		36.2		68.5		29.9		84.5		21.3		71.8		10.4		14.9	
Cobalt	**34**	5.1		4.8		4.0		10.5		8.4		12.0		5.5		10.3		4.8		4.4	
Copper	**310**	7.2		6.4		34.7		31.7		9.1		34.3		6.7		53.8		9.7		12.1	
Iron	**74,767**	10700		9770		11300		20100		20900		22000		13200		23000		12700		10500	
Lead	**400**	5.5		3.1		40.2		56.1		11.8		58.5		7.3		173		5.6		9.8	
Magnesium	**--**	1450		2600		1190		3590		4250		3740		2630		3490		1870		2380	
Manganese	**2,100**	67.7		136		172		736		455		835		222		393		111		92.8	
Nickel	**150**	8.1		9.4		9.1		19.6		17.5		21.7		12.0		21.6		10.9		12.8	
Potassium	**--**	603		717		519		1400		1620		1450		1010		1510		579		683	
Selenium	**39**	ND	U	ND	U	ND	U	0.60	J	ND	U	0.53	J	ND	U	1.6	J	ND	U	ND	U
Sodium	**--**	123		81.3	J	62.6	J	281		301		288		169		370		146		198	
Thallium	**0.078**	ND	U	ND	U	ND	U	**0.24**	J	**0.14**	J	**0.20**	J	ND	U	**0.15**	J	ND	U	ND	U
Vanadium	**134**	21.9		11.5		33.8		26.5		27.6		28.0		22.6		47.1		14.1		17.4	
Zinc	**2,300**	20.2		24.7		66.5		205		47.3		153		32.4		191		26.1		37.3	
METALS BY METHOD 6020B (MG/KG)																					
Mercury	**1.1**	0.013	J	ND	U	0.053		ND	U	0.037		ND	U	0.012	J F1	0.096		ND	U	0.019	
CYANIDE BY METHOD 9012B (MG/KG)																					
Cyanide, Total	**2.3**	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U

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Table 1.3 Summary of Stratum B Analytical Results compared to Human Health Screening Levels
Edgemoor Sediment and Surface Water Qaulity Assessment
Edgemoor, Delaware

Client ID	**DNREC SIRS**	**VB21-COMP-B**		**VB29-COMP-A**		**VB27-COMP-B**		**VB30-COMP-B**		**VB33-COMP-B**		**VB31-COMP-B**		**VB19-COMP-B**		**VB23-COMP-B**		**DUP-COMP-B**		**VB25-COMP-B**	
Lab Sample ID	**Screening Levels**	460-186429-2		460-186429-5		460-186429-6		460-186429-7		460-186429-8		460-186429-12		460-186302-3		460-186302-5		460-186302-6		460-186302-9	
Sampling Date	**Soils**	07/09/2019 09:05:00		07/09/2019 10:00:00		07/09/2019 11:45:00		07/09/2019 12:15:00		07/09/2019 14:50:00		07/09/2019 13:30:00		07/08/2019 11:40:00		07/08/2019 13:50:00		07/08/2019 13:55:00		07/08/2019 14:45:00	
Matrix	**Nov 2019**	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil	
Unit	**mg/kg**	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
		Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
VOLATILE ORGANIC COMPOUNDS BY METHOD 8260B																					
No Detection																					
SEMI VOLATILE ORGANIC COMPOUNDS BY METHOD 8270D SIM (MG/KG)																					
1-Methylnaphthalene	**18**	0.0013		ND	U	ND	U	ND	U	ND	U	0.018		0.0077		0.00057	J	0.00044	J	0.0018	
2-Methylnaphthalene	**24**	0.0027		ND	U	ND	U	ND	U	ND	U	0.035		0.014		0.00076	J	0.00062	J	0.0031	
Acenaphthene	**360**	0.00089		ND	U	ND	U	ND	U	ND	U	0.019		0.016		0.00017	J	0.00027	J	0.002	
Acenaphthylene	**--**	0.0017		ND	U	ND	U	ND	U	ND	U	0.020		0.0094		0.00084	J	0.00047	J	0.0024	
Anthracene	**1800**	0.0019		ND	U	ND	U	ND	U	ND	U	0.025		0.015		0.001		0.00079	J	0.0043	
Benzo[a]anthracene	**1.1**	0.0062		ND	U	ND	U	ND	U	ND	U	0.082		0.065		0.0061		0.0046		0.015	
Benzo[a]pyrene	**0.24**	0.0072		ND	U	ND	U	ND	U	ND	U	0.087		0.061		0.0055		0.0039		0.014	
Benzo[b]fluoranthene	**1.11**	0.0065		ND	U	ND	U	ND	U	ND	U	0.082		0.051		0.0055		0.0041		0.011	
Benzo[e]pyrene	**--**	0.0059		0.00032	J	ND	U	ND	U	ND	U	0.077		0.048		0.0041		0.0031		0.0095	
Benzo[g,h,i]perylene	**--**	0.0043		ND	U	ND	U	ND	U	ND	U	0.036		0.039		0.0032		0.0023		0.006	
Benzo[k]fluoranthene	**11**	0.0053		ND	U	ND	U	ND	U	ND	U	0.076		0.043		0.005		0.0037		0.011	
Chrysene	**110**	0.0076		0.00045	J	ND	U	0.00026	J	ND	U	0.11		0.076		0.0061		0.0045		0.014	
Dibenz(a,h)anthracene	**0.17**	0.0014		ND	U	ND	U	ND	U	ND	U	0.014		0.012		0.0012		0.00088		0.0025	
Fluoranthene	**240**	0.0096		ND	U	ND	U	ND	U	ND	U	0.14		0.097		0.0076		0.0057		0.017	
Fluorene	**240**	0.0015		ND	U	ND	U	ND	U	ND	U	0.023		0.008		0.00036	J	0.00044	J	0.0028	
Indeno[1,2,3-cd]pyrene	**1.3**	0.0036		ND	U	ND	U	ND	U	ND	U	0.033		0.032		0.0032		0.0022		0.0066	
Naphthalene	**3.8**	0.0062		ND	U	ND	U	ND	U	ND	U	0.045		0.021		0.0012		0.00094		0.0059	
Perylene	**--**	0.013		0.050		ND	U	0.032		0.094		0.18		0.13		0.0043		0.0037		0.055	
Phenanthrene	**180**	0.0082		0.00094	J	ND	U	ND	U	ND	U	0.12		0.061		0.0037		0.0034		0.014	
Pyrene	**180**	0.012		0.00085	J	ND	U	ND	U	ND	U	0.15		0.14		0.010		0.0081		0.021	
Total Conc	**--**	0.40399		0.05496		ND		0.03226		0.094		5.683		2.7781		0.1316		0.10345		0.3584	
PESTICIDES BY METHOD 8081A (MG/KG)																					
4,4'-DDD	**0.19**	0.0014	U	0.0014	U	0.0014	U	0.0013	U	0.0014	U	0.022		0.0017	U	0.0014	U	0.0014	U	0.0013	U
4,4'-DDE	**2**	0.00094	U	0.00096	U	0.00096	U	0.00092	U	0.00094	U	0.057		0.0012	U	0.00099	U	0.00094	U	0.00092	U
4,4'-DDT	**1.9**	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
Heptachlor	**0.13**	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U

Duffield Associates, Inc.
Project No. 11139.LH

Table 1.3 Summary of Stratum B Analytical Results compared to Human Health Screening Levels
Edgemoor Sediment and Surface Water Qaulity Assessment
Edgemoor, Delaware

Client ID	**DNREC SIRS**	**VB21-COMP-B**		**VB29-COMP-A**		**VB27-COMP-B**		**VB30-COMP-B**		**VB33-COMP-B**		**VB31-COMP-B**		**VB19-COMP-B**		**VB23-COMP-B**		**DUP-COMP-B**		**VB25-COMP-B**	
Lab Sample ID	**Screening Levels**	460-186429-2		460-186429-5		460-186429-6		460-186429-7		460-186429-8		460-186429-12		460-186302-3		460-186302-5		460-186302-6		460-186302-9	
Sampling Date	**Soils**	07/09/2019 09:05:00		07/09/2019 10:00:00		07/09/2019 11:45:00		07/09/2019 12:15:00		07/09/2019 14:50:00		07/09/2019 13:30:00		07/08/2019 11:40:00		07/08/2019 13:50:00		07/08/2019 13:55:00		07/08/2019 14:45:00	
Matrix	**Nov 2019**	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil	
Unit	**mg/kg**	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
		Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
METALS BY METHOD 6020B (MG/KG)																					
Aluminum	**51,200**	5000		6260		7030		7740		5760		10900		7230		7830		4540		6860	
Antimony	**3.1**	ND	U	ND	U	ND	U	ND	U	ND	U	2.2		2.8		0.50	J	0.53	J	ND	U
Arsenic	**11**	3.4		3.4		3.3		1.8		3.2		**26.9**		**28.4**		3.3		2.1		4.0	
Barium	**1,500**	21.1		27.0		33.8		56.7		29.5		68.9		61.3		17.6		12.0		19.9	
Beryllium	**16**	0.22	J	0.35	J	0.41	J	0.41	J	0.33	J	0.79		0.36	J	0.30	J	0.19	U	0.38	J
Cadmium	**7.1**	ND	U	ND	U	ND	U	ND	U	ND	U	0.60	J	0.99	J	ND	U	ND	U	ND	U
Calcium	--	355		261		252		243		167		1610		1090		309		254		353	
Chromium	**214**	17.1		15.7		13.9		16.3		10.4		88.2		46.9		17.1		12.9		24.4	
Cobalt	**34**	10.2		5.3		8.7		2.8		2.4		9.1		6.8		3.8		2.3		4.1	
Copper	**310**	10.2		7.6		10.9		7.8		3.7		96.9		87.5		13.6		14.0		7.8	
Iron	**74,767**	11100		9030		15700		7940		5760		25600		18900		7680		4830		6840	
Lead	**400**	10.8		5.6		7.3		7.5		4.4		126		81.7		13.0		11.9		6.7	
Magnesium	--	1180		2050		2400		1420		923		3630		2650		447		339		969	
Manganese	**2,100**	166		90.1		165		91.7		43.7		417		259		53.3		40.3		84.1	
Nickel	**150**	8.6		10.7		15.0		8.7		6.5		21.1		14.1		6.7		4.0		11.5	
Potassium	--	472		1040		805		563		358		1550		1040		302		214		442	
Selenium	**39**	ND	U	ND	U	ND	U	ND	U	ND	U	1.6	J	0.73	J	ND	U	ND	U	ND	U
Sodium	--	58.6	J	68.7	J	88.0	J	89.6	J	70.6	J	293		265		67.1	J	55.0	J	108	J
Thallium	**0.078**	ND	U	ND	U	ND	U	0.14	U	0.14	U	0.19	U	**0.20**	J	ND	U	ND	U	ND	U
Vanadium	**134**	16.9		19.4		17.6		22.5		ND		72.6		38.1		24.8		15.4		17.1	
Zinc	**2,300**	29.6		23.9		31.4		26.2		16.0		186		183		25.9		19.5		25.8	
METALS BY METHOD 6020B (MG/KG)																					
Mercury	**1.1**	0.045		ND	U	0.011	J	ND	U	0.015	J	0.32		0.11		0.019		0.021		0.023	
CYANIDE BY METHOD 9012B (MG/KG)																					
Cyanide, Total (mg/kg)	**2.3**	ND	U	ND	U	ND	U	ND	U	ND	U	0.33	J F1	0.24	J	0.14	U	0.14	U	0.13	U

Notes:

ND: Compound was not detected in the sample
U : Indicates the analyte was analyzed for but not detected.
B : Compound was found in the blank and sample.
J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
-- : no applicable standard found for this compound
F1 : MS and/or MSD Recovery is outside acceptance limits.

Highlighted Concentrations shown in bold type face exceed limits
* : LCS or LCSD is outside acceptance limits.
mg/kg: miligrams per kilogram
Q: qualifier
Screening levels are derived from the DNREC Site Investigation and Restoration Section
Screening Level Tables (November, 2019).

Legend :

Result is above Human Health Screening Level

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Table 1.4 Summary of Stratum B Analytical Results compared to Ecological Screening Levels
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Client ID	DNREC SIRS	DNREC SIRS	VB1-COMP-B		VB4-COMP-A		VB5-COMP-B		VB6-COMP-B		VB9-COMP-B		VB10-COMP-B		VB13-COMP-B		VB15-COMP-B		VB12-COMP-B	
Lab Sample ID	Screening Level	Screening Level	460-185785-5		460-186095-3		460-186095-5		460-186095-7		460-186095-9		460-186095-11		460-186095-13		460-186095-15		460-186096-6	
Sampling Date	Ecological Sediment Fresh	Ecological Surface Soils	07/01/2019 13:50:00		07/02/2019 09:10:00		07/02/2019 09:55:00		07/02/2019 11:55:00		07/02/2019 10:20:00		07/02/2019 11:35:00		07/02/2019 13:55:00		07/02/2019 13:35:00		07/03/2019 10:20:00	
Matrix	Nov 2019	Nov 2019	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil	
Unit	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
			Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
VOLATILE ORGANIC COMPOUNDS BY METHOD 8260B																				
No Detection																				
SEMI VOLATILE ORGANIC COMPOUNDS BY METHOD 8270D SIM (MG/KG)																				
1-Methylnaphthalene	--	--	ND	U	ND	U	0.0015	J	ND	U	ND	U	ND	U	ND	U	0.00082	J	ND	U
2-Methylnaphthalene	**0.0202**	--	ND	U	ND	U	0.0019	J	ND	U	ND	U	ND	U	ND	U	0.0015		ND	U
Acenaphthene	**0.021***	**20**	ND	U	ND	U	0.0023	J	ND	U	ND	U	ND	U	ND	U	0.00053	J	ND	U
Acenaphthylene	--	--	ND	U	ND	U	0.0031		ND	U	ND	U	ND	U	ND	U	0.0011		ND	U
Anthracene	**0.087***	--	ND	U	ND	U	0.0096		0.00014	J	ND	U	ND	U	ND	U	0.0013		ND	U
Benzo[a]anthracene	**0.108**	--	ND	U	ND	U	0.050		0.00044	J	ND	U	ND	U	ND	U	0.0044		ND	U
Benzo[a]pyrene	**0.15**	--	ND	U	ND	U	0.054		0.00042	J	ND	U	ND	U	ND	U	0.0045		0.00032	J
Benzo[b]fluoranthene	--	--	ND	U	ND	U	0.060		0.00042	J	ND	U	ND	U	0.00042	J	0.0052		0.00037	J
Benzo[e]pyrene	--	--	ND	U	ND	U	0.047		0.00032	J	ND	U	ND	U	0.00019	J	0.0046		0.00022	J
Benzo[g,h,i]perylene	--	--	ND	U	ND	U	0.028		ND	U	ND	U	ND	U	ND	U	0.0019		0.00022	J
Benzo[k]fluoranthene	**0.24**	--	ND	U	ND	U	0.052		ND	U	ND	U	ND	U	ND	U	0.0043		ND	U
Chrysene	**0.166**	--	ND	U	ND	U	0.060		0.00043	J	ND	U	ND	U	ND	U	0.0055		0.00020	J
Dibenz(a,h)anthracene	**0.046***	--	ND	U	ND	U	0.012		ND	U	ND	U	ND	U	ND	U	0.00073	J	ND	U
Fluoranthene	**0.423**	--	ND	U	ND	U	0.074		0.00058	J	ND	U	ND	U	ND	U	0.0089		ND	U
Fluorene	**0.0774**	**30**	ND	U	ND	U	0.0031		ND	U	ND	U	ND	U	ND	U	0.00091		ND	U
Indeno[1,2,3-cd]pyrene	**0.059***	--	ND	U	ND	U	0.030		0.00016	J	ND	U	ND	U	ND	U	0.0018		0.00016	J
Naphthalene	**0.176**	--	ND	U	ND	U	0.0026	J	0.00037	J	ND	U	ND	U	ND	U	0.0022		ND	U
Perylene	--	--	0.14		0.011		0.028		0.002		0.0043		0.0035		0.0078		0.011		0.00038	J
Phenanthrene	**0.204**	--	ND	U	ND	U	0.037		0.00050	J	ND	U	ND	U	ND	U	0.0052		ND	U
Pyrene	**0.195**	--	ND	U	ND	U	0.065		0.00066	J	ND	U	ND	U	ND	U	0.0091		ND	U
Total Conc	--	--	0.14		0.011		0.8396		0.00721		0.0043		0.0035		0.00841		0.20879		0.00187	
PESTICIDES BY METHOD 8081A (MG/KG)																				
4,4'-DDD	**0.00488**	--	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
4,4'-DDE	**0.00316**	--	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U
4,4'-DDT	--	--	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U

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Table 1.4 Summary of Stratum B Analytical Results compared to Ecological Screening Levels
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Lab Sample ID	Screening Level	Screening Levels	460-185785-5		460-186095-3		460-186095-5		460-186095-7		460-186095-9		460-186095-11		460-186095-13		460-186095-15		460-186096-6	
Sampling Date	Ecological Sediment Fresh	Ecological Surface Soils	07/01/2019 13:50:00		07/02/2019 09:10:00		07/02/2019 09:55:00		07/02/2019 11:55:00		07/02/2019 10:20:00		07/02/2019 11:35:00		07/02/2019 13:55:00		07/02/2019 13:35:00		07/03/2019 10:20:00	
Matrix	Nov 2019	Nov 2019	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil	
Unit	mg/kg	mg/kg	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
			Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
METALS BY METHOD 6020B (MG/KG)																				
Aluminum	--	--	7860		4270		3640		11000		11300		12500		8750		9560		4910	
Antimony	2.0	5	ND	U	ND	U	1.3		0.32	J	ND	U	0.32	J	ND	U	0.95	J	ND	U
Arsenic	9.8	10	3.2		1.6		4.8		**25.0**		6.9		**26.4**		5.5		**20.4**		2.2	
Barium	--	283	22.7		17.2		38.7		82.0		56.3		96.4		55.3		50.1		18.8	
Beryllium	--	10	0.31	J	0.26	J	0.27	J	0.66		0.55		0.75		0.48		0.66		0.23	J
Cadmium	0.99	3	ND	U	ND	U	ND	U	0.51	J	ND	U	0.38	J	ND	U	0.57	J	ND	U
Calcium	--	--	170		1880		1190		1920		1860		2030		992		1390		173	
Chromium	43.4	0.4	**17.3**		**11.2**		**36.2**		**68.5**		**29.9**		**84.5**		**21.3**		**71.8**		**10.4**	
Cobalt	50	20	5.1		4.8		4.0		10.5		8.4		12.0		5.5		10.3		4.8	
Copper	31.6	50	7.2		6.4		**34.7**		**31.7**		9.1		**34.3**		6.7		**53.8**		9.7	
Iron	20,000	--	10700		9770		11300		**20100**		**20900**		**22000**		13200		**23000**		12700	
Lead	35.8	41	5.5		3.1		**40.2**		**56.1**		11.8		**58.5**		7.3		**173**		5.6	
Magnesium	--	--	1450		2600		1190		3590		4250		3740		2630		3490		1870	
Manganese	460	--	67.7		136		172		**736**		455		**835**		222		393		111	
Nickel	22.7	30	8.1		9.4		9.1		19.6		17.5		21.7		12.0		21.6		10.9	
Potassium	--	--	603		717		519		1400		1620		1450		1010		1510		579	
Selenium	2	0.2	ND	U	ND	U	ND	U	**0.60**	J	ND	U	**0.53**	J	ND	U	**1.6**	J	ND	U
Sodium	--	--	123		81.3	J	62.6	J	281		301		288		169		370		146	
Thallium	--	1	ND	U	ND	U	ND	U	0.24	J	0.14	J	0.20	J	ND	U	0.15	J	ND	U
Vanadium	--	2	**21.9**		**11.5**		**33.8**		**26.5**		**27.6**		**28.0**		**22.6**		**47.1**		**14.1**	
Zinc	121	8.5	**20.2**		**24.7**		**66.5**		**205**		**47.3**		**153**		**32.4**		**191**		**26.1**	
METALS BY METHOD 6020B (MG/KG)																				
Mercury	0.18	0.0005	**0.013**	J	ND	U	**0.053**		ND	U	**0.037**		ND	U	**0.012**	J F1	**0.096**		ND	U
CYANIDE BY METHOD 9012B (MG/KG)																				
Cyanide, Total (mg/kg)	0.1	--	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U

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Table 1.4 Summary of Stratum B Analytical Results compared to Ecological Screening Levels
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Client ID	DNREC SIRS	DNREC SIRS	VB11-COMP-B		VB21-COMP-B		VB29-COMP-A		VB27-COMP-B		VB30-COMP-B		VB33-COMP-B		VB31-COMP-B		VB19-COMP-B		VB23-COMP-B		DUP-COMP-B		VB25-COMP-B	
Lab Sample ID	Screening Level	Screening Level	460-186096-8		460-186429-2		460-186429-5		460-186429-6		460-186429-7		460-186429-8		460-186429-12		460-186302-3		460-186302-5		460-186302-6		460-186302-9	
Sampling Date	Ecological Sediment Fresh	Ecological Surface Soils	07/03/2019 11:25:00		07/09/2019 09:05:00		07/09/2019 10:00:00		07/09/2019 11:45:00		07/09/2019 12:15:00		07/09/2019 14:50:00		07/09/2019 13:30:00		07/08/2019 11:40:00		07/08/2019 13:50:00		07/08/2019 13:55:00		07/08/2019 14:45:00	
Matrix	Nov 2019	Nov 2019	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil	
Unit	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
			Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
VOLATILE ORGANIC COMPOUNDS BY METHOD 8260B																								
No Detection																								
SEMI VOLATILE ORGANIC COMPOUNDS BY METHOD 8270D SIM (MG/KG)																								
1-Methylnaphthalene	--	--	0.0013		0.0013		ND	U	ND	U	ND	U	ND	U	0.018		0.0077		0.00057	J	0.00044	J	0.0018	
2-Methylnaphthalene	**0.0202**	--	0.0023		0.0027		ND	U	ND	U	ND	U	ND	U	**0.035**		0.014		0.00076	J	0.00062	J	0.0031	
Acenaphthene	**0.021***	**20**	0.00094		0.00089		ND	U	ND	U	ND	U	ND	U	0.019		0.016		0.00017	J	0.00027	J	0.002	
Acenaphthylene	--	--	0.0014		0.0017		ND	U	ND	U	ND	U	ND	U	0.020		0.0094		0.00084	J	0.00047	J	0.0024	
Anthracene	**0.087***	--	0.0017		0.0019		ND	U	ND	U	ND	U	ND	U	0.025		0.015		0.001		0.00079	J	0.0043	
Benzo[a]anthracene	**0.108**	--	0.0054		0.0062		ND	U	ND	U	ND	U	ND	U	0.082		0.065		0.0061		0.0046		0.015	
Benzo[a]pyrene	**0.15**	--	0.0061		0.0072		ND	U	ND	U	ND	U	ND	U	0.087		0.061		0.0055		0.0039		0.014	
Benzo[b]fluoranthene	--	--	0.0062		0.0065		ND	U	ND	U	ND	U	ND	U	0.082		0.051		0.0055		0.0041		0.011	
Benzo[e]pyrene	--	--	0.0052		0.0059		0.00032	J	ND	U	ND	U	ND	U	0.077		0.048		0.0041		0.0031		0.0095	
Benzo[g,h,i]perylene	--	--	0.0031		0.0043		ND	U	ND	U	ND	U	ND	U	0.036		0.039		0.0032		0.0023		0.006	
Benzo[k]fluoranthene	**0.24**	--	0.0048		0.0053		ND	U	ND	U	ND	U	ND	U	0.076		0.043		0.005		0.0037		0.011	
Chrysene	**0.166**	--	0.007		0.0076		0.00045	J	ND	U	0.00026	J	ND	U	0.11		0.076		0.0061		0.0045		0.014	
Dibenz(a,h)anthracene	**0.046***	--	0.0011		0.0014		ND	U	ND	U	ND	U	ND	U	0.014		0.012		0.0012		0.00088		0.0025	
Fluoranthene	**0.423**	--	0.0088		0.0096		ND	U	ND	U	ND	U	ND	U	0.14		0.097		0.0076		0.0057		0.017	
Fluorene	**0.0774**	**30**	0.0017		0.0015		ND	U	ND	U	ND	U	ND	U	0.023		0.008		0.00036	J	0.00044	J	0.0028	
Indeno[1,2,3-cd]pyrene	**0.059***	--	0.0029		0.0036		ND	U	ND	U	ND	U	ND	U	0.033		0.032		0.0032		0.0022		0.0066	
Naphthalene	**0.176**	--	0.0028		0.0062		ND	U	ND	U	ND	U	ND	U	0.045		0.021		0.0012		0.00094		0.0059	
Perylene	--	--	0.013		0.013		0.050		ND	U	0.032		0.094		0.18		0.13		0.0043		0.0037		0.055	
Phenanthrene	**0.204**	--	0.0068		0.0082		0.00094	J	ND	U	ND	U	ND	U	0.12		0.061		0.0037		0.0034		0.014	
Pyrene	**0.195**	--	0.011		0.012		0.00085	J	ND	U	ND	U	ND	U	0.15		0.14		0.010		0.0081		0.021	
Total Conc	--	--	0.30694		0.40399		0.05496		0		0.03226		0.094		5.683		2.7781		0.1316		0.10345		0.3584	
PESTICIDES BY METHOD 8081A (MG/KG)																								
4,4'-DDD	**0.00488**	--	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	**0.022**		ND	U	ND	U	ND	U	ND	U
4,4'-DDE	**0.00316**	--	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	**0.057**		ND	U	ND	U	ND	U	ND	U
4,4'-DDT	--	--	0.0058	J	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U	ND	U

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Project No. 11139.LH

Table 1.4 Summary of Stratum B Analytical Results compared to Ecological Screening Levels
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Lab Sample ID	Screening Level	Screening Levels	460-186096-8		460-186429-2		460-186429-5		460-186429-6		460-186429-7	
Sampling Date	Ecological Sediment Fresh	Ecological Surface Soils	07/03/2019 11:25:00		07/09/2019 09:05:00		07/09/2019 10:00:00		07/09/2019 11:45:00		07/09/2019 12:15:00	
Matrix	Nov 2019	Nov 2019	Soil		Soil		Soil		Soil		Soil	
Unit	mg/kg	mg/kg	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
			Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
METALS BY METHOD 6020B (MG/KG)												
Aluminum	--	--	7200		5000		6260		7030		7740	
Antimony	2.0	5	ND	U	0.33	U	ND	U	ND	U	ND	U
Arsenic	9.8	10	1.7		3.4		3.4		3.3		1.8	
Barium	--	283	27.6		21.1		27.0		33.8		56.7	
Beryllium	--	10	0.29	J	0.22	J	0.35	J	0.41	J	0.41	J
Cadmium	0.99	3	ND	U	ND	U	ND	U	ND	U	ND	U
Calcium	--	--	493		355		261		252		243	
Chromium	43.4	0.4	14.9		17.1		15.7		13.9		16.3	
Cobalt	50	20	4.4		10.2		5.3		8.7		2.8	
Copper	31.6	50	12.1		10.2		7.6		10.9		7.8	
Iron	20,000	--	10500		11100		9030		15700		7940	
Lead	35.8	41	9.8		10.8		5.6		7.3		7.5	
Magnesium	--	--	2380		1180		2050		2400		1420	
Manganese	460	--	92.8		166		90.1		165		91.7	
Nickel	22.7	30	12.8		8.6		10.7		15.0		8.7	
Potassium	--	--	683		472		1040		805		563	
Selenium	2	0.2	ND	U	ND	U	ND	U	ND	U	ND	U
Sodium	--	--	198		58.6	J	68.7	J	88.0	J	89.6	J
Thallium	--	1	ND	U	ND	U	ND	U	ND	U	ND	U
Vanadium	--	2	17.4		16.9		19.4		17.6		22.5	
Zinc	121	8.5	37.3		29.6		23.9		31.4		26.2	
METALS BY METHOD 6020B (MG/KG)												
Mercury	0.18	0.0005	0.019		0.045		ND	U	0.011	J	ND	U
CYANIDE BY METHOD 9012B (MG/KG)												
Cyanide, Total (mg/kg)	0.1	--	ND	U	ND	U	ND	U	ND	U	ND	U

Lab Sample ID	460-186429-8		460-186429-12		460-186302-3		460-186302-5		460-186302-6		460-186302-9	
Sampling Date	07/09/2019 14:50:00		07/09/2019 13:30:00		07/08/2019 11:40:00		07/08/2019 13:50:00		07/08/2019 13:55:00		07/08/2019 14:45:00	
Matrix	Soil		Soil		Soil		Soil		Soil		Soil	
Unit	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
METALS BY METHOD 6020B (MG/KG)												
Aluminum	5760		10900		7230		7830		4540		6860	
Antimony	ND	U	2.2		2.8		0.50	J	0.53	J	ND	U
Arsenic	3.2		26.9		28.4		3.3		2.1		4.0	
Barium	29.5		68.9		61.3		17.6		12.0		19.9	
Beryllium	0.33	J	0.79		0.36	J	0.30	J	ND	U	0.38	J
Cadmium	ND	U	0.60	J	0.99	J	ND	U	ND	U	ND	U
Calcium	167		1610		1090		309		254		353	
Chromium	10.4		88.2		46.9		17.1		12.9		24.4	
Cobalt	2.4		9.1		6.8		3.8		2.3		4.1	
Copper	3.7		96.9		87.5		13.6		14.0		7.8	
Iron	5760		25600		18900		7680		4830		6840	
Lead	4.4		126		81.7		13.0		11.9		6.7	
Magnesium	923		3630		2650		447		339		969	
Manganese	43.7		417		259		53.3		40.3		84.1	
Nickel	6.5		21.1		14.1		6.7		4.0		11.5	
Potassium	358		1550		1040		302		214		442	
Selenium	ND	U	1.6	J	0.73	J	ND	U	ND	U	ND	U
Sodium	70.6	J	293		265		67.1	J	55.0	J	108	J
Thallium	ND	U	ND	U	0.20	J	ND	U	ND	U	ND	U
Vanadium	13.2		72.6		38.1		24.8		15.4		17.1	
Zinc	16.0		186		183		25.9		19.5		25.8	
METALS BY METHOD 6020B (MG/KG)												
Mercury	0.015	J	0.32		0.11		0.019		0.021		0.023	J
CYANIDE BY METHOD 9012B (MG/KG)												
Cyanide, Total (mg/kg)	ND	U	0.33	J F1	0.24	J	ND	U	ND	U	ND	U

Notes:

ND: Compound was not detected in the sample
U : Indicates the analyte was analyzed for but not detected.
B : Compound was found in the blank and sample.
J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
-- : no applicable standard found for this compound
F1 : MS and/or MSD Recovery is outside acceptance limits.

Highlighted Concentrations shown in bold type face exceed limits
* : LCS or LCSD is outside acceptance limits.
mg/kg: miligrams per kilogram
Q: qualifier
Screening levels are derived from the DNREC Site Investigation and Restoration Section Screening Level Tables (November, 2019).

Legend :

Result is above the Ecological Fresh Sediment Screening Level
Result is above the Ecological Surface Soil Screening Level
Result is above both Ecological Screening Levels
MDL is above Screening Level

Duffield Associates, Inc.
Project No. 11139.LH

Table 1.5 Summary of Stratum C Analytical Results compared to Human Health Screening Levels
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Sample Identification	TB-1B		TB-2B		TB-3B		TB-4B		TB-5B		Human Health
Sample Description	Soil		Soil		Soil		Soil		Soil		DNREC-SIRS Human Health Soil Screening Levels (mg/kg)
Sample Collection	Composite		Composite		Composite		Composite		Composite		
Sample Date	10/5/2016		9/27/2016		10/3/2016		10/4/2016		10/4/2016		
Moisture Content	18.50		14.60		14.20		17.50		15.70		
Sample Depth (ft. below MLLW)	43 to 48		32 to 48		43 to 49		42 to 48		42 to 48		
TCL Volatile Organic Compounds											
No Detections											--
TCL Semivolatile Organic Compounds											
No Detections											--
TCL Pesticides											
No Detections											--
Pesticides											
No Detections											--
Polychlorinated Biphenyls											
Monochlorobiphenyl	ND	U	2.44E-06		ND	U	ND	U	ND	U	--
Dichlorobiphenyl	1.68E-05		3.32E-05		9.49E-07		1.04E-06		8.02E-06		--
Trichlorobiphenyls	4.69E-06		1.15E-05		4.74E-07		ND	U	2.27E-06		--
Tetrachlorobiphenyls	6.64E-05		2.16E-05		ND	U	ND	U	5.10E-06		--
Pentachlorobiphenyls	1.43E-06		ND	U *	ND	U *	5.13E-07		ND	U *	--
Hexachlorobiphenyls	9.64E-07		ND	U	ND	U	ND	U	ND	U	--
Heptachlorobiphenyls	ND	U	ND	U	ND	U	ND	U	ND	U	--
Octachlorobiphenyls	1.80E-06		ND	U	ND	U	ND	U	ND	U	--
Nonachlorobiphenyls	ND	U	ND	U	ND	U	ND	U	ND	U	--
Decachlorobiphenyls	ND	U	ND	U	ND	U	ND	U	ND	U	--
Total PCBs	9.20E-05		6.87E-05		1.42E-06		1.60E-06		1.54E-05		**5.98E-02**
Dioxin TEQs											
TEQs (2,3,7,8-TCDD)	3.26E-08		5.28E-09		3.72E-08		3.38E-08		2.39E-08		**4.80E-06**
TAL Inorganics											
Aluminum	4140		2880		3510		4210		1560		**51,200**
Arsenic	2.5	U	5.7	U	2.2	U	0.88	U	1.5		**11**
Beryllium	0.85	U	2	U	0.42		0.43		0.37		**16**
Calcium	1800	J	876	J	1210		544	J	461	J	-
Chromium	60.3		29.5		27.9		31.9		25.5		**214**
Cobalt	2.9	U	23.7	J	2.5	J	1	U	2.4	J	**34**
Copper	6.1	J	22.2	J	6.6		7		4.9		**310**
Iron	59,300		**86,700**		39,400		31,800		18,400		**74,767**
Lead	5.7		4.6	U	2.8		4.7		2.1		**400**
Magnesium	440	J	384	J	316	J	142	J	108	J	-
Manganese	460		1,680		511		92.7		59.2		**2,100**
Nickel	8.3	J	22.1	J	3.9	J	2.5	J	3.3	J	**150**
Selenium	3.5	J	8	U	1.2	U	1.2	U	1.2	U	**39**
Vanadium	145		92.5		67.3		96.4		67.9		**134**
Zinc	18.9		8.5	U	3.3	J	1.3	U	7.1		**2,300**

Notes:

1. The Ecological Screening Levels for fresh water sediments, and surface soils are from the State of Delaware, Department of Natural Resources and Environmental Control, Site Investigation and Restoration Section (DNREC-SIRS) Screening Level Table, last updated in November 2019.

= concentration is above the screening level

Table 1.6 Summary of Stratum C Analytical Results compared to Ecological Screening Levels
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Sample Identification	TB-1B		TB-2B		TB-3B		TB-4B		TB-5B		Ecological Screening Criteria	Ecological Screening Criteria
Sample Description	Soil		Soil		Soil		Soil		Soil		DNREC-SIRS Ecological Sediment Screening Levels - Fresh Water (mg/kg)	DNREC-SIRS Ecological Surface Soil Screening Levels - Fresh Water (mg/kg)
Sample Collection	Composite		Composite		Composite		Composite		Composite			
Sample Date	10/5/2016		9/27/2016		10/3/2016		10/4/2016		10/4/2016			
Moisture Content	18.50		14.60		14.20		17.50		15.70			
Sample Depth (ft. below MLLW)	43 to 48		32 to 48		43 to 49		42 to 48		42 to 48			
Soil Characteristics												
Cyanide, Total (mg/kg)	0.032	U	0.067	J B	0.031	U	0.033	U	0.032	U	0.1	-
TCL Volatile Organic Compounds												
No Detections											--	--
TCL Semivolatile Organic Compounds												
No Detections											--	--
TCL Pesticides												
No Detections											--	--
Pesticides												
No Detections											--	--
Polychlorinated Biphenyls												
Monochlorobiphenyl	ND	U	2.44E-06		ND	U	ND	U	ND	U	--	--
Dichlorobiphenyl	1.68E-05		3.32E-05		9.49E-07		1.04E-06		8.02E-06		--	--
Trichlorobiphenyls	4.69E-06		1.15E-05		4.74E-07		ND	U	2.27E-06		--	--
Tetrachlorobiphenyls	6.64E-05		2.16E-05		ND	U	ND	U	5.10E-06		--	--
Pentachlorobiphenyls	1.43E-06		ND	U *	ND	U *	5.13E-07		ND	U *	--	--
Hexachlorobiphenyls	9.64E-07		ND	U	ND	U	ND	U	ND	U	--	--
Heptachlorobiphenyls	ND	U	ND	U	ND	U	ND	U	ND	U	--	--
Octachlorobiphenyls	1.80E-06		ND	U	ND	U	ND	U	ND	U	--	--
Nonachlorobiphenyls	ND	U	ND	U	ND	U	ND	U	ND	U	--	--
Decachlorobiphenyls	ND	U	ND	U	ND	U	ND	U	ND	U	--	--
Total PCBs	9.20E-05		6.87E-05		1.42E-06		1.60E-06		1.54E-05		5.98E-02	40
Dioxin TEQs												
TEQs (2,3,7,8-TCDD)	3.26E-08		5.28E-09		3.72E-08		3.38E-08		2.39E-08		8.5E-07	3E-06
TAL Inorganics												
Aluminum	4,140		2,880		3,510		4,210		1,560		-	-
Arsenic	2.5	U	5.7	U	2.2	U	0.88	U	1.5		9.8	10
Beryllium	0.85	U	2	U	0.42		0.43		0.37		-	10
Calcium	1,800	J	876	J	1,210		544	J	461	J	-	-
Chromium	60.3		29.5		27.9		31.9		25.5		43.4	0.4
Cobalt	2.9	U	23.7	J	2.5	J	1	U	2.4	J	50	20
Copper	6.1	J	22.2	J	6.6		7		4.9		31.6	50
Iron	59,300		86,700		39,400		31,800		18,400		20,000	-
Lead	5.7		4.6	U	2.8		4.7		2.1		35.8	41
Magnesium	440	J	384	J	316	J	142	J	108	J	-	-
Manganese	460		1,680		511		92.7		59.2		460	-
Nickel	8.3	J	22.1	J	3.9	J	2.5	J	3.3	J	22.7	30
Selenium	3.5	J	8	U	1.2	U	1.2	U	1.2	U	2	0.2
Vanadium	145		92.5		67.3		96.4		67.9		-	2
Zinc	18.9		8.5	U	3.3	J	1.3	U	7.1		121	8.5

Notes:

1. The Ecological Screening Levels for fresh water sediments, and surface soils are from the State of Delaware, Department of Natural Resources and Environmental Control, Site Investigation and Restoration Section (DNREC-SIRS) Screening Level Table, last updated in November 2019.

= concentration is above the screening level

Table 2.1 Summary of Surface Water Analytical Results compared to Human Health Standards
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Client ID	DRBC SQOs for Freshwater Carcinogens (Fish Ingestion Only)	DRBC SQOs for Freshwater Systemic Toxicants (Fish Ingestion Only)	SW1		SW-2		SW-3		SW-5		SW-4	
Lab Sample ID			460-185785-1		460-186095-2		460-186096-2		460-186429-11		460-186302-1	
Sampling Date	Fish Ingestion	Fish Ingestion	07/01/2019 11:35:00		07/02/2019 08:45:00		07/03/2019 09:00:00		07/09/2019 15:00:00		07/08/2019 08:15:00	
Matrix	Sept 2017	Sept 2017	Water		Water		Water		Water		Water	
Dilution Factor			1		1		1		1		1	
Unit	ug/l	ug/l	ug/l		ug/l		ug/l		ug/l		ug/l	
			Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
SEMI VOLATILE ORGANIC COMPOUNDS BY METHOD 8260B (UG/L)												
1-Methylnaphthalene	-	-	ND	U	0.0045	J H	0.0027	J	ND	U	ND	U
2-Methylnaphthalene	-	-	ND	U	0.0054	J H	0.0040	J	ND	U	ND	U
Anthracene	-	**40,000**	ND	U	ND	U H	ND	U	0.014	J	ND	U
Benzo[a]anthracene	**0.18**	-	ND	U	0.013	J H	0.029		0.0092	J	0.0057	J
Benzo[a]pyrene[3]	**0.018**	-	ND	U	0.016	J H	**0.035**		0.0093	J	0.0068	J
Benzo[b]fluoranthene	**0.18**	-	ND	U	0.038	H	0.085		0.018	J	0.022	J
Benzo[e]pyrene	-	-	0.0030	J	0.023	H	0.048		0.011	J	0.013	J
Benzo[g,h,i]perylene	-	-	ND	U	0.012	J H	0.025		0.0087	J	0.0075	J
Benzo[k]fluoranthene	**1.8**	-	ND	U	0.027	H	0.057		0.013	J	0.016	J
Chrysene	**18**	-	0.0049	J	0.037	H	0.10		0.021	J	0.028	
Dibenz(a,h)anthracene	**0.018**	-	ND	U	ND	U H	0.0074	J	0.0066	U	ND	U
Fluoranthene	-	**140**	ND	U	0.079	H	0.12		0.049		0.041	
Indeno[1,2,3-cd]pyrene	**0.18**	-	ND	U	0.012	J H	0.025		0.0081	J	0.0070	J
Naphthalene	-	-	ND	U	0.013	J H B	0.0079	J B	0.0049	J	0.0060	J
Perylene	-	-	ND	U	0.0051	J H	0.011	J	0.0032	J	ND	U
Phenanthrene	-	-	ND	U	0.061	H	0.039		0.035		0.025	
Pyrene	-	**4,000**	0.0091	J	0.064	H	0.10		0.041		0.031	
Total Conc	-	-	0.076		0.41		0.82		0.2454		0.209	
PESTICIDES BY METHOD 8081A (UG/L)												
4,4'-DDD	**0.00031**	**0.037**	Not Analyzed		**ND**	U	**ND**	U	**ND**	U	**ND**	U
4,4'-DDE	**0.00022**	**0.037**			**ND**	U	**ND**	U	**ND**	U	**ND**	U
4,4'-DDT	**0.00022**	**0.037**			**ND**	U	**ND**	U	**ND**	U	**ND**	U
Aldrin	**0.00005**	**0.025**			**ND**	U	**ND**	U	**ND**	U	**ND**	U
alpha-BHC[3]	**0.0049**	-			**ND**	U	**ND**	U	**ND**	U	**ND**	U
cis-Chlordane	**0.00081**	**0.14**			**ND**	U	**ND**	U	**ND**	U	**ND**	U
Heptachlor	**0.000079**	**0.18**			**ND**	U	**ND**	U	**ND**	U	**ND**	U
Heptachlor epoxide	**0.000039**	**0.0046**			**ND**	U	**ND**	U	**ND**	U	**ND**	U
Toxaphene[3]	**0.00028**	-			**ND**	U	**ND**	U	**ND**	U	**ND**	U
POLYCHLORINATED BIPHENYLS BY METHOD 1668C (UG/L)												
Total PCBs	**0.000016**	**0.00849**	**0.00227**		**0.00939**		**0.0225**		**0.00311**		**0.00632**	
DIOXIN TEQs BY METHOD 1613B (UG/L)												
TEQs (2,3,7,8-TCDD)	**5.1E-09**	6E-07 (DE SWQS)	**1.30E-07**		**6.74E-07**		**1.95E-06**		**1.24E-07**		**7.79E-07**	
METALS BY METHOD 6020B (UG/L)												
Aluminum	-	-	405		1650		2040		1050		719	
Antimony[3]	-	**640**	0.45	J	0.59	J	0.63	J	0.43	J	0.56	J
Arsenic[3]	-	-	1.3	J	2.6		2.1		1.4	J	1.7	J
Barium[3]	-	-	31.1		42.3		49.7		38.2		33.1	
Beryllium[3]	**0.024**	**420**	**ND**	U	**ND**	U	**ND**	U	**ND**	U	**ND**	U
Calcium	-	-	21800		18400		18600		18700		19700	
Chromium[3]	-	-	ND	U	5.8		7.6		4.7		2.5	J
Cobalt	-	-	ND	U	ND	U	2.3	J	1.6	J	ND	U
Copper[3]	-	-	3.2	J	12.2		8.6		9.1		3.9	J
Iron	-	-	771		2860		3760		2050		1230	
Lead[3]	-	-	1.5		5.7		8.3		4.4		2.3	
Magnesium	-	-	6600		7500		7560		7340		8350	
Manganese	-		54.7		208		379		255		74.8	
Nickel[3]	-	**1,700**	ND	U	3.8	J	4.9		3.6	J	2.6	J
Potassium	-	-	2850		3190		3200		3110		3490	
Sodium	-	-	23300		27100		25500		27800		34500	
Vanadium	-	-	8.6		6.3		7.3		3.7	J	3.0	J
Zinc	-	**26,000**	18.8		23.7		27.3		17.3		11.9	J
MERCURY BY METHOD 6020B (UG/L)												
Mercury	-	**0.051**	No Detection									
CYANIDE BY METHOD 9012B (UG/L)												
Cyanide, Total	-	**140**	No Detection									

Notes:

ND: Compound was not detected in the sample
U : Indicates the analyte was analyzed for but not detected.
B : Compound was found in the blank and sample.
J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
H: Analysis was completed past the method holding time
-- : no applicable standard found for this compound

Highlighted Concentrations shown in bold type face exceed limits
* : LCS or LCSD is outside acceptance limits.
ug/L: micrograms per liter
Q: qualifier
1. Stream Quality Objectives (SQOs) are derived from Delaware River Basin Commission's (DRBC's) Zone 5 Water Quality Regulations (2013).
2. Where applicable, Delaware Surface Water Quality Standards (DE SWQS) have been used (2017). DE SWQS are identified on the table with a bolded border.

Legend :

Result is above the SW Systemic-Fish Ingestion Standard
Result is above the SW Human Health - Fish Ingestion Standard
Result is above more than one Standard
MDL is above Standard
Result is less than 3x and 5x Method Blank - NOT VALID
Result is greater than 5x the Method Blank - VALID
Result is greater than 3x but less than 5x the Method Blank - USE WITH CAUTION

Duffield Associates, Inc.
Project No. 11139.LH

Table 2.2 Summary of Surface Water Analytical Results compared to Ecological Standards
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Client ID	DRBC Freshwater Chronic SQOs for Aquatic Life	DRBC Freshwater Acute SQOs for Aquatic Life	SW1		SW-2		SW-3		SW-5		SW-4	
Lab Sample ID			460-185785-1		460-186095-2		460-186096-2		460-186429-11		460-186302-1	
Sampling Date			07/01/2019 11:35:00		07/02/2019 08:45:00		07/03/2019 09:00:00		07/09/2019 15:00:00		07/08/2019 08:15:00	
Matrix	December 2013	December 2013	Water		Water		Water		Water		Water	
Dilution Factor			1		1		1		1		1	
Unit	ug/l	ug/l	ug/l		ug/l		ug/l		ug/l		ug/l	
			Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
SEMI VOLATILE ORGANIC COMPOUNDS BY METHOD 8260B (UG/L)												
1-Methylnaphthalene	-	-	ND	U	0.0045	J H	0.0027	J	ND	U	ND	U
2-Methylnaphthalene	-	-	ND	U	0.0054	J H	0.0040	J	ND	U	ND	U
Anthracene	-	-	ND	U	ND	U H	ND	U	0.014	J	ND	U
Benzo[a]anthracene	-	-	ND	U	0.013	J H	0.029		0.0092	J	0.0057	J
Benzo[a]pyrene[3]	-	-	ND	U	0.016	J H	0.035		0.0093	J	0.0068	J
Benzo[b]fluoranthene	-	-	ND	U	0.038	H	0.085		0.018	J	0.022	J
Benzo[e]pyrene	-	-	0.0030	J	0.023	H	0.048		0.011	J	0.013	J
Benzo[g,h,i]perylene	-	-	ND	U	0.012	J H	0.025		0.0087	J	0.0075	J
Benzo[k]fluoranthene	-	-	ND	U	0.027	H	0.057		0.013	J	0.016	J
Chrysene	-	-	0.0049	J	0.037	H	0.10		0.021	J	0.028	
Dibenz(a,h)anthracene	-	-	ND	U	ND	U H	0.0074	J	0.0066	U	ND	U
Fluoranthene	-	-	ND	U	0.079	H	0.12		0.049		0.041	
Indeno[1,2,3-cd]pyrene	-	-	ND	U	0.012	J H	0.025		0.0081	J	0.0070	J
Naphthalene	-	-	ND	U	0.013	J H B	0.0079	J B	0.0049	J	0.0060	J
Perylene	-	-	ND	U	0.0051	J H	0.011	J	0.0032	J	ND	U
Phenanthrene	-	-	ND	U	0.061	H	0.039		0.035		0.025	
Pyrene	-	-	0.0091	J	0.064	H	0.10		0.041		0.031	
Total Conc	-	-	0.076		0.41		0.82		0.2454		0.209	
PESTICIDES BY METHOD 8081A (UG/L)												
4,4'-DDD	**0.001**	**1.1**	Not Analyzed		**ND**	U	**ND**	U	**ND**	U	**ND**	U
4,4'-DDE	**0.001**	**1.1**			**ND**	U	**ND**	U	**ND**	U	**ND**	U
4,4'-DDT	**0.001**	**1.1**			**ND**	U	**ND**	U	**ND**	U	**ND**	U
Aldrin	-	**3.0**			**ND**	U	**ND**	U	**ND**	U	**ND**	U
alpha-BHC[3]	-	-			**ND**	U	**ND**	U	**ND**	U	**ND**	U
cis-Chlordane	**0.0043**	**2.4**			**ND**	U	**ND**	U	**ND**	U	**ND**	U
Heptachlor	**0.0038**	**0.52**			**ND**	U	**ND**	U	**ND**	U	**ND**	U
Heptachlor epoxide	**0.0038**	**0.52**			**ND**	U	**ND**	U	**ND**	U	**ND**	U
Toxaphene[3]	**0.0002**	**0.73**			**ND**	U	**ND**	U	**ND**	U	**ND**	U
POLYCHLORINATED BIPHENYLS BY METHOD 1668C (UG/L)												
Total PCBs	**0.014**	**1.0**	0.00227		0.00939		**0.0225**		0.00311		0.00632	
DIOXIN TEQs BY METHOD 1613B (UG/L)												
TEQs (2,3,7,8-TCDD)	-	-	1.30E-07		6.74E-07		1.95E-06		1.24E-07		7.79E-07	
METALS BY METHOD 6020B (UG/L)												
Aluminum	**87.0**	**750**	**405**		**1650**		**2040**		**1050**		**719**	
Antimony[3]	--	-	0.45	J	0.59	J	0.63	J	0.43	J	0.56	J
Arsenic[3]	**150**	**340**	1.3	J	2.6		2.1		1.4	J	1.7	J
Barium[3]	--	-	31.1		42.3		49.7		38.2		33.1	
Calcium	--	-	21800		18400		18600		18700		19700	
Chromium[3]	**11**	**16**	ND	U	5.8		7.6		4.7		2.5	J
Cobalt	--	-	ND	U	ND	U	2.3	J	1.6	J	ND	U
Copper[3]	**9.6**	**6.5**	3.2	J	**12.2**		**8.6**		**9.1**		3.9	J
Iron	**1,000**	-	771		**2860**		**3760**		**2050**		**1230**	
Lead[3]	**5.4**	**38**	1.5		**5.7**		**8.3**		4.4		2.3	
Magnesium	--	-	6600		7500		7560		7340		8350	
Manganese	--	-	54.7		208		379		255		74.8	
Nickel[3]	**34.2**	**363**	ND	U	3.8	J	4.9		3.6	J	2.6	J
Potassium	--	-	2850		3190		3200		3110		3490	
Sodium	--	-	23300		27100		25500		27800		34500	
Vanadium	--	-	8.6		6.3		7.3		3.7	J	3.0	J
Zinc	**91.5**	**90.8**	18.8		23.7		27.3		17.3		11.9	J
MERCURY BY METHOD 6020B (UG/L)												
Mercury	**0.770**	**1.40**	ND	U	ND	U	ND	U	ND	U	ND	U
CYANIDE BY METHOD 9012B (UG/L)												
Cyanide, Total (mg/l)	**5.20**	**22.0**	ND	U	ND	U	ND	U *	ND	U F1	ND	U * F1

Notes:

ND: Compound was not detected in the sample
U : Indicates the analyte was analyzed for but not detected.
B : Compound was found in the blank and sample.
J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
-- : no applicable standard found for this compound
F1 : MS and/or MSD Recovery is outside acceptance limits.
H: Analysis was completed past the method holding time
Highlighted Concentrations shown in bold type face exceed limits
* : LCS or LCSD is outside acceptance limits.
ug/L: micrograms per liter
Q: qualifier
1. Stream Quality Objectives (SQOs) are derived from Delaware River Basin Commission's (DRBC's) Zone 5 Water Quality Regulations (2013).

Legend :

- Result is above the SW Aquatic Life - Fresh Water Acute Criterion Standard
- Result is above the SW Aquatic Life - Fresh Water Chronic Criterion Standard
- Result is above more than one Standard
- MDL is above standard
- Result is less than 3x and 5x Method Blank - NOT VALID
- Result is greater than 5x the Method Blank - VALID
- Result is greater than 3x but less than 5x the Method Blank - USE WITH CAUTION

Duffield Associates, Inc.
Project No. 11139.LH

Table 2.3 Summary of Surface Water Analytical Results
October 2016 Sampling Event
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Sample Identification	SW-1		DRBC SQOs for Chronic Aquatic Life (Fresh Water)	DRBC SQOs for Acute Aquatic Life (Fresh Water)	DRBC SQOs for Carcinogens (Fish Ingestion Only)	DRBC SQOs for Systemic Toxicants (Fish Ingestion Only)
Sample Description	Surface Water					
Sample Collection	Grab					
Sample Date	9/28/2016					
TCL Volatile Organic Compounds			ug/L	ug/L	ug/L	ug/L
No detections						
TCL Semivolatile Organic Compounds						
No detections						
TCL Pesticides						
No detections						
PCBs, Dioxins, Furans, and Dioxin-like PCBs						
Total PCBS	2.80E-05		1.4E-02	--	1.60E-05	8.49E-03
TEQ	2.4E-06		-	--	5.10E-09	6E-07 (DE SWQS)
TAL Inorganics						
Aluminum	1,600		87	750	--	--
Antimony	ND	U	--	--	--	640
Arsenic	ND	U	150	340	--	--
Barium	43.9	J	--	--	--	--
Beryllium	ND	U	--	--	0.024	420
Cadmium	ND	U	1.02	0.14	--	16
Calcium	41,300		--	--	--	--
Chromium	4.1	J	11	16	--	--
Cobalt	ND	U	--	--	--	--
Copper	ND	U	9.6	6.5	--	--
Iron	2,220		1000	--	--	--
Lead	ND	U	5.4	38	--	--
Magnesium	73,400		--	--	--	--
Manganese	101		--	--	--	--
Nickel	ND	U	34.2	363	--	1,700
Potassium	24,400		--	--	--	--
Selenium	ND	U	20	5.0	--	4,200
Silver	ND	U	--	--	--	40,000
Sodium	562,000		--	--	--	--
Thallium	ND	U	--	--	--	0.47
Vanadium	5.5	J	--	--	--	--
Zinc	54.4		91.5	90.8	--	26,000
Mercury	ND	U	0.770	1.40	--	0.051
Cyanide, Total	5.1	J B	5.20	22.0	--	140

Notes:
ug/L : micrograms per liter
ND: Compound was not detected in the sample
U : Indicates the analyte was analyzed for but not detected.
B : Compound was found in the blank and sample
J : Result is less than the Reporting Limit (RL) but greater than or equal to the Method Detection Limit (MDL) and the concentration is an approximate value.
-- : no applicable standard found for this compound
1) Concentration are in are in µg/L and are derived from Delaware River Basin Commission's Water Quality Regulations (last updated 2013).
2) Delaware fresh water chronic ecologcal screening level for copper is based on EPA Biotic Ligand Model. The require criteria to run the model is unavailable.
**A hardness of 74 mg/L was used in order to determine calculated Delaware Fresh Water Chronic Criterion
3. Stream Quality Objectives (SQOs) are derived from Delaware River Basin Commission's (DRBC's) Zone 5 Water Quality Regulations (last updated 2013).

Table 3 . Summary of Statistics
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Sample Identification	Stratum A						Stratum B						Surface Water				
	Mean	Standard Deviation	CV	95% UCL	Max	Median	Mean	Standard Deviation	CV	95% UCL	Max	Median	Mean	Standard Deviation	CV	Max	Median
Units	mg/kg				mg/kg	mg/kg	mg/kg				mg/kg	mg/kg	ug/L			ug/L	ug/L
WetChem																	
Acid Volatile Sulfides (AVS)	5.41	8.59	1.59	8.65	34.20	0.77	6.3325	11.9	1.88	10.9	55.1	5.9					
Toatal and amendable Cyanide (mg/kg)	0.0938	0.0938	1.00	0.129	0.450	0.240	0.147	0.052	0.35	0.167	0.330	0.130					
Corrosivity (su)	6.91	0.346	0.0501	7.04	7.40	7.00	6.630	0.579	0.09	6.85	7.60	6.45					
Sulfide (mg/kg)	14.8	19.1	1.29	22.0	86.9	5.9	5.260	3.001	0.57	6.42	14.70	3.85			NA		
pH (su)	6.91	0.346	0.05	7.04	7.40	7.00	6.630	0.579	0.09	6.85	7.60	6.45					
Sulfite (mg/kg)	10.8	0.0218	0.00202	10.8	10.8	10.8	10.800	0.000	0.00	10.8	10.8	10.8					
Total Organic Carbon (mg/kg)	21,187	7,667	0.362	24,072	34,200	20,900	5,107	4,995	0.978	7,038	23,800	3,415					
TCL Volatile Organic Compounds																	
Methylene Chloride	0.122	0.158	1.294	0.239	0.470	0.049	0.0320	0.00308	0.0963	0.0343	0.0370	0.0300			NA		
Toluene	0.136	0.120	0.888	0.224	0.310	0.059	0.0376	0.00397	0.106	0.0405	0.0440	0.0350					
Pesticides																	
4,4'-DDD	0.00250	0.00180	0.721	0.0032	0.0091	0.0020	0.00242	0.00461	1.909	0.002813632	0.022	0.0014					
4,4'-DDE	0.00628	0.01302	2.07	0.0112	0.0500	0.0014	0.00376	0.01253	3.333	0.004842947	0.057	0.00094			NA		
4,4'-DDT	-	-	-	-	-	-	0.00172	0.00097	0.562	0.001803616	0.0058	0.0015					
Heptachlor	-	-	-	-	-	-	0.00097	0.00008	0.087	0.000976833	0.0012	0.00094					
PCB Homologs																	
Monochlorobiphenyls	0.000357	0.000486	1.36	-	0.00122	0.0000650	0.0000601	0.000128	2.13	0.000446	0.000440	0.0000194	0.00000897	-	-	0.0000163	0.00000680
Dichlorobiphenyls	0.00175	0.00297	1.70	0.0116	0.00948	0.0000399	0.000334	0.000753	2.26	0.00284	0.00279	0.0000563	0.0000741	-	-	0.000106	0.0000662
Trichlorobiphenyls	0.00956	0.0175	1.83	0.0729	0.0495	0.0000831	0.00218	0.00584	2.68	0.0225	0.0222	0.000280	0.000376	-	-	0.000783	0.000292
Tetrachlorobiphenyls	0.0332	0.0569	1.71	0.223	0.154	0.000500	0.00659	0.0184	2.80	0.0732	0.0726	0.000820	0.00118	-	-	0.00296	0.000888
Pentachlorobiphenyls	0.0291	0.0579	1.99	0.246	0.155	0.000169	0.00823	0.0234	2.84	0.0960	0.0953	0.000755	0.00157	-	-	0.00431	0.00121
Hexachlorobiphenyls	0.0285	0.0482	1.69	0.182	0.129	0.000560	0.0100	0.0163	1.62	0.0565	0.0537	0.00494	0.00137	-	-	0.00385	0.000895
Heptachlorobiphenyls	0.0122	0.0214	1.76	0.0835	0.0560	0.000271	0.00501	0.00886	1.77	0.0331	0.0255	0.00186	0.000812	-	-	0.00193	0.000727
Octachlorobiphenyls	0.00521	0.00831	1.59	0.0316	0.0204	0.000561	0.00292	-	-	-	0.0104	0.000861	0.000492	-	-	0.00109	0.0004630
Nonachlorobiphenyls	0.00826	0.0124	1.50	0.0476	0.0341	0.00131	0.00399	-	-	-	0.0194	0.00139	0.00138	-	-	0.00357	0.000806
Decachlorobiphenyls	0.00620	0.0126	2.04	0.0613	0.0437	0.0000730	0.00327	0.00705	2.16	0.0267	0.0260	0.00112	0.00146	-	-	0.00388	0.0008200
Total PCBs	0.0885	0.200	2.26	0.963	0.588	0.000447	0.0295	0.0767	2.60	0.337	0.328	0.000893	0.00726	-	-	0.0186	0.00550
TEQs (Dioxins, Furans, and Dioxin-like PCBs)																	
TEQ	1.30E-05	1.17E-05	0.90	1.74E-05	4.29E-05	9.23E-06	2.15E-06	2.84E-06	1.3	3.25E-06	1.32E-05	1.68E-06	6.10E-07	-	-	1.95E-06	4.02E-07
TAL Inorganics																	
Aluminum	14,985	4,774	0.319	16,782	22,800	16,200	7,507	2,532	0.337	8,486	12,500	7,215	1,172.8	-	-	2,040	1,050
Antimony	0.567	0.254	0.449	0.662	1.500	0.500	0.645	0.689	1.068	0.911	2.80	0.340	0.532	-	-	1	1
Arsenic	24.2	14.6	0.602	29.7	47.3	23.4	8.88	9.98	1.12	12.7	28.4	3.4	1.82	-	-	3	2
Barium	89.7	39.6	0.441	105	146	97	40.6	23.9	0.589	49.9	96.4	31.7	38.9	-	-	50	38
Beryllium	0.916	0.341	0.373	1.04	1.40	1.00	0.410	0.180	0.440	0.480	0.790	0.355	ND	ND	ND	ND	ND
Cadmium	0.727	0.323	0.444	0.848	1.700	0.630	0.442	0.145	0.328	0.498	0.990	0.390	ND	ND	ND	ND	ND
Calcium	2,284	1,286	0.563	2,768	4,000	2,730	850	704	0.828	1,122	2,030	424	19,440	-	-	21,800	18,700
Chromium	77.0	41.7	0.541	92.6	149.0	83.9	31.4	25.9	0.824	41.5	88.2	17.2	4.58	-	-	8	5
Cobalt	14.7	5.04	0.343	16.6	27.0	15.6	6.265	3.00	0.478	7.42	12.0	5.20	1.74	-	-	2	2
Copper	39.2	23.4	0.596	48.0	94.0	42.5	23.3	26.9	1.15	33.7	96.9	10.6	7.40	-	-	12	9
Iron	28,720	13,887	0.484	33,947	74,300	30,300	13,378	6,271	0.469	15,802	25,600	11,200	2,134	-	-	3,760	2,050
Lead	60.6	41.603	0.686	76.3	134.0	73.2	32.3	46.3	1.435	50.2	173	10.3	4.44	-	-	8	4
Magnesium	4,708	2,020	0.429	5,468	7,850	5,490	2,160	1,166	0.540	2,611	4,250	2,215	7,470	-	-	8,350	7,500
Manganese	819	472	0.576	997	1,530	921	232	227	0.979	319	835	151	194	-	-	379	208
Mercury	0.244	0.192	0.784	0.316	0.830	0.260	0.0431	0.0711	1.65	0.0705	21.7	0.0170	ND	ND	ND	ND	ND
Nickel	27.8	12.9	0.465	32.6	68.3	28.6	12.5	5.4	0.429	14.6	1,620	11.2	3.46	-	-	5	4
Potassium	1,807	725	0.401	2,080	2,850	2,160	844	454	0.537	1,019	1.60	700	3,168	-	-	3,490	3,190
Selenium	0.739	0.363	0.491	0.876	1.900	0.650	0.503	0.391	0.777	0.654	0.920	0.335	ND	ND	ND	ND	ND
Silver (ND)	1.004	0.134	0.133	1.055	1.200	1.000	0.724	0.066	0.091	0.750	370	0.710	ND	ND	ND	ND	ND
Sodium	372	210	0.565	451	737	394	159	103	0.647	199	0.240	116	27,640	-	-	34,500	27,100
Thallium	0.251	0.071	0.282	0.278	0.420	0.240	0.157	0.028	0.180	0.167	72.6	0.140	ND	ND	ND	ND	ND
Vanadium	40.9	16.0	0.391	46.9	84.0	40.4	25.4	14.2	0.560	30.9	205	22.2	5.78	-	-	9	6
Zinc	188	126	0.672	236	382	232	68.5	69.6	1.01	95.4	0.320	30.5	19.8	-	-	27	19
SVOCs																	
1-Methylnaphthalene	0.0297	0.0167	0.565	0.0360	0.0570	0.0310	0.00181	0.00416	2.30	0.00342	0.01800	0.00051	0.003	-	-	0.00450	0.00270
2-Methylnaphthalene	0.0564	0.0323	0.573	0.0685	0.1100	0.0590	0.00330	0.00806	2.44	0.00642	0.03500	0.00069	0.004	-	-	0.00540	0.00380
Acenaphthene	0.028	0.018	0.652	0.034	0.070	0.027	0.00222	0.00528	2.38	0.00426	0.01900	0.00026	ND	ND	ND	ND	ND
Acenaphthylene	0.053	0.032	0.604	0.065	0.100	0.061	0.00222	0.00467	2.11	0.00402	0.02000	0.00064	ND	ND	ND	ND	ND
Anthracene	0.080	0.053	0.661	0.100	0.190	0.098	0.00317	0.00637	2.01	0.00563	0.02500	0.00065	0.00712	-	-	0.01400	0.00560
Benzo[a]anthracene	0.261	0.169	0.649	0.325	0.610	0.300	0.0123	0.0238	1.93	0.0216	0.0820	0.00190	0.0120	-	-	0.0290	0.00920
Benzo[a]pyrene	0.254	0.163	0.639	0.316	0.570	0.290	0.0124	0.0246	1.98	0.0219	0.0870	0.00108	0.0139	-	-	0.0350	0.00930
Benzo[b]fluoranthene	0.194	0.119	0.612	0.239	0.450	0.210	0.0119	0.0234	1.96	0.0209	0.0820	0.00145	0.0335	-	-	0.0850	0.0220
Benzo[e]pyrene	0.172	0.107	0.620	0.213	0.380	0.180	0.0104	0.0211	2.04	0.0186	0.0770	0.00070	0.0196	-	-	0.0480	0.0130
Benzo[g,h,i]perylene	0.110	0.075	0.683	0.138	0.260	0.120	0.00639	0.0123	1.92	0.0111	0.0390	0.00091	0.0115	-	-	0.0250	0.00870
Benzo[k]fluoranthene	0.200	0.121	0.606	0.245	0.410	0.220	0.0107	0.0209	1.95	0.0188	0.0760	0.00200	0.0242	-	-	0.0570	0.0160
Chrysene	0.256	0.162	0.632	0.317	0.570	0.280	0.0147	0.0304	2.06	0.0265	0.1100	0.00086	0.0382	-	-	0.100	0.0280
Dibenz(a,h)anthracene	0.047	0.032	0.668	0.059	0.110	0.050	0.0025	0.0045	1.81	0.0042	0.0140	0.00073	0.00636	-	-	0.00740	0.00630
Fluoranthene	0.339	0.217	0.641	0.421	0.810	0.360	0.0189	0.0384	2.03	0.0337	0.1400	0.00215	0.059	-	-	0.120	0.0490
Fluorene	0.049	0.028	0.576	0.060	0.110	0.058	0.0024	0.0052	2.17	0.0044	0.0230	0.00053	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	0.113	0.077	0.680	0.141	0.270	0.120	0.0059	0.0112	1.91	0.0102	0.0330	0.00059	0.0110	-	-	0.0250	0.00810
Naphthalene	0.111	0.066	0.592	0.136	0.220	0.120	0.0047	0.0106	2.25	0.0088	0.0450	0.00107	0.00487	-	-	0.00600	0.00490
Perylene	0.467	0.260	0.557	0.565	1.200	0.440	0.0392	0.0539	1.38	0.0600	0.1800	0.01200	0.00470	-	-	0.0110	0.00320
Phenanthrene	0.247	0.156	0.633	0.306	0.530	0.260	0.0134	0.0293	2.18	0.0247	0.1200	0.00200	0.0334	-	-	0.0610	0.0350
Pyrene	0.389	0.255	0.657	0.485	0.960	0.430	0.0217	0.0459	2.11	0.0395	0.1500	0.00140	0.0490	-	-	0.100	0.0410

Notes:
NA: no analysis was run for this compound on this sample
ND: compound not detected in this sample
- : less than 10 samples were detected, so there was insufficient data to calculate this statistic
CV: Coefficient of Variance
95% UCL: The 95% Upper Confidence Limit
TEQ: Toxic Equivalency Quotient
TCL: Target Compound List
PCB: Polychlorinated Biphenyl
TAL: Target Analyte List
SVOCs: Semi Volatile Organic Compound
Methodology for 95% UCL Calculations were derived from " Calculating Upper Confidence Limits for Exposure Point Concentrations at Hazardous Waste Sites", EPA 2002

Duffield Associates, Inc.
Project No. 11139.LH

Table 4. Summary of PCB Analytical Results Compared to Human Health and Ecological Screening Levels
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Stratum A																
	PCB Congeners	**VB1-COMP-A**	**VB2-COMP-A**	**VB3-COMP-A**	**VB5-COMP-A**	**VB6-COMP-A**	**VB7-COMP-A**	**DUP1-COMP-A**	**VB9-COMP-A**	**VB10-COMP-A**	**VB11-COMP-A**	**VB13-COMP-A**	**VB14-COMP-A**	**DNREC Screening Value (ng/g)**	**Eco Sediment (Fresh)**	**Eco Surface Soil**
	PCB-77	0.063	0.017	ND	ND	ND	ND	ND	ND	ND	1.29	ND	ND	**38**	**NVP**	**NVP**
	PCB-81	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**12**	**NVP**	**NVP**
	PCB-105	0.18	0.038	ND	0.0047	ND	ND	ND	ND	ND	4	ND	ND	**120**	**NVP**	**NVP**
	PCB-114	0.0099	ND	ND	ND	ND	ND	ND	ND	ND	0.21	ND	ND	**120**	**NVP**	**NVP**
	PCB-118	0.59	0.12	ND	0.016	0.024	ND	ND	ND	ND	16	ND	ND	**120**	**NVP**	**NVP**
	PCB-123	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.23	ND	ND	**120**	**NVP**	**NVP**
	PCB-126	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.036**	**NVP**	**NVP**
	PCB-156, 157	0.064	ND	ND	ND	ND	ND	ND	ND	ND	1.84	ND	ND	**120**	**NVP**	**NVP**
	PCB-167	0.028	ND	ND	ND	ND	ND	ND	ND	ND	0.64	ND	ND	**120**	**NVP**	**NVP**
	PCB-169	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.12**	**NVP**	**NVP**
	PCB-170	0.22	0.064	ND	0.0086	0.0083	ND	ND	ND	ND	5.52	ND	ND	**NVP**	**NVP**	**NVP**
	PCB-180, 193	0.51	0.15	ND	0.017	0.039	ND	ND	ND	ND	11.9	ND	ND	**NVP**	**NVP**	**NVP**
	PCB-189	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.18	ND	ND	**130**	**NVP**	**NVP**
	Total PCBs (ALL RESULTS)	29.1	5.87	0.02	2.60	3.82	0.0299	0.0110	0.00730	0.0323	523	0.00530	0.0758	**230**	**59.8**	**40,000**
Calculated Results	**PCB Homologs**	**VB1-COMP-A**	**VB2-COMP-A**	**VB3-COMP-A**	**VB5-COMP-A**	**VB6-COMP-A**	**VB7-COMP-A**	**DUP1-COMP-A**	**VB9-COMP-A**	**VB10-COMP-A**	**VB11-COMP-A**	**VB13-COMP-A**	**VB14-COMP-A**	**DNREC Screening Value (ng/g)**	**Eco Sediment (Fresh)**	**Eco Surface Soil**
		ONLY VALID RESULTS INCLUDED														
	Monochlorobiphenyls	0.0650	ND	ND	0.00073	0.03000	ND	ND	ND	ND	1.22	0.00390	ND	**NVP**	**NVP**	**NVP**
	Dichlorobiphenyls	0.691	0.199	0.019	0.0053	0.017	0.026	ND	ND	ND	9.477	ND	0.0282	**NVP**	**NVP**	**NVP**
	Trichlorobiphenyls	2.95	0.717	ND	0.0115	0.1203	ND	ND	0.0032	ND	49.549	ND	0.0065	**NVP**	**NVP**	**NVP**
	Tetrachlorobiphenyls	7.27	1.295	ND	0.070	0.500	ND	ND	ND	ND	116.8	ND	ND	**NVP**	**NVP**	**NVP**
	Pentachlorobiphenyls	6.01	1.054	ND	0.094	0.430	ND	ND	ND	0.012	137.4	ND	0.0131	**NVP**	**NVP**	**NVP**
	Hexachlorobiphenyls	4.07	0.787	ND	0.136	0.334	ND	ND	ND	ND	98.5	ND	ND	**NVP**	**NVP**	**NVP**
	Heptachlorobiphenyls	2.14	0.531	ND	0.048	0.1505	ND	ND	ND	ND	48.98	ND	ND	**NVP**	**NVP**	**NVP**
	Octachlorobiphenyls	0.802	0.32	ND	0.199	0.0909	ND	ND	ND	ND	18.33	ND	ND	**NVP**	**NVP**	**NVP**
	Nonachlorobiphenyls	1.51	0.48	ND	1.119	0.276	ND	ND	ND	ND	19.51	ND	ND	**NVP**	**NVP**	**NVP**
	Decachlorobiphenyls	3.63	0.49000	0.005	0.9200	1.8700	0.00390	0.011	0.0018	0.02	23.6	0.0014	0.028	**NVP**	**NVP**	**NVP**
	Total PCBs (ONLY VALID RESULTS INCLUDED)	29.1	5.87	0.02	2.60	3.82	0.0299	0.0110	0.00500	0.0323	523	0.00530	0.0758	**230**	**59.8**	**40,000**
As Reported by Lab	**PCB Homologs**	**VB1-COMP-A**	**VB2-COMP-A**	**VB3-COMP-A**	**VB5-COMP-A**	**VB6-COMP-A**	**VB7-COMP-A**	**DUP1-COMP-A**	**VB9-COMP-A**	**VB10-COMP-A**	**VB11-COMP-A**	**VB13-COMP-A**	**VB14-COMP-A**	**DNREC Screening Value (ng/g)**	**Eco Sediment (Fresh)**	**Eco Surface Soil**
	Total Monochlorobiphenyls	0.066	0.0033	0.0030	0.00073	0.031	0.0025	0.0028	0.00046	0.0034	1.22	0.0039	0.0015	**NVP**	**NVP**	**NVP**
	Total Dichlorobiphenyls	0.69	0.20	0.019	0.0053	0.017	0.026	0.013	0.0072	0.015	9.48	0.0084	0.028	**NVP**	**NVP**	**NVP**
	Total Trichlorobiphenyls	2.94	0.72	0.0068	0.011	0.12	0.0063	0.0088	0.0055	0.0085	49.5	0.0038	0.0065	**NVP**	**NVP**	**NVP**
	Total Tetrachlorobiphenyls	7.27	1.31	0.016	0.069	0.50	0.013	0.014	0.0019	0.020	117	0.0029	0.0096	**NVP**	**NVP**	**NVP**
	Total Pentachlorobiphenyls	6.02	1.07	0.0084	0.093	0.43	0.010	0.013	0.0016	0.012	137	0.0037	0.013	**NVP**	**NVP**	**NVP**
	Total Hexachlorobiphenyls	4.08	0.78	0.014	0.14	0.33	0.0080	0.024	0.0023	0.014	98.5	0.0038	0.0059	**NVP**	**NVP**	**NVP**
	Total Heptachlorobiphenyls	2.14	0.54	0.0076	0.048	0.15	0.0083	0.010	0.0025	0.0092	49.0	0.0024	0.0041	**NVP**	**NVP**	**NVP**
	Total Octachlorobiphenyls	0.79	0.32	0.0094	0.20	0.091	0.0067	0.013	0.0051	0.0083	18.3	0.0033	0.0050	**NVP**	**NVP**	**NVP**
	Total Nonachlorobiphenyls	1.51	0.48	0.011	1.11	0.28	0.0064	0.0093	0.0056	0.0095	19.5	0.0062	0.0057	**NVP**	**NVP**	**NVP**
	Total Decachlorobiphenyls	3.63	0.15	0.0088	0.92	1.87	0.0039	0.011	0.0018	0.020	23.6	0.0014	0.028	**NVP**	**NVP**	**NVP**
	Total PCBs	29.3	6.14	0.034	2.63	3.90	0.037	0.014	0.0065	0.037	522	0.0084	0.085	**230**	**59.8**	**40,000**

Table 4. Summary of PCB Analytical Results Compared to Human Health and Ecological Screening Levels
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Stratum B															
	PCB Congeners	**VB1-COMP-B**	**VB4-COMP-A**	**VB5-COMP-B**	**VB6-COMP-B**	**VB9-COMP-B**	**VB10-COMP-B**	**VB11-COMP-B**	**VB12-COMP-B**	**VB13-COMP-B**	**VB15-COMP-B**	**VB19-COMP-B**	**VB21-COMP-B**	**DNREC Screening Value (ng/g)**	**Eco Sediment (fresh)**	**Eco Surface Soil**
	PCB-77	ND	ND	0.045	ND	ND	ND	0.084	ND	ND	0.11	0.13	0.04	**38**	**NVP**	**NVP**
	PCB-81	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**12**	**NVP**	**NVP**
	PCB-105	ND	ND	0.21	ND	ND	ND	0.24	ND	ND	0.19	0.12	0.17	**120**	**NVP**	**NVP**
	PCB-114	ND	ND	0.012	ND	ND	ND	0.012	ND	ND	0.0089	0.0082	0.0098	**120**	**NVP**	**NVP**
	PCB-118	0.0055	ND	0.43	ND	ND	ND	1.01	ND	ND	0.86	0.42	0.75	**120**	**NVP**	**NVP**
	PCB-123	ND	ND	0.0072	ND	ND	ND	0.0094	ND	ND	0.011	0.0077	0.0093	**120**	**NVP**	**NVP**
	PCB-126	ND	ND	0.0053	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.036**	**NVP**	**NVP**
	PCB-156, 157	ND	ND	0.087	ND	ND	ND	0.1	ND	ND	0.088	0.063	0.092	**120**	**NVP**	**NVP**
	PCB-167	ND	ND	ND	ND	ND	ND	0.036	ND	ND	0.034	0.045	0.033	**120**	**NVP**	**NVP**
	PCB-169	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.12**	**NVP**	**NVP**
	PCB-170	ND	ND	1.39	ND	ND	ND	0.29	ND	ND	0.34	0.16	0.24	**NVP**	**NVP**	**NVP**
	PCB-180, 193	0.0078	ND	3.72	ND	ND	ND	0.63	ND	ND	0.68	0.36	0.48	**NVP**	**NVP**	**NVP**
	PCB-189	ND	ND	0.063	ND	ND	ND	0.0088	ND	ND	0.011	NOT VALID	**0.013**	**130**	**NVP**	**NVP**
	Total PCBs (ALL RESULTS)	0.133	0.017	**67.8**	0.011	ND	ND	29.5	0.020	0.053	28.2	30.5	21.8	**230**	**59.8**	**NVP**
Calculated Results	**PCB Homologs**	**VB1-COMP-B**	**VB4-COMP-A**	**VB5-COMP-B**	**VB6-COMP-B**	**VB9-COMP-B**	**VB10-COMP-B**	**VB11-COMP-B**	**VB12-COMP-B**	**VB13-COMP-B**	**VB15-COMP-B**	**VB19-COMP-B**	**VB21-COMP-B**	**DNREC Screening Value (ng/g)**	**Eco Sediment (fresh)**	**Eco Surface Soil**
		ONLY VALID RESULTS INCLUDED														
	Monochlorobiphenyl	ND	ND	0.0194	0.00055	ND	ND	0.0535	0.0033	ND	0.0408	0.068	0.0266	**NVP**	**NVP**	**NVP**
	Dichlorobiphenyls	0.006	0.0046	0.164	0.0041	ND	ND	0.5118	ND	ND	0.272	0.2818	0.169	**NVP**	**NVP**	**NVP**
	Trichlorobiphenyls	0.0201	0.0017	0.643	0.0042	ND	ND	2.6853	ND	ND	2.0834	1.2763	0.786	**NVP**	**NVP**	**NVP**
	Tetrachlorobiphenyls	0.0749	0.0052	2.4734	ND	ND	ND	7.5215	0.003	0.0189	6.9183	3.6046	3.5228	**NVP**	**NVP**	**NVP**
	Pentachlorobiphenyls	0.0195	0.0025	6.7875	ND	ND	ND	8.1684	ND	0.0345	7.0719	3.7897	6.0691	**NVP**	**NVP**	**NVP**
	Hexachlorobiphenyls	ND	ND	19.823	ND	ND	ND	5.294	ND	ND	5.0867	3.67248	4.794	**NVP**	**NVP**	**NVP**
	Heptachlorobiphenyls	0.0127	ND	22.095	ND	ND	ND	2.6128	ND	ND	2.64	1.6064	2.115	**NVP**	**NVP**	**NVP**
	Octachlorobiphenyls	ND	ND	9.821	ND	ND	ND	0.8368	ND	ND	0.8976	2.2459	0.861	**NVP**	**NVP**	**NVP**
	Nonachlorobiphenyls	ND	ND	3.34	ND	ND	ND	0.705	ND	ND	1.39	7.47	1.432	**NVP**	**NVP**	**NVP**
	Decachlorobiphenyls	ND	ND	2.65	0.002	ND	ND	1.12	0.014	ND	1.84	6.5	2.01	**NVP**	**NVP**	**NVP**
	Total PCBs (ONLY VALID RESULTS)	0.133	0.0140	**67.8**	0.011	ND	ND	29.5	0.020	0.053	28.2	30.5	21.8	**230**	**59.8**	**40,000**
As Reported by Lab	**PCB Homologs**	**VB1-COMP-B**	**VB4-COMP-A**	**VB5-COMP-B**	**VB6-COMP-B**	**VB9-COMP-B**	**VB10-COMP-B**	**VB11-COMP-B**	**VB12-COMP-B**	**VB13-COMP-B**	**VB15-COMP-B**	**VB19-COMP-B**	**VB21-COMP-B**	**DNREC Screening Value (ng/g)**	**Eco Sediment (fresh)**	**Eco Surface Soil**
	Total Monochlorobiphenyls	0.00071	0.00044	0.019	0.00055	0.00025	0.00075	0.053	0.0033	0.00012	0.042	0.068	0.027	**NVP**	**NVP**	**NVP**
	Total Dichlorobiphenyls	0.0060	0.0046	0.17	0.0041	0.0078	0.0096	0.51	0.0059	0.011	0.27	0.28	0.17	**NVP**	**NVP**	**NVP**
	Total Trichlorobiphenyls	0.020	0.0045	0.64	0.0042	0.00044	0.0029	2.70	0.0024	0.00095	2.08	1.27	0.78	**NVP**	**NVP**	**NVP**
	Total Tetrachlorobiphenyls	0.075	0.0052	2.48	0.00065	0.00097	0.0032	7.52	0.0030	0.019	6.91	3.61	3.52	**NVP**	**NVP**	**NVP**
	Total Pentachlorobiphenyls	0.019	0.0025	6.79	0.00080	0.00015	0.0030	8.16	0.0027	0.034	7.06	3.77	6.07	**NVP**	**NVP**	**NVP**
	Total Hexachlorobiphenyls	0.0047	0.0017	19.8	0.0014	0.00019	0.0066	5.29	0.0042	0.0023	5.08	3.67	4.79	**NVP**	**NVP**	**NVP**
	Total Heptachlorobiphenyls	0.013	0.0018	22.1	0.0015	0.00040	0.0045	2.61	0.0039	0.0014	2.63	1.63	2.12	**NVP**	**NVP**	**NVP**
	Total Octachlorobiphenyls	0.0043	0.0035	9.81	0.0016	0.00090	0.0064	0.83	0.0064	0.0021	0.90	2.25	0.87	**NVP**	**NVP**	**NVP**
	Total Nonachlorobiphenyls	0.0058	0.0036	3.34	0.0017	0.0035	0.0059	0.71	0.0070	0.0063	1.39	7.47	1.43	**NVP**	**NVP**	**NVP**
	Total Decachlorobiphenyls	0.0043	0.0011	2.65	0.0020	0.00035	0.0038	1.12	0.014	0.0013	36.3	6.50	2.01	**NVP**	**NVP**	**NVP**
	Total PCBs	0.15	0.020	67.9	0.012	0.0078	0.0096	29.6	0.018	0.064	28.3	30.5	22.1	**230**	**59.8**	**40,000**

Duffield Associates, Inc.
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Table 4. Summary of PCB Analytical Results Compared to Human Health and Ecological Screening Levels
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

	Stratum A											
	PCB Congeners	**VB15-COMP-A**	**VB17-COMP-A**	**VB18-COMP-A**	**VB21-COMP-A**	**VB22-COMP-A**	**VB24-COMP-A**	**VB25-COMP-A**	**VB26-COMP-A**	**VB28-COMP-A**	**DNREC Screening Value (ng/g)**	**Eco Sediment (Fresh)**	**Eco Surface Soil**
	PCB-77	2.67	ND	ND	1.03	NOT VALID	ND	0.18	NOT VALID	ND	38	NVP	NVP
	PCB-81	ND	ND	ND	ND	ND	ND	ND	ND	ND	12	NVP	NVP
	PCB-105	4.34	ND	ND	4.69	ND	ND	0.63	ND	ND	120	NVP	NVP
	PCB-114	0.21	ND	ND	0.2	ND	ND	0.037	ND	ND	120	NVP	NVP
	PCB-118	18.6	0.0051	0.015	18.9	0.023	0.015	2.47	ND	ND	120	NVP	NVP
	PCB-123	0.22	ND	ND	0.2	ND	ND	0.033	ND	ND	120	NVP	NVP
	PCB-126	0.068	ND	ND	0.15	NOT VALID	ND	ND	ND	ND	0.036	NVP	NVP
	PCB-156, 157	1.93	ND	ND	2.38	ND	ND	0.25	ND	ND	120	NVP	NVP
	PCB-167	0.72	ND	ND	0.82	ND	ND	0.08	ND	ND	120	NVP	NVP
	PCB-169	0.045	ND	ND	0.077	0.018	ND	ND	ND	NOT VALID	0.12	NVP	NVP
	PCB-170	5.05	0.013	ND	6.96	0.016	0.018	0.75	ND	0.0043	NVP	NVP	NVP
	PCB-180, 193	10.7	0.021	0.014	13.4	0.057	0.019	1.66	ND	0.015	NVP	NVP	NVP
	PCB-189	0.18	ND	ND	0.19	NOT VALID	ND	0.027	ND	NOT VALID	130	NVP	NVP
	Total PCBs (ALL RESULTS)	578	0.110	0.190	588	19.7	0.538	106	0.0889	0.447	**230**	**59.8**	**40,000**
Calculated Results	**PCB Homologs**	**VB15-COMP-A**	**VB17-COMP-A**	**VB18-COMP-A**	**VB21-COMP-A**	**VB22-COMP-A**	**VB24-COMP-A**	**VB25-COMP-A**	**VB26-COMP-A**	**VB28-COMP-A**	**DNREC Screening Value (ng/g)**	**Eco Sediment (Fresh)**	**Eco Surface Soil**
		ONLY VALID RESULTS INCLUDED											
	Monochlorobiphenyls	1	ND	0.0055	0.72	ND	ND	0.169	ND	ND	NVP	NVP	NVP
	Dichlorobiphenyls	5.301	ND	0.017	4.744	ND	0.0399	2.187	ND	ND	NVP	NVP	NVP
	Trichlorobiphenyls	43.461	ND	0.013	34.157	0.0831	0.03	12.33	0.0036	0.0227	NVP	NVP	NVP
	Tetrachlorobiphenyls	153.655	ND	0.0221	122.725	0.194	0.103	29.047	0.034	0.06	NVP	NVP	NVP
	Pentachlorobiphenyls	154.84	0.0116	0.0519	142.822	0.199	0.0992	21.673	0.0073	0.139	NVP	NVP	NVP
	Hexachlorobiphenyls	93.344	0.022	ND	129.055	0.2238	0.0934	15.3906	ND	0.021	NVP	NVP	NVP
	Heptachlorobiphenyls	42.997	0.0502	0.014	56.007	0.2707	0.037	7.22	ND	0.0572	NVP	NVP	NVP
	Octachlorobiphenyls	18.01	0.0088	ND	20.35	1.7503	0.013	2.68	ND	0.01	NVP	NVP	NVP
	Nonachlorobiphenyls	29.52	ND	0.022	34.09	8.6	0.043	3.88	ND	0.064	NVP	NVP	NVP
	Decachlorobiphenyls	36.3	0.017	0.044	43.7	8.39	0.079	11	0.044	0.073	NVP	NVP	NVP
	Total PCBs (ONLY VALID RESULTS INCLUDED)	**578**	0.110	0.190	**588**	19.7	0.538	106	0.0889	0.447	**230**	**59.8**	**40,000**
As Reported by Lab	**PCB Homologs**	**VB15-COMP-A**	**VB17-COMP-A**	**VB18-COMP-A**	**VB21-COMP-A**	**VB22-COMP-A**	**VB24-COMP-A**	**VB25-COMP-A**	**VB26-COMP-A**	**VB28-COMP-A**	**DNREC Screening Value (ng/g)**	**Eco Sediment (Fresh)**	**Eco Surface Soil**
	Total Monochlorobiphenyls	1.0	0.00071	0.0055	0.72	0.0027	0.0019	0.17	0.0029	0.0029	NVP	NVP	NVP
	Total Dichlorobiphenyls	5.30	0.012	0.017	4.75	0.0093	0.040	2.19	0.023	0.013	NVP	NVP	NVP
	Total Trichlorobiphenyls	43.5	0.0019	0.013	34.2	0.083	0.030	12.3	0.0038	0.023	NVP	NVP	NVP
	Total Tetrachlorobiphenyls	154	0.0076	0.022	123	0.19	0.10	29.0	0.034	0.061	NVP	NVP	NVP
	Total Pentachlorobiphenyls	155	0.012	0.052	143	0.20	0.099	21.7	0.0073	0.14	NVP	NVP	NVP
	Total Hexachlorobiphenyls	93.3	0.022	0.0078	129	0.22	0.093	15.4	0.017	0.021	NVP	NVP	NVP
	Total Heptachlorobiphenyls	43.0	0.050	0.014	56.0	0.27	0.037	7.23	0.0095	0.058	NVP	NVP	NVP
	Total Octachlorobiphenyls	18.0	0.0088	0.0033	20.3	1.74	0.013	2.68	0.010	0.010	NVP	NVP	NVP
	Total Nonachlorobiphenyls	29.5	0.010	0.022	34.1	8.59	0.044	3.88	0.012	0.063	NVP	NVP	NVP
	Total Decachlorobiphenyls	36.3	0.017	0.044	2.01	8.39	0.079	11.0	0.044	0.073	NVP	NVP	NVP
	Total PCBs	577	0.12	0.20	588	19.8	0.60	106	0.12	0.50	**230**	**59.8**	**40,000**

Duffield Associates, Inc.
Project No. 11139.LH

Table 4. Summary of PCB Analytical Results Compared to Human Health and Ecological Screening Levels
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Stratum B											
	PCB Congeners	**VB23-COMP-B**	**DUP-COMP-B**	**VB25-COMP-B**	**VB27-COMP-B**	**VB29-COMP-A**	**VB30-COMP-B**	**VB31-COMP-B**	**VB33-COMP-B**	**DNREC Screening Value (ng/g)**	**Eco Sediment (fresh)**	**Eco Surface Soil**
	PCB-77	0.014	0.01	NOT VALID	ND	ND	ND	0.77	ND	38	NVP	NVP
	PCB-81	ND	ND	ND	ND	ND	ND	0.021	ND	12	NVP	NVP
	PCB-105	0.13	0.042	0.011	ND	ND	ND	2.54	0.0012	120	NVP	NVP
	PCB-114	ND	ND	ND	ND	ND	ND	0.14	ND	120	NVP	NVP
	PCB-118	0.39	0.13	0.04	ND	ND	0.0012	12	0.0015	120	NVP	NVP
	PCB-123	0.0097	ND	ND	ND	ND	ND	0.13	ND	120	NVP	NVP
	PCB-126	ND	ND	ND	ND	ND	ND	ND	ND	0.036	NVP	NVP
	PCB-156, 157	0.19	0.025	ND	ND	ND	ND	1.37	ND	120	NVP	NVP
	PCB-167	0.052	0.0087	ND	ND	ND	ND	0.46	ND	120	NVP	NVP
	PCB-169	ND	ND	ND	ND	ND	ND	ND	ND	0.12	NVP	NVP
	PCB-170	0.32	0.1	ND	ND	ND	0.0038	3.15	ND	NVP	NVP	NVP
	PCB-180, 193	0.57	0.28	0.04	ND	ND	0.0091	6.2	0.0023	NVP	NVP	NVP
	PCB-189	**0.012**	NOT VALID	**ND**	ND	ND	ND	0.095	ND	130	NVP	NVP
	Total PCBs (ALL RESULTS)	15.4	7.71	1.66	0.004	0.008	0.036	**328**	0.029	230	**59.8**	NVP
Calculated Results	**PCB Homologs**	**VB23-COMP-B**	**DUP-COMP-B**	**VB25-COMP-B**	**VB27-COMP-B**	**VB29-COMP-A**	**VB30-COMP-B**	**VB31-COMP-B**	**VB33-COMP-B**	**DNREC Screening Value (ng/g)**	**Eco Sediment (fresh)**	**Eco Surface Soil**
		ONLY VALID RESULTS INCLUDED										
	Monochlorobiphenyl	0.0036	0.0044	0.0013	ND	ND	ND	0.44	ND	NVP	NVP	NVP
	Dichlorobiphenyls	0.0563	0.0476	0.0281	ND	ND	0.0066	2.789	ND	NVP	NVP	NVP
	Trichlorobiphenyls	0.2962	0.2635	0.152	ND	ND	0.0015	22.249	0.0011	NVP	NVP	NVP
	Tetrachlorobiphenyls	0.9387	0.8203	0.3901	ND	0.0032	ND	72.596	0.0052	NVP	NVP	NVP
	Pentachlorobiphenyls	2.9143	1.18849	0.3215	0.0043	0.005	0.0012	95.293	0.0067	NVP	NVP	NVP
	Hexachlorobiphenyls	5.816	2.0166	0.2048	ND	ND	ND	53.6792	0.00299	NVP	NVP	NVP
	Heptachlorobiphenyls	2.333	1.0852	0.0943	ND	ND	0.0129	25.474	0.0023	NVP	NVP	NVP
	Octachlorobiphenyls	0.699	0.464	0.034	ND	ND	ND	10.383	ND	NVP	NVP	NVP
	Nonachlorobiphenyls	1.177	0.995	0.057	ND	ND	ND	19.35	ND	NVP	NVP	NVP
	Decachlorobiphenyls	1.17	0.82	0.37	ND	ND	0.0044	26	0.0022	NVP	NVP	NVP
	Total PCBs (ONLY VALID RESULTS)	15.4	7.71	1.65	0.004	0.008	0.0266	**328**	0.0205	230	**59.8**	**40,000**
As Reported by Lab	**PCB Homologs**	**VB23-COMP-B**	**DUP-COMP-B**	**VB25-COMP-B**	**VB27-COMP-B**	**VB29-COMP-A**	**VB30-COMP-B**	**VB31-COMP-B**	**VB33-COMP-B**	**DNREC Screening Value (ng/g)**	**Eco Sediment (fresh)**	**Eco Surface Soil**
	Total Monochlorobiphenyls	0.0036	0.0044	0.0013	0.00056	0.00075	0.00047	0.44	0.00034	NVP	NVP	NVP
	Total Dichlorobiphenyls	0.056	0.047	0.032	0.011	0.010	0.0066	2.80	0.0067	NVP	NVP	NVP
	Total Trichlorobiphenyls	0.29	0.26	0.15	0.00084	0.0016	0.0042	22.3	0.0033	NVP	NVP	NVP
	Total Tetrachlorobiphenyls	0.94	0.82	0.40	0.00085	0.0032	0.0017	72.7	0.0089	NVP	NVP	NVP
	Total Pentachlorobiphenyls	2.91	1.19	0.32	0.0043	0.0050	0.0012	95.4	0.0066	NVP	NVP	NVP
	Total Hexachlorobiphenyls	5.80	2.02	0.21	0.00070	0.0023	0.0064	53.6	0.0056	NVP	NVP	NVP
	Total Heptachlorobiphenyls	2.32	1.09	0.094	0.0013	0.0024	0.013	25.5	0.0023	NVP	NVP	NVP
	Total Octachlorobiphenyls	0.69	0.47	0.034	0.0028	0.0052	0.0011	10.4	0.0010	NVP	NVP	NVP
	Total Nonachlorobiphenyls	1.17	0.99	0.058	0.0059	0.0084	0.0028	19.4	0.0037	NVP	NVP	NVP
	Total Decachlorobiphenyls	1.17	0.82	0.37	0.0036	0.0048	0.0044	26.0	0.0022	NVP	NVP	NVP
	Total PCBs	15.4	7.83	1.72	0.0048	0.0098	0.039	328	0.034	230	**59.8**	**40,000**

Table 4. Summary of PCB Analytical Results Compared to Human Health and Ecological Screening Levels
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Notes:

ng/g : nanogram per gram
ND: compound not detected in this sample
NVP: no value present, there is no applicable screening level for this compound

1. 'All Results Included' implies that the totals are the summation of the analytical results that were denoted as 'valid', 'not valid', and 'use with caution'.
2. 'Only Valid Results Included' implies that the totals are the summation of the analytical results that were denoted as 'valid' and 'use with caution'.
3. DNREC Screening Values, ecological sediment (fresh water), and ecological surface sediment levels are derived from the DNREC Site Investigation and Restoration Section Screening Level tables last updated November, 2019.

Legend :

(light blue)	Compounds listed are coeluting and concentrations of these compounds were only counted one time.
(red)	Result is less than 3x and 5x Method Blank - NOT VALID
(yellow)	Result is greater than 3x but less than 5x the Method Blank - USE WITH CAUTION
(green)	Result is greater than 5x Method Blank - VALID

Table 5.1 Summary of Stratum A Chronic Toxicity Calculations
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Stratum A

1 ng/g = 1 ug/kg

Sample ID	Units	VB1-COMP-A	VB2-COMP-A	VB3-COMP-A	VB5-COMP-A	VB6-COMP-A	VB7-COMP-A	DUP1-COMP-A	VB9-COMP-A	VB10-COMP-A	VB11-COMP-A	VB13-COMP-A
Monochlorobiphenyls	ug/kg	0.065	ND	ND	0.00073	0.03	ND	ND	ND	ND	1.22	0.0039
Dichlorobiphenyls	ug/kg	0.691	0.199	0.019	0.0053	0.017	0.026	ND	ND	ND	9.477	ND
Trichlorobiphenyls	ug/kg	2.95	0.717	ND	0.0115	0.1203	ND	ND	0.0032	ND	49.549	ND
Tetrachlorobiphenyls	ug/kg	7.272	1.295	ND	0.0696	0.5	ND	ND	ND	ND	116.834	ND
Pentachlorobiphenyls	ug/kg	6.0129	1.054	ND	0.094	0.4295	ND	ND	ND	0.0123	137.37	ND
Hexachlorobiphenyls	ug/kg	4.072	0.787	ND	0.13567	0.3337	ND	ND	ND	ND	98.501	ND
Heptachlorobiphenyls	ug/kg	2.135	0.531	ND	0.0482	0.1505	ND	ND	ND	ND	48.98	ND
Octachlorobiphenyls	ug/kg	0.802	0.32	ND	0.199	0.0909	ND	ND	ND	ND	18.33	ND
Nonachlorobiphenyls	ug/kg	1.509	0.48	ND	1.119	0.276	ND	ND	ND	ND	19.51	ND
Decachlorobiphenyls	ug/kg	3.63	0.49	0.005	0.92	1.87	0.0039	0.011	0.0018	0.02	23.6	0.0014
Total PCBs (ONLY VALID RESULTS)	ug/kg	29.1389	5.873	0.024	2.603	3.8179	0.0299	0.011	0.005	0.0323	523.371	0.0053
TOC (sample specific)	mg OC/kg sed	28600	28000	34200	34000	1860	28500	9760	20900	14700	19500	16500
TOC (sample specific)	kg OC/kg sed	0.0286	0.028	0.0342	0.034	0.00186	0.0285	0.00976	0.0209	0.0147	0.0195	0.0165
Total PCB	ug/kg OC	1019	210	0.702	76.6	2053	1.05	1.13	0.239	2.20	26840	0.321
Total PCB	ug/g OC	1.02	0.210	0.000702	0.0766	2.05	0.00105	0.00113	0.000239	0.00220	26.8	0.000321

Homolog Weight Percent Contribution

Sample ID	Units	VB1-COMP-A	VB2-COMP-A	VB3-COMP-A	VB5-COMP-A	VB6-COMP-A	VB7-COMP-A	DUP1-COMP-A	VB9-COMP-A	VB10-COMP-A	VB11-COMP-A	VB13-COMP-A
Monochlorobiphenyl	decimal %	0.00223	ND	ND	0.000280446	0.007857723	ND	ND	ND	ND	0.002331042	0.735849057
Dichlorobiphenyls	decimal %	0.0237	0.033883875	0.791666667	0.002036112	0.00445271	0.869565217	ND	ND	ND	0.018107614	ND
Trichlorobiphenyls	decimal %	0.101	0.122	ND	0.004	0.032	ND	ND	0.640	ND	0.095	ND
Tetrachlorobiphenyls	decimal %	0.250	0.221	ND	0.027	0.131	ND	ND	ND	ND	0.223	ND
Pentachlorobiphenyls	decimal %	0.206	0.179	ND	0.036	0.112	ND	ND	ND	0.381	0.262	ND
Hexachlorobiphenyls	decimal %	0.140	0.134	ND	0.052	0.087	ND	ND	ND	ND	0.188	ND
Heptachlorobiphenyls	decimal %	0.0733	0.0904	ND	0.0185	0.0394	ND	ND	ND	ND	0.0936	ND
Octachlorobiphenyls	decimal %	0.0275	0.0545	ND	0.0765	0.0238	ND	ND	ND	ND	0.0350	ND
Nonachlorobiphenyls	decimal %	0.0518	0.0817	ND	0.4299	0.0723	ND	ND	ND	ND	0.0373	ND
Decachlorobiphenyls	decimal %	0.125	0.083	0.208	0.353	0.490	0.130	1.000	0.360	0.619	0.045	0.264
	check	1	1	1	1	1	1	1	1	1	1	1

Octanol-Water Partition Coefficient for PCB Mixture		VB1-COMP-A	VB2-COMP-A	VB3-COMP-A	VB5-COMP-A	VB6-COMP-A	VB7-COMP-A	DUP1-COMP-A	VB9-COMP-A	VB10-COMP-A	VB11-COMP-A	VB13-COMP-A
	log K_{ow}	$f_i/K_{ow,i}$	$f_i/K_{ow,i}$	$f_i/K_{ow,i}$	$f_i/K_{ow,i}$	$f_i/K_{ow,i}$	$f_i/K_{ow,i}$	$f_i/K_{ow,i}$	$f_i/K_{ow,i}$	$f_i/K_{ow,i}$	$f_i/K_{ow,i}$	$f_i/K_{ow,i}$
Monochlorobiphenyl	4.64	5.11E-08	ND	ND	6.42E-09	1.80E-07	ND	ND	ND	ND	5.34E-08	1.69E-05
Dichlorobiphenyls	5.12	1.80E-07	2.57E-07	6.01E-06	1.54E-08	3.38E-08	6.60E-06	ND	ND	ND	1.37E-07	ND
Trichlorobiphenyls	5.62	2.43E-07	2.93E-07	ND	1.06E-08	7.56E-08	ND	ND	1.54E-06	ND	2.27E-07	ND
Tetrachlorobiphenyls	6.04	2.28E-07	2.01E-07	ND	2.44E-08	1.19E-07	ND	ND	ND	ND	2.04E-07	ND
Pentachlorobiphenyls	6.49	6.68E-08	5.81E-08	ND	1.17E-08	3.64E-08	ND	ND	ND	1.23E-07	8.49E-08	ND
Hexachlorobiphenyls	6.84	2.02E-08	1.94E-08	ND	7.53E-09	1.26E-08	ND	ND	ND	ND	2.72E-08	ND
Heptachlorobiphenyls	6.98	7.67E-09	9.47E-09	ND	1.94E-09	4.13E-09	ND	ND	ND	ND	9.80E-09	ND
Octachlorobiphenyls	7.72	5.24E-10	1.04E-09	ND	1.46E-09	4.54E-10	ND	ND	ND	ND	6.67E-10	ND
Nonachlorobiphenyls	8.24	2.98E-10	4.70E-10	ND	2.47E-09	4.16E-10	ND	ND	ND	ND	2.15E-10	ND
Decachlorobiphenyls	8.26	6.85E-10	4.58E-10	1.14E-09	1.94E-09	2.69E-09	7.17E-10	5.50E-09	1.98E-09	3.40E-09	2.48E-10	1.45E-09

Table 5.1 Summary of Stratum A Chronic Toxicity Calculations
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Stratum A

1 ng/g = 1 ug/kg

Sample ID	Units	VB14-COMP-A	VB15-COMP-A	VB17-COMP-A	VB18-COMP-A	VB21-COMP-A	VB22-COMP-A	VB24-COMP-A	VB25-COMP-A	VB26-COMP-A	VB28-COMP-A
Monochlorobiphenyls	ug/kg	ND	1	ND	0.0055	0.72	ND	ND	0.169	ND	ND
Dichlorobiphenyls	ug/kg	0.0282	5.301	ND	0.017	4.744	ND	0.0399	2.187	ND	ND
Trichlorobiphenyls	ug/kg	0.0065	43.461	ND	0.013	34.157	0.0831	0.03	12.33	0.0036	0.0227
Tetrachlorobiphenyls	ug/kg	ND	153.655	ND	0.0221	122.725	0.194	0.103	29.047	0.034	0.06
Pentachlorobiphenyls	ug/kg	0.0131	154.84	0.0116	0.0519	142.822	0.199	0.0992	21.673	0.0073	0.139
Hexachlorobiphenyls	ug/kg	ND	93.344	0.022	ND	129.055	0.2238	0.0934	15.3906	ND	0.021
Heptachlorobiphenyls	ug/kg	ND	42.997	0.0502	0.014	56.007	0.2707	0.037	7.22	ND	0.0572
Octachlorobiphenyls	ug/kg	ND	18.01	0.0088	ND	20.35	1.7503	0.013	2.68	ND	0.01
Nonachlorobiphenyls	ug/kg	ND	29.52	ND	0.022	34.09	8.6	0.043	3.88	ND	0.064
Decachlorobiphenyls	ug/kg	0.028	36.3	0.017	0.044	43.7	8.39	0.079	11	0.044	0.073
Total PCBs (ONLY VALID RESULTS)	ug/kg	0.0758	578.428	0.1096	0.1895	588.37	19.7109	0.5375	105.5766	0.0889	0.4469
TOC (sample specific)	mg OC/kg sed	23200	21400	22900	20300	20700	19900	26600	14600	23100	15700
TOC (sample specific)	kg OC/kg sed	0.0232	0.0214	0.0229	0.0203	0.0207	0.0199	0.0266	0.0146	0.0231	0.0157
Total PCB	ug/kg OC	3.27	27029	4.79	9.33	28424	990	20.2	7231	3.85	28.5
Total PCB	ug/g OC	0.00327	27.0	0.00479	0.00933	28.4	0.990	0.0202	7.23	0.00385	0.0285

Homolog Weight Percent Contribution

Sample ID	Units	VB14-COMP-A	VB15-COMP-A	VB17-COMP-A	VB18-COMP-A	VB21-COMP-A	VB22-COMP-A	VB24-COMP-A	VB25-COMP-A	VB26-COMP-A	VB28-COMP-A
Monochlorobiphenyl	decimal %	ND	0.001728824	ND	0.029023747	0.00122372	ND	ND	0.001600733	ND	ND
Dichlorobiphenyls	decimal %	0.372031662	0.009164494	ND	0.089709763	0.008062954	ND	0.074232558	0.020714817	ND	ND
Trichlorobiphenyls	decimal %	0.086	0.075	ND	0.069	0.058	0.004	0.056	0.117	0.040	0.051
Tetrachlorobiphenyls	decimal %	ND	0.266	ND	0.117	0.209	0.010	0.192	0.275	0.382	0.134
Pentachlorobiphenyls	decimal %	0.173	0.268	0.106	0.274	0.243	0.010	0.185	0.205	0.082	0.311
Hexachlorobiphenyls	decimal %	ND	0.161	0.201	ND	0.219	0.011	0.174	0.146	ND	0.047
Heptachlorobiphenyls	decimal %	ND	0.0743	0.4580	0.0739	0.0952	0.0137	0.0688	0.0684	ND	0.1280
Octachlorobiphenyls	decimal %	ND	0.0311	0.0803	ND	0.0346	0.0888	0.0242	0.0254	ND	0.0224
Nonachlorobiphenyls	decimal %	ND	0.0510	ND	0.1161	0.0579	0.4363	0.0800	0.0368	ND	0.1432
Decachlorobiphenyls	decimal %	0.369	0.063	0.155	0.232	0.074	0.426	0.147	0.104	0.495	0.163
	check	1	1	1	1	1	1	1	1	1	1

Octanol-Water Partition Coefficient for PCB Mixture		VB14-COMP-A	VB15-COMP-A	VB17-COMP-A	VB18-COMP-A	VB21-COMP-A	VB22-COMP-A	VB24-COMP-A	VB25-COMP-A	VB26-COMP-A	VB28-COMP-A
	log K_{ow}	$f_i/K_{ow,i}$	$f_i/K_{ow,i}$	$f_i/K_{ow,i}$	$f_i/K_{ow,i}$	$f_i/K_{ow,i}$	$f_i/K_{ow,i}$	$f_i/K_{ow,i}$	$f_i/K_{ow,i}$	$f_i/K_{ow,i}$	$f_i/K_{ow,i}$
Monochlorobiphenyl	4.64	ND	3.96E-08	ND	6.65E-07	2.80E-08	ND	ND	3.67E-08	ND	ND
Dichlorobiphenyls	5.12	2.82E-06	6.95E-08	ND	6.81E-07	6.12E-08	ND	5.63E-07	1.57E-07	ND	ND
Trichlorobiphenyls	5.62	2.06E-07	1.80E-07	ND	1.65E-07	1.39E-07	1.01E-08	1.34E-07	2.80E-07	9.71E-08	1.22E-07
Tetrachlorobiphenyls	6.04	ND	2.42E-07	ND	1.06E-07	1.90E-07	8.98E-09	1.75E-07	2.51E-07	3.49E-07	1.22E-07
Pentachlorobiphenyls	6.49	5.59E-08	8.66E-08	3.42E-08	8.86E-08	7.85E-08	3.27E-09	5.97E-08	6.64E-08	2.66E-08	1.01E-07
Hexachlorobiphenyls	6.84	ND	2.33E-08	2.90E-08	ND	3.17E-08	1.64E-09	2.51E-08	2.11E-08	ND	6.79E-09
Heptachlorobiphenyls	6.98	ND	7.78E-09	4.80E-08	7.74E-09	9.97E-09	1.44E-09	7.21E-09	7.16E-09	ND	1.34E-08
Octachlorobiphenyls	7.72	ND	5.93E-10	1.53E-09	ND	6.59E-10	1.69E-09	4.61E-10	4.84E-10	ND	4.26E-10
Nonachlorobiphenyls	8.24	ND	2.94E-10	ND	6.68E-10	3.33E-10	2.51E-09	4.60E-10	2.11E-10	ND	8.24E-10
Decachlorobiphenyls	8.26	2.03E-09	3.45E-10	8.52E-10	1.28E-09	4.08E-10	2.34E-09	8.08E-10	5.73E-10	2.72E-09	8.98E-10

Table 5.1 Summary of Stratum A Chronic Toxicity Calculations
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

	VB1-COMP-A	VB2-COMP-A	VB3-COMP-A	VB5-COMP-A	VB6-COMP-A	VB7-COMP-A	DUP1-COMP-A	VB9-COMP-A	VB10-COMP-A	VB11-COMP-A	VB13-COMP-A
$\Sigma(f_i/K_{ow,i})$=	7.98E-07	8.40E-07	6.01E-06	8.39E-08	4.66E-07	6.60E-06	5.50E-09	1.54E-06	1.27E-07	7.45E-07	1.69E-05
$K_{ow,\ Total\ PCB}$ =	1,253,754	1,190,658	166,485	11,921,089	2,148,053	151,583	181,970,086	650,520	7,897,098	1,343,139	59,316
log $K_{ow,\ Total\ PCB}$ =	6.10	6.08	5.22	7.08	6.33	5.18	8.26	5.81	6.90	6.13	4.77
log $K_{oc,\ Total\ PCB}$ =	6.10	6.08	5.22	7.08	6.33	5.18	8.26	5.81	6.90	6.13	4.77

	VB14-COMP-A	VB15-COMP-A	VB17-COMP-A	VB18-COMP-A	VB21-COMP-A	VB22-COMP-A	VB24-COMP-A	VB25-COMP-A	VB26-COMP-A	VB28-COMP-A
$\Sigma(f_i/K_{ow,i})$=	3.09E-06	6.51E-07	1.14E-07	1.71E-06	5.40E-07	3.20E-08	9.66E-07	8.21E-07	4.75E-07	3.67E-07
$K_{ow,\ Total\ PCB}$ =	324,064	1,537,048	8,802,264	583,211	1,850,780	31,271,827	1,035,687	1,218,311	2,104,232	2,722,698
log $K_{ow,\ Total\ PCB}$ =	5.51	6.19	6.94	5.77	6.27	7.50	6.02	6.09	6.32	6.43
log $K_{oc,\ Total\ PCB}$ =	5.51	6.19	6.94	5.77	6.27	7.50	6.02	6.09	6.32	6.43

SUMMARY STATS	
STDEV	0.798
AVERAGE	6.23
MEDIAN	6.13
MINIMUM	4.77
MAXIMUM	8.26
COUNT	21

Sediment Quality Benchmark (SQB) to Protect Aquatic Life from PCBs:

Chronic Fresh Water Criteria = 0.014 ug/L

SQB (ug PCB/g o.c.) = $C_{criteria}$ (ug/L) x K_{oc} (L/kg) x (1 kg/1000 g)

	VB1-COMP-A	VB2-COMP-A	VB3-COMP-A	VB5-COMP-A	VB6-COMP-A	VB7-COMP-A	DUP1-COMP-A	VB9-COMP-A	VB10-COMP-A	VB11-COMP-A	VB13-COMP-A
Sediment Quality Benchmark Freshwater (ug PCB/g OC)	18	17	2	167	30	2	2,548	9	111	19	1

	VB14-COMP-A	VB15-COMP-A	VB17-COMP-A	VB18-COMP-A	VB21-COMP-A	VB22-COMP-A	VB24-COMP-A	VB25-COMP-A	VB26-COMP-A	VB28-COMP-A
Sediment Quality Benchmark Freshwater (ug PCB/g OC)	5	22	123	8	26	438	14	17	29	38

Comparing Sediment Quality Benchmark to Actual Total PCB Results - Chronic Toxic Units (T.U.c):

		VB1-COMP-A	VB2-COMP-A	VB3-COMP-A	VB5-COMP-A	VB6-COMP-A	VB7-COMP-A	DUP1-COMP-A	VB9-COMP-A	VB10-COMP-A	VB11-COMP-A	VB13-COMP-A
Actual Total PCB Results	(ug PCB/g OC)	1.02	0.210	0.000702	0.0766	2.05	0.00105	0.00113	0.000239	0.00220	26.8	0.000321
Ratio of Total PCBs to SQB (Fresh)	unitless	0.0580	0.0126	0.000301	0.000459	0.0683	0.000494	0.000000442	0.0000263	0.0000199	**1.43**	0.000387

		VB14-COMP-A	VB15-COMP-A	VB17-COMP-A	VB18-COMP-A	VB21-COMP-A	VB22-COMP-A	VB24-COMP-A	VB25-COMP-A	VB26-COMP-A	VB28-COMP-A
Actual Total PCB Results	(ug PCB/g OC)	0.00327	27.0	0.00479	0.00933	28.4	0.990	0.0202	7.23	0.00385	0.0285
Ratio of Total PCBs to SQB (Fresh)	unitless	0.000720	**1.26**	0.0000388	0.00114	**1.10**	0.00226	0.00139	0.424	0.000131	0.000747

Notes:

1. Log Kow values from Greene, R. 2010. Assessment of 2008 DEBI PCB Data for Sediments of the Delaware Estuary. Department of Natural Resources and Environmental Control, Division of Water Resources, Watershed Delaware Branch, Dover, DE. who got values from Fuchsman, et.al, 2006, (who cites Mackay et al. 1992 and Shiu and Mackay 1986).
2. Chronic Freshwater Criteria based on DNREC (2004) and DRBC (2008) criteria.

SUMMARY STATS - T.U.c for Total PCBs	
STDEV	0.453
AVERAGE	0.21
MEDIAN	0.000747
MINIMUM	0.00
MAXIMUM	1.43
COUNT	21
t-value	1.72
95% UCL	0.378

Table 5.2 Summary of Stratum B Chronic Toxicity Calculations
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Stratum B

1 ng/g = 1 ug/kg

Sample ID	Units	VB1-COMP-B	VB4-COMP-A	VB5-COMP-B	VB6-COMP-B	VB9-COMP-B	VB10-COMP-B	VB11-COMP-B	VB12-COMP-B	VB13-COMP-B	VB15-COMP-B	VB19-COMP-B
Monochlorobiphenyl	ug/kg	ND	ND	0.0194	0.00055	ND	ND	0.0535	0.0033	ND	0.0408	0.068
Dichlorobiphenyls	ug/kg	0.006	0.0046	0.164	0.0041	ND	ND	0.5118	ND	ND	0.272	0.2818
Trichlorobiphenyls	ug/kg	0.0201	0.0017	0.643	0.0042	ND	ND	2.6853	ND	ND	2.0834	1.2763
Tetrachlorobiphenyls	ug/kg	0.0749	0.0052	2.4734	ND	ND	ND	7.5215	0.003	0.0189	6.9183	3.6046
Pentachlorobiphenyls	ug/kg	0.0195	0.0025	6.7875	ND	ND	ND	8.1684	ND	0.0345	7.0719	3.7897
Hexachlorobiphenyls	ug/kg	ND	ND	19.823	ND	ND	ND	5.294	ND	ND	5.0867	3.67248
Heptachlorobiphenyls	ug/kg	0.0127	ND	22.095	ND	ND	ND	2.6128	ND	ND	2.64	1.6064
Octachlorobiphenyls	ug/kg	ND	ND	9.821	ND	ND	ND	0.8368	ND	ND	0.8976	2.2459
Nonachlorobiphenyls	ug/kg	ND	ND	3.34	ND	ND	ND	0.705	ND	ND	1.39	7.47
Decachlorobiphenyls	ug/kg	ND	ND	2.65	0.002	ND	ND	1.12	0.014	ND	1.84	6.5
Total PCBs (ONLY VALID RESULTS)	ug/kg	0.1332	0.014	67.8163	0.01085	ND	ND	29.5091	0.0203	0.0534	28.2407	30.51518
TOC (sample specific)	mg OC/kg sed	2250	1860	4130	1770	2790	4630	2170	3160	1390	6180	6650
TOC (sample specific)	kg OC/kg sed	0.00225	0.00186	0.00413	0.00177	0.00279	0.00463	0.00217	0.00316	0.00139	0.00618	0.00665
Total PCB	ug/kg OC	59.2	7.53	16,420	6.13	-	-	13,599	6.42	38.4	4,570	4,589
Total PCB	ug/g OC	0.0592	0.00753	16.4	0.00613	-	-	13.6	0.00642	0.0384	4.57	4.59

Homolog Weight Percent Contribution

Sample ID	Units	VB1-COMP-B	VB4-COMP-A	VB5-COMP-B	VB6-COMP-B	VB9-COMP-B	VB10-COMP-B	VB11-COMP-B	VB12-COMP-B	VB13-COMP-B	VB15-COMP-B	VB19-COMP-B
Monochlorobiphenyl	decimal %	ND	ND	0.000286	0.0507	ND	ND	0.00181	0.163	ND	0.00144	0.00223
Dichlorobiphenyls	decimal %	0.0450	0.329	0.00242	0.378	ND	ND	0.0173	ND	ND	0.00963	0.00923
Trichlorobiphenyls	decimal %	0.151	0.121	0.00948	0.387	ND	ND	0.0910	ND	ND	0.0738	0.0418
Tetrachlorobiphenyls	decimal %	0.562	0.371	0.0365	ND	ND	ND	0.255	0.148	0.354	0.245	0.118
Pentachlorobiphenyls	decimal %	0.146	0.179	0.100	ND	ND	ND	0.277	ND	0.646	0.250	0.124
Hexachlorobiphenyls	decimal %	ND	ND	0.292	ND	ND	ND	0.179	ND	ND	0.180	0.120
Heptachlorobiphenyls	decimal %	0.0953	ND	0.326	ND	ND	ND	0.0885	ND	ND	0.0935	0.0526
Octachlorobiphenyls	decimal %	ND	ND	0.145	ND	ND	ND	0.0284	ND	ND	0.0318	0.0736
Nonachlorobiphenyls	decimal %	ND	ND	0.0493	ND	ND	ND	0.0239	ND	ND	0.0492	0.245
Decachlorobiphenyls	decimal %	ND	ND	0.0391	0.184	ND	ND	0.0380	0.690	ND	0.0652	0.213
	check	1	1	1	1	0	0	1	1	1	1	1

Octanol-Water Partition Coefficient for PCB Mixture		VB1-COMP-B	VB4-COMP-A	VB5-COMP-B	VB6-COMP-B	VB9-COMP-B	VB10-COMP-B	VB11-COMP-B	VB12-COMP-B	VB13-COMP-B	VB15-COMP-B	VB19-COMP-B
	log K_{ow}	$f_i/K_{ow,i}$	$f_i/K_{ow,i}$	$f_i/K_{ow,i}$	$f_i/K_{ow,i}$	$f_i/K_{ow,i}$	$f_i/K_{ow,i}$	$f_i/K_{ow,i}$	$f_i/K_{ow,i}$	$f_i/K_{ow,i}$	$f_i/K_{ow,i}$	$f_i/K_{ow,i}$
Monochlorobiphenyl	4.64	ND	ND	6.55E-09	1.16E-06	ND	ND	4.15E-08	3.72E-06	ND	3.31E-08	5.10E-08
Dichlorobiphenyls	5.12	3.42E-07	2.49E-06	1.83E-08	2.87E-06	ND	ND	1.32E-07	ND	ND	7.31E-08	7.01E-08
Trichlorobiphenyls	5.62	3.62E-07	2.91E-07	2.27E-08	9.29E-07	ND	ND	2.18E-07	ND	ND	1.77E-07	1.00E-07
Tetrachlorobiphenyls	6.04	5.13E-07	3.39E-07	3.33E-08	ND	ND	ND	2.32E-07	1.35E-07	3.23E-07	2.23E-07	1.08E-07
Pentachlorobiphenyls	6.49	4.74E-08	5.78E-08	3.24E-08	ND	ND	ND	8.96E-08	ND	2.09E-07	8.10E-08	4.02E-08
Hexachlorobiphenyls	6.84	ND	ND	4.23E-08	ND	ND	ND	2.59E-08	ND	ND	2.60E-08	1.74E-08
Heptachlorobiphenyls	6.98	9.98E-09	ND	3.41E-08	ND	ND	ND	9.27E-09	ND	ND	9.79E-09	5.51E-09
Octachlorobiphenyls	7.72	ND	ND	2.76E-09	ND	ND	ND	5.40E-10	ND	ND	6.06E-10	1.40E-09
Nonachlorobiphenyls	8.24	ND	ND	2.83E-10	ND	ND	ND	1.37E-10	ND	ND	2.83E-10	1.41E-09
Decachlorobiphenyls	8.26	ND	ND	2.15E-10	1.01E-09	ND	ND	2.09E-10	3.79E-09	ND	3.58E-10	1.17E-09

Table 5.2 Summary of Stratum B Chronic Toxicity Calculations
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Stratum B

1 ng/g = 1 ug/kg

Sample ID	Units	VB21-COMP-B	VB23-COMP-B	DUP-COMP-B	VB25-COMP-B	VB27-COMP-B	VB29-COMP-A	VB30-COMP-B	VB31-COMP-B	VB33-COMP-B
Monochlorobiphenyl	ug/kg	0.0266	0.0036	0.0044	0.0013	ND	ND	ND	0.44	ND
Dichlorobiphenyls	ug/kg	0.169	0.0563	0.0476	0.0281	ND	ND	0.0066	2.789	ND
Trichlorobiphenyls	ug/kg	0.786	0.2962	0.2635	0.152	ND	ND	0.0015	22.249	0.0011
Tetrachlorobiphenyls	ug/kg	3.5228	0.9387	0.8203	0.3901	ND	0.0032	ND	72.596	0.0052
Pentachlorobiphenyls	ug/kg	6.0691	2.9143	1.18849	0.3215	0.0043	0.005	0.0012	95.293	0.0067
Hexachlorobiphenyls	ug/kg	4.794	5.816	2.0166	0.2048	ND	ND	ND	53.6792	0.00299
Heptachlorobiphenyls	ug/kg	2.115	2.333	1.0852	0.0943	ND	ND	0.0129	25.474	0.0023
Octachlorobiphenyls	ug/kg	0.861	0.699	0.464	0.034	ND	ND	ND	10.383	ND
Nonachlorobiphenyls	ug/kg	1.432	1.177	0.995	0.057	ND	ND	ND	19.35	ND
Decachlorobiphenyls	ug/kg	2.01	1.17	0.82	0.37	ND	ND	0.0044	26	0.0022
Total PCBs (ONLY VALID RESULTS)	ug/kg	21.7855	15.4041	7.70509	1.6531	0.0043	0.0082	0.0266	328.2532	0.02049
TOC (sample specific)	mg OC/kg sed	9120	3540	2490	3150	23800	6470	3480	3350	9750
TOC (sample specific)	kg OC/kg sed	0.00912	0.00354	0.00249	0.00315	0.0238	0.00647	0.00348	0.00335	0.00975
Total PCB	ug/kg OC	2,389	4,351	3,094	525	0.181	1.27	7.64	97,986	2.10
Total PCB	ug/g OC	2.39	4.35	3.09	0.525	0.000181	0.00127	0.00764	98.0	0.00210

Homolog Weight Percent Contribution

Sample ID	Units	VB21-COMP-B	VB23-COMP-B	DUP-COMP-B	VB25-COMP-B	VB27-COMP-B	VB29-COMP-A	VB30-COMP-B	VB31-COMP-B	VB33-COMP-B
Monochlorobiphenyl	decimal %	0.00122	0.00023	0.00057	0.00079	ND	ND	ND	0.00134	ND
Dichlorobiphenyls	decimal %	0.00776	0.00365	0.00618	0.0170	ND	ND	0.248	0.00850	ND
Trichlorobiphenyls	decimal %	0.0361	0.0192	0.0342	0.0919	ND	ND	0.0564	0.0678	0.0537
Tetrachlorobiphenyls	decimal %	0.162	0.0609	0.106	0.236	ND	0.390	ND	0.221	0.254
Pentachlorobiphenyls	decimal %	0.279	0.189	0.154	0.194	1.00	0.610	0.0451	0.290	0.327
Hexachlorobiphenyls	decimal %	0.220	0.378	0.262	0.124	ND	ND	ND	0.164	0.146
Heptachlorobiphenyls	decimal %	0.0971	0.151	0.141	0.0570	ND	ND	0.485	0.0776	0.112
Octachlorobiphenyls	decimal %	0.0395	0.0454	0.0602	0.0206	ND	ND	ND	0.0316	ND
Nonachlorobiphenyls	decimal %	0.0657	0.0764	0.129	0.0345	ND	ND	ND	0.0589	ND
Decachlorobiphenyls	decimal %	0.0923	0.0760	0.106	0.224	ND	ND	0.165	0.0792	0.107
check	check	1	1	1	1	1	1	1	1	1

Octanol-Water Partition Coefficient for PCB Mixture

	log K_{ow}	VB21-COMP-B $f_i/K_{ow,i}$	VB23-COMP-B $f_i/K_{ow,i}$	DUP-COMP-B $f_i/K_{ow,i}$	VB25-COMP-B $f_i/K_{ow,i}$	VB27-COMP-B $f_i/K_{ow,i}$	VB29-COMP-A $f_i/K_{ow,i}$	VB30-COMP-B $f_i/K_{ow,i}$	VB31-COMP-B $f_i/K_{ow,i}$	VB33-COMP-B $f_i/K_{ow,i}$
Monochlorobiphenyl	4.64	2.80E-08	5.35E-09	1.31E-08	1.80E-08	ND	ND	ND	3.07E-08	ND
Dichlorobiphenyls	5.12	5.88E-08	2.77E-08	4.69E-08	1.29E-07	ND	ND	1.88E-06	6.45E-08	ND
Trichlorobiphenyls	5.62	8.65E-08	4.61E-08	8.20E-08	2.21E-07	ND	ND	1.35E-07	1.63E-07	1.29E-07
Tetrachlorobiphenyls	6.04	1.47E-07	5.56E-08	9.71E-08	2.15E-07	ND	3.56E-07	ND	2.02E-07	2.31E-07
Pentachlorobiphenyls	6.49	9.01E-08	6.12E-08	4.99E-08	6.29E-08	3.24E-07	1.97E-07	1.46E-08	9.39E-08	1.06E-07
Hexachlorobiphenyls	6.84	3.18E-08	5.46E-08	3.78E-08	1.79E-08	ND	ND	ND	2.36E-08	2.11E-08
Heptachlorobiphenyls	6.98	1.02E-08	1.59E-08	1.47E-08	5.97E-09	ND	ND	5.08E-08	8.13E-09	1.18E-08
Octachlorobiphenyls	7.72	7.53E-10	8.65E-10	1.15E-09	3.92E-10	ND	ND	ND	6.03E-10	ND
Nonachlorobiphenyls	8.24	3.78E-10	4.40E-10	7.43E-10	1.98E-10	ND	ND	ND	3.39E-10	ND
Decachlorobiphenyls	8.26	5.07E-10	4.17E-10	5.85E-10	1.23E-09	ND	ND	9.09E-10	4.35E-10	5.90E-10

Table 5.2 Summary of Stratum B Chronic Toxicity Calculations
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

	VB1-COMP-B	VB4-COMP-A	VB5-COMP-B	VB6-COMP-B	VB9-COMP-B	VB10-COMP-B	VB11-COMP-B	VB12-COMP-B	VB13-COMP-B	VB15-COMP-B	VB19-COMP-B
$\Sigma(f_i/K_{ow,i})$=	1.27E-06	3.18E-06	1.93E-07	4.96E-06	0.00E+00	0.00E+00	7.50E-07	3.86E-06	5.32E-07	6.25E-07	3.96E-07
$K_{ow, Total PCB}$ =	785,004	314,437	5,183,564	201,720	-	-	1,334,197	258,890	1,880,216	1,600,890	2,523,710
log $K_{ow, Total PCB}$ =	5.89	5.50	6.71	5.30	-	-	6.13	5.41	6.27	6.20	6.40
log $K_{oc, Total PCB}$ =	5.89	5.50	6.71	5.30	-	-	6.13	5.41	6.27	6.20	6.40

	VB21-COMP-B	VB23-COMP-B	DUP-COMP-B	VB25-COMP-B	VB27-COMP-B	VB29-COMP-A	VB30-COMP-B	VB31-COMP-B	VB33-COMP-B
$\Sigma(f_i/K_{ow,i})$=	4.55E-07	2.68E-07	3.44E-07	6.71E-07	3.24E-07	5.53E-07	2.08E-06	5.87E-07	4.99E-07
$K_{ow, Total PCB}$ =	2,199,732	3,729,154	2,906,617	1,489,466	3,090,295	1,807,600	479,905	1,704,935	2,002,078
log $K_{ow, Total PCB}$ =	6.34	6.57	6.46	6.17	6.49	6.26	5.68	6.23	6.30
log $K_{oc, Total PCB}$ =	6.34	6.57	6.46	6.17	6.49	6.26	5.68	6.23	6.30

SUMMARY STATS - T.U.s for Total PCBs	
STDEV	0.408
AVERAGE	6.13
MEDIAN	6.24
MINIMUM	5.30
MAXIMUM	6.71
COUNT	18

Sediment Quality Benchmark (SQB) to Protect Aquatic Life from PCBs:

Chronic Fresh Water Criteria = 0.014 ug/L

SQB (ug PCB/g o.c.) = C_{sed} (ug/L) x K_{oc} (L/kg) x (1 kg/1000 g)

	VB1-COMP-B	VB4-COMP-A	VB5-COMP-B	VB6-COMP-B	VB9-COMP-B	VB10-COMP-B	VB11-COMP-B	VB12-COMP-B	VB13-COMP-B	VB15-COMP-B	VB19-COMP-B
Sediment Quality Benchmark Freshwater (ug PCB/g OC)	11	4	73	3	-	-	19	4	26	22	35

	VB21-COMP-B	VB23-COMP-B	DUP-COMP-B	VB25-COMP-B	VB27-COMP-B	VB29-COMP-A	VB30-COMP-B	VB31-COMP-B	VB33-COMP-B
Sediment Quality Benchmark Freshwater (ug PCB/g OC)	31	52	41	21	43	25	7	24	28

Comparing Sediment Quality Benchmark to Actual Total PCB Results - Chronic Toxic Units (T.U.c):

		VB1-COMP-B	VB4-COMP-A	VB5-COMP-B	VB6-COMP-B	VB9-COMP-B	VB10-COMP-B	VB11-COMP-B	VB12-COMP-B	VB13-COMP-B	VB15-COMP-B	VB19-COMP-B
Actual Total PCB Results	(ug PCB/g OC)	0.0592	0.00753	16.4	0.00613	-	-	13.6	0.00642	0.0384	4.57	4.59
Ratio of Total PCBs to SQB (Fresh)	unitless	0.00539	0.00171	0.226	0.00217	-	-	0.728	0.00177	0.00146	0.204	0.130

		VB21-COMP-B	VB23-COMP-B	DUP-COMP-B	VB25-COMP-B	VB27-COMP-B	VB29-COMP-A	VB30-COMP-B	VB31-COMP-B	VB33-COMP-B
Actual Total PCB Results	(ug PCB/g OC)	2.39	4.35	3.09	0.525	0.000181	0.00127	0.00764	98.0	0.00210
Ratio of Total PCBs to SQB (Fresh)	unitless	0.0776	0.0833	0.0760	0.0252	0.00000418	0.0000501	0.00114	**4.11**	0.0000750

Notes:

1. Log Kow values from Greene, R. 2010. Assessment of 2008 DEBI PCB Data for Sediments of the Delaware Estuary. Department of Natural Resources and Environmental Control, Division of Water Resources, Watershed Delaware Branch, Dover, DE. who got values from Fuchsman, et.al, 2006, (who cites Mackay et al. 1992 and Shiu and Mackay 1986).
2. Chronic Freshwater Criteria based on DNREC (2004) and DRBC (2008) criteria

SUMMARY STATS - T.U.c for Total PCBs	
STDEV	0.962
AVERAGE	0.31
MEDIAN	0.02
MINIMUM	0.00
MAXIMUM	4.11
COUNT	18
t-value	1.74
95% UCL	0.709

Table 5.3 Summary of Stratum A Human Health PCB Toxicity Calculations
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Bioaccumulation-based Sediment Quality Benchmark (BB SQB) for Human Health Assessment of PCB Effects

PCB BB SQB using cancer endpoint	HH SQB_{CA}	0.285877644 mg PCB/kg o.c.	Same as ug PCB/g o.c.
PCB BB SQB using non-cancer endpoint	HH $SQB_{non\text{-}CA}$	0.457404231 mg PCB/kg o.c.	Same as ug PCB/g o.c.

Notes:
1. See the following reference for calculations used to dervie the above benchmarks: Greene, R. 2010. Assessment of 2008 DEBI PCB Data for Sediments of the Delaware Estuary. Department of Natural Resources and Environmental Control, Division of Water Resources, Watershed Delaware Branch, Dover, DE. which is from Greene, R. 1997. Bioaccumulation-based Sediment Quality Criteria for the Protection of Human Health. Department of Natural Resources and Environmental Control, Division of Water Resources, Watershed Delaware Branch, Dover, DE.

Stratum A

		VB1-COMP-A	VB2-COMP-A	VB3-COMP-A	VB5-COMP-A	VB6-COMP-A	VB7-COMP-A	DUP1-COMP-A	VB9-COMP-A	VB10-COMP-A
Actual Total PCBs	(ug PCB/g OC)	1.02	0.210	0.000702	0.0766	2.05	0.00105	0.00113	0.000239	0.00220
Cancer Risk Ratio	(Actual Total PCBs: HH SQB_{CA})	3.56	0.734	0.00245	0.268	7.18	0.00367	0.00394	0.000837	0.00769
Non-Cancer Risk Ratio	(Actual Total PCBs: HH $SQB_{non\text{-}CA}$)	2.23	0.459	0.00153	0.167	4.49	0.00229	0.00246	0.000523	0.00480
		VB11-COMP-A	VB13-COMP-A	VB14-COMP-A	VB15-COMP-A	VB17-COMP-A	VB18-COMP-A	VB21-COMP-A	VB22-COMP-A	VB24-COMP-A
Actual Total PCBs	(ug PCB/g OC)	26.8	0.000321	0.00327	27.0	0.00479	0.00933	28.4	0.990	0.0202
Cancer Risk Ratio	(Actual Total PCBs: HH SQB_{CA})	93.9	0.00112	0.0114	94.5	0.0167	0.0327	99.4	3.46	0.0707
Non-Cancer Risk Ratio	(Actual Total PCBs: HH $SQB_{non\text{-}CA}$)	58.7	0.000702	0.00714	59.1	0.0105	0.0204	62.1	2.17	0.0442
		VB25-COMP-A	VB26-COMP-A	VB28-COMP-A	Exceedances					
Actual Total PCBs	(ug PCB/g OC)	7.23	0.00385	0.0285						
Cancer Risk Ratio	(Actual Total PCBs: HH SQB_{CA})	25.3	0.0135	0.100	2					
Non-Cancer Risk Ratio	(Actual Total PCBs: HH $SQB_{non\text{-}CA}$)	15.8	0.00841	0.0622	9					

Summary Statistics for Ratio of Organic Carbon Normalized Total PCBs to BB SQB_{CA}	
Average	15.6
Standard Deviation	34.1
Median	0.0707
Minimum	0.00
Maximum	99.4
Count	21
t-value	1.72
95% UCL	28.5

Summary Statistics for Ratio of Organic Carbon Normalized Total PCBs to BB $SQB_{non\text{-}CA}$	
Average	9.78
Standard Deviation	21.3
Median	0.0442
Minimum	0.000523
Maximum	62.1
Count	21
t-value	1.72
95% UCL	17.8

Table 5.4 Summary of Stratum B Human Health PCB Toxicity Calculations
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Bioaccumulation-based Sediment Quality Benchmark (BB SQB) for Human Health Assessment of PCB Effects

PCB BB SQB using cancer endpoint	HH SQB_{CA}	0.285877644 mg PCB/kg o.c.	Same as ug PCB/g o.c.
PCB BB SQB using non-cancer endpoint	HH $SQB_{non\text{-}CA}$	0.457404231 mg PCB/kg o.c.	Same as ug PCB/g o.c.

Notes:
1. See the following reference for calculations used to dervie the above benchmarks: Greene, R. 2010. Assessment of 2008 DEBI PCB Data for Sediments of the Delaware Estuary. Department of Natural Resources and Environmental Control, Division of Water Resources, Watershed Delaware Branch, Dover, DE. which is from Greene, R. 1997. Bioaccumulation-based Sediment Quality Criteria for the Protection of Human Health. Department of Natural Resources and Environmental Control, Division of Water Resources, Watershed Delaware Branch, Dover, DE.

Stratum B

		VB1-COMP-B	VB4-COMP-A	VB5-COMP-B	VB6-COMP-B	VB9-COMP-B	VB10-COMP-B	VB11-COMP-B	VB12-COMP-B	VB13-COMP-B
Actual Total PCBs	(ug PCB/g OC)	0.0592	0.00753	16.4	0.00613	-	-	13.6	0.00642	0.0384
Cancer Risk Ratio	(Actual Total PCBs: HH SQB_{CA})	0.207	0.0263	57.4	0.0214	-	-	47.6	0.0225	0.134
Non-Cancer Risk Ratio	(Actual Total PCBs: HH $SQB_{non\text{-}CA}$)	0.129	0.0165	35.9	0.0134	-	-	29.7	0.0140	0.0840

		VB15-COMP-B	VB19-COMP-B	VB21-COMP-B	VB23-COMP-B	DUP-COMP-B	VB25-COMP-B	VB27-COMP-B	VB29-COMP-A	VB30-COMP-B
Actual Total PCBs	(ug PCB/g OC)	4.57	4.59	2.39	4.35	3.09	0.525	0.000181	0.00127	0.00764
Cancer Risk Ratio	(Actual Total PCBs: HH SQB_{CA})	16.0	16.1	8.36	15.2	10.8	1.84	0.000632	0.00443	0.0267
Non-Cancer Risk Ratio	(Actual Total PCBs: HH $SQB_{non\text{-}CA}$)	9.99	10.0	5.22	9.51	6.77	1.15	0.000395	0.00277	0.0167

		VB31-COMP-B	VB33-COMP-B	Exceedances
Actual Total PCBs	(ug PCB/g OC)	98.0	0.00210	
Cancer Risk Ratio	(Actual Total PCBs: HH SQB_{CA})	343	0.00735	9
Non-Cancer Risk Ratio	(Actual Total PCBs: HH $SQB_{non\text{-}CA}$)	214	0.00459	18

Summary Statistics for Ratio of Organic Carbon Normalized Total PCBs to BB SQBCA	
Average	28.7
Standard Deviation	80.1
Median	1.02
Minimum	0.000632
Maximum	343
Count	18
t-value	1.74
95% UCL	61.5

Summary Statistics for Ratio of Organic Carbon Normalized Total PCBs to BB $SQB_{non\text{-}CA}$	
Average	17.9
Standard Deviation	50.1
Median	0.638
Minimum	0.000395
Maximum	214
Count	18
t-value	1.74
95% UCL	38.5

Table 6 . Summary of Risk Assessment Results (Stratum A)
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Excavator Risk Summary

Exposure Media	Exposure Route	COPC	EPC	Units	Carcinogenic Risk	Hazard Index
Stratum A	Ingestion	Arsenic, Inorganic	29.7	mg/kg	9E-08	0.01
		Benzo[a]pyrene	0.316	mg/kg	1E-09	0.0002
		TCDD-2,3,7,8	1.7E-05	mg/kg	7E-09	0.006
		Thallium (Soluble Salts)	0.278	mg/kg	-	0.006
	Total for Exposure Route				9E-08	0.02
	Inhalation	Arsenic, Inorganic	29.7	mg/kg	2E-11	0.00003
		Benzo[a]pyrene	0.316	mg/kg	4E-14	0.000002
		TCDD-2,3,7,8	1.7E-05	mg/kg	9E-11	0.000004
		Thallium (Soluble Salts)	0.278	mg/kg	-	-
	Total for Exposure Route				1E-10	0.00004
	Dermal	Arsenic, Inorganic	29.7	mg/kg	1E-08	0.002
		Benzo[a]pyrene	0.316	mg/kg	4E-10	0.0001
		TCDD-2,3,7,8	1.7E-05	mg/kg	7E-10	0.0005
		Thallium (Soluble Salts)	0.278	mg/kg	-	-
	Total for Exposure Route				1E-08	0.003
Total for Exposure Media					**1E-07**	**0.02**

Recreator Risk Summary

Exposure Media	Exposure Route	COPC	EPC	Units	Carcinogenic Risk	Hazard Index
Stratum A	Ingestion	Arsenic, Inorganic	29.7	mg/kg	8E-06	0.2
		Benzo[a]pyrene	0.316	mg/kg	4E-07	0.003
		TCDD-2,3,7,8	1.7E-05	mg/kg	7E-07	0.07
		Thallium (Soluble Salts)	0.278	mg/kg	-	0.08
	Total for Exposure Route				9E-06	0.31
	Inhalation	Arsenic, Inorganic	29.7	mg/kg	3E-10	0.00001
		Benzo[a]pyrene	0.316	mg/kg	1E-12	0.000001
		TCDD-2,3,7,8	1.7E-05	mg/kg	1E-09	0.000002
		Thallium (Soluble Salts)	0.278	mg/kg	-	-
	Total for Exposure Route				1E-09	0.00002
	Dermal	Arsenic, Inorganic	29.7	mg/kg	1E-06	0.02
		Benzo[a]pyrene	0.316	mg/kg	1E-07	0.0009
		TCDD-2,3,7,8	1.7E-05	mg/kg	6E-08	0.005
		Thallium (Soluble Salts)	0.278	mg/kg	-	-
	Total for Exposure Route				1E-06	0.03
Total for Exposure Media					**1E-05**	**0.3**

Outdoor Worker Risk Summaruy

Exposure Media	Exposure Route	COPC	EPC	Units	Carcinogenic Risk	Hazard Index
Stratum A	Ingestion	Arsenic, Inorganic	29.7	mg/kg	7E-06	0.05
		Benzo[a]pyrene	0.316	mg/kg	9E-08	0.001
		TCDD-2,3,7,8	1.7E-05	mg/kg	6E-07	0.02
		Thallium (Soluble Salts)	0.278	mg/kg	-	0.02
	Total for Exposure Route				8E-06	0.09
	Inhalation	Arsenic, Inorganic	29.7	mg/kg	7E-09	0.0003
		Benzo[a]pyrene	0.316	mg/kg	1E-11	0.00002
		TCDD-2,3,7,8	1.7E-05	mg/kg	2E-08	0.00005
		Thallium (Soluble Salts)	0.278	mg/kg	-	-
	Total for Exposure Route				3E-08	0.0004
	Dermal	Arsenic, Inorganic	29.7	mg/kg	2E-06	0.01
		Benzo[a]pyrene	0.316	mg/kg	5E-08	0.0004
		TCDD-2,3,7,8	1.7E-05	mg/kg	8E-08	0.0024
		Thallium (Soluble Salts)	0.278	mg/kg	-	-
	Total for Exposure Route				2E-06	0.01
Total for Exposure Media					**1E-05**	**0.1**

Resident Risk Summary

Exposure Media	Exposure Route	COPC	EPC	Units	Carcinogenic Risk	Hazard Index
Stratum A	Ingestion	Arsenic, Inorganic	29.7	mg/kg	4E-05	0.8
		Benzo[a]pyrene	0.316	mg/kg	2E-06	0.01
		TCDD-2,3,7,8	1.7E-05	mg/kg	3E-06	0.32
		Thallium (Soluble Salts)	0.278	mg/kg	-	0.36
	Total for Exposure Route				4E-05	1
	Inhalation	Arsenic, Inorganic	29.7	mg/kg	3E-08	0.001
		Benzo[a]pyrene	0.316	mg/kg	1E-10	0.0001
		TCDD-2,3,7,8	1.7E-05	mg/kg	1E-07	0.0002
		Thallium (Soluble Salts)	0.278	mg/kg	-	-
	Total for Exposure Route				2E-07	0.002
	Dermal	Arsenic, Inorganic	29.7	mg/kg	5E-06	0.09
		Benzo[a]pyrene	0.316	mg/kg	7E-07	0.004
		TCDD-2,3,7,8	1.7E-05	mg/kg	3E-07	0.02
		Thallium (Soluble Salts)	0.278	mg/kg	-	-
	Total for Exposure Route				6E-06	0.1
Total for Exposure Media					**5E-05**	**2**

Table 6 . Summary of Risk Assessment Results (Stratum A)
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Composite Worker Risk Summary

Exposure Media	Exposure Route	COPC	EPC	Units	Carcinogenic Risk	Hazard Index
Stratum A	Ingestion	Arsenic, Inorganic	29.7	mg/kg	8E-06	0.05
		Benzo[a]pyrene	0.316	mg/kg	1E-07	0.001
		TCDD-2,3,7,8	1.7E-05	mg/kg	7E-07	0.02
		Thallium (Soluble Salts)	0.278	mg/kg	-	0.02
	Total for Exposure Route				9E-06	0.1
	Inhalation	Arsenic, Inorganic	29.7	mg/kg	8E-09	0.0003
		Benzo[a]pyrene	0.316	mg/kg	1E-11	0.00003
		TCDD-2,3,7,8	1.7E-05	mg/kg	3E-08	0.00005
		Thallium (Soluble Salts)	0.278	mg/kg	-	-
	Total for Exposure Route				4E-08	0.0004
	Dermal	Arsenic, Inorganic	29.7	mg/kg	2E-06	0.01
		Benzo[a]pyrene	0.316	mg/kg	5E-08	0.0005
		TCDD-2,3,7,8	1.7E-05	mg/kg	9E-08	0.003
		Thallium (Soluble Salts)	0.278	mg/kg	-	-
	Total for Exposure Route			mg/kg	2E-06	0.01
Total for Exposure Media					**1E-05**	**0.1**

Notes:

mg/kg: milligrams per kilogram
1. Red and bolded values exceed the carcinogenic risk level of $1x10^{-5}$ or the non-carcinogenic risk level of 1 as per Delaware Regulations Governing
Hazardous Substance Cleanup Act (State of Delaware, Amended July 2015).
COPC : Contamiannt of Potential Concern
EPC: Exposure Point Concentrations

Table 7. Bioavailability of Metals in Stratum B
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Stratum B													
Client ID	Acid Volatile Sulfides (umol/g)	Cadmium SEM (umol/g)	Copper SEM (umol/g)	Lead SEM (umol/g)	Nickel SEM (umol/g)	Zinc SEM (umol/g)	Mercury SEM (umol/g)	Cd SEM/AVS	Cu SEM/AVS	Pb SEM/AVS	Ni SEM/AVS	Zn SEM/AVS	Hg SEM/AVS
VB1-COMP-B	0.25	0.00013	0.069	0.019	0.054	0.18	0.000016	0.000520	0.276	0.0760	0.216	0.720	-
VB4-COMP-A	ND	0.022	3.3	2.4	3.4	7.7	0.0029	0.0147	**2.2**	**1.60**	**2.3**	**5.13**	-
VB5-COMP-B	ND	0.0011	0.38	0.17	0.1	0.71	0.000055	0.000733	0.25	0.113	0.067	0.47	0.000037
VB6-COMP-B	ND	0.00012	0.074	0.013	0.05	0.082	0.000015	-	-	-	-	-	-
VB9-COMP-B	ND	0.00019	0.082	0.019	0.053	0.11	0.000016	-	-	-	-	-	-
VB10-COMP-B	ND	0.00017	0.064	0.018	0.045	0.073	0.000016	-	-	-	-	-	-
VB13-COMP-B	ND	0.000079	0.091	0.028	0.051	0.09	0.000015	-	-	-	-	-	-
VB15-COMP-B	ND	0.00057	0.12	0.073	0.083	0.18	0.000016	-	-	-	-	-	-
VB12-COMP-B	ND	0.00019	0.11	0.022	0.11	0.24	0.000023	-	-	-	-	-	-
VB11-COMP-B	ND	0.00073	0.19	0.063	0.15	0.57	0.000044	-	-	-	-	-	-
VB21-COMP-B	ND	0.00028	0.088	0.033	0.077	0.25	0.000015	-	-	-	-	-	-
VB29-COMP-A	ND	0.00052	0.075	0.02	0.078	0.24	0.000017	-	-	-	-	-	-
VB27-COMP-B	ND	0.00027	0.12	0.026	0.14	0.33	0.000016	-	-	-	-	-	-
VB30-COMP-B	ND	0.00027	0.1	0.03	0.077	0.26	0.000016	-	-	-	-	-	-
VB33-COMP-B	ND	0.000078	0.056	0.019	0.06	0.17	0.000016	-	-	-	-	-	-
VB31-COMP-B	14.9	0.003	0.77	0.35	0.19	1.6	0.000071	0.000201	0.052	0.02	0.013	0.11	0.000005
VB19-COMP-B	1.7	0.0044	0.26	0.26	0.17	1.5	0.000022	0.00259	0.15	0.15	0.100	0.88	0.0000129
VB23-COMP-B	ND	0.00037	0.12	0.042	0.032	0.25	0.000033	-	-	-	-	-	-
DUP-COMP-B	ND	0.00033	0.11	0.037	0.044	0.24	0.000031	-	-	-	-	-	-
VB25-COMP-B	ND	0.00021	0.085	0.027	0.095	0.27	0.000015	-	-	-	-	-	-
Total	16.9	0.0350	6.26	3.67	5.06	15.0	0.00337	0.00208	0.372	0.218	0.300	0.893	0.000200

Notes:

SEM: simulatneously extracted metals

umol/g: micromoles per gram

ND: AVSor SEM was not detected

- : ratio not calculated since AVS and/or SEM was not detected

= detected in blank, use with caution

1. Ratio > 1 indicates that the metals are bioavailable
2. Ratio ≤ 1 indicates that the metals are not bioavailable
3. In places where AVS was not detected, the MDL was used for purposes of this evaluation.

Ref: Alpha Analytics: World Class Chemistry. Acid Volatile Sulfide/Simultaneously Extracted Metals (AVS/SEM). 2019 <https://alphalab.com/index.php/analytical-services/sediment-a-tissue-analysis/st-capabilities/avs-sem>

Table 8 . Summary of Risk Assessment Results (Stratum B)
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Excavator Risk Summary

Exposure Media	Exposure Route	COPC	EPC	Units	Carcinogenic Risk	Hazard Index
Stratum B	Ingestion	Arsenic, Inorganic	12.7	mg/kg	4E-08	0.006
		TCDD-2,3,7,8	3.1E-06	mg/kg	1E-09	0.001
		Thallium (Soluble Salts)	0.167	mg/kg	-	0.004
	Total for Exposure Route				4E-08	0.01
	Inhalation	Arsenic, Inorganic	12.7	mg/kg	1E-11	0.00001
		TCDD-2,3,7,8	3.1E-06	mg/kg	2E-11	0.000001
		Thallium (Soluble Salts)	0.167	mg/kg	-	-
	Total for Exposure Route				3E-11	0.00001
	Dermal	Arsenic, Inorganic	12.7	mg/kg	6E-09	0.0009
		TCDD-2,3,7,8	3.1E-06	mg/kg	1E-10	0.0001
		Thallium (Soluble Salts)	0.167	mg/kg	-	-
	Total for Exposure Route				6E-09	0.001
Total for Exposure Media					**4E-08**	**0.01**

Recreator Risk Summary

Exposure Media	Exposure Route	COPC	EPC	Units	Carcinogenic Risk	Hazard Index
Stratum B	Ingestion	Arsenic, Inorganic	12.7	mg/kg	4E-06	0.07
		TCDD-2,3,7,8	1.6E-05	mg/kg	1E-07	0.01
		Thallium (Soluble Salts)	0.167	mg/kg	-	0.05
	Total for Exposure Route				4E-06	0.1
	Inhalation	Arsenic, Inorganic	12.7	mg/kg	1E-10	0.00001
		TCDD-2,3,7,8	1.6E-05	mg/kg	2E-10	0.0000004
		Thallium (Soluble Salts)	0.167	mg/kg	-	-
	Total for Exposure Route				3E-10	0.00001
	Dermal	Arsenic, Inorganic	12.7	mg/kg	5E-07	0.008
		TCDD-2,3,7,8	1.6E-05	mg/kg	1E-08	0.0009
		Thallium (Soluble Salts)	0.167	mg/kg	-	-
	Total for Exposure Route				5E-07	0.009
Total for Exposure Media					**4E-06**	**0.1**

Outdoor Worker Risk Summary

Exposure Media	Exposure Route	COPC	EPC	Units	Carcinogenic Risk	Hazard Index
Stratum B	Ingestion	Arsenic, Inorganic	12.7	mg/kg	3E-06	0.02
		TCDD-2,3,7,8	1.6E-05	mg/kg	1E-07	0.004
		Thallium (Soluble Salts)	0.167	mg/kg	-	0.01
	Total for Exposure Route				3E-06	0.04
	Inhalation	Arsenic, Inorganic	12.7	mg/kg	3E-09	0.0001
		TCDD-2,3,7,8	1.6E-05	mg/kg	5E-09	0.00001
		Thallium (Soluble Salts)	0.167	mg/kg	-	-
	Total for Exposure Route				8E-09	0.0001
	Dermal	Arsenic, Inorganic	12.7	mg/kg	7E-07	0.0041
		TCDD-2,3,7,8	1.6E-05	mg/kg	1E-08	0.00045
		Thallium (Soluble Salts)	0.167	mg/kg	-	-
	Total for Exposure Route				7E-07	0.005
Total for Exposure Media					**4E-06**	**0.04**

Resident Risk Summary

Exposure Media	Exposure Route	COPC	EPC	Units	Carcinogenic Risk	Hazard Index
Stratum B	Ingestion	Arsenic, Inorganic	12.7	mg/kg	2E-05	0.3
		TCDD-2,3,7,8	1.6E-05	mg/kg	6E-07	0.06
		Thallium (Soluble Salts)	0.167	mg/kg	-	0.2
	Total for Exposure Route				2E-05	0.6
	Inhalation	Arsenic, Inorganic	12.7	mg/kg	1E-08	0.0006
		TCDD-2,3,7,8	1.6E-05	mg/kg	2E-08	0.00004
		Thallium (Soluble Salts)	0.167	mg/kg	-	-
	Total for Exposure Route				4E-08	0.0006
	Dermal	Arsenic, Inorganic	12.7	mg/kg	2E-06	0.04
		TCDD-2,3,7,8	1.6E-05	mg/kg	5E-08	0.004
		Thallium (Soluble Salts)	0.167	mg/kg	-	-
	Total for Exposure Route				2E-06	0.04
Total for Exposure Media					**2E-05**	**0.6**

Table 8 . Summary of Risk Assessment Results (Stratum B)
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Composite Worker Risk Summary

Exposure Media	Exposure Route	COPC	EPC	Units	Carcinogenic Risk	Hazard Index
Stratum B	Ingestion	Arsenic, Inorganic	12.7	mg/kg	3E-06	0.02
		TCDD-2,3,7,8	1.6E-05	mg/kg	1E-07	0.004
		Thallium (Soluble Salts)	0.167	mg/kg	-	0.01
	Total for Exposure Route				4E-06	0.04
	Inhalation	Arsenic, Inorganic	12.7	mg/kg	3E-09	0.0001
		TCDD-2,3,7,8	1.6E-05	mg/kg	5E-09	0.00001
		Thallium (Soluble Salts)	0.167	mg/kg	-	-
	Total for Exposure Route				8E-09	0.0002
	Dermal	Arsenic, Inorganic	12.7	mg/kg	7E-07	0.005
		TCDD-2,3,7,8	1.6E-05	mg/kg	2E-08	0.0005
		Thallium (Soluble Salts)	0.167	mg/kg	-	-
	Total for Exposure Route			mg/kg	8E-07	0.005
Total for Exposure Media					**4E-06**	**0.05**

Notes:

mg/kg: milligrams per kilogram
1. Red and bolded values exceed the carcinogenic risk level of $1x10^{-5}$ or the non-carcinogenic risk level of 1 as per Delaware Regulations Governing
Hazardous Substance Cleanup Act (State of Delaware, Amended July 2015).
COPC : Contamiannt of Potential Concern
EPC: Exposure Point Concentrations

Table 9.1.1 Water Quality During Dredging for Stratum A Compared to Aquatic Life SQOs
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Parameters		Units	Comments
Estimated TSS Concentration =	250	mg/L	
Dissolved Phase Concentration (C_d)			using standard equilibrium partition coefficients
Total Organic Carbon (TOC) =	24,072	mg/kg	95% UCL of results
TOC Fraction =	0.02407	kg/kg	95% UCL of results

See report Section XIV for calculations.

Sample Identification	Assumed TSS (mg/L)	C_{sed} (mg/kg)	C_{pw} (ug/L)	Log K_{oc} (L/kg)	Koc	Keq (L/kg)	f_d	f_p	C_T (ug/L)	C_d (ug/L)	C_p (ug/L)	DRBC SQOs - Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)
TCL Semivolatile Organic Compounds													
Methylene Chloride[1]	250	0.239	0.0596	1.4	25.1	1.21	0.99970	0.000302	197.36	197.3	0.0596	-	-
Toluene[2]	250	0.224	0.0560	2.13	135	6.49	0.998	0.00162	34.5	34.5	0.0560	-	-
Pesticides													
4,4'-DDD[1]	250	0.00318	0.000795	5.18	151,356	4,415	0.475	0.525	0.00151	0.000720	0.000795	**1.1**	**0.001**
4,4'-DDE[1]	250	0.0112	0.00279	4.7	50,119	1,985	0.668	0.332	0.00842	**0.00563**	0.00279	**1.1**	**0.001**
Polychlorinated Biphenyls (PCBs), Dioxins, and Furans													
Toxic Equivalency Quotient[1]	250	0.0000174	0.00000436	6.8	6,309,573	10,802	0.270	0.730	5.97E-06	1.61E-06	4.36E-06	-	-
Total PCBs[2]	250	0.963	0.241	5.21	162,181	4,601	0.465	0.535	0.449978	**0.209**	0.240703	**1.0**	**0.014**
Poly Aromatic Hydrocarbons (PAHs)													
1-Methylnaphthalene	250	0.0360	0.0090	Uknown								-	-
2-Methylnaphthalene[1]	250	0.0685	0.0171	3.39	2,455	117	0.972	0.0284	0.603	0.586	0.0171	-	-
Acenaphthene[2]	250	0.0345	0.0086	3.85	7,079	331	0.924	0.0764	0.113	0.104	0.00861	-	-
Acenaphthylene	250	0.0648	0.0162	Uknown								-	-
Anthracene[1]	250	0.100	0.0250	4.15	14,125	641	0.862	0.138	0.181	0.156	0.0250	-	-
Benzo[a]anthracene[2]	250	0.325	0.081	6.14	1,380,384	9,585	0.294	0.706	0.115	0.0339	0.0812	-	-
Benzo[a]pyrene[2]	250	0.316	0.079	6.01	1,023,293	9,125	0.305	0.695	0.114	0.0346	0.0789	-	-
Benzo[b]fluoranthene[2]	250	0.239	0.060	5.74	549,541	7,869	0.337	0.663	0.0900	0.0303	0.0597	-	-
Benzo[e]pyrene	250	0.213	0.053	Uknown								-	-
Benzo[g,h,i]perylene	250	0.138	0.035	Uknown								-	-
Benzo[k]fluoranthene[2]	250	0.245	0.061	5.74	549,541	7,869	0.337	0.663	0.0925	0.0312	0.0613	-	-
Chrysene[2]	250	0.317	0.079	5.3	199,526	5,171	0.436	0.564	0.140	0.0612	0.0791	-	-
Dibenz(a,h)anthracene	250	0.0593	0.0148	Uknown								-	-
Fluoranthene[2]	250	0.421	0.105	4.58	38,019	1,573	0.718	0.282	0.373	0.268	0.105	-	-
Fluorene[2]	250	0.0601	0.0150	3.86	7,244	338	0.922	0.0780	0.193	0.178	0.0150	-	-
Indeno[1,2,3-cd]pyrene[2]	250	0.141	0.0354	7.53	33,884,416	11,124	0.264	0.736	0.0481	0.0127	0.0354	-	-
Naphthalene[1]	250	0.136	0.0339	2.97	933	44.8	0.989	0.01106	3.066	3.032	0.0339	-	-
Perylene	250	0.565	0.141	Uknown								-	-
Phenanthrene[2]	250	0.306	0.0765	4.15	14,125	641	0.862	0.138	0.553	0.477	0.0765	-	-
Pyrene[2]	250	0.485	0.121	4.58	38,019	1,573	0.718	0.282	0.429	0.308	0.121	-	-

Notes:
1. Octanol-water partitioning coefficient (Log Koc) value from Agency for Toxic Substances and Disease Registry (ATSDR) database
Toxicological information located here: https://www.atsdr.cdc.gov/toxprofiles/tp.asp?id=72&tid=19. SVOC and dioxin Log Koc values are from ATSDR Chemical and Physical Information for each compound.
2. Volatile Organic Compounds (VOCs), poly aromatic hydrocarbons (PAHs), and polychlorinate biphenyls (PCB) Log Koc values from Delaware Risk-Based Corrective Action Program (DERBCAP), (2000) - for soil to groundwater.

Table 9.1.1 Water Quality During Dredging for Stratum A Compared to Aquatic Life SQOs
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Sample Identification	Log K_d (L/kg)	Assumed TSS (mg/L)	f_d	f_p	C_{sed} (mg/kg)	C_T (ug/L)	C_d (ug/L)	C_p (ug/L)	DRBC SQOs - Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)
TAL Inorganics										
Aluminum[2]	Not Needed	250			16,782	4,195	15.5	4,180	**750**	**87**
Antimony	3.6	250	0.5012	0.499	0.662	0.166	0.0830	0.0826	-	-
Arsenic	2.4	250	0.941	0.059	29.7	7.42	6.99	0.439	**340**	**150**
Barium	2.5	250	0.927	0.073	105	26.1	24.2	1.92	-	-
Beryllium	2.8	250	0.864	0.136	1.04	0.261	0.226	0.0356	-	-
Cadmium	3.3	250	0.6672	0.333	0.848	0.212	0.141	0.0706	**1.0**	**0.141**
Calcium	Uknown	250			2,768	692			-	-
Chromium[6]	5.1	250	0.031	0.969	92.6	23.2	0.713	22.4	**390**	**19**
Cobalt	3.1	250	0.761	0.239	16.6	4.15	3.15	0.993	-	-
Copper	3.5	250	0.5585	0.442	48.0	12.0	**6.70**	5.30	**9.6**	**6.5**
Iron	Uknown	250			33,947	8,487			-	-
Lead	4.6	250	0.09130	0.909	76.3	19.1	1.74	17.3	**38.0**	**5.4**
Magnesium	Uknown	250			5,468	1,367			-	-
Manganese	Uknown	250			997	249			-	-
Mercury	4.9	250	0.0479	0.952	0.316	0.0791	0.00379	0.0753	**1.4**	**0.77**
Nickel	3.9	250	0.335	0.665	32.6	8.16	2.73	5.43	**308**	**34**
Potassium	Uknown	250			2,080	520			-	-
Selenium[7]	3.6	250	0.501	0.499	0.876	0.219	0.110	0.109	**20**	**5**
Silver (ND)	3.6	250	0.5012	0.499	1.055	0.264	0.132	0.132	**1.9**	**NA**
Sodium	Uknown	250			451	113			-	-
Thallium	1.3	250	0.9950	0.005	0.278	0.0695	0.0692	0.000345	-	-
Vanadium	2.1	250	0.9695	0.031	46.9	11.7	11.4	0.357	-	-
Zinc	4.1	250	0.2411	0.759	236	58.9	14.2	44.7	**88**	**88**
Total Cyanide (mg/kg)[8]	3.0	250	0.8000	0.200	0.129	0.0323	0.0258	0.00645	**22**	**5.2**

Notes:
1. Data is compared to acute (one-hour average) as well as chronic (4-day time period) stream quality objectives (SQOs) for freshwater aquatic life (Delaware River Basin Commission Water Quality Regulations, 2013).
2. Assuming 95% UCL, pH is approximately 7. Therefore, Aluminum solubility is approximately 10^-7 M and concentration of aluminum is approximately 10^1.19 ug/L, which is approximately 15.5 ug/L (Greene, 2010) The concentration of aluminum in water is a function of pH. The minimum solubility occurs at around pH 6.5 and solubility remains low to moderate between pH 6 and pH 8. At median of pH 7.5, roughly in DRBC Zone 5, aluminum solubility is 42.4 ug/L. In excess of this, concentrations of aluminum expected to occur as solid aluminum hydroxide. Speculatively, most aluminum likely is in particulate form as part of very small colloidal (clay), which would have limited bio availability.
3. Metals Acute Aquatic Life Criterion assume a hardness of 74 mg/L as per the DRBC Water Quality Regulations, Article 4: Application of Standards (p.108, 2013).
4. Delaware River meets definition of freshwater (salinitiy < or equal to 5 ppt)
5. Adsorption-desorption distribution (Log K_d) values derived from the median values in Table 5 of the following reference: Ambrose, R. 2005. Partition Coefficients For Metals In Surface Water, Soil, and Waste. U.S. Environmental Protection Agency, Office of Research and Development, Washington, DC (p.3-15)
6. Used median trivalent chromium (Cr III) Log K_d value.
7. Used Se (IV) log K_d value
8. Total cyanide Log K_d value is for soil to water partitioning rather than sediment to water.
9. SQOs are derived from Delaware River Basin Commission's (DRBC's) Zone 5 Water Quality Regulations (2013).

Abbreviations:

- TSS: total suspended solids concentration
- C_{pw}: concentration in pore water
- C_{sed}: concentration in sediment
- Log K_{oc} or K_{oc}: octanol-water partitioning coefficient
- K_{eq}: equilibrium partitioning coefficient
- mg/kg : milligram per kilogram
- L/kg : liters per kilogram
- ug/L : microgram per liter
- f_d : dissolved fraction of substance
- f_p : fraction of substance sorbed to particulate
- C_T : total concentration of substance
- C_d : dissolved concentration of substance
- C_p : concentration of substance sorbed to particulate

Table 9.1.2 Water Quality During Dredging for Stratum A Compared to Human Health SQOs
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Parameters		Units	Comments
Estimated TSS Concentration =	250	mg/L	
Dissolved Phase Concentration (C_d)			using standard equilibrium partition coefficients
Total Organic Carbon (TOC) =	24,072	mg/kg	95% UCL of results
TOC Fraction =	0.02407	kg/kg	95% UCL of results

See report Section XIV for calculations.

Sample Identification	Assumed TSS (mg/L)	C_{sed} (mg/kg)	C_{pw} (ug/L)	Log K_{oc} (L/kg)	Koc	Keq (L/kg)	f_d	f_p	C_T (ug/L)	C_d (ug/L)	C_p (ug/L)	DRBC SQOs - Freshwater Carcinogens (Fish Ingestion Only) (ug/L)	DRBC SQOs - Freshwater Systemic Toxicant (Fish Ingestion Only) (ug/L)
TCL Semivolatile Organic Compounds													
Methylene Chloride[1]	250	0.239	0.0596	1.4	25.1	1.21	0.99970	0.000302	197.36	197.3	0.0596	-	-
Toluene[2]	250	0.224	0.0560	2.13	135	6.49	0.998	0.00162	34.5	34.5	0.0560	-	**15,000**
Pesticides													
4,4'-DDD[1]	250	0.00318	0.000795	5.18	151,356	4,415	0.475	0.525	0.00151	**0.000720**	0.000795	**0.00031**	**0.037**
4,4'-DDE[1]	250	0.0112	0.00279	4.7	50,119	1,985	0.668	0.332	0.00842	**0.00563**	0.00279	**0.00022**	**0.037**
PCBs, Dioxins, and Furans													
Toxic Equivalency Quotient[1]	250	0.0000174	0.00000436	6.8	6,309,573	10,802	0.270	0.730	5.97E-06	**1.61E-06**	4.36E-06	**5.10E-09**	-
Total PCBs[2]	250	0.963	0.241	5.21	162,181	4,601	0.465	0.535	0.449978	**0.209**	0.240703	**0.000016**	**0.00849**
SVOCs													
1-Methylnaphthalene	250	0.0360	0.00899	Uknown								-	-
2-Methylnaphthalene[1]	250	0.0685	0.0171	3.39	2,455	117	0.972	0.0284	0.603	0.586	0.0171	-	-
Acenaphthene[2]	250	0.0345	0.0086	3.85	7,079	331	0.924	0.0764	0.113	0.104	0.00861	-	**990**
Acenaphthylene	250	0.0648	0.0162	Uknown								-	-
Anthracene[1]	250	0.1002	0.0250	4.15	14,125	641	0.862	0.138	0.181	0.156	0.0250	-	**40,000**
Benzo[a]anthracene[2]	250	0.325	0.081	6.14	1,380,384	9,585	0.294	0.706	0.115	0.0339	0.0812	**0.18**	-
Benzo[a]pyrene[2]	250	0.316	0.079	6.01	1,023,293	9,125	0.305	0.695	0.114	**0.0346**	0.0789	**0.018**	-
Benzo[b]fluoranthene[2]	250	0.239	0.060	5.74	549,541	7,869	0.337	0.663	0.0900	0.0303	0.0597	**0.18**	-
Benzo[e]pyrene	250	0.213	0.053	Uknown								-	-
Benzo[g,h,i]perylene	250	0.138	0.035	Uknown								-	-
Benzo[k]fluoranthene[2]	250	0.245	0.061	5.74	549,541	7,869	0.337	0.663	0.0925	0.0312	0.0613	**1.8**	-
Chrysene[2]	250	0.317	0.079	5.3	199,526	5,171	0.436	0.564	0.140	0.0612	0.0791	**18**	-
Dibenz(a,h)anthracene	250	0.0593	0.0148	Uknown								**0.018**	-
Fluoranthene[2]	250	0.421	0.105	4.58	38,019	1,573	0.718	0.282	0.373	0.268	0.105	-	**140**
Fluorene[2]	250	0.0601	0.0150	3.86	7,244	338	0.922	0.0780	0.193	0.178	0.0150	-	**5,300**
Indeno[1,2,3-cd]pyrene[2]	250	0.141	0.035	7.53	33,884,416	11,124	0.264	0.736	0.0481	0.0127	0.0354	**0.18**	-
Naphthalene[1]	250	0.136	0.034	2.97	933	44.8	0.989	0.01106	3.066	3.032	0.0339	-	-
Perylene	250	0.565	0.141	Uknown								-	-
Phenanthrene[2]	250	0.306	0.076	4.15	14,125	641	0.862	0.138	0.553	0.477	0.0765	-	-
Pyrene[2]	250	0.485	0.121	4.58	38,019	1,573	0.718	0.282	0.429	0.308	0.121	-	**4,000**

Notes:
1. Octanol-water partitioning coefficient (Log Koc) value from Agency for Toxic Substances and Disease Registry (ATSDR) database
Toxicological information located here: https://www.atsdr.cdc.gov/toxprofiles/tp.asp?id=72&tid=19. SVOC and dioxin Log Koc values are from ATSDR Chemical and Physical Information for each compound.
2. Volatile Organic Compounds (VOCs), poly aromatic hydrocarbons (PAHs), and polychlorinate biphenyls (PCB) Log Koc values from Delaware Risk-Based Corrective Action Program (DERBCAP), (2000) - for soil to groundwater.

Table 9.1.2 Water Quality During Dredging for Stratum A Compared to Human Health SQOs
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Sample Identification	Log K_d (L/kg)	Assumed TSS (mg/L)	f_d	f_p	C_{sed} (mg/kg)	C_T (ug/L)	C_d (ug/L)	C_p (ug/L)	DRBC SQOs - Freshwater Carcinogens (Fish Ingestion Only) (ug/L)	DRBC SQOs - Freshwater Systemic Toxicant (Fish Ingestion Only) (ug/L)
TAL Inorganics										
Aluminum[2]	Not Needed	250			16,782	4,195	15.5	4,180	-	-
Antimony	3.6	250	0.5012	0.499	0.662	0.166	0.0830	0.0826	-	**640**
Arsenic	2.4	250	0.941	0.059	29.7	7.42	6.99	0.439	-	**NA**
Barium	2.5	250	0.927	0.073	105	26.1	24.2	1.92	-	-
Beryllium	2.8	250	0.864	0.136	1.04	0.261	0.226	0.0356	-	**420**
Cadmium	3.3	250	0.6672	0.333	0.848	0.212	0.141	0.0706	-	**16**
Calcium	Uknown	250			2,768	692			-	-
Chromium[6]	5.1	250	0.031	0.969	92.6	23.2	0.713	22.4	-	**380,000**
Cobalt	3.1	250	0.761	0.239	16.6	4.15	3.15	0.993	-	-
Copper	3.5	250	0.5585	0.442	48.0	12.0	6.70	5.30	-	-
Iron	Uknown	250			33,947	8,487			-	-
Lead	4.6	250	0.09130	0.909	76.3	19.1	1.74	17.3	-	-
Magnesium	Uknown	250			5,468	1,367			-	-
Manganese	Uknown	250			997	249			-	-
Mercury	4.9	250	0.0479	0.952	0.316	0.0791	0.00379	0.0753	-	**0.051**
Nickel	3.9	250	0.335	0.665	32.6	8.16	2.73	5.43	-	**1,700**
Potassium	Uknown	250			2,080	520			-	-
Selenium[7]	3.6	250	0.501	0.499	0.876	0.219	0.110	0.109	-	**4,200**
Silver (ND)	3.6	250	0.5012	0.499	1.055	0.264	0.132	0.132	-	**40,000**
Sodium	Uknown	250			451	113			-	-
Thallium	1.3	250	0.9950	0.005	0.278	0.0695	0.0692	0.000345	-	**0.47**
Vanadium	2.1	250	0.9695	0.031	46.9	11.7	11.4	0.357	-	-
Zinc	4.1	250	0.2411	0.759	236	58.9	14.2	44.7	-	**26,000**
Total Cyanide (mg/kg)[8]	3.0	250	0.8000	0.200	0.129	0.0323	0.0258	0.00645	-	**140**

Abbreviations:

TSS: total suspended solids concentration
C_{pw} : concentration in pore water
C_{sed} : concentration in sediment
Log K_{oc} or K_{oc} : octanol-water partitioning coefficient
K_{eq} : equilibrium partitioning coefficient
mg/kg : milligram per kilogram
L/kg : liters per kilogram
ug/L : microgram per liter
f_d : dissolved fraction of substance
f_p : fraction of substance sorbed to particulate
C_T : total concentration of substance
C_d : dissolved concentration of substance
C_p : concentration of substance sorbed to particulate

Notes:
1. Data is compared to acute (one-hour average) as well as chronic (4-day time period) stream quality objectives (SQOs) for freshwater aquatic life (DRBC Water Quality Regulations, 2013).
2. Assuming 95% UCL, pH is approximately 7. Therefore, Aluminum solubility is approximately 10^-7 M and concentration of aluminum is approximately 10^1.19 ug/L, which is approximately 15.5 ug/L (Greene, 2010)
The concentration of aluminum in water is a function of pH. The minimum solubility occurs at around pH 6.5 and solubility remains low to moderate between pH 6 and pH 8. At median of pH 7.5, roughly in DRBC Zone 5, aluminum solubility is 42.4 ug/L. In excess of this, concentrations of aluminum expected to occur as solid aluminum hydroxide. Speculatively, most aluminum likely is in particulate form as part of very small colloidal (clay), which would have limited bioavailability.
3. Metals Acute Aquatic Life Criterion assume a hardness of 74 mg/L as per the DRBC Water Quality Regulations, Article 4: Application of Standards (p.108, 2013).
4. Delaware River meets definition of freshwater (salinitiy < or equal to 5 ppt)
5. Adsorption-desorption distribution (Log K_d) values derived from the median values in Table 5 of the following reference: Ambrose, R. 2005. Partition Coefficients For Metals In Surface Water, Soil, and Waste. U.S. Environmental Protection Agency, Office of Research and Development, Washington, DC (p.3-15)
6. Used median trivalent chromium (Cr III) Log K_d value.
7. Used Se (IV) log K_d value
8. Total cyanide Log K_d value is for soil to water partitioning rather than sediment to water.
9. SQOs are derived from Delaware River Basin Commission's (DRBC's) Zone 5 Water Quality Regulations (2013).

Table 9.2.1 Water Quality During Dredging for Stratum B Compared to Aquatic Life SQOs
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Parameters		Units	Comments
Estimated TSS Concentration =	250	mg/L	
Dissolved Phase Concentration (C_d)			using standard equilibrium partition coefficients
Total Organic Carbon (TOC) =	7,038	mg/kg	95% UCL of results
TOC Fraction =	0.00704	kg/kg	95% UCL of results

See report Section XIV for calculations.

Sample Identification	Assumed TSS (mg/L)	C_{sed} (mg/kg)	C_{pw} (ug/L)	Log K_{oc} (L/kg)	Koc	Keq (L/kg)	f_d	f_p	C_T (ug/L)	C_d (ug/L)	C_p (ug/L)	DRBC SQOs - Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)
TCL Semivolatile Organic Compounds													
Methylene Chloride[1]	250	0.034	0.008566	1.4	25.1	0.35	0.99991	0.000088	96.9	96.9	0.00857	-	-
Toluene[2]	250	0.041	0.010130	2.13	135	1.90	1.000	0.00047	21.4	21.3	0.0101	-	-
Pesticides													
4,4'-DDD[1]	250	0.00281	0.000703	5.18	151,356	1,790	0.691	0.309	0.00228	0.00157	0.000703	**1.1**	**0.001**
4,4'-DDE[1]	250	0.00484	0.001211	4.7	50,119	664	0.858	0.142	0.00851	**0.00730**	0.00121	**1.1**	**0.001**
4,4'-DDT[1]	250	0.00180	0.000451	5.18	151,356	1,790	0.691	0.309	0.00146	0.00101	0.000451	**1.1**	**0.001**
Heptachlor[1]	250	0.000977	0.000244208	4.34	21,878	300	0.930	0.070	0.00350	0.00326	0.000244	**0.5**	**0.0038**
PCBs Dioxins, and Furans													
Toxic Equivalency Quotient[1]	250	0.00000325	0.0000008125	6.8	6,309,573	9,946	0.287	0.713	0.000001139	0.0000003268	0.0000008125	-	-
Total PCBs[2]	250	0.000893	0.000223	5.21	162,181	1,896	0.678	0.322	0.000694	0.000471	0.000223	**1.0**	**0.014**
SVOCs													
1-Methylnaphthalene	250	0.000855	0.000214	Uknown								-	-
2-Methylnaphthalene[1]	250	0.00161	0.000401	3.39	2,455	34.4	0.991	0.00854	0.0470	0.0466	0.000401	-	-
Acenaphthene[2]	250	0.00107	0.000266	3.85	7,079	98.8	0.976	0.0241	0.0111	0.0108	0.000266	-	-
Acenaphthylene	250	0.00101	0.000251	Uknown								-	-
Anthracene[1]	250	0.00141	0.000352	4.15	14,125	195.4	0.953	0.0466	0.00756	0.00721	0.000352	-	-
Benzo[a]anthracene[2]	250	0.00539	0.001347	6.14	1,380,384	7,105	0.360	0.640	0.00211	0.000758	0.00135	-	-
Benzo[a]pyrene[2]	250	0.00548	0.001369	6.01	1,023,293	6,301	0.388	0.612	0.00224	0.000869	0.00137	-	-
Benzo[b]fluoranthene[2]	250	0.00523	0.001308	5.74	549,541	4,575	0.466	0.534	0.00245	0.00114	0.00131	-	-
Benzo[e]pyrene	250	0.00464	0.001160	Uknown								-	-
Benzo[g,h,i]perylene	250	0.00278	0.000696	Uknown								-	-
Benzo[k]fluoranthene[2]	250	0.00469	0.001172	5.74	549,541	4,575	0.466	0.534	0.00220	0.00103	0.00117	-	-
Chrysene[2]	250	0.00662	0.001655	5.3	199,526	2,245	0.640	0.360	0.00460	0.00295	0.00165	-	-
Dibenz(a,h)anthracene	250	0.00105	0.000262	Uknown								-	-
Fluoranthene[2]	250	0.00843	0.002109	4.58	38,019	511	0.887	0.1132	0.0186	0.0165	0.00211	-	-
Fluorene[2]	250	0.00110	0.000274	3.86	7,244	101.0	0.975	0.0246	0.0111	0.0108	0.000274	-	-
Indeno[1,2,3-cd]pyrene[2]	250	0.00256	0.000640	7.53	33,884,416	10,943	0.268	0.732	0.000874	0.000234	0.000640	-	-
Naphthalene[1]	250	0.00220	0.000549	2.97	933	13.12	0.997	0.00327	0.168	0.1674	0.000549	-	-
Perylene	250	0.0150	0.00375	Uknown								-	-
Phenanthrene[2]	250	0.00618	0.001545	4.15	14,125	195.4	0.953	0.0466	0.0332	0.0316	0.00154	-	-
Pyrene[2]	250	0.00986	0.002466	4.58	38,019	511	0.887	0.1132	0.0218	0.0193	0.00247	-	-

Notes:

1. Octanol-water partitioning coefficient (Log Koc) value from Agency for Toxic Substances and Disease Registry (ATSDR) database

Toxicological information located here: https://www.atsdr.cdc.gov/toxprofiles/tp.asp?id=72&tid=19. SVOC and dioxin Log Koc values are from ATSDR Chemical and Physical Information for each compound.

2. Volatile Organic Compounds (VOCs), poly aromatic hydrocarbons (PAHs), and polychlorinate biphenyls (PCB) Log Koc values from Delaware Risk-Based Corrective Action Program (DERBCAP), (2000) - for soil to groundwater.

Table 9.2.1 Water Quality During Dredging for Stratum B Compared to Aquatic Life SQOs
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Sample Identification	Log K_d (L/kg)	Assumed TSS (mg/L)	f_d	f_p	C_{sed} (mg/kg)	C_T (ug/L)	C_d (ug/L)	C_p (ug/L)	DRBC SQOs - Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)
TAL Inorganics										
Aluminum[2]	Not Needed	250			8,486	2,121	15.5	2,106	750	87.00
Antimony	3.6	250	0.501	0.499	0.911	0.228	0.114	0.114	-	-
Arsenic	2.4	250	0.941	0.059	12.7	3.18	3.00	0.188	340	150.00
Barium	2.5	250	0.927	0.073	49.9	12.5	11.6	0.914	-	-
Beryllium	2.8	250	0.864	0.136	0.480	0.120	0.104	0.0163	-	-
Cadmium	3.3	250	0.667	0.333	0.498	0.125	0.0831	0.0414	1.0	0.14
Calcium	Unknown				1,122				-	-
Chromium[6]	5.1	250	0.031	0.969	41.5	10.4	0.319	10.0	390	18.65
Cobalt	3.1	250	0.761	0.239	7.4	1.86	1.41	0.444	-	-
Copper	3.5	250	0.558	0.442	33.7	8.42	4.70	3.72	9.6	6.55
Iron	Unknown				15,802				-	-
Lead	4.6	250	0.091	0.909	50.2	12.6	1.15	11.4	38.0	5.40
Magnesium	Unknown				2,611				-	-
Manganese	Unknown				319				-	-
Mercury	4.9	250	0.048	0.952	0.0705	0.0176	0.000845	0.0168	1.4	0.77
Nickel	3.9	250	0.335	0.665	14.6	3.64	1.22	2.42	308	34.21
Potassium	Unknown				1,019				-	-
Selenium[7]	3.6	250	0.501	0.499	0.654	0.164	0.0820	0.0816	20	5.00
Silver (ND)	3.6	250	0.501	0.499	0.750	0.187	0.0939	0.0935	1.9	NA
Sodium	Unknown				199				-	-
Thallium	1.3	250	0.995	0.005	0.167	0.0418	0.0416	0.000208	-	-
Vanadium	2.1	250	0.969	0.031	30.9	7.73	7.49	0.236	-	-
Zinc	4.1	250	0.241	0.759	95.4	23.9	5.75	18.1	88	88.19
Total Cyanide (mg/kg)[8]	Unknown				0.167				22	5.20

Abbreviations:
- TSS: total suspended solids concentration
- C_{pw} : concentration in pore water
- C_{sed} : concentration in sediment
- Log K_{oc} or K_{oc} : octanol-water partitioning coefficient
- K_{eq} : equilibrium partitioning coefficient
- mg/kg : milligram per kilogram
- L/kg : liters per kilogram
- ug/L : microgram per liter
- f_d : dissolved fraction of substance
- f_p : fraction of substance sorbed to particulate
- C_T : total concentration of substance
- C_d : dissolved concentration of substance
- C_p : concentration of substance sorbed to particulate

Notes:
1. Data is compared to acute (one-hour average) as well as chronic (4-day time period) stream quality objectives (SQOs) for freshwater aquatic life (DRBC Water Quality Regulations, 2013).
2. Assuming 95% UCL, pH is approximately 7. Therefore, Aluminum solubility is approximately 10^-7 M and concentration of aluminum is approximately 10^1.19 ug/L, which is approximately 15.5 ug/L (Greene, 2010)
The concentration of aluminum in water is a function of pH. The minimum solubility occurs at around pH 6.5 and solubility remains low to moderate between pH 6 and pH 8. At median of pH 7.5, roughly in DRBC Zone 5, aluminum solubility is 42.4 ug/L. In excess of this, concentrations of aluminum expected to occur as solid aluminum hydroxide. Speculatively, most aluminum likely is in particulate form as part of very small colloidal (clay), which would have limited bioavailability.
3. Metals Acute Aquatic Life Criterion assume a hardness of 74 mg/L as per the DRBC Water Quality Regulations, Article 4: Application of Standards (p.108, 2013).
4. Delaware River meets definition of freshwater (salinitiy < or equal to 5 ppt)
5. Adsorption-desorption distribution (Log K_d) values derived from the median values in Table 5 of the following reference: Ambrose, R. 2005. Partition Coefficients For Metals In Surface Water, Soil, and Waste. U.S. Environmental Protection Agency, Office of Research and Development, Washington, DC (p.3-15)
6. Used median trivalent chromium (Cr III) Log K_d value.
7. Used Se (IV) log K_d value
8. Total cyanide Log K_d value is for soil to water partitioning rather than sediment to water.
9. SQOs are derived from Delaware River Basin Commission's (DRBC's) Zone 5 Water Quality Regulations (2013).

Table 9.2.2 Water Quality During Dredging for Stratum B Compared to Human Health SQOs
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Parameters		Units	Comments
Estimated TSS Concentration =	250	mg/L	
Dissolved Phase Concentration (C_d)			using standard equilibrium partition coefficients
Total Organic Carbon (TOC) =	7,038	mg/kg	95% UCL of results
TOC Fraction =	0.00704	kg/kg	95% UCL of results

See report Section XIV for calculations.

Sample Identification	Assumed TSS (mg/L)	C_{sed} (mg/kg)	C_{pw} (ug/L)	Log K_{oc} (L/kg)	Koc	Keq (L/kg)	f_d	f_p	C_T (ug/L)	C_d (ug/L)	C_p (ug/L)	DRBC SQOs - Freshwater Carcinogens (Fish Ingestion Only) (ug/L)	DRBC SQOs - Freshwater Systemic Toxicant (Fish Ingestion Only) (ug/L)
TCL Semivolatile Organic Compounds													
Methylene Chloride[1]	250	0.034	0.008566	1.4	25.1	0.35	0.99991	0.000088	96.9	96.9	0.00857	-	-
Toluene[2]	250	0.041	0.010130	2.13	135	1.90	1.000	0.00047	21.4	21.3	0.0101	-	**15,000**
Pesticides													
4,4'-DDD[1]	250	0.00281	0.000703	5.18	151,356	1,790	0.691	0.309	0.00228	**0.00157**	0.000703	**0.00031**	**0.037**
4,4'-DDE[1]	250	0.00484	0.001211	4.7	50,119	664	0.858	0.142	0.00851	**0.00730**	0.00121	**0.00022**	**0.037**
4,4'-DDT[1]	250	0.00180	0.000451	5.18	151,356	1,790	0.691	0.309	0.00146	0.00101	0.000451	**0.00022**	**0.037**
Heptachlor[1]	250	0.000977	0.000244208	4.34	21,878	300	0.930	0.070	0.00350	**0.00326**	0.000244	**0.000079**	**0.18**
PCBs Dioxins, and Furans													
Toxic Equivalency Quotient[1]	250	0.00000325	0.0000008125	6.8	6,309,573	9,946	0.287	0.713	1.14E-06	**3.27E-07**	8.13E-07	**5.10E-09**	-
Total PCBs[2]	250	0.000893	0.000223	5.21	162,181	1,896	0.678	0.322	0.000694	**0.000471**	0.000223	**0.000016**	**0.00849**
SVOCs													
1-Methylnaphthalene	250	0.000855	0.000214	Uknown								-	-
2-Methylnaphthalene[1]	250	0.00161	0.000401	3.39	2,455	34.4	0.991	0.00854	0.0470	0.0466	0.000401	-	-
Acenaphthene[2]	250	0.00107	0.000266	3.85	7,079	98.8	0.976	0.0241	0.0111	0.0108	0.000266	-	**990**
Acenaphthylene	250	0.00101	0.000251	Uknown								-	-
Anthracene[1]	250	0.00141	0.000352	4.15	14,125	195.4	0.953	0.0466	0.00756	0.00721	0.000352	-	**40,000**
Benzo[a]anthracene[2]	250	0.00539	0.001347	6.14	1,380,384	7,105	0.360	0.640	0.00211	0.000758	0.00135	**0.18**	-
Benzo[a]pyrene[2]	250	0.00548	0.001369	6.01	1,023,293	6,301	0.388	0.612	0.00224	0.000869	0.00137	**0.018**	-
Benzo[b]fluoranthene[2]	250	0.00523	0.001308	5.74	549,541	4,575	0.466	0.534	0.00245	0.00114	0.00131	**0.18**	-
Benzo[e]pyrene	250	0.00464	0.001160	Uknown								-	-
Benzo[g,h,i]perylene	250	0.00278	0.000696	Uknown								-	-
Benzo[k]fluoranthene[2]	250	0.00469	0.001172	5.74	549,541	4,575	0.466	0.534	0.00220	0.00103	0.00117	**1.8**	-
Chrysene[2]	250	0.00662	0.001655	5.3	199,526	2,245	0.640	0.360	0.00460	0.00295	0.00165	**18**	-
Dibenz(a,h)anthracene	250	0.00105	0.000262	Uknown								**0.018**	-
Fluoranthene[2]	250	0.00843	0.002109	4.58	38,019	511	0.887	0.1132	0.0186	0.0165	0.00211	-	**140**
Fluorene[2]	250	0.00110	0.000274	3.86	7,244	101.0	0.975	0.0246	0.0111	0.0108	0.000274	-	**5,300**
Indeno[1,2,3-cd]pyrene[2]	250	0.00256	0.000640	7.53	33,884,416	10,943	0.268	0.732	0.000874	0.000234	0.000640	**0.18**	-
Naphthalene[1]	250	0.00220	0.000549	2.97	933	13.12	0.997	0.00327	0.168	0.1674	0.000549	-	-
Perylene	250	0.0150	0.00375	Uknown								-	-
Phenanthrene[2]	250	0.00618	0.001545	4.15	14,125	195.4	0.953	0.0466	0.0332	0.0316	0.00154	-	-
Pyrene[2]	250	0.00986	0.002466	4.58	38,019	511	0.887	0.1132	0.0218	0.0193	0.00247	-	**4,000**

Notes:

1. Octanol-water partitioning coefficient (Log Koc) value from Agency for Toxic Substances and Disease Registry (ATSDR) database

Toxicological information located here: https://www.atsdr.cdc.gov/toxprofiles/tp.asp?id=72&tid=19. SVOC and dioxin Log Koc values are from ATSDR Chemical and Physical Information for each compound.

2. Volatile Organic Compounds (VOCs), poly aromatic hydrocarbons (PAHs), and polychlorinate biphenyls (PCB) Log Koc values from Delaware Risk-Based Corrective Action Program (DERBCAP), (2000) - for soil to groundwater.

Table 9.2.2 Water Quality During Dredging for Stratum B Compared to Human Health SQOs
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Sample Identification	Log K_d (L/kg)	Assumed TSS (mg/L)	f_d	f_p	C_{sed} (mg/kg)	C_T (ug/L)	C_d (ug/L)	C_p (ug/L)	DRBC SQOs - Freshwater Carcinogens (Fish Ingestion Only) (ug/L)	DRBC SQOs - Freshwater Systemic Toxicant (Fish Ingestion Only) (ug/L)
TAL Inorganics										
Aluminum[2]	Not Needed	250			8,486	2,121	15.5	2,106	-	-
Antimony	3.6	250	0.501	0.499	0.911	0.228	0.114	0.114	-	**640**
Arsenic	2.4	250	0.941	0.059	12.7	3.18	3.00	0.188	-	**NA**
Barium	2.5	250	0.927	0.073	49.9	12.5	11.6	0.914	-	-
Beryllium	2.8	250	0.864	0.136	0.480	0.120	0.104	0.0163	-	**420**
Cadmium	3.3	250	0.667	0.333	0.498	0.125	0.0831	0.0414	-	**16**
Calcium	Unknown				1,122				-	-
Chromium[6]	5.1	250	0.031	0.969	41.5	10.4	0.319	10.0	-	**380,000**
Cobalt	3.1	250	0.761	0.239	7.4	1.86	1.41	0.444	-	-
Copper	3.5	250	0.558	0.442	33.7	8.42	4.70	3.72	-	-
Iron	Unknown				15,802				-	-
Lead	4.6	250	0.091	0.909	50.2	12.6	1.15	11.4	-	-
Magnesium	Unknown				2,611				-	-
Manganese	Unknown				319				-	-
Mercury	4.9	250	0.048	0.952	0.0705	0.0176	0.000845	0.0168	-	**0.051**
Nickel	3.9	250	0.335	0.665	14.6	3.64	1.22	2.42	-	**1,700**
Potassium	Unknown				1,019				-	-
Selenium[7]	3.6	250	0.501	0.499	0.654	0.164	0.0820	0.0816	-	**4,200**
Silver (ND)	3.6	250	0.501	0.499	0.750	0.187	0.0939	0.0935	-	**40,000**
Sodium	Unknown				199				-	-
Thallium	1.3	250	0.995	0.005	0.167	0.0418	0.0416	0.000208	-	**0.47**
Vanadium	2.1	250	0.969	0.031	30.9	7.73	7.49	0.236	-	-
Zinc	4.1	250	0.241	0.759	95.4	23.9	5.75	18.1	-	**26,000**
Total Cyanide (mg/kg)[8]	Unknown				0.167				-	**140**

Abbreviations:
- TSS: total suspended solids concentration
- C_{pw} : concentration in pore water
- C_{sed} : concentration in sediment
- Log K_{oc} or K_{oc} : octanol-water partitioning coefficient
- K_{eq} : equilibrium partitioning coefficient
- mg/kg : milligram per kilogram
- L/kg : liters per kilogram
- ug/L : microgram per liter
- f_d : dissolved fraction of substance
- f_p : fraction of substance sorbed to particulate
- C_T : total concentration of substance
- C_d : dissolved concentration of substance
- C_p : concentration of substance sorbed to particulate

Notes:
1. Data is compared to acute (one-hour average) as well as chronic (4-day time period) stream quality objectives (SQOs) for freshwater aquatic life (DRBC Water Quality Regulations, 2013).
2. Assuming 95% UCL, pH is approximately 7. Therefore, Aluminum solubility is approximately 10^-7 M and concentration of aluminum is approximately 10^1.19 ug/L, which is approximately 15.5 ug/L (Greene, 2010)
The concentration of aluminum in water is a function of pH. The minimum solubility occurs at around pH 6.5 and solubility remains low to moderate between pH 6 and pH 8. At median of pH 7.5, roughly in DRBC Zone 5, aluminum solubility is 42.4 ug/L. In excess of this, concentrations of aluminum expected to occur as solid aluminum hydroxide. Speculatively, most aluminum likely is in particulate form as part of very small colloidal (clay), which would have limited bioavailability.
3. Metals Acute Aquatic Life Criterion assume a hardness of 74 mg/L as per the DRBC Water Quality Regulations, Article 4: Application of Standards (p.108, 2013).
4. Delaware River meets definition of freshwater (salinitiy < or equal to 5 ppt)
5. Adsorption-desorption distribution (Log K_d) values derived from the median values in Table 5 of the following reference: Ambrose, R. 2005. Partition Coefficients For Metals In Surface Water, Soil, and Waste. U.S. Environmental Protection Agency, Office of Research and Development, Washington, DC (p.3-15)
6. Used median trivalent chromium (Cr III) Log K_d value.
7. Used Se (IV) log K_d value
8. Total cyanide Log K_d value is for soil to water partitioning rather than sediment to water.
9. SQOs are derived from Delaware River Basin Commission's (DRBC's) Zone 5 Water Quality Regulations (2013).

Table 9.3.1 Water Quality During Dredging for Stratum C Compared to Aquatic Life SQOs
(Derived from October 2016 Sampling Event Analytical Results)
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Parameters		Units	Comments
Estimated TSS Concentration =	250	mg/L	
Dissolved Phase Concentration (C_d)			using standard equilibrium partition coefficients
Total Organic Carbon =	13800	mg/kg	Median result from laboratory.
TOC Fraction =	0.0138	kg OC/kg sed	Median result from laboratory.

See report Section XIV for calculations.

Sample Identification	C_{sed} (mg/kg)	Assumed TSS (mg/L)	C_{pw} (ug/L)	Log K_{oc} (L/kg)	Koc	Keq (L/kg)	f_d	f_p	C_T (ug/L)	C_d (ug/L)	C_p (ug/L)	DRBC SQOs - Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)
TCL Volatile Organic Compounds													
Toluene[2]	0.088	250	0.0220	2.13	135	3.72	0.999	0.000930	23.7	23.6	0.0220	-	-
Pesticides													
No Detections												-	-
PCBs, Dioxins, and Furans													
Toxic Equivalency Quotient[1,3]	3.26E-08	250	8.16E-09	6.8	6,309,573	10,523	0.275	0.725	1.13E-08	3.10E-09	8.16E-09	-	-
Total PCBs[2]	0.0000154	250	0.000004	5.21	162,181	3,198	0.556	0.444	0.000009	0.00000482	0.00000385	**1.0**	**0.014**
TCL Semivolatile Organic Compounds													
2-Methylnaphthalene[1]	0.0355	250	0.00888	3.39	2,455	67.3	0.983	0.0166	0.536	0.527	0.0089	-	-
4-Methylphenol	0.037	250	0.00925	1.69	49	1.35	0.9997	0.000338	27.4	27.4	0.00925	-	-
Acenaphthene[2]	0.026	250	0.00650	3.85	7,079	192	0.954	0.0458	0.142	0.135	0.00650	-	-
Anthracene[1]	0.106	250	0.0265	4.15	14,125	377	0.914	0.0861	0.308	0.281	0.0265	-	-
Benzo[a]anthracene[2]	0.082	250	0.0205	6.14	1,380,384	8,656	0.316	0.684	0.0300	0.00947	0.0205	-	-
Benzo[a]pyrene[2]	0.04	250	0.0100	6.01	1,023,293	8,020	0.333	0.667	0.0150	0.00499	0.0100	-	-
Benzo[b]fluoranthene[2]	0.055	250	0.0138	5.74	549,541	6,443	0.383	0.617	0.0223	0.00854	0.0138	-	-
Benzo[k]fluoranthene[2]	0.0375	250	0.00938	5.74	549,541	6,443	0.383	0.617	0.0152	0.00582	0.00938	-	-
Bis(2-ethylhexyl) phthalate	0.041	250	0.0103	6.00	1,000,000	7,967	0.334	0.666	0.0154	0.00515	0.0103	-	-
Chrysene[2]	0.052	250	0.0130	5.3	199,526	3,692	0.520	0.480	0.0271	0.0141	0.0130	-	-
Dibenzofuran	0.0405	250	0.0101	5.61	407,380	5,611	0.416	0.584	0.0173	0.00722	0.0101	-	-
Fluoranthene[2]	0.047	250	0.0118	4.58	38,019	959	0.807	0.193	0.0607	0.0490	0.0118	-	-
Fluorene[2]	0.024	250	0.00600	3.86	7,244	196	0.953	0.0468	0.128	0.122	0.00600	-	-
Indeno[1,2,3-cd]pyrene[2]	0.049	250	0.0123	7.53	33,884,416	11,067	0.26547	0.735	0.0167	0.00443	0.0123	-	-
Naphthalene[1]	0.033	250	0.00825	2.97	933	25.7	0.994	0.00638	1.29	1.28	0.0083	-	-
Phenanthrene[2]	0.044	250	0.0110	4.15	14,125	377	0.914	0.0861	0.128	0.117	0.0110	-	-
Pyrene[2]	0.062	250	0.0155	4.58	38,019	959	0.807	0.193	0.0801	0.0646	0.0155	-	-

Notes:

NVF: no value found in literature

1. Octanol-water partitioning coefficient (Log Koc) value from Agency for Toxic Substances and Disease Registry (ATSDR) database

Toxicological information located here: https://www.atsdr.cdc.gov/toxprofiles/tp.asp?id=72&tid=19. SVOC and dioxin Log Koc values are from ATSDR Chemical and Physical Information for each compound.

2. Volatile Organic Compounds (VOCs), poly aromatic hydrocarbons (PAHs), and polychlorinate biphenyls (PCB) Log Koc values from Delaware Risk-Based Corrective Action Program (DERBCAP), (2000) - for soil to groundwater.

3. Total TEQ values from Duffield's October 2016 sampling event have been compared to 2,3,7,8-TCDD standards and criteria.

Table 9.3.1 Water Quality During Dredging for Stratum C Compared to Aquatic Life SQOs
(Derived from October 2016 Sampling Event Analytical Results)
Sediment and Surface Water Quality Assessment

Sample Identification	C_{sed} (mg/kg)	Log K_d (L/kg)	Assumed TSS (mg/L)	f_d	f_p	C_T (ug/L)	C_d (ug/L)	C_p (ug/L)	DRBC SQOs - Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)
TAL Inorganics										
Aluminum[2]	9280	Not Needed	250	-	-	2320	15.5	2,305	750	87
Arsenic	13.5	2.4	250	0.941	0.0591	3.38	3.2	0	340	150
Barium	49.8	2.5	250	0.927	0.0733	12.5	12	1	-	-
Beryllium	0.620	2.8	250	0.864	0.136	0.155	0.134	0	-	-
Calcium	1120	NVF	250	-	-	-	-	-	-	-
Chromium[6]	50.2	5.1	250	0.031	0.9692	12.6	0.386	12.2	390	19
Cobalt	7.40	3.1	250	0.761	0.239	1.85	1.41	0	-	-
Copper	21.7	3.5	250	0.558	0.442	5.43	3.03	2	9.6	6.5
Iron	18100	NVF	250	-	-	-	-	-	-	-
Lead	28.9	4.6	250	0.0913	0.909	7.23	0.660	7	38.0	5.4
Magnesium	2180	NVF	250	-	-	-	-	-	-	-
Manganese	508	NVF	250	-	-	-	-	-	-	-
Mercury	0.0880	4.9	250	0.0479	0.952	0.0220	0.00105	0.0	1.4	0.77
Nickel	13.9	3.9	250	0.335	0.665	3.48	1.16	2	308	34
Potassium	923	NVF	250	-	-	-	-	-	-	-
Sodium	177	NVF	250	-	-				-	-
Vanadium	23.9	2.1	250	0.969	0.0305	5.98	6	0	-	-
Zinc	104	4.1	250	0.241	0.759	26.0	6.27	20	88	88
Total Cyanide (mg/kg)[8]	0.0750	NVF	250	-	-	-	-	-	22	5.2

Abbreviations:

TSS: total suspended solids concentration
C_{pw}: concentration in pore water
C_{sed}: concentration in sediment
Log K_{oc} or K_{oc}: octanol-water partitioning coefficient
mg/kg : milligram per kilogram
L/kg : liters per kilogram
ug/L : microgram per liter
f_d : dissolved fraction of substance
f_p : fraction of substance sorbed to particulate
C_T : total concentration of substance
C_d : dissolved concentration of substance
C_p : concentration of substance sorbed to particulate

Notes:

NVF: no value found in literature

1. Data is compared to acute (one-hour average) as well as chronic (4-day time period) stream quality objectives (SQOs) for freshwater aquatic life (DRBC Water Quality Regulations, 2013).
2. Assuming 95% UCL, pH is approximately 7. Therefore, Aluminum solubility is approximately 10^-7 M and concentration of aluminum is approximately 10^1.19 ug/L, which is approximately 15.5 ug/L (Greene, 2010)
The concentration of aluminum in water is a function of pH. The minimum solubility occurs at around pH 6.5 and solubility remains low to moderate between pH 6 and pH 8. At median of pH 7.5, roughly in DRBC Zone 5, aluminum solubility is 42.4 ug/L. In excess of this, concentrations of aluminum expected to occur as solid aluminum hydroxide. Speculatively, most aluminum likely is in particulate form as part of very small colloidal (clay), which would have limited bioavailability.
3. Metals Acute Aquatic Life Criterion assume a hardness of 74 mg/L as per the DRBC Water Quality Regulations, Article 4: Application of Standards (p.108, 2013).
4. Delaware River meets definition of freshwater (salinitiy < or equal to 5 ppt)
5. Adsorption-desorption distribution (Log K_d) values derived from the median values in Table 5 of the following reference: Ambrose, R. 2005. Partition Coefficients For Metals In Surface Water, Soil, and Waste. U.S. Environmental Protection Agency, Office of Research and Development, Washington, DC (p.3-15)
6. Used median trivalent chromium (Cr III) Log K_d value.
7. Used Se (IV) log K_d value
8. Total cyanide Log K_d value is for soil to water partitioning rather than sediment to water.
9. SQOs are derived from Delaware River Basin Commission's (DRBC's) Zone 5 Water Quality Regulations (2013).

Table 9.3.2 Water Quality During Dredging for Stratum C Compared to Human Health SQOs
(Derived from October 2016 Sampling Event Analytical Results)
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Parameters		Units	Comments
Estimated TSS Concentration =	250	mg/L	
Dissolved Phase Concentration (C_d)			using standard equilibrium partition coefficients
Total Organic Carbon =	13800	mg/kg	Median result from laboratory.
TOC Fraction =	0.0138	kg OC/kg sed	Median result from laboratory.

See report Section XIV for calculations.

Sample Identification	C_{sed} (mg/kg)	Assumed TSS (mg/L)	C_{pw} (ug/L)	Log K_{oc} (L/kg)	Koc	Keq (L/kg)	f_d	f_p	C_T (ug/L)	C_d (ug/L)	C_p (ug/L)	DRBC SQOs - Freshwater Carcinogens (Fish Ingestion Only) (ug/L)	DRBC SQOs - Freshwater Systemic Toxicant (Fish Ingestion Only) (ug/L)
TCL Volatile Organic Compounds													
Methylene Chloride[1]	-	250	-	1.4	25.1	0.693	0.9998	0.000173	-	-	-	-	-
Toluene[2]	0.088	250	0.0220	2.13	135	3.72	0.999	0.000930	23.7	23.6	0.0220	-	**15,000**
Pesticides													
No Detections												-	-
PCBs, Dioxins, and Furans													
Toxic Equivalency Quotient[1,3]	3.26E-08	250	8.16E-09	6.8	6,309,573	10,523	0.275	0.725	1.13E-08	3.10E-09	8.16E-09	**5.10E-09**	-
Total PCBs[2]	0.0000154	250	0.000004	5.21	162,181	3,198	0.556	0.444	0.00000867	0.00000482	0.00000385	**0.000016**	**0.00849**
TCL Semivolatile Organic Compounds													
2-Methylnaphthalene[1]	0.0355	250	0.00888	3.39	2,455	67.3	0.983	0.0166	0.536	0.527	0.0089	-	-
2-Methylphenol	-	250	-	1.03	11	-	-	-	-	-	-	-	-
4-Methylphenol	0.037	250	0.00925	1.69	49	1.35	0.9997	0.000338	27.4	27.4	0.00925	-	-
Acenaphthene[2]	0.026	250	0.00650	3.85	7,079	192	0.954	0.0458	0.142	0.135	0.00650	-	**990**
Acenaphthylene	0.029	250	0.0073	NVF	-	-	-	-	-	-	-	-	-
Anthracene[1]	0.106	250	0.0265	4.15	14,125	377	0.914	0.0861	0.308	0.281	0.0265	-	**40,000**
Benzo[a]anthracene[2]	0.082	250	0.0205	6.14	1,380,384	8,656	0.316	0.684	0.0300	0.00947	0.0205	**0.18**	-
Benzo[a]pyrene[2]	0.04	250	0.0100	6.01	1,023,293	8,020	0.333	0.667	0.0150	0.00499	0.0100	**0.018**	-
Benzo[b]fluoranthene[2]	0.055	250	0.0138	5.74	549,541	6,443	0.383	0.617	0.0223	0.00854	0.0138	**0.18**	-
Benzo[g,h,i]perylene	0.052	250	0.0130	NVF	-	-	-	-	-	-	-	-	-
Benzo[k]fluoranthene[2]	0.0375	250	0.00938	5.74	549,541	6,443	0.383	0.617	0.0152	0.00582	0.00938	-	-
Bis(2-ethylhexyl) phthalate	0.041	250	0.0103	6.00	1,000,000	7,967	0.334	0.666	0.0154	0.00515	0.0103	-	-
Butyl benzyl phthalate	0.014	250	0.0035	NVF	-	-	-	-	-	-	-	**1.8**	-
Chrysene[2]	0.052	250	0.0130	5.3	199,526	3,692	0.520	0.480	0.0271	0.0141	0.0130	**18**	-
Dibenz(a,h)anthracene	0.031	250	0.0078	NVF	-	-	-	-	-	-	-	**0.018**	-
Dibenzofuran	0.0405	250	0.0101	5.61	407,380	5,611	0.416	0.584	0.0173	0.00722	0.0101	-	**140**
Fluoranthene[2]	0.047	250	0.0118	4.58	38,019	959	0.807	0.193	0.0607	0.0490	0.0118	-	**5,300**
Fluorene[2]	0.024	250	0.00600	3.86	7,244	196	0.953	0.0468	0.128	0.122	0.00600	**0.18**	-
Indeno[1,2,3-cd]pyrene[2]	0.049	250	0.0123	7.53	33,884,416	11,067	0.26547	0.735	0.0167	0.00443	0.0123	-	-
Naphthalene[1]	0.033	250	0.00825	2.97	933	25.7	0.994	0.00638	1.29	1.28	0.0083	-	-
Phenanthrene[2]	0.044	250	0.0110	4.15	14,125	377	0.914	0.0861	0.128	0.117	0.0110	-	-
Pyrene[2]	0.062	250	0.0155	4.58	38,019	959	0.807	0.193	0.0801	0.0646	0.0155	-	**4,000**

Notes:

NVF: no value found in literature

1. Octanol-water partitioning coefficient (Log Koc) value from Agency for Toxic Substances and Disease Registry (ATSDR) database

Toxicological information located here: https://www.atsdr.cdc.gov/toxprofiles/tp.asp?id=72&tid=19. SVOC and dioxin Log Koc values are from ATSDR Chemical and Physical Information for each compound.

2. Volatile Organic Compounds (VOCs), poly aromatic hydrocarbons (PAHs), and polychlorinate biphenyls (PCB) Log Koc values from Delaware Risk-Based Corrective Action Program (DERBCAP), (2000) - for soil to groundwater.

3. Total TEQ values from Duffield's October 2016 sampling event have been compared to 2,3,7,8-TCDD standards and criteria.

Table 9.3.2 Water Quality During Dredging for Stratum C Compared to Human Health SQOs
(Derived from October 2016 Sampling Event Analytical Results)
Sediment and Surface Water Quality Assessment

Sample Identification	C_{sed} (mg/kg)	Log K_d (L/kg)	Assumed TSS (mg/L)	f_d	f_p	C_T (ug/L)	C_d (ug/L)	C_p (ug/L)	DRBC SQOs - Freshwater Carcinogens (Fish Ingestion Only) (ug/L)	DRBC SQOs - Freshwater Systemic Toxicant (Fish Ingestion Only) (ug/L)
TAL Inorganics										
Aluminum[2]	9280	Not Needed	250	-	-	2320	15.5	2,305	-	-
Arsenic	13.5	2.4	250	0.941	0.0591	3.38	3.18	0.199	-	**NA**
Barium	49.8	2.5	250	0.927	0.0733	12.5	11.5	0.912	-	-
Beryllium	0.620	2.8	250	0.864	0.136	0.155	0.134	0.0211	-	**420**
Calcium	1120	NVF	250	-	-	-	-	-	-	-
Chromium[6]	50.2	5.1	250	0.031	0.9692	12.6	0.386	12.2	-	**380,000**
Cobalt	7.40	3.1	250	0.761	0.239	1.85	1.41	0.443	-	-
Copper	21.7	3.5	250	0.558	0.442	5.43	3.03	2.40	-	-
Iron	18100	NVF	250	-	-	-	-	-	-	-
Lead	28.9	4.6	250	0.0913	0.909	7.23	0.660	6.57	-	-
Magnesium	2180	NVF	250	-	-	-	-	-	-	-
Manganese	508	NVF	250	-	-	-	-	-	-	-
Mercury	0.0880	4.9	250	0.0479	0.952	0.0220	0.00105	0.0209	-	**0.051**
Nickel	13.9	3.9	250	0.335	0.665	3.48	1.16	2.31	-	**1,700**
Potassium	923	NVF	250	-	-	-	-	-	-	-
Sodium	177	NVF	250	-	-				-	-
Vanadium	23.9	2.1	250	0.969	0.0305	5.98	5.79	0.182	-	-
Zinc	104	4.1	250	0.241	0.759	26.0	6.27	19.7	-	**26,000**
Total Cyanide (mg/kg)[8]	0.0750	NVF	250	-	-	-	-	-	-	**140**

Notes:

NVF: no value found in literature

1. Data is also compared to DE SWQ standards for fish and water ingestion as a systemic toxicant.
2. Assuming 95% UCL, pH is approximately 7. Therefore, Aluminum solubility is approximately 10^-7 M and concentration of aluminum is approximately 10^1.19 ug/L, which is approximately 15.5 ug/L (Greene, 2010)
The concentration of aluminum in water is a function of pH. The minimum solubility occurs at around pH 6.5 and solubility remains low to moderate between pH 6 and pH 8. At median of pH 7.5, roughly in DRBC Zone 5, aluminum solubility is 42.4 ug/L. In excess of this, concentrations of aluminum expected to occur as solid aluminum hydroxide. Speculatively, most aluminum likely is in particulate form as part of very small colloidal (clay), which would have limited bioavailability.
3. Metals Acute Aquatic Life Criterion assume a hardness of 74 mg/L as per the DRBC Water Quality Regulations, Article 4: Application of Standards (p.108, 2013).
4. Delaware River meets definition of freshwater (salinitiy < or equal to 5 ppt)
5. Adsorption-desorption distribution (Log K_d) values derived from the median values in Table 5 of the following reference: Ambrose, R. 2005. Partition Coefficients For Metals In Surface Water, Soil, and Waste. U.S. Environmental Protection Agency, Office of Research and Development, Washington, DC (p.3-15)
6. Used median trivalent chromium (Cr III) Log K_d value.
7. Used Se (IV) log K_d value
8. Total cyanide Log K_d value is for soil to water partitioning rather than sediment to water.
9. SQOs are derived from Delaware River Basin Commission's (DRBC's) Zone 5 Water Quality Regulations (2013).

Abbreviations:

TSS: total suspended solids concentration
C_{pw}: concentration in pore water
C_{sed}: concentration in sediment
Log K_{oc} or K_{oc}: octanol-water partitioning coefficient
mg/kg : milligram per kilogram
L/kg : liters per kilogram
ug/L : microgram per liter
f_d : dissolved fraction of substance
f_p : fraction of substance sorbed to particulate
C_T : total concentration of substance
C_d : dissolved concentration of substance
C_p : concentration of substance sorbed to particulate

Table 10.1.1 CDF Effluent Water Quality Evaluation
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Dredge Cycle 1

Parameters	Units	Comments
Dissolved Phase Concentration (C_d)	mg/kg	using standard equilibrium partition coefficients
[TSS]slurry =	674,000	mg/L

See report Section XIV for calculations

Sample Identification	$C_{sed,A}$ (mg/kg)	$C_{sed,B}$ (mg/kg)	$C_{sed,C}$ (mg/kg)	Assumed TSS (mg/L)	$C_{sedA,B,C}$ (mg/kg)	C_{pw} (ug/L)	Log K_{oc} (L/kg)	Koc	Keq (L/kg)	f_d	f_p	C_T (ug/L)	C_d (ug/L)	C_p (ug/L)	DRBC SQOs - Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)
TCL VOCs	**95% UCL**	**95% UCL**	**Average**													
Methylene Chloride[1]	0.24	0.034	ND	674,000	0.11	75	1.4	25	0.65	0.70	0.30	250	170	76	-	-
Toluene[2]	0.22	0.041	0.20	674,000	0.14	97	2.1	135	2.07	0.42	0.58	170	71	99	-	-
Pesticides																
4,4'-DDD[1]	0.0032	0.00281	ND	674,000	0.0025	1.7	5.18	151,356	4.15	0.26	0.74	2.3	**0.59**	1.7	**1.1**	**0.001**
4,4'-DDE[1]	0.011	0.00484	ND	674,000	0.0066	4.4	4.7	50,119	4.14	0.26	0.74	6.0	**1.6**	4.4	**1.1**	**0.001**
4,4'-DDT[1]	ND	0.00180	ND	674,000	0.00074	0.50	5.18	151,356	4.15	0.26	0.74	0.68	**0.18**	0.50	**1.1**	**0.001**
Heptachlor[1]	ND	0.000977	ND	674,000	0.00040	0.27	4.34	21,878	4.13	0.26	0.74	0.37	**0.098**	0.27	**0.52**	**0.0038**
Polychlorinated Biphenyls (PCBs), Dioxins, and Furans																
TEQ[1]	1.74E-05	3.25E-06	2.66E-08	674,000	8.46E-06	5.71E-03	6.80	6,309,573	4.15	0.26	0.74	0.00774	0.00204	0.00571	-	-
Total PCBs[2]	0.963	0.000893	0.0000154	674,000	0.394	265	5.21	162,181	4.15	0.26	0.74	360	**94.8**	265	-	**0.014**
PAHs for Strata A and B, TCL SVOCs for Stratum C																
1-Methylnaphthalene	0.036	0.00085	NA	674,000	0.015	10	NVF								-	-
2-Methylnaphthalene[1]	0.069	0.0016	0.048	674,000	0.037	25	3.39	2,455	3.94	0.27	0.73	35	9.5	25	-	-
4-Methylphenol	NA	NA	0.048	674,000	0.0086	5.8	1.69	49	1.10	0.57	0.43	14	7.8	5.8	-	-
Acenaphthene[2]	0.034	0.0011	0.026	674,000	0.019	13	3.85	7,079	4.08	0.27	0.73	18	4.7	13	-	-
Acenaphthylene	0.065	0.0010	0.029	674,000	0.032	22	NVF								-	-
Anthracene[1]	0.10	0.0014	0.11	674,000	0.060	41	4.15	14,125	4.11	0.27	0.73	55	15	41	-	-
Benzo[a]anthracene[2]	0.32	0.0054	0.099	674,000	0.15	100	6.14	1,380,384	4.15	0.26	0.74	140	37	103	-	-
Benzo[a]pyrene[2]	0.32	0.0055	0.072	674,000	0.14	97	6.01	1,023,293	4.15	0.26	0.74	130	34	96	-	-
Benzo[b]fluoranthene[2]	0.24	0.0052	0.086	674,000	0.11	77	5.74	549,541	4.15	0.26	0.74	110	29	81	-	-
Benzo[e]pyrene	0.21	0.0046	NA	674,000	0.089	60	NVF								-	-
Benzo[g,h,i]perylene	0.14	0.0028	0.062	674,000	0.069	46	NVF								-	-
Benzo[k]fluoranthene[2]	0.25	0.0047	0.042	674,000	0.11	74	5.74	549,541	4.15	0.26	0.74	100	26	74	-	-
Bis(2-ethylhexyl) phthalate	NA	NA	0.041	674,000	0.0073	4.9	6	1,000,000	4.15	0.26	0.74	6.7	1.8	4.9	-	-
Butyl benzyl phthalate	NA	NA	0.014	674,000	0.0025	1.7	NVF								-	-
Chrysene[2]	0.32	0.0066	0.097	674,000	0.15	100	5.3	199,526	4.15	0.26	0.74	140	37	103	-	-
Dibenz(a,h)anthracene	0.059	0.0010	0.031	674,000	0.030	20	NVF								-	-
Dibenzofuran	NA	NA	0.041	674,000	0.0072	4.9	5.61	407,380	4.15	0.26	0.74	6.6	1.7	4.9		-
Fluoranthene[2]	0.42	0.0084	0.11	674,000	0.195	130	4.58	38,019	4.14	0.26	0.74	180	47	133	-	-
Fluorene[2]	0.060	0.0011	0.034	674,000	0.031	21	3.86	7,244	4.08	0.27	0.73	28	7.6	21	-	-
Indeno[1,2,3-cd]pyrene[2]	0.14	0.0026	0.059	674,000	0.069	47	7.53	33,884,416	4.15	0.26	0.74	63	17	47	-	-
Naphthalene[1]	0.14	0.0022	0.085	674,000	0.071	48	2.97	933	3.63	0.29	0.71	68	20	48	-	-
Perylene	0.57	0.015	NA	674,000	0.24	160	NVF								-	-
Phenanthrene[2]	0.31	0.0062	0.11	674,000	0.15	99	4.15	14,125	4.11	0.27	0.73	130	34	96	-	-
Pyrene[2]	0.48	0.0099	0.12	674,000	0.22	150	4.58	38,019	4.14	0.26	0.74	200	53	147	-	-

Table 10.1.1 CDF Effluent Water Quality Evaluation
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Sample Identification	$C_{sed,A}$ (mg/kg)	$C_{sed,B}$ (mg/kg)	$C_{sed,C}$ (mg/kg)	Log K_d (L/kg)	Assumed TSS (mg/L)	f_d	f_p	$C_{sedA,B,C}$ (mg/kg)	C_T (ug/L)	C_d (ug/L)	C_p (ug/L)	DRBC SQOs - Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)	Notes on DRBC SQOs
TAL Inorganics	**95% UCL**	**95% UCL**	**Average**											
Aluminum	16,800	8,490	8,770	Not Needed	674,000			11,900	8,020,000	15.5	8,020,000	**750**	**87**	total recoverable basis
Antimony	0.662	0.911	ND	3.6	674,000	0.0004	0.9996	0.647	436	0.162	436	-	-	
Arsenic	29.7	12.7	10.8	2.4	674,000	0.006	0.994	19.3	13,020	76.5	12,900	**340**	**150**	total dissolved form
Barium	105	49.9	45.3	2.5	674,000	0.005	0.995	71	48,100	225	47,900	-	-	
Beryllium	1.04	0.480	0.670	2.8	674,000	0.002	0.998	0.744	502	1.18	501	-	-	
Cadmium	0.848	0.498	ND	3.3	674,000	0.0007	0.999	0.552	372	**0.277**	372	**1.0**	**0.141**	total dissolved form
Calcium	2,770	1,120	966	NVF	674,000			1,770	1,190,000			-	-	
Chromium[5]	92.6	41.5	50.1	5.1	674,000	0.00001	0.99999	63.9	43,100	0.508	43,100	**390**	**19**	total dissolved form
Cobalt	16.6	7.42	7.34	3.1	674,000	0.001	0.999	11.2	7,520	8.85	7,500	-	-	
Copper	48.0	33.7	18.2	3.5	674,000	0.0005	0.9995	36.8	24,800	**11.6**	24,800	**9.6**	**6.5**	total dissolved form
Iron	33,900	15,800	24,700	NVF	674,000			24,800	16,700,000			-	-	total recoverable basis
Lead	76.3	50.2	26.9	4.6	674,000	0.00004	0.99996	56.7	38,200	1.42	38,200	**38**	**5.4**	total dissolved form
Magnesium	5,470	2,610	1,920	NVF	674,000			3,660	2,470,000			-	-	
Manganese	997	319	423	NVF	674,000			615	414,000			-	-	
Mercury	0.316	0.0705	0.126	4.9	674,000	0.00002	0.99998	0.181	122	0.00228	122	**1.4**	**0.77**	total dissolved form
Nickel	32.6	14.6	12.6	3.9	674,000	0.0002	0.9998	21.6	14,600	2.73	14,600	**308**	**34**	total dissolved form
Potassium	2,080	1,020	812	NVF	674,000			1,420	957,000			-	-	
Selenium[6]	0.876	0.654	ND	3.6	674,000	0.0004	0.9996	0.628	423	0.158	423	**20**	**5**	total recoverable basis
Silver (ND)	1.05	0.750	ND	3.6	674,000	0.0004	0.9996	0.740	499	0.186	499	**1.9**	**NA**	total dissolved form
Sodium	451	199	190	NVF	674,000			300	202,000			-	-	
Thallium	0.278	0.167	ND	1.3	674,000	0.07	0.93	0.183	123	8.52	115	-	-	
Vanadium	46.9	30.9	46.6	2.1	674,000	0.01	0.99	40.2	27,100	316	26,800	-	-	
Zinc	236	95.4	88.0	4.1	674,000	0.0001	0.9999	151	102,000	12.0	102,000	**88**	**88**	total dissolved form
Total Cyanide (mg/kg)[7]	0.129	0.167	0.0850	3.0	674,000	0.001	0.999	0.137	92.3	0.137	92.2	**22**	**5.2**	free cyanide based on lowest pH in receiving waters

Notes:
mg/kg: milligrams per kilogram
ug/L: microgram per liter
TCL VOCs: Target Compound List Volatile Organic Compounds
TCL SVOCs: Target Compound List Semivolatile Organic Compounds
TAL: Target Analyte List
PAHs: Poly Aromatic Hydrocarbons
= not sufficient information to calculate
Data is compared to acute (one-hour average) as well as chronic (4-day time period) stream quality objectives (SQOs) for freshwater aquatic life (DRBC Water Quality Regulations, 2013).
highlighted concentrations were found above acute DRBC SQOs at TSS concentration in slurry
highlighted concentrations were found above chronic DRBC SQOs at TSS concentration in slurry
NA: sample not analyzed for the specified substance
ND: substance not detected
NVF: no octanol-water partitioning coefficient (Log K_{oc}) value found
95% UCL: 95% upper confidence limit
1. Log Koc value from Agency for Toxic Substances and Disease Registry (ATSDR) database Toxicological information located here: https://www.atsdr.cdc.gov/toxprofiles/tp.asp?id=72&tid=19.
SVOC and dioxin Log Koc values are from ATSDR Chemical and Physical Information for each compound.
2. Volatile Organic Carbons, Poly Aromatic Hydrocarbons or Semivolatile Organic Carbons, Polychlorinated Bipheyl log Koc values from Delaware Risk=Based Corrective Action Program (DERBCAP), (2000) - for soil to groundwater.
3. Metals Acute Aquatic Life Criterion assume a hardness of 74 mg/L as per the DRBC Water Quality Regulations, Article 4: Application of Standards (p.108, 2013).
4. Log (K_d) values derived from the median values in Table 5 of the following reference: Ambrose, R. 2005. Partition Coefficients For Metals In Surface Water, Soil, and Waste. U.S. Environmental Protection Agency, Office of Research and Development, Washington, DC (p.3-15)
5. Used trivalent chromium (Cr III) log K_d value.
6. Used Se (IV) log K_d value
7. Total cyanide Log K_d value is for soil to water partitioning.

Table 10.1.1 CDF Effluent Water Quality Evaluation
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Dredge Cycle 1

Abbreviations:

TSS:	total suspended solids concentration
C_{pw} :	concentration in pore water
$C_{sed,A}$:	concentration in stratum A sediment
$C_{sed,B}$:	concentration in stratum B sediment
$C_{sed,C}$:	concentration in stratum C sediment
$C_{sed,A,B,C}$:	composited concentration in strata A, B, and C sediment
Log K_{oc} or K_{oc} :	octanol-water partitioning coefficient
K_{eq} :	equilibrium partitioning coefficient
mg/kg :	milligram per kilogram
L/kg :	liters per kilogram
ug/L :	microgram per liter
f_d :	dissolved fraction of substance
f_p :	fraction of substance sorbed to particulate
C_T :	total concentration of substance
C_d :	dissolved concentration of substance
C_p :	concentration of substance sorbed to particulate

Stratum A

Parameter		Units	Comments
Percent moisture =	75.6	%	Median result from boring logs.
Fraction sediment moisture =	0.756	unitless	Median result from boring logs.
Volume to dredge =	915,000	yd^3	
Volume to dredge =	700,000	m^3	
Volume of pore water =	529,000	m^3	
Volume of sediment particles =	171,000	m^3	
Density of sediment particles =	2.65	g/cm^3	Common mineral density
Mass of sediment particles =	453,000,000,000	g	
Volume river water =	1,300,000	m^3	<--- assume that influent slurry contains 65% water, 35% sediment
Volume water =	1,830,000	m^3	

Stratum B

Parameter		Units	Comments
Percent moisture =	18.1	%	Median result from boring logs.
Fraction sediment moisture =	0.181	unitless	Median result from boring logs.
Volume to dredge =	925,000	yd^3	
Volume to dredge =	707,000	m^3	
Volume of pore water =	128,000	m^3	
Volume of sediment particles =	579,000	m^3	
Density of sediment particles =	2.65	g/cm^3	Common mineral density
Mass of sediment particles =	1,530,000,000,000	g	
Volume river water =	1,310,000	m^3	<--- assume that influent slurry contains 65% water, 35% sediment (Pedricktown South, Delaware River. 2013)
Volume water =	1,440,000	m^3	

Stratum C

Parameter		Units	Comments
Total Organic Carbon =	14,196	mg/kg	Average result from laboratory data.
Total Organic Carbon Fraction =	0.01420	kg/kg	Average result from laboratory data.
Percent moisture =	20.5	%	Median result from boring logs.
Fraction sediment moisture =	0.205	unitless	Median result from boring logs.
Volume to dredge =	400,000	yd^3	
Volume to dredge =	306,000	m^3	
Volume of pore water =	62,700	m^3	
Volume of sediment particles =	243,000	m^3	
Density of sediment particles =	2.65	g/cm^3	Common mineral density
Mass of sediment particles =	644,000,000,000	g	
Volume river water =	568,000	m^3	<--- assume that influent slurry contains 65% water, 35% sediment
Volume water =	631,000	m^3	

[TSS]slurry = 674,000 g/m^3 or mg/L

Table 10.1.2 CDF Effluent Water Quality Evaluation
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Dredge Cycle 1

Sample Identification	Dissolved Concentration from Sediment to Water (95% UCL/Average)	Particulate Concentration from Sediment to Water (95% UCL/Average)	Concentration in Water (MEDIAN)	Concentration in Slurry	Effluent Concentration from CDF	DRBC Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)
TCL VOCs	C_d (ug/L)	C_p (ug/L)	(ug/L)	(ug/L)	(ug/L)		
Methylene Chloride	170	76	NA	170	170	-	-
Toluene	71	99	NA	71	71	-	-
Pesticides							
4,4'-DDD	0.6	1.7	NA	0.6	**0.6**	**1.1**	**0.001**
4,4'-DDE	1.6	4.4	NA	1.6	**1.6**	**1.1**	**0.001**
4,4'-DDT	0.18	0.50	NA	0.18	**0.18**	**1.1**	**0.001**
Heptachlor	0.10	0.27	NA	0.10	**0.10**	**0.52**	**0.0038**
Polychlorinated Biphenyls (PCBs), Dioxins, and Furans							
TEQ	0.00204	0.00571	0.000000391	0.00204	0.00318	-	-
Total PCBs	95	265	0.00550	95	**148**	**1.0**	**0.014**
PAHs for Strata A and B, TCL SVOCs for Stratum C							
1-Methylnaphthalene			0.0027	0.0027	0.0027	-	-
2-Methylnaphthalene	9.5	25.1	0.0037	9.5	9.5	-	-
4-Methylphenol	7.79	5.78	NA	7.8	7.8	-	-
Acenaphthene	4.7	12.9	ND	4.7	4.7	-	-
Acenaphthylene			ND	-		-	-
Anthracene	14.7	40.7	0.0057	15	15	-	-
Benzo[a]anthracene	36.8	103	0.0075	37	37	-	-
Benzo[a]pyrene	34.2	95.8	0.0081	34	34	-	-
Benzo[b]fluoranthene	29.0	81.0	0.020	29	29	-	-
Benzo[e]pyrene			0.0120	0.012	0.012	-	-
Benzo[g,h,i]perylene			0.0081	0.0081	0.0081	-	-
Benzo[k]fluoranthene	26.4	73.8	0.015	26	26	-	-
Bis(2-ethylhexyl) phthalate	1.76	4.93	NA	1.8	1.8	-	-
Butyl benzyl phthalate			NA	-		-	-
Chrysene	36.9	103.1	0.025	37	37	-	-
Dibenz(a,h)anthracene			0.0063	0.0063	0.0063	-	-
Dibenzofuran	1.74	4.87	NA	1.7	1.7		-
Fluoranthene	47	133	0.045	47.5	47.5	-	-
Fluorene	7.6	20.9	ND	8	8	-	-
Indeno[1,2,3-cd]pyrene	16.7	46.7	0.0076	17	17	-	-
Naphthalene	19.7	48.2	0.0049	20	20	-	-
Perylene			0.0028	0.0028	0.0028	-	-
Phenanthrene	34.5	95.5	0.030	34	34	-	-
Pyrene	53	147	0.036	53	53	-	-

Table 10.1.2 CDF Effluent Water Quality Evaluation
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Sample Identification	Stratum A, B, and C Concentration from Sediment to Water (95% UCL)	Cp (ug/L)	Concentration in Water (MEDIAN)	Concentration in Slurry	Effluent Concentration from CDF	DRBC Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)	Notes on DRBC SQOs
TAL Inorganics								
Aluminum	15.5	8,020,000	885	900	**1,600,000**	**750**	**87**	total recoverable basis
Antimony	0.162	436	0.505	0.667	0.667	-	-	
Arsenic	76.5	12,900	1.55	78.00	78.0	**340**	**150**	total dissolved form
Barium	225	47,900	35.7	260.3	260	-	-	
Beryllium	1.18	501	ND	1.177	1.18	-	-	
Cadmium	0.277	372	ND	0.277	**0.277**	**1.0**	**0.141**	total dissolved form
Calcium			18,700	18,700	18,700	-	-	
Chromium	0.508	43,100	3.60	4.11	4.11	**390**	**19**	total dissolved form
Cobalt	8.85	7,500	1.60	10.5	10.5	-	-	
Copper	11.6	24,800	6.25	17.9	**17.9**	**9.6**	**6.5**	total dissolved form
Iron			1,640	1,640	1,640	-	-	total recoverable basis
Lead	1.42	38,200	3.35	4.77	4.77	**38.0**	**5.4**	total dissolved form
Magnesium			7,420	7,420	7,420	-	-	
Manganese			141	141	141	-	-	
Mercury	0.00228	122	ND	0.00228	0.00228	**1.4**	**0.77**	total dissolved form
Nickel	2.73	14,600	3.10	5.83	5.83	**308**	**34**	total dissolved form
Potassium			3,150	3,150	3,150	-	-	
Selenium	0.158	423	ND	0.158	0.158	**20**	**5**	total recoverable basis
Silver (ND)	0.186	499	ND	0.186	0.186	**1.9**	**NA**	total dissolved form
Sodium			26,300	26,300	26,300	-	-	
Thallium	8.52	115	ND	8.52	8.52	-	-	
Vanadium	316	26,800	5.00	321	321	-	-	
Zinc	12.0	102,000	18.1	30.1	30.1	**88**	**88**	total dissolved form
Total Cyanide (mg/kg)	0.137	92.2	ND	0.137	0.137	**22**	**5.2**	free cyanide based on lowest pH in receiving waters

Notes:
ug/L: microgram per liter
NA: sample not analyzed for specified substance
ND: substance not detected
NVF: no octanol-water partitioning coefficient (Log K_{oc}) value found
95% UCL: 95% upper confidence limit
TCL VOCs: Target Compound List Volatile Organic Compounds
TCL SVOCs: Target Compound List Semivolatile Organic Compounds
TAL: Target Analyte List
PAHs: Poly Aromatic Hydrocarbons
= not sufficient information to calculate
Data is compared to acute (one-hour average) as well as chronic (4-day time period) stream quality objectives (SQOs) for freshwater aquatic life (DRBC Water Quality Regulations, 2013).
highlighted concentrations were found above acute DRBC SQOs at TSS concentration in slurry
highlighted concentrations were found above chronic DRBC SQOs at TSS concentration in slurry
SQOs are derived from DRBC's Zone 5 Water Quality Regulations (2013).
Total recoverable basis is used interchangably by the US Environmental Protection Agency (USEPA) with total metals (1998).

Table 10.2.1 CDF Effluent Water Quality Evaluation
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Dredge Cycle 2

Parameters	Units	Comments
Dissolved Phase Concentration (C_d)	ug/L	using standard equilibrium partition coefficients
Particulate Concentration (C_P)	ug/L	using standard equilibrium partition coefficients

TSS Limit = 1,030,000 mg/L

See report Section XVI for calculations.

Sample Identification	$C_{sed,C}$ (mg/kg)	Assumed TSS (mg/L)	C_{pw} (ug/L)	Log K_{oc} (L/kg)	Koc	Keq (L/kg)	f_d	f_p	C_T (ug/L)	C_d (ug/L)	C_p (ug/L)	DRBC SQOs - Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)
TCL VOCs	**Average**												
Methylene Chloride[1]	ND	1,030,000	ND	1.4	25	0.56	0.63	0.37				-	-
Toluene[2]	0.20	1,030,000	208	2.1	135	1.59	0.38	0.62	340	130	210	-	-
Pesticides													
4,4'-DDD[1]	ND	1,030,000	ND	5.18	151,356	2.72	0.26	0.74				**1.1**	**0.001**
4,4'-DDE[1]	ND	1,030,000	ND	4.7	50,119	2.71	0.26	0.74				**1.1**	**0.001**
4,4'-DDT[1]	ND	1,030,000	ND	5.18	151,356	2.72	0.26	0.74				**1.1**	**0.001**
Heptachlor	ND	1,030,000	ND	4.53	33,884	2.71	0.26	0.74				**0.52**	**0.0038**
Polychlorinated Biphenyls (PCBs), Dioxins, and Furans													
TEQ[1]	0.0000000266	1,030,000	0.0000274	6.8	6,309,573	2.72	0.26	0.74	0.0000371	0.00000977	0.0000274	-	-
Total PCBs[2]	0.0000154	1,030,000	0.0159	5.21	162,181	2.72	0.26	0.74	0.0215	0.00567	0.0159	-	**0.014**
TCL SVOCs for Stratum C													
1-Methylnaphthalene	NA	1,030,000	ND	NVF								-	-
2-Methylnaphthalene[1]	0.048	1,030,000	49	3.39	2,455	2.62	0.27	0.73	68	18	49	-	-
4-Methylphenol	0.069	1,030,000	71	1.69	49	0.92	0.51	0.49	150	77	73	-	-
Acenaphthene[2]	0.026	1,030,000	27	3.85	7,079	2.68	0.27	0.73	36	10	27	-	-
Acenaphthylene	0.029	1,030,000	30	NVF								-	-
Anthracene[1]	0.11	1,030,000	110	4.15	14,125	2.70	0.26	0.74	150	40	110	-	-
Benzo[a]anthracene[2]	0.099	1,030,000	100	6.14	1,380,384	2.72	0.26	0.74	140	37	100	-	-
Benzo[a]pyrene[2]	0.072	1,030,000	70	6.01	1,023,293	2.72	0.26	0.74	100	26	74	-	-
Benzo[b]fluoranthene[2]	0.086	1,030,000	90	5.74	549,541	2.72	0.26	0.74	120	32	88	-	-
Benzo[e]pyrene	NA	1,030,000	ND	NVF								-	-
Benzo[g,h,i]perylene	0.062	1,030,000	63	NVF								-	-
Benzo[k]fluoranthene[2]	0.042	1,030,000	43	5.74	549,541	2.72	0.26	0.74	58	15	43	-	-
Bis(2-ethylhexyl) phthalate	0.041	1,030,000	42	6.00	1,000,000	2.72	0.26	0.74	57	15	42	-	-
Butyl benzyl phthalate	0.014	1,030,000	14	NVF								-	-
Chrysene[2]	0.097	1,030,000	99	5.3	199,526	2.72	0.26	0.74	140	37	100	-	-
Dibenz(a,h)anthracene	0.031	1,030,000	32	NVF								-	-
Dibenzofuran	0.041	1,030,000	42	5.61	407,380	2.72	0.26	0.74	57	15	42		-
Fluoranthene[2]	0.11	1,030,000	110	4.58	38,019	2.71	0.26	0.74	150	40	110	-	-
Fluorene[2]	0.034	1,030,000	35	3.86	7,244	2.68	0.27	0.73	47	12	35	-	-
Indeno[1,2,3-cd]pyrene[2]	0.059	1,030,000	61	7.53	33,884,416	2.72	0.26	0.74	80	21	59	-	-
Naphthalene[1]	0.085	1,030,000	87	2.97	933	2.47	0.28	0.72	120	34	86	-	-
Perylene	NA	1,030,000	NA	NVF								-	-
Phenanthrene[2]	0.11	1,030,000	111	4.15	14,125	2.70	0.26	0.74	150	40	110	-	-
Pyrene[2]	0.12	1,030,000	124	4.58	38,019	2.71	0.26	0.74	170	45	130	-	-

Table 10.2.1 CDF Effluent Water Quality Evaluation
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Sample Identification	$C_{sed,C}$ (mg/kg)	Log K_d (L/kg)	Assumed TSS (mg/L)	f_d	f_p	C_T (ug/L)	C_d (ug/L)	C_p (ug/L)	DRBC SQOs - Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)	Notes on DRBC SQOs
TAL Inorganics	**Average**										
Aluminum	8,770	Not Needed	1,030,000			9,030,000	15.5	9,030,000	**750**	**87**	total recoverable basis
Antimony	ND	3.6	1,030,000	0.0002	0.9998				-	-	
Arsenic	10.8	2.4	1,030,000	0.004	0.996	11,200	43.1	11,200	**340**	**150**	total dissolved form
Barium	45.3	2.5	1,030,000	0.003	0.997	46,700	143	46,600	-	-	
Beryllium	0.670	2.8	1,030,000	0.002	0.998	690	1.06	689	-	-	
Cadmium	ND	3.3	1,030,000	0.0005	0.9995				**1.0**	**0.141**	total dissolved form
Calcium	966	NVF	1,030,000			995,000			-	-	
Chromium[5]	50.1	5.1	1,030,000	0.000008	0.99999	51,600	0.398	51,600	**390**	**19**	total dissolved form
Cobalt	7.34	3.1	1,030,000	0.001	0.999	7,560	5.83	7,550	-	-	
Copper	18.2	3.5	1,030,000	0.0003	0.9997	18,700	5.74	18,700	**9.6**	**6.5**	total dissolved form
Iron	24,700	NVF	1,030,000			25,400,000			-	-	total recoverable basis
Lead	26.9	4.6	1,030,000	0.00002	0.99998	27,700	0.676	27,700	**38.0**	**5.4**	total dissolved form
Magnesium	1,920	NVF	1,030,000			1,980,000			-	-	
Manganese	423	NVF	1,030,000			436,000			-	-	
Mercury	0.126	4.9	1,030,000	0.00001	0.99999	130	0.00159	130	**1.4**	**0.77**	total dissolved form
Nickel	12.6	3.9	1,030,000	0.0001	0.9999	13,000	1.59	13,000	**308**	**34**	total dissolved form
Potassium	812	NVF	1,030,000			837,000			-	-	
Selenium[6]	ND	3.6	1,030,000	0.0002	0.9998				**20**	**5**	total recoverable basis
Silver (ND)	ND	3.6	1,030,000	0.0002	0.9998				**1.9**	**NA**	total dissolved form
Sodium	190	NVF	1,030,000			195,000			-	-	
Thallium	ND	1.3	1,030,000	0.05	0.954				-	-	
Vanadium	46.6	2.1	1,030,000	0.008	0.992	48,000	367	47,600	-	-	
Zinc	88.0	4.1	1,030,000	0.0001	0.9999	90,700	6.99	90,700	**88**	**88**	total dissolved form
Total Cyanide (mg/kg)[7]	0.085	3.0	1,030,000	0.001	0.999	87.6	0.0849	87.5	**22**	**5.2**	free cyanide based on lowest pH in receiving waters

Notes:
mg/kg: milligrams per kilogram
ug/L: microgram per liter
TCL VOCs: Target Compound List Volatile Organic Compounds
TCL SVOCs: Target Compound List Semivolatile Organic Compounds
TAL: Target Analyte List
= not sufficient information to calculate
Data is compared to acute (one-hour average) as well as chronic (4-day time period) stream quality objectives (SQOs) for freshwater aquatic life (DRBC Water Quality Regulations, 2013).
highlighted concentrations were found above acute DRBC SQOs at TSS concentration in slurry
highlighted concentrations were found above chronic DRBC SQOs at TSS concentration in slurry
NA: this compound was not analyzed for during this sampling event
ND: substance not detected
NVF: no octanol-water partitioning coefficient (Log Koc) value found
95% UCL: 95% upper confidence limit
1. Log Koc value from Agency for Toxic Substances and Disease Registry (ATSDR) database Toxicological information located here: https://www.atsdr.cdc.gov/toxprofiles/tp.asp?id=72&tid=19.
SVOC and dioxin Log Koc values are from ATSDR Chemical and Physical Information for each compound.
2. Volatile Organic Carbons, Poly Aromatic Hydrocarbons or Semivolatile Organic Carbons, Polychlorinated Bipheyl log Koc values from Delaware Risk=Based Corrective Action Program (DERBCAP), (2000) - for soil to groundwater.
3. Metals Acute Aquatic Life Criterion assume a hardness of 74 mg/L as per the DRBC Water Quality Regulations, Article 4: Application of Standards (p.108, 2013).
4. Log (K_d) values derived from the median values in Table 5 of the following reference: Ambrose, R. 2005. Partition Coefficients For Metals In Surface Water, Soil, and Waste. U.S. Environmental Protection Agency, Office of Research and Development, Washington, DC (p.3-15)
5. Used trivalent chromium (Cr III) log K_d value.
6. Used Se (IV) log K_d value
7. Total cyanide Log K_d value is for soil to water partitioning.
8. SQOs are derived from DRBC's Zone 5 Water Quality Regulations (2013).

Table 10.2.1 CDF Effluent Water Quality Evaluation
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Dredge Cycle 2

Stratum C

Parameter		Units	Comments
Total Organic Carbon =	14,200	mg/kg	Average result from laboratory data.
Total Organic Carbon Fraction =	0.0142	kg/kg	Average result from laboratory data.
Percent moisture =	20.5	%	Median result from boring logs.
Fraction sediment moisture =	0.205	unitless	Median result from boring logs.
Volume to dredge =	700,000	yd^3	
Volume to dredge =	535,000	m^3	
Volume of pore water =	110,000	m^3	
Volume of sediment particles =	425,000	m^3	
Density of sediment particles =	2.65	g/cm^3	Common mineral density
Mass of sediment particles =	1,130,000,000,000	g	
Volume river water =	994,000	<--- assume that influent slurry contains 65% water, 35% sediment	
Volume water =	1,100,000		
[TSS]slurry =	1,030,000	g/m^3 or mg/L	

Abbreviations:

TSS:	total suspended solids concentration
C_{pw} :	concentration in pore water
$C_{sed,C}$:	concentration in stratum C sediment
Log K_{oc} or K_{oc} :	octanol-water partitioning coefficient
K_{eq} :	equilibrium partitioning coefficient
mg/kg :	milligram per kilogram
L/kg :	liters per kilogram
ug/L :	microgram per liter
f_d :	dissolved fraction of substance
f_p :	fraction of substance sorbed to particulate
C_T :	total concentration of substance
C_d :	dissolved concentration of substance
C_p :	concentration of substance sorbed to particulate

Table 10.2.2 CDF Effluent Water Quality Evaluation
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Dredge Cycle 2

Sample Identification	Dissolved Concentration from Sediment to Water (95% UCL/Average)	Particulate Concentration from Sediment to Water (95% UCL/Average)	Concentration in Water (MEDIAN)	Concentration in Slurry	Effluent Concentration from CDF	DRBC Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)
TCL VOCs	C_d (ug/L)	C_p (ug/L)	(ug/L)	(ug/L)	(ug/L)		
Methylene Chloride			NA			-	-
Toluene	130	210	NA	130	130	-	-
Pesticides							
4,4'-DDD			NA			1.1	**0.001**
4,4'-DDE			NA			1.1	**0.001**
4,4'-DDT			NA			1.1	**0.001**
Heptachlor			NA			0.52	**0.0038**
Polychlorinated Biphenyls (PCBs), Dioxins, and Furans							
TEQ	0.0000098	0.0000274	0.000000391	-		-	-
Total PCBs	0.0057	0.0159	0.00550	0.0112	0.0112	1.0	**0.014**
TCL SVOCs for Stratum C							
1-Methylnaphthalene			0.0027	0.0027	0.0027	-	-
2-Methylnaphthalene	18	49	0.0037	18	18	-	-
4-Methylphenol	77	73	NA			-	-
Acenaphthene	10	27	ND	10	10	-	-
Acenaphthylene			ND	-		-	-
Anthracene	40	110	0.0057	40	40	-	-
Benzo[a]anthracene	37	100	0.0075	37	37	-	-
Benzo[a]pyrene	26	74	0.0081	26	26	-	-
Benzo[b]fluoranthene	32	88	0.020	32	32	-	-
Benzo[e]pyrene			0.012	0.012	0.012	-	-
Benzo[g,h,i]perylene			0.0081	0.0081	0.0081	-	-
Benzo[k]fluoranthene	15	43	0.015	15	15	-	-
Bis(2-ethylhexyl) phthalate	15	42	NA			-	-
Chrysene	37	100	0.025	37	37	-	-
Dibenz(a,h)anthracene			0.0063	0.0063	0.0063	-	-
Dibenzofuran	15	42	NA			-	-
Fluoranthene	40	110	0.045	40	40	-	-
Fluorene	12	35	ND	12	12	-	-
Indeno[1,2,3-cd]pyrene	21	59	0.0076	21	21	-	-
Naphthalene	34	86	0.0049	34	34	-	-
Perylene			0.0028	0.0028	0.0028	-	-

Table 10.2.2 CDF Effluent Water Quality Evaluation
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Sample Identification	Dissolved Concentration from Sediment to Water (95% UCL/Average)	Particulate Concentration from Sediment to Water (95% UCL/Average)	Concentration in Water (MEDIAN)	Concentration in Slurry	Effluent Concentration from CDF	DRBC Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)	Notes on DRBC SQOs
TAL Inorganics								
Aluminum	15.5	9,030,000	885	900	**1,810,000**	750	**87**	total recoverable basis
Antimony			0.505	0.505	0.505	-	-	
Arsenic	43.1	11,200	1.55	44.7	44.7	340	**150**	total dissolved form
Barium	143	46,600	35.7	179	179	-	-	
Beryllium	1.060	689	ND	1.06	1.06	-	-	
Cadmium			ND			1.0	**0.141**	total dissolved form
Calcium			18,700	18,700	18,700	-	-	
Chromium (trivalent)	0.398	51,600	3.60	4.00	4.00	390	**19**	total dissolved form
Cobalt	5.83	7,550	1.60	7.43	7.43	-	-	
Copper	5.74	18,700	6.25	12.0	12.0	9.6	**6.5**	total dissolved form
Iron			1,640	1,640	1,640	-	-	total recoverable basis
Lead	0.676	27,700	3.35	4.03	4.03	38.0	**5.4**	total dissolved form
Magnesium			7,420	7,420	7,420	-	-	
Manganese			141	141	141	-	-	
Mercury	0.00159	130	ND	0.00159	0.00159	1.4	**0.77**	total dissolved form
Nickel	1.59	13,000	3.10	4.69	4.69	308	**34**	total dissolved form
Potassium			3,150	3,150	3,150	-	-	
Selenium			ND			20	**5**	total recoverable basis
Silver (ND)			ND			1.9	**NA**	total dissolved form
Sodium			26,300	26,300	26,300	-	-	
Thallium			ND			-	-	
Vanadium	367	47,600	5.00	372	372	-	-	
Zinc	6.99	90,700	18.1	25.0	25.0	88	**88**	total dissolved form
Total Cyanide (mg/kg)	0.0849	87.5	ND	0.0849	0.085	22	**5.2**	free cyanide based on lowest pH in receiving waters

Notes:
ug/L: microgram per liter
TCL VOCs: Target Compound List Volatile Organic Compounds
TCL SVOCs: Target Compound List Semivolatile Organic Compounds
TAL: Target Analyte List
NA: sample not analyzed for the specified substance
ND: substance not detected
NVF: no octanol-water partitioning coefficient (Log K_{oc}) value found
95% UCL: 95% upper confidence limit
= not sufficient information to calculate
Data is compared to acute (one-hour average) as well as chronic (4-day time period) stream quality objectives (SQOs) for freshwater aquatic life (DRBC Water Quality Regulations, 2013).
highlighted concentrations were found above acute DRBC SQOs at TSS concentration in slurry
highlighted concentrations were found above chronic DRBC SQOs at TSS concentration in slurry
SQOs are derived from DRBC's Zone 5 Water Quality Regulations (2013).
Total recoverable basis is used interchangably by the US Environmental Protection Agency (USEPA) with total metals (1998).

Table 10.3.1 CDF Effluent Water Quality Evaluation
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Dredge Cycle 3

Parameters	Units	Comments
Dissolved Phase Concentration (C_d)	mg/kg	using standard equilibrium partition coefficients
Particulate Concentration (C_p)	mg/kg	
[TSS]slurry =	1,020,000	mg/L

See report Section XIV for calculations

Sample Identification	$C_{sed,C}$ (mg/kg)	Assumed TSS (mg/L)	C_{pw} (ug/L)	Log K_{oc} (L/kg)	Koc	Keq (L/kg)	f_d	f_p	C_T (ug/L)	C_d (ug/L)	C_p (ug/L)	DRBC SWQ Standard - Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)
TCL VOCs	**Average**												
Methylene Chloride[1]	ND	1,020,000		1.4	25.1	0.57	0.63	0.37				-	-
Toluene[2]	0.20	1,020,000	210	2.1	135	1.60	0.38	0.62	340	130	210	-	-
Pesticides													
4,4'-DDD[1]	ND	1,020,000		5.18	151,356	2.74	0.26	0.74				**1.1**	**0.001**
4,4'-DDE[1]	ND	1,020,000		4.7	50,119	2.74	0.26	0.74				**1.1**	**0.001**
4,4'-DDT[1]	ND	1,020,000		5.18	151,356	2.74	0.26	0.74				**1.1**	**0.001**
Heptachlor	ND	1,020,000		4.53	33,884	2.74	0.26	0.74				**0.52**	**0.0038**
Polychlorinated Biphenyls (PCBs), Dioxins, and Furans													
TEQ[1]	0.0000000266	1,020,000	0.0000271	6.8	6,309,573	2.75	0.26	0.74	0.0000368	0.00000968	0.0000271	-	-
Total PCBs[2]	0.0000154	1,020,000	0.0157	5.21	162,181	2.74	0.26	0.74	0.0213	0.00561	0.0157	-	**0.014**
TCL SVOCs for Stratum C													
1-Methylnaphthalene	NA	1,020,000		NVF								-	-
2-Methylnaphthalene[1]	0.048	1,020,000	49	3.39	2,455	2.64	0.27	0.73	67	18	49	-	-
4-Methylphenol	0.069	1,020,000	70	1.69	49	0.92	0.52	0.48	140	72	68	-	-
Acenaphthene[2]	0.026	1,020,000	27	3.85	7,079	2.71	0.27	0.73	36	10	27	-	-
Acenaphthylene	0.029	1,020,000	30	NVF								-	-
Anthracene[1]	0.11	1,020,000	110	4.15	14,125	2.73	0.26	0.74	150	40	110	-	-
Benzo[a]anthracene[2]	0.099	1,020,000	100	6.14	1,380,384	2.74	0.26	0.74	140	37	100	-	-
Benzo[a]pyrene[2]	0.072	1,020,000	73	6.01	1,023,293	2.74	0.26	0.74	100	26	74	-	-
Benzo[b]fluoranthene[2]	0.086	1,020,000	87	5.74	549,541	2.74	0.26	0.74	120	32	88	-	-
Benzo[e]pyrene	NA	1,020,000		NVF								-	-
Benzo[g,h,i]perylene	0.062	1,020,000	63	NVF								-	-
Benzo[k]fluoranthene[2]	0.042	1,020,000	42	5.74	549,541	2.74	0.26	0.74	57	15	42	-	-
Bis(2-ethylhexyl) phthalate	0.041	1,020,000	42	6.00	1,000,000	2.74	0.26	0.74	57	15	42	-	-
Butyl benzyl phthalate	0.014	1,020,000	14	NVF								-	-
Chrysene[2]	0.097	1,020,000	99	5.3	199,526	2.74	0.26	0.74	130	34	96	-	-
Dibenz(a,h)anthracene	0.031	1,020,000	32	NVF								-	-
Dibenzofuran	0.041	1,020,000	41	5.61	407,380	2.74	0.26	0.74	56	15	41		-
Fluoranthene[2]	0.11	1,020,000	110	4.58	38,019	2.74	0.26	0.74	150	40	110	-	-
Fluorene[2]	0.034	1,020,000	34	3.86	7,244	2.71	0.27	0.73	47	12	34	-	-
Indeno[1,2,3-cd]pyrene[2]	0.059	1,020,000	60	7.53	33,884,416	2.75	0.26	0.74	80	21	59	-	-
Naphthalene[1]	0.085	1,020,000	86	2.97	933	2.49	0.28	0.72	120	34	86	-	-
Perylene	NA	1,020,000		NVF								-	-
Phenanthrene[2]	0.11	1,020,000	110	4.15	14,125	2.73	0.26	0.74	150	40	110	-	-
Pyrene[2]	0.12	1,020,000	120	4.58	38,019	2.74	0.26	0.74	160	42	120	-	-

Table 10.3.1 CDF Effluent Water Quality Evaluation
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Sample Identification	$C_{sed,C}$ (mg/kg)	Log K_d (L/kg)	Assumed TSS (mg/L)	f_d	f_p	C_T (ug/L)	C_d (ug/L)	C_p (ug/L)	DRBC SWQ Standard - Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)	Notes on DRBC SQOs
TAL Inorganics	**Average**										
Aluminum	8,770	Not Needed	1,020,000			8,950,000	15.5	8,950,000	**750**	**87**	total recoverable basis
Antimony	ND	3.60	1,020,000	0.0002	0.9998				-	-	
Arsenic	10.8	2.40	1,020,000	0.004	0.996	11,100	43.2	11,100	**340**	**150**	total dissolved form
Barium	45.3	2.50	1,020,000	0.003	0.997	46,200	143	46,100	-	-	
Beryllium	0.670	2.80	1,020,000	0.002	0.998	683	1.06	682	-	-	
Cadmium	ND	3.30	1,020,000	0.0005	0.9995				**1.0**	**0.141**	total dissolved form
Calcium	966	NVF	1,020,000			985,000			-	-	
Chromium[5]	50.1	5.10	1,020,000	0.00001	0.99999	51,100	0.398	51,100	**390**	**19**	total dissolved form
Cobalt	7.34	3.10	1,020,000	0.001	0.999	7,500	5.84	7,490	-	-	
Copper	18.2	3.50	1,020,000	0.0003	0.9997	18,500	5.73	18,500	**9.6**	**6.5**	total dissolved form
Iron	24,700	NVF	1,020,000			25,200,000			-	-	total recoverable basis
Lead	26.9	4.60	1,020,000	0.00002	0.99998	27,400	0.675	27,400	**38.0**	**5.4**	total dissolved form
Magnesium	1,920	NVF	1,020,000			1,960,000			-	-	
Manganese	423	NVF	1,020,000			432,000			-	-	
Mercury	0.126	4.90	1,020,000	0.00001	0.99999	129	0.00159	129	**1.4**	**0.77**	total dissolved form
Nickel	12.6	3.90	1,020,000	0.0001	0.9999	12,900	1.59	12,900	**308**	**34**	total dissolved form
Potassium	812	NVF	1,020,000			828,000			-	-	
Selenium[6]	ND	3.60	1,020,000	0.0002	0.9998				**20**	**5**	total recoverable basis
Silver (ND)	ND	3.60	1,020,000	0.0002	0.9998				**1.9**	**NA**	total dissolved form
Sodium	190	NVF	1,020,000			194,000			-	-	
Thallium	ND	1.30	1,020,000	0.05	0.95				-	-	
Vanadium	46.6	2.10	1,020,000	0.008	0.992	47,600	368	47,200	-	-	
Zinc	88.0	4.10	1,020,000	0.0001	0.9999	89,800	6.99	89,800	**88**	**88**	total dissolved form
Total Cyanide (mg/kg)[7]	0.0850	3.00	1,020,000	0.001	0.999	86.7	0.0849	86.6	**22**	**5.2**	free cyanide based on lowest pH in receiving waters

Notes:

mg/kg: milligrams per kilogram

ug/L: microgram per liter

TCL VOCs: Target Compound List Volatile Organic Compounds

TCL SVOCs: Target Compound List Semivolatile Organic Compounds

TAL: Target Analyte List

NA: this compound was not analyzed for during this sampling event

ND: substance not detected

NVF: no octanol-water partitioning coefficient (Log K_{oc}) value found

95% UCL: 95% upper confidence limit

= not sufficient information to calculate

Data is compared to acute (one-hour average) as well as chronic (4-day time period) stream quality objectives (SQOs) for freshwater aquatic life (DRBC Water Quality Regulations, 2013).

highlighted concentrations were found above acute DRBC SQOs at TSS concentration in slurry

highlighted concentrations were found above chronic DRBC SQOs at TSS concentration in slurry

1. Log Koc value from Agency for Toxic Substances and Disease Registry (ATSDR) database Toxicological information located here: https://www.atsdr.cdc.gov/toxprofiles/tp.asp?id=72&tid=19.

SVOC and dioxin Log Koc values are from ATSDR Chemical and Physical Information for each compound.

2. Volatile Organic Carbons, Poly Aromatic Hydrocarbons or Semivolatile Organic Carbons, Polychlorinated Bipheyl log Koc values from Delaware Risk=Based Corrective Action Program (DERBCAP), (2000) - for soil to groundwater.

3. Metals Acute Aquatic Life Criterion assume a hardness of 74 mg/L as per the DRBC Water Quality Regulations, Article 4: Application of Standards (p.108, 2013).

4. Log (K_d) values derived from the median values in Table 5 of the following reference: Ambrose, R. 2005. Partition Coefficients For Metals In Surface Water, Soil, and Waste. U.S. Environmental Protection Agency, Office of Research and Development, Washington, DC (p.3-15)

5. Used trivalent chromium (Cr III) log K_d value.

6. Used Se (IV) log K_d value

7. Total cyanide Log K_d value is for soil to water partitioning.

8. SQOs are derived from DRBC's Zone 5 Water Quality Regulations (2013).

Duffield Associates, Inc.
Project No. 11139.LH

Table 10.3.1 CDF Effluent Water Quality Evaluation
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Dredge Cycle 3

Stratum C

Parameter		Units	Comments
Total Organic Carbon =	14,200	mg/kg	Average result from laboratory data.
Total Organic Carbon Fraction =	0.0142	kg/kg	Average result from laboratory data.
Percent moisture =	20.5	%	Median result from boring logs.
Fraction sediment moisture =	0.205	unitless	Median result from boring logs.
Volume to dredge =	385,000	yd^3	
Volume to dredge =	294,000	m^3	
Volume of pore water =	60,300	m^3	
Volume of sediment particles =	234,000	m^3	
Density of sediment particles =	2.65	g/cm^3	Common mineral density
Mass of sediment particles =	620,000,000,000	g	
Volume river water =	546,000	<--- assume that influent slurry contains 65% water, 35% sediment	
Volume water =	606,000		
[TSS]slurry =	1,020,000	g/cm^3 or mg/L	

Abbreviations:

TSS:	total suspended solids concentration
C_{pw} :	concentration in pore water
$C_{sed,C}$:	concentration in stratum C sediment
Log K_{oc} or K_{oc} :	octanol-water partitioning coefficient
K_{eq} :	equilibrium partitioning coefficient
mg/kg :	milligram per kilogram
L/kg :	liters per kilogram
ug/L :	microgram per liter
f_d :	dissolved fraction of substance
f_p :	fraction of substance sorbed to particulate
C_T :	total concentration of substance
C_d :	dissolved concentration of substance
C_p :	concentration of substance sorbed to particulate

Table 10.3.2 CDF Effluent Water Quality Evaluation
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Sample Identification	Stratum C Concentration from Sediment to Water (Average)	Particulate Concentration from Sediment to Water (95% UCL/Average)	Concentration in Water (MEDIAN)	Concentration in Slurry	Effluent Concentration from CDF	DRBC Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)
TCL Semivolatile Organic Compounds	C_d (ug/L)	C_p (ug/L)	(ug/L)	(ug/L)	(ug/L)		
Toluene	130	210	NA	130	130	-	-
Pesticides							
No detections						-	-
Polychlorinated Biphenyls (PCBs), Dioxins, and Furans							
TEQ	0.0000097	0.0000271	0.000000391			-	-
Total PCBs	0.0056	0.0157	0.00550	0.0111	0.0111	**1.0**	**0.0140**
TCL SVOCs for Stratum C							
2-Methylnaphthalene[1]	18	49	0.0037	18	18	-	-
4-Methylphenol	72	68				-	-
Acenaphthene[2]	10	27	ND	10	10	-	-
Anthracene[1]	40	110	0.0057	40	40	-	-
Benzo[a]anthracene[2]	37	100	0.0075	37	37	-	-
Benzo[a]pyrene[2]	26	74	0.0081	26	26	-	-
Benzo[b]fluoranthene[2]	32	88	0.020	32	32	-	-
Benzo[k]fluoranthene[2]	15	42	0.015	15	15	-	-
Bis(2-ethylhexyl) phthalate	15	42					-
Chrysene[2]	34	96	0.025	34	34	-	-
Dibenzofuran	15	41				-	-
Fluoranthene[2]	40	110	0.045	40	40	-	-
Fluorene[2]	12	34	ND	12	12	-	-
Indeno[1,2,3-cd]pyrene[2]	21	59	0.0076	21	21	-	-
Naphthalene[1]	34	86	0.0049	34	34	-	-
Phenanthrene[2]	40	110	0.030	40	40	-	-
Pyrene[2]	42	120	0.036	42	42	-	-

Table 10.3.2 CDF Effluent Water Quality Evaluation
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Sample Identification	Stratum C Concentration from Sediment to Water (Average)	Particulate Concentration from Sediment to Water (95% UCL/Average)	Concentration in Water (MEDIAN)	Concentration in Slurry	Effluent Concentration from CDF	DRBC Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)	Notes on DRBC SQOs
TCL Semivolatile Organic Compounds	C_d (ug/L)	C_p (ug/L)	(ug/L)	(ug/L)	(ug/L)			
Aluminum	15.5	8,950,000	885	900	1,790,000	750	87	total recoverable basis
Antimony			0.505	0.505	0.505	-	-	
Arsenic	43.2	11,100	1.55	44.7	44.7	340	150	total dissolved form
Beryllium	1.06	682	ND	1.06	1.06	-	-	
Cadmium			ND			1.0	0.141	total dissolved form
Calcium			18,700	18,700	18,700	-	-	
Chromium	0.398	51,100	3.60	4.00	4.00	390	19	total dissolved form
Cobalt	5.84	7,490	1.60	7.44	7.44	-	-	
Copper	5.73	18,500	6.25	12.0	12.0	9.6	6.5	total dissolved form
Iron			1,640	1,640	1,640	-	-	total recoverable basis
Manganese			141	141	141	-	-	
Selenium			ND			20	5	total recoverable basis
Sodium			26,300	26,300	26,300	-	-	
Thallium			ND			-	-	
Zinc	6.99	89,800	18.1	25.0	25.0	88	88	total dissolved form
Total Cyanide (mg/kg)	0.0170	0.00425	ND	0.0170	0.0170	22	5.2	free cyanide based on lowest pH in receiving waters

Notes:
ug/L: microgram per liter
TCL VOCs: Target Compound List Volatile Organic Compounds
TCL SVOCs: Target Compound List Semivolatile Organic Compounds
TAL: Target Analyte List
NA: sample not analyzed for the specified substance
ND: substance not detected
NVF: no octanol-water partitioning coefficient (Log K_{oc}) value found
95% UCL: 95% upper confidence limit
= not sufficient information to calculate
Data is compared to acute (one-hour average) as well as chronic (4-day time period) stream quality objectives (SQOs) for freshwater aquatic life (DRBC Water Quality Regulations, 2013).
highlighted concentrations were found above acute DRBC SQOs at TSS concentration in slurry
highlighted concentrations were found above chronic DRBC SQOs at TSS concentration in slurry
SQOs are derived from DRBC's Zone 5 Water Quality Regulations (2013).
Total recoverable basis is used interchangably by the US Environmental Protection Agency (USEPA) with total metals (1998).

Table 11.1.1 CDF Effluent Water Quality Evaluation at TSS Average Discharge Limit
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Dredge Cycle 1

Parameters	Units	Comments
Dissolved Phase Concentration (C_d)	mg/kg	using standard equilibrium partition coefficients
Average TSS Limit =	3,000	mg/L

See report Section XIV for calculations

Sample Identification	$C_{sed,A}$ (mg/kg)	$C_{sed,B}$ (mg/kg)	$C_{sed,C}$ (mg/kg)	Average TSS Limit (mg/L)	$C_{sedA,B,C}$ (mg/kg)	C_{pw} (ug/L)	Log K_{oc} (L/kg)	Koc	Keq (L/kg)	f_d	f_p	C_T (ug/L)	C_d (ug/L)	C_p (ug/L)	DRBC SQOs - Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)
TCL VOCs	**95% UCL**	**95% UCL**	**Average**													
Methylene Chloride[1]	0.24	0.034	ND	3,000	0.11	0.33	1.4	25	0.77	0.998	0.002	150	150	0.34	-	-
Toluene[2]	0.22	0.041	0.20	3,000	0.14	0.43	2.1	130	3.95	0.988	0.01	37	36	0.43	-	-
Pesticides																
4,4'-DDD[1]	0.0032	0.0028	ND	3,000	0.0025	0.0074	5.2	151,000	776	0.300	0.700	0.011	**0.0032**	0.0074	**1.1**	**0.001**
4,4'-DDE[1]	0.011	0.0048	ND	3,000	0.0066	0.020	4.7	50,000	579	0.365	0.635	0.031	**0.011**	0.020	**1.1**	**0.001**
4,4'-DDT[1]	ND	0.0018	ND	3,000	0.00074	0.0022	5.2	151,000	776	0.300	0.700	0.0032	0.0010	0.0022	**1.1**	**0.001**
Heptachlor[1]	ND	0.00098	ND	3,000	0.00040	0.0012	4.3	21,900	390	0.461	0.539	0.0022	0.0010	0.0012	**0.52**	**0.0038**
Polychlorinated Biphenyls (PCBs), Dioxins, and Furans																
2,3,7,8-TCDD[1]	1.61E-05	3.10E-07	2.66E-08	3,000	6.71E-06	2.01E-05	6.80	6,310,000	929	0.264	0.736	0.0000273	0.00000722	0.0000201	-	-
Total PCBs[2]	0.963	0.000893	0.0000154	3,000	0.394	1.18	5.21	162,000	785	0.298	0.702	1.68	**0.501**	1.18	**1.0**	**0.014**
PAHs for Strata A and B, TCL SVOCs for Stratum C																
1-Methylnaphthalene	0.036	0.00085	NA	3,000	0.015	0.045	NVF								-	-
2-Methylnaphthalene[1]	0.069	0.0016	0.048	3,000	0.037	0.11	3.4	2,500	70.6	0.825	0.175	0.64	0.53	0.11	-	-
4-Methylphenol	NA	NA	0.048	3,000	0.0086	0.026	1.7	49	1.49	0.996	0.004	5.8	5.7	0.026	-	-
Acenaphthene[2]	0.034	0.0011	0.026	3,000	0.019	0.057	3.9	7,100	176	0.654	0.346	0.17	0.11	0.057	-	-
Acenaphthylene	0.065	0.0010	0.029	3,000	0.032	0.096	NVF								-	-
Anthracene[1]	0.10	0.0014	0.11	3,000	0.060	0.18	4.2	14,000	293	0.532	0.468	0.39	0.21	0.18	-	-
Benzo[a]anthracene[2]	0.32	0.0054	0.099	3,000	0.15	0.46	6.1	1,400,000	913	0.267	0.733	0.62	0.17	0.46	-	-
Benzo[a]pyrene[2]	0.32	0.0055	0.072	3,000	0.14	0.43	6.0	1,000,000	906	0.269	0.731	0.59	0.16	0.43	-	-
Benzo[b]fluoranthene[2]	0.24	0.0052	0.086	3,000	0.11	0.34	5.7	550,000	884	0.274	0.726	0.47	0.13	0.34	-	-
Benzo[e]pyrene	0.21	0.0046	NA	3,000	0.089	0.27	NVF								-	-
Benzo[g,h,i]perylene	0.14	0.0028	0.062	3,000	0.069	0.21	NVF								-	-
Benzo[k]fluoranthene[2]	0.25	0.0047	0.042	3,000	0.11	0.33	5.7	550,000	884	0.274	0.726	0.45	0.12	0.33	-	-
Bis(2-ethylhexyl) phthalate	NA	NA	0.041	3,000	0.0073	0.022	6.0	1,000,000	906	0.269	0.731	0.030	0.0081	0.022	-	-
Butyl benzyl phthalate	NA	NA	0.014	3,000	0.0025	0.0075	NVF								-	-
Chrysene[2]	0.32	0.0066	0.097	3,000	0.15	0.45	5.3	200,000	810	0.292	0.708	0.63	0.18	0.45	-	-
Dibenz(a,h)anthracene	0.059	0.0010	0.031	3,000	0.030	0.091	NVF								-	-
Dibenzofuran	NA	NA	0.041	3,000	0.0072	0.022	5.6	410,000	869	0.277	0.723	0.030	0.0083	0.022		-
Fluoranthene[2]	0.42	0.0084	0.11	3,000	0.19	0.58	4.6	38,000	517	0.392	0.608	0.96	0.38	0.58	-	-
Fluorene[2]	0.060	0.0011	0.034	3,000	0.031	0.093	3.9	7,200	178	0.652	0.348	0.27	0.17	0.093	-	-
Indeno[1,2,3-cd]pyrene[2]	0.14	0.0026	0.059	3,000	0.069	0.21	7.5	34,000,000	932	0.263	0.737	0.28	0.074	0.21	-	-
Naphthalene[1]	0.14	0.0022	0.085	3,000	0.071	0.21	3.0	930	27.6	0.924	0.076	2.8	2.6	0.21	-	-
Perylene	0.57	0.015	NA	3,000	0.24	0.71	NVF								-	-
Phenanthrene[2]	0.31	0.0062	0.11	3,000	0.15	0.44	4.2	14,000	293	0.532	0.468	0.94	0.50	0.44	-	-
Pyrene[2]	0.48	0.0099	0.12	3,000	0.22	0.67	4.6	38,000	517	0.392	0.608	1.1	0.43	0.67	-	-

Table 11.1.1 CDF Effluent Water Quality Evaluation at TSS Average Discharge Limit
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Sample Identification	$C_{sed,A}$ (mg/kg)	$C_{sed,B}$ (mg/kg)	$C_{sed,C}$ (mg/kg)	Log K_d (L/kg)	TSS (mg/L)	f_d	f_p	$C_{sedA,B,C}$ (mg/kg)	C_T (ug/L)	C_d (ug/L)	C_p (ug/L)	DRBC SQOs - Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs Fresh Chronic Aquatic Life Criteria (ug/L)	Notes on DRBC SQOs
TAL Inorganics	**95% UCL**	**95% UCL**	**Average**											
Aluminum	16,800	8,490	8,770	Not Needed	3,000			11,900	35,700	15.5	35,700	750	87	total recoverable basis
Antimony	0.662	0.911	ND	3.6	3,000	0.0773	0.923	0.647	1.94	0.150	1.79	-	-	
Arsenic	29.7	12.7	10.8	2.4	3,000	0.570	0.430	19.3	58.0	33.1	24.9	340	150	total dissolved form
Barium	105	49.9	45.3	2.5	3,000	0.513	0.487	71.4	214	110	104	-	-	
Beryllium	1.04	0.480	0.670	2.8	3,000	0.346	0.654	0.744	2.23	0.772	1.46	-	-	
Cadmium	0.848	0.498	ND	3.3	3,000	0.143	0.857	0.552	1.66	**0.237**	1.42	1.0	0.141	total dissolved form
Calcium	2,770	1,120	966	NVF	3,000			1,770	5,310			-	-	
Chromium[5]	92.6	41.5	50.1	5.1	3,000	0.00264	0.997	63.9	192	0.506	191	390	19	total dissolved form
Cobalt	16.6	7.42	7.34	3.1	3,000	0.209	0.791	11.2	33.5	7.00	26.5	-	-	
Copper	48.0	33.7	18.2	3.5	3,000	0.0954	0.905	36.8	110	**10.5**	100	9.6	6.5	total dissolved form
Iron	33,900	15,800	24,700	NVF	3,000			24,800	74,400			-	-	total recoverable basis
Lead	76.3	50.2	26.9	4.6	3,000	0.00830	0.992	56.7	170	1.41	169	38	5.4	total dissolved form
Magnesium	5,470	2,610	1,920	NVF	3,000			3,660	11,000			-	-	
Manganese	997	319	423	NVF	3,000			615	1,840			-	-	
Mercury	0.316	0.0705	0.126	4.9	3,000	0.00418	0.996	0.181	0.543	0.00227	0.540	1.4	0.77	total dissolved form
Nickel	32.6	14.6	12.6	3.9	3,000	0.0403	0.960	21.6	64.8	2.61	62.2	308	34	total dissolved form
Potassium	2,080	1,020	812	NVF	3,000			1,420	4,260			-	-	
Selenium[6]	0.876	0.654	ND	3.6	3,000	0.0773	0.923	0.628	1.88	0.146	1.74	20	5	total recoverable basis
Silver (ND)	1.05	0.750	ND	3.6	3,000	0.0773	0.923	0.740	2.22	0.172	2.05	1.9	NA	total dissolved form
Sodium	451	199	190	NVF	3,000			300	901			-	-	
Thallium	0.278	0.167	ND	1.3	3,000	0.944	0.0565	0.183	0.548	0.517	0.0310	-	-	
Vanadium	46.9	30.9	46.6	2.1	3,000	0.726	0.274	40.2	121	87.6	33.1	-	-	
Zinc	236	95.4	88.0	4.1	3,000	0.0258	0.974	151	454	11.7	442	88	88	total dissolved form
Total Cyanide (mg/kg)[7]	0.129	0.167	0.0850	3.0	3,000	0.250	0.750	0.137	0.411	0.103	0.308	22	5.2	free cyanide based on lowest pH in receiving waters

Notes:
mg/kg: milligrams per kilogram
ug/L: microgram per liter
TCL VOCs: Target Compound List Volatile Organic Compounds
TCL SVOCs: Target Compound List Semivolatile Organic Compounds
TAL: Target Analyte List
PAHs: Poly Aromatic Hydrocarbons
= not sufficient information to calculate
Data is compared to acute (one-hour average) as well as chronic (4-day time period) stream quality objectives (SQOs) for freshwater aquatic life (DRBC Water Quality Regulations, 2013).
highlighted concentrations were found above acute DRBC SQOs at TSS concentration in slurry
highlighted concentrations were found above chronic DRBC SQOs at TSS concentration in slurry
NA: sample not analyzed for the specified substance
ND: substance not detected
NVF: no octanol-water partitioning coefficient (Log K_{oc}) value found
95% UCL: 95% upper confidence limit
1. Log Koc value from Agency for Toxic Substances and Disease Registry (ATSDR) database Toxicological information located here: https://www.atsdr.cdc.gov/toxprofiles/tp.asp?id=72&tid=19.
SVOC and dioxin Log Koc values are from ATSDR Chemical and Physical Information for each compound.
2. Volatile Organic Carbons, Poly Aromatic Hydrocarbons or Semivolatile Organic Carbons, Polychlorinated Bipheyl log Koc values from Delaware Risk=Based Corrective Action Program (DERBCAP), (2000) - for soil to groundwater.
3. Metals Acute Aquatic Life Criterion assume a hardness of 74 mg/L as per the DRBC Water Quality Regulations, Article 4: Application of Standards (p.108, 2013).
4. Log (K_d) values derived from the median values in Table 5 of the following reference: Ambrose, R. 2005. Partition Coefficients For Metals In Surface Water, Soil, and Waste. U.S. Environmental Protection Agency, Office of Research and Development, Washington, DC (p.3-15)
5. Used trivalent chromium (Cr III) log K_d value.
6. Used Se (IV) log K_d value
7. Total cyanide Log K_d value is for soil to water partitioning.

Abbreviations:
TSS: total suspended solids concentration
C_{pw}: concentration in pore water
$C_{sed,A}$: concentration in stratum A sediment
$C_{sed,B}$: concentration in stratum B sediment
$C_{sed,C}$: concentration in stratum C sediment
$C_{sed,A,B,C}$: composited concentration in strata A, B, and C sediment
Log K_{oc} or K_{oc}: octanol-water partitioning coefficient
K_{eq}: equilibrium partitioning coefficient
mg/kg : milligram per kilogram
L/kg : liters per kilogram
ug/L : microgram per liter
f_d : dissolved fraction of substance
f_p : fraction of substance sorbed to particulate
C_T : total concentration of substance
C_d : dissolved concentration of substance
C_p : concentration of substance sorbed to particulate

Table 11.1.2 CDF Effluent Water Quality Evaluation at TSS Average Discharge Limit
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Dredge Cycle 1

Sample Identification	Dissolved Concentration from Sediment to Water (95% UCL/Average)	Particulate Concentration from Sediment to Water (95% UCL/Average)	Concentration in Water (MEDIAN)	Concentration in Slurry	Effluent Concentration from CDF	DRBC Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)
TCL VOCs	C_d (ug/L)	C_p (ug/L)	(ug/L)	(ug/L)	(ug/L)		
Methylene Chloride	150	0.34	NA	150	150	-	-
Toluene	36	0.43	NA	36	36	-	-
Pesticides							
4,4'-DDD	0.0032	0.0074	NA	0.0032	**0.0032**	1.1	**0.001**
4,4'-DDE	0.011	0.020	NA	0.011	**0.011**	1.1	**0.001**
4,4'-DDT	0.0010	0.0022	NA	0.0010	0.0010	1.1	**0.001**
Heptachlor	0.0010	0.0012	NA	0.0010	0.0010	0.52	**0.0038**
Polychlorinated Biphenyls (PCBs), Dioxins, and Furans							
2,3,7,8-TCDD	0.00000722	0.0000201	NA	0.00000722	0.0000112	-	-
Total PCBs	0.501	1.18	0.00550	0.507	**0.743**	1.0	**0.014**
PAHs for Strata A and B, TCL SVOCs for Stratum C							
1-Methylnaphthalene			0.0027	0.0027	0.0027	-	-
2-Methylnaphthalene	0.53	0.11	0.0037	0.53	0.53	-	-
4-Methylphenol	5.7	0.026	NA	5.7	5.7	-	-
Acenaphthene	0.11	0.057	ND	0.11	0.11	-	-
Acenaphthylene			ND	-		-	-
Anthracene	0.21	0.18	0.0057	0.21	0.21	-	-
Benzo[a]anthracene	0.17	0.46	0.0075	0.17	0.17	-	-
Benzo[a]pyrene	0.16	0.43	0.0081	0.17	0.17	-	-
Benzo[b]fluoranthene	0.13	0.34	0.020	0.15	0.15	-	-
Benzo[e]pyrene			0.012	0.012	0.012	-	-
Benzo[g,h,i]perylene			0.0081	0.0081	0.0081	-	-
Benzo[k]fluoranthene	0.12	0.33	0.015	0.14	0.14	-	-
Bis(2-ethylhexyl) phthalate	0.0081	0.022	NA	0.0081	0.0081	-	-
Butyl benzyl phthalate			NA	-		-	-
Chrysene	0.18	0.45	0.025	0.21	0.21	-	-
Dibenz(a,h)anthracene			0.0063	0.0063	0.0063	-	-
Dibenzofuran	0.0083	0.022	NA	0.0083	0.0083		-
Fluoranthene	0.38	0.58	0.045	0.42	0.42	-	-
Fluorene	0.17	0.093	ND	0.17	0.17	-	-
Indeno[1,2,3-cd]pyrene	0.074	0.21	0.0076	0.082	0.082	-	-
Naphthalene	2.6	0.21	0.0049	2.6	2.6	-	-
Perylene			0.0028	0.0028	0.0028	-	-
Phenanthrene	0.50	0.44	0.030	0.53	0.53	-	-
Pyrene	0.43	0.67	0.036	0.47	0.47	-	-

Table 11.1.2 CDF Effluent Water Quality Evaluation at TSS Average Discharge Limit
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Sample Identification	Stratum A, B, and C Concentration from Sediment to Water (95% UCL)	Cp (ug/L)	Concentration in Water (MEDIAN)	Concentration in Slurry	Effluent Concentration from CDF	DRBC Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)	Notes on DRBC SQOs
TAL Inorganics								
Aluminum	15.5	35,700	885	900	**8,040**	**750**	**87**	total recoverable basis
Antimony	0.150	1.79	0.505	0.655	0.655	-	-	
Arsenic	33.1	24.9	1.55	34.6	34.6	**340**	**150**	total dissolved form
Barium	110	104	35.7	146	146	-	-	
Beryllium	0.772	1.46	ND	0.772	0.772	-	-	
Cadmium	0.237	1.42	ND	0.237	**0.237**	**1.0**	**0.141**	total dissolved form
Calcium			18,700	18,700	18,700	-	-	
Chromium	0.506	191	3.60	4.11	4.11	**390**	**19**	total dissolved form
Cobalt	7.00	26.5	1.60	8.60	8.60	-	-	
Copper	10.5	100	6.25	16.8	**16.8**	**9.6**	**6.5**	total dissolved form
Iron			1,640	1,640	1,640	-	-	total recoverable basis
Lead	1.41	169	3.35	4.76	4.76	**38.0**	**5.4**	total dissolved form
Magnesium			7,420	7,420	7,420	-	-	
Manganese			141	141	141	-	-	
Mercury	0.00227	0.540	ND	0.00227	0.00227	**1.4**	**0.77**	total dissolved form
Nickel	2.61	62.2	3.10	5.71	5.71	**308**	**34**	total dissolved form
Potassium			3,150	3,150	3,150	-	-	
Selenium	0.146	1.74	ND	0.146	0.146	**20**	**5**	total recoverable basis
Silver (ND)	0.172	2.05	ND	0.172	0.172	**1.9**	**NA**	total dissolved form
Sodium			26,300	26,300	26,300	-	-	
Thallium	0.517	0.0310	ND	0.517	0.517	-	-	
Vanadium	87.6	33.1	5.00	92.6	92.6	-	-	
Zinc	11.7	442	18.1	29.8	29.8	**88**	**88**	total dissolved form
Total Cyanide (mg/kg)	0.103	0.308	ND	0.103	0.103	**22**	**5.2**	free cyanide based on lowest pH in receiving waters

Notes:
ug/L: microgram per liter
NA: sample not analyzed for the specified substance
ND: substance not detected
NVF: no Log K_{oc} value found
95% UCL: 95% upper confidence limit
C_d : dissolved concentration of substance
TCL VOCs: Target Compound List Volatile Organic Compounds
TCL SVOCs: Target Compound List Semivolatile Organic Compounds
TAL: Target Analyte List
PAHs: Poly Aromatic Hydrocarbons
= not sufficient information to calculate
Data is compared to acute (one-hour average) as well as chronic (4-day time period) stream quality objectives (SQOs) for freshwater aquatic life (Delaware River Basin Commission Water Quality Regulations, 2013).
highlighted concentrations were found above acute DRBC SQOs at TSS concentration in slurry
highlighted concentrations were found above chronic DRBC SQOs at TSS concentration in slurry
SQOs are derived from DRBC's Zone 5 Water Quality Regulations (2013).
Total recoverable basis is used interchangably by the US Environmental Protection Agency (USEPA) with total metals (1998).

Duffield Associates, Inc.
Project No. 11139.LH

Table 11.2.1 CDF Effluent Water Quality Evaluation at TSS Average Discharge Limit
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Dredge Cycle 2

Parameters	Units	Comments
Dissolved Phase Concentration (C_d)	ug/L	using standard equilibrium partition coefficients
Particulate Concentration (C_P)	ug/L	using standard equilibrium partition coefficients

Average TSS Limit = 3,000 mg/L

See report Section XVI for calculations.

Sample Identification	$C_{sed,C}$ (mg/kg)	Average TSS Limit (mg/L)	C_{pw} (ug/L)	Log K_{oc} (L/kg)	Koc	Keq (L/kg)	f_d	f_p	C_T (ug/L)	C_d (ug/L)	C_p (ug/L)	DRBC SQOs - Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)
TCL VOCs	Average												
Methylene Chloride[1]	ND	3,000	ND	1.4	25	0.713	0.998	0.002				-	-
Toluene[2]	0.20	3,000	0.61	2.1	130	3.68	0.989	0.011	56	55	0.61	-	-
Pesticides													
4,4'-DDD[1]	ND	3,000	ND	5.18	151,000	766	0.303	0.697				1.1	**0.001**
4,4'-DDE[1]	ND	3,000	ND	4.70	50,100	564	0.372	0.628				1.1	**0.001**
4,4'-DDT[1]	ND	3,000	ND	5.18	151,000	766	0.303	0.697				1.1	**0.001**
Heptachlor	ND	3,000	ND	4.53	33,900	474	0.413	0.587				0.52	**0.0038**
Polychlorinated Biphenyls (PCBs), Dioxins, and Furans													
2,3,7,8-TCDD[1]	0.0000000266	3,000	0.0000000797	6.80	6,310,000	928	0.264	0.736	0.000000108	0.0000000286	0.0000000797	-	-
Total PCBs[2]	0.000522	3,000	0.00157	5.21	162,000	776	0.301	0.699	0.00224	0.000673	0.00157	-	**0.014**
TCL SVOCs for Stratum C													
1-Methylnaphthalene	NA	3,000	ND	NVF								-	-
2-Methylnaphthalene[1]	0.048	3,000	0.14	3.39	2,450	64.7	0.837	0.163	0.89	0.74	0.14	-	-
4-Methylphenol	0.069	3,000	0.21	1.69	49.0	1.39	0.996	0.004	50	49	0.21	-	-
Acenaphthene[2]	0.026	3,000	0.078	3.85	7,080	165	0.668	0.332	0.24	0.16	0.078	-	-
Acenaphthylene	0.029	3,000	0.087	NVF								-	-
Anthracene[1]	0.11	3,000	0.32	4.15	14,100	280	0.543	0.457	0.70	0.38	0.32	-	-
Benzo[a]anthracene[2]	0.099	3,000	0.30	6.14	1,380,000	912	0.268	0.732	0.41	0.11	0.30	-	-
Benzo[a]pyrene[2]	0.072	3,000	0.22	6.01	1,020,000	904	0.269	0.731	0.30	0.080	0.22	-	-
Benzo[b]fluoranthene[2]	0.086	3,000	0.26	5.74	550,000	881	0.275	0.725	0.35	0.10	0.26	-	-
Benzo[e]pyrene	NA	3,000	ND	NVF								-	-
Benzo[g,h,i]perylene	0.062	3,000	0.18	NVF								-	-
Benzo[k]fluoranthene[2]	0.042	3,000	0.12	5.74	550,000	881	0.275	0.725	0.17	0.047	0.12	-	-
Bis(2-ethylhexyl) phthalate	0.041	3,000	0.12	6.00	1,000,000	904	0.269	0.731	0.17	0.045	0.12	-	-
Butyl benzyl phthalate	0.014	3,000	0.042	NVF								-	-
Chrysene[2]	0.097	3,000	0.29	5.3	200,000	802	0.294	0.706	0.41	0.12	0.29	-	-
Dibenz(a,h)anthracene	0.031	3,000	0.093	NVF								-	-
Dibenzofuran	0.041	3,000	0.12	5.61	407,000	864	0.278	0.722	0.17	0.047	0.12		-
Fluoranthene[2]	0.11	3,000	0.33	4.58	38,000	500	0.400	0.600	0.55	0.22	0.33	-	-
Fluorene[2]	0.034	3,000	0.10	3.86	7,200	168	0.665	0.335	0.30	0.20	0.10	-	-
Indeno[1,2,3-cd]pyrene[2]	0.059	3,000	0.18	7.53	33,900,000	932	0.263	0.737	0.24	0.063	0.18	-	-
Naphthalene[1]	0.085	3,000	0.25	2.97	933	25.8	0.928	0.072	3.5	3.3	0.25	-	-
Perylene	NA	3,000	NA	NVF								-	-
Phenanthrene[2]	0.11	3,000	0.32	4.15	14,100	280	0.543	0.457	0.71	0.39	0.32	-	-
Pyrene[2]	0.12	3,000	0.36	4.58	38,000	500	0.400	0.600	0.60	0.24	0.36	-	-

Table 11.2.1 CDF Effluent Water Quality Evaluation at TSS Average Discharge Limit
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Sample Identification	$C_{sed,C}$ (mg/kg)	Log K_d (L/kg)	TSS (mg/L)	f_d	f_p	C_T (ug/L)	C_d (ug/L)	C_p (ug/L)	DRBC SQOs - Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)	Notes on DRBC SQOs
TAL Inorganics	**Average**										
Aluminum	8,770	Not Needed	3,000			26,300	15.5	26,300	**750**	**87**	total recoverable basis
Antimony	ND	3.6	3,000	0.0773	0.923				-	-	
Arsenic	10.8	2.4	3,000	0.570	0.430	32.5	18.5	14.0	**340**	**150**	total dissolved form
Barium	45.3	2.5	3,000	0.513	0.487	136	69.8	66.2	-	-	
Beryllium	0.670	2.8	3,000	0.346	0.654	2.01	0.695	1.32	-	-	
Cadmium	ND	3.3	3,000	0.143	0.857				**1.0**	**0.141**	total dissolved form
Calcium	966	NVF	3,000			2,900			-	-	
Chromium[5]	50.1	5.1	3,000	0.00264	0.997	150	0.397	150	**390**	**19**	total dissolved form
Cobalt	7.34	3.1	3,000	0.209	0.791	22.0	4.61	17.4	-	-	
Copper	18.2	3.5	3,000	0.0954	0.905	54.5	5.20	49.3	**9.6**	**6.5**	total dissolved form
Iron	24,700	NVF	3,000			74,100			-	-	total recoverable basis
Lead	26.9	4.6	3,000	0.00830	0.992	80.7	0.670	80.0	**38.0**	**5.4**	total dissolved form
Magnesium	1,920	NVF	3,000			5,760			-	-	
Manganese	423	NVF	3,000			1,270			-	-	
Mercury	0.126	4.9	3,000	0.0042	0.996	0.379	0.00158	0.377	**1.4**	**0.77**	total dissolved form
Nickel	12.6	3.9	3,000	0.0403	0.960	37.8	1.52	36.3	**308**	**34**	total dissolved form
Potassium	812	NVF	3,000			2,440			-	-	
Selenium[6]	ND	3.6	3,000	0.0773	0.923				**20**	**5**	total recoverable basis
Silver (ND)	ND	3.6	3,000	0.0773	0.923				**1.9**	**NA**	total dissolved form
Sodium	190	NVF	3,000			569			-	-	
Thallium	ND	1.3	3,000	0.944	0.0565				-	-	
Vanadium	46.6	2.1	3,000	0.726	0.274	140	102	38.3	-	-	
Zinc	88.0	4.1	3,000	0.0258	0.974	264	6.81	257	**88**	**88**	total dissolved form
Total Cyanide (mg/kg)[7]	0.0850	3.0	3,000	0.250	0.750	0.255	0.0638	0.191	**22**	**5.2**	free cyanide based on lowest pH in receiving waters

Notes:
mg/kg: milligrams per kilogram
ug/L: microgram per liter
TCL VOCs: Target Compound List Volatile Organic Compounds
TCL SVOCs: Target Compound List Semivolatile Organic Compounds
TAL: Target Analyte List
PAHs: Poly Aromatic Hydrocarbons
= not sufficient information to calculate
Data is compared to acute (one-hour average) as well as chronic (4-day time period) stream quality objectives (SQOs) for freshwater aquatic life (DRBC Water Quality Regulations, 2013).
highlighted concentrations were found above acute DRBC SQOs at TSS concentration in slurry
highlighted concentrations were found above chronic DRBC SQOs at TSS concentration in slurry
NA: sample not analyzed for the specified substance
ND: substance not detected
NVF: no octanol-water partitioning coefficient (Log K_{oc}) value found
95% UCL: 95% upper confidence limit
1. Log Koc value from Agency for Toxic Substances and Disease Registry (ATSDR) database Toxicological information located here: https://www.atsdr.cdc.gov/toxprofiles/tp.asp?id=72&tid=19.
SVOC and dioxin Log Koc values are from ATSDR Chemical and Physical Information for each compound
2. Volatile Organic Carbons, Poly Aromatic Hydrocarbons or Semivolatile Organic Carbons, Polychlorinated Biphenyl log Koc values from Delaware Risk=Based Corrective Action Program (DERBCAP), (2000) - for soil to groundwater.
3. Metals Acute Aquatic Life Criterion assume a hardness of 74 mg/L as per the DRBC Water Quality Regulations, Article 4: Application of Standards (p.108, 2013).
4. Log (K_d) values derived from the median values in Table 5 of the following reference: Ambrose, R. 2005. Partition Coefficients For Metals In Surface Water, Soil, and Waste. U.S. Environmental Protection Agency, Office of Research and Development, Washington, DC (p.3-15)
5. Used trivalent chromium (Cr III) log K_d value.
6. Used Se (IV) log K_d value
7. Total cyanide Log K_d value is for soil to water partitioning.

Abbreviations:
TSS: total suspended solids concentration
C_{pw} : concentration in pore water
$C_{sed,C}$: concentration in stratum C sediment
Log K_{oc} or K_{oc} : octanol-water partitioning coefficient
K_{eq} : equilibrium partitioning coefficient
mg/kg : milligram per kilogram
L/kg : liters per kilogram
ug/L : microgram per liter
f_d : dissolved fraction of substance
f_p : fraction of substance sorbed to particulate
C_T : total concentration of substance
C_d : dissolved concentration of substance
C_p : concentration of substance sorbed to particulate

Table 11.2.2 CDF Effluent Water Quality Evaluation at TSS Average Discharge Limit
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Dredge Cycle 2

Sample Identification	Dissolved Concentration from Sediment to Water (95% UCL/Average)	Particulate Concentration from Sediment to Water (95% UCL/Average)	Concentration in Water (MEDIAN)	Concentration in Slurry	Effluent Concentration from CDF	DRBC Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)
TCL VOCs	C_d (ug/L)	C_p (ug/L)	(ug/L)	(ug/L)	(ug/L)		
Methylene Chloride			NA			-	-
Toluene	55	0.61	NA	55	55	-	-
Pesticides							
4,4'-DDD			NA			1.1	0.001
4,4'-DDE			NA			1.1	0.001
4,4'-DDT			NA			1.1	0.001
Heptachlor			NA			0.52	0.0038
Polychlorinated Biphenyls (PCBs), Dioxins, and Furans							
2,3,7,8-TCDD	0.0000000286	0.0000000797	NA	-		-	-
Total PCBs	0.000673	0.00157	0.00550	0.006173	0.006173	1.0	0.014
TCL SVOCs for Stratum C							
1-Methylnaphthalene			0.0027	0.0027	0.0027	-	-
2-Methylnaphthalene	0.74	0.14	0.0037	0.75	0.75	-	-
4-Methylphenol	49	0.21	NA			-	-
Acenaphthene	0.16	0.078	ND	0.2	0.2	-	-
Acenaphthylene			ND	-		-	-
Anthracene	0.38	0.32	0.0057	0.38	0.38	-	-
Benzo[a]anthracene	0.11	0.30	0.0075	0.12	0.12	-	-
Benzo[a]pyrene	0.080	0.22	0.0081	0.088	0.088	-	-
Benzo[b]fluoranthene	0.097	0.26	0.020	0.12	0.12	-	-
Benzo[e]pyrene			0.012	0.012	0.012	-	-
Benzo[g,h,i]perylene			0.008	0.0081	0.0081	-	-
Benzo[k]fluoranthene	0.047	0.12	0.015	0.062	0.062	-	-
Bis(2-ethylhexyl) phthalate	0.045	0.12	NA			-	-
Chrysene	0.12	0.29	0.025	0.15	0.15	-	-
Dibenz(a,h)anthracene			0.0063	0.0063	0.0063	-	-
Dibenzofuran	0.047	0.12	NA			-	-
Fluoranthene	0.22	0.33	0.045	0.26	0.26	-	-
Fluorene	0.20	0.10	ND	0.20	0.20	-	-
Indeno[1,2,3-cd]pyrene	0.063	0.18	0.0076	0.071	0.071	-	-
Naphthalene	3.3	0.25	0.0049	3.3	3.3	-	-
Perylene			0.0028	0.0028	0.0028	-	-

Table 11.2.2 CDF Effluent Water Quality Evaluation at TSS Average Discharge Limit
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Sample Identification	Dissolved Concentration from Sediment to Water (95% UCL/Average)	Particulate Concentration from Sediment to Water (95% UCL/Average)	Concentration in Water (MEDIAN)	Concentration in Slurry	Effluent Concentration from CDF	DRBC Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)	Notes on DRBC SQOs
TAL Inorganics								
Aluminum	15.5	26,300	885	900	**6,160**	750	87	total recoverable basis
Antimony			0.505	0.505	0.505	-	-	
Arsenic	18.5	14.0	1.55	20.1	20.1	340	150	total dissolved form
Barium	69.8	66.2	36	105	105	-	-	
Beryllium	0.695	1.32	ND	0.695	0.695	-	-	
Cadmium			ND			1.0	0.141	total dissolved form
Calcium			18,650	18,650	18,650	-	-	
Chromium (trivalent)	0.397	150	3.60	4.00	4.00	390	19	total dissolved form
Cobalt	4.61	17.4	1.60	6.21	6.21	-	-	
Copper	5.20	49.3	6.25	11.5	11.5	9.6	6.5	total dissolved form
Iron			1,640	1,640	1,640	-	-	total recoverable basis
Lead	0.670	80.0	3.35	4.02	4.02	38.0	5.4	total dissolved form
Magnesium			7,420	7,420	7,420	-	-	
Manganese			141	141	141	-	-	
Mercury	0.00158	0.377	ND	0.00158	0.00158	1.4	0.77	total dissolved form
Nickel	1.52	36.3	3.10	4.62	4.62	308	34	total dissolved form
Potassium			3,150	3,150	3,150	-	-	
Selenium			ND			20	5	total recoverable basis
Silver (ND)			ND			1.9	NA	total dissolved form
Sodium			26,300	26,300	26,300	-	-	
Thallium			ND			-	-	
Vanadium	102	38.3	5.00	107	107	-	-	
Zinc	6.81	257	18	24.9	24.9	88	88	total dissolved form
Total Cyanide (mg/kg)	0.0638	0.191	ND	0.0638	0.0638	22	5.2	free cyanide based on lowest pH in receiving waters

Notes:
ug/L: microgram per liter
NA: sample not analyzed for the specified substance
ND: substance not detected
NVF: no Log K_{oc} value found
95% UCL: 95% upper confidence limit
TCL VOCs: Target Compound List Volatile Organic Compounds
TCL SVOCs: Target Compound List Semivolatile Organic Compounds
TAL: Target Analyte List
PAHs: Poly Aromatic Hydrocarbons
= not sufficient information to calculate
Data is compared to acute (one-hour average) as well as chronic (4-day time period) stream quality objectives (SQOs) for freshwater aquatic life (Delaware River Basin Commission Water Quality Regulations, 2013).
highlighted concentrations were found above acute DRBC SQOs at TSS concentration in slurry
highlighted concentrations were found above chronic DRBC SQOs at TSS concentration in slurry
SQOs are derived from DRBC's Zone 5 Water Quality Regulations (2013).
Total recoverable basis is used interchangably by the US Environmental Protection Agency (USEPA) with total metals (1998).

Table 11.3.1 CDF Effluent Water Quality Evaluation at TSS Average Discharge Limit
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Dredge Cycle 3

Parameters	Units	Comments
Dissolved Phase Concentration (C_d)	mg/kg	using standard equilibrium partition coefficients
Particulate Concentration (C_p)	mg/kg	
Average TSS Limit =	3,000	mg/L

See report Section XIV for calculations

Sample Identification	$C_{sed,C}$ (mg/kg)	Average TSS Limit (mg/L)	C_{pw} (ug/L)	Log K_{oc} (L/kg)	Koc	Keq (L/kg)	f_d	f_p	C_T (ug/L)	C_d (ug/L)	C_p (ug/L)	DRBC SWQ Standard - Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)
TCL VOCs	**Average**												
Methylene Chloride[1]	ND	3,000		1.4	25	0.713	0.998	0.002				-	-
Toluene[2]	0.20	3,000	1	2.1	130	3.68	0.989	0.011	56	55	0.61	-	-
Pesticides													
4,4'-DDD[1]	ND	3,000		5.18	151,000	766	0.303	0.697				**1.1**	**0.001**
4,4'-DDE[1]	ND	3,000		4.70	50,100	564	0.372	0.628				**1.1**	**0.001**
4,4'-DDT[1]	ND	3,000		5.18	151,000	766	0.303	0.697				**1.1**	**0.001**
Heptachlor	ND	3,000		4.53	33,900	474	0.413	0.587				**0.52**	**0.0038**
Polychlorinated Biphenyls (PCBs), Dioxins, and Furans													
2,3,7,8-TCDD[1]	0.0000000266	3,000	0.0000000797	6.80	6,310,000	928	0.264	0.736	1.08E-07	2.86E-08	7.97E-08	-	-
Total PCBs[2]	0.000522	3,000	0.00157	5.21	162,000	776	0.301	0.699	0.00224	0.000673	0.00157	**1.0**	**0.014**
TCL SVOCs for Stratum C													
1-Methylnaphthalene	NA	3,000		NVF								-	-
2-Methylnaphthalene[1]	0.048	3,000	0.14	3.39	2,450	64.7	0.837	0.163	0.89	0.74	0.14	-	-
4-Methylphenol	0.069	3,000	0.21	1.69	49.0	1.39	0.996	0.004	50	49	0.21	-	-
Acenaphthene[2]	0.026	3,000	0.078	3.85	7,080	165	0.668	0.332	0.24	0.16	0.078	-	-
Acenaphthylene	0.029	3,000	0.087	NVF								-	-
Anthracene[1]	0.11	3,000	0.32	4.15	14,100	280	0.543	0.457	0.70	0.38	0.32	-	-
Benzo[a]anthracene[2]	0.10	3,000	0.30	6.14	1,380,000	912	0.268	0.732	0.41	0.11	0.30	-	-
Benzo[a]pyrene[2]	0.072	3,000	0.22	6.01	1,020,000	904	0.269	0.731	0.30	0.08	0.22	-	-
Benzo[b]fluoranthene[2]	0.086	3,000	0.26	5.74	550,000	881	0.275	0.725	0.35	0.10	0.26	-	-
Benzo[e]pyrene	NA	3,000		NVF								-	-
Benzo[g,h,i]perylene	0.062	3,000	0.18	NVF								-	-
Benzo[k]fluoranthene[2]	0.042	3,000	0.12	5.74	550,000	881	0.275	0.725	0.17	0.05	0.12	-	-
Bis(2-ethylhexyl) phthalate	0.041	3,000	0.12	6.00	1,000,000	904	0.269	0.731	0.17	0.05	0.12	-	-
Butyl benzyl phthalate	0.014	3,000	0.042	NVF								-	-
Chrysene[2]	0.097	3,000	0.29	5.3	200,000	802	0.294	0.706	0.41	0.12	0.29	-	-
Dibenz(a,h)anthracene	0.031	3,000	0.093	NVF								-	-
Dibenzofuran	0.041	3,000	0.12	5.61	407,000	864	0.278	0.722	0.17	0.05	0.12		-
Fluoranthene[2]	0.11	3,000	0.33	4.58	38,000	500	0.400	0.600	0.55	0.22	0.33	-	-
Fluorene[2]	0.034	3,000	0.10	3.86	7,200	168	0.665	0.335	0.30	0.20	0.10	-	-
Indeno[1,2,3-cd]pyrene[2]	0.059	3,000	0.18	7.53	33,900,000	932	0.263	0.737	0.24	0.06	0.18	-	-
Naphthalene[1]	0.085	3,000	0.25	2.97	933	25.8	0.928	0.072	3.5	3.3	0.25	-	-
Perylene	NA	3,000		NVF								-	-
Phenanthrene[2]	0.11	3,000	0.32	4.15	14,100	280	0.543	0.457	0.71	0.39	0.32	-	-
Pyrene[2]	0.12	3,000	0.36	4.58	38,000	500	0.400	0.600	0.60	0.24	0.36	-	-

Table 11.3.1 CDF Effluent Water Quality Evaluation at TSS Average Discharge Limit
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Sample Identification	$C_{sed,C}$ (mg/kg)	Log K_d (L/kg)	TSS (mg/L)	f_d	f_p	C_T (ug/L)	C_d (ug/L)	C_p (ug/L)	DRBC SWQ Standard - Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)	Notes on DRBC SQOs
TAL Inorganics	**Average**										
Aluminum	8,770	Not Needed	3,000			26,300	15.5	26,300	750	87	total recoverable basis
Antimony	ND	3.6	3,000	0.0773	0.923				-	-	
Arsenic	10.8	2.4	3,000	0.570	0.430	32.5	18.5	14.0	340	150	total dissolved form
Barium	45.3	2.5	3,000	0.513	0.487	136	69.8	66.2	-	-	
Beryllium	0.670	2.8	3,000	0.346	0.654	2.01	0.695	1.32	-	-	
Cadmium	ND	3.3	3,000	0.143	0.857				1.0	0.141	total dissolved form
Calcium	966	NVF	3,000			2,900			-	-	
Chromium[5]	50.1	5.1	3,000	0.00264	0.997	150	0.397	150	390	19	total dissolved form
Cobalt	7.34	3.1	3,000	0.209	0.791	22.0	4.61	17.4	-	-	
Copper	18.2	3.5	3,000	0.0954	0.905	54.5	5.20	49.3	9.6	6.5	total dissolved form
Iron	24,700	NVF	3,000			74,100			-	-	total recoverable basis
Lead	26.9	4.6	3,000	0.00830	0.992	80.7	0.670	80.0	38.0	5.4	total dissolved form
Magnesium	1,920	NVF	3,000			5,760			-	-	
Manganese	423	NVF	3,000			1,270			-	-	
Mercury	0.126	4.9	3,000	0.00418	0.996	0.379	0.00158	0.377	1.4	0.77	total dissolved form
Nickel	12.6	3.9	3,000	0.0403	0.960	37.8	1.52	36.3	308	34	total dissolved form
Potassium	812	NVF	3,000			2,440			-	-	
Selenium[6]	ND	3.6	3,000	0.0773	0.923				20	5	total recoverable basis
Silver (ND)	ND	3.6	3,000	0.0773	0.923				1.9	NA	total dissolved form
Sodium	190	NVF	3,000			569			-	-	
Thallium	ND	1.3	3,000	0.944	0.0565				-	-	
Vanadium	46.6	2.1	3,000	0.726	0.274	140	102	38.3	-	-	
Zinc	88.0	4.1	3,000	0.0258	0.974	264	6.81	257	88	88	total dissolved form
Total Cyanide (mg/kg)[7]	0.0850	3.0	3,000	0.250	0.750	0.255	0.0638	0.191	22	5.2	free cyanide based on lowest pH in receiving waters

Notes:
mg/kg: milligrams per kilogram
ug/L: microgram per liter
TCL VOCs: Target Compound List Volatile Organic Compounds
TCL SVOCs: Target Compound List Semivolatile Organic Compounds
TAL: Target Analyte List
PAHs: Poly Aromatic Hydrocarbons
= not sufficient information to calculate
Data is compared to acute (one-hour average) as well as chronic (4-day time period) stream quality objectives (SQOs) for freshwater aquatic life (DRBC Water Quality Regulations, 2013).
highlighted concentrations were found above acute DRBC SQOs at TSS concentration in slurry
highlighted concentrations were found above chronic DRBC SQOs at TSS concentration in slurry
NA: sample not analyzed for the specified substance
ND: substance not detected
NVF: no octanol-water partitioning coefficient (Log K_{oc}) value found
95% UCL: 95% upper confidence limit
1. Log Koc value from Agency for Toxic Substances and Disease Registry (ATSDR) database Toxicological information located here: https://www.atsdr.cdc.gov/toxprofiles/tp.asp?id=72&tid=19.
SVOC and dioxin Log Koc values are from ATSDR Chemical and Physical Information for each compound.
2. Volatile Organic Carbons, Poly Aromatic Hydrocarbons or Semivolatile Organic Carbons, Polychlorinated Bipheyl log Koc values from Delaware Risk=Based Corrective Action Program (DERBCAP), (2000) - for soil to groundwater.
3. Metals Acute Aquatic Life Criterion assume a hardness of 74 mg/L as per the DRBC Water Quality Regulations, Article 4: Application of Standards (p.108, 2013).
4. Log (K_d) values derived from the median values in Table 5 of the following reference: Ambrose, R. 2005. Partition Coefficients For Metals In Surface Water, Soil, and Waste. U.S. Environmental Protection Agency, Office of Research and Development, Washington, DC (p.3-15)
5. Used trivalent chromium (Cr III) log K_d value.
6. Used Se (IV) log K_d value
7. Total cyanide Log K_d value is for soil to water partitioning.

Abbreviations:
TSS: total suspended solids concentration
C_{pw}: concentration in pore water
$C_{sed,C}$: concentration in stratum C sediment
Log K_{oc} or K_{oc}: octanol-water partitioning coefficient
K_{eq}: equilibrium partitioning coefficient
mg/kg: milligram per kilogram
L/kg: liters per kilogram
ug/L: microgram per liter
f_d: dissolved fraction of substance
f_p: fraction of substance sorbed to particulate
C_T: total concentration of substance
C_d: dissolved concentration of substance
C_p: concentration of substance sorbed to particulate

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Project No. 11139.LH

Table 11.3.2 CDF Effluent Water Quality Evaluation at TSS Average Discharge Limit
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Sample Identification	Stratum C Concentration from Sediment to Water (Average)	Particulate Concentration from Sediment to Water (95% UCL/Average)	Concentration in Water (MEDIAN)	Concentration in Slurry	Effluent Concentration from CDF	DRBC Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)
TCL VOCs	C_d (ug/L)	C_p (ug/L)	(ug/L)	(ug/L)	(ug/L)		
Toluene	55	0.61	NA	55	55	-	-
Pesticides							
No detections						-	-
Polychlorinated Biphenyls (PCBs), Dioxins, and Furans							
2,3,7,8-TCDD	0.0000000286	0.0000000797	NA			-	-
Total PCBs	0.000673	0.00157	0.00550	0.006173	0.006173	**1.0**	**0.0140**
TCL SVOCs for Stratum C							
2-Methylnaphthalene[1]	0.74	0.14	0.0037	0.75	0.75	-	-
4-Methylphenol	49	0.21				-	-
Acenaphthene[2]	0.16	0.078	ND	0.16	0.16	-	-
Anthracene[1]	0.38	0.32	0.0057	0.38	0.38	-	-
Benzo[a]anthracene[2]	0.11	0.30	0.0075	0.12	0.12	-	-
Benzo[a]pyrene[2]	0.080	0.22	0.0081	0.088	0.088	-	-
Benzo[b]fluoranthene[2]	0.10	0.26	0.020	0.12	0.12	-	-
Benzo[k]fluoranthene[2]	0.047	0.12	0.015	0.062	0.062	-	-
Bis(2-ethylhexyl) phthalate	0.045	0.12					-
Chrysene[2]	0.12	0.29	0.025	0.15	0.15	-	-
Dibenzofuran	0.047	0.12				-	-
Fluoranthene[2]	0.22	0.33	0.045	0.26	0.26	-	-
Fluorene[2]	0.20	0.10	ND	0.20	0.20	-	-
Indeno[1,2,3-cd]pyrene[2]	0.063	0.18	0.0076	0.071	0.071	-	-
Naphthalene[1]	3.29	0.25	0.0049	3.3	3.3	-	-
Phenanthrene[2]	0.39	0.32	0.030	0.42	0.42	-	-
Pyrene[2]	0.24	0.36	0.036	0.28	0.28	-	-

Table 11.3.2 CDF Effluent Water Quality Evaluation at TSS Average Discharge Limit
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Sample Identification	Stratum C Concentration from Sediment to Water (Average)	Particulate Concentration from Sediment to Water (95% UCL/Average)	Concentration in Water (MEDIAN)	Concentration in Slurry	Effluent Concentration from CDF	DRBC Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)	Notes on DRBC SQOs
TAL Inorganics	C_d (ug/L)	C_p (ug/L)	(ug/L)	(ug/L)	(ug/L)			
Aluminum	15.5	26,300	885	900	6,160	750	87	total recoverable basis
Antimony			0.505	0.505	0.505	-	-	
Arsenic	18.5	14.0	1.55	20.1	20.1	340	150	total dissolved form
Beryllium	0.695	1.32	ND	0.695	0.695	-	-	
Cadmium			ND			1.0	0.141	total dissolved form
Calcium			18,700	18,700	18,700	-	-	
Chromium	0.397	150	3.60	4.00	4.00	390	19	total dissolved form
Cobalt	4.61	17.4	1.60	6.21	6.21	-	-	
Copper	5.20	49.3	6.25	11.5	11.5	9.6	6.5	total dissolved form
Iron			1,640	1,640	1,640	-	-	total recoverable basis
Manganese			141	141	141	-	-	
Selenium			ND			20	5	total recoverable basis
Sodium			26,300	26,300	26,300	-	-	
Thallium			ND			-	-	
Zinc	6.81	257	18.1	24.9	24.9	88	88	total dissolved form
Total Cyanide (mg/kg)	0.0170	0.00425	ND	0.0170	0.0170	22	5.2	free cyanide based on lowest pH in receiving waters

Notes:
ug/L: microgram per liter
NA: sample not analyzed for the specified substance
ND: substance not detected
NVF: no Log K_{oc} value found
95% UCL: 95% upper confidence limit
TCL VOCs: Target Compound List Volatile Organic Compounds
TCL SVOCs: Target Compound List Semivolatile Organic Compounds
TAL: Target Analyte List
PAHs: Poly Aromatic Hydrocarbons
= not sufficient information to calculate
Data is compared to acute (one-hour average) as well as chronic (4-day time period) stream quality objectives (SQOs) for freshwater aquatic life (Delaware River Basin Commission Water Quality Regulations, 2013).
highlighted concentrations were found above acute DRBC SQOs at TSS concentration in slurry
highlighted concentrations were found above chronic DRBC SQOs at TSS concentration in slurry
SQOs are derived from DRBC's Zone 5 Water Quality Regulations (2013).
Total recoverable basis is used interchangably by the US Environmental Protection Agency (USEPA) with total metals (1998).

Table 12.1.1 CDF Effluent Water Quality Evaluation at TSS Instantaneous Limit
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Dredge Cycle 1

Parameters	Units	Comments
Dissolved Phase Concentration (C_d)	mg/kg	using standard equilibrium partition coefficients
Instantaneous TSS Limit =	4,000	mg/L

See report Section XIV for calculations

Sample Identification	$C_{sed,A}$ (mg/kg)	$C_{sed,B}$ (mg/kg)	$C_{sed,C}$ (mg/kg)	Instant TSS Limit (mg/L)	$C_{sedA,B,C}$ (mg/kg)	C_{pw} (ug/L)	Log K_{oc} (L/kg)	Koc	Keq (L/kg)	f_d	f_p	C_T (ug/L)	C_d (ug/L)	C_p (ug/L)	DRBC SQOs - Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)
TCL VOCs	**95% UCL**	**95% UCL**	**Average**													
Methylene Chloride[1]	0.24	0.034	ND	4,000	0.11	0.45	1.4	25	0.766	0.997	0.003	150	150	0.46	-	-
Toluene[2]	0.22	0.041	0.20	4,000	0.14	0.58	2.1	130	3.95	0.984	0.016	37	37	0.58	-	-
Pesticides																
4,4'-DDD[1]	0.0032	0.0028	ND	4,000	0.0025	0.0098	5.2	151,000	608	0.29	0.709	0.014	**0.0040**	0.010	**1.1**	**0.001**
4,4'-DDE[1]	0.0112	0.0048	ND	4,000	0.0066	0.026	4.7	50,000	480	0.34	0.658	0.040	**0.014**	0.026	**1.1**	**0.001**
4,4'-DDT[1]	ND	0.0018	ND	4,000	0.00074	0.0030	5.2	151,000	608	0.29	0.709	0.0042	**0.0012**	0.0030	**1.1**	**0.001**
Heptachlor[1]	ND	0.00098	ND	4,000	0.00040	0.0016	4.3	21,900	342	0.42	0.578	0.0028	**0.0012**	0.0016	**0.52**	**0.0038**
Polychlorinated Biphenyls (PCBs), Dioxins, and Furans																
2,3,7,8-TCDD[1]	1.61E-05	3.10E-07	2.66E-08	4,000	6.71E-06	2.68E-05	6.8	6,310,000	697	0.26	0.736	0.0000364	0.00000962	0.0000268	-	-
Total PCBs[2]	0.963	0.000893	0.000522	4,000	0.394	1.58	5.2	162,000	613	0.29	0.710	2.22	**0.642**	1.58	**1.0**	**0.014**
PAHs for Strata A and B, TCL SVOCs for Stratum C																
1-Methylnaphthalene	0.036	0.00085	NA	4,000	0.015	0.060	NVF								-	-
2-Methylnaphthalene[1]	0.069	0.0016	0.048	4,000	0.037	0.15	3.4	2,500	69	0.78	0.216	0.69	0.54	0.15	-	-
4-Methylphenol	NA	NA	0.048	4,000	0.009	0.034	1.7	49	1.49	0.99	0.006	5.8	5.7	0.034	-	-
Acenaphthene[2]	0.034	0.0011	0.026	4,000	0.019	0.077	3.9	7,100	166	0.60	0.398	0.19	0.12	0.077	-	-
Acenaphthylene	0.065	0.0010	0.029	4,000	0.032	0.13	NVF								-	-
Anthracene[1]	0.10	0.0014	0.11	4,000	0.060	0.24	4.2	14,000	265	0.48	0.515	0.47	0.23	0.24	-	-
Benzo[a]anthracene[2]	0.32	0.0054	0.099	4,000	0.15	0.61	6.1	1,400,000	689	0.27	0.734	0.83	0.22	0.61	-	-
Benzo[a]pyrene[2]	0.32	0.0055	0.072	4,000	0.14	0.58	6.0	1,000,000	684	0.27	0.732	0.79	0.21	0.58	-	-
Benzo[b]fluoranthene[2]	0.24	0.0052	0.086	4,000	0.11	0.46	5.7	550,000	672	0.27	0.729	0.63	0.17	0.46	-	-
Benzo[e]pyrene	0.21	0.0046	NA	4,000	0.089	0.35	NVF								-	-
Benzo[g,h,i]perylene	0.14	0.0028	0.062	4,000	0.069	0.27	NVF								-	-
Benzo[k]fluoranthene[2]	0.25	0.0047	0.042	4,000	0.11	0.44	5.7	550,000	672	0.27	0.729	0.60	0.16	0.44	-	-
Bis(2-ethylhexyl) phthalate	NA	NA	0.041	4,000	0.0073	0.029	6.0	1,000,000	684	0.27	0.732	0.040	0.011	0.029	-	-
Butyl benzyl phthalate	NA	NA	0.014	4,000	0.0025	0.010	NVF								-	-
Chrysene[2]	0.32	0.0066	0.097	4,000	0.15	0.60	5.3	200,000	628	0.28	0.715	0.83	0.24	0.60	-	-
Dibenz(a,h)anthracene	0.059	0.0010	0.031	4,000	0.030	0.12	NVF								-	-
Dibenzofuran	NA	NA	0.041	4,000	0.0072	0.029	5.6	410,000	663	0.27	0.726	0.040	0.011	0.029		-
Fluoranthene[2]	0.42	0.0084	0.11	4,000	0.19	0.78	4.6	38,000	437	0.36	0.636	1.2	0.45	0.78	-	-
Fluorene[2]	0.060	0.0011	0.034	4,000	0.031	0.12	3.9	7,200	167	0.60	0.401	0.31	0.19	0.12	-	-
Indeno[1,2,3-cd]pyrene[2]	0.14	0.0026	0.059	4,000	0.069	0.28	7.5	34,000,000	700	0.26	0.737	0.38	0.10	0.28	-	-
Naphthalene[1]	0.14	0.0022	0.085	4,000	0.071	0.29	3.0	930	27.3	0.90	0.10	2.9	2.6	0.29	-	-
Perylene	0.57	0.015	NA	4,000	0.24	0.95	NVF								-	-
Phenanthrene[2]	0.31	0.0062	0.11	4,000	0.15	0.59	4.2	14,000	265	0.48	0.515	1.1	0.55	0.59	-	-
Pyrene[2]	0.48	0.0099	0.12	4,000	0.22	0.89	4.6	38,000	437	0.36	0.636	1.4	0.51	0.89	-	-

Table 12.1.1 CDF Effluent Water Quality Evaluation at TSS Instantaneous Limit
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Sample Identification	$C_{sed,A}$ (mg/kg)	$C_{sed,B}$ (mg/kg)	$C_{sed,C}$ (mg/kg)	Log K_d (L/kg)	TSS (mg/L)	f_d	f_p	$C_{sedA,B,C}$ (mg/kg)	C_T (ug/L)	C_d (ug/L)	C_p (ug/L)	DRBC SQOs - Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)	Notes on DRBC SQOs
TAL Inorganics	**95% UCL**	**95% UCL**	**Average**											
Aluminum	16,800	8,490	8,770	Not Needed	4,000			11,900	47,600	15.5	47,600	**750**	**87**	total recoverable basis
Antimony	0.662	0.911	ND	3.6	4,000	0.0591	0.941	0.647	2.59	0.153	2.43	-	-	
Arsenic	29.7	12.7	10.8	2.4	4,000	0.499	0.501	19.3	77.3	38.6	38.7	**340**	**150**	total dissolved form
Barium	105	49.9	45.3	2.5	4,000	0.442	0.558	71	286	126	160	-	-	
Beryllium	1.04	0.480	0.670	2.8	4,000	0.284	0.716	0.744	2.98	0.845	2.13	-	-	
Cadmium	0.848	0.498	ND	3.3	4,000	0.111	0.889	0.552	2.21	**0.246**	1.96	**1.0**	**0.141**	total dissolved form
Calcium	2,770	1,120	966	NVF	4,000			1,770	7,080			-	-	
Chromium[5]	92.6	41.5	50.1	5.1	4,000	0.00198	0.998	63.9	256	0.507	255	**390**	**19**	total dissolved form
Cobalt	16.6	7.42	7.34	3.1	4,000	0.166	0.834	11.2	44.6	7.39	37.2	-	-	
Copper	48.0	33.7	18.2	3.5	4,000	0.0733	0.927	36.8	147	**10.8**	136	**9.6**	**6.5**	total dissolved form
Iron	33,900	15,800	24,700	NVF	4,000			24,800	99,200			-	-	total recoverable basis
Lead	76.3	50.2	26.9	4.6	4,000	0.00624	0.994	56.7	227	1.42	225	**38**	**5.4**	total dissolved form
Magnesium	5,470	2,610	1,920	NVF	4,000			3,660	14,600			-	-	
Manganese	997	319	423	NVF	4,000			615	2,460			-	-	
Mercury	0.316	0.0705	0.1262	4.9	4,000	0.00314	0.997	0.181	0.724	0.00227	0.721	**1.4**	**0.77**	total dissolved form
Nickel	32.6	14.6	12.6	3.9	4,000	0.0305	0.969	21.6	86.4	2.64	83.7	**308**	**34**	total dissolved form
Potassium	2,080	1,020	812	NVF	4,000			1,420	5,680			-	-	
Selenium[6]	0.876	0.654	ND	3.6	4,000	0.0591	0.941	0.628	2.51	0.148	2.36	**20**	**5**	total recoverable basis
Silver (ND)	1.055	0.750	ND	3.6	4,000	0.0591	0.941	0.740	2.96	0.175	2.79	**1.9**	**NA**	total dissolved form
Sodium	451	199	190	NVF	4,000			300	1,200			-	-	
Thallium	0.278	0.167	ND	1.3	4,000	0.926	0.0739	0.183	0.731	0.677	0.0540	-	-	
Vanadium	46.9	30.9	46.6	2.1	4,000	0.665	0.335	40.2	161	107	53.9	-	-	
Zinc	236	95.4	88.0	4.1	4,000	0.0195	0.981	151	605	11.8	594	**88**	**88**	total dissolved form
Total Cyanide (mg/kg)[7]	0.129	0.167	0.0850	3.0	4,000	0.200	0.800	0.137	0.548	0.110	0.438	**22**	**5.2**	free cyanide based on lowest pH in receiving waters

Notes:
mg/kg: milligrams per kilogram
ug/L: microgram per liter
TCL VOCs: Target Compound List Volatile Organic Compounds
TCL SVOCs: Target Compound List Semivolatile Organic Compounds
TAL: Target Analyte List
PAHs: Poly Aromatic Hydrocarbons
= not sufficient information to calculate
Data is compared to acute (one-hour average) as well as chronic (4-day time period) stream quality objectives (SQOs) for freshwater aquatic life (DRBC Water Quality Regulations, 2013).
highlighted concentrations were found above acute DRBC SQOs at TSS concentration in slurry
highlighted concentrations were found above chronic DRBC SQOs at TSS concentration in slurry
NA: sample not analyzed for the specified substance
ND: substance not detected
NVF: no octanol-water partitioning coefficient (Log K_{oc}) value found
95% UCL: 95% upper confidence limit
1. Log Koc value from Agency for Toxic Substances and Disease Registry (ATSDR) database Toxicological information located here: https://www.atsdr.cdc.gov/toxprofiles/tp.asp?id=72&tid=19.
SVOC and dioxin Log Koc values are from ATSDR Chemical and Physical Information for each compound.
2. Volatile Organic Carbons, Poly Aromatic Hydrocarbons or Semivolatile Organic Carbons, Polychlorinated Bipheyl log Koc values from Delaware Risk=Based Corrective Action Program (DERBCAP), (200
for soil to groundwater.
3. Metals Acute Aquatic Life Criterion assume a hardness of 74 mg/L as per the DRBC Water Quality Regulations, Article 4: Application of Standards (p.108, 2013).
4. Log (K_d) values derived from the median values in Table 5 of the following reference: Ambrose, R. 2005. Partition Coefficients For Metals In Surface Water, Soil, and Waste.
U.S. Environmental Protection Agency, Office of Research and Development, Washington, DC (p.3-15)
5. Used trivalent chromium (Cr III) log K_d value.
6. Used Se (IV) log K_d value
7. Total cyanide Log K_d value is for soil to water partitioning.

Abbreviations:
TSS: total suspended solids concentration
C_{pw} : concentration in pore water
$C_{sed,A}$: concentration in stratum A sediment
$C_{sed,B}$: concentration in stratum B sediment
$C_{sed,C}$: concentration in stratum C sediment
$C_{sed,A,B,C}$: composited concentration in strata A, B, and C sediment
Log K_{oc} or K_{oc} : octanol-water partitioning coefficient
K_{eq} : equilibrium partitioning coefficient
mg/kg : milligram per kilogram
L/kg : liters per kilogram
ug/L : microgram per liter
f_d : dissolved fraction of substance
f_p : fraction of substance sorbed to particulate
C_T : total concentration of substance
C_d : dissolved concentration of substance
C_p : concentration of substance sorbed to particulate

Table 12.1.2 CDF Effluent Water Quality Evaluation at TSS Instantaneous Limit
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Dredge Cycle 1

Sample Identification	Dissolved Concentration from Sediment to Water (95% UCL/Average)	Particulate Concentration from Sediment to Water (95% UCL/Average)	Concentration in Water (MEDIAN)	Concentration in Slurry	Effluent Concentration from CDF	DRBC Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)
TCL VOCs	C_d (ug/L)	C_p (ug/L)	(ug/L)	(ug/L)	(ug/L)		
Methylene Chloride	150	0.46	NA	150	150	-	-
Toluene	37	0.58	NA	37	37	-	-
Pesticides							
4,4'-DDD	0.0040	0.0098	NA	0.0040	**0.0040**	1.1	**0.001**
4,4'-DDE	0.014	0.026	NA	0.014	**0.014**	1.1	**0.001**
4,4'-DDT	0.0012	0.0030	NA	0.0012	**0.0012**	1.1	**0.001**
Heptachlor	0.0012	0.0016	NA	0.0012	**0.0012**	0.52	**0.0038**
Polychlorinated Biphenyls (PCBs), Dioxins, and Furans							
2,3,7,8-TCDD	0.0000096	0.0000268	NA	0.00000962	0.0000150	-	-
Total PCBs	0.642	1.58	0.00550	0.648	**0.963**	1.0	**0.014**
PAHs for Strata A and B, TCL SVOCs for Stratum C							
1-Methylnaphthalene			0.0027	0.0027	0.0027	-	-
2-Methylnaphthalene	0.54	0.15	0.0037	0.54	0.54	-	-
4-Methylphenol	5.7	0.034	NA	5.7	5.7	-	-
Acenaphthene	0.12	0.077	ND	0.12	0.12	-	-
Acenaphthylene			ND	-		-	-
Anthracene	0.23	0.24	0.0057	0.23	0.23	-	-
Benzo[a]anthracene	0.22	0.61	0.0075	0.23	0.23	-	-
Benzo[a]pyrene	0.21	0.58	0.0081	0.22	0.22	-	-
Benzo[b]fluoranthene	0.17	0.46	0.020	0.19	0.19	-	-
Benzo[e]pyrene			0.012	0.012	0.012	-	-
Benzo[g,h,i]perylene			0.0081	0.0081	0.0081	-	-
Benzo[k]fluoranthene	0.16	0.44	0.015	0.18	0.18	-	-
Bis(2-ethylhexyl) phthalate	0.011	0.029	NA	0.011	0.011	-	-
Butyl benzyl phthalate			NA	-		-	-
Chrysene	0.24	0.60	0.025	0.26	0.26	-	-
Dibenz(a,h)anthracene			0.00630	0.00630	0.00630	-	-
Dibenzofuran	0.011	0.029	NA	0.011	0.011		-
Fluoranthene	0.45	0.78	0.045	0.49	0.49	-	-
Fluorene	0.19	0.12	ND	0.19	0.19	-	-
Indeno[1,2,3-cd]pyrene	0.10	0.28	0.0076	0.11	0.11	-	-
Naphthalene	2.6	0.29	0.0049	2.6	2.6	-	-
Perylene			0.0028	0.0028	0.0028	-	-
Phenanthrene	0.55	0.59	0.030	0.58	0.58	-	-
Pyrene	0.51	0.89	0.036	0.55	0.55	-	-

Table 12.1.2 CDF Effluent Water Quality Evaluation at TSS Instantaneous Limit
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Sample Identification	Stratum A, B, and C Concentration from Sediment to Water (95% UCL)	Cp (ug/L)	Concentration in Water (MEDIAN)	Concentration in Slurry	Effluent Concentration from CDF	DRBC Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)	Notes on DRBC SQOs
TAL Inorganics								
Aluminum	15.5	47,600	885	900	**10,400**	**750**	**87**	total recoverable basis
Antimony	0.153	2.43	0.505	0.658	0.658	-	-	
Arsenic	38.6	38.7	1.55	40.1	40.1	**340**	**150**	total dissolved form
Barium	126	160	35.7	162	162	-	-	
Beryllium	0.845	2.13	ND	0.845	0.845	-	-	
Cadmium	0.246	1.96	ND	0.246	**0.246**	**1.0**	**0.141**	total dissolved form
Calcium			18,700	18,700	18,700	-	-	
Chromium	0.507	255	3.60	4.11	4.11	**390**	**19**	total dissolved form
Cobalt	7.39	37.2	1.60	8.99	8.99	-	-	
Copper	10.8	136	6.25	17.0	**17.0**	**9.6**	**6.5**	total dissolved form
Iron			1,640	1,640	1,640	-	-	total recoverable basis
Lead	1.42	225	3.35	4.77	4.77	**38.0**	**5.4**	total dissolved form
Magnesium			7,420	7,420	7,420	-	-	
Manganese			141	141	141	-	-	
Mercury	0.00227	0.721	ND	0.00227	0.00227	**1.4**	**0.77**	total dissolved form
Nickel	2.64	83.7	3.10	5.74	5.74	**308**	**34**	total dissolved form
Potassium			3,150	3,150	3,150	-	-	
Selenium	0.148	2.36	ND	0.148	0.148	**20**	**5**	total recoverable basis
Silver (ND)	0.175	2.79	ND	0.175	0.175	**1.9**	**NA**	total dissolved form
Sodium			26,300	26,300	26,300	-	-	
Thallium	0.677	0.0540	ND	0.677	0.677	-	-	
Vanadium	107	53.9	5.00	112	112	-	-	
Zinc	11.8	594	18.1	29.8	29.8	**88**	**88**	total dissolved form
Total Cyanide (mg/kg)	0.110	0.438	ND	0.110	0.110	**22**	**5.2**	free cyanide based on lowest pH in receiving waters

Notes:
ug/L: microgram per liter
NA: sample not analyzed for the specified substance
ND: substance not detected
NVF: no Log K_{oc} value found
95% UCL: 95% upper confidence limit
TCL VOCs: Target Compound List Volatile Organic Compounds
TCL SVOCs: Target Compound List Semivolatile Organic Compounds
TAL: Target Analyte List
PAHs: Poly Aromatic Hydrocarbons
= not sufficient information to calculate
Data is compared to acute (one-hour average) as well as chronic (4-day time period) stream quality objectives (SQOs) for freshwater aquatic life (Delaware River Basin Commission Water Quality Regulations, 2013).
highlighted concentrations were found above acute DRBC SQOs at TSS concentration in slurry
highlighted concentrations were found above chronic DRBC SQOs at TSS concentration in slurry
SQOs are derived from DDRBC's Zone 5 Water Quality Regulations (2013).
Total recoverable basis is used interchangably by the US Environmental Protection Agency (USEPA) with total metals (1998).

Table 12.2.1 CDF Effluent Water Quality Evaluation at TSS Instantaneous Limit
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Dredge Cycle 2

Parameters	Units	Comments
Dissolved Phase Concentration (C_d)	ug/L	using standard equilibrium partition coefficients
Particulate Concentration (C_P)	ug/L	using standard equilibrium partition coefficients

Instantaneous TSS Limit = 4,000 mg/L
See report Section XVI for calculations.

Sample Identification	$C_{sed,C}$ (mg/kg)	Instant TSS Limit (mg/L)	C_{pw} (ug/L)	Log K_{oc} (L/kg)	Koc	Keq (L/kg)	f_d	f_p	C_T (ug/L)	C_d (ug/L)	C_p (ug/L)	DRBC SQOs - Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)
TCL VOCs	**Average**												
Methylene Chloride[1]	ND	4,000	ND	1.4	25	0.712	0.997	0.003				-	-
Toluene[2]	0.20	4,000	1	2.1	135	3.81	0.985	0.015	53.8	53.0	0.81	-	-
Pesticides													
4,4'-DDD[1]	ND	4,000	ND	5.18	151,356	602	0.29	0.707				1.1	**0.001**
4,4'-DDE[1]	ND	4,000	ND	4.70	50,119	469	0.35	0.652				1.1	**0.001**
4,4'-DDT[1]	ND	4,000	ND	5.18	151,356	602	0.29	0.707				1.1	**0.001**
Heptachlor	ND	4,000	ND	4.53	33,884	405	0.38	0.618				0.52	**0.0038**
Polychlorinated Biphenyls (PCBs), Dioxins, and Furans													
2,3,7,8-TCDD[1]	0.0000000266	4,000	0.0000001	6.80	6,309,573	697	0.264	0.736	0.000000144	0.0000000381	0.000000106	-	-
Total PCBs[2]	0.000522	4,000	0.002	5.21	162,181	608	0.292	0.708	0.00295	0.00086	0.00209	-	**0.014**
TCL SVOCs for Stratum C													
1-Methylnaphthalene	NA	4,000	ND	NVF								-	-
2-Methylnaphthalene[1]	0.048	4,000	0.2	3.39	2,455	63	0.798	0.202	0.95	0.76	0.19	-	-
4-Methylphenol	0.069	4,000	0.3	1.69	49.0	1.39	0.994	0.006	50	49	0.27	-	-
Acenaphthene[2]	0.026	4,000	0.1	3.85	7,079	156	0.616	0.384	0.27	0.17	0.10	-	-
Acenaphthylene	0.029	4,000	0.1	NVF								-	-
Anthracene[1]	0.11	4,000	0	4.15	14,125	255	0.495	0.505	0.84	0.42	0.42	-	-
Benzo[a]anthracene[2]	0.099	4,000	0	6.14	1,380,384	688	0.267	0.733	0.54	0.14	0.40	-	-
Benzo[a]pyrene[2]	0.072	4,000	0.3	6.01	1,023,293	684	0.268	0.732	0.39	0.11	0.29	-	-
Benzo[b]fluoranthene[2]	0.086	4,000	0.3	5.74	549,541	670	0.272	0.728	0.47	0.13	0.34	-	-
Benzo[e]pyrene	NA	4,000	ND	NVF								-	-
Benzo[g,h,i]perylene	0.062	4,000	0.2	NVF								-	-
Benzo[k]fluoranthene[2]	0.042	4,000	0.2	5.74	549,541	670	0.272	0.728	0.23	0.062	0.17	-	-
Bis(2-ethylhexyl) phthalate	0.041	4,000	0.164	6.00	1,000,000	683	0.268	0.732	0.22	0.060	0.16	-	-
Butyl benzyl phthalate	0.014	4,000	0.056	NVF								-	-
Chrysene[2]	0.097	4,000	0.386	5.3	199,526	623	0.286	0.714	0.54	0.16	0.39	-	-
Dibenz(a,h)anthracene	0.031	4,000	0.1240	NVF								-	-
Dibenzofuran	0.041	4,000	0.1620	5.61	407,380	660	0.275	0.725	0.22	0.061	0.16		-
Fluoranthene[2]	0.11	4,000	0.437	4.58	38,019	425	0.371	0.629	0.69	0.26	0.44	-	-
Fluorene[2]	0.034	4,000	0.1340	3.86	7,244	159	0.611	0.3887	0.34	0.21	0.13	-	-
Indeno[1,2,3-cd]pyrene[2]	0.059	4,000	0.235	7.53	33,884,416	699	0.263	0.737	0.32	0.084	0.24	-	-
Naphthalene[1]	0.085	4,000	0.339	2.97	933	25.5	0.907	0.093	3.7	3.3	0.34	-	-
Perylene	NA	4,000	NA	NVF								-	-
Phenanthrene[2]	0.11	4,000	0	4.15	14,125	255	0.495	0.505	0.86	0.42	0.43	-	-
Pyrene[2]	0.12	4,000	0	4.58	38,019	425	0.371	0.629	0.77	0.28	0.48	-	-

Table 12.2.1 CDF Effluent Water Quality Evaluation at TSS Instantaneous Limit
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Sample Identification	$C_{sed,C}$ (mg/kg)	Log K_d (L/kg)	TSS (mg/L)	f_d	f_p	C_T (ug/L)	C_d (ug/L)	C_p (ug/L)	DRBC SQOs - Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)	Notes on DRBC SQOs
TAL Inorganics	**Average**										
Aluminum	8,770	Not Needed	4,000			35,100	15.5	35,100	**750**	**87**	total recoverable basis
Antimony	ND	3.6	4,000	0.0591	0.941				**-**	**-**	
Arsenic	10.8	2.4	4,000	0.499	0.501	43.4	21.6	21.7	**340**	**150**	total dissolved form
Barium	45.3	2.5	4,000	0.442	0.558	181	80.1	101	**-**	**-**	
Beryllium	0.670	2.8	4,000	0.284	0.716	2.68	0.761	1.92	**-**	**-**	
Cadmium	ND	3.3	4,000	0.111	0.889				**1.0**	**0.141**	total dissolved form
Calcium	966	NVF	4,000			3,860			**-**	**-**	
Chromium[5]	50.1	5.1	4,000	0.00198	0.998	200	0.397	200	**390**	**19**	total dissolved form
Cobalt	7.34	3.1	4,000	0.166	0.834	29.4	4.86	24.5	**-**	**-**	
Copper	18.2	3.5	4,000	0.0733	0.927	72.7	5.33	67.4	**9.6**	**6.5**	total dissolved form
Iron	24,700	NVF	4,000			98,800			**-**	**-**	total recoverable basis
Lead	26.9	4.6	4,000	0.00624	0.994	108	0.671	107	**38.0**	**5.4**	total dissolved form
Magnesium	1,920	NVF	4,000			7,680			**-**	**-**	
Manganese	423	NVF	4,000			1,690			**-**	**-**	
Mercury	0.126	4.9	4,000	0.00314	0.997	0.505	0.00158	0.503	**1.4**	**0.77**	total dissolved form
Nickel	12.6	3.9	4,000	0.0305	0.969	50.4	1.54	48.9	**308**	**34**	total dissolved form
Potassium	812	NVF	4,000			3,250			**-**	**-**	
Selenium[6]	ND	3.6	4,000	0.0591	0.941				**20**	**5**	total recoverable basis
Silver (ND)	ND	3.6	4,000	0.0591	0.941				**1.9**	**NA**	total dissolved form
Sodium	190	NVF	4,000			759			**-**	**-**	
Thallium	ND	1.3	4,000	0.926	0.0739				**-**	**-**	
Vanadium	46.6	2.1	4,000	0.665	0.335	186	124	62.5	**-**	**-**	
Zinc	88.0	4.1	4,000	0.0195	0.981	352	6.86	345	**88**	**88**	total dissolved form
Total Cyanide (mg/kg)[7]	0.0850	3.0	4,000	0.200	0.800	0.340	0.0680	0.272	**22**	**5.2**	free cyanide based on lowest pH in receiving waters

Notes:
mg/kg: milligrams per kilogram
ug/L: microgram per liter
TCL VOCs: Target Compound List Volatile Organic Compounds
TCL SVOCs: Target Compound List Semivolatile Organic Compounds
TAL: Target Analyte List
PAHs: Poly Aromatic Hydrocarbons
[grey shading] = not sufficient information to calculate
Data is compared to acute (one-hour average) as well as chronic (4-day time period) stream quality objectives (SQOs) for freshwater aquatic life (DRBC Water Quality Regulations, 2013).
highlighted concentrations were found above acute DRBC SQOs at TSS concentration in slurry
highlighted concentrations were found above chronic DRBC SQOs at TSS concentration in slurry
NA: sample not analyzed for the specified substance
ND: substance not detected
NVF: no octanol-water partitioning coefficient (Log K_{oc}) value found
95% UCL: 95% upper confidence limit
1. Log Koc value from Agency for Toxic Substances and Disease Registry (ATSDR) database Toxicological information located here: https://www.atsdr.cdc.gov/toxprofiles/tp.asp?id=72&tid=19.
SVOC and dioxin Log Koc values are from ATSDR Chemical and Physical Information for each compound
2. Volatile Organic Carbons, Poly Aromatic Hydrocarbons or Semivolatile Organic Carbons, Polychlorinated Biphenyl log Koc values from Delaware Risk=Based Corrective Action Program (DERBCAP), (2000) - for soil to groundwater.
3. Metals Acute Aquatic Life Criterion assume a hardness of 74 mg/L as per the DRBC Water Quality Regulations, Article 4: Application of Standards (p.108, 2013).
4. Log (K_d) values derived from the median values in Table 5 of the following reference: Ambrose, R. 2005. Partition Coefficients For Metals In Surface Water, Soil, and Waste. U.S. Environmental Protection Agency, Office of Research and Development, Washington, DC (p.3-15)
5. Used trivalent chromium (Cr III) log K_d value.
6. Used Se (IV) log K_d value
7. Total cyanide Log K_d value is for soil to water partitioning.

Abbreviations:
TSS: total suspended solids concentration
C_{pw} : concentration in pore water
$C_{sed,C}$: concentration in stratum C sediment
Log K_{oc} or K_{oc} : octanol-water partitioning coefficient
K_{eq} : equilibrium partitioning coefficient
mg/kg : milligram per kilogram
L/kg : liters per kilogram
ug/L : microgram per liter
f_d : dissolved fraction of substance
f_p : fraction of substance sorbed to particulate
C_T : total concentration of substance
C_d : dissolved concentration of substance
C_p : concentration of substance sorbed to particulate

Duffield Associates, Inc
Project No. 11139.LH

Table 12.2.2 CDF Effluent Water Quality Evaluation at TSS Instantaneous Limit
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Dredge Cycle 2

Sample Identification	Dissolved Concentration from Sediment to Water (95% UCL/Average)	Particulate Concentration from Sediment to Water (95% UCL/Average)	Concentration in Water (MEDIAN)	Concentration in Slurry	Effluent Concentration from CDF	DRBC Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)
TCL VOCs	C_d (ug/L)	C_p (ug/L)	(ug/L)	(ug/L)	(ug/L)		
Methylene Chloride			NA			-	-
Toluene	53	0.81	NA	53	53	-	-
Pesticides							
4,4'-DDD			NA			1.1	0.001
4,4'-DDE			NA			1.1	0.001
4,4'-DDT			NA			1.1	0.001
Heptachlor			NA			0.52	0.0038
Polychlorinated Biphenyls (PCBs), Dioxins, and Furans							
2,3,7,8-TCDD	0.0000000381	0.000000106	NA	-		-	-
Total PCBs	0.000859	0.00209	0.00550	0.006359	0.006359	1.0	0.014
TCL SVOCs for Stratum C							
1-Methylnaphthalene			0.0027	0.0027	0.0027	-	-
2-Methylnaphthalene	0.76	0.19	0.0037	0.76	0.76	-	-
4-Methylphenol	49	0.27	NA			-	-
Acenaphthene	0.17	0.10	ND	0.17	0.17	-	-
Acenaphthylene			ND	-		-	-
Anthracene	0.42	0.42	0.0057	0.42	0.42	-	-
Benzo[a]anthracene	0.14	0.40	0.0075	0.15	0.15	-	-
Benzo[a]pyrene	0.11	0.29	0.0081	0.11	0.11	-	-
Benzo[b]fluoranthene	0.13	0.34	0.020	0.15	0.15	-	-
Benzo[e]pyrene			0.012	0.012	0.012	-	-
Benzo[g,h,i]perylene			0.0081	0.0081	0.0081	-	-
Benzo[k]fluoranthene	0.062	0.17	0.015	0.076	0.076	-	-
Bis(2-ethylhexyl) phthalate	0.060	0.16	NA			-	-
Chrysene	0.16	0.39	0.025	0.18	0.18	-	-
Dibenz(a,h)anthracene			0.0063	0.0063	0.0063	-	-
Dibenzofuran	0.061	0.16	NA			-	-
Fluoranthene	0.26	0.44	0.045	0.30	0.30	-	-
Fluorene	0.21	0.13	ND	0.21	0.21	-	-
Indeno[1,2,3-cd]pyrene	0.084	0.24	0.0076	0.092	0.092	-	-
Naphthalene	3.3	0.34	0.0049	3.3	3.3	-	-
Perylene			0.0028	0.0028	0.0028	-	-

Table 12.2.2 CDF Effluent Water Quality Evaluation at TSS Instantaneous Limit
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Sample Identification	Dissolved Concentration from Sediment to Water (95% UCL/Average)	Particulate Concentration from Sediment to Water (95% UCL/Average)	Concentration in Water (MEDIAN)	Concentration in Slurry	Effluent Concentration from CDF	DRBC Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)	Notes on DRBC SQOs
TAL Inorganics								
Aluminum	15.5	35,100	885	900	**7,920**	**750**	**87**	total recoverable basis
Antimony			0.505	0.505	0.505	-	-	
Arsenic	21.6	21.7	1.55	23.2	23.2	**340**	**150**	total dissolved form
Barium	80.1	101	35.7	116	116	-	-	
Beryllium	0.761	1.92	ND	0.761	0.761	-	-	
Cadmium			ND			**1.0**	**0.141**	total dissolved form
Calcium			18,650	18,650	18,650	-	-	
Chromium (trivalent)	0.397	200	3.60	4.00	4.00	**390**	**19**	total dissolved form
Cobalt	4.86	24.5	1.60	6.46	6.46	-	-	
Copper	5.33	67.4	6.25	11.6	**11.6**	**9.6**	**6.5**	total dissolved form
Iron			1,640	1,640	1,640	-	-	total recoverable basis
Lead	0.671	107	3.35	4.02	4.02	**38.0**	**5.4**	total dissolved form
Magnesium			7,420	7,420	7,420	-	-	
Manganese			141	141	141	-	-	
Mercury	0.00158	0.503	ND	0.00158	0.00158	**1.4**	**0.77**	total dissolved form
Nickel	1.54	48.9	3.10	4.64	4.64	**308**	**34**	total dissolved form
Potassium			3,150	3,150	3,150	-	-	
Selenium			ND			**20**	**5**	total recoverable basis
Silver (ND)			ND			**1.9**	**NA**	total dissolved form
Sodium			26,300	26,300	26,300	-	-	
Thallium			ND			-	-	
Vanadium	124	62.5	5.00	129	129	-	-	
Zinc	6.86	345	18.1	24.9	24.9	**88**	**88**	total dissolved form
Total Cyanide (mg/kg)	0.0680	0.272	ND	0.0680	0.0680	**22**	**5.2**	free cyanide based on lowest pH in receiving waters

Notes:
ug/L: microgram per liter
NA: sample not analyzed for the specified substance
ND: substance not detected
NVF: no Log K_{oc} value found
95% UCL: 95% upper confidence limit
TCL VOCs: Target Compound List Volatile Organic Compounds
TCL SVOCs: Target Compound List Semivolatile Organic Compounds
TAL: Target Analyte List
PAHs: Poly Aromatic Hydrocarbons
[grey shading] = not sufficient information to calculate
Data is compared to acute (one-hour average) as well as chronic (4-day time period) stream quality objectives (SQOs) for freshwater aquatic life (Delaware River Basin Commission Water Quality Regulations, 2013).
highlighted concentrations were found above acute DRBC SQOs at TSS concentration in slurry
highlighted concentrations were found above chronic DRBC SQOs at TSS concentration in slurry
SQOs are derived from DDRBC's Zone 5 Water Quality Regulations (2013).
Total recoverable basis is used interchangably by the US Environmental Protection Agency (USEPA) with total metals (1998).

Duffield Associates, Inc.
Project No. 11139.LH

Table 12.3.1 CDF Effluent Water Quality Evaluation at TSS Instantaneous Limit
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Dredge Cycle 3

Parameters	Units	Comments
Dissolved Phase Concentration (C_d)	mg/kg	using standard equilibrium partition coefficients
Particulate Concentration (C_p)	mg/kg	
Instantaneous TSS Limit =	4,000	mg/L

See report Section XIV for calculations

Sample Identification	$C_{sed,C}$ (mg/kg)	Instant TSS Limit (mg/L)	C_{pw} (ug/L)	Log K_{oc} (L/kg)	Koc	Keq (L/kg)	f_d	f_p	C_T (ug/L)	C_d (ug/L)	C_p (ug/L)	DRBC SWQ Standard - Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)
TCL VOCs	**Average**												
Methylene Chloride[1]	ND	4,000		1.4	25	0.71	0.997	0.003				-	-
Toluene[2]	0.20	4,000	0.81	2.1	135	3.8	0.985	0.02	54	53.0	0.81	-	-
Pesticides													
4,4'-DDD[1]	ND	4,000		5.18	151,356	600	0.294	0.706				**1.1**	**0.001**
4,4'-DDE[1]	ND	4,000		4.70	50,119	470	0.347	0.653				**1.1**	**0.001**
4,4'-DDT[1]	ND	4,000		5.18	151,356	600	0.294	0.706				**1.1**	**0.001**
Heptachlor	ND	4,000		4.53	33,884	410	0.379	0.621				**0.52**	**0.0038**
Polychlorinated Biphenyls (PCBs), Dioxins, and Furans													
2,3,7,8-TCDD[1]	0.0000000266	4,000	0.000000106	6.80	6,309,573	697	0.264	0.736	1.44E-07	3.81E-08	1.06E-07	-	-
Total PCBs[2]	0.000522	4,000	0.00209	5.21	162,181	608	0.292	0.708	0.00295	0.000859	0.00209	**1.0**	**0.014**
TCL SVOCs for Stratum C													
1-Methylnaphthalene	NA	4,000		NVF								-	-
2-Methylnaphthalene[1]	0.048	4,000	0.19	3.39	2,455	63	0.798	0.202	0.95	0.76	0.19	-	-
4-Methylphenol	0.069	4,000	0.27	1.69	49.0	1.4	0.994	0.006	50	49	0.27	-	-
Acenaphthene[2]	0.026	4,000	0.10	3.85	7,079	160	0.610	0.390	0.27	0.16	0.10	-	-
Acenaphthylene	0.029	4,000	0.12	NVF								-	-
Anthracene[1]	0.11	4,000	0.42	4.15	14,125	255	0.495	0.505	0.84	0.42	0.42	-	-
Benzo[a]anthracene[2]	0.099	4,000	0.40	6.14	1,380,384	688	0.267	0.733	0.54	0.14	0.40	-	-
Benzo[a]pyrene[2]	0.072	4,000	0.29	6.01	1,023,293	684	0.268	0.732	0.39	0.11	0.29	-	-
Benzo[b]fluoranthene[2]	0.086	4,000	0.34	5.74	549,541	670	0.272	0.728	0.47	0.13	0.34	-	-
Benzo[e]pyrene	NA	4,000		NVF								-	-
Benzo[g,h,i]perylene	0.062	4,000	0.25	NVF								-	-
Benzo[k]fluoranthene[2]	0.042	4,000	0.17	5.74	549,541	670	0.272	0.728	0.23	0.06	0.17	-	-
Bis(2-ethylhexyl) phthalate	0.041	4,000	0.16	6.00	1,000,000	683	0.268	0.732	0.22	0.06	0.16	-	-
Butyl benzyl phthalate	0.014	4,000	0.06	NVF								-	-
Chrysene[2]	0.097	4,000	0.39	5.3	199,526	623	0.286	0.714	0.54	0.16	0.39	-	-
Dibenz(a,h)anthracene	0.031	4,000	0.12	NVF								-	-
Dibenzofuran	0.041	4,000	0.16	5.61	407,380	660	0.275	0.725	0.22	0.061	0.16		-
Fluoranthene[2]	0.11	4,000	0.44	4.58	38,019	425	0.371	0.629	0.69	0.26	0.44	-	-
Fluorene[2]	0.034	4,000	0.13	3.86	7,244	159	0.611	0.3887	0.34	0.21	0.13	-	-
Indeno[1,2,3-cd]pyrene[2]	0.059	4,000	0.24	7.53	33,884,416	699	0.263	0.737	0.32	0.084	0.24	-	-
Naphthalene[1]	0.085	4,000	0.34	2.97	933	26	0.907	0.09266	3.7	3.3	0.34	-	-
Perylene	NA	4,000		NVF								-	-
Phenanthrene[2]	0.11	4,000	0.43	4.15	14,125	255	0.495	0.505	0.86	0.42	0.43	-	-
Pyrene[2]	0.12	4,000	0.48	4.58	38,019	425	0.371	0.629	0.77	0.28	0.48	-	-

Table 12.3.1 CDF Effluent Water Quality Evaluation at TSS Instantaneous Limit
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Sample Identification	$C_{sed,C}$ (mg/kg)	Log K_d (L/kg)	TSS (mg/L)	f_d	f_p	C_T (ug/L)	C_d (ug/L)	C_p (ug/L)	DRBC SWQ Standard - Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)	Notes on DRBC SQOs
TAL Inorganics	**Average**										
Aluminum	8,770	Not Needed	4,000			35,000	15.5	35,000	750	87	total recoverable basis
Antimony	ND	3.60	4,000	0.059	0.941				-	-	
Arsenic	10.8	2.40	4,000	0.499	0.501	43.4	21.6	21.7	340	150	total dissolved form
Barium	45.3	2.50	4,000	0.442	0.558	181	80.1	101	-	-	
Beryllium	0.670	2.80	4,000	0.284	0.716	2.68	0.761	1.92	-	-	
Cadmium	ND	3.30	4,000	0.111	0.889				1.0	0.141	total dissolved form
Calcium	966	NVF	4,000			3,860			-	-	
Chromium[5]	50.1	5.10	4,000	0.00198	0.998	200	0.397	200	390	19	total dissolved form
Cobalt	7.34	3.10	4,000	0.166	0.834	29.4	4.86	24.5	-	-	
Copper	18.2	3.50	4,000	0.0733	0.927	72.7	5.33	67.4	9.6	6.5	total dissolved form
Iron	24,700	NVF	4,000			98,800			-	-	total recoverable basis
Lead	26.9	4.60	4,000	0.00624	0.994	108	0.671	107	38.0	5.4	total dissolved form
Magnesium	1,920	NVF	4,000			7,680			-	-	
Manganese	423	NVF	4,000			1,690			-	-	
Mercury	0.126	4.90	4,000	0.00314	0.997	0.505	0.00158	0.503	1.4	0.77	total dissolved form
Nickel	12.6	3.90	4,000	0.0305	0.969	50.4	1.54	48.9	308	34	total dissolved form
Potassium	812	NVF	4,000			3,250			-	-	
Selenium[6]	ND	3.60	4,000	0.0591	0.941				20	5	total recoverable basis
Silver (ND)	ND	3.60	4,000	0.0591	0.941				1.9	NA	total dissolved form
Sodium	190	NVF	4,000			759			-	-	
Thallium	ND	1.30	4,000	0.926	0.0739				-	-	
Vanadium	46.6	2.10	4,000	0.665	0.335	186	124	62.5	-	-	
Zinc	88.0	4.10	4,000	0.0195	0.981	352	6.86	345	88	88	total dissolved form
Total Cyanide (mg/kg)[7]	0.0850	3.00	4,000	0.200	0.800	0.340	0.0680	0.272	22	5.2	free cyanide based on lowest pH in receiving waters

Notes:
mg/kg: milligrams per kilogram
ug/L: microgram per liter
TCL VOCs: Target Compound List Volatile Organic Compounds
TCL SVOCs: Target Compound List Semivolatile Organic Compounds
TAL: Target Analyte List
PAHs: Poly Aromatic Hydrocarbons
= not sufficient info = not sufficient information to calculate
Data is compared to acute (one-hour average) as well as chronic (4-day time period) stream quality objectives (SQOs) for freshwater aquatic life (DRBC Water Quality Regulations, 2013).
highlighted concentrations were found above acute DRBC SQOs at TSS concentration in slurry
highlighted concentrations were found above chronic DRBC SQOs at TSS concentration in slurry
NA: sample not analyzed for the specified substance
ND: substance not detected
NVF: no octanol-water partitioning coefficient (Log K_{oc}) value found
95% UCL: 95% upper confidence limit
1. Log Koc value from Agency for Toxic Substances and Disease Registry (ATSDR) database Toxicological information located here: https://www.atsdr.cdc.gov/toxprofiles/tp.asp?id=72&tid=19.
SVOC and dioxin Log Koc values are from ATSDR Chemical and Physical Information for each compound.
2. Volatile Organic Carbons, Poly Aromatic Hydrocarbons or Semivolatile Organic Carbons, Polychlorinated Bipheyl log Koc values from Delaware Risk=Based Corrective Action Program (DERBCAP), (2000) - for soil to groundwater.
3. Metals Acute Aquatic Life Criterion assume a hardness of 74 mg/L as per the DRBC Water Quality Regulations, Article 4: Application of Standards (p.108, 2013).
4. Log (K_d) values derived from the median values in Table 5 of the following reference: Ambrose, R. 2005. Partition Coefficients For Metals In Surface Water, Soil, and Waste. U.S. Environmental Protection Agency, Office of Research and Development, Washington, DC (p.3-15)
5. Used trivalent chromium (Cr III) log K_d value.
6. Used Se (IV) log K_d value
7. Total cyanide Log K_d value is for soil to water partitioning.

Abbreviations:
TSS: total suspended solids concentration
C_{pw} : concentration in pore water
$C_{sed,C}$: concentration in stratum C sediment
Log K_{oc} or K_{oc} : octanol-water partitioning coefficient
K_{eq} : equilibrium partitioning coefficient
mg/kg : milligram per kilogram
L/kg : liters per kilogram
ug/L : microgram per liter
f_d : dissolved fraction of substance
f_p : fraction of substance sorbed to particulate
C_T : total concentration of substance
C_d : dissolved concentration of substance
C_p : concentration of substance sorbed to particulate

Duffield Associates, Inc.
Project No. 11139.LH

Table 12.3.2 CDF Effluent Water Quality Evaluation at TSS Instantaneous Limit
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Sample Identification	Stratum C Concentration from Sediment to Water (Average)	Particulate Concentration from Sediment to Water (95% UCL/Average)	Concentration in Water (MEDIAN)	Concentration in Slurry	Effluent Concentration from CDF	DRBC Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)
TCL VOCs	C_d (ug/L)	C_p (ug/L)	(ug/L)	(ug/L)	(ug/L)		
Toluene	53	0.81	NA	53	53	-	-
Pesticides							
No detections						-	-
Polychlorinated Biphenyls (PCBs), Dioxins, and Furans							
2,3,7,8-TCDD	0.0000000381	0.000000106	NA			-	-
Total PCBs	0.000859	0.00209	0.00550	0.006359	0.006359	**1.0**	**0.0140**
TCL SVOCs for Stratum C							
2-Methylnaphthalene[1]	0.76	0.19	0.0037	0.76	0.76	-	-
4-Methylphenol	49.5	0.27				-	-
Acenaphthene[2]	0.16	0.10	ND	0.16	0.16	-	-
Anthracene[1]	0.42	0.42	0.0057	0.42	0.42	-	-
Benzo[a]anthracene[2]	0.14	0.40	0.0075	0.15	0.15	-	-
Benzo[a]pyrene[2]	0.11	0.29	0.0081	0.11	0.11	-	-
Benzo[b]fluoranthene[2]	0.13	0.34	0.020	0.15	0.15	-	-
Benzo[k]fluoranthene[2]	0.062	0.17	0.015	0.076	0.076	-	-
Bis(2-ethylhexyl) phthalate	0.060	0.16					-
Chrysene[2]	0.16	0.39	0.025	0.18	0.18	-	-
Dibenzofuran	0.061	0.16				-	-
Fluoranthene[2]	0.26	0.44	0.045	0.30	0.30	-	-
Fluorene[2]	0.21	0.13	ND	0.21	0.21	-	-
Indeno[1,2,3-cd]pyrene[2]	0.084	0.24	0.0076	0.0915	0.0915	-	-
Naphthalene[1]	3.32	0.34	0.0049	3.3	3.3	-	-
Phenanthrene[2]	0.42	0.43	0.030	0.45	0.45	-	-
Pyrene[2]	0.28	0.48	0.036	0.32	0.32	-	-

Table 12.3.2 CDF Effluent Water Quality Evaluation at TSS Instantaneous Limit
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Sample Identification	Stratum C Concentration from Sediment to Water (Average)	Particulate Concentration from Sediment to Water (95% UCL/Average)	Concentration in Water (MEDIAN)	Concentration in Slurry	Effluent Concentration from CDF	DRBC Fresh Acute Aquatic Life Criteria (ug/L)	DRBC SQOs - Fresh Chronic Aquatic Life Criteria (ug/L)	Notes on DRBC SQOs
TAL Inorganics	**C_d (ug/L)**	**C_p (ug/L)**	**(ug/L)**	**(ug/L)**	**(ug/L)**			
Aluminum	15.5	35,000	885	900	**7,900**	**750**	**87**	total recoverable basis
Antimony			0.505	0.505	0.505	-	-	
Arsenic	21.6	21.7	1.55	23.2	23.2	**340**	**150**	total dissolved form
Beryllium	0.761	1.92	ND	0.761	0.761	-	-	
Cadmium			ND			**1.0**	**0.141**	total dissolved form
Calcium			18,650	18,650	18,650	-	-	
Chromium	0.397	200	3.60	4.00	4.00	**390**	**19**	total dissolved form
Cobalt	4.86	24.5	1.60	6.46	6.46	-	-	
Copper	5.33	67.4	6.25	11.6	**11.6**	**9.6**	**6.5**	total dissolved form
Iron			1,640	1,640	1,640	-	-	total recoverable basis
Manganese			141	141	141	-	-	
Selenium			ND			**20**	**5**	total recoverable basis
Sodium			26,300	26,300	26,300	-	-	
Thallium			ND			-	-	
Zinc	6.86	345	18.1	24.9	24.9	**88**	**88**	total dissolved form
Total Cyanide (mg/kg)	0.0170	0.00425	ND	0.0170	0.0170	**22**	**5.2**	free cyanide based on lowest pH in receiving waters

Notes:
ug/L: microgram per liter
NA: sample not analyzed for the specified substance
ND: substance not detected
NVF: no Log K_{oc} value found
95% UCL: 95% upper confidence limit
TCL VOCs: Target Compound List Volatile Organic Compounds
TCL SVOCs: Target Compound List Semivolatile Organic Compounds
TAL: Target Analyte List
PAHs: Poly Aromatic Hydrocarbons
= not sufficient information to calculate
Data is compared to acute (one-hour average) as well as chronic (4-day time period) stream quality objectives (SQOs) for freshwater aquatic life (Delaware River Basin Commission Water Quality Regulations, 2013).
highlighted concentrations were found above acute DRBC SQOs at TSS concentration in slurry
highlighted concentrations were found above chronic DRBC SQOs at TSS concentration in slurry
SQOs are derived from DDRBC's Zone 5 Water Quality Regulations (2013).
Total recoverable basis is used interchangably by the US Environmental Protection Agency (USEPA) with total metals (1998).

APPENDIX A

VIBRACORE AND TEST BORING LOGS
(DUFFIELD 2016, 2018, AND 2019)

DUFFIELD ASSOCIATES
Soil, Water & the Environment

TEST BORING TB-1

Preliminary Subsurface Evaluation
Chemours Edge Moor Site
Claymont, Delaware
Project No. 11139.LB

Date Started	: October 5, 2016	Drilling Equipment	: Barge-mounted Acker XLS
Date Completed	: October 5, 2016	Drilling Methods	: ASTM D 1586 (Mud Rotary)
Logged by	: JWF	Surface Elevation	: 0.0 feet (± MLLW Datum)
Weather	: Sunny, 75	Northing	: 633,142.338 DE State Plane
Driller/Agency	: P. Flaherty/TRC	Easting	: 635,473.797 DE State Plane

Sample Condition: Remolded
Water Levels: ▼ During Drilling

Depth in feet	Surf. Elev. 0.0 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0	0										▼
5	-5										
10	-10										
			MH	Dark gray SILT, trace fine sand	☒	S-1	WOH/2.0	2.0			
				Dark gray SILT, trace fine sand; Atterberg Limits: LL: 92, PL: 42, PI: 50	☒	S-2	WOH/2.0	2.0	87.4	96.9	
15	-15			Dark gray SILT, trace fine sand	☒	S-3	WOH/2.0	2.0			
				Dark gray SILT, trace fine sand	☒	S-4	1-11-6-4	2.0			
20	-20		SW-SM	Brown, green-brown medium to coarse SAND, little fine sand, trace gravel, trace silt	☒	S-5	1-2-3-3	1.1			
				Light brown medium SAND, little fine sand, trace silt, trace gravel, trace coarse sand	☒	S-6	4-5-5-5	1.3	18.6	8.9	
				Light brown fine to medium SAND, trace silt	☒	S-7	4-5-5-6	1.1			
25	-25		SP	Light brown medium to coarse SAND, trace gravel	☒	S-8	7-4-4-6	1.2			
				Light brown medium SAND, some coarse sand, trace fine sand, trace gravel, trace silt	☒	S-9	4-6-7-6	1.0	11.9	2.8	
30	-30			Light brown fine to medium SAND, trace gravel, trace fine sand	☒	S-10	4-5-5-4	1.0			
				Light brown fine to medium SAND, little fine sand, trace coarse sand, trace silt	☒	S-11	4-5-7-8	0.8	22.8	2.9	
35	-35			Red-brown coarse SAND and GRAVEL, trace silt	☒	S-12A	4-4-8-6	1.2			
			CL	Brown-gray, light gray CLAY, trace fine to coarse sand		S-12B					
				Dark red-brown, light brown CLAY, little fine sand	☒	S-13	3-3-3-3	1.2			
				Dark red-brown, light brown CLAY and fine SAND	☒	S-14	3-4-4-5	0.5			
40	-40										
				Gray, red-brown CLAY and fine SAND; Atterberg Limits: LL: 41, PL: 22, PI: 19	☒	S-15	2-5-5-7	1.2	12.2	60.0	
45	-45										
				Gray, red-brown CLAY and fine to medium SAND	☒	S-16	14-10-10-12	1.0			
50	-50										

NOTES:
1. Ground surface ("mudline") approximately 13 feet below water surface at 0800 AM. Mudline at approximately -11 ft MLLW.
2. Boring terminated approximately 37.0 feet below "mudline"
3. Boring location collected by Trimble GPS measurements
4. Elevations estmiated based on Marcus Hook tide gauge for MLLW datum.
5. Environmental composite samples include TB-1T, collected at 11 to 11.16 ft. below MLLW, TB-1C, collected 11 to 34.5 ft. below MLLW, and TB-1B, collected 43 to 48 ft. below MLLW.
6. 3-inch split spoon sampler used to collect sample S-16.
7. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

TEST BORING TB-2

DUFFIELD ASSOCIATES
Soil, Water & the Environment

Preliminary Subsurface Evaluation
Chemours Edge Moor Site
Claymont, Delaware
Project No. 11139.LB

Date Started	: September 27, 2016	Drilling Equipment	: Barge-mounted Acker XLS
Date Completed	: September 27, 2016	Drilling Methods	: ASTM D 1586 (Mud Rotary)
Logged by	: JWF	Surface Elevation	: 0.0 feet (± MLLW Datum)
Weather	: Sunny, 75	Northing	: 633,536.95 DE State Plane
Driller/Agency	: P. Flaherty/TRC	Easting	: 636,457.038 DE State Plane

Sample Condition: Remolded
Water Levels: ▼ During Drilling

Depth in feet	Surf. Elev. 0.0 ft	USCS	DESCRIPTION	Sample Number	Blows per 6 inches	Recovery (ft)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0	0								▼
5	-5	MH	Dark gray SILT, trace fine sand	S-1	WOR/2.0	1.0			
			Dark gray SILT, trace fine to coarse sand	S-2	WOH/2.0	2.4	58.3	98.2	
		SM	Light brown fine SAND, some medium sand, little silt, trace coarse sand	S-3	8-6-5-4	1.0	17.9	19.5	
10	-10		Orange-brown fine to medium SAND, little silt, trace coarse sand	S-4	2-3-3-3	1.3			
			Orange-brown fine to medium SAND, little silt, trace coarse sand	S-5A S-5B	2-3-3-3	2.0			
15	-15	SP-SM	Red-brown fine SAND, trace coarse sand, trace silt Orange-brown medium to coarse SAND, little to trace silt	S-6	8-10-6-4	0.8			
			Orange-brown medium to fine SAND, little coarse sand, little gravel, little silt	S-7	7-8-11-12	1.2	12.5	11.2	
			Orange-brown medium to fine SAND, little coarse sand, little gravel, little to trace silt	S-8	5-7-7-9	1.9			
20	-20		Orange-brown medium to fine SAND, little coarse sand, little gravel, trace silt	S-9	4-6-7-9	1.2			
			Orange-brown medium SAND, some gravel, little fine sand, trace coarse sand, trace silt	S-10	5-7-7-8	1.9	11.1	6.2	
25	-25		Orange-brown medium SAND, some gravel, little fine sand, trace coarse sand, trace silt	S-11	3-5-5-8	0.5			
		CL	Orange-brown CLAY, trace medium to coarse sand	S-12	4-5-5-7	0.6			
		SC	Orange-brown fine SAND, little to some clay	S-13	2-4-5-2	0.7			
30	-30	CL	Light blue-gray, red CLAY, little medium sand	S-14	3-3-4-4	1.1			
			Light blue-gray, red CLAY, little medium sand	S-15	4-5-6-6	2.0			
35	-35		Light blue-gray, red CLAY, little medium sand	S-16	4-4-3-6	1.8			
			Light blue-gray, red CLAY, little medium sand	S-17	2-3-3-7	1.1			
			Light blue-gray, red CLAY, little medium sand	S-18	3-3-5-6	1.8			
40	-40	SC	Dark red-brown, blue-gray fine SAND and CLAY, little medium sand, trace coarse sand	S-19	2-3-4-5	2.4	15.8	37.8	
			Dark red-brown, blue-gray fine SAND, little clay	S-20A	2-4-4-5	2.4			
		CL	Light blue-gray, red, white CLAY, trace medium sand	S-20B					
45	-45	SC	Dark red-brown, blue-gray fine SAND, little clay	S-21	5-8-9-8	2.4			
			Dark red-brown, blue-gray fine SAND, little clay	S-22A	9-8-12-14	1.9			
		SC	Green-brown fine to medium SAND, some clay, trace coarse sand	S-22B			17.6	20.0	
50	-50								

NOTES:
1. Ground surface ("mudline") approximately 9 feet below water surface at 0900 AM. Mudline at approximately -4 ft MLLW.
2. Boring terminated approximately 45 ft below "mudline".
3. Boring location collecteed by Trimble GPS measurements.
4. Elevations estmiated based on Marcus Hook tide gauge for MLLW datum.
5. Environmental composite samples include TB-2T, collected at 4 to 4.16 ft. below MLLW, TB-2C, collected 4 to 30 ft. below MLLW, and TB-1B, collected 32 to 48 ft. below MLLW.
6. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

DUFFIELD ASSOCIATES
Soil, Water & the Environment

TEST BORING TB-3

Preliminary Subsurface Evaluation
Chemours Edge Moor Site
Claymont, Delaware
Project No. 11139.LB

Date Started	: October 3, 2016	Drilling Equipment	: Barge-mounted Acker XLS
Date Completed	: October 3, 2016	Drilling Methods	: ASTM D 1586 (Mud Rotary)
Logged by	: JWF	Surface Elevation	: 0.0 feet (± MLLW Datum)
Weather	: Sunny, 75	Northing	: 633,671.776 DE State Plane
Driller/Agency	: P. Flaherty/TRC	Easting	: 636,361.674 DE State Plane

Sample Condition: Remolded
Water Levels: ▼ During Drilling

Depth in feet	Surf. Elev. 0.0 ft
0	0
5	-5
10	-10
15	-15
20	-20
25	-25
30	-30
35	-35
40	-40
45	-45
50	-50

USCS	DESCRIPTION	Sample Number	Blows per 6 inches	Recovery (ft)	Moisture Content (%)	Percent Passing 200 Sieve
MH	Dark gray SILT, trace fine to coarse sand	S-1	WOR/2.0	1.0		
MH	Dark gray SILT, trace fine to coarse sand; Atterberg Limits: LL: 77, PL: 37, PI: 40	S-2	WOR/2.0	2.0	101.8	98.9
MH	Dark gray SILT, trace fine to coarse sand	S-3	WOR/2.0	2.0		
MH	Dark gray SILT, trace fine to coarse sand	S-4	WOR/2.0	1.9		
MH	Dark gray SILT, trace fine to coarse sand	S-5	WOR/2.0	2.2		
MH	Dark gray SILT, trace fine to coarse sand	S-6A	WOH-2-3-9	1.3		
SM	Light gray and brown fine SAND, some silt, trace clay	S-6B				
SM	Orange-brown medium SAND, little fine sand, little silt, trace coarse sand, trace gravel	S-7	7-7-7-7	1.3	16.6	12.0
SM	Orange-brown medium SAND, little fine sand, little silt, trace coarse sand, trace gravel	S-8	4-6-10-9	0.3		
SW-SM	Orange-brown medium SAND, little fine sand, little gravel, trace silt, trace coarse sand	S-9	6-6-6-7	1.9	15.2	8.6
SW-SM	Orange-brown medium SAND, little fine sand, little gravel, trace silt, trace coarse sand	S-10	5-6-6-11	2.0		
SW-SM	TRACE RECOVERY (fine to coarse gravel pieces)	S-11	7-7-4-3	0.1		
CL	Red-brown CLAY, trace fine to coarse sand	S-12	3-4-5-9	0.3		
CL	Red-brown CLAY, little to some fine sand	S-13	4-6-6-6	2.0		
SC	Red-brown, blue-gray fine SAND and CLAY	S-14	7-14-14-14	2.4		
SC	Brown, red, blue-gray fine SAND and CLAY, trace coarse sand; Atterberg Limits: LL: 30, PL: 17, PI: 13	S-15	4-7-9-8	1.8	13.8	39.5
SC	Brown, red, blue-gray fine SAND and CLAY, trace coarse sand	S-16	8-12-13-11	2.4		
SC	Brown, red, blue-gray fine SAND and CLAY, trace coarse sand	S-17	8-9-11-12	2.4		
SC	Brown, red, blue-gray fine SAND and CLAY, trace coarse sand	S-18	5-8-8-10			
SC	Brown, red, blue-gray fine SAND and CLAY, trace coarse sand	S-19A	7-8-10-10	2.0		
SC	Green-brown medium to fine SAND, some clay, trace coarse sand, trace gravel	S-19B			16.9	27.9

NOTES:
1. Ground surface ("mudline") approximately 11.5 feet below water surface at 0900 AM. Mudline at approximately 11 ft MLLW.
2. Boring terminated approximately 38 ft below "mudline".
3. Boring location collecteed by Trimble GPS measurements.
4. Elevations estmiated based on Marcus Hook tide gauge for MLLW datum.
5. Environmental composite samples include TB-3T, collected at 11 to 11.16 ft. below MLLW, TB-3C, collected 11 to 32 ft. below MLLW, and TB-3B, collected 43 to 49 ft. below MLLW.
6. Composite river water sample SW-1 collected.
7. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

TEST BORING TB-4

DUFFIELD ASSOCIATES
Soil, Water & the Environment

Preliminary Subsurface Evaluation
Chemours Edge Moor Site
Claymont, Delaware
Project No. 11139.LB

Date Started	: October 4, 2016	Drilling Equipment	: Barge-mounted Acker XLS
Date Completed	: October 4, 2016	Drilling Methods	: ASTM D 1586 (Mud Rotary)
Logged by	: JWF	Surface Elevation	: 0.0 feet (± MLLW Datum)
Weather	: Sunny, 75	Northing	: 633,809.89 DE State Plane
Driller/Agency	: P. Flaherty/TRC	Easting	: 636,259.732 DE State Plane

Sample Condition: Remolded
Water Levels: ▼ During Drilling

Depth in feet	Surf. Elev. 0.0 ft	USCS	DESCRIPTION	Sample Number	Blows per 6 inches	Recovery (ft)	Moisture Content (%)	Percent Passing 200 Sieve
0	0							
5	-5							
10	-10							
15	-15							
20	-20							
25	-25							
		MH	Dark gray SILT, trace fine sand	S-1	WOR/2.0	2.0		
		MH	Dark gray SILT, trace fine sand; Atterberg Limits: LL: 94, PL: 41, PI: 53	S-2	WOR/2.0	2.0	84.7	97.3
30	-30	MH	Dark gray SILT, trace fine sand	S-3A	WOH/2.0	2.0		
		MH	Dark gray SILT, trace fine sand	S-3B				
		CL	Red-brown CLAY, little fine sand, trace coarse sand	S-4	2-3-4-6	1.9		
35	-35	SC	Orange-brown fine to medium SAND and CLAY, trace gravel, trace coarse sand	S-5	2-2-3-2	1.8	19.6	39.7
		CL	Orange brown, dark red CLAY, some fine sand, little medium sand, trace coarse sand	S-6	5-5-5-5	1.2	27.5	60.1
		SC	Light brown fine SAND and CLAY, trace coarse sand	S-7	4-8-6-5	1.4		
40	-40	SC	Light brown fine SAND and CLAY, trace coarse sand; Atterberg Limits: LL: 40, PL: 19, PI: 21	S-8	1-1-2-3	1.2	22.6	40.3
		SC	Light brown fine SAND and CLAY, trace coarse sand	S-9	1-1-2-2	2.4		
45	-45	SC	Gray-brown, red brown fine to medium SAND, some clay, little coarse sand	S-10	6-5-5-6	2.4		
		SC	Gray-brown, red-brown fine to medium SAND, some clay, trace coarse sand	S-11	5-6-7-9	2.4	18.7	28.2
50	-50							

NOTES:
1. Ground surface ("mudline") approximately 27 feet below water surface at 0800 AM. Mudline at approximately 26 ft MLLW.
2. Boring terminated approximately 22 ft below "mudline"
3. Boring location collecteed by Trimble GPS measurements
4. Elevations estmiated based on Marcus Hook tide gauge for MLLW datum.
5. Environmental composite samples include TB-4T, collected at 26 to 26.16 ft. below MLLW, TB-4C, collected 26 to 48 ft. below MLLW, and TB-4B, collected 42 to 48 ft. below MLLW.
6. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

DUFFIELD ASSOCIATES
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TEST BORING TB-5

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Preliminary Subsurface Evaluation
Chemours Edge Moor Site
Claymont, Delaware
Project No. 11139.LB

Date Started	: October 5, 2016	Drilling Equipment	: Barge-mounted Acker XLS
Date Completed	: October 5, 2016	Drilling Methods	: ASTM D 1586 (Mud Rotary)
Logged by	: JWF	Surface Elevation	: 0.0 feet (± MLLW Datum)
Weather	: Sunny, 75	Northing	: 634,184.772 DE State Plane
Driller/Agency	: P. Flaherty/TRC	Easting	: 637,173.917 DE State Plane

Sample Condition: Remolded
Water Levels: ▼ During Drilling

Depth in feet	Surf. Elev. 0.0 ft	USCS	DESCRIPTION	Sample Number	Blows per 6 inches	Recovery (ft)	Moisture Content (%)	Percent Passing 200 Sieve
10	-10	MH	Dark gray, brown SILT, trace fine sand	S-1	WOR/2.0	2.0		
		MH	Dark gray, brown SILT, trace fine sand	S-2	WOR/2.0	2.0		
		MH	Dark gray, brown SILT, trace fine sand	S-3	WOH/1.0-1-1	2.0		
15	-15	MH	Dark gray, brown SILT, trace fine sand; Atterberg Limits: LL: 95, PL: 47, PI: 48	S-4	WOH/1.0-1-1	2.0	83.1	99.5
		ML	Dark gray, brown SILT, little fine sand; Atterberg Limits: LL: 40, PL: 28, PI: 12	S-5	1-1-1-1	2.0	45.6	89.6
20	-20	ML	Dark gray, brown SILT, trace to little fine sand	S-6	3-4-6-5	2.0		
		SM	Dark gray fine to medium SAND, little silt, little coarse sand, trace gravel	S-7	11-11-8-10	1.1		
		SM	NO RECOVERY	S-8	8-6-3-2	0.0		
25	-25	SM	Gray medium SAND, some gravel, little silt, trace coarse sand, trace fine sand	S-9	8-16-15-20	1.3	10.1	18.3
		SM	Gray-brown fine to medium SAND, little silt, little coarse sand, trace gravel.	S-10	13-15-16-16	1.1		
30	-30	ML	Light gray SILT, little fine sand	S-11	5-8-7-9	1.1		
		ML	Light gray, red-brown medium to fine SAND, some silt, trace coarse sand	S-12	7-8-25-23	1.0	12.8	23.0
35	-35	SC	Orange-brown fine to coarse SAND, little clay	S-13	11-11-17-5	0.5		
		SC	Orange-brown fine to coarse SAND, little clay	S-14	7-3-4-3	1.5		
		SC	Orange-brown, red, gray fine SAND and CLAY, trace coarse sand; Atterberg Limits: LL: 34, PL: 16, PI: 18	S-15	4-5-5-7	2.0	20.9	48.7
40	-40	SC						
		SC	Orange-brown, red, gray fine SAND and CLAY, trace coarse sand	S-16	6-4-3-5	1.3		
45	-45	SC						
		SC	Orange-brown, red, gray fine SAND and CLAY, trace coarse sand	S-17	5-4-4-5	2.0		
50	-50							

NOTES:
1. Ground surface ("mudline") approximately 12 feet below water surface at 1230 PM. Mudline at approximately 9 ft MLLW.
2. Boring terminated approximately 29 ft below mudline
3. Boring location collecteed by Trimble GPS measurements
4. Elevations estmiated based on Marcus Hook tide gauge for MLLW datum.
5. Environmental composite samples include TB-5T, collected at 9 to 9.16 ft. below MLLW, TB-5C, collected 9 to 35.5 ft. below MLLW, and TB-5B, collected 42 to 48 ft. below MLLW.
6. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

TBLOGPASSIM% 11139.LB.0916.BORINGLOGS.GPJ DUFFIELD.GDT 10/16/16

TEST BORING TB-6

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DUFFIELD ASSOCIATES
Soil, Water & the Environment

Geotechnical Evaluation
POW Edgemoor - USACE 204F
Edgemoor, Delaware
Project No. 11139.LD

Date Started	: July 12, 2018	Drilling Equipment	: Barge-mounted Diedrich D-50
Date Completed	: July 12, 2018	Drilling Methods	: HSA (SPT, ASTM D 1586)
Logged by	: IMF	Surface Elevation	: -1.5 feet ± Project Datum
Weather	: Cloudy, 80s	Northing	: 635,185.8319
Driller/Agency	: J. Gravatt/CGC Geoservices	Easting	: 632,619.8073

Sample Condition: Remolded; Undisturbed

Water Levels

Depth in feet	Surf. Elev. -1.5 ft	USCS	DESCRIPTION	Sample Number	Blows per 6 inches	Recovery (ft)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0		MH	Dark gray SILT, trace fine sand	S-1	WOH	0.6			
			Dark gray SILT, trace fine sand	S-2	WOH	2.0			
5			Dark gray SILT, trace fine sand	S-3	WOH	2.0			
			Dark gray SILT, trace fine sand (slight petroleum odor) (Liquid Limit: 63; Plasticity Index: 30)	S-4	WOH	2.0	80.4	97.0	
			Dark gray SILT, trace fine sand	S-5A	WOH-3-2	0.7			
10	-11.0	SM	Dark gray fine to medium SAND and SILT, little coarse sand, trace to little gravel	S-5B					
			SHELBY TUBE ST-1: 10.0' - 12.0'	ST-1	P-U-S-H	1.6			
			Dark gray, orange, brown medium to coarse SAND, little silt, little fine sand, trace to little fine gravel	S-6	3-3-4-4	0.8	20.4	12.7	
15			Orange, brown medium to coarse SAND, little fine sand, little silt, little fine to coarse gravel	S-7	11-7-4-6	0.6			
20			Orange, brown fine to coarse SAND, little silt, little fine gravel	S-8	6-5-10-7	0.6	15.9	15.4	
25	-25.5	CL	Red, dark brown CLAY, trace to little fine sand	S-9	7-6-10-14	2.0			
30			Red, brown, blue CLAY, some fine sand, trace medium to coarse sand	S-10	7-10-22-17	1.0			
35			Red, brown CLAY, trace to little fine sand	S-11	7-7-11-15	2.0			
			SHELBY TUBE ST-2: 37.0' - 39.0'	ST-2	P-U-S-H	2.0			
40			Red, brown CLAY, trace fine sand	S-12	4-6-7-10	2.0			
45			Red, brown CLAY and fine SAND	S-13	10-12-18-22	0.8	46.4	50.1	
50									

NOTES:
1. Ground surface ("mudline") approximately 3.0 feet below water surface at 10:15am. Mudline at approximately - 1.5ft MLLW.
2. Test boring terminated at ± 86 feet below mudline.
3. Elevations estimated based on NOAA tide predictions for Edgemoor, DE
4. Boring backfilled with grout below mudline.
5. Soil desriptions performed in general accordance with ASTM D 2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

DUFFIELD ASSOCIATES
Soil, Water & the Environment

TEST BORING TB-6

Geotechnical Evaluation
POW Edgemoor - USACE 204F
Edgemoor, Delaware
Project No. 11139.LD

Date Started	: July 12, 2018	Drilling Equipment	: Barge-mounted Diedrich D-50
Date Completed	: July 12, 2018	Drilling Methods	: HSA (SPT, ASTM D 1586)
Logged by	: IMF	Surface Elevation	: -1.5 feet ± Project Datum
Weather	: Cloudy, 80s	Northing	: 635,185.8319
Driller/Agency	: J. Gravatt/CGC Geoservices	Easting	: 632,619.8073

Sample Condition: Remolded; Undisturbed

Water Levels

Depth in feet	Surf. Elev. -1.5 ft	USCS	DESCRIPTION	Sample Number	Blows per 6 inches	Recovery (ft)	Moisture Content (%)	Percent Passing 200 Sieve
50		CL	Red, brown, blue CLAY, little fine sand	S-14	7-10-15-15	1.9		
55		CL	Red, brown CLAY, trace to little fine sand	S-15	11-11-13-11	1.6		
60		CL	Red, brown, blue CLAY and fine SAND (Liquid Limit: 37; Plasticity Index: 20)	S-16	10-10-17-18	2.0	20.8	53.9
65		CL	Red, brown CLAY, trace fine sand	S-17	11-15-22-26	2.0		
70		CL	Red, brown, gray CLAY, little fine sand, trace weathering	S-18A	11-17-19-31	2.0		
	-71.8	SC	Brown fine to medium SAND, some to and clay	S-18B				
75		SC	Brown, gray, red fine to medium SAND, some clay, trace to little coarse sand (Liquid Limit: 23; Plasticity Index: 9)	S-19	17-19-17-36	2.0	18.1	29.3
80		SC	Brown, gray, red medium to coarse SAND, some clay, little fine sand, trace fine gravel	S-20	20-29-45-45	1.2		
85		SC	Brown, gray fine to medium SAND, little to some clay, trace coarse sand	S-21A	68-48-38-42	2.0		
	-87.0	CL	WEATHERED ROCK: Dark gray, black clay, some fine sand	S-21B				
	-89.5							
90								
95								
100								

NOTES:
1. Ground surface ("mudline") approximately 3.0 feet below water surface at 10:15am. Mudline at approximately - 1.5ft MLLW.
2. Test boring terminated at ± 86 feet below mudline.
3. Elevations estimated based on NOAA tide predictions for Edgemoor, DE.
4. Boring backfilled with grout below mudline.
5. Soil desriptions performed in general accordance with ASTM D 2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

TEST BORING TB-7

DUFFIELD ASSOCIATES
Soil, Water & the Environment

Geotechnical Evaluation
POW Edgemoor - USACE 204F
Edgemoor, Delaware
Project No. 11139.LD

Date Started	: July 23, 2018	Drilling Equipment	: Barge-mounted Diedrich D-50
Date Completed	: July 23, 2018	Drilling Methods	: HSA (SPT, ASTM D 1586)
Logged by	: EMO	Surface Elevation	: -3.2 feet ± Project Datum
Weather	: Overcast, 70s	Northing	: 635,722.52
Driller/Agency	: J. Gravatt/CGC Geoservices	Easting	: 632,763.9

Sample Condition: Remolded (X box); Undisturbed (hatched box)

Water Levels

Depth in feet	Surf. Elev. -3.2 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0			MH	Dark gray SILT, trace fine sand	Remolded	S-1	WR	0.6			
			MH	Dark gray SILT, trace fine sand (Liquid Limit: 63; Plasticity Index: 27)	Remolded	S-2	WR	1.0	92.9	99.7	
5			MH	Dark gray SILT, trace fine sand	Remolded	S-3	WR	2.0			
			MH	SHELBY TUBE ST-1: 6.0' - 8.0' - SHELBY TUBE ST-1: 6.0' - 8.0'	Undisturbed	ST-1	P-U-S-H	2.0			
10			MH	Dark gray SILT, trace fine sand	Remolded	S-4	WR	2.0			
	-14.2		SC	Light brown, red fine SAND and CLAY (Liquid Limit: 37; Plasticity Index: 21)	Remolded	S-5	2-3-2-3		22.9	49.7	
15											
	-20.2		CL	Red, brown, gray CLAY, little fine sand, trace silt	Remolded	S-6	4-5-6-7	2.0			
			CL	SHELBY TUBE ST-2: 18.0' - 20.0' - Red, brown gray CLAY and fine SAND (Liquid Limit: 41; Plasticity Index: 23)	Undisturbed	ST-2	P-U-S-H	2.0	21.4	56.8	
20			CL	Red, brown, gray CLAY, little fine sand, trace silt	Remolded	S-7	4-5-6-7	2.0			
25			CL	Light brown, red, gray CLAY and fine SAND, trace medium sand (Liquid Limit: 35; Plasticity Index: 19)	Remolded	S-8	4-7-9-13	2.0	20.6	57.9	
30	-34.2		SC	Light brown, red, gray fine SAND and CLAY, trace medium sand	Remolded	S-9	5-5-8-9	2.0	17.2	46.0	
35			SC	Light brown, red, gray fine SAND and CLAY, trace medium sand	Remolded	S-10	3-5-7-8	2.0			
40			SC	Light brown, gray, red fine SAND and CLAY, trace medium sand	Remolded	S-11	4-6-10-11	2.0	16.6	39.3	
45			SC	Light brown, gray, red CLAY and fine SAND, trace medium sand	Remolded	S-12	5-5-5-22	2.0			
50											

NOTES:
1. Ground surface ("mudline") approximately 8.5 feet below water surface at 8:45am. Mudline at approximately - 3.2ft MLLW.
2. Test boring terminated at ± 55 feet below mudline.
3. Elevations estimated based on NOAA tide predictions for Edgemoor, DE
4. Boring backfilled with grout below mudline
5. Soil desriptions performed in general accordance with ASTM D 2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

TEST BORING TB-7

DUFFIELD ASSOCIATES
Soil, Water & the Environment

Geotechnical Evaluation
POW Edgemoor - USACE 204F
Edgemoor, Delaware
Project No. 11139.LD

Date Started	: July 23, 2018	Drilling Equipment	: Barge-mounted Diedrich D-50
Date Completed	: July 23, 2018	Drilling Methods	: HSA (SPT, ASTM D 1586)
Logged by	: EMO	Surface Elevation	: -3.2 feet ± Project Datum
Weather	: Overcast, 70s	Northing	: 635,722.52
Driller/Agency	: J. Gravatt/CGC Geoservices	Easting	: 632,763.9

Sample Condition: Remolded; Undisturbed

Water Levels

Depth in feet	Surf. Elev. -3.2 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
50	-54.2		SC								
			CL	Red, gray CLAY and fine SAND, trace medium sand		S-13	22-40-50-50/0.4	2.0			
				SHELBY TUBE ST-2: 53.0'		ST-2	P-U-S-H	0.0			
55	-58.2			Red, gray fine SAND and CLAY, trace medium sand (Liquid Limit: 39; Plasticity Index: 19)		S-14	40-50/0.2	2.0	17.5	41.3	
60											
65											
70											
75											
80											
85											
90											
95											
100											

NOTES:
1. Ground surface ("mudline") approximately 8.5 feet below water surface at 8:45am. Mudline at approximately - 3.2ft MLLW.
2. Test boring terminated at ± 55 feet below mudline.
3. Elevations estimated based on NOAA tide predictions for Edgemoor, DE
4. Boring backfilled with grout below mudline
5. Soil desriptions performed in general accordance with ASTM D 2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

DUFFIELD ASSOCIATES
Soil, Water & the Environment

TEST BORING TB-7A

Geotechnical Evaluation
POW Edgemoor - USACE 204F
Edgemoor, Delaware
Project No. 11139.LD

Date Started	: July 24, 2018	Drilling Equipment	: Barge-mounted Diedrich D-50
Date Completed	: July 25, 2018	Drilling Methods	: HSA (SPT, ASTM D 1586)
Logged by	: EMO	Surface Elevation	: -3.2 feet ± Project Datum
Weather	: Overcast, 70s	Northing	: 635,719.07
Driller/Agency	: J. Gravatt/CGC Geoservices	Easting	: 632,766.87

Sample Condition: Remolded
Water Levels

Depth in feet	Surf. Elev. -3.2 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0											
5											
10											
15											
20											
25				TB-9A offset from TB-9 and advanced to 62.0 feet below "mudline"							
30											
35											
40											
45											
50											

NOTES:
1. Ground surface ("mudline") approximately 8.5 feet below water surface at. Mudline at approximately -2.5ft MLLW.
2. Test boring terminated at ± 116.8 feet below mudline.
3. Elevations estimated based on NOAA tide predictions for Edgemoor, DE
4. Boring backfilled with grout below mudline
5. Soil desriptions performed in general accordance with ASTM D 2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

DUFFIELD ASSOCIATES
Soil, Water & the Environment

TEST BORING TB-7A

Geotechnical Evaluation
POW Edgemoor - USACE 204F
Edgemoor, Delaware
Project No. 11139.LD

Date Started	: July 24, 2018	Drilling Equipment	: Barge-mounted Diedrich D-50
Date Completed	: July 25, 2018	Drilling Methods	: HSA (SPT, ASTM D 1586)
Logged by	: EMO	Surface Elevation	: -3.2 feet ± Project Datum
Weather	: Overcast, 70s	Northing	: 635,719.07
Driller/Agency	: J. Gravatt/CGC Geoservices	Easting	: 632,766.87

Sample Condition: ☒ Remolded

Water Levels

Depth in feet	Surf. Elev. -3.2 ft	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
50										
55	-58.2	SC								
			Brown, red, gray fine SAND, little clay, trace medium sand (Liquid Limit: 23; Plasticity Index: 10)	☒	S-1	21-32-50/5	1.4	15.1	26.6	
65	-68.2	CL	Dark red CLAY, some to and fine sand, trace medium sand	☒	S-2	DR-11-12-14	2.0			
			Dark, red, blue, brown CLAY, little to some fine sand, trace medium sand	☒	S-3	10-17-27-34	2.0			
75	-78.2	SC	Dark red, brown fine SAND and CLAY, trace medium sand (Liquid Limit: 43; Plasticity Index: 29)	☒	S-4	11-18-24-25	2.0	19.6	37.3	
80	-83.2	CL	Red CLAY, trace to little fine sand	☒	S-5	80/3	0.2			
	-87.2	CL	WEATHERED ROCK: Blue, gray clay, some silt, trace fine sand (Liquid Limit: 62; Plasticity Index: 45)	☒	S-6	18-20-20-34	2.0	26.4	99.0	
			WEATHERED ROCK: Blue, gray, green clay, trace to little fine sand	☒	S-7	14-18-21-30	2.0			
100										

NOTES:
1. Ground surface ("mudline") approximately 8.5 feet below water surface at. Mudline at approximately -2.5ft MLLW.
2. Test boring terminated at ± 116.8 feet below mudline.
3. Elevations estimated based on NOAA tide predictions for Edgemoor, DE
4. Boring backfilled with grout below mudline
5. Soil desriptions performed in general accordance with ASTM D 2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

TEST BORING TB-7A

Geotechnical Evaluation
POW Edgemoor - USACE 204F
Edgemoor, Delaware
Project No. 11139.LD

Date Started	: July 24, 2018	Drilling Equipment	: Barge-mounted Diedrich D-50
Date Completed	: July 25, 2018	Drilling Methods	: HSA (SPT, ASTM D 1586)
Logged by	: EMO	Surface Elevation	: -3.2 feet ± Project Datum
Weather	: Overcast, 70s	Northing	: 635,719.07
Driller/Agency	: J. Gravatt/CGC Geoservices	Easting	: 632,766.87

Sample Condition: Remolded

Water Levels

Depth in feet	Surf. Elev. -3.2 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
100			CL								
105	-108.2		SC	WEATHERED ROCK: Blue, gray, green, purple fine sand, some clay (Liquid Limit: 48; Plasticity Index: 19)	Remolded	S-8	17-25-35-47	2.0	23.6	21.2	
115				WEATHERED ROCK: Blue, green, gray gravel (fractured rock) and clay, little to some fine to medium sand	Remolded	S-9	50/3	0.3			
	-121.2			REFUSAL ON APPARENT BEDROCK							
120											
125											
130											
135											
140											
145											
150											

NOTES:
1. Ground surface ("mudline") approximately 8.5 feet below water surface at. Mudline at approximately -2.5ft MLLW.
2. Test boring terminated at ± 116.8 feet below mudline.
3. Elevations estimated based on NOAA tide predictions for Edgemoor, DE
4. Boring backfilled with grout below mudline
5. Soil desriptions performed in general accordance with ASTM D 2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

DUFFIELD ASSOCIATES
Soil, Water & the Environment

TEST BORING TB-8

Geotechnical Evaluation
POW Edgemoor - USACE 204F
Edgemoor, Delaware
Project No. 11139.LD

Date Started	: July 17, 2018	Drilling Equipment	: Barge-mounted Diedrich D-50
Date Completed	: July 17, 2018	Drilling Methods	: HSA (SPT, ASTM D 1586)
Logged by	: IMF	Surface Elevation	: -1.8 feet ± Project Datum
Weather	: Partly Cloudy, 80s	Northing	: 636,861.0944
Driller/Agency	: J. Gravatt/CGC Geoservices	Easting	: 633,592.2327

Sample Condition: Remolded; Undisturbed

Water Levels

Depth in feet	Surf. Elev. -1.8 ft	USCS	DESCRIPTION	Sample Number	Blows per 6 inches	Recovery (ft)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0		MH	Dark gray SILT and coarse GRAVEL, some fine sand	S-1	5-1-6-9	0.2			
			Dark gray fine SAND, some medium to coarse sand, little silt,	S-2A			24.4	17.7	
5	-6.8	SC	Light brown, light yellow fine SAND, trace silt	S-2B	8-11-11-11	2.0			
10			Orange, brown fine SAND, some clay, trace to little medium to coarse sand	S-3	6-3-1-2	0.6			
	-14.8								
15		SW	Orange, brown medium to coarse SAND, little fine sand, trace clay	S-4	3-3-3-9	0.7	14.5	4.8	
	-19.8								
20		SC	Orange, brown coarse SAND, some to and fine to coarse gravel, little to some medium sand, little clay	S-5	13-20-30-17	0.4			
25			Blue, light gray, brown fine SAND and CLAY	S-6	4-8-11-13	1.1	15.6	46.7	
30	-31.8	CL	Blue, light gray CLAY and fine SAND	S-7	4-5-5-6	1.6			
			SHELBY TUBE ST-1: 32.0' - 34.0' - Blue, light gray CLAY and fine SAND (Liquid Limit: 43; Plasticity Index: 22)	ST-1	P-U-S-H	2.0	20.4	59.7	
35			Blue, light gray, red, brown CLAY, little fine sand	S-8	2-4-5-8	1.5			
40			Red, dark brown CLAY, trace to little coarse sand	S-9A	6-12-15-16	1.7			
	-42.8	SC	Blue, gray, brown fine to medium SAND, some clay, trace to little coarse sand	S-9B					
45			Blue, gray, red fine SAND and CLAY, trace to little medium sand, possible weathering (Liquid Limit: 35; Plasticity Index: 17)	S-10	2-15-30-27	1.5	19.5	38.6	
50									

NOTES:
1. Ground surface ("mudline") approximately 2.0 feet below water surface at 7:10am. Mudline at approximately - 1.8ft MLLW
2. Test boring terminated at ± 109 feet below mudline.
3. Elevations estimated based on NOAA tide predictions for Edgemoor, DE
4. Boring backfilled with grout below mudline
5. Soil desriptions performed in general accordance with ASTM D 2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

DUFFIELD ASSOCIATES
Soil, Water & the Environment

TEST BORING TB-8

Geotechnical Evaluation
POW Edgemoor - USACE 204F
Edgemoor, Delaware
Project No. 11139.LD

Date Started : July 17, 2018
Date Completed : July 17, 2018
Logged by : IMF
Weather : Partly Cloudy, 80s
Driller/Agency : J. Gravatt/CGC Geoservices

Drilling Equipment : Barge-mounted Diedrich D-50
Drilling Methods : HSA (SPT, ASTM D 1586)
Surface Elevation : -1.8 feet ± Project Datum
Northing : 636,861.0944
Easting : 633,592.2327

Sample Condition: Remolded; Undisturbed

Water Levels

Depth in feet	Surf. Elev. -1.8 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
50	-51.8		CL	Red, brown, blue, gray CLAY, little fine sand		S-11	6-4-8-9	1.5			
55				Red, blue CLAY, trace fine sand		S-12	19-37-50/0.2	1.5			
60			CL	Red, blue, brown CLAY and fine SAND		S-13	14-22-33-50/5	2.0	16.1	50.6	
65				Red, brown CLAY, trace fine sand		S-14A	15-16-20-17	2.0			
				Brown, light brown, red CLAY and fine to medium SAND		S-14B					
70				Brown, light brown CLAY, some to and fine to medium sand		S-15A	7-8-10-15	2.0			
				Brown, red, gray CLAY, trace fine sand		S-15B					
	-73.8		SC	SHELBY TUBE ST-2: 72.0' - 74.0' - Brown, red, gray fine SAND and CLAY (Liquid Limit: 33; Plasticity Index: 19)		ST-2	P-U-S-H	1.5	19.7	41.7	
75	-75.8		CL	Brown, light brown, red CLAY, some to and fine to medium sand		S-16	26-33	2.0			
80	-82.8			WEATHERED ROCK: Red, blue, gray, pink clay and fine to medium sand		S-17	13-18-13-16	2.0			
85				WEATHERED ROCK: Green, brown, pink, white clay and fine sand		S-18	14-30-48-50/4	1.7			
90			CL	WEATHERED ROCK: Green, brown, pink clay, and fine sand (Liquid Limit: 48; Plasticity Index: 19)		S-19	18-26-34-46	1.4	19.3	59.2	
95				WEATHERED ROCK: Green, brown, pink clay, little to some fine sand		S-20	8-20-41-50/4	1.3			
100											

NOTES:
1. Ground surface ("mudline") approximately 2.0 feet below water surface at 7:10am. Mudline at approximately - 1.8ft MLLW
2. Test boring terminated at ± 109 feet below mudline.
3. Elevations estimated based on NOAA tide predictions for Edgemoor, DE
4. Boring backfilled with grout below mudline
5. Soil desriptions performed in general accordance with ASTM D 2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

TEST BORING TB-8

DUFFIELD ASSOCIATES
Soil, Water & the Environment

Geotechnical Evaluation
POW Edgemoor - USACE 204F
Edgemoor, Delaware
Project No. 11139.LD

Date Started	: July 17, 2018	Drilling Equipment	: Barge-mounted Diedrich D-50
Date Completed	: July 17, 2018	Drilling Methods	: HSA (SPT, ASTM D 1586)
Logged by	: IMF	Surface Elevation	: -1.8 feet ± Project Datum
Weather	: Partly Cloudy, 80s	Northing	: 636,861.0944
Driller/Agency	: J. Gravatt/CGC Geoservices	Easting	: 633,592.2327

Sample Condition: Remolded; Undisturbed

Water Levels

Depth in feet	Surf. Elev. -1.8 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
100			CL	WEATHERED ROCK: Green, brown, gray clay, little to some fine sand		S-21	9-25-40-43	1.3			
105			CL	WEATHERED ROCK: Brown, gray, purple clay, little to some fine sand, trace medium sand		S-22	8-25-43-49	1.0			
	-110.8										
110				REFUSAL ON APPARENT BEDROCK		S-23	50/3	0.0			
115											
120											
125											
130											
135											
140											
145											
150											

NOTES:
1. Ground surface ("mudline") approximately 2.0 feet below water surface at 7:10am. Mudline at approximately - 1.8ft MLLW
2. Test boring terminated at ± 109 feet below mudline.
3. Elevations estimated based on NOAA tide predictions for Edgemoor, DE
4. Boring backfilled with grout below mudline
5. Soil desriptions performed in general accordance with ASTM D 2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

DUFFIELD ASSOCIATES
Soil, Water & the Environment

TEST BORING TB-9

Geotechnical Evaluation
POW Edgemoor - USACE 204F
Edgemoor, Delaware
Project No. 11139.LD

Date Started	: July 18, 2018	Drilling Equipment	: Barge-mounted Diedrich D-50
Date Completed	: July 18, 2018	Drilling Methods	: HSA (SPT, ASTM D 1586)
Logged by	: EMO	Surface Elevation	: -0.2 feet ± Project Datum
Weather	: Clear, 80s	Northing	: 637,646.9897
Driller/Agency	: M. Lyons/CGC Geoservices	Easting	: 634,239.5331

Sample Condition: Remolded; Undisturbed

Water Levels

Depth in feet	Surf. Elev. -0.2 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0			MH	NO RECOVERY	Remolded	S-1	WOR	0.0			
				Dark gray SILT, trace fine sand (Liquid Limit: 42; Plasticity Index: 15)	Remolded	S-2	WOR	0.8	37.6	52.9	
5	-4.2		CL	Gray CLAY, little to trace fine sand	Remolded	S-3	WOR-3-1-2	1.0			
	-6.2		SC	SHELBY TUBE ST-1: 6.0' - 8.0'	Undisturbed	ST-1	P-U-S-H	2.0			
				Gray, dark brown fine SAND, little gravel, little clay, trace coarse sand	Remolded	S-4	1-9-18-13	1.8			
15				Brown fine SAND, little to some clay, trace gravel, trace coarse sand	Remolded	S-5	25-14-20-23	1.0	12.3	14.2	
20				Brown medium to coarse SAND, little clay, trace gravel	Remolded	S-6	14-8-9-16	1.2			
25	-23.2		CL	Red, brown, gray CLAY, some fine sand, trace medium sand	Remolded	S-7	5-8-12-10	1.9			
				SHELBY TUBE ST-2: 26.0' - 28.0' - Red, brown, gray CLAY and fine SAND (Liquid Limit: 28; Plasticity Index: 13)	Undisturbed	ST-2	P-U-S-H	2.0	15.4	58.2	
				Red, brown, gray CLAY, some to little fine sand	Remolded	S-8	7-8-8-9	2.0			
35	-32.2		SC	Gray, blue fine SAND, some clay, trace medium sand (Liquid Limit: 29; Plasticity Index: 16)	Remolded	S-9	5-6-5-9	2.0	14.4	33.7	
40				Brown, gray fine SAND and CLAY, trace medium sand (Liquid Limit: 35; Plasticity Index: 19)	Remolded	S-10	4-4-8-11	2.0	17.9	43.0	
45				Brown, gray fine SAND, some to little clay, trace medium sand, trace silt	Remolded	S-11	4-3-6-11	2.0			
				SHELBY TUBE ST-3: 46.0' - 48.0'	Undisturbed	ST-3	P-U-S-H	2.0			
50				Brown fine SAND, little clay, trace medium to coarse sand	Remolded	S-12	50/0.2	0.1			

NOTES:
1. Ground surface ("mudline") approximately 6.0 feet below water surface at 6:05am . Mudline at approximately -0.2 ft MLLW.
2. Test boring terminated at ± 88.5 feet below mudline (± 21.0 feet below barge).
3. Elevations estimated based on NOAA tide predictions for Edgemoor, DE
4. Boring backfilled with grout below mudline
5. Soil desriptions performed in general accordance with ASTM D 2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

DUFFIELD ASSOCIATES
Soil, Water & the Environment

TEST BORING TB-9

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Geotechnical Evaluation
POW Edgemoor - USACE 204F
Edgemoor, Delaware
Project No. 11139.LD

Date Started	: July 18, 2018	Drilling Equipment	: Barge-mounted Diedrich D-50
Date Completed	: July 18, 2018	Drilling Methods	: HSA (SPT, ASTM D 1586)
Logged by	: EMO	Surface Elevation	: -0.2 feet ± Project Datum
Weather	: Clear, 80s	Northing	: 637,646.9897
Driller/Agency	: M. Lyons/CGC Geoservices	Easting	: 634,239.5331

Sample Condition: Remolded; Undisturbed

Water Levels

Depth in feet	Surf. Elev. -0.2 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
50											
55			SC	Brown, gray fine SAND, some clay, little medium sand	Remolded	S-13	10-5-4-5	2.0			
60			SC	Brown, gray, red fine to medium SAND, some clay, trace medium sand (Liquid Limit: 31; Plasticity Index: 14)	Remolded	S-14	10-11-12-14	2.0	18.5	24.1	
65			SC	Red, brown fine SAND, some clay, trace medium sand	Remolded	S-15	8-14-22-30	2.0			
70			SC	Gray fine SAND, some clay, little medium sand	Remolded	S-16	50/4	0.3			
	-74.2										
75			CL	Dark red CLAY, trace fine sand, trace clay	Remolded	S-17	5-8-9-13	2.0	29.0	89.2	
	-78.2										
80			CL	WEATHERED ROCK: Gray, blue clay, little fine sand	Remolded	S-18	10-14-20-20	2.0			
85											
90					Remolded	S-19	50/1	0.0			
	-91.2			Refusal on apparent bedrock							
95											
100											

NOTES:
1. Ground surface ("mudline") approximately 6.0 feet below water surface at 6:05am. Mudline at approximately -0.2 ft MLLW.
2. Test boring terminated at ± 88.5 feet below mudline (± 21.0 feet below barge).
3. Elevations estimated based on NOAA tide predictions for Edgemoor, DE
4. Boring backfilled with grout below mudline
5. Soil desriptions performed in general accordance with ASTM D 2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

DUFFIELD ASSOCIATES
Soil, Water & the Environment

TEST BORING TB-10

Geotechnical Evaluation
POW Edgemoor - USACE 204F
Edgemoor, Delaware
Project No. 11139.LD

Date Started	: July 16, 2018	Drilling Equipment	: Barge-mounted Diedrich D-50
Date Completed	: July 16, 2018	Drilling Methods	: HSA (SPT, ASTM D 1586)
Logged by	: IMF	Surface Elevation	: -3.5 feet ± Project Datum
Weather	: Clear, 80s	Northing	: 638,064.4847
Driller/Agency	: J. Gravatt/CGC Geoservices	Easting	: 634,707.0228

Sample Condition: Remolded; Undisturbed

Water Levels

Depth in feet	Surf. Elev. -3.5 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0			MH	Dark gray SILT, trace fine sand	Remolded	S-1	WOR	0.4			
				Dark gray SILT, trace fine sand	Remolded	S-2	WOR	1.8			
5				Dark gray SILT, trace fine sand	Remolded	S-3	WOH	2.0			
				SHELBY TUBE ST-1: 6.0' - 8.0' - Dark gray SILT, little fine sand (Liquid Limit: 48; Plasticity Index: 19)	Undisturbed	ST-1	P-U-S-H	2.0	71.7	85.7	
				Dark gray SILT, trace fine sand	Remolded	S-4	WOH-2-2-1	2.0			
10											
15				Dark gray SILT, trace fine sand (Liquid Limit: 49; Plasticity Index: 23)	Remolded	S-5A	WOH-2-3	2.0	58.4	94.4	
	-19.0		ML	Brown, orange, dark gray SILT, some fine sand, little medium sand		S-5B					
				Brown, orange SILT, some fine sand	Remolded	S-6	4-4-8-10	1.8			
20	-23.5		SC								
				Brown, orange fine to medium SAND, some SILT (Liquid Limit: 44; Plasticity Index: 24)	Remolded	S-7	9-14-22-21	2.0	16.5	24.5	
25				Gray, blue, brown, orange fine SAND, little to some clay, little medium sand, slight weathering	Remolded	S-8	10-12-21-22	1.7			
30				Gray, blue, brown, orange fine SAND, some clay, little medium sand, some weathered rock	Remolded	S-9	5-6-8-8	2.0	15.9	27.7	
35				Brown, orange fine to medium SAND, some to and clay	Remolded	S-10	7-9-12-16	2.0			
40				Brown, orange, gray, blue fine SAND, little clay, trace to little medium sand	Remolded	S-11	7-12-17-15	1.9	17.4	19.9	
45				Brown, light brown medium to coarse SAND, some clay, little to some fine sand, trace fine gravel	Remolded	S-12A	16-20-30-43	1.8			
				Brown, light brown fine SAND, some clay, trace to little medium sand		S-12B					
50											

NOTES:
1. Ground surface ("mudline") approximately 4.5 feet below water surface at 7:00am. Mudline at approximately - 3.5ft MLLW
2. Test boring terminated at ± 71 feet below mudline.
3. Elevations estimated based on NOAA tide predictions for Edgemoor, DE
4. Boring backfilled with grout below mudline.
5. Soil desriptions performed in general accordance with ASTM D 2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

DUFFIELD ASSOCIATES
Soil, Water & the Environment

TEST BORING TB-10

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Geotechnical Evaluation
POW Edgemoor - USACE 204F
Edgemoor, Delaware
Project No. 11139.LD

Date Started	: July 16, 2018	Drilling Equipment	: Barge-mounted Diedrich D-50
Date Completed	: July 16, 2018	Drilling Methods	: HSA (SPT, ASTM D 1586)
Logged by	: IMF	Surface Elevation	: -3.5 feet ± Project Datum
Weather	: Clear, 80s	Northing	: 638,064.4847
Driller/Agency	: J. Gravatt/CGC Geoservices	Easting	: 634,707.0228

Sample Condition: Remolded; Undisturbed
Water Levels

Depth in feet	Surf. Elev. -3.5 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
50											
			SC	Brown, orange fine SAND, some clay, little medium sand		S-13	17-30-39-30	1.1			
55											
	-60.5										
			SC	WEATHERED ROCK: Blue, gray fine sand, some clay		S-14	13-15-23-37	2.0	17.9	35.6	
60											
				WEATHERED ROCK: Blue, gray fine sand, some clay		S-15	9-19-20-39	2.0			
65											
70				WEATHERED ROCK: Blue fine sand and clay, trace to little medium sand		S-16	11-20-28-35	1.5			
	-74.5										
75											
80											
85											
90											
95											
100											

NOTES:
1. Ground surface ("mudline") approximately 4.5 feet below water surface at 7:00am. Mudline at approximately - 3.5ft MLLW
2. Test boring terminated at ± 71 feet below mudline.
3. Elevations estimated based on NOAA tide predictions for Edgemoor, DE
4. Boring backfilled with grout below mudline.
5. Soil desriptions performed in general accordance with ASTM D 2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

TEST BORING VB-01

DUFFIELD ASSOCIATES
Soil, Water & the Environment

Geotechnical Evaluation
POW Edgemoor
Edgemoor, Delaware
Project No. 11139.LH

Date Started	: July 1, 2019	Drilling Equipment	: 20ft Vibrocore Rig
Date Completed	: July 1, 2019	Drilling Methods	: Vibrocore
Logged by	: IMF/ADS	Surface Elevation	: 0 feet ± Project Datum
Weather	: Sunny, 79	Northing	: 635,786.4 DE State Plane
Driller/Agency	: B. Fristrom/Aqua Survey Inc.	Easting	: 632,819.225 DE State Plane

Sample Condition: Remolded

Water Levels

Depth in feet	Surf. Elev. 0 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	PID (units)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0	0											
5	-5		MH	Dark gray SILT, trace fine sand								
10	-10		SC	Gary, orange fine to medium SAND and CLAY								
15	-15											
20	-20											
25	-25											
30	-30											
35	-35											
40	-40											
45	-45											
50	-50											

NOTES:
1. Water surface at approximately 4.8 feet above MLLW at 1325 PM.
2. Mudline at approximately -2.2 ft MLLW.
3. Vibrocore terminated approximately 9.0 ft below "mudline" due to refusal.
4. Vibrocore location collecteed by Trimble GPS measurements.
5. Elevations estimated based on Edgemoor tide gauge for MLLW datum.
6. No environmental samples collected.
7. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

TEST BORING VB-01A

DUFFIELD ASSOCIATES
Soil, Water & the Environment

Geotechnical Evaluation
POW Edgemoor
Edgemoor, Delaware
Project No. 11139.LH

Date Started	: July 1, 2019	Drilling Equipment	: 20ft Vibrocore Rig
Date Completed	: July 1, 2019	Drilling Methods	: Vibrocore
Logged by	: IMF/ADS	Surface Elevation	: 0 feet ± Project Datum
Weather	: Sunny, 79	Northing	: 635,759.741 DE State Plane
Driller/Agency	: B. Fristrom/Aqua Survey Inc.	Easting	: 632,892.593 DE State Plane

Sample Condition: ☒ Remolded

Water Levels

Depth in feet	Surf. Elev. 0 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	PID (units)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0	0											
			MH	Dark gray SILT, trace fine sand	☒	S-A				67.9	97.4	
5	-5		SC	Gray, orange fine to medium SAND and CLAY, trace gravel	☒	S-B				17.4	42.8	
			CL	Gray, orange CLAY and fine SAND	☒							
10	-10											
15	-15											
20	-20											
25	-25											
30	-30											
35	-35											
40	-40											
45	-45											
50	-50											

NOTES:
1. Water surface at approximately 4.7 feet above MLLW at 1325 PM.
2. Mudline at approximately -1.7 ft MLLW.
3. Vibrocore terminated approximately 9.2 ft below "mudline" due to refusal.
4. Vibrocore location collecteed by Trimble GPS measurements.
5. Elevations estimated based on Edgemoor tide gauge for MLLW datum.
6. Environmental composite sample A collected 0 to 4 ft below "mudline"at 1345 PM. Environmental composite sample B collected 4 to 9.0 ft below "mudline" at 1350 PM.
7. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

DUFFIELD ASSOCIATES
Soil, Water & the Environment

TEST BORING VB-02

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Geotechnical Evaluation
POW Edgemoor
Edgemoor, Delaware
Project No. 11139.LH

Date Started	: July 1, 2019	Drilling Equipment	: 20ft Vibrocore Rig
Date Completed	: July 1, 2019	Drilling Methods	: Vibrocore
Logged by	: IMF/ADS	Surface Elevation	: 0 feet ± Project Datum
Weather	: Sunny, 79	Northing	: 635,149.63 DE State Plane
Driller/Agency	: B. Fristrom/Aqua Survey Inc.	Easting	: 632,850.692 DE State Plane

Sample Condition: Remolded

Water Levels

Depth in feet	Surf. Elev. 0 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	**Recovery (ft)**	PID (units)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
5.5–19.7	-5.5 – -19.7		MH	Dark gray SILT, trace fine sand (aromatic odor)	Remolded	S-A				98.9	99.3	

NOTES:
1. Water surface at approximately 2.7 feet above MLLW at 1520 PM.
2. Mudline at approximately -5.5 ft MLLW.
3. Vibrocore terminated approximately 14.2 ft below "mudline" due to refusal.
4. Vibrccore location collecteed by Trimble GPS measurements.
5. Elevations estimated based on Edgemoor tide gauge for MLLW datum.
6. Environmental composite sample A collected 0 to 14 ft below "mudline"at 1520 PM. Environmental composite sample B not collected.
7. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

DUFFIELD ASSOCIATES
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TEST BORING VB-03

Geotechnical Evaluation
POW Edgemoor
Edgemoor, Delaware
Project No. 11139.LH

Date Started	: July 1, 2019	Drilling Equipment	: 20ft Vibrocore Rig
Date Completed	: July 1, 2019	Drilling Methods	: Vibrocore
Logged by	: IMF/ADS	Surface Elevation	: 0 feet ± Project Datum
Weather	: Sunny, 79	Northing	: 634,632.77 DE State Plane
Driller/Agency	: B. Fristrom/Aqua Survey Inc.	Easting	: 632,808.876 DE State Plane

Sample Condition: Remolded

Water Levels

Depth in feet	Surf. Elev. 0 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	**Recovery (ft)**	PID (units)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0	0											
5	-5											
10	-10											
15	-15											
20	-20		MH	Gray SILT, trace fine sand (aromatic odor)	Remolded	S-A				76.9	93.5	
25	-25											
30	-30											
35	-35											
40	-40											
45	-45											
50	-50											

NOTES:
1. Water surface at approximately 2.3 feet above MLLW at 1550 PM.
2. Mudline at approximately -11.3 ft MLLW.
3. Vibrocore terminated approximately 16 ft below "mudline" due to refusal.
4. Vibrocore location collecteed by Trimble GPS measurements.
5. Elevations estimated based on Edgemoor tide gauge for MLLW datum.
6. Environmental composite sample A collected 0 to 16 ft below "mudline"at 1550 PM. Environmental composite sample B not collected.
7. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

TEST BORING VB-04

Geotechnical Evaluation
POW Edgemoor
Edgemoor, Delaware
Project No. 11139.LH

Date Started	: July 2, 2019	Drilling Equipment	: 20ft Vibrocore Rig
Date Completed	: July 2, 2019	Drilling Methods	: Vibrocore
Logged by	: ADS	Surface Elevation	: 0 feet ± Project Datum
Weather	: Sunny, 77	Northing	: 634,158.492 DE State Plane
Driller/Agency	: B. Fristrom/Aqua Survey Inc.	Easting	: 632,810.967 DE State Plane

Sample Condition: Remolded
Water Levels

Depth in feet	Surf. Elev. 0 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	PID (units)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0	0											
5	-5											
10	-10											
15	-15											
20	-20											
25	-25											
30	-30											
35	-35											
40	-40		SM	Dark gray fine to medium SAND, little silt, trace gravel, trace coarse sand	Remolded	S-B				21.4	14.7	
45	-45											
50	-50											

NOTES:
1. Water surface at approximately 1.3 feet above MLLW at 0910 AM.
2. Mudline at approximately -35.7 ft MLLW.
3. Vibrocore terminated approximately 6.7 ft below "mudline" due to refusal.
4. Vibrocore location collecteed by Trimble GPS measurements.
5. Elevations estimated based on Edgemoor tide gauge for MLLW datum.
6. Environmental composite sample A not collected. Environmental composite sample B collected 0 to 6.3 ft below "mudline" at 0910 AM.
7. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).
8. Strong winds and currents hidering Vibrocore recovery.

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TEST BORING VB-05

Geotechnical Evaluation
POW Edgemoor
Edgemoor, Delaware
Project No. 11139.LH

Date Started	: July 2, 2019	Drilling Equipment	: 20ft Vibrocore Rig
Date Completed	: July 2, 2019	Drilling Methods	: Vibrocore
Logged by	: ADS	Surface Elevation	: 0 feet ± Project Datum
Weather	: Sunny, 77	Northing	: 636,338.228 DE State Plane
Driller/Agency	: B. Fristrom/Aqua Survey Inc.	Easting	: 633,258.678 DE State Plane

Sample Condition: Remolded
Water Levels

Depth in feet	Surf. Elev. 0 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	**Recovery (ft)**	PID (units)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0	0											
			SM	Dark gray, brown fine SAND, some silt	Remolded	S-B				32.9	26.2	
5	-5		ML	Dark gray, brown SILT and fine SAND, trace medium sand	Remolded	S-A				19.4	53.0	
			SM	Dark gray, brown fine SAND and SILT	Remolded							
10	-10											
15	-15											
20	-20											
25	-25											
30	-30											
35	-35											
40	-40											
45	-45											
50	-50											

NOTES:
1. Water surface at approximately 2.9 feet above MLLW at 0955 AM.
2. Mudline at approximately -1.9 ft MLLW.
3. Vibrocore terminated approximately 6.3 ft below "mudline" due to refusal.
4. Vibrocore location collecteed by Trimble GPS measurements.
5. Elevations estimated based on Edgemoor tide gauge for MLLW datum.
6. Environmental composite sample A collected 3 to 5 ft below "mudline"at 0950 AM. Environmental composite sample B collected 0 to 2 ft below "mudline" at 0955 AM.
7. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

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TEST BORING VB-06

Geotechnical Evaluation
POW Edgemoor
Edgemoor, Delaware
Project No. 11139.LH

Date Started	: July 2, 2019	Drilling Equipment	: 20ft Vibrocore Rig
Date Completed	: July 2, 2019	Drilling Methods	: Vibrocore
Logged by	: ADS	Surface Elevation	: 0 feet ± Project Datum
Weather	: Sunny, 85	Northing	: 636,048.586 DE State Plane
Driller/Agency	: B. Fristrom/Aqua Survey Inc.	Easting	: 633,312.123 DE State Plane

Sample Condition: Remolded
Water Levels

Depth in feet	Surf. Elev. 0 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	PID (units)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
5 – ~12	-5 – ~-12		MH	Dark gray SILT, trace fine sand (aromatic odor)	Remolded	S-A				74.0	94.5	
~12 – ~14.7	~-12 – ~-14.7		SP	Dark brown fine to medium SAND, little gravel, trace coarse sand, trace silt	Remolded	S-B				16.5	3.6	

NOTES:
1. Water surface at approximately 5 feet above MLLW at 1150 AM.
2. Mudline at approximately -5.0 ft MLLW.
3. Vibrocore terminated approximately 9.7 ft below "mudline" due to refusal.
4. Vibrocore location collecteed by Trimble GPS measurements.
5. Elevations estimated based on Edgemoor tide gauge for MLLW datum.
6. Environmental composite sample A collected 0 to 5 ft below "mudline"at 1150 AM. Environmental composite sample B collected 7 to 9.7 ft below "mudline" at 1155 AM.
7. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

TEST BORING VB-07A

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Geotechnical Evaluation
POW Edgemoor
Edgemoor, Delaware
Project No. 11139.LH

Date Started	: July 3, 2019	Drilling Equipment	: 20ft Vibrocore Rig
Date Completed	: July 3, 2019	Drilling Methods	: Vibrocore
Logged by	: ADS	Surface Elevation	: 0 feet ± Project Datum
Weather	: Cloudy, 80s	Northing	: 635,645.278 DE State Plane
Driller/Agency	: B. Fristrom/Aqua Survey Inc.	Easting	: 633,381.213 DE State Plane

Sample Condition: Remolded

Water Levels

Depth in feet	Surf. Elev. 0 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	PID (units)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0	0											
5	-5											
10	-10											
15	-15		MH	Dark gary SILT, trace sand (slight aromatic odor)	Remolded	S-A				101.3	98.8	
20	-20											
25	-25											
30	-30											
35	-35											
40	-40											
45	-45											
50	-50											

NOTES:
1. Water surface at approximately 0.8 feet above MLLW at 0930 AM.
2. Mudline at approximately -13.4 ft MLLW.
3. Vibrocore terminated approximately 7.0 ft below "mudline" due to refusal.
4. Vibracore location collecteed by Trimble GPS measurements
5. Elevations estimated based on Edgemoor tide gauge for MLLW datum.
6. Environmental composite sample A collected 0 to 7 ft below "mudline" at 0930 AM. Environmental composite sample B not collected. Environmental sample DUP1-COMP-A collected from the same as COMP-A.
7. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

TEST BORING VB-08

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Geotechnical Evaluation
POW Edgemoor
Edgemoor, Delaware
Project No. 11139.LH

Date Started	: July 3, 2019	Drilling Equipment	: 20ft Vibrocore Rig
Date Completed	: July 3, 2019	Drilling Methods	: Vibrocore
Logged by	: ADS	Surface Elevation	: 0 feet ± Project Datum
Weather	: Cloudy, 80s	Northing	: 635,163.345 DE State Plane
Driller/Agency	: B. Fristrom/Aqua Survey Inc.	Easting	: 633,388.37 DE State Plane

Sample Condition: ⊠ Remolded

Water Levels

Depth in feet	Surf. Elev. 0 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	**Recovery (ft)**	PID (units)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0	0											
5	-5											
10	-10											
15	-15											
20	-20											
25	-25											
30	-30											
35	-35											
40	-40											
			CL	Red, orange, brown CLAY, trace gravel, trace fine sand	⊠							
45	-45											
50	-50											

NOTES:
1. Water surface at approximately 0.3 feet above MLLW at 0900 AM.
2. Mudline at approximately -42.5 ft MLLW.
3. Vibrocore terminated approximately 1.0 ft below "mudline" due to refusal.
4. Vibrocore location collecteed by Trimble GPS measurements.
5. Elevations estimated based on Edgemoor tide gauge for MLLW datum.
6. No environmental composite samples collected.
7. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

TEST BORING VB-08A

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Geotechnical Evaluation
POW Edgemoor
Edgemoor, Delaware
Project No. 11139.LH

Date Started	: July 3, 2019	Drilling Equipment	: 20ft Vibrocore Rig
Date Completed	: July 3, 2019	Drilling Methods	: Vibrocore
Logged by	: ADS	Surface Elevation	: 0 feet ± Project Datum
Weather	: Cloudy, 80s	Northing	: 635,254.411 DE State Plane
Driller/Agency	: B. Fristrom/Aqua Survey Inc.	Easting	: 633,389.296 DE State Plane

Sample Condition: Remolded

Water Levels

Depth in feet	Surf. Elev. 0 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	**Recovery (ft)**	PID (units)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0	0											
5	-5											
10	-10											
15	-15											
20	-20											
25	-25											
30	-30											
35	-35											
40	-40											
				NO RECOVERY	Remolded							
45	-45											
50	-50											

NOTES:
1. Water surface at approximately 1.1 feet above MLLW at 0945 AM.
2. Mudline at approximately -41.9 ft MLLW.
3. Vibrocore terminated approximately 3.0 ft below "mudline" due to refusal.
4. Vibrocore location collecteed by Trimble GPS measurements.
5. Elevations estimated based on Edgemoor tide gauge for MLLW datum.
6. No environmental samples collected.
7. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).
8. Hard refusal in possible Potomac clay layer at depth 45 feet below MLLW.

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Soil, Water & the Environment

TEST BORING VB-09

Geotechnical Evaluation
POW Edgemoor
Edgemoor, Delaware
Project No. 11139.LH

Date Started	: July 2, 2019	Drilling Equipment	: 20ft Vibrocore Rig
Date Completed	: July 2, 2019	Drilling Methods	: Vibrocore
Logged by	: ADS	Surface Elevation	: 0 feet ± Project Datum
Weather	: Sunny, 82	Northing	: 637,029.466 DE State Plane
Driller/Agency	: B. Fristrom/Aqua Survey Inc.	Easting	: 633,825.331 DE State Plane

Sample Condition: Remolded
Water Levels

Depth in feet	Surf. Elev. 0 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	PID (units)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0	0											
5	-5		MH	Dark gray SILT, little fine to medium sand		S-A				35.9	85.6	
10	-10		SC	Dark gray, brown fine to coarse SAND, little gravel, little clay		S-B				17.9	17.3	
15	-15											
20	-20											
25	-25											
30	-30											
35	-35											
40	-40											
45	-45											
50	-50											

NOTES:
1. Water surface at approximately 3.4 feet above MLLW at 1015 AM.
2. Mudline at approximately -4.1 ft MLLW.
3. Vibrocore terminated approximately 6.9 ft below "mudline" due to refusal.
4. Vibrocore location collecteed by Trimble GPS measurements.
5. Elevations estimated based on Edgemoor tide gauge for MLLW datum.
6. Environmental composite sample A collected 0 to 2 ft below "mudline"at 1015 AM. Environmental composite sample B collected 4 to 6.9 ft below "mudline" at 1020 AM.
7. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

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Soil, Water & the Environment

TEST BORING VB-10

Geotechnical Evaluation
POW Edgemoor
Edgemoor, Delaware
Project No. 11139.LH

Date Started	: July 2, 2019	Drilling Equipment	: 20ft Vibrocore Rig
Date Completed	: July 2, 2019	Drilling Methods	: Vibrocore
Logged by	: ADS	Surface Elevation	: 0 feet ± Project Datum
Weather	: Sunny, 85	Northing	: 636,896.035 DE State Plane
Driller/Agency	: B. Fristrom/Aqua Survey Inc.	Easting	: 633,947.81 DE State Plane

Sample Condition: ☒ Remolded

Water Levels

Depth in feet	Surf. Elev. 0 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	PID (units)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0	0											
5	-5											
10	-10											
15	-15		MH	Dark gray SILT, trace fine sand (slight aromatic odor)	Remolded	S-A				77.9	96.6	
20	-20		SM	Dark brown fine to medium SAND, some silt	Remolded	S-B				15.1	24.9	
25	-25											
30	-30											
35	-35											
40	-40											
45	-45											
50	-50											

NOTES:
1. Water surface at approximately 4.8 feet above MLLW at 1130 AM.
2. Mudline at approximately -10.7 ft MLLW.
3. Vibrocore terminated approximately 11.6 ft below "mudline" due to refusal.
4. Vibrocore location collecteed by Trimble GPS measurements.
5. Elevations estimated based on Edgemoor tide gauge for MLLW datum.
6. Environmental composite sample A collected 0 to 4 ft below "mudline"at 1130 AM. Environmental composite sample B collected 8.7 to 11.6 ft below "mudline" at 1135 AM.
7. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

TEST BORING VB-11

DUFFIELD ASSOCIATES
Soil, Water & the Environment

Geotechnical Evaluation
POW Edgemoor
Edgemoor, Delaware
Project No. 11139.LH

Date Started	: July 3, 2019	Drilling Equipment	:	20ft Vibrocore Rig
Date Completed	: July 3, 2019	Drilling Methods	:	Vibrocore
Logged by	: ADS	Surface Elevation	:	0 feet ± Project Datum
Weather	: Partly cloudy, 80s	Northing	:	636,793.203 DE State Plane
Driller/Agency	: B. Fristrom/Aqua Survey Inc.	Easting	:	634,070.879 DE State Plane

Sample Condition: Remolded
Water Levels

Depth in feet	Surf. Elev. 0 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	PID (units)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0	0											
5	-5											
10	-10											
15	-15											
20	-20											
25	-25											
			MH	Dark gray SILT, trace fine sand, trace organics(aromatic odor)		S-A				112.6	93.3	
30	-30											
			SP	Red, gray fine SAND and SILT, trace gravel, trace medium to coarse sand		S-B				18.1	41.1	
35	-35											
40	-40											
45	-45											
50	-50											

NOTES:
1. Water surface at approximately 3.0 feet above MLLW at 1120 AM.
2. Mudline at approximately -22 ft MLLW.
3. Vibrocore terminated approximately 10.5 ft below "mudline" due to refusal.
4. Vibrocore location collecteed by Trimble GPS measurements.
5. Elevations estimated based on Edgemoor tide gauge for MLLW datum.
6. Environmental composite sample A collected 0 to 9.5 ft below "mudline"at 1120 AM. Environmental composite sample B collected 9.5 to 10.5 ft below "mudline" at 1125 AM.
7. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).
8. Strong winds and currents hidering Vibrocore yields.

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Soil, Water & the Environment

TEST BORING VB-12

Geotechnical Evaluation
POW Edgemoor
Edgemoor, Delaware
Project No. 11139.LH

Date Started	: July 3, 2019	Drilling Equipment	: 20ft Vibrocore Rig
Date Completed	: July 3, 2019	Drilling Methods	: Vibrocore
Logged by	: ADS	Surface Elevation	: 0 feet ± Project Datum
Weather	: Cloudy, 80s	Northing	: 636,649.494 DE State Plane
Driller/Agency	: B. Fristrom/Aqua Survey Inc.	Easting	: 634,285.019 DE State Plane

Sample Condition: Remolded

Water Levels

Depth in feet	Surf. Elev. 0 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	PID (units)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0	0											
5	-5											
10	-10											
15	-15											
20	-20											
25	-25											
30	-30											
			SP	Dark gray fine SAND, trace gravel, trace medium to coarse sand, trace silt	Remolded	S-B				26.3	2.8	
35	-35											
40	-40											
45	-45											
50	-50											

NOTES:
1. Water surface at approximately 2.0 feet above MLLW at 1020 AM.
2. Mudline at approximately -33 ft MLLW.
3. Vibrocore terminated approximately 1.9 ft below "mudline" due to refusal.
4. Vibrocore location collecteed by Trimble GPS measurements.
5. Elevations estimated based on Edgemoor tide gauge for MLLW datum.
6. Environmental composite sample A not collected. Environmental composite sample B collected 0 to 1.9 ft below "mudline" at 1020 AM.
7. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).
8. Strong winds and currents hidering Vibrocore yields.

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TEST BORING VB-13

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Geotechnical Evaluation
POW Edgemoor
Edgemoor, Delaware
Project No. 11139.LH

Date Started	: July 2, 2019	Drilling Equipment	: 20ft Vibrocore Rig
Date Completed	: July 2, 2019	Drilling Methods	: Vibrocore
Logged by	: ADS	Surface Elevation	: 0 feet ± Project Datum
Weather	: Sunny, 90s	Northing	: 637,289.751 DE State Plane
Driller/Agency	: B. Fristrom/Aqua Survey Inc.	Easting	: 634,014.516 DE State Plane

Sample Condition: Remolded
Water Levels

Depth in feet	Surf. Elev. 0 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	PID (units)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0	0											
5	-5		MH	Dark gray SILT, trace sand, trace organics, trace gravel	Remolded	S-A				35.0	53.6	
10	-10		SM	Light gray, brown fine to medium SAND and SILT, trace organics	Remolded	S-B				16.7	44.4	
15	-15											
20	-20											
25	-25											
30	-30											
35	-35											
40	-40											
45	-45											
50	-50											

NOTES:
1. Water surface at approximately 4.9 feet above MLLW at 1350 PM.
2. Mudline at approximately -1.7 ft MLLW.
3. Vibrocore terminated approximately 9.2 ft below "mudline" due to refusal.
4. Vibrocore location collecteed by Trimble GPS measurements.
5. Elevations estimated based on Edgemoor tide gauge for MLLW datum.
6. Environmental composite sample A collected 0 to 6 ft below "mudline"at 1350 PM. Environmental composite sample B collected 6 to 9.2 ft below "mudline" at 1355 PM.
7. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

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TEST BORING VB-14

Geotechnical Evaluation
POW Edgemoor
Edgemoor, Delaware
Project No. 11139.LH

Date Started	: July 1, 2019	Drilling Equipment	: 20ft Vibrocore Rig
Date Completed	: July 1, 2019	Drilling Methods	: Vibrocore
Logged by	: IMF/ADS	Surface Elevation	: 0 feet ± Project Datum
Weather	: Sunny, 79	Northing	: 637,402.306 DE State Plane
Driller/Agency	: B. Fristrom/Aqua Survey Inc.	Easting	: 634,437.792 DE State Plane

Sample Condition: Remolded

Water Levels

Depth in feet	Surf. Elev. 0 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	PID (units)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0	0											
5	-5											
8–20	-8 to -20		MH	Dark gray SILT, trace fine sand	Remolded	S-A				81.4	98.5	
25	-25											
30	-30											
35	-35											
40	-40											
45	-45											
50	-50											

NOTES:
1. Water surface at approximately 5.0 feet above MLLW at 1240 PM.
2. Mudline at approximately -8.0 ft MLLW.
3. Vibrocore terminated approximately 12 ft below "mudline" due to refusal.
4. Vibrocore location collecteed by Trimble GPS measurements.
5. Elevations estimated based on Edgemoor tide gauge for MLLW datum.
6. Environmental composite sample A collected 0 to 12 ft below "mudline"at 1240 PM. Environmental composite sample B not collected.
7. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

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Soil, Water & the Environment

TEST BORING VB-15

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Geotechnical Evaluation
POW Edgemoor
Edgemoor, Delaware
Project No. 11139.LH

Date Started	: July 2, 2019	Drilling Equipment	: 20ft Vibrocore Rig
Date Completed	: July 2, 2019	Drilling Methods	: Vibrocore
Logged by	: ADS	Surface Elevation	: 0 feet ± Project Datum
Weather	: Sunny, 90s	Northing	: 637,568.123 DE State Plane
Driller/Agency	: B. Fristrom/Aqua Survey Inc.	Easting	: 634,775.912 DE State Plane

Sample Condition: Remolded

Water Levels

Depth in feet	Surf. Elev. 0 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	**Recovery (ft)**	PID (units)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0	0											
5	-5											
10	-10											
15	-15											
20	-20											
25	-25											
30	-30											
35	-35		MH	Dark gray SILT, little fine sand, trace medium to coarse sand		S-A				99.3	77.9	
			SP	Dark brown fine to medium SAND, some gravel, trace coarse sand, trace silt		S-B				17.9	2.0	
40	-40											
45	-45											
50	-50											

NOTES:
1. Water surface at approximately 5.2 feet above MLLW at 1330 PM.
2. Mudline at approximately -32.6 ft MLLW.
3. Vibrocore terminated approximately 6.0 ft below "mudline" due to refusal.
4. Vibrocore location collecteed by Trimble GPS measurements.
5. Elevations estimated based on Edgemoor tide gauge for MLLW datum.
6. Environmental composite sample A collected 0 to 4 ft below "mudline"at 1330 PM. Environmental composite sample B collected 4.8 to 6.0 ft below "mudline" at 1335 PM.
7. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

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TEST BORING VB-16

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Geotechnical Evaluation
POW Edgemoor
Edgemoor, Delaware
Project No. 11139.LH

Date Started	: July 8, 2019	Drilling Equipment	: 20ft Vibrocore Rig
Date Completed	: July 8, 2019	Drilling Methods	: Vibrocore
Logged by	: ADS	Surface Elevation	: 0 feet ± Project Datum
Weather	: Cloudy, 70s	Northing	: 637,746.663 DE State Plane
Driller/Agency	: B. Fristrom/Aqua Survey Inc.	Easting	: 635,151.154 DE State Plane

Sample Condition: ☒ Remolded

Water Levels

Depth in feet	Surf. Elev. 0 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	PID (units)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0	0											
5	-5											
10	-10											
15	-15											
20	-20											
25	-25											
30	-30											
35	-35											
40	-40											
45	-45											
			SP	Orange, brown fine to medium SAND, trace silt, trace large gravel	☒							
50	-50											

NOTES:
1. Water surface at approximately at MLLW at 1250 PM.
2. Mudline at approximately -46.0 ft MLLW.
3. Vibrocore terminated approximately 1.5 ft below "mudline" due to refusal.
4. Vibrocore location collecteed by Trimble GPS measurements.
5. Elevations estimated based on Edgemoor tide gauge for MLLW datum.
6. No environmental samples collected.
7. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

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TEST BORING VB-16-A

Geotechnical Evaluation
POW Edgemoor
Edgemoor, Delaware
Project No. 11139.LH

Date Started	: July 8, 2019	Drilling Equipment	: 20ft Vibrocore Rig
Date Completed	: July 8, 2019	Drilling Methods	: Vibrocore
Logged by	: ADS	Surface Elevation	: 0 feet ± Project Datum
Weather	: Cloudy, 70s	Northing	: 637,723.761 DE State Plane
Driller/Agency	: B. Fristrom/Aqua Survey Inc.	Easting	: 635,096.024 DE State Plane

Sample Condition: Remolded
Water Levels

Depth in feet	Surf. Elev. 0 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	PID (units)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0	0											
5	-5											
10	-10											
15	-15											
20	-20											
25	-25											
30	-30											
35	-35											
40	-40											
45	-45		GP	Large multicolored GRAVEL, some light brown fine sand	Remolded							
50	-50											

NOTES:
1. Water surface at approximately 0.1 feet above MLLW at 1310 PM.
2. Mudline at approximately -43.9 ft MLLW.
3. Vibrocore terminated approximately 1.0 ft below "mudline" due to refusal.
4. Vibrocore location collecteed by Trimble GPS measurements.
5. Elevations estimated based on Edgemoor tide gauge for MLLW datum.
6. No environmental samples collected.
7. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

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TEST BORING VB-17

Geotechnical Evaluation
POW Edgemoor
Edgemoor, Delaware
Project No. 11139.LH

Date Started	: July 2, 2019	Drilling Equipment	: 20ft Vibrocore Rig
Date Completed	: July 2, 2019	Drilling Methods	: Vibrocore
Logged by	: ADS	Surface Elevation	: 0 feet ± Project Datum
Weather	: Sunny, 90s	Northing	: 638,113.828 DE State Plane
Driller/Agency	: B. Fristrom/Aqua Survey Inc.	Easting	: 634,740.385 DE State Plane

Sample Condition: Remolded
Water Levels

Depth in feet	Surf. Elev. 0 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	PID (units)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0	0											
5	-5											
10	-10		MH	Dark gray SILT, trace sand		S-A				43.0	94.2	
15	-15											
20	-20											
25	-25											
30	-30											
35	-35											
40	-40											
45	-45											
50	-50											

NOTES:
1. Water surface at approximately 5.4 feet above MLLW at 1240 PM.
2. Mudline at approximately -3.3 ft MLLW.
3. Vibrocore terminated approximately 12.7 ft below "mudline" due to refusal.
4. Vibrocore location collecteed by Trimble GPS measurements.
5. Elevations estimated based on Edgemoor tide gauge for MLLW datum.
6. Environmental composite sample A collected 0 to 12.7 ft below "mudline"at 1240 PM. Environmental composite sample B not collected.
7. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

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TEST BORING VB-18

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Geotechnical Evaluation
POW Edgemoor
Edgemoor, Delaware
Project No. 11139.LH

Date Started	: July 3, 2019	Drilling Equipment	: 20ft Vibrocore Rig
Date Completed	: July 3, 2019	Drilling Methods	: Vibrocore
Logged by	: ADS	Surface Elevation	: 0 feet ± Project Datum
Weather	: Cloudy, 80s	Northing	: 638,166.46 DE State Plane
Driller/Agency	: B. Fristrom/Aqua Survey Inc.	Easting	: 634,961.713 DE State Plane

Sample Condition: Remolded

Water Levels

Depth in feet	Surf. Elev. 0 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	PID (units)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0	0											
5	-5											
10	-10											
			MH	Dark gray SILT, trace fine sand, trace organics	Remolded	S-A				67.3	98.5	
15	-15											
20	-20											
25	-25											
30	-30											
35	-35											
40	-40											
45	-45											
50	-50											

NOTES:
1. Water surface at approximately 4.5 feet above MLLW at 1150 AM.
2. Mudline at approximately -5.6 ft MLLW.
3. Vibrocore terminated approximately 14.9 ft below "mudline" due to refusal.
4. Vibrocore location collecteed by Trimble GPS measurements.
5. Elevations estimated based on Edgemoor tide gauge for MLLW datum.
6. Environmental composite sample A collected 0 to 14.9 ft below "mudline"at 1150 AM. Environmental composite sample B not collected.
7. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

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TEST BORING VB-19

Geotechnical Evaluation
POW Edgemoor
Edgemoor, Delaware
Project No. 11139.LH

Date Started	: July 8, 2019	Drilling Equipment	: 20ft Vibrocore Rig
Date Completed	: July 8, 2019	Drilling Methods	: Vibrocore
Logged by	: ADS	Surface Elevation	: 0 feet ± Project Datum
Weather	: Cloudy, 70s	Northing	: 638,209.611 DE State Plane
Driller/Agency	: B. Fristrom/Aqua Survey Inc.	Easting	: 635,197.652 DE State Plane

Sample Condition: Remolded

Water Levels

Depth in feet	Surf. Elev. 0 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	PID (units)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0	0											
5	-5											
10	-10											
15	-15											
20	-20											
25	-25											
			MH	Dark gray SILT, trace sand, trace gravel, trace organics	Remolded							
30	-30		SM	Dark gray fine to medium SAND, some silt, trace gravel, trace coarse sand	Remolded	S-B				44.7	28.6	
35	-35											
40	-40											
45	-45											
50	-50											

NOTES:
1. Water surface at approximately 0.1 feet above MLLW at 1140 AM.
2. Mudline at approximately -25.9 ft MLLW.
3. Vibrocore terminated approximately 5.0 ft below "mudline" due to refusal.
4. Vibrocore location collecteed by Trimble GPS measurements.
5. Elevations estimated based on Edgemoor tide gauge for MLLW datum.
6. Environmental composite sample A not collected. Environmental composite sample B collected 1.5 to 5.0 ft below "mudline" at 1140 AM.
7. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).
8. Strong winds and currents hidering Vibrocore yields.

TEST BORING VB-20

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Geotechnical Evaluation
POW Edgemoor
Edgemoor, Delaware
Project No. 11139.LH

Date Started	: July 9, 2019	Drilling Equipment	: 20ft Vibrocore Rig
Date Completed	: July 9, 2019	Drilling Methods	: Vibrocore
Logged by	: ADS	Surface Elevation	: 0 feet ± Project Datum
Weather	: Sunny, 80s	Northing	: 638,225.48 DE State Plane
Driller/Agency	: B. Fristrom/Aqua Survey Inc.	Easting	: 635,389.143 DE State Plane

Sample Condition: Remolded

Water Levels

Depth in feet	Surf. Elev. 0 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	PID (units)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0	0											
5	-5											
10	-10											
15	-15											
20	-20											
25	-25											
30	-30											
35	-35		SP	MINIMAL RECOVERY	Remolded							
40	-40											
45	-45											
50	-50											

NOTES:
1. Water surface at approximately 0.1 feet above MLLW at 1310 PM.
2. Mudline at approximately -39.1 ft MLLW.
3. Vibrocore terminated approximately 3.0 ft below "mudline" due to refusal.
4. Vibrocore location collecteed by Trimble GPS measurements.
5. Elevations estimated based on Edgemoor tide gauge for MLLW datum.
6. No environmental samples collected.
7. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).
8. Strong winds and currents hindering Vibrocore recovery.

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TEST BORING VB-21

Geotechnical Evaluation
POW Edgemoor
Edgemoor, Delaware
Project No. 11139.LH

Date Started	: July 9, 2019	Drilling Equipment	: 20ft Vibrocore Rig
Date Completed	: July 9, 2019	Drilling Methods	: Vibrocore
Logged by	: ADS	Surface Elevation	: 0 feet ± Project Datum
Weather	: Sunny, 80s	Northing	: 636,456.886 DE State Plane
Driller/Agency	: B. Fristrom/Aqua Survey Inc.	Easting	: 633,768.585 DE State Plane

Sample Condition: ☒ Remolded

Water Levels

Depth in feet	Surf. Elev. 0 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	PID (units)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0	0											
5	-5											
10	-10		MH	Dark gray SILT, some fine sand, trace gravel, trace medium sand	☒	S-A				62.5	62.9	
15	-15		SM	Light brown fine to medium SAND, little gravel, little silt, trace coarse sand	☒	S-B				15.6	13.6	
20	-20											
25	-25											
30	-30											
35	-35											
40	-40											
45	-45											
50	-50											

NOTES:
1. Water surface at approximately 4.0 feet above MLLW at 0900 AM.
2. Mudline at approximately -7.5 ft MLLW.
3. Vibrocore terminated approximately 9.5 ft below "mudline" due to refusal.
4. Vibrocore location collecteed by Trimble GPS measurements
5. Elevations estimated based on Edgemoor tide gauge for MLLW datum.
6. Environmental composite sample A collected 0 to 8.9 ft below "mudline"at 0900 AM. Environmental composite sample B collected 8.9 to 9.5 ft below "mudline" at 0905 AM.
7. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

TEST BORING VB-22

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Geotechnical Evaluation
POW Edgemoor
Edgemoor, Delaware
Project No. 11139.LH

Date Started	: July 8, 2019	Drilling Equipment	: 20ft Vibrocore Rig
Date Completed	: July 8, 2019	Drilling Methods	: Vibrocore
Logged by	: ADS	Surface Elevation	: 0 feet ± Project Datum
Weather	: Cloudy, 70s	Northing	: 636,690.171 DE State Plane
Driller/Agency	: B. Fristrom/Aqua Survey Inc.	Easting	: 633,596.986 DE State Plane

Sample Condition: Remolded

Water Levels

Depth in feet	Surf. Elev. 0 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	**Recovery (ft)**	PID (units)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0	0											
5	-5		MH	Dark gray SILT, trace fine sand	Remolded	S-A				78.0	91.8	
10	-10											
15	-15											
20	-20											
25	-25											
30	-30											
35	-35											
40	-40											
45	-45											
50	-50											

NOTES:
1. Water surface at approximately 0.2 feet above MLLW at 1330 PM.
2. Mudline at approximately -3.8 ft MLLW.
3. Vibrocore terminated approximately 2.5 ft below "mudline" due to refusal.
4. Vibrocore location collecteed by Trimble GPS measurements.
5. Elevations estimated based on Edgemoor tide gauge for MLLW datum.
6. Environmental composite sample A collected 0 to 2.5 ft below "mudline"at 1330 PM. Environmental composite sample B not collected.
7. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

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TEST BORING VB-23

Geotechnical Evaluation
POW Edgemoor
Edgemoor, Delaware
Project No. 11139.LH

Date Started	: July 8, 2019	Drilling Equipment	: 20ft Vibrocore Rig
Date Completed	: July 8, 2019	Drilling Methods	: Vibrocore
Logged by	: ADS	Surface Elevation	: 0 feet ± Project Datum
Weather	: Cloudy, 70s	Northing	: 636,174.807 DE State Plane
Driller/Agency	: B. Fristrom/Aqua Survey Inc.	Easting	: 633,110.339 DE State Plane

Sample Condition: Remolded
Water Levels

Depth in feet	Surf. Elev. 0 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	**Recovery (ft)**	PID (units)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0	0											
2.5–16	-2.5 to -16		SP	Red, gray, brown fine to coarse SAND, some gravel, trace silt (gravel lenses throughout)	Remolded	S-B				19.4	6.0	

NOTES:
1. Water surface at approximately 0.5 feet above MLLW at 1350 PM.
2. Mudline at approximately -2.5 ft MLLW.
3. Vibrocore terminated approximately 13.5 ft below "mudline" due to refusal.
4. Vibrocore location collecteed by Trimble GPS measurements.
5. Elevations estimated based on Edgemoor tide gauge for MLLW datum.
6. Environmental composite sample A not collected. Environmental composite sample B collected 0 to 13.5 ft below "mudline" at 1350 PM. Environmental sample DUP-COMP-B collected same as composite sample B.
7. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

TEST BORING VB-24

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Geotechnical Evaluation
POW Edgemoor
Edgemoor, Delaware
Project No. 11139.LH

Date Started	: July 8, 2019	Drilling Equipment	: 20ft Vibrocore Rig
Date Completed	: July 8, 2019	Drilling Methods	: Vibrocore
Logged by	: ADS	Surface Elevation	: 0 feet ± Project Datum
Weather	: Cloudy, 70s	Northing	: 635,814.812 DE State Plane
Driller/Agency	: B. Fristrom/Aqua Survey Inc.	Easting	: 633,217.147 DE State Plane

Sample Condition: Remolded

Water Levels

Depth in feet	Surf. Elev. 0 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	PID (units)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0	0											
8.6–17.1	-8.6 to -17.1		MH	Dark gray SILT, trace sand, trace gravel (slight aromatic odor)	Remolded	S-A				71.7	95.6	

Depth scale: 0, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50; Elevation scale: 0, -5, -10, -15, -20, -25, -30, -35, -40, -45, -50

NOTES:
1. Water surface at approximately 2.4 feet above MLLW at 1500 PM.
2. Mudline at approximately -8.6 ft MLLW.
3. Vibrocore terminated approximately 8.5 ft below "mudline" due to refusal.
4. Vibrocore location collecteed by Trimble GPS measurements.
5. Elevations estimated based on Edgemoor tide gauge for MLLW datum.
6. Environmental composite sample A collected 0 to 8.5 ft below "mudline"at 1500 PM. Environmental composite sample B not collected.
7. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

TEST BORING VB-25

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Geotechnical Evaluation
POW Edgemoor
Edgemoor, Delaware
Project No. 11139.LH

Date Started	: July 8, 2019	Drilling Equipment	: 20ft Vibrocore Rig
Date Completed	: July 8, 2019	Drilling Methods	: Vibrocore
Logged by	: ADS	Surface Elevation	: 0 feet ± Project Datum
Weather	: Cloudy, 70s	Northing	: 635,635.601 DE State Plane
Driller/Agency	: B. Fristrom/Aqua Survey Inc.	Easting	: 632,810.368 DE State Plane

Sample Condition: Remolded

Water Levels

Depth in feet	Surf. Elev. 0 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	PID (units)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0	0											
5	-5		MH	Dark gray SILT, trace fine sand		S-A				75.6	98.2	
10	-10		GP-GM	Light brown GRAVEL and fine to coarse SAND, trace silt		S-B				10.6	6.9	
15	-15											
20	-20											
25	-25											
30	-30											
35	-35											
40	-40											
45	-45											
50	-50											

NOTES:
1. Water surface at approximately 1.9 feet above MLLW at 1440 PM.
2. Mudline at approximately -5.1 ft MLLW.
3. Vibracore terminated approximately 5.5 ft below "mudline" due to refusal.
4. Vibracore location collecteed by Trimble GPS measurements.
5. Elevations estimated based on Edgemoor tide gauge for MLLW datum.
6. Environmental composite sample A collected 0 to 4 ft below "mudline"at 1440PM. Environmental composite sample B collected 4 to 5.5 ft below "mudline" at 1445 PM.
7. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).
8. Hard refusal at bottom.

TEST BORING VB-26

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Geotechnical Evaluation
POW Edgemoor
Edgemoor, Delaware
Project No. 11139.LH

Date Started	: July 9, 2019	Drilling Equipment	: 20ft Vibrocore Rig
Date Completed	: July 9, 2019	Drilling Methods	: Vibrocore
Logged by	: ADS	Surface Elevation	: 0 feet ± Project Datum
Weather	: Sunny, 80s	Northing	: 634,022.772 DE State Plane
Driller/Agency	: B. Fristrom/Aqua Survey Inc.	Easting	: 632,647.735 DE State Plane

Sample Condition: Remolded

Water Levels

Depth in feet	Surf. Elev. 0 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	PID (units)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0	0											
5	-5											
10	-10											
15	-15											
20	-20											
			MH	Dark gray SILT, trace sand (slight aromatic odor)	Remolded	S-A				69.1	92.0	
25	-25											
30	-30											
35	-35											
40	-40											
45	-45											
50	-50											

NOTES:
1. Water surface at approximately 2.2 feet above MLLW at 1020 AM.
2. Mudline at approximately -14.3 ft MLLW.
3. Vibrocore terminated approximately 17.2 ft below "mudline" due to refusal.
4. Vibrocore location collecteed by Trimble GPS measurements.
5. Elevations estimated based on Edgemoor tide gauge for MLLW datum.
6. Environmental composite sample A collected 0 to 17.2 ft below "mudline"at 1020 AM. Environmental composite sample B not collected.
7. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

TEST BORING VB-27

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Geotechnical Evaluation
POW Edgemoor
Edgemoor, Delaware
Project No. 11139.LH

Date Started	: July 9, 2019	Drilling Equipment	: 20ft Vibrocore Rig
Date Completed	: July 9, 2019	Drilling Methods	: Vibrocore
Logged by	: ADS	Surface Elevation	: 0 feet ± Project Datum
Weather	: Sunny, 80s	Northing	: 636,412.565 DE State Plane
Driller/Agency	: B. Fristrom/Aqua Survey Inc.	Easting	: 634,045.238 DE State Plane

Sample Condition: Remolded
Water Levels

Depth in feet	Surf. Elev. 0 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	**Recovery (ft)**	PID (units)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0	0											
5	-5											
10	-10											
15	-15											
20	-20											
25	-25											
			GP	Minimal Recovery - Fine to coarse GRAVEL	Remolded							
30	-30											
35	-35											
40	-40											
45	-45											
50	-50											

NOTES:
1. Water surface at approximately 1.3 feet above MLLW at 1130 AM.
2. Mudline at approximately -27.7 ft MLLW.
3. Vibrocore terminated approximately 3.0 ft below "mudline" due to refusal.
4. Vibrocore location collecteed by Trimble GPS measurements.
5. Elevations estimated based on Edgemoor tide gauge for MLLW datum.
6. No environmental samples collected.
7. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).
8. Strong winds and currents hindering Vibrocore recovery.

TEST BORING VB-27-A

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Geotechnical Evaluation
POW Edgemoor
Edgemoor, Delaware
Project No. 11139.LH

Date Started	: July 9, 2019	Drilling Equipment	: 20ft Vibrocore Rig
Date Completed	: July 9, 2019	Drilling Methods	: Vibrocore
Logged by	: ADS	Surface Elevation	: 0 feet ± Project Datum
Weather	: Sunny, 80s	Northing	: 636,415.544 DE State Plane
Driller/Agency	: B. Fristrom/Aqua Survey Inc.	Easting	: 633,971.85 DE State Plane

Sample Condition: Remolded

Water Levels

Depth in feet	Surf. Elev. 0 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	PID (units)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0	0											
5	-5											
10	-10											
15	-15											
20	-20											
25	-25											
30	-30		SP	Gray, brown SILT and fine SAND, trace medium sand	Remolded	S-B				22.3	54.3	
35	-35											
40	-40											
45	-45											
50	-50											

NOTES:
1. Water surface at approximately 1.0 feet above MLLW at 1145 AM.
2. Mudline at approximately -29.0 ft MLLW.
3. Vibrocore terminated approximately 2.5 ft below "mudline" due to refusal.
4. Vibrocore location collecteed by Trimble GPS measurements.
5. Elevations estimated based on Edgemoor tide gauge for MLLW datum.
6. Environmental composite sample A not collected. Environmental composite sample B collected 0 to 2.5 ft below "mudline" at 1145 AM.
7. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

DUFFIELD ASSOCIATES
Soil, Water & the Environment

TEST BORING VB-28

Geotechnical Evaluation
POW Edgemoor
Edgemoor, Delaware
Project No. 11139.LH

Date Started	: July 9, 2019	Drilling Equipment	: 20ft Vibrocore Rig
Date Completed	: July 9, 2019	Drilling Methods	: Vibrocore
Logged by	: ADS	Surface Elevation	: 0 feet ± Project Datum
Weather	: Sunny, 80s	Northing	: 636,343.664 DE State Plane
Driller/Agency	: B. Fristrom/Aqua Survey Inc.	Easting	: 633,695.093 DE State Plane

Sample Condition: Remolded

Water Levels

Depth in feet	Surf. Elev. 0 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	PID (units)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0	0											
5	-5											
10	-10											
15	-15		MH	Dark gray SILT, trace sand	Remolded	S-A				77.3	94.2	
20	-20											
25	-25											
30	-30											
35	-35											
40	-40											
45	-45											
50	-50											

NOTES:
1. Water surface at approximately 3.3 feet above MLLW at 0920 AM.
2. Mudline at approximately -9.7 ft MLLW.
3. Vibrocore terminated approximately 9.0 ft below "mudline" due to refusal.
4. Vibrocore location collecteed by Trimble GPS measurements.
5. Elevations estimated based on Edgemoor tide gauge for MLLW datum.
6. Environmental composite sample A collected 0 to 9.0 ft below "mudline" at 0920 AM. Environmental composite sample B not collected.
7. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

DUFFIELD ASSOCIATES
Soil, Water & the Environment

TEST BORING VB-29

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Geotechnical Evaluation
POW Edgemoor
Edgemoor, Delaware
Project No. 11139.LH

Date Started	: July 9, 2019	Drilling Equipment	: 20ft Vibrocore Rig
Date Completed	: July 9, 2019	Drilling Methods	: Vibrocore
Logged by	: ADS	Surface Elevation	: 0 feet ± Project Datum
Weather	: Sunny, 80s	Northing	: 637,203.98 DE State Plane
Driller/Agency	: B. Fristrom/Aqua Survey Inc.	Easting	: 634,206.77 DE State Plane

Sample Condition: Remolded

Water Levels

Depth in feet	Surf. Elev. 0 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	**Recovery (ft)**	PID (units)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0	0											
5	-5		MH	Dark gray SILT, trace sand, trace clay								
10	-10											
15	-15											
			GM	Dark brown, gray fine to medium SAND, some silt, trace gravel		S-B				17.5	32.1	
20	-20											
25	-25											
30	-30											
35	-35											
40	-40											
45	-45											
50	-50											

NOTES:
1. Water surface at approximately 2.7 feet above MLLW at 1000 AM.
2. Mudline at approximately -4.8 ft MLLW.
3. Vibrocore terminated approximately 15 ft below "mudline" due to refusal.
4. Vibrocore location collecteed by Trimble GPS measurements.
5. Elevations estimated based on Edgemoor tide gauge for MLLW datum.
6. Environmental composite sample A not collected.Environmental composite sample B collected 13.5 to 15 ft below "mudline"at 1000 AM.
7. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

TEST BORING VB-30

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DUFFIELD ASSOCIATES
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Geotechnical Evaluation
POW Edgemoor
Edgemoor, Delaware
Project No. 11139.LH

Date Started	: July 9, 2019	Drilling Equipment	: 20ft Vibrocore Rig
Date Completed	: July 9, 2019	Drilling Methods	: Vibrocore
Logged by	: ADS	Surface Elevation	: 0 feet ± Project Datum
Weather	: Sunny, 80s	Northing	: 637,003.412 DE State Plane
Driller/Agency	: B. Fristrom/Aqua Survey Inc.	Easting	: 634,041.821 DE State Plane

Sample Condition: Remolded

Water Levels

Depth in feet	Surf. Elev. 0 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	PID (units)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
12.3–22.3	-12.3 to -22.3		MH	Dark gray SILT, trace fine sand, trace large gravel, trace stiff clay	Remolded							
22.3–25	-22.3 to -25		ML	Light gray SILT and fine to medium SAND	Remolded	S-B				18.1	58.5	

Depth scale: 0, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50; Elevation scale: 0, -5, -10, -15, -20, -25, -30, -35, -40, -45, -50

NOTES:
1. Water surface at approximately 0.7 feet above MLLW at 1215 PM.
2. Mudline at approximately -12.3 ft MLLW.
3. Vibrocore terminated approximately 12.7 ft below "mudline" due to refusal.
4. Vibrocore location collecteed by Trimble GPS measurements.
5. Elevations estimated based on Edgemoor tide gauge for MLLW datum.
6. Environmental composite sample A not collected. Environmental composite sample B collected 10 to 12.7 ft below "mudline"at 1215 PM.
7. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

DUFFIELD ASSOCIATES
Soil, Water & the Environment

TEST BORING VB-31

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Geotechnical Evaluation
POW Edgemoor
Edgemoor, Delaware
Project No. 11139.LH

Date Started	: July 9, 2019	Drilling Equipment	: 20ft Vibrocore Rig
Date Completed	: July 9, 2019	Drilling Methods	: Vibrocore
Logged by	: ADS	Surface Elevation	: 0 feet ± Project Datum
Weather	: Sunny, 80s	Northing	: 637,855.442 DE State Plane
Driller/Agency	: B. Fristrom/Aqua Survey Inc.	Easting	: 634,881.316 DE State Plane

Sample Condition: Remolded
Water Levels

Depth in feet	Surf. Elev. 0 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	Recovery (ft)	PID (units)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0	0											
5	-5											
10	-10											
15	-15											
20	-20		MH	Dark gray SILT, trace fine sand, trace organics (sand lenses)								
25	-25		ML	Dark gray SILT, some fine to medium SAND, little gravel		S-B				49.5	53.3	
30	-30											
35	-35											
40	-40											
45	-45											
50	-50											

NOTES:
1. Water surface at approximately 0.0 feet above MLLW at 1330 PM.
2. Mudline at approximately -13.0 ft MLLW.
3. Vibrocore terminated approximately 13 ft below "mudline" due to refusal.
4. Vibrocore location collecteed by Trimble GPS measurements.
5. Elevations estimated based on Edgemoor tide gauge for MLLW datum.
6. Environmental composite sample A not collected. Environmental composite sample B collected 12 to 13 ft below "mudline"at 1330 PM.
7. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).
8. Strong winds and currents hidering Vibrocore recovery.

DUFFIELD ASSOCIATES
Soil, Water & the Environment

TEST BORING VB-32

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Geotechnical Evaluation
POW Edgemoor
Edgemoor, Delaware
Project No. 11139.LH

Date Started : July 9, 2019		Drilling Equipment :	20ft Vibrocore Rig
Date Completed : July 9, 2019		Drilling Methods :	Vibrocore
Logged by : ADS		Surface Elevation :	0 feet ± Project Datum
Weather : Sunny, 80s		Northing :	636,581.66 DE State Plane
Driller/Agency : B. Fristrom/Aqua Survey Inc.		Easting :	633,551.618 DE State Plane

Sample Condition: ☒ Remolded
Water Levels

Depth in feet	Surf. Elev. 0 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	**Recovery (ft)**	PID (units)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0	0											
				NO RECOVERY	☒							
5	-5											
10	-10											
15	-15											
20	-20											
25	-25											
30	-30											
35	-35											
40	-40											
45	-45											
50	-50											

NOTES:
1. Water surface at approximately 0.4 feet above MLLW at 1410 PM.
2. Mudline at approximately -2.5 ft MLLW.
3. Vibrocore terminated approximately 1.5 ft below "mudline" due to refusal.
4. Vibrocore location collecteed by Trimble GPS measurements.
5. Elevations estimated based on Edgemoor tide gauge for MLLW datum.
6. No environmental samples collected.
7. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).
8. Very hard refusal. No more penetration after 1.5 ft into the mudline.

TEST BORING VB-33

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DUFFIELD ASSOCIATES
Soil, Water & the Environment

Geotechnical Evaluation
POW Edgemoor
Edgemoor, Delaware
Project No. 11139.LH

Date Started	: July 9, 2019	Drilling Equipment	: 20ft Vibrocore Rig
Date Completed	: July 9, 2019	Drilling Methods	: Vibrocore
Logged by	: ADS	Surface Elevation	: 0 feet ± Project Datum
Weather	: Sunny, 80s	Northing	: 637,062.872 DE State Plane
Driller/Agency	: B. Fristrom/Aqua Survey Inc.	Easting	: 633,946.27 DE State Plane

Sample Condition: Remolded
Water Levels

Depth in feet	Surf. Elev. 0 ft	GRAPHIC	USCS	DESCRIPTION	SAMPLES	Sample Number	Blows per 6 inches	**Recovery (ft)**	PID (units)	Moisture Content (%)	Percent Passing 200 Sieve	WATER LEVEL
0	0											
5	-5		MH	Dark brown, black, gray SILT, trace to some stiff clay, trace sand, trace organics								
10	-10		SM	Light gray fine to medium SAND, little silt		S-B				18.9	17.4	
15	-15											
20	-20											
25	-25											
30	-30											
35	-35											
40	-40											
45	-45											
50	-50											

NOTES:
1. Water surface at approximately 0.6 feet above MLLW at 1450 PM.
2. Mudline at approximately -3.4 ft MLLW.
3. Vibrocore terminated approximately 10 ft below "mudline" due to refusal.
4. Vibrocore location collecteed by Trimble GPS measurements.
5. Elevations estimated based on Edgemoor tide gauge for MLLW datum.
6. Environmental composite sample A not collected. Environmental composite sample B collected 6 to 10 ft below "mudline" at 1450 PM.
7. Soil descriptions performed in general accordance with ASTM D2488, the Practice for Description and Identification of Soils (Visual-Manual Procedure).

APPENDIX B

TEST AMERICA LABORATORY REPORTS
(CD-ROM ONLY)

APPENDIX C.1.1

METHOD BLANK INVENTORY

Method Blank Inventory
Sediment and Surface Water Assessment
Edgemoor, Delaware

PCBs

Prep Batch No	Prep Date	Analysis Batch No	Analysis Date	Job No	Samples	MB
140-31852						
	7/19/2019	140-32076	7/26/2019	460-185785	SW1	MB 140-31852/13-A
	7/19/2019	140-32020	7/24/2019	460-186095	SW2, LCS 140-31852/14-A	MB 140-31852/13-A
	7/19/2019	140-32020	7/24/2019	460-186096	LCS 140-31852/14-A	MB 140-31852/13-A
	7/19/2019	140-32025	7/25/2019	460-186096	SW3	MB 140-31852/13-A
	7/19/2019	140-32076	7/26/2019	460-186096	EB (surface water)	MB 140-31852/13-A
	7/19/2019	140-32025	7/25/2019	460-186302	SW4	MB 140-31852/13-A
	7/19/2019	140-32020	7/24/2019	460-186302	LCS 140-31852/14-A	MB 140-31852/13-A
	7/19/2019	140-32020	7/24/2019	460-186429	SW5, LCS 140-31852/14-A	MB 140-31852/13-A
140-31752						
	7/17/2019	140-32156	7/29/2019	460-185785	VB1A, VB2A, VB3A	MB 140-31752/14-B
	7/17/2019	140-32117	7/27/2019	460-185785	VB14A, VB1B	MB 140-31752/14-B
	7/17/2019	140-32803	7/26/2019	460-185785	LCS 140-31752/15-B	MB 140-31752/14-B
140-31828						
	7/19/2019	140-32251	8/1/2019	460-186095	VB10A, VB10B, VB13A, VB13B, VB6B, VB9A, VB9B	MB 140-31828/21-B
	7/19/2019	140-32297	8/2/2019	460-186095	VB15A	MB 140-31828/21-B
	7/19/2019	140-32272	8/1/2019	460-186095	VB15B, VB17A, VB6A	MB 140-31828/21-B
	7/19/2019	140-32234	7/31/2019	460-186095	VB4A, VB5A, VB5B	MB 140-31828/21-B
	7/19/2019	140-32187	7/31/2019	460-186095	LCS 140-31828/22-B	MB 140-31828/21-B
	7/19/2019	140-32187	7/31/2019	460-186096	VB7A, DUP1-A, VB12B, VB11B, LCS 140-31828/22-B	MB 140-31828/21-B
	7/19/2019	140-32234	7/31/2019	460-186096	VB11A, VB18A	MB 140-31828/21-B
140-31989						
	7/24/2019	140-32380	8/6/2019	460-186302	VB19B, VB24A, VB25A	MB 140-31989/19-B
	7/24/2019	140-32448	8/7/2019	460-186302	VB22A	MB 140-31989/19-B
	7/24/2019	140-32350	8/5/2019	460-186302	VB23B, DUPB, VB25B, LCS 140-31989/20-B	MB 140-31989/19-B
	7/24/2019	140-32380	8/6/2019	460-186429	VB21A, VB21B	MB 140-31989/19-B
	7/24/2019	140-32448	8/7/2019	460-186429	VB31B, VB28A, VB26A	MB 140-31989/19-B
	7/24/2019	140-32391	8/6/2019	460-186429	VB29A, VB27B	MB 140-31989/19-B
	7/24/2019	140-32478	8/8/2019	460-186429	VB30B, VB33B, EB(SED)	MB 140-31989/19-B
	7/24/2019	140-32350	8/5/2019	460-186429	LCS 140-31989/20-B	MB 140-31989/19-B

Method Blank Inventory
Sediment and Surface Water Assessment
Edgemoor, Delaware

					Dioxins and Furans	
Prep Batch No	Prep Date	Analysis Batch No	Analysis Date	Job No.	Samples	MB
140-31953						
	7/23/2019	140-32300	8/5/2019	460-185785	SW1, LCS 140-31953/9-A	MB 140-31953/8-A
140-31714						
	7/16/2019	140-32252	8/1/2019	460-185785	VB1A, VB14A, VB1B, VB2A, LCS 140-31714/18-A	MB 140-31714/17-A
	7/16/2019	140-32322	8/5/2019	460-185785	13C-2,3,7,8-TCDF, 2,3,7,8-TCDF: VB1A	MB 140-31714/17-A
	7/16/2019	140-32270	8/1/2019	460-185785	VB3A	MB 140-31714/17-A
	7/16/2019	140-32300	8/5/2019	460-186095	VB10A, VB10B	MB 140-31714/17-A
	7/16/2019	140-32252	8/1/2019	460-186095	LCS 140-31714/18-A	MB 140-31714/17-A
	7/16/2019	140-32270	8/1/2019	460-186095	VB4A, VB5A VB5B, VB6A, VB6B, VB9A, VB9B	MB 140-31714/17-A
140-31677						
	7/15/2019	140-32131	7/28/2019	460-186095	SW2, LCS 140-31677/17-A	MB 140-31677/16-A
	7/15/2019	140-32131	7/28/2019	460-186096	SW3, EB (surface water), LCS 140-31677/17-A	MB 140-31677/16-A
	7/15/2019	140-32133	7/29/2019	460-186302	SW4	MB 140-31677/16-A
	7/15/2019	140-32131	7/28/2019	460-186302	LCS 140-31677/17-A	MB 140-31677/16-A
	7/15/2019	140-32133	7/29/2019	460-186429	SW5	MB 140-31677/16-A
	7/15/2019	140-32131	7/28/2019	460-186429	LCS 140-31677/17-A	MB 140-31677/16-A
140-31841						
	7/19/2019	140-32146	7/29/2019	460-186095	VB13A, VB13B, VB15A	MB 140-31841/17-A
	7/19/2019	140-32167	7/30/2019	460-186095	VB15B, VB17A	MB 140-31841/17-A
	7/19/2019	140-32250	7/30/2019	460-186096	13C-2,3,7,8-TCDF, 2,3,7,8-TCDF: VB7A, DUP1A, VB11A, VB11B, VB18A	MB 140-31841/17-A
	7/19/2019	140-32167	7/30/2019	460-186096	VB7A, DUP1A, VB12B, VB11A	MB 140-31841/17-A
	7/19/2019	140-32186	7/30/2019	460-186096	VB11B, VB18A	MB 140-31841/17-A
	7/19/2019	140-32146	7/29/2019	460-186096	LCS 140-31841/18-A	MB 140-31841/17-A
	7/19/2019	140-32186	7/30/2019	460-186302	VB19B	MB 140-31841/17-A
	7/19/2019	140-32146	7/29/2019	460-186302	LCS 140-31841/18-A	MB 140-31841/17-A
	7/19/2019	140-32250	8/1/2019	460-186302	13C-2,3,7,8-TCDF, 2,3,7,8-TCDF: VB19B	MB 140-31841/17-A
140-31891						
	7/22/2019	140-32220	7/31/2019	460-186302	VB22A, VB23B, DUPB, VB24A, VB25A	MB 140-31891/17-A
	7/22/2019	140-32267	8/1/2019	460-186302	13C-2,3,7,8-TCDF, 2,3,7,8-TCDF: VB22A, VB25A	MB 140-31891/17-A
	7/22/2019	140-32237	7/31/2019	460-186302	VB25B	MB 140-31891/17-A
	7/22/2019	140-32237	7/31/2019	460-186429	VB21A, VB21B, VB28A, VB26A, VB29A, VB27B, VB30B	MB 140-31891/17-A
	7/22/2019	140-32267	8/1/2019	460-186429	13C-2,3,7,8-TCDF, 2,3,7,8-TCDF: VB21A	MB 140-31891/17-A
	7/22/2019	140-32220	7/31/2019	460-186429	LCS 140-31891/18-A	MB 140-31891/17-A
	7/22/2019	140-32322	8/5/2019	460-186429	13C-2,3,7,8-TCDF, 2,3,7,8-TCDF: VB31B	MB 140-31891/17-A
	7/22/2019	140-32252	8/1/2019	460-186429	VB31B, VB33B, EB(SED)	MB 140-31891/17-A

APPENDIX C.1.2

METHOD BLANK DATA VALIDATION – AVS/SEM

Table C.1.2. Summary of QA/QC Data Validation AVS/SEM
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

VB7-COMP-A				**Method Blank**						
460-186096										
Analysis Batch : 180-285750										
	Results		Q	MB Results		Q	MB 3x		MB 5x	
Compound	mg/kg	umol/g		mg/kg	umol/g		mg/kg	umol/g	mg/kg	umol/g
Zinc	207	3.2	B	0.253	0.00387	J	0.759	0.01161	1.265	0.05805
Mercury	0.0076	0.000038	B	0.0033	0.0000165	J	0.0099	0.0000495	0.0165	0.000248

DUP-1-COMP-A				**Method Blank**						
460-186096										
Analysis Batch : 180-285750										
	Results		Q	MB Results		Q	MB 3x		MB 5x	
Compound	mg/kg	umol/g		mg/kg	umol/g		mg/kg	umol/g	mg/kg	umol/g
Zinc	207	3.2	B	0.253	0.00387	J	0.759	0.01161	1.265	0.05805
Mercury	0.0065	0.000032	B	0.0033	0.0000165	J	0.0099	0.0000495	0.0165	0.000248

VB23-COMP-B				**Method Blank**						
460-186302										
Analysis Batch : 180-284815										
	Results		Q	MB Results		Q	MB 3x		MB 5x	
Compound	mg/kg	umol/g		mg/kg	umol/g		mg/kg	umol/g	mg/kg	umol/g
Zinc	16.6	0.25	B	0.253	0.00387	J	0.759	0.01161	1.265	0.05805
Mercury	0.0066	0.000033	B	0.0033	0.0000165	J	0.0099	0.0000495	0.0165	0.000248

DUP-COMP-B				**Method Blank**						
460-186302										
Analysis Batch : 180-284815										
	Results		Q	MB Results		Q	MB 3x		MB 5x	
Compound	mg/kg	umol/g		mg/kg	umol/g		mg/kg	umol/g	mg/kg	umol/g
Zinc	15.4	0.25	B	0.253	0.00387	J	0.759	0.01161	1.265	0.05805
Mercury	0.0063	0.000031	B	0.0033	0.0000165	J	0.0099	0.0000495	0.0165	0.000248

Notes:
Q : Qualifier
mg/kg: miligrams per kilogram
umol/g: micromoles per gram
MB: Method Blank

Legend:

Result is less than 3x and 5x Method Blank - NOT VALID
Result is greater than 5x the Method Blank - VALID
Result is greater than 3x but less than 5x the Method Blank - USE WITH CAUTION

APPENDIX C.1.3

METHOD BLANK DATA VALIDATION – PCBS

Table C.1.3.1 . Method Blank Data Validation -PCB SED BLANK 140-31828
Edgemoor Sediment and Surface Water Assessment
Edgmoor, Delaware

Homologs	Client ID	VB7-COMP-A		DUP1-COMP-A		VB12-COMP-B		VB11-COMP-A		VB11-COMP-B		VB18-COMP-A		VB10-COMP-A		VB10-COMP-B		VB13-COMP-A		VB13-COMP-B		VB4-COMP-A		VB5-COMP-A		Dioxin-Like Screening Concentration
	Lab Sample ID	460-186096-4		460-186096-5		460-186096-6		460-186096-7		460-186096-8		460-186096-9		460-186095-10		460-186095-11		460-186095-12		460-186095-13		460-186095-3		460-186095-4		
	Batch	140-32187		140-32187		140-32187		140-32234		140-32187		140-32234														
	Prep Date																									
	Sampling Date	07/03/2019 09:35:00		07/03/2019 09:40:00		07/03/2019 10:20:00		07/03/2019 11:20:00		07/03/2019 11:25:00		07/03/2019 11:50:00		07/02/2019 11:30:00		07/02/2019 11:35:00		07/02/2019 13:50:00		07/02/2019 13:55:00		07/02/2019 09:10:00		07/02/2019 09:50:00		
	Matrix	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		
	Dilution Factor	1		1		1		1		1		1		1		1		1		1		1		1		
	Unit	ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		
	DIOXIN-1668C-SOIL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	
	SOIL BY 1668C																									
	PCB-1	0.0020	U	0.0024	U	0.0033	J q	0.50		0.021		0.00067	U	0.0028	U	0.00059	U	0.0010	U	0.000087	U	0.00035	U	0.00073	J q	
Mono	PCB-2	0.0023	U	0.0027	U	0.00057	U	0.23		0.0085	J	0.0055	J	0.0032	U	0.00068	U	0.0039	J q	0.00010	U	0.00040	U	0.00034	U	
	PCB-3	0.0025	U	0.0028	U	0.00062	U	0.49		0.024	q	0.00077	U	0.0034	U	0.00075	U	0.0012	U	0.00012	U	0.00044	U	0.00038	U	
	PCB-4	0.0085	U	0.012	U	0.0059	U	1.15		0.066	q	0.0067	U	0.011	U	0.0096	U	0.0084	U	0.011	U	0.0059	U	0.0050	U	
	PCB-5	0.0080	U	0.012	U	0.0047	U	0.065	q	0.0058	U	0.0058	U	0.012	U	0.0075	U	0.0066	U	0.0083	U	0.0045	U	0.0041	U	
	PCB-6	0.0070	U	0.010	U	0.0041	U	1.61		0.063		0.0051	U	0.010	U	0.0066	U	0.0058	U	0.0073	U	0.0040	U	0.0036	U	
	PCB-7	0.0072	U	0.011	U	0.0042	U	0.12		0.010	J	0.0053	U	0.011	U	0.0068	U	0.0059	U	0.0075	U	0.0041	U	0.0037	U	
	PCB-8	0.0065	U	0.0097	U	0.0038	U	1.78		0.11		0.0048	U	0.0097	U	0.0061	U	0.0053	U	0.0067	U	0.0037	U	0.0034	U	
Di	PCB-9	0.0073	U	0.011	U	0.0043	U	0.15		0.0054	U	0.0054	U	0.011	U	0.0070	U	0.0061	U	0.0077	U	0.0042	U	0.0038	U	
	PCB-10	0.0078	U	0.012	U	0.0046	U	0.092		0.0078	J q	0.0058	U	0.012	U	0.0074	U	0.0065	U	0.0082	U	0.0045	U	0.0041	U	
	PCB-11	0.013	J q	0.010	U	0.0040	U	0.61		0.027	q	0.011	J q	0.010	U	0.0065	U	0.0056	U	0.0071	U	0.0046	J q	0.0053	J q	
	PCB-12	0.0071	U C	0.011	U C	0.0042	U C	0.92	C	0.048	C	0.0052	U C	0.011	U C	0.0067	U C	0.0059	U C	0.0074	U C	0.0040	U C	0.0037	U C	
	PCB-13	0.0071	U C12	0.011	U C12	0.0042	U C12	0.92	C12	0.048	C12	0.0052	U C12	0.011	U C12	0.0067	U C12	0.0059	U C12	0.0074	U C12	0.0040	U C12	0.0037	U C12	
	PCB-14	0.0060	U	0.0090	U	0.0035	U	0.0093	U	0.0044	U	0.0044	U	0.0090	U	0.0057	U	0.0050	U	0.0063	U	0.0034	U	0.0031	U	
	PCB-15	0.013	J q	0.013	U	0.0043	U	2.98		0.18		0.0060	J q	0.015	U	0.0069	U	0.0060	U	0.0075	U	0.0041	U	0.0039	U	
	PCB-16	0.0043	U	0.0043	U	0.0021	U	2.91		0.13		0.00015	U	0.0035	U	0.0026	U	0.0034	U	0.00012	U	0.00098	U	0.00089	U	
	PCB-17	0.0038	U	0.0039	U	0.0019	U	4.26		0.18		0.00014	U	0.0032	U	0.0024	U	0.0031	U	0.00011	U	0.00088	U	0.00079	U	
	PCB-18	0.0034	U C	0.0034	U C	0.0017	U C	8.32	C	0.36	C	0.00012	U C	0.0028	U C	0.0021	U C	0.0027	U C	0.000098	U C	0.00077	U C	0.00070	U C	
	PCB-19	0.0047	U	0.0047	U	0.0024	U	0.58		0.049		0.00017	U	0.0039	U	0.0029	U	0.0038	U	0.00014	U	0.0011	U	0.00097	U	
	PCB-20	0.0059	U C	0.0083	U C	0.0013	U C	9.34	C B	0.60	C B	0.010	J C B	0.0080	U C	0.0020	U C	0.0014	U C	0.00089	U C	0.0028	J C B	0.0040	J C B q	
	PCB-21	0.0058	U C	0.0081	U C	0.0013	U C	2.68	C	0.19	C	0.0016	U C	0.0078	U C	0.0019	U C	0.0014	U C	0.00087	U C	0.00068	U C	0.00066	U C	
	PCB-22	0.0061	U	0.0085	U	0.0013	U	1.64		0.13		0.0017	U	0.0082	U	0.0020	U	0.0015	U	0.00091	U	0.00071	U	0.0020	J	
	PCB-23	0.0060	U	0.0084	U	0.0013	U	0.014	U	0.0027	U	0.0016	U	0.0081	U	0.0020	U	0.0015	U	0.00091	U	0.00071	U	0.00069	U	
	PCB-24	0.0032	U	0.0032	U	0.0016	U	0.17		0.0066	J q	0.00011	U	0.0027	U	0.0020	U	0.0026	U	0.000094	U	0.00074	U	0.00067	U	
	PCB-25	0.0055	U	0.0076	U	0.0012	U	2.43		0.085		0.0015	U	0.0074	U	0.0018	U	0.0013	U	0.00082	U	0.00064	U	0.00063	U	
	PCB-26	0.0058	U C	0.0081	U C	0.0013	U C	3.05	C	0.12	C	0.0016	U C	0.0078	U C	0.0019	U C	0.0014	U C	0.00088	U C	0.00069	U C	0.0023	J C	
Tri	PCB-27	0.0028	U	0.0028	U	0.0014	U	0.90		0.036		0.000099	U	0.0023	U	0.0017	U	0.0022	U	0.000081	U	0.00064	U	0.00058	U	
	PCB-28	0.0059	U C20	0.0083	U C20	0.0013	U C20	9.34	B C20	0.60	B C20	0.010	J B C20	0.0080	U C20	0.0020	U C20	0.0014	U C20	0.00089	U C20	0.0028	J B C20	0.0040	J B C20 q	
	PCB-29	0.0058	U C26	0.0081	U C26	0.0013	U C26	3.05	C26	0.12	C26	0.0016	U C26	0.0078	U C26	0.0019	U C26	0.0014	U C26	0.00088	U C26	0.00069	U C26	0.0023	J C26	
	PCB-30	0.0034	U C18	0.0034	U C18	0.0017	U C18	8.32	C18	0.36	C18	0.00012	U C18	0.0028	U C18	0.0021	U C18	0.0027	U C18	0.000098	U C18	0.00077	U C18	0.00070	U C18	
	PCB-31	0.0058	U	0.0081	U	0.0013	U	7.55		0.48		0.0016	U	0.0078	U	0.0019	U	0.0014	U	0.00087	U	0.0017	J q	0.0032	J	
	PCB-32	0.0027	U	0.0027	U	0.0013	U	2.94		0.14		0.000094	U	0.0022	U	0.0016	U	0.0021	U	0.000078	U	0.00061	U	0.00055	U	
	PCB-33	0.0058	U C21	0.0081	U C21	0.0013	U C21	2.68	C21	0.19	C21	0.0016	U C21	0.0078	U C21	0.0019	U C21	0.0014	U C21	0.00087	U C21	0.00068	U C21	0.00066	U C21	
	PCB-34	0.0063	U	0.0087	U	0.0014	U	0.14	q	0.0064	J	0.0017	U	0.0084	U	0.0021	U	0.0015	U	0.00094	U	0.00074	U	0.00072	U	
	PCB-35	0.0061	U	0.0085	U	0.0013	U	0.46		0.031		0.0017	U	0.0082	U	0.0020	U	0.0015	U	0.00092	U	0.00072	U	0.00070	U	
	PCB-36	0.0059	U	0.0082	U	0.0013	U	0.013	U	0.0045	J q	0.0016	U	0.0079	U	0.0019	U	0.0014	U	0.00088	U	0.00069	U	0.00067	U	
	PCB-37	0.0061	U	0.0084	U	0.0013	U	2.10		0.13		0.0030	J	0.0081	U	0.0020	U	0.0015	U	0.00091	U	0.00071	U	0.00069	U	
	PCB-38	0.0063	U	0.0088	U	0.0014	U	0.014	U	0.0029	U	0.0017	U	0.0085	U	0.0021	U	0.0015	U	0.00095	U	0.00074	U	0.00072	U	
	PCB-39	0.0056	U	0.0079	U	0.0012	U	0.079		0.0068	J q	0.0015	U	0.0076	U	0.0019	U	0.0014	U	0.00085	U	0.00066	U	0.00065	U	
	PCB-40	0.011	U C	0.011	U C	0.0019	U C	8.52	C	0.48	C	0.0040	U C	0.016	U C	0.0025	U C	0.0015	U C	0.0014	U C	0.00095	U C	0.0052	J C	
	PCB-41	0.011	U C40	0.011	U C40	0.0019	U C40	8.52	C40	0.48	C40	0.0040	U C40	0.016	U C40	0.0025	U C40	0.0015	U C40	0.0014	U C40	0.00095	U C40	0.0052	J C40	
	PCB-42	0.011	U	0.011	U	0.0019	U	4.56	G	0.28		0.0040	U	0.016	U	0.0025	U	0.0015	U	0.0014	U	0.00095	U	0.0020	U	
Tetra	PCB-43	0.010	U C	0.010	U C	0.0017	U C	0.24	C q	0.030	C	0.0037	U C	0.015	U C	0.0023	U C	0.0014	U C	0.0037	J C q	0.00089	U C	0.0019	U C	
	PCB-44	0.0094	U C	0.0095	U C	0.0016	U C	14.6	C	0.98	C	0.0035	U C	0.014	U C	0.0022	U C	0.0013	U C	0.0062	J C	0.0031	J C	0.013	J C q	
	PCB-45	0.011	U C	0.011	U C	0.0019	U C	2.71	C	0.17	C	0.0042	U C	0.017	U C	0.0026	U C	0.0016	U C	0.0015	U C	0.0010	U C	0.0021	U C	
	PCB-46	0.013	U	0.014	U	0.0024	U	0.84	G	0.056		0.0050	U	0.020	U G	0.0032	U	0.0019	U	0.0018	U	0.0012	U	0.0025	U	
	PCB-47	0.0094	U C44	0.0095	U C44	0.0016	U C44	14.6	C44	0.98	C44	0.0035	U C44	0.014	U C44	0.0022	U C44	0.0013	U C44	0.0062	J C44	0.0031	J C44	0.013	J C44 q	

Table C.1.3.1 . Method Blank Data Validation -PCB SED BLANK 140-31828
Edgemoor Sediment and Surface Water Assessment
Edgmoor, Delaware

Homologs	Client ID	VB7-COMP-A		DUP1-COMP-A		VB12-COMP-B		VB11-COMP-A		VB11-COMP-B		VB18-COMP-A		VB10-COMP-A		VB10-COMP-B		VB13-COMP-A		VB13-COMP-B		VB4-COMP-A		VB5-COMP-A		Dioxin-Like Screening Concentration
	Lab Sample ID	460-186096-4		460-186096-5		460-186096-6		460-186096-7		460-186096-8		460-186096-9		460-186095-10		460-186095-11		460-186095-12		460-186095-13		460-186095-3		460-186095-4		
	Batch	140-32187		140-32187		140-32187		140-32234		140-32187		140-32234														
	Prep Date																									
	Sampling Date	07/03/2019 09:35:00		07/03/2019 09:40:00		07/03/2019 10:20:00		07/03/2019 11:20:00		07/03/2019 11:25:00		07/03/2019 11:50:00		07/02/2019 11:30:00		07/02/2019 11:35:00		07/02/2019 13:50:00		07/02/2019 13:55:00		07/02/2019 09:10:00		07/02/2019 09:50:00		
	Matrix	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		
	Dilution Factor	1		1		1		1		1		1		1		1		1		1		1		1		
	Unit	ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		
	DIOXIN-1668C-SOIL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	
	SOIL BY 1668C																									
Tetra	PCB-48	0.011	U	0.011	U	0.0019	U	1.85	G	0.14		0.0040	U	0.016	U	0.0025	U	0.0015	U	0.0014	U	0.00095	U	0.0020	U	
	PCB-49	0.0087	U C	0.0087	U C	0.0015	U C	13.1	C	0.75	C	0.0032	U C	0.013	U C	0.0020	U C	0.0012	U C	0.0012	U C	0.00078	U C	0.0075	J C q	
	PCB-50	0.010	U C	0.010	U C	0.0018	U C	2.18	C	0.13	C	0.0039	U C	0.015	U C	0.0024	U C	0.0014	U C	0.0014	U C	0.00092	U C	0.0019	U C	
	PCB-51	0.011	U C45	0.011	U C45	0.0019	U C45	2.71	C45	0.17	C45	0.0042	U C45	0.017	U C45	0.0026	U C45	0.0016	U C45	0.0015	U C45	0.0010	U C45	0.0021	U C45	
	PCB-52	0.011	U	0.011	U	0.0018	U	21.6	G	1.23		0.0039	U	0.016	U	0.0025	U	0.0015	U	0.0038	J q	0.00094	U	0.014		
	PCB-53	0.010	U C50	0.010	U C50	0.0018	U C50	2.18	C50	0.13	C50	0.0039	U C50	0.015	U C50	0.0024	U C50	0.0014	U C50	0.0014	U C50	0.00092	U C50	0.0019	U C50	
	PCB-54	0.0035	U	0.0038	U	0.0017	U	0.040	q	0.0082	J	0.000051	U	0.0029	U	0.0014	U	0.0029	U	0.000085	U	0.00067	U	0.00062	U	
	PCB-55	0.0077	U	0.0078	U	0.0014	U	0.044	q G	0.011	J q	0.0029	U	0.012	U	0.0018	U	0.0011	U	0.0010	U	0.00069	U	0.0014	U	
	PCB-56	0.0077	U	0.0078	U	0.0014	U	4.91	G	0.37		0.0029	U	0.012	U	0.0018	U	0.0011	U	0.0010	U	0.00069	U	0.0038	J	
	PCB-57	0.0078	U	0.0079	U	0.0014	U	0.027	U G	0.0060	J q	0.0029	U	0.012	U	0.0018	U	0.0011	U	0.0011	U	0.00070	U	0.0015	U	
	PCB-58	0.0080	U	0.0080	U	0.0014	U	0.13	q G	0.0077	J	0.0030	U	0.012	U	0.0019	U	0.0011	U	0.0052	J q	0.00071	U	0.0015	U	
	PCB-59	0.0075	U C	0.0076	U C	0.0013	U C	1.29	C	0.078	C q	0.0028	U C	0.011	U C	0.0018	U C	0.0011	U C	0.0010	U C	0.00067	U C	0.0014	U C	
	PCB-60	0.0079	U	0.0079	U	0.0014	U	0.53	q G	0.052		0.0029	U	0.012	U	0.0019	U	0.0011	U	0.0011	U	0.00071	U	0.0015	U	
	PCB-61	0.0074	U C	0.0074	U C	0.0030	J C q	19.2	C	1.32	C	0.013	J C q	0.011	U C	0.0017	U C	0.0010	U C	0.0010	U C	0.00066	U C	0.013	J C	
	PCB-62	0.0075	U C59	0.0076	U C59	0.0013	U C59	1.29	C59	0.078	C59 q	0.0028	U C59	0.011	U C59	0.0018	U C59	0.0011	U C59	0.0010	U C59	0.00067	U C59	0.0014	U C59	
	PCB-63	0.0072	U	0.0072	U	0.0013	U	0.39	G	0.032		0.0027	U	0.011	U	0.0017	U	0.0010	U	0.00097	U	0.00064	U	0.0013	U	
	PCB-64	0.0071	U	0.0072	U	0.0012	U	5.32	G	0.36		0.0027	U	0.011	U	0.0017	U	0.00099	U	0.00096	U	0.00064	U	0.0038	J q	
	PCB-65	0.0094	U C44	0.0095	U C44	0.0016	U C44	14.6	C44	0.98	C44	0.0035	U C44	0.014	U C44	0.0022	U C44	0.0013	U C44	0.0062	J C44	0.0031	J C44	0.013	J C44 q	
	PCB-66	0.0073	U	0.0074	U	0.0013	U	12.2	G	0.88		0.0091	J q	0.011	U	0.0017	U	0.0010	U	0.00099	U	0.0021	J	0.0093	J	
	PCB-67	0.0068	U	0.0068	U	0.0012	U	0.31	G	0.024		0.0025	U	0.010	U	0.0016	U	0.00095	U	0.00092	U	0.00061	U	0.0013	U	
	PCB-68	0.0069	U	0.0070	U	0.0012	U	0.30	G	0.012	q	0.0026	U	0.010	U	0.0016	U	0.00097	U	0.00094	U	0.00062	U	0.0013	U	
	PCB-69	0.0087	U C49	0.0087	U C49	0.0015	U C49	13.1	C49	0.75	C49	0.0032	U C49	0.013	U C49	0.0020	U C49	0.0012	U C49	0.0012	U C49	0.00078	U C49	0.0075	J C49 q	
	PCB-70	0.0074	U C61	0.0074	U C61	0.0030	J C61 q	19.2	C61	1.32	C61	0.013	J C61 q	0.011	U C61	0.0017	U C61	0.0010	U C61	0.0010	U C61	0.00066	U C61	0.013	J C61	
	PCB-71	0.011	U C40	0.011	U C40	0.0019	U C40	8.52	C40	0.48	C40	0.0040	U C40	0.016	U C40	0.0025	U C40	0.0015	U C40	0.0014	U C40	0.00095	U C40	0.0052	J C40	
	PCB-72	0.0077	U	0.0078	U	0.0013	U	0.52	G	0.022	q	0.0029	U	0.012	U	0.0018	U	0.0011	U	0.0010	U	0.00069	U	0.0014	U	
	PCB-73	0.010	U C43	0.010	U C43	0.0017	U C43	0.24	C43 q	0.030	C43	0.0037	U C43	0.015	U C43	0.0023	U C43	0.0014	U C43	0.0037	J C43 q	0.00089	U C43	0.0019	U C43	
	PCB-74	0.0074	U C61	0.0074	U C61	0.0030	J C61 q	19.2	C61	1.32	C61	0.013	J C61 q	0.011	U C61	0.0017	U C61	0.0010	U C61	0.0010	U C61	0.00066	U C61	0.013	J C61	
	PCB-75	0.0075	U C59	0.0076	U C59	0.0013	U C59	1.29	C59	0.078	C59 q	0.0028	U C59	0.011	U C59	0.0018	U C59	0.0011	U C59	0.0010	U C59	0.00067	U C59	0.0014	U C59	
	PCB-76	0.0074	U C61	0.0074	U C61	0.0030	J C61 q	19.2	C61	1.32	C61	0.013	J C61 q	0.011	U C61	0.0017	U C61	0.0010	U C61	0.0010	U C61	0.00066	U C61	0.013	J C61	
	PCB-77	0.0071	U	0.0074	U	0.0013	U	1.29	G	0.084		0.0027	U	0.011	U	0.0017	U	0.00094	U	0.00097	U	0.00067	U	0.0014	U	38
	PCB-78	0.0079	U	0.0080	U	0.0014	U	0.027	U G	0.0056	U	0.0030	U	0.012	U	0.0019	U	0.0011	U	0.0011	U	0.00071	U	0.0015	U	
	PCB-79	0.0069	U	0.0069	U	0.0012	U	0.16	G	0.0086	J q	0.0026	U	0.010	U	0.0016	U	0.00096	U	0.00093	U	0.00062	U	0.0013	U	
	PCB-80	0.0068	U	0.0068	U	0.0012	U	0.023	U G	0.0047	U	0.0025	U	0.010	U	0.0016	U	0.00095	U	0.00091	U	0.00061	U	0.0013	U	
	PCB-81	0.0077	U	0.0074	U	0.0012	U	0.026	U G	0.0052	U	0.0028	U	0.011	U	0.0018	U	0.0011	U	0.0010	U	0.00065	U	0.0013	U	12
Penta	PCB-82	0.0048	U	0.0045	U	0.0021	U	1.78		0.13		0.00038	U	0.0031	U	0.0026	U	0.0036	U	0.0015	U	0.00083	U	0.0012	U	
	PCB-83	0.0044	U C	0.0041	U C	0.0020	U C	17.1	C	0.93	C	0.0060	J C q	0.0028	U C	0.0024	U C	0.0033	U C	0.0013	U C	0.00076	U C	0.013	J C q	
	PCB-84	0.0049	U	0.0046	U	0.0022	U	6.08		0.39		0.00038	U	0.0031	U	0.0026	U	0.0037	U	0.0062	J q	0.00084	U	0.0012	U	
	PCB-85	0.0036	U C	0.0033	U C	0.0016	U C	2.72	C	0.17	C q	0.00028	U C	0.0023	U C	0.0019	U C	0.0027	U C	0.0011	U C	0.00062	U C	0.0023	J C q	
	PCB-86	0.0036	U C	0.0034	U C	0.0016	U C	11.1	C	0.68	C	0.0014	J C q	0.0023	U C	0.0019	U C	0.0027	U C	0.0011	U C	0.00062	U C	0.0087	J C q	
	PCB-87	0.0036	U C86	0.0034	U C86	0.0016	U C86	11.1	C86	0.68	C86	0.0014	J C86 q	0.0023	U C86	0.0019	U C86	0.0027	U C86	0.0011	U C86	0.00062	U C86	0.0087	J C86 q	
	PCB-88	0.0044	U C	0.0041	U C	0.0019	U C	4.95	C	0.23	C	0.00034	U C	0.0028	U C	0.0023	U C	0.0033	U C	0.0013	U C	0.00075	U C	0.0051	J C q	
	PCB-89	0.0047	U	0.0044	U	0.0021	U	0.23		0.020		0.00037	U	0.0030	U	0.0025	U	0.0035	U	0.0049	J q	0.00082	U	0.0012	U	
	PCB-90	0.0037	U C	0.0034	U C	0.0016	U C	22.3	C	1.29	C	0.012	J C	0.0023	U C	0.0020	U C	0.0027	U C	0.0011	U C	0.00063	U C	0.019	J C q	
	PCB-91	0.0044	U C88	0.0041	U C88	0.0019	U C88	4.95	C88	0.23	C88	0.00034	U C88	0.0028	U C88	0.0023	U C88	0.0033	U C88	0.0013	U C88	0.00075	U C88	0.0051	J C88 q	
	PCB-92	0.0041	U	0.0039	U	0.0018	U	4.33		0.26		0.00032	U	0.0026	U	0.0022	U	0.0031	U	0.0012	U	0.00071	U	0.0038	J	
	PCB-93	0.0042	U C	0.0039	U C	0.0019	U C	0.44	C q	0.025	C	0.0055	J C	0.0027	U C	0.0022	U C	0.0031	U C	0.0013	U C	0.00072	U C	0.0011	U C	

Table C.1.3.1 . Method Blank Data Validation -PCB SED BLANK 140-31828
Edgemoor Sediment and Surface Water Assessment
Edgmoor, Delaware

Homologs	Client ID	VB7-COMP-A		DUP1-COMP-A		VB12-COMP-B		VB11-COMP-A		VB11-COMP-B		VB18-COMP-A		VB10-COMP-A		VB10-COMP-B		VB13-COMP-A		VB13-COMP-B		VB4-COMP-A		VB5-COMP-A		Dioxin-Like Screening Concentration
	Lab Sample ID	460-186096-4		460-186096-5		460-186096-6		460-186096-7		460-186096-8		460-186096-9		460-186095-10		460-186095-11		460-186095-12		460-186095-13		460-186095-3		460-186095-4		
	Batch	140-32187		140-32187		140-32187		140-32234		140-32187		140-32234														
	Prep Date																									
	Sampling Date	07/03/2019 09:35:00		07/03/2019 09:40:00		07/03/2019 10:20:00		07/03/2019 11:20:00		07/03/2019 11:25:00		07/03/2019 11:50:00		07/02/2019 11:30:00		07/02/2019 11:35:00		07/02/2019 13:50:00		07/02/2019 13:55:00		07/02/2019 09:10:00		07/02/2019 09:50:00		
	Matrix	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		
	Dilution Factor	1		1		1		1		1		1		1		1		1		1		1		1		
	Unit	ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		
	DIOXIN-1668C-SOIL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	
	SOIL BY 1668C																									
Penta	PCB-94	0.0047	U	0.0044	U	0.0021	U	0.0050	U	0.014		0.00037	U	0.0030	U	0.0025	U	0.0035	U	0.0014	U	0.00082	U	0.0012	U	
	PCB-95	0.0046	U	0.0043	U	0.0020	U	19.2		1.14		0.00036	U	0.0078	J	0.0024	U	0.0034	U	0.0014	U	0.00079	U	0.0012	U	
	PCB-96	0.0036	U	0.0033	U	0.0016	U	0.22		0.013	q	0.00028	U	0.0023	U	0.0019	U	0.0027	U	0.0050	J q	0.00062	U	0.00091	U	
	PCB-97	0.0036	U C86	0.0034	U C86	0.0016	U C86	11.1	C86	0.68	C86	0.0014	J C86 q	0.0023	U C86	0.0019	U C86	0.0027	U C86	0.0011	U C86	0.00062	U C86	0.0087	J C86 q	
	PCB-98	0.0041	U C	0.0038	U C	0.0018	U C	0.83	C q	0.056	C	0.00032	U C	0.0026	U C	0.0022	U C	0.0030	U C	0.011	J C q	0.00070	U C	0.0010	U C	
	PCB-99	0.0044	U C83	0.0041	U C83	0.0020	U C83	17.1	C83	0.93	C83	0.0060	J C83 q	0.0028	U C83	0.0024	U C83	0.0033	U C83	0.0013	U C83	0.00076	U C83	0.013	J C83 q	
	PCB-100	0.0042	U C93	0.0039	U C93	0.0019	U C93	0.44	C93 q	0.025	C93	0.0055	J C93	0.0027	U C93	0.0022	U C93	0.0031	U C93	0.0013	U C93	0.00072	U C93	0.0011	U C93	
	PCB-101	0.0037	U C90	0.0034	U C90	0.0016	U C90	22.3	C90	1.29	C90	0.012	J C90	0.0023	U C90	0.0020	U C90	0.0027	U C90	0.0011	U C90	0.00063	U C90	0.019	J C90 q	
	PCB-102	0.0041	U C98	0.0038	U C98	0.0018	U C98	0.83	C98 q	0.056	C98	0.00032	U C98	0.0026	U C98	0.0022	U C98	0.0030	U C98	0.011	J C98 q	0.00070	U C98	0.0010	U C98	
	PCB-103	0.0042	U	0.0039	U	0.0019	U	0.83		0.037		0.00033	U	0.0027	U	0.0022	U	0.0031	U	0.0013	U	0.00072	U	0.0011	U	
	PCB-104	0.0032	U	0.0030	U	0.0014	U	0.0034	U	0.0016	U	0.00025	U	0.0020	U	0.0017	U	0.0024	U	0.0024	J	0.00055	U	0.00081	U	
	PCB-105	0.0095	U	0.011	U	0.0022	U	4.00		0.24		0.0030	U	0.013	U	0.0026	U	0.00087	U	0.00086	U	0.00098	U	0.0047	J q	120
	PCB-106	0.0090	U	0.011	U	0.0023	U	0.015	U	0.0032	U	0.0027	U	0.013	U	0.0026	U	0.0010	U	0.00091	U	0.0010	U	0.00085	U	
	PCB-107	0.0097	U	0.012	U	0.0025	U	1.81		0.094	q	0.0029	U	0.014	U	0.0028	U	0.0011	U	0.00097	U	0.0011	U	0.0024	J	
	PCB-108	0.0093	U C	0.011	U C	0.0024	U C	0.45	C	0.028	C	0.0028	U C	0.013	U C	0.0027	U C	0.0011	U C	0.00093	U C	0.0011	U C	0.00087	U C	
	PCB-109	0.0036	U C86	0.0034	U C86	0.0016	U C86	11.1	C86	0.68	C86	0.0014	J C86 q	0.0023	U C86	0.0019	U C86	0.0027	U C86	0.0011	U C86	0.00062	U C86	0.0087	J C86 q	
	PCB-110	0.0030	U C	0.0028	U C	0.0014	U C	22.2	C	1.37	C	0.012	J C q	0.0045	J C q	0.0016	U C	0.0023	U C	0.00092	U C	0.0025	J C q	0.019	J C	
	PCB-111	0.0029	U	0.0027	U	0.0013	U	0.0031	U	0.0014	U	0.00023	U	0.0019	U	0.0016	U	0.0022	U	0.00089	U	0.00051	U	0.00075	U	
	PCB-112	0.0031	U	0.0029	U	0.0014	U	0.0033	U	0.0015	U	0.00024	U	0.0020	U	0.0017	U	0.0023	U	0.00093	U	0.00053	U	0.00079	U	
	PCB-113	0.0037	U C90	0.0034	U C90	0.0016	U C90	22.3	C90	1.29	C90	0.012	J C90	0.0023	U C90	0.0020	U C90	0.0027	U C90	0.0011	U C90	0.00063	U C90	0.019	J C90 q	
	PCB-114	0.0081	U	0.011	U	0.0021	U	0.21		0.012		0.0026	U	0.013	U	0.0024	U	0.00097	U	0.00088	U	0.00097	U	0.00081	U	120
	PCB-115	0.0030	U C110	0.0028	U C110	0.0014	U C110	22.2	C110	1.37	C110	0.012	J C110 q	0.0045	J C110 q	0.0016	U C110	0.0023	U C110	0.00092	U C110	0.0025	J C110 q	0.019	J C110	
	PCB-116	0.0036	U C85	0.0033	U C85	0.0016	U C85	2.72	C85	0.17	C85 q	0.00028	U C85	0.0023	U C85	0.0019	U C85	0.0027	U C85	0.0011	U C85	0.00062	U C85	0.0023	J C85 q	
	PCB-117	0.0036	U C85	0.0033	U C85	0.0016	U C85	2.72	C85	0.17	C85 q	0.00028	U C85	0.0023	U C85	0.0019	U C85	0.0027	U C85	0.0011	U C85	0.00062	U C85	0.0023	J C85 q	
	PCB-118	0.0091	U	0.010	U	0.0022	U	16.0		1.01		0.015	J	0.012	U	0.0026	U	0.0010	U	0.00082	U	0.00097	U	0.016	q	120
	PCB-119	0.0036	U C86	0.0034	U C86	0.0016	U C86	11.1	C86	0.68	C86	0.0014	J C86 q	0.0023	U C86	0.0019	U C86	0.0027	U C86	0.0011	U C86	0.00062	U C86	0.0087	J C86 q	
	PCB-120	0.0030	U	0.0028	U	0.0013	U	0.18	q	0.010	J q	0.00023	U	0.0019	U	0.0016	U	0.0022	U	0.00090	U	0.00052	U	0.00076	U	
	PCB-121	0.0031	U	0.0029	U	0.0014	U	0.0033	U	0.0015	U	0.00024	U	0.0020	U	0.0017	U	0.0023	U	0.0050	J q	0.00053	U	0.00079	U	
	PCB-122	0.010	U	0.013	U	0.0027	U	0.18	q	0.010	J q	0.0031	U	0.015	U	0.0030	U	0.0012	U	0.0010	U	0.0012	U	0.00098	U	
	PCB-123	0.0091	U	0.010	U	0.0024	U	0.23		0.0094	J q	0.0027	U	0.013	U	0.0028	U	0.0012	U	0.00094	U	0.0011	U	0.00087	U	120
	PCB-124	0.0093	U C108	0.011	U C108	0.0024	U C108	0.45	C108	0.028	C108	0.0028	U C108	0.013	U C108	0.0027	U C108	0.0011	U C108	0.00093	U C108	0.0011	U C108	0.00087	U C108	
	PCB-125	0.0036	U C86	0.0034	U C86	0.0016	U C86	11.1	C86	0.68	C86	0.0014	J C86 q	0.0023	U C86	0.0019	U C86	0.0027	U C86	0.0011	U C86	0.00062	U C86	0.0087	J C86 q	
	PCB-126	0.0086	U	0.011	U	0.0024	U	0.015	U	0.0033	U	0.0026	U	0.013	U	0.0026	U	0.0010	U	0.00094	U	0.0010	U	0.00092	U	0.036
	PCB-127	0.0090	U	0.011	U	0.0023	U	0.015	U	0.0032	U	0.0027	U	0.013	U	0.0026	U	0.0010	U	0.00091	U	0.0010	U	0.00085	U	
Hexa	PCB-128	0.0056	U C	0.017	U C	0.0029	U C	2.57	C	0.15	C	0.0055	U C	0.010	U C	0.0046	U C	0.0016	U C	0.00035	U C	0.0012	U C	0.0017	U C	
	PCB-129	0.0058	U C	0.017	U C	0.0030	U C	18.1	C	1.02	C	0.0056	U C	0.010	U C	0.0048	U C	0.0016	U C	0.00036	U C	0.0012	U C	0.035	J C	
	PCB-130	0.0077	U	0.023	U G	0.0040	U	1.49	G	0.073	q	0.0074	U	0.014	U	0.0063	U	0.0022	U	0.00048	U	0.0016	U	0.0024	U	
	PCB-131	0.0080	U	0.024	U G	0.0042	U	0.043	U G	0.0090	J q	0.0078	U	0.014	U	0.0066	U	0.0023	U	0.00050	U	0.0017	U	0.0025	U	
	PCB-132	0.0075	U	0.022	U G	0.0039	U	6.36	G	0.38		0.0073	U	0.013	U	0.0062	U	0.0021	U	0.00047	U	0.0016	U	0.0079	J q	
	PCB-133	0.0073	U	0.021	U G	0.0038	U	0.55	G	0.025		0.0070	U	0.013	U	0.0060	U	0.0021	U	0.00045	U	0.0015	U	0.0022	U	
	PCB-134	0.0076	U C	0.022	U C	0.0040	U C	1.04	C	0.064	C	0.0074	U C	0.013	U C	0.0062	U C	0.0021	U C	0.00047	U C	0.0016	U C	0.0023	U C	
	PCB-135	0.0055	U C	0.0065	U C	0.0024	U C	8.26	C	0.45	C	0.00034	U C	0.0028	U C	0.0033	U C	0.0038	U C	0.0023	U C	0.00080	U C	0.0094	J C q	
	PCB-136	0.0040	U	0.0047	U	0.0017	U	3.24		0.16		0.00024	U	0.0020	U	0.0024	U	0.0027	U	0.0017	U	0.00057	U	0.0026	J q	
	PCB-137	0.0066	U	0.019	U G	0.0034	U	0.63	G	0.038		0.0064	U	0.012	U	0.0054	U	0.0019	U	0.00041	U	0.0014	U	0.0029	J	
	PCB-138	0.0058	U C129	0.017	U C129	0.0030	U C129	18.1	C129	1.02	C129	0.0056	U C129	0.010	U C129	0.0048	U C129	0.0016	U C129	0.00036	U C129	0.0012	U C129	0.035	J C129	
	PCB-139	0.0065	U C	0.019	U C	0.0034	U C	0.39	C	0.021	J C	0.0063	U C	0.011	U C	0.0053	U C	0.0018	U C	0.00040	U C	0.0013	U C	0.0020	U C	

Table C.1.3.1 . Method Blank Data Validation -PCB SED BLANK 140-31828
Edgemoor Sediment and Surface Water Assessment
Edgmoor, Delaware

Homologs	Client ID	VB7-COMP-A		DUP1-COMP-A		VB12-COMP-B		VB11-COMP-A		VB11-COMP-B		VB18-COMP-A		VB10-COMP-A		VB10-COMP-B		VB13-COMP-A		VB13-COMP-B		VB4-COMP-A		VB5-COMP-A		Dioxin-Like Screening Concentration
	Lab Sample ID	460-186096-4		460-186096-5		460-186096-6		460-186096-7		460-186096-8		460-186096-9		460-186095-10		460-186095-11		460-186095-12		460-186095-13		460-186095-3		460-186095-4		
	Batch	140-32187		140-32187		140-32187		140-32234		140-32187		140-32234														
	Prep Date																									
	Sampling Date	07/03/2019 09:35:00		07/03/2019 09:40:00		07/03/2019 10:20:00		07/03/2019 11:20:00		07/03/2019 11:25:00		07/03/2019 11:50:00		07/02/2019 11:30:00		07/02/2019 11:35:00		07/02/2019 13:50:00		07/02/2019 13:55:00		07/02/2019 09:10:00		07/02/2019 09:50:00		
	Matrix	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		
	Dilution Factor	1		1		1		1		1		1		1		1		1		1		1		1		
	Unit	ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		
	DIOXIN-1668C-SOIL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	
	SOIL BY 1668C																									
	PCB-140	0.0065	U C139	0.019	U C139	0.0034	U C139	0.39	C139	0.021	J C139	0.0063	U C139	0.011	U C139	0.0053	U C139	0.0018	U C139	0.00040	U C139	0.0013	U C139	0.0020	U C139	
	PCB-141	0.0068	U	0.020	U G	0.0035	U	2.85	G	0.16		0.0066	U	0.012	U	0.0056	U	0.0019	U	0.00042	U	0.0014	U	0.0021	U	
	PCB-142	0.0073	U	0.021	U G	0.0038	U	0.039	U G	0.0059	U	0.0070	U	0.013	U	0.0059	U	0.0020	U	0.00045	U	0.0015	U	0.0022	U	
	PCB-143	0.0076	U C134	0.022	U C134	0.0040	U C134	1.04	C134	0.064	C134	0.0074	U C134	0.013	U C134	0.0062	U C134	0.0021	U C134	0.00047	U C134	0.0016	U C134	0.0023	U C134	
	PCB-144	0.0050	U	0.0059	U	0.0022	U	0.62		0.040		0.00031	U	0.0025	U	0.0030	U	0.0034	U	0.0021	U	0.00072	U	0.00078	U	
	PCB-145	0.0038	U	0.0045	U	0.0017	U	0.0033	U	0.0020	U	0.00023	U	0.0019	U	0.0023	U	0.0026	U	0.0016	U	0.00055	U	0.00059	U	
	PCB-146	0.0064	U	0.019	U G	0.0033	U	4.83	G	0.24		0.0062	U	0.011	U	0.0053	U	0.0018	U	0.00040	U	0.0013	U	0.0092	J	
	PCB-147	0.0073	U C	0.022	U C	0.0038	U C	22.0	C	1.15	C	0.0071	U C	0.013	U C	0.0060	U C	0.0021	U C	0.00045	U C	0.0015	U C	0.032	C	
	PCB-148	0.0053	U	0.0063	U	0.0023	U	0.16		0.0028	U	0.00033	U	0.0027	U	0.0032	U	0.0037	U	0.0022	U	0.00077	U	0.00083	U	
	PCB-149	0.0073	U C147	0.022	U C147	0.0038	U C147	22.0	C147	1.15	C147	0.0071	U C147	0.013	U C147	0.0060	U C147	0.0021	U C147	0.00045	U C147	0.0015	U C147	0.032	C147	
	PCB-150	0.0036	U	0.0043	U	0.0016	U	0.22		0.0019	U	0.00022	U	0.0018	U	0.0022	U	0.0025	U	0.0015	U	0.00052	U	0.00057	U	
	PCB-151	0.0055	U C135	0.0065	U C135	0.0024	U C135	8.26	C135	0.45	C135	0.00034	U C135	0.0028	U C135	0.0033	U C135	0.0038	U C135	0.0023	U C135	0.00080	U C135	0.0094	J C135 q	
	PCB-152	0.0039	U	0.0046	U	0.0017	U	0.0034	U	0.0021	U	0.00024	U	0.0020	U	0.0023	U	0.0027	U	0.0016	U	0.00056	U	0.00061	U	
	PCB-153	0.0051	U C	0.015	U C	0.0026	U C	18.4	C	0.98	C	0.0049	U C	0.0090	U C	0.0042	U C	0.0014	U C	0.00031	U C	0.0011	U C	0.036	C	
Hexa	PCB-154	0.0043	U	0.0051	U	0.0019	U	1.10		0.037		0.00026	U	0.0022	U	0.0026	U	0.0029	U	0.0018	U	0.00062	U	0.00067	U	
	PCB-155	0.0036	U	0.0043	U	0.0016	U	0.071		0.0019	U	0.00022	U	0.0018	U	0.0022	U	0.0025	U	0.0015	U	0.00052	U	0.00057	U	
	PCB-156	0.0057	U C	0.017	U C	0.0031	U C	1.84	C	0.10	C	0.0054	U C	0.0095	U C	0.0050	U C	0.0017	U C	0.00038	U C	0.0013	U C	0.0018	U C	120
	PCB-157	0.0057	U C156	0.017	U C156	0.0031	U C156	1.84	C156	0.10	C156	0.0054	U C156	0.0095	U C156	0.0050	U C156	0.0017	U C156	0.00038	U C156	0.0013	U C156	0.0018	U C156	120
	PCB-158	0.0046	U	0.013	U	0.0024	U	1.51	G	0.085		0.0044	U	0.0081	U	0.0038	U	0.0013	U	0.00028	U	0.00095	U	0.0014	U	
	PCB-159	0.0049	U	0.014	U	0.0025	U	0.15	G	0.0040	U	0.0047	U	0.0086	U	0.0040	U	0.0014	U	0.00030	U	0.0010	U	0.0015	U	
	PCB-160	0.0058	U C129	0.017	U C129	0.0030	U C129	18.1	C129	1.02	C129	0.0056	U C129	0.010	U C129	0.0048	U C129	0.0016	U C129	0.00036	U C129	0.0012	U C129	0.035	J C129	
	PCB-161	0.0048	U	0.014	U	0.0025	U	0.026	U G	0.0039	U	0.0047	U	0.0085	U	0.0039	U	0.0014	U	0.00030	U	0.0010	U	0.0015	U	
	PCB-162	0.0048	U	0.014	U	0.0025	U	0.025	U G	0.0039	U	0.0046	U	0.0084	U	0.0039	U	0.0013	U	0.00030	U	0.00099	U	0.0015	U	
	PCB-163	0.0058	U C129	0.017	U C129	0.0030	U C129	18.1	C129	1.02	C129	0.0056	U C129	0.010	U C129	0.0048	U C129	0.0016	U C129	0.00036	U C129	0.0012	U C129	0.035	J C129	
	PCB-164	0.0051	U	0.015	U	0.0027	U	1.48	G	0.076		0.0049	U	0.0090	U	0.0042	U	0.0014	U	0.00032	U	0.0011	U	0.0030	J q	
	PCB-165	0.0055	U	0.016	U	0.0028	U	0.029	U G	0.0045	U	0.0053	U	0.0097	U	0.0045	U	0.0015	U	0.00034	U	0.0011	U	0.0017	U	
	PCB-166	0.0056	U C128	0.017	U C128	0.0029	U C128	2.57	C128	0.15	C128	0.0055	U C128	0.010	U C128	0.0046	U C128	0.0016	U C128	0.00035	U C128	0.0012	U C128	0.0017	U C128	
	PCB-167	0.0040	U	0.013	U	0.0020	U	0.64		0.036		0.0042	U	0.0086	U	0.0032	U	0.0011	U	0.00024	U	0.00082	U	0.0012	U	120
	PCB-168	0.0051	U C153	0.015	U C153	0.0026	U C153	18.4	C153	0.98	C153	0.0049	U C153	0.0090	U C153	0.0042	U C153	0.0014	U C153	0.00031	U C153	0.0011	U C153	0.036	C153	
	PCB-169	0.0038	U	0.010	U	0.0020	U	0.020	U	0.0030	U	0.0035	U	0.0061	U	0.0029	U	0.0010	U	0.00022	U	0.00072	U	0.0012	U	0.12
	PCB-170	0.0040	U	0.0080	U	0.0039	U	5.52		0.29		0.0035	U	0.0030	U	0.0044	U	0.0013	U	0.00066	U	0.0018	U	0.0086	J	NVP
	PCB-171	0.0043	U C	0.0082	U C	0.0037	U C	1.66	C	0.088	C q	0.0035	U C	0.0031	U C	0.0045	U C	0.0013	U C	0.00064	U C	0.0017	U C	0.0015	U C	
	PCB-172	0.0043	U	0.0081	U	0.0037	U	0.95		0.066		0.0035	U	0.0031	U	0.0045	U	0.0013	U	0.00063	U	0.0017	U	0.0015	U	
	PCB-173	0.0043	U C171	0.0082	U C171	0.0037	U C171	1.66	C171	0.088	C171 q	0.0035	U C171	0.0031	U C171	0.0045	U C171	0.0013	U C171	0.00064	U C171	0.0017	U C171	0.0015	U C171	
	PCB-174	0.0040	U	0.0076	U	0.0035	U	6.14		0.35		0.0033	U	0.0029	U	0.0042	U	0.0012	U	0.00059	U	0.0016	U	0.0014	U	
	PCB-175	0.0039	U	0.0074	U	0.0034	U	0.25		0.014		0.0032	U	0.0028	U	0.0041	U	0.0012	U	0.00057	U	0.0016	U	0.0013	U	
	PCB-176	0.0029	U	0.0056	U	0.0025	U	0.77		0.038		0.0024	U	0.0021	U	0.0031	U	0.00089	U	0.00043	U	0.0012	U	0.0010	U	
Hepta	PCB-177	0.0041	U	0.0079	U	0.0036	U	3.67		0.19		0.0034	U	0.0030	U	0.0043	U	0.0012	U	0.00061	U	0.0017	U	0.0014	U	
	PCB-178	0.0042	U	0.0080	U	0.0036	U	1.57		0.068		0.0034	U	0.0030	U	0.0044	U	0.0013	U	0.00062	U	0.0017	U	0.0014	U	
	PCB-179	0.0031	U	0.0059	U	0.0027	U	2.95		0.16		0.0025	U	0.0022	U	0.0033	U	0.00094	U	0.00046	U	0.0012	U	0.0041	J q	
	PCB-180	0.0032	U C	0.0062	U C	0.0028	U C	11.9	C	0.63	C	0.014	J C	0.0024	U C	0.0034	U C	0.00098	U C	0.00048	U C	0.0013	U C	0.017	J C	NVP
	PCB-181	0.0039	U	0.0074	U	0.0033	U	0.0035	U	0.0030	U	0.0031	U	0.0028	U	0.0041	U	0.0012	U	0.00057	U	0.0016	U	0.0013	U	
	PCB-182	0.0037	U	0.0071	U	0.0032	U	0.11	q	0.0029	U	0.0030	U	0.0027	U	0.0039	U	0.0011	U	0.00055	U	0.0015	U	0.0013	U	
	PCB-183	0.0038	U C	0.0072	U C	0.0033	U C	3.87	C	0.22	C	0.0031	U C	0.0028	U C	0.0040	U C	0.0011	U C	0.00056	U C	0.0015	U C	0.0065	J C q	
	PCB-184	0.0032	U	0.0060	U	0.0027	U	0.0029	U	0.0024	U	0.0026	U	0.0023	U	0.0033	U	0.00096	U	0.00047	U	0.0013	U	0.0011	U	
	PCB-185	0.0038	U C183	0.0072	U C183	0.0033	U C183	3.87	C183	0.22	C183	0.0031	U C183	0.0028	U C183	0.0040	U C183	0.0011	U C183	0.00056	U C183	0.0015	U C183	0.0065	J C183 q	

Table C.1.3.1 . Method Blank Data Validation -PCB SED BLANK 140-31828
Edgemoor Sediment and Surface Water Assessment
Edgmoor, Delaware

Homologs		VB7-COMP-A		DUP1-COMP-A		VB12-COMP-B		VB11-COMP-A		VB11-COMP-B		VB18-COMP-A		VB10-COMP-A		VB10-COMP-B		VB13-COMP-A		VB13-COMP-B		VB4-COMP-A		VB5-COMP-A		Dioxin-Like Screening Concentration
	Lab Sample ID	460-186096-4		460-186096-5		460-186096-6		460-186096-7		460-186096-8		460-186096-9		460-186095-10		460-186095-11		460-186095-12		460-186095-13		460-186095-3		460-186095-4		
	Batch	140-32187		140-32187		140-32187		140-32234		140-32187		140-32234														
	Prep Date																									
	Sampling Date	07/03/2019 09:35:00		07/03/2019 09:40:00		07/03/2019 10:20:00		07/03/2019 11:20:00		07/03/2019 11:25:00		07/03/2019 11:50:00		07/02/2019 11:30:00		07/02/2019 11:35:00		07/02/2019 13:50:00		07/02/2019 13:55:00		07/02/2019 09:10:00		07/02/2019 09:50:00		
	Matrix	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		
	Dilution Factor	1		1		1		1		1		1		1		1		1		1		1		1		
	Unit	ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		
	DIOXIN-1668C-SOIL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	
	SOIL BY 1668C																									
Hepta	PCB-186	0.0031	U	0.0059	U	0.0027	U	0.0028	U	0.0024	U	0.0025	U	0.0022	U	0.0033	U	0.00093	U	0.00046	U	0.0012	U	0.0011	U	
	PCB-187	0.0036	U	0.0069	U	0.0031	U	8.23		0.44		0.0029	U	0.0026	U	0.0038	U	0.0011	U	0.00053	U	0.0014	U	0.012		
	PCB-188	0.0029	U	0.0054	U	0.0024	U	0.10	q	0.0022	U	0.0023	U	0.0021	U	0.0030	U	0.00085	U	0.00040	U	0.0011	U	0.00092	U	
	PCB-189	0.0083	U	0.010	U	0.0029	U	0.18		0.0088	J q	0.0034	U	0.0092	U	0.0040	U	0.0024	U	0.0014	U	0.0016	U	0.0014	U	130
	PCB-190	0.0028	U	0.0053	U	0.0024	U	0.90		0.050		0.0023	U	0.0020	U	0.0030	U	0.00085	U	0.00041	U	0.0011	U	0.00095	U	
	PCB-191	0.0029	U	0.0056	U	0.0025	U	0.21		0.0022	U	0.0024	U	0.0021	U	0.0031	U	0.00088	U	0.00043	U	0.0012	U	0.00099	U	
	PCB-192	0.0033	U	0.0062	U	0.0028	U	0.0029	U	0.0025	U	0.0027	U	0.0024	U	0.0034	U	0.00099	U	0.00048	U	0.0013	U	0.0011	U	
	PCB-193	0.0032	U C180	0.0062	U C180	0.0028	U C180	11.9	C180	0.63	C180	0.014	J C180	0.0024	U C180	0.0034	U C180	0.00098	U C180	0.00048	U C180	0.0013	U C180	0.017	J C180	
Octa	PCB-194	0.0061	U	0.012	U	0.0059	U	3.36		0.17		0.0030	U	0.0076	U	0.0058	U	0.0030	U	0.0019	U	0.0032	U	0.013		
	PCB-195	0.0067	U	0.013	U	0.0064	U	1.29		0.067		0.0033	U	0.0083	U	0.0064	U	0.0033	U	0.0021	U	0.0035	U	0.0029	U	
	PCB-196	0.0047	U	0.0061	U	0.0043	U	2.23		0.086	q	0.0016	U	0.0026	U	0.0042	U	0.0018	U	0.00093	U	0.0015	U	0.014	q	
	PCB-197	0.0036	U	0.0046	U	0.0033	U	0.16	q	0.0067	J q	0.0012	U	0.0020	U	0.0032	U	0.0014	U	0.00071	U	0.0011	U	0.0014	U	
	PCB-198	0.0048	U C	0.0062	U C	0.0044	U C	5.92	C	0.26	C	0.0016	U C	0.0026	U C	0.0042	U C	0.0019	U C	0.00094	U C	0.0015	U C	0.098	C q	
	PCB-199	0.0048	U C198	0.0062	U C198	0.0044	U C198	5.92	C198	0.26	C198	0.0016	U C198	0.0026	U C198	0.0042	U C198	0.0019	U C198	0.00094	U C198	0.0015	U C198	0.098	C198 q	
	PCB-200	0.0032	U	0.0041	U	0.0029	U	0.39		0.020		0.0011	U	0.0018	U	0.0028	U	0.0012	U	0.00063	U	0.00099	U	0.0012	U	
	PCB-201	0.0033	U	0.0042	U	0.0030	U	0.67		0.029		0.0011	U	0.0018	U	0.0029	U	0.0013	U	0.00065	U	0.0010	U	0.0013	U	
	PCB-202	0.0037	U	0.0047	U	0.0034	U	1.50		0.061		0.0012	U	0.0020	U	0.0032	U	0.0014	U	0.00073	U	0.0011	U	0.041		
	PCB-203	0.0043	U	0.0055	U	0.0039	U	2.64		0.13		0.0014	U	0.0023	U	0.0038	U	0.0017	U	0.00084	U	0.0013	U	0.033	q	
	PCB-204	0.0036	U	0.0046	U	0.0033	U	0.0041	U	0.0023	U	0.0012	U	0.0020	U	0.0032	U	0.0014	U	0.00071	U	0.0011	U	0.0014	U	
	PCB-205	0.0052	U	0.0098	U	0.0050	U	0.17		0.0071	J	0.0026	U	0.0064	U	0.0049	U	0.0025	U	0.0016	U	0.0027	U	0.0022	U	
Nona	PCB-206	0.0064	U	0.0093	U	0.0070	U	12.8		0.46		0.022		0.0095	U	0.0059	U	0.0062	U	0.0063	U	0.0036	U	0.75		
	PCB-207	0.0051	U	0.0070	U	0.0054	U	0.99		0.045		0.0017	U	0.0073	U	0.0047	U	0.0045	U	0.0048	U	0.0027	U	0.039		
	PCB-208	0.0056	U	0.0074	U	0.0058	U	5.72		0.20		0.0017	U	0.0078	U	0.0052	U	0.0047	U	0.0052	U	0.0028	U	0.33		
Deca	PCB-209	0.0039	U	0.011	J q	0.014		23.6		1.12		0.044		0.020	q	0.0038	U	0.0014	U	0.0013	U	0.0011	U	0.92		
Reported by Lab	Total Monochlorobiphenyls	0.0025	U	0.0028	U	0.0033	J q	1.22		0.053	q	0.0055	J	0.0034	U	0.00075	U	0.0039	J q	0.00012	U	0.00044	U	0.00073	J q	
	Total Dichlorobiphenyls	0.026	J q	0.013	U	0.0059	U	9.48	q	0.51	q	0.017	J q	0.015	U	0.0096	U	0.0084	U	0.011	U	0.0046	J q	0.0053	J q	
	Total Trichlorobiphenyls	0.0063	U	0.0088	U	0.0024	U	49.5	B q	2.70	B q	0.013	J B	0.0085	U	0.0029	U	0.0038	U	0.00095	U	0.0045	J B q	0.011	J B q	
	Total Tetrachlorobiphenyls	0.013	U	0.014	U	0.0030	J q	117	q	7.52	q	0.022	J q	0.020	U	0.0032	U	0.0029	U	0.019	J q	0.0052	J	0.069	q	
	Total Pentachlorobiphenyls	0.010	U	0.013	U	0.0027	U	137	q	8.16	q	0.052	J q	0.012	J q	0.0030	U	0.0037	U	0.034	J q	0.0025	J q	0.093	q	
	Total Hexachlorobiphenyls	0.0080	U	0.024	U	0.0042	U	98.5		5.29	q	0.0078	U	0.014	U	0.0066	U	0.0038	U	0.0023	U	0.0017	U	0.14	q	
	Total Heptachlorobiphenyls	0.0083	U	0.010	U	0.0039	U	49.0	q	2.61	q	0.014	J	0.0092	U	0.0045	U	0.0024	U	0.0014	U	0.0018	U	0.048	q	
	Total Octachlorobiphenyls	0.0067	U	0.013	U	0.0064	U	18.3	q	0.83	q	0.0033	U	0.0083	U	0.0064	U	0.0033	U	0.0021	U	0.0035	U	0.20	q	
	Total Nonachlorobiphenyls	0.0064	U	0.0093	U	0.0070	U	19.5		0.71		0.022		0.0095	U	0.0059	U	0.0062	U	0.0063	U	0.0036	U	1.11		
	Total PCBs	0.037	J q B	0.014	J B q	0.018	J B q	522	B q	29.6	B q	0.20	B q	0.037	J B q	0.0096	U	0.0084	U	0.064	J B q	0.020	J B q	2.63	B q	230

Notes:
-- : no applicable standard found for this compound
B : Compound was found in the blank and sample.
C : The compound co-eluted with other compounds
G : The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference
J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q : The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.
U : Indicates the analyte was analyzed for but not detected.
ng/L : Nanograms per Liter
1. Totals for each homolog group at the bottom of this table were reported by Test America Laboratory.

Legend:
Result is less than 3x and 5x Method Blank - NOT VALID
Result is greater than 5x the Method Blank - VALID
Result is greater than 3x but less than 5x the Method Blank - USE WITH CAUTION
The compound co-eluted with other compounds

Table C.1.3.1 . Method Blank Data Validation -PCB SED BLANK 140-31828
Edgemoor Sediment and Surface Water Assessment
Edgmoor, Delaware

	Client ID	VB5-COMP-B		VB6-COMP-A		VB6-COMP-B		VB9-COMP-A		VB9-COMP-B		VB15-COMP-A		VB15-COMP-B		VB17-COMP-A		Applicable Method Blank						Dioxin-Like Screening Concentration
H	Lab Sample ID	460-186095-5		460-186095-6		460-186095-7		460-186095-8		460-186095-9		460-186095-14		460-186095-15		460-186095-16		MB 140-31828/21-B						
o	Batch																	460-186096						
m	Prep Date																	140-31828						
o	Sampling Date	07/02/2019 09:55:00		07/02/2019 11:50:00		07/02/2019 11:55:00		07/02/2019 10:15:00		07/02/2019 10:20:00		07/02/2019 13:30:00		07/02/2019 13:35:00		07/02/2019 12:40:00								
l	Matrix	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		7/19/2019						
o	Dilution Factor	1		1		1		1		1		1		1		1		140-32187						
g	Unit	ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g						
s	DIOXIN-1668C-SOIL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	ML	EDL	3Xresult	5Xresult	
	SOIL BY 1668C																							
Mono	PCB-1	0.0065	J	0.0016	U	0.00013	U	0.00037	U	0.00018	U	0.23		0.0078	J q	0.00055	U	0.00020	U		0.00020			
	PCB-2	0.0048	J q	0.017	q	0.00015	U	0.00042	U	0.00022	U	0.34		0.012		0.00065	U	0.00023	U		0.00023			
	PCB-3	0.0081	J	0.013	J	0.00055	J q	0.00046	U	0.00025	U	0.43		0.021		0.00071	U	0.00026	U		0.00026			
Di	PCB-4	0.015	J q	0.011	U	0.0017	U	0.0072	U	0.0078	U	0.52		0.032	q	0.012	U	0.0028	U		0.0028			
	PCB-5	0.0041	U	0.012	U	0.0015	U	0.0058	U	0.0066	U	0.054		0.0074	U	0.0096	U	0.0024	U		0.0024			
	PCB-6	0.014		0.010	U	0.0013	U	0.0051	U	0.0058	U	0.70		0.029	q	0.0085	U	0.0021	U		0.0021			
	PCB-7	0.0037	U	0.010	U	0.0013	U	0.0052	U	0.0060	U	0.057		0.0067	U	0.0087	U	0.0022	U		0.0022			
	PCB-8	0.031		0.0094	U	0.0012	U	0.0047	U	0.0054	U	0.71		0.044		0.0078	U	0.0019	U		0.0019			
	PCB-9	0.0037	U	0.011	U	0.0013	U	0.0053	U	0.0061	U	0.22		0.012	q	0.0089	U	0.0022	U		0.0022			
	PCB-10	0.0040	U	0.011	U	0.0014	U	0.0057	U	0.0065	U	0.047	q	0.0073	U	0.0095	U	0.0024	U		0.0024			
	PCB-11	0.027	q	0.010	U	0.0041	J q	0.0050	U	0.0057	U	0.69		0.036	q	0.0083	U	0.0021	U		0.0021			
	PCB-12	0.020	J C q	0.010	U C	0.0013	U C	0.0052	U C	0.0059	U C	0.87	C	0.041	C q	0.0086	U C	0.0021	U C		0.0021			
	PCB-13	0.020	J C12 q	0.010	U C12	0.0013	U C12	0.0052	U C12	0.0059	U C12	0.87	C12	0.041	C12 q	0.0086	U C12	0.0021	U C12		0.0021			
	PCB-14	0.0031	U	0.0088	U	0.0011	U	0.0044	U	0.0050	U	0.043		0.0056	U	0.0073	U	0.0018	U		0.0018			
	PCB-15	0.057		0.017		0.0014	U	0.0054	U	0.0065	U	1.39		0.078		0.0090	U	0.0023	U		0.0023			
Tri	PCB-16	0.025	q	0.0035	U	0.00047	U	0.0011	U	0.00040	U	2.26		0.086		0.0018	U	0.00090	U		0.00090			
	PCB-17	0.039		0.0031	U	0.00042	U	0.00094	U	0.00036	U	3.36		0.13		0.0016	U	0.00080	U		0.00080			
	PCB-18	0.062	C q	0.018	J q C	0.00037	U C	0.0032	J C	0.00032	U C	7.48	C	0.26	C	0.0014	U C	0.00071	U C		0.00071			
	PCB-19	0.0084	J q	0.0038	U	0.00052	U	0.0012	U	0.00044	U	0.59		0.0024	U	0.0019	U	0.00098	U		0.00098			
	PCB-20	0.15	C B	0.031	J C B	0.00032	U C	0.0023	J C B q	0.00013	U C	9.35	C B	0.53	C B	0.0011	U C	0.00108	J C q		0.00024	0.00324	0.0054	
	PCB-21	0.041	C q	0.013	J q C	0.00031	U C	0.00075	U C	0.00013	U C	2.85	C	0.16	C	0.0011	U C	0.00023	U C		0.00023			
	PCB-22	0.034		0.0056	U	0.0010	J q	0.00078	U	0.00013	U	1.47		0.10		0.0012	U	0.00024	U		0.00024			
	PCB-23	0.0016	U	0.0055	U	0.00033	U	0.00078	U	0.00013	U	0.015	U	0.0025	U	0.0012	U	0.00024	U		0.00024			
	PCB-24	0.00077	U	0.0026	U	0.00035	U	0.00079	U	0.00030	U	0.12	q	0.0017	U	0.0013	U	0.00068	U		0.00068			
	PCB-25	0.026		0.0093	J q	0.00030	U	0.00071	U	0.00012	U	1.31		0.061		0.0010	U	0.00022	U		0.00022			
	PCB-26	0.032	C	0.018	J C	0.00031	U C	0.00075	U C	0.00013	U C	1.37	C	0.082	C	0.0011	U C	0.00023	U C		0.00023			
	PCB-27	0.011	J q	0.0023	U	0.00031	U	0.00069	U	0.00026	U	0.69		0.017	q	0.0012	U	0.00059	U		0.00059			
	PCB-28	0.15	B C20	0.031	J C20 B	0.00032	U C20	0.0023	J B C20 q	0.00013	U C20	9.35	C20 B	0.53	B C20	0.0011	U C20	0.00108	J C20 q		0.00024	0.00324	0.0054	
	PCB-29	0.032	C26	0.018	J C26	0.00031	U C26	0.00075	U C26	0.00013	U C26	1.37	C26	0.082	C26	0.0011	U C26	0.00023	U C26		0.00023			
	PCB-30	0.062	C18 q	0.018	J q C18	0.00037	U C18	0.0032	J C18	0.00032	U C18	7.48	C18	0.26	C18	0.0014	U C18	0.00071	U C18		0.00071			
	PCB-31	0.11		0.020	J	0.0010	J q	0.00074	U	0.00013	U	6.36		0.39		0.0011	U	0.00023	U		0.00023			
	PCB-32	0.041		0.0022	U	0.0022	J	0.00066	U	0.00025	U	2.87		0.10	q	0.0011	U	0.00056	U		0.00056			
	PCB-33	0.041	C21 q	0.013	J q C21	0.00031	U C21	0.00075	U C21	0.00013	U C21	2.85	C21	0.16	C21	0.0011	U C21	0.00023	U C21		0.00023			
	PCB-34	0.0017	U	0.0058	U	0.00034	U	0.00080	U	0.00014	U	0.15		0.0074	J	0.0012	U	0.00025	U		0.00025			
	PCB-35	0.0046	J	0.0056	U	0.00033	U	0.00078	U	0.00013	U	0.92		0.040		0.0012	U	0.00024	U		0.00024			
	PCB-36	0.0016	U	0.0054	U	0.00032	U	0.00075	U	0.00013	U	0.051	q	0.0025	U	0.0011	U	0.00023	U		0.00023			
	PCB-37	0.059		0.011	J q	0.00033	U	0.00078	U	0.00013	U	2.15		0.12		0.0012	U	0.00024	U		0.00024			
	PCB-38	0.0017	U	0.0058	U	0.00034	U	0.00081	U	0.00014	U	0.015	U	0.0027	U	0.0012	U	0.00025	U		0.00025			
	PCB-39	0.0015	U	0.0052	U	0.00030	U	0.00073	U	0.00012	U	0.11		0.0024	U	0.0011	U	0.00023	U		0.00023			
Tetra	PCB-40	0.20	C	0.069	C	0.00051	U C	0.0015	U C	0.00076	U C	9.90	C	0.44	C	0.0060	U C	0.00096	U C		0.00096			
	PCB-41	0.20	C40	0.069	C40	0.00051	U C40	0.0015	U C40	0.00076	U C40	9.90	C40	0.44	C40	0.0060	U C40	0.00096	U C40		0.00096			
	PCB-42	0.067		0.018	q	0.00051	U	0.0015	U	0.00077	U	5.95	G	0.28		0.0060	U	0.00096	U		0.00096			
	PCB-43	0.016	J C q	0.0093	U C	0.00048	U C	0.0014	U C	0.00072	U C	0.38	q C	0.026	C	0.0056	U C	0.00090	U C		0.00090			
	PCB-44	0.35	C	0.052	q C	0.00045	U C	0.0013	U C	0.00068	U C	19.9	C	0.90	C	0.0053	U C	0.00085	U C		0.00085			
	PCB-45	0.076	C	0.010	U C	0.00054	U C	0.0015	U C	0.00080	U C	4.05	G C	0.16	C	0.0063	U C	0.0010	U C		0.0010			
	PCB-46	0.017		0.013	U	0.00065	U	0.0019	U	0.00097	U	1.30	G	0.058		0.0076	U	0.0012	U		0.0012			
	PCB-47	0.35	C44	0.052	q C44	0.00045	U C44	0.0013	U C44	0.00068	U C44	19.9	C44	0.90	C44	0.0053	U C44	0.00085	U C44		0.00085			

Table C.1.3.1 . Method Blank Data Validation -PCB SED BLANK 140-31828
Edgemoor Sediment and Surface Water Assessment
Edgmoor, Delaware

Homologs	Client ID	VB5-COMP-B		VB6-COMP-A		VB6-COMP-B		VB9-COMP-A		VB9-COMP-B		VB15-COMP-A		VB15-COMP-B		VB17-COMP-A		Applicable Method Blank						Dioxin-Like Screening Concentration
	Lab Sample ID	460-186095-5		460-186095-6		460-186095-7		460-186095-8		460-186095-9		460-186095-14		460-186095-15		460-186095-16		MB 140-31828/21-B						
	Batch																	460-186096						
	Prep Date																	140-31828						
	Sampling Date	07/02/2019 09:55:00		07/02/2019 11:50:00		07/02/2019 11:55:00		07/02/2019 10:15:00		07/02/2019 10:20:00		07/02/2019 13:30:00		07/02/2019 13:35:00		07/02/2019 12:40:00								
	Matrix	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		7/19/2019						
	Dilution Factor	1		1		1		1		1		1		1		1		140-32187						
	Unit	ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g						
	DIOXIN-1668C-SOIL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	ML	EDL	3Xresult	5Xresult	
	SOIL BY 1668C																							
Tetra	PCB-48	0.031		0.0099	U	0.00051	U	0.0015	U	0.00076	U	2.57	G	0.14		0.0060	U	0.00096	U		0.00096			
	PCB-49	0.30	C	0.099	C	0.00042	U C	0.0012	U C	0.00062	U C	15.1	C	0.67	C	0.0049	U C	0.00079	U C		0.00079			
	PCB-50	0.051	C	0.0096	U C	0.00050	U C	0.0014	U C	0.00074	U C	3.04	C	0.12	C	0.0058	U C	0.00093	U C		0.00093			
	PCB-51	0.076	C45	0.010	U C45	0.00054	U C45	0.0015	U C45	0.00080	U C45	4.05	G C45	0.16	C45	0.0063	U C45	0.0010	U C45		0.0010			
	PCB-52	0.38		0.19		0.00051	U	0.0015	U	0.00076	U	27.9	G	1.14		0.0060	U	0.00095	U		0.00095			
	PCB-53	0.051	C50	0.0096	U C50	0.00050	U C50	0.0014	U C50	0.00074	U C50	3.04	C50	0.12	C50	0.0058	U C50	0.00093	U C50		0.00093			
	PCB-54	0.0044	J	0.0019	U	0.00031	U	0.00093	U	0.00031	U	0.035		0.00088	U	0.0012	U	0.00058	U		0.00058			
	PCB-55	0.0030	U	0.0072	U	0.00037	U	0.0011	U	0.00056	U	0.028	U G	0.0073	J q	0.0044	U	0.00070	U		0.00070			
	PCB-56	0.092		0.0072	U	0.00037	U	0.0011	U	0.00056	U	8.58	G	0.39		0.0044	U	0.00070	U		0.00070			
	PCB-57	0.0030	U	0.0073	U	0.00038	U	0.0011	U	0.00057	U	0.060	G	0.0044	U	0.0044	U	0.00071	U		0.00071			
	PCB-58	0.0031	U	0.0074	U	0.00038	U	0.0011	U	0.00057	U	0.16	G q	0.0050	J q	0.0045	U	0.00072	U		0.00072			
	PCB-59	0.030	J C	0.0070	U C	0.00036	U C	0.0010	U C	0.00054	U C	1.74	C	0.069	C	0.0042	U C	0.00068	U C		0.00068			
	PCB-60	0.028	q	0.0074	U	0.00038	U	0.0011	U	0.00057	U	0.50	G	0.031	q	0.0045	U	0.00071	U		0.00071			
	PCB-61	0.39	C	0.044	J q C	0.00036	U C	0.0010	U C	0.00053	U C	23.2	C	1.17	C	0.0042	U C	0.00067	U C		0.00067			
	PCB-62	0.030	J C59	0.0070	U C59	0.00036	U C59	0.0010	U C59	0.00054	U C59	1.74	C59	0.069	C59	0.0042	U C59	0.00068	U C59		0.00068			
	PCB-63	0.015		0.0067	U	0.00035	U	0.00099	U	0.00052	U	0.44	G	0.020		0.0041	U	0.00065	U		0.00065			
	PCB-64	0.085		0.0066	U	0.00034	U	0.00098	U	0.00051	U	7.90	G	0.34		0.0040	U	0.00064	U		0.00064			
	PCB-65	0.35	C44	0.052	q C44	0.00045	U C44	0.0013	U C44	0.00068	U C44	19.9	C44	0.90	C44	0.0053	U C44	0.00085	U C44		0.00085			
	PCB-66	0.25		0.028		0.00036	U	0.0010	U	0.00053	U	17.0	G	0.79		0.0042	U	0.00067	U		0.00067			
	PCB-67	0.019		0.0063	U	0.00033	U	0.00094	U	0.00049	U	0.40	G	0.020		0.0038	U	0.00062	U		0.00062			
	PCB-68	0.011	J q	0.0065	U	0.00034	U	0.00096	U	0.00050	U	0.26	G	0.012	q	0.0039	U	0.00063	U		0.00063			
	PCB-69	0.30	C49	0.099	C49	0.00042	U C49	0.0012	U C49	0.00062	U C49	15.1	C49	0.67	C49	0.0049	U C49	0.00079	U C49		0.00079			
	PCB-70	0.39	C61	0.044	J q C61	0.00036	U C61	0.0010	U C61	0.00053	U C61	23.2	C61	1.17	C61	0.0042	U C61	0.00067	U C61		0.00067			
	PCB-71	0.20	C40	0.069	C40	0.00051	U C40	0.0015	U C40	0.00076	U C40	9.90	C40	0.44	C40	0.0060	U C40	0.00096	U C40		0.00096			
	PCB-72	0.016	q	0.0072	U	0.00037	U	0.0011	U	0.00055	U	0.45	G	0.020		0.0044	U	0.00070	U		0.00070			
	PCB-73	0.016	J C43 q	0.0093	U C43	0.00048	U C43	0.0014	U C43	0.00072	U C43	0.38	q C43	0.026	C43	0.0056	U C43	0.00090	U C43		0.00090			
	PCB-74	0.39	C61	0.044	J q C61	0.00036	U C61	0.0010	U C61	0.00053	U C61	23.2	C61	1.17	C61	0.0042	U C61	0.00067	U C61		0.00067			
	PCB-75	0.030	J C59	0.0070	U C59	0.00036	U C59	0.0010	U C59	0.00054	U C59	1.74	C59	0.069	C59	0.0042	U C59	0.00068	U C59		0.00068			
	PCB-76	0.39	C61	0.044	J q C61	0.00036	U C61	0.0010	U C61	0.00053	U C61	23.2	C61	1.17	C61	0.0042	U C61	0.00067	U C61		0.00067			
	PCB-77	0.045	q	0.0071	U	0.00036	U	0.0010	U	0.00056	U	2.67	G	0.11		0.0042	U	0.00068	U		0.00068			38
	PCB-78	0.0031	U	0.0074	U	0.00038	U	0.0011	U	0.00057	U	0.028	U G	0.0045	U	0.0045	U	0.00072	U		0.00072			
	PCB-79	0.0027	U	0.0064	U	0.00033	U	0.00095	U	0.00050	U	0.17	G	0.0039	U	0.0039	U	0.00062	U		0.00062			
	PCB-80	0.0026	U	0.0063	U	0.00033	U	0.00093	U	0.00049	U	0.024	U G	0.0038	U	0.0038	U	0.00061	U		0.00061			
	PCB-81	0.0028	U	0.0067	U	0.00035	U	0.00099	U	0.00050	U	0.026	U G	0.0041	U	0.0041	U	0.00066	U		0.00066			12
Penta	PCB-82	0.081		0.0038	U	0.00058	U	0.0016	U	0.00015	U	2.04		0.079	q	0.0018	U	0.00068	U		0.00068			
	PCB-83	0.62	C	0.072	q C	0.00053	U C	0.0014	U C	0.00013	U C	17.9	C	0.82	C	0.0016	U C	0.00063	U C		0.00063			
	PCB-84	0.16		0.014	J	0.00059	U	0.0016	U	0.00015	U	7.72		0.32		0.0018	U	0.00069	U		0.00069			
	PCB-85	0.11	C	0.0028	U C	0.00043	U C	0.0011	U C	0.00011	U C	3.22	C	0.14	C	0.0013	U C	0.00051	U C		0.00051			
	PCB-86	0.55	C	0.028	J C	0.00043	U C	0.0012	U C	0.00011	U C	12.9	C	0.60	C	0.0013	U C	0.00051	U C		0.00051			
	PCB-87	0.55	C86	0.028	J C86	0.00043	U C86	0.0012	U C86	0.00011	U C86	12.9	C86	0.60	C86	0.0013	U C86	0.00051	U C86		0.00051			
	PCB-88	0.25	C	0.048	q C	0.00052	U C	0.0014	U C	0.00013	U C	4.82	C	0.20	C	0.0016	U C	0.00062	U C		0.00062			
	PCB-89	0.00096	U	0.0037	U	0.00057	U	0.0015	U	0.00014	U	0.32		0.0027	U	0.0018	U	0.00067	U		0.00067			
	PCB-90	1.32	C	0.074	C	0.00044	U C	0.0012	U C	0.00011	U C	24.4	C	1.14	C	0.0014	U C	0.00052	U C		0.00052			
	PCB-91	0.25	C88	0.048	q C88	0.00052	U C88	0.0014	U C88	0.00013	U C88	4.82	C88	0.20	C88	0.0016	U C88	0.00062	U C88		0.00062			
	PCB-92	0.80		0.0095	J q	0.00050	U	0.0013	U	0.00013	U	4.67		0.23		0.0015	U	0.00059	U		0.00059			
	PCB-93	0.33	C	0.014	J q C	0.00050	U C	0.0013	U C	0.00013	U C	0.35	q C	0.017	J C q	0.0016	U C	0.00059	U C		0.00059			

Table C.1.3.1 . Method Blank Data Validation -PCB SED BLANK 140-31828
Edgemoor Sediment and Surface Water Assessment
Edgmoor, Delaware

Homologs	Client ID	VB5-COMP-B		VB6-COMP-A		VB6-COMP-B		VB9-COMP-A		VB9-COMP-B		VB15-COMP-A		VB15-COMP-B		VB17-COMP-A		Applicable Method Blank						Dioxin-Like Screening Concentration
	Lab Sample ID	460-186095-5		460-186095-6		460-186095-7		460-186095-8		460-186095-9		460-186095-14		460-186095-15		460-186095-16		MB 140-31828/21-B						
	Batch																	460-186096						
	Prep Date																	140-31828						
	Sampling Date	07/02/2019 09:55:00		07/02/2019 11:50:00		07/02/2019 11:55:00		07/02/2019 10:15:00		07/02/2019 10:20:00		07/02/2019 13:30:00		07/02/2019 13:35:00		07/02/2019 12:40:00								
	Matrix	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		7/19/2019						
	Dilution Factor	1		1		1		1		1		1		1		1		140-32187						
	Unit	ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g						
	DIOXIN-1668C-SOIL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	ML	EDL	3Xresult	5Xresult	
	SOIL BY 1668C																							
Penta	PCB-94	0.097		0.0037	U	0.00057	U	0.0015	U	0.00014	U	0.19	q	0.0027	U	0.0018	U	0.00067	U		0.00067			
	PCB-95	0.56		0.079	q	0.00055	U	0.0015	U	0.00014	U	21.2		0.99		0.0017	U	0.00065	U		0.00065			
	PCB-96	0.014		0.0028	U	0.00043	U	0.0011	U	0.00011	U	0.39		0.016	q	0.0013	U	0.00051	U		0.00051			
	PCB-97	0.55	C86	0.028	J C86	0.00043	U C86	0.0012	U C86	0.00011	U C86	12.9	C86	0.60	C86	0.0013	U C86	0.00051	U C86		0.00051			
	PCB-98	0.25	C	0.0032	U C	0.00049	U C	0.0013	U C	0.00012	U C	1.14	C	0.053	C	0.0015	U C	0.00058	U C		0.00058			
	PCB-99	0.62	C83	0.072	q C83	0.00053	U C83	0.0014	U C83	0.00013	U C83	17.9	C83	0.82	C83	0.0016	U C83	0.00063	U C83		0.00063			
	PCB-100	0.33	C93	0.014	J q C93	0.00050	U C93	0.0013	U C93	0.00013	U C93	0.35	q C93	0.017	J C93 q	0.0016	U C93	0.00059	U C93		0.00059			
	PCB-101	1.32	C90	0.074	C90	0.00044	U C90	0.0012	U C90	0.00011	U C90	24.4	C90	1.14	C90	0.0014	U C90	0.00052	U C90		0.00052			
	PCB-102	0.25	C98	0.0032	U C98	0.00049	U C98	0.0013	U C98	0.00012	U C98	1.14	C98	0.053	C98	0.0015	U C98	0.00058	U C98		0.00058			
	PCB-103	0.075	q	0.019		0.00050	U	0.0013	U	0.00013	U	0.58		0.020	q	0.0016	U	0.00059	U		0.00059			
	PCB-104	0.00064	U	0.0025	U	0.00038	U	0.0010	U	0.000097	U	0.0023	U	0.0018	U	0.0012	U	0.00045	U		0.00045			
	PCB-105	0.21		0.0074	U	0.00068	U	0.0010	U	0.000071	U	4.34		0.19		0.0014	U	0.00031	U		0.00031			120
	PCB-106	0.0024	U	0.0076	U	0.00070	U	0.0012	U	0.000069	U	0.014	U	0.0039	U	0.0016	U	0.00033	U		0.00033			
	PCB-107	0.052		0.0081	U	0.00075	U	0.0013	U	0.000074	U	2.38		0.090	q	0.0017	U	0.00036	U		0.00036			
	PCB-108	0.017	J C	0.0078	U C	0.00072	U C	0.0012	U C	0.000071	U C	0.53	C	0.025	C q	0.0016	U C	0.00034	U C		0.00034			
	PCB-109	0.55	C86	0.028	J C86	0.00043	U C86	0.0012	U C86	0.00011	U C86	12.9	C86	0.60	C86	0.0013	U C86	0.00051	U C86		0.00051			
	PCB-110	0.76	C	0.048	q C	0.00037	U C	0.00098	U C	0.000093	U C	26.2	C	1.24	C	0.0065	J C q	0.00043	U C		0.00043			
	PCB-111	0.022		0.0023	U	0.00035	U	0.00094	U	0.000090	U	0.0021	U	0.0017	U	0.0011	U	0.00042	U		0.00042			
	PCB-112	0.00063	U	0.0024	U	0.00037	U	0.00099	U	0.000095	U	0.0022	U	0.0018	U	0.0012	U	0.00044	U		0.00044			
	PCB-113	1.32	C90	0.074	C90	0.00044	U C90	0.0012	U C90	0.00011	U C90	24.4	C90	1.14	C90	0.0014	U C90	0.00052	U C90		0.00052			
	PCB-114	0.012	J q	0.0072	U	0.00064	U	0.0011	U	0.000063	U	0.21		0.0089	J q	0.0015	U	0.00032	U		0.00032			120
	PCB-115	0.76	C110	0.048	q C110	0.00037	U C110	0.00098	U C110	0.000093	U C110	26.2	C110	1.24	C110	0.0065	J C110 q	0.00043	U C110		0.00043			
	PCB-116	0.11	C85	0.0028	U C85	0.00043	U C85	0.0011	U C85	0.00011	U C85	3.22	C85	0.14	C85	0.0013	U C85	0.00051	U C85		0.00051			
	PCB-117	0.11	C85	0.0028	U C85	0.00043	U C85	0.0011	U C85	0.00011	U C85	3.22	C85	0.14	C85	0.0013	U C85	0.00051	U C85		0.00051			
	PCB-118	0.43		0.024		0.00065	U	0.0011	U	0.000063	U	18.6		0.86		0.0051	J q	0.00032	U		0.00032			120
	PCB-119	0.55	C86	0.028	J C86	0.00043	U C86	0.0012	U C86	0.00011	U C86	12.9	C86	0.60	C86	0.0013	U C86	0.00051	U C86		0.00051			
	PCB-120	0.026	q	0.0023	U	0.00036	U	0.00096	U	0.000091	U	0.20		0.011	J q	0.0011	U	0.00042	U		0.00042			
	PCB-121	0.029		0.0024	U	0.00037	U	0.00099	U	0.000094	U	0.0022	U	0.0018	U	0.0011	U	0.00044	U		0.00044			
	PCB-122	0.0028	U	0.0088	U	0.00080	U	0.0014	U	0.000080	U	0.23		0.011	J	0.0018	U	0.00038	U		0.00038			
	PCB-123	0.0072	J q	0.0077	U	0.00072	U	0.0013	U	0.000071	U	0.22		0.011	J q	0.0015	U	0.00034	U		0.00034			120
	PCB-124	0.017	J C108	0.0078	U C108	0.00072	U C108	0.0012	U C108	0.000071	U C108	0.53	C108	0.025	q C108	0.0016	U C108	0.00034	U C108		0.00034			
	PCB-125	0.55	C86	0.028	J C86	0.00043	U C86	0.0012	U C86	0.00011	U C86	12.9	C86	0.60	C86	0.0013	U C86	0.00051	U C86		0.00051			
	PCB-126	0.0053	J	0.0079	U	0.00071	U	0.0012	U	0.000070	U	0.068		0.0039	U	0.0017	U	0.00033	U		0.00033			0.036
	PCB-127	0.0024	U	0.0076	U	0.00069	U	0.0012	U	0.000069	U	0.022	q	0.0039	U	0.0016	U	0.00033	U		0.00033			
Hexa	PCB-128	0.27	C	0.0099	U C	0.00099	U C	0.0016	U C	0.00011	U C	2.66	C	0.14	C	0.0033	U C	0.00076	U C		0.00076			
	PCB-129	2.60	C	0.036	J C	0.0010	U C	0.0017	U C	0.00011	U C	18.6	C	1.02	C	0.010	J C q	0.00079	U C		0.00079			
	PCB-130	0.22	G	0.013	U	0.0014	U	0.0022	U	0.00015	U	1.61	G	0.073		0.0044	U	0.0010	U		0.0010			
	PCB-131	0.014	U G	0.014	U	0.0014	U	0.0023	U	0.00016	U	0.23	G	0.0086	U	0.0046	U	0.0011	U		0.0011			
	PCB-132	0.54		0.013	U	0.0013	U	0.0021	U	0.00015	U	7.02	G	0.38		0.0043	U	0.0010	U		0.0010			
	PCB-133	0.69		0.013	U	0.0013	U	0.0021	U	0.00014	U	0.51	G	0.024		0.0042	U	0.00098	U		0.00098			
	PCB-134	0.21	C	0.013	U C	0.0013	U C	0.0022	U C	0.00015	U C	1.11	C	0.050	C q	0.0044	U C	0.0010	U C		0.0010			
	PCB-135	2.75	C	0.035	C	0.00048	U C	0.0013	U C	0.00019	U C	7.39	C	0.41	C	0.0015	U C	0.00071	U C		0.00071			
	PCB-136	0.35		0.027		0.00035	U	0.00097	U	0.00014	U	2.89		0.16		0.0011	U	0.00051	U		0.00051			
	PCB-137	0.10		0.011	U	0.0012	U	0.0019	U	0.00013	U	0.65	G	0.020	q	0.0038	U	0.00088	U		0.00088			
	PCB-138	2.60	C129	0.036	J C129	0.0010	U C129	0.0017	U C129	0.00011	U C129	18.6	C129	1.02	C129	0.010	J C129 q	0.00079	U C129		0.00079			
	PCB-139	0.12	C	0.011	U C	0.0011	U C	0.0019	U C	0.00013	U C	0.41	C	0.018	J C q	0.0037	U C	0.00087	U C		0.00087			

Table C.1.3.1 . Method Blank Data Validation -PCB SED BLANK 140-31828
Edgemoor Sediment and Surface Water Assessment
Edgmoor, Delaware

Homologs	Client ID	VB5-COMP-B		VB6-COMP-A		VB6-COMP-B		VB9-COMP-A		VB9-COMP-B		VB15-COMP-A		VB15-COMP-B		VB17-COMP-A		Applicable Method Blank						Dioxin-Like Screening Concentration
	Lab Sample ID	460-186095-5		460-186095-6		460-186095-7		460-186095-8		460-186095-9		460-186095-14		460-186095-15		460-186095-16		MB 140-31828/21-B						
	Batch																	460-186096						
	Prep Date																	140-31828						
	Sampling Date	07/02/2019 09:55:00		07/02/2019 11:50:00		07/02/2019 11:55:00		07/02/2019 10:15:00		07/02/2019 10:20:00		07/02/2019 13:30:00		07/02/2019 13:35:00		07/02/2019 12:40:00								
	Matrix	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		7/19/2019						
	Dilution Factor	1		1		1		1		1		1		1		1		140-32187						
	Unit	ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g						
	DIOXIN-1668C-SOIL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	ML	EDL	3Xresult	5Xresult	
	SOIL BY 1668C																							
	PCB-140	0.12	C139	0.011	U C139	0.0011	U C139	0.0019	U C139	0.00013	U C139	0.41	C139	0.018	J C139 q	0.0037	U C139	0.00087	U C139		0.00087			
	PCB-141	0.25		0.012	U	0.0012	U	0.0019	U	0.00013	U	2.80	G	0.18		0.0039	U	0.00091	U		0.00091			
	PCB-142	0.013	U	0.013	U	0.0013	U	0.0021	U	0.00014	U	0.032	U G	0.0078	U	0.0042	U	0.00097	U		0.00097			
	PCB-143	0.21	C134	0.013	U C134	0.0013	U C134	0.0022	U C134	0.00015	U C134	1.11	C134	0.050	C134 q	0.0044	U C134	0.0010	U C134		0.0010			
	PCB-144	0.043	q	0.0026	U	0.00044	U	0.0012	U	0.00018	U	0.59		0.034		0.0013	U	0.00065	U		0.00065			
	PCB-145	0.00065	U	0.0020	U	0.00033	U	0.00092	U	0.00013	U	0.015	J q	0.0018	U	0.0010	U	0.00049	U		0.00049			
	PCB-146	3.06		0.022		0.0011	U	0.0018	U	0.00012	U	4.31	G	0.23		0.0037	U	0.00086	U		0.00086			
	PCB-147	4.47	C	0.12	q C	0.0013	U C	0.0021	U C	0.00014	U C	18.6	C	1.09	C	0.0042	U C	0.00099	U C		0.00099			
	PCB-148	0.22		0.0028	U	0.00047	U	0.0013	U	0.00019	U	0.11		0.0025	U	0.0014	U	0.00069	U		0.00069			
	PCB-149	4.47	C147	0.12	q C147	0.0013	U C147	0.0021	U C147	0.00014	U C147	18.6	C147	1.09	C147	0.0042	U C147	0.00099	U C147		0.00099			
	PCB-150	0.15		0.0077	J q	0.00032	U	0.00088	U	0.00013	U	0.099		0.0057	J q	0.00098	U	0.00047	U		0.00047			
	PCB-151	2.75	C135	0.035	C135	0.00048	U C135	0.0013	U C135	0.00019	U C135	7.39	C135	0.41	C135	0.0015	U C135	0.00071	U C135		0.00071			
	PCB-152	0.013		0.0020	U	0.00034	U	0.00095	U	0.00014	U	0.021		0.0019	U	0.0010	U	0.00050	U		0.00050			
	PCB-153	2.18	C	0.071	C	0.00089	U C	0.0015	U C	0.000099	U C	17.1	C	0.94	C	0.012	J C	0.00068	U C		0.00068			
Hexa	PCB-154	1.13		0.015	J q	0.00038	U	0.0011	U	0.00015	U	0.53		0.030		0.0012	U	0.00056	U		0.00056			
	PCB-155	0.010	J	0.0019	U	0.00032	U	0.00089	U	0.00013	U	0.014	J q	0.0017	U	0.00098	U	0.00047	U		0.00047			
	PCB-156	0.087	C	0.0094	U C	0.0011	U C	0.0017	U C	0.00011	U C	1.93	C	0.088	C	0.0034	U C	0.00080	U C		0.00080			120
	PCB-157	0.087	C156	0.0094	U C156	0.0011	U C156	0.0017	U C156	0.00011	U C156	1.93	C156	0.088	C156	0.0034	U C156	0.00080	U C156		0.00080			120
	PCB-158	0.15		0.0080	U	0.00081	U	0.0013	U	0.000089	U	1.53	G	0.083		0.0026	U	0.00062	U		0.00062			
	PCB-159	0.0086	U	0.0085	U	0.00085	U	0.0014	U	0.000094	U	0.15	G	0.0052	U	0.0028	U	0.00065	U		0.00065			
	PCB-160	2.60	C129	0.036	J C129	0.0010	U C129	0.0017	U C129	0.00011	U C129	18.6	C129	1.02	C129	0.010	J C129 q	0.00079	U C129		0.00079			
	PCB-161	0.0085	U	0.0084	U	0.00085	U	0.0014	U	0.000093	U	0.021	U G	0.0052	U	0.0028	U	0.00065	U		0.00065			
	PCB-162	0.0084	U	0.0083	U	0.00084	U	0.0014	U	0.000092	U	0.19	G	0.0051	U	0.0028	U	0.00064	U		0.00064			
	PCB-163	2.60	C129	0.036	J C129	0.0010	U C129	0.0017	U C129	0.00011	U C129	18.6	C129	1.02	C129	0.010	J C129 q	0.00079	U C129		0.00079			
	PCB-164	0.10		0.0089	U	0.00090	U	0.0015	U	0.000099	U	1.51	G	0.077		0.0030	U	0.00069	U		0.00069			
	PCB-165	0.11		0.0096	U	0.00096	U	0.0016	U	0.00011	U	0.024	U G	0.0059	U	0.0032	U	0.00074	U		0.00074			
	PCB-166	0.27	C128	0.0099	U C128	0.00099	U C128	0.0016	U C128	0.00011	U C128	2.66	C128	0.14	C128	0.0033	U C128	0.00076	U C128		0.00076			
	PCB-167	0.0069	U	0.0083	U	0.00070	U	0.0011	U	0.000081	U	0.72		0.034		0.0023	U	0.00055	U		0.00055			120
	PCB-168	2.18	C153	0.071	C153	0.00089	U C153	0.0015	U C153	0.000099	U C153	17.1	C153	0.94	C153	0.012	J C153	0.00068	U C153		0.00068			
	PCB-169	0.0069	U	0.0062	U	0.00062	U	0.0010	U	0.000071	U	0.045	q	0.0039	U	0.0021	U	0.00047	U		0.00047			0.12
	PCB-170	1.39		0.0083	J q	0.0015	U	0.0014	U	0.00039	U	5.05		0.34		0.013	J q	0.00050	U		0.00050			NVP
	PCB-171	0.48	C	0.0031	U C	0.0015	U C	0.0013	U C	0.00039	U C	1.53	C	0.091	C	0.0025	U C	0.00051	U C		0.00051			
	PCB-172	0.41		0.0031	U	0.0015	U	0.0013	U	0.00039	U	0.98		0.057		0.0024	U	0.00050	U		0.00050			
	PCB-173	0.48	C171	0.0031	U C171	0.0015	U C171	0.0013	U C171	0.00039	U C171	1.53	C171	0.091	C171	0.0025	U C171	0.00051	U C171		0.00051			
	PCB-174	1.63		0.012	J	0.0014	U	0.0013	U	0.00036	U	5.54		0.33		0.0062	J	0.00047	U		0.00047			
	PCB-175	0.12		0.0028	U	0.0013	U	0.0012	U	0.00035	U	0.26		0.018		0.0022	U	0.00046	U		0.00046			
	PCB-176	0.34		0.0021	U	0.0010	U	0.00092	U	0.00027	U	0.72		0.040		0.0017	U	0.00035	U		0.00035			
Hepta	PCB-177	2.52		0.015	J q	0.0014	U	0.0013	U	0.00037	U	3.17		0.18		0.0024	U	0.00049	U		0.00049			
	PCB-178	1.44		0.0072	J q	0.0014	U	0.0013	U	0.00038	U	1.28		0.080		0.0024	U	0.00049	U		0.00049			
	PCB-179	2.06		0.013	J	0.0011	U	0.00097	U	0.00028	U	2.51		0.16		0.0018	U	0.00037	U		0.00037			
	PCB-180	3.72	C	0.039	C	0.0011	U C	0.0010	U C	0.00029	U C	10.7	C	0.68	C	0.021	J C	0.00038	U C		0.00038			NVP
	PCB-181	0.0011	U	0.0028	U	0.0013	U	0.0012	U	0.00035	U	0.045		0.0058	U	0.0022	U	0.00046	U		0.00046			
	PCB-182	0.16		0.0027	U	0.0013	U	0.0012	U	0.00034	U	0.084		0.0056	U	0.0021	U	0.00044	U		0.00044			
	PCB-183	1.22	C	0.020	J C	0.0013	U C	0.0012	U C	0.00034	U C	3.49	C	0.20	C	0.0022	U C	0.00045	U C		0.00045			
	PCB-184	0.00090	U	0.0023	U	0.0011	U	0.00099	U	0.00029	U	0.036	q	0.0048	U	0.0018	U	0.00037	U		0.00037			
	PCB-185	1.22	C183	0.020	J C183	0.0013	U C183	0.0012	U C183	0.00034	U C183	3.49	C183	0.20	C183	0.0022	U C183	0.00045	U C183		0.00045			

Table C.1.3.1 . Method Blank Data Validation -PCB SED BLANK 140-31828
Edgemoor Sediment and Surface Water Assessment
Edgmoor, Delaware

Homologs		VB5-COMP-B		VB6-COMP-A		VB6-COMP-B		VB9-COMP-A		VB9-COMP-B		VB15-COMP-A		VB15-COMP-B		VB17-COMP-A		Applicable Method Blank						Dioxin-Like Screening Concentration
	Lab Sample ID	460-186095-5		460-186095-6		460-186095-7		460-186095-8		460-186095-9		460-186095-14		460-186095-15		460-186095-16		MB 140-31828/21-B						
	Batch																	460-186096						
	Prep Date																	140-31828						
	Sampling Date	07/02/2019 09:55:00		07/02/2019 11:50:00		07/02/2019 11:55:00		07/02/2019 10:15:00		07/02/2019 10:20:00		07/02/2019 13:30:00		07/02/2019 13:35:00		07/02/2019 12:40:00								
	Matrix	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		7/19/2019						
	Dilution Factor	1		1		1		1		1		1		1		1		140-32187						
	Unit	ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g						
	DIOXIN-1668C-SOIL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	ML	EDL	3Xresult	5Xresult	
	SOIL BY 1668C																							
Hepta	PCB-186	0.00087	U	0.0022	U	0.0011	U	0.00096	U	0.00028	U	0.0019	U	0.0046	U	0.0018	U	0.00036	U		0.00036			
	PCB-187	6.15		0.036		0.0012	U	0.0011	U	0.00033	U	6.28		0.39		0.010	J	0.00042	U		0.00042			
	PCB-188	0.034	q	0.0021	U	0.00096	U	0.00084	U	0.00026	U	0.052	q	0.0041	U	0.0015	U	0.00033	U		0.00033			
	PCB-189	0.063		0.0064	U	0.00081	U	0.0025	U	0.00040	U	0.18		0.011	J	0.0041	U	0.00043	U		0.00043			130
	PCB-190	0.30		0.0020	U	0.00096	U	0.00088	U	0.00025	U	0.88		0.063		0.0016	U	0.00033	U		0.00033			
	PCB-191	0.058		0.0021	U	0.0010	U	0.00091	U	0.00026	U	0.21		0.0044	U	0.0017	U	0.00034	U		0.00034			
	PCB-192	0.00092	U	0.0023	U	0.0011	U	0.0010	U	0.00030	U	0.0020	U	0.0049	U	0.0019	U	0.00038	U		0.00038			
	PCB-193	3.72	C180	0.039	C180	0.0011	U C180	0.0010	U C180	0.00029	U C180	10.7	C180	0.68	C180	0.021	J C180	0.00038	U C180		0.00038			
Octa	PCB-194	2.76		0.013	J q	0.0015	U	0.0046	U	0.00082	U	2.98		0.18		0.0044	U	0.00047	U		0.00047			
	PCB-195	1.18		0.0054	U	0.0016	U	0.0051	U	0.00090	U	0.97		0.075		0.0048	U	0.00052	U		0.00052			
	PCB-196	0.92		0.023		0.00071	U	0.0017	U	0.00023	U	1.98		0.088	q	0.0035	U	0.00051	U		0.00051			
	PCB-197	0.081	q	0.0068	J	0.00054	U	0.0013	U	0.00018	U	0.18		0.0096	J q	0.0027	U	0.00039	U		0.00039			
	PCB-198	2.54	C	0.026	J q C	0.00072	U C	0.0017	U C	0.00024	U C	6.57	C	0.30	C	0.0088	J C q	0.00052	U C		0.00052			
	PCB-199	2.54	C198	0.026	J q C198	0.00072	U C198	0.0017	U C198	0.00024	U C198	6.57	C198	0.30	C198	0.0088	J C198 q	0.00052	U C198		0.00052			
	PCB-200	0.25		0.0017	U	0.00048	U	0.0012	U	0.00016	U	0.34		0.018		0.0024	U	0.00035	U		0.00035			
	PCB-201	0.32		0.0081	J	0.00050	U	0.0012	U	0.00016	U	0.59		0.032		0.0024	U	0.00035	U		0.00035			
	PCB-202	0.53		0.0019	U	0.00056	U	0.0013	U	0.00018	U	1.74		0.075		0.0027	U	0.00040	U		0.00040			
	PCB-203	1.10		0.014	J q	0.00064	U	0.0015	U	0.00021	U	2.52		0.12	q	0.0031	U	0.00046	U		0.00046			
	PCB-204	0.0021	U	0.0019	U	0.00055	U	0.0013	U	0.00018	U	0.0022	U	0.0033	U	0.0027	U	0.00039	U		0.00039			
	PCB-205	0.14		0.0042	U	0.0013	U	0.0039	U	0.00069	U	0.14		0.0066	U	0.0037	U	0.00040	U		0.00040			
Nona	PCB-206	2.27		0.18		0.0017	U	0.0056	U	0.0035	U	19.7	G	0.95		0.010	U	0.00099	U		0.00099			
	PCB-207	0.22		0.031		0.0013	U	0.0041	U	0.0025	U	1.27	G	0.060		0.0070	U	0.00076	U		0.00076			
	PCB-208	0.85		0.065		0.0014	U	0.0043	U	0.0026	U	8.55	G	0.38		0.0070	U	0.00083	U		0.00083			
Deca	PCB-209	2.65		1.87		0.0020	J	0.0018	U	0.00035	U	36.3		1.84		0.017		0.00049	U		0.00049			
s Reported by Lab	Total Monochlorobiphenyls	0.019	q	0.031	q	0.00055	J q	0.00046	U	0.00025	U	1.0		0.042	q	0.00071	U	0.00026	U		0.00026			
	Total Dichlorobiphenyls	0.17	q	0.017	J	0.0041	J q	0.0072	U	0.0078	U	5.30	q	0.27	q	0.012	U	0.0028	U		0.0028			
	Total Trichlorobiphenyls	0.64	B q	0.12	q B	0.0042	J B q	0.0055	J B q	0.00044	U	43.5	q B	2.08	B q	0.0019	U	0.00108	J q		0.00041	0.00324	0.0054	
	Total Tetrachlorobiphenyls	2.48	q	0.50	q	0.00065	U	0.0019	U	0.00097	U	154	q	6.91	q	0.0076	U	0.0012	U		0.0012			
	Total Pentachlorobiphenyls	6.79	q	0.43	q	0.00080	U	0.0016	U	0.00015	U	155	q	7.06	q	0.012	J q	0.00069	U		0.00069			
	Total Hexachlorobiphenyls	19.8	q	0.33	q	0.0014	U	0.0023	U	0.00019	U	93.3	q	5.08	q	0.022	J q	0.0011	U		0.0011			
	Total Heptachlorobiphenyls	22.1	q	0.15	q	0.0015	U	0.0025	U	0.00040	U	43.0	q	2.63		0.050	q	0.00051	U		0.00051			
	Total Octachlorobiphenyls	9.81	q	0.091	q	0.0016	U	0.0051	U	0.00090	U	18.0		0.90	q	0.0088	J q	0.00052	U		0.00052			
	Total Nonachlorobiphenyls	3.34		0.28		0.0017	U	0.0056	U	0.0035	U	29.5	G	1.39		0.010	U	0.00099	U		0.00099			
	Total PCBs	67.9	B q	3.90	q B	0.012	J B q	0.0065	J B q	0.0078	U	577	q B	28.3	B q	0.12	B q	0.00133	J q		0.00097	0.00399	0.00665	230

Data Quality Review Notes for Table C.1.3.1
Dioxin Sediment Blank 140-31828
VB7-COMP-A
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:
Sample VB-7-COMP-A

Total Trichlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total PCBs	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-20, 28	Method blank concentration inconsequential to reported sample concentration. Use Data. PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-108, 124	PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	PCB 129, 138, 160 and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-156, 157	PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs.
PCB-171, 173	PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.
PCB-198, 199	PCB 198 and 199 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.1
Dioxin Sediment Blank 140-31828
DUP1-COMP-A
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:
Sample DUP1-COMP-A

Total Trichlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total PCBs	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-20, 28	Method blank concentration inconsequential to reported sample concentration. Use Data. PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-108, 124	PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	PCB 129, 138, 160 and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-156, 157	PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs.
PCB-171, 173	PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.
PCB-198, 199	PCB 198 and 199 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.1
Dioxin Sediment Blank 140-31828
VB12-COMP-B
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:
Sample VB12-COMP-B

Total PCBs	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Trichlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-20, 28	Method blank concentration consequential to reported sample concentration. PCB 20 and 28 coelute. Data probably not valid.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-108, 124	PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	PCB 129, 138, 160 and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-156, 157	PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs.
PCB-171, 173	PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.
PCB-198, 199	PCB 198 and 199 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.1
Dioxin Sediment Blank 140-31828
VB11-COMP-A
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes: **Sample VB11-COMP-A**	
Total Trichlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total PCBs	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-20, 28	Method blank concentration inconsequential to reported sample concentration. Use Data. PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-108, 124	PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	PCB 129, 138, 160 and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-156, 157	PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs.
PCB-171, 173	PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.
PCB-198, 199	PCB 198 and 199 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.1
Dioxin Sediment Blank 140-31828
VB11-COMP-B
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:
Sample VB11-COMP-B

Total PCBs	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Trichlorobiphenyls	Method blank concentration may or may not be consequential to reported sample concentration. Data Suspect. Further evaluate importance of data.
PCB-20, 28	Method blank concentration inconsequential to reported sample concentration. Use Data. PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-108, 124	PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	PCB 129, 138, 160 and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-156, 157	PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs.
PCB-171, 173	PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.
PCB-198, 199	PCB 198 and 199 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.1
Dioxin Sediment Blank 140-31828
VB18-COMP-A
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes: Sample VB18-COMP-A	
Total Trichlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total PCBs	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-20, 28	Method blank concentration inconsequential to reported sample concentration. Use Data. PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-108, 124	PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	PCB 129, 138, 160 and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-156, 157	PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs.
PCB-171, 173	PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.
PCB-198, 199	PCB 198 and 199 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.1
Dioxin Sediment Blank 140-31828
VB10-COMP-A
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:	
Sample VB10-COMP-A	
Total Trichlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total PCBs	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-20, 28	Method blank concentration inconsequential to reported sample concentration. Use Data. PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-108, 124	PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	PCB 129, 138, 160 and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-156, 157	PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs.
PCB-171, 173	PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.
PCB-198, 199	PCB 198 and 199 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.1
Dioxin Sediment Blank 140-31828
VB10-COMP-B
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes: Sample VB10-COMP-B	
Total PCBs	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Trichlorobiphenyls	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-20, 28	Method blank concentration consequential to reported sample concentration. PCB 20 and 28 coelute. Data probably not valid.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-108, 124	PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	PCB 129, 138, 160 and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-156, 157	PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs.
PCB-171, 173	PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.
PCB-198, 199	PCB 198 and 199 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.1
Dioxin Sediment Blank 140-31828
VB13-COMP-A
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:
Sample VB13-COMP-A

Total PCBs	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Trichlorobiphenyls	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate importance of data.
PCB-20, 28	Method blank concentration consequential to reported sample concentration. PCB 20 and 28 coelute. Data probably not valid.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-108, 124	PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	PCB 129, 138, 160 and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-156, 157	PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs.
PCB-171, 173	PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.
PCB-198, 199	PCB 198 and 199 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.1
Dioxin Sediment Blank 140-31828
VB13-COMP-B
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:
Sample VB13-COMP-B

Total PCBs	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Trichlorobiphenyls	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-20, 28	Method blank concentration consequential to reported sample concentration. PCB 20 and 28 coelute. Data probably not valid.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-108, 124	PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	PCB 129, 138, 160 and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-156, 157	PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs.
PCB-171, 173	PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.
PCB-198, 199	PCB 198 and 199 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.1
Dioxin Sediment Blank 140-31828
VB4-COMP-A
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes: Sample VB14-COMP-A	
Total PCBs	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Trichlorobiphenyls	Method blank concentration may or may not be consequential to reported native concentration. Data Suspect. Further evaluate importance of data.
PCB-20, 28	Method blank concentration consequential to reported sample concentration. PCB 20 and 28 coelute. Data probably not valid.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-108, 124	PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	PCB 129, 138, 160 and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-156, 157	PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs.
PCB-171, 173	PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.
PCB-198, 199	PCB 198 and 199 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.1
Dioxin Sediment Blank 140-31828
VB5-COMP-A
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:
Sample VB5-COMP-A

Total Trichlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total PCBs	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-20, 28	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate the importance of data. PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-108, 124	PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	PCB 129, 138, 160 and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-156, 157	PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs.
PCB-171, 173	PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.
PCB-198, 199	PCB 198 and 199 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.1
Dioxin Sediment Blank 140-31828
VB5-COMP-B
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes: Sample VB5-COMP-B	
Total Trichlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total PCBs	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-20, 28	Method blank concentration inconsequential to reported sample concentration. Use Data. PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-108, 124	PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	PCB 129, 138, 160 and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-156, 157	PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs.
PCB-171, 173	PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.
PCB-198, 199	PCB 198 and 199 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.1
Dioxin Sediment Blank 140-31828
VB6-COMP-A
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:
Sample VB6-COMP-A

Total Trichlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total PCBs	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-20, 28	Method blank concentration inconsequential to reported sample concentration. Use Data. PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-108, 124	PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	PCB 129, 138, 160 and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-156, 157	PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs.
PCB-171, 173	PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.
PCB-198, 199	PCB 198 and 199 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.1
Dioxin Sediment Blank 140-31828
VB6-COMP-B
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:
Sample VB6-COMP-B

Total PCBs	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Trichlorobiphenyls	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate importance of data.
PCB-20, 28	Method blank concentration consequential to reported sample concentration. PCB 20 and 28 coelute. Data probably not valid.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-108, 124	PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	PCB 129, 138, 160 and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-156, 157	PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs.
PCB-171, 173	PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.
PCB-198, 199	PCB 198 and 199 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.1
Dioxin Sediment Blank 140-31828
VB9-COMP-A
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes: Sample VB9-COMP-A	
Total Trichlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total PCBs	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate importance of data.
PCB-20, 28	Method blank concentration consequential to reported sample concentration. PCB 20 and 28 coelute. Data probably not valid.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-108, 124	PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	PCB 129, 138, 160 and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-156, 157	PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs.
PCB-171, 173	PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.
PCB-198, 199	PCB 198 and 199 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.1
Dioxin Sediment Blank 140-31828
VB9-COMP-B
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:
Sample VB9-COMP-B

Total PCBs	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Trichlorobiphenyls	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-20, 28	Method blank concentration consequential to reported sample concentration. PCB 20 and 28 coelute. Data probably not valid.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-108, 124	PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	PCB 129, 138, 160 and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-156, 157	PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs.
PCB-171, 173	PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.
PCB-198, 199	PCB 198 and 199 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.1
Dioxin Sediment Blank 140-31828
VB15-COMP-A
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:	
Sample VB15-COMP-A	
Total Trichlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total PCBs	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-20, 28	Method blank concentration inconsequential to reported sample concentration. Use Data. PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-108, 124	PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	PCB 129, 138, 160 and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-156, 157	PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs.
PCB-171, 173	PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.
PCB-198, 199	PCB 198 and 199 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.1
Dioxin Sediment Blank 140-31828
VB15-COMP-B
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:	
Sample VB15-COMP-B	
Total Trichlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total PCBs	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-20, 28	Method blank concentration inconsequential to reported sample concentration. Use Data. PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-108, 124	PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	PCB 129, 138, 160 and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-156, 157	PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs.
PCB-171, 173	PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.
PCB-198, 199	PCB 198 and 199 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.1
Dioxin Sediment Blank 140-31828
VB17-COMP-A
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:
Sample VB17-COMP-A

Total PCBs	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Trichlorobiphenyls	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-20, 28	Method blank concentration consequential to reported sample concentration. PCB 20 and 28 coelute. Data probably not valid.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-108, 124	PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	PCB 129, 138, 160 and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-156, 157	PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs.
PCB-171, 173	PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.
PCB-198, 199	PCB 198 and 199 coelute. Count result once when calculating total PCBs and total homologs.

Table C.1.3.2 . Method Blank Data Validation -PCB SED BLANK 140-31752
Edgemoor Sediment and Surface Water Assessment
Edgemoor, Delaware

Homologs	Client ID	VB1-COMP-A		VB14-COMP-A		VB1-COMP-B		VB2-COMP-A		VB3-COMP-A		Applicable Method Blank						Dioxin-Like Screening Concentration
	Lab Sample ID	460-185785-3		460-185785-4		460-185785-5		460-185785-6		460-185785-7		MB 140-31752/14-B						
	Batch	140-31752		140-31752		140-31752		140-31752		140-31752		460-185785						
	Sampling Date	07/01/2019 13:45:00		07/01/2019 12:40:00		07/01/2019 13:50:00		07/01/2019 15:20:00		07/01/2019 15:50:00		140-31752						
	Matrix	Soil		Soil		Soil		Soil		Soil		7/17/2019						
	Dilution Factor	2		1		1		2		2		140-32803						
	Unit	ng/g		ng/g		ng/g		ng/g		ng/g		ng/g						
	DIOXIN-1668C-SOIL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	ML	EDL	3Xresult	5Xresult	
	SOIL BY 1668C																	
Mono	PCB-1	0.021	J q	0.0013	U	0.00059	U	0.0028	U	0.0023	U	0.0000051	U		0.0000051			
Mono	PCB-2	0.016	J q	0.0015	U	0.00067	U	0.0031	U	0.0027	U	0.0000059	U		0.0000059			
Mono	PCB-3	0.028	J	0.0015	U	0.00071	U	0.0033	U	0.0030	U	0.0000065	U		0.0000065			
Di	PCB-4	0.11	q	0.0050	U	0.0041	U	0.020	U	0.014	U	0.0031	U		0.0031			
Di	PCB-5	0.010	U	0.0045	U	0.0031	U	0.016	U	0.011	U	0.0026	U		0.0026			
Di	PCB-6	0.14		0.0040	U	0.0027	U	0.037	q	0.0096	U	0.0022	U		0.0022			
Di	PCB-7	0.010	J q	0.0041	U	0.0028	U	0.015	U	0.0098	U	0.0023	U		0.0023			
Di	PCB-8	0.13		0.0046	J q	0.0025	U	0.030	J	0.0089	U	0.0021	U		0.0021			
Di	PCB-9	0.023	J q	0.0042	U	0.0029	U	0.015	U	0.010	U	0.0024	U		0.0024			
Di	PCB-10	0.016	J	0.0045	U	0.0031	U	0.016	U	0.011	U	0.0025	U		0.0025			
Di	PCB-11	0.036	J	0.0060	J	0.0060	J q	0.026	J q	0.0094	U	0.0022	U		0.0022			
Di	PCB-12	0.066	J C q	0.0056	J q C	0.0028	U C	0.045	J q C	0.0097	U C	0.0023	U C		0.0023			
Di	PCB-13	0.066	J C12 q	0.0056	J q C12	0.0028	U C12	0.045	J q C12	0.0097	U C12	0.0023	U C12		0.0023			
Di	PCB-14	0.0079	U	0.0034	U	0.0024	U	0.012	U	0.0082	U	0.0019	U		0.0019			
Di	PCB-15	0.16		0.012	J q	0.0028	U	0.061	q	0.019	J q	0.0024	U		0.0024			
Tri	PCB-16	0.15	q	0.0036	U	0.0041	U	0.028	J q	0.0062	U	0.0010	U		0.0010			
Tri	PCB-17	0.25		0.0032	U	0.0037	U	0.035	J q	0.0055	U	0.0010	U		0.0010			
Tri	PCB-18	0.46	C	0.0028	U C	0.0032	U C	0.080	C	0.0049	U C	0.0010	U C		0.0010			
Tri	PCB-19	0.030	J q	0.0039	U	0.0045	U	0.011	U	0.0068	U	0.0010	U		0.0010			
Tri	PCB-20	0.58	C	0.0065	J q C	0.0056	J q C	0.12	C	0.0047	U C	0.0000061	U C		0.0000061			
Tri	PCB-21	0.14	C	0.0026	U C	0.0032	J C	0.033	J q C	0.0046	U C	0.0000060	U C		0.0000060			
Tri	PCB-22	0.12		0.0028	U	0.0012	U	0.023	J	0.0049	U	0.0000063	U		0.0000063			
Tri	PCB-23	0.0051	U	0.0027	U	0.0012	U	0.0065	U	0.0048	U	0.0000062	U		0.0000062			
Tri	PCB-24	0.0043	U	0.0027	U	0.0031	U	0.048		0.0046	U	0.0010	U		0.0010			
Tri	PCB-25	0.17		0.0025	U	0.0015	J q	0.061		0.0044	U	0.0000057	U		0.0000057			
Tri	PCB-26	0.18	C	0.0027	U C	0.0011	U C	0.079	C	0.0047	U C	0.0000060	U C		0.0000060			
Tri	PCB-27	0.044		0.0023	U	0.0027	U	0.037		0.0040	U	0.0010	U		0.0010			
Tri	PCB-28	0.58	C20	0.0065	J q C20	0.0056	J q C20	0.12	C20	0.0047	U C20	0.0000061	U C20		0.0000061			
Tri	PCB-29	0.18	C26	0.0027	U C26	0.0011	U C26	0.079	C26	0.0047	U C26	0.0000060	U C26		0.0000060			
Tri	PCB-30	0.46	C18	0.0028	U C18	0.0032	U C18	0.080	C18	0.0049	U C18	0.0010	U C18		0.0010			
Tri	PCB-31	0.58		0.0026	U	0.0059	J q	0.11		0.0046	U	0.0000060	U		0.0000060			
Tri	PCB-32	0.14		0.0022	U	0.0026	U	0.032	J q	0.0039	U	0.0010	U		0.0010			
Tri	PCB-33	0.14	C21	0.0026	U C21	0.0032	J C21	0.033	J q C21	0.0046	U C21	0.0000060	U C21		0.0000060			
Tri	PCB-34	0.0053	U	0.0029	U	0.0012	U	0.0068	U	0.0050	U	0.0000065	U		0.0000065			
Tri	PCB-35	0.016	J	0.0028	U	0.0039	J	0.014	J	0.0049	U	0.0000063	U		0.0000063			
Tri	PCB-36	0.0050	U	0.0027	U	0.0011	U	0.0063	U	0.0047	U	0.0000060	U		0.0000060			
Tri	PCB-37	0.085		0.0028	U	0.0012	U	0.0065	U	0.0048	U	0.0000062	U		0.0000062			
Tri	PCB-38	0.0054	U	0.0029	U	0.0012	U	0.0068	U	0.0050	U	0.0000065	U		0.0000065			
Tri	PCB-39	0.0048	U	0.0026	U	0.0011	U	0.017	J q	0.0045	U	0.0000058	U		0.0000058			

Table C.1.3.2 . Method Blank Data Validation -PCB SED BLANK 140-31752
Edgemoor Sediment and Surface Water Assessment
Edgemoor, Delaware

Homologs	Client ID	VB1-COMP-A		VB14-COMP-A		VB1-COMP-B		VB2-COMP-A		VB3-COMP-A		Applicable Method Blank						Dioxin-Like Screening Concentration
	Lab Sample ID	460-185785-3		460-185785-4		460-185785-5		460-185785-6		460-185785-7		MB 140-31752/14-B						
	Batch	140-31752		140-31752		140-31752		140-31752		140-31752		460-185785						
	Sampling Date	07/01/2019 13:45:00		07/01/2019 12:40:00		07/01/2019 13:50:00		07/01/2019 15:20:00		07/01/2019 15:50:00		140-31752						
	Matrix	Soil		Soil		Soil		Soil		Soil		7/17/2019						
	Dilution Factor	2		1		1		2		2		140-32803						
	Unit	ng/g		ng/g		ng/g		ng/g		ng/g		ng/g						
	DIOXIN-1668C-SOIL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	ML	EDL	3Xresult	5Xresult	
	SOIL BY 1668C																	
Tetra	PCB-40	0.51	C	0.0075	U C	0.0075	J q C	0.13	C	0.012	U C	0.00045	U C		0.00045			
	PCB-41	0.51	C40	0.0075	U C40	0.0075	J q C40	0.13	C40	0.012	U C40	0.00045	U C40		0.00045			
	PCB-42	0.31		0.0076	U	0.0016	U	0.045	q	0.012	U	0.00045	U		0.00045			
	PCB-43	0.044	J C q	0.0071	U C	0.0015	U C	0.0090	U C	0.012	U C	0.00042	U C		0.00042			
	PCB-44	0.97	C	0.0067	U C	0.0096	J q C	0.19	C	0.011	U C	0.00040	U C		0.00040			
	PCB-45	0.21	C	0.0079	U C	0.0016	U C	0.038	J q C	0.013	U C	0.00047	U C		0.00047			
	PCB-46	0.091	q	0.0096	U	0.0020	U	0.019	J q	0.016	U	0.00057	U		0.00057			
	PCB-47	0.97	C44	0.0067	U C44	0.0096	J q C44	0.19	C44	0.011	U C44	0.00040	U C44		0.00040			
	PCB-48	0.18		0.0075	U	0.0017	J q	0.014	J q	0.012	U	0.00045	U		0.00045			
	PCB-49	0.69	C	0.0062	U C	0.0078	J q C	0.18	C	0.010	U C	0.00037	U C		0.00037			
	PCB-50	0.12	C q	0.0073	U C	0.0015	U C	0.033	J q C	0.012	U C	0.00043	U C		0.00043			
	PCB-51	0.21	C45	0.0079	U C45	0.0016	U C45	0.038	J q C45	0.013	U C45	0.00047	U C45		0.00047			
	PCB-52	1.28		0.0075	U	0.014		0.26		0.012	U	0.00044	U		0.00044			
	PCB-53	0.12	C50 q	0.0073	U C50	0.0015	U C50	0.033	J q C50	0.012	U C50	0.00043	U C50		0.00043			
	PCB-54	0.0043	U	0.0029	U	0.0033	U	0.0069	U	0.0047	U	0.000068	U		0.000068			
	PCB-55	0.022	J	0.0055	U	0.0011	U	0.0070	U	0.0090	U	0.00033	U		0.00033			
	PCB-56	0.30		0.0055	U	0.0034	J	0.053		0.0090	U	0.00033	U		0.00033			
	PCB-57	0.0067	U	0.0056	U	0.0012	U	0.0071	U	0.0091	U	0.00033	U		0.00033			
	PCB-58	0.0068	U	0.0057	U	0.0012	U	0.0072	U	0.0092	U	0.00034	U		0.00034			
	PCB-59	0.094	J C	0.0053	U C	0.0020	J q C	0.0068	U C	0.0087	U C	0.00032	U C		0.00032			
	PCB-60	0.050		0.0056	U	0.0012	U	0.0071	U	0.0091	U	0.00033	U		0.00033			
	PCB-61	1.19	C	0.0052	U C	0.016	J C	0.16	C	0.0086	U C	0.00031	U C		0.00031			
	PCB-62	0.094	J C59	0.0053	U C59	0.0020	J q C59	0.0068	U C59	0.0087	U C59	0.00032	U C59		0.00032			
	PCB-63	0.024	J q	0.0051	U	0.0011	U	0.0065	U	0.0083	U	0.00030	U		0.00030			
	PCB-64	0.41		0.0050	U	0.0057	J q	0.056	q	0.0082	U	0.00030	U		0.00030			
	PCB-65	0.97	C44	0.0067	U C44	0.0096	J q C44	0.19	C44	0.011	U C44	0.00040	U C44		0.00040			
	PCB-66	0.66		0.0052	U	0.0072	J q	0.10		0.0085	U	0.00031	U		0.00031			
	PCB-67	0.024	J	0.0048	U	0.0010	U	0.0061	U	0.0079	U	0.00029	U		0.00029			
	PCB-68	0.0060	U	0.0049	U	0.0010	U	0.0063	U	0.0080	U	0.00029	U		0.00029			
	PCB-69	0.69	C49	0.0062	U C49	0.0078	J q C49	0.18	C49	0.010	U C49	0.00037	U C49		0.00037			
	PCB-70	1.19	C61	0.0052	U C61	0.016	J C61	0.16	C61	0.0086	U C61	0.00031	U C61		0.00031			
	PCB-71	0.51	C40	0.0075	U C40	0.0075	J q C40	0.13	C40	0.012	U C40	0.00045	U C40		0.00045			
	PCB-72	0.030	J q	0.0055	U	0.0011	U	0.0069	U	0.0089	U	0.00032	U		0.00032			
	PCB-73	0.044	J C43 q	0.0071	U C43	0.0015	U C43	0.0090	U C43	0.012	U C43	0.00042	U C43		0.00042			
	PCB-74	1.19	C61	0.0052	U C61	0.016	J C61	0.16	C61	0.0086	U C61	0.00031	U C61		0.00031			
	PCB-75	0.094	J C59	0.0053	U C59	0.0020	J q C59	0.0068	U C59	0.0087	U C59	0.00032	U C59		0.00032			
	PCB-76	1.19	C61	0.0052	U C61	0.016	J C61	0.16	C61	0.0086	U C61	0.00031	U C61		0.00031			
	PCB-77	0.063		0.0051	U	0.0011	U	0.017	J q	0.0087	U	0.00031	U		0.00031			38
	PCB-78	0.0068	U	0.0056	U	0.0012	U	0.0072	U	0.0092	U	0.00034	U		0.00034			
	PCB-79	0.0059	U	0.0049	U	0.0010	U	0.0062	U	0.0080	U	0.00029	U		0.00029			
	PCB-80	0.0058	U	0.0048	U	0.0010	U	0.0061	U	0.0078	U	0.00029	U		0.00029			
	PCB-81	0.0064	U	0.0054	U	0.0011	U	0.0065	U	0.0084	U	0.00031	U		0.00031			12

Table C.1.3.2 . Method Blank Data Validation -PCB SED BLANK 140-31752
Edgemoor Sediment and Surface Water Assessment
Edgemoor, Delaware

Homologs	**Client ID**	**VB1-COMP-A**		**VB14-COMP-A**		**VB1-COMP-B**		**VB2-COMP-A**		**VB3-COMP-A**		**Applicable Method Blank**						**Dioxin-Like Screening Concentration**
	Lab Sample ID	460-185785-3		460-185785-4		460-185785-5		460-185785-6		460-185785-7		MB 140-31752/14-B						
	Batch	140-31752		140-31752		140-31752		140-31752		140-31752		460-185785						
	Sampling Date	07/01/2019 13:45:00		07/01/2019 12:40:00		07/01/2019 13:50:00		07/01/2019 15:20:00		07/01/2019 15:50:00		140-31752						
	Matrix	Soil		Soil		Soil		Soil		Soil		7/17/2019						
	Dilution Factor	2		1		1		2		2		140-32803						
	Unit	ng/g		ng/g		ng/g		ng/g		ng/g		ng/g						
	DIOXIN-1668C-SOIL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	ML	EDL	3Xresult	5Xresult	
	SOIL BY 1668C																	
	PCB-82	0.096		0.0035	U	0.0041	U	0.016	U	0.0065	U	0.00086	U		0.00086			
	PCB-83	0.68	C	0.0032	U C	0.0038	U C	0.14	C	0.0059	U C	0.00079	U C		0.00079			
	PCB-84	0.29	q	0.0035	U	0.0042	U	0.045	q	0.0065	U	0.00087	U		0.00087			
	PCB-85	0.14	C	0.0026	U C	0.0031	U C	0.012	U C	0.0048	U C	0.00064	U C		0.00064			
	PCB-86	0.54	C	0.0026	U C	0.0031	U C	0.012	U C	0.0048	U C	0.00064	U C		0.00064			
	PCB-87	0.54	C86	0.0026	U C86	0.0031	U C86	0.012	U C86	0.0048	U C86	0.00064	U C86		0.00064			
	PCB-88	0.22	C	0.0032	U C	0.0037	U C	0.067	J C	0.0058	U C	0.00078	U C		0.00078			
	PCB-89	0.026	J q	0.0034	U	0.0041	U	0.015	U	0.0063	U	0.00085	U		0.00085			
	PCB-90	0.99	C	0.0026	U C	0.014	J q C	0.18	q C	0.0049	U C	0.00065	U C		0.00065			
	PCB-91	0.22	C88	0.0032	U C88	0.0037	U C88	0.067	J C88	0.0058	U C88	0.00078	U C88		0.00078			
	PCB-92	0.21		0.0030	U	0.0035	U	0.054		0.0055	U	0.00074	U		0.00074			
	PCB-93	0.010	U C	0.0030	U C	0.0036	U C	0.014	U C	0.0056	U C	0.00075	U C		0.00075			
	PCB-94	0.011	U	0.0034	U	0.0041	U	0.015	U	0.0063	U	0.00085	U		0.00085			
	PCB-95	0.92		0.0073	J q	0.0039	U	0.21		0.0061	U	0.00082	U		0.00082			
	PCB-96	0.0086	U	0.0026	U	0.0031	U	0.012	U	0.0048	U	0.00064	U		0.00064			
	PCB-97	0.54	C86	0.0026	U C86	0.0031	U C86	0.012	U C86	0.0048	U C86	0.00064	U C86		0.00064			
	PCB-98	0.052	J C q	0.0029	U C	0.0035	U C	0.013	U C	0.0054	U C	0.00073	U C		0.00073			
	PCB-99	0.68	C83	0.0032	U C83	0.0038	U C83	0.14	C83	0.0059	U C83	0.00079	U C83		0.00079			
	PCB-100	0.010	U C93	0.0030	U C93	0.0036	U C93	0.014	U C93	0.0056	U C93	0.00075	U C93		0.00075			
	PCB-101	0.99	C90	0.0026	U C90	0.014	J q C90	0.18	q C90	0.0049	U C90	0.00065	U C90		0.00065			
	PCB-102	0.052	J C98 q	0.0029	U C98	0.0035	U C98	0.013	U C98	0.0054	U C98	0.00073	U C98		0.00073			
	PCB-103	0.010	U	0.0030	U	0.0036	U	0.014	U	0.0056	U	0.00075	U		0.00075			
	PCB-104	0.0077	U	0.0023	U	0.0027	U	0.010	U	0.0042	U	0.00057	U		0.00057			
Penta	PCB-105	0.18		0.0039	U	0.0013	U	0.038		0.0072	U	0.000049	U		0.000049			120
	PCB-106	0.0063	U	0.0037	U	0.0014	U	0.010	U	0.0073	U	0.000051	U		0.000051			
	PCB-107	0.063	q	0.0040	U	0.0015	U	0.011	U	0.0078	U	0.000055	U		0.000055			
	PCB-108	0.016	J C q	0.0038	U C	0.0014	U C	0.010	U C	0.0075	U C	0.000053	U C		0.000053			
	PCB-109	0.54	C86	0.0026	U C86	0.0031	U C86	0.012	U C86	0.0048	U C86	0.00064	U C86		0.00064			
	PCB-110	0.99	C	0.0058	J q C	0.0026	U C	0.20	C	0.0041	U C	0.00054	U C		0.00054			
	PCB-111	0.0071	U	0.0021	U	0.0025	U	0.0096	U	0.0039	U	0.00053	U		0.00053			
	PCB-112	0.0075	U	0.0022	U	0.0027	U	0.010	U	0.0041	U	0.00055	U		0.00055			
	PCB-113	0.99	C90	0.0026	U C90	0.014	J q C90	0.18	q C90	0.0049	U C90	0.00065	U C90		0.00065			
	PCB-114	0.0099	J q	0.0035	U	0.0013	U	0.0099	U	0.0069	U	0.000050	U		0.000050			120
	PCB-115	0.99	C110	0.0058	J q C110	0.0026	U C110	0.20	C110	0.0041	U C110	0.00054	U C110		0.00054			
	PCB-116	0.14	C85	0.0026	U C85	0.0031	U C85	0.012	U C85	0.0048	U C85	0.00064	U C85		0.00064			
	PCB-117	0.14	C85	0.0026	U C85	0.0031	U C85	0.012	U C85	0.0048	U C85	0.00064	U C85		0.00064			
	PCB-118	0.59		0.0034	U	0.0055	J q	0.12		0.0067	U	0.000048	U		0.000048			120
	PCB-119	0.54	C86	0.0026	U C86	0.0031	U C86	0.012	U C86	0.0048	U C86	0.00064	U C86		0.00064			
	PCB-120	0.0072	U	0.0022	U	0.0026	U	0.0098	U	0.0040	U	0.00053	U		0.00053			
	PCB-121	0.0074	U	0.0022	U	0.0026	U	0.010	U	0.0041	U	0.00055	U		0.00055			
	PCB-122	0.0072	U	0.0043	U	0.0016	U	0.012	U	0.0084	U	0.000059	U		0.000059			
	PCB-123	0.0062	U	0.0038	U	0.0014	U	0.010	U	0.0075	U	0.000050	U		0.000050			120
	PCB-124	0.016	J q C108	0.0038	U C108	0.0014	U C108	0.010	U C108	0.0075	U C108	0.000053	U C108		0.000053			
	PCB-125	0.54	C86	0.0026	U C86	0.0031	U C86	0.012	U C86	0.0048	U C86	0.00064	U C86		0.00064			
	PCB-126	0.0064	U	0.0036	U	0.0015	U	0.0098	U	0.0073	U	0.000053	U		0.000053			0.036
	PCB-127	0.0062	U	0.0037	U	0.0014	U	0.010	U	0.0073	U	0.000051	U		0.000051			

Table C.1.3.2 . Method Blank Data Validation -PCB SED BLANK 140-31752
Edgemoor Sediment and Surface Water Assessment
Edgemoor, Delaware

Homologs	Client ID	VB1-COMP-A		VB14-COMP-A		VB1-COMP-B		VB2-COMP-A		VB3-COMP-A		Applicable Method Blank						Dioxin-Like Screening Concentration
	Lab Sample ID	460-185785-3		460-185785-4		460-185785-5		460-185785-6		460-185785-7		MB 140-31752/14-B						
	Batch	140-31752		140-31752		140-31752		140-31752		140-31752		460-185785						
	Sampling Date	07/01/2019 13:45:00		07/01/2019 12:40:00		07/01/2019 13:50:00		07/01/2019 15:20:00		07/01/2019 15:50:00		140-31752						
	Matrix	Soil		Soil		Soil		Soil		Soil		7/17/2019						
	Dilution Factor	2		1		1		2		2		140-32803						
	Unit	ng/g		ng/g		ng/g		ng/g		ng/g		ng/g						
	DIOXIN-1668C-SOIL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	ML	EDL	3Xresult	5Xresult	
	SOIL BY 1668C																	
	PCB-128	0.11	C	0.0042	U C	0.0026	U C	0.019	U C	0.010	U C	0.0000062	U C		0.0000062			
	PCB-129	0.82	C	0.0043	U C	0.0027	U C	0.18	C	0.010	U C	0.0000064	U C		0.0000064			
	PCB-130	0.066	q	0.0057	U	0.0035	U	0.026	U	0.014	U	0.0000085	U		0.0000085			
	PCB-131	0.016	U	0.0059	U	0.0036	U	0.027	U	0.014	U	0.0000089	U		0.0000089			
	PCB-132	0.29		0.0055	U	0.0034	U	0.025	U	0.013	U	0.0000083	U		0.0000083			
	PCB-133	0.015	U	0.0054	U	0.0033	U	0.024	U	0.013	U	0.0000080	U		0.0000080			
	PCB-134	0.015	U C	0.0056	U C	0.0035	U C	0.025	U C	0.013	U C	0.0000084	U C		0.0000084			
	PCB-135	0.40	C	0.0047	U C	0.0047	U C	0.12	C	0.0060	U C	0.00043	U C		0.00043			
	PCB-136	0.15		0.0033	U	0.0034	U	0.012	U	0.0043	U	0.00031	U		0.00031			
	PCB-137	0.019	J q	0.0049	U	0.0030	U	0.022	U	0.012	U	0.0000072	U		0.0000072			
	PCB-138	0.82	C129	0.0043	U C129	0.0027	U C129	0.18	C129	0.010	U C129	0.0000064	U C129		0.0000064			
	PCB-139	0.013	U C	0.0048	U C	0.0029	U C	0.022	U C	0.011	U C	0.0000072	U C		0.0000072			
	PCB-140	0.013	U C139	0.0048	U C139	0.0029	U C139	0.022	U C139	0.011	U C139	0.0000072	U C139		0.0000072			
	PCB-141	0.13		0.0050	U	0.0031	U	0.047		0.012	U	0.0000075	U		0.0000075			
	PCB-142	0.015	U	0.0054	U	0.0033	U	0.024	U	0.013	U	0.0000080	U		0.0000080			
	PCB-143	0.015	U C134	0.0056	U C134	0.0035	U C134	0.025	U C134	0.013	U C134	0.0000084	U C134		0.0000084			
	PCB-144	0.013	U	0.0042	U	0.0042	U	0.015	U	0.0055	U	0.00039	U		0.00039			
	PCB-145	0.0099	U	0.0032	U	0.0032	U	0.011	U	0.0041	U	0.00030	U		0.00030			
	PCB-146	0.19		0.0047	U	0.0029	U	0.021	U	0.011	U	0.0000071	U		0.0000071			
	PCB-147	0.90	C	0.0054	U C	0.0033	U C	0.25	C	0.013	U C	0.0000081	U C		0.0000081			
Hexa	PCB-148	0.014	U	0.0045	U	0.0045	U	0.016	U	0.0058	U	0.00042	U		0.00042			
	PCB-149	0.90	C147	0.0054	U C147	0.0033	U C147	0.25	C147	0.013	U C147	0.0000081	U C147		0.0000081			
	PCB-150	0.0094	U	0.0031	U	0.0031	U	0.011	U	0.0040	U	0.00028	U		0.00028			
	PCB-151	0.40	C135	0.0047	U C135	0.0047	U C135	0.12	C135	0.0060	U C135	0.00043	U C135		0.00043			
	PCB-152	0.010	U	0.0033	U	0.0033	U	0.011	U	0.0043	U	0.00031	U		0.00031			
	PCB-153	0.75	C	0.0038	U C	0.0023	U C	0.19	C	0.0090	U C	0.0000056	U C		0.0000056			
	PCB-154	0.021	J	0.0036	U	0.0037	U	0.013	U	0.0047	U	0.00034	U		0.00034			
	PCB-155	0.0095	U	0.0031	U	0.0031	U	0.011	U	0.0040	U	0.00028	U		0.00028			
	PCB-156	0.064	J C q	0.0042	U C	0.0028	U C	0.020	U C	0.010	U C	0.0000065	U C		0.0000065			120
	PCB-157	0.064	J C156 q	0.0042	U C156	0.0028	U C156	0.020	U C156	0.010	U C156	0.0000065	U C156		0.0000065			120
	PCB-158	0.068		0.0034	U	0.0021	U	0.015	U	0.0081	U	0.0000051	U		0.0000051			
	PCB-159	0.0098	U	0.0036	U	0.0022	U	0.016	U	0.0086	U	0.0000054	U		0.0000054			
	PCB-160	0.82	C129	0.0043	U C129	0.0027	U C129	0.18	C129	0.010	U C129	0.0000064	U C129		0.0000064			
	PCB-161	0.0098	U	0.0036	U	0.0022	U	0.016	U	0.0085	U	0.0000053	U		0.0000053			
	PCB-162	0.0097	U	0.0035	U	0.0022	U	0.016	U	0.0084	U	0.0000053	U		0.0000053			
	PCB-163	0.82	C129	0.0043	U C129	0.0027	U C129	0.18	C129	0.010	U C129	0.0000064	U C129		0.0000064			
	PCB-164	0.066	q	0.0038	U	0.0023	U	0.017	U	0.0091	U	0.0000056	U		0.0000056			
	PCB-165	0.011	U	0.0040	U	0.0025	U	0.018	U	0.0097	U	0.0000060	U		0.0000060			
	PCB-166	0.11	C128	0.0042	U C128	0.0026	U C128	0.019	U C128	0.010	U C128	0.0000062	U C128		0.0000062			
	PCB-167	0.028	J	0.0031	U	0.0017	U	0.014	U	0.0070	U	0.0000042	U		0.0000042			120
	PCB-168	0.75	C153	0.0038	U C153	0.0023	U C153	0.19	C153	0.0090	U C153	0.0000056	U C153		0.0000056			
	PCB-169	0.0075	U	0.0027	U	0.0017	U	0.012	U	0.0067	U	0.0000042	U		0.0000042			0.12

Table C.1.3.2 . Method Blank Data Validation -PCB SED BLANK 140-31752
Edgemoor Sediment and Surface Water Assessment
Edgemoor, Delaware

Homologs	Client ID	VB1-COMP-A		VB14-COMP-A		VB1-COMP-B		VB2-COMP-A		VB3-COMP-A		Applicable Method Blank						Dioxin-Like Screening Concentration
	Lab Sample ID	460-185785-3		460-185785-4		460-185785-5		460-185785-6		460-185785-7		MB 140-31752/14-B						
	Batch	140-31752		140-31752		140-31752		140-31752		140-31752		460-185785						
	Sampling Date	07/01/2019 13:45:00		07/01/2019 12:40:00		07/01/2019 13:50:00		07/01/2019 15:20:00		07/01/2019 15:50:00		140-31752						
	Matrix	Soil		Soil		Soil		Soil		Soil		7/17/2019						
	Dilution Factor	2		1		1		2		2		140-32803						
	Unit	ng/g		ng/g		ng/g		ng/g		ng/g		ng/g						
	DIOXIN-1668C-SOIL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	ML	EDL	3Xresult	5Xresult	
	SOIL BY 1668C																	
Hepta	PCB-170	0.22		0.0041	U	0.0031	U	0.064		0.0072	U	0.00024	U		0.00024			NVP
	PCB-171	0.079	C q	0.0041	U C	0.0030	U C	0.012	U C	0.0075	U C	0.00022	U C		0.00022			
	PCB-172	0.037		0.0041	U	0.0030	U	0.012	U	0.0074	U	0.00022	U		0.00022			
	PCB-173	0.079	C171 q	0.0041	U C171	0.0030	U C171	0.012	U C171	0.0075	U C171	0.00022	U C171		0.00022			
	PCB-174	0.27		0.0039	U	0.0028	U	0.071		0.0070	U	0.00021	U		0.00021			
	PCB-175	0.0096	U	0.0037	U	0.0027	U	0.011	U	0.0067	U	0.00020	U		0.00020			
	PCB-176	0.035		0.0028	U	0.0021	U	0.0079	U	0.0051	U	0.00015	U		0.00015			
	PCB-177	0.18		0.0040	U	0.0029	U	0.044	q	0.0071	U	0.00021	U		0.00021			
	PCB-178	0.061	q	0.0040	U	0.0030	U	0.011	U	0.0073	U	0.00022	U		0.00022			
	PCB-179	0.14		0.0030	U	0.0022	U	0.036		0.0054	U	0.00016	U		0.00016			
	PCB-180	0.51	C	0.0031	U C	0.0078	J C	0.15	C	0.0056	U C	0.00017	U C		0.00017			NVP
	PCB-181	0.0096	U	0.0037	U	0.0027	U	0.010	U	0.0067	U	0.00020	U		0.00020			
	PCB-182	0.0092	U	0.0036	U	0.0026	U	0.010	U	0.0065	U	0.00019	U		0.00019			
	PCB-183	0.18	C	0.0037	U C	0.0027	U C	0.056	J C	0.0066	U C	0.00020	U C		0.00020			
	PCB-184	0.0079	U	0.0031	U	0.0022	U	0.0086	U	0.0055	U	0.00016	U		0.00016			
	PCB-185	0.18	C183	0.0037	U C183	0.0027	U C183	0.056	J C183	0.0066	U C183	0.00020	U C183		0.00020			
	PCB-186	0.0077	U	0.0030	U	0.0022	U	0.0084	U	0.0054	U	0.00016	U		0.00016			
	PCB-187	0.39		0.0035	U	0.0049	J q	0.11		0.0062	U	0.00019	U		0.00019			
	PCB-188	0.0072	U	0.0027	U	0.0019	U	0.0077	U	0.0050	U	0.00014	U		0.00014			
	PCB-189	0.0063	U	0.0039	U	0.0022	U	0.014	U	0.0076	U	0.000072	U		0.000072			130
	PCB-190	0.033	J q	0.0027	U	0.0020	U	0.0076	U	0.0049	U	0.00014	U		0.00014			
	PCB-191	0.0072	U	0.0028	U	0.0021	U	0.0079	U	0.0051	U	0.00015	U		0.00015			
	PCB-192	0.0081	U	0.0031	U	0.0023	U	0.0088	U	0.0057	U	0.00017	U		0.00017			
	PCB-193	0.51	C180	0.0031	U C180	0.0078	J C180	0.15	C180	0.0056	U C180	0.00017	U C180		0.00017			
Octa	PCB-194	0.18		0.0046	U	0.0039	U	0.069		0.0086	U	0.00041	U		0.00041			
	PCB-195	0.072		0.0050	U	0.0043	U	0.027	U	0.0094	U	0.00045	U		0.00045			
	PCB-196	0.065	q	0.0035	U	0.0040	U	0.055	q	0.0044	U	0.00030	U		0.00030			
	PCB-197	0.0088	U	0.0027	U	0.0030	U	0.0073	U	0.0034	U	0.00023	U		0.00023			
	PCB-198	0.28	C q	0.0036	U C	0.0040	U C	0.11	q C	0.0045	U C	0.00031	U C		0.00031			
	PCB-199	0.28	C198 q	0.0036	U C198	0.0040	U C198	0.11	q C198	0.0045	U C198	0.00031	U C198		0.00031			
	PCB-200	0.0079	U	0.0024	U	0.0027	U	0.0065	U	0.0030	U	0.00020	U		0.00020			
	PCB-201	0.018	J q	0.0024	U	0.0028	U	0.0067	U	0.0031	U	0.00021	U		0.00021			
	PCB-202	0.077		0.0027	U	0.0031	U	0.032	J	0.0035	U	0.00024	U		0.00024			
	PCB-203	0.11	q	0.0032	U	0.0036	U	0.054	q	0.0040	U	0.00027	U		0.00027			
	PCB-204	0.0089	U	0.0027	U	0.0030	U	0.0073	U	0.0034	U	0.00023	U		0.00023			
	PCB-205	0.0062	U	0.0039	U	0.0033	U	0.021	U	0.0073	U	0.00035	U		0.00035			
Nona	PCB-206	0.99		0.0057	U	0.0058	U	0.33		0.011	U	0.0029	U		0.0029			
	PCB-207	0.089		0.0042	U	0.0042	U	0.018	U	0.0084	U	0.0020	U		0.0020			
	PCB-208	0.43		0.0044	U	0.0043	U	0.15		0.0088	U	0.0020	U		0.0020			
Deca	PCB-209	3.63		0.028		0.0042	U	0.49		0.0050	U	0.000053	U		0.000053			

Table C.1.3.2 . Method Blank Data Validation -PCB SED BLANK 140-31752
Edgemoor Sediment and Surface Water Assessment
Edgemoor, Delaware

Homologs	**Client ID**	**VB1-COMP-A**		**VB14-COMP-A**		**VB1-COMP-B**		**VB2-COMP-A**		**VB3-COMP-A**		**Applicable Method Blank**						**Dioxin-Like Screening Concentration**
	Lab Sample ID	460-185785-3		460-185785-4		460-185785-5		460-185785-6		460-185785-7		MB 140-31752/14-B						
	Batch	140-31752		140-31752		140-31752		140-31752		140-31752		460-185785						
	Sampling Date	07/01/2019 13:45:00		07/01/2019 12:40:00		07/01/2019 13:50:00		07/01/2019 15:20:00		07/01/2019 15:50:00		140-31752						
	Matrix	Soil		Soil		Soil		Soil		Soil		7/17/2019						
	Dilution Factor	2		1		1		2		2		140-32803						
	Unit	ng/g		ng/g		ng/g		ng/g		ng/g		ng/g						
	DIOXIN-1668C-SOIL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	ML	EDL	3Xresult	5Xresult	
	SOIL BY 1668C																	
Reported by Lab	Total Monochlorobiphenyls	0.066	q	0.0015	U	0.00071	U	0.0033	U	0.0030	U	0.0000065	U		0.0000065			
	Total Dichlorobiphenyls	0.69	q	0.028	J q	0.0060	J q	0.20	q	0.019	J q	0.0031	U		0.0031			
	Total Trichlorobiphenyls	2.94	q	0.0065	J q	0.020	J q	0.72	q	0.0068	U	0.0000065	U		0.0000065			
	Total Tetrachlorobiphenyls	7.27	q	0.0096	U	0.075	q	1.31	q	0.016	U	0.00057	U		0.00057			
	Total Pentachlorobiphenyls	6.02	q	0.013	J q	0.019	J q	1.07	q	0.0084	U	0.00087	U		0.00087			
	Total Hexachlorobiphenyls	4.08	q	0.0059	U	0.0047	U	0.78		0.014	U	0.00043	U		0.00043			
	Total Heptachlorobiphenyls	2.14	q	0.0041	U	0.013	J q	0.54	q	0.0076	U	0.00024	U		0.00024			
	Total Octachlorobiphenyls	0.79	q	0.0050	U	0.0043	U	0.32	q	0.0094	U	0.00045	U		0.00045			
	Total Nonachlorobiphenyls	1.51		0.0057	U	0.0058	U	0.48		0.011	U	0.0029	U		0.0029			
	Total PCBs	29.3	q	0.085	J q	0.15	q	6.14	q	0.034	J q	0.0031	U		0.0031			230

Notes:
-- : no applicable standard found for this compound
B : Compound was found in the blank and sample.
C : The compound co-eluted with other compounds
G : The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference
J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q : The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.
U : Indicates the analyte was analyzed for but not detected.
ng/L : Nanograms per Liter
1. Samples in this batch did not detect PCBs above the EDL in the Method Blank.
2. Totals for each homolog group at the bottom of this table were reported by Test America Laboratory.

Legend:
Result is less than 3x and 5x Method Blank - NOT VALID
Result is greater than 5x the Method Blank - VALID
Result is greater than 3x but less than 5x the Method Blank - USE WITH CAUTION
The compound co-eluted with other compounds and concentrations reported were only counted once towards totals

Data Quality Review Notes for Table C.1.3.2
Dioxin Sediment Blank 140-31752
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:

Sample VB1-COMP-A

PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-20, 28	PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-108, 124	PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	PCB 129, 138, 160 and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-156, 157	PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs.
PCB-171, 173	PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.
PCB-198, 199	PCB 198 and 199 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.2
Dioxin Sediment Blank 140-31752
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:

Sample VB14-COMP-A

PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-20, 28	PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-108, 124	PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	PCB 129, 138, 160 and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-156, 157	PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs.
PCB-171, 173	PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.
PCB-198, 199	PCB 198 and 199 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.2
Dioxin Sediment Blank 140-31752
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:

Sample VB1-COMP-B

PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-20, 28	PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-108, 124	PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	PCB 129, 138, 160 and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-156, 157	PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs.
PCB-171, 173	PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.
PCB-198, 199	PCB 198 and 199 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.2
Dioxin Sediment Blank 140-31752
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:

Sample VB2-COMP-A

PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-20, 28	PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-108, 124	PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	PCB 129, 138, 160 and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-156, 157	PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs.
PCB-171, 173	PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.
PCB-198, 199	PCB 198 and 199 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.2
Dioxin Sediment Blank 140-31752
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:

Sample VB3-COMP-A

PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-20, 28	PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-108, 124	PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	PCB 129, 138, 160 and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-156, 157	PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs.
PCB-171, 173	PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.
PCB-198, 199	PCB 198 and 199 coelute. Count result once when calculating total PCBs and total homologs.

Table C.1.3.3 . Method Blank Data Validation -PCB SED BLANK 140-31989
Edgemoor Sediment and Surface Water Assessment
Edgemoor, Delaware

Homologs	Client ID	VB21-COMP-A		VB21-COMP-A		VB21-COMP-B		VB28-COMP-A		VB26-COMP-A		VB29-COMP-A		VB27-COMP-B		VB30-COMP-B		Dioxin-Like Screening Concentration
	Lab Sample ID	460-186429-1		460-186429-1		460-186429-2		460-186429-3		460-186429-4		460-186429-5		460-186429-6		460-186429-7		
	Prep Date	07/09/2019 09:00:00		07/09/2019 09:00:00		07/09/2019 09:05:00		07/09/2019 09:20:00		07/09/2019 10:20:00		07/09/2019 10:00:00		07/09/2019 11:45:00		07/09/2019 12:15:00		
	Analysis Batch	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		
	Analysis Date	1		2		2		2		2		2		2		1		
	Unit	ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		
	DIOXIN-1668C-SOIL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	
	SOIL BY 1668C																	
Mono	PCB-1	0.22		NR		0.0086	J q	0.0025	U	0.0023	U	0.00061	U	0.00046	U	0.00040	U	
	PCB-2	0.17		NR		0.0014	U	0.0028	U	0.0027	U	0.00070	U	0.00052	U	0.00045	U	
	PCB-3	0.33		NR		0.018	J	0.0029	U	0.0029	U	0.00075	U	0.00056	U	0.00047	U	
Di	PCB-4	0.58		NR		0.022	J q	0.013	U	0.017	U	0.010	U	0.011	U	0.0045	U	
	PCB-5	0.029	q	NR		0.0088	U	0.011	U	0.015	U	0.0082	U	0.0095	U	0.0037	U	
	PCB-6	0.43		NR		0.017	J q	0.0097	U	0.013	U	0.0072	U	0.0083	U	0.0032	U	
	PCB-7	0.051	q	NR		0.0079	U	0.0099	U	0.013	U	0.0074	U	0.0086	U	0.0033	U	
	PCB-8	0.85		NR		0.030	J q	0.0090	U	0.012	U	0.0067	U	0.0077	U	0.0030	U	
	PCB-9	0.10		NR		0.0081	U	0.010	U	0.013	U	0.0076	U	0.0088	U	0.0034	U	
	PCB-10	0.051	q	NR		0.0087	U	0.011	U	0.014	U	0.0081	U	0.0093	U	0.0036	U	
	PCB-11	0.64		NR		0.026	J q	0.0095	U	0.013	U	0.0071	z	0.0082	U	0.0066	J	
	PCB-12	0.50	C	NR		0.018	J q C	0.0098	U C	0.013	U C	0.0073	U C	0.0085	U C	0.0033	U C	
	PCB-13	0.50	C12	NR		0.018	J q C12	0.0098	U C12	0.013	U C12	0.0073	U C12	0.0085	U C12	0.0033	U C12	
	PCB-14	0.023		NR		0.0067	U	0.0083	U	0.011	U	0.0062	U	0.0072	U	0.0028	U	
	PCB-15	1.49		NR		0.056		0.011	U	0.015	U	0.0077	U	0.0095	U	0.0035	U	
Tri	PCB-16	2.18		NR		0.031	q	0.00096	U	0.0015	U	0.0015	U	0.00076	U	0.0016	U	
	PCB-17	2.85		NR		0.038	q	0.0057	J q	0.0036	J q	0.0013	U	0.00068	U	0.0014	U	
	PCB-18	6.41	C	NR		0.10	C	0.00076	U C	0.0011	U C	0.0012	U C	0.00060	U C	0.0012	U C	
	PCB-19	0.48		NR		0.010	J q	0.0011	U	0.0016	U	0.0016	U	0.00084	U	0.0017	U	
	PCB-20	6.52	C B	NR		0.20	C B	0.0055	U C	0.0052	U C	0.00099	U C	0.00060	U C	0.0017	J C B q	
	PCB-21	1.87	C B	NR		0.048	q C B	0.0054	U C	0.0050	U C	0.00097	U C	0.00058	U C	0.0010	J C B q	
	PCB-22	1.33	B	NR		0.040	B	0.0056	U	0.0053	U	0.0010	U	0.00061	U	0.00056	U	
	PCB-23	0.011	U	NR		0.0038	U	0.0056	U	0.0052	U	0.0010	U	0.00061	U	0.00055	U	
	PCB-24	0.076	q	NR		0.0050	J	0.00072	U	0.0011	U	0.0011	U	0.00057	U	0.0012	U	
	PCB-25	1.02		NR		0.026	q	0.0051	U	0.0048	U	0.00092	U	0.00055	U	0.00050	U	
	PCB-26	1.32	C	NR		0.040	J C	0.0054	U C	0.0051	U C	0.00097	U C	0.00059	U C	0.00054	U C	
	PCB-27	0.62	q	NR		0.013	J	0.00063	U	0.00095	U	0.00098	U	0.00050	U	0.0010	U	
	PCB-28	6.52	B C20	NR		0.20	C20 B	0.0055	U C20	0.0052	U C20	0.00099	U C20	0.00060	U C20	0.0017	J B C20 q	
	PCB-29	1.32	C26	NR		0.040	J C26	0.0054	U C26	0.0051	U C26	0.00097	U C26	0.00059	U C26	0.00054	U C26	
	PCB-30	6.41	C18	NR		0.10	C18	0.00076	U C18	0.0011	U C18	0.0012	U C18	0.00060	U C18	0.0012	U C18	
	PCB-31	5.14		NR		0.15		0.017	J q	0.0050	U	0.00097	U	0.00058	U	0.0015	J	
	PCB-32	2.34		NR		0.022	J q	0.00060	U	0.00091	U	0.00093	U	0.00048	U	0.00097	U	
	PCB-33	1.87	B C21	NR		0.048	q C21 B	0.0054	U C21	0.0050	U C21	0.00097	U C21	0.00058	U C21	0.0010	J B C21 q	
	PCB-34	0.069	q	NR		0.0039	U	0.0058	U	0.0054	U	0.0010	U	0.00063	U	0.00057	U	
	PCB-35	0.37		NR		0.015	J	0.0056	U	0.0053	U	0.0010	U	0.00061	U	0.00056	U	
	PCB-36	0.038	q	NR		0.0037	U	0.0054	U	0.0051	U	0.00098	U	0.00059	U	0.00054	U	
	PCB-37	1.46		NR		0.048	q	0.0056	U	0.0053	U	0.0010	U	0.00061	U	0.00056	U	
	PCB-38	0.012	U	NR		0.0039	U	0.0058	U	0.0055	U	0.0011	U	0.00063	U	0.00058	U	
	PCB-39	0.064		NR		0.0035	U	0.0052	U	0.0049	U	0.00094	U	0.00057	U	0.00052	U	

Table C.1.3.3 . Method Blank Data Validation -PCB SED BLANK 140-31989
Edgemoor Sediment and Surface Water Assessment
Edgemoor, Delaware

Homologs	Client ID	VB21-COMP-A		VB21-COMP-A		VB21-COMP-B		VB28-COMP-A		VB26-COMP-A		VB29-COMP-A		VB27-COMP-B		VB30-COMP-B		Dioxin-Like Screening Concentration
	Lab Sample ID	460-186429-1		460-186429-1		460-186429-2		460-186429-3		460-186429-4		460-186429-5		460-186429-6		460-186429-7		
	Prep Date	07/09/2019 09:00:00		07/09/2019 09:00:00		07/09/2019 09:05:00		07/09/2019 09:20:00		07/09/2019 10:20:00		07/09/2019 10:00:00		07/09/2019 11:45:00		07/09/2019 12:15:00		
	Analysis Batch	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		
	Analysis Date	1		2		2		2		2		2		2		1		
	Unit	ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		
	DIOXIN-1668C-SOIL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	
	SOIL BY 1668C																	
	PCB-40	6.70	C	NR		0.18	C	0.010	U C	0.0069	U C	0.0024	U C	0.00067	U C	0.0013	U C	
	PCB-41	6.70	C40	NR		0.18	C40	0.010	U C40	0.0069	U C40	0.0024	U C40	0.00067	U C40	0.0013	U C40	
	PCB-42	3.52	G	NR		0.11		0.010	U	0.0069	U	0.0024	U	0.00067	U	0.0013	U	
	PCB-43	0.44	C	NR		0.014	J C	0.0098	U C	0.0064	U C	0.0022	U C	0.00063	U C	0.0012	U C	
	PCB-44	18.7	C B	NR		0.46	C B	0.0092	U C	0.034	J C B	0.0021	U C	0.00059	U C	0.0012	U C	
	PCB-45	5.88	C	NR		0.083	C	0.011	U C	0.0072	U C	0.0025	U C	0.00070	U C	0.0014	U C	
	PCB-46	0.77	G	NR		0.023	J	0.013	U	0.0087	U	0.0030	U	0.00085	U	0.0017	U	
	PCB-47	18.7	B C44	NR		0.46	C44 B	0.0092	U C44	0.034	J C44 B	0.0021	U C44	0.00059	U C44	0.0012	U C44	
	PCB-48	1.74	G	NR		0.052		0.010	U	0.0068	U	0.0024	U	0.00067	U	0.0013	U	
	PCB-49	13.4	C	NR		0.38	C	0.0085	U C	0.0056	U C	0.0019	U C	0.00055	U C	0.0011	U C	
	PCB-50	3.24	C	NR		0.045	J q C	0.010	U C	0.0066	U C	0.0023	U C	0.00065	U C	0.0013	U C	
	PCB-51	5.88	C45	NR		0.083	C45	0.011	U C45	0.0072	U C45	0.0025	U C45	0.00070	U C45	0.0014	U C45	
	PCB-52	24.9	G	NR		0.73		0.015	J	0.0068	U	0.0023	U	0.00067	U	0.0013	U	
	PCB-53	3.24	C50	NR		0.045	J q C50	0.010	U C50	0.0066	U C50	0.0023	U C50	0.00065	U C50	0.0013	U C50	
	PCB-54	0.37		NR		0.0056	J q	0.00055	U	0.00044	U	0.00084	U	0.00044	U	0.0011	U	
	PCB-55	0.020	U G	NR		0.0056	U	0.0076	U	0.0050	U	0.0017	U	0.00049	U	0.00096	U	
	PCB-56	4.52	G	NR		0.14		0.0076	U	0.0050	U	0.0017	U	0.00049	U	0.00097	U	
	PCB-57	0.13	G	NR		0.0057	U	0.0077	U	0.0051	U	0.0017	U	0.00050	U	0.00098	U	
	PCB-58	0.065	q G	NR		0.0082	J	0.0078	U	0.0051	U	0.0018	U	0.00050	U	0.00099	U	
	PCB-59	1.36	C	NR		0.041	J C	0.0074	U C	0.0048	U C	0.0017	U C	0.00047	U C	0.00094	U C	
Tetra	PCB-60	0.50	G	NR		0.019	J	0.0077	U	0.0051	U	0.0018	U	0.00050	U	0.00098	U	
	PCB-61	17.8	C	NR		0.59	C	0.031	J q C	0.0048	U C	0.0032	J q C	0.00047	U C	0.00092	U C	
	PCB-62	1.36	C59	NR		0.041	J C59	0.0074	U C59	0.0048	U C59	0.0017	U C59	0.00047	U C59	0.00094	U C59	
	PCB-63	0.39		NR		0.012	J q	0.0070	U	0.0046	U	0.0016	U	0.00045	U	0.00090	U	
	PCB-64	4.92		NR		0.15		0.0070	U	0.0046	U	0.0016	U	0.00045	U	0.00089	U	
	PCB-65	18.7	B C44	NR		0.46	C44 B	0.0092	U C44	0.034	J C44 B	0.0021	U C44	0.00059	U C44	0.0012	U C44	
	PCB-66	11.2	G	NR		0.39		0.014	J q	0.0047	U	0.0016	U	0.00047	U	0.00092	U	
	PCB-67	0.28		NR		0.010	J	0.0067	U	0.0044	U	0.0015	U	0.00043	U	0.00085	U	
	PCB-68	0.24		NR		0.010	J	0.0068	U	0.0045	U	0.0015	U	0.00044	U	0.00087	U	
	PCB-69	13.4	C49	NR		0.38	C49	0.0085	U C49	0.0056	U C49	0.0019	U C49	0.00055	U C49	0.0011	U C49	
	PCB-70	17.8	C61	NR		0.59	C61	0.031	J q C61	0.0048	U C61	0.0032	J q C61	0.00047	U C61	0.00092	U C61	
	PCB-71	6.70	C40	NR		0.18	C40	0.010	U C40	0.0069	U C40	0.0024	U C40	0.00067	U C40	0.0013	U C40	
	PCB-72	0.47	G	NR		0.020	J	0.0075	U	0.0050	U	0.0017	U	0.00049	U	0.00096	U	
	PCB-73	0.44	C43	NR		0.014	J C43	0.0098	U C43	0.0064	U C43	0.0022	U C43	0.00063	U C43	0.0012	U C43	
	PCB-74	17.8	C61	NR		0.59	C61	0.031	J q C61	0.0048	U C61	0.0032	J q C61	0.00047	U C61	0.00092	U C61	
	PCB-75	1.36	C59	NR		0.041	J C59	0.0074	U C59	0.0048	U C59	0.0017	U C59	0.00047	U C59	0.00094	U C59	
	PCB-76	17.8	C61	NR		0.59	C61	0.031	J q C61	0.0048	U C61	0.0032	J q C61	0.00047	U C61	0.00092	U C61	
	PCB-77	1.03	B G	NR		0.040	B	0.0072	U	0.0049	U	0.0016	U	0.00049	U	0.00096	U	38
	PCB-78	0.021	U G	NR		0.0058	U	0.0078	U	0.0051	U	0.0018	U	0.00050	U	0.00099	U	
	PCB-79	0.16	q	NR		0.010	J q	0.0067	U	0.0044	U	0.0015	U	0.00044	U	0.00086	U	
	PCB-80	0.018	U	NR		0.0049	U	0.0066	U	0.0044	U	0.0015	U	0.00043	U	0.00084	U	
	PCB-81	0.019	U	NR		0.0053	U	0.0072	U	0.0046	U	0.0017	U	0.00044	U	0.00088	U	12

Duffield Associates, Inc.
Project No. 11139.LH

Table C.1.3.3 . Method Blank Data Validation -PCB SED BLANK 140-31989
Edgemoor Sediment and Surface Water Assessment
Edgemoor, Delaware

Homologs	Client ID	VB21-COMP-A		VB21-COMP-A		VB21-COMP-B		VB28-COMP-A		VB26-COMP-A		VB29-COMP-A		VB27-COMP-B		VB30-COMP-B		Dioxin-Like Screening Concentration
	Lab Sample ID	460-186429-1		460-186429-1		460-186429-2		460-186429-3		460-186429-4		460-186429-5		460-186429-6		460-186429-7		
	Prep Date	07/09/2019 09:00:00		07/09/2019 09:00:00		07/09/2019 09:05:00		07/09/2019 09:20:00		07/09/2019 10:20:00		07/09/2019 10:00:00		07/09/2019 11:45:00		07/09/2019 12:15:00		
	Analysis Batch	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		
	Analysis Date	1		2		2		2		2		2		2		1		
	Unit	ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		
	DIOXIN-1668C-SOIL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	
	SOIL BY 1668C																	
	PCB-82	1.89		NR		0.094		0.0012	U	0.0010	U	0.0012	U	0.00048	U	0.0011	U	
	PCB-83	15.1	C	NR		0.63	C	0.016	J q C	0.00091	U C	0.0011	U C	0.00044	U C	0.0010	U C	
	PCB-84	6.25		NR		0.27		0.0013	U	0.0010	U	0.0012	U	0.00048	U	0.0011	U	
	PCB-85	2.70	C	NR		0.14	C	0.029	J q C	0.0073	J C	0.00088	U C	0.00035	U C	0.00084	U C	
	PCB-86	11.8	C	NR		0.52	C	0.0068	J q C	0.00074	U C	0.00089	U C	0.00036	U C	0.00085	U C	
	PCB-87	11.8	C86	NR		0.52	C86	0.0068	J q C86	0.00074	U C86	0.00089	U C86	0.00036	U C86	0.00085	U C86	
	PCB-88	3.45	C	NR		0.13	C	0.016	J q C	0.00090	U C	0.0011	U C	0.00043	U C	0.0010	U C	
	PCB-89	0.18		NR		0.0039	U	0.0012	U	0.00098	U	0.0012	U	0.00047	U	0.0011	U	
	PCB-90	23.1	C	NR		1.04	C	0.022	J q C	0.00076	U C	0.0050	J q C	0.00036	U C	0.00086	U C	
	PCB-91	3.45	C88	NR		0.13	C88	0.016	J q C88	0.00090	U C88	0.0011	U C88	0.00043	U C88	0.0010	U C88	
	PCB-92	4.89		NR		0.20		0.0069	J	0.00086	U	0.0010	U	0.00041	U	0.00097	U	
	PCB-93	0.93	C	NR		0.017	J q C	0.0011	U C	0.00086	U C	0.0010	U C	0.00041	U C	0.00098	U C	
	PCB-94	0.22	q	NR		0.0039	U	0.013	J q	0.00098	U	0.0012	U	0.00047	U	0.0011	U	
	PCB-95	20.8		NR		0.82	q	0.020	J	0.00094	U	0.0011	U	0.0016	J q	0.0011	U	
	PCB-96	0.25		NR		0.012	J	0.00092	U	0.00074	U	0.00088	U	0.00035	U	0.00084	U	
	PCB-97	11.8	C86	NR		0.52	C86	0.0068	J q C86	0.00074	U C86	0.00089	U C86	0.00036	U C86	0.00085	U C86	
	PCB-98	0.85	C	NR		0.034	J C	0.0010	U C	0.00084	U C	0.0010	U C	0.00040	U C	0.00095	U C	
	PCB-99	15.1	C83	NR		0.63	C83	0.016	J q C83	0.00091	U C83	0.0011	U C83	0.00044	U C83	0.0010	U C83	
	PCB-100	0.93	C93	NR		0.017	J q C93	0.0011	U C93	0.00086	U C93	0.0010	U C93	0.00041	U C93	0.00098	U C93	
	PCB-101	23.1	C90	NR		1.04	C90	0.022	J q C90	0.00076	U C90	0.0050	J q C90	0.00036	U C90	0.00086	U C90	
	PCB-102	0.85	C98	NR		0.034	J C98	0.0010	U C98	0.00084	U C98	0.0010	U C98	0.00040	U C98	0.00095	U C98	
	PCB-103	0.77		NR		0.018	J q	0.0093	J q	0.00086	U	0.0010	U	0.00041	U	0.00098	U	
Penta	PCB-104	0.0030	U	NR		0.0026	U	0.00082	U	0.00066	U	0.00078	U	0.00031	U	0.00075	U	
	PCB-105	4.69		NR		0.17		0.0094	U	0.0093	U	0.0012	U	0.00052	U	0.00057	U	120
	PCB-106	0.016	U	NR		0.0056	U	0.0088	U	0.0088	U	0.0013	U	0.00056	U	0.00061	U	
	PCB-107	2.20		NR		0.081		0.0094	U	0.0094	U	0.0013	U	0.00060	U	0.00066	U	
	PCB-108	0.57	C B	NR		0.024	J C B	0.0090	U C	0.0090	U C	0.0013	U C	0.00058	U C	0.00063	U C	
	PCB-109	11.8	C86	NR		0.52	C86	0.0068	J q C86	0.00074	U C86	0.00089	U C86	0.00036	U C86	0.00085	U C86	
	PCB-110	22.3	C	NR		1.10	C	0.00078	U C	0.00063	U C	0.00075	U C	0.0027	J C	0.00072	U C	
	PCB-111	0.062		NR		0.0024	U	0.00075	U	0.00061	U	0.00073	U	0.00029	U	0.00069	U	
	PCB-112	0.0030	U	NR		0.0025	U	0.00079	U	0.00064	U	0.00076	U	0.00031	U	0.00073	U	
	PCB-113	23.1	C90	NR		1.04	C90	0.022	J q C90	0.00076	U C90	0.0050	J q C90	0.00036	U C90	0.00086	U C90	
	PCB-114	0.20		NR		0.0098	J q	0.0083	U	0.0082	U	0.0012	U	0.00052	U	0.00058	U	120
	PCB-115	22.3	C110	NR		1.10	C110	0.00078	U C110	0.00063	U C110	0.00075	U C110	0.0027	J C110	0.00072	U C110	
	PCB-116	2.70	C85	NR		0.14	C85	0.029	J q C85	0.0073	J C85	0.00088	U C85	0.00035	U C85	0.00084	U C85	
	PCB-117	2.70	C85	NR		0.14	C85	0.029	J q C85	0.0073	J C85	0.00088	U C85	0.00035	U C85	0.00084	U C85	
	PCB-118	18.9		NR		0.75		0.0080	U	0.0079	U	0.0012	U	0.00052	U	0.0012	J q	120
	PCB-119	11.8	C86	NR		0.52	C86	0.0068	J q C86	0.00074	U C86	0.00089	U C86	0.00036	U C86	0.00085	U C86	
	PCB-120	0.17		NR		0.0025	U	0.00077	U	0.00062	U	0.00074	U	0.00030	U	0.00070	U	
	PCB-121	0.0029	U	NR		0.0025	U	0.00079	U	0.00064	U	0.00076	U	0.00030	U	0.00072	U	
	PCB-122	0.20		NR		0.0064	U	0.010	U	0.010	U	0.0015	U	0.00065	U	0.00071	U	
	PCB-123	0.20		NR		0.0093	J q	0.0088	U	0.0084	U	0.0013	U	0.00056	U	0.00063	U	120
	PCB-124	0.57	B C108	NR		0.024	J C108 B	0.0090	U C108	0.0090	U C108	0.0013	U C108	0.00058	U C108	0.00063	U C108	
	PCB-125	11.8	C86	NR		0.52	C86	0.0068	J q C86	0.00074	U C86	0.00089	U C86	0.00036	U C86	0.00085	U C86	
	PCB-126	0.15	B	NR		0.0057	U	0.0086	U	0.0093	U	0.0014	U	0.00063	U	0.00066	U	0.036
	PCB-127	0.016	U	NR		0.0056	U	0.0088	U	0.0088	U	0.0013	U	0.00056	U	0.00061	U	

Table C.1.3.3 . Method Blank Data Validation -PCB SED BLANK 140-31989
Edgemoor Sediment and Surface Water Assessment
Edgemoor, Delaware

Homologs	Client ID	VB21-COMP-A		VB21-COMP-A		VB21-COMP-B		VB28-COMP-A		VB26-COMP-A		VB29-COMP-A		VB27-COMP-B		VB30-COMP-B		Dioxin-Like Screening Concentration
	Lab Sample ID	460-186429-1		460-186429-1		460-186429-2		460-186429-3		460-186429-4		460-186429-5		460-186429-6		460-186429-7		
	Prep Date	07/09/2019 09:00:00		07/09/2019 09:00:00		07/09/2019 09:05:00		07/09/2019 09:20:00		07/09/2019 10:20:00		07/09/2019 10:00:00		07/09/2019 11:45:00		07/09/2019 12:15:00		
	Analysis Batch	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		
	Analysis Date	1		2		2		2		2		2		2		1		
	Unit	ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		
	DIOXIN-1668C-SOIL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	
	SOIL BY 1668C																	
	PCB-128	3.43	C	NR		0.14	q C	0.011	U C	0.012	U C	0.0016	U C	0.00049	U C	0.00084	U C	
	PCB-129	26.0	C B	NR		1.0	C B	0.021	J q C B	0.013	U C	0.0017	U C	0.00051	U C	0.0028	J C B q	
	PCB-130	2.06	G	NR		0.084		0.016	U	0.017	U	0.0022	U	0.00067	U	0.0011	U	
	PCB-131	0.24	B q G	NR		0.014	U	0.016	U	0.017	U	0.0023	U	0.00070	U	0.0012	U	
	PCB-132	10.5	G	NR		0.36		0.015	U	0.016	U	0.0022	U	0.00065	U	0.0011	U	
	PCB-133	0.68	G	NR		0.026	q	0.015	U	0.016	U	0.0021	U	0.00063	U	0.0011	U	
	PCB-134	1.59	C G	NR		0.076	C	0.015	U C	0.017	U C	0.0022	U C	0.00066	U C	0.0011	U C	
	PCB-135	9.13	C	NR		0.37	C	0.00092	U C	0.0014	U C	0.0012	U C	0.00045	U C	0.0013	U C	
	PCB-136	3.54		NR		0.15		0.00066	U	0.0010	U	0.00089	U	0.00032	U	0.00094	U	
	PCB-137	0.83	q G	NR		0.039	q	0.013	U	0.014	U	0.0019	U	0.00057	U	0.00098	U	
	PCB-138	26.0	B C129	NR		1.0	C129 B	0.021	J q C129 B	0.013	U C129	0.0017	U C129	0.00051	U C129	0.0028	J B C129 q	
	PCB-139	0.55	C G	NR		0.025	J C	0.013	U C	0.014	U C	0.0019	U C	0.00056	U C	0.00096	U C	
	PCB-140	0.55	C139 G	NR		0.025	J C139	0.013	U C139	0.014	U C139	0.0019	U C139	0.00056	U C139	0.00096	U C139	
	PCB-141	4.33	G	NR		0.15		0.014	U	0.015	U	0.0020	U	0.00059	U	0.0010	U	
	PCB-142	0.047	U G	NR		0.013	U	0.015	U	0.016	U	0.0021	U	0.00063	U	0.0011	U	
	PCB-143	1.59	C134 G	NR		0.076	C134	0.015	U C134	0.017	U C134	0.0022	U C134	0.00066	U C134	0.0011	U C134	
	PCB-144	0.80		NR		0.036		0.00083	U	0.0013	U	0.0011	U	0.00041	U	0.0012	U	
	PCB-145	0.015	J q	NR		0.0036	U	0.00063	U	0.00097	U	0.00085	U	0.00031	U	0.00090	U	
	PCB-146	5.94	G	NR		0.21		0.013	U	0.014	U	0.0019	U	0.00056	U	0.00095	U	
	PCB-147	26.8	C G	NR		0.99	C	0.015	U C	0.016	U C	0.0021	U C	0.00064	U C	0.0011	U C	
Hexa	PCB-148	0.10		NR		0.0051	U	0.00089	U	0.0014	U	0.0012	U	0.00043	U	0.0013	U	
	PCB-149	26.8	C147 G	NR		0.99	C147	0.015	U C147	0.016	U C147	0.0021	U C147	0.00064	U C147	0.0011	U C147	
	PCB-150	0.077		NR		0.0035	U	0.00060	U	0.00093	U	0.00081	U	0.00029	U	0.00086	U	
	PCB-151	9.13	C135	NR		0.37	C135	0.00092	U C135	0.0014	U C135	0.0012	U C135	0.00045	U C135	0.0013	U C135	
	PCB-152	0.030		NR		0.0037	U	0.00065	U	0.0010	U	0.00087	U	0.00032	U	0.00092	U	
	PCB-153	24.1	C B	NR		0.85	C B	0.010	U C	0.011	U C	0.0015	U C	0.00044	U C	0.0036	J C B	
	PCB-154	0.59		NR		0.025		0.00072	U	0.0011	U	0.00096	U	0.00035	U	0.0010	U	
	PCB-155	0.016	J q	NR		0.0035	U	0.00060	U	0.00093	U	0.00081	U	0.00030	U	0.00086	U	
	PCB-156	2.38	C B	NR		0.092	q C B	0.012	U C	0.013	U C	0.0017	U C	0.00051	U C	0.00089	U C	120
	PCB-157	2.38	C156 B	NR		0.092	q C156 B	0.012	U C156	0.013	U C156	0.0017	U C156	0.00051	U C156	0.00089	U C156	120
	PCB-158	2.19	G	NR		0.076		0.0093	U	0.010	U	0.0013	U	0.00040	U	0.00068	U	
	PCB-159	0.15	G	NR		0.0087	U	0.0098	U	0.011	U	0.0014	U	0.00042	U	0.00072	U	
	PCB-160	26.0	B C129	NR		1.0	C129 B	0.021	J q C129 B	0.013	U C129	0.0017	U C129	0.00051	U C129	0.0028	J B C129 q	
	PCB-161	0.031	U G	NR		0.0087	U	0.0097	U	0.010	U	0.0014	U	0.00042	U	0.00072	U	
	PCB-162	0.10	G	NR		0.0086	U	0.0096	U	0.010	U	0.0014	U	0.00041	U	0.00071	U	
	PCB-163	26.0	B C129	NR		1.0	C129 B	0.021	J q C129 B	0.013	U C129	0.0017	U C129	0.00051	U C129	0.0028	J B C129 q	
	PCB-164	1.99	B G	NR		0.062	q B	0.010	U	0.011	U	0.0015	U	0.00044	U	0.00076	U	
	PCB-165	0.036	U G	NR		0.0098	U	0.011	U	0.012	U	0.0016	U	0.00048	U	0.00081	U	
	PCB-166	3.43	C128	NR		0.14	q C128	0.011	U C128	0.012	U C128	0.0016	U C128	0.00049	U C128	0.00084	U C128	
	PCB-167	0.82	G	NR		0.033		0.0081	U	0.0090	U	0.0011	U	0.00034	U	0.00058	U	120
	PCB-168	24.1	B C153	NR		0.85	C153 B	0.010	U C153	0.011	U C153	0.0015	U C153	0.00044	U C153	0.0036	J B C153	
	PCB-169	0.077	B q G	NR		0.0067	U	0.0073	U	0.0076	U	0.0011	U	0.00032	U	0.00054	U	0.12

Table C.1.3.3 . Method Blank Data Validation -PCB SED BLANK 140-31989
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Edgemoor, Delaware

Homologs	Client ID	VB21-COMP-A		VB21-COMP-A		VB21-COMP-B		VB28-COMP-A		VB26-COMP-A		VB29-COMP-A		VB27-COMP-B		VB30-COMP-B		Dioxin-Like Screening Concentration
	Lab Sample ID	460-186429-1		460-186429-1		460-186429-2		460-186429-3		460-186429-4		460-186429-5		460-186429-6		460-186429-7		
	Prep Date	07/09/2019 09:00:00		07/09/2019 09:00:00		07/09/2019 09:05:00		07/09/2019 09:20:00		07/09/2019 10:20:00		07/09/2019 10:00:00		07/09/2019 11:45:00		07/09/2019 12:15:00		
	Analysis Batch	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		
	Analysis Date	1		2		2		2		2		2		2		1		
	Unit	ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		
	DIOXIN-1668C-SOIL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	
	SOIL BY 1668C																	
Hepta	PCB-170	6.96		NR		0.24		0.0043	J q	0.00017	U	0.0019	U	0.00056	U	0.0038	J	NVP
	PCB-171	1.94	C B	NR		0.088	C B	0.0012	U C	0.00018	U C	0.0019	U C	0.00056	U C	0.0011	U C	
	PCB-172	1.08		NR		0.049	q	0.0012	U	0.00017	U	0.0019	U	0.00055	U	0.0011	U	
	PCB-173	1.94	C171 B	NR		0.088	C171 B	0.0012	U C171	0.00018	U C171	0.0019	U C171	0.00056	U C171	0.0011	U C171	
	PCB-174	7.47		NR		0.26		0.012	J q	0.00016	U	0.0018	U	0.00052	U	0.0010	U	
	PCB-175	0.31		NR		0.011	U	0.0011	U	0.00016	U	0.0017	U	0.00050	U	0.00099	U	
	PCB-176	0.95		NR		0.034		0.00081	U	0.00012	U	0.0013	U	0.00038	U	0.00075	U	
	PCB-177	4.20		NR		0.17		0.0011	U	0.00017	U	0.0018	U	0.00053	U	0.0011	U	
	PCB-178	1.68		NR		0.064		0.0012	U	0.00017	U	0.0018	U	0.00054	U	0.0011	U	
	PCB-179	3.62		NR		0.13		0.00085	U	0.00013	U	0.0014	U	0.00040	U	0.00079	U	
	PCB-180	13.4	C	NR		0.48	C	0.015	J q C	0.00013	U C	0.0014	U C	0.00042	U C	0.0091	J C	NVP
	PCB-181	0.0087	U	NR		0.011	U	0.0011	U	0.00016	U	0.0017	U	0.00050	U	0.00099	U	
	PCB-182	0.080		NR		0.011	U	0.0010	U	0.00015	U	0.0016	U	0.00048	U	0.00095	U	
	PCB-183	4.52	C	NR		0.16	C	0.0087	J q C	0.00015	U C	0.0017	U C	0.00049	U C	0.00097	U C	
	PCB-184	0.0071	U	NR		0.0090	U	0.00087	U	0.00013	U	0.0014	U	0.00041	U	0.00081	U	
	PCB-185	4.52	C183	NR		0.16	C183	0.0087	J q C183	0.00015	U C183	0.0017	U C183	0.00049	U C183	0.00097	U C183	
	PCB-186	0.0069	U	NR		0.0087	U	0.00085	U	0.00013	U	0.0014	U	0.00040	U	0.00079	U	
	PCB-187	8.24		NR		0.34		0.013	J q	0.00015	U	0.0016	U	0.00047	U	0.00092	U	
	PCB-188	0.057		NR		0.0078	U	0.00075	U	0.00012	U	0.0012	U	0.00036	U	0.00070	U	
	PCB-189	0.19	B	NR		0.013	J B	0.0087	U	0.0095	U	0.0024	U	0.0013	U	0.00084	U	130
	PCB-190	1.06		NR		0.049	q	0.0042	J q	0.00011	U	0.0012	U	0.00036	U	0.00072	U	
	PCB-191	0.25		NR		0.038	q	0.00080	U	0.00012	U	0.0013	U	0.00038	U	0.00075	U	
	PCB-192	0.0073	U	NR		0.0092	U	0.00090	U	0.00013	U	0.0014	U	0.00042	U	0.00083	U	
	PCB-193	13.4	C180	NR		0.48	C180	0.015	J q C180	0.00013	U C180	0.0014	U C180	0.00042	U C180	0.0091	J C180	
Octa	PCB-194	3.67	B G	NR		0.15	B	0.0081	U	0.0092	U	0.0047	U	0.0025	U	0.0010	U	
	PCB-195	1.40	G	NR		0.048		0.0088	U	0.010	U	0.0052	U	0.0028	U	0.0011	U	
	PCB-196	2.06		NR		0.078	q	0.010	J	0.0026	U	0.0018	U	0.00080	U	0.0011	U	
	PCB-197	0.11	q	NR		0.0074	U	0.00092	U	0.0020	U	0.0014	U	0.00061	U	0.00083	U	
	PCB-198	7.18	C B	NR		0.31	C B	0.0012	U C	0.0026	U C	0.0018	U C	0.00081	U C	0.0011	U C	
	PCB-199	7.18	C198 B	NR		0.31	C198 B	0.0012	U C198	0.0026	U C198	0.0018	U C198	0.00081	U C198	0.0011	U C198	
	PCB-200	0.33	q	NR		0.016	J q	0.00082	U	0.0017	U	0.0012	U	0.00054	U	0.00074	U	
	PCB-201	0.59		NR		0.029		0.00084	U	0.0018	U	0.0012	U	0.00056	U	0.00076	U	
	PCB-202	1.95		NR		0.10	q	0.00094	U	0.0020	U	0.0014	U	0.00062	U	0.00085	U	
	PCB-203	2.86		NR		0.13	q	0.0011	U	0.0023	U	0.0016	U	0.00072	U	0.00099	U	
	PCB-204	0.012	U	NR		0.0074	U	0.00093	U	0.0020	U	0.0014	U	0.00061	U	0.00084	U	
	PCB-205	0.20	B	NR		0.014	U	0.0068	U	0.0077	U	0.0040	U	0.0021	U	0.00087	U	
Nona	PCB-206	23.4	G	NR		0.98		0.041		0.012	U	0.0084	U	0.0059	U	0.0028	U	
	PCB-207	1.24		NR		0.062	q	0.0099	U	0.0090	U	0.0060	U	0.0042	U	0.0020	U	
	PCB-208	9.45		NR		0.39		0.023	J	0.0099	U	0.0062	U	0.0044	U	0.0021	U	
Deca	PCB-209	NR		43.7		2.01		0.073		0.044	q	0.0048	U	0.0036	U	0.0044	J q	
As Reported by Lab	Total Monochlorobiphenyls	0.72		NR		0.027	q	0.0029	U	0.0029	U	0.00075	U	0.00056	U	0.00047	U	
	Total Dichlorobiphenyls	4.75	q	NR		0.17	q	0.013	U	0.023	J q	0.010	U	0.011	U	0.0066	J	
	Total Trichlorobiphenyls	34.2	B q	NR		0.78	q B	0.023	J q B	0.0038	U	0.0016	U	0.00084	U	0.0042	J B q	
	Total Tetrachlorobiphenyls	123	B q	NR		3.52	q B	0.061	J q B	0.034	J B	0.0032	J q B	0.00085	U	0.0017	U	
	Total Pentachlorobiphenyls	143	B q	NR		6.07	q B	0.14	J q B	0.0073	J B	0.0050	J q B	0.0043	J q B	0.0012	J B q	
	Total Hexachlorobiphenyls	129	B q	NR		4.79	q B	0.021	J q B	0.017	U	0.0023	U	0.00070	U	0.0064	J B q	
	Total Heptachlorobiphenyls	56.0	B	NR		2.12	q B	0.058	J q B	0.0095	U	0.0024	U	0.0013	U	0.013	J B	
	Total Octachlorobiphenyls	20.3	B q	NR		0.87	q B	0.010	J B	0.010	U	0.0052	U	0.0028	U	0.0011	U	
	Total Nonachlorobiphenyls	34.1	G	NR		1.43	q	0.063		0.012	U	0.0084	U	0.0059	U	0.0028	U	
	Total PCBs	588	B q	NR		22.1	q B	0.50	q B	0.12	J q B	0.0098	J q B	0.0048	J q B	0.039	J B q	

Table C.1.3.3 . Method Blank Data Validation -PCB SED BLANK 140-31989
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Homologs	Client ID	VB33-COMP-B		VB31-COMP-B		VB19-COMP-B		VB22-COMP-A		VB23-COMP-B		DUP-COMP-B		VB24-COMP-A		VB25-COMP-A		Dioxin-Like Screening Concentration
	Lab Sample ID	460-186429-8		460-186429-12		460-186302-3		460-186302-4		460-186302-5		460-186302-6		460-186302-7		460-186302-8		
	Prep Date	07/09/2019 14:50:00		07/09/2019 13:30:00		07/08/2019 11:40:00		07/08/2019 13:30:00		07/08/2019 13:50:00		07/08/2019 13:55:00		07/08/2019 15:00:00		07/08/2019 14:40:00		
	Analysis Batch	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		
	Analysis Date	1		2		1		1		1		1		1		1		
	Unit	ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		
	DIOXIN-1668C-SOIL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	
	SOIL BY 1668C																	
Mono	PCB-1	0.00026	U	0.13		0.017		0.0023	U	0.00031	U	0.0017	J q	0.0016	U	0.048	q	
Mono	PCB-2	0.00030	U	0.10		0.020		0.0025	U	0.00035	U	0.00022	U	0.0018	U	0.036		
Mono	PCB-3	0.00034	U	0.21		0.031	q	0.0027	U	0.0036	J q	0.0027	J	0.0019	U	0.085		
Di	PCB-4	0.0067	U	0.37		0.016	J	0.0093	U	0.0055	U	0.0064	J q	0.0065	U	0.24		
Di	PCB-5	0.0052	U	0.025	J q	0.0041	J q	0.0079	U	0.0045	U	0.0032	U	0.0071	U	0.0095	U	
Di	PCB-6	0.0046	U	0.20		0.017	q	0.0069	U	0.0057	J q	0.0051	J q	0.0062	U	0.52		
Di	PCB-7	0.0047	U	0.033	q	0.0046	J q	0.0071	U	0.0041	U	0.0029	U	0.0064	U	0.023	q	
Di	PCB-8	0.0043	U	0.57		0.035		0.0064	U	0.013	J q	0.0092	J q	0.0069	J q	0.48		
Di	PCB-9	0.0048	U	0.073	q	0.011	J q	0.0073	U	0.0042	U	0.0030	U	0.0065	U	0.041		
Di	PCB-10	0.0052	U	0.026	J q	0.0033	U	0.0077	U	0.0045	U	0.0031	U	0.0070	U	0.027	q	
Di	PCB-11	0.0045	U	0.44		0.097		0.0068	U	0.0099	J q	0.011	J	0.013	J q	0.076	q	
Di	PCB-12	0.0047	U C	0.29	C	0.043	C	0.0070	U C	0.0057	J C q	0.0039	J C q	0.0063	U C	0.20	q C	
Di	PCB-13	0.0047	U C12	0.29	C12	0.043	C12	0.0070	U C12	0.0057	J C12 q	0.0039	J C12 q	0.0063	U C12	0.20	q C12	
Di	PCB-14	0.0040	U	0.022	J q	0.0071	J	0.0060	U	0.0034	U	0.0024	U	0.0054	U	0.0072	U	
Di	PCB-15	0.0048	U	0.74		0.047	q	0.0076	U	0.022		0.012	q	0.020	q	0.58		
Tri	PCB-16	0.0012	U	1.44		0.046		0.0018	U	0.0092	J q	0.015		0.0021	U	0.51	q	
Tri	PCB-17	0.0011	U	2.02		0.070		0.0016	U	0.019		0.011	J q	0.0019	U	0.93		
Tri	PCB-18	0.00093	U C	4.18	C	0.16	C	0.015	J C q	0.033	C	0.034	C q	0.011	J q C	1.88	C	
Tri	PCB-19	0.0013	U	0.29		0.012	J q	0.0020	U	0.00059	U	0.00058	U	0.0023	U	0.14		
Tri	PCB-20	0.00089	J q C B	4.47	C B	0.26	C B	0.025	J C B q	0.077	C B	0.068	C B	0.019	J C B	2.61	C B	
Tri	PCB-21	0.0013	J C B	1.29	C B	0.066	C B	0.0064	J C B q	0.023	J C B	0.019	J C B q	0.0066	U C	0.48	q C B	
Tri	PCB-22	0.00057	U	0.93	B	0.050	B	0.0039	U	0.014	B q	0.016	B	0.0069	U	0.41	B	
Tri	PCB-23	0.00057	U	0.0097	U	0.0015	U	0.0039	U	0.0014	U	0.00086	U	0.0069	U	0.034	q	
Tri	PCB-24	0.00089	U	0.071		0.0070	J q	0.0014	U	0.00041	U	0.00040	U	0.0016	U	0.029	q	
Tri	PCB-25	0.00051	U	0.39		0.035		0.0035	U	0.0068	J q	0.0072	J	0.0062	U	0.87		
Tri	PCB-26	0.00055	U C	0.65	C	0.057	C	0.0038	U C	0.014	J C	0.011	J C	0.0066	U C	0.87	C	
Tri	PCB-27	0.00077	U	0.34		0.013	J	0.0012	U	0.0032	J q	0.00035	U	0.0014	U	0.18		
Tri	PCB-28	0.00089	J q C20 B	4.47	C20 B	0.26	C20 B	0.025	J B C20 q	0.077	B C20	0.068	B C20	0.019	J C20 B	2.61	C20 B	
Tri	PCB-29	0.00055	U C26	0.65	C26	0.057	C26	0.0038	U C26	0.014	J C26	0.011	J C26	0.0066	U C26	0.87	C26	
Tri	PCB-30	0.00093	U C18	4.18	C18	0.16	C18	0.015	J C18 q	0.033	C18	0.034	C18 q	0.011	J q C18	1.88	C18	
Tri	PCB-31	0.0011	J q	3.61		0.23		0.024	J	0.064		0.051		0.0066	U	2.46		
Tri	PCB-32	0.00074	U	1.29		0.058		0.0052	J q	0.016		0.011	J q	0.0013	U	0.53	S	
Tri	PCB-33	0.0013	J C21 B	1.29	C21 B	0.066	C21 B	0.0064	J B C21 q	0.023	J B C21	0.019	J B C21 q	0.0066	U C21	0.48	q C21 B	
Tri	PCB-34	0.00059	U	0.064		0.0080	J	0.0040	U	0.0014	U	0.00089	U	0.0071	U	0.0091	U	
Tri	PCB-35	0.00057	U	0.24		0.11		0.0039	U	0.0014	U	0.0023	J q	0.0069	U	0.047		
Tri	PCB-36	0.00055	U	0.0094	U	0.0063	J	0.0038	U	0.0013	U	0.00084	U	0.0067	U	0.0085	U	
Tri	PCB-37	0.00057	U	0.92		0.078		0.0075	J q	0.017	q	0.018		0.0069	U	0.35		
Tri	PCB-38	0.00059	U	0.010	U	0.0016	U	0.0041	U	0.0014	U	0.00090	U	0.0072	U	0.0092	U	
Tri	PCB-39	0.00053	U	0.054		0.010	J q	0.0037	U	0.0013	U	0.00081	U	0.0064	U	0.0082	U	

Table C.1.3.3 . Method Blank Data Validation -PCB SED BLANK 140-31989
Edgemoor Sediment and Surface Water Assessment
Edgemoor, Delaware

Homologs	Client ID	VB33-COMP-B		VB31-COMP-B		VB19-COMP-B		VB22-COMP-A		VB23-COMP-B		DUP-COMP-B		VB24-COMP-A		VB25-COMP-A		Dioxin-Like Screening Concentration
	Lab Sample ID	460-186429-8		460-186429-12		460-186302-3		460-186302-4		460-186302-5		460-186302-6		460-186302-7		460-186302-8		
	Prep Date	07/09/2019 14:50:00		07/09/2019 13:30:00		07/08/2019 11:40:00		07/08/2019 13:30:00		07/08/2019 13:50:00		07/08/2019 13:55:00		07/08/2019 15:00:00		07/08/2019 14:40:00		
	Analysis Batch	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		
	Analysis Date	1		2		1		1		1		1		1		1		
	Unit	ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		
	DIOXIN-1668C-SOIL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	
	SOIL BY 1668C																	
	PCB-40	0.0013	U C	3.85	C	0.23	C	0.017	J C q	0.057	C	0.058	C	0.010	U C	2.26	C	
	PCB-41	0.0013	U C40	3.85	C40	0.23	C40	0.017	J q C40	0.057	C40	0.058	C40	0.010	U C40	2.26	C40	
	PCB-42	0.0013	U	2.55		0.13		0.0066	U	0.035		0.029		0.010	U	1.0	G	
	PCB-43	0.0013	U C	0.24	C	0.016	J C	0.0062	U C	0.0040	U C	0.0026	U C	0.0098	U C	0.020	U C	
	PCB-44	0.0037	J C B	9.66	C B	0.47	C B	0.030	J C B	0.12	C B	0.11	C B	0.025	J C B	4.24	C B	
	PCB-45	0.0014	U C	1.51	C	0.085	C	0.0070	U C	0.022	J C	0.019	J C	0.011	U C	0.78	C	
	PCB-46	0.0017	U	0.50		0.030		0.0084	U	0.0054	U	0.0035	U	0.013	U	0.21	G	
	PCB-47	0.0037	J C44 B	9.66	C44 B	0.47	C44 B	0.030	J B C44	0.12	B C44	0.11	B C44	0.025	J C44 B	4.24	C44 B	
	PCB-48	0.0013	U	1.33		0.068		0.0066	U	0.013	q	0.017		0.010	U	0.56	G	
	PCB-49	0.0011	U C	7.86	C	0.36	C	0.020	J C	0.091	C	0.085	C	0.016	J C	3.16	C	
	PCB-50	0.0013	U C	1.16	C	0.068	C	0.0064	U C	0.015	J C	0.014	J C	0.010	U C	0.57	C	
	PCB-51	0.0014	U C45	1.51	C45	0.085	C45	0.0070	U C45	0.022	J C45	0.019	J C45	0.011	U C45	0.78	C45	
	PCB-52	0.0013	U	14.1		0.65		0.041		0.18		0.15		0.020	q	5.71	G	
	PCB-53	0.0013	U C50	1.16	C50	0.068	C50	0.0064	U C50	0.015	J C50	0.014	J C50	0.010	U C50	0.57	C50	
	PCB-54	0.00093	U	0.013	J q	0.0024	J	0.00087	U	0.00029	U	0.00022	U	0.00061	U	0.00050	U	
	PCB-55	0.00098	U	0.058	q	0.0027	U	0.0048	U	0.0031	U	0.0020	U	0.0076	U	0.019	q	
	PCB-56	0.00098	U	3.09		0.14		0.0048	U	0.044		0.042		0.0076	U	0.96		
	PCB-57	0.0010	U	0.013	U	0.0042	J q	0.0049	U	0.0032	U	0.0020	U	0.0077	U	0.019	q	
	PCB-58	0.0010	U	0.094		0.0037	J q	0.0050	U	0.0032	U	0.0020	U	0.0078	U	0.025		
	PCB-59	0.00095	U C	0.73	C	0.034	J C	0.0047	U C	0.0097	J C q	0.0019	U C	0.0074	U C	0.41	C	
Tetra	PCB-60	0.0010	U	0.32		0.028		0.010	J q	0.013		0.0073	J q	0.0078	U	0.10		
	PCB-61	0.0025	J C	12.4	C	0.57	C	0.041	J C	0.18	C	0.15	C	0.030	J C	4.98	C	
	PCB-62	0.00095	U C59	0.73	C59	0.034	J C59	0.0047	U C59	0.0097	J C59 q	0.0019	U C59	0.0074	U C59	0.41	C59	
	PCB-63	0.00091	U	0.30		0.014	J	0.0045	U	0.0029	U	0.0018	U	0.0071	U	0.081		
	PCB-64	0.0015	J q	3.27		0.17		0.010	J	0.045		0.040		0.0070	U	1.37		
	PCB-65	0.0037	J C44 B	9.66	C44 B	0.47	C44 B	0.030	J B C44	0.12	B C44	0.11	B C44	0.025	J C44 B	4.24	C44 B	
	PCB-66	0.0012	J	8.03		0.37		0.025		0.10		0.089	q	0.012	J	2.24		
	PCB-67	0.00086	U	0.14		0.0076	J q	0.0042	U	0.0027	U	0.0017	U	0.0067	U	0.039		
	PCB-68	0.00088	U	0.17		0.0075	J	0.0043	U	0.0028	U	0.0018	U	0.0068	U	0.040		
	PCB-69	0.0011	U C49	7.86	C49	0.36	C49	0.020	J C49	0.091	C49	0.085	C49	0.016	J C49	3.16	C49	
	PCB-70	0.0025	J C61	12.4	C61	0.57	C61	0.041	J C61	0.18	C61	0.15	C61	0.030	J C61	4.98	C61	
	PCB-71	0.0013	U C40	3.85	C40	0.23	C40	0.017	J q C40	0.057	C40	0.058	C40	0.010	U C40	2.26	C40	
	PCB-72	0.00098	U	0.30		0.010	J	0.0048	U	0.0031	U	0.0020	U	0.0076	U	0.094		
	PCB-73	0.0013	U C43	0.24	C43	0.016	J C43	0.0062	U C43	0.0040	U C43	0.0026	U C43	0.0098	U C43	0.020	U C43	
	PCB-74	0.0025	J C61	12.4	C61	0.57	C61	0.041	J C61	0.18	C61	0.15	C61	0.030	J C61	4.98	C61	
	PCB-75	0.00095	U C59	0.73	C59	0.034	J C59	0.0047	U C59	0.0097	J C59 q	0.0019	U C59	0.0074	U C59	0.41	C59	
	PCB-76	0.0025	J C61	12.4	C61	0.57	C61	0.041	J C61	0.18	C61	0.15	C61	0.030	J C61	4.98	C61	
	PCB-77	0.00096	U	0.77	B	0.13	B	0.0046	U	0.014	B	0.010	J B q	0.0073	U	0.18	B	38
	PCB-78	0.0010	U	0.014	U	0.0028	U	0.0050	U	0.0032	U	0.0020	U	0.0078	U	0.016	U	
	PCB-79	0.00087	U	0.13		0.0062	J q	0.0043	U	0.0028	U	0.0018	U	0.0068	U	0.014	U	
	PCB-80	0.00086	U	0.012	U	0.0023	U	0.0042	U	0.0027	U	0.0017	U	0.0067	U	0.013	U	
	PCB-81	0.00091	U	0.021	J	0.0025	U	0.0046	U	0.0029	U	0.0018	U	0.0072	U	0.014	U	12

Table C.1.3.3 . Method Blank Data Validation -PCB SED BLANK 140-31989
Edgemoor Sediment and Surface Water Assessment
Edgemoor, Delaware

Homologs	Client ID	VB33-COMP-B		VB31-COMP-B		VB19-COMP-B		VB22-COMP-A		VB23-COMP-B		DUP-COMP-B		VB24-COMP-A		VB25-COMP-A		Dioxin-Like Screening Concentration
	Lab Sample ID	460-186429-8		460-186429-12		460-186302-3		460-186302-4		460-186302-5		460-186302-6		460-186302-7		460-186302-8		
	Prep Date	07/09/2019 14:50:00		07/09/2019 13:30:00		07/08/2019 11:40:00		07/08/2019 13:30:00		07/08/2019 13:50:00		07/08/2019 13:55:00		07/08/2019 15:00:00		07/08/2019 14:40:00		
	Analysis Batch	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		
	Analysis Date	1		2		1		1		1		1		1		1		
	Unit	ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		
	DIOXIN-1668C-SOIL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	
	SOIL BY 1668C																	
	PCB-82	0.00078	U	1.21		0.047	q	0.00094	U	0.050	q	0.020	q	0.0011	U	0.26		
	PCB-83	0.00071	U C	10.8	C	0.42	C	0.0037	J C q	0.28	C	0.15	C	0.010	J q C	2.45	C	
	PCB-84	0.00079	U	4.37		0.18		0.0099	J q	0.099		0.052		0.0011	U	1.02		
	PCB-85	0.00057	U C	1.70	C	0.077	C	0.00069	U C	0.062	C	0.030	J C	0.0048	J q C	0.42	q C	
	PCB-86	0.00058	U C	7.79	C	0.32	C	0.022	J C	0.26	C	0.11	C	0.0098	J C	1.81	C	
	PCB-87	0.00058	U C86	7.79	C86	0.32	C86	0.022	J C86	0.26	C86	0.11	C86	0.0098	J C86	1.81	C86	
	PCB-88	0.00070	U C	2.47	C	0.11	C	0.0092	J C	0.067	C	0.049	C	0.0066	J q C	0.82	C	
	PCB-89	0.00076	U	0.13	q	0.0071	J q	0.00092	U	0.0012	U	0.00061	U	0.0011	U	0.029	q	
	PCB-90	0.0016	J q C	15.9	C	0.62	C	0.033	J C q	0.52	C	0.28	C	0.018	J q C	3.54	C	
	PCB-91	0.00070	U C88	2.47	C88	0.11	C88	0.0092	J C88	0.067	C88	0.049	C88	0.0066	J q C88	0.82	C88	
	PCB-92	0.00067	U	3.24		0.12		0.0058	J q	0.099		0.056		0.00097	U	0.67		
	PCB-93	0.00067	U C	0.22	C	0.0067	J q C	0.00081	U C	0.0096	J C q	0.0051	J C	0.00098	U C	0.062	q C	
	PCB-94	0.00076	U	0.0022	U	0.0036	J q	0.00092	U	0.0012	U	0.00061	U	0.0011	U	0.027		
	PCB-95	0.00073	U	13.9		0.55		0.029	q	0.35		0.23		0.013	J q	3.29		
	PCB-96	0.00057	U	0.11		0.0064	J	0.00069	U	0.00090	U	0.00046	U	0.00084	U	0.041	q	
	PCB-97	0.00058	U C86	7.79	C86	0.32	C86	0.022	J C86	0.26	C86	0.11	C86	0.0098	J C86	1.81	C86	
	PCB-98	0.00065	U C	0.51	C	0.024	J C	0.00079	U C	0.010	J C q	0.0047	J C q	0.00095	U C	0.15	C	
	PCB-99	0.00071	U C83	10.8	C83	0.42	C83	0.0037	J C83 q	0.28	C83	0.15	C83	0.010	J q C83	2.45	C83	
	PCB-100	0.00067	U C93	0.22	C93	0.0067	J q C93	0.00081	U C93	0.0096	J C93 q	0.0051	J C93	0.00098	U C93	0.062	q C93	
	PCB-101	0.0016	J q C90	15.9	C90	0.62	C90	0.033	J C90 q	0.52	C90	0.28	C90	0.018	J q C90	3.54	C90	
	PCB-102	0.00065	U C98	0.51	C98	0.024	J C98	0.00079	U C98	0.010	J C98 q	0.0047	J C98 q	0.00095	U C98	0.15	C98	
	PCB-103	0.00067	U	0.37		0.011	J	0.00081	U	0.010	J q	0.013		0.00098	U	0.067	q	
Penta	PCB-104	0.00051	U	0.0015	U	0.00035	U	0.00062	U	0.00080	U	0.00041	U	0.00075	U	0.0016	U	
	PCB-105	0.0012	J q	2.54		0.12		0.0061	U	0.13		0.042		0.010	U	0.63		120
	PCB-106	0.00030	U	0.013	U	0.0019	U	0.0059	U	0.0030	U	0.0013	U	0.0099	U	0.012	U	
	PCB-107	0.00032	U	1.33		0.042		0.0063	U	0.030	q	0.012	q	0.011	U	0.27		
	PCB-108	0.00031	U C	0.31	C B	0.014	J C B	0.0061	U C	0.018	J C B q	0.0037	J C B q	0.010	U C	0.069	C B	
	PCB-109	0.00058	U C86	7.79	C86	0.32	C86	0.022	J C86	0.26	C86	0.11	C86	0.0098	J C86	1.81	C86	
	PCB-110	0.0024	J q C	16.0	C	0.66	C	0.044	C	0.52	C	0.00039	U C	0.019	J q C	3.45	C	
	PCB-111	0.00047	U	0.0014	U	0.0046	J	0.0024	J	0.00074	U	0.00038	U	0.0030	J	0.0015	U	
	PCB-112	0.00050	U	0.0015	U	0.00034	U	0.017		0.00078	U	0.00040	U	0.00073	U	0.0015	U	
	PCB-113	0.0016	J q C90	15.9	C90	0.62	C90	0.033	J C90 q	0.52	C90	0.28	C90	0.018	J q C90	3.54	C90	
	PCB-114	0.00028	U	0.14		0.0082	J	0.0056	U	0.0028	U	0.0012	U	0.0094	U	0.037		120
	PCB-115	0.0024	J q C110	16.0	C110	0.66	C110	0.044	C110	0.52	C110	0.00039	U C110	0.019	J q C110	3.45	C110	
	PCB-116	0.00057	U C85	1.70	C85	0.077	C85	0.00069	U C85	0.062	C85	0.030	J C85	0.0048	J q C85	0.42	q C85	
	PCB-117	0.00057	U C85	1.70	C85	0.077	C85	0.00069	U C85	0.062	C85	0.030	J C85	0.0048	J q C85	0.42	q C85	
	PCB-118	0.0015	J q	12.0		0.42		0.023		0.39		0.13		0.015	J	2.47		120
	PCB-119	0.00058	U C86	7.79	C86	0.32	C86	0.022	J C86	0.26	C86	0.11	C86	0.0098	J C86	1.81	C86	
	PCB-120	0.00048	U	0.0014	U	0.0063	J q	0.00058	U	0.00075	U	0.0043	J	0.00070	U	0.022		
	PCB-121	0.00049	U	0.0014	U	0.00034	U	0.00060	U	0.00077	U	0.00039	U	0.00072	U	0.0015	U	
	PCB-122	0.00035	U	0.11	q	0.0041	J q	0.0068	U	0.0034	U	0.0015	U	0.011	U	0.036	q	
	PCB-123	0.00030	U	0.13		0.0077	J q	0.0059	U	0.0097	J	0.0013	U	0.0098	U	0.033		120
	PCB-124	0.00031	U C108	0.31	C108 B	0.014	J C108 B	0.0061	U C108	0.018	B q C108	0.0037	J B q C108	0.010	U C108	0.069	C108 B	
	PCB-125	0.00058	U C86	7.79	C86	0.32	C86	0.022	J C86	0.26	C86	0.11	C86	0.0098	J C86	1.81	C86	
	PCB-126	0.00032	U	0.013	U	0.0020	U	0.0060	U	0.0030	U	0.0013	U	0.0096	U	0.012	U	0.036
	PCB-127	0.00030	U	0.013	U	0.0019	U	0.0059	U	0.0030	U	0.0013	U	0.0098	U	0.011	U	

Table C.1.3.3 . Method Blank Data Validation -PCB SED BLANK 140-31989
Edgemoor Sediment and Surface Water Assessment
Edgemoor, Delaware

Homologs	Client ID	VB33-COMP-B		VB31-COMP-B		VB19-COMP-B		VB22-COMP-A		VB23-COMP-B		DUP-COMP-B		VB24-COMP-A		VB25-COMP-A		Dioxin-Like Screening Concentration
	Lab Sample ID	460-186429-8		460-186429-12		460-186302-3		460-186302-4		460-186302-5		460-186302-6		460-186302-7		460-186302-8		
	Prep Date	07/09/2019 14:50:00		07/09/2019 13:30:00		07/08/2019 11:40:00		07/08/2019 13:30:00		07/08/2019 13:50:00		07/08/2019 13:55:00		07/08/2019 15:00:00		07/08/2019 14:40:00		
	Analysis Batch	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		
	Analysis Date	1		2		1		1		1		1		1		1		
	Unit	ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		
	DIOXIN-1668C-SOIL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	
	SOIL BY 1668C																	
Hexa	PCB-128	0.00051	U C	1.91	C	0.077	q C	0.013	J C	0.22	C	0.034	C q	0.017	U C	0.37	C	
	PCB-129	0.00053	U C	13.6	C B	0.63	C B	0.046	J C B	1.39	C B	0.35	C B	0.029	J q C B	3.01	C B	
	PCB-130	0.00069	U	1.10		0.087		0.012	U	0.11		0.019	q	0.023	U G	0.23	G	
	PCB-131	0.00072	U	0.030	U	0.0076	U	0.012	U	0.021	B	0.0031	U	0.024	U G	0.027	U G	
	PCB-132	0.00068	U	5.66		0.28		0.012	J q	0.40		0.12		0.022	U G	0.97	G	
	PCB-133	0.00066	U	0.36		0.047		0.011	U	0.019		0.0082	J	0.021	U G	0.093	G	
	PCB-134	0.00068	U C	0.028	U C	0.034	C	0.011	U C	0.066	C	0.018	J C q	0.022	U C	0.15	q C	
	PCB-135	0.00095	U C	4.84	C	0.32	C	0.023	J C	0.35	C	0.21	C	0.0074	J q C	1.22	C	
	PCB-136	0.00068	U	1.99		0.12		0.010	J	0.13		0.081		0.0013	U	0.46		
	PCB-137	0.00059	U	0.52		0.017	q	0.0098	U	0.083		0.0084	J	0.019	U	0.10	G	
	PCB-138	0.00053	U C129	13.6	C129 B	0.63	C129 B	0.046	J B C129	1.39	B C129	0.35	B C129	0.029	J q C129 B	3.01	C129 B	
	PCB-139	0.00058	U C	0.29	C	0.010	J q C	0.0097	U C	0.026	C	0.0025	U C	0.019	U C	0.038	q C	
	PCB-140	0.00058	U C139	0.29	C139	0.010	J q C139	0.0097	U C139	0.026	C139	0.0025	U C139	0.019	U C139	0.038	q C139	
	PCB-141	0.00061	U	2.08		0.10		0.010	U	0.23		0.070	q	0.030	G	0.41	G	
	PCB-142	0.00065	U	0.027	U	0.0068	U	0.011	U	0.0071	U	0.0028	U	0.021	U G	0.024	U G	
	PCB-143	0.00068	U C134	0.028	U C134	0.034	C134	0.011	U C134	0.066	C134	0.018	J C134 q	0.022	U C134	0.15	q C134	
	PCB-144	0.00086	U	0.42		0.018	q	0.00070	U	0.043		0.016	q	0.0016	U	0.093		
	PCB-145	0.00065	U	0.0021	U	0.00037	U	0.00053	U	0.0010	U	0.00045	U	0.0012	U	0.0032	U	
	PCB-146	0.00099	J q	3.03		0.22		0.0096	U	0.21		0.078		0.019	U	0.74	G	
	PCB-147	0.0020	J q C	0.87	C	0.82	C	0.049	C	1.05	C	0.52	C	0.027	J q C	3.53	C	
	PCB-148	0.00092	U	0.031	q	0.00052	U	0.00075	U	0.0014	U	0.00064	U	0.0017	U	0.0095	J q	
	PCB-149	0.0020	J q C147	0.87	C147	0.82	C147	0.049	C147	1.05	C147	0.52	C147	0.027	J q C147	3.53	C147	
	PCB-150	0.00062	U	0.030	q	0.0017	J q	0.00051	U	0.00097	U	0.0023	J q	0.0011	U	0.013	J q	
	PCB-151	0.00095	U C135	4.84	C135	0.32	C135	0.023	J C135	0.35	C135	0.21	C135	0.0074	J q C135	1.22	C135	
	PCB-152	0.00067	U	0.0022	U	0.00038	U	0.00055	U	0.0010	U	0.00047	U	0.0012	U	0.0032	U	
	PCB-153	0.0026	J C B	12.6	C B	0.60	C B	0.048	C B	0.97	C B	0.38	C B	0.015	U C	3.13	C B	
	PCB-154	0.00074	U	0.29		0.017		0.0048	J q	0.016	q	0.015	q	0.0014	U	0.098		
	PCB-155	0.00063	U	0.0082	J q	0.00078	J q	0.00051	U	0.00097	U	0.00043	U	0.0012	U	0.0061	J	
	PCB-156	0.00054	U C	1.37	C B	0.063	C B	0.0085	U C	0.19	C B	0.025	C B	0.016	U C	0.25	C B	120
	PCB-157	0.00054	U C156	1.37	C156 B	0.063	C156 B	0.0085	U C156	0.19	C156 B	0.025	C156 B	0.016	U C156	0.25	C156 B	120
	PCB-158	0.00041	U	1.10		0.039	q	0.0069	U	0.14		0.027		0.014	U	0.20	q	
	PCB-159	0.00044	U	0.018	U	0.0046	U	0.0073	U	0.0048	U	0.0018	U	0.014	U	0.016	U	
	PCB-160	0.00053	U C129	13.6	C129 B	0.63	C129 B	0.046	J B C129	1.39	B C129	0.35	B C129	0.029	J q C129 B	3.01	C129 B	
	PCB-161	0.00043	U	0.018	U	0.0045	U	0.0072	U	0.0047	U	0.0018	U	0.014	U	0.016	U	
	PCB-162	0.00043	U	0.018	U	0.027		0.0071	U	0.0047	U	0.0018	U	0.014	U	0.016	U	
	PCB-163	0.00053	U C129	13.6	C129 B	0.63	C129 B	0.046	J B C129	1.39	B C129	0.35	B C129	0.029	J q C129 B	3.01	C129 B	
	PCB-164	0.00046	U	1.12	B	0.099	B	0.0076	U	0.10	B	0.026	B q	0.015	U	0.19	B	
	PCB-165	0.00049	U	0.020	U	0.0052	U	0.0082	U	0.0054	U	0.0021	U	0.016	U	0.018	U G	
	PCB-166	0.00051	U C128	1.91	C128	0.077	q C128	0.013	J C128	0.22	C128	0.034	C128 q	0.017	U C128	0.37	C128	
	PCB-167	0.00034	U	0.46		0.045		0.0067	U	0.052		0.0087	J	0.012	U	0.080		120
	PCB-168	0.0026	J C153 B	12.6	C153 B	0.60	C153 B	0.048	B C153	0.97	B C153	0.38	B C153	0.015	U C153	3.13	C153 B	
	PCB-169	0.00034	U	0.014	U	0.0036	U	0.018	B	0.0037	U	0.0014	U	0.011	U	0.013	U	0.12

Duffield Associates, Inc.
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Table C.1.3.3 . Method Blank Data Validation -PCB SED BLANK 140-31989
Edgemoor Sediment and Surface Water Assessment
Edgemoor, Delaware

Homologs	Client ID	VB33-COMP-B		VB31-COMP-B		VB19-COMP-B		VB22-COMP-A		VB23-COMP-B		DUP-COMP-B		VB24-COMP-A		VB25-COMP-A		Dioxin-Like Screening Concentration
	Lab Sample ID	460-186429-8		460-186429-12		460-186302-3		460-186302-4		460-186302-5		460-186302-6		460-186302-7		460-186302-8		
	Prep Date	07/09/2019 14:50:00		07/09/2019 13:30:00		07/08/2019 11:40:00		07/08/2019 13:30:00		07/08/2019 13:50:00		07/08/2019 13:55:00		07/08/2019 15:00:00		07/08/2019 14:40:00		
	Analysis Batch	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		
	Analysis Date	1		2		1		1		1		1		1		1		
	Unit	ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		ng/g		
	DIOXIN-1668C-SOIL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	
	SOIL BY 1668C																	
Hepta	PCB-170	0.00086	U	3.15		0.16		0.016	q	0.32		0.10	q	0.018	J q	0.75		NVP
	PCB-171	0.00083	U C	0.93	C B	0.049	C B	0.0012	U C	0.11	C B	0.038	C B	0.0050	U C	0.24	q C B	
	PCB-172	0.00082	U	0.54		0.046		0.0083	J q	0.055		0.020		0.0050	U	0.14		
	PCB-173	0.00083	U C171	0.93	C171 B	0.049	C171 B	0.0012	U C171	0.11	C171 B	0.038	C171 B	0.0050	U C171	0.24	q C171 B	
	PCB-174	0.00077	U	3.25		0.18		0.023		0.30		0.15		0.0047	U	0.87		
	PCB-175	0.00075	U	0.12	q	0.013	J q	0.0011	U	0.013		0.0042	J q	0.0045	U	0.036	q	
	PCB-176	0.00056	U	0.41		0.026		0.00082	U	0.030		0.011	J q	0.0034	U	0.11		
	PCB-177	0.00079	U	1.95		0.10		0.012	J	0.17		0.077	q	0.0048	U	0.55		
	PCB-178	0.00081	U	0.73		0.070		0.013	J q	0.062		0.032	q	0.0049	U	0.26		
	PCB-179	0.00060	U	1.60		0.10		0.018		0.12		0.064	q	0.0036	U	0.47		
	PCB-180	0.0023	J q C	6.20	C	0.36	C	0.057	C	0.57	C	0.28	C	0.019	J q C	1.66	C	NVP
	PCB-181	0.00074	U	0.0067	U	0.0011	U	0.0011	U	0.0021	U	0.00052	U	0.0045	U	0.0064	U	
	PCB-182	0.00072	U	0.049		0.0052	J q	0.0010	U	0.0021	U	0.00051	U	0.0043	U	0.0062	U	
	PCB-183	0.00073	U C	2.02	C	0.14	C	0.032	C q	0.19	C	0.094	C	0.0044	U C	0.58	C	
	PCB-184	0.00061	U	0.0055	U	0.00091	U	0.00089	U	0.0018	U	0.00043	U	0.0037	U	0.0053	U	
	PCB-185	0.00073	U C183	2.02	C183	0.14	C183	0.032	C183 q	0.19	C183	0.094	C183	0.0044	U C183	0.58	C183	
	PCB-186	0.00059	U	0.0054	U	0.00088	U	0.00087	U	0.0017	U	0.00042	U	0.0036	U	0.0051	U	
	PCB-187	0.00069	U	3.81		0.32		0.085		0.32		0.19		0.0042	U	1.34		
	PCB-188	0.00053	U	0.0047	U	0.0044	J	0.00076	U	0.0015	U	0.00038	U	0.0031	U	0.0046	U	
	PCB-189	0.00059	U	0.095	q B	0.0078	J q B	0.0072	U	0.012	B q	0.0047	J B	0.011	U	0.027	B	130
	PCB-190	0.00054	U	0.48		0.025		0.0064	J q	0.049	q	0.025		0.0033	U	0.15		
	PCB-191	0.00056	U	0.14		0.0078	J	0.00082	U	0.012		0.00040	U	0.0034	U	0.037		
	PCB-192	0.00063	U	0.0057	U	0.00093	U	0.00092	U	0.0018	U	0.00044	U	0.0038	U	0.0054	U	
	PCB-193	0.0023	J q C180	6.20	C180	0.36	C180	0.057	C180	0.57	C180	0.28	C180	0.019	J q C180	1.66	C180	
Octa	PCB-194	0.00093	U	1.79	B	0.17	B	0.10	B	0.17	B	0.083	B	0.012	U	0.50	B	
	PCB-195	0.0010	U	0.60		0.041		0.018	q	0.057		0.030		0.013	U	0.16	G	
	PCB-196	0.0010	U	1.06		0.16	q	0.19		0.059	q	0.042	q	0.0029	U	0.28		
	PCB-197	0.00076	U	0.075	q	0.012	J	0.0073	J q	0.014		0.0030	J q	0.0022	U	0.022		
	PCB-198	0.0010	U C	3.75	C B	1.02	C B	0.82	C B	0.23	C B	0.17	C B	0.013	J q C B	0.99	C B	
	PCB-199	0.0010	U C198	3.75	C198 B	1.02	C198 B	0.82	C198 B	0.23	C198 B	0.17	C198 B	0.013	J q C198 B	0.99	C198 B	
	PCB-200	0.00068	U	0.17		0.022		0.015	J q	0.0012	U	0.0062	J q	0.0020	U	0.040	q	
	PCB-201	0.00069	U	0.32		0.061	q	0.050		0.015	q	0.011	J q	0.0020	U	0.066	q	
	PCB-202	0.00078	U	1.08		0.39		0.26		0.058		0.049		0.0023	U	0.25		
	PCB-203	0.00090	U	1.47		0.36		0.29	q	0.096		0.062	q	0.0026	U	0.34	q	
	PCB-204	0.00076	U	0.0044	U	0.00078	U	0.0020	U	0.0013	U	0.00076	U	0.0022	U	0.0046	U	
	PCB-205	0.00079	U	0.068	q B	0.0099	J q B	0.0060	U	0.0051	U	0.0078	J B	0.0098	U	0.032	B	
Nona	PCB-206	0.0037	U	13.0		4.86		5.68		0.78	G	0.65		0.029		2.58		
	PCB-207	0.0026	U	0.79		0.30		0.39		0.057		0.045		0.0075	U	0.20		
	PCB-208	0.0027	U	5.56		2.31		2.53		0.34		0.30		0.014	J	1.10		
Deca	PCB-209	0.0022	J q	26.0		6.50		8.39		1.17		0.82		0.079	q	11.0		
As Reported by Lab	Total Monochlorobiphenyls	0.00034	U	0.44		0.068	q	0.0027	U	0.0036	J q	0.0044	J q	0.0019	U	0.17	q	
	Total Dichlorobiphenyls	0.0067	U	2.80	q	0.28	q	0.0093	U	0.056	q	0.047	q	0.040	q	2.19	q	
	Total Trichlorobiphenyls	0.0033	J q B	22.3	B	1.27	q B	0.083	B q	0.29	B q	0.26	B q	0.030	J q B	12.3	q S B	
	Total Tetrachlorobiphenyls	0.0089	J q B	72.7	q B	3.61	q B	0.19	B q	0.94	B q	0.82	B q	0.10	q B	29.0	q B	
	Total Pentachlorobiphenyls	0.0066	J q B	95.4	q B	3.77	q B	0.20	B q	2.91	B q	1.19	B q	0.099	J q B	21.7	q B	
	Total Hexachlorobiphenyls	0.0056	J q B	53.6	q B	3.67	q B	0.22	B q	5.80	B q	2.02	B q	0.093	q B	15.4	q B	
	Total Heptachlorobiphenyls	0.0023	J q B	25.5	q B	1.63	q B	0.27	B q	2.32	B q	1.09	B q	0.037	J q B	7.23	q B	
	Total Octachlorobiphenyls	0.0010	U	10.4	q B	2.25	q B	1.74	B q	0.69	B q	0.47	B q	0.013	J q B	2.68	q B	
	Total Nonachlorobiphenyls	0.0037	U	19.4		7.47		8.59		1.17	G	0.99		0.044		3.88		
	Total PCBs	0.034	J q B	328	q B	30.5	q B	19.8	B q	15.4	B q	7.83	B q	0.60	q B	106	q B	230

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Table C.1.3.3 . Method Blank Data Validation -PCB SED BLANK 140-31989
Edgemoor Sediment and Surface Water Assessment
Edgemoor, Delaware

Homologs	Client ID	VB25-COMP-B		Applicable Method Blank						Dioxin-Like Screening Concentration
	Lab Sample ID	460-186302-9		MB 140-31989/19-B						
	Prep Date	07/08/2019 14:45:00		7/24/2019						
	Analysis Batch	Soil		140-32350						
	Analysis Date	1		8/5/2017						
	Unit	ng/g		ng/g						
	DIOXIN-1668C-SOIL	Result	Q	Result	Q	ML	EDL	3Xresult	5Xresult	
	SOIL BY 1668C									
Mono	PCB-1	0.00042	U	0.00015	U		0.00015			
	PCB-2	0.00047	U	0.00018	U		0.00018			
	PCB-3	0.0013	J q	0.00021	U		0.00021			
Di	PCB-4	0.0051	U	0.0043	U		0.0043			
	PCB-5	0.0041	U	0.0037	U		0.0037			
	PCB-6	0.0081	J q	0.0033	U		0.0033			
	PCB-7	0.0037	U	0.0033	U		0.0033			
	PCB-8	0.0054	J q	0.0030	U		0.0030			
	PCB-9	0.0038	U	0.0034	U		0.0034			
	PCB-10	0.0040	U	0.0036	U		0.0036			
	PCB-11	0.0058	J q	0.0032	U		0.0032			
	PCB-12	0.0037	U C	0.0033	U C		0.0033			
	PCB-13	0.0037	U C12	0.0033	U C12		0.0033			
	PCB-14	0.0031	U	0.0028	U		0.0028			
	PCB-15	0.0088	J q	0.0036	U		0.0036			
Tri	PCB-16	0.0049	J q	0.00065	U		0.00065			
	PCB-17	0.012		0.00059	U		0.00059			
	PCB-18	0.019	J C	0.00052	U C		0.00052			
	PCB-19	0.00064	U	0.00072	U		0.00072			
	PCB-20	0.034	C B	0.00134	J C q		0.00026	0.00402	0.0067	
	PCB-21	0.0098	J C B	0.00232	J C q		0.00025	0.00696	0.0116	
	PCB-22	0.0057	J q B	0.000864	J		0.00026	0.002592	0.00432	
	PCB-23	0.0013	U	0.00026	U		0.00026			
	PCB-24	0.00044	U	0.00049	U		0.00049			
	PCB-25	0.011	J	0.00024	U		0.00024			
	PCB-26	0.0080	J q C	0.00025	U C		0.00025			
	PCB-27	0.0017	J q	0.00043	U		0.00043			
	PCB-28	0.034	C20 B	0.00134	J C20 q		0.00026	0.00402	0.0067	
	PCB-29	0.0080	J q C26	0.00025	U C26		0.00025			
	PCB-30	0.019	J C18	0.00052	U C18		0.00052			
	PCB-31	0.034		0.00025	U		0.00025			
	PCB-32	0.0068	J q	0.00041	U		0.00041			
	PCB-33	0.0098	J C21 B	0.00232	J C21 q		0.00025	0.00696	0.0116	
	PCB-34	0.0013	U	0.00027	U		0.00027			
	PCB-35	0.0013	U	0.00026	U		0.00026			
	PCB-36	0.0012	U	0.00025	U		0.00025			
	PCB-37	0.0051	J	0.00026	U		0.00026			
	PCB-38	0.0013	U	0.00027	U		0.00027			
	PCB-39	0.0012	U	0.00024	U		0.00024			

Table C.1.3.3 . Method Blank Data Validation -PCB SED BLANK 140-31989
Edgemoor Sediment and Surface Water Assessment
Edgemoor, Delaware

Homologs	Client ID	VB25-COMP-B		Applicable Method Blank						Dioxin-Like Screening Concentration
	Lab Sample ID	460-186302-9		MB 140-31989/19-B						
	Prep Date	07/08/2019 14:45:00		7/24/2019						
	Analysis Batch	Soil		140-32350						
	Analysis Date	1		8/5/2017						
	Unit	ng/g		ng/g						
	DIOXIN-1668C-SOIL	Result	Q	Result	Q	ML	EDL	3Xresult	5Xresult	
	SOIL BY 1668C									
Tetra	PCB-40	0.033	J C	0.00074	U C		0.00074			
	PCB-41	0.033	J C40	0.00074	U C40		0.00074			
	PCB-42	0.019		0.00074	U		0.00074			
	PCB-43	0.0025	U C	0.00069	U C		0.00069			
	PCB-44	0.055	C B	0.00192	J C q		0.00065	0.00576	0.0096	
	PCB-45	0.0080	J q C	0.00078	U C		0.00078			
	PCB-46	0.0033	U	0.00094	U		0.00094			
	PCB-47	0.055	C44 B	0.00192	J C44 q		0.00065	0.00576	0.0096	
	PCB-48	0.0070	J q	0.00074	U		0.00074			
	PCB-49	0.046	C	0.00060	U C		0.00060			
	PCB-50	0.0071	J q C	0.00072	U C		0.00072			
	PCB-51	0.0080	J q C45	0.00078	U C45		0.00078			
	PCB-52	0.078		0.00073	U		0.00073			
	PCB-53	0.0071	J q C50	0.00072	U C50		0.00072			
	PCB-54	0.00028	U	0.00065	U		0.00065			
	PCB-55	0.0019	U	0.00054	U		0.00054			
	PCB-56	0.013	q	0.00054	U		0.00054			
	PCB-57	0.0019	U	0.00055	U		0.00055			
	PCB-58	0.0020	U	0.00055	U		0.00055			
	PCB-59	0.0019	U C	0.00052	U C		0.00052			
	PCB-60	0.0019	U	0.00055	U		0.00055			
	PCB-61	0.066	C	0.00052	U C		0.00052			
	PCB-62	0.0019	U C59	0.00052	U C59		0.00052			
	PCB-63	0.0018	U	0.00050	U		0.00050			
	PCB-64	0.024		0.00049	U		0.00049			
	PCB-65	0.055	C44 B	0.00192	J C44 q		0.00065	0.00576	0.0096	
	PCB-66	0.034		0.00051	U		0.00051			
	PCB-67	0.0017	U	0.00047	U		0.00047			
	PCB-68	0.0017	U	0.00048	U		0.00048			
	PCB-69	0.046	C49	0.00060	U C49		0.00060			
	PCB-70	0.066	C61	0.00052	U C61		0.00052			
	PCB-71	0.033	J C40	0.00074	U C40		0.00074			
	PCB-72	0.0019	U	0.00054	U		0.00054			
	PCB-73	0.0025	U C43	0.00069	U C43		0.00069			
	PCB-74	0.066	C61	0.00052	U C61		0.00052			
	PCB-75	0.0019	U C59	0.00052	U C59		0.00052			
	PCB-76	0.066	C61	0.00052	U C61		0.00052			
	PCB-77	0.0043	J B	0.00206	J		0.00053	0.00618	0.0103	38
	PCB-78	0.0020	U	0.00055	U		0.00055			
	PCB-79	0.0017	U	0.00048	U		0.00048			
	PCB-80	0.0017	U	0.00047	U		0.00047			
	PCB-81	0.0018	U	0.00050	U		0.00050			12

Table C.1.3.3 . Method Blank Data Validation -PCB SED BLANK 140-31989
Edgemoor Sediment and Surface Water Assessment
Edgemoor, Delaware

Homologs	Client ID	VB25-COMP-B		Applicable Method Blank						Dioxin-Like Screening Concentration
	Lab Sample ID	460-186302-9		MB 140-31989/19-B						
	Prep Date	07/08/2019 14:45:00		7/24/2019						
	Analysis Batch	Soil		140-32350						
	Analysis Date	1		8/5/2017						
	Unit	ng/g		ng/g						
	DIOXIN-1668C-SOIL	Result	Q	Result	Q	ML	EDL	3Xresult	5Xresult	
	SOIL BY 1668C									
	PCB-82	0.0010	U	0.00091	U		0.00091			
	PCB-83	0.039	q C	0.00083	U C		0.00083			
	PCB-84	0.016	q	0.00092	U		0.00092			
	PCB-85	0.0035	J q C	0.00068	U C		0.00068			
	PCB-86	0.028	J q C	0.00068	U C		0.00068			
	PCB-87	0.028	J q C86	0.00068	U C86		0.00068			
	PCB-88	0.0090	J q C	0.00083	U C		0.00083			
	PCB-89	0.0010	U	0.00090	U		0.00090			
	PCB-90	0.061	C	0.00069	U C		0.00069			
	PCB-91	0.0090	J q C88	0.00083	U C88		0.00083			
	PCB-92	0.012	q	0.00078	U		0.00078			
	PCB-93	0.00088	U C	0.00079	U C		0.00079			
	PCB-94	0.0010	U	0.00089	U		0.00089			
	PCB-95	0.047		0.00086	U		0.00086			
	PCB-96	0.00075	U	0.00068	U		0.00068			
	PCB-97	0.028	J q C86	0.00068	U C86		0.00068			
	PCB-98	0.00086	U C	0.00077	U C		0.00077			
	PCB-99	0.039	q C83	0.00083	U C83		0.00083			
	PCB-100	0.00088	U C93	0.00079	U C93		0.00079			
	PCB-101	0.061	C90	0.00069	U C90		0.00069			
	PCB-102	0.00086	U C98	0.00077	U C98		0.00077			
	PCB-103	0.00088	U	0.00079	U		0.00079			
	PCB-104	0.00067	U	0.00060	U		0.00060			
Penta	PCB-105	0.011	J	0.00029	U		0.00029			120
	PCB-106	0.0018	U	0.00115	J		0.00031	0.00345	0.00575	
	PCB-107	0.0020	U	0.00033	U		0.00033			
	PCB-108	0.0019	U C	0.00164	J C q		0.00032	0.00492	0.0082	
	PCB-109	0.028	J q C86	0.00068	U C86		0.00068			
	PCB-110	0.055	q C	0.00058	U C		0.00058			
	PCB-111	0.00062	U	0.00056	U		0.00056			
	PCB-112	0.00065	U	0.00059	U		0.00059			
	PCB-113	0.061	C90	0.00069	U C90		0.00069			
	PCB-114	0.0017	U	0.00029	U		0.00029			120
	PCB-115	0.055	q C110	0.00058	U C110		0.00058			
	PCB-116	0.0035	J q C85	0.00068	U C85		0.00068			
	PCB-117	0.0035	J q C85	0.00068	U C85		0.00068			
	PCB-118	0.040		0.00028	U		0.00028			120
	PCB-119	0.028	J q C86	0.00068	U C86		0.00068			
	PCB-120	0.00063	U	0.00057	U		0.00057			
	PCB-121	0.00065	U	0.00058	U		0.00058			
	PCB-122	0.0021	U	0.00036	U		0.00036			
	PCB-123	0.0019	U	0.00031	U		0.00031			120
	PCB-124	0.0019	U C108	0.00164	J q C108		0.00032	0.00492	0.0082	
	PCB-125	0.028	J q C86	0.00068	U C86		0.00068			
	PCB-126	0.0019	U	0.00249	J q		0.00034	0.00747	0.01245	0.036
	PCB-127	0.0018	U	0.00160	J q		0.00031	0.0048	0.008	

Table C.1.3.3 . Method Blank Data Validation -PCB SED BLANK 140-31989
Edgemoor Sediment and Surface Water Assessment
Edgemoor, Delaware

o	**Client ID**	**VB25-COMP-B**		**Applicable Method Blank**						**Dioxin-Like Screening Concentration**
m	**Lab Sample ID**	460-186302-9		MB 140-31989/19-B						
o	**Prep Date**	07/08/2019 14:45:00		7/24/2019						
l	**Analysis Batch**	Soil		140-32350						
o	**Analysis Date**	1		8/5/2017						
g	**Unit**	ng/g		ng/g						
s	**DIOXIN-1668C-SOIL**	Result	Q	Result	Q	ML	EDL	3Xresult	5Xresult	
	SOIL BY 1668C									
	PCB-128	0.0045	U C	0.00069	U C		0.00069			
	PCB-129	0.051	C B	0.00303	J C q		0.00071	0.00909	0.01515	
	PCB-130	0.0061	U	0.00094	U		0.00094			
	PCB-131	0.0063	U	0.00226	J		0.00098	0.00678	0.0113	
	PCB-132	0.018		0.00092	U		0.00092			
	PCB-133	0.0058	U	0.00089	U		0.00089			
	PCB-134	0.0060	U C	0.00093	U C		0.00093			
	PCB-135	0.016	J q C	0.00049	U C		0.00049			
	PCB-136	0.0078	J	0.00036	U		0.00036			
	PCB-137	0.0052	U	0.00080	U		0.00080			
	PCB-138	0.051	C129 B	0.00303	J C129 q		0.00071	0.00909	0.01515	
	PCB-139	0.0051	U C	0.00079	U C		0.00079			
	PCB-140	0.0051	U C139	0.00079	U C139		0.00079			
	PCB-141	0.0054	U	0.00083	U		0.00083			
	PCB-142	0.0057	U	0.00089	U		0.00089			
	PCB-143	0.0060	U C134	0.00093	U C134		0.00093			
	PCB-144	0.0011	U	0.00045	U		0.00045			
	PCB-145	0.00085	U	0.00034	U		0.00034			
	PCB-146	0.014		0.00078	U		0.00078			
	PCB-147	0.056	C	0.00090	U C		0.00090			
Hexa	PCB-148	0.0012	U	0.00048	U		0.00048			
	PCB-149	0.056	C147	0.00090	U C147		0.00090			
	PCB-150	0.00082	U	0.00032	U		0.00032			
	PCB-151	0.016	J q C135	0.00049	U C135		0.00049			
	PCB-152	0.00088	U	0.00035	U		0.00035			
	PCB-153	0.042	C B	0.00162	J C q		0.00062	0.00486	0.0081	
	PCB-154	0.00097	U	0.00039	U		0.00039			
	PCB-155	0.00082	U	0.00032	U		0.00032			
	PCB-156	0.0047	U C	0.00148	J C q		0.00073	0.00444	0.0074	120
	PCB-157	0.0047	U C156	0.00148	J C156 q		0.00073	0.00444	0.0074	120
	PCB-158	0.0036	U	0.00056	U		0.00056			
	PCB-159	0.0038	U	0.00059	U		0.00059			
	PCB-160	0.051	C129 B	0.00303	J C129 q		0.00071	0.00909	0.01515	
	PCB-161	0.0038	U	0.00059	U		0.00059			
	PCB-162	0.0038	U	0.00058	U		0.00058			
	PCB-163	0.051	C129 B	0.00303	J C129 q		0.00071	0.00909	0.01515	
	PCB-164	0.0040	U	0.00147	J q		0.00062	0.00441	0.00735	
	PCB-165	0.0043	U	0.00067	U		0.00067			
	PCB-166	0.0045	U C128	0.00069	U C128		0.00069			
	PCB-167	0.0031	U	0.00046	U		0.00046			120
	PCB-168	0.042	C153 B	0.00162	J C153 q		0.00062	0.00486	0.0081	
	PCB-169	0.0030	U	0.00246	J q		0.00047	0.00738	0.0123	0.12

Table C.1.3.3 . Method Blank Data Validation -PCB SED BLANK 140-31989
Edgemoor Sediment and Surface Water Assessment
Edgemoor, Delaware

Homologs	Client ID	VB25-COMP-B		Applicable Method Blank						Dioxin-Like Screening Concentration
	Lab Sample ID	460-186302-9		MB 140-31989/19-B						
	Prep Date	07/08/2019 14:45:00		7/24/2019						
	Analysis Batch	Soil		140-32350						
	Analysis Date	1		8/5/2017						
	Unit	ng/g		ng/g						
	DIOXIN-1668C-SOIL	Result	Q	Result	Q	ML	EDL	3Xresult	5Xresult	
	SOIL BY 1668C									
Hepta	PCB-170	0.0041	U	0.00083	U		0.00083			NVP
	PCB-171	0.0039	U C	0.00320	J C		0.00079	0.0096	0.016	
	PCB-172	0.0039	U	0.00078	U		0.00078			
	PCB-173	0.0039	U C171	0.00320	J C171		0.00079	0.0096	0.016	
	PCB-174	0.014		0.00073	U		0.00073			
	PCB-175	0.0035	U	0.00071	U		0.00071			
	PCB-176	0.0027	U	0.00054	U		0.00054			
	PCB-177	0.0038	U	0.00075	U		0.00075			
	PCB-178	0.0038	U	0.00077	U		0.00077			
	PCB-179	0.0095	J	0.00057	U		0.00057			
	PCB-180	0.040	C	0.00059	U C		0.00059			NVP
	PCB-181	0.0035	U	0.00071	U		0.00071			
	PCB-182	0.0034	U	0.00068	U		0.00068			
	PCB-183	0.0068	J q C	0.00069	U C		0.00069			
	PCB-184	0.0029	U	0.00058	U		0.00058			
	PCB-185	0.0068	J q C183	0.00069	U C183		0.00069			
	PCB-186	0.0028	U	0.00056	U		0.00056			
	PCB-187	0.024		0.00066	U		0.00066			
	PCB-188	0.0025	U	0.00050	U		0.00050			
	PCB-189	0.0036	U	0.00296	J q		0.00039	0.00888	0.0148	130
	PCB-190	0.0026	U	0.00051	U		0.00051			
	PCB-191	0.0027	U	0.00053	U		0.00053			
	PCB-192	0.0030	U	0.00060	U		0.00060			
	PCB-193	0.040	C180	0.00059	U C180		0.00059			
Octa	PCB-194	0.0081	U	0.00164	J q		0.00063	0.00492	0.0082	
	PCB-195	0.0088	U	0.00069	U		0.00069			
	PCB-196	0.0029	U	0.00042	U		0.00042			
	PCB-197	0.0022	U	0.00032	U		0.00032			
	PCB-198	0.017	J q C B	0.00286	J C q		0.00043	0.00858	0.0143	
	PCB-199	0.017	J q C198 B	0.00286	J C198 q		0.00043	0.00858	0.0143	
	PCB-200	0.0020	U	0.00029	U		0.00029			
	PCB-201	0.0020	U	0.00029	U		0.00029			
	PCB-202	0.0050	J q	0.00033	U		0.00033			
	PCB-203	0.012		0.00038	U		0.00038			
	PCB-204	0.0022	U	0.00032	U		0.00032			
	PCB-205	0.0068	U	0.00178	J q		0.00053	0.00534	0.0089	
Nona	PCB-206	0.038		0.0024	U		0.0024			
	PCB-207	0.0057	U	0.0018	U		0.0018			
	PCB-208	0.019	q	0.0019	U		0.0019			
Deca	PCB-209	0.37		0.00061	U		0.00061			
As Reported by Lab	Total Monochlorobiphenyls	0.0013	J q	0.00021	U		0.00021			
	Total Dichlorobiphenyls	0.032	q	0.0043	U		0.0043			
	Total Trichlorobiphenyls	0.15	q B	0.00452	J q		0.00036	0.01356	0.0226	
	Total Tetrachlorobiphenyls	0.40	q B	0.00398	J q		0.00060	0.01194	0.0199	
	Total Pentachlorobiphenyls	0.32	q B	0.00688	J q		0.00060	0.02064	0.0344	
	Total Hexachlorobiphenyls	0.21	q B	0.0123	J q		0.00064	0.0369	0.0615	
	Total Heptachlorobiphenyls	0.094	q B	0.00616	J q		0.00064	0.01848	0.0308	
	Total Octachlorobiphenyls	0.034	q B	0.00627	J q		0.00042	0.01881	0.03135	
	Total Nonachlorobiphenyls	0.058	q	0.0024	U		0.0024			
	Total PCBs	1.72	q B	0.0517	J q		0.0012	0.1551	0.2585	230

Notes:
-- : no applicable standard found for this compound
B : Compound was found in the blank and sample.
C : The compound co-eluted with other compounds
G : The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference
J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q : The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.
U : Indicates the analyte was analyzed for but not detected.
ng/L : Nanograms per Liter
1. Totals for each homolog group at the bottom of this table were reported by Test America Laboratory.

Legend:
Result is less than 3x and 5x Method Blank - NOT VALID
Result is greater than 5x the Method Blank - VALID
Result is greater than 3x but less than 5x the Method Blank - USE WITH CAUTION
The compound co-eluted with other compounds

Data Quality Review Notes for Table C.1.3.3
PCB Sediment Blank 140-31898
Sample VB21-COMP-A
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:
Sample VB-21-COMP-A

PCB-22	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-77	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-106	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-126	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-127	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-131	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-164	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-169	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-189	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-194	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-205	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Trichlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Tetrachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Pentachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Hexachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Heptachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Octachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total PCBs	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-20, 28	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 44, 47, and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-108, 124	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 129, 138, 160, and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-156, 157	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs.
PCB-171, 173	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs.
PCB-198, 199	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 198 and 199 coelute. Count result once when calculating total PCBs and total homologs.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.3
PCB Sediment Blank 140-31898
Sample VB21-COMP-B
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:
Sample VB-21-COMP-B

PCB-22	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-77	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-131	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-164	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-194	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-205	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Trichlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Tetrachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Pentachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Hexachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Heptachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Octachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total PCBs	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-106	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate importance of data.
PCB-127	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate importance of data.
PCB-189	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate importance of data.
PCB-126	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-169	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-20, 28	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 44, 47, and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-108, 124	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 129, 138, 160, and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-156, 157	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs.
PCB-171, 173	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs.
PCB-198, 199	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 198 and 199 coelute. Count result once when calculating total PCBs and total homologs.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.3
PCB Sediment Blank 140-31898
Sample VB28-COMP-A
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:
Sample VB-28-COMP-A

PCB-22	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-106	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-127	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-131	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-164	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Trichlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Tetrachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Pentachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Heptachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total PCBs	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-77	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate importance of data.
PCB-126	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate importance of data.
PCB-194	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate importance of data.
PCB-205	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate importance of data.
PCB-169	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-189	Method blank concentration consequential to reported sample concentration. Data probably not valid.
Total Hexachlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total Octachlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
PCB-108, 124	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 129, 138, 160, and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-156, 157	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs.
PCB-20, 28	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate the importance of data. PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate the importance of data. PCB 44, 47, and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	Method blank concentration consequential to reported sample concentration. PCB 21 and 33 coelute. Data probably not valid.
PCB-171, 173	Method blank concentration consequential to reported sample concentration. PCB 171 and 173 coelute. Data probably not valid.
PCB-198, 199	Method blank concentration consequential to reported sample concentration. PCB 198 and 199 coelute. Data probably not valid.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.3
PCB Sediment Blank 140-31898
Sample VB26-COMP-A
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:
Sample VB-26-COMP-A

PCB-22	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-106	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-127	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-131	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-164	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-194	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Tetrachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-126	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate importance of data.
PCB-169	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate importance of data.
PCB-189	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate importance of data.
PCB-205	Method blank concentration inconsequential to reported sample concentration. Use data.Further evaluate importance of data.
PCB-77	Method blank concentration consequential to reported sample concentration. Data probably not valid.
Total Trichlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total Pentachlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total Hexachlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total Heptachlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total Octachlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total PCBs	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
PCB-44, 47, 65	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-108, 124	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-156, 157	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs.
PCB-20, 28	Method blank concentration inconsequential to reported sample concentration. Use data. Further evaluate the importance of data. PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	Method blank concentration inconsequential to reported sample concentration. Use data. Further evaluate the importance of data. PCB 129, 138, 160, and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	Method blank concentration consequential to reported sample concentration. Data probably not valid. PCB 21 and 33 coelute. Data probably not valid.
PCB-171, 173	Method blank concentration consequential to reported sample concentration. Data probably not valid. PCB 171 and 173 coelute. Data probably not valid.
PCB-198, 199	Method blank concentration consequential to reported sample concentration. Data probably not valid. PCB 198 and 199 coelute. Data probably not valid.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.3
PCB Sediment Blank 140-31898
Sample VB29-COMP-A
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:
Sample VB-29-COMP-A

PCB-169	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate importance of data.
PCB-22	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-77	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-106	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-126	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-127	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-131	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-164	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-189	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-194	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-205	Method blank concentration consequential to reported sample concentration. Data probably not valid.
Total Trichlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total Tetrachlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total Pentachlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total Hexachlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total Heptachlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total Octachlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total PCBs	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
PCB-20, 28	Method blank concentration consequential to reported sample concentration. PCB 20 and 28 coelute. Data probably not valid.
PCB-21, 33	Method blank concentration consequential to reported sample concentration. PCB 21 and 33 coelute. Data probably not valid.
PCB-44, 47, 65	Method blank concentration consequential to reported sample concentration. PCB 44, 47 and 65 coelute. Data probably not valid.
PCB-108, 124	Method blank concentration consequential to reported sample concentration. PCB 108 and 124 coelute. Data probably not valid.
PCB-129, 138, 160, 163	Method blank concentration consequential to reported sample concentration. PCB 129, 138, 160, and 163 coelute. Data probably not valid.
PCB-153, 168	Method blank concentration consequential to reported sample concentration. PCB 153 and 168 coelute. Data probably not valid.
PCB-156, 157	Method blank concentration consequential to reported sample concentration. PCB 156 and 157 coelute. Data probably not valid.
PCB-171, 173	Method blank concentration consequential to reported sample concentration. PCB 171 and 173 coelute. Data probably not valid.
PCB-198, 199	Method blank concentration consequential to reported sample concentration. PCB 198 and 199 coelute. Data probably not valid.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.3
PCB Sediment Blank 140-31898
Sample VB29-COMP-A
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.3
PCB Sediment Blank 140-31898
Sample VB27-COMP-B
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:
Sample VB-27-COMP-B

PCB-22	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-77	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-106	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-126	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-127	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-131	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-164	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-169	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-189	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-194	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-205	Method blank concentration consequential to reported sample concentration. Data probably not valid.
Total Trichlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total Tetrachlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total Pentachlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total Hexachlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total Heptachlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total Octachlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total PCBs	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
PCB-20, 28	Method blank concentration consequential to reported sample concentration. PCB 20 and 28 coelute. Data probably not valid.
PCB-21, 33	Method blank concentration consequential to reported sample concentration. PCB 21 and 33 coelute. Data probably not valid.
PCB-44, 47, 65	Method blank concentration consequential to reported sample concentration. PCB 44, 47 and 65 coelute. Data probably not valid.
PCB-108, 124	Method blank concentration consequential to reported sample concentration. PCB 108 and 124 coelute. Data probably not valid.
PCB-129, 138, 160, 163	Method blank concentration consequential to reported sample concentration. PCB 129, 138, 160, and 163 coelute. Data probably not valid.
PCB-153, 168	Method blank concentration consequential to reported sample concentration. PCB 153 and 168 coelute. Data probably not valid.
PCB-156, 157	Method blank concentration consequential to reported sample concentration. PCB 156 and 157 coelute. Data probably not valid.
PCB-171, 173	Method blank concentration consequential to reported sample concentration. PCB 171 and 173 coelute. Data probably not valid.
PCB-198, 199	Method blank concentration consequential to reported sample concentration. PCB 198 and 199 coelute. Data probably not valid.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.3
PCB Sediment Blank 140-31898
Sample VB27-COMP-B
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.3
PCB Sediment Blank 140-31898
Sample VB30-COMP-B
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:
Sample VB-30-COMP-B

PCB-22	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-77	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-106	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-126	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-127	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-131	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-164	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-169	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-189	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-194	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-205	Method blank concentration consequential to reported sample concentration. Data probably not valid.
Total Trichlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total Tetrachlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total Pentachlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total Hexachlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total Heptachlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total Octachlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total PCBs	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
PCB-20, 28	Method blank concentration consequential to reported sample concentration. PCB 20 and 28 coelute. Data probably not valid.
PCB-21, 33	Method blank concentration consequential to reported sample concentration. PCB 21 and 33 coelute. Data probably not valid.
PCB-44, 47, 65	Method blank concentration consequential to reported sample concentration. PCB 44, 47 and 65 coelute. Data probably not valid.
PCB-108, 124	Method blank concentration consequential to reported sample concentration. PCB 108 and 124 coelute. Data probably not valid.
PCB-129, 138, 160, 163	Method blank concentration consequential to reported sample concentration. PCB 129, 138, 160, and 163 coelute. Data probably not valid.
PCB-153, 168	Method blank concentration consequential to reported sample concentration. PCB 153 and 168 coelute. Data probably not valid.
PCB-156, 157	Method blank concentration consequential to reported sample concentration. PCB 156 and 157 coelute. Data probably not valid.
PCB-171, 173	Method blank concentration consequential to reported sample concentration. PCB 171 and 173 coelute. Data probably not valid.
PCB-198, 199	Method blank concentration consequential to reported sample concentration. PCB 198 and 199 coelute. Data probably not valid.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.3
PCB Sediment Blank 140-31898
Sample VB33-COMP-B
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:
Sample VB-33-COMP-B

PCB-22	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-77	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-106	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-126	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-127	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-131	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-164	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-169	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-189	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-194	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-205	Method blank concentration consequential to reported sample concentration. Data probably not valid.
Total Trichlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total Tetrachlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total Pentachlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total Hexachlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total Heptachlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total Octachlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total PCBs	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
PCB-20, 28	Method blank concentration consequential to reported sample concentration. PCB 20 and 28 coelute. Data probably not valid.
PCB-21, 33	Method blank concentration consequential to reported sample concentration. PCB 21 and 33 coelute. Data probably not valid.
PCB-44, 47, 65	Method blank concentration consequential to reported sample concentration. PCB 44, 47 and 65 coelute. Data probably not valid.
PCB-108, 124	Method blank concentration consequential to reported sample concentration. PCB 108 and 124 coelute. Data probably not valid.
PCB-129, 138, 160, 163	Method blank concentration consequential to reported sample concentration. PCB 129, 138, 160, and 163 coelute. Data probably not valid.
PCB-153, 168	Method blank concentration consequential to reported sample concentration. PCB 153 and 168 coelute. Data probably not valid.
PCB-156, 157	Method blank concentration consequential to reported sample concentration. PCB 156 and 157 coelute. Data probably not valid.
PCB-171, 173	Method blank concentration consequential to reported sample concentration. PCB 171 and 173 coelute. Data probably not valid.
PCB-198, 199	Method blank concentration consequential to reported sample concentration. PCB 198 and 199 coelute. Data probably not valid.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.3
PCB Sediment Blank 140-31898
Sample EB (SED)
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:
Sample EB(SED)

PCB-22	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-77	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-106	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-126	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-127	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-131	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-164	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-169	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-189	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-194	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-205	Method blank concentration consequential to reported sample concentration. Data probably not valid.
Total Trichlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total Tetrachlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total Pentachlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total Hexachlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total Heptachlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total Octachlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total PCBs	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
PCB-20, 28	Method blank concentration consequential to reported sample concentration. PCB 20 and 28 coelute. Data probably not valid.
PCB-21, 33	Method blank concentration consequential to reported sample concentration. PCB 21 and 33 coelute. Data probably not valid.
PCB-44, 47, 65	Method blank concentration consequential to reported sample concentration. PCB 44, 47 and 65 coelute. Data probably not valid.
PCB-108, 124	Method blank concentration consequential to reported sample concentration. PCB 108 and 124 coelute. Data probably not valid.
PCB-129, 138, 160, 163	Method blank concentration consequential to reported sample concentration. PCB 129, 138, 160, and 163 coelute. Data probably not valid.
PCB-153, 168	Method blank concentration consequential to reported sample concentration. PCB 153 and 168 coelute. Data probably not valid.
PCB-156, 157	Method blank concentration consequential to reported sample concentration. PCB 156 and 157 coelute. Data probably not valid.
PCB-171, 173	Method blank concentration consequential to reported sample concentration. PCB 171 and 173 coelute. Data probably not valid.
PCB-198, 199	Method blank concentration consequential to reported sample concentration. PCB 198 and 199 coelute. Data probably not valid.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.3
PCB Sediment Blank 140-31898
Sample VB31-COMP-B
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:	
Sample VB-31-COMP-B	
PCB-22	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-77	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-106	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-126	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-127	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-131	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-164	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-169	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-189	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-194	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-205	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Trichlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Tetrachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Pentachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Hexachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Heptachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Octachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total PCBs	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-20, 28	Method blank concentration inconsequential to reported sample concentration. Use Data. PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	Method blank concentration inconsequential to reported sample concentration. Use Data. PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	Method blank concentration inconsequential to reported sample concentration. Use Data. PCB 44, 47, and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-108, 124	Method blank concentration inconsequential to reported sample concentration. Use Data. PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	Method blank concentration inconsequential to reported sample concentration. Use Data. PCB 129, 138, 160, and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	Method blank concentration inconsequential to reported sample concentration. Use Data. PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-156, 157	Method blank concentration inconsequential to reported sample concentration. Use Data. PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs.
PCB-171, 173	Method blank concentration inconsequential to reported sample concentration. Use Data. PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs.
PCB-198, 199	Method blank concentration inconsequential to reported sample concentration. Use Data. PCB 198 and 199 coelute. Count result once when calculating total PCBs and total homologs.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.3
PCB Sediment Blank 140-31898
Sample VB19-COMP-B
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:
Sample VB-19-COMP-B

PCB-22	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-77	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-164	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-194	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-205	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Trichlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Tetrachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Pentachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Hexachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Heptachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Octachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total PCBs	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-131	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate importance of data.
PCB-106	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-126	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-127	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-169	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-189	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-20, 28	Method blank concentration inconsequential to reported sample concentration. Use Data. PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	Method blank concentration inconsequential to reported sample concentration. Use Data. PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	Method blank concentration inconsequential to reported sample concentration. Use Data. PCB 44, 47, and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-108, 124	Method blank concentration inconsequential to reported sample concentration. Use Data. PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	Method blank concentration inconsequential to reported sample concentration. Use Data. PCB 129, 138, 160, and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	Method blank concentration inconsequential to reported sample concentration. Use Data. PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-156, 157	Method blank concentration inconsequential to reported sample concentration. Use Data. PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs.
PCB-171, 173	Method blank concentration inconsequential to reported native concentration. Use Data. PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs.
PCB-198, 199	Method blank concentration inconsequential to reported sample concentration. Use Data. PCB 198 and 199 coelute. Count result once when calculating total PCBs and total homologs.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.3
PCB Sediment Blank 140-31898
Sample VB22-COMP-A
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:
Sample VB-22-COMP-A

PCB-106	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-131	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-164	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-169	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-194	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Trichlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Tetrachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Pentachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Hexachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Heptachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Octachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total PCBs	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-22	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate importance of data.
PCB-127	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate importance of data.
PCB-205	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate importance of data.
PCB-77	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-126	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-189	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-20, 28	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 44, 47, and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 129, 138, 160, and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-156, 157	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs.
PCB-198, 199	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 198 and 199 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate the importance of data. PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs.
PCB-108, 124	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate the importance of data. PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs.
PCB-171, 173	Method blank concentration consequential to reported sample concentration. PCB 171 and 173 coelute. Data probably not valid.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.3
PCB Sediment Blank 140-31898
Sample VB23-COMP-B
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:
Sample VB-23-COMP-B

PCB-22	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-77	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-131	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-164	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-194	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Trichlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Tetrachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Pentachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Hexachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Heptachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Octachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total PCBs	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-189	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate importance of data.
PCB-106	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-126	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-127	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-169	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-205	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-20, 28	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 44, 47, and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-108, 124	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 126, 138, 160, and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-156, 157	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs.
PCB-171, 173	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs.
PCB-198, 199	Method blank concentration inconsequential to reported native concentration. Use Data. PCB 198 and 199 coelute. Count result once when calculating total PCBs and total homologs.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.3
PCB Sediment Blank 140-31898
Sample DUP-COMP-B
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:
Sample DUP-COMP-B

PCB-22	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-164	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-194	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Trichlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Tetrachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Pentachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Hexachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Heptachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Octachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total PCBs	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-77	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate importance of data.
PCB-205	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate importance of data.
PCB-106	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-131	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-126	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-127	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-169	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-189	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-20, 28	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 44, 47, and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 129, 138, 160, and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-156, 157	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs.
PCB-171, 173	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs.
PCB-198, 199	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 198 and 199 coelute. Count result once when calculating total PCBs and total homologs.
PCB-108, 124	Method blank concentration consequential to reported native concentration. PCB 108 and 124 coelute. Data probably not valid.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.3
PCB Sediment Blank 140-31898
Sample VB24-COMP-A
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:	
Sample VB24-COMP-A	
PCB-22	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-106	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-127	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-164	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-194	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-205	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Trichlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Tetrachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Pentachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Hexachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Heptachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total PCBs	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-77	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate importance of data.
PCB-126	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate importance of data.
PCB-169	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate importance of data.
PCB-189	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate importance of data.
PCB-131	Method blank concentration consequential to reported sample concentration. Data probably not valid.
Total Octachlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
PCB-20, 28	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 44, 47, and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-108, 124	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 129, 138, 160, and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-156, 157	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs.
PCB-198, 199	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate the importance of data. PCB 198 and 199 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	Method blank concentration consequential to reported sample concentration. PCB 21 and 33 coelute. Data probably not valid.
PCB-171, 173	Method blank concentration consequential to reported sample concentration. PCB 171 and 173 coelute. Data probably not valid.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.3
PCB Sediment Blank 140-31898
Sample VB25-COMP-A
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:
Sample VB25-COMP-A

PCB-22	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-77	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-106	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-127	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-131	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-164	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-169	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-189	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-194	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-205	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Trichlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Tetrachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Pentachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Hexachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Heptachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Octachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total PCBs	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-126	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate importance of data.
PCB-20, 28	Method blank concentration inconsequential to reported sample concentration. Use data PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	Method blank concentration inconsequential to reported sample concentration. Use data PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	Method blank concentration inconsequential to reported sample concentration. Use data PCB 44, 47, and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-108, 124	Method blank concentration inconsequential to reported sample concentration. Use data PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 129, 138, 160, and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	Method blank concentration inconsequential to reported sample concentration. Use data PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-156, 157	Method blank concentration inconsequential to reported sample concentration. Use data PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs.
PCB-171, 173	Method blank concentration inconsequential to reported sample concentration. Use data PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs.
PCB-198, 199	Method blank concentration inconsequential to reported native concentration. Use Data. PCB 198 and 199 coelute. Count result once when calculating total PCBs and total homologs.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.3
PCB Sediment Blank 140-31898
Sample VB25-COMP-B
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes: Sample VB25-COMP-B	
PCB-22	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Trichlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Tetrachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Pentachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Hexachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Heptachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Octachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total PCBs	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-194	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate importance of data.
PCB-205	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate importance of data.
PCB-77	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-106	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-126	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-127	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-131	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-164	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-169	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-189	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-20, 28	Method blank concentration inconsequential to reported sample concentration. Use Data. PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	Method blank concentration inconsequential to reported sample concentration. Use Data. PCB 44, 47, and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	Method blank concentration inconsequential to reported sample concentration. Use Data. PCB 129, 138, 160, and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	Method blank concentration inconsequential to reported sample concentration. Use Data. PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-198, 199	Method blank concentration inconsequential to reported sample concentration. Use Data. PCB 198 and 199 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate the importance of data. PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs.
PCB-156, 157	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate the importance of data. PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs.
PCB-108, 124	Method blank concentration consequential to reported sample concentration. PCB 108 and 124 coelute. Data probably not valid.
PCB-171, 173	Method blank concentration consequential to reported sample concentration. PCB 171 and 173 coelute. Data probably not valid.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	PCB 61, 70, and 74, 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	PCB 90, 101, and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.

Table C.1.3.4. Method Blank Data Validation -PCB SW BLANK 140-31852
Edgemoor Sediment and Surface Water Quality Assessment
Edgmoor, Delaware

H	**Client ID**	**SW1**		**SW-2**		**SW-3**		**SW-4**		**SW-5**		**Applicable Method Blank**					**Dioxin-Like Screening Concentration**
o	**Lab Sample ID**	460-185785-1		460-186095-2		460-186096-2		460-186302-1		460-186429-11		MB 140-31852/13-A					
m	**Batch**	07/01/2019 11:35:00		07/02/2019 08:45:00		07/03/2019 09:00:00		07/08/2019 08:15:00		07/09/2019 15:00:00		140-31852					
o	**Matrix**	Water		Water		Water		Water		Water		7/19/2019					
l	**Dilution Factor**	1		1		1		1		1		140-32020					
o	**Unit**	ng/l		ng/l		ng/l		ng/l		ng/l		ng/L					
g	**DIOXIN-1668C-SOIL**	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	EDL	3Xresult	5Xresult	
s	**SOIL BY 1668C**																
Mono	PCB-1	0.00054	U	0.00058	U	0.0043	J q	0.00057	U	0.0026	J q	0.00040	U	0.00040			
	PCB-2	0.00063	U	0.00067	U	0.0050	J q	0.00066	U	0.0042	J q	0.00046	U	0.00046			
	PCB-3	0.00071	U	0.0038	J	0.0070	J q	0.00071	U	0.00060	U	0.00050	U	0.00050			
Di	PCB-4	0.064	q	0.038	J q	0.036	J	0.042	J q	0.036	J q	0.0073	U	0.0073			
	PCB-5	0.0050	U	0.0076	U	0.0053	U	0.0064	U	0.0066	U	0.0051	U	0.0051			
	PCB-6	0.0044	U	0.0067	U	0.012	J q	0.0057	U	0.0058	U	0.0045	U	0.0045			
	PCB-7	0.0045	U	0.0068	U	0.0048	U	0.0058	U	0.0060	U	0.0046	U	0.0046			
	PCB-8	0.0064	J q B	0.011	J q B	0.028	J B	0.0084	J q B	0.013	J q B	0.0132	J q	0.0042	0.0396	0.066	
	PCB-9	0.0047	U	0.0070	U	0.0049	U	0.0059	U	0.0061	U	0.0047	U	0.0047			
	PCB-10	0.0050	U	0.0075	U	0.0052	U	0.0063	U	0.0065	U	0.0051	U	0.0051			
	PCB-11	0.048	J B	0.061	J q B	0.068	B	0.052	J B	0.052	J B	0.0358	J q	0.0044	0.1074	0.179	
	PCB-12	0.0045	U C	0.0074	J q C	0.0047	U	0.0057	U C	0.0072	J q C	0.0046	U	0.0046			
	PCB-13	0.0045	U C12	0.0074	J q C12	0.0047	U	0.0057	U C12	0.0072	J q C12	0.0046	U	0.0046			
	PCB-14	0.0038	U	0.0057	U	0.0040	U	0.0049	U	0.0050	U	0.0039	U	0.0039			
	PCB-15	0.014	J q	0.019	J q	0.058		0.014	J q	0.023	J q	0.0044	U	0.0044			
Tri	PCB-16	0.014	J q	0.013	J q	0.030	J	0.012	J q	0.021	J	0.0017	U	0.0017			
	PCB-17	0.027	J q	0.024	J	0.049		0.024	J	0.026	J q	0.0015	U	0.0015			
	PCB-18	0.042	J q C	0.058	J C	0.11		0.047	J C	0.051	J C	0.0013	U	0.0013			
	PCB-19	0.020	J	0.013	J q	0.028	J q	0.025	J	0.022	J	0.0018	U	0.0018			
	PCB-20	0.042	J C B	0.061	J C B	0.19	B	0.046	J C B	0.067	J C B	0.00513	J	0.00071	0.01539	0.02565	
	PCB-21	0.0064	J q C B	0.0078	J q C B	0.023	J B	0.0078	J C B	0.012	J C B	0.00319	J q	0.00069	0.00957	0.01595	
	PCB-22	0.0059	J B	0.0073	J B	0.024	J B	0.0071	J B	0.011	J B	0.00403	J	0.00072	0.01209	0.02015	
	PCB-23	0.00081	U	0.0010	U	0.0012	U	0.0020	U	0.0015	U	0.00072	U	0.00072			
	PCB-24	0.0017	U	0.0027	U	0.0017	U	0.0023	U	0.0026	U	0.0013	U	0.0013			
	PCB-25	0.0090	J	0.0087	J q	0.033	J	0.0086	J	0.012	J	0.00065	U	0.00065			
	PCB-26	0.012	J C	0.015	J C	0.049	J	0.012	J C	0.016	J C	0.00069	U	0.00069			
	PCB-27	0.0093	J q	0.015	J	0.026	J	0.012	J q	0.015	J q	0.0011	U	0.0011			
	PCB-28	0.042	J C20 B	0.061	J C20 B	0.19	B	0.046	J C20 B	0.067	J C20 B	0.00513	J	0.00071	0.01539	0.02565	
	PCB-29	0.012	J C26	0.015	J C26	0.049	J	0.012	J C26	0.016	J C26	0.00069	U	0.00069			
	PCB-30	0.042	J q C18	0.058	J C18	0.11		0.047	J C18	0.051	J C18	0.0013	U	0.0013			
	PCB-31	0.032	J B	0.043	J B	0.11	B	0.028	J B	0.038	J q B	0.00390	J	0.00069	0.0117	0.0195	
	PCB-32	0.026	J	0.024	J q	0.062	q	0.022	J q	0.022	J q	0.0010	U	0.0010			
	PCB-33	0.0064	J q C21 B	0.0078	J q C21 B	0.023	J B	0.0078	J C21 B	0.012	J C21 B	0.00319	J q	0.00069	0.00957	0.01595	
	PCB-34	0.00084	U	0.0011	U	0.0013	U	0.0021	U	0.0015	U	0.00074	U	0.00074			
	PCB-35	0.0021	J q	0.0037	J	0.0058	J	0.0048	J	0.0052	J q	0.00072	U	0.00072			
	PCB-36	0.00079	U	0.0010	U	0.0012	U	0.0020	U	0.0014	U	0.00070	U	0.00070			
	PCB-37	0.0063	J B	0.014	J B	0.043	J B	0.0074	J q B	0.013	J B	0.00216	J	0.00072	0.00648	0.0108	
	PCB-38	0.00085	U	0.0011	U	0.0013	U	0.0021	U	0.0015	U	0.00075	U	0.00075			
	PCB-39	0.00076	U	0.00096	U	0.0011	U	0.0019	U	0.0014	U	0.00067	U	0.00067			

Table C.1.3.4. Method Blank Data Validation -PCB SW BLANK 140-31852
Edgemoor Sediment and Surface Water Quality Assessment
Edgmoor, Delaware

Homologs	Client ID	SW1		SW-2		SW-3		SW-4		SW-5		Applicable Method Blank					Dioxin-Like Screening Concentration
	Lab Sample ID	460-185785-1		460-186095-2		460-186096-2		460-186302-1		460-186429-11		MB 140-31852/13-A					
	Batch	07/01/2019 11:35:00		07/02/2019 08:45:00		07/03/2019 09:00:00		07/08/2019 08:15:00		07/09/2019 15:00:00		140-31852					
	Matrix	Water		Water		Water		Water		Water		7/19/2019					
	Dilution Factor	1		1		1		1		1		140-32020					
	Unit	ng/l		ng/l		ng/l		ng/l		ng/l		ng/L					
	DIOXIN-1668C-SOIL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	EDL	3Xresult	5Xresult	
	SOIL BY 1668C																
	PCB-40	0.033	J q C	0.074	J C	0.22		0.052	J C	0.079	J C	0.0024	U	0.0024			
	PCB-41	0.033	J q C40	0.074	J C40	0.22		0.052	J C40	0.079	J C40	0.0024	U	0.0024			
	PCB-42	0.018	J q	0.034	J	0.10		0.025	J q	0.035	J	0.0024	U	0.0024			
	PCB-43	0.0021	U C	0.0060	J C	0.0089	J q	0.0035	U C	0.0036	U C	0.0022	U	0.0022			
	PCB-44	0.077	J C B	0.13	J C B	0.48	B	0.14	C B	0.15	C B	0.0172	J	0.0021	0.0516	0.086	
	PCB-45	0.023	J q C	0.029	J C	0.10		0.021	J q C	0.036	J C	0.0025	U	0.0025			
	PCB-46	0.0062	J q	0.0083	J	0.029	J	0.0047	U	0.0049	U	0.0030	U	0.0030			
	PCB-47	0.077	J C44 B	0.13	J C44 B	0.48	B	0.14	C44 B	0.15	C44 B	0.0172	J	0.0021	0.0516	0.086	
	PCB-48	0.0083	J	0.014	J	0.042	J	0.031	J	0.013	J q	0.0024	U	0.0024			
	PCB-49	0.059	J C	0.10	C	0.33		0.063	J C	0.11	C	0.0019	U	0.0019			
	PCB-50	0.016	J C	0.023	J C	0.061	J q	0.020	J C	0.033	J C	0.0023	U	0.0023			
	PCB-51	0.023	J q C45	0.029	J C45	0.10		0.021	J q C45	0.036	J C45	0.0025	U	0.0025			
	PCB-52	0.095		0.16		0.55		0.10		0.19		0.0023	U	0.0023			
	PCB-53	0.016	J C50	0.023	J C50	0.061	J q	0.020	J C50	0.033	J C50	0.0023	U	0.0023			
	PCB-54	0.0014	U	0.0029	U	0.0016	U	0.0022	U	0.0025	U	0.0014	U	0.0014			
	PCB-55	0.0017	U	0.0016	U	0.0020	U	0.0027	U	0.0028	U	0.0017	U	0.0017			
	PCB-56	0.017	J	0.037	J	0.11		0.018	J q	0.032	J q	0.0017	U	0.0017			
	PCB-57	0.0017	U	0.0016	U	0.0021	U	0.0028	U	0.0028	U	0.0017	U	0.0017			
	PCB-58	0.0017	U	0.0016	U	0.0036	J q	0.0028	U	0.0029	U	0.0018	U	0.0018			
	PCB-59	0.0083	J C	0.010	J C	0.035	J	0.029	J q C	0.0088	J q C	0.0017	U	0.0017			
	PCB-60	0.0063	J q	0.0099	J q	0.020	J q	0.0058	J q	0.0076	J q	0.0018	U	0.0018			
Tetra	PCB-61	0.061	J C B	0.12	J C B	0.39	B	0.063	J C B	0.13	J C B	0.00836	J q	0.0016	0.02508	0.0418	
	PCB-62	0.0083	J C59	0.010	J C59	0.035	J	0.029	J q C59	0.0088	J q C59	0.0017	U	0.0017			
	PCB-63	0.0015	U	0.0043	J	0.011	J	0.0025	U	0.0026	U	0.0016	U	0.0016			
	PCB-64	0.026	J	0.042	J	0.14		0.031	J	0.053		0.0016	U	0.0016			
	PCB-65	0.077	J C44 B	0.13	J C44 B	0.48	B	0.14	C44 B	0.15	C44 B	0.0172	J	0.0021	0.0516	0.086	
	PCB-66	0.034	J B	0.079	B	0.26	B	0.043	J B	0.074	B	0.0116	J q	0.0016	0.0348	0.058	
	PCB-67	0.0015	U	0.0014	U	0.0065	J q	0.0024	U	0.0025	U	0.0015	U	0.0015			
	PCB-68	0.0015	U	0.0038	J	0.024	J	0.0024	U	0.0055	J q	0.0015	U	0.0015			
	PCB-69	0.059	J C49	0.10	C49	0.33		0.063	J C49	0.11	C49	0.0019	U	0.0019			
	PCB-70	0.061	J C61 B	0.12	J C61 B	0.39	B	0.063	J C61 B	0.13	J C61 B	0.00836	J q	0.0016	0.02508	0.0418	
	PCB-71	0.033	J q C40	0.074	J C40	0.22		0.052	J C40	0.079	J C40	0.0024	U	0.0024			
	PCB-72	0.0017	U	0.0038	J q	0.011	J	0.0027	U	0.0028	U	0.0017	U	0.0017			
	PCB-73	0.0021	U C43	0.0060	J C43	0.0089	J q	0.0035	U C43	0.0036	U C43	0.0022	U	0.0022			
	PCB-74	0.061	J C61 B	0.12	J C61 B	0.39	B	0.063	J C61 B	0.13	J C61 B	0.00836	J q	0.0016	0.02508	0.0418	
	PCB-75	0.0083	J C59	0.010	J C59	0.035	J	0.029	J q C59	0.0088	J q C59	0.0017	U	0.0017			
	PCB-76	0.061	J C61 B	0.12	J C61 B	0.39	B	0.063	J C61 B	0.13	J C61 B	0.00836	J q	0.0016	0.02508	0.0418	
	PCB-77	0.0047	J q B	0.0077	J B	0.026	J B	0.011	J q B	0.011	J B	0.00408	J	0.0017	0.01224	0.0204	38
	PCB-78	0.0017	U	0.0016	U	0.0021	U	0.0028	U	0.0029	U	0.0018	U	0.0018			
	PCB-79	0.0015	U	0.0014	U	0.0059	J	0.0024	U	0.0025	U	0.0015	U	0.0015			
	PCB-80	0.0015	U	0.0014	U	0.0018	U	0.0024	U	0.0024	U	0.0015	U	0.0015			
	PCB-81	0.0015	U	0.0015	U	0.0019	U	0.0026	U	0.0026	U	0.0016	U	0.0016			12

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Table C.1.3.4. Method Blank Data Validation -PCB SW BLANK 140-31852
Edgemoor Sediment and Surface Water Quality Assessment
Edgmoor, Delaware

Homologs	Client ID	SW1		SW-2		SW-3		SW-4		SW-5		Applicable Method Blank					Dioxin-Like Screening Concentration
	Lab Sample ID	460-185785-1		460-186095-2		460-186096-2		460-186302-1		460-186429-11		MB 140-31852/13-A					
	Batch	07/01/2019 11:35:00		07/02/2019 08:45:00		07/03/2019 09:00:00		07/08/2019 08:15:00		07/09/2019 15:00:00		140-31852					
	Matrix	Water		Water		Water		Water		Water		7/19/2019					
	Dilution Factor	1		1		1		1		1		140-32020					
	Unit	ng/l		ng/l		ng/l		ng/l		ng/l		ng/L					
	DIOXIN-1668C-SOIL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	EDL	3Xresult	5Xresult	
	SOIL BY 1668C																
	PCB-82	0.010	J q	0.0027	U	0.055		0.016	J q	0.029	J	0.0020	U	0.0020			
	PCB-83	0.049	J C	0.14	C	0.52		0.068	J C	0.16	C	0.0018	U	0.0018			
	PCB-84	0.022	J B	0.054	q B	0.18	B	0.038	J q B	0.056	q B	0.0157	J q	0.0020	0.0471	0.0785	
	PCB-85	0.010	J q C	0.021	J C	0.083	J q	0.021	J q C	0.029	J q C	0.0015	U	0.0015			
	PCB-86	0.039	J q C	0.11	J C	0.36		0.063	J q C	0.11	J C	0.0015	U	0.0015			
	PCB-87	0.039	J q C86	0.11	J C86	0.36		0.063	J q C86	0.11	J C86	0.0015	U	0.0015			
	PCB-88	0.019	J C	0.042	J C	0.15		0.042	J C	0.053	J C	0.0018	U	0.0018			
	PCB-89	0.0016	U	0.0026	U	0.0016	U	0.0035	U	0.0026	U	0.0019	U	0.0019			
	PCB-90	0.075	J C B	0.19	C B	0.68	B	0.094	J C B	0.16	q C B	0.00742	J	0.0015	0.02226	0.0371	
	PCB-91	0.019	J C88	0.042	J C88	0.15		0.042	J C88	0.053	J C88	0.0018	U	0.0018			
	PCB-92	0.012	J q	0.030	J q	0.14		0.021	J	0.044	J	0.0017	U	0.0017			
	PCB-93	0.0052	J C	0.0067	J q C	0.028	J q	0.0097	J C	0.017	J q C	0.0017	U	0.0017			
	PCB-94	0.0016	U	0.0026	U	0.0016	U	0.0034	U	0.0044	J q	0.0019	U	0.0019			
	PCB-95	0.070	q	0.20		0.64		0.11		0.20		0.0019	U	0.0019			
	PCB-96	0.0012	U	0.0020	U	0.0012	U	0.0026	U	0.0020	U	0.0015	U	0.0015			
	PCB-97	0.039	J q C86	0.11	J C86	0.36		0.063	J q C86	0.11	J C86	0.0015	U	0.0015			
	PCB-98	0.0055	J C	0.0097	J q C	0.019	J q	0.013	J q C	0.014	J q C	0.0017	U	0.0017			
	PCB-99	0.049	J C83	0.14	C83	0.52		0.068	J C83	0.16	C83	0.0018	U	0.0018			
	PCB-100	0.0052	J C93	0.0067	J q C93	0.028	J q	0.0097	J C93	0.017	J q C93	0.0017	U	0.0017			
	PCB-101	0.075	J C90 B	0.19	C90 B	0.68	B	0.094	J C90 B	0.16	q C90 B	0.00742	J	0.0015	0.02226	0.0371	
	PCB-102	0.0055	J C98	0.0097	J q C98	0.019	J q	0.013	J q C98	0.014	J q C98	0.0017	U	0.0017			
	PCB-103	0.0015	U	0.0023	U	0.020	J q	0.0030	U	0.024	J q	0.0017	U	0.0017			
Penta	PCB-104	0.0011	U	0.0018	U	0.0011	U	0.0023	U	0.0017	U	0.0013	U	0.0013			
	PCB-105	0.014	J	0.044	J	0.13		0.016	J q	0.036	J	0.0011	U	0.0011			120
	PCB-106	0.00091	U	0.0014	U	0.0012	U	0.0016	U	0.0029	U	0.0011	U	0.0011			
	PCB-107	0.0050	J B	0.0086	J q B	0.051	B	0.0018	U	0.011	J q B	0.00347	J	0.0011	0.01041	0.01735	
	PCB-108	0.0034	J q C B	0.0035	J q C B	0.013	J B	0.0045	J q C B	0.0030	U C	0.00424	J	0.0011	0.01272	0.0212	
	PCB-109	0.039	J q C86	0.11	J C86	0.36		0.063	J q C86	0.11	J C86	0.0015	U	0.0015			
	PCB-110	0.085	C B	0.23	C B	0.78	B	0.12	C B	0.21	C B	0.00535	J q	0.0012	0.01605	0.02675	
	PCB-111	0.0010	U	0.0016	U	0.00099	U	0.0021	U	0.0016	U	0.0012	U	0.0012			
	PCB-112	0.0011	U	0.0017	U	0.0010	U	0.0023	U	0.0017	U	0.0013	U	0.0013			
	PCB-113	0.075	J C90 B	0.19	C90 B	0.68	B	0.094	J C90 B	0.16	q C90 B	0.00742	J	0.0015	0.02226	0.0371	
	PCB-114	0.00085	U	0.0013	U	0.0034	J q B	0.0016	U	0.0028	U	0.00385	J q	0.00098	0.01155	0.01925	120
	PCB-115	0.085	C110 B	0.23	C110 B	0.78	B	0.12	C110 B	0.21	C110 B	0.00535	J q	0.0012	0.01605	0.02675	
	PCB-116	0.010	J q C85	0.021	J C85	0.083	J q	0.021	J q C85	0.029	J q C85	0.0015	U	0.0015			
	PCB-117	0.010	J q C85	0.021	J C85	0.083	J q	0.021	J q C85	0.029	J q C85	0.0015	U	0.0015			
	PCB-118	0.042	J B	0.13	B	0.44	B	0.054	B	0.097	B	0.00453	J	0.0010	0.01359	0.02265	120
	PCB-119	0.039	J q C86	0.11	J C86	0.36		0.063	J q C86	0.11	J C86	0.0015	U	0.0015			
	PCB-120	0.0010	U	0.0017	U	0.0056	J q	0.0022	U	0.0050	J q	0.0012	U	0.0012			
	PCB-121	0.0011	U	0.0017	U	0.0010	U	0.0022	U	0.0017	U	0.0013	U	0.0013			
	PCB-122	0.0010	U	0.0016	U	0.0067	J q	0.0019	U	0.0034	U	0.0012	U	0.0012			
	PCB-123	0.00093	U	0.0014	U	0.0064	J q	0.0017	U	0.0029	U	0.0011	U	0.0011			120
	PCB-124	0.0034	J q C108 B	0.0035	J q C108 B	0.013	J B	0.0045	J q C108 B	0.0030	U C108	0.00424	J	0.0011	0.01272	0.0212	
	PCB-125	0.039	J q C86	0.11	J C86	0.36		0.063	J q C86	0.11	J C86	0.0015	U	0.0015			
	PCB-126	0.00094	U	0.0014	U	0.0012	U	0.0017	U	0.0031	U	0.00537	J	0.0011	0.01611	0.02685	0.036
	PCB-127	0.00090	U	0.0014	U	0.0012	U	0.0016	U	0.0029	U	0.00285	J q	0.0011	0.00855	0.01425	

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Table C.1.3.4. Method Blank Data Validation -PCB SW BLANK 140-31852
Edgemoor Sediment and Surface Water Quality Assessment
Edgmoor, Delaware

Homologs	Client ID	SW1		SW-2		SW-3		SW-4		SW-5		Applicable Method Blank					Dioxin-Like Screening Concentration
	Lab Sample ID	460-185785-1		460-186095-2		460-186096-2		460-186302-1		460-186429-11		MB 140-31852/13-A					
	Batch	07/01/2019 11:35:00		07/02/2019 08:45:00		07/03/2019 09:00:00		07/08/2019 08:15:00		07/09/2019 15:00:00		140-31852					
	Matrix	Water		Water		Water		Water		Water		7/19/2019					
	Dilution Factor	1		1		1		1		1		140-32020					
	Unit	ng/l		ng/l		ng/l		ng/l		ng/l		ng/L					
	DIOXIN-1668C-SOIL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	EDL	3Xresult	5Xresult	
	SOIL BY 1668C																
	PCB-128	0.011	J q C B	0.027	J q C B	0.097	B	0.015	J C B	0.025	J q C B	0.00712	J	0.0019	0.02136	0.0356	
	PCB-129	0.074	J C B	0.30	C B	0.78	B	0.098	J C B	0.19	C B	0.0108	J	0.0019	0.0324	0.054	
	PCB-130	0.0031	U	0.0092	J q	0.049		0.0059	J q	0.0078	U	0.0026	U	0.0026			
	PCB-131	0.0032	U	0.0049	U	0.0039	U	0.0031	U	0.0081	U	0.0027	U	0.0027			
	PCB-132	0.023	J	0.076		0.24		0.040	J	0.062		0.0025	U	0.0025			
	PCB-133	0.0029	U	0.0044	U	0.021	J	0.0028	U	0.0074	U	0.0024	U	0.0024			
	PCB-134	0.0030	U C	0.014	J C	0.038	J	0.011	J C	0.0077	U C	0.0025	U	0.0025			
	PCB-135	0.027	J C	0.099	C	0.29		0.043	J q C	0.084	J C	0.0023	U	0.0023			
	PCB-136	0.013	J	0.034	J q	0.12		0.017	J q	0.036	J	0.0016	U	0.0016			
	PCB-137	0.0026	U	0.0040	U	0.023	J	0.0050	J q	0.0067	U	0.0022	U	0.0022			
	PCB-138	0.074	J C129 B	0.30	C129 B	0.78	B	0.098	J C129 B	0.19	C129 B	0.0108	J	0.0019	0.0324	0.054	
	PCB-139	0.0026	U C	0.0039	U C	0.014	J	0.0025	U C	0.0066	U C	0.0022	U	0.0022			
	PCB-140	0.0026	U C139	0.0039	U C139	0.014	J	0.0025	U C139	0.0066	U C139	0.0022	U	0.0022			
	PCB-141	0.0099	J	0.057		0.11		0.019	J	0.031	J q	0.0023	U	0.0023			
	PCB-142	0.0029	U	0.0044	U	0.0036	U	0.0028	U	0.0074	U	0.0024	U	0.0024			
	PCB-143	0.0030	U C134	0.014	J C134	0.038	J	0.011	J C134	0.0077	U C134	0.0025	U	0.0025			
	PCB-144	0.0013	U	0.0026	U	0.024	J	0.0036	U	0.0036	U	0.0020	U	0.0020			
	PCB-145	0.00095	U	0.0020	U	0.00072	U	0.0028	U	0.0027	U	0.0015	U	0.0015			
	PCB-146	0.016	J	0.053		0.19		0.025	J	0.045	J	0.0021	U	0.0021			
	PCB-147	0.075	J C	0.29	C	0.84		0.12	C	0.22	C	0.0024	U	0.0024			
Hexa	PCB-148	0.0013	U	0.0028	U	0.0046	J	0.0039	U	0.0039	U	0.0022	U	0.0022			
	PCB-149	0.075	J C147	0.29	C147	0.84		0.12	C147	0.22	C147	0.0024	U	0.0024			
	PCB-150	0.00091	U	0.0019	U	0.0054	J q	0.0026	U	0.0026	U	0.0015	U	0.0015			
	PCB-151	0.027	J C135	0.099	C135	0.29		0.043	J q C135	0.084	J C135	0.0023	U	0.0023			
	PCB-152	0.00098	U	0.0021	U	0.0015	J q	0.0028	U	0.0028	U	0.0016	U	0.0016			
	PCB-153	0.071	J C B	0.27	C B	0.76	B	0.096	C B	0.19	C B	0.00814	J	0.0017	0.02442	0.0407	
	PCB-154	0.0055	J	0.0023	U	0.042	J	0.0031	U	0.012	J q	0.0018	U	0.0018			
	PCB-155	0.00092	U	0.0019	U	0.0042	J	0.0026	U	0.0026	U	0.0015	U	0.0015			
	PCB-156	0.0097	J q C B	0.026	J C B	0.059	J B	0.011	J C B	0.017	J C B	0.00785	J	0.0019	0.02355	0.03925	120
	PCB-157	0.0097	J q C156 B	0.026	J C156 B	0.059	J B	0.011	J C156 B	0.017	J C156 B	0.00785	J	0.0019	0.02355	0.03925	120
	PCB-158	0.0044	J	0.023	J	0.055		0.0068	J	0.0047	U	0.0015	U	0.0015			
	PCB-159	0.0019	U	0.0029	U	0.0024	U	0.0019	U	0.0049	U	0.0016	U	0.0016			
	PCB-160	0.074	J C129 B	0.30	C129 B	0.78	B	0.098	J C129 B	0.19	C129 B	0.0108	J	0.0019	0.0324	0.054	
	PCB-161	0.0019	U	0.0029	U	0.0024	U	0.0019	U	0.0049	U	0.0016	U	0.0016			
	PCB-162	0.0019	U	0.0029	U	0.0081	J	0.0018	U	0.0048	U	0.0016	U	0.0016			
	PCB-163	0.074	J C129 B	0.30	C129 B	0.78	B	0.098	J C129 B	0.19	C129 B	0.0108	J	0.0019	0.0324	0.054	
	PCB-164	0.0056	J q	0.020	J	0.054		0.0085	J	0.0052	U	0.0017	U	0.0017			
	PCB-165	0.0022	U	0.0033	U	0.0027	U	0.0021	U	0.0056	U	0.0018	U	0.0018			
	PCB-166	0.011	J q C128 B	0.027	J q C128 B	0.097	B	0.015	J C128 B	0.025	J q C128 B	0.00712	J	0.0019	0.02136	0.0356	
	PCB-167	0.0015	U	0.0023	U	0.021	J	0.0015	U	0.0040	U	0.0013	U	0.0013			120
	PCB-168	0.071	J C153 B	0.27	C153 B	0.76	B	0.096	C153 B	0.19	C153 B	0.00814	J	0.0017	0.02442	0.0407	
	PCB-169	0.0014	U	0.0024	U	0.0019	U	0.0014	U	0.0038	U	0.00671	J	0.0014	0.02013	0.03355	0.12

Table C.1.3.4. Method Blank Data Validation -PCB SW BLANK 140-31852
Edgemoor Sediment and Surface Water Quality Assessment
Edgmoor, Delaware

Homologs	Client ID	SW1		SW-2		SW-3		SW-4		SW-5		Applicable Method Blank					Dioxin-Like Screening Concentration
	Lab Sample ID	460-185785-1		460-186095-2		460-186096-2		460-186302-1		460-186429-11		MB 140-31852/13-A					
	Batch	07/01/2019 11:35:00		07/02/2019 08:45:00		07/03/2019 09:00:00		07/08/2019 08:15:00		07/09/2019 15:00:00		140-31852					
	Matrix	Water		Water		Water		Water		Water		7/19/2019					
	Dilution Factor	1		1		1		1		1		140-32020					
	Unit	ng/l		ng/l		ng/l		ng/l		ng/l		ng/L					
	DIOXIN-1668C-SOIL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	EDL	3Xresult	5Xresult	
	SOIL BY 1668C																
Hepta	PCB-170	0.020	J	0.13		0.23		0.031	J	0.099		0.0033	U	0.0033			NVP
	PCB-171	0.0063	J C	0.026	J q C	0.049	J	0.0043	U C	0.036	J C	0.0030	U	0.0030			
	PCB-172	0.0048	J q	0.038	J	0.039	J	0.0043	U	0.032	J q	0.0029	U	0.0029			
	PCB-173	0.0063	J C171	0.026	J q C171	0.049	J	0.0043	U C171	0.036	J C171	0.0030	U	0.0030			
	PCB-174	0.025	J	0.11		0.22		0.029	J q	0.077		0.0028	U	0.0028			
	PCB-175	0.0011	U	0.0018	U	0.0088	J	0.0039	U	0.013	J q	0.0027	U	0.0027			
	PCB-176	0.00085	U	0.014	J	0.027	J	0.0029	U	0.0028	U	0.0020	U	0.0020			
	PCB-177	0.015	J	0.055	q	0.15		0.012	J q	0.046	J q	0.0028	U	0.0028			
	PCB-178	0.0054	J	0.024	J	0.053	q	0.0083	J	0.020	J	0.0029	U	0.0029			
	PCB-179	0.010	J q	0.046		0.11		0.014	J q	0.039	J	0.0021	U	0.0021			
	PCB-180	0.051	J C	0.26	C	0.48		0.071	J C	0.16	C	0.0022	U	0.0022			NVP
	PCB-181	0.0011	U	0.0018	U	0.00046	U	0.0039	U	0.0037	U	0.0027	U	0.0027			
	PCB-182	0.0011	U	0.0017	U	0.00045	U	0.0037	U	0.0036	U	0.0026	U	0.0026			
	PCB-183	0.016	J q C	0.072	J C	0.15		0.022	J C	0.067	J C	0.0026	U	0.0026			
	PCB-184	0.00092	U	0.0015	U	0.00038	U	0.0032	U	0.0031	U	0.0022	U	0.0022			
	PCB-185	0.016	J q C183	0.072	J C183	0.15		0.022	J C183	0.067	J C183	0.0026	U	0.0026			
	PCB-186	0.00089	U	0.0014	U	0.00037	U	0.0031	U	0.0030	U	0.0021	U	0.0021			
	PCB-187	0.039	J	0.16		0.37		0.041	J	0.11		0.0025	U	0.0025			
	PCB-188	0.00079	U	0.0013	U	0.0031	J q	0.0027	U	0.0027	U	0.0018	U	0.0018			
	PCB-189	0.0017	U	0.0017	U	0.0033	U	0.0014	U	0.0063	J q B	0.00430	J	0.0011	0.0129	0.0215	130
	PCB-190	0.0046	J q	0.028	J	0.038	J	0.0028	U	0.028	J q	0.0019	U	0.0019			
	PCB-191	0.00084	U	0.0078	J q	0.0067	J q	0.0029	U	0.0028	U	0.0020	U	0.0020			
	PCB-192	0.00094	U	0.0015	U	0.00039	U	0.0033	U	0.0032	U	0.0022	U	0.0022			
	PCB-193	0.051	J C180	0.26	C180	0.48		0.071	J C180	0.16	C180	0.0022	U	0.0022			
Octa	PCB-194	0.014	J B	0.078	B	0.14	B	0.024	J B	0.071	q B	0.00439	J q	0.0018	0.01317	0.02195	
	PCB-195	0.0031	U	0.021	J q B	0.028	J q B	0.0079	J q B	0.031	J q B	0.00490	J	0.0020	0.0147	0.0245	
	PCB-196	0.013	J q	0.080		0.094		0.015	J	0.047	J	0.0022	U	0.0022			
	PCB-197	0.0022	J	0.0089	J q	0.0093	J	0.0024	U	0.0034	U	0.0017	U	0.0017			
	PCB-198	0.037	J q C B	0.27	C B	0.46	B	0.052	J C B	0.16	C B	0.00494	J q	0.0023	0.01482	0.0247	
	PCB-199	0.037	J q C198 B	0.27	C198 B	0.46	B	0.052	J C198 B	0.16	C198 B	0.00494	J q	0.0023	0.01482	0.0247	
	PCB-200	0.0029	J	0.0093	J	0.010	J q	0.0021	U	0.0030	U	0.0015	U	0.0015			
	PCB-201	0.0089	J	0.015	J	0.032	J q	0.0022	U	0.034	J	0.0016	U	0.0016			
	PCB-202	0.011	J	0.075		0.15		0.012	J	0.051		0.0017	U	0.0017			
	PCB-203	0.017	J	0.11		0.17		0.020	J	0.069	q	0.0020	U	0.0020			
	PCB-204	0.00087	U	0.0063	J q	0.00052	U	0.0024	U	0.0034	U	0.0017	U	0.0017			
	PCB-205	0.0024	U	0.0027	U	0.0083	U	0.0022	U	0.0041	U	0.00974	J	0.0016	0.02922	0.0487	
Nona	PCB-206	0.13		1.34		2.41		0.20		0.50		0.0034	U	0.0034			
	PCB-207	0.012	J q	0.075		0.11		0.018	J	0.066		0.0024	U	0.0024			
	PCB-208	0.069		0.59		1.05		0.077	q	0.24		0.0024	U	0.0024			
Deca	PCB-209	0.23		1.99		3.88		0.37		0.82		0.0027	U	0.0027			
As Reported by Lab	Total Monochlorobiphenyls	0.00071	U	0.0038	J	0.016	J q	0.00071	U	0.0069	J q	0.251	q	0.00050	0.753	1.255	
	Total Dichlorobiphenyls	0.14	q B	0.14	q B	0.20	q B	0.13	q B	0.14	q B	0.00050	U	0.0048			
	Total Trichlorobiphenyls	0.25	q B	0.31	q B	0.77	q B	0.26	q B	0.33	q B	0.0490	J q	0.00095	0.147	0.245	
	Total Tetrachlorobiphenyls	0.49	q B	0.90	q B	2.97	q B	0.65	q B	0.96	q B	0.0184	J q	0.0019	0.0552	0.092	
	Total Pentachlorobiphenyls	0.47	q B	1.21	q B	4.32	q B	0.69	q B	1.27	q B	0.0413	J q	0.0014	0.1239	0.2065	
	Total Hexachlorobiphenyls	0.34	q B	1.30	q B	3.84	q B	0.52	q B	0.91	q B	0.0527	J q	0.0019	0.1581	0.2635	
	Total Heptachlorobiphenyls	0.20	q B	0.97	q B	1.94	q B	0.23	q B	0.74	q B	0.0406	J	0.0024	0.1218	0.203	
	Total Octachlorobiphenyls	0.11	q B	0.67	q B	1.09	q B	0.13	q B	0.46	q B	0.00430	J	0.0018	0.0129	0.0215	
	Total Nonachlorobiphenyls	0.21	q	2.01		3.58		0.30	q	0.81		0.0240	J q	0.0034	0.072	0.12	
	Total PCBs	2.52	q B	9.60	q B	22.7	q B	3.37	q B	6.60	q B	0.0034	U	0.0024			230

Notes:
-- : no applicable standard found for this compound
B : Compound was found in the blank and sample.
G : The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference
J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q : The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

U : Indicates the analyte was analyzed for but not detected.

1. Totals for each homolog group at the bottom of this table were reported by Test America Laboratory.

Legend:
- Result is less than 3x and 5x Method Blank - NOT VAILD
- Result is greater than 5x the Method Blank - VAILD
- Result is greater than 3x but less than 5x the Method Blank - USE WITH CAUTION
- The compound co-eluted with other compounds

Duffield Associates, Inc.
Project No. 11139.LH

Data Quality Review Notes for Table C.1.3.4
PCB Surface Water Blank
SW-1
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:
Sample SW-1

PCB-31	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-118	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Trichlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Tetrachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Pentachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Hexachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Octachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Nonachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-194	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate importance of data.
Total Heptachlorobiphenyls	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate importance of data.
PCB-8	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-11	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-22	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-37	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-66	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-77	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-84	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-107	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-114	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-169	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-189	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-195	Method blank concentration consequential to reported sample concentration. Data probably not valid.
Total Monochlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as report probably is not valid.
PCB-20, 28	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 61, 70, 74 and 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 90, 101 and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 129, 138, 160, and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-198, 199	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 198 and 199 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate the importance of data. PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	Method blank concentration consequential to reported sample concentration. PCB 21 and 33 coelute. Data probably not valid.
PCB-108, 124	Method blank concentration consequential to reported sample concentration. PCB 108 and 124 coelute. Data probably not valid.
PCB-128, 166	Method blank concentration consequential to reported sample concentration. PCB 128 and 166 coelute. Data probably not valid.
PCB-156, 157	Method blank concentration consequential to reported sample concentration. PCB 156 and 157 coelute. Data probably not valid.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.4
PCB Surface Water Blank
SW-1
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-171, 173	PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.4
PCB Surface Water Blank
SW-2
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:
Sample SW-2

PCB-31	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-37	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-66	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-118	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-194	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Trichlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Tetrachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Pentachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Hexachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Heptachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Octachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Nonachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-84	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate importance of data.
PCB-195	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate importance of data.
PCB-8	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-11	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-22	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-77	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-107	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-114	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-169	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-189	Method blank concentration consequential to reported sample concentration. Data probably not valid.
Total Monochlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as report probably is not valid.
PCB-20, 28	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 61, 70, 74 and 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 90, 101 and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 129, 138, 160, and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-198, 199	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 198 and 199 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate the importance of data. PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-156, 157	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate the importance of data. PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	Method blank concentration consequential to reportedsample concentration. PCB 21 and 33 coelute. Data probably not valid.
PCB-108, 124	Method blank concentration consequential to reported sample concentration. PCB 108 and 124 coelute. Data probably not valid.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.4
PCB Surface Water Blank
SW-2
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-171, 173	PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.4
PCB Surface Water Blank
SW-3
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:
Sample SW-3

PCB-22	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-31	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-37	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-66	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-77	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-84	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-107	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-118	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-194	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-195	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Trichlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Tetrachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Pentachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Hexachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Heptachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Octachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Nonachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-8	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-11	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-114	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-169	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-189	Method blank concentration consequential to reported sample concentration. Data probably not valid.
Total Monochlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as report probably is not valid.
PCB-20, 28	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 61, 70, 74 and 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 90, 101 and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 129, 138, 160, and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-156, 157	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs.
PCB-198, 199	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 198 and 199 coelute. Count result once when calculating total PCBs and total homologs.
PCB-108, 124	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate the importance of data. PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.4
PCB Surface Water Blank
SW-3
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-171, 173	PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.4
PCB Surface Water Blank
SW-4
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:
Sample SW-4

PCB-31	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-118	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-194	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Trichlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Tetrachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Pentachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Hexachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Heptachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Octachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Nonachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-37	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate importance of data.
PCB-66	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate importance of data.
PCB-8	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-11	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-22	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-77	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-84	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-107	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-114	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-169	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-189	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-195	Method blank concentration consequential to reported sample concentration. Data probably not valid.
Total Monochlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as report probably is not valid.
PCB-20, 28	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 61, 70, 74 and 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 90, 101 and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 129, 138, 160, and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	Method blank concentration inconsequential to reported sample concentration. Use data.. PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-198, 199	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 198 and 199 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	Method blank concentration consequential to reported sample concentration. PCB 21 and 33 coelute. Data probably not valid.
PCB-108, 124	Method blank concentration consequential to reported sample concentration. PCB 108 and 124 coelute. Data probably not valid.
PCB-128, 166	Method blank concentration consequential to reported sample concentration. PCB 128 and 166 coelute. Data probably not valid.
PCB-156, 157	Method blank concentration consequential to reported sample concentration. PCB 156 and 157 coelute. Data probably not valid.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.4
PCB Surface Water Blank
SW-4
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-171, 173	PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.4
PCB Surface Water Blank
SW-5
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:
Sample SW-5

PCB-31	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-37	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-66	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-118	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-194	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-195	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Trichlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Tetrachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Pentachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Hexachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Heptachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Octachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
Total Nonachlorobiphenyls	Method blank concentration inconsequential to reported sample concentration. Use data.
PCB-84	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate importance of data.
PCB-107	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate importance of data.
PCB-8	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-11	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-22	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-77	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-114	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-169	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-189	Method blank concentration consequential to reported sample concentration. Data probably not valid.
Total Monochlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as report probably is not valid.
PCB-20, 28	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs.
PCB-44, 47, 65	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs.
PCB-61, 70, 74, 76	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 61, 70, 74 and 76 coelute. Count result once when calculating total PCBs and total homologs.
PCB-90, 101, 113	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 90, 101 and 113 coelute. Count result once when calculating total PCBs and total homologs.
PCB-110, 115	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs.
PCB-129, 138, 160, 163	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 129, 138, 160, and 163 coelute. Count result once when calculating total PCBs and total homologs.
PCB-153, 168	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs.
PCB-198, 199	Method blank concentration inconsequential to reported sample concentration. Use data. PCB 198 and 199 coelute. Count result once when calculating total PCBs and total homologs.
PCB-21, 33	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate the importance of data. PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs.
PCB-128, 166	Method blank concentration may or may not be consequential to reported sample concentration. Data suspect. Further evaluate the importance of data. PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs.
PCB-108, 124	Method blank concentration consequential to reported sample concentration. PCB 108 and 124 coelute. Data probably not valid.
PCB-156, 157	Method blank concentration consequential to reported sample concentration. PCB 156 and 157 coelute. Data probably not valid.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.4
PCB Surface Water Blank
SW-5
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.
PCB-171, 173	PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.4
PCB Surface Water Blank
EB
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:
Sample EB

PCB-8	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-11	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-22	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-31	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-37	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-66	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-77	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-84	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-107	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-114	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-118	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-169	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-189	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-194	Method blank concentration consequential to reported sample concentration. Data probably not valid.
PCB-195	Method blank concentration consequential to reported sample concentration. Data probably not valid.
Total Monochlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total Trichlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total Tetrachlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total Pentachlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total Hexachlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total Heptachlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total Octachlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
Total Nonachlorobiphenyls	Method blank concentration consequential to reported sample concentration. Total as reported probably is not valid.
PCB-20, 28	Method blank concentration consequential to reported sample concentration. PCB 20 and 28 coelute. Data probably not valid.
PCB-21, 33	Method blank concentration consequential to reported sample concentration. PCB 21 and 33 coelute. Data probably not valid.
PCB-44, 47, 65	Method blank concentration consequential to reported sample concentration. PCB 44, 47 and 65 coelute. Data probably not valid.
PCB-61, 70, 74, 76	Method blank concentration consequential to reported sample concentration. PCB 61, 70, 74 and 76 coelute. Data probably not valid.
PCB-90, 101, 113	Method blank concentration consequential to reported sample concentration. PCB 90, 101 and 113 coelute. Data probably not valid.
PCB-108, 124	Method blank concentration consequential to reported sample concentration. PCB 108 and 124 coelute. Data probably not valid.
PCB-110, 115	Method blank concentration consequential to reported sample concentration.. PCB 110 and 115 coelute. Data probably not valid.
PCB-128, 166	Method blank concentration consequential to reported sample concentration. PCB 128 and 166 coelute. Data probably not valid.
PCB-129, 138, 160, 163	Method blank concentration consequential to reported sample concentration. PCB 129, 138, 160 and 163 coelute. Data probably not valid.
PCB-153, 168	Method blank concentration consequential to reported sample concentration. PCB 153 and 168 coelute. Data probably not valid.
PCB-156, 157	Method blank concentration consequential to reported sample concentration. PCB 156 and 157 coelute. Data probably not valid.
PCB-198, 199	Method blank concentration consequential to reported sample concentration. PCB 198 and 199 coelute. Data probably not valid.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs.
PCB-18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs.
PCB-26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs.
PCB-40, 41, 71	PCB 40, 41, and 71 coelute. Count result once when calculating total PCBs and total homologs.
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs.
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs.
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs.
PCB-59, 62, 75	PCB 59, 62, and 75 coelute. Count result once when calculating total PCBs and total homologs.
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-85, 116, 117	PCB 85, 116, and 117 coelute. Count result once when calculating total PCBs and total homologs.
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119, and 125 coelute. Count result once when calculating total PCBs and total homologs.
PCB-88, 91	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs.
PCB-134, 143	PCB 134 and 133 coelute. Count result once when calculating total PCBs and total homologs.
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs.
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs.

Data Quality Review Notes for Table C.1.3.4
PCB Surface Water Blank
EB
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

PCB-171, 173	PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs.
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs.
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs.

APPENDIX C.1.4

METHOD BLANK DATA VALIDATION – DIOXIN AND FURAN

Table C.1.4.1 . Method Blank Data Validation -DIOXIN SED BLANK 140-31714
Edgemoor Sediment and Surface Water Quality Assessment
Edgmoor, Delaware

Client ID	**VB1-COMP-A**		**VB1-COMP-B**		**VB14-COMP-A**		**VB2-COMP-A**		**VB10-COMP-A**		**VB10-COMP-B**		**VB4-COMP-A**		**VB3-COMP-A**	
Lab Sample ID	460-185785-3		460-185785-5		460-185785-4		460-185785-6		460-186095-10		460-186095-11		460-186095-3		460-185785-7	
Sampling Date	07/01/2019 13:45:00		07/01/2019 13:50:00		07/01/2019 12:40:00		07/01/2019 15:20:00		07/02/2019 11:30:00		07/02/2019 11:35:00		07/02/2019 09:10:00		07/01/2019 15:50:00	
Matrix	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil	
Dilution Factor	1		1		1		1		1		1		1		1	
Unit	pg/g		pg/g		pg/g		pg/g		pg/g		pg/g		pg/g		pg/g	
DIOXIN-1613B-SOIL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
SOIL BY 1613B																
1,2,3,4,6,7,8-HpCDD	161		61.6		155		169		175		69.0		6.76		162	
1,2,3,4,6,7,8-HpCDF	49.1		0.062	U	2.77	J	5.47		2.41	J	0.080	J q	0.16	J	2.51	J
1,2,3,4,7,8,9-HpCDF	5.67		0.085	U	0.45	J	0.86	J	0.42	J	0.039	U	0.060	U	0.45	J
1,2,3,4,7,8-HxCDD	0.077	U	0.38	U	0.077	U	2.82	J	0.43	U	0.27	U	0.18	J q	1.57	U
1,2,3,4,7,8-HxCDF	10.2		0.031	U	1.59	J	2.90	J	1.94	J	0.026	U	0.055	U	2.20	J
1,2,3,6,7,8-HxCDD	3.69	J	0.40	U	3.76	J	4.49	J	4.09	J	0.27	U	0.32	J q	1.68	U
1,2,3,6,7,8-HxCDF	3.35	J	0.031	U	0.45	J q	1.04	J	0.72	J	0.025	U	0.050	U	0.72	J
1,2,3,7,8,9-HxCDD	6.82		0.36	U	7.46		8.22		7.43		6.04		0.69	J	8.42	
1,2,3,7,8,9-HxCDF	0.38	J	0.040	U	0.056	U	0.16	J	0.071	J q	0.031	U	0.064	U	0.12	J q
1,2,3,7,8-PeCDD	1.26	J	0.043	U	1.16	J	1.37	J	1.18	J	0.20	J	0.15	J	1.51	J
1,2,3,7,8-PeCDF	2.53	J	0.089	U	1.36	J	2.00	J	1.81	J	0.025	U	0.048	U	1.91	J
2,3,4,6,7,8-HxCDF	1.97	J	0.033	U	0.35	J	0.64	J	0.37	J q	0.050	J q	0.053	U	0.46	J
2,3,4,7,8-PeCDF	2.66	J	0.083	U	0.95	J	1.74	J	1.32	J	0.025	U	0.044	U	1.67	J
2,3,7,8-TCDD	0.26	J	0.14	U	0.24	J	0.35	J	0.30	J	0.067	U	0.053	U	0.069	U
2,3,7,8-TCDF	5.60		0.047	U	5.81		10.1		8.44		0.021	U	0.041	U	9.48	
OCDD	**6100**	E B	**2300**	B	**5350**	E B	**5650**	E B	**7160**	E B	**1120**	B	**134**	B	**5020**	E B
OCDF	**255**	B	**0.52**	J B	**8.75**	J B	**10.1**	B	**4.16**	J B	**0.17**	J q B	**0.38**	J B	**3.76**	J B

Client ID	**VB5-COMP-A**		**VB5-COMP-B**		**VB6-COMP-A**		**VB6-COMP-B**		**VB9-COMP-A**		**VB9-COMP-B**		Applicable Method Blank MB 140-31714/17-A				
Lab Sample ID	460-186095-4		460-186095-5		460-186095-6		460-186095-7		460-186095-8		460-186095-9		460-185785				
Sampling Date	07/02/2019 09:50:00		07/02/2019 09:55:00		07/02/2019 11:50:00		07/02/2019 11:55:00		07/02/2019 10:15:00		07/02/2019 10:20:00		7/16/2019				
Matrix	Soil		Soil		Soil		Soil		Soil		Soil		Solid				
Dilution Factor	1		1		1		1		1		1		140-31714				
Unit	pg/g		pg/g		pg/g		pg/g		pg/g		pg/g		pg/g				
DIOXIN-1613B-SOIL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	EDL	3Xresult	5Xresult
SOIL BY 1613B																	
1,2,3,4,6,7,8-HpCDD	243		21.3		123		9.38		70.8		72.4		0.12	U	0.12		
1,2,3,4,6,7,8-HpCDF	0.42	J	11.7		67.5		0.25	J	0.18	J	0.030	U	0.025	U	0.025		
1,2,3,4,7,8,9-HpCDF	0.053	U	4.46	J	10.3		0.036	U	0.033	U	0.043	U	0.037	U	0.037		
1,2,3,4,7,8-HxCDD	0.20	U	0.33	J	1.99	J	0.18	U	0.089	U	0.44	U	0.065	U	0.065		
1,2,3,4,7,8-HxCDF	0.039	U	4.64	J	19.6		0.026	U	0.087	J	0.047	U	0.068	U	0.068		
1,2,3,6,7,8-HxCDD	0.20	U	0.83	J	3.28	J	0.19	U	2.20	J	0.44	U	0.061	U	0.061		
1,2,3,6,7,8-HxCDF	0.038	U	1.66	J	5.66		0.024	U	0.028	U	0.045	U	0.066	U	0.066		
1,2,3,7,8,9-HxCDD	10.5		1.04	J	6.03		0.82	J	4.51	J	4.26	J	0.059	U	0.059		
1,2,3,7,8,9-HxCDF	0.049	U	0.17	U	0.67	J q	0.032	U	0.037	U	0.060	U	0.10	U	0.10		
1,2,3,7,8-PeCDD	0.35	J	0.21	J q	0.94	J	0.023	U	0.64	J	0.10	J q	0.042	U	0.042		
1,2,3,7,8-PeCDF	0.079	U	0.65	J q	4.78	J	0.031	U	0.081	J	0.053	U	0.082	U	0.082		
2,3,4,6,7,8-HxCDF	0.040	U	0.37	J	1.84	J	0.026	U	0.031	U	0.046	U	0.077	U	0.077		
2,3,4,7,8-PeCDF	0.072	U	0.80	J	3.16	J	0.030	U	0.043	U	0.050	U	0.079	U	0.079		
2,3,7,8-TCDD	1.0	q	0.13	J q	0.28	J q	0.096	U	0.17	J q	0.12	U	0.11	U	0.11		
2,3,7,8-TCDF	0.093	U	0.73	J	7.87		0.044	U	0.41	J q	0.056	U	0.067	U	0.067		
OCDD	**6740**	E B	**412**	B	**4210**	E B	**242**	B	**1120**	B	**2630**	B	**1.048**	**J q**	**0.066**	**3.144**	**5.24**
OCDF	**2.76**	J B	**238**	B	**509**	B	**2.07**	J B	**0.64**	J B	**0.22**	J q B	**0.258**	**J q**	**0.042**	**0.774**	**1.29**

Notes:

B : Compound was found in the blank and sample.

E : Result exceeded calibration range.

J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

q : The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

U : Indicates the analyte was analyzed for but not detected.

-- : no applicable standard found for this compound

Legend:

(red)	Result is less than 3x and 5x Method Blank - NOT VAILD
(green)	Result is greater than 5x the Method Blank - VAILD
(yellow)	Result is greater than 3x but less than 5x the Method Blank - USE WITH CAUTION
(light blue)	The compound co-eluted with other compounds

Data Quality Review Notes for Table C.1.4.1
Dioxin Sediment Blank 140-31717
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:

Sample VB1-COMP-A

OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration inconsequential to reported sample concentration. Use data.

Sample VB1-COMP-B

OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration consequential to reported sample concentration. Data probably not valid.

Sample VB14-COMP-A

OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration inconsequential to reported sample concentration. Use data.

Sample VB2-COMP-A

OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration inconsequential to reported sample concentration. Use data.

Sample VB10-COMP-A

OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration inconsequential to reported sample concentration. Use data.

Sample VB10-COMP-B

OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration consequential to reported sample concentration. Data probably not valid.

Sample VB4-COMP-A

OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration consequential to reported sample concentration. Data probably not valid.

Sample VB3-COMP-A

OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration inconsequential to reported sample concentration. Use data.

Sample VB5-COMP-A

OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration inconsequential to reported sample concentration. Use data.

Sample VB5-COMP-B

OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration inconsequential to reported sample concentration. Use data.

Sample VB6-COMP-A

OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration inconsequential to reported sample concentration. Use data.

Sample VB6-COMP-B

OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration inconsequential to reported sample concentration. Use data.

Sample VB9-COMP-A

OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration consequential to reported sample concentration. Data probably not valid.

Sample VB9-COMP-B

OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration consequential to reported sample concentration. Data probably not valid.

Table C.1.4.2 . Method Blank Data Validation -DIOXIN SED BLANK 140-31841
Edgemoor Sediment and Surface Water Quality Assessment
Edgmoor, Delaware

Client ID	**VB13-COMP-A**		**VB13-COMP-B**		**VB15-COMP-A**		**VB15-COMP-B**		**VB17-COMP-A**		**VB19-COMP-B**		**VB7-COMP-A**		**DUP1-COMP-A**		**VB11-COMP-A**		**VB11-COMP-B**		**VB12-COMP-B**		**VB18-COMP-A**		Applicable Method Blank MB 140-31841/17-A				
Lab Sample ID	460-186095-12		460-186095-13		460-186095-14		460-186095-15		460-186095-16		460-186302-3		460-186096-4		460-186096-5		460-186096-7		460-186096-8		460-186096-6		460-186096-9		460-186096				
Sampling Date	07/02/2019 13:50:00		07/02/2019 13:55:00		07/02/2019 13:30:00		07/02/2019 13:35:00		07/02/2019 12:40:00		07/08/2019 11:40:00		07/03/2019 09:35:00		07/03/2019 09:40:00		07/03/2019 11:20:00		07/03/2019 11:25:00		07/03/2019 10:20:00		07/03/2019 11:50:00		7/19/2019				
Matrix	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Solid				
Dilution Factor	1		1		1		1		1		1		1		1		1		1		1		1		140-31841				
Unit	pg/g		pg/g		pg/g		pg/g		pg/g		pg/g		pg/g		pg/g		pg/g		pg/g		pg/g		pg/g		pg/g				
DIOXIN-1613B-SOIL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	EDL	3Xresult	5Xresult
SOIL BY 1613B																													
1,2,3,4,6,7,8-HpCDD	141		78.2		449		19.4		146		65.6		172		168		365		18.1		5.25		173		0.17	U	0.17		
1,2,3,4,6,7,8-HpCDF	0.14	J	0.030	U	147		12.2		0.41	J	27.9		2.95	J	2.71	J	123		5.29		0.053	J q	1.28	J	0.040	U	0.040		
1,2,3,4,7,8,9-HpCDF	0.041	U	0.049	U	11.7		3.81	J q	0.10	J q	2.17	J	0.67	J	0.48	J q	14.1		0.66	J	0.034	U	0.19	J	0.059	U	0.059		
1,2,3,4,7,8-HxCDD	1.22	J	0.13	U	5.81		0.088	U	0.19	U	1.19	J	2.75	J	2.69	J	4.95	J	0.24	J q	0.087	J	2.39	J	0.099	U	0.099		
1,2,3,4,7,8-HxCDF	0.040	U	0.067	U	30.8		1.97	J	0.19	J q	4.57	J	2.24	J	2.02	J	36.8		1.79	J	0.039	U	1.14	J	0.069	U	0.069		
1,2,3,6,7,8-HxCDD	3.34	J	0.14	U	16.4		0.72	J	3.17	J	2.60	J	4.48	J	3.88	J	16.3		0.65	J q	0.18	J	3.61	J	0.10	U	0.10		
1,2,3,6,7,8-HxCDF	0.041	U	0.065	U	14.9		1.14	J	0.051	U	2.74	J	0.73	J	0.71	J q	15.6		0.60	J	0.036	U	0.37	J	0.062	U	0.062		
1,2,3,7,8,9-HxCDD	6.78		5.65		17.8		0.74	J	7.25		4.37	J	8.24		7.64		16.0		1.16	J	0.33	J	7.25		0.094	U	0.094		
1,2,3,7,8,9-HxCDF	0.057	U	0.095	U	1.98	U	0.15	U	0.071	U	0.32	U	0.079	U	0.13	U	1.21	U	0.12	U	0.050	U	0.093	U	0.088	U	0.088		
1,2,3,7,8-PeCDD	0.69	J	0.25	J q	3.35	J	0.35	J q	1.16	J q	0.83	J q	1.15	J q	1.30	J	6.01	q	0.37	J q	0.053	U	1.00	J	0.050	U	0.050		
1,2,3,7,8-PeCDF	0.060	U	0.066	U	8.79		0.44	J	0.12	J q	0.99	J	1.70	J	1.85	J	8.86		0.34	J q	0.055	U	0.96	J q	0.095	U	0.095		
2,3,4,6,7,8-HxCDF	0.043	U	0.075	U	4.51	J	0.34	J q	0.056	U	0.73	J q	0.53	J	0.46	J q	4.87	J	0.27	J	0.040	U	0.18	J	0.072	U	0.072		
2,3,4,7,8-PeCDF	0.058	U	0.065	U	14.8		0.82	J	0.051	U	1.20	J	1.48	J	1.54	J	19.3		0.97	J	0.055	U	0.67	J q	0.089	U	0.089		
2,3,7,8-TCDD	0.16	J	0.61	J q	1.60	q	0.14	U	0.092	U	0.21	J q	0.24	J q	0.076	U	3.30		0.24	J q	0.081	U	0.22	J q	0.11	U	0.11		
2,3,7,8-TCDF	0.13	J q	0.090	U	16.9	q G	0.64	J q	0.36	J q	1.88		9.10		8.93		31.5		0.93	J	0.084	U	3.60		0.14	U	0.14		
OCDD	**2780**	**B**	**3300**	**B**	**7360**	**E B**	**361**	**B**	**2770**	**B**	**1030**	**B**	**5480**	**E B**	**5230**	**E B**	**6630**	**E B**	**281**	**B**	**218**	**B**	**5190**	**E B**	**0.391**	**J**	**0.057**	**1.173**	**1.955**
OCDF	**0.24**	**J q B**	**0.15**	**J B q**	**554**	**B**	**112**	**B**	**2.16**	**J B**	**96.6**	**B**	**4.19**	**J B**	**3.54**	**J B**	**535**	**B**	**27.3**	**B**	**0.29**	**J B**	**2.12**	**J B**	**0.0417**	**J q**	**0.033**	**0.1251**	**0.2085**

Notes:

B : Compound was found in the blank and sample.

E : Result exceeded calibration range.

J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

q : The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

U : Indicates the analyte was analyzed for but not detected.

-- : no applicable standard found for this compound

Legend:

(red)	Result is less than 3x and 5x Method Blank - NOT VAILD
(green)	Result is greater than 5x the Method Blank - VAILD
(yellow)	Result is greater than 3x but less than 5x the Method Blank - USE WITH CAUTION
(light blue)	The compound co-eluted with other compounds

Data Quality Review Notes:

Sample VB13-COMP-A

OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration inconsequential to reported sample concentration. Use data.

Sample VB13-COMP-B

OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration may or may not be consequential to reported sample concentration. Further evaluate importance of data.

Sample VB15-COMP-A

OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration inconsequential to reported sample concentration. Use data.

Sample VB15-COMP-B

OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration inconsequential to reported sample concentration. Use data.

Sample VB17-COMP-A

OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration inconsequential to reported sample concentration. Use data.

Sample VB19-COMP-B

OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration inconsequential to reported sample concentration. Use data.

Sample VB7-COMP-A

OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration inconsequential to reported sample concentration. Use data.

Sample DUP1-COMP-A

OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration inconsequential to reported sample concentration. Use data.

Sample VB11-COMP-A

OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration inconsequential to reported sample concentration. Use data.

Sample VB11-COMP-B

OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration inconsequential to reported sample concentration. Use data.

Sample VB12-COMP-B

OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration inconsequential to reported sample concentration. Use data.

Sample VB18-COMP-A

OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration inconsequential to reported sample concentration. Use data.

Table C.1.4.3 . Summary of Data Validation -DIOXIN SED BLANK 140-31891
Edgemoor Sediment and Surface Water Quality Assessment
Edgmoor, Delaware

Client ID	VB22-COMP-A		VB23-COMP-B		DUP-COMP-B		VB24-COMP-A		VB25-COMP-A		VB25-COMP-B		VB21-COMP-A		VB21-COMP-B	
Lab Sample ID	460-186302-4		460-186302-5		460-186302-6		460-186302-7		460-186302-8		460-186302-9		460-186429-1		460-186429-2	
Sampling Date	07/08/2019 13:30:00		07/08/2019 13:50:00		07/08/2019 13:55:00		07/08/2019 15:00:00		07/08/2019 14:40:00		07/08/2019 14:45:00		07/09/2019 09:00:00		07/09/2019 09:05:00	
Matrix	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil	
Dilution Factor	1		1		1		1		1		1		1		1	
Unit	pg/g		pg/g		pg/g		pg/g		pg/g		pg/g		pg/g		pg/g	
DIOXIN-1613B-SOIL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
SOIL BY 1613B																
1,2,3,4,6,7,8-HpCDD	123	B	9.70	B	9.58	B	173	B	177	B	45.8	B	357	B	26.5	B
1,2,3,4,6,7,8-HpCDF	12.1	B	2.80	J B	2.43	J B	4.24	J B	101	B	0.57	J B q	124	B	6.99	B
1,2,3,4,7,8,9-HpCDF	1.63	J	0.62	J	0.61	J	0.73	J	12.0		0.091	J q	10.6		0.67	J
1,2,3,4,7,8-HxCDD	1.61	J	0.051	U	0.057	U	0.83	U	2.43	J	0.069	U	4.21	J	0.27	J q
1,2,3,4,7,8-HxCDF	3.50	J	0.93	J q	1.21	J	2.67	J	23.3		0.18	J q	20.9		1.25	J
1,2,3,6,7,8-HxCDD	2.74	J	0.26	J	0.25	J	4.57	J	4.57	J	0.80	J	15.2		1.12	J
1,2,3,6,7,8-HxCDF	1.40	J	0.62	J	0.53	J	0.90	J	7.57		0.071	U	10.7		0.51	J
1,2,3,7,8,9-HxCDD	4.93	J	0.70	J	0.50	J	8.36		6.74		2.57	J	13.6		1.39	J
1,2,3,7,8,9-HxCDF	0.19	J	0.088	U	0.067	U	0.049	U	0.74	J	0.090	U	1.38	U	0.074	U
1,2,3,7,8-PeCDD	0.82	J B	0.071	J B q	0.037	U	1.30	J B	1.23	J B	0.14	J B q	3.61	J B	0.37	J B
1,2,3,7,8-PeCDF	1.62	J	0.17	J q	0.27	J	2.17	J	5.34		0.043	U	4.85	J	0.16	J q
2,3,4,6,7,8-HxCDF	0.68	J	0.13	J	0.13	J	0.59	J	3.54	J	0.075	U	4.32	J	0.18	J q
2,3,4,7,8-PeCDF	1.22	J	0.16	J q	0.26	J q	1.77	J	6.89		0.042	U	8.81		0.42	J
2,3,7,8-TCDD	0.19	J q	0.084	U	0.094	U	0.31	J	0.45	J	0.38	J	1.96		0.14	U
2,3,7,8-TCDF	5.17		0.53	J q	0.68	J	10.3		8.55		0.38	J	13.3	q	0.92	J q
OCDD	5240	E B	244	B	192	B	5130	E B	5710	E B	860	B	6470	E B	402	B
OCDF	58.1	B	38.8	B	33.7	B	10.6	B	569	B	3.05	J B	562	B	33.6	B

Client ID	VB28-COMP-A		VB26-COMP-A		VB29-COMP-A		VB27-COMP-B		VB30-COMP-B		VB33-COMP-B		VB31-COMP-B		Applicable Method Blank MB 140-31891/17-A				
Lab Sample ID	460-186429-3		460-186429-4		460-186429-5		460-186429-6		460-186429-7		460-186429-8		460-186429-12		460-186302				
Sampling Date	07/09/2019 09:20:00		07/09/2019 10:20:00		07/09/2019 10:00:00		07/09/2019 11:45:00		07/09/2019 12:15:00		07/09/2019 14:50:00		07/09/2019 13:30:00		7/22/2019				
Matrix	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Solid				
Dilution Factor	1		1		1		1		1		1		1		140-31891				
Unit	pg/g		pg/g		pg/g		pg/g		pg/g		pg/g		pg/g		pg/g				
DIOXIN-1613B-SOIL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	EDL	3Xresult	5Xresult
SOIL BY 1613B																			
1,2,3,4,6,7,8-HpCDD	173	B	154	B	20.2	B	5.63	B	73.8	B	100	B	191	B	**0.248**	**J q**	**0.12**	**0.744**	**1.24**
1,2,3,4,6,7,8-HpCDF	2.96	J B	3.90	J B	0.10	J q B	0.029	U	0.062	J q B	0.048	U	76.1	B	**0.0689**	**J q**	**0.035**	**0.2067**	**0.3445**
1,2,3,4,7,8,9-HpCDF	0.38	J q	0.46	J	0.047	U	0.039	U	0.039	U	0.065	U	10.3		0.062	U	0.062		
1,2,3,4,7,8-HxCDD	2.74	J	0.42	U	0.21	J q	0.051	U	0.17	U	0.16	U	0.44	U	0.087	U	0.087		
1,2,3,4,7,8-HxCDF	1.92	J	1.67	J	0.042	U	0.031	U	0.045	U	0.036	U	19.6		0.046	U	0.046		
1,2,3,6,7,8-HxCDD	4.18	J	4.03	J	0.78	J	0.34	J	0.16	U	0.17	U	7.53		0.096	U	0.096		
1,2,3,6,7,8-HxCDF	0.59	J	0.60	J	0.040	U	0.031	U	0.043	U	0.038	U	5.76		0.043	U	0.043		
1,2,3,7,8,9-HxCDD	7.90		7.96		1.46	J	0.83	J	4.08	J	4.30	J	7.15		0.086	U	0.086		
1,2,3,7,8,9-HxCDF	0.12	U	0.061	U	0.052	U	0.043	U	0.059	U	0.055	U	0.58	U	0.058	U	0.058		
1,2,3,7,8-PeCDD	1.28	J B	1.20	J B	0.13	J q B	0.21	J B	0.060	U	0.20	J B	1.33	J B	**0.0941**	**J q**	**0.044**	**0.2823**	**0.4705**
1,2,3,7,8-PeCDF	1.86	J	1.21	J	0.038	U	0.039	U	0.091	U	0.079	U	3.56	J	0.073	U	0.073		
2,3,4,6,7,8-HxCDF	0.45	J q	0.25	J q	0.044	U	0.032	U	0.046	U	0.042	U	2.15	J	0.045	U	0.045		
2,3,4,7,8-PeCDF	1.54	J	0.84	J q	0.036	U	0.035	U	0.086	U	0.075	U	4.57	J	0.066	U	0.066		
2,3,7,8-TCDD	0.31	J	0.28	J	0.053	U	0.064	U	0.21	U	0.31	J q	0.58	J	0.075	U	0.075		
2,3,7,8-TCDF	9.49		5.58		0.044	U	0.058	U	0.093	U	0.065	U	8.35	q	0.059	U	0.059		
OCDD	6040	E B	4640	E B	331	B	111	B	2840	B	2230	B	2960	B	**4.255**	**J**	**0.063**	**12.765**	**21.275**
OCDF	7.33	J B	12.2	B	0.19	J q B	0.057	J q B	0.13	J q B	0.38	J B q	494	B	**0.442**	**J q**	**0.054**	**1.326**	**2.21**

Notes:

B : Compound was found in the blank and sample.

E : Result exceeded calibration range.

J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

q : The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

U : Indicates the analyte was analyzed for but not detected.

-- : no applicable standard found for this compound

Legend:

(red)	Result is less than 3x and 5x Method Blank - NOT VAILD
(green)	Result is greater than 5x the Method Blank - VAILD
(yellow)	Result is greater than 3x but less than 5x the Method Blank - USE WITH CAUTION
(light blue)	The compound co-eluted with other compounds

Data Quality Review Notes for Table C.1.4.3
Dioxin Sediment Blank 140-31891
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:

Sample VB22-COMP-A

1,2,3,4,6,7,8-HpCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
1,2,3,4,6,7,8-HpCDF	Method blank concentration inconsequential to reported sample concentration. Use data.
1,2,3,7,8-PeCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration inconsequential to reported sample concentration. Use data.

Sample VB23-COMP-B

1,2,3,4,6,7,8-HpCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
1,2,3,4,6,7,8-HpCDF	Method blank concentration inconsequential to reported sample concentration. Use data.
1,2,3,7,8-PeCDD	Method blank concentration consequential to reported sample concentration. Data probably not valid.
OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration inconsequential to reported sample concentration. Use data.

Sample DUP-COMP-B

1,2,3,4,6,7,8-HpCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
1,2,3,4,6,7,8-HpCDF	Method blank concentration inconsequential to reported sample concentration. Use data.
1,2,3,7,8-PeCDD	Method blank concentration consequential to reported sample concentration. Data probably not valid.
OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration inconsequential to reported sample concentration. Use data.

Sample VB24-COMP-A

1,2,3,4,6,7,8-HpCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
1,2,3,4,6,7,8-HpCDF	Method blank concentration inconsequential to reported sample concentration. Use data.
1,2,3,7,8-PeCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration inconsequential to reported sample concentration. Use data.

Sample VB25-COMP-A

1,2,3,4,6,7,8-HpCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
1,2,3,4,6,7,8-HpCDF	Method blank concentration inconsequential to reported sample concentration. Use data.
1,2,3,7,8-PeCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration inconsequential to reported sample concentration. Use data.

Sample VB25-COMP-B

1,2,3,4,6,7,8-HpCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
1,2,3,4,6,7,8-HpCDF	Method blank concentration inconsequential to reported sample concentration. Use data.
1,2,3,7,8-PeCDD	Method blank concentration consequential to reported sample concentration. Data probably not valid.
OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration inconsequential to reported sample concentration. Use data.

Sample VB21-COMP-A

1,2,3,4,6,7,8-HpCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
1,2,3,4,6,7,8-HpCDF	Method blank concentration inconsequential to reported sample concentration. Use data.
1,2,3,7,8-PeCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration inconsequential to reported sample concentration. Use data.

Sample VB21-COMP-b

1,2,3,4,6,7,8-HpCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
1,2,3,4,6,7,8-HpCDF	Method blank concentration inconsequential to reported sample concentration. Use data.
1,2,3,7,8-PeCDD	Method blank concentration may or may not be consequential to reported sample concentration. Further evaluate importance of data.
OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration inconsequential to reported sample concentration. Use data.

Sample VB28-COMP-A

1,2,3,4,6,7,8-HpCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
1,2,3,4,6,7,8-HpCDF	Method blank concentration inconsequential to reported sample concentration. Use data.
1,2,3,7,8-PeCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration inconsequential to reported sample concentration. Use data.

Sample VB26-COMP-A

1,2,3,4,6,7,8-HpCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
1,2,3,4,6,7,8-HpCDF	Method blank concentration inconsequential to reported sample concentration. Use data.
1,2,3,7,8-PeCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration inconsequential to reported sample concentration. Use data.

Sample EB(SED)

1,2,3,4,6,7,8-HpCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
1,2,3,4,6,7,8-HpCDF	Method blank concentration consequential to reported sample concentration. Data probably not valid.
1,2,3,7,8-PeCDD	Method blank concentration consequential to reported sample concentration. Data probably not valid.
OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration consequential to reported sample concentration. Data probably not valid.

Sample VB29-COMP-A

1,2,3,4,6,7,8-HpCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
1,2,3,4,6,7,8-HpCDF	Method blank concentration consequential to reported sample concentration. Data probably not valid.
1,2,3,7,8-PeCDD	Method blank concentration consequential to reported sample concentration. Data probably not valid.
OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration consequential to reported sample concentration. Data probably not valid.

Sample VB27-COMP-B

1,2,3,4,6,7,8-HpCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
1,2,3,4,6,7,8-HpCDF	Method blank concentration consequential to reported sample concentration. Data probably not valid.
1,2,3,7,8-PeCDD	Method blank concentration consequential to reported sample concentration. Data probably not valid.
OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration consequential to reported sample concentration. Data probably not valid.

Sample VB30-COMP-B

1,2,3,4,6,7,8-HpCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
1,2,3,4,6,7,8-HpCDF	Method blank concentration consequential to reported sample concentration. Data probably not valid.
1,2,3,7,8-PeCDD	Method blank concentration consequential to reported sample concentration. Data probably not valid.
OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration consequential to reported sample concentration. Data probably not valid.

Sample VB33-COMP-B

1,2,3,4,6,7,8-HpCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
1,2,3,4,6,7,8-HpCDF	Method blank concentration consequential to reported sample concentration. Data probably not valid.
1,2,3,7,8-PeCDD	Method blank concentration consequential to reported sample concentration. Data probably not valid.
OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration consequential to reported sample concentration. Data probably not valid.

Sample VB31-COMP-B

1,2,3,4,6,7,8-HpCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
1,2,3,4,6,7,8-HpCDF	Method blank concentration inconsequential to reported sample concentration. Use data.
1,2,3,7,8-PeCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration inconsequential to reported sample concentration. Use data.

Table C.1.4.4. Method Blank Data Validation -DIOXIN SW BLANK 140-31953
Edgemoor Sediment and Surface Water Quality Assessment
Edgmoor, Delaware

Client ID	**SW1**			Applicable Method Blank MB 140-31953/8-A					
Lab Sample ID	460-185785-1			460-185785					
Sampling Date	07/01/2019 11:35:00			7/23/2019					
Matrix	Water			Water					
Dilution Factor	1			140-31953					
Unit	pg/l			pg/l					
DIOXIN-1613B-WATER	Result	Q	RL	Result	Q	RL	EDL	3Xresult	5Xresult
WATER BY 1613B									
2,3,7,8-TCDD	0.27	U	10.4	0.33	U	10.0	0.33		
1,2,3,7,8-PeCDD	0.34	U	52.1	0.23	U	50.0	0.23		
1,2,3,4,7,8-HxCDD	0.49	U	52.1	0.33	U	50.0	0.33		
1,2,3,6,7,8-HxCDD	0.49	U	52.1	0.32	U	50.0	0.32		
1,2,3,7,8,9-HxCDD	0.46	U	52.1	0.31	U	50.0	0.31		
1,2,3,4,6,7,8-HpCDD	5.28	J q	52.1	0.45	U	50.0	0.45		
OCDD	**141**	**B**	**104**	**7.381**	**J**	**100**	**0.19**	**22.143**	**36.905**
2,3,7,8-TCDF	0.31	U	10.4	0.22	U	10.0	0.22		
1,2,3,7,8-PeCDF	0.40	U	52.1	0.30	U	50.0	0.30		
2,3,4,7,8-PeCDF	0.41	U	52.1	0.29	U	50.0	0.29		
1,2,3,4,7,8-HxCDF	0.23	U	52.1	0.34	U	50.0	0.34		
1,2,3,6,7,8-HxCDF	0.22	U	52.1	0.31	U	50.0	0.31		
2,3,4,6,7,8-HxCDF	0.23	U	52.1	0.33	U	50.0	0.33		
1,2,3,7,8,9-HxCDF	0.27	U	52.1	0.38	U	50.0	0.38		
1,2,3,4,6,7,8-HpCDF	**2.59**	**J B**	**52.1**	**0.468**	**J q**	**50.0**	**0.18**	**1.404**	**2.34**
1,2,3,4,7,8,9-HpCDF	0.48	J	52.1	0.25	U	50.0	0.25		
OCDF	**6.70**	**J B**	**104**	**2.897**	**J**	**100**	**0.11**	**8.691**	**14.485**

Notes:

B : Compound was found in the blank and sample.

J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

q : The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio.

The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

U : Indicates the analyte was analyzed for but not detected.

-- : no applicable standard found for this compound

(See data quality notes for SW-1 below Table D.4.5)

Legend:

(red)	Result is less than 3x and 5x Method Blank - NOT VAILD
(green)	Result is greater than 5x the Method Blank - VAILD
(yellow)	Result is greater than 3x but less than 5x the Method Blank - USE WITH CAUTION
(light blue)	The compound co-eluted with other compounds

Data Quality Review Notes for Table C.1.4.5
Dioxin Surface Water Blank 140-31677
Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Data Quality Review Notes:

Sample SW-1

OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
1,2,3,4,6,7,8-HpCDF	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration consequential to reported sample concentration. Data probably not valid.

Sample SW-2

OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration inconsequential to reported sample concentration. Use data.

Sample SW-3

OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration inconsequential to reported sample concentration. Use data.

Sample SW-4

OCDD	Method blank concentration inconsequential to reported sample concentration. Use data.
OCDF	Method blank concentration inconsequential to reported sample concentration. Use data.

Sample SW-5

OCDD	Method blank concentration consequential to reported sample concentration. Data probably not valid.
OCDF	Method blank concentration inconsequential to reported sample concentration. Use data.

Sample EB

OCDD	Method blank concentration may or may not be consequential to reported sample concentration. Further evaluate importance of data.
OCDF	Method blank concentration consequential to reported sample concentration. Data probably not valid.

Table C.1.4.5 . Method Blank Data Validation -DIOXIN SW BLANK 140-31677
Edgemoor Sediment and Surface Water Quality Assessment
Edgmoor, Delaware

Client ID	**SW-2**		**SW-3**		**SW-4**		**SW-5**		Applicable Method Blank MB 140-31677/16-A				
Lab Sample ID	460-186095-2		460-186096-2		460-186302-1		460-186429-11		460-186096				
Sampling Date	07/02/2019 08:45:00		07/03/2019 09:00:00		07/08/2019 08:15:00		07/09/2019 15:00:00		7/19/2019				
Matrix	Water		Water		Water		Water		Water				
Dilution Factor	1		1		1		1		140-31677				
Unit	pg/l		pg/l		pg/l		pg/l		pg/L				
DIOXIN-1613B-WATER	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	EDL	3XResult	5XResult
WATER BY 1613B													
2,3,7,8-TCDD	0.51	U	0.87	U	0.35	U	0.54	U	0.63	U	0.63		
1,2,3,7,8-PeCDD	0.45	U	0.75	U	0.43	U	0.27	U	0.23	U	0.23		
1,2,3,4,7,8-HxCDD	0.53	U	0.29	U	0.73	U	0.40	U	0.35	U	0.35		
1,2,3,6,7,8-HxCDD	0.52	U	0.32	U	0.72	U	0.40	U	0.35	U	0.35		
1,2,3,7,8,9-HxCDD	1.14	J q	2.80	J	0.68	U	0.38	U	0.33	U	0.33		
1,2,3,4,6,7,8-HpCDD	19.5	J	44.2	J	5.17	J q	1.54	J q	0.73	U	0.73		
OCDD	**428**	**B**	**1010**	**B**	**102**	**J B**	**9.06**	**J B**	**3.054**	**J q**	**0.23**	**9.162**	**15.27**
2,3,7,8-TCDF	0.89	U	0.79	U	0.40	U	1.72	J	0.38	U	0.38		
1,2,3,7,8-PeCDF	0.55	U	0.84	U	0.45	U	0.87	U	0.33	U	0.33		
2,3,4,7,8-PeCDF	0.52	U	0.81	U	0.43	U	0.84	U	0.30	U	0.30		
1,2,3,4,7,8-HxCDF	1.42	J	4.86	J	0.26	U	3.55	J	0.31	U	0.31		
1,2,3,6,7,8-HxCDF	0.46	U	2.04	J	0.25	U	1.55	J q	0.29	U	0.29		
1,2,3,7,8,9-HxCDF	0.58	U	0.53	U	0.32	U	0.63	U	0.38	U	0.38		
2,3,4,6,7,8-HxCDF	0.48	U	0.40	U	0.26	U	0.50	U	0.31	U	0.31		
1,2,3,4,6,7,8-HpCDF	6.65	J	12.8	J	2.41	J	4.15	J	0.18	U	0.18		
1,2,3,4,7,8,9-HpCDF	0.57	U	2.60	J q	0.35	U	2.38	J q	0.26	U	0.26		
OCDF	**20.1**	**J B**	**103**	**J B**	**8.69**	**J B**	**33.1**	**J B q**	**1.031**	**J q**	**0.14**	**3.093**	**5.155**

Notes:
B : Compound was found in the blank and sample.
J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q : The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio.
The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.
U : Indicates the analyte was analyzed for but not detected.
-- : no applicable standard found for this compound

Legend:

Result is less than 3x and 5x Method Blank - NOT VAILD
Result is greater than 5x the Method Blank - VAILD
Result is greater than 3x but less than 5x the Method Blank - USE WITH CAUTION
The compound co-eluted with other compounds

APPENDIX C.1.5

METHOD BLANK DATA VALIDATION – AVS/SEM

Table C.1.5 Summary of QA/QC Data Validation SW
Edgemoor Sediment and Surface Water Quality Assessment
Edegmoor, Delaware

Naphthalene							
460-186095							
Prep Batch : 200-144920							
Results		Q	MB Result	Q	MB 3x	MB 5x	
Sample	ug/l		ug/l		ug/l	ug/l	
SW-2	0.013	JHB	0.00473	J	0.0142	0.02365	
460-186096							
Prep Batch 200-144920							
SW-3	0.0079	JHB	0.00474	J	0.0142	0.0237	

Notes:
Q : Qualifier
mg/kg: miligrams per kilogram
umol/g: micromoles per gram
MB: Method Blank

Legend:
Result is less than 3x and 5x Method Blank - NOT VALID
Result is greater than 5x the Method Blank - VALID
Result is greater than 3x but less than 5x the Method Blank - USE WITH CAUTION

APPENDIX C.2.1

SUMMARY OF PCB DATA VALIDATION

Table C.2.1.1 Summary of PCB Data Validation-Stratum A
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Homologs	Client ID	VB1-COMP-A	VB2-COMP-A	VB3-COMP-A	VB5-COMP-A	VB6-COMP-A	VB7-COMP-A	DUP1-COMP-A	VB9-COMP-A	VB10-COMP-A	VB11-COMP-A	VB13-COMP-A	DNREC Screening Value (ng/g)
	Lab Sample ID	460-185785-3	460-185785-6	460-185785-7	460-186095-4	460-186095-6	460-186096-4	460-186096-5	460-186095-8	460-186095-10	460-186096-7	460-186095-12	
	Prep Batch	140-31752	140-31752	140-31752	140-31828	140-31828	140-31828	140-31828	140-31828	140-31828	140-31828	140-31828	
	Unit	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	
	DIOXIN-1668C-SOIL	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	
	SOIL BY 1668C												
Mono	PCB-1	0.021	ND	ND	0.00073	ND	ND	ND	ND	ND	0.5	ND	
	PCB-2	0.016	ND	ND	ND	0.017	ND	ND	ND	ND	0.23	0.0039	
	PCB-3	0.028	ND	ND	ND	0.013	ND	ND	ND	ND	0.49	ND	
Di	PCB-4	0.11	ND	ND	ND	ND	ND	ND	ND	ND	1.15	ND	
	PCB-5	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.065	ND	
	PCB-6	0.14	0.037	ND	ND	ND	ND	ND	ND	ND	1.61	ND	
	PCB-7	0.010	ND	ND	ND	ND	ND	ND	ND	ND	0.12	ND	
	PCB-8	0.13	0.030	ND	ND	ND	ND	ND	ND	ND	1.78	ND	
	PCB-9	0.023	ND	ND	ND	ND	ND	ND	ND	ND	0.15	ND	
	PCB-10	0.016	ND	ND	ND	ND	ND	ND	ND	ND	0.092	ND	
	PCB-11	0.036	0.026	ND	0.0053	ND	0.013	ND	ND	ND	0.61	ND	
	PCB-12, 13	0.066	0.045	ND	ND	ND	ND	ND	ND	ND	0.92	ND	
	PCB-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-15	0.16	0.061	0.019	ND	0.017	0.013	ND	ND	ND	2.98	ND	
Tri	PCB-16	0.15	0.028	ND	ND	ND	ND	ND	ND	ND	2.91	ND	
	PCB-17	0.25	0.035	ND	ND	ND	ND	ND	ND	ND	4.26	ND	
	PCB-18, 30	0.46	0.080	ND	ND	0.018	ND	ND	0.0032	ND	8.32	ND	
	PCB-19	0.030	ND	ND	ND	ND	ND	ND	ND	ND	0.58	ND	
	PCB-20, 28	0.58	0.12	ND	0.004	0.031	ND	ND	NOT VALID	ND	9.34	NOT VALID	
	PCB-21, 33	0.14	0.033	ND	ND	0.013	ND	ND	ND	ND	2.68	ND	
	PCB-22	0.12	0.023	ND	0.002	ND	ND	ND	ND	ND	1.64	ND	
	PCB-23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-24	ND	0.048	ND	ND	ND	ND	ND	ND	ND	0.17	ND	
	PCB-25	0.17	0.061	ND	ND	0.0093	ND	ND	ND	ND	2.43	ND	
	PCB-26, 29	0.18	0.079	ND	0.0023	0.018	ND	ND	ND	ND	3.05	ND	
	PCB-27	0.044	0.037	ND	ND	ND	ND	ND	ND	ND	0.9	ND	
	PCB-31	0.58	0.11	ND	0.0032	0.02	ND	ND	ND	ND	7.55	ND	
	PCB-32	0.14	0.032	ND	ND	ND	ND	ND	ND	ND	2.94	ND	
	PCB-34	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.14	ND	
	PCB-35	0.016	0.014	ND	ND	ND	ND	ND	ND	ND	0.46	ND	
	PCB-36	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-37	0.085	ND	ND	ND	0.011	ND	ND	ND	ND	2.1	ND	
	PCB-38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-39	ND	0.017	ND	ND	ND	ND	ND	ND	ND	0.079	ND	
Tetra	PCB-40, 41, 71	0.51	0.13	ND	0.0052	0.069	ND	ND	ND	ND	8.52	ND	
	PCB-42	0.31	0.045	ND	ND	0.018	ND	ND	ND	ND	4.56	ND	
	PCB-43, 73	0.044	ND	ND	ND	ND	ND	ND	ND	ND	0.24	ND	
	PCB-44, 47, 65	0.97	0.19	ND	0.013	0.052	ND	ND	ND	ND	14.6	ND	
	PCB-45, 51	0.21	0.038	ND	ND	ND	ND	ND	ND	ND	2.71	ND	
	PCB-46	0.091	0.019	ND	ND	ND	ND	ND	ND	ND	0.84	ND	
	PCB-48	0.18	0.014	ND	ND	ND	ND	ND	ND	ND	1.85	ND	
	PCB-49, 69	0.69	0.18	ND	0.0075	0.099	ND	ND	ND	ND	13.1	ND	
	PCB-50, 53	0.12	0.033	ND	ND	ND	ND	ND	ND	ND	2.18	ND	
	PCB-52	1.28	0.26	ND	0.014	0.19	ND	ND	ND	ND	21.6	ND	
	PCB-54	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.04	ND	

Table C.2.1.1 Summary of PCB Data Validation-Stratum A
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Homologs	Client ID	VB1-COMP-A	VB2-COMP-A	VB3-COMP-A	VB5-COMP-A	VB6-COMP-A	VB7-COMP-A	DUP1-COMP-A	VB9-COMP-A	VB10-COMP-A	VB11-COMP-A	VB13-COMP-A	DNREC Screening Value (ng/g)
	Lab Sample ID	460-185785-3	460-185785-6	460-185785-7	460-186095-4	460-186095-6	460-186096-4	460-186096-5	460-186095-8	460-186095-10	460-186096-7	460-186095-12	
	Prep Batch	140-31752	140-31752	140-31752	140-31828	140-31828	140-31828	140-31828	140-31828	140-31828	140-31828	140-31828	
	Unit	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	
	DIOXIN-1668C-SOIL	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	
	SOIL BY 1668C												
	PCB-55	0.022	ND	ND	ND	ND	ND	ND	ND	ND	0.044	ND	
	PCB-56	0.30	0.053	ND	0.0038	ND	ND	ND	ND	ND	4.91	ND	
	PCB-57	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-58	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.13	ND	
	PCB-59, 62, 75	0.094	ND	ND	ND	ND	ND	ND	ND	ND	1.29	ND	
	PCB-60	0.050	ND	ND	ND	ND	ND	ND	ND	ND	0.53	ND	
	PCB-61, 70, 74, 76	1.19	0.16	ND	0.013	0.044	ND	ND	ND	ND	19.2	ND	
	PCB-63	0.024	ND	ND	ND	ND	ND	ND	ND	ND	0.39	ND	
Tetra	PCB-64	0.41	0.056	ND	0.0038	ND	ND	ND	ND	ND	5.32	ND	
	PCB-66	0.66	0.10	ND	0.0093	0.028	ND	ND	ND	ND	12.2	ND	
	PCB-67	0.024	ND	ND	ND	ND	ND	ND	ND	ND	0.31	ND	
	PCB-68	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.3	ND	
	PCB-72	0.030	ND	ND	ND	ND	ND	ND	ND	ND	0.52	ND	
	PCB-77	0.063	0.017	ND	ND	ND	ND	ND	ND	ND	1.29	ND	38
	PCB-78	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-79	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.16	ND	
	PCB-80	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-81	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12
	PCB-82	0.096	ND	ND	ND	ND	ND	ND	ND	ND	1.78	ND	
	PCB-83, 99	0.68	0.14	ND	0.013	0.072	ND	ND	ND	ND	17.1	ND	
	PCB-84	0.29	0.045	ND	ND	0.014	ND	ND	ND	ND	6.08	ND	
	PCB-85, 116, 117	0.14	ND	ND	0.0023	ND	ND	ND	ND	ND	2.72	ND	
	PCB-86, 87, 97, 109, 119, 1	0.54	ND	ND	0.0087	0.028	ND	ND	ND	ND	11.1	ND	
	PCB-88, 91	0.22	0.067	ND	0.0051	0.048	ND	ND	ND	ND	4.95	ND	
	PCB-89	0.026	ND	ND	ND	ND	ND	ND	ND	ND	0.23	ND	
	PCB-90, 101, 113	0.99	0.18	ND	0.019	0.074	ND	ND	ND	ND	22.3	ND	
	PCB-92	0.21	0.054	ND	0.0038	0.0095	ND	ND	ND	ND	4.33	ND	
	PCB-93, 100	ND	ND	ND	ND	0.014	ND	ND	ND	ND	0.44	ND	
	PCB-94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-95	0.92	0.21	ND	ND	0.079	ND	ND	ND	0.0078	19.2	ND	
	PCB-96	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.22	ND	
	PCB-98, 102	0.052	ND	ND	ND	ND	ND	ND	ND	ND	0.83	ND	
	PCB-103	ND	ND	ND	ND	0.019	ND	ND	ND	ND	0.83	ND	
Penta	PCB-104	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-105	0.18	0.038	ND	0.0047	ND	ND	ND	ND	ND	4	ND	120
	PCB-106	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-107	0.063	ND	ND	0.0024	ND	ND	ND	ND	ND	1.81	ND	
	PCB-108, 124	0.016	ND	ND	ND	ND	ND	ND	ND	ND	0.45	ND	
	PCB-110, 115	0.99	0.20	ND	0.019	0.048	ND	ND	ND	0.0045	22.2	ND	
	PCB-111	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-112	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-114	0.0099	ND	ND	ND	ND	ND	ND	ND	ND	0.21	ND	120
	PCB-118	0.59	0.12	ND	0.016	0.024	ND	ND	ND	ND	16	ND	120
	PCB-120	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.18	ND	
	PCB-121	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-122	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.18	ND	
	PCB-123	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.23	ND	120
	PCB-126	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.036
	PCB-127	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	

Table C.2.1.1 Summary of PCB Data Validation-Stratum A
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Homologs	Client ID	VB1-COMP-A	VB2-COMP-A	VB3-COMP-A	VB5-COMP-A	VB6-COMP-A	VB7-COMP-A	DUP1-COMP-A	VB9-COMP-A	VB10-COMP-A	VB11-COMP-A	VB13-COMP-A	DNREC Screening Value (ng/g)
	Lab Sample ID	460-185785-3	460-185785-6	460-185785-7	460-186095-4	460-186095-6	460-186096-4	460-186096-5	460-186095-8	460-186095-10	460-186096-7	460-186095-12	
	Prep Batch	140-31752	140-31752	140-31752	140-31828	140-31828	140-31828	140-31828	140-31828	140-31828	140-31828	140-31828	
	Unit	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	
	DIOXIN-1668C-SOIL	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	
	SOIL BY 1668C												
Hexa	PCB-128, 166	0.11	ND	ND	ND	ND	ND	ND	ND	ND	2.57	ND	
	PCB-129, 138, 160, 163	0.82	0.18	ND	0.035	0.036	ND	ND	ND	ND	18.1	ND	
	PCB-130	0.066	ND	ND	ND	ND	ND	ND	ND	ND	1.49	ND	
	PCB-131	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-132	0.29	ND	ND	0.0079	ND	ND	ND	ND	ND	6.36	ND	
	PCB-133	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.55	ND	
	PCB-134, 143	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.04	ND	
	PCB-135, 151	0.40	0.12	ND	0.0094	0.035	ND	ND	ND	ND	8.26	ND	
	PCB-136	0.15	ND	ND	0.0026	0.027	ND	ND	ND	ND	3.24	ND	
	PCB-137	0.019	ND	ND	0.0029	ND	ND	ND	ND	ND	0.63	ND	
	PCB-139, 140	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.39	ND	
	PCB-141	0.13	0.047	ND	ND	ND	ND	ND	ND	ND	2.85	ND	
	PCB-142	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-144	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.62	ND	
	PCB-145	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-146	0.19	ND	ND	0.0092	0.022	ND	ND	ND	ND	4.83	ND	
	PCB-147, 149	0.90	0.25	ND	0.032	0.12	ND	ND	ND	ND	22	ND	
	PCB-148	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.16	ND	
	PCB-150	ND	ND	ND	ND	0.0077	ND	ND	ND	ND	0.22	ND	
	PCB-152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-153, 168	0.75	0.19	ND	0.036	0.071	ND	ND	ND	ND	18.4	ND	
	PCB-154	0.021	ND	ND	ND	0.015	ND	ND	ND	ND	1.1	ND	
	PCB-155	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.071	ND	
	PCB-156, 157	0.064	ND	ND	ND	ND	ND	ND	ND	ND	1.84	ND	120
	PCB-158	0.068	ND	ND	ND	ND	ND	ND	ND	ND	1.51	ND	
	PCB-159	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.15	ND	
	PCB-161	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-162	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-164	0.066	ND	ND	0.003	ND	ND	ND	ND	ND	1.48	ND	
	PCB-165	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-167	0.028	ND	ND	ND	ND	ND	ND	ND	ND	0.64	ND	120
	PCB-169	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.12
Hepta	PCB-170	0.22	0.064	ND	0.0086	0.0083	ND	ND	ND	ND	5.52	ND	NVP
	PCB-171, 173	0.079	ND	ND	ND	ND	ND	ND	ND	ND	1.66	ND	
	PCB-172	0.037	ND	ND	ND	ND	ND	ND	ND	ND	0.95	ND	
	PCB-174	0.27	0.071	ND	ND	0.012	ND	ND	ND	ND	6.14	ND	
	PCB-175	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.25	ND	
	PCB-176	0.035	ND	ND	ND	ND	ND	ND	ND	ND	0.77	ND	
	PCB-177	0.18	0.044	ND	ND	0.015	ND	ND	ND	ND	3.67	ND	
	PCB-178	0.061	ND	ND	ND	0.0072	ND	ND	ND	ND	1.57	ND	
	PCB-179	0.14	0.036	ND	0.0041	0.013	ND	ND	ND	ND	2.95	ND	

Table C.2.1.1 Summary of PCB Data Validation-Stratum A
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Homologs	Client ID	VB1-COMP-A	VB2-COMP-A	VB3-COMP-A	VB5-COMP-A	VB6-COMP-A	VB7-COMP-A	DUP1-COMP-A	VB9-COMP-A	VB10-COMP-A	VB11-COMP-A	VB13-COMP-A	DNREC Screening Value (ng/g)
	Lab Sample ID	460-185785-3	460-185785-6	460-185785-7	460-186095-4	460-186095-6	460-186096-4	460-186096-5	460-186095-8	460-186095-10	460-186096-7	460-186095-12	
	Prep Batch	140-31752	140-31752	140-31752	140-31828	140-31828	140-31828	140-31828	140-31828	140-31828	140-31828	140-31828	
	Unit	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	
	DIOXIN-1668C-SOIL	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	
	SOIL BY 1668C												
Hepta	PCB-180, 193	0.51	0.15	ND	0.017	0.039	ND	ND	ND	ND	11.9	ND	NVP
	PCB-181	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-182	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.11	ND	
	PCB-183, 185	0.18	0.056	ND	0.0065	0.02	ND	ND	ND	ND	3.87	ND	
	PCB-184	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-186	ND	ND	ND	ND	ND	ND	ND	ND	ND	D	ND	
	PCB-187	0.39	0.11	ND	0.012	0.036	ND	ND	ND	ND	8.23	ND	
	PCB-188	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.1	ND	
	PCB-189	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.18	ND	130
	PCB-190	0.033	ND	ND	ND	ND	ND	ND	ND	ND	0.9	ND	
	PCB-191	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.21	ND	
	PCB-192	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Octa	PCB-194	0.18	0.069	ND	0.013	0.013	ND	ND	ND	ND	3.36	ND	
	PCB-195	0.072	ND	ND	ND	ND	ND	ND	ND	ND	1.29	ND	
	PCB-196	0.065	0.055	ND	0.014	0.023	ND	ND	ND	ND	2.23	ND	
	PCB-197	ND	ND	ND	ND	0.0068	ND	ND	ND	ND	0.16	ND	
	PCB-198, 199	0.28	0.11	ND	0.098	0.026	ND	ND	ND	ND	5.92	ND	
	PCB-200	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.39	ND	
	PCB-201	0.018	ND	ND	ND	0.0081	ND	ND	ND	ND	0.67	ND	
	PCB-202	0.077	0.032	ND	0.041	ND	ND	ND	ND	ND	1.5	ND	
	PCB-203	0.11	0.054	ND	0.033	0.014	ND	ND	ND	ND	2.64	ND	
	PCB-204	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-205	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.17	ND	
Nona	PCB-206	0.99	0.33	ND	0.75	0.18	ND	ND	ND	ND	12.8	ND	
	PCB-207	0.089	ND	ND	0.039	0.031	ND	ND	ND	ND	0.99	ND	
	PCB-208	0.43	0.15	ND	0.33	0.065	ND	ND	ND	ND	5.72	ND	
Deca	PCB-209	3.63	0.49	ND	0.92	1.87	ND	ND	ND	0.02	23.6	ND	

Table C.2.1.1 Summary of PCB Data Validation-Stratum A
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Edgemoor, Delaware

Homologs	Client ID	VB14-COMP-A	VB15-COMP-A	VB17-COMP-A	VB18-COMP-A	VB21-COMP-A	VB22-COMP-A	VB24-COMP-A	VB25-COMP-A	VB26-COMP-A	VB28-COMP-A	DNREC Screening Value (ng/g)
	Lab Sample ID	460-185785-4	460-186095-14	460-186095-16	460-186096-9	460-186429-1	460-186302-4	460-186302-7	460-186302-8	460-186429-4	460-186429-3	
	Prep Batch	140-31752	140-31828	140-31828	140-31828	140-31989	140-31989	140-31989	140-31989	140-31989	140-31989	
	Unit	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	
	DIOXIN-1668C-SOIL	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	
	SOIL BY 1668C											
Mono	PCB-1	ND	0.23	ND	ND	0.22	ND	ND	0.048	ND	ND	
	PCB-2	ND	0.34	ND	0.0055	0.17	ND	ND	0.036	ND	ND	
	PCB-3	ND	0.43	ND	ND	0.33	ND	ND	0.085	ND	ND	
Di	PCB-4	ND	0.52	ND	ND	0.58	ND	ND	0.24	ND	ND	
	PCB-5	ND	0.054	ND	ND	0.029	ND	ND	ND	ND	ND	
	PCB-6	ND	0.7	ND	ND	0.43	ND	ND	0.52	ND	ND	
	PCB-7	ND	0.057	ND	ND	0.051	ND	ND	0.023	ND	ND	
	PCB-8	0.0046	0.71	ND	ND	0.85	ND	0.0069	0.48	ND	ND	
	PCB-9	ND	0.22	ND	ND	0.1	ND	ND	0.041	ND	ND	
	PCB-10	ND	0.047	ND	ND	0.051	ND	ND	0.027	ND	ND	
	PCB-11	0.006	0.69	ND	0.011	0.64	ND	0.013	0.076	ND	ND	
	PCB-12, 13	0.0056	0.87	ND	ND	0.5	ND	ND	0.2	ND	ND	
	PCB-14	ND	0.043	ND	ND	0.023	ND	ND	ND	ND	ND	
	PCB-15	0.012	1.39	ND	0.006	1.49	ND	0.02	0.58	ND	ND	
Tri	PCB-16	ND	2.26	ND	ND	2.18	ND	ND	0.51	ND	ND	
	PCB-17	ND	3.36	ND	ND	2.85	ND	ND	0.93	0.0036	0.0057	
	PCB-18, 30	ND	7.48	ND	ND	6.41	0.015	0.011	1.88	ND	ND	
	PCB-19	ND	0.59	ND	ND	0.48	ND	ND	0.14	ND	ND	
	PCB-20, 28	0.0065	9.35	NOT VALID	0.01	6.52	0.025	0.019	2.61	ND	ND	
	PCB-21, 33	ND	2.85	ND	ND	1.87	0.0064	NOT VALID	0.48	NOT VALID	NOT VALID	
	PCB-22	ND	1.47	ND	ND	1.33	ND	ND	0.41	ND	ND	
	PCB-23	ND	ND	ND	ND	ND	ND	ND	0.034	ND	ND	
	PCB-24	ND	0.12	ND	ND	0.076	ND	ND	0.029	ND	ND	
	PCB-25	ND	1.31	ND	ND	1.02	ND	ND	0.87	ND	ND	
	PCB-26, 29	ND	1.37	ND	ND	1.32	ND	ND	0.87	ND	ND	
	PCB-27	ND	0.69	ND	ND	0.62	ND	ND	0.18	ND	ND	
	PCB-31	ND	6.36	ND	ND	5.14	0.024	ND	2.46	ND	0.017	
	PCB-32	ND	2.87	ND	ND	2.34	0.0052	ND	0.53	ND	ND	
	PCB-34	ND	0.15	ND	ND	0.069	ND	ND	ND	ND	ND	
	PCB-35	ND	0.92	ND	ND	0.37	ND	ND	0.047	ND	ND	
	PCB-36	ND	0.051	ND	ND	0.038	ND	ND	ND	ND	ND	
	PCB-37	ND	2.15	ND	0.003	1.46	0.0075	ND	0.35	ND	ND	
	PCB-38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-39	ND	0.11	ND	ND	0.064	ND	ND	ND	ND	ND	
Tetra	PCB-40, 41, 71	ND	9.9	ND	ND	6.7	0.017	ND	2.26	ND	ND	
	PCB-42	ND	5.95	ND	ND	3.52	ND	ND	1	ND	ND	
	PCB-43, 73	ND	0.38	ND	ND	0.44	ND	ND	ND	ND	ND	
	PCB-44, 47, 65	ND	19.9	ND	ND	18.7	0.03	0.025	4.24	0.034	ND	
	PCB-45, 51	ND	4.05	ND	ND	5.88	ND	ND	0.78	ND	ND	
	PCB-46	ND	1.3	ND	ND	0.77	ND	ND	0.21	ND	ND	
	PCB-48	ND	2.57	ND	ND	1.74	ND	ND	0.56	ND	ND	
	PCB-49, 69	ND	15.1	ND	ND	13.4	0.02	0.016	3.16	ND	ND	
	PCB-50, 53	ND	3.04	ND	ND	3.24	ND	ND	0.57	ND	ND	
	PCB-52	ND	27.9	ND	ND	24.9	0.041	0.02	5.71	ND	0.015	
	PCB-54	ND	0.035	ND	ND	0.37	ND	ND	ND	ND	ND	

Table C.2.1.1 Summary of PCB Data Validation-Stratum A
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Homologs	Client ID	VB14-COMP-A	VB15-COMP-A	VB17-COMP-A	VB18-COMP-A	VB21-COMP-A	VB22-COMP-A	VB24-COMP-A	VB25-COMP-A	VB26-COMP-A	VB28-COMP-A	DNREC Screening Value (ng/g)
	Lab Sample ID	460-185785-4	460-186095-14	460-186095-16	460-186096-9	460-186429-1	460-186302-4	460-186302-7	460-186302-8	460-186429-4	460-186429-3	
	Prep Batch	140-31752	140-31828	140-31828	140-31828	140-31989	140-31989	140-31989	140-31989	140-31989	140-31989	
	Unit	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	
	DIOXIN-1668C-SOIL	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	
	SOIL BY 1668C											
Tetra	PCB-55	ND	ND	ND	ND	ND	ND	ND	0.019	ND	ND	
	PCB-56	ND	8.58	ND	ND	4.52	ND	ND	0.96	ND	ND	
	PCB-57	ND	0.06	ND	ND	0.13	ND	ND	0.019	ND	ND	
	PCB-58	ND	0.16	ND	ND	0.065	ND	ND	0.025	ND	ND	
	PCB-59, 62, 75	ND	1.74	ND	ND	1.36	ND	ND	0.41	ND	ND	
	PCB-60	ND	0.5	ND	ND	0.5	0.01	ND	0.1	ND	ND	
	PCB-61, 70, 74, 76	ND	23.2	ND	0.013	17.8	0.041	0.03	4.98	ND	0.031	
	PCB-63	ND	0.44	ND	ND	0.39	ND	ND	0.081	ND	ND	
	PCB-64	ND	7.9	ND	ND	4.92	0.01	ND	1.37	ND	ND	
	PCB-66	ND	17	ND	0.0091	11.2	0.025	0.012	2.24	ND	0.014	
	PCB-67	ND	0.4	ND	ND	0.28	ND	ND	0.039	ND	ND	
	PCB-68	ND	0.26	ND	ND	0.24	ND	ND	0.04	ND	ND	
	PCB-72	ND	0.45	ND	ND	0.47	ND	ND	0.094	ND	ND	
	PCB-77	ND	2.67	ND	ND	1.03	NOT VALID	ND	0.18	NOT VALID	ND	38
	PCB-78	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-79	ND	0.17	ND	ND	0.16	ND	ND	ND	ND	ND	
	PCB-80	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-81	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12
Penta	PCB-82	ND	2.04	ND	ND	1.89	ND	ND	0.26	ND	ND	
	PCB-83, 99	ND	17.9	ND	0.006	15.1	0.0037	0.01	2.45	ND	0.016	
	PCB-84	ND	7.72	ND	ND	6.25	0.0099	ND	1.02	ND	ND	
	PCB-85, 116, 117	ND	3.22	ND	ND	2.7	ND	0.0048	0.42	0.0073	0.029	
	PCB-86, 87, 97, 109, 119,	ND	12.9	ND	0.0014	11.8	0.022	0.0098	1.81	ND	0.0068	
	PCB-88, 91	ND	4.82	ND	ND	3.45	0.0092	0.0066	0.82	ND	0.016	
	PCB-89	ND	0.32	ND	ND	0.18	ND	ND	0.029	ND	ND	
	PCB-90, 101, 113	ND	24.4	ND	0.012	23.1	0.033	0.018	3.54	ND	0.022	
	PCB-92	ND	4.67	ND	ND	4.89	0.0058	ND	0.67	ND	0.0069	
	PCB-93, 100	ND	0.35	ND	0.0055	0.93	ND	ND	0.062	ND	ND	
	PCB-94	ND	0.19	ND	ND	0.22	ND	ND	0.027	ND	0.013	
	PCB-95	0.0073	21.2	ND	ND	20.8	0.029	0.013	3.29	ND	0.02	
	PCB-96	ND	0.39	ND	ND	0.25	ND	ND	0.041	ND	ND	
	PCB-98, 102	ND	1.14	ND	ND	0.85	ND	ND	0.15	ND	ND	
	PCB-103	ND	0.58	ND	ND	0.77	ND	ND	0.067	ND	0.0093	
	PCB-104	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-105	ND	4.34	ND	ND	4.69	ND	ND	0.63	ND	ND	120
	PCB-106	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-107	ND	2.38	ND	ND	2.2	ND	ND	0.27	ND	ND	
	PCB-108, 124	ND	0.53	ND	ND	0.57	ND	ND	0.069	ND	ND	
	PCB-110, 115	0.0058	26.2	0.0065	0.012	22.3	0.044	0.019	3.45	ND	ND	
	PCB-111	ND	ND	ND	ND	0.062	0.0024	0.003	ND	ND	ND	
	PCB-112	ND	ND	ND	ND	ND	0.017	ND	ND	ND	ND	
	PCB-114	ND	0.21	ND	ND	0.2	ND	ND	0.037	ND	ND	120
	PCB-118	ND	18.6	0.0051	0.015	18.9	0.023	0.015	2.47	ND	ND	120
	PCB-120	ND	0.2	ND	ND	0.17	ND	ND	0.022	ND	ND	
	PCB-121	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-122	ND	0.23	ND	ND	0.2	ND	ND	0.036	ND	ND	
	PCB-123	ND	0.22	ND	ND	0.2	ND	ND	0.033	ND	ND	120
	PCB-126	ND	0.068	ND	ND	0.15	NOT VALID	ND	ND	ND	ND	0.036
	PCB-127	ND	0.022	ND	ND	ND	ND	ND	ND	ND	ND	

Table C.2.1.1 Summary of PCB Data Validation-Stratum A
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Homologs	Client ID	VB14-COMP-A	VB15-COMP-A	VB17-COMP-A	VB18-COMP-A	VB21-COMP-A	VB22-COMP-A	VB24-COMP-A	VB25-COMP-A	VB26-COMP-A	VB28-COMP-A	DNREC Screening Value (ng/g)
	Lab Sample ID	460-185785-4	460-186095-14	460-186095-16	460-186096-9	460-186429-1	460-186302-4	460-186302-7	460-186302-8	460-186429-4	460-186429-3	
	Prep Batch	140-31752	140-31828	140-31828	140-31828	140-31989	140-31989	140-31989	140-31989	140-31989	140-31989	
	Unit	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	
	DIOXIN-1668C-SOIL	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	
	SOIL BY 1668C											
Hexa	PCB-128, 166	ND	2.66	ND	ND	3.43	0.013	ND	0.37	ND	ND	
	PCB-129, 138, 160, 163	ND	18.6	0.01	ND	26	0.046	0.029	3.01	ND	0.021	
	PCB-130	ND	1.61	ND	ND	2.06	ND	ND	0.23	ND	ND	
	PCB-131	ND	0.23	ND	ND	0.24	ND	NOT VALID	ND	ND	ND	
	PCB-132	ND	7.02	ND	ND	10.5	0.012	ND	0.97	ND	ND	
	PCB-133	ND	0.51	ND	ND	0.68	ND	ND	0.093	ND	ND	
	PCB-134, 143	ND	1.11	ND	ND	1.59	ND	ND	0.15	ND	ND	
	PCB-135, 151	ND	7.39	ND	ND	9.13	0.023	0.0074	1.22	ND	ND	
	PCB-136	ND	2.89	ND	ND	3.54	0.01	ND	0.46	ND	ND	
	PCB-137	ND	0.65	ND	ND	0.83	ND	ND	0.1	ND	ND	
	PCB-139, 140	ND	0.41	ND	ND	0.55	ND	ND	0.038	ND	ND	
	PCB-141	ND	2.8	ND	ND	4.33	ND	0.03	0.41	ND	ND	
	PCB-142	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-144	ND	0.59	ND	ND	0.8	ND	ND	0.093	ND	ND	
	PCB-145	ND	0.015	ND	ND	0.015	ND	ND	ND	ND	ND	
	PCB-146	ND	4.31	ND	ND	5.94	ND	ND	0.74	ND	ND	
	PCB-147, 149	ND	18.6	ND	ND	26.8	0.049	0.027	3.53	ND	ND	
	PCB-148	ND	0.11	ND	ND	0.1	ND	ND	0.0095	ND	ND	
	PCB-150	ND	0.099	ND	ND	0.077	ND	ND	0.013	ND	ND	
	PCB-152	ND	0.021	ND	ND	0.03	ND	ND	ND	ND	ND	
	PCB-153, 168	ND	17.1	0.012	ND	24.1	0.048	ND	3.13	ND	ND	
	PCB-154	ND	0.53	ND	ND	0.59	0.0048	ND	0.098	ND	ND	
	PCB-155	ND	0.014	ND	ND	0.016	ND	ND	0.0061	ND	ND	
	PCB-156, 157	ND	1.93	ND	ND	2.38	ND	ND	0.25	ND	ND	120
	PCB-158	ND	1.53	ND	ND	2.19	ND	ND	0.2	ND	ND	
	PCB-159	ND	0.15	ND	ND	0.15	ND	ND	ND	ND	ND	
	PCB-161	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-162	ND	0.19	ND	ND	0.1	ND	ND	ND	ND	ND	
	PCB-164	ND	1.51	ND	ND	1.99	ND	ND	0.19	ND	ND	
	PCB-165	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-167	ND	0.72	ND	ND	0.82	ND	ND	0.08	ND	ND	120
	PCB-169	ND	0.045	ND	ND	0.077	0.018	ND	ND	ND	NOT VALID	0.12
Hepta	PCB-170	ND	5.05	0.013	ND	6.96	0.016	0.018	0.75	ND	0.0043	NVP
	PCB-171, 173	ND	1.53	ND	ND	1.94	NOT VALID	NOT VALID	0.24	NOT VALID	NOT VALID	
	PCB-172	ND	0.98	ND	ND	1.08	0.0083	ND	0.14	ND	ND	
	PCB-174	ND	5.54	0.0062	ND	7.47	0.023	ND	0.87	ND	0.012	
	PCB-175	ND	0.26	ND	ND	0.31	ND	ND	0.036	ND	ND	
	PCB-176	ND	0.72	ND	ND	0.95	ND	ND	0.11	ND	ND	
	PCB-177	ND	3.17	ND	ND	4.2	0.012	ND	0.55	ND	ND	
	PCB-178	ND	1.28	ND	ND	1.68	0.013	ND	0.26	ND	ND	
	PCB-179	ND	2.51	ND	ND	3.62	0.018	ND	0.47	ND	ND	

Table C.2.1.1 Summary of PCB Data Validation-Stratum A
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Homologs	**Client ID**	VB14-COMP-A	VB15-COMP-A	VB17-COMP-A	VB18-COMP-A	VB21-COMP-A	VB22-COMP-A	VB24-COMP-A	VB25-COMP-A	VB26-COMP-A	VB28-COMP-A	DNREC Screening Value (ng/g)
	Lab Sample ID	460-185785-4	460-186095-14	460-186095-16	460-186096-9	460-186429-1	460-186302-4	460-186302-7	460-186302-8	460-186429-4	460-186429-3	
	Prep Batch	140-31752	140-31828	140-31828	140-31828	140-31989	140-31989	140-31989	140-31989	140-31989	140-31989	
	Unit	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	
	DIOXIN-1668C-SOIL	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	
	SOIL BY 1668C											
Hepta	PCB-180, 193	ND	10.7	0.021	0.014	13.4	0.057	0.019	1.66	ND	0.015	NVP
	PCB-181	ND	0.045	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-182	ND	0.084	ND	ND	0.08	ND	ND	ND	ND	ND	
	PCB-183, 185	ND	3.49	ND	ND	4.52	0.032	ND	0.58	ND	0.0087	
	PCB-184	ND	0.036	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-186	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-187	ND	6.28	0.01	ND	8.24	0.085	ND	1.34	ND	0.013	
	PCB-188	ND	0.052	ND	ND	0.057	ND	ND	ND	ND	ND	
	PCB-189	ND	0.18	ND	ND	0.19	NOT VALID	ND	0.027	ND	NOT VALID	130
	PCB-190	ND	0.88	ND	ND	1.06	0.0064	ND	0.15	ND	0.0042	
	PCB-191	ND	0.21	ND	ND	0.25	ND	ND	0.037	ND	ND	
	PCB-192	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Octa	PCB-194	ND	2.98	ND	ND	3.67	0.1	ND	0.5	ND	ND	
	PCB-195	ND	0.97	ND	ND	1.4	0.018	ND	0.16	ND	ND	
	PCB-196	ND	1.98	ND	ND	2.06	0.19	ND	0.28	ND	0.01	
	PCB-197	ND	0.18	ND	ND	0.11	0.0073	ND	0.022	ND	ND	
	PCB-198, 199	ND	6.57	0.0088	ND	7.18	0.82	0.013	0.99	NOT VALID	NOT VALID	
	PCB-200	ND	0.34	ND	ND	0.33	0.015	ND	0.04	ND	ND	
	PCB-201	ND	0.59	ND	ND	0.59	0.05	ND	0.066	ND	ND	
	PCB-202	ND	1.74	ND	ND	1.95	0.26	ND	0.25	ND	ND	
	PCB-203	ND	2.52	ND	ND	2.86	0.29	ND	0.34	ND	ND	
	PCB-204	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-205	ND	0.14	ND	ND	0.2	ND	ND	0.032	ND	ND	
Nona	PCB-206	ND	19.7	ND	0.022	23.4	5.68	0.029	2.58	ND	0.041	
	PCB-207	ND	1.27	ND	ND	1.24	0.39	ND	0.2	ND	ND	
	PCB-208	ND	8.55	ND	ND	9.45	2.53	0.014	1.1	ND	0.023	
Deca	PCB-209	0.028	36.3	0.017	0.044	43.7	8.39	0.079	11	0.044	0.073	

Notes:

-- : no applicable standard found for this compound

B : Compound was found in the blank and sample.

C : The compound co-eluted with other compounds

G : The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference

J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

q : The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

U : Indicates the analyte was analyzed for but not detected.

ng/g: nanograms per gram

Legend:

Result is less than 3x and 5x Method Blank - NOT VALID

Result is greater than 5x the Method Blank - VALID

Result is greater than 3x but less than 5x the Method Blank - USE WITH CAUTION

The compound co-eluted with other compounds

Duffield Associates, Inc.
Project No. 11139.LH

Table C.2.1.2 Summary of PCB Data Validation-Stratum A
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Homologs	Client ID	VB1-COMP-B	VB4-COMP-A	VB5-COMP-B	VB6-COMP-B	VB9-COMP-B	VB10-COMP-B	VB11-COMP-B	VB12-COMP-B	VB13-COMP-B	VB15-COMP-B	DNREC Screening Value (ng/g)
	Lab Sample ID	460-185785-5	460-186095-3	460-186095-5	460-186095-7	460-186095-9	460-186095-11	460-186096-8	460-186096-6	460-186095-13	460-186095-15	
	Prep Batch	140-31752	140-31828	140-31828	140-31828	140-31828	140-31828	140-31828	140-31828	140-31828	140-31828	
	Unit	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	
	DIOXIN-1668C-SOIL	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	
	SOIL BY 1668C											
Mono	PCB-1	ND	ND	0.0065	ND	ND	ND	0.021	0.0033	ND	0.0078	
	PCB-2	ND	ND	0.0048	ND	ND	ND	0.0085	ND	ND	0.012	
	PCB-3	ND	ND	0.0081	0.00055	ND	ND	0.024	ND	ND	0.021	
Di	PCB-4	ND	ND	0.015	ND	ND	ND	0.066	ND	ND	0.032	
	PCB-5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-6	ND	ND	0.014	ND	ND	ND	0.063	ND	ND	0.029	
	PCB-7	ND	ND	ND	ND	ND	ND	0.01	ND	ND	ND	
	PCB-8	ND	ND	0.031	ND	ND	ND	0.11	ND	ND	0.044	
	PCB-9	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.012	
	PCB-10	ND	ND	ND	ND	ND	ND	0.0078	ND	ND	ND	
	PCB-11	0.006	0.0046	0.027	0.0041	ND	ND	0.027	ND	ND	0.036	
	PCB-12, 13	ND	ND	0.02	ND	ND	ND	0.048	ND	ND	0.041	
	PCB-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-15	ND	ND	0.057	ND	ND	ND	0.18	ND	ND	0.078	
Tri	PCB-16	ND	ND	0.025	ND	ND	ND	0.13	ND	ND	0.086	
	PCB-17	ND	ND	0.039	ND	ND	ND	0.18	ND	ND	0.13	
	PCB-18, 30	ND	ND	0.062	ND	ND	ND	0.36	ND	ND	0.26	
	PCB-19	ND	ND	0.0084	ND	ND	ND	0.049	ND	ND	ND	
	PCB-20, 28	0.0056	NOT VALID	0.15	ND	ND	ND	0.6	ND	ND	0.53	
	PCB-21, 33	0.0032	ND	0.041	ND	ND	ND	0.19	ND	ND	0.16	
	PCB-22	ND	ND	0.034	0.001	ND	ND	0.13	ND	ND	0.1	
	PCB-23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-24	ND	ND	ND	ND	ND	ND	0.0066	ND	ND	ND	
	PCB-25	0.0015	ND	0.026	ND	ND	ND	0.085	ND	ND	0.061	
	PCB-26, 29	ND	ND	0.032	ND	ND	ND	0.12	ND	ND	0.082	
	PCB-27	ND	ND	0.011	ND	ND	ND	0.036	ND	ND	0.017	
	PCB-31	0.0059	0.0017	0.11	0.001	ND	ND	0.48	ND	ND	0.39	
	PCB-32	ND	ND	0.041	0.0022	ND	ND	0.14	ND	ND	0.1	
	PCB-34	ND	ND	ND	ND	ND	ND	0.0064	ND	ND	0.0074	
	PCB-35	0.0039	ND	0.0046	ND	ND	ND	0.031	ND	ND	0.04	
	PCB-36	ND	ND	ND	ND	ND	ND	0.0045	ND	ND	ND	
	PCB-37	ND	ND	0.059	ND	ND	ND	0.13	ND	ND	0.12	
	PCB-38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-39	ND	ND	ND	ND	ND	ND	0.0068	ND	ND	ND	
Tetra	PCB-40, 41, 71	0.0075	ND	0.2	ND	ND	ND	0.48	ND	ND	0.44	
	PCB-42	ND	ND	0.067	ND	ND	ND	0.28	ND	ND	0.28	
	PCB-43, 73	ND	ND	0.016	ND	ND	ND	0.03	ND	0.0037	0.026	
	PCB-44, 47, 65	0.0096	0.0031	0.35	ND	ND	ND	0.98	ND	0.0062	0.9	
	PCB-45, 51	ND	ND	0.076	ND	ND	ND	0.17	ND	ND	0.16	
	PCB-46	ND	ND	0.017	ND	ND	ND	0.056	ND	ND	0.058	
	PCB-48	0.0017	ND	0.031	ND	ND	ND	0.14	ND	ND	0.14	
	PCB-49, 69	0.0078	ND	0.3	ND	ND	ND	0.75	ND	ND	0.67	
	PCB-50, 53	ND	ND	0.051	ND	ND	ND	0.13	ND	ND	0.12	
	PCB-52	0.014	ND	0.38	ND	ND	ND	1.23	ND	0.0038	1.14	
	PCB-54	ND	ND	0.0044	ND	ND	ND	0.0082	ND	ND	ND	
	PCB-55	ND	ND	ND	ND	ND	ND	0.011	ND	ND	0.0073	
	PCB-56	0.0034	ND	0.092	ND	ND	ND	0.37	ND	ND	0.39	
	PCB-57	ND	ND	ND	ND	ND	ND	0.006	ND	ND	ND	
	PCB-58	ND	ND	ND	ND	ND	ND	0.0077	ND	0.0052	0.005	
	PCB-59, 62, 75	0.002	ND	0.03	ND	ND	ND	0.078	ND	ND	0.069	

Table C.2.1.2 Summary of PCB Data Validation-Stratum A
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Homologs	Client ID	VB1-COMP-B	VB4-COMP-A	VB5-COMP-B	VB6-COMP-B	VB9-COMP-B	VB10-COMP-B	VB11-COMP-B	VB12-COMP-B	VB13-COMP-B	VB15-COMP-B	DNREC Screening Value (ng/g)
	Lab Sample ID	460-185785-5	460-186095-3	460-186095-5	460-186095-7	460-186095-9	460-186095-11	460-186096-8	460-186096-6	460-186095-13	460-186095-15	
	Prep Batch	140-31752	140-31828	140-31828	140-31828	140-31828	140-31828	140-31828	140-31828	140-31828	140-31828	
	Unit	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	
	DIOXIN-1668C-SOIL	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	
	SOIL BY 1668C											
Tetra	PCB-60	ND	ND	0.028	ND	ND	ND	0.052	ND	ND	0.031	
	PCB-61, 70, 74, 76	0.016	ND	0.39	ND	ND	ND	1.32	0.003	ND	1.17	
	PCB-63	ND	ND	0.015	ND	ND	ND	0.032	ND	ND	0.02	
	PCB-64	0.0057	ND	0.085	ND	ND	ND	0.36	ND	ND	0.34	
	PCB-66	0.0072	0.0021	0.25	ND	ND	ND	0.88	ND	ND	0.79	
	PCB-67	ND	ND	0.019	ND	ND	ND	0.024	ND	ND	0.02	
	PCB-68	ND	ND	0.011	ND	ND	ND	0.012	ND	ND	0.012	
	PCB-72	ND	ND	0.016	ND	ND	ND	0.022	ND	ND	0.02	
	PCB-77	ND	ND	0.045	ND	ND	ND	0.084	ND	ND	0.11	38
	PCB-78	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-79	ND	ND	ND	ND	ND	ND	0.0086	ND	ND	ND	
	PCB-80	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-81	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12
Penta	PCB-82	ND	ND	0.081	ND	ND	ND	0.13	ND	ND	0.079	
	PCB-83, 99	ND	ND	0.62	ND	ND	ND	0.93	ND	ND	0.82	
	PCB-84	ND	ND	0.16	ND	ND	ND	0.39	ND	0.0062	0.32	
	PCB-85, 116, 117	ND	ND	0.11	ND	ND	ND	0.17	ND	ND	0.14	
	PCB-86, 87, 97, 109, 119, 125	ND	ND	0.55	ND	ND	ND	0.68	ND	ND	0.6	
	PCB-88, 91	ND	ND	0.25	ND	ND	ND	0.23	ND	ND	0.2	
	PCB-89	ND	ND	ND	ND	ND	ND	0.02	ND	0.0049	ND	
	PCB-90, 101, 113	0.014	ND	1.32	ND	ND	ND	1.29	ND	ND	1.14	
	PCB-92	ND	ND	0.8	ND	ND	ND	0.26	ND	ND	0.23	
	PCB-93, 100	ND	ND	0.33	ND	ND	ND	0.025	ND	ND	0.017	
	PCB-94	ND	ND	0.097	ND	ND	ND	0.014	ND	ND	ND	
	PCB-95	ND	ND	0.56	ND	ND	ND	1.14	ND	ND	0.99	
	PCB-96	ND	ND	0.014	ND	ND	ND	0.013	ND	0.005	0.016	
	PCB-98, 102	ND	ND	0.25	ND	ND	ND	0.056	ND	0.011	0.053	
	PCB-103	ND	ND	0.075	ND	ND	ND	0.037	ND	ND	0.02	
	PCB-104	ND	ND	ND	ND	ND	ND	ND	ND	0.0024	ND	
	PCB-105	ND	ND	0.21	ND	ND	ND	0.24	ND	ND	0.19	120
	PCB-106	ND	ND	ND	ND	ND	ND	D	ND	ND	ND	
	PCB-107	ND	ND	0.052	ND	ND	ND	0.094	ND	ND	0.09	
	PCB-108, 124	ND	ND	0.017	ND	ND	ND	0.028	ND	ND	0.025	
	PCB-110, 115	ND	0.0025	0.76	ND	ND	ND	1.37	ND	ND	1.24	
	PCB-111	ND	ND	0.022	ND	ND	ND	ND	ND	ND	ND	
	PCB-112	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-114	ND	ND	0.012	ND	ND	ND	0.012	ND	ND	0.0089	120
	PCB-118	0.0055	ND	0.43	ND	ND	ND	1.01	ND	ND	0.86	120
	PCB-120	ND	ND	0.026	ND	ND	ND	0.01	ND	ND	0.011	
	PCB-121	ND	ND	0.029	ND	ND	ND	ND	ND	0.005	ND	
	PCB-122	ND	ND	ND	ND	ND	ND	0.01	ND	ND	0.011	
	PCB-123	ND	ND	0.0072	ND	ND	ND	0.0094	ND	ND	0.011	120
	PCB-126	ND	ND	0.0053	ND	ND	ND	ND	ND	ND	ND	0.036
	PCB-127	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	

Table C.2.1.2 Summary of PCB Data Validation-Stratum A
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Edgemoor, Delaware

Homologs	Client ID	VB1-COMP-B	VB4-COMP-A	VB5-COMP-B	VB6-COMP-B	VB9-COMP-B	VB10-COMP-B	VB11-COMP-B	VB12-COMP-B	VB13-COMP-B	VB15-COMP-B	DNREC Screening Value (ng/g)
	Lab Sample ID	460-185785-5	460-186095-3	460-186095-5	460-186095-7	460-186095-9	460-186095-11	460-186096-8	460-186096-6	460-186095-13	460-186095-15	
	Prep Batch	140-31752	140-31828	140-31828	140-31828	140-31828	140-31828	140-31828	140-31828	140-31828	140-31828	
	Unit	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	
	DIOXIN-1668C-SOIL	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	
	SOIL BY 1668C											
Hexa	PCB-128, 166	ND	ND	0.27	ND	ND	ND	0.15	ND	ND	0.14	
Hexa	PCB-129, 138, 160, 163	ND	ND	2.6	ND	ND	ND	1.02	ND	ND	1.02	
Hexa	PCB-130	ND	ND	0.22	ND	ND	ND	0.073	ND	ND	0.073	
Hexa	PCB-131	ND	ND	ND	ND	ND	ND	0.009	ND	ND	ND	
Hexa	PCB-132	ND	ND	0.54	ND	ND	ND	0.38	ND	ND	0.38	
Hexa	PCB-133	ND	ND	0.69	ND	ND	ND	0.025	ND	ND	0.024	
Hexa	PCB-134, 143	ND	ND	0.21	ND	ND	ND	0.064	ND	ND	0.05	
Hexa	PCB-135, 151	ND	ND	2.75	ND	ND	ND	0.45	ND	ND	0.41	
Hexa	PCB-136	ND	ND	0.35	ND	ND	ND	0.16	ND	ND	0.16	
Hexa	PCB-137	ND	ND	0.1	ND	ND	ND	0.038	ND	ND	0.02	
Hexa	PCB-139, 140	ND	ND	0.12	ND	ND	ND	0.021	ND	ND	0.018	
Hexa	PCB-141	ND	ND	0.25	ND	ND	ND	0.16	ND	ND	0.18	
Hexa	PCB-142	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Hexa	PCB-144	ND	ND	0.043	ND	ND	ND	0.04	ND	ND	0.034	
Hexa	PCB-145	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Hexa	PCB-146	ND	ND	3.06	ND	ND	ND	0.24	ND	ND	0.23	
Hexa	PCB-147, 149	ND	ND	4.47	ND	ND	ND	1.15	ND	ND	1.09	
Hexa	PCB-148	ND	ND	0.22	ND	ND	ND	ND	ND	ND	ND	
Hexa	PCB-150	ND	ND	0.15	ND	ND	ND	ND	ND	ND	0.0057	
Hexa	PCB-152	ND	ND	0.013	ND	ND	ND	ND	ND	ND	ND	
Hexa	PCB-153, 168	ND	ND	2.18	ND	ND	ND	0.98	ND	ND	0.94	
Hexa	PCB-154	ND	ND	1.13	ND	ND	ND	0.037	ND	ND	0.03	
Hexa	PCB-155	ND	ND	0.01	ND	ND	ND	ND	ND	ND	ND	
Hexa	PCB-156, 157	ND	ND	0.087	ND	ND	ND	0.1	ND	ND	0.088	120
Hexa	PCB-158	ND	ND	0.15	ND	ND	ND	0.085	ND	ND	0.083	
Hexa	PCB-159	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Hexa	PCB-161	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Hexa	PCB-162	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Hexa	PCB-164	ND	ND	0.1	ND	ND	ND	0.076	ND	ND	0.077	
Hexa	PCB-165	ND	ND	0.11	ND	ND	ND	ND	ND	ND	ND	
Hexa	PCB-167	ND	ND	ND	ND	ND	ND	0.036	ND	ND	0.034	120
Hexa	PCB-169	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.12
Hepta	PCB-170	ND	ND	1.39	ND	ND	ND	0.29	ND	ND	0.34	NVP
Hepta	PCB-171, 173	ND	ND	0.48	ND	ND	ND	0.088	ND	ND	0.091	
Hepta	PCB-172	ND	ND	0.41	ND	ND	ND	0.066	ND	ND	0.057	
Hepta	PCB-174	ND	ND	1.63	ND	ND	ND	0.35	ND	ND	0.33	
Hepta	PCB-175	ND	ND	0.12	ND	ND	ND	0.014	ND	ND	0.018	
Hepta	PCB-176	ND	ND	0.34	ND	ND	ND	0.038	ND	ND	0.04	
Hepta	PCB-177	ND	ND	2.52	ND	ND	ND	0.19	ND	ND	0.18	
Hepta	PCB-178	ND	ND	1.44	ND	ND	ND	0.068	ND	ND	0.08	
Hepta	PCB-179	ND	ND	2.06	ND	ND	ND	0.16	ND	ND	0.16	
Hepta	PCB-180, 193	0.0078	ND	3.72	ND	ND	ND	0.63	ND	ND	0.68	NVP
Hepta	PCB-181	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Hepta	PCB-182	ND	ND	0.16	ND	ND	ND	ND	ND	ND	ND	
Hepta	PCB-183, 185	ND	ND	1.22	ND	ND	ND	0.22	ND	ND	0.2	
Hepta	PCB-184	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Hepta	PCB-186	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Hepta	PCB-187	0.0049	ND	6.15	ND	ND	ND	0.44	ND	ND	0.39	
Hepta	PCB-188	ND	ND	0.034	ND	ND	ND	ND	ND	ND	ND	

Table C.2.1.2 Summary of PCB Data Validation-Stratum A
Edgemoor Sediment and Surface Water Quality Assessment
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Hepta	PCB-189	ND	ND	0.063	ND	ND	ND	0.0088	ND	ND	0.011	130
	PCB-190	ND	ND	0.3	ND	ND	ND	0.05	ND	ND	0.063	
	PCB-191	ND	ND	0.058	ND	ND	ND	ND	ND	ND	ND	
	PCB-192	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Octa	PCB-194	ND	ND	2.76	ND	ND	ND	0.17	ND	ND	0.18	
	PCB-195	ND	ND	1.18	ND	ND	ND	0.067	ND	ND	0.075	
	PCB-196	ND	ND	0.92	ND	ND	ND	0.086	ND	ND	0.088	
	PCB-197	ND	ND	0.081	ND	ND	ND	0.0067	ND	ND	0.0096	
	PCB-198, 199	ND	ND	2.54	ND	ND	ND	0.26	ND	ND	0.3	
	PCB-200	ND	ND	0.25	ND	ND	ND	0.02	ND	ND	0.018	
	PCB-201	ND	ND	0.32	ND	ND	ND	0.029	ND	ND	0.032	
	PCB-202	ND	ND	0.53	ND	ND	ND	0.061	ND	ND	0.075	
	PCB-203	ND	ND	1.1	ND	ND	ND	0.13	ND	ND	0.12	
	PCB-204	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-205	ND	ND	0.14	ND	ND	ND	0.0071	ND	ND	ND	
Nona	PCB-206	ND	ND	2.27	ND	ND	ND	0.46	ND	ND	0.95	
	PCB-207	ND	ND	0.22	ND	ND	ND	0.045	ND	ND	0.06	
	PCB-208	ND	ND	0.85	ND	ND	ND	0.2	ND	ND	0.38	
Deca	PCB-209	ND	ND	2.65	0.002	ND	ND	1.12	0.014	ND	1.84	

Table C.2.1.2 Summary of PCB Data Validation-Stratum A
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Homologs	Client ID	VB19-COMP-B	VB21-COMP-B	VB23-COMP-B	DUP-COMP-B	VB25-COMP-B	VB27-COMP-B	VB29-COMP-A	VB30-COMP-B	VB31-COMP-B	VB33-COMP-B	DNREC Screening Value (ng/g)
	Lab Sample ID	460-186302-3	460-186429-2	460-186302-5	460-186302-6	460-186302-9	460-186429-6	460-186429-5	460-186429-7	460-186429-12	460-186429-8	
	Prep Batch	140-31989	140-31989	140-31989	140-31989	140-31989	140-31989	140-31989	140-31989	140-31989	140-31989	
	Unit	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	
	DIOXIN-1668C-SOIL	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	
	SOIL BY 1668C											
Mono	PCB-1	0.017	0.0086	ND	0.0017	ND	ND	ND	ND	0.13	ND	
	PCB-2	0.02	ND	ND	ND	ND	ND	ND	ND	0.1	ND	
	PCB-3	0.031	0.018	0.0036	0.0027	0.0013	ND	ND	ND	0.21	ND	
Di	PCB-4	0.016	0.022	ND	0.0064	ND	ND	ND	ND	0.37	ND	
	PCB-5	0.0041	ND	ND	ND	ND	ND	ND	ND	0.025	ND	
	PCB-6	0.017	0.017	0.0057	0.0051	0.0081	ND	ND	ND	0.2	ND	
	PCB-7	0.0046	ND	ND	ND	ND	ND	ND	ND	0.033	ND	
	PCB-8	0.035	0.03	0.013	0.0092	0.0054	ND	ND	ND	0.57	ND	
	PCB-9	0.011	ND	ND	ND	ND	ND	ND	ND	0.073	ND	
	PCB-10	ND	ND	ND	ND	ND	ND	ND	ND	0.026	ND	
	PCB-11	0.097	0.026	0.0099	0.011	0.0058	ND	ND	0.0066	0.44	ND	
	PCB-12, 13	0.043	0.018	0.0057	0.0039	ND	ND	ND	ND	0.29	ND	
	PCB-14	0.0071	ND	ND	ND	ND	ND	ND	ND	0.022	ND	
	PCB-15	0.047	0.056	0.022	0.012	0.0088	ND	ND	ND	0.74	ND	
Tri	PCB-16	0.046	0.031	0.0092	0.015	0.0049	ND	ND	ND	1.44	ND	
	PCB-17	0.07	0.038	0.019	0.011	0.012	ND	ND	ND	2.02	ND	
	PCB-18, 30	0.16	0.1	0.033	0.034	0.019	ND	ND	ND	4.18	ND	
	PCB-19	0.012	0.01	ND	ND	ND	ND	ND	ND	0.29	ND	
	PCB-20, 28	0.26	0.2	0.077	0.068	0.034	ND	ND	NOT VALID	4.47	NOT VALID	
	PCB-21, 33	0.066	0.048	0.023	0.019	0.0098	ND	ND	NOT VALID	1.29	NOT VALID	
	PCB-22	0.05	0.04	0.014	0.016	0.0057	ND	ND	ND	0.93	ND	
	PCB-23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-24	0.007	0.005	ND	ND	ND	ND	ND	ND	0.071	ND	
	PCB-25	0.035	0.026	0.0068	0.0072	0.011	ND	ND	ND	0.39	ND	
	PCB-26, 29	0.057	0.04	0.014	0.011	0.008	ND	ND	ND	0.65	ND	
	PCB-27	0.013	0.013	0.0032	ND	0.0017	ND	ND	ND	0.34	ND	
	PCB-31	0.23	0.15	0.064	0.051	0.034	ND	ND	0.0015	3.61	0.0011	
	PCB-32	0.058	0.022	0.016	0.011	0.0068	ND	ND	ND	1.29	ND	
	PCB-34	0.008	ND	ND	ND	ND	ND	ND	ND	0.064	ND	
	PCB-35	0.11	0.015	ND	0.0023	ND	ND	ND	ND	0.24	ND	
	PCB-36	0.0063	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-37	0.078	0.048	0.017	0.018	0.0051	ND	ND	ND	0.92	ND	
	PCB-38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-39	0.01	ND	ND	ND	ND	ND	ND	ND	0.054	ND	
Tetra	PCB-40, 41, 71	0.23	0.18	0.057	0.058	0.033	ND	ND	ND	3.85	ND	
	PCB-42	0.13	0.11	0.035	0.029	0.019	ND	ND	ND	2.55	ND	
	PCB-43, 73	0.016	0.014	ND	ND	ND	ND	ND	ND	0.24	ND	
	PCB-44, 47, 65	0.47	0.46	0.12	0.11	0.055	ND	ND	ND	9.66	NOT VALID	
	PCB-45, 51	0.085	0.083	0.022	0.019	0.008	ND	ND	ND	1.51	ND	
	PCB-46	0.03	0.023	ND	ND	ND	ND	ND	ND	0.5	ND	
	PCB-48	0.068	0.052	0.013	0.017	0.007	ND	ND	ND	1.33	ND	
	PCB-49, 69	0.36	0.38	0.091	0.085	0.046	ND	ND	ND	7.86	ND	
	PCB-50, 53	0.068	0.045	0.015	0.014	0.0071	ND	ND	ND	1.16	ND	
	PCB-52	0.65	0.73	0.18	0.15	0.078	ND	ND	ND	14.1	ND	
	PCB-54	0.0024	0.0056	ND	ND	ND	ND	ND	ND	0.013	ND	
	PCB-55	ND	ND	ND	ND	ND	ND	ND	ND	0.058	ND	
	PCB-56	0.14	0.14	0.044	0.042	0.013	ND	ND	ND	3.09	ND	
	PCB-57	0.0042	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-58	0.0037	0.0082	ND	ND	ND	ND	ND	ND	0.094	ND	
	PCB-59, 62, 75	0.034	0.041	0.0097	ND	ND	ND	ND	ND	0.73	ND	

Table C.2.1.2 Summary of PCB Data Validation-Stratum A
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Homologs	Client ID	VB19-COMP-B	VB21-COMP-B	VB23-COMP-B	DUP-COMP-B	VB25-COMP-B	VB27-COMP-B	VB29-COMP-A	VB30-COMP-B	VB31-COMP-B	VB33-COMP-B	DNREC Screening Value (ng/g)
	Lab Sample ID	460-186302-3	460-186429-2	460-186302-5	460-186302-6	460-186302-9	460-186429-6	460-186429-5	460-186429-7	460-186429-12	460-186429-8	
	Prep Batch	140-31989	140-31989	140-31989	140-31989	140-31989	140-31989	140-31989	140-31989	140-31989	140-31989	
	Unit	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	
	DIOXIN-1668C-SOIL	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	
	SOIL BY 1668C											
Tetra	PCB-60	0.028	0.019	0.013	0.0073	ND	ND	ND	ND	0.32	ND	
	PCB-61, 70, 74, 76	0.57	0.59	0.18	0.15	0.066	ND	0.0032	ND	12.4	0.0025	
	PCB-63	0.014	0.012	ND	ND	ND	ND	ND	ND	0.3	ND	
	PCB-64	0.17	0.15	0.045	0.04	0.024	ND	ND	ND	3.27	0.0015	
	PCB-66	0.37	0.39	0.1	0.089	0.034	ND	ND	ND	8.03	0.0012	
	PCB-67	0.0076	0.01	ND	ND	ND	ND	ND	ND	0.14	ND	
	PCB-68	0.0075	0.01	ND	ND	ND	ND	ND	ND	0.17	ND	
	PCB-72	0.01	0.02	ND	ND	ND	ND	ND	ND	0.3	ND	
	PCB-77	0.13	0.04	0.014	0.01	NOT VALID	ND	ND	ND	0.77	ND	38
	PCB-78	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-79	0.0062	0.01	ND	ND	ND	ND	ND	ND	0.13	ND	
	PCB-80	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-81	ND	ND	ND	ND	ND	ND	ND	ND	0.021	ND	12
Penta	PCB-82	0.047	0.094	0.05	0.02	ND	ND	ND	ND	1.21	ND	
	PCB-83, 99	0.42	0.63	0.28	0.15	0.039	ND	ND	ND	10.8	ND	
	PCB-84	0.18	0.27	0.099	0.052	0.016	ND	ND	ND	4.37	ND	
	PCB-85, 116, 117	0.077	0.14	0.062	0.03	0.0035	ND	ND	ND	1.7	ND	
	PCB-86, 87, 97, 109, 119, 125	0.32	0.52	0.26	0.11	0.028	ND	ND	ND	7.79	ND	
	PCB-88, 91	0.11	0.13	0.067	0.049	0.009	ND	ND	ND	2.47	ND	
	PCB-89	0.0071	ND	ND	ND	ND	ND	ND	ND	0.13	ND	
	PCB-90, 101, 113	0.62	1.04	0.52	0.28	0.061	ND	0.005	ND	15.9	0.0016	
	PCB-92	0.12	0.2	0.099	0.056	0.012	ND	ND	ND	3.24	ND	
	PCB-93, 100	0.0067	0.017	0.0096	0.0051	ND	ND	ND	ND	0.22	ND	
	PCB-94	0.0036	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-95	0.55	0.82	0.35	0.23	0.047	0.0016	ND	ND	13.9	ND	
	PCB-96	0.0064	0.012	ND	ND	ND	ND	ND	ND	0.11	ND	
	PCB-98, 102	0.024	0.034	0.01	0.0047	ND	ND	ND	ND	0.51	ND	
	PCB-103	0.011	0.018	0.01	0.013	ND	ND	ND	ND	0.37	ND	
	PCB-104	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-105	0.12	0.17	0.13	0.042	0.011	ND	ND	ND	2.54	0.0012	120
	PCB-106	ND	ND	ND	ND	ND	ND	ND	ND	0.013	ND	
	PCB-107	0.042	0.081	0.03	0.012	ND	ND	ND	ND	1.33	ND	
	PCB-108, 124	0.014	0.024	0.018	NOT VALID	ND	ND	ND	ND	0.31	ND	
	PCB-110, 115	0.66	1.1	0.52	0.00039	0.055	0.0027	ND	ND	16	0.0024	
	PCB-111	0.0046	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-112	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-114	0.0082	0.0098	ND	ND	ND	ND	ND	ND	0.14	ND	120
	PCB-118	0.42	0.75	0.39	0.13	0.04	ND	ND	0.0012	12	0.0015	120
	PCB-120	0.0063	ND	ND	0.0043	ND	ND	ND	ND	ND	ND	
	PCB-121	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-122	0.0041	ND	ND	ND	ND	ND	ND	ND	0.11	ND	
	PCB-123	0.0077	0.0093	0.0097	ND	ND	ND	ND	ND	0.13	ND	120
	PCB-126	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.036
	PCB-127	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	

Table C.2.1.2 Summary of PCB Data Validation-Stratum A
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Homologs	Client ID	VB19-COMP-B	VB21-COMP-B	VB23-COMP-B	DUP-COMP-B	VB25-COMP-B	VB27-COMP-B	VB29-COMP-A	VB30-COMP-B	VB31-COMP-B	VB33-COMP-B	DNREC Screening Value (ng/g)
	Lab Sample ID	460-186302-3	460-186429-2	460-186302-5	460-186302-6	460-186302-9	460-186429-6	460-186429-5	460-186429-7	460-186429-12	460-186429-8	
	Prep Batch	140-31989	140-31989	140-31989	140-31989	140-31989	140-31989	140-31989	140-31989	140-31989	140-31989	
	Unit	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	
	DIOXIN-1668C-SOIL	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	
	SOIL BY 1668C											
	PCB-128, 166	0.077	0.14	0.22	0.034	ND	ND	ND	ND	1.91	ND	
	PCB-129, 138, 160, 163	0.63	1	1.39	0.35	0.051	ND	ND	NOT VALID	13.6	ND	
	PCB-130	0.087	0.084	0.11	0.019	ND	ND	ND	ND	1.1	ND	
	PCB-131	ND	ND	0.021	ND	ND	ND	ND	ND	ND	ND	
	PCB-132	0.28	0.36	0.4	0.12	0.018	ND	ND	ND	5.66	ND	
	PCB-133	0.047	0.026	0.019	0.0082	ND	ND	ND	ND	0.36	ND	
	PCB-134, 143	0.034	0.076	0.066	0.018	ND	ND	ND	ND	ND	ND	
	PCB-135, 151	0.32	0.37	0.35	0.21	0.016	ND	ND	ND	4.84	ND	
	PCB-136	0.12	0.15	0.13	0.081	0.0078	ND	ND	ND	1.99	ND	
	PCB-137	0.017	0.039	0.083	0.0084	ND	ND	ND	ND	0.52	ND	
	PCB-139, 140	0.01	0.025	0.026	ND	ND	ND	ND	ND	0.29	ND	
	PCB-141	0.1	0.15	0.23	0.07	ND	ND	ND	ND	2.08	ND	
	PCB-142	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-144	0.018	0.036	0.043	0.016	ND	ND	ND	ND	0.42	ND	
	PCB-145	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Hexa	PCB-146	0.22	0.21	0.21	0.078	0.014	ND	ND	ND	3.03	0.00099	
	PCB-147, 149	0.82	0.99	1.05	0.52	0.056	ND	ND	ND	0.87	0.002	
	PCB-148	ND	ND	ND	ND	ND	ND	ND	ND	0.031	ND	
	PCB-150	0.0017	ND	ND	0.0023	ND	ND	ND	ND	0.03	ND	
	PCB-152	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-153, 168	0.6	0.85	0.97	0.38	0.042	ND	ND	NOT VALID	12.6	NOT VALID	
	PCB-154	0.017	0.025	0.016	0.015	ND	ND	ND	ND	0.29	ND	
	PCB-155	0.00078	ND	ND	ND	ND	ND	ND	ND	0.0082	ND	
	PCB-156, 157	0.063	0.092	0.19	0.025	ND	ND	ND	ND	1.37	ND	120
	PCB-158	0.039	0.076	0.14	0.027	ND	ND	ND	ND	1.1	ND	
	PCB-159	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-161	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-162	0.027	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-164	0.099	0.062	0.1	0.026	ND	ND	ND	ND	1.12	ND	
	PCB-165	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-167	0.045	0.033	0.052	0.0087	ND	ND	ND	ND	0.46	ND	120
	PCB-169	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.12
	PCB-170	0.16	0.24	0.32	0.1	ND	ND	ND	0.0038	3.15	ND	NVP
	PCB-171, 173	0.049	0.088	0.11	0.038	ND	ND	ND	ND	0.93	ND	
	PCB-172	0.046	0.049	0.055	0.02	ND	ND	ND	ND	0.54	ND	
	PCB-174	0.18	0.26	0.3	0.15	0.014	ND	ND	ND	3.25	ND	
	PCB-175	0.013	ND	0.013	0.0042	ND	ND	ND	ND	0.12	ND	
	PCB-176	0.026	0.034	0.03	0.011	ND	ND	ND	ND	0.41	ND	
	PCB-177	0.1	0.17	0.17	0.077	ND	ND	ND	ND	1.95	ND	
	PCB-178	0.07	0.064	0.062	0.032	ND	ND	ND	ND	0.73	ND	
Hepta	PCB-179	0.1	0.13	0.12	0.064	0.0095	ND	ND	ND	1.6	ND	
	PCB-180, 193	0.36	0.48	0.57	0.28	0.04	ND	ND	0.0091	6.2	0.0023	NVP
	PCB-181	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-182	0.0052	ND	ND	ND	ND	ND	ND	ND	0.049	ND	
	PCB-183, 185	0.14	0.16	0.19	0.094	0.0068	ND	ND	ND	2.02	ND	
	PCB-184	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-186	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-187	0.32	0.34	0.32	0.19	0.024	ND	ND	ND	3.81	ND	
	PCB-188	0.0044	ND	ND	ND	ND	ND	ND	ND	ND	ND	

Table C.2.1.2 Summary of PCB Data Validation-Stratum A
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Hepta	PCB-189	NOT VALID	0.013	0.012	NOT VALID	ND	ND	ND	ND	0.095	ND	130
	PCB-190	0.025	0.049	0.049	0.025	ND	ND	ND	ND	0.48	ND	
	PCB-191	0.0078	0.038	0.012	ND	ND	ND	ND	ND	0.14	ND	
	PCB-192	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Octa	PCB-194	0.17	0.15	0.17	0.083	ND	ND	ND	ND	1.79	ND	
	PCB-195	0.041	0.048	0.057	0.03	ND	ND	ND	ND	0.6	ND	
	PCB-196	0.16	0.078	0.059	0.042	ND	ND	ND	ND	1.06	ND	
	PCB-197	0.012	ND	0.014	0.003	ND	ND	ND	ND	0.075	ND	
	PCB-198, 199	1.02	0.31	0.23	0.17	0.017	ND	ND	ND	3.75	ND	
	PCB-200	0.022	0.016	ND	0.0062	ND	ND	ND	ND	0.17	ND	
	PCB-201	0.061	0.029	0.015	0.011	ND	ND	ND	ND	0.32	ND	
	PCB-202	0.39	0.1	0.058	0.049	0.005	ND	ND	ND	1.08	ND	
	PCB-203	0.36	0.13	0.096	0.062	0.012	ND	ND	ND	1.47	ND	
	PCB-204	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	PCB-205	0.0099	ND	NOT VALID	0.0078	ND	ND	ND	ND	0.068	ND	
Nona	PCB-206	4.86	0.98	0.78	0.65	0.038	ND	ND	ND	13	ND	
	PCB-207	0.3	0.062	0.057	0.045	ND	ND	ND	ND	0.79	ND	
	PCB-208	2.31	0.39	0.34	0.3	0.019	ND	ND	ND	5.56	ND	
Deca	PCB-209	6.5	2.01	1.17	0.82	0.37	ND	ND	0.0044	26	0.0022	

Notes:
-- : no applicable standard found for this compound
B : Compound was found in the blank and sample.
C : The compound co-eluted with other compounds
G : The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference
J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q : The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.
U : Indicates the analyte was analyzed for but not detected.
ng/g: nanograms per gram

Legend:

Result is less than 3x and 5x Method Blank - NOT VALID
Result is greater than 5x the Method Blank - VALID
Result is greater than 3x but less than 5x the Method Blank - USE WITH CAUTION
The compound co-eluted with other compounds

Table C.2.1.3 Summary of Surface Water PCB Validation
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Homologs	Client ID	SW1	SW1	SW-2	SW-2	SW-3	SW-3	SW-4	SW-4	SW-5	SW-5
	Lab Sample ID	460-185785-1	460-185785-1	460-186095-2	460-186095-2	460-186096-2	460-186096-2	460-186302-1	460-186302-1	460-186429-11	460-186429-11
	Sampling Date	7/1/2019	7/1/2019	7/2/2019	7/2/2019	7/3/2019	7/3/2019	7/8/2019	7/8/2019	7/9/2019	7/9/2019
	Sampling Time	11:35:00	11:35:00	8:45:00	8:45:00	09:00:00	9:00:00	08:15:00	8:15:00	15:00:00	15:00:00
		ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS
	Matrix	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
	Unit	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l
	DIOXIN-1668C-SOIL	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
	SOIL BY 1668C										
	PCB-1	ND	ND	ND	ND	0.0043	0.0043	ND	ND	0.0026	0.0026
Mono	PCB-2	ND	ND	ND	ND	0.005	0.005	ND	ND	0.0042	0.0042
	PCB-3	ND	ND	0.0038	0.0038	0.007	0.007	ND	ND	ND	ND
	PCB-4	0.064	0.064	0.038	0.038	0.036	0.036	0.042	0.042	0.036	0.036
	PCB-5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	PCB-6	ND	ND	ND	ND	0.012	0.012	ND	ND	ND	ND
	PCB-7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	PCB-8	0.0064	NOT VALID	0.011	NOT VALID	0.028	NOT VALID	0.0084	NOT VALID	0.013	NOT VALID
Di	PCB-9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	PCB-10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	PCB-11	0.048	NOT VALID	0.061	NOT VALID	0.068	NOT VALID	0.052	NOT VALID	0.052	NOT VALID
	PCB-12, 13	ND	ND	0.0074	0.0074	ND	ND	ND	ND	0.0072	0.0072
	PCB-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	PCB-15	0.014	0.014	0.019	0.019	0.058	0.058	0.014	0.014	0.023	0.023
	PCB-16	0.014	0.014	0.013	0.013	0.03	0.03	0.012	0.012	0.021	0.021
	PCB-17	0.027	0.027	0.024	0.024	0.049	0.049	0.024	0.024	0.026	0.026
	PCB-18, 30	0.042	0.042	0.058	0.058	0.11	0.11	0.047	0.047	0.051	0.051
	PCB-19	0.02	0.02	0.013	0.013	0.028	0.028	0.025	0.025	0.022	0.022
	PCB-20, 28	0.042	0.042	0.061	0.061	0.19	0.19	0.046	0.046	0.067	0.067
	PCB-21, 33	0.0064	NOT VALID	0.0078	NOT VALID	0.023	0.023	0.0078	NOT VALID	0.012	0.012
	PCB-22	0.0059	NOT VALID	0.0073	NOT VALID	0.024	0.024	0.0071	NOT VALID	0.011	NOT VALID
	PCB-23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	PCB-24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tri	PCB-25	0.009	0.009	0.0087	0.0087	0.033	0.033	0.0086	0.0086	0.012	0.012
	PCB-26, 29	0.012	0.012	0.015	0.015	0.049	0.049	0.012	0.012	0.016	0.016
	PCB-27	0.0093	0.0093	0.015	0.015	0.026	0.026	0.012	0.012	0.015	0.015
	PCB-31	0.032	0.032	0.043	0.043	0.11	0.11	0.028	0.028	0.038	0.038
	PCB-32	0.026	0.026	0.024	0.024	0.062	0.062	0.022	0.022	0.022	0.022
	PCB-34	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	PCB-35	0.0021	0.0021	0.0037	0.0037	0.0058	0.0058	0.0048	0.0048	0.0052	0.0052
	PCB-36	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	PCB-37	0.0063	NOT VALID	0.014	0.014	0.043	0.043	0.0074	0.0074	0.013	0.013
	PCB-38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	PCB-39	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Duffield Associates, Inc.
Project No. 11139.LH

Table C.2.1.3 Summary of Surface Water PCB Validation
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

	Client ID	**SW1**	**SW1**	**SW-2**	**SW-2**	**SW-3**	**SW-3**	**SW-4**	**SW-4**	**SW-5**	**SW-5**
H	**Lab Sample ID**	460-185785-1	460-185785-1	460-186095-2	460-186095-2	460-186096-2	460-186096-2	460-186302-1	460-186302-1	460-186429-11	460-186429-11
o	**Sampling Date**	7/1/2019	7/1/2019	7/2/2019	7/2/2019	7/3/2019	7/3/2019	7/8/2019	7/8/2019	7/9/2019	7/9/2019
m	**Sampling Time**	11:35:00	11:35:00	8:45:00	8:45:00	09:00:00	9:00:00	08:15:00	8:15:00	15:00:00	15:00:00
o l		ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS
o	**Matrix**	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
g	**Unit**	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l
s	**DIOXIN-1668C-SOIL**	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
	SOIL BY 1668C										
	PCB-40, 41, 71	0.033	0.033	0.074	0.074	0.22	0.22	0.052	0.052	0.079	0.079
	PCB-42	0.018	0.018	0.034	0.034	0.1	0.1	0.025	0.025	0.035	0.035
	PCB-43, 73	ND	ND	0.006	0.006	0.0089	0.0089	ND	ND	ND	ND
	PCB-44, 47, 65	0.077	0.077	0.13	0.13	0.48	0.48	0.14	0.14	0.15	0.15
	PCB-45, 51	0.023	0.023	0.029	0.029	0.1	0.1	0.021	0.021	0.036	0.036
	PCB-46	0.0062	0.0062	0.0083	0.0083	0.029	0.029	ND	ND	ND	ND
	PCB-48	0.0083	0.0083	0.014	0.014	0.042	0.042	0.031	0.031	0.013	0.013
	PCB-49, 69	0.059	0.059	0.1	0.1	0.33	0.33	0.063	0.063	0.11	0.11
	PCB-50, 53	0.016	0.016	0.023	0.023	0.061	0.061	0.02	0.02	0.033	0.033
	PCB-52	0.095	0.095	0.16	0.16	0.55	0.55	0.1	0.1	0.19	0.19
	PCB-54	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	PCB-55	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	PCB-56	0.017	0.017	0.037	0.037	0.11	0.11	0.018	0.018	0.032	0.032
	PCB-57	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetra	PCB-58	ND	ND	ND	ND	0.0036	0.0036	ND	ND	ND	ND
	PCB-59, 62, 75	0.0083	0.0083	0.01	0.01	0.035	0.035	0.029	0.029	0.0088	0.0088
	PCB-60	0.0063	0.0063	0.0099	0.0099	0.02	0.02	0.0058	0.0058	0.0076	0.0076
	PCB-61, 70, 74, 76	0.061	0.061	0.12	0.12	0.39	0.39	0.063	0.063	0.13	0.13
	PCB-63	ND	ND	0.0043	0.0043	0.011	0.011	ND	ND	ND	ND
	PCB-64	0.026	0.026	0.042	0.042	0.14	0.14	0.031	0.031	0.053	0.053
	PCB-66	0.034	NOT VALID	0.079	0.079	0.26	0.26	0.043	0.043	0.074	0.074
	PCB-67	ND	ND	ND	ND	0.0065	0.0065	ND	ND	ND	ND
	PCB-68	ND	ND	0.0038	0.0038	0.024	0.024	ND	ND	0.0055	0.0055
	PCB-72	ND	ND	0.0038	0.0038	0.011	0.011	ND	ND	ND	ND
	PCB-77	0.0047	NOT VALID	0.0077	NOT VALID	0.026	0.026	0.011	NOT VALID	0.011	NOT VALID
	PCB-78	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	PCB-79	ND	ND	ND	ND	0.0059	0.0059	ND	ND	ND	ND
	PCB-80	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	PCB-81	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table C.2.1.3 Summary of Surface Water PCB Validation
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

	Client ID	**SW1**	**SW1**	**SW-2**	**SW-2**	**SW-3**	**SW-3**	**SW-4**	**SW-4**	**SW-5**	**SW-5**
H	**Lab Sample ID**	460-185785-1	460-185785-1	460-186095-2	460-186095-2	460-186096-2	460-186096-2	460-186302-1	460-186302-1	460-186429-11	460-186429-11
o	**Sampling Date**	7/1/2019	7/1/2019	7/2/2019	7/2/2019	7/3/2019	7/3/2019	7/8/2019	7/8/2019	7/9/2019	7/9/2019
m	**Sampling Time**	11:35:00	11:35:00	8:45:00	8:45:00	09:00:00	9:00:00	08:15:00	8:15:00	15:00:00	15:00:00
o l		ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS
o	**Matrix**	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
g	**Unit**	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l
s	**DIOXIN-1668C-SOIL**	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
	SOIL BY 1668C										
	PCB-82	0.01	0.01	ND	ND	0.055	0.055	0.016	0.016	0.029	0.029
	PCB-83, 99	0.049	0.049	0.14	0.14	0.52	0.52	0.068	0.068	0.16	0.16
	PCB-84	0.022	NOT VALID	0.054	0.054	0.18	0.18	0.038	NOT VALID	0.056	0.056
	PCB-85, 116, 117	0.01	0.01	0.021	0.021	0.083	0.083	0.021	0.021	0.029	0.029
	PCB-86, 87, 97, 109, 119, 125	0.039	0.039	0.11	0.11	0.36	0.36	0.063	0.063	0.11	0.11
	PCB-88, 91	0.019	0.019	0.042	0.042	0.15	0.15	0.042	0.042	0.053	0.053
	PCB-89	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	PCB-90, 101, 113	0.075	0.075	0.19	0.19	0.68	0.68	0.094	0.094	0.16	0.16
	PCB-92	0.012	0.012	0.03	0.03	0.14	0.14	0.021	0.021	0.044	0.044
	PCB-93, 100	0.0052	0.0052	0.0067	0.0067	0.028	0.028	0.0097	0.0097	0.017	0.017
	PCB-94	ND	ND	ND	ND	ND	ND	ND	ND	0.0044	0.0044
	PCB-95	0.07	0.07	0.2	0.2	0.64	0.64	0.11	0.11	0.2	0.2
	PCB-96	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	PCB-98, 102	0.0055	0.0055	0.0097	0.0097	0.019	0.019	0.013	0.013	0.014	0.014
	PCB-103	ND	ND	ND	ND	0.02	0.02	ND	ND	0.024	0.024
Penta	PCB-104	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	PCB-105	0.014	0.014	0.044	0.044	0.13	0.13	0.016	0.016	0.036	0.036
	PCB-106	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	PCB-107	0.005	NOT VALID	0.0086	NOT VALID	0.051	0.051	ND	ND	0.011	0.011
	PCB-108, 124	0.0034	NOT VALID	0.0035	NOT VALID	0.013	0.013	0.0045	NOT VALID	ND	ND
	PCB-110, 115	0.085	0.085	0.23	0.23	0.78	0.78	0.12	0.12	0.21	0.21
	PCB-111	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	PCB-112	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	PCB-114	ND	ND	ND	ND	0.0034	NOT VALID	ND	ND	ND	ND
	PCB-118	0.042	0.042	0.13	0.13	0.44	0.44	0.054	0.054	0.097	0.097
	PCB-120	ND	ND	ND	ND	0.0056	0.0056	ND	ND	0.005	0.005
	PCB-121	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	PCB-122	ND	ND	ND	ND	0.0067	0.0067	ND	ND	ND	ND
	PCB-123	ND	ND	ND	ND	0.0064	0.0064	ND	ND	ND	ND
	PCB-126	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	PCB-127	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table C.2.1.3 Summary of Surface Water PCB Validation
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Homologs	**Client ID**	**SW1**	**SW1**	**SW-2**	**SW-2**	**SW-3**	**SW-3**	**SW-4**	**SW-4**	**SW-5**	**SW-5**
	Lab Sample ID	460-185785-1	460-185785-1	460-186095-2	460-186095-2	460-186096-2	460-186096-2	460-186302-1	460-186302-1	460-186429-11	460-186429-11
	Sampling Date	7/1/2019	7/1/2019	7/2/2019	7/2/2019	7/3/2019	7/3/2019	7/8/2019	7/8/2019	7/9/2019	7/9/2019
	Sampling Time	11:35:00	11:35:00	8:45:00	8:45:00	09:00:00	9:00:00	08:15:00	8:15:00	15:00:00	15:00:00
		ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS
	Matrix	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
	Unit	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l
	DIOXIN-1668C-SOIL	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
	SOIL BY 1668C										
Hexa	PCB-128, 166	0.011	NOT VALID	0.027	0.027	0.097	0.097	0.015	NOT VALID	0.025	0.025
	PCB-129, 138, 160, 163	0.074	0.074	0.3	0.3	0.78	0.78	0.098	0.098	0.19	0.19
	PCB-130	ND	ND	0.0092	0.0092	0.049	0.049	0.0059	0.0059	ND	ND
	PCB-131	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	PCB-132	0.023	0.023	0.076	0.076	0.24	0.24	0.04	0.04	0.062	0.062
	PCB-133	ND	ND	ND	ND	0.021	0.021	ND	ND	ND	ND
	PCB-134, 143	ND	ND	0.014	0.014	0.038	0.038	0.011	0.011	ND	ND
	PCB-135, 151	0.027	0.027	0.099	0.099	0.29	0.29	0.043	0.043	0.084	0.084
	PCB-136	0.013	0.013	0.034	0.034	0.12	0.12	0.017	0.017	0.036	0.036
	PCB-137	ND	ND	ND	ND	0.023	0.023	0.005	0.005	ND	ND
	PCB-139, 140	ND	ND	ND	ND	0.014	0.014	ND	ND	ND	ND
	PCB-141	0.0099	0.0099	0.057	0.057	0.11	0.11	0.019	0.019	0.031	0.031
	PCB-142	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	PCB-144	ND	ND	ND	ND	0.024	0.024	ND	ND	ND	ND
	PCB-145	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	PCB-146	0.016	0.016	0.053	0.053	0.19	0.19	0.025	0.025	0.045	0.045
	PCB-147, 149	0.075	0.075	0.29	0.29	0.84	0.84	0.12	0.12	0.22	0.22
	PCB-148	ND	ND	ND	ND	0.0046	0.0046	ND	ND	ND	ND
	PCB-150	ND	ND	ND	ND	0.0054	0.0054	ND	ND	ND	ND
	PCB-152	ND	ND	ND	ND	0.0015	0.0015	ND	ND	ND	ND
	PCB-153, 168	0.071	0.071	0.27	0.27	0.76	0.76	0.096	0.096	0.19	0.19
	PCB-154	0.0055	0.0055	ND	ND	0.042	0.042	ND	ND	0.012	0.012
	PCB-155	ND	ND	ND	ND	0.0042	0.0042	ND	ND	ND	ND
	PCB-156, 157	0.0097	NOT VALID	0.026	0.026	0.059	0.059	0.011	NOT VALID	0.017	NOT VALID
	PCB-158	0.0044	0.0044	0.023	0.023	0.055	0.055	0.0068	0.0068	ND	ND
	PCB-159	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	PCB-161	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	PCB-162	ND	ND	ND	ND	0.0081	0.0081	ND	ND	ND	ND
	PCB-164	0.0056	0.0056	0.02	0.02	0.054	0.054	0.0085	0.0085	ND	ND
	PCB-165	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	PCB-167	ND	ND	ND	ND	0.021	0.021	ND	ND	ND	ND
	PCB-169	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Table C.2.1.3 Summary of Surface Water PCB Validation
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Homologs	Client ID	SW1	SW1	SW-2	SW-2	SW-3	SW-3	SW-4	SW-4	SW-5	SW-5
	Lab Sample ID	460-185785-1	460-185785-1	460-186095-2	460-186095-2	460-186096-2	460-186096-2	460-186302-1	460-186302-1	460-186429-11	460-186429-11
	Sampling Date	7/1/2019	7/1/2019	7/2/2019	7/2/2019	7/3/2019	7/3/2019	7/8/2019	7/8/2019	7/9/2019	7/9/2019
	Sampling Time	11:35:00	11:35:00	8:45:00	8:45:00	09:00:00	9:00:00	08:15:00	8:15:00	15:00:00	15:00:00
		ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS
	Matrix	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
	Unit	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l	ng/l
	DIOXIN-1668C-SOIL	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
	SOIL BY 1668C										
Hepta	PCB-170	0.02	0.02	0.13	0.13	0.23	0.23	0.031	0.031	0.099	0.099
	PCB-171, 173	0.0063	0.0063	0.026	0.026	0.049	0.049	ND	ND	0.036	0.036
	PCB-172	0.0048	0.0048	0.038	0.038	0.039	0.039	ND	ND	0.032	0.032
	PCB-174	0.025	0.025	0.11	0.11	0.22	0.22	0.029	0.029	0.077	0.077
	PCB-175	ND	ND	ND	ND	0.0088	0.0088	ND	ND	0.013	0.013
	PCB-176	ND	ND	0.014	0.014	0.027	0.027	ND	ND	ND	ND
	PCB-177	0.015	0.015	0.055	0.055	0.15	0.15	0.012	0.012	0.046	0.046
	PCB-178	0.0054	0.0054	0.024	0.024	0.053	0.053	0.0083	0.0083	0.02	0.02
	PCB-179	0.01	0.01	0.046	0.046	0.11	0.11	0.014	0.014	0.039	0.039
	PCB-180, 193	0.051	0.051	0.26	0.26	0.48	0.48	0.071	0.071	0.16	0.16
	PCB-181	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	PCB-182	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	PCB-183, 185	0.016	0.016	0.072	0.072	0.15	0.15	0.022	0.022	0.067	0.067
	PCB-184	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	PCB-186	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	PCB-187	0.039	0.039	0.16	0.16	0.37	0.37	0.041	0.041	0.11	0.11
	PCB-188	ND	ND	ND	ND	0.0031	0.0031	ND	ND	ND	ND
	PCB-189	ND	ND	ND	ND	ND	ND	ND	ND	0.0063	NOT VALID
	PCB-190	0.0046	0.0046	0.028	0.028	0.038	0.038	ND	ND	0.028	0.028
	PCB-191	ND	ND	0.0078	0.0078	0.0067	0.0067	ND	ND	ND	ND
	PCB-192	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Octa	PCB-194	0.014	0.014	0.078	0.078	0.14	0.14	0.024	0.024	0.071	0.071
	PCB-195	ND	ND	0.021	0.021	0.028	0.028	0.0079	NOT VALID	0.031	0.031
	PCB-196	0.013	0.013	0.08	0.08	0.094	0.094	0.015	0.015	0.047	0.047
	PCB-197	0.0022	0.0022	0.0089	0.0089	0.0093	0.0093	ND	ND	ND	ND
	PCB-198, 199	0.037	0.037	0.27	0.27	0.46	0.46	0.052	0.052	0.16	0.16
	PCB-200	0.0029	0.0029	0.0093	0.0093	0.01	0.01	ND	ND	ND	ND
	PCB-201	0.0089	0.0089	0.015	0.015	0.032	0.032	ND	ND	0.034	0.034
	PCB-202	0.011	0.011	0.075	0.075	0.15	0.15	0.012	0.012	0.051	0.051
	PCB-203	0.017	0.017	0.11	0.11	0.17	0.17	0.02	0.02	0.069	0.069
	PCB-204	ND	ND	0.0063	0.0063	ND	ND	ND	ND	ND	ND
	PCB-205	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nona	PCB-206	0.13	0.13	1.34	1.34	2.41	2.41	0.2	0.2	0.5	0.5
	PCB-207	0.012	0.012	0.075	0.075	0.11	0.11	0.018	0.018	0.066	0.066
	PCB-208	0.069	0.069	0.59	0.59	1.05	1.05	0.077	0.077	0.24	0.24
Deca	PCB-209	0.23	0.23	1.99	1.99	3.88	3.88	0.37	0.37	0.82	0.82

Duffield Associates, Inc.
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Table C.2.1.3 Summary of Surface Water PCB Validation
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

	Client ID	SW1	SW1	SW-2	SW-2	SW-3	SW-3	SW-4	SW-4	SW-5	SW-5
	CALCULATED	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS
Calculated Results	Total Monochlorobiphenyls	ND	ND	0.0038	0.0038	0.0163	0.0163	ND	ND	0.0068	0.0068
	Total Dichlorobiphenyls	0.1324	0.078	0.1364	0.0644	0.202	0.106	0.1164	0.056	0.1312	0.0662
	Total Trichlorobiphenyls	0.254	0.2354	0.3075	0.2924	0.7828	0.7828	0.2637	0.2488	0.3312	0.3202
	Total Tetrachlorobiphenyls	0.4928	0.4541	0.8958	0.8881	2.9639	2.9639	0.6528	0.6418	0.9679	0.9569
	Total Pentachlorobiphenyls	0.4661	0.4357	1.2195	1.2074	4.3111	4.3077	0.6902	0.6477	1.2594	1.2594
	Total Hexachlorobiphenyls	0.3451	0.3244	1.2982	1.2982	3.8508	3.8508	0.5212	0.4952	0.912	0.895
	Total Heptachlorobiphenyls	0.1971	0.1971	0.9708	0.9708	1.9346	1.9346	0.2283	0.2283	0.7333	0.727
	Total Octachlorobiphenyls	0.106	0.106	0.6735	0.6735	1.0933	1.0933	0.1309	0.123	0.463	0.463
	Total Nonachlorobiphenyls	0.211	0.211	2.005	2.005	3.57	3.57	0.295	0.295	0.806	0.806
	Total Decachlorobiphenyls	0.23	0.23	1.99	1.99	3.88	3.88	0.37	0.37	0.82	0.82
	Total PCBs	2.43	2.27	9.50	9.39	22.6	22.5	3.27	3.11	6.43	6.32
Reported by Lab	Total Monochlorobiphenyls	ND	ND	0.0038	NOT VALID	0.016	NOT VALID	ND	ND	0.0069	NOT VALID
	Total Dichlorobiphenyls	0.14	0.14	0.14	0.14	0.2	0.2	0.13	0.13	0.14	0.14
	Total Trichlorobiphenyls	0.25	0.25	0.31	0.31	0.77	0.77	0.26	0.26	0.33	0.33
	Total Tetrachlorobiphenyls	0.49	0.49	0.9	0.9	2.97	2.97	0.65	0.65	0.96	0.96
	Total Pentachlorobiphenyls	0.47	0.47	1.21	1.21	4.32	4.32	0.69	0.69	1.27	1.27
	Total Hexachlorobiphenyls	0.34	0.34	1.3	1.3	3.84	3.84	0.52	0.52	0.91	0.91
	Total Heptachlorobiphenyls	0.2	0.2	0.97	0.97	1.94	1.94	0.23	0.23	0.74	0.74
	Total Octachlorobiphenyls	0.11	0.11	0.67	0.67	1.09	1.09	0.13	0.13	0.46	0.46
	Total Nonachlorobiphenyls	0.21	0.21	2.01	2.01	3.58	3.58	0.3	0.3	0.81	0.81
	Total PCBs	2.52	2.52	9.6	9.6	22.7	22.7	3.37	3.37	6.6	6.6

Notes:

-- : no applicable standard found for this compound

B : Compound was found in the blank and sample.

C : The compound co-eluted with other compounds

G : The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference

J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

q : The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

U : Indicates the analyte was analyzed for but not detected.

ng/L : Nanograms per Liter

1. 'Calculated Results' were calculated by Duffield Associates while 'As Reported by Lab' results were reported by the laboratory.
2. 'Calculated Results' in the 'ALL RESULTS' column include the summation of results denoted with 'valid', 'not valid', and 'use with caution'.
3. 'Calculated Results' in the 'ONLY VALID RESULTS' column include the summation of results denoted with 'valid' and 'use with caution'.

Legend:

Result is less than 3x and 5x Method Blank - NOT VALID

Result is greater than 5x the Method Blank - VALID

Result is greater than 3x but less than 5x the Method Blank - USE WITH CAUTION

The compound co-eluted with other compounds

APPENDIX C.2.2

SUMMARY OF TEQS – STRATUM A

Table C.2.2 Summary of Data Validation - TEQs for Stratum A
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Client ID		VB1-COMP-A		VB2-COMP-A		VB3-COMP-A		VB5-COMP-A		VB6-COMP-A		VB7-COMP-A		DUP-1-COMP-A	
	Toxicity Equivalence Factor (TEF)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)
PCBs (ng/g)															
PCB 77 (BZ)	0.0001	6.30E-06	6.30E-06	1.70E-06	1.70E-06	8.70E-07	8.70E-07	1.40E-07	1.40E-07	7.10E-07	7.10E-07	7.10E-07	7.10E-07	7.40E-07	7.40E-07
PCB 81 (BZ)	0.0003	1.92E-06	1.92E-06	1.95E-06	1.95E-06	2.52E-06	2.52E-06	3.90E-07	3.90E-07	2.01E-06	2.01E-06	2.31E-06	2.31E-06	2.22E-06	2.22E-06
PCB 105 (BZ)	0.00003	5.40E-06	5.40E-06	1.14E-06	1.14E-06	2.16E-07	2.16E-07	1.41E-07	1.41E-07	2.22E-07	2.22E-07	2.85E-07	2.85E-07	3.30E-07	3.30E-07
PCB 114 (BZ)	0.00003	2.97E-07	2.97E-07	2.97E-07	2.97E-07	2.07E-07	2.07E-07	2.43E-08	2.43E-08	2.16E-07	2.16E-07	2.43E-07	2.43E-07	3.30E-07	3.30E-07
PCB 118 (BZ)	0.00003	1.77E-05	1.77E-05	3.60E-06	3.60E-06	2.01E-07	2.01E-07	4.80E-07	4.80E-07	7.20E-07	7.20E-07	2.73E-07	2.73E-07	3.00E-07	3.00E-07
PCB 123 (BZ)	0.00003	1.86E-07	1.86E-07	3.00E-07	3.00E-07	2.25E-07	2.25E-07	2.61E-08	2.61E-08	2.31E-07	2.31E-07	2.73E-07	2.73E-07	3.00E-07	3.00E-07
PCB 126 (BZ)	0.1	6.40E-04	6.40E-04	9.80E-04	9.80E-04	7.30E-04	7.30E-04	9.20E-05	9.20E-05	7.90E-04	7.90E-04	8.60E-04	8.60E-04	1.10E-03	1.10E-03
PCB 156, 157 (BZ)	0.00003	1.92E-06	1.92E-06	6.00E-07	6.00E-07	3.00E-07	3.00E-07	5.40E-08	5.40E-08	2.82E-07	2.82E-07	1.71E-07	1.71E-07	5.10E-07	5.10E-07
PCB 167 (BZ)	0.00003	8.40E-07	8.40E-07	4.20E-07	4.20E-07	2.10E-07	2.10E-07	3.60E-08	3.60E-08	2.49E-07	2.49E-07	1.20E-07	1.20E-07	3.90E-07	3.90E-07
PCB 169 (BZ)	0.03	2.25E-04	2.25E-04	3.60E-04	3.60E-04	2.01E-04	2.01E-04	3.60E-05	3.60E-05	1.86E-04	1.86E-04	1.14E-04	1.14E-04	3.00E-04	3.00E-04
PCB 170 (BZ)	0.0001	2.20E-05	2.20E-05	6.40E-06	6.40E-06	7.20E-07	7.20E-07	8.60E-07	8.60E-07	8.30E-07	8.30E-07	4.00E-07	4.00E-07	8.00E-07	8.00E-07
PCB 180, 193 (BZ)	0.00001	5.10E-06	5.10E-06	1.50E-06	1.50E-06	5.60E-08	5.60E-08	1.70E-07	1.70E-07	3.90E-07	3.90E-07	3.20E-08	3.20E-08	6.20E-08	6.20E-08
PCB 189 (BZ)	0.00003	1.89E-07	1.89E-07	4.20E-07	4.20E-07	2.28E-07	2.28E-07	4.20E-08	4.20E-08	1.92E-07	1.92E-07	2.49E-07	2.49E-07	3.00E-07	3.00E-07
Total PCB TEQ		9.27E-04	9.27E-04	1.36E-03	1.36E-03	9.37E-04	9.37E-04	1.30E-04	1.30E-04	9.82E-04	9.82E-04	9.79E-04	9.79E-04	1.41E-03	1.41E-03
Dioxins (ng/g)															
1,2,3,4,6,7,8-HpCDD	0.01	1.61E-03	1.61E-03	1.69E-03	1.69E-03	1.62E-03	1.62E-03	2.43E-03	2.43E-03	1.23E-03	1.23E-03	1.72E-03	1.72E-03	1.68E-03	1.68E-03
1,2,3,4,7,8-HxCDD	0.1	7.70E-06	7.70E-06	2.82E-04	2.82E-04	1.57E-04	1.57E-04	2.00E-05	2.00E-05	1.99E-04	1.99E-04	2.75E-04	2.75E-04	2.69E-04	2.69E-04
1,2,3,6,7,8-HxCDD	0.1	3.69E-04	3.69E-04	4.49E-04	4.49E-04	1.68E-04	1.68E-04	2.00E-05	2.00E-05	3.28E-04	3.28E-04	4.48E-04	4.48E-04	3.88E-04	3.88E-04
1,2,3,7,8,9-HxCDD	0.1	6.82E-04	6.82E-04	8.22E-04	8.22E-04	8.42E-04	8.42E-04	1.05E-03	1.05E-03	6.03E-04	6.03E-04	8.24E-04	8.24E-04	7.64E-04	7.64E-04
1,2,3,7,8-PeCDD	1	1.26E-03	1.26E-03	1.37E-03	1.37E-03	1.51E-03	1.51E-03	3.50E-04	3.50E-04	9.40E-04	9.40E-04	1.15E-03	1.15E-03	1.30E-03	1.30E-03
2,3,7,8-TCDD	1	2.60E-04	2.60E-04	3.50E-04	3.50E-04	6.90E-05	6.90E-05	1.00E-03	1.00E-03	2.80E-04	2.80E-04	2.40E-04	2.40E-04	7.60E-05	7.60E-05
OCDD	0.0003	**1.83E-03**	**1.83E-03**	**1.70E-03**	**1.70E-03**	**1.51E-03**	**1.51E-03**	**2.02E-03**	**2.02E-03**	**1.26E-03**	**1.26E-03**	**1.64E-03**	**1.64E-03**	**1.57E-03**	**1.57E-03**
Total Dioxin TEQ		6.02E-03	6.02E-03	6.66E-03	6.66E-03	5.87E-03	5.87E-03	6.89E-03	6.89E-03	4.84E-03	4.84E-03	6.30E-03	6.30E-03	6.05E-03	6.05E-03
Furans (ng/g)															
1,2,3,4,6,7,8-HpCDF	0.01	4.91E-04	4.91E-04	5.47E-05	5.47E-05	2.51E-05	2.51E-05	4.20E-06	4.20E-06	6.75E-04	6.75E-04	2.95E-05	2.95E-05	2.71E-05	2.71E-05
1,2,3,4,7,8,9-HpCDF	0.01	5.67E-05	5.67E-05	8.60E-06	8.60E-06	4.50E-06	4.50E-06	5.30E-07	5.30E-07	1.03E-04	1.03E-04	6.70E-06	6.70E-06	4.80E-06	4.80E-06
1,2,3,4,7,8-HxCDF	0.1	1.02E-03	1.02E-03	2.90E-04	2.90E-04	2.20E-04	2.20E-04	3.90E-06	3.90E-06	1.96E-03	1.96E-03	2.24E-04	2.24E-04	2.02E-04	2.02E-04
1,2,3,6,7,8-HxCDF	0.1	3.35E-04	3.35E-04	1.04E-04	1.04E-04	7.20E-05	7.20E-05	3.80E-06	3.80E-06	5.66E-04	5.66E-04	7.30E-05	7.30E-05	7.10E-05	7.10E-05
1,2,3,7,8,9-HxCDF	0.1	3.80E-05	3.80E-05	1.60E-05	1.60E-05	1.20E-05	1.20E-05	4.90E-06	4.90E-06	6.70E-05	6.70E-05	7.90E-06	7.90E-06	1.30E-05	1.30E-05
1,2,3,7,8-PeCDF	0.03	7.59E-05	7.59E-05	6.00E-05	6.00E-05	5.73E-05	5.73E-05	2.37E-06	2.37E-06	1.43E-04	1.43E-04	5.10E-05	5.10E-05	5.55E-05	5.55E-05
2,3,4,6,7,8-HxCDF	0.1	1.97E-04	1.97E-04	6.40E-05	6.40E-05	4.60E-05	4.60E-05	4.00E-06	4.00E-06	1.84E-04	1.84E-04	5.30E-05	5.30E-05	4.60E-05	4.60E-05
2,3,4,7,8-PeCDF	0.3	7.98E-04	7.98E-04	5.22E-04	5.22E-04	5.01E-04	5.01E-04	2.16E-05	2.16E-05	9.48E-04	9.48E-04	4.44E-04	4.44E-04	4.62E-04	4.62E-04
2,3,7,8-TCDF	0.1	5.60E-04	5.60E-04	1.01E-03	1.01E-03	9.48E-04	9.48E-04	9.30E-06	9.30E-06	7.87E-04	7.87E-04	9.10E-04	9.10E-04	8.93E-04	8.93E-04
OCDF	0.0003	**7.65E-05**	**7.65E-05**	**3.03E-06**	**3.03E-06**	**1.13E-06**	**1.13E-06**	**8.28E-07**	**8.28E-07**	**1.53E-04**	**1.53E-04**	**1.26E-06**	**1.26E-06**	**1.06E-06**	**1.06E-06**
Total Furan TEQ		3.65E-03	3.65E-03	2.13E-03	2.13E-03	1.89E-03	1.89E-03	5.54E-05	5.54E-05	5.59E-03	5.59E-03	1.80E-03	1.80E-03	1.78E-03	1.78E-03
Toxic Equivalent (TEQ), ng/g		**1.06E-02**	**1.06E-02**	**1.01E-02**	**1.01E-02**	**8.70E-03**	**8.70E-03**	**7.08E-03**	**7.08E-03**	**1.14E-02**	**1.14E-02**	**9.08E-03**	**9.08E-03**	**9.23E-03**	**9.23E-03**

Table C.2.2 Summary of Data Validation - TEQs for Stratum A
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Client ID	VB1-COMP-A		VB2-COMP-A		VB3-COMP-A		VB5-COMP-A		VB6-COMP-A		VB7-COMP-A		DUP-1-COMP-A	
	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS
Human Health	Exceeds													
Ecological Sediment	Exceeds													
Ecological Surface Soil	Exceeds													

Table C.2.2 Summary of Data Validation - TEQs for Stratum A
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

		VB9-COMP-A		VB10-COMP-A		VB11-COMP-A		VB13-COMP-A		VB14-COMP-A		VB15-COMP-A		VB17-COMP-A	
	Toxicity Equivalence Factor (TEF)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)
PCBs (ng/g)															
PCB 77 (BZ)	0.0001	1.00E-07	1.00E-07	1.10E-06	1.10E-06	1.29E-04	1.29E-04	9.40E-08	9.40E-08	5.10E-07	5.10E-07	2.67E-04	2.67E-04	4.20E-07	4.20E-07
PCB 81 (BZ)	0.0003	2.97E-07	2.97E-07	3.30E-06	3.30E-06	7.80E-06	7.80E-06	3.30E-07	3.30E-07	1.62E-06	1.62E-06	7.80E-06	7.80E-06	1.23E-06	1.23E-06
PCB 105 (BZ)	0.00003	3.00E-08	3.00E-08	3.90E-07	3.90E-07	1.20E-04	1.20E-04	2.61E-08	2.61E-08	1.17E-07	1.17E-07	1.30E-04	1.30E-04	4.20E-08	4.20E-08
PCB 114 (BZ)	0.00003	3.30E-08	3.30E-08	3.90E-07	3.90E-07	6.30E-06	6.30E-06	2.91E-08	2.91E-08	1.05E-07	1.05E-07	6.30E-06	6.30E-06	4.50E-08	4.50E-08
PCB 118 (BZ)	0.00003	3.30E-08	3.30E-08	3.60E-07	3.60E-07	4.80E-04	4.80E-04	3.00E-08	3.00E-08	1.02E-07	1.02E-07	5.58E-04	5.58E-04	1.53E-07	1.53E-07
PCB 123 (BZ)	0.00003	3.90E-08	3.90E-08	3.90E-07	3.90E-07	6.90E-06	6.90E-06	3.60E-08	3.60E-08	1.14E-07	1.14E-07	6.60E-06	6.60E-06	4.50E-08	4.50E-08
PCB 126 (BZ)	0.1	1.20E-04	1.20E-04	1.30E-03	1.30E-03	1.50E-03	1.50E-03	1.00E-04	1.00E-04	3.60E-04	3.60E-04	6.80E-03	6.80E-03	1.70E-04	1.70E-04
PCB 156, 157 (BZ)	0.00003	5.10E-08	5.10E-08	2.85E-07	2.85E-07	5.52E-05	5.52E-05	5.10E-08	5.10E-08	1.26E-07	1.26E-07	5.79E-05	5.79E-05	1.02E-07	1.02E-07
PCB 167 (BZ)	0.00003	3.30E-08	3.30E-08	2.58E-07	2.58E-07	1.92E-05	1.92E-05	3.30E-08	3.30E-08	9.30E-08	9.30E-08	2.16E-05	2.16E-05	6.90E-08	6.90E-08
PCB 169 (BZ)	0.03	3.00E-05	3.00E-05	1.83E-04	1.83E-04	6.00E-04	6.00E-04	3.00E-05	3.00E-05	8.10E-05	8.10E-05	1.35E-03	1.35E-03	6.30E-05	6.30E-05
PCB 170 (BZ)	0.0001	1.40E-07	1.40E-07	3.00E-07	3.00E-07	5.52E-04	5.52E-04	1.30E-07	1.30E-07	4.10E-07	4.10E-07	5.05E-04	5.05E-04	1.30E-06	1.30E-06
PCB 180, 193 (BZ)	0.00001	1.00E-08	1.00E-08	2.40E-08	2.40E-08	1.19E-04	1.19E-04	9.80E-09	9.80E-09	3.10E-08	3.10E-08	1.07E-04	1.07E-04	2.10E-07	2.10E-07
PCB 189 (BZ)	0.00003	7.50E-08	7.50E-08	2.76E-07	2.76E-07	5.40E-06	5.40E-06	7.20E-08	7.20E-08	1.17E-07	1.17E-07	5.40E-06	5.40E-06	1.23E-07	1.23E-07
Total PCB TEQ		1.51E-04	1.51E-04	1.49E-03	1.49E-03	3.60E-03	3.60E-03	1.31E-04	1.31E-04	4.44E-04	4.44E-04	9.82E-03	9.82E-03	2.37E-04	2.37E-04
Dioxins (ng/g)															
1,2,3,4,6,7,8-HpCDD	0.01	7.08E-04	7.08E-04	1.75E-03	1.75E-03	3.65E-03	3.65E-03	1.41E-03	1.41E-03	1.55E-03	1.55E-03	4.49E-03	4.49E-03	1.46E-03	1.46E-03
1,2,3,4,7,8-HxCDD	0.1	8.90E-06	8.90E-06	4.30E-05	4.30E-05	4.95E-04	4.95E-04	1.22E-04	1.22E-04	7.70E-06	7.70E-06	5.81E-04	5.81E-04	1.90E-05	1.90E-05
1,2,3,6,7,8-HxCDD	0.1	2.20E-04	2.20E-04	4.09E-04	4.09E-04	1.63E-03	1.63E-03	3.34E-04	3.34E-04	3.76E-04	3.76E-04	1.64E-03	1.64E-03	3.17E-04	3.17E-04
1,2,3,7,8,9-HxCDD	0.1	4.51E-04	4.51E-04	7.43E-04	7.43E-04	1.60E-03	1.60E-03	6.78E-04	6.78E-04	7.46E-04	7.46E-04	1.78E-03	1.78E-03	7.25E-04	7.25E-04
1,2,3,7,8-PeCDD	1	6.40E-04	6.40E-04	1.18E-03	1.18E-03	6.01E-03	6.01E-03	6.90E-04	6.90E-04	1.16E-03	1.16E-03	3.35E-03	3.35E-03	1.16E-03	1.16E-03
2,3,7,8-TCDD	1	1.70E-04	1.70E-04	3.00E-04	3.00E-04	3.30E-03	3.30E-03	1.60E-04	1.60E-04	2.40E-04	2.40E-04	1.60E-03	1.60E-03	9.20E-05	9.20E-05
OCDD	0.0003	**3.36E-04**	**3.36E-04**	**2.15E-03**	**2.15E-03**	**1.99E-03**	**1.99E-03**	**8.34E-04**	**8.34E-04**	**1.61E-03**	**1.61E-03**	**2.21E-03**	**2.21E-03**	**8.31E-04**	**8.31E-04**
Total Dioxin TEQ		2.53E-03	2.53E-03	6.57E-03	6.57E-03	1.87E-02	1.87E-02	4.23E-03	4.23E-03	5.68E-03	5.68E-03	1.56E-02	1.56E-02	4.60E-03	4.60E-03
Furans (ng/g)															
1,2,3,4,6,7,8-HpCDF	0.01	1.80E-06	1.80E-06	2.41E-05	2.41E-05	1.23E-03	1.23E-03	1.40E-06	1.40E-06	2.77E-05	2.77E-05	1.47E-03	1.47E-03	4.10E-06	4.10E-06
1,2,3,4,7,8,9-HpCDF	0.01	3.30E-07	3.30E-07	4.20E-06	4.20E-06	1.41E-04	1.41E-04	4.10E-07	4.10E-07	4.50E-06	4.50E-06	1.17E-04	1.17E-04	1.00E-06	1.00E-06
1,2,3,4,7,8-HxCDF	0.1	8.70E-06	8.70E-06	1.94E-04	1.94E-04	3.68E-03	3.68E-03	4.00E-06	4.00E-06	1.59E-04	1.59E-04	3.08E-03	3.08E-03	1.90E-05	1.90E-05
1,2,3,6,7,8-HxCDF	0.1	2.80E-06	2.80E-06	7.20E-05	7.20E-05	1.56E-03	1.56E-03	4.10E-06	4.10E-06	4.50E-05	4.50E-05	1.49E-03	1.49E-03	5.10E-06	5.10E-06
1,2,3,7,8,9-HxCDF	0.1	3.70E-06	3.70E-06	7.10E-06	7.10E-06	1.21E-04	1.21E-04	5.70E-06	5.70E-06	5.60E-06	5.60E-06	1.98E-04	1.98E-04	7.10E-06	7.10E-06
1,2,3,7,8-PeCDF	0.03	2.43E-06	2.43E-06	5.43E-05	5.43E-05	2.66E-04	2.66E-04	1.80E-06	1.80E-06	4.08E-05	4.08E-05	2.64E-04	2.64E-04	3.60E-06	3.60E-06
2,3,4,6,7,8-HxCDF	0.1	3.10E-06	3.10E-06	3.70E-05	3.70E-05	4.87E-04	4.87E-04	4.30E-06	4.30E-06	3.50E-05	3.50E-05	4.51E-04	4.51E-04	5.60E-06	5.60E-06
2,3,4,7,8-PeCDF	0.3	1.29E-05	1.29E-05	3.96E-04	3.96E-04	5.79E-03	5.79E-03	1.74E-05	1.74E-05	2.85E-04	2.85E-04	4.44E-03	4.44E-03	1.53E-05	1.53E-05
2,3,7,8-TCDF	0.1	4.10E-05	4.10E-05	8.44E-04	8.44E-04	3.15E-03	3.15E-03	1.30E-05	1.30E-05	5.81E-04	5.81E-04	1.69E-03	1.69E-03	3.60E-05	3.60E-05
OCDF	0.0003	**1.92E-07**	**NOT VALID**	**1.25E-06**	**1.25E-06**	**1.61E-04**	**1.61E-04**	**7.20E-08**	**7.20E-08**	**2.63E-06**	**2.63E-06**	**1.66E-04**	**1.66E-04**	**6.48E-07**	**6.48E-07**
Total Furan TEQ		7.70E-05	7.68E-05	1.63E-03	1.63E-03	1.66E-02	1.66E-02	5.22E-05	5.22E-05	1.19E-03	1.19E-03	1.34E-02	1.34E-02	9.74E-05	9.74E-05
Toxic Equivalent (TEQ), ng/g		**2.76E-03**	**2.76E-03**	**9.70E-03**	**9.70E-03**	**3.89E-02**	**3.89E-02**	**4.41E-03**	**4.41E-03**	**7.32E-03**	**7.32E-03**	**3.89E-02**	**3.89E-02**	**4.94E-03**	**4.94E-03**

Duffield Associates, Inc.
Project No. 11139.LH

Table C.2.2 Summary of Data Validation - TEQs for Stratum A
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Client ID	VB9-COMP-A		VB10-COMP-A		VB11-COMP-A		VB13-COMP-A		VB14-COMP-A		VB15-COMP-A		VB17-COMP-A	
	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS
Human Health	OK	OK	Exceeds	Exceeds	Exceeds	Exceeds	OK	OK	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds
Ecological Sediment	Exceeds													
Ecological Surface Soil	OK	OK	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds

Table C.2.2 Summary of Data Validation - TEQs for Stratum A
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

		VB18-COMP-A		VB21-COMP-A		VB22-COMP-A		VB24-COMP-A		VB25-COMP-A		VB26-COMP-A		VB28-COMP-A	
	Toxicity Equivalence Factor (TEF)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)
PCBs (ng/g)															
PCB 77 (BZ)	0.0001	2.70E-07	2.70E-07	**1.03E-04**	**1.03E-04**	**4.60E-07**	**NOT VALID**	**7.30E-07**	**7.30E-07**	**1.80E-05**	**1.80E-05**	**4.90E-07**	**NOT VALID**	**7.20E-07**	**7.20E-07**
PCB 81 (BZ)	0.0003	8.40E-07	8.40E-07	5.70E-06	5.70E-06	1.38E-06	1.38E-06	2.16E-06	2.16E-06	4.20E-06	4.20E-06	1.38E-06	1.38E-06	2.16E-06	2.16E-06
PCB 105 (BZ)	0.00003	9.00E-08	9.00E-08	1.41E-04	1.41E-04	1.83E-07	1.83E-07	3.00E-07	3.00E-07	1.89E-05	1.89E-05	2.79E-07	2.79E-07	2.82E-07	2.82E-07
PCB 114 (BZ)	0.00003	7.80E-08	7.80E-08	6.00E-06	6.00E-06	1.68E-07	1.68E-07	2.82E-07	2.82E-07	1.11E-06	1.11E-06	2.46E-07	2.46E-07	2.49E-07	2.49E-07
PCB 118 (BZ)	0.00003	4.50E-07	4.50E-07	5.67E-04	5.67E-04	6.90E-07	6.90E-07	4.50E-07	4.50E-07	7.41E-05	7.41E-05	2.37E-07	2.37E-07	2.40E-07	2.40E-07
PCB 123 (BZ)	0.00003	8.10E-08	8.10E-08	6.00E-06	6.00E-06	1.77E-07	1.77E-07	2.94E-07	2.94E-07	9.90E-07	9.90E-07	2.52E-07	2.52E-07	2.64E-07	2.64E-07
PCB 126 (BZ)	0.1	2.60E-04	2.60E-04	**1.50E-02**	**1.50E-02**	**6.00E-04**	**NOT VALID**	**9.60E-04**	**9.60E-04**	**1.20E-03**	**1.20E-03**	**9.30E-04**	**9.30E-04**	**8.60E-04**	**8.60E-04**
PCB 156, 157 (BZ)	0.00003	1.62E-07	1.62E-07	**7.14E-05**	**7.14E-05**	**2.55E-07**	**2.55E-07**	**4.80E-07**	**4.80E-07**	**7.50E-06**	**7.50E-06**	**3.90E-07**	**3.90E-07**	**3.60E-07**	**3.60E-07**
PCB 167 (BZ)	0.00003	1.26E-07	1.26E-07	2.46E-05	2.46E-05	2.01E-07	2.01E-07	3.60E-07	3.60E-07	2.40E-06	2.40E-06	2.70E-07	2.70E-07	2.43E-07	2.43E-07
PCB 169 (BZ)	0.03	1.05E-04	1.05E-04	**2.31E-03**	**2.31E-03**	**5.40E-04**	**5.40E-04**	**3.30E-04**	**3.30E-04**	**3.90E-04**	**3.90E-04**	**2.28E-04**	**2.28E-04**	**2.19E-04**	**NOT VALID**
PCB 170 (BZ)	0.0001	3.50E-07	3.50E-07	6.96E-04	6.96E-04	1.60E-06	1.60E-06	1.80E-06	1.80E-06	7.50E-05	7.50E-05	1.70E-08	1.70E-08	4.30E-07	4.30E-07
PCB 180, 193 (BZ)	0.00001	1.40E-07	1.40E-07	1.34E-04	1.34E-04	5.70E-07	5.70E-07	1.90E-07	1.90E-07	1.66E-05	1.66E-05	1.30E-09	1.30E-09	1.50E-07	1.50E-07
PCB 189 (BZ)	0.00003	1.02E-07	1.02E-07	**5.70E-06**	**5.70E-06**	**2.16E-07**	**NOT VALID**	**3.30E-07**	**3.30E-07**	**8.10E-07**	**8.10E-07**	**2.85E-07**	**2.85E-07**	**2.61E-07**	**NOT VALID**
Total PCB TEQ		3.68E-04	3.68E-04	1.91E-02	1.91E-02	1.15E-03	5.45E-04	1.30E-03	1.30E-03	1.81E-03	1.81E-03	1.16E-03	1.16E-03	1.08E-03	8.65E-04
Dioxins (ng/g)															
1,2,3,4,6,7,8-HpCDD	0.01	1.73E-03	1.73E-03	**3.57E-03**	**3.57E-03**	**1.23E-03**	**1.23E-03**	**1.73E-03**	**1.73E-03**	**1.77E-03**	**1.77E-03**	**1.54E-03**	**1.54E-03**	**1.73E-03**	**1.73E-03**
1,2,3,4,7,8-HxCDD	0.1	2.39E-04	2.39E-04	4.21E-04	4.21E-04	1.61E-04	1.61E-04	8.30E-05	8.30E-05	2.43E-04	2.43E-04	4.20E-05	4.20E-05	2.74E-04	2.74E-04
1,2,3,6,7,8-HxCDD	0.1	3.61E-04	3.61E-04	1.52E-03	1.52E-03	2.74E-04	2.74E-04	4.57E-04	4.57E-04	4.57E-04	4.57E-04	4.03E-04	4.03E-04	4.18E-04	4.18E-04
1,2,3,7,8,9-HxCDD	0.1	7.25E-04	7.25E-04	1.36E-03	1.36E-03	4.93E-04	4.93E-04	8.36E-04	8.36E-04	6.74E-04	6.74E-04	7.96E-04	7.96E-04	7.90E-04	7.90E-04
1,2,3,7,8-PeCDD	1	1.00E-03	1.00E-03	**3.61E-03**	**3.61E-03**	**8.20E-04**	**8.20E-04**	**1.30E-03**	**1.30E-03**	**1.23E-03**	**1.23E-03**	**1.20E-03**	**1.20E-03**	**1.28E-03**	**1.28E-03**
2,3,7,8-TCDD	1	2.20E-04	2.20E-04	1.96E-03	1.96E-03	1.90E-04	1.90E-04	3.10E-04	3.10E-04	4.50E-04	4.50E-04	2.80E-04	2.80E-04	3.10E-04	3.10E-04
OCDD	0.0003	**1.56E-03**	**1.56E-03**	**1.94E-03**	**1.94E-03**	**1.57E-03**	**1.57E-03**	**1.54E-03**	**1.54E-03**	**1.71E-03**	**1.71E-03**	**1.39E-03**	**1.39E-03**	**1.81E-03**	**1.81E-03**
Total Dioxin TEQ		5.83E-03	5.83E-03	1.44E-02	1.44E-02	4.74E-03	4.74E-03	6.26E-03	6.26E-03	6.54E-03	6.54E-03	5.65E-03	5.65E-03	6.61E-03	6.61E-03
Furans (ng/g)															
1,2,3,4,6,7,8-HpCDF	0.01	1.28E-05	1.28E-05	**1.24E-03**	**1.24E-03**	**1.21E-04**	**1.21E-04**	**4.24E-05**	**4.24E-05**	**1.01E-03**	**1.01E-03**	**3.90E-05**	**3.90E-05**	**2.96E-05**	**2.96E-05**
1,2,3,4,7,8,9-HpCDF	0.01	1.90E-06	1.90E-06	1.06E-04	1.06E-04	1.63E-05	1.63E-05	7.30E-06	7.30E-06	1.20E-04	1.20E-04	4.60E-06	4.60E-06	3.80E-06	3.80E-06
1,2,3,4,7,8-HxCDF	0.1	1.14E-04	1.14E-04	2.09E-03	2.09E-03	3.50E-04	3.50E-04	2.67E-04	2.67E-04	2.33E-03	2.33E-03	1.67E-04	1.67E-04	1.92E-04	1.92E-04
1,2,3,6,7,8-HxCDF	0.1	3.70E-05	3.70E-05	1.07E-03	1.07E-03	1.40E-04	1.40E-04	9.00E-05	9.00E-05	7.57E-04	7.57E-04	6.00E-05	6.00E-05	5.90E-05	5.90E-05
1,2,3,7,8,9-HxCDF	0.1	9.30E-06	9.30E-06	1.38E-04	1.38E-04	1.90E-05	1.90E-05	4.90E-06	4.90E-06	7.40E-05	7.40E-05	6.10E-06	6.10E-06	1.20E-05	1.20E-05
1,2,3,7,8-PeCDF	0.03	2.88E-05	2.88E-05	1.46E-04	1.46E-04	4.86E-05	4.86E-05	6.51E-05	6.51E-05	1.60E-04	1.60E-04	3.63E-05	3.63E-05	5.58E-05	5.58E-05
2,3,4,6,7,8-HxCDF	0.1	1.80E-05	1.80E-05	4.32E-04	4.32E-04	6.80E-05	6.80E-05	5.90E-05	5.90E-05	3.54E-04	3.54E-04	2.50E-05	2.50E-05	4.50E-05	4.50E-05
2,3,4,7,8-PeCDF	0.3	2.01E-04	2.01E-04	2.64E-03	2.64E-03	3.66E-04	3.66E-04	5.31E-04	5.31E-04	2.07E-03	2.07E-03	2.52E-04	2.52E-04	4.62E-04	4.62E-04
2,3,7,8-TCDF	0.1	3.60E-04	3.60E-04	1.33E-03	1.33E-03	5.17E-04	5.17E-04	1.03E-03	1.03E-03	8.55E-04	8.55E-04	5.58E-04	5.58E-04	9.49E-04	9.49E-04
OCDF	0.0003	**6.36E-07**	**6.36E-07**	**1.69E-04**	**1.69E-04**	**1.74E-05**	**1.74E-05**	**3.18E-06**	**3.18E-06**	**1.71E-04**	**1.71E-04**	**3.66E-06**	**3.66E-06**	**2.20E-06**	**2.20E-06**
Total Furan TEQ		7.83E-04	7.83E-04	9.36E-03	9.36E-03	1.66E-03	1.66E-03	2.10E-03	2.10E-03	7.90E-03	7.90E-03	1.15E-03	1.15E-03	1.81E-03	1.81E-03
Toxic Equivalent (TEQ), ng/g		**6.98E-03**	**6.98E-03**	**4.29E-02**	**4.29E-02**	**7.55E-03**	**6.95E-03**	**9.65E-03**	**9.65E-03**	**1.63E-02**	**1.63E-02**	**7.97E-03**	**7.97E-03**	**9.51E-03**	**9.29E-03**

Table C.2.2 Summary of Data Validation - TEQs for Stratum A
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Client ID	VB18-COMP-A		VB21-COMP-A		VB22-COMP-A		VB24-COMP-A		VB25-COMP-A		VB26-COMP-A		VB28-COMP-A	
	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS
Human Health	Exceeds													
Ecological Sediment	Exceeds													
Ecological Surface Soil	Exceeds													

Notes:

-- : no applicable standard found for this compound
B : Compound was found in the blank and sample.
E : Result exceeded calibration range.
J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

q : The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

G : The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference
U : Indicates the analyte was analyzed for but not detected.
ng/g: Nanograms per gram
1. 'All Results Included' implies that the totals are the summation of the analytical results that were denoted as 'valid', 'not valid', and 'use with caution'.
2. 'Only Valid Results Included' implies that the totals are the summation of the analytical results that were denoted as 'valid' and 'use with caution'.
3. TEQs, Total Dioxin-like PCBs, Total Dioxins, and Total Furan TEQs were calculated by Duffield Associates.

Legend:

(red)	Result is less than 3x and 5x Method Blank - NOT VALID
(green)	Result is greater than 5x the Method Blank - VALID
(yellow)	Result is greater than 3x but less than 5x the Method Blank - USE WITH CAUTION
(light blue)	The compound co-eluted with other compounds

APPENDIX C.2.3

SUMMARY OF TEQS – STRATUM B

Table C.2.3 Summary of Data Validation - TEQs for Stratum B
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Client ID		VB1-COMP-B		VB4-COMP-A		VB5-COMP-B		VB6-COMP-B		VB9-COMP-B		VB10-COMP-B		VB11-COMP-B	
	Toxicity Equivalence Factor (TEF)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)
PCBs (ng/g)															
PCB 77 (BZ)	0.0001	ND	ND	ND	ND	0.0000045	0.0000045	ND	ND	ND	ND	ND	ND	0.0000084	0.0000084
PCB 81 (BZ)	0.0003	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB 105 (BZ)	0.00003	ND	ND	ND	ND	0.0000063	0.0000063	ND	ND	ND	ND	ND	ND	0.0000072	0.0000072
PCB 114 (BZ)	0.00003	ND	ND	ND	ND	0.00000036	0.00000036	ND	ND	ND	ND	ND	ND	0.00000036	0.00000036
PCB 118 (BZ)	0.00003	0.000000165	0.000000165	ND	ND	0.0000129	0.0000129	ND	ND	ND	ND	ND	ND	0.0000303	0.0000303
PCB 123 (BZ)	0.00003	ND	ND	ND	ND	0.000000216	0.000000216	ND	ND	ND	ND	ND	ND	0.000000282	0.000000282
PCB 126 (BZ)	0.1	ND	ND	ND	ND	0.00053	0.00053	ND	ND	ND	ND	ND	ND	ND	ND
PCB 156, 157 (BZ)	0.00003	ND	ND	ND	ND	0.00000261	0.00000261	ND	ND	ND	ND	ND	ND	0.000003	0.000003
PCB 167 (BZ)	0.00003	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00000108	0.00000108
PCB 169 (BZ)	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB 170 (BZ)	0.0001	ND	ND	ND	ND	0.000139	0.000139	ND	ND	ND	ND	ND	ND	0.000029	0.000029
PCB 180, 193 (BZ)	0.00001	0.000000078	0.000000078	ND	ND	0.0000372	0.0000372	ND	ND	ND	ND	ND	ND	0.0000063	0.0000063
PCB 189 (BZ)	0.00003	ND	ND	ND	ND	0.00000189	0.00000189	ND	ND	ND	ND	ND	ND	0.000000264	0.000000264
Total PCB TEQ		0.000000243	0.000000243	ND	ND	0.000735	0.000735	ND	ND	ND	ND	ND	ND	0.0000862	0.0000862
Dioxins (ng/g)															
1,2,3,4,6,7,8-HpCDD	0.01	ND	ND	ND	ND	0.00013	0.00013	ND	ND	ND	ND	ND	ND	0.00024	0.00024
1,2,3,4,7,8-HxCDD	0.1	ND	ND	0.00015	0.00015	0.00021	0.00021	ND	ND	0.0001	0.0001	0.0002	0.0002	0.00037	0.00037
1,2,3,6,7,8-HxCDD	0.1	ND	ND	0.000018	0.000018	0.000033	0.000033	ND	ND	ND	ND	ND	ND	0.000024	0.000024
1,2,3,7,8,9-HxCDD	0.1	ND	ND	0.000032	0.000032	0.000083	0.000083	ND	ND	ND	ND	ND	ND	0.000065	0.000065
1,2,3,7,8-PeCDD	1	ND	ND	0.000069	0.000069	0.000104	0.000104	0.000082	0.000082	0.000426	0.000426	0.000604	0.000604	0.000116	0.000116
2,3,7,8-TCDD	1	0.000616	0.000616	0.0000676	0.0000676	0.000213	0.000213	0.0000938	0.0000938	0.000724	0.000724	0.00069	0.00069	0.000181	0.000181
OCDD	0.0003	**0.00069**	**0.00069**	**0.0000402**	**0.0000402**	**0.0001236**	**0.0001236**	**0.0000726**	**0.0000726**	**0.000789**	**0.000789**	**0.000336**	**0.000336**	**0.0000843**	**0.0000843**
Total Dioxin TEQ		0.00131	0.00131	0.000377	0.000377	0.000897	0.000897	0.000248	0.000248	0.00204	0.00204	0.00183	0.00183	0.00108	0.00108
Furans (ng/g)															
1,2,3,4,6,7,8-HpCDF	0.01	ND	ND	0.0000016	0.0000016	0.000117	0.000117	0.0000025	0.0000025	ND	ND	0.0000008	0.0000008	0.0000529	0.0000529
1,2,3,4,7,8,9-HpCDF	0.01	ND	ND	ND	ND	0.0000446	0.0000446	ND	ND	ND	ND	ND	ND	0.0000066	0.0000066
1,2,3,4,7,8-HxCDF	0.1	ND	ND	ND	ND	0.000464	0.000464	ND	ND	ND	ND	ND	ND	0.000179	0.000179
1,2,3,6,7,8-HxCDF	0.1	ND	ND	ND	ND	0.000166	0.000166	ND	ND	ND	ND	ND	ND	0.00006	0.00006
1,2,3,7,8,9-HxCDF	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,7,8-PeCDF	0.03	ND	ND	ND	ND	0.0000195	0.0000195	ND	ND	ND	ND	ND	ND	0.0000102	0.0000102
2,3,4,6,7,8-HxCDF	0.1	ND	ND	ND	ND	0.000037	0.000037	ND	ND	ND	ND	0.000005	0.000005	0.000027	0.000027
2,3,4,7,8-PeCDF	0.3	ND	ND	ND	ND	0.00024	0.00024	ND	ND	ND	ND	ND	ND	0.000291	0.000291
2,3,7,8-TCDF	0.1	ND	ND	ND	ND	0.000073	0.000073	ND	ND	ND	ND	ND	ND	0.000093	0.000093
OCDF	0.0003	**0.000000156**	**NOT VALID**	**0.000000114**	**NOT VALID**	**0.0000714**	**0.0000714**	**0.000000621**	**0.000000621**	**0.000000066**	**NOT VALID**	**0.000000051**	**NOT VALID**	**0.00000819**	**0.00000819**
Total Furan TEQ		0.000000156	0.0000000	0.0000017	0.0000016	0.00123	0.00123	0.0000031	0.0000031	0.0000000660	ND	0.00000585	0.00000580	0.000728	0.000728
Toxic Equivalent (TEQ), ng/g		**0.00131**	**0.00131**	**0.000379**	**0.000378**	**0.00286**	**0.00286**	**0.000252**	**0.000252**	**0.00204**	**0.00204**	**0.00184**	**0.00184**	**0.0019**	**0.0019**

Table C.2.3 Summary of Data Validation - TEQs for Stratum B
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Client ID	VB1-COMP-B		VB4-COMP-A		VB5-COMP-B		VB6-COMP-B		VB9-COMP-B		VB10-COMP-B		VB11-COMP-B	
	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS
Human Health	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Ecological Sediment	Exceeds	Exceeds	OK	OK	Exceeds	Exceeds	OK	OK	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds
Ecological Surface Soil	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

Notes:

-- : no applicable standard found for this compound

B : Compound was found in the blank and sample.

E : Result exceeded calibration range.

J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

q : The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

G : The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference

U : Indicates the analyte was analyzed for but not detected.

ng/g: Nanograms per gram

TEQ: Toxic Equivalency Quotient, conversino of the compound to its toxicity as 2,3,7,8-TCDD

1. 'All Results Included' implies that the totals are the summation of the analytical results that were denoted as 'valid', 'not valid', and 'use with caution'.
2. 'Only Valid Results Included' implies that the totals are the summation of the analytical results that were denoted as 'valid' and 'use with caution'.
3. TEQs, Total Dioxin-like PCBs, Total Dioxins, and Total Furan TEQs were calculated by Duffield Associates.

Legend:

Result is less than 3x and 5x Method Blank - NOT VALID

Result is greater than 5x the Method Blank - VALID

Result is greater than 3x but less than 5x the Method Blank - USE WITH CAUTION

The compound co-eluted with other compounds

Table C.2.3 Summary of Data Validation - TEQs for Stratum B
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

		VB12-COMP-B		VB13-COMP-B		VB15-COMP-B		VB19-COMP-B		VB21-COMP-B		VB23-COMP-B		DUP-COMP-B	
	Toxicity Equivalence Factor (TEF)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)
PCBs (ng/g)															
PCB 77 (BZ)	0.0001	ND	ND	ND	ND	0.000011	0.000011	**0.000013**	**0.000013**	**0.000004**	**0.000004**	**0.0000014**	**0.0000014**	**0.000001**	**0.000001**
PCB 81 (BZ)	0.0003	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB 105 (BZ)	0.00003	ND	ND	ND	ND	0.0000057	0.0000057	0.0000036	0.0000036	0.0000051	0.0000051	0.0000039	0.0000039	0.00000126	0.00000126
PCB 114 (BZ)	0.00003	ND	ND	ND	ND	0.000000267	0.000000267	0.000000246	0.000000246	0.000000294	0.000000294	ND	ND	ND	ND
PCB 118 (BZ)	0.00003	ND	ND	ND	ND	0.0000258	0.0000258	0.0000126	0.0000126	0.0000225	0.0000225	0.0000117	0.0000117	0.0000039	0.0000039
PCB 123 (BZ)	0.00003	ND	ND	ND	ND	0.00000033	0.00000033	0.000000231	0.000000231	0.000000279	0.000000279	0.000000291	0.000000291	ND	ND
PCB 126 (BZ)	0.1	ND	ND	ND	ND	ND	ND	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
PCB 156, 157 (BZ)	0.00003	ND	ND	ND	ND	0.00000264	0.00000264	**0.00000189**	**0.00000189**	**0.00000276**	**0.00000276**	**0.0000057**	**0.0000057**	**0.00000075**	**0.00000075**
PCB 167 (BZ)	0.00003	ND	ND	ND	ND	0.00000102	0.00000102	0.00000135	0.00000135	0.00000099	0.00000099	0.00000156	0.00000156	0.000000261	0.000000261
PCB 169 (BZ)	0.03	ND	ND	ND	ND	ND	ND	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
PCB 170 (BZ)	0.0001	ND	ND	ND	ND	0.000034	0.000034	0.000016	0.000016	0.000024	0.000024	0.000032	0.000032	0.00001	0.00001
PCB 180, 193 (BZ)	0.00001	ND	ND	ND	ND	0.0000068	0.0000068	0.0000036	0.0000036	0.0000048	0.0000048	0.0000057	0.0000057	0.0000028	0.0000028
PCB 189 (BZ)	0.00003	ND	ND	ND	ND	0.00000033	0.00000033	**0.000000234**	**NOT VALID**	**0.00000039**	**0.00000039**	**0.00000036**	**0.00000036**	**0.000000141**	**NOT VALID**
Total PCB TEQ		ND	ND	ND	ND	0.0000879	0.0000879	0.0000528	0.0000525	0.0000651	0.0000651	0.0000626	0.0000626	0.0000201	0.0000200
Dioxins (ng/g)															
1,2,3,4,6,7,8-HpCDD	0.01	ND	ND	0.00061	0.00061	ND	ND	0.00021	0.00021	ND	ND	ND	ND	ND	ND
1,2,3,4,7,8-HxCDD	0.1	ND	ND	0.00025	0.00025	0.00035	0.00035	0.00083	0.00083	**0.00037**	**0.00037**	**0.000071**	**NOT VALID**	**ND**	**ND**
1,2,3,6,7,8-HxCDD	0.1	0.0000087	0.0000087	ND	ND	ND	ND	0.000119	0.000119	0.000027	0.000027	ND	ND	ND	ND
1,2,3,7,8,9-HxCDD	0.1	0.000018	0.000018	ND	ND	0.000072	0.000072	0.00026	0.00026	0.000112	0.000112	0.000026	0.000026	0.000025	0.000025
1,2,3,7,8-PeCDD	1	0.000033	0.000033	0.000565	0.000565	0.000074	0.000074	0.000437	0.000437	0.000139	0.000139	0.00007	0.00007	0.00005	0.00005
2,3,7,8-TCDD	1	0.0000525	0.0000525	0.000782	0.000782	0.000194	0.000194	0.000656	0.000656	**0.000265**	**0.000265**	**0.000097**	**0.000097**	**0.0000958**	**0.0000958**
OCDD	0.0003	**0.0000654**	**0.0000654**	**0.00099**	**0.00099**	**0.0001083**	**0.0001083**	**0.000309**	**0.000309**	**0.0001206**	**0.0001206**	**0.0000732**	**0.0000732**	**0.0000576**	**0.0000576**
Total Dioxin TEQ		0.000178	0.000178	0.00320	0.00320	0.000798	0.000798	0.00282	0.00282	0.00103	0.00103	0.000337	0.000266	0.000228	0.000228
Furans (ng/g)															
1,2,3,4,6,7,8-HpCDF	0.01	0.00000053	0.00000053	ND	ND	0.000122	0.000122	0.000279	0.000279	0.0000699	0.0000699	0.000028	0.000028	0.0000243	0.0000243
1,2,3,4,7,8,9-HpCDF	0.01	ND	ND	ND	ND	0.0000381	0.0000381	0.0000217	0.0000217	0.0000067	0.0000067	0.0000062	0.0000062	0.0000061	0.0000061
1,2,3,4,7,8-HxCDF	0.1	ND	ND	ND	ND	0.000197	0.000197	0.000457	0.000457	0.000125	0.000125	0.000093	0.000093	0.000121	0.000121
1,2,3,6,7,8-HxCDF	0.1	ND	ND	ND	ND	0.000114	0.000114	0.000274	0.000274	0.000051	0.000051	0.000062	0.000062	0.000053	0.000053
1,2,3,7,8,9-HxCDF	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,7,8-PeCDF	0.03	ND	ND	ND	ND	0.0000132	0.0000132	0.0000297	0.0000297	0.0000048	0.0000048	0.0000051	0.0000051	0.0000081	0.0000081
2,3,4,6,7,8-HxCDF	0.1	ND	ND	ND	ND	0.000034	0.000034	0.000073	0.000073	0.000018	0.000018	0.000013	0.000013	0.000013	0.000013
2,3,4,7,8-PeCDF	0.3	ND	ND	ND	ND	0.000246	0.000246	0.00036	0.00036	0.000126	0.000126	0.000048	0.000048	0.000078	0.000078
2,3,7,8-TCDF	0.1	ND	ND	ND	ND	0.000064	0.000064	0.000188	0.000188	0.000092	0.000092	0.000053	0.000053	0.000068	0.000068
OCDF	0.0003	**0.000000087**	**0.000000087**	**0.0000000450**	**0.0000000450**	**0.0000336**	**0.0000336**	**0.00002898**	**0.00002898**	**0.00001008**	**0.00001008**	**0.00001164**	**0.00001164**	**0.00001011**	**0.00001011**
Total Furan TEQ		0.000000617	0.000000617	0.0000000450	0.0000000450	0.000862	0.000862	0.0017114	0.0017114	0.000503	0.000503	0.0003	0.0003	0.0003816	0.0003816
Toxic Equivalent (TEQ), ng/g		**0.000178**	**0.000178**	**0.00320**	**0.00320**	**0.00175**	**0.00175**	**0.00459**	**0.00458**	**0.00160**	**0.00160**	**0.0007**	**0.0006**	**0.00063**	**0.00063**

Table C.2.3 Summary of Data Validation - TEQs for Stratum B
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Client ID	VB12-COMP-B		VB13-COMP-B		VB15-COMP-B		VB19-COMP-B		VB21-COMP-B		VB23-COMP-B		DUP-COMP-B	
	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS
Human Health	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
Ecological Sediment	OK	OK	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds
Ecological Surface Soil	OK	OK	Exceeds	Exceeds	OK	OK	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds

Table C.2.3 Summary of Data Validation - TEQs for Stratum B
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

		VB25-COMP-B		VB27-COMP-B		VB29-COMP-A		VB30-COMP-B		VB31-COMP-B		VB33-COMP-B	
	Toxicity Equivalence Factor (TEF)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)	Calculated TEC Result	Calculated TEC Result (Only Valid Data Included)
PCBs (ng/g)													
PCB 77 (BZ)	0.0001	**0.00000043**	**NOT VALID**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**0.000077**	**0.000077**	**ND**	**ND**
PCB 81 (BZ)	0.0003	ND	ND	ND	ND	ND	ND	ND	ND	0.0000063	0.0000063	ND	ND
PCB 105 (BZ)	0.00003	0.00000033	0.00000033	ND	ND	ND	ND	ND	ND	0.0000762	0.0000762	0.000000036	0.000000036
PCB 114 (BZ)	0.00003	0.000000051	0.000000051	ND	ND	ND	ND	ND	ND	0.0000042	0.0000042	ND	ND
PCB 118 (BZ)	0.00003	0.0000012	0.0000012	ND	ND	ND	ND	0.000000036	0.000000036	0.00036	0.00036	0.000000045	0.000000045
PCB 123 (BZ)	0.00003	ND	ND	ND	ND	ND	ND	ND	ND	0.0000039	0.0000039	ND	ND
PCB 126 (BZ)	0.1	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
PCB 156, 157 (BZ)	0.00003	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**0.0000411**	**0.0000411**	**ND**	**ND**
PCB 167 (BZ)	0.00003	ND	ND	ND	ND	ND	ND	ND	ND	0.0000138	0.0000138	ND	ND
PCB 169 (BZ)	0.03	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
PCB 170 (BZ)	0.0001	ND	ND	ND	ND	ND	ND	0.00000038	0.00000038	0.000315	0.000315	0.000000086	0.000000086
PCB 180, 193 (BZ)	0.00001	0.0000004	0.0000004	ND	ND	ND	ND	0.000000091	0.000000091	0.000062	0.000062	0.000000023	0.000000023
PCB 189 (BZ)	0.00003	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**0.00000285**	**0.00000285**	**ND**	**ND**
Total PCB TEQ		0.00000241	0.00000198	ND	ND	ND	ND	0.000000507	0.000000507	0.000962	0.000962	0.000000190	0.000000190
Dioxins (ng/g)													
1,2,3,4,6,7,8-HpCDD	0.01	0.00038	0.00038	ND	ND	ND	ND	ND	ND	0.00058	0.00058	0.00031	0.00031
1,2,3,4,7,8-HxCDD	0.1	**0.00014**	**NOT VALID**	**0.00021**	**NOT VALID**	**0.00013**	**NOT VALID**	**ND**	**ND**	**0.00133**	**0.00133**	**0.0002**	**NOT VALID**
1,2,3,6,7,8-HxCDD	0.1	ND	ND	ND	ND	0.000021	0.000021	ND	ND	ND	ND	ND	ND
1,2,3,7,8,9-HxCDD	0.1	0.00008	0.00008	0.000034	0.000034	0.000078	0.000078	ND	ND	0.000753	0.000753	ND	ND
1,2,3,7,8-PeCDD	1	0.000257	0.000257	0.000083	0.000083	0.000146	0.000146	0.000408	0.000408	0.000715	0.000715	0.00043	0.00043
2,3,7,8-TCDD	1	**0.000458**	**0.000458**	**0.0000563**	**0.0000563**	**0.000202**	**0.000202**	**0.000738**	**0.000738**	**0.00191**	**0.00191**	**0.001**	**0.001**
OCDD	0.0003	**0.000258**	**0.000258**	**0.0000333**	**0.0000333**	**0.0000993**	**0.0000993**	**0.000852**	**0.000852**	**0.000888**	**0.000888**	**0.000669**	**0.000669**
Total Dioxin TEQ		0.00157	0.00143	0.000417	0.000207	0.000676	0.000546	0.00200	0.00200	0.006176	0.006176	0.00261	0.00241
Furans (ng/g)													
1,2,3,4,6,7,8-HpCDF	0.01	0.0000057	0.0000057	**ND**	**ND**	**0.000001**	**NOT VALID**	**0.00000062**	**NOT VALID**	**0.000761**	**0.000761**	**ND**	**ND**
1,2,3,4,7,8,9-HpCDF	0.01	0.00000091	0.00000091	ND	ND	ND	ND	ND	ND	0.000103	0.000103	ND	ND
1,2,3,4,7,8-HxCDF	0.1	0.000018	0.000018	ND	ND	ND	ND	ND	ND	0.00196	0.00196	ND	ND
1,2,3,6,7,8-HxCDF	0.1	ND	ND	ND	ND	ND	ND	ND	ND	0.000576	0.000576	ND	ND
1,2,3,7,8,9-HxCDF	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,7,8-PeCDF	0.03	ND	ND	ND	ND	ND	ND	ND	ND	0.0001068	0.0001068	ND	ND
2,3,4,6,7,8-HxCDF	0.1	ND	ND	ND	ND	ND	ND	ND	ND	0.000215	0.000215	ND	ND
2,3,4,7,8-PeCDF	0.3	ND	ND	ND	ND	ND	ND	ND	ND	0.001371	0.001371	ND	ND
2,3,7,8-TCDF	0.1	0.000038	0.000038	ND	ND	ND	ND	ND	ND	0.000835	0.000835	ND	ND
OCDF	0.0003	**0.000000915**	**0.000000915**	**1.71E-08**	**NOT VALID**	**0.000000057**	**NOT VALID**	**0.000000039**	**NOT VALID**	**0.0001482**	**0.0001482**	**0.000000114**	**NOT VALID**
Total Furan TEQ		0.0000635	0.0000635	0.0000000171	ND	0.00000106	ND	0.000000659	ND	0.00608	0.00608	0.000000114	ND
Toxic Equivalent (TEQ), ng/g		**0.00164**	**0.00150**	**0.0004**	**0.0002**	**0.00068**	**0.00055**	**0.00200**	**0.00200**	**0.0132**	**0.0132**	**0.00261**	**0.00241**

Table C.2.3 Summary of Data Validation - TEQs for Stratum B
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

		VB25-COMP-B		VB27-COMP-B		VB29-COMP-A		VB30-COMP-B		VB31-COMP-B		VB33-COMP-B	
		ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS	ALL RESULTS	ONLY VALID RESULTS
Human Health		OK	OK	OK	OK	OK	OK	OK	OK	Exceeds	Exceeds	OK	OK
Ecological Sediment		Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds
Ecological Surface Soil		Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds

Notes:

-- : no applicable standard found for this compound

B : Compound was found in the blank and sample.

E : Result exceeded calibration range.

J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

q : The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

G : The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference

U : Indicates the analyte was analyzed for but not detected.

ng/g: Nanograms per gram

Legend:

Result is less than 3x and 5x Method Blank - NOT VALID

Result is greater than 5x the Method Blank - VALID

Result is greater than 3x but less than 5x the Method Blank - USE WITH CAUTION

The compound co-eluted with other compounds

APPENDIX C.2.4

SUMMARY OF TEQS – SURFACE WATER

Table C.2.4 - Summary of Data Validation - Surface Water TEQs
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

Compound	Toxicity Equivalence Factor (TEF)	**SW-1**		**SW-2**		**SW-3**		**SW-4**		**SW-5**	
		Calculated TEC Result	TEC (Only Valid Results)	Calculated TEC Result	TEC (Only Valid Results)	Calculated TEC Result	TEC (Only Valid Results)	Calculated TEC Result	TEC (Only Valid Results)	Calculated TEC Result	TEC (Only Valid Results)
PCBs (ng/L)		**TEQ**		**TEQ**		**TEQ**		**TEQ**		**TEQ**	
PCB 77 (BZ)	0.0001	**0.00000047**	**NOT VALID**	**0.00000077**	**NOT VALID**	**0.0000026**	**0.0000026**	**0.0000011**	**NOT VALID**	**0.0000011**	**NOT VALID**
PCB 81 (BZ)	0.0003	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB 105 (BZ)	0.00003	0.00000042	0.00000042	0.00000132	0.00000132	0.0000039	0.0000039	0.00000108	0.00000108	0.00000048	0.00000048
PCB 114 (BZ)	0.00003	**ND**	**ND**	**ND**	**ND**	**0.000000102**	**NOT VALID**	**ND**	**ND**	**ND**	**ND**
PCB 118 (BZ)	0.00003	**0.00000126**	**0.00000126**	**0.0000039**	**0.0000039**	**0.0000132**	**0.0000132**	**0.00000291**	**0.00000291**	**0.00000162**	**0.00000162**
PCB 123 (BZ)	0.00003	ND	ND	ND	ND	0.000000192	0.000000192	ND	ND	ND	ND
PCB 126 (BZ)	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB 156, 157 (BZ)	0.00003	**0.000000291**	**NOT VALID**	**0.00000078**	**0.00000078**	**0.00000177**	**0.00000177**	**0.00000051**	**NOT VALID**	**0.00000033**	**NOT VALID**
PCB 167 (BZ)	0.00003	ND	ND	ND	ND	0.00000063	0.00000063	ND	ND	ND	ND
PCB 169 (BZ)	0.03	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
PCB 170 (BZ)	0.0001	0.000002	0.000002	0.000013	0.000013	0.000023	0.000023	0.0000099	0.0000099	0.0000031	0.0000031
PCB 180, 193 (BZ)	0.00001	0.00000051	0.00000051	0.0000026	0.0000026	0.0000048	0.0000048	0.0000016	0.0000016	0.00000071	0.00000071
PCB 189 (BZ)	0.00003	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**0.000000189**	**NOT VALID**	**ND**	**ND**
Total PCB TEQ		0.00000495	0.0000042	0.0000224	0.0000216	0.0000502	0.0000501	0.0000173	0.0000155	0.00000734	0.0000059
Dioxins (ng/L)		**TEQ**		**TEQ**		**TEQ**		**TEQ**		**TEQ**	
1,2,3,4,6,7,8-HpCDD	0.01	0.00005280	0.0000528	0.000195	0.000195	0.000442	0.000442	0.00005170	0.0000517	0.00001540	0.0000154
1,2,3,4,7,8-HxCDD	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,6,7,8-HxCDD	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,7,8,9-HxCDD	0.1	ND	ND	0.000114	0.000114	0.00028	0.00028	ND	ND	ND	ND
1,2,3,7,8-PeCDD	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,3,7,8-TCDD	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
OCDD	0.0003	**0.0000423**	**0.0000423**	**0.0001284**	**0.0001284**	**0.000303**	**0.000303**	**0.0000306**	**0.0000306**	**0.000002718**	**NOT VALID**
Total Dioxin TEQ		0.0000951	0.0000951	0.000437	0.000437	0.00103	0.00103	0.0000823	0.0000823	0.0000181	0.0000154
Furans (ng/L)		**TEQ**		**TEQ**		**TEQ**		**TEQ**		**TEQ**	
1,2,3,4,6,7,8-HpCDF	0.01	**0.00002590**	**0.0000259**	0.0000665	0.0000665	0.000128	0.000128	0.00002410	0.0000241	0.00004150	0.0000415
1,2,3,4,7,8,9-HpCDF	0.01	0.00000480	0.0000048	ND	ND	0.000026	0.000026	ND	ND	0.00002380	0.0000238
1,2,3,4,7,8-HxCDF	0.1	ND	ND	0.000142	0.000142	0.000486	0.000486	ND	ND	0.00035500	0.000355
1,2,3,6,7,8-HxCDF	0.1	ND	ND	ND	ND	0.000204	0.000204	ND	ND	0.00015500	0.000155
1,2,3,7,8,9-HxCDF	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,7,8-PeCDF	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,3,4,6,7,8-HxCDF	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,3,4,7,8-PeCDF	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,3,7,8-TCDF	0.1	ND	ND	ND	ND	ND	ND	ND	ND	0.0001720	0.000172
OCDF	0.0003	**0.00000201**	**NOT VALID**	**0.00000603**	**0.00000603**	**0.0000309**	**0.0000309**	**0.000002607**	**0.000002607**	**0.00000993**	**0.00000993**
Total Furan TEQ		0.000033	0.0000307	0.000215	0.000215	0.000875	0.000875	0.0000267	0.0000267	0.000757	0.000757
Toxic Equivalent (TEQ)		**0.000133**	**0.000130**	**0.000674**	**0.000674**	**0.00195**	**0.00195**	**0.000126**	**0.000124**	**0.000783**	**0.000779**

Table C.2.4 - Summary of Data Validation - Surface Water TEQs
Edgemoor Sediment and Surface Water Quality Assessment
Edgemoor, Delaware

	Dioxin Toxic Equivalency Calculations						DRBC SWQS (Fish Ingestion)	SWQS - HH (Fish Ingestion)	SWQS - Systemic Toxicants (Fish Ingestion)	SWQS - Aquatic Life (Fresh Water Acute)
	SW-1	SW-2	SW-3	SW-4	SW-5	EQUIPMENT BLANK				
ALL RESULTS INCLUDED										
Total PCB TEQ	0.00000495	0.0000224	0.0000502	0.0000173	0.00000734	0.0000300	-	-	-	-
Total Dioxin TEQ	0.0000951	0.000437	0.00103	0.0000823	0.0000181	0.000004	-	-	-	-
Total Furan TEQ	0.000033	0.000215	0.000875	0.0000267	0.000757	0.000000414	-	-	-	-
Toxic Equivalent (TEQ)	**0.000133**	**0.00067**	**0.00195**	**0.000126**	**0.000783**	**0.0000347**	**0.000005**	**0.0000051**	**0.0006**	**-**
ONLY VALID RESULTS INCLUDED										
Total PCB TEQ	0.00000419	0.0000216	0.0000501	0.0000155	0.0000059	ND	-	-	-	-
Total Dioxin TEQ	0.0000951	0.000437	0.00103	0.0000823	0.0000154	0.00000420	-	-	-	-
Total Furan TEQ	0.0000307	0.000215	0.000875	0.0000267	0.000757	ND	-	-	-	-
Toxic Equivalent (TEQ)	**0.000130**	**0.000674**	**0.00195**	**0.000124**	**0.000779**	**0.00000420**	**0.000005**	**0.0000051**	**0.0006**	**-**

Notes:
SWQS: State of Delaware's 7401 Surface Water Quality Standards
B : Compound was found in the blank and sample.
J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q : The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.
U : Indicates the analyte was analyzed for but not detected.
C : The compound co-eluted with other compounds
C156 : The compound co-eluted with PCB-156
-- : no applicable standard found for this compound
ng/L : Nanograms per Liter
TEF: Toxic Equivalency Factor
TEQ: Toxic Equivalency Quotient, conversino of the compound to its toxicity as 2,3,7,8-TCDD
1. 'All Results Included' implies that the totals are the summation of the analytical results that were denoted as 'valid', 'not valid', and 'use with caution'.
2. 'Only Valid Results Included' implies that the totals are the summation of the analytical results that were denoted as 'valid' and 'use with caution'.
3. Standards are derived from the State of Delaware's Title 7, Regulation 7401, Surface Water Quality Standards (2017).
4. Standards set in the Delaware River Basin Commission's (DRBC's) Water Code, 18 CFR Part 410 (2013) are adhered to in place of the State of Delaware SWQS for Fish Ingestion.

Legend:
Result is less than 3x and 5x Method Blank - NOT VALID
Result is greater than 5x the Method Blank - VALID
Result is greater than 3x but less than 5x the Method Blank - USE WITH CAUTION
The compound co-eluted with other compounds and data has been counted one time towards totals

APPENDIX D

PCB, DIOXIN, AND FURAN DATA VALIDATION
(DUFFIELD, OCTOBER 2016)

Table D.1.1 Summary of Data Validation - PCB SED BLANK 6301027
October 2016 Edgemoor Sampling Event
Edgemoor, Delaware

Homologs	Client ID	TB-2T			Applicable Method Blank					Dioxin-Like Screening Concentration
	Lab Sample ID	H6J050416001			H6J270000027B					
	Batch	6301027			6301027					
	Sampling Date	09/27/2016 10:00:00			Not Applicable					
	Prep Date	10/28/2016			10/28/2016					
	Analysis Date	11/3/2016			11/3/2016					
	Matrix	Soil			Solid					
	Unit	ng/g			ng/g					
	DIOXIN-1668A-SOIL	Result	Q	ML	Result	Q	ML	3Xresult	5Xresult	
	SOIL BY 1668A									
Mono	PCB 1 (BZ)	0.0400	Q B J	0.137	0.00067	QJ	0.01	0.00201	0.00335	
Mono	PCB 2 (BZ)	0.0811	J	0.137	ND		0.01			
Mono	PCB 3 (BZ)	0.0888	B J	0.137	0.000754	J	0.01	0.002262	0.00377	
Di	PCB 4 (BZ)	0.0903	Q B J	0.274	0.00155	QJ	0.02	0.00465	0.00775	
Di	PCB 5 (BZ)	ND	U	0.137	ND		0.01			
Di	PCB 6 (BZ)	0.0808	Q B J	0.137	0.000483	QJ	0.01	0.001449	0.002415	
Di	PCB 7 (BZ)	0.0166	Q B J	0.137	0.00067	QJ	0.01	0.00201	0.00335	
Di	PCB 8 (BZ)	0.166	Q B J	0.274	0.00186	QJ	0.02	0.00558	0.0093	
Di	PCB 9 (BZ)	ND	U	0.137	ND		0.01			
Di	PCB 10 (BZ)	ND	U	0.137	ND		0.01			
Di	PCB 11 (BZ)	0.377	Q B	0.274	0.00491	QJ	0.02	0.01473	0.02455	
Di	PCB 12 (BZ)	0.137	Q C J	0.137	ND		0.01			
Di	PCB 13 (BZ)	0.137	Q C12 J	0.137	ND		0.01			
Di	PCB 14 (BZ)	0.0110	Q B J	0.137	0.000364	QJ	0.01	0.001092	0.00182	
Di	PCB 15 (BZ)	0.380	Q B	0.137	0.00076	QJ	0.01	0.00228	0.0038	
Tri	PCB 16 (BZ)	0.0718	Q B J	0.137	0.00118	QJ	0.01	0.00354	0.0059	
Tri	PCB 17 (BZ)	0.113	Q J	0.137	ND		0.01			
Tri	PCB 18 (BZ)	0.206	B C J	0.274	0.00143	QCJ	0.02	0.00429	0.00715	
Tri	PCB 19 (BZ)	0.0260	Q J	0.137	ND		0.01			
Tri	PCB 20 (BZ)	0.768	B C	0.274	0.000646	QCJ	0.02	0.001938	0.00323	
Tri	PCB 21 (BZ)	0.168	B C	0.137	0.00108	QCJ	0.01	0.00324	0.0054	
Tri	PCB 22 (BZ)	0.107	Q J	0.137	ND		0.01			
Tri	PCB 23 (BZ)	ND	U	0.137	ND		0.01			
Tri	PCB 24 (BZ)	ND	U	0.137	ND		0.01			
Tri	PCB 25 (BZ)	0.109	J	0.137	ND		0.01			
Tri	PCB 26 (BZ)	0.149	B C	0.137	0.000563	CJ	0.01	0.001689	0.002815	
Tri	PCB 27 (BZ)	0.0445	Q J	0.137	ND		0.01			
Tri	PCB 28 (BZ)	0.768	B C20	0.274	0.000646	QC20J	0.01	0.001938	0.00323	
Tri	PCB 29 (BZ)	0.149	B C26	0.137	0.000563	C26J	0.01	0.001689	0.002815	
Tri	PCB 30 (BZ)	0.206	B C18 J	0.274	0.00143	QC18J	0.02	0.00429	0.00715	
Tri	PCB 31 (BZ)	0.480	B	0.274	0.00104	J	0.02	0.00312	0.0052	
Tri	PCB 32 (BZ)	0.137	J	0.137	ND		0.01			
Tri	PCB 33 (BZ)	0.168	B C21	0.137	0.00108	QC21J	0.01	0.00324	0.0054	
Tri	PCB 34 (BZ)	ND	U	0.137	ND		0.01			
Tri	PCB 35 (BZ)	0.0634	Q J	0.137	ND		0.01			
Tri	PCB 36 (BZ)	ND	U	0.137	ND		0.01			

Table D.1.1 Summary of Data Validation - PCB SED BLANK 6301027
October 2016 Edgemoor Sampling Event
Edgemoor, Delaware

Homologs	Client ID	TB-2T			Applicable Method Blank					Dioxin-Like Screening Concentration
	Lab Sample ID	H6J050416001			H6J270000027B					
	Batch	6301027			6301027					
	Sampling Date	09/27/2016 10:00:00			Not Applicable					
	Prep Date	10/28/2016			10/28/2016					
	Analysis Date	11/3/2016			11/3/2016					
	Matrix	Soil			Solid					
	Unit	ng/g			ng/g					
	DIOXIN-1668A-SOIL	Result	Q	ML	Result	Q	ML	3Xresult	5Xresult	
	SOIL BY 1668A									
Tri	PCB 37 (BZ)	0.328		0.137	ND		0.01			
	PCB 38 (BZ)	ND	U	0.137	ND		0.01			
	PCB 39 (BZ)	0.0116	Q J	0.137	ND		0.01			
Tetra	PCB 40 (BZ)	0.546	B C	0.137	0.00116	CJ	0.01	0.00348	0.0058	
	PCB 41 (BZ)	0.546	B C40	0.137	0.00116	C40J	0.01	0.00348	0.0058	
	PCB 42 (BZ)	0.255		0.137	ND		0.01			
	PCB 43 (BZ)	0.0259	C J	0.137	ND		0.01			
	PCB 44 (BZ)	0.936	B C	0.137	0.00141	CJ	0.01	0.00423	0.00705	
	PCB 45 (BZ)	0.170	Q C	0.137	ND		0.01			
	PCB 46 (BZ)	0.0600	J	0.137	ND		0.01			
	PCB 47 (BZ)	0.936	B C44	0.137	0.00141	C44J	0.01	0.00423	0.00705	
	PCB 48 (BZ)	0.0702	Q J	0.137	ND		0.01			
	PCB 49 (BZ)	0.683	Q C	0.137	ND		0.01			
	PCB 50 (BZ)	0.175	C	0.137	ND		0.01			
	PCB 51 (BZ)	0.170	Q C45	0.137	ND		0.01			
	PCB 52 (BZ)	1.16		0.137	ND		0.01			
	PCB 53 (BZ)	0.175	C50	0.137	ND		0.01			
	PCB 54 (BZ)	ND	U	0.137	ND		0.01			
	PCB 55 (BZ)	0.0201	Q J	0.137	ND		0.01			
	PCB 56 (BZ)	0.373		0.137	ND		0.01			
	PCB 57 (BZ)	ND	U	0.137	ND		0.01			
	PCB 58 (BZ)	ND	U	0.137	ND		0.01			
	PCB 59 (BZ)	0.0812	Q B C J	0.137	0.000272	QCJ	0.01	0.000816	0.00136	
	PCB 60 (BZ)	0.0962	Q J	0.137	ND		0.01			
	PCB 61 (BZ)	1.25	B C	0.274	0.00118	QCJ	0.01	0.00354	0.0059	
	PCB 62 (BZ)	0.0812	Q B C59 J	0.137	0.000272	QC59J	0.01	0.000816	0.00136	
	PCB 63 (BZ)	0.0371	J	0.137	ND		0.01			
	PCB 64 (BZ)	0.339		0.137	ND		0.01			
	PCB 65 (BZ)	0.936	B C44	0.137	0.00141	C44J	0.01	0.00423	0.00705	
	PCB 66 (BZ)	0.974	B	0.137	0.000966	QJ	0.01	0.002898	0.00483	
	PCB 69 (BZ)	0.683	Q C49	0.137	ND		0.01			
	PCB 70 (BZ)	1.25	B C61	0.274	0.00118	QC61J	0.02	0.00354	0.0059	
	PCB 71 (BZ)	0.546	B C40	0.137	0.00116	C40J	0.01	0.00348	0.0058	
	PCB 72 (BZ)	0.0328	Q J	0.137	ND		0.01			
	PCB 73 (BZ)	0.0259	C43 J	0.137	ND		0.01			
	PCB 74 (BZ)	1.25	B C61	0.274	0.00118	QC61 J	0.02	0.00354	0.0059	

Table D.1.1 Summary of Data Validation - PCB SED BLANK 6301027
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Homologs	**Client ID**	**TB-2T**			**Applicable Method Blank**					Dioxin-Like Screening Concentration
	Lab Sample ID	H6J050416001			H6J270000027B					
	Batch	6301027			6301027					
	Sampling Date	09/27/2016 10:00:00			Not Applicable					
	Prep Date	10/28/2016			10/28/2016					
	Analysis Date	11/3/2016			11/3/2016					
	Matrix	Soil			Solid					
	Unit	ng/g			ng/g					
	DIOXIN-1668A-SOIL	Result	Q	ML	Result	Q	ML	3Xresult	5Xresult	
	SOIL BY 1668A									
Tetra	PCB 75 (BZ)	0.0812	Q B C59 J	0.137	0.000272	QC59J	0.01	0.000816	0.00136	
	PCB 76 (BZ)	1.25	B C61	0.274	0.00118	QC61J	0.02	0.00354	0.0059	
	PCB 77 (BZ)	0.217	B	0.137	0.000612	QJ	0.01	0.001836	0.00306	38
	PCB 78 (BZ)	ND	U	0.137	ND		0.01			
	PCB 79 (BZ)	0.0243	J	0.137	ND		0.01			
	PCB 80 (BZ)	ND	U	0.137	ND		0.01			
	PCB 81 (BZ)	ND	U	0.137	ND		0.01			12
Penta	PCB 82 (BZ)	0.281		0.137	ND		0.01			
	PCB 83 (BZ)	1.63	C	0.137	ND		0.01			
	PCB 84 (BZ)	0.645		0.137	ND		0.01			
	PCB 85 (BZ)	0.375	C	0.137	ND		0.01			
	PCB 86 (BZ)	1.40	Q C	0.137	ND		0.01			
	PCB 87 (BZ)	1.40	Q C86	0.137	ND		0.01			
	PCB 88 (BZ)	0.474	C	0.137	ND		0.01			
	PCB 89 (BZ)	ND	U	0.137	ND		0.01			
	PCB 90 (BZ)	2.25	C	0.137	ND		0.01			
	PCB 91 (BZ)	0.474	C88	0.137	ND		0.01			
	PCB 92 (BZ)	0.460		0.137	ND		0.01			
	PCB 93 (BZ)	0.0672	Q C J	0.137	ND		0.01			
	PCB 94 (BZ)	ND	U	0.137	ND		0.01			
	PCB 95 (BZ)	1.80		0.137	ND		0.01			
	PCB 96 (BZ)	ND	U	0.137	ND		0.01			
	PCB 97 (BZ)	1.40	Q C86	0.137	ND		0.01			
	PCB 98 (BZ)	0.0790	Q C J	0.137	ND		0.01			
	PCB 99 (BZ)	1.63	C83	0.137	ND		0.01			
	PCB 100 (BZ)	0.0672	Q C93 J	0.137	ND		0.01			
	PCB 101 (BZ)	2.25	C90	0.137	ND		0.01			
	PCB 102 (BZ)	0.0790	Q C98 J	0.137	ND		0.01			
	PCB 103 (BZ)	ND	U	0.137	ND		0.01			
	PCB 104 (BZ)	ND	U	0.137	ND		0.01			
	PCB 105 (BZ)	0.515	Q B	0.137	0.000387	QJ	0.01	0.001161	0.001935	120
	PCB 106 (BZ)	ND	U	0.137	0.000387	QJ	0.01			
	PCB 107 (BZ)/109 (IUPAC)	0.200		0.137	ND		0.01			
	PCB 108 (BZ)/107 (IUPAC)	0.0655	C J	0.137	ND		0.01			
	PCB 109 (BZ)/108 (IUPAC)	1.40	Q C86	0.137	ND		0.01			
	PCB 110 (BZ)	2.94	C	0.137	ND		0.01			

Table D.1.1 Summary of Data Validation - PCB SED BLANK 6301027
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Homologs	Client ID	TB-2T			Applicable Method Blank					Dioxin-Like Screening Concentration
	Lab Sample ID	H6J050416001			H6J270000027B					
	Batch	6301027			6301027					
	Sampling Date	09/27/2016 10:00:00			Not Applicable					
	Prep Date	10/28/2016			10/28/2016					
	Analysis Date	11/3/2016			11/3/2016					
	Matrix	Soil			Solid					
	Unit	ng/g			ng/g					
	DIOXIN-1668A-SOIL	Result	Q	ML	Result	Q	ML	3Xresult	5Xresult	
	SOIL BY 1668A									
Penta	PCB 111 (BZ)	ND	U	0.137	ND		0.01			
	PCB 112 (BZ)	ND	U	0.137	ND		0.01			
	PCB 113 (BZ)	2.25	C90	0.137	ND		0.01			
	PCB 114 (BZ)	0.0248	Q J	0.137	ND		0.01			120
	PCB 115 (BZ)	2.94	C110	0.137	ND		0.01			
	PCB 116 (BZ)	0.375	C85	0.137	ND		0.01			
	PCB 117 (BZ)	0.375	C85	0.137	ND		0.01			
	PCB 118 (BZ)	1.75		0.137	ND		0.01			120
	PCB 119 (BZ)	1.40	Q C86	0.137	ND		0.01			
	PCB 120 (BZ)	ND	U	0.137	ND		0.01			
	PCB 121 (BZ)	ND	U	0.137	ND		0.01			
	PCB 122 (BZ)	ND	U	0.137	ND		0.01			
	PCB 123 (BZ)	0.0220	Q J	0.137	ND		0.01			120
	PCB 124 (BZ)	0.0655	C108 J	0.137	ND		0.01			
	PCB 125 (BZ)	1.40	Q C86	0.137	ND		0.01			
	PCB 126 (BZ)	0.0151	Q J	0.137	ND		0.01			0.036
	PCB 127 (BZ)	ND	U	0.137	ND		0.01			
Hexa	PCB 128 (BZ)	0.539	C	0.137	ND		0.01			
	PCB 129 (BZ)	3.32	C	0.137	ND		0.01			
	PCB 130 (BZ)	0.218	Q	0.137	ND		0.01			
	PCB 131 (BZ)	0.0462	Q J	0.137	ND		0.01			
	PCB 132 (BZ)	1.06		0.137	ND		0.01			
	PCB 133 (BZ)	0.115	J	0.137	ND		0.01			
	PCB 134 (BZ)	0.184	Q C	0.137	ND		0.01			
	PCB 135 (BZ)	0.961	C	0.137	ND		0.01			
	PCB 136 (BZ)	0.383		0.137	ND		0.01			
	PCB 137 (BZ)	0.131	J	0.137	ND		0.01			
	PCB 138 (BZ)	3.32	C129	0.137	ND		0.01			
	PCB 139 (BZ)	0.0705	C J	0.137	ND		0.01			
	PCB 140 (BZ)	0.0705	C139 J	0.137	ND		0.01			
	PCB 141 (BZ)	0.507		0.137	ND		0.01			
	PCB 142 (BZ)	ND	U	0.137	ND		0.01			
	PCB 143 (BZ)	0.184	Q C134	0.137	ND		0.01			
	PCB 144 (BZ)	0.0839	Q J	0.137	ND		0.01			
	PCB 145 (BZ)	ND	U	0.137	ND		0.01			
	PCB 146 (BZ)	0.668		0.137	ND		0.01			

Table D.1.1 Summary of Data Validation - PCB SED BLANK 6301027
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Homologs	Client ID	TB-2T			Applicable Method Blank					Dioxin-Like Screening Concentration
	Lab Sample ID	H6J050416001			H6J270000027B					
	Batch	6301027			6301027					
	Sampling Date	09/27/2016 10:00:00			Not Applicable					
	Prep Date	10/28/2016			10/28/2016					
	Analysis Date	11/3/2016			11/3/2016					
	Matrix	Soil			Solid					
	Unit	ng/g			ng/g					
	DIOXIN-1668A-SOIL	Result	Q	ML	Result	Q	ML	3Xresult	5Xresult	
	SOIL BY 1668A									
Hexa	PCB 147 (BZ)	2.59	B C	0.137	0.000675	QCJ	0.01	0.002025	0.003375	
Hexa	PCB 148 (BZ)	ND	U	0.137	ND		0.01			
Hexa	PCB 149 (BZ)	2.59	B C147	0.137	0.000675	QC147J	0.01	0.002025	0.003375	
Hexa	PCB 150 (BZ)	ND	U	0.137	ND		0.01			
Hexa	PCB 151 (BZ)	0.961	C135	0.137	ND		0.01			
Hexa	PCB 152 (BZ)	ND	U	0.137	ND		0.01			
Hexa	PCB 153 (BZ)	2.72	B C	0.137	0.000923	QCJ	0.01	0.002769	0.004615	
Hexa	PCB 154 (BZ)	0.172		0.137	ND		0.01			
Hexa	PCB 155 (BZ)	ND	U	0.137	ND		0.01			
Hexa	PCB 156 (BZ)	0.361	C	0.137	ND		0.01			120
Hexa	PCB 157 (BZ)	0.361	C156	0.137	ND		0.01			120
Hexa	PCB 158 (BZ)	0.258		0.137	ND		0.01			
Hexa	PCB 159 (BZ)	ND	U	0.137	ND		0.01			
Hexa	PCB 160 (BZ)	3.32	C129	0.137	ND		0.01			
Hexa	PCB 161 (BZ)	ND	U	0.137	ND		0.01			
Hexa	PCB 162 (BZ)	0.0257	J	0.137	ND		0.01			
Hexa	PCB 163 (BZ)	3.32	C129	0.137	ND		0.01			
Hexa	PCB 164 (BZ)	0.234		0.137	ND		0.01			
Hexa	PCB 165 (BZ)	ND	U	0.137	ND		0.01			
Hexa	PCB 166 (BZ)	0.539	C128	0.137	ND		0.01			
Hexa	PCB 167 (BZ)	0.157		0.137	ND		0.01			120
Hexa	PCB 168 (BZ)	2.72	B C153	0.137	0.000923	QC153J	0.01	0.002769	0.004615	
Hexa	PCB 169 (BZ)	ND	U	0.137	ND		0.01			0.12
Hepta	PCB 170 (BZ)	0.680		0.137	ND		0.01			NVP
Hepta	PCB 171 (BZ)	0.227	Q B C	0.137	0.000718	QCJ	0.01	0.002154	0.00359	
Hepta	PCB 172 (BZ)	0.151	Q	0.137	ND		0.01			
Hepta	PCB 173 (BZ)	0.227	Q B C171	0.137	0.000718	QC171J	0.01	0.002154	0.00359	
Hepta	PCB 174 (BZ)	0.705		0.137	ND		0.01			
Hepta	PCB 175 (BZ)	0.0322	Q J	0.137	ND		0.01			
Hepta	PCB 176 (BZ)	0.131	J	0.137	ND		0.01			
Hepta	PCB 177 (BZ)	0.487		0.137	ND		0.01			
Hepta	PCB 178 (BZ)	0.243		0.137	ND		0.01			
Hepta	PCB 179 (BZ)	0.355		0.137	ND		0.01			
Hepta	PCB 180 (BZ)	1.36	C	0.137	ND		0.01			NVP
Hepta	PCB 181 (BZ)	0.0405	Q J	0.137	ND		0.01			
Hepta	PCB 182 (BZ)	0.0370	Q J	0.137	ND		0.01			

Table D.1.1 Summary of Data Validation - PCB SED BLANK 6301027
October 2016 Edgemoor Sampling Event
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Homologs	**Client ID**	**TB-2T**			**Applicable Method Blank**					Dioxin-Like Screening Concentration
	Lab Sample ID	H6J050416001			H6J270000027B					
	Batch	6301027			6301027					
	Sampling Date	09/27/2016 10:00:00			Not Applicable					
	Prep Date	10/28/2016			10/28/2016					
	Analysis Date	11/3/2016			11/3/2016					
	Matrix	Soil			Solid					
	Unit	ng/g			ng/g					
	DIOXIN-1668A-SOIL	Result	Q	ML	Result	Q	ML	3Xresult	5Xresult	
	SOIL BY 1668A									
Hepta	PCB 183 (BZ)	0.553	C	0.137	ND		0.01			
Hepta	PCB 184 (BZ)	ND	U	0.137	ND		0.01			
Hepta	PCB 185 (BZ)	0.553	C183	0.137	ND		0.01			
Hepta	PCB 186 (BZ)	ND	U	0.137	ND		0.01			
Hepta	PCB 187 (BZ)	1.10		0.137	ND		0.01			
Hepta	PCB 188 (BZ)	0.0614	Q J	0.137	ND		0.01			
Hepta	PCB 189 (BZ)	0.0305	Q J	0.137	ND		0.01			130
Hepta	PCB 190 (BZ)	0.119	Q J	0.137	ND		0.01			
Hepta	PCB 191 (BZ)	0.0401	Q J	0.137	ND		0.01			
Hepta	PCB 192 (BZ)	ND	U	0.137	ND		0.01			
Hepta	PCB 193 (BZ)	1.36	C180	0.137	ND		0.01			
Octa	PCB 194 (BZ)	0.522		0.137	ND		0.01			
Octa	PCB 195 (BZ)	0.195		0.137	ND		0.01			
Octa	PCB 196 (BZ)	0.506		0.137	ND		0.01			
Octa	PCB 197 (BZ)	0.0950	J	0.137	ND		0.01			
Octa	PCB 198 (BZ)	1.36	C	0.137	ND		0.01			
Octa	PCB 199 (BZ)/200 (IUPAC)	0.0644	J	0.137	ND		0.01			
Octa	PCB 200 (BZ)/201 (IUPAC)	0.199		0.137	ND		0.01			
Octa	PCB 201 (BZ)/199 (IUPAC)	1.36	C198	0.137	ND		0.01			
Octa	PCB 202 (BZ)	0.457		0.137	ND		0.01			
Octa	PCB 203 (BZ)	0.573		0.137	ND		0.01			
Octa	PCB 204 (BZ)	ND	U	0.137	ND		0.01			
Octa	PCB 205 (BZ)	0.0400	Q J	0.137	ND		0.01			
Nona	PCB 206 (BZ)	5.45		0.137	ND		0.01			
Nona	PCB 207 (BZ)	0.533		0.137	ND		0.01			
Nona	PCB 208 (BZ)	2.61		0.137	ND		0.01			
Deca	PCB 209 (BZ)	8.28		0.137	ND		0.01			

(green)	=	above 5x result
(yellow)	=	less than 5x result,but not 3xresult
(red)	=	less than 3xresult
(light blue)	=	coeluting congener, count once

Table D.1.1 Summary of Data Validation - PCB SED BLANK 6301027
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Data Quality Review Notes:
Sample TB-2T

PCB 1	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 3	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 4	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 6	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 7	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 8	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 11	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 14	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 15	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 16	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 31	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 66	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 77	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 105	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 18, 30	Method blank concentration inconsequential to reported native concentration. Use data. PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs
PCB 20, 28	Method blank concentration inconsequential to reported native concentration. Use data. PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs
PCB 21, 33	Method blank concentration inconsequential to reported native concentration. Use data. PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs
PCB 26, 29	Method blank concentration inconsequential to reported native concentration. Use data. PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs
PCB 40, 41,71	Method blank concentration inconsequential to reported native concentration. Use data. PCB 40, 41 and 71 coelute. Count result once when calculating total PCBs and total homologs
PCB 44, 47, 65	Method blank concentration inconsequential to reported native concentration. Use data. PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs
PCB 59, 62, 75	Method blank concentration inconsequential to reported native concentration. Use data. PCB 59, 62 and 75 coelute. Count result once when calculating total PCBs and total homologs
PCB 61, 70, 74, 76	Method blank concentration inconsequential to reported native concentration. Use data. PCB 61, 70, 74 and 76 coelute. Count result once when calculating total PCBs and total homologs
PCB 147, 149	Method blank concentration inconsequential to reported native concentration. Use data. PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs
PCB 153, 168	Method blank concentration inconsequential to reported native concentration. Use data. PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs
PCB 171, 173	Method blank concentration inconsequential to reported native concentration. Use data. PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs
PCB 12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs
PCB 43,73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs
PCB 45,51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs
PCB 49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs
PCB 50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs
PCB 83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs
PCB 85, 116, 117	PCB 85, 116 and 117 coelute. Count result once when calculating total PCBs and total homologs
PCB 86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119 and 125 coelute. Count result once when calculating total PCBs and total homologs
PCB 88, 91	PCB 88 and 91 coelute. Count result once when calculating total PCBs and total homologs
PCB 90, 101, 113	PCB 90, 101 and 113 coelute. Count result once when calculating total PCBs and total homologs
PCB 93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs
PCB 98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs
PCB 108, 124	PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs
PCB 110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs
PCB 128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs
PCB 129, 138, 160, 163	PCB 129, 138, 160 and 163 coelute. Count result once when calculating total PCBs and total homologs
PCB 134, 143	PCB 134 and 143 coelute. Count result once when calculating total PCBs and total homologs

Table D.1.1 Summary of Data Validation - PCB SED BLANK 6301027
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PCB 135,151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs
PCB 139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs
PCB 156, 157	PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs
PCB 180,193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs
PCB 183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs
PCB 198, 201	PCB 198 and 201 coelute. Count result once when calculating total PCBs and total homologs

Table D.1.2 Summary of Data Validation - PCB SED BLANK 6295024
October 2016 Edgemoor Sampling Event
Edgemoor, Delaware

Homologs	Client ID	TB-2C			TB-2B			Applicable Method Blank					Dioxin-Like Screening Concentration
	Lab Sample ID	H6J050416002			H6J050416003			H6J050416-002					
	Batch	6295024			6295024			6295024					
	Sampling Date	09/27/2016 12:00:00			09/27/2016 14:00:00			Not Applicable					
	Prep Date	10/21/2016			10/21/2016			10/21/2016					
	Analysis Date	11/5/2016			11/7/2016			11/4/2016					
	Matrix	Solid			Soil			Solid					
	Unit	ng/g			ng/g			ng/g					
	DIOXIN-1668A-SOIL	Result	Q	ML	Result	Q	ML	Result	Q	ML	3Xresult	5Xresult	
	SOIL BY 1668A												
Mono	PCB 1 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 2 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 3 (BZ)	0.00389	J	0.0648	0.00244	Q J	0.0564	ND		0.0100			
Di	PCB 4 (BZ)	0.00767	Q J	0.130	ND	U	0.113	ND		0.0200			
	PCB 5 (BZ)	0.00340	Q J	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 6 (BZ)	0.00417	Q B J	0.0648	ND	U	0.0564	0.00215	Q J	0.0100	0.00645	0.01075	
	PCB 7 (BZ)	ND	U	0.0648	0.00302	Q J	0.0564	ND		0.0100			
	PCB 8 (BZ)	0.0128	Q B J	0.130	ND	U	0.113	0.00186	Q J	0.0200	0.00558	0.0093	
	PCB 9 (BZ)	ND	U	0.0648	0.00445	Q B J	0.0564	0.000692	Q J	0.0100	0.002076	0.00346	
	PCB 10 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 11 (BZ)	0.0733	Q B J	0.130	0.0128	Q B J	0.113	0.00314	Q J	0.0200	0.00942	0.0157	
	PCB 12 (BZ)	ND	U	0.0648	0.00599	Q B C J	0.0564	0.00104	Q C J	0.0100	0.00312	0.0052	
	PCB 13 (BZ)	ND	U	0.0648	0.00599	Q B C12 J	0.0564	0.00104	Q C12 J	0.0100	0.00312	0.0052	
	PCB 14 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 15 (BZ)	0.0121	Q B J	0.0648	0.00696	Q B J	0.0564	0.00121	Q J	0.0100	0.00363	0.00605	
Tri	PCB 16 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 17 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 18 (BZ)	0.0119	C J	0.130	ND	U	0.113	ND		0.0200			
	PCB 19 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 20 (BZ)	0.0308	B C J	0.130	0.00400	B C J	0.113	0.00108	Q C J	0.0200	0.00324	0.0054	
	PCB 21 (BZ)	0.00995	Q C J	0.0648	0.00189	C J	0.0564	ND		0.0100			
	PCB 22 (BZ)	0.00362	Q B J	0.0648	0.00121	Q B J	0.0564	0.000443	Q J	0.0100	0.001329	0.002215	
	PCB 23 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 24 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 25 (BZ)	0.00749	J	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 26 (BZ)	0.00515	Q C J	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 27 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 28 (BZ)	0.0308	B C20 J	0.130	0.00400	B C20 J	0.113	0.00108	Q C20 J	0.0200	0.00324	0.0054	
	PCB 29 (BZ)	0.00515	Q C26 J	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 30 (BZ)	0.0119	C18 J	0.130	ND	U	0.113	ND		0.0200			
	PCB 31 (BZ)	0.0183	Q B J	0.130	0.00314	Q B J	0.113	0.000812	Q J	0.0200	0.002436	0.00406	
	PCB 32 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 33 (BZ)	0.00995	Q C21 J	0.0648	0.00189	C21 J	0.0564	ND		0.0100			
	PCB 34 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 35 (BZ)	ND	U	0.0648	ND	U	0.0564	0.000679	Q J	0.0100			
	PCB 36 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 37 (BZ)	0.00820	B J	0.0648	0.00249	B J	0.0564	0.000642	Q J	0.0100	0.001926	0.00321	
	PCB 38 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 39 (BZ)	ND	U	0.0648	ND	U	0.0564	0.000318	Q J	0.0100	0.000954	0.00159	
Tetra	PCB 40 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 41 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 42 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 43 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			

Table D.1.2 Summary of Data Validation - PCB SED BLANK 6295024
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	Client ID	**TB-2C**			**TB-2B**			**Applicable Method Blank**					Dioxin-Like Screening Concentration
	Lab Sample ID	H6J050416002			H6J050416003			H6J050416-002					
	Batch	6295024			6295024			6295024					
	DIOXIN-1668A-SOIL	Result	Q	ML	Result	Q	ML	Result	Q	ML	3Xresult	5Xresult	
	PCB 44 (BZ)	0.383	B C	0.0648	0.0154	B C J	0.0564	0.00121	Q C J	0.0100	0.00363	0.00605	
	PCB 45 (BZ)	0.0452	C J	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 46 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 47 (BZ)	0.383	B C44	0.0648	0.0154	B C44 J	0.0564	0.00121	Q C44 J	0.0100	0.00363	0.00605	
	PCB 48 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 49 (BZ)	0.0108	Q C J	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 50 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 51 (BZ)	0.0452	C45 J	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 52 (BZ)	0.0206	J	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 53 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 54 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 55 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 56 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 57 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 58 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 59 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
Tetra	PCB 60 (BZ)	0.00340	Q B J	0.0648	ND	U	0.0564	0.000781	J	0.0100	0.002343	0.003905	
	PCB 61 (BZ)	0.0133	Q B C J	0.130	0.00363	Q B C J	0.113	0.000938	Q C J	0.0200	0.002814	0.00469	
	PCB 62 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 63 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 64 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 65 (BZ)	0.383	B C44	0.0648	0.0154	B C44 J	0.0564	0.00121	Q C44 J	0.0100	0.00363	0.00605	
	PCB 66 (BZ)	0.0114	Q B J	0.0648	ND	U	0.0564	0.000801	Q J	0.0100	0.002403	0.004005	
	PCB 67 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 68 (BZ)	0.167		0.0648	0.00252	Q J	0.0564	ND		0.0100			
	PCB 69 (BZ)	0.0108	Q C49 J	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 70 (BZ)	0.0133	Q B C61 J	0.130	0.00363	Q B C61 J	0.113	0.000938	Q C61 J	0.0200	0.002814	0.00469	
	PCB 71 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 72 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 73 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 74 (BZ)	0.0133	Q B C61 J	0.130	0.00363	Q B C61 J	0.113	0.000938	Q C61 J	0.0200	0.002814	0.00469	
	PCB 75 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 76 (BZ)	0.0133	Q B C61 J	0.130	0.00363	Q B C61 J	0.113	0.000938	Q C61 J	0.0200	0.002814	0.00469	
	PCB 77 (BZ)	ND	U	0.0648	ND	U	0.0564	0.000958	Q J	0.0100	0.002874	0.00479	38
	PCB 78 (BZ)	ND	U	0.0648	ND	U	0.0564	0.000844	Q J	0.0100	0.002532	0.00422	
	PCB 79 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 80 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 81 (BZ)	ND	U	0.0648	ND	U	0.0564	0.000836	Q J	0.0100	0.002508	0.00418	12
	PCB 82 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
Penta	PCB 83 (BZ)	0.00543	Q C J	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 84 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			

Table D.1.2 Summary of Data Validation - PCB SED BLANK 6295024
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	Client ID	**TB-2C**			**TB-2B**			**Applicable Method Blank**					Dioxin-Like Screening Concentration
	Lab Sample ID	H6J050416002			H6J050416003			H6J050416-002					
	Batch	6295024			6295024			6295024					
	DIOXIN-1668A-SOIL	Result	Q	ML	Result	Q	ML	Result	Q	ML	3Xresult	5Xresult	
	PCB 85 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 86 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 87 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 88 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 89 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 90 (BZ)	0.00885	Q B C J	0.0648	ND	U	0.0564	0.00102	Q C J	0.0100	0.00306	0.0051	
	PCB 91 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 92 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 93 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 94 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 95 (BZ)	0.00933	Q J	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 96 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 97 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 98 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 99 (BZ)	0.00543	Q C83 J	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 100 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
Penta	PCB 101 (BZ)	0.00885	Q B C90 J	0.0648	ND	U	0.0564	0.00102	Q C90 J	0.0100	0.00306	0.0051	
	PCB 102 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 103 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 104 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 105 (BZ)	ND	U	0.0648	ND	U	0.0564	0.00102	J	0.0100	0.00306	0.0051	120
	PCB 106 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 107 (BZ)/109 (IUPAC)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 108 (BZ)/107 (IUPAC)	ND	U	0.0648	ND	U	0.0564	0.000728	Q C J	0.0100	0.002184	0.00364	
	PCB 109 (BZ)/108 (IUPAC)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 110 (BZ)	0.0105	Q B C J	0.0648	0.00133	Q B C J	0.0564	0.0012	C J	0.0100	0.0036	0.006	
	PCB 111 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 112 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 113 (BZ)	0.00885	Q B C90 J	0.0648	ND	U	0.0564	0.00102	Q C90 J	0.0100	0.00306	0.0051	
	PCB 114 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			120
	PCB 115 (BZ)	0.0105	Q B C110 J	0.0648	0.00133	Q B C110 J	0.0564	0.0012	C110 J	0.0100	0.0036	0.006	
	PCB 116 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 117 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 118 (BZ)	0.00435	Q B J	0.0648	ND	U	0.0564	0.000640	Q J	0.0100	0.00192	0.0032	120
	PCB 119 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 120 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 121 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 122 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 123 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			120
	PCB 124 (BZ)	ND	U	0.0648	ND	U	0.0564	0.000728	Q C108 J	0.0100	0.002184	0.00364	

Table D.1.2 Summary of Data Validation - PCB SED BLANK 6295024
October 2016 Edgemoor Sampling Event
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	Client ID	**TB-2C**			**TB-2B**			**Applicable Method Blank**					Dioxin-Like Screening Concentration
	Lab Sample ID	H6J050416002			H6J050416003			H6J050416-002					
Penta	**Batch**	6295024			6295024			6295024					
	DIOXIN-1668A-SOIL	Result	Q	ML	Result	Q	ML	Result	Q	ML	3Xresult	5Xresult	
	PCB 125 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 126 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			0.036
	PCB 127 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 128 (BZ)	ND	U	0.0648	ND	U	0.0564	0.00166	C J	0.0100	0.00498	0.0083	
	PCB 129 (BZ)	0.00700	B C J	0.0648	ND	U	0.0564	0.00327	Q C J	0.0100	0.00981	0.01635	
	PCB 130 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 131 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 132 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 133 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 134 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 135 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 136 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 137 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 138 (BZ)	0.00700	B C129 J	0.0648	ND	U	0.0564	0.00327	Q C129 J	0.0100	0.00981	0.01635	
	PCB 139 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 140 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 141 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 142 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 143 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 144 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 145 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
Hexa	PCB 146 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 147 (BZ)	0.0177	C J	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 148 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 149 (BZ)	0.0177	C147 J	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 150 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 151 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 152 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 153 (BZ)	0.00657	Q C J	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 154 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 155 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 156 (BZ)	ND	U	0.0648	ND	U	0.0564	0.00125	Q C J	0.0100	0.00375	0.00625	120
	PCB 157 (BZ)	ND	U	0.0648	ND	U	0.0564	0.00125	Q C156 J	0.0100	0.00375	0.00625	120
	PCB 158 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 159 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 160 (BZ)	0.00700	B C129 J	0.0648	ND	U	0.0564	0.00327	Q C129 J	0.0100	0.00981	0.01635	
	PCB 161 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 162 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 163 (BZ)	0.00700	B C129 J	0.0648	ND	U	0.0564	0.00327	Q C129 J	0.0100	0.00981	0.01635	
	PCB 164 (BZ)	ND	U	0.0648	ND	U	0.0564	0.000459	Q J	0.0100	0.001377	0.002295	

Table D.1.2 Summary of Data Validation - PCB SED BLANK 6295024
October 2016 Edgemoor Sampling Event
Edgemoor, Delaware

	Client ID	**TB-2C**			**TB-2B**			**Applicable Method Blank**					Dioxin-Like Screening Concentration
	Lab Sample ID	H6J050416002			H6J050416003			H6J050416-002					
	Batch	6295024			6295024			6295024					
Hexa	**DIOXIN-1668A-SOIL**	Result	Q	ML	Result	Q	ML	Result	Q	ML	3Xresult	5Xresult	
	PCB 165 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 166 (BZ)	ND	U	0.0648	ND	U	0.0564	0.00166	C128 J	0.0100	0.00498	0.0083	
	PCB 167 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			120
	PCB 168 (BZ)	0.00657	Q C153 J	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 169 (BZ)	ND	U	0.0648	ND	U	0.0564	0.00132	Q J	0.0100	0.00396	0.0066	0.12
Hepta	PCB 170 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			NVP
	PCB 171 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 172 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 173 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 174 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 175 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 176 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 177 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 178 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 179 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 180 (BZ)	ND	U	0.0648	ND	U	0.0564	0.00132	Q C J	0.0100			NVP
	PCB 181 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 182 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 183 (BZ)	0.00507	B C J	0.0648	ND	U	0.0564	0.00104	Q C J	0.0100	0.00312	0.0052	
	PCB 184 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 185 (BZ)	0.00507	B C183 J	0.0648	ND	U	0.0564	0.00104	Q C183 J	0.0100	0.00312	0.0052	
	PCB 186 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 187 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 188 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 189 (BZ)	ND	U	0.0648	ND	U	0.0564	0.000863	J	0.0100			130
	PCB 190 (BZ)	ND	U	0.0648	ND	U	0.0564	0.000979	Q J	0.0100			
	PCB 191 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 192 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 193 (BZ)	ND	U	0.0648	ND	U	0.0564	0.00132	Q C180 J	0.0100			
Octa	PCB 194 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 195 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 196 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 197 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 198 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 199 (BZ)/200 (IUPAC)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 200 (BZ)/201 (IUPAC)	ND	U	0.0648	ND	U	0.0564	0.000593	Q J	0.0100			
	PCB 201 (BZ)/199 (IUPAC)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 202 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 203 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 204 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 205 (BZ)	ND	U	0.0648	ND	U	0.0564	ND		0.0100			

Table D.1.2 Summary of Data Validation - PCB SED BLANK 6295024
October 2016 Edgemoor Sampling Event
Edgemoor, Delaware

	Client ID	**TB-2C**			**TB-2B**			**Applicable Method Blank**					Dioxin-Like Screening Concentration
Nona	**Lab Sample ID**	H6J050416002			H6J050416003			H6J050416-002					
	Batch	6295024			6295024			6295024					
	DIOXIN-1668A-SOIL	Result	Q	ML	Result	Q	ML	Result	Q	ML	3Xresult	5Xresult	
	PCB 206 (BZ)	0.0218	J	0.0648	ND	U	0.0564	ND		0.0100			
	PCB 207 (BZ)	ND	U	0.0648	ND	U	0.0564	0.0013	Q J	0.0100			
	PCB 208 (BZ)	0.0114	Q J	0.0648	ND	U	0.0564	ND		0.0100			
Deca	PCB 209 (BZ)	0.0277	J	0.0648	ND	U	0.0564	ND		0.0100			

(green)	=	above 5x result
(yellow)	=	less than 5x result,but not 3xresult
(red)	=	less than 3xresult
(light blue)	=	coeluting congener, count once

Data Quality Review Notes:
Sample TB-2C

PCB 8	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 9	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 11	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 15	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 22	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 31	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 35	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 37	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 39	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 77	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 78	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 81	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 105	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 118	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 164	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 169	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 189	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 190	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 6	Method blank concentration consequential to reported native concentration. Reject data.
PCB 60	Method blank concentration may or may not be consequential to reported native concentration. Further evaluate the importance of data.
PCB 12, 13	Method blank concentration inconsequential to reported native concentration. Use data. PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs
PCB 20, 28	Method blank concentration inconsequential to reported native concentration. Use data. PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs
PCB 44, 47, 65	Method blank concentration inconsequential to reported native concentration. Use data. PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs
PCB 61, 70, 74, 76	Method blank concentration inconsequential to reported native concentration. Use data. PCB 61, 70, 74 and 76 coelute. Count result once when calculating total PCBs and total homologs
PCB 90, 101, 113	Method blank concentration inconsequential to reported native concentration. Use data. PCB 90, 101 and 113 coelute. Count result once when calculating total PCBs and total homologs
PCB 108, 124	Method blank concentration inconsequential to reported native concentration. Use data. PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs
PCB 110, 115	Method blank concentration inconsequential to reported native concentration. Use data. PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs
PCB 128, 166	Method blank concentration inconsequential to reported native concentration. Use data. PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs
PCB 156, 157	Method blank concentration inconsequential to reported native concentration. Use data. PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs
PCB 18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs

Table D.1.2 Summary of Data Validation - PCB SED BLANK 6295024
October 2016 Edgemoor Sampling Event
Edgemoor, Delaware

PCB 21, 33	PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs
PCB 26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs
PCB 45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs
PCB 49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs
PCB 83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs
PCB 147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs
PCB 153, 168	PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs
PCB 180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs
PCB 183, 185	Method blank concentration may or may not be consequential to reported native concentration. Further evaluate the importance of data. PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs
PCB 129, 138, 160, 163	Method blank concentration consequential to reported native concentration. Reject data. PCB 129, 138, 160 and 163 coelute. Count result once when calculating total PCBs and total homologs

Data Quality Review Notes:
Sample TB-2B

PCB 6	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 8	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 9	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 15	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 35	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 60	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 66	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 77	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 78	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 81	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 105	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 118	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 169	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 189	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 190	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 200	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 207	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 22	Method blank concentration consequential to reported native concentration. Reject data.
PCB 11	Method blank concentration may or may not be consequential to reported native concentration. Further evaluate the importance of data.
PCB 31	Method blank concentration may or may not be consequential to reported native concentration. Further evaluate the importance of data.
PCB 37	Method blank concentration may or may not be consequential to reported native concentration. Further evaluate the importance of data.
PCB 12, 13	Method blank concentration inconsequential to reported native concentration. Use data. PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs
PCB 44, 47, 65	Method blank concentration inconsequential to reported native concentration. Use data. PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs
PCB 90, 101, 113	Method blank concentration inconsequential to reported native concentration. Use data. PCB 90, 101 and 113 coelute. Count result once when calculating total PCBs and total homologs
PCB 108, 124	Method blank concentration inconsequential to reported native concentration. Use data. PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs
PCB 128, 166	Method blank concentration inconsequential to reported native concentration. Use data. PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs
PCB 156, 157	Method blank concentration inconsequential to reported native concentration. Use data. PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs
PCB 183, 185	Method blank concentration inconsequential to reported native concentration. Use data. PCB 183and 185 coelute. Count result once when calculating total PCBs and total homologs
PCB 18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs
PCB 21, 33	PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs
PCB 26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs
PCB 45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs
PCB 49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs
PCB 83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs
PCB 129, 138, 160, 163	PCB 129, 138, 160 and 163 coelute. Count result once when calculating total PCBs and total homologs
PCB 147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs

Table D.1.2 Summary of Data Validation - PCB SED BLANK 6295024
October 2016 Edgemoor Sampling Event
Edgemoor, Delaware

PCB 153, 168	PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs
PCB 180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs
PCB 20, 28	Method blank concentration may or may not be consequential to reported native concentration. Further evaluate the importance of data. PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs
PCB 61, 70, 74, 76	Method blank concentration may or may not be consequential to reported native concentration. Further evaluate the importance of data. PCB 61, 70, 74 and 76 coelute. Count result once when calculating total PCBs and total homologs
PCB 110, 115	Method blank concentration consequential to reported native concentration. Reject data. PCB 110 and 115 coelute. Reject both.

Table D.1.3 Summary of Data Validation - PCB SED BLANK 6307010
October 2016 Edgemoor Sampling Event
Edgemoor, Delaware

Homologs	Client ID	TB-3C			TB-3B			TB-3T			Applicable Method Blank					Dioxin-Like Screening Concentration
	Lab Sample ID	H6J100405-001			H6J100405-002			H6J100405-003			H6K020000-10B					
	Batch	6307010			630710			6307010			6307010					
	Sampling Date	10/03/2016 12:00:00			10/03/2016 12:30:00			10/03/2016 09:30:00			Not Applicable					
	Prep Date	11/2/2016			11/2/2016			11/2/2016			11/2/2016					
	Analysis Date	11/17/2016			11/17/2016			11/18/2016			11/17/2016					
	Matrix	Soil			Soil			Soil			Solid					
	Unit	ng/g			ng/g			ng/g			ng/g					
	DIOXIN-1668A-SOIL	Result	Q	ML	Result	Q	ML	Result	Q	ML	Result	Q	ML	3Xresult	5Xresult	
	SOIL BY 1668A															
Mono	PCB 1 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
Mono	PCB 2 (BZ)	0.00395	Q J	0.0699	ND	U	0.0119	0.0410	Q J	0.117	ND		0.0100			
Mono	PCB 3 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0548	Q J	0.117	ND		0.0100			
Di	PCB 4 (BZ)	ND	U	0.140	ND	U	0.0238	0.0551	Q B J	0.233	0.00166	Q J	0.0200	0.00498	0.0083	
Di	PCB 5 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	0.00134	Q J	0.0100	0.00402	0.0067	
Di	PCB 6 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0482	Q B J	0.117	0.00147	Q J	0.0100	0.00441	0.00735	
Di	PCB 7 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	0.00115	Q J	0.0100	0.00345	0.00575	
Di	PCB 8 (BZ)	0.0154	Q J	0.140	0.000949	Q J	0.0238	0.0956	Q J	0.233	ND		0.0200			
Di	PCB 9 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
Di	PCB 10 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	0.000904	Q J	0.0100	0.002712	0.00452	
Di	PCB 11 (BZ)	0.0188	Q B J	0.140	0.00351	Q B J	0.0238	0.219	B J	0.233	0.00372	Q J	0.0200	0.01116	0.0186	
Di	PCB 12 (BZ)	0.00995	Q B C J	0.0699	0.00112	Q B C J	0.0119	0.0598	Q B C J	0.117	0.00101	Q C J	0.0100	0.00303	0.00505	
Di	PCB 13 (BZ)	0.00995	Q B C12 J	0.0699	0.00112	Q B C12 J	0.0119	0.0598	Q B C12 J	0.117	0.00101	Q C12 J	0.0100	0.00303	0.00505	
Di	PCB 14 (BZ)	ND	U	0.0699	ND	U	0.0119	0.00927	Q B J	0.117	0.000593	Q J	0.0100	0.001779	0.002965	
Di	PCB 15 (BZ)	0.0142	Q B J	0.0699	ND	U	0.0119	0.243	Q B	0.117	0.00102	Q J	0.0100	0.00306	0.0051	
Tri	PCB 16 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0569	Q J	0.117	ND		0.0100			
Tri	PCB 17 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0911	Q J	0.117	ND		0.0100			
Tri	PCB 18 (BZ)	0.0106	Q C J	0.140	ND	U	0.0238	0.151	C J	0.233	ND		0.0200			
Tri	PCB 19 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
Tri	PCB 20 (BZ)	0.0169	Q B C J	0.140	0.000743	Q B C J	0.0238	0.522	B C	0.233	0.00142	Q C J	0.0200	0.00426	0.0071	
Tri	PCB 21 (BZ)	0.00530	C J	0.0699	0.000474	Q C J	0.0119	0.133	C	0.117	ND		0.0100			
Tri	PCB 22 (BZ)	0.00413	Q J	0.0699	ND	U	0.0119	0.0784	Q J	0.117	ND		0.0100			
Tri	PCB 23 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
Tri	PCB 24 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
Tri	PCB 25 (BZ)	0.00611	Q J	0.0699	ND	U	0.0119	0.0721	J	0.117	ND		0.0100			
Tri	PCB 26 (BZ)	0.00731	C J	0.0699	ND	U	0.0119	0.0851	Q C J	0.117	ND		0.0100			
Tri	PCB 27 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0228	Q J	0.117	ND		0.0100			
Tri	PCB 28 (BZ)	0.0169	Q B C20 J	0.140	0.000743	Q B C20 J	0.0238	0.522	B C20	0.233	0.00142	Q C20 J	0.0200	0.00426	0.0071	
Tri	PCB 29 (BZ)	0.00731	C26 J	0.0699	ND	U	0.0119	0.0851	Q C26 J	0.117	ND		0.0100			
Tri	PCB 30 (BZ)	0.0106	Q C18 J	0.140	ND	U	0.0238	0.151	C18 J	0.233	ND		0.0200			
Tri	PCB 31 (BZ)	0.0149	Q B J	0.140	0.000734	Q B J	0.0238	0.334	B	0.233	0.000619	Q J	0.0200	0.001857	0.003095	
Tri	PCB 32 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0826	J	0.117	ND		0.0100			
Tri	PCB 33 (BZ)	0.00530	C21 J	0.0699	0.000474	Q C21 J	0.0119	0.133	C21	0.117	ND		0.0100			
Tri	PCB 34 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
Tri	PCB 35 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0211	Q J	0.117	ND		0.0100			
Tri	PCB 36 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			

Duffield Associates, Inc.
Project No. 11139.LH

Table D.1.3 Summary of Data Validation - PCB SED BLANK 6307010
October 2016 Edgemoor Sampling Event
Edgemoor, Delaware

Homologs	Client ID	TB-3C			TB-3B			TB-3T			Applicable Method Blank					Dioxin-Like Screening Concentration
	Lab Sample ID	H6J100405-001			H6J100405-002			H6J100405-003			H6K020000-10B					
	Batch	6307010			630710			6307010			6307010					
	Sampling Date	10/03/2016 12:00:00			10/03/2016 12:30:00			10/03/2016 09:30:00			Not Applicable					
	Prep Date	11/2/2016			11/2/2016			11/2/2016			11/2/2016					
	Analysis Date	11/17/2016			11/17/2016			11/18/2016			11/17/2016					
	Matrix	Soil			Soil			Soil			Solid					
	Unit	ng/g			ng/g			ng/g			ng/g					
	DIOXIN-1668A-SOIL	Result	Q	ML	Result	Q	ML	Result	Q	ML	Result	Q	ML	3Xresult	5Xresult	
	SOIL BY 1668A															
Tri	PCB 37 (BZ)	0.00371	Q J	0.0699	ND	U	0.0119	0.167	Q	0.117	ND		0.0100			
	PCB 38 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
	PCB 39 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
Tetra	PCB 40 (BZ)	0.0140	Q C J	0.0699	ND	U	0.0119	0.211	Q C	0.117	ND		0.0100			
	PCB 41 (BZ)	0.0140	Q C40 J	0.0699	ND	U	0.0119	0.211	Q C40	0.117	ND		0.0100			
	PCB 42 (BZ)	0.00589	Q J	0.0699	ND	U	0.0119	0.143		0.117	ND		0.0100			
	PCB 43 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
	PCB 44 (BZ)	0.0286	Q B C J	0.0699	ND	U	0.0119	0.510	B C	0.117	0.000823	Q C J	0.0100	0.002469	0.004115	
	PCB 45 (BZ)	ND	U	0.0699	ND	U	0.0119	0.103	Q C J	0.117	ND		0.0100			
	PCB 46 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0276	Q J	0.117	ND		0.0100			
	PCB 47 (BZ)	0.0286	Q B C44 J	0.0699	ND	U	0.0119	0.510	B C44	0.117	0.000823	Q C44 J	0.0100	0.002469	0.004115	
	PCB 48 (BZ)	0.00337	Q J	0.0699	ND	U	0.0119	0.0444	Q J	0.117	ND		0.0100			
	PCB 49 (BZ)	0.0195	Q B C J	0.0699	ND	U	0.0119	0.388	B C	0.117	0.000595	Q C J	0.0100	0.001785	0.002975	
	PCB 50 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0687	Q C J	0.117	ND		0.0100			
	PCB 51 (BZ)	ND	U	0.0699	ND	U	0.0119	0.103	Q C45 J	0.117	ND		0.0100			
	PCB 52 (BZ)	0.0366	B J	0.0699	ND	U	0.0119	0.608	B	0.117	0.000533	QJ	0.0010	0.001599	0.002665	
	PCB 53 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0687	Q C50 J	0.117	ND		0.0100			
	PCB 54 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
	PCB 55 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
	PCB 56 (BZ)	0.00754	Q J	0.0699	ND	U	0.0119	0.214		0.117	ND		0.0100			
	PCB 57 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
	PCB 58 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
	PCB 59 (BZ)	0.00366	Q C J	0.0699	ND	U	0.0119	0.0608	C J	0.117	ND		0.0100			
	PCB 60 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0712	J	0.117	ND		0.0100			
	PCB 61 (BZ)	0.0389	B C J	0.140	0.00112	Q B C J	0.0238	0.703	B C	0.233	0.00101	C J	0.0200	0.00303	0.00505	
	PCB 62 (BZ)	0.00366	Q C59 J	0.0699	ND	U	0.0119	0.0608	C59 J	0.117	ND		0.0100			
	PCB 63 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0193	J	0.117	ND		0.0100			
	PCB 64 (BZ)	0.0116	J	0.0699	ND	U	0.0119	0.174		0.117	ND		0.0100			
	PCB 65 (BZ)	0.0286	Q B C44 J	0.0699	ND	U	0.0119	0.510	B C44	0.117	0.000823	Q C44 J	0.0100	0.002469	0.004115	
	PCB 66 (BZ)	0.0171	Q J	0.0699	ND	U	0.0119	0.614		0.117	ND		0.0100			
	PCB 67 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0198	J	0.117	ND		0.0100			
	PCB 68 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0187	Q J	0.117	ND		0.0100			
	PCB 69 (BZ)	0.0195	Q B C49 J	0.0699	ND	U	0.0119	0.388	B C49	0.117	0.000595	Q C49 J	0.0100	0.001785	0.002975	
	PCB 70 (BZ)	0.0389	B C61 J	0.140	0.00112	Q B C61 J	0.0238	0.703	B C61	0.233	0.00101	C61 J	0.0200	0.00303	0.00505	
	PCB 71 (BZ)	0.0140	Q C40 J	0.0699	ND	U	0.0119	0.211	Q C40	0.117	ND		0.0100			
	PCB 72 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0280	J	0.117	ND		0.0100			

Table D.1.3 Summary of Data Validation - PCB SED BLANK 6307010
October 2016 Edgemoor Sampling Event
Edgemoor, Delaware

Homologs	Client ID	TB-3C			TB-3B			TB-3T			Applicable Method Blank					Dioxin-Like Screening Concentration
	Lab Sample ID	H6J100405-001			H6J100405-002			H6J100405-003			H6K020000-10B					
	Batch	6307010			630710			6307010			6307010					
	Sampling Date	10/03/2016 12:00:00			10/03/2016 12:30:00			10/03/2016 09:30:00			Not Applicable					
	Prep Date	11/2/2016			11/2/2016			11/2/2016			11/2/2016					
	Analysis Date	11/17/2016			11/17/2016			11/18/2016			11/17/2016					
	Matrix	Soil			Soil			Soil			Solid					
	Unit	ng/g			ng/g			ng/g			ng/g					
	DIOXIN-1668A-SOIL	Result	Q	ML	Result	Q	ML	Result	Q	ML	Result	Q	ML	3Xresult	5Xresult	
	SOIL BY 1668A															
Tetra	PCB 73 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
	PCB 74 (BZ)	0.0389	B C61 J	0.140	0.00112	Q B C61 J	0.0238	0.703	B C61	0.233	0.00101	C61 J	0.0200	0.00303	0.00505	
	PCB 75 (BZ)	0.00366	Q C59 J	0.0699	ND	U	0.0119	0.0608	C59 J	0.117	ND		0.0100			
	PCB 76 (BZ)	0.0389	B C61 J	0.140	0.00112	Q B C61 J	0.0238	0.703	B C61	0.233	0.00101	C61 J	0.0200	0.00303	0.00505	
	PCB 77 (BZ)	ND	U	0.0699	ND	U	0.0119	0.103	B J	0.117	0.000749	Q J	0.0100	0.002247	0.003745	38
	PCB 78 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
	PCB 79 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0141	Q J	0.117	ND		0.0100			
	PCB 80 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
	PCB 81 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			12
Penta	PCB 82 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0408	Q J	0.117	ND		0.0100			
	PCB 83 (BZ)	0.0215	Q C J	0.0699	ND	U	0.0119	0.710	Q C	0.117	ND		0.0100			
	PCB 84 (BZ)	ND	U	0.0699	ND	U	0.0119	0.183		0.117	ND		0.0100			
	PCB 85 (BZ)	ND	U	0.0699	ND	U	0.0119	0.123	C	0.117	ND		0.0100			
	PCB 86 (BZ)	0.0225	C J	0.0699	ND	U	0.0119	0.497	C	0.117	ND		0.0100			
	PCB 87 (BZ)	0.0225	C86 J	0.0699	ND	U	0.0119	0.497	C86	0.117	ND		0.0100			
	PCB 88 (BZ)	ND	U	0.0699	ND	U	0.0119	0.141	Q C	0.117	ND		0.0100			
	PCB 89 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
	PCB 90 (BZ)	0.0486	C J	0.0699	ND	U	0.0119	0.975	C	0.117	ND		0.0100			
	PCB 91 (BZ)	ND	U	0.0699	ND	U	0.0119	0.141	Q C88	0.117	ND		0.0100			
	PCB 92 (BZ)	ND	U	0.0699	ND	U	0.0119	0.204		0.117	ND		0.0100			
	PCB 93 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0464	Q C J	0.117	ND		0.0100			
	PCB 94 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
	PCB 95 (BZ)	0.0302	Q J	0.0699	ND	U	0.0119	0.757		0.117	ND		0.0100			
	PCB 96 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
	PCB 97 (BZ)	0.0225	C86 J	0.0699	ND	U	0.0119	0.497	C86	0.117	ND		0.0100			
	PCB 98 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0491	C J	0.117	ND		0.0100			
	PCB 99 (BZ)	0.0215	Q C83 J	0.0699	ND	U	0.0119	0.710	Q C83	0.117	ND		0.0100			
	PCB 100 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0464	Q C93 J	0.117	ND		0.0100			
	PCB 101 (BZ)	0.0486	C90 J	0.0699	ND	U	0.0119	0.975	C90	0.117	ND		0.0100			
	PCB 102 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0491	C98 J	0.117	ND		0.0100			
	PCB 103 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0414	J	0.117	ND		0.0100			
	PCB 104 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
	PCB 105 (BZ)	0.00968	B J	0.0699	ND	U	0.0119	0.244	B	0.117	0.000456	Q J	0.0100	0.001368	0.00228	120
	PCB 106 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
	PCB 107 (BZ)/109 (IUPAC)	0.00282	Q B J	0.0699	ND	U	0.0119	0.0654	Q B J	0.117	0.000525	J	0.0100	0.001575	0.002625	
	PCB 108 (BZ)/107 (IUPAC)	ND	U	0.0699	ND	U	0.0119	0.0199	Q B C J	0.117	0.000541	Q C J	0.0100	0.001623	0.002705	

Table D.1.3 Summary of Data Validation - PCB SED BLANK 6307010
October 2016 Edgemoor Sampling Event
Edgemoor, Delaware

Homologs	Client ID	TB-3C			TB-3B			TB-3T			Applicable Method Blank					Dioxin-Like Screening Concentration
	Lab Sample ID	H6J100405-001			H6J100405-002			H6J100405-003			H6K020000-10B					
	Batch	6307010			630710			6307010			6307010					
	Sampling Date	10/03/2016 12:00:00			10/03/2016 12:30:00			10/03/2016 09:30:00			Not Applicable					
	Prep Date	11/2/2016			11/2/2016			11/2/2016			11/2/2016					
	Analysis Date	11/17/2016			11/17/2016			11/18/2016			11/17/2016					
	Matrix	Soil			Soil			Soil			Solid					
	Unit	ng/g			ng/g			ng/g			ng/g					
	DIOXIN-1668A-SOIL	Result	Q	ML	Result	Q	ML	Result	Q	ML	Result	Q	ML	3Xresult	5Xresult	
	SOIL BY 1668A															
Penta	PCB 109 (BZ)/108 (IUPAC)	0.0225	C86 J	0.0699	ND	U	0.0119	0.497	C86	0.117	ND		0.0100			
	PCB 110 (BZ)	0.0355	Q B C J	0.0699	0.000902	Q B C J	0.0119	1.09	B C	0.117	0.00124	C J	0.0100	0.00372	0.0062	
	PCB 111 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
	PCB 112 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
	PCB 113 (BZ)	0.0486	C90 J	0.0699	ND	U	0.0119	0.975	C90	0.117	ND		0.0100			
	PCB 114 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0130	Q J	0.117	ND		0.0100			120
	PCB 115 (BZ)	0.0355	Q B C110 J	0.0699	0.000902	Q B C110 J	0.0119	1.09	B C110	0.117	0.00124	C110 J	0.0100	0.00372	0.0062	
	PCB 116 (BZ)	ND	U	0.0699	ND	U	0.0119	0.123	C85	0.117	ND		0.0100			
	PCB 117 (BZ)	ND	U	0.0699	ND	U	0.0119	0.123	C85	0.117	ND		0.0100			
	PCB 118 (BZ)	0.0277	Q J	0.0699	ND	U	0.0119	0.784		0.117	ND		0.0100			120
	PCB 119 (BZ)	0.0225	C86 J	0.0699	ND	U	0.0119	0.497	C86	0.117	ND		0.0100			
	PCB 120 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
	PCB 121 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
	PCB 122 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
	PCB 123 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0174	J	0.117	ND		0.0100			120
	PCB 124 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0199	Q B C108 J	0.117	0.000541	Q C108 J	0.0100	0.001623	0.002705	
	PCB 125 (BZ)	0.0225	C86 J	0.0699	ND	U	0.0119	0.497	C86	0.117	ND		0.0100			
	PCB 126 (BZ)	ND	U	0.0699	ND	U	0.0119	0.00493	J	0.117	ND		0.0100			0.036
	PCB 127 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
Hexa	PCB 128 (BZ)	0.00812	Q B C J	0.0699	ND	U	0.0119	ND	U	0.117	0.000761	Q C J	0.0100	0.002283	0.003805	
	PCB 129 (BZ)	0.0433	Q B C J	0.0699	0.00164	Q B C J	0.0119	1.31	B C	0.117	0.00140	Q C J	0.0100	0.0042	0.007	
	PCB 130 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0872	Q J	0.117	ND		0.0100			
	PCB 131 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
	PCB 132 (BZ)	0.0102	Q B J	0.0699	ND	U	0.0119	0.344	B	0.117	0.000487	Q J	0.0100	0.001461	0.002435	
	PCB 133 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0468	Q J	0.117	ND		0.0100			
	PCB 134 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0514	Q C J	0.117	ND		0.0100			
	PCB 135 (BZ)	0.00974	Q C J	0.0699	ND	U	0.0119	0.468	C	0.117	ND		0.0100			
	PCB 136 (BZ)	ND	U	0.0699	ND	U	0.0119	0.161		0.117	ND		0.0100			
	PCB 137 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0353	J	0.117	ND		0.0100			
	PCB 138 (BZ)	0.0433	Q B C129 J	0.0699	0.00164	Q B C129 J	0.0119	1.31	B C129	0.117	0.00140	Q C129 J	0.0100	0.0042	0.007	
	PCB 139 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0189	Q C J	0.117	ND		0.0100			
	PCB 140 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0189	Q C139 J	0.117	ND		0.0100			
	PCB 141 (BZ)	0.00812	Q J	0.0699	ND	U	0.0119	0.180		0.117	ND		0.0100			
	PCB 142 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
	PCB 143 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0514	Q C134 J	0.117	ND		0.0100			
	PCB 144 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0352	J	0.117	ND		0.0100			

Table D.1.3 Summary of Data Validation - PCB SED BLANK 6307010
October 2016 Edgemoor Sampling Event
Edgemoor, Delaware

Homologs	Client ID	TB-3C			TB-3B			TB-3T			Applicable Method Blank					Dioxin-Like Screening Concentration
	Lab Sample ID	H6J100405-001			H6J100405-002			H6J100405-003			H6K020000-10B					
	Batch	6307010			630710			6307010			6307010					
	Sampling Date	10/03/2016 12:00:00			10/03/2016 12:30:00			10/03/2016 09:30:00			Not Applicable					
	Prep Date	11/2/2016			11/2/2016			11/2/2016			11/2/2016					
	Analysis Date	11/17/2016			11/17/2016			11/18/2016			11/17/2016					
	Matrix	Soil			Soil			Soil			Solid					
	Unit	ng/g			ng/g			ng/g			ng/g					
	DIOXIN-1668A-SOIL	Result	Q	ML	Result	Q	ML	Result	Q	ML	Result	Q	ML	3Xresult	5Xresult	
	SOIL BY 1668A															
Hexa	PCB 145 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
	PCB 146 (BZ)	0.00821	Q J	0.0699	ND	U	0.0119	0.331		0.117	ND		0.0100			
	PCB 147 (BZ)	0.0437	B C J	0.0699	0.00143	Q B C J	0.0119	1.30	B C	0.117	0.000861	Q C J	0.0100	0.002583	0.004305	
	PCB 148 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
	PCB 149 (BZ)	0.0437	B C147 J	0.0699	0.00143	Q B C147 J	0.0119	1.30	B C147	0.117	0.000861	Q C147 J	0.0100	0.002583	0.004305	
	PCB 150 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
	PCB 151 (BZ)	0.00974	Q C135 J	0.0699	ND	U	0.0119	0.468	C135	0.117	ND		0.0100			
	PCB 152 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
	PCB 153 (BZ)	0.0364	B C J	0.0699	0.00118	Q B C J	0.0119	1.37	B C	0.117	0.00142	C J	0.0100	0.00426	0.0071	
	PCB 154 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0876	J	0.117	ND		0.0100			
	PCB 155 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
	PCB 156 (BZ)	ND	U	0.0699	ND	U	0.0119	0.101	Q C J	0.117	ND		0.0100			120
	PCB 157 (BZ)	ND	U	0.0699	ND	U	0.0119	0.101	Q C156 J	0.117	ND		0.0100			120
	PCB 158 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0841	B J	0.117	0.000403	Q J	0.0100	0.001209	0.002015	
	PCB 159 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
	PCB 160 (BZ)	0.0433	Q B C129 J	0.0699	0.00164	Q B C129 J	0.0119	1.31	B C129	0.117	0.00140	Q C129 J	0.0100	0.0042	0.007	
	PCB 161 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
	PCB 162 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
	PCB 163 (BZ)	0.0433	Q B C129 J	0.0699	0.00164	Q B C129 J	0.0119	1.31	B C129	0.117	0.0014	Q C129 J	0.0100	0.0042	0.007	
	PCB 164 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0919	Q J	0.117	ND		0.0100			
	PCB 165 (BZ)	ND	U	0.0699	ND	U	0.0119	0.00562	Q J	0.117	ND		0.0100			
	PCB 166 (BZ)	0.00812	Q B C128 J	0.0699	ND	U	0.0119	ND	U	0.117	0.000761	Q C128 J	0.0100	0.002283	0.003805	
	PCB 167 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			120
	PCB 168 (BZ)	0.0364	B C153 J	0.0699	0.00118	Q B C153 J	0.0119	1.37	B C153	0.117	0.00142	C153 J	0.0100	0.00426	0.0071	
	PCB 169 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			0.12
Hepta	PCB 170 (BZ)	ND	U	0.0699	ND	U	0.0119	0.339	B	0.117	0.00096	Q J	0.0100	0.00288	0.0048	NVP
	PCB 171 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0953	Q B C J	0.117	0.00122	C J	0.0100	0.00366	0.0061	
	PCB 172 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0371	Q J	0.117	ND		0.0100			
	PCB 173 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0953	Q B C171 J	0.117	0.00122	C171 J	0.0100	0.00366	0.0061	
	PCB 174 (BZ)	ND	U	0.0699	ND	U	0.0119	0.373		0.117	ND		0.0100			
	PCB 175 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0199	Q J	0.117	ND		0.0100			
	PCB 176 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0469	Q J	0.117	ND		0.0100			
	PCB 177 (BZ)	ND	U	0.0699	ND	U	0.0119	0.222	Q	0.117	ND		0.0100			
	PCB 178 (BZ)	ND	U	0.0699	ND	U	0.0119	0.129		0.117	ND		0.0100			
	PCB 179 (BZ)	ND	U	0.0699	ND	U	0.0119	0.199		0.117	ND		0.0100			
	PCB 180 (BZ)	0.0280	B C J	0.0699	ND	U	0.0119	0.863	B C	0.117	0.00162	Q C J	0.0100	0.00486	0.0081	NVP

Table D.1.3 Summary of Data Validation - PCB SED BLANK 6307010
October 2016 Edgemoor Sampling Event
Edgemoor, Delaware

Homologs	Client ID	TB-3C			TB-3B			TB-3T			Applicable Method Blank					Dioxin-Like Screening Concentration
	Lab Sample ID	H6J100405-001			H6J100405-002			H6J100405-003			H6K020000-10B					
	Batch	6307010			630710			6307010			6307010					
	Sampling Date	10/03/2016 12:00:00			10/03/2016 12:30:00			10/03/2016 09:30:00			Not Applicable					
	Prep Date	11/2/2016			11/2/2016			11/2/2016			11/2/2016					
	Analysis Date	11/17/2016			11/17/2016			11/18/2016			11/17/2016					
	Matrix	Soil			Soil			Soil			Solid					
	Unit	ng/g			ng/g			ng/g			ng/g					
	DIOXIN-1668A-SOIL	Result	Q	ML	Result	Q	ML	Result	Q	ML	Result	Q	ML	3Xresult	5Xresult	
	SOIL BY 1668A															
Hepta	PCB 181 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
	PCB 182 (BZ)	ND	U	0.0699	ND	U	0.0119	0.00941	Q J	0.117	ND		0.0100			
	PCB 183 (BZ)	ND	U	0.0699	ND	U	0.0119	0.306	C	0.117	ND		0.0100			
	PCB 184 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
	PCB 185 (BZ)	ND	U	0.0699	ND	U	0.0119	0.306	C183	0.117	ND		0.0100			
	PCB 186 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
	PCB 187 (BZ)	0.0162	Q B J	0.0699	ND	U	0.0119	0.745	B	0.117	0.000601	Q J	0.0100	0.001803	0.003005	
	PCB 188 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0270	J	0.117	ND		0.0100			
	PCB 189 (BZ)	0.00194	Q B J	0.0699	ND	U	0.0119	0.0140	Q B J	0.117	0.000827	Q J	0.0100	0.002481	0.004135	130
	PCB 190 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0701	J	0.117	ND		0.0100			
	PCB 191 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
	PCB 192 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
	PCB 193 (BZ)	0.0280	B C180 J	0.0699	ND	U	0.0119	0.863	B C180	0.117	0.00162	Q C180 J	0.0100	0.00486	0.0081	
Octa	PCB 194 (BZ)	0.00917	Q J	0.0699	ND	U	0.0119	0.389		0.117	ND		0.0100			
	PCB 195 (BZ)	ND	U	0.0699	ND	U	0.0119	0.110	J	0.117	ND		0.0100			
	PCB 196 (BZ)	ND	U	0.0699	ND	U	0.0119	0.309		0.117	ND		0.0100			
	PCB 197 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0421	Q J	0.117	ND		0.0100			
	PCB 198 (BZ)	0.00704	Q C J	0.0699	ND	U	0.0119	1.06	C	0.117	ND		0.0100			
	PCB 199 (BZ)/200 (IUPAC)	ND	U	0.0699	ND	U	0.0119	0.0426	J	0.117	ND		0.0100			
	PCB 200 (BZ)/201 (IUPAC)	ND	U	0.0699	ND	U	0.0119	0.106	Q J	0.117	ND		0.0100			
	PCB 201 (BZ)/199 (IUPAC)	0.00704	Q C198 J	0.0699	ND	U	0.0119	1.06	C198	0.117	ND		0.0100			
	PCB 202 (BZ)	ND	U	0.0699	ND	U	0.0119	0.308		0.117	ND		0.0100			
	PCB 203 (BZ)	0.0106	Q B J	0.0699	ND	U	0.0119	0.347	B	0.117	0.000897	J	0.0100	0.002691	0.004485	
	PCB 204 (BZ)	ND	U	0.0699	ND	U	0.0119	ND	U	0.117	ND		0.0100			
	PCB 205 (BZ)	ND	U	0.0699	ND	U	0.0119	0.0118	Q J	0.117	ND		0.0100			
Nona	PCB 206 (BZ)	0.0303	J	0.0699	ND	U	0.0119	5.02		0.117	ND		0.0100			
	PCB 207 (BZ)	ND	U	0.0699	ND	U	0.0119	0.399		0.117	ND		0.0100			
	PCB 208 (BZ)	0.0148	Q J	0.0699	ND	U	0.0119	2.22		0.117	ND		0.0100			
Deca	PCB 209 (BZ)	0.0829		0.0699	ND	U	0.0119	7.48		0.117	ND		0.0100			

(green)	=	above 5x result
(yellow)	=	less than 5x result,but not 3xresult
(red)	=	less than 3xresult
(light blue)	=	coeluting congener, count once

Duffield Associates, Inc.
Project No. 11139.LH

Table D.1.3 Summary of Data Validation - PCB SED BLANK 6307010
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Data Quality Review Notes:
Sample TB-3T

PCB-4	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-5	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-6	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-7	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-10	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-11	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-14	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-15	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-31	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-52	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-77	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-105	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-107	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-132	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-158	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-170	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-187	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-189	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-203	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-12, 13	Method blank concentration inconsequential to reported native concentration. Use data. PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs
PCB 20, 28	Method blank concentration inconsequential to reported native concentration. Use data. PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs
PCB 44, 47, 65	Method blank concentration inconsequential to reported native concentration. Use data. PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs
PCB-49, 69	Method blank concentration inconsequential to reported native concentration. Use data. PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs
PCB 61, 70, 74, 76	Method blank concentration inconsequential to reported native concentration. Use data. PCB 61, 70, 74 and 76 coelute. Count result once when calculating total PCBs and total homologs
PCB-108, 124	Method blank concentration inconsequential to reported native concentration. Use data. PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs
PCB-110, 115	Method blank concentration inconsequential to reported native concentration. Use data. PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs
PCB-128, 166	Method blank concentration inconsequential to reported native concentration. Use data. PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs
PCB-129, 138, 160, 163	Method blank concentration inconsequential to reported native concentration. Use data. PCB 129, 138, 160 and 163 coelute. Count result once when calculating total PCBs and total homologs
PCB-147, 149	Method blank concentration inconsequential to reported native concentration. Use data. PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs
PCB-153, 168	Method blank concentration inconsequential to reported native concentration. Use data. PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs
PCB-171, 173	Method blank concentration inconsequential to reported native concentration. Use data. PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs
PCB-180, 193	Method blank concentration inconsequential to reported native concentration. Use data. PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs
PCB 18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs
PCB 21, 33	PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs
PCB 26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs
PCB 40, 41,71	PCB 40, 41 and 71 coelute. Count result once when calculating total PCBs and total homologs
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs
PCB 59, 62, 75	PCB 59, 62 and 75 coelute. Count result once when calculating total PCBs and total homologs
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs
PCB-85, 116, 117	PCB 85, 116 and 117 coelute. Count result once when calculating total PCBs and total homologs
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119 and 125 coelute. Count result once when calculating total PCBs and total homologs

PCB-88, 91	PCB 88 and 91 coelute. Count result once when calculating total PCBs and total homologs
PCB-90, 101, 113	PCB 90, 101 and 113 coelute. Count result once when calculating total PCBs and total homologs
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs
PCB-134, 143	PCB 134 and 143 coelute. Count result once when calculating total PCBs and total homologs
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs
PCB-156, 157	PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs
PCB-198, 201	PCB 198 and 201 coelute. Count result once when calculating total PCBs and total homologs
Sample TB-3C	
PCB-4	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-5	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-6	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-7	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-10	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-11	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-14	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-15	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-31	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-52	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-77	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-105	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-107	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-132	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-158	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-170	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-187	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-203	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-189	Method blank concentration consequential to reported native concentration. Reject data.
PCB-12, 13	Method blank concentration inconsequential to reported native concentration. Use data. PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs
PCB 20, 28	Method blank concentration inconsequential to reported native concentration. Use data. PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs
PCB 44, 47, 65	Method blank concentration inconsequential to reported native concentration. Use data. PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs
PCB-49, 69	Method blank concentration inconsequential to reported native concentration. Use data. PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs
PCB 61, 70, 74, 76	Method blank concentration inconsequential to reported native concentration. Use data. PCB 61, 70, 74 and 76 coelute. Count result once when calculating total PCBs and total homologs
PCB-108, 124	Method blank concentration inconsequential to reported native concentration. Use data. PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs
PCB-110, 115	Method blank concentration inconsequential to reported native concentration. Use data. PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs
PCB-128, 166	Method blank concentration inconsequential to reported native concentration. Use data. PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs
PCB-129, 138, 160, 163	Method blank concentration inconsequential to reported native concentration. Use data. PCB 129, 138, 160 and 163 coelute. Count result once when calculating total PCBs and total homologs
PCB-147, 149	Method blank concentration inconsequential to reported native concentration. Use data. PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs
PCB-153, 168	Method blank concentration inconsequential to reported native concentration. Use data. PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs
PCB-171, 173	Method blank concentration inconsequential to reported native concentration. Use data. PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs
PCB-180, 193	Method blank concentration inconsequential to reported native concentration. Use data. PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs

Table D.1.3 Summary of Data Validation - PCB SED BLANK 6307010
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PCB 18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs
PCB 21, 33	PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs
PCB 26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs
PCB 40, 41,71	PCB 40, 41 and 71 coelute. Count result once when calculating total PCBs and total homologs
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs
PCB 59, 62, 75	PCB 59, 62 and 75 coelute. Count result once when calculating total PCBs and total homologs
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs
PCB-85, 116, 117	PCB 85, 116 and 117 coelute. Count result once when calculating total PCBs and total homologs
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119 and 125 coelute. Count result once when calculating total PCBs and total homologs
PCB-88, 91	PCB 88 and 91 coelute. Count result once when calculating total PCBs and total homologs
PCB-90, 101, 113	PCB 90, 101 and 113 coelute. Count result once when calculating total PCBs and total homologs
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs
PCB-134, 143	PCB 134 and 143 coelute. Count result once when calculating total PCBs and total homologs
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs
PCB-156, 157	PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs
PCB-198, 201	PCB 198 and 201 coelute. Count result once when calculating total PCBs and total homologs
Sample TB-3B	
PCB-4	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-5	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-6	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-7	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-10	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-14	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-15	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-52	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-77	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-105	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-107	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-132	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-158	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-170	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-187	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-189	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-203	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-11	Method blank concentration consequential to reported native concentration. Reject data.
PCB-31	Method blank concentration consequential to reported native concentration. Reject data.
PCB 44, 47, 65	Method blank concentration inconsequential to reported native concentration. Use data. PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs
PCB-49, 69	Method blank concentration inconsequential to reported native concentration. Use data. PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs

Table D.1.3 Summary of Data Validation - PCB SED BLANK 6307010
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PCB-108, 124	Method blank concentration inconsequential to reported native concentration. Use data. PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs
PCB-128, 166	Method blank concentration inconsequential to reported native concentration. Use data. PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs
PCB-171, 173	Method blank concentration inconsequential to reported native concentration. Use data. PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs
PCB-180, 193	Method blank concentration inconsequential to reported native concentration. Use data. PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs
PCB-12, 13	Method blank concentration consequential to reported native concentration. Reject data. PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs
PCB 20, 28	Method blank concentration consequential to reported native concentration. Reject data. PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs
PCB 61, 70, 74, 76	Method blank concentration consequential to reported native concentration. Reject data. PCB 61, 70, 74 and 76 coelute. Count result once when calculating total PCBs and total homologs
PCB-110, 115	Method blank concentration consequential to reported native concentration. Reject data. PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs
PCB-129, 138, 160, 163	Method blank concentration consequential to reported native concentration. Reject data. PCB 129, 138, 160 and 163 coelute. Count result once when calculating total PCBs and total homologs
PCB-147, 149	Method blank concentration consequential to reported native concentration. Reject data. PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs
PCB-153, 168	Method blank concentration consequential to reported native concentration. Reject data. PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs
PCB 18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs
PCB 21, 33	PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs
PCB 26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs
PCB 40, 41,71	PCB 40, 41 and 71 coelute. Count result once when calculating total PCBs and total homologs
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs
PCB 59, 62, 75	PCB 59, 62 and 75 coelute. Count result once when calculating total PCBs and total homologs
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs
PCB-85, 116, 117	PCB 85, 116 and 117 coelute. Count result once when calculating total PCBs and total homologs
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119 and 125 coelute. Count result once when calculating total PCBs and total homologs
PCB-88, 91	PCB 88 and 91 coelute. Count result once when calculating total PCBs and total homologs
PCB-90, 101, 113	PCB 90, 101 and 113 coelute. Count result once when calculating total PCBs and total homologs
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs
PCB-134, 143	PCB 134 and 143 coelute. Count result once when calculating total PCBs and total homologs
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs
PCB-156, 157	PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs
PCB-198, 201	PCB 198 and 201 coelute. Count result once when calculating total PCBs and total homologs
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.

Table D.1.4 Summary of Data Validation - PCB SED BLANK 6307010
October 2016 Edgemoor Sampling Event
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Homologs	Client ID	TB-4C			TB-4B			TB-4T			TB-1T			Applicable Method Blank						Dioxin-Like Screening Concentration
	Lab Sample ID	H6J100404-001			H6J100404-002			H6J100404-003			H6J10404-004			H6K020000-10B						
	Batch	6307010			6307010			6307010			6307010			6307010						
	Sampling Date	10/04/2016 12:00:00			10/04/2016 12:30:00			10/04/2016 09:30:00			10/04/2016 13:00:00			Not Applicable						
	Prep Date	11/2/2016			11/2/2016			11/2/2016			11/2/2016			11/2/2016						
	Analysis Date	11/17/2016			11/17/2016			11/17/2016			11/17/2016			11/17/2016						
	Matrix	Soil			Soil			Soil			Soil			Solid						
	Unit	ng/g			ng/g			ng/g			ng/g			ng/g						
	DIOXIN-1668A-SOIL	Result	Q	ML	Result	Q	ML	Result	Q	ML	Result	Q	ML	Result	Q	ML	EDL	3Xresult	5Xresult	
	SOIL BY 1668A																			
Mono	PCB 1 (BZ)	0.00908	J	0.0680	ND	U	0.0123	0.00298	Q J	0.0222	ND	U	0.106	ND		0.0100	0.0000978			
Mono	PCB 2 (BZ)	0.00843	Q J	0.0680	ND	U	0.0123	0.0104	J	0.0222	0.00872	Q J	0.106	ND		0.0100	0.000117			
Mono	PCB 3 (BZ)	0.0122	Q J	0.0680	ND	U	0.0123	0.00820	J	0.0222	0.0123	J	0.106	ND		0.0100	0.000143			
Di	PCB 4 (BZ)	0.00528	Q B J	0.136	0	Q B J	0.0246	0.00645	Q B J	0.0445	0.0140	Q B J	0.212	0.00166	Q J	0.0200	0.00111	0.00498	0.0083	
Di	PCB 5 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	0.00134	Q J	0.0100	0.000987	0.00402	0.0067	
Di	PCB 6 (BZ)	0.0204	Q B J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	0.00147	Q J	0.0100	0.000929	0.00441	0.00735	
Di	PCB 7 (BZ)	0.00352	Q B J	0.0680	0.000986	Q B J	0.0123	ND	U	0.0222	ND	U	0.106	0.00115	Q J	0.0100	0.000954	0.00345	0.00575	
Di	PCB 8 (BZ)	0.0127	Q J	0.136	0.00104	Q J	0.0246	0.00404	Q J	0.0445	0.00942	Q J	0.212	ND		0.0200	0.000909			
Di	PCB 9 (BZ)	ND	U	0.0680	ND	U	0.0123	0.00223	Q J	0.0222	ND	U	0.106	ND		0.0100	0.000959			
Di	PCB 10 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	0.0009	Q J	0.0100	0.00103	0.002712	0.00452	
Di	PCB 11 (BZ)	0.0408	Q B J	0.136	0.00473	Q B J	0.0246	0.00983	Q B J	0.0445	0.0198	Q B J	0.212	0.00372	Q J	0.0200	0.000913	0.01116	0.0186	
Di	PCB 12 (BZ)	0.0174	Q B C J	0.0680	ND	U	0.0123	0.00328	Q B C J	0.0222	ND	U	0.106	0.00101	Q C J	0.0100	0.000936	0.00303	0.00505	
Di	PCB 13 (BZ)	0.0174	Q B C12 J	0.0680	ND	U	0.0123	0.00328	Q B C12 J	0.0222	ND	U	0.106	0.00101	Q C12 J	0.0100	0.000936	0.00303	0.00505	
Di	PCB 14 (BZ)	0.00449	Q B J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	0.00059	Q J	0.0100	0.000808	0.001779	0.002965	
Di	PCB 15 (BZ)	0.0287	Q B J	0.0680	0.000916	Q B J	0.0123	0.00857	Q B J	0.0222	0.0320	Q B J	0.106	0.00102	Q J	0.0100	0.00108	0.00306	0.0051	
Tri	PCB 16 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.00056			
Tri	PCB 17 (BZ)	0.0255	J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000467			
Tri	PCB 18 (BZ)	0.0249	C J	0.136	ND	U	0.0246	ND	U	0.0445	ND	U	0.212	ND		0.0200	0.000414			
Tri	PCB 19 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000572			
Tri	PCB 20 (BZ)	0.0501	B C J	0.136	ND	U	0.0246	0.00631	B C J	0.0445	0.0117	Q B C J	0.212	0.00142	Q C J	0.0200	0.000249	0.00426	0.0071	
Tri	PCB 21 (BZ)	0.0111	Q C J	0.0680	ND	U	0.0123	0.00245	Q C J	0.0222	0.00633	C J	0.106	ND		0.0100	0.00025			
Tri	PCB 22 (BZ)	0.00690	Q J	0.0680	ND	U	0.0123	0.00145	Q J	0.0222	ND	U	0.106	ND		0.0100	0.000254			
Tri	PCB 23 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000259			
Tri	PCB 24 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000391			
Tri	PCB 25 (BZ)	0.0275	J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000231			
Tri	PCB 26 (BZ)	0.0313	C J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000245			
Tri	PCB 27 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000338			
Tri	PCB 28 (BZ)	0.0501	B C20 J	0.136	ND	U	0.0246	0.00631	B C20 J	0.0445	0.0117	Q B C20 J	0.212	0.00142	Q C20 J	0.0200	0.000249	0.00426	0.0071	
Tri	PCB 29 (BZ)	0.0313	C26 J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000245			
Tri	PCB 30 (BZ)	0.0249	C18 J	0.136	ND	U	0.0246	ND	U	0.0445	ND	U	0.212	ND		0.0200	0.000414			
Tri	PCB 31 (BZ)	0.0420	Q B J	0.136	ND	U	0.0246	0.00530	Q B J	0.0445	0.00808	Q B J	0.212	0.00062	Q J	0.0200	0.000243	0.001857	0.003095	
Tri	PCB 32 (BZ)	0.0177	Q J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000331			
Tri	PCB 33 (BZ)	0.0111	Q C21 J	0.0680	ND	U	0.0123	0.00245	Q C21 J	0.0222	0.00633	C21 J	0.106	ND		0.0100	0.00025			
Tri	PCB 34 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000255			
Tri	PCB 35 (BZ)	0.00470	J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000262			
Tri	PCB 36 (BZ)	0.00176	Q J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000253			
Tri	PCB 37 (BZ)	0.0143	J	0.0680	ND	U	0.0123	0.00255	Q J	0.0222	0.00901	Q J	0.106	ND		0.0100	0.00026			
Tri	PCB 38 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000267			
Tri	PCB 39 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000237			
Tetra	PCB 40 (BZ)	0.0469	Q C J	0.0680	ND	U	0.0123	0.00364	Q C J	0.0222	0.00689	Q C J	0.106	ND		0.0100	0.000397			
Tetra	PCB 41 (BZ)	0.0469	Q C40 J	0.0680	ND	U	0.0123	0.00364	Q C40 J	0.0222	0.00689	Q C40 J	0.106	ND		0.0100	0.000397			
Tetra	PCB 42 (BZ)	0.0306	Q J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000404			
Tetra	PCB 43 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000371			

Table D.1.4 Summary of Data Validation - PCB SED BLANK 6307010
October 2016 Edgemoor Sampling Event
Edgemoor, Delaware

Homologs	**Client ID**	TB-4C			TB-4B			TB-4T			TB-1T			Applicable Method Blank						Dioxin-Like Screening Concentration
	Lab Sample ID	H6J100404-001			H6J100404-002			H6J100404-003			H6J10404-004			H6K020000-10B						
	Batch	6307010			6307010			6307010			6307010			6307010						
	Sampling Date	10/04/2016 12:00:00			10/04/2016 12:30:00			10/04/2016 09:30:00			10/04/2016 13:00:00			Not Applicable						
	Prep Date	11/2/2016			11/2/2016			11/2/2016			11/2/2016			11/2/2016						
	Analysis Date	11/17/2016			11/17/2016			11/17/2016			11/17/2016			11/17/2016						
	Matrix	Soil			Soil			Soil			Soil			Solid						
	Unit	ng/g			ng/g			ng/g			ng/g			ng/g						
	DIOXIN-1668A-SOIL	Result	Q	ML	Result	Q	ML	Result	Q	ML	Result	Q	ML	Result	Q	ML	EDL	3Xresult	5Xresult	
	SOIL BY 1668A																			
	PCB 44 (BZ)	0.149	B C	0.0680	0.00130	Q B C J	0.0123	0.00992	B C J	0.0222	0.0154	Q B C J	0.106	0.00082	Q C J	0.0100	0.000355	0.002469	0.004115	
	PCB 45 (BZ)	0.0164	C J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000412			
	PCB 46 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000486			
	PCB 47 (BZ)	0.149	B C44	0.0680	0.00130	Q B C44 J	0.0123	0.00992	B C44 J	0.0222	0.0154	Q B C44 J	0.106	0.00082	Q C44 J	0.0100	0.000355	0.002469	0.004115	
	PCB 48 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000394			
	PCB 49 (BZ)	0.0930	B C	0.0680	ND	U	0.0123	0.00554	B C J	0.0222	0.00643	Q B C J	0.106	0.0006	Q C J	0.0100	0.000327	0.001785	0.002975	
	PCB 50 (BZ)	0.00767	Q C J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.00383			
	PCB 51 (BZ)	0.0164	C45 J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000412			
	PCB 52 (BZ)	0.135	B	0.0680	ND	U	0.0123	0.00996	B J	0.0222	0.0172	B J	0.106	0.00053	QJ	0.0010	0.000383	0.001599	0.002665	
	PCB 53 (BZ)	0.00767	Q C50 J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000382			
	PCB 54 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000491			
	PCB 55 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000307			
	PCB 56 (BZ)	0.0153	Q J	0.0680	ND	U	0.0123	0.00268	J	0.0222	ND	U	0.106	ND		0.0100	0.000289			
	PCB 57 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000293			
	PCB 58 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000291			
	PCB 59 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000283			
	PCB 60 (BZ)	0.00273	Q J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000298			
	PCB 61 (BZ)	0.0604	Q B C J	0.136	ND	U	0.0246	0.00807	B C J	0.0445	0.0162	Q B C J	0.212	0.00101	C J	0.0200	0.000282	0.00303	0.00505	
Tetra	PCB 62 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000283			
	PCB 63 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000271			
	PCB 64 (BZ)	0.0263	J	0.0680	ND	U	0.0123	0.00308	Q J	0.0222	ND	U	0.106	ND		0.0100	0.000268			
	PCB 65 (BZ)	0.149	B C44	0.0680	0.00130	Q B C44 J	0.0123	0.00992	B C44 J	0.0222	0.0154	Q B C44 J	0.106	0.00082	Q C44 J	0.0100	0.000355	0.002469	0.004115	
	PCB 66 (BZ)	0.0494	J	0.0680	ND	U	0.0123	0.00423	Q J	0.0222	0.0142	J	0.106	ND		0.0100	0.000281			
	PCB 67 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000263			
	PCB 68 (BZ)	0.0468	J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000265			
	PCB 69 (BZ)	0.0930	B C49	0.0680	ND	U	0.0123	0.00554	B C49 J	0.0222	0.00643	Q B C49 J	0.106	0.0006	Q C49 J	0.0100	0.000327	0.001785	0.002975	
	PCB 70 (BZ)	0.0604	Q B C61 J	0.136	ND	U	0.0246	0.00807	B C61 J	0.0445	0.0162	Q B C61 J	0.212	0.00101	C61 J	0.0200	0.000282	0.00303	0.00505	
	PCB 71 (BZ)	0.0469	Q C40 J	0.0680	ND	U	0.0123	0.00364	Q C40 J	0.0222	0.00689	Q C40 J	0.106	ND		0.0100	0.000397			
	PCB 72 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000285			
	PCB 73 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000371			
	PCB 74 (BZ)	0.0604	Q B C61 J	0.136	ND	U	0.0246	0.00807	B C61 J	0.0445	0.0162	Q B C61 J	0.212	0.00101	C61 J	0.0200	0.000282	0.00303	0.00505	
	PCB 75 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000283			
	PCB 76 (BZ)	0.0604	Q B C61 J	0.136	ND	U	0.0246	0.00807	B C61 J	0.0445	0.0162	Q B C61 J	0.212	0.00101	C61 J	0.0200	0.000282	0.00303	0.00505	
	PCB 77 (BZ)	0.00883	Q B J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	0.00075	Q J	0.0100	0.000282	0.002247	0.003745	38
	PCB 78 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000303			
	PCB 79 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000266			
	PCB 80 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000259			
	PCB 81 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000267			12

Table D.1.4 Summary of Data Validation - PCB SED BLANK 6307010
October 2016 Edgemoor Sampling Event
Edgemoor, Delaware

Homologs	Client ID	TB-4C			TB-4B			TB-4T			TB-1T			Applicable Method Blank						Dioxin-Like Screening Concentration
	Lab Sample ID	H6J100404-001			H6J100404-002			H6J100404-003			H6J10404-004			H6K020000-10B						
	Batch	6307010			6307010			6307010			6307010			6307010						
	Sampling Date	10/04/2016 12:00:00			10/04/2016 12:30:00			10/04/2016 09:30:00			10/04/2016 13:00:00			Not Applicable						
	Prep Date	11/2/2016			11/2/2016			11/2/2016			11/2/2016			11/2/2016						
	Analysis Date	11/17/2016			11/17/2016			11/17/2016			11/17/2016			11/17/2016						
	Matrix	Soil			Soil			Soil			Soil			Solid						
	Unit	ng/g			ng/g			ng/g			ng/g			ng/g						
	DIOXIN-1668A-SOIL	Result	Q	ML	Result	Q	ML	Result	Q	ML	Result	Q	ML	Result	Q	ML	EDL	3Xresult	5Xresult	
	SOIL BY 1668A																			
	PCB 82 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000587			
	PCB 83 (BZ)	0.110	C	0.0680	ND	U	0.0123	0.00743	Q C J	0.0222	ND	U	0.106	ND		0.0100	0.000493			
	PCB 84 (BZ)	0.0334	J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000561			
	PCB 85 (BZ)	ND	U	0.0680	ND	U	0.0123	0.00229	Q C J	0.0222	ND	U	0.106	ND		0.0100	0.000406			
	PCB 86 (BZ)	0.0531	Q C J	0.0680	0.000513	Q C J	0.0123	0.00624	Q C J	0.0222	ND	U	0.106	ND		0.0100	0.000416			
	PCB 87 (BZ)	0.0531	Q C86 J	0.0680	0.000513	Q C86 J	0.0123	0.00624	Q C86 J	0.0222	ND	U	0.106	ND		0.0100	0.000416			
	PCB 88 (BZ)	0.0424	Q C J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000500			
	PCB 89 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000543			
	PCB 90 (BZ)	0.120	C	0.0680	ND	U	0.0123	0.0114	C J	0.0222	0.0168	Q C J	0.106	ND		0.0100	0.000423			
	PCB 91 (BZ)	0.0424	Q C88 J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000500			
	PCB 92 (BZ)	0.0203	Q J	0.0680	ND	U	0.0123	0.00302	Q J	0.0222	ND	U	0.106	ND		0.0100	0.000480			
	PCB 93 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000482			
	PCB 94 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000543			
	PCB 95 (BZ)	0.142		0.0680	ND	U	0.0123	0.00790	Q J	0.0222	0.0193	Q J	0.106	ND		0.0100	0.000511			
	PCB 96 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000406			
	PCB 97 (BZ)	0.0531	Q C86 J	0.0680	0.000513	Q C86 J	0.0123	0.00624	Q C86 J	0.0222	ND	U	0.106	ND		0.0100	0.000416			
	PCB 98 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000467			
	PCB 99 (BZ)	0.110	C83	0.0680	ND	U	0.0123	0.00743	Q C83 J	0.0222	ND	U	0.106	ND		0.0100	0.000493			
Penta	PCB 100 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000482			
	PCB 101 (BZ)	0.120	C90	0.0680	ND	U	0.0123	0.0114	C90 J	0.0222	0.0168	Q C90 J	0.106	ND		0.0100	0.000423			
	PCB 102 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000467			
	PCB 103 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000476			
	PCB 104 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000362			
	PCB 105 (BZ)	0.0147	Q B J	0.0680	ND	U	0.0123	0.00340	B J	0.0222	ND	U	0.106	0.00046	Q J	0.0100	0.000299	0.001368	0.00228	120
	PCB 106 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000323			
	PCB 107 (BZ)/109 (IUPAC)	0.00833	Q B J	0.0680	ND	U	0.0123	0.00177	B J	0.0222	ND	U	0.106	0.00053	J	0.0100	0.000314	0.001575	0.002625	
	PCB 108 (BZ)/107 (IUPAC)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	0.00054	Q C J	0.0100	0.000330	0.001623	0.002705	
	PCB 109 (BZ)/108 (IUPAC)	0.0531	Q C86 J	0.0680	0.000513	Q C86 J	0.0123	0.00624	Q C86 J	0.0222	ND	U	0.106	ND		0.0100	0.000416			
	PCB 110 (BZ)	0.138	B C	0.0680	ND	U	0.0123	0.0138	B C J	0.0222	0.0268	B C J	0.106	0.00124	C J	0.0100	0.000359	0.00372	0.0062	
	PCB 111 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000340			
	PCB 112 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000369			
	PCB 113 (BZ)	0.120	C90	0.0680	ND	U	0.0123	0.0114	C90 J	0.0222	0.0168	Q C90 J	0.106	ND		0.0100	0.000423			
	PCB 114 (BZ)	ND	U	0.0680	ND	U	0.0123	0.000954	Q J	0.0222	ND	U	0.106	ND		0.0100	0.000289			120
	PCB 115 (BZ)	0.138	B C110	0.0680	ND	U	0.0123	0.0138	B C110 J	0.0222	0.0268	B C110 J	0.106	0.00124	C110 J	0.0100	0.000359	0.00372	0.0062	
	PCB 116 (BZ)	ND	U	0.0680	ND	U	0.0123	0.00229	Q C85 J	0.0222	ND	U	0.106	ND		0.0100	0.000406			
	PCB 117 (BZ)	ND	U	0.0680	ND	U	0.0123	0.00229	Q C85 J	0.0222	ND	U	0.106	ND		0.0100	0.000406			
	PCB 118 (BZ)	0.0738		0.0680	ND	U	0.0123	0.00683	J	0.0222	ND	U	0.106	ND		0.0100	0.000307			120
	PCB 119 (BZ)	0.0531	Q C86 J	0.0680	0.000513	Q C86 J	0.0123	0.00624	Q C86 J	0.0222	ND	U	0.106	ND		0.0100	0.000416			

Table D.1.4 Summary of Data Validation - PCB SED BLANK 6307010
October 2016 Edgemoor Sampling Event
Edgemoor, Delaware

Homologs	Client ID	TB-4C			TB-4B			TB-4T			TB-1T			Applicable Method Blank						Dioxin-Like Screening Concentration
	Lab Sample ID	H6J100404-001			H6J100404-002			H6J100404-003			H6J10404-004			H6K020000-10B						
	Batch	6307010			6307010			6307010			6307010			6307010						
	Sampling Date	10/04/2016 12:00:00			10/04/2016 12:30:00			10/04/2016 09:30:00			10/04/2016 13:00:00			Not Applicable						
	Prep Date	11/2/2016			11/2/2016			11/2/2016			11/2/2016			11/2/2016						
	Analysis Date	11/17/2016			11/17/2016			11/17/2016			11/17/2016			11/17/2016						
	Matrix	Soil			Soil			Soil			Soil			Solid						
	Unit	ng/g			ng/g			ng/g			ng/g			ng/g						
	DIOXIN-1668A-SOIL	Result	Q	ML	Result	Q	ML	Result	Q	ML	Result	Q	ML	Result	Q	ML	EDL	3Xresult	5Xresult	
	SOIL BY 1668A																			
	PCB 120 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.00035			
	PCB 121 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000353			
	PCB 122 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000352			
Penta	PCB 123 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000352			120
	PCB 124 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	0.00054	Q C108 J	0.0100	0.000330	0.001623	0.002705	
	PCB 125 (BZ)	0.0531	Q C86 J	0.0680	0.000513	Q C86 J	0.0123	0.00624	Q C86 J	0.0222	ND	U	0.106	ND		0.0100	0.000416			
	PCB 126 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000338			0.036
	PCB 127 (BZ)	ND	U	0.0680	ND	U	0.0123	0.00144	Q J	0.0222	ND	U	0.106	ND		0.0100	0.000320			
	PCB 128 (BZ)	ND	U	0.0680	ND	U	0.0123	0.00174	Q B C J	0.0222	ND	U	0.106	0.00076	Q C J	0.0100	0.000431	0.002283	0.003805	
	PCB 129 (BZ)	0.112	B C	0.0680	ND	U	0.0123	0.0109	B C J	0.0222	0.0245	Q B C J	0.106	0.00140	Q C J	0.0100	0.000446	0.0042	0.007	
	PCB 130 (BZ)	0.0170	J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000576			
	PCB 131 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000590			
	PCB 132 (BZ)	0.0366	Q B J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	0.00049	Q J	0.0100	0.000561	0.001461	0.002435	
	PCB 133 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000541			
	PCB 134 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000576			
	PCB 135 (BZ)	0.0597	C J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000587			
	PCB 136 (BZ)	0.0206	Q J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000431			
	PCB 137 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000497			
	PCB 138 (BZ)	0.112	B C129	0.0680	ND	U	0.0123	0.0109	B C129 J	0.0222	0.0245	Q B C129 J	0.106	0.00140	Q C129 J	0.0100	0.000446	0.0042	0.007	
	PCB 139 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000494			
	PCB 140 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000494			
	PCB 141 (BZ)	0.0181	Q J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000514			
Hexa	PCB 142 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000567			
	PCB 143 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000576			
	PCB 144 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000544			
	PCB 145 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000412			
	PCB 146 (BZ)	0.0379	J	0.0680	ND	U	0.0123	0.00290	Q J	0.0222	ND	U	0.106	ND		0.0100	0.000469			
	PCB 147 (BZ)	0.174	B C	0.0680	ND	U	0.0123	0.00934	Q B C J	0.0222	0.0220	Q B C J	0.106	0.00086	Q C J	0.0100	0.000479	0.002583	0.004305	
	PCB 148 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000576			
	PCB 149 (BZ)	0.174	B C147	0.0680	ND	U	0.0123	0.00934	Q B C147 J	0.0222	0.0220	Q B C147 J	0.106	0.00086	Q C147 J	0.0100	0.000479	0.002583	0.004305	
	PCB 150 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000401			
	PCB 151 (BZ)	0.0597	C135 J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000587			
	PCB 152 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000409			
	PCB 153 (BZ)	0.141	B C	0.0680	ND	U	0.0123	0.00800	Q B C J	0.0222	0.0250	Q B C J	0.106	0.00142	C J	0.0100	0.000385	0.00426	0.0071	
	PCB 154 (BZ)	0.0128	Q J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000477			
	PCB 155 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.00039			
	PCB 156 (BZ)	0.0175	C J	0.0680	ND	U	0.0123	0.00209	C J	0.0222	ND	U	0.106	ND		0.0100	0.000501			120
	PCB 157 (BZ)	0.0175	C156 J	0.0680	ND	U	0.0123	0.00209	C156 J	0.0222	ND	U	0.106	ND		0.0100	0.000501			120

Table D.1.4 Summary of Data Validation - PCB SED BLANK 6307010
October 2016 Edgemoor Sampling Event
Edgemoor, Delaware

Homologs	Client ID	TB-4C			TB-4B			TB-4T			TB-1T			Applicable Method Blank						Dioxin-Like Screening Concentration
	Lab Sample ID	H6J100404-001			H6J100404-002			H6J100404-003			H6J10404-004			H6K020000-10B						
	Batch	6307010			6307010			6307010			6307010			6307010						
	Sampling Date	10/04/2016 12:00:00			10/04/2016 12:30:00			10/04/2016 09:30:00			10/04/2016 13:00:00			Not Applicable						
	Prep Date	11/2/2016			11/2/2016			11/2/2016			11/2/2016			11/2/2016						
	Analysis Date	11/17/2016			11/17/2016			11/17/2016			11/17/2016			11/17/2016						
	Matrix	Soil			Soil			Soil			Soil			Solid						
	Unit	ng/g			ng/g			ng/g			ng/g			ng/g						
	DIOXIN-1668A-SOIL	Result	Q	ML	Result	Q	ML	Result	Q	ML	Result	Q	ML	Result	Q	ML	EDL	3Xresult	5Xresult	
	SOIL BY 1668A																			
Hexa	PCB 158 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	0.0004	Q J	0.0100	0.000352	0.001209	0.002015	
Hexa	PCB 159 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000377			
Hexa	PCB 160 (BZ)	0.112	B C129	0.0680	ND	U	0.0123	0.0109	B C129 J	0.0222	0.0245	Q B C129 J	0.106	0.00140	Q C129 J	0.0100	0.000446	0.0042	0.007	
Hexa	PCB 161 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000375			
Hexa	PCB 162 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000373			
Hexa	PCB 163 (BZ)	0.112	B C129	0.0680	ND	U	0.0123	0.0109	B C129 J	0.0222	0.0245	Q B C129 J	0.106	0.0014	Q C129 J	0.0100	0.000446	0.0042	0.007	
Hexa	PCB 164 (BZ)	0.0151	J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000393			
Hexa	PCB 165 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000413			
Hexa	PCB 166 (BZ)	ND	U	0.0680	ND	U	0.0123	0.00174	Q B C128 J	0.0222	ND	U	0.106	0.00076	Q C128 J	0.0100	0.000431	0.002283	0.003805	
Hexa	PCB 167 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000282			120
Hexa	PCB 168 (BZ)	0.141	B C153	0.0680	ND	U	0.0123	0.00800	Q B C153 J	0.0222	0.0250	Q B C153 J	0.106	0.00142	C153 J	0.0100	0.000385	0.00426	0.0071	
Hexa	PCB 169 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000268			0.12
Hepta	PCB 170 (BZ)	0.0286	Q B J	0.0680	ND	U	0.0123	ND	U	0.0222	0.00698	Q B J	0.106	0.00096	Q J	0.0100	0.000451	0.00288	0.0048	NVP
Hepta	PCB 171 (BZ)	0.00952	Q B C J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	0.00122	C J	0.0100	0.000466	0.00366	0.0061	
Hepta	PCB 172 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000462			
Hepta	PCB 173 (BZ)	0.00952	Q B C171 J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	0.00122	C171 J	0.0100	0.000466	0.00366	0.0061	
Hepta	PCB 174 (BZ)	0.0395	Q J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000432			
Hepta	PCB 175 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000415			
Hepta	PCB 176 (BZ)	0.00631	Q J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000316			
Hepta	PCB 177 (BZ)	0.0222	Q J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000443			
Hepta	PCB 178 (BZ)	0.0116	J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000449			
Hepta	PCB 179 (BZ)	0.0159	J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000333			
Hepta	PCB 180 (BZ)	0.0892	B C	0.0680	ND	U	0.0123	0.00474	Q B C J	0.0222	0.0195	B C J	0.106	0.00162	Q C J	0.0100	0.000352	0.00486	0.0081	NVP
Hepta	PCB 181 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000415			
Hepta	PCB 182 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000403			
Hepta	PCB 183 (BZ)	0.0325	C J	0.0680	ND	U	0.0123	ND	U	0.0222	0.00895	Q C J	0.106	ND		0.0100	0.000412			
Hepta	PCB 184 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000342			
Hepta	PCB 185 (BZ)	0.0325	C183 J	0.0680	ND	U	0.0123	ND	U	0.0222	0.00895	Q C183 J	0.106	ND		0.0100	0.000412			
Hepta	PCB 186 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000332			
Hepta	PCB 187 (BZ)	0.0574	B J	0.0680	ND	U	0.0123	ND	U	0.0222	0.0164	Q B J	0.106	0.0006	Q J	0.0100	0.000386	0.001803	0.003005	
Hepta	PCB 188 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000332			
Hepta	PCB 189 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	0.00083	Q J	0.0100	0.000265	0.002481	0.004135	130
Hepta	PCB 190 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000321			
Hepta	PCB 191 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000316			
Hepta	PCB 192 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000353			
Hepta	PCB 193 (BZ)	0.0892	B C180	0.0680	ND	U	0.0123	0.00474	Q B C180 J	0.0222	0.0195	B C180 J	0.106	0.00162	Q C180 J	0.0100	0.000352	0.00486	0.0081	
Octa	PCB 194 (BZ)	0.0383	J	0.0680	ND	U	0.0123	ND	U	0.0222	0.00460	Q J	0.106	ND		0.0100	0.000325			
Octa	PCB 195 (BZ)	0.0105	Q J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000354			

Table D.1.4 Summary of Data Validation - PCB SED BLANK 6307010
October 2016 Edgemoor Sampling Event
Edgemoor, Delaware

Homologs	Client ID	TB-4C			TB-4B			TB-4T			TB-1T			Applicable Method Blank						Dioxin-Like Screening Concentration
	Lab Sample ID	H6J100404-001			H6J100404-002			H6J100404-003			H6J10404-004			H6K020000-10B						
	Batch	6307010			6307010			6307010			6307010			6307010						
	Sampling Date	10/04/2016 12:00:00			10/04/2016 12:30:00			10/04/2016 09:30:00			10/04/2016 13:00:00			Not Applicable						
	Prep Date	11/2/2016			11/2/2016			11/2/2016			11/2/2016			11/2/2016						
	Analysis Date	11/17/2016			11/17/2016			11/17/2016			11/17/2016			11/17/2016						
	Matrix	Soil			Soil			Soil			Soil			Solid						
	Unit	ng/g			ng/g			ng/g			ng/g			ng/g						
	DIOXIN-1668A-SOIL	Result	Q	ML	Result	Q	ML	Result	Q	ML	Result	Q	ML	Result	Q	ML	EDL	3Xresult	5Xresult	
	SOIL BY 1668A																			
Octa	PCB 196 (BZ)	0.0285	J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000398			
	PCB 197 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000296			
	PCB 198 (BZ)	0.106	Q C	0.0680	ND	U	0.0123	0.00569	C J	0.0222	ND	U	0.106	ND		0.0100	0.00041			
	PCB 199 (BZ)/200 (IUPAC)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000291			
	PCB 200 (BZ)/201 (IUPAC)	0.0144	J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.00028			
	PCB 201 (BZ)/199 (IUPAC)	0.106	Q C198	0.0680	ND	U	0.0123	0.00569	C198 J	0.0222	ND	U	0.106	ND		0.0100	0.00041			
	PCB 202 (BZ)	0.0289	J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000316			
	PCB 203 (BZ)	0.0432	B J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	0.0009	J	0.0100	0.000367	0.002691	0.004485	
	PCB 204 (BZ)	ND	U	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000308			
	PCB 205 (BZ)	0.0108	Q J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000273			
Nona	PCB 206 (BZ)	0.485		0.0680	ND	U	0.0123	0.0137	Q J	0.0222	0.0390	J	0.106	ND		0.0100	0.000574			
	PCB 207 (BZ)	0.0339	J	0.0680	ND	U	0.0123	ND	U	0.0222	ND	U	0.106	ND		0.0100	0.000416			
	PCB 208 (BZ)	0.192		0.0680	ND	U	0.0123	0.0105	Q J	0.0222	0.0141	Q J	0.106	ND		0.0100	0.000438			
Deca	PCB 209 (BZ)	0.681		0.0680	ND	U	0.0123	0.0225		0.0222	0.0512	J	0.106	ND		0.0100	0.000435			

= above 5x result
= less than 5x result,but not 3x result
= less than 3x result
= coeluting congener, count once

Data Quality Review Notes:
TB-1T

PCB-4	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-5	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-6	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-7	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-10	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-11	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-14	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-15	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-31	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-52	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-77	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-105	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-107	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-132	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-158	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-170	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-187	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-189	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-203	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-12, 13	Method blank concentration inconsequential to reported native concentration. Use data. PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs

Table D.1.4 Summary of Data Validation - PCB SED BLANK 6307010
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PCB 20, 28	Method blank concentration inconsequential to reported native concentration. Use data. PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs
PCB 44, 47, 65	Method blank concentration inconsequential to reported native concentration. Use data. PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs
PCB-49, 69	Method blank concentration inconsequential to reported native concentration. Use data. PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs
PCB 61, 70, 74, 76	Method blank concentration inconsequential to reported native concentration. Use data. PCB 61, 70, 74 and 76 coelute. Count result once when calculating total PCBs and total homologs
PCB-108, 124	Method blank concentration inconsequential to reported native concentration. Use data. PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs
PCB-110, 115	Method blank concentration inconsequential to reported native concentration. Use data. PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs
PCB-128, 166	Method blank concentration inconsequential to reported native concentration. Use data. PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs
PCB-129, 138, 160, 163	Method blank concentration inconsequential to reported native concentration. Use data. PCB 129, 138, 160 and 163 coelute. Count result once when calculating total PCBs and total homologs
PCB-147, 149	Method blank concentration inconsequential to reported native concentration. Use data. PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs
PCB-153, 168	Method blank concentration inconsequential to reported native concentration. Use data. PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs
PCB-171, 173	Method blank concentration inconsequential to reported native concentration. Use data. PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs
PCB-180, 193	Method blank concentration inconsequential to reported native concentration. Use data. PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs
PCB 18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs
PCB 21, 33	PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs
PCB 26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs
PCB 40, 41,71	PCB 40, 41 and 71 coelute. Count result once when calculating total PCBs and total homologs
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs
PCB 59, 62, 75	PCB 59, 62 and 75 coelute. Count result once when calculating total PCBs and total homologs
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs
PCB-85, 116, 117	PCB 85, 116 and 117 coelute. Count result once when calculating total PCBs and total homologs
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119 and 125 coelute. Count result once when calculating total PCBs and total homologs
PCB-88, 91	PCB 88 and 91 coelute. Count result once when calculating total PCBs and total homologs
PCB-90, 101, 113	PCB 90, 101 and 113 coelute. Count result once when calculating total PCBs and total homologs
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs
PCB-134, 143	PCB 134 and 143 coelute. Count result once when calculating total PCBs and total homologs
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs
PCB-156, 157	PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs
PCB-198, 201	PCB 198 and 201 coelute. Count result once when calculating total PCBs and total homologs
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
TB-4T	
PCB-5	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-6	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-7	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-10	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-14	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-15	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-31	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-52	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-105	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-132	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-158	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-170	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-187	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-189	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-203	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-4	Method blank concentration may or may not be consequential to reported native concentration. Further evaluate the importance of data.
PCB-107	Method blank concentration may or may not be consequential to reported native concentration. Further evaluate the importance of data.

Table D.1.4 Summary of Data Validation - PCB SED BLANK 6307010
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PCB-11	Method blank concentration consequential to reported native concentration. Reject data.
PCB 44, 47, 65	Method blank concentration inconsequential to reported native concentration. Use data. PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs
PCB-49, 69	Method blank concentration inconsequential to reported native concentration. Use data. PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs
PCB 61, 70, 74, 76	Method blank concentration inconsequential to reported native concentration. Use data. PCB 61, 70, 74 and 76 coelute. Count result once when calculating total PCBs and total homologs
PCB-108, 124	Method blank concentration inconsequential to reported native concentration. Use data. PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs
PCB-110, 115	Method blank concentration inconsequential to reported native concentration. Use data. PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs
PCB-129, 138, 160, 163	Method blank concentration inconsequential to reported native concentration. Use data. PCB 129, 138, 160 and 163 coelute. Count result once when calculating total PCBs and total homologs
PCB-147, 149	Method blank concentration inconsequential to reported native concentration. Use data. PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs
PCB-153, 168	Method blank concentration inconsequential to reported native concentration. Use data. PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs
PCB-171, 173	Method blank concentration inconsequential to reported native concentration. Use data. PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs
PCB-12, 13	Method blank concentration may or may not be consequential to reported native concentration. Further evaluate the importance of data. PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs
PCB 20, 28	Method blank concentration may or may not be consequential to reported native concentration. Further evaluate the importance of data. PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs
PCB-180, 193	Method blank concentration may or may not be consequential to reported native concentration. Further evaluate the importance of data. PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs
PCB-128, 166	Method blank concentration consequential to reported native concentration. Reject data. PCB 128 and 166 coelute. Reject both.
PCB 18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs
PCB 21, 33	PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs
PCB 26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs
PCB 40, 41,71	PCB 40, 41 and 71 coelute. Count result once when calculating total PCBs and total homologs
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs
PCB 59, 62, 75	PCB 59, 62 and 75 coelute. Count result once when calculating total PCBs and total homologs
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs
PCB-85, 116, 117	PCB 85, 116 and 117 coelute. Count result once when calculating total PCBs and total homologs
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119 and 125 coelute. Count result once when calculating total PCBs and total homologs
PCB-88, 91	PCB 88 and 91 coelute. Count result once when calculating total PCBs and total homologs
PCB-90, 101, 113	PCB 90, 101 and 113 coelute. Count result once when calculating total PCBs and total homologs
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs
PCB-134, 143	PCB 134 and 143 coelute. Count result once when calculating total PCBs and total homologs
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs
PCB-156, 157	PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs
PCB-198, 201	PCB 198 and 201 coelute. Count result once when calculating total PCBs and total homologs
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
TB-4C	
PCB-5	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-6	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-10	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-11	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-14	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-15	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-31	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-52	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-77	Method blank concentration inconsequential to reported native concentration. Use data.

Table D.1.4 Summary of Data Validation - PCB SED BLANK 6307010
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PCB-105	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-107	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-132	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-158	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-170	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-187	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-189	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-203	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-4	Method blank concentration may or may not be consequential to reported native concentration. Further evaluate the importance of data.
PCB-7	Method blank concentration may or may not be consequential to reported native concentration. Further evaluate the importance of data.
PCB-12, 13	Method blank concentration inconsequential to reported native concentration. Use data. PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs
PCB 20, 28	Method blank concentration inconsequential to reported native concentration. Use data. PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs
PCB 44, 47, 65	Method blank concentration inconsequential to reported native concentration. Use data. PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs
PCB-49, 69	Method blank concentration inconsequential to reported native concentration. Use data. PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs
PCB 61, 70, 74, 76	Method blank concentration inconsequential to reported native concentration. Use data. PCB 61, 70, 74 and 76 coelute. Count result once when calculating total PCBs and total homologs
PCB-108, 124	Method blank concentration inconsequential to reported native concentration. Use data. PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs
PCB-110, 115	Method blank concentration inconsequential to reported native concentration. Use data. PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs
PCB-128, 166	Method blank concentration inconsequential to reported native concentration. Use data. PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs
PCB-129, 138, 160, 163	Method blank concentration inconsequential to reported native concentration. Use data. PCB 129, 138, 160 and 163 coelute. Count result once when calculating total PCBs and total homologs
PCB-147, 149	Method blank concentration inconsequential to reported native concentration. Use data. PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs
PCB-153, 168	Method blank concentration inconsequential to reported native concentration. Use data. PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs
PCB-171, 173	Method blank concentration inconsequential to reported native concentration. Use data. PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs
PCB-180, 193	Method blank concentration inconsequential to reported native concentration. Use data. PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs
PCB 18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs
PCB 21, 33	PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs
PCB 26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs
PCB 40, 41,71	PCB 40, 41 and 71 coelute. Count result once when calculating total PCBs and total homologs
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs
PCB 59, 62, 75	PCB 59, 62 and 75 coelute. Count result once when calculating total PCBs and total homologs
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs
PCB-85, 116, 117	PCB 85, 116 and 117 coelute. Count result once when calculating total PCBs and total homologs
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119 and 125 coelute. Count result once when calculating total PCBs and total homologs
PCB-88, 91	PCB 88 and 91 coelute. Count result once when calculating total PCBs and total homologs
PCB-90, 101, 113	PCB 90, 101 and 113 coelute. Count result once when calculating total PCBs and total homologs
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs
PCB-134, 143	PCB 134 and 143 coelute. Count result once when calculating total PCBs and total homologs
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs
PCB-156, 157	PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs
PCB-198, 201	PCB 198 and 201 coelute. Count result once when calculating total PCBs and total homologs
TB-4B	
PCB-5	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-6	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-10	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-14	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-31	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-52	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-77	Method blank concentration inconsequential to reported native concentration. Use data.

Table D.1.4 Summary of Data Validation - PCB SED BLANK 6307010
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PCB-105	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-107	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-132	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-158	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-170	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-187	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-189	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-203	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-4	Method blank concentration consequential to reported native concentration. Reject data.
PCB-7	Method blank concentration consequential to reported native concentration. Reject data.
PCB-11	Method blank concentration consequential to reported native concentration. Reject data.
PCB-15	Method blank concentration consequential to reported native concentration. Reject data.
PCB-12, 13	Method blank concentration inconsequential to reported native concentration. Use data. PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs
PCB 20, 28	Method blank concentration inconsequential to reported native concentration. Use data. PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs
PCB-49, 69	Method blank concentration inconsequential to reported native concentration. Use data. PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs
PCB 61, 70, 74, 76	Method blank concentration inconsequential to reported native concentration. Use data. PCB 61, 70, 74 and 76 coelute. Count result once when calculating total PCBs and total homologs
PCB-108, 124	Method blank concentration inconsequential to reported native concentration. Use data. PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs
PCB-110, 115	Method blank concentration inconsequential to reported native concentration. Use data. PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs
PCB-128, 166	Method blank concentration inconsequential to reported native concentration. Use data. PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs
PCB-129, 138, 160, 163	Method blank concentration inconsequential to reported native concentration. Use data. PCB 129, 138, 160 and 163 coelute. Count result once when calculating total PCBs and total homologs
PCB-147, 149	Method blank concentration inconsequential to reported native concentration. Use data. PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs
PCB-153, 168	Method blank concentration inconsequential to reported native concentration. Use data. PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs
PCB-171, 173	Method blank concentration inconsequential to reported native concentration. Use data. PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs
PCB-180, 193	Method blank concentration inconsequential to reported native concentration. Use data. PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs
PCB 44, 47, 65	Method blank concentration consequential to reported native concentration. Reject data. PCB 44, 47 and 65 coelute. Reject all three.

Table D.1.5 Summary of Data Validation - PCB SED BLANK 6322013
October 2016 Edgemoor Sampling Event
Edgemoor, Delaware

Homologs	**Client ID**	**TB-5T**			**TB-5C**			**TB-5B**			**TB-1C**			**TB-1B**			**Applicable Method Blank**					Dioxin-Like Screening Concentration
	Lab Sample ID	H6J130401-001			H6J130401-004			H6J130401-005			H6J130401-002			H6J130401-003			H6K170000-13B					
	Batch	6322013			6322013			632213			6322013			6322013			6322013					
	Sampling Date	10/5/2016			10/5/2016			10/5/2016			10/5/2016			10/5/2016			Not Applicable					
	Prep Date	11/17/2016			11/17/2016			11/17/2016			11/17/2016			11/17/2016			11/17/2016					
	Analysis Date	12/1/2016			11/30/2016			11/30/2016			12/1/2016			11/30/2016			11/28/2016					
	Matrix	Soil			Soil			Soil			Soil			Soil			Solid					
	Unit	ng/g			ng/g			ng/g			ng/g			ng/g			ng/g					
	DIOXIN-1668A-SOIL	Result	Q	ML	Result	Q	ML	Result	Q	ML	Result	Q	ML	Result	Q	ML	Result	Q	ML	3Xresult	5Xresult	
	SOIL BY 1668A																					
	PCB 1 (BZ)	0.0365	Q J	0.226	ND	U	0.0137	ND	U	0.0120	0.00132	Q J	0.0147	ND	U	0.0125	ND		0.0100			
Mono	PCB 2 (BZ)	0.0379	Q J	0.226	ND	U	0.0137	ND	U	0.0120	0.00124	Q J	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 3 (BZ)	0.0459	J	0.226	0.00115	Q J	0.0137	ND	U	0.0120	0.00326	Q J	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 4 (BZ)	ND	U	0.452	ND	U	0.0275	ND	U	0.0240	ND	U	0.0294	0.00190	Q J	0.0250	ND		0.0200			
	PCB 5 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	0.00466	Q J	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 6 (BZ)	0.0377	Q B J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	0.00194	Q J	0.0100	0.00582	0.00970	
	PCB 7 (BZ)	ND	U	0.226	ND	U	0.0137	0.00114	Q B J	0.0120	0.00287	Q B J	0.0147	ND	U	0.0125	0.00148	Q J	0.0100	0.00444	0.00740	
	PCB 8 (BZ)	0.0547	Q B J	0.452	0.00181	Q B J	0.0275	0.00177	Q B J	0.0240	ND	U	0.0294	0.00240	Q B J	0.0250	0.00150	Q J	0.2000	0.00450	0.00750	
Di	PCB 9 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	0.00189	Q B J	0.0147	ND	U	0.0125	0.00163	Q J	0.0100	0.00489	0.00815	
	PCB 10 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 11 (BZ)	0.0450	Q B J	0.452	0.0136	Q B J	0.0275	0.00802	Q B J	0.0240	0.00825	Q B J	0.0294	0.0137	Q B J	0.0250	0.00189	Q J	0.0200	0.00567	0.00945	
	PCB 12 (BZ)	0.0781	Q C J	0.226	0.00184	Q C J	0.0137	ND	U	0.0120	0.00212	Q C J	0.0147	0.00116	Q C J	0.0125	ND		0.0100			
	PCB 13 (BZ)	0.0781	Q C12 J	0.226	0.00184	Q C12 J	0.0137	ND	U	0.0120	0.00212	Q C12 J	0.0147	0.00116	Q C12 J	0.0125	ND		0.0100			
	PCB 14 (BZ)	0.0314	Q B J	0.226	ND	U	0.0137	ND	U	0.0120	0.000882	Q B J	0.0147	ND	U	0.0125	0.00123	Q J	0.0100	0.00369	0.00615	
	PCB 15 (BZ)	0.0734	Q B J	0.226	0.00251	Q B J	0.0137	ND	U	0.0120	0.00376	Q B J	0.0147	0.00104	Q B J	0.0125	0.00140	Q J	0.0100	0.0042	0.00700	
	PCB 16 (BZ)	0.0398	Q J	0.226	ND	U	0.0137	ND	U	0.0120	0.00385	Q J	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 17 (BZ)	0.0325	J	0.226	ND	U	0.0137	ND	U	0.0120	0.00258	Q J	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 18 (BZ)	0.0290	Q C J	0.452	0.00384	Q C J	0.0275	ND	U	0.0240	0.00448	C J	0.0294	ND	U	0.0250	ND		0.0200			
	PCB 19 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 20 (BZ)	0.0607	Q B C J	0.452	0.00293	B C J	0.0275	0.000476	Q B C J	0.0240	0.00399	Q B C J	0.0294	0.00230	Q B C J	0.0250	0.000998	Q C J	0.0200	0.002994	0.00499	
	PCB 21 (BZ)	0.0383	C J	0.226	0.00206	Q C J	0.0137	0.000756	Q C J	0.0120	0.00322	Q C J	0.0147	0.00201	C J	0.0125	ND		0.0100			
	PCB 22 (BZ)	0.0250	Q J	0.226	0.00115	J	0.0137	ND	U	0.0120	0.00289	J	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 23 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 24 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 25 (BZ)	0.0147	Q J	0.226	ND	U	0.0137	ND	U	0.0120	0.000720	Q J	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 26 (BZ)	0.0154	Q C J	0.226	ND	U	0.0137	ND	U	0.0120	0.00170	C J	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 27 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Tri	PCB 28 (BZ)	0.0607	Q B C20 J	0.452	0.00293	B C20 J	0.0275	0.000476	Q B C20 J	0.0240	0.00399	Q B C20 J	0.0294	0.00230	Q B C20 J	0.0250	0.000998	Q C J	0.0200	0.002994	0.00499	
	PCB 29 (BZ)	0.0154	Q C26 J	0.226	ND	U	0.0137	ND	U	0.0120	0.00170	C26 J	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 30 (BZ)	0.0290	Q C18 J	0.452	0.00384	Q C18 J	0.0275	ND	U	0.0240	0.00448	C18 J	0.0294	ND	U	0.0250	ND		0.0200			
	PCB 31 (BZ)	0.0581	Q J	0.452	0.00122	Q J	0.0275	0.000439	Q J	0.0240	0.00258	Q J	0.0294	0.00180	Q J	0.0250	ND		0.0200			
	PCB 32 (BZ)	0.0287	Q J	0.226	ND	U	0.0137	0.00107	Q J	0.0120	0.00309	Q J	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 33 (BZ)	0.0383	C21 J	0.226	0.00206	Q C21 J	0.0137	0.000756	Q C21 J	0.0120	0.00322	Q C21 J	0.0147	0.00201	C21 J	0.0125	ND		0.0100			
	PCB 34 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 35 (BZ)	0.0275	Q J	0.226	ND	U	0.0137	ND	U	0.0120	0.000918	Q J	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 36 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 37 (BZ)	0.0464	Q J	0.226	ND	U	0.0137	ND	U	0.0120	0.00233	J	0.0147	0.000878	Q J	0.0125	ND		0.0100			
	PCB 38 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 39 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 40 (BZ)	0.0767	Q C J	0.226	0.00313	C J	0.0137	ND	U	0.0120	0.00345	Q C J	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 41 (BZ)	0.0767	Q C40 J	0.226	0.00313	C40 J	0.0137	ND	U	0.0120	0.00345	Q C40 J	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 42 (BZ)	0.0327	Q J	0.226	ND	U	0.0137	ND	U	0.0120	0.00153	Q J	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 43 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Tetra	PCB 44 (BZ)	0.0811	Q C J	0.226	0.0179	C	0.0137	0.00351	Q C J	0.0120	0.00340	C J	0.0147	0.0373	C	0.0125	ND		0.0100			
	PCB 45 (BZ)	0.0324	Q C J	0.226	0.00383	Q C J	0.0137	ND	U	0.0120	0.000785	C J	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 46 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 47 (BZ)	0.0811	Q C44 J	0.226	0.0179	C44	0.0137	0.00351	Q C44 J	0.0120	0.00340	C44 J	0.0147	0.0373	C44	0.0125	ND		0.0100			

Table D.1.5 Summary of Data Validation - PCB SED BLANK 6322013
October 2016 Edgemoor Sampling Event
Edgemoor, Delaware

	PCB 48 (BZ)	0.0228	Q J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	0.000912	J	0.0125	ND		0.0100			
Homologs	**Client ID**	**TB-5T**			**TB-5C**			**TB-5B**			**TB-1C**			**TB-1B**			**Applicable Method Blank**					Dioxin-Like Screening Concentration
	Lab Sample ID	H6J130401-001			H6J130401-004			H6J130401-005			H6J130401-002			H6J130401-003			H6K170000-13B					
	Batch	6322013			6322013			632213			6322013			6322013			6322013					
	Sampling Date	10/5/2016			10/5/2016			10/5/2016			10/5/2016			10/5/2016			Not Applicable					
	Prep Date	11/17/2016			11/17/2016			11/17/2016			11/17/2016			11/17/2016			11/17/2016					
	Analysis Date	12/1/2016			11/30/2016			11/30/2016			12/1/2016			11/30/2016			11/28/2016					
	Matrix	Soil			Soil			Soil			Soil			Soil			Solid					
	Unit	ng/g			ng/g			ng/g			ng/g			ng/g			ng/g					
	DIOXIN-1668A-SOIL	Result	Q	ML	Result	Q	ML	Result	Q	ML	Result	Q	ML	Result	Q	ML	Result	Q	ML	3Xresult	5Xresult	
	SOIL BY 1668A																					
Tetra	PCB 49 (BZ)	0.0771	C J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Tetra	PCB 50 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Tetra	PCB 51 (BZ)	0.0324	Q C45 J	0.226	0.00383	Q C45 J	0.0137	ND	U	0.0120	0.000785	C45 J	0.0147	ND	U	0.0125	ND		0.0100			
Tetra	PCB 52 (BZ)	0.130	Q J	0.226	ND	U	0.0137	ND	U	0.0120	0.00209	Q J	0.0147	0.00204	J	0.0125	ND		0.0100			
Tetra	PCB 53 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Tetra	PCB 54 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Tetra	PCB 55 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	0.00120	Q J	0.0147	ND	U	0.0125	ND		0.0100			
Tetra	PCB 56 (BZ)	0.0506	J	0.226	ND	U	0.0137	ND	U	0.0120	0.00272	J	0.0147	ND	U	0.0125	ND		0.0100			
Tetra	PCB 57 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Tetra	PCB 58 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Tetra	PCB 59 (BZ)	0.0129	Q C J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Tetra	PCB 60 (BZ)	0.0183	Q J	0.226	ND	U	0.0137	ND	U	0.0120	0.00142	Q J	0.0147	ND	U	0.0125	ND		0.0100			
Tetra	PCB 61 (BZ)	0.132	C J	0.452	0.00109	Q C J	0.0275	0.00159	Q C J	0.0240	0.00432	C J	0.0294	0.00188	C J	0.0250	ND		0.0200			
Tetra	PCB 62 (BZ)	0.0129	Q C59 J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Tetra	PCB 63 (BZ)	0.00712	Q J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Tetra	PCB 64 (BZ)	0.0490	Q J	0.226	ND	U	0.0137	ND	U	0.0120	0.00191	Q J	0.0147	ND	U	0.0125	ND		0.0100			
Tetra	PCB 65 (BZ)	0.0811	Q C44 J	0.226	0.0179	C44	0.0137	0.00351	Q C44 J	0.0120	0.00340	C44 J	0.0147	0.0373	C44	0.0125	ND		0.0100			
Tetra	PCB 66 (BZ)	0.0936	J	0.226	0.00174	Q J	0.0137	ND	U	0.0120	0.00232	J	0.0147	0.00164	J	0.0125	ND		0.0100			
Tetra	PCB 67 (BZ)	0.0123	J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Tetra	PCB 68 (BZ)	ND	U	0.226	0.00466	J	0.0137	ND	U	0.0120	ND	U	0.0147	0.0226		0.0125	ND		0.0100			
Tetra	PCB 69 (BZ)	0.0771	C49 J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Tetra	PCB 70 (BZ)	0.132	C61 J	0.452	0.00109	Q C61 J	0.0275	0.00159	Q C61 J	0.0240	0.00432	C61 J	0.0294	0.00188	C61 J	0.0250	ND		0.0200			
Tetra	PCB 71 (BZ)	0.0767	Q C40 J	0.226	0.00313	C40 J	0.0137	ND	U	0.0120	0.00345	Q C40 J	0.0147	ND	U	0.0125	ND		0.0100			
Tetra	PCB 72 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Tetra	PCB 73 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Tetra	PCB 74 (BZ)	0.132	C61 J	0.452	0.00109	Q C61 J	0.0275	0.00159	Q C61 J	0.0240	0.00432	C61 J	0.0294	0.00188	C61 J	0.0250	ND		0.0200			
Tetra	PCB 75 (BZ)	0.0129	Q C59 J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Tetra	PCB 76 (BZ)	0.132	C61 J	0.452	0.00109	Q C61 J	0.0275	0.00159	Q C61 J	0.0240	0.00432	C61 J	0.0294	0.00188	C61 J	0.0250	ND		0.0100			
Tetra	PCB 77 (BZ)	0.0284	Q J	0.226	ND	U	0.0137	ND	U	0.0120	0.00145	J	0.0147	ND	U	0.0125	ND		0.0100			38
Tetra	PCB 78 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Tetra	PCB 79 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	0.00138	J	0.0147	ND	U	0.0125	ND		0.0100			
Tetra	PCB 80 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Tetra	PCB 81 (BZ)	0.0110	Q J	0.226	ND	U	0.0137	ND	U	0.0120	0.00107	Q J	0.0147	ND	U	0.0125	ND		0.0100			12
Penta	PCB 82 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Penta	PCB 83 (BZ)	0.118	C J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Penta	PCB 84 (BZ)	0.0328	Q J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Penta	PCB 85 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Penta	PCB 86 (BZ)	0.112	C J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Penta	PCB 87 (BZ)	0.112	C86 J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			

Table D.1.5 Summary of Data Validation - PCB SED BLANK 6322013
October 2016 Edgemoor Sampling Event
Edgemoor, Delaware

	PCB 88 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Homologs	**Client ID**	**TB-5T**			**TB-5C**			**TB-5B**			**TB-1C**			**TB-1B**			**Applicable Method Blank**					Dioxin-Like Screening Concentration
	Lab Sample ID	H6J130401-001			H6J130401-004			H6J130401-005			H6J130401-002			H6J130401-003			H6K170000-13B					
	Batch	6322013			6322013			632213			6322013			6322013			6322013					
	Sampling Date	10/5/2016			10/5/2016			10/5/2016			10/5/2016			10/5/2016			Not Applicable					
	Prep Date	11/17/2016			11/17/2016			11/17/2016			11/17/2016			11/17/2016			11/17/2016					
	Analysis Date	12/1/2016			11/30/2016			11/30/2016			12/1/2016			11/30/2016			11/28/2016					
	Matrix	Soil			Soil			Soil			Soil			Soil			Solid					
	Unit	ng/g			ng/g			ng/g			ng/g			ng/g			ng/g					
	DIOXIN-1668A-SOIL	Result	Q	ML	Result	Q	ML	Result	Q	ML	Result	Q	ML	Result	Q	ML	Result	Q	ML	3Xresult	5Xresult	
	SOIL BY 1668A																					
	PCB 89 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 90 (BZ)	0.152	C J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 91 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 92 (BZ)	0.0371	J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 93 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 94 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 95 (BZ)	0.119	J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 96 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 97 (BZ)	0.112	C86 J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 98 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 99 (BZ)	0.118	C83 J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 100 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 101 (BZ)	0.152	C90 J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 102 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 103 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 104 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 105 (BZ)	0.0357	Q J	0.226	ND	U	0.0137	ND	U	0.0120	0.00142	Q J	0.0147	ND	U	0.0125	ND		0.0100			120
	PCB 106 (BZ)	0.0116	J	0.226	ND	U	0.0137	ND	U	0.0120	0.00102	Q J	0.0147	ND	U	0.0125	ND		0.0100			
Penta	PCB 107 (BZ)/109 (IUPAC)	0.0180	Q J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 108 (BZ)/107 (IUPAC)	0.0290	Q C J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 109 (BZ)/108 (IUPAC)	0.112	C86 J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 110 (BZ)	0.208	C J	0.226	0.00185	Q C J	0.0137	ND	U	0.0120	0.00232	Q C J	0.0147	0.00143	Q C J	0.0125	ND		0.0100			
	PCB 111 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 112 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 113 (BZ)	0.152	C90 J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 114 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	0.000978	J	0.0147	ND	U	0.0125	ND		0.0100			120
	PCB 115 (BZ)	0.208	C110 J	0.226	0.00185	Q C110 J	0.0137	ND	U	0.0120	0.00232	Q C110 J	0.0147	0.00143	Q C110 J	0.0125	ND		0.0100			
	PCB 116 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 117 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 118 (BZ)	0.125	J	0.226	ND	U	0.0137	ND	U	0.0120	0.00165	Q J	0.0147	ND	U	0.0125	ND		0.0100			120
	PCB 119 (BZ)	0.112	C86 J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 120 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 121 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 122 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 123 (BZ)	0.0151	J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			120
	PCB 124 (BZ)	0.0290	Q C108 J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 125 (BZ)	0.112	C86 J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			

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	PCB 126 (BZ)	0.0225	Q J	0.226	ND	U	0.0137	ND	U	0.0120	0.00101	Q J	0.0147	ND	U	0.0125	ND		0.0100			0.036
Homologs	**Client ID**	**TB-5T**			**TB-5C**			**TB-5B**			**TB-1C**			**TB-1B**			**Applicable Method Blank**					Dioxin-Like Screening Concentration
	Lab Sample ID	H6J130401-001			H6J130401-004			H6J130401-005			H6J130401-002			H6J130401-003			H6K170000-13B					
	Batch	6322013			6322013			632213			6322013			6322013			6322013					
	Sampling Date	10/5/2016			10/5/2016			10/5/2016			10/5/2016			10/5/2016			Not Applicable					
	Prep Date	11/17/2016			11/17/2016			11/17/2016			11/17/2016			11/17/2016			11/17/2016					
	Analysis Date	12/1/2016			11/30/2016			11/30/2016			12/1/2016			11/30/2016			11/28/2016					
	Matrix	Soil			Soil			Soil			Soil			Soil			Solid					
	Unit	ng/g			ng/g			ng/g			ng/g			ng/g			ng/g					
	DIOXIN-1668A-SOIL	Result	Q	ML	Result	Q	ML	Result	Q	ML	Result	Q	ML	Result	Q	ML	Result	Q	ML	3Xresult	5Xresult	
	SOIL BY 1668A																					
Penta	PCB 127 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	0.00123	Q J	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 128 (BZ)	0.0592	C J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 129 (BZ)	0.169	C J	0.226	ND	U	0.0137	ND	U	0.0120	0.000953	Q C J	0.0147	0.000964	Q C J	0.0125	ND		0.0100			
	PCB 130 (BZ)	0.0196	Q J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 131 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 132 (BZ)	0.0713	Q J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 133 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 134 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 135 (BZ)	0.100	Q C J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 136 (BZ)	0.0409	J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 137 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 138 (BZ)	0.169	C129 J	0.226	ND	U	0.0137	ND	U	0.0120	0.000953	Q C129 J	0.0147	0.000964	Q C129 J	0.0125	ND		0.0100			
	PCB 139 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 140 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 141 (BZ)	0.0330	Q J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 142 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 143 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 144 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 145 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 146 (BZ)	0.0562	Q J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Hexa	PCB 147 (BZ)	0.180	C J	0.226	ND	U	0.0137	ND	U	0.0120	0.00152	C J	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 148 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 149 (BZ)	0.180	C147 J	0.226	ND	U	0.0137	ND	U	0.0120	0.00152	C147 J	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 150 (BZ)	0.0137	Q J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 151 (BZ)	0.100	Q C135 J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 152 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 153 (BZ)	0.162	Q C J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 154 (BZ)	0.0524	Q J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 155 (BZ)	0.0118	Q J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 156 (BZ)	0.0395	Q C J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			120
	PCB 157 (BZ)	0.0395	Q C156 J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			120
	PCB 158 (BZ)	0.0161	Q J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 159 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 160 (BZ)	0.169	C129 J	0.226	ND	U	0.0137	ND	U	0.0120	0.000953	Q C129 J	0.0147	0.000964	Q C129 J	0.0125	ND		0.0100			
	PCB 161 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 162 (BZ)	0.0146	J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
	PCB 163 (BZ)	0.169	C129 J	0.226	ND	U	0.0137	ND	U	0.0120	0.000953	Q C129 J	0.0147	0.000964	Q C129 J	0.0125	ND		0.0100			
	PCB 164 (BZ)	0.0143	Q J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			

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	PCB 165 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Homologs	**Client ID**	**TB-5T**			**TB-5C**			**TB-5B**			**TB-1C**			**TB-1B**			**Applicable Method Blank**					Dioxin-Like Screening Concentration
	Lab Sample ID	H6J130401-001			H6J130401-004			H6J130401-005			H6J130401-002			H6J130401-003			H6K170000-13B					
	Batch	6322013			6322013			632213			6322013			6322013			6322013					
	Sampling Date	10/5/2016			10/5/2016			10/5/2016			10/5/2016			10/5/2016			Not Applicable					
	Prep Date	11/17/2016			11/17/2016			11/17/2016			11/17/2016			11/17/2016			11/17/2016					
	Analysis Date	12/1/2016			11/30/2016			11/30/2016			12/1/2016			11/30/2016			11/28/2016					
	Matrix	Soil			Soil			Soil			Soil			Soil			Solid					
	Unit	ng/g			ng/g			ng/g			ng/g			ng/g			ng/g					
	DIOXIN-1668A-SOIL	Result	Q	ML	Result	Q	ML	Result	Q	ML	Result	Q	ML	Result	Q	ML	Result	Q	ML	3Xresult	5Xresult	
	SOIL BY 1668A																					
Hexa	PCB 166 (BZ)	0.0592	C128 J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Hexa	PCB 167 (BZ)	0.0242	Q J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			120
Hexa	PCB 168 (BZ)	0.162	Q C153 J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Hexa	PCB 169 (BZ)	0.250	Q	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			0.12
Hepta	PCB 170 (BZ)	0.0760	J	0.226	ND	U	0.0137	ND	U	0.0120	0.000853	Q J	0.0147	ND	U	0.0125	ND		0.0100			NVP
Hepta	PCB 171 (BZ)	0.0600	C J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Hepta	PCB 172 (BZ)	0.163	Q J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Hepta	PCB 173 (BZ)	0.0600	C171 J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Hepta	PCB 174 (BZ)	0.227		0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Hepta	PCB 175 (BZ)	0.0527	J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Hepta	PCB 176 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Hepta	PCB 177 (BZ)	0.168	Q B J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	0.000942	Q J	0.0100	0.002826	0.00471	
Hepta	PCB 178 (BZ)	0.246		0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Hepta	PCB 179 (BZ)	0.144	J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Hepta	PCB 180 (BZ)	0.431	C	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			NVP
Hepta	PCB 181 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Hepta	PCB 182 (BZ)	0.0213	Q J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Hepta	PCB 183 (BZ)	0.341	C	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Hepta	PCB 184 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Hepta	PCB 185 (BZ)	0.341	C183	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Hepta	PCB 186 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Hepta	PCB 187 (BZ)	0.989		0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Hepta	PCB 188 (BZ)	0.0388	J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Hepta	PCB 189 (BZ)	0.0328	J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			130
Hepta	PCB 190 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Hepta	PCB 191 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Hepta	PCB 192 (BZ)	ND	U	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Hepta	PCB 193 (BZ)	0.431	C180	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Octa	PCB 194 (BZ)	2.04		0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	0.00180	Q J	0.0125	ND		0.0100			
Octa	PCB 195 (BZ)	0.259	Q	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Octa	PCB 196 (BZ)	3.12		0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Octa	PCB 197 (BZ)	0.141	Q J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Octa	PCB 198 (BZ)	25.8	C	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Octa	PCB 199 (BZ)/200 (IUPAC)	0.207	J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Octa	PCB 200 (BZ)/201 (IUPAC)	1.07		0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Octa	PCB 201 (BZ)/199 (IUPAC)	25.8	C198	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Octa	PCB 202 (BZ)	8.48		0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Octa	PCB 203 (BZ)	7.75		0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Octa	PCB 204 (BZ)	0.0346	J	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Octa	PCB 205 (BZ)	0.239		0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	ND		0.0100			
Nona	PCB 206 (BZ)	141		0.226	ND	U	0.0137	ND	U	0.0120	0.00331	Q J	0.0147	ND	U	0.0125	ND		0.0100			
Nona	PCB 207 (BZ)	6.30	B	0.226	ND	U	0.0137	ND	U	0.0120	ND	U	0.0147	ND	U	0.0125	0.00135	J	0.0100	0.00405	0.00675	
Nona	PCB 208 (BZ)	64.2		0.226	ND	U	0.0137	ND	U	0.0120	0.000875	Q J	0.0147	ND	U	0.0125	ND		0.0100			
Deca	PCB 209 (BZ)	168		0.226	ND	U	0.0137	ND	U	0.0120	0.00338	Q J	0.0147	ND	U	0.0125	ND		0.0100			

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(green)	=	above 5x result
(yellow)	=	less than 5x result,but not 3xresult
(red)	=	less than 3xresult
(light blue)	=	coeluting congener, count once

TB-5T	
PCB-6	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-7	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-8	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-9	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-11	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-14	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-15	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-117	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-207	Method blank concentration inconsequential to reported native concentration. Use data.
PCB 20, 28	Method blank concentration inconsequential to reported native concentration. Use data. PCB 20 and 28 coelute. Count result once when calculating total PCBs and total homologs
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs
PCB 18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs
PCB 21, 33	PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs
PCB 26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs
PCB 40, 41,71	PCB 40, 41 and 71 coelute. Count result once when calculating total PCBs and total homologs
PCB 44, 47, 65	PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs
PCB 59, 62, 75	PCB 59, 62 and 75 coelute. Count result once when calculating total PCBs and total homologs
PCB 61, 70, 74, 76	PCB 61, 70, 74 and 76 coelute. Count result once when calculating total PCBs and total homologs
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119 and 125 coelute. Count result once when calculating total PCBs and total homologs
PCB-90, 101, 113	PCB 90, 101 and 113 coelute. Count result once when calculating total PCBs and total homologs
PCB-108, 124	PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs
PCB-129, 138, 160, 163	PCB 129, 138, 160 and 163 coelute. Count result once when calculating total PCBs and total homologs
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs
PCB-153, 168	PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs
PCB-156, 157	PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs
PCB-171, 173	PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs
PCB-198, 201	PCB 198 and 201 coelute. Count result once when calculating total PCBs and total homologs
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
PCB-85, 116, 117	PCB 85, 116 and 117 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
PCB-88, 91	PCB 88 and 91 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
PCB-134, 143	PCB 134 and 143 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
TB-5C	
PCB-6	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-7	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-9	Method blank concentration inconsequential to reported native concentration. Use data.

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PCB-11	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-14	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-117	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-207	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-8	Method blank concentration consequential to reported native concentration. Reject data.
PCB-15	Method blank concentration consequential to reported native concentration. Reject data.
PCB 20, 28	Method blank concentration consequential to reported native concentration. Reject data. PCB 20 and 28 coelute. Reject both.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs
PCB 18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs
PCB 21, 33	PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs
PCB 26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs
PCB 40, 41,71	PCB 40, 41 and 71 coelute. Count result once when calculating total PCBs and total homologs
PCB 44, 47, 65	PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs
PCB 59, 62, 75	PCB 59, 62 and 75 coelute. Count result once when calculating total PCBs and total homologs
PCB 61, 70, 74, 76	PCB 61, 70, 74 and 76 coelute. Count result once when calculating total PCBs and total homologs
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119 and 125 coelute. Count result once when calculating total PCBs and total homologs
PCB-90, 101, 113	PCB 90, 101 and 113 coelute. Count result once when calculating total PCBs and total homologs
PCB-108, 124	PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs
PCB-129, 138, 160, 163	PCB 129, 138, 160 and 163 coelute. Count result once when calculating total PCBs and total homologs
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs
PCB-153, 168	PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs
PCB-156, 157	PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs
PCB-171, 173	PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs
PCB-198, 201	PCB 198 and 201 coelute. Count result once when calculating total PCBs and total homologs
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
PCB-85, 116, 117	PCB 85, 116 and 117 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
PCB-88, 91	PCB 88 and 91 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
PCB-134, 143	PCB 134 and 143 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
TB-5B	
PCB-6	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-9	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-14	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-15	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-117	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-207	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-11	Method blank concentration may or may not be consequential to reported native concentration. Further evaluate the importance of data.
PCB-7	Method blank concentration consequential to reported native concentration. Reject data.
PCB-8	Method blank concentration consequential to reported native concentration. Reject data.
PCB 20, 28	Method blank concentration consequential to reported native concentration. Reject data. PCB 20 and 28 coelute. Reject both.

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PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs
PCB 18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs
PCB 21, 33	PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs
PCB 26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs
PCB 40, 41,71	PCB 40, 41 and 71 coelute. Count result once when calculating total PCBs and total homologs
PCB 44, 47, 65	PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs
PCB 59, 62, 75	PCB 59, 62 and 75 coelute. Count result once when calculating total PCBs and total homologs
PCB 61, 70, 74, 76	PCB 61, 70, 74 and 76 coelute. Count result once when calculating total PCBs and total homologs
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119 and 125 coelute. Count result once when calculating total PCBs and total homologs
PCB-90, 101, 113	PCB 90, 101 and 113 coelute. Count result once when calculating total PCBs and total homologs
PCB-108, 124	PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs
PCB-129, 138, 160, 163	PCB 129, 138, 160 and 163 coelute. Count result once when calculating total PCBs and total homologs
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs
PCB-153, 168	PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs
PCB-156, 157	PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs
PCB-171, 173	PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs
PCB-198, 201	PCB 198 and 201 coelute. Count result once when calculating total PCBs and total homologs
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
PCB-85, 116, 117	PCB 85, 116 and 117 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
PCB-88, 91	PCB 88 and 91 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
PCB-134, 143	PCB 134 and 143 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
TB-1C	
PCB-6	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-8	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-117	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-207	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-11	Method blank concentration may or may not be consequential to reported native concentration. Further evaluate the importance of data.
PCB-7	Method blank concentration consequential to reported native concentration. Reject data.
PCB-9	Method blank concentration consequential to reported native concentration. Reject data.
PCB-14	Method blank concentration consequential to reported native concentration. Reject data.
PCB-15	Method blank concentration consequential to reported native concentration. Reject data.
PCB 20, 28	Method blank concentration consequential to reported native concentration. Reject data. PCB 20 and 28 coelute. Reject both.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs
PCB 18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs
PCB 21, 33	PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs
PCB 26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs
PCB 40, 41,71	PCB 40, 41 and 71 coelute. Count result once when calculating total PCBs and total homologs
PCB 44, 47, 65	PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs

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PCB 59, 62, 75	PCB 59, 62 and 75 coelute. Count result once when calculating total PCBs and total homologs
PCB 61, 70, 74, 76	PCB 61, 70, 74 and 76 coelute. Count result once when calculating total PCBs and total homologs
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119 and 125 coelute. Count result once when calculating total PCBs and total homologs
PCB-90, 101, 113	PCB 90, 101 and 113 coelute. Count result once when calculating total PCBs and total homologs
PCB-108, 124	PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs
PCB-129, 138, 160, 163	PCB 129, 138, 160 and 163 coelute. Count result once when calculating total PCBs and total homologs
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs
PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs
PCB-153, 168	PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs
PCB-156, 157	PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs
PCB-171, 173	PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs
PCB-198, 201	PCB 198 and 201 coelute. Count result once when calculating total PCBs and total homologs
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
PCB-85, 116, 117	PCB 85, 116 and 117 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
PCB-88, 91	PCB 88 and 91 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
PCB-134, 143	PCB 134 and 143 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
TB-1B	
PCB-6	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-7	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-9	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-11	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-14	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-117	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-207	Method blank concentration inconsequential to reported native concentration. Use data.
PCB-8	Method blank concentration consequential to reported native concentration. Reject data.
PCB-15	Method blank concentration consequential to reported native concentration. Reject data.
PCB 20, 28	Method blank concentration consequential to reported native concentration. Reject data. PCB 20 and 28 coelute. Reject both.
PCB-12, 13	PCB 12 and 13 coelute. Count result once when calculating total PCBs and total homologs
PCB 18, 30	PCB 18 and 30 coelute. Count result once when calculating total PCBs and total homologs
PCB 21, 33	PCB 21 and 33 coelute. Count result once when calculating total PCBs and total homologs
PCB 26, 29	PCB 26 and 29 coelute. Count result once when calculating total PCBs and total homologs
PCB 40, 41,71	PCB 40, 41 and 71 coelute. Count result once when calculating total PCBs and total homologs
PCB 44, 47, 65	PCB 44, 47 and 65 coelute. Count result once when calculating total PCBs and total homologs
PCB-45, 51	PCB 45 and 51 coelute. Count result once when calculating total PCBs and total homologs
PCB-49, 69	PCB 49 and 69 coelute. Count result once when calculating total PCBs and total homologs
PCB 59, 62, 75	PCB 59, 62 and 75 coelute. Count result once when calculating total PCBs and total homologs
PCB 61, 70, 74, 76	PCB 61, 70, 74 and 76 coelute. Count result once when calculating total PCBs and total homologs
PCB-83, 99	PCB 83 and 99 coelute. Count result once when calculating total PCBs and total homologs
PCB-86, 87, 97, 109, 119, 125	PCB 86, 87, 97, 109, 119 and 125 coelute. Count result once when calculating total PCBs and total homologs
PCB-90, 101, 113	PCB 90, 101 and 113 coelute. Count result once when calculating total PCBs and total homologs
PCB-108, 124	PCB 108 and 124 coelute. Count result once when calculating total PCBs and total homologs
PCB-110, 115	PCB 110 and 115 coelute. Count result once when calculating total PCBs and total homologs
PCB-128, 166	PCB 128 and 166 coelute. Count result once when calculating total PCBs and total homologs
PCB-129, 138, 160, 163	PCB 129, 138, 160 and 163 coelute. Count result once when calculating total PCBs and total homologs
PCB-135, 151	PCB 135 and 151 coelute. Count result once when calculating total PCBs and total homologs

Table D.1.5 Summary of Data Validation - PCB SED BLANK 6322013
October 2016 Edgemoor Sampling Event
Edgemoor, Delaware

PCB-147, 149	PCB 147 and 149 coelute. Count result once when calculating total PCBs and total homologs
PCB-153, 168	PCB 153 and 168 coelute. Count result once when calculating total PCBs and total homologs
PCB-156, 157	PCB 156 and 157 coelute. Count result once when calculating total PCBs and total homologs
PCB-171, 173	PCB 171 and 173 coelute. Count result once when calculating total PCBs and total homologs
PCB-180, 193	PCB 180 and 193 coelute. Count result once when calculating total PCBs and total homologs
PCB-183, 185	PCB 183 and 185 coelute. Count result once when calculating total PCBs and total homologs
PCB-198, 201	PCB 198 and 201 coelute. Count result once when calculating total PCBs and total homologs
PCB-43, 73	PCB 43 and 73 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
PCB-50, 53	PCB 50 and 53 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
PCB-85, 116, 117	PCB 85, 116 and 117 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
PCB-88, 91	PCB 88 and 91 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
PCB-93, 100	PCB 93 and 100 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
PCB-98, 102	PCB 98 and 102 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
PCB-134, 143	PCB 134 and 143 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.
PCB-139, 140	PCB 139 and 140 coelute. Count result once when calculating total PCBs and total homologs. Not indicated by laboratory report due to ND.

Table D.2.1 Summary of Data Validation - DIOXINS AND FURANS SED BLANK 6301015
October 2016 Edgemoor Sampling Event
Edgemoor, Delaware

Client ID	**TB-2T**			**Method Blank**					Dioxin-Like Screening Concentration
Lab Sample ID	H6J050416001			H6J270000-015B					
Batch	6301015			6301015					
Sampling Date	09/27/2016 10:00:00			Not Applicable					
Prep Date	10/27/2016			10/27/2016					
Analysis Date	11/8/2016			11/4/2016					
Matrix	Soil			Solid					
Unit	ρg/g			ρg/g					ρg/g
DIOXIN-1613B-SOIL	Result	Q	ML	Result	Q	ML	3Xresult	5Xresult	
SOIL BY 1613B									
2,3,7,8-TCDD	0.346	J	1.36	ND		1.00			
Total TCDD	**12.6**	**Q**	**1.36**	**ND**		1.00			
1,2,3,7,8-PeCDD	1.08	Q B J	6.82	0.0599	Q J	5.00	0.180	0.300	
Total PeCDD	**16.9**	**J Q B**	**6.82**	**0.0918**	**Q J**	5.00	0.275	0.459	
1,2,3,4,7,8-HxCDD	2.07	B J	6.82	0.0566	Q J	5.00	0.170	0.283	
1,2,3,6,7,8-HxCDD	3.54	J	6.82	ND		5.00			
1,2,3,7,8,9-HxCDD	5.75	C B J	6.82	0.0602	Q J	5.00	0.181	0.301	
Total HxCDD	**87.1**	**C B**	**6.82**	**0.117**	**Q J**	5.00	0.351	0.585	1000
1,2,3,4,6,7,8-HpCDD	91.0	B	6.82	0.0696	Q J	5.00	0.209	0.348	
Total HpCDD	**266**	**Q B**	**6.82**	**0.154**	**J Q**	5.00	0.462	0.770	
OCDD	**1730**	**B**	**13.6**	**0.824**	**J**	10.0	2.47	4.12	
2,3,7,8-TCDF	3.63		1.36	ND		1.00			4.8
Total TCDF	**49.6**	**Q**	**1.36**	**ND**		1.00			
1,2,3,7,8-PeCDF	1.24	B J	6.82	0.0263	Q J	5.00	0.079	0.132	
2,3,4,7,8-PeCDF	2.25	J	6.82	ND		5.00			
Total PeCDF	**27.5**	**Q B**	**6.82**	**0.0263**	**Q J**	5.00	0.079	0.132	
1,2,3,4,7,8-HxCDF	4.93	C J	6.82	ND		5.00			
1,2,3,6,7,8-HxCDF	2.11	Q B J	6.82	0.0593	J	5.00	0.178	0.297	
2,3,4,6,7,8-HxCDF	1.47	B J	6.82	0.0452	Q J	5.00	0.136	0.226	
1,2,3,7,8,9-HxCDF	0.241	Q J	6.82	ND		5.00			
Total HxCDF	**25.2**	**Q B**	**6.82**	**0.104**	**Q J**	5.00	0.312	0.520	
1,2,3,4,6,7,8-HpCDF	22.0	B	6.82	0.0585	Q J	5.00	0.176	0.293	
1,2,3,4,7,8,9-HpCDF	1.60	Q B J	6.82	0.0205	Q J	5.00	0.062	0.103	
Total HpCDF	**39.2**	**B Q**	**6.82**	**0.079**	**Q J**	5.00	0.237	0.395	
OCDF	**66.9**	**B**	**13.6**	**0.154**	**Q J**	10.0	0.462	0.770	

Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.

(green)	=	above 5x result
(yellow)	=	less than 5x result,but not 3xresult
(red)	=	less than 3xresult
(light blue)	=	coeluting congener, count once

Table D.2.2 Summary of Data Validation - DIOXINS AND FURANS SED BLANK 6288019
October 2016 Edgemoor Sampling Event
Edgemoor, Delaware

Client ID	**TB-2C**			**TB-2B**			**Method Blank**					Dioxin-Like Screening Concentration
Lab Sample ID	H6J050416002			H6J050416003			H6J140000-019B					
Batch	6288019			6288019			6288019					
Sampling Date	09/27/2016 12:00:00			09/27/2016 14:00:00			Not Applicable					
Prep Date	10/14/2016			10/14/2016			10/14/2016					
Analysis Date	10/26/2016			10/26/2016			10/25/2016					
Matrix	Soil			Soil			Solid					
Unit	ρg/g			ρg/g			ρg/g					
DIOXIN-1613B-SOIL	Result	Q	ML	Result	Q	ML	Result	Q	ML	3Xresult	5Xresult	ρg/g
SOIL BY 1613B												
2,3,7,8-TCDD	ND	U	0.971	ND	U	0.995	ND		1.00			
Total TCDD	7.04	Q	0.971	ND	U	0.995	ND		1.00			
1,2,3,7,8-PeCDD	ND	U	4.86	ND	U	4.98	ND		5.00			
Total PeCDD	2.02	J Q	4.86	ND	U	4.98	0.141	Q J	5.00	0.423	0.705	
1,2,3,4,7,8-HxCDD	0.281	J	4.86	ND	U	4.98	ND		5.00			
1,2,3,6,7,8-HxCDD	0.395	Q J	4.86	ND	U	4.98	ND		5.00			
1,2,3,7,8,9-HxCDD	0.809	Q B J	4.86	ND	U	4.98	0.240	J	5.00	0.72	1.2	
Total HxCDD	12.8	Q B	4.86	ND	U	4.98	0.405	Q J	5.00	1.215	2.025	1000
1,2,3,4,6,7,8-HpCDD	14.1		4.86	0.138	Q J	4.98	ND		5.00			
Total HpCDD	37.9		4.86	0.408	Q J	4.98	ND		5.00			
OCDD	557	B	9.71	13.0	B	9.95	0.223	J	10.0	0.669	1.115	
2,3,7,8-TCDF	ND	U	0.971	ND	U	0.995	ND		1.00			4.8
Total TCDF	0.201	Q J	0.971	ND	U	0.995	ND		1.00			
1,2,3,7,8-PeCDF	ND	U	4.86	ND	U	4.98	ND		5.00			
2,3,4,7,8-PeCDF	ND	U	4.86	ND	U	4.98	ND		5.00			
Total PeCDF	0.0813	Q J	4.86	ND	U	4.98	ND		5.00			
1,2,3,4,7,8-HxCDF	0.116	Q J	4.86	ND	U	4.98	ND		5.00			
1,2,3,6,7,8-HxCDF	ND	U	4.86	ND	U	4.98	ND		5.00			
2,3,4,6,7,8-HxCDF	ND	U	4.86	ND	U	4.98	0.0501	Q J	5.00	0.1503	0.2505	
1,2,3,7,8,9-HxCDF	ND	U	4.86	ND	U	4.98	ND		5.00			
Total HxCDF	0.198	Q J	4.86	ND	U	4.98	0.0501	Q J	5.00	0.1503	0.2505	
1,2,3,4,6,7,8-HpCDF	ND	U	4.86	ND	U	4.98	ND		5.00			
1,2,3,4,7,8,9-HpCDF	ND	U	4.86	ND	U	4.98	ND		5.00			
Total HpCDF	ND	U	4.86	ND	U	4.98	ND		5.00			
OCDF	1.77	B J	9.71	0.204	Q B J	9.95	0.177	Q J	10.0000	0.531	0.885	

Color		Meaning
(green)	=	above 5x result
(yellow)	=	less than 5x result,but not 3xresult
(red)	=	less than 3xresult
(light blue)	=	coeluting congener, count once

Table D.2.2 Summary of Data Validation - DIOXINS AND FURANS SED BLANK 6288019
October 2016 Edgemoor Sampling Event
Edgemoor, Delaware

Data Quality Review Notes:

Sample TB-2C

Total PeCDD	Result should have been flagged with a B due to some form of PeCDD being reported in the method blank.
1,2,3,7,8,9-HxCDD	Reported concentration is more than 3 times the method blank concentration but less than 5 times the method blank concentration. Use result with care.
Total HXCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
OCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
2,3,4,6,7,8-HxCDF	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
Total HxCDF	Reported concentration is more than 3 times the method blank concentration but less than 5 times the method blank concentration. Use result with care.
OCDF	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.

Sample TB-2B

Total PeCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
1,2,3,7,8,9-HxCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
Total HXCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
OCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
2,3,4,6,7,8-HxCDF	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
Total HxCDF	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
OCDF	Method blank concentration consequential to reported native concentration. Reject data.

Surrogate recoveries were low for 1,2,3,4,7,8 HxCDF, 1,2,3,6,7,8 HXCDF and 1,2,3,4,6,7,8-HPCDF in spiked internal sample for batch.
Other recoveries were mind-range

Table D.2.3 Summary of Data Validation - DIOXINS AND FURANS SED BLANK 6305013
October 2016 Edgemoor Sampling Event
Edgemoor, Delaware

Client ID	TB-3C			TB-3B			TB-3T			Method Blank					Dioxin-Like Screening Concentration
Lab Sample ID	460-121512-1			460-121512-2			460-121512-3			H6J140000-019B					
Batch	6305013			6305013			6305013			6305013					
Sampling Date	10/03/2016 12:00:00			10/03/2016 12:30:00			10/03/2016 09:30:00			Not Applicable					
Prep Date	10/31/2016			10/31/2016			10/31/2016			10/31/2016					
Analysis Date	11/10/2016			11/10/2016			11/10/2016			11/9/2016					
Matrix	Soil			Soil			Soil			Solid					
Unit	ρg/g			ρg/g			ρg/g			ρg/g					ρg/g
DIOXIN-1613B-SOIL	Result	Q	ML	Result	Q	ML	Result	Q	ML	Result	Q	ML	3Xresult	5Xresult	
SOIL BY 1613B															
2,3,7,8-TCDD	ND	U	0.984	ND	U	0.959	0.434	Q J	1.21	ND		1.00			
Total TCDD	**7.12**	**Q**	**0.984**	**ND**	**U**	**0.959**	**20.4**	**Q B**	**1.21**	**0.0388**	**Q J**	**1.00**	0.116	0.194	
1,2,3,7,8-PeCDD	0.688	Q J	4.92	ND	U	4.79	1.73	Q J	6.03	ND		5.00			
Total PeCDD	**10.5**	**J Q**	**4.92**	**ND**	**U**	**4.79**	**26.5**	**Q**	**6.03**	**ND**		**5.00**			
1,2,3,4,7,8-HxCDD	1.41	J	4.92	ND	U	4.79	3.08	J	6.03	ND		5.00			
1,2,3,6,7,8-HxCDD	2.11	J	4.92	ND	U	4.79	5.75	J	6.03	ND		5.00			
1,2,3,7,8,9-HxCDD	4.17	C J	4.92	ND	U	4.79	9.99	C	6.03	ND		5.00			
Total HxCDD	**58.7**		**4.92**	**0.583**	**J Q**	**4.79**	**148**	**Q**	**6.03**	**ND**		**5.00**			1000
1,2,3,4,6,7,8-HpCDD	85.0	B	4.92	1.83	B J	4.79	148	B	6.03	0.0526	Q J	5.00	0.158	0.263	
Total HpCDD	**222**	**B**	**4.92**	**4.30**	**J B**	**4.79**	**437**	**B**	**6.03**	**0.176**	**Q J**	**5.00**	0.528	0.880	
OCDD	2690	B	9.84	60.7	B	9.59	2590	B	12.1	0.620	J	10.00	1.86	3.10	
2,3,7,8-TCDF	4.21	Q	0.984	ND	U	0.959	2.68	Q X	1.21	ND		1.00			4.8
Total TCDF	**13.2**	**Q**	**0.984**	**ND**	**U**	**0.959**	**55.6**	**Q**	**1.21**	**ND**		**1.00**			
1,2,3,7,8-PeCDF	1.04	J	4.92	ND	U	4.79	1.49	J	6.03	ND		5.00			
2,3,4,7,8-PeCDF	0.913	J	4.92	ND	U	4.79	2.31	J	6.03	ND		5.00			
Total PeCDF	**5.54**	**Q J B**	**4.92**	**ND**	**U**	**4.79**	**31.5**	**B Q**	**6.03**	**0.0259**	**Q J**	**5.00**	0.0777	0.130	
1,2,3,4,7,8-HxCDF	1.20	C J	4.92	ND	U	4.79	4.89	C J	6.03	ND		5.00			
1,2,3,6,7,8-HxCDF	0.375	Q J	4.92	ND	U	4.79	2.18	Q J	6.03	ND		5.00			
2,3,4,6,7,8-HxCDF	0.222	Q J	4.92	ND	U	4.79	1.33	J	6.03	ND		5.00			
1,2,3,7,8,9-HxCDF	ND	U	4.92	ND	U	4.79	0.284	J	6.03	ND		5.00			
Total HxCDF	**3.45**	**Q J**	**4.92**	**ND**	**U**	**4.79**	**34.4**	**Q**	**6.03**	**ND**		**5.00**			
1,2,3,4,6,7,8-HpCDF	1.91	J	4.92	0.0688	Q J	4.79	29.5		6.03	ND		5.00			
1,2,3,4,7,8,9-HpCDF	0.309	Q J	4.92	ND	U	4.79	2.64	J	6.03	ND		5.00			
Total HpCDF	**3.29**	**J Q**	**4.92**	**0.0688**	**Q J**	**4.79**	**57.9**		**6.03**	**ND**		**5.00**			
OCDF	6.15	B J	9.84	0.197	Q B J	9.59	83.9	B	12.1	0.147	Q J	10.0	0.441	0.735	

(green)	=	above 5x result
(yellow)	=	less than 5x result,but not 3xresult
(red)	=	less than 3xresult
(light blue)	=	coeluting congener, count once

Table D.2.3 Summary of Data Validation - DIOXINS AND FURANS SED BLANK 6305013
October 2016 Edgemoor Sampling Event
Edgemoor, Delaware

Data Quality Review Notes:

Sample TB-3C

Total TCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
1,2,3,4,6,7,8-HpCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
Total HpCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
OCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
Total PeCDF	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
OCDF	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.

Sample TB-3B

Total TCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
1,2,3,4,6,7,8-HpCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
Total HpCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
OCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
Total PeCDF	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
OCDF	Method blank concentration consequential to reported native concentration. Reject data.

Sample TB-3T

Total TCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
1,2,3,4,6,7,8-HpCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
Total HpCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
OCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
Total PeCDF	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
OCDF	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.

Internal Standard recoveries OK

Table D.2.4 Summary of Data Validation - DIOXINS AND FURANS SED BLANK 6305013
October 2016 Edgemoor Sampling Event
Edgemoor, Delaware

Client ID	**TB-4C**			**TB-4B**			**TB-4T**			**TB-1T**			**Method Blank**					Dioxin-Like Screening Concentration
Lab Sample ID	460-121517-1			460-121517-2			460-121517-3			460-121517-4			H6J140000-019B					
Batch	6305013			6305013			6305013			6305013			6305013					
Sampling Date	10/04/2016 12:00:00			10/04/2016 12:30:00			10/04/2016 09:30:00			10/04/2016 13:00:00			Not Applicable					
Prep Date	10/31/2016			10/31/2016			10/31/2016			10/31/2016			10/31/2016					
Analysis Date	11/10/2016			11/10/2016			11/10/2016			11/10/2016			11/9/2016					
Matrix	Soil			Soil			Soil			Soil			Solid					
Unit	ρg/g			ρg/g			ρg/g			ρg/g			ρg/g					ρg/g
DIOXIN-1613B-SOIL	Result	Q	ML	Result	Q	ML	Result	Q	ML	Result	Q	ML	Result	Q	ML	3Xresult	5Xresult	
SOIL BY 1613B																		
2,3,7,8-TCDD	ND	U	0.959	ND	U	0.989	0.254	Q J	1.11	0.347	J	1.06	ND		1.00			
Total TCDD	**2.64**	**Q**	**0.959**	**ND**	**U**	**0.989**	**17.2**	**Q**	**1.11**	**19.1**	**Q B**	**1.06**	**0.0388**	**Q J**	**1.00**	0.116	0.194	
1,2,3,7,8-PeCDD	0.300	J	4.80	ND	U	4.95	1.63	Q J	5.53	1.87	J	5.28	ND		5.00			
Total PeCDD	**5.32**	**J Q**	**4.80**	**0.0627**	**Q J**	**4.95**	**28.7**	**Q**	**5.53**	**30.7**	**Q**	**5.28**	**ND**		**5.00**			
1,2,3,4,7,8-HxCDD	0.572	J	4.80	ND	U	4.95	3.60	J	5.53	3.73	J	5.28	ND		5.00			
1,2,3,6,7,8-HxCDD	0.930	J	4.80	ND	U	4.95	5.85		5.53	5.51		5.28	ND		5.00			
1,2,3,7,8,9-HxCDD	2.10	C J	4.80	0.0989	Q J	4.95	12.1	C	5.53	12.1	C	5.28	ND		5.00			
Total HxCDD	**38.8**	**Q**	**4.80**	**1.50**	**J Q**	**4.95**	**173**	**Q**	**5.53**	**173**		**5.28**	**ND**		**5.00**			1000
1,2,3,4,6,7,8-HpCDD	33.8	B	4.80	1.53	B J	4.95	227	B	5.53	231	B	5.28	0.0526	Q J	5.00	0.158	0.263	
Total HpCDD	**109**	**B**	**4.80**	**5.84**	**J B**	**4.95**	**615**	**B**	**5.53**	**629**	**B**	**5.28**	**0.176**	**Q J**	**5.00**	0.528	0.880	
OCDD	776	B	9.59	26.0	B	9.89	5850	B E	11.1	5540	B E	10.6	0.620	J	10.00	1.86	3.10	
2,3,7,8-TCDF	0.959	Q J	0.959	ND	U	0.989	8.23	X	1.11	10.0		1.06	ND		1.00			4.8
Total TCDF	**6.67**	**Q**	**0.959**	**0.00674**	**Q J**	**0.989**	**21.5**	**Q**	**1.11**	**26.9**	**Q**	**1.06**	**ND**		**1.00**			
1,2,3,7,8-PeCDF	0.215	Q J	4.80	ND	U	4.95	1.46	J	5.53	1.92	J	5.28	ND		5.00			
2,3,4,7,8-PeCDF	0.240	Q J	4.80	ND	U	4.95	1.18	J	5.53	1.56	J	5.28	ND		5.00			
Total PeCDF	**3.16**	**Q J**	**4.80**	**ND**	**U**	**4.95**	**7.74**	**J Q B**	**5.53**	**10.6**	**Q J B**	**5.28**	**0.0259**	**Q J**	**5.00**	0.0777	0.130	
1,2,3,4,7,8-HxCDF	0.587	Q J	4.80	ND	U	4.95	1.68	C J	5.53	4.01	Q J	5.28	ND		5.00			
1,2,3,6,7,8-HxCDF	0.324	Q J	4.80	ND	U	4.95	0.623	Q J	5.53	0.935	J	5.28	ND		5.00			
2,3,4,6,7,8-HxCDF	0.142	Q J	4.80	ND	U	4.95	0.367	J	5.53	0.413	Q J	5.28	ND		5.00			
1,2,3,7,8,9-HxCDF	ND	U	4.80	ND	U	4.95	0.116	Q J	5.53	0.211	Q J	5.28	ND		5.00			
Total HxCDF	**2.42**	**Q J**	**4.80**	**ND**	**U**	**4.95**	**5.26**	**J Q**	**5.53**	**9.18**	**Q J**	**5.28**	**ND**		**5.00**			
1,2,3,4,6,7,8-HpCDF	2.85	J	4.80	0.0744	J	4.95	2.43	J	5.53	3.83	J	5.28	ND		5.00			
1,2,3,4,7,8,9-HpCDF	0.341	Q J	4.80	ND	U	4.95	0.489	J	5.53	3.79	J	5.28	ND		5.00			
Total HpCDF	**5.90**	**J Q**	**4.80**	**0.0744**	**J**	**4.95**	**3.31**	**Q J**	**5.53**	**9.30**	**J**	**5.28**	**0.147**	**Q J**	**10.0**	0.441	0.735	
OCDF	9.31	Q B J	9.59	0.229	B J	9.89	3.97	B J	11.1	16.3	B	10.6	ND		5.00			

= above 5x result
= less than 5x result,but not 3xresult
= less than 3xresult
= coeluting congener, count once

Duffield Associates, Inc.
Project No. 11139.LH

Table D.2.4 Summary of Data Validation - DIOXINS AND FURANS SED BLANK 6305013
October 2016 Edgemoor Sampling Event
Edgemoor, Delaware

Data Quality Review Notes:

Sample TB-4C

Total TCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
1,2,3,7,8,9-HxCDD	Isomer is known to coelute with other memebers of the homologue group. Laboratory flagged result due to the chromatogram peak having a shoulder. Coeluting isomer(s) not identified. Use data.
1,2,3,4,6,7,8-HpCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
Total HpCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
OCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
Total PeCDF	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
1,2,3,4,7,8-HxCDF	Isomer is known to coelute with other memebers of the homologue group. Laboratory did not flag suggesting that chromatogram peak was not shouldered. Use data.
Total HpCDF	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.

Sample TB-4B

Total TCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
1,2,3,7,8,9-HxCDD	Isomer is known to coelute with other memebers of the homologue group. Laboratory did not flag suggesting that chromatogram peak was not shouldered. Use data.
1,2,3,4,6,7,8-HpCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
Total HpCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
OCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
Total PeCDF	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
1,2,3,4,7,8-HxCDF	Isomer is known to coelute with other memebers of the homologue group. Isomer not detected in sample. Use data.
Total HpCDF	Method blank concentration consequential to reported native concentration. Reject data.

Sample TB-4T

Total TCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
1,2,3,7,8,9-HxCDD	Isomer is known to coelute with other memebers of the homologue group. Laboratory flagged result due to the chromatogram peak having a shoulder. Coeluting isomer(s) not identified. Use data.
1,2,3,4,6,7,8-HpCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
Total HpCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
OCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
Total PeCDF	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
1,2,3,4,7,8-HxCDF	Isomer is known to coelute with other memebers of the homologue group. Laboratory flagged result due to the chromatogram peak having a shoulder. Coeluting isomer(s) not identified. Use data.
Total HpCDF	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.

Sample TB-1T

Total TCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
1,2,3,7,8,9-HxCDD	Isomer is known to coelute with other memebers of the homologue group. Laboratory flagged result due to the chromatogram peak having a shoulder. Coeluting isomer(s) not identified. Use data.
1,2,3,4,6,7,8-HpCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
Total HpCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
OCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
Total PeCDF	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
1,2,3,4,7,8-HxCDF	Isomer is known to coelute with other memebers of the homologue group. Laboratory did not flag suggesting that chromatogram peak was not shouldered. Use data.
Total HpCDF	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.

Internal Standard recoveries OK

Table D.2.5 Summary of Data Validation - DIOXINS AND FURANS SED BLANK 6321012
October 2016 Edgemoor Sampling Event
Edgemoor, Delaware

Client ID	**TB-5T**			**TB-5C**			**TB-5B**			**TB-1C**			**TB-1B**			**Method Blank**					Dioxin-Like Screening Concentration
Lab Sample ID	460-121749-1			460-121749-4			460-121749-5			460-121749-2			460-121749-3			H6K160000-012B					
Batch	6321012			6321012			6321012			6321012			6321012			6321012					
Sampling Date	0/05/2016 12:30:0			10/05/2016 15:00:00			10/05/2016 15:30:00			10/05/2016 10:30:00			10/05/2016 11:00:00			Not Applicable					
Prep Date	11/16/2016			11/16/2016			11/16/2016			11/16/2016			11/16/2016			11/16/2016					
Analysis Date	12/5/2016			12/5/2016			12/5/2016			12/5/2012			12/5/2016			12/5/2016					
Matrix	Soil			Soil			Soil			Soil			Soil			Solid					
Unit	ρg/g			ρg/g			ρg/g			ρg/g			ρg/g			ρg/g					
DIOXIN-1613B-SOIL	Result	Q	ML	Result	Q	ML	Result	Q	ML	Result	Q	ML	Result	Q	ML	Result	Q	ML	3Xresult	5Xresult	ρg/g
SOIL BY 1613B																					
2,3,7,8-TCDD	0.444	J	1.10	ND	U	0.953	ND	U	0.974	ND	U	0.972	ND	U	0.951	ND		1.00			
Total TCDD	**16.9**	**Q**	**1.10**	**4.64**	**Q**	**0.953**	**ND**	**U**	**0.974**	**7.55**	**Q**	**0.972**	**ND**	**U**	**0.951**	**ND**		**1.00**			
1,2,3,7,8-PeCDD	1.71	J	5.51	0.421	J	4.77	ND	U	4.87	0.457	Q J	4.86	ND	U	4.76	ND		5.00			
Total PeCDD	**28.6**	**Q**	**5.51**	**8.06**	**J**	**4.77**	**0.185**	**Q B J**	**4.87**	**8.08**	**Q J**	**4.86**	**0.426**	**Q B J**	**4.76**	**0.0468**	**J**	**5.00**	**0.1404**	**0.234**	
1,2,3,4,7,8-HxCDD	3.45	J	5.51	0.620	J	4.77	ND	U	4.87	1.18	J	4.86	ND	U	4.76	ND		5.00			
1,2,3,6,7,8-HxCDD	5.39	J	5.51	1.04	Q J	4.77	ND	U	4.87	2.04	J	4.86	ND	U	4.76	ND		5.00			
1,2,3,7,8,9-HxCDD	9.27	C	5.51	2.77	C J	4.77	ND	U	4.87	5.31	C	4.86	ND	U	4.76	ND		5.00			
Total HxCDD	133	Q	5.51	**39.5**	**Q**	**4.77**	**0.476**	**Q J**	**4.87**	**59.4**	**Q**	**4.86**	**0.407**	**Q J**	**4.76**	**0.246**	**J**	**5.00**	**0.738**	**1.230**	1000
1,2,3,4,6,7,8-HpCDD	177	B	5.51	44.0	B	4.77	1.25	B J	4.87	73.5	B	4.86	1.26	B J	4.76	0.115	Q J	5.00	0.345	0.575	
Total HpCDD	**462**	**B**	**5.51**	**114**	**B**	**4.77**	**2.99**	**B J**	**4.87**	**197**	**B**	**4.86**	**3.41**	**J B**	**4.76**	**0.190**	**Q J**	**5.00**	**0.570**	**0.950**	
OCDD	5380	B E	11.0	1280	B	9.53	37.9	B	9.74	2390	B	9.72	54.8	B	9.51	0.735	Q J	10.0	2.205	3.675	
2,3,7,8-TCDF	12.0		1.10	0.965	X	0.953	ND	U	0.974	3.87	X	0.972	ND	U	0.951	ND		1.00			4.8
Total TCDF	**98.4**	**Q B**	**1.10**	**3.45**	**Q**	**0.953**	**0.108**	**Q J**	**0.974**	**8.15**	**Q**	**0.972**	**0.0741**	**J**	**0.951**	**0.0450**	**Q J**	**1.00**	**0.135**	**0.225**	
1,2,3,7,8-PeCDF	18.2		5.51	0.360	Q J	4.77	ND	U	4.87	0.748	J	4.86	ND	U	4.76	ND		5.00			
2,3,4,7,8-PeCDF	11.6		5.51	0.218	Q J	4.77	ND	U	4.87	0.681	J	4.86	ND	U	4.76	ND		5.00			
Total PeCDF	**137**	**Q**	**5.51**	**1.26**	**Q J**	**4.77**	**0.0397**	**Q J**	**4.87**	**2.78**	**Q J**	**4.86**	**0.177**	**Q J**	**4.76**	**ND**		**5.00**			
1,2,3,4,7,8-HxCDF	87.9	C B	5.51	0.417	C B J	4.77	ND	U	4.87	1.45	Q B J	4.86	ND	U	4.76	0.0412	Q J	5.00	0.124	0.206	
1,2,3,6,7,8-HxCDF	28.3	Q	5.51	0.152	Q J	4.77	ND	U	4.87	0.486	Q J	4.86	ND	U	4.76	ND		5.00			
2,3,4,6,7,8-HxCDF	9.16		5.51	0.0632	Q J	4.77	ND	U	4.87	0.266	Q J	4.86	ND	U	4.76	ND		5.00			
1,2,3,7,8,9-HxCDF	3.35	J	5.51	ND	U	4.77	ND	U	4.87	ND	U	4.86	ND	U	4.76	ND		5.00			
Total HxCDF	**235**	**Q B**	**5.51**	**0.894**	**Q J B**	**4.77**	**ND**	**U**	**4.87**	**3.30**	**J Q B**	**4.86**	**ND**	**U**	**4.76**	**0.0412**	**Q J**	**5.00**	**0.124**	**0.206**	
1,2,3,4,6,7,8-HpCDF	350	B	5.51	0.713	B J	4.77	0.0423	Q B J	4.87	5.07	B	4.86	0.291	B J	4.76	0.0707		5.00	0.212	0.354	
1,2,3,4,7,8,9-HpCDF	51.1		5.51	0.105	Q J	4.77	ND	U	4.87	0.579	J	4.86	ND	U	4.76	ND		5.00			
Total HpCDF	**520**	**Q B**	**5.51**	**1.01**	**J B Q**	**4.77**	**0.0631**	**Q J B**	**4.87**	**7.18**	**B**	**4.86**	**0.291**	**B J**	**4.76**	**0.0707**	**Q J**	**5.00**	**0.212**	**0.354**	
OCDF	2410	B	11.0	2.17	Q B J	9.53	0.478	Q B J	9.74	20.9	B	9.72	2.33	B J	9.51	0.272	Q J	10.0	0.816	1.36	

= above 5x result
= less than 5x result,but not 3xresult
= less than 3xresult
= coeluting congener, count once

Table D.2.5 Summary of Data Validation - DIOXINS AND FURANS SED BLANK 6321012
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Data Quality Review Notes:

Sample TB-5T	
Total PeCDD	Result should have been flagged with a B due to some form of PeCDD being reported in the method blank.
1,2,3,7,8,9-HxCDD	Isomer is known to coelute with other memebers of the homologue group. Laboratory flagged result due to the chromatogram peak having a shoulder. Coeluting isomer(s) not identified. Use data.
Total HxCDD	Result should have been flagged with a B due to some form of PeCDD being reported in the method blank.
1,2,3,4,6,7,8-HpCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
Total HpCDD	Result should have been flagged with a B due to some form of PeCDD being reported in the method blank.
OCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
Total TCDF	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
1,2,3,4,7,8-HxCDF	Isomer is known to coelute with other memebers of the homologue group. Laboratory flagged result due to the chromatogram peak having a shoulder. Coeluting isomer(s) not identified. Method Blank concentration does not interfere with the usefulness of the reported sample concentrations. Use data.
Total HxCDF	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
1,2,3,4,6,7,8-HpCDF	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
Total HpCDF	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
OCDF	Method blank concentration consequential to reported native concentration. Reject data.
Sample TB-5C	
Total PeCDD	Result should have been flagged with a B due to some form of PeCDD being reported in the method blank.
1,2,3,7,8,9-HxCDD	Isomer is known to coelute with other memebers of the homologue group. Laboratory flagged result due to the chromatogram peak having a shoulder. Coeluting isomer(s) not identified. Use data.
Total HxCDD	Result should have been flagged with a B due to some form of PeCDD being reported in the method blank.
1,2,3,4,6,7,8-HpCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
Total HpCDD	Result should have been flagged with a B due to some form of PeCDD being reported in the method blank.
OCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
Total TCDF	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
1,2,3,4,7,8-HxCDF	Isomer is known to coelute with other memebers of the homologue group. Laboratory flagged result due to the chromatogram peak having a shoulder. Coeluting isomer(s) not identified. Method Blank concentration does not interfere with the usefulness of the reported sample concentrations. Use data.
Total HxCDF	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
1,2,3,4,6,7,8-HpCDF	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
Total HpCDF	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
OCDF	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
Sample TB-5B	
Total PeCDD	Reported concentration is more than 3 times the method blank concentration but less than 5 times the method blank concentration. Use result with care.
1,2,3,7,8,9-HxCDD	Isomer is known to coelute with other memebers of the homologue group. Isomer not detected in sample. Use data.
Total HxCDD	Method blank concentration consequential to reported native concentration. Reject data.
1,2,3,4,6,7,8-HpCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
Total HpCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
OCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
Total TCDF	Method blank concentration consequential to reported native concentration. Reject data.
1,2,3,4,7,8-HxCDF	Isomer is known to coelute with other memebers of the homologue group. Isomer not detected in sample. Use data.
Total HxCDF	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
1,2,3,4,6,7,8-HpCDF	Method blank concentration consequential to reported native concentration. Reject data.
Total HpCDF	Method blank concentration consequential to reported native concentration. Reject data.
OCDF	Method blank concentration consequential to reported native concentration. Reject data.
Sample TB-1C	
Total PeCDD	Result should have been flagged with a B due to some form of PeCDD being reported in the method blank.
1,2,3,7,8,9-HxCDD	Isomer is known to coelute with other memebers of the homologue group. Laboratory flagged result due to the chromatogram peak having a shoulder. Coeluting isomer(s) not identified. Use data.
Total HxCDD	Result should have been flagged with a B due to some form of PeCDD being reported in the method blank.
1,2,3,4,6,7,8-HpCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
Total HpCDD	Result should have been flagged with a B due to some form of PeCDD being reported in the method blank.

Table D.2.5 Summary of Data Validation - DIOXINS AND FURANS SED BLANK 6321012
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OCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
Total TCDF	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
1,2,3,4,7,8-HxCDF	Isomer is known to coelute with other memebers of the homologue group. Laboratory did not flag suggesting that chromatogram peak was not shouldered. Method Blank concentration does not interfere with the usefulness of the reported sample concentrations. Use data.
Total HxCDF	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
1,2,3,4,6,7,8-HpCDF	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
Total HpCDF	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
OCDF	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
Sample TB-1B	
Total PeCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
1,2,3,7,8,9-HxCDD	Isomer is known to coelute with other memebers of the homologue group. Isomer not detected in sample. Use data.
Total HxCDD	Method blank concentration consequential to reported native concentration. Reject data.
1,2,3,4,6,7,8-HpCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
Total HpCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
OCDD	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
Total TCDF	Method blank concentration consequential to reported native concentration. Reject data.
1,2,3,4,7,8-HxCDF	Isomer is known to coelute with other memebers of the homologue group. Isomer not detected in sample. Use data.
Total HxCDF	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.
1,2,3,4,6,7,8-HpCDF	Reported concentration is more than 3 times the method blank concentration but less than 5 times the method blank concentration. Use result with care.
Total HpCDF	Reported concentration is more than 3 times the method blank concentration but less than 5 times the method blank concentration. Use result with care.
OCDF	Method Blank concentration does not interfere with the usefulness of the reported sample concentrations.

Table D.3.1 Summary of Top Sample PCB Data Validation
October 2016 Sampling Event
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Homologs	Client ID	TB-1T	TB-2T	TB-3T	TB-4T	TB-5T	DNREC Screening Value (ng/g)
	Lab Sample ID	H6J10404-004	H6J050416001	H6J100405-003	H6J100404-003	H6J130401-001	
	Batch	6307010	6301027	6307010	6307010	6322013	
	Unit	ng/g	ng/g	ng/g	ng/g	ng/g	
	DIOXIN-1668A-SOIL	Result	Result	Result	Result	Result	
	SOIL BY 1668A						
Mono	PCB 1 (BZ)	ND	0.0400	ND	0.00298	0.0365	
	PCB 2 (BZ)	0.00872	0.0811	0.041	0.0104	0.0379	
	PCB 3 (BZ)	0.0123	0.0888	0.0548	0.0082	0.0459	
Di	PCB 4 (BZ)	0.0140	0.0903	0.0551	0.00645	ND	
	PCB 5 (BZ)	ND	ND	ND	ND	ND	
	PCB 6 (BZ)	ND	0.0808	0.0482	ND	0.0377	
	PCB 7 (BZ)	ND	0.0166	ND	ND	ND	
	PCB 8 (BZ)	0.00942	0.166	0.0956	0.00404	0.0547	
	PCB 9 (BZ)	ND	ND	ND	0.00223	ND	
	PCB 10 (BZ)	ND	ND	ND	ND	ND	
	PCB 11 (BZ)	0.0198	0.377	0.219	Not Valid	0.0450	
	PCB 12, 13 (BZ)	ND	0.137	0.0598	0.00328	0.0781	
	PCB 14 (BZ)	ND	0.011	0.00927	ND	0.0314	
	PCB 15 (BZ)	0.0320	0.380	0.243	0.00857	0.0734	
Tri	PCB 16 (BZ)	ND	0.0718	0.0569	ND	0.0398	
	PCB 17 (BZ)	ND	0.113	0.0911	ND	0.0325	
	PCB 18, 30 (BZ)	ND	0.206	0.151	ND	0.0290	
	PCB 19 (BZ)	ND	0.0260	ND	ND	ND	
	PCB 20, 28 (BZ)	0.0117	0.768	0.522	0.00631	0.0607	
	PCB 21, 33 (BZ)	0.00633	0.168	0.133	0.00245	0.0383	
	PCB 22 (BZ)	ND	0.107	0.0784	0.00145	0.0250	
	PCB 23 (BZ)	ND	ND	ND	ND	ND	
	PCB 24 (BZ)	ND	ND	ND	ND	ND	
	PCB 25 (BZ)	ND	0.109	0.0721	ND	0.0147	
	PCB 26, 29 (BZ)	ND	0.149	0.0851	ND	0.0154	
	PCB 27 (BZ)	ND	0.0445	0.0228	ND	ND	
	PCB 31 (BZ)	0.00808	0.480	0.334	0.0053	0.0581	
	PCB 32 (BZ)	ND	0.137	0.0826	ND	0.0287	
	PCB 34 (BZ)	ND	ND	ND	ND	ND	
	PCB 35 (BZ)	ND	0.0634	0.0211	ND	0.0275	
	PCB 36 (BZ)	ND	ND	ND	ND	ND	
	PCB 37 (BZ)	0.00901	0.328	0.167	0.00255	0.0464	
	PCB 38 (BZ)	ND	ND	ND	ND	ND	
	PCB 39 (BZ)	ND	0.0116	ND	ND	ND	
Tetra	PCB 40, 41, 71 (BZ)	0.00689	0.546	0.211	0.00364	0.0767	
	PCB 42 (BZ)	ND	0.255	0.143	ND	0.0327	
	PCB 43, 73 (BZ)	ND	0.0259	ND	ND	ND	
	PCB 44, 47, 65 (BZ)	0.0154	0.936	0.51	0.00992	0.0811	
	PCB 45, 51 (BZ)	ND	0.170	0.103	ND	0.0324	
	PCB 46 (BZ)	ND	0.0600	0.0276	ND	ND	
	PCB 48 (BZ)	ND	0.0702	0.0444	ND	0.0228	
	PCB 49, 69 (BZ)	0.00643	0.683	0.388	0.00554	0.0771	
	PCB 50, 53 (BZ)	ND	0.175	0.0687	ND	ND	
	PCB 52 (BZ)	0.0172	1.16	0.608	0.00996	0.130	
	PCB 54 (BZ)	ND	ND	ND	ND	ND	
	PCB 55 (BZ)	ND	0.0201	ND	ND	ND	
	PCB 56 (BZ)	ND	0.373	0.214	0.00268	0.0506	
	PCB 57 (BZ)	ND	ND	ND	ND	ND	
	PCB 58 (BZ)	ND	ND	ND	ND	ND	
	PCB 59, 62, 75 (BZ)	ND	0.0812	0.0608	ND	0.0129	
	PCB 60 (BZ)	ND	0.0962	0.0712	ND	0.0183	
	PCB 61, 70, 74, 76 (BZ)	0.0162	1.25	0.703	0.00807	0.132	
	PCB 63 (BZ)	ND	0.0371	0.0193	ND	0.00712	
	PCB 64 (BZ)	ND	0.339	0.174	0.00308	0.0490	
	PCB 66 (BZ)	0.0142	0.974	0.614	0.00423	0.0936	
	PCB 67 (BZ)	ND	0.0221	0.0198	ND	0.0123	
	PCB 68 (BZ)	ND	0.0224	0.0187	ND	ND	
	PCB 72 (BZ)	ND	0.0328	0.028	ND	ND	
	PCB 77 (BZ)	ND	0.217	0.103	ND	0.0284	38
	PCB 78 (BZ)	ND	ND	ND	ND	ND	
	PCB 79 (BZ)	ND	0.0243	0.0141	ND	ND	
	PCB 80 (BZ)	ND	ND	ND	ND	ND	
	PCB 81 (BZ)	ND	ND	ND	ND	0.0110	12
Penta	PCB 82 (BZ)	ND	0.281	0.0408	ND	ND	
	PCB 83, 99 (BZ)	ND	1.63	0.71	0.00743	0.118	
	PCB 84 (BZ)	ND	0.645	0.183	ND	0.0328	
	PCB 85, 116, 117 (BZ)	ND	0.375	0.123	0.00229	ND	
	PCB 86, 87, 97, 109, 119, 125 (BZ)	ND	1.4	0.497	0.00624	0.112	
	PCB 88, 91 (BZ)	ND	0.474	0.141	ND	ND	
	PCB 89 (BZ)	ND	ND	ND	ND	ND	

Table D.3.1 Summary of Top Sample PCB Data Validation
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Homologs	Client ID	TB-1T	TB-2T	TB-3T	TB-4T	TB-5T	DNREC Screening Value (ng/g)
	Lab Sample ID	H6J10404-004	H6J050416001	H6J100405-003	H6J100404-003	H6J130401-001	
	Batch	6307010	6301027	6307010	6307010	6322013	
	Unit	ng/g	ng/g	ng/g	ng/g	ng/g	
	DIOXIN-1668A-SOIL	Result	Result	Result	Result	Result	
	SOIL BY 1668A						
Penta	PCB 90, 101, 113 (BZ)	0.0168	2.25	0.975	0.0114	0.152	
	PCB 92 (BZ)	ND	0.46	0.204	0.00302	0.0371	
	PCB 93, 100 (BZ)	ND	0.0672	0.0464	ND	ND	
	PCB 94 (BZ)	ND	ND	ND	ND	ND	
	PCB 95 (BZ)	0.0193	1.8	0.757	0.0079	0.119	
	PCB 96 (BZ)	ND	ND	ND	ND	ND	
	PCB 98, 102 (BZ)	ND	0.079	0.0491	ND	ND	
	PCB 103 (BZ)	ND	ND	0.0414	ND	ND	
	PCB 104 (BZ)	ND	ND	ND	ND	ND	
	PCB 105 (BZ)	ND	0.515	0.244	0.0034	0.0357	120
	PCB 106 (BZ)	ND	ND	ND	ND	0.0116	
	PCB 107 (BZ)/109 (IUPAC)	ND	0.2	0.0654	0.00177	0.0180	
	PCB 108, 124 (BZ)/107 (IUPAC)	ND	0.0655	0.0199	ND	0.0290	
	PCB 110, 115 (BZ)	0.0268	2.94	1.09	0.0138	0.208	
	PCB 111 (BZ)	ND	ND	ND	ND	ND	
	PCB 112 (BZ)	ND	ND	ND	ND	ND	
	PCB 114 (BZ)	ND	0.0248	0.013	0.000954	ND	120
	PCB 118 (BZ)	ND	1.75	0.784	0.00683	0.125	120
	PCB 120 (BZ)	ND	ND	ND	ND	ND	
	PCB 121 (BZ)	ND	ND	ND	ND	ND	
	PCB 122 (BZ)	ND	ND	ND	ND	ND	
	PCB 123 (BZ)	ND	0.022	0.0174	ND	0.0151	120
	PCB 126 (BZ)	ND	0.0151	0.00493	ND	0.0225	0.036
	PCB 127 (BZ)	ND	ND	ND	0.00144	ND	
Hexa	PCB 128, 166 (BZ)	ND	0.539	ND	Not Valid	0.0592	
	PCB 129, 138, 160, 163 (BZ)	0.0245	3.32	1.31	0.0109	0.169	
	PCB 130 (BZ)	ND	0.218	0.0872	ND	0.0196	
	PCB 131 (BZ)	ND	0.0462	ND	ND	ND	
	PCB 132 (BZ)	ND	1.06	0.344	ND	0.0713	
	PCB 133 (BZ)	ND	0.115	0.0468	ND	ND	
	PCB 134, 143 (BZ)	ND	0.184	0.0514	ND	ND	
	PCB 135, 151 (BZ)	ND	0.961	0.468	ND	0.100	
	PCB 136 (BZ)	ND	0.383	0.161	ND	0.0409	
	PCB 137 (BZ)	ND	0.131	0.0353	ND	ND	
	PCB 139, 140 (BZ)	ND	0.0705	0.0189	ND	ND	
	PCB 141 (BZ)	ND	0.507	0.18	ND	0.0330	
	PCB 142 (BZ)	ND	ND	ND	ND	ND	
	PCB 144 (BZ)	ND	0.0839	0.0352	ND	ND	
	PCB 145 (BZ)	ND	ND	ND	ND	ND	
	PCB 146 (BZ)	ND	0.668	0.331	0.0029	0.0562	
	PCB 147, 149 (BZ)	0.0220	2.59	1.3	0.00934	0.18	
	PCB 148 (BZ)	ND	ND	ND	ND	ND	
	PCB 150 (BZ)	ND	ND	ND	ND	0.0137	
	PCB 152 (BZ)	ND	ND	ND	ND	ND	
	PCB 153, 168 (BZ)	0.0250	2.72	1.37	0.008	0.162	
	PCB 154 (BZ)	ND	0.172	0.0876	ND	0.0524	
	PCB 155 (BZ)	ND	ND	ND	ND	0.0118	
	PCB 156, 157 (BZ)	ND	0.361	0.101	0.00209	0.0395	120
	PCB 158 (BZ)	ND	0.258	0.0841	ND	0.0161	
	PCB 159 (BZ)	ND	ND	ND	ND	ND	
	PCB 161 (BZ)	ND	ND	ND	ND	ND	
	PCB 162 (BZ)	ND	0.0257	ND	ND	0.0146	
	PCB 164 (BZ)	ND	0.234	0.0919	ND	0.0143	
	PCB 165 (BZ)	ND	ND	0.00562	ND	ND	
	PCB 167 (BZ)	ND	0.157	ND	ND	0.0242	120
	PCB 169 (BZ)	ND	ND	ND	ND	0.250	0.12
Hepta	PCB 170 (BZ)	0.00698	0.68	0.339	ND	0.0760	NVP
	PCB 171, 173 (BZ)	ND	0.227	0.0953	ND	0.0600	
	PCB 172 (BZ)	ND	0.151	0.0371	ND	0.163	
	PCB 174 (BZ)	ND	0.705	0.373	ND	0.227	
	PCB 175 (BZ)	ND	0.0322	0.0199	ND	0.0527	
	PCB 176 (BZ)	ND	0.131	0.0469	ND	ND	
	PCB 177 (BZ)	ND	0.487	0.222	ND	0.168	
	PCB 178 (BZ)	ND	0.243	0.129	ND	0.246	
	PCB 179 (BZ)	ND	0.355	0.199	ND	0.144	
	PCB 180, 193 (BZ)	0.0195	1.36	0.863	0.00474	0.431	NVP
	PCB 181 (BZ)	ND	0.0405	ND	ND	ND	
	PCB 182 (BZ)	ND	0.037	0.00941	ND	0.0213	
	PCB 183, 185 (BZ)	0.00895	0.553	0.306	ND	0.341	
	PCB 184 (BZ)	ND	ND	ND	ND	ND	

Table D.3.1 Summary of Top Sample PCB Data Validation
October 2016 Sampling Event
Edgemoor, Delaware

Homologs	Client ID	TB-1T	TB-2T	TB-3T	TB-4T	TB-5T	DNREC Screening Value (ng/g)
	Lab Sample ID	H6J10404-004	H6J050416001	H6J100405-003	H6J100404-003	H6J130401-001	
	Batch	6307010	6301027	6307010	6307010	6322013	
	Unit	ng/g	ng/g	ng/g	ng/g	ng/g	
	DIOXIN-1668A-SOIL	Result	Result	Result	Result	Result	
	SOIL BY 1668A						
Hepta	PCB 186 (BZ)	ND	ND	ND	ND	ND	
	PCB 187 (BZ)	0.0164	1.1	0.745	ND	0.989	
	PCB 188 (BZ)	ND	0.0614	0.027	ND	0.0388	
	PCB 189 (BZ)	ND	0.0305	0.014	ND	0.0328	130
	PCB 190 (BZ)	ND	0.119	0.0701	ND	ND	
	PCB 191 (BZ)	ND	0.0401	ND	ND	ND	
	PCB 192 (BZ)	ND	ND	ND	ND	ND	
Octa	PCB 194 (BZ)	0.00460	0.522	0.389	ND	2.04	
	PCB 195 (BZ)	ND	0.195	0.11	ND	0.259	
	PCB 196 (BZ)	ND	0.506	0.309	ND	3.12	
	PCB 197 (BZ)	ND	0.095	0.0421	ND	0.141	
	PCB 198, 201 (BZ)	ND	1.36	1.06	0.00569	25.8	
	PCB 199 (BZ)/200 (IUPAC)	ND	0.0644	0.0426	ND	0.207	
	PCB 200 (BZ)/201 (IUPAC)	ND	0.199	0.106	ND	1.07	
	PCB 202 (BZ)	ND	0.457	0.308	ND	8.48	
	PCB 203 (BZ)	ND	0.573	0.347	ND	7.75	
	PCB 204 (BZ)	ND	ND	ND	ND	0.0346	
	PCB 205 (BZ)	ND	0.04	0.0118	ND	0.239	
Nona	PCB 206 (BZ)	0.0390	5.45	5.02	0.0137	141	
	PCB 207 (BZ)	ND	0.533	0.399	ND	6.30	
	PCB 208 (BZ)	0.0141	2.61	2.22	0.0105	64.2	
Deca	PCB 209 (BZ)	0.0512	8.28	7.48	0.0225	168	
	Monochlorobiphenyls	0.0210	0.210	0.0958	0.0216	0.120	
	Dichlorobiphenyls	0.0752	1.26	0.73	0.0246	0.320	
	Trichlorobiphenyls	0.0351	2.78	1.82	0.0181	0.416	
	Tetrachlorobiphenyls	0.0763	7.57	4.1	0.047	0.868	
	Pentachlorobiphenyls	0.0629	15.0	6.0	0.066	1.04	
	Hexachlorobiphenyls	0.0715	14.8	6.1	0.0332	1.33	
	Heptachlorobiphenyls	0.0518	6.35	3.50	0.00474	2.99	
	Octachlorobiphenyls	0.00460	4.01	2.73	0.0057	49.1	
	Nonachlorobiphenyls	0.0531	8.59	7.64	0.0242	212	
	Decachlorobiphenyls	0.0512	8.28	7.48	0.0225	168	
	Total PCB	0.503	68.9	40.2	0.268	436	230

(green)	=	Accepted. see appendix D.1.
(yellow)	=	Use with caution. See appendix D.1.
(red)	=	Not Valid. See appendix D.1.
(light blue)	=	coeluting congener, count once in totals

Table D.3.2 Summary of Composite Sample PCB Data Validation
October 2016 Sampling Event
Edgemoor, Delaware

Homologs	Client ID	TB-1C	TB-2C	TB-3C	TB-4C	TB-5C	DNREC Screening Value (ng/g)
	Lab Sample ID	H6J130401-002	H6J050416002	H6J100405-001	H6J100404-001	H6J130401-004	
	Batch	6322013	6295024	6307010	6307010	6322013	
	Unit	ng/g	ng/g	ng/g	ng/g	ng/g	
	DIOXIN-1668A-SOIL	Result	Result	Result	Result	Result	
	SOIL BY 1668A						
Mono	PCB 1 (BZ)	0.00132	ND	ND	0.00908	ND	
	PCB 2 (BZ)	0.00124	ND	0.00395	0.00843	ND	
	PCB 3 (BZ)	0.00326	0.00389	ND	0.0122	0.00115	
Di	PCB 4 (BZ)	ND	0.00767	ND	0.00528	ND	
	PCB 5 (BZ)	0.00466	0.0034	ND	ND	ND	
	PCB 6 (BZ)	ND	0.00417	ND	0.0204	ND	
	PCB 7 (BZ)	0.00287	ND	ND	0.00352	ND	
	PCB 8 (BZ)	ND	0.0128	0.0154	0.0127	0.00181	
	PCB 9 (BZ)	0.00189	ND	ND	ND	ND	
	PCB 10 (BZ)	ND	ND	ND	ND	ND	
	PCB 11 (BZ)	0.00825	0.0733	0.0188	0.0408	0.0136	
	PCB 12, 13 (BZ)	0.00212	ND	0.00995	0.0174	0.00184	
	PCB 14 (BZ)	0.000882	ND	ND	0.00449	ND	
	PCB 15 (BZ)	0.00376	0.0121	0.0142	0.0287	0.00251	
Tri	PCB 16 (BZ)	0.00385	ND	ND	ND	ND	
	PCB 17 (BZ)	0.00258	ND	ND	0.0255	ND	
	PCB 18, 30 (BZ)	0.00448	0.0119	0.0106	0.0249	0.00384	
	PCB 19 (BZ)	ND	ND	ND	ND	ND	
	PCB 20, 28 (BZ)	0.00399	0.0308	0.0169	0.0501	0.00293	
	PCB 21, 33 (BZ)	0.00322	0.00995	0.00530	0.0111	0.00206	
	PCB 22 (BZ)	0.00289	0.00362	0.00413	0.00690	0.00115	
	PCB 23 (BZ)	ND	ND	ND	ND	ND	
	PCB 24 (BZ)	ND	ND	ND	ND	ND	
	PCB 25 (BZ)	0.00072	0.00749	0.00611	0.0275	ND	
	PCB 26, 29 (BZ)	0.0017	0.00515	0.00731	0.0313	ND	
	PCB 27 (BZ)	ND	ND	ND	ND	ND	
	PCB 31 (BZ)	0.00258	0.0183	0.0149	0.0420	0.00122	
	PCB 32 (BZ)	0.00309	ND	ND	0.0177	ND	
	PCB 34 (BZ)	ND	ND	ND	ND	ND	
	PCB 35 (BZ)	0.000918	ND	ND	0.0047	ND	
	PCB 36 (BZ)	ND	ND	ND	0.00176	ND	
	PCB 37 (BZ)	0.00233	0.0082	0.00371	0.0143	ND	
	PCB 38 (BZ)	ND	ND	ND	ND	ND	
	PCB 39 (BZ)	ND	ND	ND	ND	ND	
Tetra	PCB 40, 41, 71 (BZ)	0.00345	ND	0.0140	0.0469	0.00313	
	PCB 42 (BZ)	0.00153	ND	0.00589	0.0306	ND	
	PCB 43, 73 (BZ)	ND	ND	ND	ND	ND	
	PCB 44, 47, 65 (BZ)	0.00340	0.383	0.0286	0.149	0.0179	
	PCB 45, 51 (BZ)	0.000785	0.0452	ND	0.0164	0.00383	
	PCB 46 (BZ)	ND	ND	ND	ND	ND	
	PCB 48 (BZ)	ND	ND	0.00337	ND	ND	
	PCB 49, 69 (BZ)	ND	0.0108	0.0195	0.0930	ND	
	PCB 50, 53 (BZ)	ND	ND	ND	0.00767	ND	
	PCB 52 (BZ)	0.00209	0.0206	0.0366	0.135	ND	
	PCB 54 (BZ)	ND	ND	ND	ND	ND	
	PCB 55 (BZ)	0.00120	ND	ND	ND	ND	
	PCB 56 (BZ)	0.00272	ND	0.00754	0.0153	ND	
	PCB 57 (BZ)	ND	ND	ND	ND	ND	
	PCB 58 (BZ)	ND	ND	ND	ND	ND	
	PCB 59, 62, 75 (BZ)	ND	ND	0.00366	ND	ND	
	PCB 60 (BZ)	0.00142	0.0034	ND	0.00273	ND	
	PCB 61, 70, 74, 76 (BZ)	0.00432	0.0133	0.0389	0.0604	0.00109	
	PCB 63 (BZ)	ND	ND	ND	ND	ND	
	PCB 64 (BZ)	0.00191	ND	0.0116	0.0263	ND	
	PCB 66 (BZ)	0.00232	0.0114	0.0171	0.0494	0.00174	
	PCB 67 (BZ)	ND	ND	ND	ND	ND	
	PCB 68 (BZ)	ND	0.167	ND	0.0468	0.00466	
	PCB 72 (BZ)	ND	ND	ND	ND	ND	
	PCB 77 (BZ)	0.00145	ND	ND	0.00883	ND	38
	PCB 78 (BZ)	ND	ND	ND	ND	ND	
	PCB 79 (BZ)	0.00138	ND	ND	ND	ND	
	PCB 80 (BZ)	ND	ND	ND	ND	ND	
	PCB 81 (BZ)	0.00107	ND	ND	ND	ND	12
Penta	PCB 82 (BZ)	ND	ND	ND	ND	ND	
	PCB 83, 99 (BZ)	ND	0.00543	0.0215	0.110	ND	
	PCB 84 (BZ)	ND	ND	ND	0.0334	ND	
	PCB 85, 116, 117 (BZ)	ND	ND	ND	ND	ND	
	PCB 86, 87, 97, 109, 119, 125 (BZ)	ND	ND	0.0225	0.0531	ND	
	PCB 88, 91 (BZ)	ND	ND	ND	0.0424	ND	
	PCB 89 (BZ)	ND	ND	ND	ND	ND	

Table D.3.2 Summary of Composite Sample PCB Data Validation
October 2016 Sampling Event
Edgemoor, Delaware

Homologs	Client ID	TB-1C	TB-2C	TB-3C	TB-4C	TB-5C	DNREC Screening Value (ng/g)
	Lab Sample ID	H6J130401-002	H6J050416002	H6J100405-001	H6J100404-001	H6J130401-004	
	Batch	6322013	6295024	6307010	6307010	6322013	
	Unit	ng/g	ng/g	ng/g	ng/g	ng/g	
	DIOXIN-1668A-SOIL	Result	Result	Result	Result	Result	
	SOIL BY 1668A						
Penta	PCB 90, 101, 113 (BZ)	ND	0.00885	0.0486	0.120	ND	
	PCB 92 (BZ)	ND	ND	ND	0.0203	ND	
	PCB 93, 100 (BZ)	ND	ND	ND	ND	ND	
	PCB 94 (BZ)	ND	ND	ND	ND	ND	
	PCB 95 (BZ)	ND	0.00933	0.0302	0.142	ND	
	PCB 96 (BZ)	ND	ND	ND	ND	ND	
	PCB 98, 102 (BZ)	ND	ND	ND	ND	ND	
	PCB 103 (BZ)	ND	ND	ND	ND	ND	
	PCB 104 (BZ)	ND	ND	ND	ND	ND	
	PCB 105 (BZ)	0.00142	ND	0.00968	0.0147	ND	120
	PCB 106 (BZ)	0.00102	ND	ND	ND	ND	
	PCB 107 (BZ)/109 (IUPAC)	ND	ND	0.00282	0.00833	ND	
	PCB 108, 124 (BZ)/107 (IUPAC)	ND	ND	ND	ND	ND	
	PCB 110, 115 (BZ)	0.00232	0.0105	0.0355	0.138	0.00185	
	PCB 111 (BZ)	ND	ND	ND	ND	ND	
	PCB 112 (BZ)	ND	ND	ND	ND	ND	
	PCB 114 (BZ)	0.000978	ND	ND	ND	ND	120
	PCB 118 (BZ)	0.00165	0.00435	0.0277	0.0738	ND	120
	PCB 120 (BZ)	ND	ND	ND	ND	ND	
	PCB 121 (BZ)	ND	ND	ND	ND	ND	
	PCB 122 (BZ)	ND	ND	ND	ND	ND	
	PCB 123 (BZ)	ND	ND	ND	ND	ND	120
	PCB 126 (BZ)	0.00101	ND	ND	ND	ND	0.036
	PCB 127 (BZ)	0.00123	ND	ND	ND	ND	
Hexa	PCB 128, 166 (BZ)	ND	ND	0.00812	ND	ND	
	PCB 129, 138, 160, 163 (BZ)	0.000953	0.007	0.0433	0.112	ND	
	PCB 130 (BZ)	ND	ND	ND	0.017	ND	
	PCB 131 (BZ)	ND	ND	ND	ND	ND	
	PCB 132 (BZ)	ND	ND	0.0102	0.0366	ND	
	PCB 133 (BZ)	ND	ND	ND	ND	ND	
	PCB 134, 143 (BZ)	ND	ND	ND	ND	ND	
	PCB 135, 151 (BZ)	ND	ND	0.00974	0.0597	ND	
	PCB 136 (BZ)	ND	ND	ND	0.0206	ND	
	PCB 137 (BZ)	ND	ND	ND	ND	ND	
	PCB 139, 140 (BZ)	ND	ND	ND	ND	ND	
	PCB 141 (BZ)	ND	ND	0.00812	0.0181	ND	
	PCB 142 (BZ)	ND	ND	ND	ND	ND	
	PCB 144 (BZ)	ND	ND	ND	ND	ND	
	PCB 145 (BZ)	ND	ND	ND	ND	ND	
	PCB 146 (BZ)	ND	ND	0.00821	0.0379	ND	
	PCB 147, 149 (BZ)	0.00152	0.0177	0.0437	0.174	ND	
	PCB 148 (BZ)	ND	ND	ND	ND	ND	
	PCB 150 (BZ)	ND	ND	ND	ND	ND	
	PCB 152 (BZ)	ND	ND	ND	ND	ND	
	PCB 153, 168 (BZ)	ND	0.00657	0.0364	0.141	ND	
	PCB 154 (BZ)	ND	ND	ND	0.0128	ND	
	PCB 155 (BZ)	ND	ND	ND	ND	ND	
	PCB 156, 157 (BZ)	ND	ND	ND	0.0175	ND	120
	PCB 158 (BZ)	ND	ND	ND	ND	ND	
	PCB 159 (BZ)	ND	ND	ND	ND	ND	
	PCB 161 (BZ)	ND	ND	ND	ND	ND	
	PCB 162 (BZ)	ND	ND	ND	ND	ND	
	PCB 164 (BZ)	ND	ND	ND	0.0151	ND	
	PCB 165 (BZ)	ND	ND	ND	ND	ND	
	PCB 167 (BZ)	ND	ND	ND	ND	ND	120
	PCB 169 (BZ)	ND	ND	ND	ND	ND	0.12
Hepta	PCB 170 (BZ)	0.000853	ND	ND	0.0286	ND	NVP
	PCB 171, 173 (BZ)	ND	ND	ND	0.00952	ND	
	PCB 172 (BZ)	ND	ND	ND	ND	ND	
	PCB 174 (BZ)	ND	ND	ND	0.0395	ND	
	PCB 175 (BZ)	ND	ND	ND	ND	ND	
	PCB 176 (BZ)	ND	ND	ND	0.00631	ND	
	PCB 177 (BZ)	ND	ND	ND	0.0222	ND	
	PCB 178 (BZ)	ND	ND	ND	0.0116	ND	
	PCB 179 (BZ)	ND	ND	ND	0.0159	ND	
	PCB 180, 193 (BZ)	ND	ND	0.0280	0.0892	ND	NVP
	PCB 181 (BZ)	ND	ND	ND	ND	ND	
	PCB 182 (BZ)	ND	ND	ND	ND	ND	
	PCB 183, 185 (BZ)	ND	0.00507	ND	0.0325	ND	
	PCB 184 (BZ)	ND	ND	ND	ND	ND	

Table D.3.2 Summary of Composite Sample PCB Data Validation
October 2016 Sampling Event
Edgemoor, Delaware

Homologs	Client ID	TB-1C	TB-2C	TB-3C	TB-4C	TB-5C	DNREC Screening Value (ng/g)
	Lab Sample ID	H6J130401-002	H6J050416002	H6J100405-001	H6J100404-001	H6J130401-004	
	Batch	6322013	6295024	6307010	6307010	6322013	
	Unit	ng/g	ng/g	ng/g	ng/g	ng/g	
	DIOXIN-1668A-SOIL	Result	Result	Result	Result	Result	
	SOIL BY 1668A						
Hepta	PCB 186 (BZ)	ND	ND	ND	ND	ND	
	PCB 187 (BZ)	ND	ND	0.0162	0.0574	ND	
	PCB 188 (BZ)	ND	ND	ND	ND	ND	
	PCB 189 (BZ)	ND	ND	Not Valid	ND	ND	130
	PCB 190 (BZ)	ND	ND	ND	ND	ND	
	PCB 191 (BZ)	ND	ND	ND	ND	ND	
	PCB 192 (BZ)	ND	ND	ND	ND	ND	
Octa	PCB 194 (BZ)	ND	ND	0.00917	0.0383	ND	
	PCB 195 (BZ)	ND	ND	ND	0.0105	ND	
	PCB 196 (BZ)	ND	ND	ND	0.0285	ND	
	PCB 197 (BZ)	ND	ND	ND	ND	ND	
	PCB 198, 201 (BZ)	ND	ND	0.00704	0.106	ND	
	PCB 199 (BZ)/200 (IUPAC)	ND	ND	ND	ND	ND	
	PCB 200 (BZ)/201 (IUPAC)	ND	ND	ND	0.0144	ND	
	PCB 202 (BZ)	ND	ND	ND	0.0289	ND	
	PCB 203 (BZ)	ND	ND	0.0106	0.0432	ND	
	PCB 204 (BZ)	ND	ND	ND	ND	ND	
	PCB 205 (BZ)	ND	ND	ND	0.0108	ND	
Nona	PCB 206 (BZ)	0.00331	0.0218	0.0303	0.485	ND	
	PCB 207 (BZ)	ND	ND	ND	0.0339	ND	
	PCB 208 (BZ)	0.000875	0.0114	0.0148	0.192	ND	
Deca	PCB 209 (BZ)	0.00338	0.0277	0.0829	0.681	ND	
	Monochlorobiphenyls	0.00582	0.00389	0.00395	0.0297	0.00115	
	Dichlorobiphenyls	0.0150	0.109	0.0584	0.133	0.0154	
	Trichlorobiphenyls	0.0323	0.0954	0.0690	0.258	0.0083	
	Tetrachlorobiphenyls	0.0290	0.655	0.187	0.688	0.0324	
	Pentachlorobiphenyls	0.00963	0.0385	0.199	0.756	0.00185	
	Hexachlorobiphenyls	0.00247	0.0243	0.168	0.662	ND	
	Heptachlorobiphenyls	0.000853	0.0051	0.0442	0.313	ND	
	Octachlorobiphenyls	ND	ND	0.0268	0.281	ND	
	Nonachlorobiphenyls	0.00419	0.0332	0.0451	0.711	ND	
	Decachlorobiphenyls	0.00338	0.0277	0.0829	0.681	ND	
	Total PCB	0.103	0.99	0.883	4.51	0.0591	230

(green) = Accepted. see appendix D.1.
(yellow) = Use with caution. See appendix D.1.
(red) = Not Valid. See appendix D.1.
(light blue) = coeluting congener, count once in totals

Table D.3.3 Summary of Bottom Sample PCB Data Validation
October 2016 Sampling Event
Edgemoor, Delaware

Homologs	Client ID	TB-1B	TB-2B	TB-3B	TB-4B	TB-5B	DNREC Screening Value (ng/g)
	Lab Sample ID	H6J130401-003	H6J050416003	H6J100405-002	H6J100404-002	H6J130401-005	
	Batch	6322013	6295024	630710	6307010	632213	
	Unit	ng/g	ng/g	ng/g	ng/g	ng/g	
	DIOXIN-1668A-SOIL	Result	Result	Result	Result	Result	
	SOIL BY 1668A						
Mono	PCB 1 (BZ)	ND	ND	ND	ND	ND	
	PCB 2 (BZ)	ND	ND	ND	ND	ND	
	PCB 3 (BZ)	ND	0.00244	ND	ND	ND	
Di	PCB 4 (BZ)	0.0019	ND	ND	0.00108	ND	
	PCB 5 (BZ)	ND	ND	ND	ND	ND	
	PCB 6 (BZ)	ND	ND	ND	ND	ND	
	PCB 7 (BZ)	ND	0.00302	ND	0.000986	0.00114	
	PCB 8 (BZ)	0.0024	ND	0.000949	0.00104	0.00177	
	PCB 9 (BZ)	ND	0.00445	ND	ND	ND	
	PCB 10 (BZ)	ND	ND	ND	ND	ND	
	PCB 11 (BZ)	0.0137	0.0128	0.00351	0.00473	0.00802	
	PCB 12, 13 (BZ)	0.00116	0.00599	0.00112	ND	ND	
	PCB 14 (BZ)	ND	ND	ND	ND	ND	
	PCB 15 (BZ)	0.00104	0.00696	ND	0.000916	ND	
Tri	PCB 16 (BZ)	ND	ND	ND	ND	ND	
	PCB 17 (BZ)	ND	ND	ND	ND	ND	
	PCB 18, 30 (BZ)	ND	ND	ND	ND	ND	
	PCB 19 (BZ)	ND	ND	ND	ND	ND	
	PCB 20, 28 (BZ)	0.0023	0.004	0.000743	ND	0.000476	
	PCB 21, 33 (BZ)	0.00201	0.00189	0.000474	ND	0.000756	
	PCB 22 (BZ)	ND	0.00121	ND	ND	ND	
	PCB 23 (BZ)	ND	ND	ND	ND	ND	
	PCB 24 (BZ)	ND	ND	ND	ND	ND	
	PCB 25 (BZ)	ND	ND	ND	ND	ND	
	PCB 26, 29 (BZ)	ND	ND	ND	ND	ND	
	PCB 27 (BZ)	ND	ND	ND	ND	ND	
	PCB 31 (BZ)	0.0018	0.00314	0.000734	ND	0.000439	
	PCB 32 (BZ)	ND	ND	ND	ND	0.00107	
	PCB 34 (BZ)	ND	ND	ND	ND	ND	
	PCB 35 (BZ)	ND	ND	ND	ND	ND	
	PCB 36 (BZ)	ND	ND	ND	ND	ND	
	PCB 37 (BZ)	0.000878	0.00249	ND	ND	ND	
	PCB 38 (BZ)	ND	ND	ND	ND	ND	
	PCB 39 (BZ)	ND	ND	ND	ND	ND	
Tetra	PCB 40, 41, 71 (BZ)	ND	ND	ND	ND	ND	
	PCB 42 (BZ)	ND	ND	ND	ND	ND	
	PCB 43, 73 (BZ)	ND	ND	ND	ND	ND	
	PCB 44, 47, 65 (BZ)	0.0373	0.0154	ND	0.00130	0.00351	
	PCB 45, 51 (BZ)	ND	ND	ND	ND	ND	
	PCB 46 (BZ)	ND	ND	ND	ND	ND	
	PCB 48 (BZ)	0.000912	ND	ND	ND	ND	
	PCB 49, 69 (BZ)	ND	ND	ND	ND	ND	
	PCB 50, 53 (BZ)	ND	ND	ND	ND	ND	
	PCB 52 (BZ)	0.00204	ND	ND	ND	ND	
	PCB 54 (BZ)	ND	ND	ND	ND	ND	
	PCB 55 (BZ)	ND	ND	ND	ND	ND	
	PCB 56 (BZ)	ND	ND	ND	ND	ND	
	PCB 57 (BZ)	ND	ND	ND	ND	ND	
	PCB 58 (BZ)	ND	ND	ND	ND	ND	
	PCB 59, 62, 75 (BZ)	ND	ND	ND	ND	ND	
	PCB 60 (BZ)	ND	ND	ND	ND	ND	
	PCB 61, 70, 74, 76 (BZ)	0.00188	0.00363	0.00112	ND	0.00159	
	PCB 63 (BZ)	ND	ND	ND	ND	ND	
	PCB 64 (BZ)	ND	ND	ND	ND	ND	
	PCB 66 (BZ)	0.00164	ND	ND	ND	ND	
	PCB 67 (BZ)	ND	ND	ND	ND	ND	
	PCB 68 (BZ)	0.0226	0.00252	ND	ND	ND	
	PCB 72 (BZ)	ND	ND	ND	ND	ND	
	PCB 77 (BZ)	ND	ND	ND	ND	ND	38
	PCB 78 (BZ)	ND	ND	ND	ND	ND	
	PCB 79 (BZ)	ND	ND	ND	ND	ND	
	PCB 80 (BZ)	ND	ND	ND	ND	ND	
	PCB 81 (BZ)	ND	ND	ND	ND	ND	12
Penta	PCB 82 (BZ)	ND	ND	ND	ND	ND	
	PCB 83, 99 (BZ)	ND	ND	ND	ND	ND	
	PCB 84 (BZ)	ND	ND	ND	ND	ND	
	PCB 85, 116, 117 (BZ)	ND	ND	ND	ND	ND	
	PCB 86, 87, 97, 109, 119, 125 (BZ)	ND	ND	ND	0.000513	ND	
	PCB 88, 91 (BZ)	ND	ND	ND	ND	ND	
	PCB 89 (BZ)	ND	ND	ND	ND	ND	

Duffield Associates, Inc.
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Table D.3.3 Summary of Bottom Sample PCB Data Validation
October 2016 Sampling Event
Edgemoor, Delaware

Homologs	Client ID	TB-1B	TB-2B	TB-3B	TB-4B	TB-5B	DNREC Screening Value (ng/g)
	Lab Sample ID	H6J130401-003	H6J050416003	H6J100405-002	H6J100404-002	H6J130401-005	
	Batch	6322013	6295024	630710	6307010	632213	
	Unit	ng/g	ng/g	ng/g	ng/g	ng/g	
	DIOXIN-1668A-SOIL	Result	Result	Result	Result	Result	
	SOIL BY 1668A						
Penta	PCB 90, 101, 113 (BZ)	ND	ND	ND	ND	ND	
	PCB 92 (BZ)	ND	ND	ND	ND	ND	
	PCB 93, 100 (BZ)	ND	ND	ND	ND	ND	
	PCB 94 (BZ)	ND	ND	ND	ND	ND	
	PCB 95 (BZ)	ND	ND	ND	ND	ND	
	PCB 96 (BZ)	ND	ND	ND	ND	ND	
	PCB 98, 102 (BZ)	ND	ND	ND	ND	ND	
	PCB 103 (BZ)	ND	ND	ND	ND	ND	
	PCB 104 (BZ)	ND	ND	ND	ND	ND	
	PCB 105 (BZ)	ND	ND	ND	ND	ND	120
	PCB 106 (BZ)	ND	ND	ND	ND	ND	
	PCB 107 (BZ)/109 (IUPAC)	ND	ND	ND	ND	ND	
	PCB 108, 124 (BZ)/107 (IUPAC)	ND	ND	ND	ND	ND	
	PCB 110, 115 (BZ)	0.00143	0.00133	0.000902	ND	ND	
	PCB 111 (BZ)	ND	ND	ND	ND	ND	
	PCB 112 (BZ)	ND	ND	ND	ND	ND	
	PCB 114 (BZ)	ND	ND	ND	ND	ND	120
	PCB 118 (BZ)	ND	ND	ND	ND	ND	120
	PCB 120 (BZ)	ND	ND	ND	ND	ND	
	PCB 121 (BZ)	ND	ND	ND	ND	ND	
	PCB 122 (BZ)	ND	ND	ND	ND	ND	
	PCB 123 (BZ)	ND	ND	ND	ND	ND	120
	PCB 126 (BZ)	ND	ND	ND	ND	ND	0.036
	PCB 127 (BZ)	ND	ND	ND	ND	ND	
Hexa	PCB 128, 166 (BZ)	ND	ND	ND	ND	ND	
	PCB 129, 138, 160, 163 (BZ)	0.000964	ND	0.00164	ND	ND	
	PCB 130 (BZ)	ND	ND	ND	ND	ND	
	PCB 131 (BZ)	ND	ND	ND	ND	ND	
	PCB 132 (BZ)	ND	ND	ND	ND	ND	
	PCB 133 (BZ)	ND	ND	ND	ND	ND	
	PCB 134, 143 (BZ)	ND	ND	ND	ND	ND	
	PCB 135, 151 (BZ)	ND	ND	ND	ND	ND	
	PCB 136 (BZ)	ND	ND	ND	ND	ND	
	PCB 137 (BZ)	ND	ND	ND	ND	ND	
	PCB 139, 140 (BZ)	ND	ND	ND	ND	ND	
	PCB 141 (BZ)	ND	ND	ND	ND	ND	
	PCB 142 (BZ)	ND	ND	ND	ND	ND	
	PCB 144 (BZ)	ND	ND	ND	ND	ND	
	PCB 145 (BZ)	ND	ND	ND	ND	ND	
	PCB 146 (BZ)	ND	ND	ND	ND	ND	
	PCB 147, 149 (BZ)	ND	ND	0.00143	ND	ND	
	PCB 148 (BZ)	ND	ND	ND	ND	ND	
	PCB 150 (BZ)	ND	ND	ND	ND	ND	
	PCB 152 (BZ)	ND	ND	ND	ND	ND	
	PCB 153, 168 (BZ)	ND	ND	0.00118	ND	ND	
	PCB 154 (BZ)	ND	ND	ND	ND	ND	
	PCB 155 (BZ)	ND	ND	ND	ND	ND	
	PCB 156, 157 (BZ)	ND	ND	ND	ND	ND	120
	PCB 158 (BZ)	ND	ND	ND	ND	ND	
	PCB 159 (BZ)	ND	ND	ND	ND	ND	
	PCB 161 (BZ)	ND	ND	ND	ND	ND	
	PCB 162 (BZ)	ND	ND	ND	ND	ND	
	PCB 164 (BZ)	ND	ND	ND	ND	ND	
	PCB 165 (BZ)	ND	ND	ND	ND	ND	
	PCB 167 (BZ)	ND	ND	ND	ND	ND	120
	PCB 169 (BZ)	ND	ND	ND	ND	ND	0.12
Hepta	PCB 170 (BZ)	ND	ND	ND	ND	ND	NVP
	PCB 171, 173 (BZ)	ND	ND	ND	ND	ND	
	PCB 172 (BZ)	ND	ND	ND	ND	ND	
	PCB 174 (BZ)	ND	ND	ND	ND	ND	
	PCB 175 (BZ)	ND	ND	ND	ND	ND	
	PCB 176 (BZ)	ND	ND	ND	ND	ND	
	PCB 177 (BZ)	ND	ND	ND	ND	ND	
	PCB 178 (BZ)	ND	ND	ND	ND	ND	
	PCB 179 (BZ)	ND	ND	ND	ND	ND	
	PCB 180, 193 (BZ)	ND	ND	ND	ND	ND	NVP
	PCB 181 (BZ)	ND	ND	ND	ND	ND	
	PCB 182 (BZ)	ND	ND	ND	ND	ND	
	PCB 183, 185 (BZ)	ND	ND	ND	ND	ND	
	PCB 184 (BZ)	ND	ND	ND	ND	ND	

Table D.3.3 Summary of Bottom Sample PCB Data Validation
October 2016 Sampling Event
Edgemoor, Delaware

Homologs	Client ID	TB-1B	TB-2B	TB-3B	TB-4B	TB-5B	DNREC Screening Value (ng/g)
	Lab Sample ID	H6J130401-003	H6J050416003	H6J100405-002	H6J100404-002	H6J130401-005	
	Batch	6322013	6295024	630710	6307010	632213	
	Unit	ng/g	ng/g	ng/g	ng/g	ng/g	
	DIOXIN-1668A-SOIL	Result	Result	Result	Result	Result	
	SOIL BY 1668A						
Hepta	PCB 186 (BZ)	ND	ND	ND	ND	ND	
	PCB 187 (BZ)	ND	ND	ND	ND	ND	
	PCB 188 (BZ)	ND	ND	ND	ND	ND	
	PCB 189 (BZ)	ND	ND	ND	ND	ND	130
	PCB 190 (BZ)	ND	ND	ND	ND	ND	
	PCB 191 (BZ)	ND	ND	ND	ND	ND	
	PCB 192 (BZ)	ND	ND	ND	ND	ND	
Octa	PCB 194 (BZ)	0.0018	ND	ND	ND	ND	
	PCB 195 (BZ)	ND	ND	ND	ND	ND	
	PCB 196 (BZ)	ND	ND	ND	ND	ND	
	PCB 197 (BZ)	ND	ND	ND	ND	ND	
	PCB 198, 201 (BZ)	ND	ND	ND	ND	ND	
	PCB 199 (BZ)/200 (IUPAC)	ND	ND	ND	ND	ND	
	PCB 200 (BZ)/201 (IUPAC)	ND	ND	ND	ND	ND	
	PCB 202 (BZ)	ND	ND	ND	ND	ND	
	PCB 203 (BZ)	ND	ND	ND	ND	ND	
	PCB 204 (BZ)	ND	ND	ND	ND	ND	
	PCB 205 (BZ)	ND	ND	ND	ND	ND	
Nona	PCB 206 (BZ)	ND	ND	ND	ND	ND	
	PCB 207 (BZ)	ND	ND	ND	ND	ND	
	PCB 208 (BZ)	ND	ND	ND	ND	ND	
Deca	PCB 209 (BZ)	ND	ND	ND	ND	ND	
Monochlorobiphenyls		ND	0.00244	ND	ND	ND	
Dichlorobiphenyls		0.0168	0.0332	0.000949	0.00104	0.00802	
Trichlorobiphenyls		0.00469	0.0115	0.000474	ND	0.00227	
Tetrachlorobiphenyls		0.0664	0.0216	ND	ND	0.00510	
Pentachlorobiphenyls		0.00143	ND	ND	0.000513	ND	
Hexachlorobiphenyls		0.000964	ND	ND	ND	ND	
Heptachlorobiphenyls		ND	ND	ND	ND	ND	
Octachlorobiphenyls		0.00180	ND	ND	ND	ND	
Nonachlorobiphenyls		ND	ND	ND	ND	ND	
Decachlorobiphenyls		ND	ND	ND	ND	ND	
Total PCB		0.0920	0.0687	0.00142	0.0016	0.0154	230

Color		Meaning
(green)	=	Accepted. see appendix D.1.
(yellow)	=	Use with caution. See appendix D.1.
(red)	=	Not Valid. See appendix D.1.
(light blue)	=	coeluting congener, count once in totals

Table D.4.1 Summary of Top Sample TEQ Data Validation
October 2016 Sampling Event
Edgemoor, Delaware

Client ID		**TB-1T**		**TB-2T**		**TB-3T**		**TB-4T**		**TB-5T**	
Lab Sample ID	TEF	H6J10404-004	TEQ	H6J050416001	TEQ	H6J100405-003	TEQ	H6J100404-003	TEQ	H6J130401-001	TEQ
Batch		6307010		6301027		6307010		6307010		6322013	
Unit	NA	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g
PCB 77 (BZ)	0.0001	ND	ND	0.217	0.0000217	0.103	0.0000103	ND	ND	0.0284	0.00000284
PCB 81 (BZ)	0.0003	ND	ND	ND	ND	ND	ND	ND	ND	0.0110	0.0000033
PCB 105 (BZ)	0.00003	ND	ND	0.515	0.0000155	0.244	0.00000732	0.0034	0.000000102	0.0357	0.000001071
PCB 114 (BZ)	0.00003	ND	ND	0.0248	0.000000744	0.013	0.000000390	0.000954	0.0000000286	ND	ND
PCB 118 (BZ)	0.00003	ND	ND	1.75	0.0000525	0.784	0.0000235	0.00683	0.000000205	0.125	0.00000375
PCB 123 (BZ)	0.00003	ND	ND	0.0220	0.000000660	0.0174	0.000000522	ND	ND	0.0151	0.000000453
PCB 126 (BZ)	0.1	ND	ND	0.0151	0.00151	0.00493	0.000493	ND	ND	0.0225	0.00225
PCB 156, 157 (BZ)	0.00003	ND	ND	0.361	0.0000108	0.101	0.00000303	0.00209	0.0000000627	0.0395	0.000001185
PCB 167 (BZ)	0.00003	ND	ND	0.157	0.00000471	ND	ND	ND	ND	0.0242	0.000000726
PCB 169 (BZ)	0.03	ND	ND	ND	ND	ND	ND	ND	ND	0.250	0.0075
PCB 170 (BZ)	0.0001	0.00698	0.000000698	0.680	0.0000680	0.339	0.0000339	ND	ND	0.0760	0.0000076
PCB 180, 193 (BZ)	0.00001	0.0195	0.000000195	1.36	0.0000136	0.863	0.00000863	0.00474	0.0000000474	0.431	0.00000431
PCB 189 (BZ)	0.00003	ND	ND	0.0305	0.000000915	0.014	0.000000420	ND	ND	0.0328	0.000000984
Total PCB TEQ			0.000000893		0.00170		0.000581		0.000000446		0.00978
Dioxins	TEF	ng/g	TEQ	ng/g	TEQ	ng/g	TEQ	ng/g	TEQ	ng/g	TEQ
2,3,7,8-TCDD	1	0.000347	0.000347	0.000346	0.000346	ND	ND	0.000254	0.000254	0.000444	0.000444
1,2,3,7,8-PeCDD	1	0.00187	0.00187	0.00108	0.00108	0.000688	0.000688	0.00163	0.00163	0.00171	0.00171
1,2,3,4,7,8-HxCDD	0.1	0.00373	0.000373	0.00207	0.000207	0.00141	0.000141	0.0036	0.00036	0.00345	0.000345
1,2,3,6,7,8-HxCDD	0.1	0.00551	0.000551	0.00354	0.000354	0.00211	0.000211	0.00585	0.000585	0.00539	0.000539
1,2,3,7,8,9-HxCDD	0.1	0.0121	0.00121	0.00575	0.000575	0.00417	0.000417	0.0121	0.00121	0.00927	0.000927
1,2,3,4,6,7,8-HpCDD	0.01	0.231	0.00231	0.091	0.000910	0.085	0.00085	0.227	0.00227	0.177	0.00177
OCDD	0.0003	5.54	0.001662	1.73	0.000519	2.69	0.000807	5.85	0.001755	5.38	0.001614
Total Dioxin TEQ			0.008323		0.00399		0.00311		0.00806		0.00735
Furans	TEF	ng/g	TEQ	ng/g	TEQ	ng/g	TEQ	ng/g	TEQ	ng/g	TEQ
2,3,7,8-TCDF	0.1	0.01	0.00100	0.00363	0.000363	0.00421	0.000421	0.00823	0.000823	0.012	0.0012
1,2,3,7,8-PeCDF	0.03	0.00192	0.0000576	0.00124	0.0000372	0.00104	0.0000312	0.00146	0.0000438	0.0182	0.000546
2,3,4,7,8-PeCDF	0.3	0.00156	0.000468	0.00225	0.000675	0.000913	0.0002739	0.00118	0.000354	0.0116	0.00348
1,2,3,4,7,8-HxCDF	0.1	0.00401	0.000401	0.00493	0.000493	0.0012	0.00012	0.00168	0.000168	0.0879	0.00879
1,2,3,6,7,8-HxCDF	0.1	0.000935	0.0000935	0.00211	0.000211	0.000375	0.0000375	0.000623	0.0000623	0.0283	0.00283
2,3,4,6,7,8-HxCDF	0.1	0.000413	0.0000413	0.00147	0.000147	0.000222	0.0000222	0.000367	0.0000367	0.00916	0.000916
1,2,3,7,8,9-HxCDF	0.1	0.000211	0.0000211	0.000241	0.0000241	ND	ND	0.000116	0.0000116	0.00335	0.000335
1,2,3,4,6,7,8-HpCDF	0.01	0.00383	0.0000383	0.022	0.000220	0.00191	0.0000191	0.00243	0.0000243	0.35	0.0035
1,2,3,4,7,8,9-HpCDF	0.01	0.00379	0.0000379	0.0016	0.0000160	0.000309	0.00000309	0.000489	0.00000489	0.0511	0.000511
OCDF	0.0003	0.0163	0.00000489	0.0669	0.0000201	0.00615	0.000001845	0.00397	0.000001191	2.41	0.000723
Total Furan TEQ			0.00216		0.00221		0.000930		0.00153		0.0228
Total TEQ			**0.0105**		**0.00790**		**0.00462**		**0.00959**		**0.0400**
Screening Conclusions											
Human Health	0.0048	ng/g	**Exceeds**		**Exceeds**		**OK**		**Exceeds**		**Exceeds**
Ecological Sediment	0.00085	ng/g	**Exceeds**		**Exceeds**		**Exceeds**		**Exceeds**		**Exceeds**
Ecological Surface Soil	0.003	ng/g	**Exceeds**		**Exceeds**		**Exceeds**		**Exceeds**		**Exceeds**

Duffield Associates, Inc.
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Table D.4.2 Summary of Composite Sample TEQ Data Validation
October 2016 Sampling Event
Edgemoor, Delaware

Client ID		**TB-1C**		**TB-2C**		**TB-3C**		**TB-4C**		**TB-5C**	
Lab Sample ID	TEF	H6J130401-002	TEQ	H6J050416002	TEQ	H6J100405-001	TEQ	H6J100404-001	TEQ	H6J130401-004	TEQ
Batch		6322013		6295024		6307010		6307010		6322013	
Unit	NA	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g
PCB 77 (BZ)	0.0001	0.00145	ND	ND	ND	ND	ND	0.00883	ND	ND	ND
PCB 81 (BZ)	0.0003	0.00107	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB 105 (BZ)	0.00003	0.00142	ND	ND	ND	0.00968	0.000000290	0.0147	0.000000441	ND	ND
PCB 114 (BZ)	0.00003	0.000978	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB 118 (BZ)	0.00003	0.00165	ND	0.00435	0.000000131	0.0277	0.000000831	0.0738	0.00000221	ND	ND
PCB 123 (BZ)	0.00003	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB 126 (BZ)	0.1	0.00101	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB 156, 157 (BZ)	0.00003	ND	ND	ND	ND	ND	ND	0.0175	0.000000525	ND	ND
PCB 167 (BZ)	0.00003	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB 169 (BZ)	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB 170 (BZ)	0.0001	0.000853	0.0000000853	ND	ND	ND	ND	0.0286	ND	ND	ND
PCB 180, 193 (BZ)	0.00001	ND	ND	ND	ND	0.0280	0.000000280	0.0892	0.000000892	ND	ND
PCB 189 (BZ)	0.00003	ND	ND	ND	ND	Not Valid	Not Valid	ND	ND	ND	ND
Total PCB TEQ			0.0000000853		0.000000131		0.000001		0.00000407		ND
Dioxins	TEF	Concentration	TEQ	Concentration	TEQ	Concentration	TEQ	Concentration	TEQ	Concentration	TEQ
2,3,7,8-TCDD	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,7,8-PeCDD	1	0.000457	0.000457	ND	ND	0.000688	0.000688	0.000300	0.000300	0.000421	0.000421
1,2,3,4,7,8-HxCDD	0.1	0.00118	0.000118	0.000281	0.0000281	0.00141	0.000141	0.000572	0.0000572	0.00062	0.000062
1,2,3,6,7,8-HxCDD	0.1	0.00204	0.000204	0.000395	0.0000395	0.00211	0.000211	0.00093	0.000093	0.00104	0.000104
1,2,3,7,8,9-HxCDD	0.1	0.00531	0.000531	0.000809	0.0000809	0.00417	0.000417	0.00210	0.000210	0.00277	0.000277
1,2,3,4,6,7,8-HpCDD	0.01	0.0735	0.000735	0.0141	0.000141	0.085	0.000850	0.0338	0.000338	0.044	0.00044
OCDD	0.0003	2.39	0.000717	0.557	0.000167	2.69	0.000807	0.776	0.000233	1.28	0.000384
Total Dioxin TEQ			0.00276		0.00046		0.00311		0.00123		0.00169
Furans	TEF	Concentration	TEQ	Concentration	TEQ	Concentration	TEQ	Concentration	TEQ	Concentration	TEQ
2,3,7,8-TCDF	0.1	0.00387	0.00039	ND	ND	0.00421	0.000421	0.000959	0.0000959	0.000965	0.0000965
1,2,3,7,8-PeCDF	0.03	0.000748	0.00002244	ND	ND	0.00104	0.0000312	0.000215	0.00000645	0.00036	0.0000108
2,3,4,7,8-PeCDF	0.3	0.000681	0.0002043	ND	ND	0.000913	0.000274	0.000240	0.0000720	0.000218	0.0000654
1,2,3,4,7,8-HxCDF	0.1	0.00145	0.000145	0.000116	0.0000116	0.0012	0.00012	0.000587	0.0000587	0.000417	0.0000417
1,2,3,6,7,8-HxCDF	0.1	0.000486	0.0000486	ND	ND	0.000375	0.0000375	0.000324	0.0000324	0.000152	0.0000152
2,3,4,6,7,8-HxCDF	0.1	0.000266	0.0000266	ND	ND	0.000222	0.0000222	0.000142	0.0000142	0.0000632	0.00000632
1,2,3,7,8,9-HxCDF	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,4,6,7,8-HpCDF	0.01	0.00507	0.0000507	ND	ND	0.00191	0.0000191	0.00285	0.0000285	0.000713	0.00000713
1,2,3,4,7,8,9-HpCDF	0.01	0.000579	0.00000579	ND	ND	0.000309	0.00000309	0.000341	0.00000341	0.000105	0.00000105
OCDF	0.0003	0.0209	0.00000627	0.00177	0.000000531	0.00615	0.00000185	0.00931	0.00000279	0.00217	0.000000651
Total Furan TEQ			0.000897		0.0000121		0.000930		0.000314		0.0002
Total TEQ			**0.00366**		**0.00047**		**0.00405**		**0.00155**		**0.0019**
Screening Conclusions											
Human Health	0.0048	ng/g	**OK**		**OK**		**OK**		**OK**		**OK**
Ecological Sediment	0.00085	ng/g	**Exceeds**		**OK**		**Exceeds**		**Exceeds**		**Exceeds**
Ecological Surface Soil	0.003	ng/g	**Exceeds**		**OK**		**Exceeds**		**OK**		**OK**

Duffield Associates, Inc.
Project No. 11139.LH

Table D.4.3 Summary of Bottom Sample TEQ Data Validation
October 2016 Sampling Event
Edgemoor, Delaware

Client ID		**TB-1B**		**TB-2B**		**TB-3B**		**TB-4B**		**TB-5B**	
Lab Sample ID	TEF	460-121749-3	TEQ	H6J050416003	TEQ	460-121512-2	TEQ	460-121517-2	TEQ	460-121749-5	TEQ
Batch		6321012		6288019		6305013		6305013		6321012	
Unit	NA	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g	ng/g
PCB 77 (BZ)	0.0001	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB 81 (BZ)	0.0003	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB 105 (BZ)	0.00003	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB 114 (BZ)	0.00003	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB 118 (BZ)	0.00003	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB 123 (BZ)	0.00003	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB 126 (BZ)	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB 156, 157 (BZ)	0.00003	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB 167 (BZ)	0.00003	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB 169 (BZ)	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB 170 (BZ)	0.0001	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB 180, 193 (BZ)	0.00001	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB 189 (BZ)	0.00003	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total PCB TEQ			ND		ND		ND		ND		ND
Dioxins	TEF	Concentration	TEQ	Concentration	TEQ	Concentration	TEQ	Concentration	TEQ	Concentration	TEQ
2,3,7,8-TCDD	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,7,8-PeCDD	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,4,7,8-HxCDD	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,6,7,8-HxCDD	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,7,8,9-HxCDD	0.1	ND	ND	ND	ND	ND	ND	0.0000989	0.00000989	ND	ND
1,2,3,4,6,7,8-HpCDD	0.01	0.00126	0.0000126	0.000138	0.00000138	0.00183	0.0000183	0.00153	0.0000153	0.00125	0.0000125
OCDD	0.0003	0.0548	0.00001644	0.0130	0.0000039	0.0607	0.00001821	0.0260	0.0000078	0.0379	0.00001137
Total Dioxin TEQ			0.0000290		0.00000528		0.00004		0.0000330		0.0000239
Furans	TEF	Concentration	TEQ	Concentration	TEQ	Concentration	TEQ	Concentration	TEQ	Concentration	TEQ
2,3,7,8-TCDF	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,7,8-PeCDF	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,3,4,7,8-PeCDF	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,4,7,8-HxCDF	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,6,7,8-HxCDF	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,3,4,6,7,8-HxCDF	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,7,8,9-HxCDF	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3,4,6,7,8-HpCDF	0.01	0.000291	0.00000291	ND	ND	0.0000688	0.000000688	0.0000744	0.000000744	Not Valid	Not Valid
1,2,3,4,7,8,9-HpCDF	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
OCDF	0.0003	0.00233	0.000000699	Not Valid	Not Valid	Not Valid	Not Valid	0.000229	0.0000000687	Not Valid	Not Valid
Total Furan TEQ			0.00000361		ND		0.000000688		0.000000813		ND
Total TEQ			**0.0000326**		**0.00000528**		**0.0000372**		**0.0000338**		**0.0000239**
					Screening Conclusions						
Ecological Sediment	0.00085	ng/g	**OK**		**OK**		**OK**		**OK**		**OK**

Duffield Associates, Inc.
Project No. 11139.LH

APPENDIX E

CASE NARRATIVE NOTES

Data Quality Review Notes for Sediment
Test America Job No. 460-185785-1
Edgemoor Sediment and Surface Water Quality Assessment

	Case Narrative Report 460-185785-1	
Media:	Sediment	
Receipt:		
	Test America Report Comments	Duffield Associates Remarks
	The samples were received on 07/02/2019; the samples arrived in good condition, properly preserved and on ice. The temperature of the 2 coolers at receipt time were 3.2º C and 4.9º C.	No comment.
	The following samples were submitted for analysis; however, it was not listed on the Chain-of-Custody (COC): 460-185785-6, 460-185785-7.	Agreed. Duffield was contacted by Test America for clarification and samples analyses were reported with correct sample IDs.
	Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.	Agreed. All samples are within specified temperature range.
Analyses:	Volatile Organic Compounds (GC/MS) SW-846 8260B	
	Test America Report Comments	Duffield Associates Remarks
	Bromomethane continuing calibration verification recovered above the upper control limit in batch 460-622654. The samples associated with this CCV were non-detects for the affected analytes; therefore, data have been reported.	Agreed. This indicates that the reported concentration may be higher than the concentration in the associated samples. However, bromomethane was not detected in the sample set.
	Bromomethane closing continuing calibration verification associated with batch 460-622654 recovered above the upper confidence limit. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.	Agreed. This indicates that the reported concentration may be higher than the concentration in the associated samples. However, bromomethane was not detected in the sample set.
	1,2-Dibromo-3-Chloropropane recovered low for the minimum response factor in the continuing calibration verification associated with batch 460-623079. A reporting limit standard was analyzed, and the target analyte was detected. The associated samples were non-detect for this analyte and the data have been reported.	Agreed. This indicates that the reported concentration may be lower than the concentration in the associated samples. However, 1,2-dibromo-3-chloropropane was not detected in the sample set.
	1,2-Dibromo-3-chloropropane was below the minimum response factor criteria for the continuing calibration verification. A CCV standard at or below the reporting limit was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.	Agreed. This indicates possible matrix interference in the batch of samples. However, 1,2-dibromo-3-chloropropane was not detected in the sample set.
	Bromomethane and chloroethane failed the recovery criteria low for the MS/MSD of sample VB1-COMP-B (460-185785-5) in batch 460-622654.	Agreed. This idicates that results may have been reported at low concentrations than are present in the samples. However, bromomethane and chloroethane were not detected in VB1-COMP-B.
	No other difficulties were encountered during the volatiles analysis.	Agreed.
	All other quality control parameters were within the acceptance limits	Agreed.
Analyses:	PCB Congeners EPA 1668C	

Data Quality Review Notes for Sediment
Test America Job No. 460-185785-1
Edgemoor Sediment and Surface Water Quality Assessment

	Case Narrative Report 460-185785-1	
Media:	Sediment	
	Test America Report Comments	Duffield Associates Remarks
	Samples VB1-COMP-A (460-185785-3)[2X], VB2-COMP-A (460-185785-6)[2X] and VB3-COMP-A (460-185785-7)[2X] required dilution priot to analysis. The reporting limits have been adjusted accordingly.	Dilutions indicate possible matrix interference and do not appear high enough to affect our ability to use the data.
	No other difficulties were encountered during the Chlorinated Biphenyl Congeners (HRGC/HRMS) analysis.	See PCB Congener Data Validation Notes.
	All other quality control parameters were within the acceptance limits.	See PCB Congener Data Validation Notes.
Analyses:	Semivolatile Organic Compounds (GC/MS SIM) SW-846 8270C	
	Test America Report Comments	Duffield Associates Remarks
	Surrogate recovery was outside acceptance limits for the following matrix spike duplicate (MSD) sample: 460-185785-E-4-B MSD. The parent sample's surrogate recovery was within limits. The MS/MSD sample has been qualified and reported.	Indicates matrix interference. However, parent sample's surrogate recovery was within limits.
	The MS/MSD recoveries for preparation batch 220-144849 and analysis batch 200-144889 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected.	Agreed. Matrix intereference evident. This may effect associated samples.
	Several analytes failed the recovery criteria high for the MS of sample VB14-COMP-AMS/VB14-COMP-AMSD (460-185785-4) in batch 200-144889.	Indicates matrix interference for sample VB14-COMP-A. Failing recovery criteria high indicates that report concentration is higher than the concentration in associated samples. Results are within the range of other samples within stratum A and results are, therefore, considered valid.
	VB1-COMP-A (460-185785-3) and VB3-COMP-A (460-185785-7) required a dilution due to the nature of the sample matrix. Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.	Noted. Indicates that matrix interference occurred prior to dilution. Since surrogate spike concentrations unknown, recovery of surrogate not calculated.
	The presence of the '4' qualifier in the data indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.	'4' qualifier not flagged on SVOC data.
	Samples VB1-COMP-A (460-185785-3)[20X], VB14-COMP-A (460-185785-4)[20X], VB1-COMP-B (460-185785-5)[5X], VB2-COMP-A (460-185785-6)[6.67X] and VB3-COMP-A (460-185785-7)[33.33X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.	Noted. The dilution factors of each of these samples indicates a possible matrix interference prior to dilution. The samples diluted by a factor of 20X or 33.33X also have reported results of benzo[a]pyrene above the DNREC-SIRS screening level.
	No other difficulties were encountered during the semivolatiles analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Organochlorine Pesticides EPA SW-846 8081A	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the pesticides analysis.	Agreed.
	All quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Dioxins and Furans (HRGC/HRMS 1613B)	
	Test America Report Comments	Duffield Associates Remarks

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Edgemoor Sediment and Surface Water Quality Assessment

	Case Narrative Report 460-185785-1	
Media:	Sediment	
	Reported analytes OCDD and/or OCDF that are flagged with the "E" qualifier exceed the upper calibration range of the instrument. Per the method, dilutions are not required to bring these analytes within the calibration range.	Agreed. Indicates matrix interference. Reported results are higher than results of associated samples. Data has been appropriately flagged.
	The Relative Retention Time (RRT) criteria for the calibration, (CCV 140-32322/3) and (CCV 140-32360/3) were not met for the Isotope Dilution Analytes (IDA). The confirmation column is a DB-225, 30M X 0.25ID X 0.32um. This column demonstrates a much lower peak to valley (P/V) value which increases the accuracy of the reported 2,3,7,8-TCDF values. All RRT criteria were met on the primary Rtx-5 column.	Indicates that IDA data encountered calibration difficulties. However, primary Rtx-5 column results met RRT criteria. Therefore, data is still considered usable.
	OCDD and OCDF were detected in method blank MB 140-31714/17-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the EDL and/or RL, the result has been flagged.	Agreed. A separate data validation of method blank detections has been performed by Duffield.
	No other difficulties were encountered during the dioxin and furans (HRGC/HRMS) analysis.	VB14-COMP-A indicates possible interference and the measured ion ratio does not meet qualitative identification criteria for 1,2,3,6,7,8-HxCDF. The same is true for VB3-COMP-A and 1,2,3,7,8,9-HxCDF. The theoretical ion ratio has been estimated and data has been appropriately flagged.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Dioxins (1668C)	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the dioxin analysis.	See PCB Congener Data Quality Validation Notes.
	All other quality control parameters were within the acceptance limits.	See PCB Congener Data Quality Validation Notes.
Analyses:	Total Metals (ICP) SW-846 6010C	
	Test America Report Comments	Duffield Associates Remarks
	Copper SEM and Zinc SEM were detected in method blank MB 180-284400-1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.	Agreed. A separate data validation of method blank detections has been performed by Duffield.
	No other difficulties were encountered during the metals analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Total Metals (ICP/MS) SW-846 6020B	
	Test America Report Comments	Duffield Associates Remarks
	Antimony and Zinc failed the recovery criteria low for the MS of sample 460-185738-3 in batch 460-623284. Several analytes failed the recovery criteria high.	Agreed. Indicates matrix interference. Recovery criteria low indicates that the concentrations reported may be lower than concentration in the associated samples. Recovery criteria high indicates that the concentrations reported may be higher than concentration in the associated samples. No concentrations of antimony or zinc were reported above the screening levels.

Data Quality Review Notes for Sediment
Test America Job No. 460-185785-1
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	Case Narrative Report 460-185785-1	
Media:	Sediment	
	Antimony, sodium, and zinc failed the recovery criteria low for the MSD of sample 460-185738-3. Several analytes failed the recovery criteria high. Also, copper and magnesium exceeded the RPD limit.	Agreed. Indicates matrix interference. Recovery criteria low indicates that the concentrations reported may be lower than concentration in the associated samples. Recovery criteria high indicates that the concentrations reported may be higher than concentration in the associated samples. No concentrations of antimony, sodium, zinc, copper, or magnesium were reported above the screening levels.
	Antimony, Chromium and Lead failed the recovery criteria low for the MS of sample 460-186191-4 in batch 460-623573. Aluminum, Calcium, Iron and Magnesium failed the recovery criteria high.	Agreed. Indicates matrix interference. Recovery criteria low indicates that the concentrations reported may be lower than concentration in the associated samples. Recovery criteria high indicates that the concentrations reported may be higher than concentration in the associated samples. No concentrations of antimony, chromium, lead, aluminum, calcium, iron, and magnesium were reported above the DNREC human health screening levels.
	Copper, Lead, Manganese, Vanadium and Zinc exceeded the RPD limit for the duplicate of sample 460-185738-3. Several analytes exceeded the RPD limit for the duplicate of sample 460-186191-4.	Agreed. Exceeding the RPD limit indicates possible matrix interference.
	The presence of the '4' qualifier in the data indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.	Noted. Concentrations of associated compounds reported below screening levels.
	No other difficulties were encountered during the metals analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Total Mercury SW-846 7470A	
	Test America Report Comments	Duffield Associates Remarks
	Mercury failed the recovery criteria low for the MS of sample 460-185779-9 in batch 460-623851.	Agreed. Mercury not detected above DNREC screening level in the sample set.
	No other difficulties were encountered during the Hg analysis.	Agreed.
	All other quality control paramters were within the acceptance limits.	Agreed.
Analyses:	9034 SEM/AVS	
	Test America Report Comments	Duffield Associates Remarks
	Acid volatile sulfide (AVS) failed the recovery criteria low for the MS/MSD of sample VB1-COMP-B (460-185785-10) in batch 180-284425.	Agreed. Indicates matrix interference. The recovery criteria low means that the concentrations reported are lower than the actual concentrations.
	No other difficulties were encountered during the 9034 analysis.	Agreed.
	All other quality control paramters were within the acceptance limits.	Agreed.
Analyses:	Total Cyanide SW-846 9012B	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the cyanide analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Total Sulfide SW-846 9030B/9034	
	Test America Report Comments	Duffield Associates Remarks

Data Quality Review Notes for Sediment
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	Case Narrative Report 460-185785-1	
Media:	Sediment	
	The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 180-284391 and analytical batch 180-284425 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.	Agreed. MS/MSD recoveries indicate matrix interference. Sulfide is not detected in the associated sample set.
	No other difficulties were encountered during the sulfide analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Anions, Ion Chromatography SW-846 9056A DI Leach	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the Anions, Ion Chromatography analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Lloyd Kahn Method (Total Organic Carbon)	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the TOC analysis.	Agreed.
	All quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Percent solids/percent moisture SW-846 CLPISM01.2 (Exhibit D) Modified	
	Test America Report Comments	Duffield Associates Remarks
	Percent moisture exceeded the RPD limit for the duplicate of sample 180-92141-1.	Indicated the reproducability of the percent moisture encountering matrix intereference.
	No other difficulties were encountered during the %solids/moisture analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Sulfite SM 4500 SO3 B	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the sulfite analysis.	Hold time of 15 minutes was exceeded. Not expected to affect usefulness of data.
	All quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Preparation, Mercury SW-846 7470A	
	Test America Report Comments	Duffield Associates Remarks
	Mercury SEM was detected in method blank MB 180-284400/1-B at a level that was above the MDL but below the RL. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.	Mercury SEM not detected in associated samples, therefore, method blank evaluation not performed and Mercury SEM data is not flagged with a 'B'.
	No difficulties were encountered during the Hg analysis.	Agreed.
	All quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Metals, Simulatneously Extract Metals (SEM)	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the Metals, SEM analysis.	A separate data validation of method blank detections has been performed by Duffield for zinc SEM and copper SEM.
	All quality control parameters were within the acceptance limits.	Agreed.

Data Quality Review Notes for Sediment
Test America Job No. 460-186095-1
Edgemoor Sediment and Surface Water Quality Assessment

	Case Narrative Report 460-186095-1	
Media:	Sediment	
Receipt:		
	Test America Report Comments	Duffield Associates Remarks
	The samples were received on 07/03/2019; the samples arrived in good condition, properly preserved and on ice. The temperature of the 6 coolers at receipt time were 3.1º C, 3.2º C, 3.8º C, 4.0º C, 4.2º C and 4.2º C.	No comment.
	Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.	Agreed. All samples are within specified temperature range.
Analyses:	Volatile Organic Compounds (GC/MS) SW-846 8260B	
TB-2	Test America Report Comments	Duffield Associates Remarks
	1,2-Dibromo-3-Chloropropane recovered outside acceptance criteria with a low bias for the minimum response factor in continuing calibration verification (CCV) associated with batch 460-623352. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.	Agreed. Low bias indicates that concentrations reported may be lower than reported. 1,2-dibromo-3-chloropropane was not detected in TB-2.
	1,1-Dichloroethane recovered outside control limits for the laboratory control sample duplicate (LCSD) for analytical batch 460-623352	Agreed. 1,1-dichloroethane not detected in TB-2.
	No other difficulties were encountered during the volatiles analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	PCB Congeners EPA 1668C	
	Test America Report Comments	Duffield Associates Remarks
	Ion abundance ratios are outside criteria for the Isotope Dilution Analyte (IDA) associated with the following sample: VB13-COMP-A (460-186095-12).	Agreed. Indicates that IDA data encountered calibration difficulties. No mention of whether primary Rtx-5 column results met RRT criteria. Data is appropriately flagged and is to be considered as an estimate.
	PCB-20, PCB-28, Polychlorinated biphenyls, Total and Total Trichlorobiphenyls were detected in method blank MB 140-31828/21-B at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the EDL and/or RL, the result has been flagged.	Agreed. A separate data validation of method blank detections has been performed by Duffield.
	The following samples exhibited elevated noise or matrix interferences for one or more analytes causing elevation of the detection limit (EDL): VB5-COMP-B (460-186095-5) and VB15-COMP-A (460-186095-14). The reporting limit (RL) for the affected analytes has been raised to be equal to the EDL, and a "G" qualifier applied.	Indicates matrix interference. Reported results are likely skewed high. Data has been appropriately flagged.
	No other difficulties were encountered during the Chlorinated Biphenyl Congeners (HRGC/HRMS) analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.

Data Quality Review Notes for Sediment
Test America Job No. 460-186095-1
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	Case Narrative Report 460-186095-1	
Media:	Sediment	
Analyses:	Semivolatile Organic Compounds (GC/MS SIM) SW-846 8270D SIM	
	Test America Report Comments	Duffield Associates Remarks
	Benzo[k]fluoranthene and Fluorene-d10 (Surr) recovered outside acceptance criteria, low biased, for the continuing calibration verification (CCV) associated with batch 200-145110 . A reporting limit (RL) standard was analyzed, and the target analyte was detected.	Indicates matrix interference. Low bias indicates that the concentration reported is likely lower than the concentration in the associated samples. Benzo[k]fluoranthene and Fluorene were not detected at concentrations above screening levels.
	Phenanthrene was outside the method criteria for the continuing calibration verification (CCV) analyzed in 200-145018. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.	Indicates possible matrix interference. Outside of range by 0.2% and interference is not considered significant. Phenanthrene is not considered a SVOC above screening levels.
	The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 200-144913 and analytical batch 200-145018 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) precision was within acceptance limits.	Noted. Matrix interference is probable.
	Perylene failed the recovery criteria low for the MS of sample VB17-COMP-AMS (460-186095-16) in batch 200-145018.	Indicates that reported concentrations is lower than concentration in associated samples. Perylene is not considered a SVOC above screening levels.
	For the MSD of sample VB17-COMP-AMSD (460-186095-16) in batch 200-145018, Perylene failed the recovery criteria low. Benzo[a]pyrene and Benzo[b]fluoranthene failed the recovery criteria high. Also, Benzo[a]pyrene and Perylene exceeded the RPD limit.	Failing recovery criteria low indicates that reported concentrations may be skewed low. Perylene is not considered a SVOC above screening levels. Failing recovery criteria high indicates that reported concentrations may be skewed high. Exceeding the RPD limit indicates that the instrument used for analysis has a wider range of reporting than desired. Benzo[a]pyrene is a SVOC above screening levels, however, the reported concentration in VB17-COMP-A is below the screening level. Data quality issues are not expected to affect the interpretation of data.
	The presence of the '4' qualifier in the data indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.	Noted. Perylene is flagged and is not considered a SVOC above screening levels.
	Sample SW-2 (460-186095-2) was extracted outside of extraction holding time due to sample arriving at the lab after the holding time had expired.	Noted. The hold time exceedance may have an affect on the usefulness of the data since SVOCs may deplete passed the holding time within the bottleware.
	Samples VB5-COMP-A (460-186095-4)[1.67X], VB5-COMP-B (460-186095-5)[3.33X], VB6-COMP-A (460-186095-6)[10X], VB9-COMP-A (460-186095-8)[6.67X], VB10-COMP-A (460-186095-10)[10X], VB13-COMP-A (460-186095-12)[50X], VB15-COMP-A (460-186095-14) [6.67X] and VB17-COMP-A (460-186095-16)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.	The dilution factors of each of these samples indicates a possible matrix interference. The samples diluted by a factor of 50X have been diluted significantly which may affect resulting concentrations. However, the use of this data as part of the evaluation of SVOCs should not alter the overall results.
	No other difficulties were encountered during the semivolatiles analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Organochlorine Pesticides SW-846 8081A	
	Test America Report Comments	Duffield Associates Remarks

Data Quality Review Notes for Sediment
Test America Job No. 460-186095-1
Edgemoor Sediment and Surface Water Quality Assessment

	Case Narrative Report 460-186095-1	
Media:	Sediment	
	The %RPD between the primary and confirmation column exceeded 40% for 4,4'-DDE for the following sample: VB15-COMP-A (460-186095-14). The lower value(s) has been reported and qualified in accordance with the laboratory's SOP.	%RPD was 47.3% according to laboratory report. Laboratory reported concentration is considered conservative. Usefulness of data does not appear to be impacted.
	trans-Chlordane failed the recovery criteria high for the MS of sample VB6-COMP-BMS (460-186095-7) in batch 460-624312.	Indicates that reported concentrations may be skewed high. trans-Chlordane is not detected in the associated samples.
	The following samples required a copper clean-up to reduce matrix interferences caused by sulfur: VB6-COMP-A (460-186095-6), VB9-COMP-A (460-186095-8), VB10-COMP-A (460-186095-10), VB15-COMP-A (460-186095-14) and VB17-COMP-A (460-186095-16).	Noted. trans-Chlordane is not detected in the associated samples.
	No other difficulties were encountered during the pesticides analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Organochlorine Pesticides (GC) SW-846 8081A	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the pesticides analysis.	Agreed.
	All quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Dioxins and Furans (HRGC/HRMS) 1613B	
	Test America Report Comments	Duffield Associates Remarks
	The Relative Retention Time (RRT) criteria for the calibration, (CCV 140-32250/3) and (CCV 140-32360/3) were not met for the Isotope Dilution Analytes (IDA). The confirmation column is a DB-225, 30M X 0.25ID X 0.32um. This column demonstrates a much lower peak to valley (P/V) value which increases the accuracy of the reported 2,3,7,8-TCDF values. All RRT criteria were met on the primary Rtx-5 column.	Indicates that IDA data may have encountered incomplete calibration and data should, therefore, be considered an estimate. However, primary Rtx-5 column results met RRT criteria. Therefore, data is still considered usable.
	OCDD and OCDF were detected in method blank MB 140-31714/17-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the EDL and/or RL, the result has been flagged. OCDD and OCDF were detected in method blank MB 140-31841/17-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the EDL and/or RL, the result has been flagged.	Agreed. A separate data validation of method blank detections has been performed by Duffield.
	Reported analytes OCDD and/or OCDF that are flagged with the "E" qualifier exceed the upper calibration range of the instrument. Per the method, dilutions are not required to bring these analytes within the calibration range.	Indicates matrix interference. Reported results are likely skewed high. Data has been appropriately flagged.
	No other difficulties were encountered during the dioxin and furans (HRGC/HRMS)analysis.	Several analytes indicate possible interference and the measured ion ratio does not meet qualitative identification criteria for several samples. The theoretical ion ratio has been estimated and data has been appropriately flagged.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Dioxin 1668C	

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	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the dioxin analysis.	Disagree. A separate evaluation of method blank detections for data validation was performed by Duffield. Co-eluting congeners present and several congeners used theoretical ion ratios since the measured ion ratio does not meet qualitative criteria. Data has been appropriately flagged.
	All quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Total Metals ICP SW-846 6010C	
	Test America Report Comments	Duffield Associates Remarks
	Copper SEM was detected in method blank MB 180-284659/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Zinc SEM was detected in method blank MB 180-284815/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Zinc SEM was detected in method blank MB 180-285688/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.	Agreed. A separate evaluation of method blank detections for data validation was performed by Duffield. Data has been appropriately flagged.
	The laboratory control sample (LCS) 180-285688/2-A recovered high and outside the control limits for zinc in the SEM re-prep of the associated samples. The initial prep of the samples also recovered high for the zinc LCS. Data for zinc will be reported from the SEM re-prep batch with this narrative.	Agreed. Indicates that there may be matrix interference. High recovery indicates that the Zinc SEM concentration reported may be higher than the concentration in the associated sample.
	Zinc SEM failed the recovery criteria low for the MS of sample 460-186096-14 in batch 180-285826.	Agreed. MS recovery indicates matrix interference. Failing recovery criteria low indicates that concentrations reported may be lower than the concentration of Zinc SEM in the associated sample.
	Due to sample matrix effect on the internal standard (ISTD), a dilution was required for the following sample: VB6-COMP-A (460-186095-20), VB10-COMP-A (460-186095-24), VB13-COMP-A (460-186095-26), and VB17-COMP-A (460-186095-30). All analytes referencing the yttrium internal standards required dilution due to the yttrium internal standard counts being high and outside the 70%-130% control limits.	Noted. Sample matrix effects on the internal standard for the listed samples may be the reason for SEM data quality issues.
	Samples VB6-COMP-A (460-186095-20)[2X], VB10-COMP-A (460-186095-24)[2X], VB13-COMP-A (460-186095-26)[2X] and VB17-COMP-A (460-186095-30)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.	Dilutions indicate possible matrix interference and do not appear high enough to affect our ability to use the data.
	No other difficulties were encountered during the metals analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Total Metals ICP/MS SW-846 6020B	
	Test America Report Comments	Duffield Associates Remarks

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Media:	Sediment	
	Antimony and Calcium failed the recovery criteria low for the MS of sample 460-184799-32 in batch 460-623897. Aluminum, Barium, Iron and Lead failed the recovery criteria high.	Agreed. Failing recovery criteria low indicates that concentrations reported may be lower than the concentration in the associated samples. Failing recovery criteria high indicates that concentrations reported may be higher than the concentration in the associated samples. Antimony, calcium, aluminum, barium, iron, and lead are not found at concentrations above screening levels.
	Antimony and Calcium failed the recovery criteria low for the MSD of sample 460-184799-32 in batch 460-623897. Several analytes failed the recovery criteria high.	Agreed. Failing recovery criteria low indicates that concentrations reported may be lower than the concentration in the associated samples. Failing recovery criteria high indicates that concentrations reported may be higher than the concentration in the associated samples. Indicates matrix interference.
	Antimony, Chromium and Lead failed the recovery criteria low for the MS of sample 460-186191-4 in batch 460-623573. Aluminum, Calcium, Iron and Magnesium failed the recovery criteria high.	Agreed. Failing recovery criteria low indicates that concentrations reported may be lower than the concentration in the associated samples. Failing recovery criteria high indicates that concentrations reported may be higher than the concentration in the associated samples. Indicates matrix interference.
	Several analytes exceeded the RPD limit for the duplicate of sample 460-186191-4.	Indicates that there may have been matrix interference for the associated samples.
	The presence of the '4' qualifier in the data indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.	Noted.
	No other difficulties were encountered during the metals analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Total Mercury SW-846 7470A	
	Test America Report Comments	Duffield Associates Remarks
	Mercury failed the recovery criteria low for the MS of sample 460-185779-9 in batch 460-623851.	Agreed. MS recovery indicates matrix interference. Failing recovery criteria low indicates that concentrations reported may be lower than the concentration of Mercury SEM in the associated samples. However, Mercury SEM is not detected in the associated samples.
	Mercury failed the recovery criteria high for the MS of sample VB13-COMP-BMS (460-186095-13) in batch 460-624135.	Agreed. MS recovery indicates matrix interference. Failing recovery criteria high indicates that concentrations reported may be higher than the concentration of Mercury SEM in the associated samples. However, Mercury SEM is not detected in the associated samples.
	No other difficulties were encountered during the Hg analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	9034 SEM/AVS	
	Test America Report Comments	Duffield Associates Remarks
	Acid Volatile Sulfides (AVS) failed the recovery criteria low for the MS of sample VB13-COMP-BMS (460-186095-27) in batch 180-284684.	Agreed. Indicates that the reported concentration is lower than the concentration found in the associated sample. AVS is not detected in the associated sample.
	Acid Volatile Sulfides (AVS) failed the recovery criteria low for the MSD of sample VB13-COMP-BMSD (460-186095-27) in batch 180-284684.	Agreed. Indicates that the reported concentration is lower than the concentration found in the associated sample. AVS is not detected in the associated sample.

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Media:	Sediment	
	Acid Volatile Sulfides (AVS) failed the recovery criteria low for the MS/MSD of sample 460-186096-14 in batch 180-284844.	Agreed. Indicates that the reported concentration is lower than the concentration found in the associated sample. AVS is not detected in the associated sample. Consistency with MS/MSD results.
	No other difficulties were encountered during the SEM/AVS analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Total Cyanide SW-846 9012B	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the cyanide analysis.	Agreed.
	All quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Total Sulfide SW-846 9030B/9034	
	Test America Report Comments	Duffield Associates Remarks
	The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 180-284622 and analytical batch 180-284684 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.	Agreed. Indicates possible matrix interference in associated samples. Generally, sulfide is not detected in the associated samples.
	No other difficulties were encountered during the sulfide analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Anions, Ion Chromatography SW-846 9056A DI Leach	
	Test America Report Comments	Duffield Associates Remarks
	Sulfate failed the recovery criteria high for the MS of sample VB4-COMP-AMS (460-186095-3) in batch 460-624904.	Agreed. Indicates that reported concentrations are higher than the concentration in the associated sample.
	Sulfate failed the recovery criteria high for the MSD of sample VB4-COMP-AMSD (460-186095-3) in batch 460-624904.	Agreed. Indicates that reported concentrations are higher than the concentration in the associated sample.
	No difficulties were encountered during the Anions, Ion Chromatography analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Lloyd Kahn Method (Total Organic Carbon)	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the TOC analysis.	Agreed.
	All quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Percent solids/percent moisture SW-846 CLPISM01.2 (Exhibit D) Modified	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the %solids/moisture analysis.	Agreed.
	All quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Sulfite SM 4500 SO3 B	
	Test America Report Comments	Duffield Associates Remarks

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Media:	Sediment	
	No difficulties were encountered during the sulfite analysis.	Hold time of 15 minutes was exceeded. Not expected to affect usefulness of data. Sulfite was not detected in the associated samples.
	All quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Preparation, Mercury SW-846 7470A	
	Test America Report Comments	Duffield Associates Remarks
	Mercury SEM was detected in method blank MB 180-284815/1-B at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.	Agreed. A separate evaluation of method blank detections for data validation was performed by Duffield. Data has been appropriately flagged.
	Mercury SEM failed the recovery criteria high for the MSD of sample 460-186096-14 in batch 180-285890. Mercury SEM exceeded the RPD limit.	Agreed. Indicates that reported concentrations are higher than the concentration in the associated sample. Exceeded RPD limit indicates that the reported concentrations could be skewed either high or low.
	No difficulties were encountered during the Hg analysis.	Agreed.
	All quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Metals, Simulatneously Extract Metals (SEM)	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the Metals, SEM analysis.	Agreed.
	All quality control parameters were within the acceptance limits.	Agreed.

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Media:	Sediment	
Reciept:		
	Test America Report Comments	Duffield Associates Remarks
	The samples were received on 7/3/2019 7:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 6 coolers at receipt time were 3.1º C, 3.2º C, 3.8º C, 4.0º C, 4.2º C and 4.2º C.	No comment.
	The following sample was listed on the Chain of Custody (COC); however, no sample was received: TB-2 (460-186096-1).	Agreed. Duffield was contacted by Test America for clarification. Sample ID was TB-3 and was mislabeled as TB-2 on COC.
	The following samples were collected in an improper container: VB7-COMP-A (460-186096-4) and DUP1-COMP-A (460-186096-5). VOC was collected as dirt in jar. Samples were not collected according to 5035L/5035A-L specifications.	Disagree. Duffield had previous correspondence with Test America about collecting VOC samples in 4oz. jars due to high moisture content of sediment.
	Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.	Agreed. All samples are within specified temperature range.
Analyses:	Volatile Organic Compounds (GC/MS) SW-846 8260B	
	Test America Report Comments	Duffield Associates Remarks
	The minimum response factor in continuing calibration verification (CCV) associated with batch 460-623352 recovered outside acceptance criteria, low biased, for 1,2-Dibromo-3-Chloropropane. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.	Indicates that reported concentrations may be lower than the concentration in the associated samples. 1,2-dibromo-3-chloropropane is not detected in the associated samples.
	The laboratory control sample duplicate (LCSD) for analytical batch 460-623352 recovered outside control limits for the following analyte: 1,1-Dichloroethane.	77% recovery was achieved while 79% was the QC recovery limit in the LCSD. Recovery was low therefore, the reported concentrations may be biased low. However, 1,1-dichloroethane is not detected in the associated sample.
	No other difficulties were encountered during the volatiles analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	PCB Congeners EPA 1668C	
	Test America Report Comments	Duffield Associates Remarks
	PCB-20, PCB-28, Polychlorinated biphenyls, Total and Total Trichlorobiphenyls were detected in method blank MB 140-31828/21-B at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the EDL and/or RL, the result has been flagged.	Agreed. A separate data validation of method blank detections has been performed by Duffield.
	The following samples exhibited elevated noise or matrix interferences for one or more analytes causing elevation of the detection limit (EDL): DUP1-COMP-A (460-186096-5) . The reporting limit (RL) for the affected analytes has been raised to be equal to the EDL, and a "G" qualifier applied.	Indicates matrix interference. Reported results are likely skewed high. Data has been appropriately flagged.

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	The following samples went through Gel-Permeation Cleanup procedure, based on EPA method 3640A: VB7-COMP-A (460-186096-4), DUP1-COMP-A (460-186096-5), VB12-COMP-B (460-186096-6), VB11-COMP-A (460-186096-7), VB11-COMP-B (460-186096-8) and VB18-COMP-A (460-186096-9).	Noted. Cleanup procedures are expected to improve reporting abilities of laboratory.
	No other difficulties were encountered during the Chlorinated Biphenyl Congeners (HRGC/HRMS) analysis.	See PCB Congener Data Validation Notes.
	All other quality control parameters were within the acceptance limits.	See PCB Congener Data Validation Notes.
Analyses:	Semivolatile Organic Compounds (GC/MS SIM) SW-846 8270C	
	Test America Report Comments	Duffield Associates Remarks
	The continuing calibration verification (CCV) analyzed in 200-145018 was outside the method criteria for the following analyte(s): Phenanthrene. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.	Indicates that the instrument was not recalibrated and sample was not reanalyzed. Phenanthrene concentrations in the associated samples are at low concentrations in comparison to the screening level. Therefore, data is considered usable.
	Samples VB7-COMP-A (460-186096-4)[10X], DUP1-COMP-A (460-186096-5)[10X], VB11-COMP-A (460-186096-7)[6.67X] and VB18-COMP-A (460-186096-9)[20X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.	Dilutions were likely performed because concentrations of target analytes in associated samples were above the highest level standard. Data was not flagged, however, the dilution factor has been noted. Concentrations are considered usable.
	No other difficulties were encountered during the semivolatiles analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Organochlorine Pesticides SW-846 8081A	
	Test America Report Comments	Duffield Associates Remarks
	trans-Chlordane failed the recovery criteria high for the MS of sample 460-186095-7 in batch 460-624312.	Agreed. Indicates that the reported concentration is higher than the concentration in the associated samples. trans-Chlordane is not detected in the associated samples.
	The following samples required a copper clean-up to reduce matrix interferences caused by sulfur: VB7-COMP-A (460-186096-4) and VB11-COMP-A (460-186096-7).	Noted. Clean-up is expected to improve laboratory results.
	No other difficulties were encountered during the pesticides analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Dioxins and Furans (HRGC/HRMS 1613B)	
	Test America Report Comments	Duffield Associates Remarks
	OCDD and OCDF were detected in method blank MB 140-31841/17-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the EDL and/or RL, the result has been flagged.	Agreed. A separate data validation of method blank detections has been performed by Duffield.
	No other difficulties were encountered during thedioxin and furans (HRGC/HRMS) analysis.	See Dioxin and Furan Data Validation Notes.
	All other quality control parameters were within the acceptance limits.	See Dioxin and Furan Data Validation Notes.
Analyses:	Dioxins (1668C)	
	Test America Report Comments	Duffield Associates Remarks

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Media:	Sediment	
	No difficulties were encountered during the dioxin analysis.	See Dioxin and Furan Data Validation Notes.
	All other quality control parameters were within the acceptance limits.	See Dioxin and Furan Data Validation Notes.
Analyses:	Total Metals (ICP) SW-846 6010C	
	Test America Report Comments	Duffield Associates Remarks
	Zinc SEM was detected in method blank MB 180-284815/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.	Agreed. A separate data validation of method blank detections has been performed by Duffield.
	The post digestion spike % recovery for zinc associated with SEM prep batch 284815 was outside of the control limits. The following sample is impacted: VB11-COMP-B (460-186096-14).	Required for MSD sample. Indicates that reported concentration could either be skewed high or low. Zinc SEM results are used for determining bioavailability characteristics of zinc. Data quality issue is not expected to affect results of this evaluation.
	Zinc SEM failed the recovery criteria low for the MS of sample VB11-COMP-BMS (460-186096-14) in batch 180-285826.	Agreed. 35% recovery was achieved while the minimum % recovery limit was 75%. Indicates that the reported concentration is lower than the concentration found in the associates sample. Zinc SEM results are used for determining bioavailability characteristics of zinc. Data quality issue is not expected to affect results of this evaluation.
	The serial dilution performed for the following sample associated with SEM prep batch 284815 was outside the control limits for zinc: VB11-COMP-B (460-186096-14).	Indicates that there may be matrix interference in the sample associated with Zinc SEM, VB11-COMP-B. Consistent with recovery criteria low for MS sample above as well as post digestion spike % recovery outside of the control limits. Zinc SEM results are used for determining bioavailability characteristics of zinc. Data quality issue is not expected to affect results of this evaluation.
	Due to sample matrix effect on the internal standard (ISTD), a dilution was required for the following samples:VB7-COMP-A (460-186096-10)[2X], DUP1-COMP-A (460-186096-11)[2X], VB11-COMP-B (460-186096-14)[2X] and VB18-COMP-A (460-186096-15) [2X], (460-186096-A-14-E MS ^2), (460-186096-A-14-F MSD ^2), (460-186096-A-14-D PDS ^2) and (460-186096-A-14-D SD ^10). All analytes referencing the yttrium internal standards required dilution due to the yttrium internal standard counts being high and outside the 70%-130% control limits.	Noted. Indicates matrix interference that may report concentrations higher than concentrations in associated samples.
	No other difficulties were encountered during the metals analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Total Metals (ICP/MS) SW-846 6020B	
	Test America Report Comments	Duffield Associates Remarks
	Antimony and Calcium failed the recovery criteria low for the MS of sample 460-184799-32 in batch 460-623897. Aluminum, Barium, Iron and Lead failed the recovery criteria high.	Agreed. Failing recovery criteria low indicates that concentrations reported may be lower than the concentration in the associated samples. Failing recovery criteria high indicates that concentrations reported may be higher than the concentration in the associated samples. Antimony, calcium, aluminum, barium, iron, and lead are not compounds of concern.

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	Antimony and Calcium failed the recovery criteria low for the MSD of sample 460-184799-32 in batch 460-623897. Several analytes failed the recovery criteria high.	Agreed. Failing recovery criteria low indicates that concentrations reported may be lower than the concentration in the associated samples. Failing recovery criteria high indicates that concentrations reported may be higher than the concentration in the associated samples. These results reaffirm the results from the MS. Compounds that failed recovery criterion are not compounds of concern.
	Antimony failed the recovery criteria low for the MS of sample 460-186213-1 in batch 460-623857. Aluminum, Iron and Manganese failed the recovery criteria high.	Agreed. Failing recovery criteria low indicates that concentrations reported may be lower than the concentration in the associated samples. Failing recovery criteria high indicates that concentrations reported may be higher than the concentration in the associated samples. Antimony, calcium, aluminum, barium, iron, and lead are not compounds of concern.
	Zinc exceeded the RPD limit for the duplicate of sample 460-186213-1.	Agreed. Indicates possible matrix interference. Zinc is not a compound of concern in the associated samples.
	The presence of the '4' qualifier in the data indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.	Noted. Concentrations of associated compounds reported below screening levels.
	No other difficulties were encountered during the metals analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Total Mercury SW-846 7471B	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the Hg analysis.	Agreed.
	All quality control paramters were within the acceptance limits.	Agreed.
Analyses:	9034 SEM/AVS	
	Test America Report Comments	Duffield Associates Remarks
	The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 180-284797 and analytical batch 180-284844 were outside control limits for: Acid Volatile Sulfides (AVS) (biased low) . Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.	Agreed. Indicates possible matrix interference. AVS was not detected in the associated sample.
	No other difficulties were encountered during the 9034 analysis.	Agreed.
	All other quality control paramters were within the acceptance limits.	Agreed.
Analyses:	Total Cyanide SW-846 9012B	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the cyanide analysis.	Agreed.
	All quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Total Sulfide SW-846 9030B/9034	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the sulfide analysis.	Agreed.
	All quality control parameters were within the acceptance limits.	Agreed.

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Media:	Sediment	
Analyses:	Anions, Ion Chromatography SW-846 9056A DI Leach	
	Test America Report Comments	Duffield Associates Remarks
	Sulfate failed the recovery criteria high for the MS/MSD of sample 460-186095-3 in batch 460-624904.	Agreed. % recovery is also high at 124-125% while upper limit of recovery is 110%. Indicates that reported concentrations are higher than the concentrations in associated samples.
	No other difficulties were encountered during the Anions, Ion Chromatography analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Lloyd Kahn Method (Total Organic Carbon)	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the TOC analysis.	Agreed.
	All quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Percent solids/percent moisture SW-846 CLPISM01.2 (Exhibit D) Modified	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the % solids/moisture analysis.	Agreed.
	All quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Sulfite SM 4500 SO3 B	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the sulfite analysis.	Hold time of 15 minutes was exceeded. Not expected to affect usefulness of data. Sulfite not detected in associated samples.
	All quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Preparation, Mercury SW-846 7470A	
	Test America Report Comments	Duffield Associates Remarks
	Mercury SEM was detected in method blank MB 180-284815/1-B at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.	Agreed. A separate evaluation of method blank detections for data validation was performed by Duffield. Data has been appropriately flagged.
	Mercury SEM failed the recovery criteria high for the MSD of sample VB11-COMP-BMSD (460-186096-14) in batch 180-285890. Mercury SEM exceeded the RPD limit.	Agreed. Indicates that reported concentrations are higher than the concentration in the associated sample. Exceeded RPD limit indicates that the reported concentrations could be skewed either high or low.
	No difficulties were encountered during the Hg analysis.	Agreed.
	All quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Metals, Simulatneously Extract Metals (SEM)	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the Metals, SEM analysis.	Zinc SEM data quality difficulties discussed in Total Metals (ICP) section above.
	All quality control parameters were within the acceptance limits.	Agreed.

Data Quality Review Notes for Sediment
Test America Job No. 460-186302-1
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	Case Narrative Report 460-186302-1	
Media:	Sediment	
Receipt:		
	Test America Report Comments	Duffield Associates Remarks
	The samples were received on 07/09/2019; the samples arrived in good condition, properly preserved and on ice. The temperature of the 2 coolers at receipt time were 4.6º C and 5.0º C.	No comment.
	Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC+B26 standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.	Agreed. All samples are within specified temperature range.
Analyses:	Volatile Organic Compounds (GC/MS) SW-846 8260B	
	Test America Report Comments	Duffield Associates Remarks
	The minimum response factor in continuing calibration verification (CCV) associated with batch 460-623819 recovered outside acceptance criteria, low biased, for 1,2-Dibromo-3-Chloropropane. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.	Indicates that reported concentrations may be lower than the concentration in the associated samples. 1,2-dibromo-3-chloropropane is not detected in the associated samples.
	The laboratory control sample (LCS) for analytical batch 460-623819 recovered outside control limits for the following analyte: 1,1-Dichloroethane. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.	Agreed. Indicates that reported concentrations are higher than the concentrations in the associated samples. 1,1-dichloroethane is not detected in the associated samples.
	Chloroethane and Trichlorofluoromethane failed the recovery criteria low for the MS of sample VB19-COMP-BMS (460-186302-3) in batch 460-623819.	Agreed. Indicates that reported concentrations are lower than the concentrations in the associated samples. Chloroethane and trichlorofluoromethane are not detected in the associated samples.
	Several analytes failed the recovery criteria low for the MSD of sample VB19-COMP-BMSD (460-186302-3) in batch 460-623819. 1,1-Dichloroethane exceeded the RPD limit.	Agreed. Indicates that reported concentrations are lower than the concentrations in the associated samples. The analytes that failed recovery criteria low are not detected in the VB19-COMP-B. 1,1-dichloroethane is not detected in VB19-COMP-B.
	No other difficulties were encountered during the volatiles analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Chlorinated Biphenyl Congeners (HRGC/HRMS) 1668C	
	Test America Report Comments	Duffield Associates Remarks
	Several analytes were detected in method blank MB 140-31989/19-B at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.	Agreed. A separate data validation of method blank detections has been performed by Duffield.

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	Case Narrative Report 460-186302-1	
Media:	Sediment	
	No other difficulties were encountered during the Chlorinated Biphenyl Congeners (HRGC/HRMS) analysis.	See PCB Congener Data Validation Notes.
	All other quality control parameters were within the acceptance limits.	See PCB Congener Data Validation Notes.
Analyses:	Semivolatile Organic Compounds (GC/MS SIM) SW-846 8270C	
	Test America Report Comments	Duffield Associates Remarks
	The continuing calibration verification (CCV) associated with batch 200-145110 recovered outside acceptance criteria, low biased, for Benzo[k]fluoranthene and Fluorene-d10 (Surr). A reporting limit (RL) standard was analyzed, and the target analyte was detected.	Agreed. Indicates that the instrument was not recalibrated and sample was not reanalyzed. Low bias indicates that reported concentrations are lower than concentrations in associated samples. Benzo[k]fluoranthene and fluorene are not found at concentrations above human health screening levels.
	The following sample required a dilution due to the nature of the sample matrix: VB22-COMP-A (460-186302-4). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.	Noted. Indicates that matrix interference occurred prior to dilution. Dilution is expected to yield laboratory results that are more usable.
	Samples VB19-COMP-B (460-186302-3)[5X], VB22-COMP-A (460-186302-4)[20X], VB24-COMP-A (460-186302-7)[10X], VB25-COMP-A (460-186302-8)[20X] and VB25-COMP-B (460-186302-9)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.	Noted. Indicates that matrix interference occurred prior to dilution. Dilution is expected to yield laboratory results that are more usable.
	No other difficulties were encountered during the semivolatiles analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Organochlorine Pesticides SW-846 8081A	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the pesticides analysis.	Agreed.
	All quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Dioxins and Furans (HRGC/HRMS 1613B)	
	Test America Report Comments	Duffield Associates Remarks
	Reported analytes OCDD and/or OCDF that are flagged with the “E” qualifier exceed the upper calibration range of the instrument. Per the method, dilutions are not required to bring these analytes within the calibration range.	Indicates matrix interference. Reported results are likely skewed high. Data has been appropriately flagged.
	The Relative Retention Time (RRT) criteria for the calibration, (CCV 140-32250/3) and (CCV 140-32267/3) were not met for the Isotope Dilution Analytes (IDA). The confirmation column is a DB-225, 30M X 0.25ID X 0.32um. This column demonstrates a much lower peak to valley (P/V) value which increases the accuracy of the reported 2,3,7,8-TCDF values. All RRT criteria were met on the primary Rtx-5 column.	Indicates that IDA data encountered calibration difficulties. However, primary Rtx-5 column results met RRT criteria. Therefore, data is still considered usable.

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	Case Narrative Report 460-186302-1	
Media:	Sediment	
	OCDD and OCDF were detected in method blank MB 140-31841/17-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. 1,2,3,4,6,7,8-HpCDD, 1,2,3,4,6,7,8-HpCDF, 1,2,3,7,8-PeCDD, OCDD and OCDF were detected in method blank MB 140-31891/17-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.	Agreed. A separate data validation of method blank detections has been performed by Duffield.
	No other difficulties were encountered during thedioxin and furans (HRGC/HRMS) analysis.	See Dioxin and Furan Data Validation Notes.
	All other quality control parameters were within the acceptance limits.	See Dioxin and Furan Data Validation Notes.
Analyses:	Dioxins (1668C)	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the dioxin analysis.	See PCB Congener Data Validation Notes.
	All quality control parameters were within the acceptance limits.	See PCB Congener Data Validation Notes.
Analyses:	Total Metals (ICP) SW-846 6010C	
	Test America Report Comments	Duffield Associates Remarks
	Due to sample matrix effect on the internal standard (ISTD), a dilution was required for the following samples: VB22-COMP-A (460-186302-11) and VB24-COMP-A (460-186302-14). All analytes referencing the yttrium internal standards required dilution due to the yttrium internal standard counts being high and outside the 70%-130% control limits.	Noted. Indicates matrix interference that may report concentrations higher than concentrations in associated samples.
	Zinc SEM was detected in method blank MB 180-284815/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Copper SEM and Zinc SEM were detected in method blank MB 180-285209/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.	Agreed. A separate data validation of method blank detections has been performed by Duffield.
	Zinc SEM failed the recovery criteria low for the MS of sample 460-186096-14 in batch 180-285826.	Agreed. 35% recovery was achieved while the minimum % recovery limit was 75%. Indicates that the reported concentration is lower than the concentration found in the associates sample. Zinc SEM results are used for determining bioavailability characteristics of zinc. Data quality issue is not expected to affect results of this evaluation.
	Samples VB22-COMP-A (460-186302-11)[2X] and VB24-COMP-A (460-186302-14)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.	Noted. Dilutions were likely performed because concentrations of target analytes in associated samples were above the highest level standard. Data was not flagged, however, the dilution factor has been noted. Concentrations are considered usable.

Data Quality Review Notes for Sediment
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	Case Narrative Report 460-186302-1	
Media:	Sediment	
	No other difficulties were encountered during the metals analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Total Metals (ICP/MS) SW-846 6020B	
	Test America Report Comments	Duffield Associates Remarks
	Aluminum, Antimony, Barium and Manganese failed the recovery criteria low for the MS of sample 460-181728-9 in batch 460-624161. Several analytes failed the recovery criteria high.	Agreed. Failing recovery criteria low indicates that concentrations reported may be lower than the concentration in the associated samples. Failing recovery criteria high indicates that concentrations reported may be higher than the concentration in the associated samples. These results reaffirm the results from the MS. Compounds that failed recovery criterion are not compounds of concern.
	Aluminum, Beryllium, Calcium, Lead, Manganese, Selenium and Sodium exceeded the RPD limit for the duplicate of sample 460-181728-9.	Agreed. Indicates possible matrix interference. Compounds exceeding the RPD limit are not of concern in the associated samples.
	No other difficulties were encountered during the metals analysis.	'4' qualifier indicates that concentrations of several metals in the unspiked sample are above four times the spiking amount.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Total Mercury SW-846 7471B	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the Hg analysis.	Agreed.
	All quality control paramters were within the acceptance limits.	Agreed.
Analyses:	9034 SEM/AVS	
	Test America Report Comments	Duffield Associates Remarks
	Acid Volatile Sulfides (AVS) failed the recovery criteria low for the MS/MSD of sample 460-186096-14 in batch 180-284844.	Agreed. Indicates that reported concentration is lower than the concentration in the associated samples. AVS is used to determine characteristics of sediments. This data quality difficulty does not prevent concentrations from being usable.
	No other difficulties were encountered during the 9034 analysis.	Agreed.
	All other quality control paramters were within the acceptance limits.	Agreed.
Analyses:	Total Cyanide SW-846 9012B	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the cyanide analysis.	Agreed.
	All quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Total Sulfide SW-846 9030B/9034	
	Test America Report Comments	Duffield Associates Remarks
	Sulfide failed the recovery criteria low for the MS/MSD of sample 460-186214-1 in batch 460-624204.	Agreed. Indicates that reported concentration is lower than the concentration in the associated samples. Sulfide is used to determine characteristics of sediments. This data quality difficulty does not prevent concentrations from being usable.
	No other difficulties were encountered during the sulfide analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Anions, Ion Chromatography SW-846 9056A DI Leach	

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	Case Narrative Report 460-186302-1	
Media:	Sediment	
	Test America Report Comments	Duffield Associates Remarks
	Sulfate failed the recovery criteria high for the MS of sample VB19-COMP-BMS (460-186302-3) in batch 460-625167.	Agreed. Indicates that reported concentration is higher than the concentration in the associated samples. Sulfate not detected in associated sample.
	Sulfate failed the recovery criteria high for the MSD of sample VB19-COMP-BMSD (460-186302-3) in batch 460-625167.	Agreed. Indicates that reported concentration is higher than the concentration in the associated samples. Sulfate not detected in associated sample.
	The presence of the '4' qualifier in the data indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.	'4' qualifier not indicated for 9056A sulfate data. Laboratory comment does not apply.
	No other difficulties were encountered during the Anions, Ion Chromatography analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Lloyd Kahn Method (Total Organic Carbon)	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the TOC analysis.	Agreed.
	All quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Percent solids/percent moisture SW-846 CLPISM01.2 (Exhibit D) Modified	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the % solids/moisture analysis.	Agreed.
	All quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Sulfite SM 4500 SO3 B	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the sulfite analysis.	Hold time of 15 minutes was exceeded. Not expected to affect usefulness of data. Sulfite not detected in associated samples.
	All quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Preparation, Mercury SW-846 7470A	
	Test America Report Comments	Duffield Associates Remarks
	Mercury SEM was detected in method blank MB 180-284815/1-B at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.	Agreed. A separate data validation of method blank detections has been performed by Duffield.
	Mercury SEM failed the recovery criteria high for the MSD of sample 460-186096-14 in batch 180-285890. Mercury SEM exceeded the RPD limit.	Agreed. Indicates that reported concentrations are higher than the concentration in the associated sample. Exceeded RPD limit indicates that the reported concentrations could be skewed either high or low.
	No difficulties were encountered during the Hg analysis.	Agreed.
	All quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Metals, Simulatneously Extract Metals (SEM)	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the Metals, SEM analysis.	Agreed.
	All quality control parameters were within the acceptance limits.	Agreed.

Data Quality Review Notes for Sediment
Test America Job No. 460-186429-1
Edgemoor Sediment and Surface Water Quality Assessment

	Case Narrative Report 460-186429-1	
Media:	Sediment	
Receipt:		
	Test America Report Comments	Duffield Associates Remarks
	The samples were received on 07/10/2019; the samples arrived in good condition, properly preserved and on ice. The temperature of the 3 coolers at receipt time were 2.4º C, 3.1º C and 3.6º C.	No comment.
	The following sample was submitted for analysis; however, it was not listed on the Chain-of-Custody (COC): VB31-COMP-B (460-186429-12). Logged in per container labels. The client was contacted on July 12th, and the laboratory was instructed to proceed with the analysis.	Agreed.
	Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.	Agreed. All samples are within specified temperature range.
Analyses:	Volatile Organic Compounds (GC/MS) SW-846 8260B	
	Test America Report Comments	Duffield Associates Remarks
	The minimum response factor in continuing calibration verification (CCV) associated with batch 460-624014 recovered outside acceptance criteria, low biased, for 1,2-Dibromo-3-Chloropropane. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.	Indicates that reported concentrations may be lower than the concentration in the associated samples. 1,2-dibromo-3-chloropropane is not detected in the associated samples.
	No other difficulties were encountered during the volatiles analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Chlorinated Biphenyl Congeners (HRGC/HRMS)	
	Test America Report Comments	Duffield Associates Remarks
	Several analytes were detected in method blank MB 140-31989/19-B at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.	Agreed. A separate data validation of method blank detections has been performed by Duffield.
	Samples VB21-COMP-A (460-186429-1)[2X], VB21-COMP-B (460-186429-2)[2X], VB28-COMP-A (460-186429-3)[2X], VB26-COMP-A (460-186429-4)[2X], VB29-COMP-A (460-186429-5)[2X], VB27-COMP-B (460-186429-6)[2X] and VB31-COMP-B (460-186429-12)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.	Noted. Indicates that matrix interference occurred prior to dilution. Samples are minimally diluted to 2Xs and concentrations are considered usable.
	No other difficulties were encountered during the Chlorinated Biphenyl Congeners (HRGC/HRMS) analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.

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	Case Narrative Report 460-186429-1	
Media:	Sediment	
Analyses:	Semivolatile Organic Compounds (GC/MS) SW-846 8270C	
	Test America Report Comments	Duffield Associates Remarks
	The continuing calibration verification (CCV) associated with batch 200-145110 recovered outside acceptance criteria, low biased, for Benzo[k]fluoranthene and Fluorene-d10 (Surr). A reporting limit (RL) standard was analyzed, and the target analyte was detected.	(This note is for SW-5) Agreed. Indicates that the instrument was not recalibrated and sample was not reanalyzed. Low bias indicates that reported concentrations are lower than concentrations in associated samples. Benzo[k]fluoranthene and fluorene are not found at concentrations above human health screening levels.
	Surrogate Fluorene-d10 (Surr) recovery for the following samples were outside control limits: VB21-COMP-A (460-186429-1) and VB26-COMP-A (460-186429-4). Evidence of matrix interference is present; therefore, re-extraction and re-analysis was not performed.	Agreed. Indicates matrix interference that may alter reported flourene concentrations. Fluorene not detected in associated samples. Laboratory did not follow necessary HSCA SOP-CAP procedure.
	Samples VB21-COMP-A (460-186429-1)[10X], VB28-COMP-A (460-186429-3)[10X], VB26-COMP-A (460-186429-4)[10X], VB29-COMP-A (460-186429-5)[2X], VB30-COMP-B (460-186429-7)[1.43X], VB33-COMP-B (460-186429-8)[4X] and VB31-COMP-B (460-186429-12)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.	Noted. Indicates that matrix interference occurred prior to dilution. Samples are minimally diluted to between 1.43X and 10X. Reported concentrations are considered usable.
	No other difficulties were encountered during the semivolatiles analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Organochlorine Pesticides SW-846 8081A	
	Test America Report Comments	Duffield Associates Remarks
	4,4'-DDT failed the recovery criteria high for the MS/MSD of sample 460-186417-2 in batch 460-624833.	Agreed. Indicates that reported concentration is higher than the concentration in the associated samples. 4,4'-DDT not detected in associated samples.
	No other difficulties were encountered during the pesticides analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Dioxins and Furans (HRGC/HRMS) 1613B	
	Test America Report Comments	Duffield Associates Remarks
	Reported analytes OCDD and/or OCDF that are flagged with the "E" qualifier exceed the upper calibration range of the instrument. Per the method, dilutions are not required to bring these analytes within the calibration range.	Indicates matrix interference. Reported results are likely skewed high. Data has been appropriately flagged.
	The Relative Retention Time (RRT) criteria for the calibration, (CCV 140-32267/3) and (CCV 140-32322/3) were not met for the Isotope Dilution Analytes (IDA). The confirmation column is a DB-225, 30M X 0.25ID X 0.32um. This column demonstrates a much lower peak to valley (P/V) value which increases the accuracy of the reported 2,3,7,8-TCDF values. All RRT criteria were met on the primary Rtx-5 column.	Indicates that IDA data encountered calibration difficulties. However, primary Rtx-5 column results met RRT criteria. Therefore, data is still considered usable.
	1,2,3,4,6,7,8-HpCDD, 1,2,3,4,6,7,8-HpCDF, 1,2,3,7,8-PeCDD, OCDD and OCDF were detected in method blank MB 140-31891/17-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.	Agreed. A separate data validation of method blank detections has been performed by Duffield.
	No other difficulties were encountered during the Dioxins and Furans (HRGC/HRMS) analysis.	See Dioxin and Furan Data Validation Notes.

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Test America Job No. 460-186429-1
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	Case Narrative Report 460-186429-1	
Media:	Sediment	
	All other quality control parameters were within the acceptance limits.	See Dioxin and Furan Data Validation Notes.
Analyses:	Chlorinate Biphenyl Congeners 1668C	
	Test America Report Comments	Duffield Associates Remarks
	The following samples exhibited elevated noise or matrix interferences for one or more analytes causing elevation of the detection limit (EDL): VB21-COMP-A (460-186429-1) . The reporting limit (RL) for the affected analytes has been raised to be equal to the EDL, and a "G" qualifier applied.	Indicates matrix interference. Reported results are likely skewed high. Data has been appropriately flagged.
	The ion abundance ratio(s) is outside criteria for the Internal Standard(s) associated with the following samples: VB21-COMP-A (460-186429-1) and VB29-COMP-A (460-186429-5).	Noted. Indicates that GC/MS sensitivity and response may not have been stable during test runs for associated samples.
	Ion abundance ratios are outside criteria for the Isotope Dilution Analyte (IDA) associated with the following sample: VB31-COMP-B (460-186429-12).	Noted. Indicates that GC/MS sensitivity and response may not have been stable during test runs for associated samples.
	The following samples went through Gel-Permeation Cleanup procedure, based on EPA method 3640A: VB21-COMP-A (460-186429-1), VB21-COMP-B (460-186429-2), VB28-COMP-A (460-186429-3), VB26-COMP-A (460-186429-4), VB29-COMP-A (460-186429-5), VB27-COMP-B (460-186429-6), VB30-COMP-B (460-186429-7), VB33-COMP-B (460-186429-8), EB(SED) (460-186429-9), SW-5 (460-186429-11) and VB31-COMP-B (460-186429-12).	Noted. Cleanup procedures are expected to improve reporting abilities of laboratory.
	No other difficulties were encountered during the dioxin analysis.	See PCB Congener Data Quality Validation Notes.
	All other quality control parameters were within the acceptance limits.	See PCB Congener Data Quality Validation Notes.
Analyses:	Total Metals (ICP) SW-846 6010C	
	Test America Report Comments	Duffield Associates Remarks
	Copper SEM and Zinc SEM were detected in method blank MB 180-285209/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.	Agreed. A separate data validation of method blank detections has been performed by Duffield.
	No other difficulties were encountered during the metals analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Total Metals (ICP/MS) SW-846 6020B	
	Test America Report Comments	Duffield Associates Remarks
	Antimony and Calcium failed the recovery criteria low for the MS of sample 460-185185-14 in batch 460-624458. Aluminum and Iron failed the recovery criteria high.	Agreed. Failing recovery criteria low indicates that concentrations reported may be lower than the concentration in the associated samples. Failing recovery criteria high indicates that concentrations reported may be higher than the concentration in the associated samples. Antimony, calcium, aluminum, iron, and magnesium are not compounds of concern.
	Antimony, Barium, Lead and Zinc failed the recovery criteria low for the MS of sample 460-186525-5 in batch 460-624641. Aluminum, Calcium, Iron and Magnesium failed the recovery criteria high.	Agreed. Failing recovery criteria low indicates that concentrations reported may be lower than the concentration in the associated samples. Failing recovery criteria high indicates that concentrations reported may be higher than the concentration in the associated samples. Antimony, barium, lead, zinc, aluminum, iron, and magnesium are not compounds of concern.

Data Quality Review Notes for Sediment
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	Case Narrative Report 460-186429-1	
Media:	Sediment	
	No other difficulties were encountered during the metals analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Total Mercury SW-846 7471B	
	Test America Report Comments	Duffield Associates Remarks
	Mercury failed the recovery criteria high for the MS of sample 460-186911-1 in batch 460-625786.	Agreed. Failing recovery criteria high indicates that concentrations reported may be higher than the concentration in the associated samples.
	No other difficulties were encountered during the Hg analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	9034 SEM/AVS	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the SEM/AVS analysis.	Agreed.
	All quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Total Cyanide SW-846 9012B	
	Test America Report Comments	Duffield Associates Remarks
	Cyanide, Total failed the recovery criteria high for the MSD of sample VB31-COMP-BMSD (460-186429-12) in batch 460-625794.	Agreed. Failing recovery criteria high indicates that concentrations reported may be higher than the concentration in the associated samples. Cyanide is not detected at a concentration above screening levels in the VB31-COMP-B.
	No other difficulties were encountered during the cyanide analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Total Sulfide SW-846 9030B/9034	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the sulfide analysis.	Agreed.
	All quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Anions, Ion Chromatography SW-846 9056A DI Leach	
	Test America Report Comments	Duffield Associates Remarks
	Sulfate failed the recovery criteria low for the MS of sample 460-186672-2 in batch 460-625575.	Agreed. Indicates that reported concentration is lower than the concentration in the associated samples. Sulfide is used to determine characteristics of sediments. This data quality difficulty does not prevent concentrations from being usable.
	Sulfate failed the recovery criteria low for the MSD of sample 460-186672-2 in batch 460-625575.	Agreed. Indicates that reported concentration is lower than the concentration in the associated samples. Sulfide is used to determine characteristics of sediments. This data quality difficulty does not prevent concentrations from being usable.
	The presence of the '4' qualifier in the data indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.	Noted.
	No other difficulties were encountered during the anions, ion chromotography analysis.	'E' qualifier for the MS/MSD of sample 186672-2 in batch 460-625575.
	All other quality control parameters were within the acceptance limits.	Agreed.

Data Quality Review Notes for Sediment
Test America Job No. 460-186429-1
Edgemoor Sediment and Surface Water Quality Assessment

	Case Narrative Report 460-186429-1	
Media:	Sediment	
Analyses:	Lloyd Kahn Method (TOC)	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the TOC analysis.	Agreed.
	All quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Solids/Percent Moisture CLPISM01.2 (Exhibit D) Modified	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the %solids/moisture analysis.	Agreed.
	All quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Sulfite SM 4500 SO3 B	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the sulfite analysis.	Hold time of 15 minutes was exceeded. Not expected to affect usefulness of data. Sulfite not detected in associated samples.
	All quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Preparation, Mercury SW-846 7470A	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the Hg analysis.	Agreed.
	All quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Metals, SEM	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the Metals, SEM analysis.	Agreed.
	All quality control parameters were within the acceptance limits.	Agreed.

Data Quality Review Notes for Surface Water
Test America Job No. 460-185785-1
Edgemoor Sediment and Surface Water Quality Assessment

	Case Narrative Report 460-185785-1	
Media:	Surface Water	
Analyses:	Alkylated PAHs EPA SW-846 Method 8270D SIM	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the semivolatiles analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	PCB Congeners 1668C	
	Test America Report Comments	Duffield Associates Remarks
	Polychlorinated biphenyls, Total was detected in method blank MB 140-31852/13-A at a level exceeding the reporting limit. If the associated sample reported a result above the EDL and/or RL, the result has been flagged. Several analytes were detected in method blank MB 140-31852/13-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the EDL and/or RL, the result has been flagged.	Agreed. A separate data validation of method blank detections has been performed by Duffield.
	No other difficulties were encountered during the PCB congeners analysis.	See PCB Congener Data Validation Notes.
	All other quality control parameters were within the acceptance limits.	See PCB Congener Data Validation Notes.
Analyses:	Dioxins and Furans (HRGC/HRMS 1613B)	
	Test America Report Comments	Duffield Associates Remarks
	1,2,3,4,6,7,8-HpCDF, OCDD, and OCDF were detected in method blank MB 140-31953/8-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the EDL and/or RL, the result has been flagged.	Agreed. A separate data validation of method blank detections has been performed by Duffield.
	No other difficulties were encountered during the dioxin and furans (HRGC/HRMS) analysis.	See Dioxin and Furan Data Validation Notes.
	All other quality control parameters were within the acceptance limits.	See Dioxin and Furan Data Validation Notes.
Analyses:	Metals SW-846 6020B	
	Test America Report Comments	Duffield Associates Remarks
	Calcium failed the recovery criteria low for the MS of sample SW1MS (460-185785-1) in batch 460-624458.	Agreed. Recovery criteria low means that concentrations may be higher than the reported concentrations. Calcium is not detected at concentrations above screening levels.
	Calcium exceeded the RPD limit for the duplicate of sample SW1DU (460-185785-1).	Agreed. RPD limit duplicate exceedance indicates possible matrix interference.
	The presence of the '4' qualifier in the data indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.	Noted. Calcium and sodium have been flagged and are not found above screening levels.
	No other difficulties were encountered during the Metals analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Total Mercury SW-846 7470A	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the Hg analysis.	Agreed. Mercury not detected in sample set.
	All other quality control parameters were within the acceptance limits.	Agreed. Mercury not detected in sample set.

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Data Quality Review Notes for Surface Water
Test America Job No. 460-185785-1
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	Case Narrative Report 460-185785-1	
Media:	Surface Water	
Analyses:	Total Cyanide SW-846 9012B	
	Test America Report Comments	Duffield Associates Remarks
	The laboratory control sample (LCS) for preparation batch 460-622810 and analytical batch 460-623022 recovered outside control limits for the following analytes: total cyanide. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.	Agreed. Cyanide not detected in sample set.
	Cyanide, total failed the recovery criteria high for the MS/MSD of sample 460-185935-1 in batch 460-623022.	Agreed. Recovery criteria high indicates that concentrations may be lower than reported concentrations. Cyanide not detected in sample set.
	No other difficulties were encountered during the cyanide analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Corrosivity (pH) SW-846 9045D	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the corrosivity (pH) analysis.	Hold time of 15 minutes was exceeded. Not expected to affect usefulness of data.
	All quality control parameters were within the acceptance limits.	Agreed.
Analyses:	pH (field) SW-846 9040C	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the pH analysis.	Hold time of 15 minutes was exceeded. Not expected to affect usefulness of data.
	All quality control parameters were within the acceptance limits.	Agreed.

Data Quality Review Notes for Surface Water
Test America Job No. 460-186095-1
Edgemoor Sediment and Surface Water Quality Assessment

	Case Narrative Report 460-186095-1	
Media:	Surface Water	
Analyses:	Alkylated PAHs SW-846 8270D SIM	
SW-2	Test America Report Comments	Duffield Associates Remarks
	Naphthalene was detected in method blank MB 200-144920/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.	Naphthalene was not detected above screening levels in this sample set. A separate evaluation of method blank detections for data validation was performed by Duffield.
	No other difficulties were encountered during the semivolatiles analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	PCB Congeners 1668C	
SW-2	Test America Report Comments	Duffield Associates Remarks
	Polychlorinated biphenyls, Total was detected in method blank MB 140-31852/13-A at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Several analytes were detected in method blank MB 140-31852/13-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the EDL and/or RL, the result has been flagged.	Agreed. A separate evaluation of method blank detections for data validation was performed by Duffield. Data has been appropriately flagged.
	No other difficulties were encountered during the PCB Congeners analysis.	See PCB Congener Data Validation Notes.
	All other quality control parameters were within the acceptance limits.	See PCB Congener Data Validation Notes.
Analyses:	Dioxins and Furans (HRGC/HRMS) 1613B	
SW-2	Test America Report Comments	Duffield Associates Remarks
	OCDD was detected in method blank MB 140-31677/16-A at a level exceeding the reporting limit. If the associated sample reported a result above the EDL and/or RL, the result has been flagged. OCDF was detected in method blank MB 140-31677/16-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the EDL and/or RL, the result has been flagged.	Agreed. A separate evaluation of method blank detections for data validation was performed by Duffield. Data has been appropriately flagged.
	No other difficulties were encountered during the dioxin and furans (HRGC/HRMS)analysis.	See Dioxin and Furan Data Validation Notes.
	All other quality control parameters were within the acceptance limits.	See Dioxin and Furan Data Validation Notes.
Analyses:	Metals 6020B	
SW-2	Test America Report Comments	Duffield Associates Remarks
	Calcium, Magnesium, Manganese and Sodium failed the recovery criteria high for the MS of sample 460-186030-1 in batch 460-624641.	Agreed. Failing recovery criteria high indicates that the reported concentration is higher than the concentration of the analyte in associated samples.
	Arsenic exceeded the RPD limit for the duplicate of sample 460-186030-1.	Indicates that arsenic concentration reported encountered matrix interference and reported concentrations could be skewed high or low.
	No other difficulties were encountered during the metals analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.

Data Quality Review Notes for Surface Water
Test America Job No. 460-186095-1
Edgemoor Sediment and Surface Water Quality Assessment

	Case Narrative Report 460-186095-1	
Media:	Surface Water	
Analyses:	Total Mercury SW-846 7470A	
SW-2	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the Hg analysis.	Agreed. Mercury not detected in sample.
	All quality control parameters were within the acceptance limits.	Agreed. Mercury not detected in sample.
Analyses:	Total Cyanide SW-846 9012B	
SW-2	Test America Report Comments	Duffield Associates Remarks
	Cyanide, Total failed the recovery criteria high for the MS of sample 460-186101-1 in batch 460-624196.	Agreed. Recovery criteria high indicates that reported concentrations are higher than concentrations in associated samples. Cyanide not detected in associated sample set.
	No other difficulties were encountered during the cyanide analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Corrosivity (pH) SW-846 9045D	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the corrosivity (pH) analysis.	Hold time of 15 minutes was exceeded. Not expected to affect usefulness of data.
	All quality control parameters were within the acceptance limits.	Agreed.
Analyses:	pH (FIELD) SW-846 9040C	
SW-2	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the pH analysis.	Hold time of 15 minutes was exceeded. Not expected to affect usefulness of data.
	All quality control parameters were within the acceptance limits.	Agreed.

Data Quality Review Notes for Surface Water
Test America Job No. 460-186096-1
Edgemoor Sediment and Surface Water Quality Assessment

	Case Narrative Report 460-186096-1	
Media:	Surface Water	
Analyses:	Organochlorine Pesticides SW-846 8081A	
SW-3/EB	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the pesticides analysis.	Agreed.
	All quality control parameters were within the acceptance limits.	Agreed.
Analyses:	PCB Congeners 1668C	
SW-3/EB	Test America Report Comments	Duffield Associates Remarks
	Polychlorinated biphenyls, Total was detected in method blank MB 140-31852/13-A at a level exceeding the reporting limit. If the associated sample reported a result above the EDL and/or RL, the result has been flagged. Several analytes were detected in method blank MB 140-31852/13-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the EDL and/or RL, the result has been flagged.	Agreed. A separate data validation of method blank detections has been performed by Duffield.
	The following samples went through Gel-Permeation Cleanup procedure, based on EPA method 3640A: SW-3 (460-186096-2) and EB (460-186096-3).	Agreed.
	No other difficulties were encountered during the PCB Congeners analysis.	See PCB Congener Data Validation Notes.
	All other quality control parameters were within the acceptance limits.	See PCB Congener Data Validation Notes.
Analyses:	Dioxins and Furans (HRGC/HRMS 1613B)	
SW-3/EB	Test America Report Comments	Duffield Associates Remarks
	The Relative Retention Time (RRT) criteria for the calibration, (CCV 140-32250/3) were not met for the Isotope Dilution Analytes (IDA). The confirmation column is a DB-225, 30M X 0.25ID X 0.32um. This column demonstrates a much lower peak to valley (P/V) value which increases the accuracy of the reported 2,3,7,8-TCDF values. All RRT criteria were met on the primary Rtx-5 column.	Indicates that IDA data may have encountered incomplete calibration and data should, therefore, be considered an estimate. However, primary Rtx-5 column results met RRT criteria. Therefore, data is still considered usable.
	OCDD was detected in method blank MB 140-31677/16-A at a level exceeding the reporting limit. If the associated sample reported a result above the EDL and/or RL, the result has been flagged. OCDF was detected in method blank MB 140-31677/16-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the EDL and/or RL, the result has been flagged.	Agreed. A separate data validation of method blank detections has been performed by Duffield.
	Reported analytes OCDD and/or OCDF that are flagged with the "E" qualifier exceed the upper calibration range of the instrument. Per the method, dilutions are not required to bring these analytes within the calibration range.	Indicates matrix interference. Reported results may be skewed high. Data has been appropriately flagged.
	No other difficulties were encountered during thedioxin and furans (HRGC/HRMS) analysis.	See Dioxin and Furan Data Validation Notes.
	All other quality control parameters were within the acceptance limits.	See Dioxin and Furan Data Validation Notes.
Analyses:	Metals SW-846 6020B	
SW-3/EB	Test America Report Comments	Duffield Associates Remarks
	Calcium, Magnesium, Manganese and Sodium failed the recovery criteria high for the MS of sample 460-186030-1 in batch 460-624641.	Agreed. Failing recovery criteria high indicates that the reported concentration is higher than the concentration of the analyte.

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	Case Narrative Report 460-186096-1	
Media:	Surface Water	
	Arsenic exceeded the RPD limit for the duplicate of sample 460-186030-1.	Indicates that arsenic concentration reported encountered matrix interference.
	The EB contains barium and calcium greater than the method detection limit (MDL) and sodium greater than the reporting limit (RL). This was confirmed by analysis of the undigested sample bottle, therefore the results are reported: EB (460-186096-3).	Agreed. Barium, calcium and sodium concentrations are identified. Concentrations are below screening levels and below reported concentrations in sample set.
	The presence of the '4' qualifier in the data indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.	Noted. Concentrations of associated compounds are not found above screening levels.
	No other difficulties were encountered during the metals analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Total Mercury SW-846 7470A	
SW-3/EB	Test America Report Comments	Duffield Associates Remarks
	The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 180-284815 and 180-285791 and analytical batch 180-285890 was outside the control limits for mercury. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) was within the acceptance limits.	Indicates that LCS values are estimated and not precise for mercury. Mercury was not detected in this sample set.
	No other difficulties were encountered during the Hg analysis.	Agreed.
	All other quality control paramters were within the acceptance limits.	Agreed.
Analyses:	Total Cyanide SW-846 9012B	
SW-3/EB	Test America Report Comments	Duffield Associates Remarks
	The laboratory control sample (LCS) for preparation batch 460-624479 and 460-624480 and analytical batch 460-624645 recovered outside control limits for the following analytes:Cyanide, Total. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.	Indicates that LCS values are estimated and not precise for total cyanide. Total cyanide was not detected in this sample set.
	Cyanide, Total failed the recovery criteria high for the MS/MSD of sample 460-186305-1 in batch 460-624645.	Indicates that the concentration reported is higher than the concentration in the MS/MSD sample. Total cyanide was not detected in this sample set.
	No other difficulties were encountered during the cyanide analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Corrosivity (pH) SW-846 9045D	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the corrosivity (pH) analysis.	Hold time of 15 minutes was exceeded. Not expected to affect usefulness of data.
	All quality control parameters were within the acceptance limits.	Agreed.
Analyses:	pH (FIELD) SW-846 9040C	
SW-3/EB	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the pH analysis.	Hold time of 15 minutes was exceeded. Not expected to affect usefulness of data.
	All quality control parameters were within the acceptance limits.	Agreed.

Data Quality Review Notes for Surface Water
Test America Job No. 460-186302-1
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	Case Narrative Report 460-186302-1	
Media:	Surface Water	
Analyses:	Alkylated PAHs	
SW-4	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the semivolatiles analysis.	Agreed.
	All quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Organochlorine Pesticides (GC) SW-846 8081A	
SW-4	Test America Report Comments	Duffield Associates Remarks
	The laboratory control sample (LCS) for preparation batch 460-624487 and analytical batch 460-624555 recovered outside control limits for the following analytes: Endrin and cis-Chlordane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.	Agreed. Indicates that the LCS sample may have encountered matrix interference. The results reported were not detected in the associated samples.
	The following sample required a copper clean-up to reduce matrix interferences caused by sulfur: VB23-COMP-B (460-186302-5).	Noted. Clean-up is expected to improve reported concentrations.
	Several analytes failed the recovery criteria high for the MSD of sample 460-186422-5 in batch 460-624555.	Indicates possible matrix interference. The concentrations reported may by higher than the concentrations in the associated samples. Pesticides are not detected for the associated sample.
	Several analytes failed the recovery criteria high for the MS of sample 460-186422-5 in batch 460-624555.	Indicates possible matrix interference. The concentrations reported may by higher than the concentrations in the associated samples. Pesticides are not detected for the associated sample.
	No other difficulties were encountered during the pesticides analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	PCB Congeners 1668C	
SW-4	Test America Report Comments	Duffield Associates Remarks
	Polychlorinated biphenyls, Total was detected in method blank MB 140-31852/13-A at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Several analytes were detected in method blank MB 140-31852/13-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.	Agreed. A separate data validation of method blank detections has been performed by Duffield.
	The following samples exhibited elevated noise or matrix interferences for one or more analytes causing elevation of the detection limit (EDL): VB24-COMP-A (460-186302-7) and VB25-COMP-A (460-186302-8) . The reporting limit (RL) for the affected analytes has been raised to be equal to the EDL, and a "G" qualifier applied.	Noted. Data has been appropriately flagged.
	The following samples went through Gel-Permeation Cleanup procedure, based on EPA method 3640A: SW-4 (460-186302-1), VB19-COMP-B (460-186302-3), VB22-COMP-A (460-186302-4), VB23-COMP-B (460-186302-5), DUP-COMP-B (460-186302-6), VB24-COMP-A (460-186302-7), VB25-COMP-A (460-186302-8) and VB25-COMP-B (460-186302-9).	Noted. Clean-up is expected to improve reported concentrations and is an indicator of previous matrix interference.

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	Case Narrative Report 460-186302-1	
Media:	Surface Water	
	No other difficulties were encountered during the PCB Congeners analysis.	Co-eluting congeners present and several congeners used theoretical ion ratios since the measured ion ratio does not meet qualitative criteria. Data is appropriately flagged.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Dioxins and Furans (HRGC/HRMS 1613B)	
SW-4	Test America Report Comments	Duffield Associates Remarks
	Reported analytes OCDD and/or OCDF that are flagged with the "E" qualifier exceed the upper calibration range of the instrument. Per the method, dilutions are not required to bring these analytes within the calibration range.	Indicates matrix interference. Reported results may be skewed high. Data has been appropriately flagged.
	The Relative Retention Time (RRT) criteria for the calibration, (CCV 140-32250/3) and (CCV 140-32267/3) were not met for the Isotope Dilution Analytes (IDA). The confirmation column is a DB-225, 30M X 0.25ID X 0.32um. This column demonstrates a much lower peak to valley (P/V) value which increases the accuracy of the reported 2,3,7,8-TCDF values. All RRT criteria were met on the primary Rtx-5 column.	Indicates that IDA data may have encountered calibration difficulties and data should, therefore, be considered an estimate. However, primary Rtx-5 column results met RRT criteria. Therefore, data is still considered usable.
	OCDD was detected in method blank MB 140-31677/16-A at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. OCDF was detected in method blank MB 140-31677/16-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.	Agreed. A separate evaluation of method blank detections for data validation was performed by Duffield. Data has been appropriately flagged.
	No other difficulties were encountered during the dioxin and furans (HRGC/HRMS) analysis.	See Dioxin and Furan Data Quality Validation Notes.
	All other quality control parameters were within the acceptance limits.	See Dioxin and Furan Data Quality Validation Notes.
Analyses:	Metals 6020B	
SW-4	Test America Report Comments	Duffield Associates Remarks
	Barium and Sodium failed the recovery criteria low for the MS of sample 460-186297-4 in batch 460-624641. Iron and Magnesium failed the recovery criteria high.	Failing recovery criteria low indicates possible matrix interference. The concentrations reported may by lower than the concentrations in the associated samples. Failing recovery criteria high indicates possible matrix interference. The concentrations reported may by higher than the concentrations in the associated samples.
	No other difficulties were encountered during the Metals analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Total Mercury SW-846 7471B	
SW-4	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the Hg analysis.	Agreed.
	All quality control paramters were within the acceptance limits.	Agreed.
Analyses:	Total Cyanide SW-846 9012B	
SW-4	Test America Report Comments	Duffield Associates Remarks

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	Case Narrative Report 460-186302-1	
Media:	Surface Water	
	The laboratory control sample (LCS) for preparation batch 460-624479 and 460-624480 and analytical batch 460-624645 recovered outside control limits for the following analytes:CN. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.	Agreed. Indicates that the LCS sample may have encountered matrix interference. The results reported were not detected in the associated samples.
	Cyanide, Total failed the recovery criteria high for the MS of sample SW-4MS (460-186302-1) in batch 460-624645.	Indicates possible matrix interference. The concentrations reported may by higher than the concentrations in the associated samples. Cyanide data is appropriately flagged and is not detected in the associated sample.
	Cyanide, Total failed the recovery criteria high for the MSD of sample SW-4MSD (460-186302-1) in batch 460-624645.	Indicates possible matrix interference. The concentrations reported may by higher than the concentrations in the associated samples. Cyanide data is appropriately flagged and is not detected in the associated sample.
	No difficulties were encountered during the cyanide analysis.	Agreed.
	All quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Corrosivity (pH) SW-846 9045D	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during pH analysis.	Hold time of 15 minutes was exceeded. Not expected to affect usefulness of data.
	All quality control parameters were within the acceptance limits.	Agreed.
Analyses:	pH (FIELD) SW-846 9040C	
SW-4	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during pH analysis.	Hold time of 15 minutes was exceeded. Not expected to affect usefulness of data.
	All quality control parameters were within the acceptance limits.	Agreed.

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	Case Narrative Report 460-186429-1	
Media:	Surface Water	
Analyses:	Alkylated PAHs SW-846 8270D	
SW-5	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the semivolatiles analysis.	Agreed.
	All quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Organochlorine Pesticides (GC) SW-846 8081A	
SW-5	Test America Report Comments	Duffield Associates Remarks
	The laboratory control sample (LCS) for preparation batch 460-624487 and analytical batch 460-624555 recovered outside control limits for the following analytes: Endrin and cis-Chlordane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.	Agreed. Indicates that the LCS sample may have encountered matrix interference. The results reported were not detected in the associated sample.
	Several analytes failed the recovery criteria high for the MS/MSD of sample 460-186422-5 in batch 460-624555.	Indicates possible matrix interference. The reported concentrations reported may by higher than the concentrations in the associated sample. The results reported were not detected in the associated sample.
	No other difficulties were encountered during the pesticides analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	PCB Congeners 1668C	
SW-5	Test America Report Comments	Duffield Associates Remarks
	Polychlorinated biphenyls, Total was detected in method blank MB 140-31852/13-A at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Several analytes were detected in method blank MB 140-31852/13-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.	Agreed. A separate data validation of method blank detections has been performed by Duffield.
	No other difficulties were encountered during the PCB Congeners analysis.	See PCB Congener Data Quality Validation Notes.
	All other quality control parameters were within the acceptance limits.	See PCB Congener Data Quality Validation Notes.
Analyses:	Dioxins and Furans (HRGC/HRMS) 1613B	
SW-5	Test America Report Comments	Duffield Associates Remarks
	OCDD was detected in method blank MB 140-31677/16-A at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. OCDF was detected in method blank MB 140-31677/16-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.	Agreed. A separate data validation of method blank detections has been performed by Duffield.
	No other difficulties were encountered during the Dioxins and Furans (HRGC/HRMS) analysis.	See Dioxin and Furan Data Quality Validation Notes.
	All other quality control parameters were within the acceptance limits.	See Dioxin and Furan Data Quality Validation Notes.

Data Quality Review Notes for Surface Water
Test America Job No. 460-186429-1
Edgemoor Sediment and Surface Water Quality Assessment

Analyses:	Metals SW-846 6020B	
SW-5	Test America Report Comments	Duffield Associates Remarks
	Sodium failed the recovery criteria low for the MS of sample 460-186563-1 in batch 460-624896. Calcium failed the recovery criteria high.	Agreed. Failing recovery criteria low means that concentrations may be higher than the reported concentrations. Failing recovery criteria high means that concentrations may be lower than the reported concentrations.
	Lead exceeded the RPD limit for the duplicate of sample 460-186563-1. Refer to the QC report for details.	Indicates possible matrix interference.
	No other difficulties were encountered during the metals analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Total Mercury SW-846 7470A	
SW-5	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the Hg analysis.	Agreed.
	All quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Total Cyanide SW-846 9012B	
SW-5	Test America Report Comments	Duffield Associates Remarks
	Cyanide, Total failed the recovery criteria high for the MS of sample SW-5MS (460-186429-11) in batch 460-626577.	Agreed. Failing recovery criteria high means that reported concentrations may be higher than the concentrations in the associated samples. Cyanide was not detected in the associated sample.
	Cyanide, Total failed the recovery criteria high for the MSD of sample SW-5MSD (460-186429-11) in batch 460-626577.	Agreed. Failing recovery criteria high means that reported concentrations may be higher than the concentrations in the associated samples. Cyanide was not detected in the associated sample.
	No other difficulties were encountered during the cyanide analysis.	Agreed.
	All other quality control parameters were within the acceptance limits.	Agreed.
Analyses:	Corrosivity (pH)	
	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the corrosivity (pH) analysis.	Hold time of 15 minutes was exceeded. Not expected to affect usefulness of data.
	All quality control parameters were within the acceptance limits.	Agreed.
Analyses:	pH (FIELD) SW-846 9040C	
SW-5	Test America Report Comments	Duffield Associates Remarks
	No difficulties were encountered during the pH analysis.	Hold time of 15 minutes was exceeded. Not expected to affect usefulness of data.
	All quality control parameters were within the acceptance limits.	Agreed.

APPENDIX F

STRATUM A RISK ASSESSMENT – RAIS OUTPUTS

Site-specific Risk
Excavation Worker Soil Inputs

Variable	Default Value	Form-input Value
A (PEF Dispersion Constant)	16.2302	16.2302
A (VF Dispersion Constant)	11.911	11.911
A (VF Dispersion Constant - Mass Limit)	11.911	11.911
B (PEF Dispersion Constant)	18.7762	18.7762
B (VF Dispersion Constant)	18.4385	18.4385
B (VF Dispersion Constant - Mass Limit)	18.4385	18.4385
City (PEF Climate Zone) Selection	Default	Default
City (VF Climate Zone) Selection	Default	Default
C (PEF Dispersion Constant)	216.108	216.108
C (VF Dispersion Constant)	209.7845	209.7845
C (VF Dispersion Constant - Mass Limit)	209.7845	209.7845
foc (fraction organic carbon in soil) g/g	0.006	0.006
F(x) (function dependent on U_m/U_t) unitless	0.194	0.194
n (total soil porosity) L_{pore}/L_{soil}	0.43396	0.43396
p_b (dry soil bulk density) g/cm^3	1.5	1.5
p_b (dry soil bulk density - mass limit) g/cm^3	1.5	1.5
PEF (particulate emission factor) m^3/kg	1359344438	1359344438
p_s (soil particle density) g/cm^3	2.65	2.65
Q/C_{wind} (g/m^2-s per kg/m^3)	93.77	93.77
Q/C_{vol} (g/m^2-s per kg/m^3)	68.18	68.18
Q/C_{vol} (g/m^2-s per kg/m^3)	68.18	68.18
A_s (PEF acres)	0.5	0.5
A_s (VF acres)	0.5	0.5
A_s (VF mass-limit acres)	0.5	0.5
AF_{ew} (skin adherence factor - excavation worker) mg/cm^2	0.3	0.3
AT_{ew} (averaging time - excavation worker)	365	365
BW_{ew} (body weight - excavation worker) kg	80	80
ED_{ew} (exposure duration - excavation worker) yr	1	1
EF_{ew} (exposure frequency - excavation worker) day/yr	20	20
ET_{ew} (exposure time - excavation worker) hr	8	8
IR_{ew} (soil ingestion rate - excavation worker) mg/day	330	330
LT (lifetime) yr	70	70
SA_{ew} (surface area - excavation worker) cm^2/day	3527	3527
T_w (groundwater temperature) Celsius	25	25

Output generated 07FEB2020:13:43:06

Site-specific Risk
Excavation Worker Soil Inputs

Variable	Default Value	Form-input Value
$Theta_a$ (air-filled soil porosity) L_{air}/L_{soil}	0.28396	0.28396
$Theta_w$ (water-filled soil porosity) L_{water}/L_{soil}	0.15	0.15
T (exposure interval) s	819936000	819936000
T (exposure interval) yr	26	26
U_m (mean annual wind speed) m/s	4.69	4.69
U_t (equivalent threshold value)	11.32	11.32
V (fraction of vegetative cover) unitless	0.5	0.5

Output generated 07FEB2020:13:43:06

Site-specific Risk
Excavation Worker for Soil

Chemical	CAS Number	Mutagen?	VOC?	Chronic RfD (mg/kg-day)	RfD Ref	Chronic RfC (mg/m^3)	RfC Ref	SF_o (mg/kg-day)$^{-1}$	SF_o Ref	IUR (ug/m^3)$^{-1}$	IUR Ref	ABS_{gi}	ABS_{derm}
Arsenic, Inorganic	7440-38-2	No	No	3.00E-04	IRIS	1.50E-05	CALEPA	1.50E+00	IRIS	4.30E-03	IRIS	1	0.03
Benzo[a]pyrene	50-32-8	Yes	No	3.00E-04	IRIS	2.00E-06	IRIS	1.00E+00	IRIS	6.00E-04	IRIS	1	0.13
TCDD, 2,3,7,8-	1746-01-6	No	Yes	7.00E-10	IRIS	4.00E-08	CALEPA	1.30E+05	CALEPA	3.80E+01	CALEPA	1	0.03
Thallium (Soluble Salts)	7440-28-0	No	No	1.00E-05	SCREEN Current	-		-		-		1	-
**Total Risk/HI*				-		-		-		-		-	-

Output generated 07FEB2020:13:43:06

Site-specific Risk

Excavation Worker for Soil

Chemical	Volatilization Factor (m^3/kg)	DA	Particulate Emission Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	HLC (atm-m^3/mole)	Henry's Law Constant (unitless)	H` and HLC Ref	Henry's Law Constant Used in Calcs (unitless)	Normal Boiling Point BP (K)	BP Ref
Arsenic, Inorganic	-	-	1.36E+09	-	-	-		-	8.88E+02	PHYSPROP
Benzo[a]pyrene	-	-	1.36E+09	-	4.57E-07	1.87E-05	PHYSPROP	1.87E-05	7.68E+02	PHYSPROP
TCDD, 2,3,7,8-	1.96E+06	3.46E-09	1.36E+09	-	5.00E-05	2.04E-03	EPI	2.04E-03	6.52E+02	EPI
Thallium (Soluble Salts)	-	-	1.36E+09	-	-	-		-	1.73E+03	PHYSPROP
**Total Risk/HI*	-	-	-	-	-	-		-	-	

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Site-specific Risk
Excavation Worker for Soil

Chemical	Critical Temperature TC (K)	TC Ref	D_{ia} \ (cm^2/s)	D_{iw} \ (cm^2/s)	Soil Concentration (mg/kg)	Ingestion Noncarcinogenic CDI (mg/kg-day)	Dermal Noncarcinogenic CDI (mg/kg-day)	Inhalation Noncarcinogenic CDI (mg/m^3)
Arsenic, Inorganic	1.67E+03	CRC89	-	-	29.7	4.03E-06	6.46E-07	3.99E-10
Benzo[a]pyrene	-		4.76E-02	5.56E-06	0.316	7.14E-08	2.98E-08	4.25E-12
TCDD, 2,3,7,8-	9.78E+02	Approx. from Tcrit=1.5xTBoil	4.70E-02	6.76E-06	0.0000174	3.93E-12	3.78E-13	1.62E-13
Thallium (Soluble Salts)	4.65E+03	YAWS	-	-	0.278	6.28E-08	-	3.74E-12
**Total Risk/HI*	-		-	-	-	-	-	-

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Site-specific Risk
Excavation Worker for Soil

Chemical	Ingestion Carcinogenic CDI (mg/kg-day)	Dermal Carcinogenic CDI (mg/kg-day)	Inhalation Carcinogenic CDI (ug/m^3)	Ingestion HQ	Dermal HQ	Inhalation HQ	Total HI	Ingestion Risk	Dermal Risk	Inhalation Risk	Total Risk
Arsenic, Inorganic	5.75E-08	9.22E-09	5.70E-09	1.34E-02	2.15E-03	2.66E-05	1.56E-02	8.63E-08	1.38E-08	2.45E-11	1.00E-07
Benzo[a]pyrene	1.02E-09	4.25E-10	6.07E-11	2.38E-04	9.92E-05	2.12E-06	3.39E-04	1.02E-09	4.25E-10	3.64E-14	1.45E-09
TCDD, 2,3,7,8-	5.62E-14	5.40E-15	2.32E-12	5.62E-03	5.40E-04	4.06E-06	6.16E-03	7.30E-09	7.03E-10	8.81E-11	8.09E-09
Thallium (Soluble Salts)	8.98E-10	-	5.34E-11	6.28E-03	-	-	6.28E-03	-	-	-	-
**Total Risk/HI*	*-*	*-*	*-*	*2.56E-02*	*2.79E-03*	*3.28E-05*	*2.84E-02*	*9.46E-08*	*1.50E-08*	*1.13E-10*	*1.10E-07*

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Site-specific Risk

Excavation Worker for Soil - Percent Contribution to Total Risk by:

Chemical	Ingestion HQ	Dermal HQ	Inhalation HQ	Total HI	Ingestion Risk	Dermal Risk	Inhalation Risk	Total Risk
Arsenic, Inorganic	47.29%	7.58%	0.09%	***54.96%***	78.67%	12.61%	0.02%	***91.30%***
Benzo[a]pyrene	0.84%	0.35%	0.01%	***1.20%***	0.93%	0.39%	0.00%	***1.32%***
TCDD, 2,3,7,8-	19.79%	1.90%	0.01%	***21.71%***	6.66%	0.64%	0.08%	***7.38%***
Thallium (Soluble Salts)	22.13%	-	-	***22.13%***	-	-	-	***-***
**Total Risk/HI Percent*	*90.05%*	*9.83%*	*0.12%*	***100.0%***	*86.26%*	*13.64%*	*0.10%*	***100.0%***

Output generated 07FEB2020:13:43:06

Site-specific Risk

Recreator Soil/Sediment Inputs

Variable	Default Value	Form-input Value
A (PEF Dispersion Constant)	16.2302	16.2302
A (VF Dispersion Constant)	11.911	11.911
A (VF Dispersion Constant - Mass Limit)	11.911	11.911
B (PEF Dispersion Constant)	18.7762	18.7762
B (VF Dispersion Constant)	18.4385	18.4385
B (VF Dispersion Constant - Mass Limit)	18.4385	18.4385
City (PEF Climate Zone) Selection	Default	Default
City (VF Climate Zone) Selection	Default	Default
C (PEF Dispersion Constant)	216.108	216.108
C (VF Dispersion Constant)	209.7845	209.7845
C (VF Dispersion Constant - Mass Limit)	209.7845	209.7845
foc (fraction organic carbon in soil) g/g	0.006	0.006
F(x) (function dependent on U_m/U_t) unitless	0.194	0.194
n (total soil porosity) L_{pore}/L_{soil}	0.43396	0.43396
p_b (dry soil bulk density) g/cm^3	1.5	1.5
p_b (dry soil bulk density - mass limit) g/cm^3	1.5	1.5
PEF (particulate emission factor) m^3/kg	1359344438	1359344438
p_s (soil particle density) g/cm^3	2.65	2.65
Q/C_{wind} (g/m^2-s per kg/m^3)	93.77	93.77
Q/C_{vol} (g/m^2-s per kg/m^3)	68.18	68.18
Q/C_{vol} (g/m^2-s per kg/m^3)	68.18	68.18
A_s (PEF acres)	0.5	0.5
A_s (VF acres)	0.5	0.5
A_s (VF mass-limit acres)	0.5	0.5
T_w (groundwater temperature) Celsius	25	25
$Theta_a$ (air-filled soil porosity) L_{air}/L_{soil}	0.28396	0.28396
$Theta_w$ (water-filled soil porosity) L_{water}/L_{soil}	0.15	0.15
T (exposure interval) s	819936000	819936000
T (exposure interval) yr	26	26
U_m (mean annual wind speed) m/s	4.69	4.69
U_t (equivalent threshold value)	11.32	11.32
V (fraction of vegetative cover) unitless	0.5	0.5

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Site-specific Risk

Recreator for Soil/Sediment

Chemical	CAS Number	Mutagen?	VOC?	Chronic RfD (mg/kg-day)	RfD Ref	Chronic RfC (mg/m ^{3})	RfC Ref	SF_o (mg/kg-day) $^{-1}$	SF_o Ref	IUR (ug/m ^{3}) $^{-1}$	IUR Ref	ABS_{gi}	ABS_{derm}	Volatilization Factor (m ^{3}/kg)
Arsenic, Inorganic	7440-38-2	No	No	3.00E-04	IRIS	1.50E-05	CALEPA	1.50E+00	IRIS	4.30E-03	IRIS	1	0.03	-
Benzo[a]pyrene	50-32-8	Yes	No	3.00E-04	IRIS	2.00E-06	IRIS	1.00E+00	IRIS	6.00E-04	IRIS	1	0.13	-
TCDD, 2,3,7,8-	1746-01-6	No	Yes	7.00E-10	IRIS	4.00E-08	CALEPA	1.30E+05	CALEPA	3.80E+01	CALEPA	1	0.03	1.96E+06
Thallium (Soluble Salts)	7440-28-0	No	No	1.00E-05	SCREEN Current	-		-		-		1	-	-
**Total Risk/HI*				-		-		-		-		-	-	-

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Site-specific Risk
Recreator for Soil/Sediment

Chemical	DA	Particulate Emission Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	RBA	HLC (atm-m^3/mole)	Henry's Law Constant (unitless)	H` and HLC Ref	Henry's Law Constant Used in Calcs (unitless)	Normal Boiling Point BP (K)	BP Ref	Critical Temperature TC (K)	TC Ref
Arsenic, Inorganic	-	1.36E+09	-	0.6	-	-		-	8.88E+02	PHYSPROP	1.67E+03	CRC89
Benzo[a]pyrene	-	1.36E+09	-	1	4.57E-07	1.87E-05	PHYSPROP	1.87E-05	7.68E+02	PHYSPROP	-	
TCDD, 2,3,7,8-	3.46E-09	1.36E+09	-	1	5.00E-05	2.04E-03	EPI	2.04E-03	6.52E+02	EPI	9.78E+02	Approx. from Tcrit=1.5xTBoil
Thallium (Soluble Salts)	-	1.36E+09	-	1	-	-		-	1.73E+03	PHYSPROP	4.65E+03	YAWS
**Total Risk/HI*	-	-	-	-	-	-		-	-		-	

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Site-specific Risk
Recreator for Soil/Sediment

Chemical	D_{ia}\ (cm^2/s)	D_{iw}\ (cm^2/s)	Soil Concentration (mg/kg)	Child Ingestion Noncarcinogenic CDI (mg/kg-day)	Child Dermal Noncarcinogenic CDI (mg/kg-day)	Child Inhalation Noncarcinogenic CDI (mg/m^3)	Adult Ingestion Noncarcinogenic CDI (mg/kg-day)	Adult Dermal Noncarcinogenic CDI (mg/kg-day)
Arsenic, Inorganic	-	-	29.7	4.88E-05	5.79E-06	1.87E-10	4.58E-06	9.66E-07
Benzo[a]pyrene	4.76E-02	5.56E-06	0.316	8.66E-07	2.67E-07	1.99E-12	8.12E-08	4.46E-08
TCDD, 2,3,7,8-	4.70E-02	6.76E-06	0.0000174	4.77E-11	3.39E-12	7.60E-14	4.47E-12	5.66E-13
Thallium (Soluble Salts)	-	-	0.278	7.62E-07	-	1.75E-12	7.14E-08	-
**Total Risk/HI*	-	-	-	-	-	-	-	-

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Site-specific Risk
Recreator for Soil/Sediment

Chemical	Adult Inhalation Noncarcinogenic CDI (mg/m³)	Adjusted Ingestion Noncarcinogenic CDI (mg/kg-day)	Adjusted Dermal Noncarcinogenic CDI (mg/kg-day)	Adjusted Inhalation Noncarcinogenic CDI (mg/m³)	Ingestion Carcinogenic CDI (mg/kg-day)	Dermal Carcinogenic CDI (mg/kg-day)	Inhalation Carcinogenic CDI (ug/m³)	Child Ingestion HQ	Child Dermal HQ
Arsenic, Inorganic	1.87E-10	1.48E-05	2.08E-06	1.87E-10	5.49E-06	7.73E-07	6.95E-08	**1.63E-01**	1.93E-02
Benzo[a]pyrene	1.99E-12	2.62E-07	9.59E-08	1.99E-12	4.42E-07	1.48E-07	2.05E-09	2.89E-03	8.90E-04
TCDD, 2,3,7,8-	7.60E-14	1.44E-11	1.22E-12	7.60E-14	5.36E-12	4.53E-13	2.82E-11	6.81E-02	4.85E-03
Thallium (Soluble Salts)	1.75E-12	2.31E-07	-	1.75E-12	8.57E-08	-	6.50E-10	7.62E-02	-
**Total Risk/HI*	-	-	-	-	-	-	-	***3.10E-01***	*2.50E-02*

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Site-specific Risk
Recreator for Soil/Sediment

Chemical	Child Inhalation HQ	Child Total HI	Adult Ingestion HQ	Adult Dermal HQ	Adult Inhalation HQ	Adult Total HI	Adjusted Ingestion HQ	Adjusted Dermal HQ	Adjusted Inhalation HQ	Adjusted Total HI	Ingestion Risk	Dermal Risk	Inhalation Risk	Total Risk
Arsenic, Inorganic	1.25E-05	1.82E-01	1.53E-02	3.22E-03	1.25E-05	1.85E-02	4.93E-02	6.93E-03	1.25E-05	5.62E-02	8.24E-06	1.16E-06	2.99E-10	9.40E-06
Benzo[a]pyrene	9.95E-07	3.78E-03	2.71E-04	1.49E-04	9.95E-07	4.20E-04	8.74E-04	3.20E-04	9.95E-07	1.19E-03	4.42E-07	1.48E-07	1.23E-12	5.90E-07
TCDD, 2,3,7,8-	1.90E-06	7.30E-02	6.38E-03	8.09E-04	1.90E-06	7.20E-03	2.06E-02	1.74E-03	1.90E-06	2.24E-02	6.97E-07	5.88E-08	1.07E-09	7.57E-07
Thallium (Soluble Salts)	-	7.62E-02	7.14E-03	-	-	7.14E-03	2.31E-02	-	-	2.31E-02	-	-	-	-
**Total Risk/HI*	*1.54E-05*	*3.35E-01*	*2.91E-02*	*4.18E-03*	*1.54E-05*	*3.32E-02*	*9.39E-02*	*8.99E-03*	*1.54E-05*	*1.03E-01*	*9.38E-06*	*1.37E-06*	*1.37E-09*	*1.07E-05*

Output generated 07FEB2020:13:45:57

Site-specific Risk

Recreator for Soil/Sediment - Percent Contribution to Total Risk by:

Chemical	Child Ingestion HQ	Child Dermal HQ	Child Inhalation HQ	Child Total HI	Adult Ingestion HQ	Adult Dermal HQ	Adult Inhalation HQ
Arsenic, Inorganic	48.59%	5.76%	0.00%	***54.35%***	45.89%	9.69%	0.04%
Benzo[a]pyrene	0.86%	0.27%	0.00%	***1.13%***	0.81%	0.45%	0.00%
TCDD, 2,3,7,8-	20.33%	1.45%	0.00%	***21.78%***	19.20%	2.43%	0.01%
Thallium (Soluble Salts)	22.74%	-	-	***22.74%***	21.48%	-	-
**Total Risk/HI Percent*	*92.52%*	*7.48%*	*0.00%*	***100.0%***	*87.39%*	*12.57%*	*0.05%*

Adult Total HI	Adjusted Ingestion HQ	Adjusted Dermal HQ	Adjusted Inhalation HQ	Adjusted Total HI	Ingestion Risk	Dermal Risk	Inhalation Risk	Total Risk
55.62%	47.92%	6.74%	0.01%	***54.67%***	76.68%	10.79%	0.00%	***87.47%***
1.26%	0.85%	0.31%	0.00%	***1.16%***	4.12%	1.37%	0.00%	***5.49%***
21.64%	20.05%	1.69%	0.00%	***21.75%***	6.49%	0.55%	0.01%	***7.05%***
21.48%	22.43%	-	-	***22.43%***	-	-	-	***-***
100.0%	*91.24%*	*8.74%*	*0.01%*	***100.0%***	*87.28%*	*12.71%*	*0.01%*	***100.0%***

Output generated 07FEB2020:13:45:57

Site-specific Risk
Outdoor Worker Soil Inputs

Variable	Default Value	Form-input Value
A (PEF Dispersion Constant)	16.2302	16.2302
A (VF Dispersion Constant)	11.911	11.911
A (VF Dispersion Constant - Mass Limit)	11.911	11.911
B (PEF Dispersion Constant)	18.7762	18.7762
B (VF Dispersion Constant)	18.4385	18.4385
B (VF Dispersion Constant - Mass Limit)	18.4385	18.4385
City (PEF Climate Zone) Selection	Default	Default
City (VF Climate Zone) Selection	Default	Default
C (PEF Dispersion Constant)	216.108	216.108
C (VF Dispersion Constant)	209.7845	209.7845
C (VF Dispersion Constant - Mass Limit)	209.7845	209.7845
foc (fraction organic carbon in soil) g/g	0.006	0.006
F(x) (function dependent on U_m/U_t) unitless	0.194	0.194
n (total soil porosity) L_{pore}/L_{soil}	0.43396	0.43396
p_b (dry soil bulk density) g/cm^3	1.5	1.5
p_b (dry soil bulk density - mass limit) g/cm^3	1.5	1.5
PEF (particulate emission factor) m^3/kg	1359344438	1359344438
p_s (soil particle density) g/cm^3	2.65	2.65
Q/C_{wind} (g/m^2-s per kg/m^3)	93.77	93.77
Q/C_{vol} (g/m^2-s per kg/m^3)	68.18	68.18
Q/C_{vol} (g/m^2-s per kg/m^3)	68.18	68.18
A_s (PEF acres)	0.5	0.5
A_s (VF acres)	0.5	0.5
A_s (VF mass-limit acres)	0.5	0.5
AF_{ow} (skin adherence factor - outdoor worker) mg/cm^2	0.12	0.12
AT_{ow} (averaging time - outdoor worker)	365	365
BW_{ow} (body weight - outdoor worker)	80	80
ED_{ow} (exposure duration - outdoor worker) yr	25	25
EF_{ow} (exposure frequency - outdoor worker) day/yr	225	225
ET_{ow} (exposure time - outdoor worker) hr	8	8
IRS_{ow} (soil ingestion rate - outdoor worker) mg/day	100	100
LT (lifetime) yr	70	70
SA_{ow} (surface area - outdoor worker) cm^2/day	3527	3527
T_w (groundwater temperature) Celsius	25	25

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Site-specific Risk
Outdoor Worker Soil Inputs

Variable	Default Value	Form-input Value
$Theta_a$ (air-filled soil porosity) L_{air}/L_{soil}	0.28396	0.28396
$Theta_w$ (water-filled soil porosity) L_{water}/L_{soil}	0.15	0.15
T (exposure interval) s	819936000	819936000
T (exposure interval) yr	26	26
U_m (mean annual wind speed) m/s	4.69	4.69
U_t (equivalent threshold value)	11.32	11.32
V (fraction of vegetative cover) unitless	0.5	0.5

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Site-specific Risk
Outdoor Worker for Soil

Chemical	CAS Number	Mutagen?	VOC?	Chronic RfD (mg/kg-day)	RfD Ref	Chronic RfC (mg/m^3)	RfC Ref	SF_o (mg/kg-day)$^{-1}$	SF_o Ref	IUR (ug/m^3)$^{-1}$	IUR Ref	ABS_{gi}	ABS_{derm}
Arsenic, Inorganic	7440-38-2	No	No	3.00E-04	IRIS	1.50E-05	CALEPA	1.50E+00	IRIS	4.30E-03	IRIS	1	0.03
Benzo[a]pyrene	50-32-8	Yes	No	3.00E-04	IRIS	2.00E-06	IRIS	1.00E+00	IRIS	6.00E-04	IRIS	1	0.13
TCDD, 2,3,7,8-	1746-01-6	No	Yes	7.00E-10	IRIS	4.00E-08	CALEPA	1.30E+05	CALEPA	3.80E+01	CALEPA	1	0.03
Thallium (Soluble Salts)	7440-28-0	No	No	1.00E-05	SCREEN Current	-		-		-		1	-
**Total Risk/HI*				-		-		-		-		-	-

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Site-specific Risk
Outdoor Worker for Soil

Chemical	Volatilization Factor (m^3/kg)	DA	Particulate Emission Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	HLC (atm-m^3/mole)	Henry's Law Constant (unitless)	H` and HLC Ref	Henry's Law Constant Used in Calcs (unitless)	Normal Boiling Point BP (K)	BP Ref
Arsenic, Inorganic	-	-	1.36E+09	-	-	-		-	8.88E+02	PHYSPROP
Benzo[a]pyrene	-	-	1.36E+09	-	4.57E-07	1.87E-05	PHYSPROP	1.87E-05	7.68E+02	PHYSPROP
TCDD, 2,3,7,8-	1.96E+06	3.46E-09	1.36E+09	-	5.00E-05	2.04E-03	EPI	2.04E-03	6.52E+02	EPI
Thallium (Soluble Salts)	-	-	1.36E+09	-	-	-		-	1.73E+03	PHYSPROP
**Total Risk/HI*	-	-	-	-	-	-		-	-	

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Site-specific Risk
Outdoor Worker for Soil

Chemical	Critical Temperature TC (K)	TC Ref	D_{ia} \ (cm^2/s)	D_{iw} \ (cm^2/s)	Soil Concentration (mg/kg)	Ingestion Noncarcinogenic CDI (mg/kg-day)	Dermal Noncarcinogenic CDI (mg/kg-day)	Inhalation Noncarcinogenic CDI (mg/m^3)
Arsenic, Inorganic	1.67E+03	CRC89	-	-	29.7	1.37E-05	2.91E-06	4.49E-09
Benzo[a]pyrene	-		4.76E-02	5.56E-06	0.316	2.43E-07	1.34E-07	4.78E-11
TCDD, 2,3,7,8-	9.78E+02	Approx. from Tcrit=1.5xTBoil	4.70E-02	6.76E-06	0.0000174	1.34E-11	1.70E-12	1.83E-12
Thallium (Soluble Salts)	4.65E+03	YAWS	-	-	0.278	2.14E-07	-	4.20E-11
**Total Risk/HI*	-		-	-	-	-	-	-

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Site-specific Risk
Outdoor Worker for Soil

Chemical	Ingestion Carcinogenic CDI (mg/kg-day)	Dermal Carcinogenic CDI (mg/kg-day)	Inhalation Carcinogenic CDI (ug/m^3)	Ingestion HQ	Dermal HQ	Inhalation HQ	Total HI	Ingestion Risk	Dermal Risk	Inhalation Risk	Total Risk
Arsenic, Inorganic	4.90E-06	1.04E-06	1.60E-06	4.58E-02	9.69E-03	2.99E-04	5.58E-02	7.36E-06	1.56E-06	6.89E-09	8.92E-06
Benzo[a]pyrene	8.70E-08	4.78E-08	1.71E-08	8.12E-04	4.47E-04	2.39E-05	1.28E-03	8.70E-08	4.78E-08	1.02E-11	1.35E-07
TCDD, 2,3,7,8-	4.79E-12	6.08E-13	6.52E-10	1.92E-02	2.43E-03	4.56E-05	2.16E-02	6.22E-07	7.90E-08	2.48E-08	7.26E-07
Thallium (Soluble Salts)	7.65E-08	-	1.50E-08	2.14E-02	-	-	2.14E-02	-	-	-	-
**Total Risk/HI*	*-*	*-*	*-*	*8.72E-02*	*1.26E-02*	*3.69E-04*	***1.00E-01***	*8.07E-06*	*1.68E-06*	*3.17E-08*	*9.78E-06*

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Site-specific Risk

Outdoor Worker for Soil - Percent Contribution to Total Risk by:

Chemical	Ingestion HQ	Dermal HQ	Inhalation HQ	Total HI	Ingestion Risk	Dermal Risk	Inhalation Risk	Total Risk
Arsenic, Inorganic	45.73%	9.68%	0.30%	***55.71%***	75.21%	15.92%	0.07%	***91.20%***
Benzo[a]pyrene	0.81%	0.45%	0.02%	***1.28%***	0.89%	0.49%	0.00%	***1.38%***
TCDD, 2,3,7,8-	19.14%	2.43%	0.05%	***21.61%***	6.36%	0.81%	0.25%	***7.43%***
Thallium (Soluble Salts)	21.40%	-	-	***21.40%***	-	-	-	***-***
**Total Risk/HI Percent*	*87.08%*	*12.55%*	*0.37%*	***100.0%***	*82.46%*	*17.21%*	*0.32%*	***100.0%***

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Site-specific Risk

Composite Worker Soil Inputs

Variable	Default Value	Form-input Value
A (PEF Dispersion Constant)	16.2302	16.2302
A (VF Dispersion Constant)	11.911	11.911
A (VF Dispersion Constant - Mass Limit)	11.911	11.911
B (PEF Dispersion Constant)	18.7762	18.7762
B (VF Dispersion Constant)	18.4385	18.4385
B (VF Dispersion Constant - Mass Limit)	18.4385	18.4385
City (PEF Climate Zone) Selection	Default	Default
City (VF Climate Zone) Selection	Default	Default
C (PEF Dispersion Constant)	216.108	216.108
C (VF Dispersion Constant)	209.7845	209.7845
C (VF Dispersion Constant - Mass Limit)	209.7845	209.7845
foc (fraction organic carbon in soil) g/g	0.006	0.006
F(x) (function dependent on U_m/U_t) unitless	0.194	0.194
n (total soil porosity) L_{pore}/L_{soil}	0.43396	0.43396
p_b (dry soil bulk density) g/cm^3	1.5	1.5
p_b (dry soil bulk density - mass limit) g/cm^3	1.5	1.5
PEF (particulate emission factor) m^3/kg	1359344438	1359344438
p_s (soil particle density) g/cm^3	2.65	2.65
Q/C_{wind} (g/m^2-s per kg/m^3)	93.77	93.77
Q/C_{vol} (g/m^2-s per kg/m^3)	68.18	68.18
Q/C_{vol} (g/m^2-s per kg/m^3)	68.18	68.18
A_s (PEF acres)	0.5	0.5
A_s (VF acres)	0.5	0.5
A_s (VF mass-limit acres)	0.5	0.5
AF_w (skin adherence factor - composite worker) mg/cm^2	0.12	0.12
AT_w (averaging time - composite worker)	365	365
BW_w (body weight - composite worker)	80	80
ED_w (exposure duration - composite worker) yr	25	25
EF_w (exposure frequency - composite worker) day/yr	250	250
ET_w (exposure time - composite worker) hr	8	8
IRS_w (soil ingestion rate - composite worker) mg/day	100	100
LT (lifetime) yr	70	70
SA_w (surface area - composite worker) cm^2/day	3527	3527
T_w (groundwater temperature) Celsius	25	25

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Site-specific Risk
Composite Worker Soil Inputs

Variable	Default Value	Form-input Value
$Theta_a$ (air-filled soil porosity) L_{air}/L_{soil}	0.28396	0.28396
$Theta_w$ (water-filled soil porosity) L_{water}/L_{soil}	0.15	0.15
T (exposure interval) s	819936000	819936000
T (exposure interval) yr	26	26
U_m (mean annual wind speed) m/s	4.69	4.69
U_t (equivalent threshold value)	11.32	11.32
V (fraction of vegetative cover) unitless	0.5	0.5

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Site-specific Risk
Composite Worker for Soil

Chemical	CAS Number	Mutagen?	VOC?	Chronic RfD (mg/kg-day)	RfD Ref	Chronic RfC (mg/m^3)	RfC Ref	SF_o (mg/kg-day)$^{-1}$	SF_o Ref	IUR (ug/m^3)$^{-1}$	IUR Ref	ABS_{gi}	ABS_{derm}
Arsenic, Inorganic	7440-38-2	No	No	3.00E-04	IRIS	1.50E-05	CALEPA	1.50E+00	IRIS	4.30E-03	IRIS	1	0.03
Benzo[a]pyrene	50-32-8	Yes	No	3.00E-04	IRIS	2.00E-06	IRIS	1.00E+00	IRIS	6.00E-04	IRIS	1	0.13
TCDD, 2,3,7,8-	1746-01-6	No	Yes	7.00E-10	IRIS	4.00E-08	CALEPA	1.30E+05	CALEPA	3.80E+01	CALEPA	1	0.03
Thallium (Soluble Salts)	7440-28-0	No	No	1.00E-05	SCREEN Current	-		-		-		1	-
*Total Risk/HI				-		-		-		-		-	-

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Site-specific Risk
Composite Worker for Soil

Chemical	Volatilization Factor (m^3/kg)	DA	Particulate Emission Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	HLC (atm-m^3/mole)	Henry's Law Constant (unitless)	H` and HLC Ref	Henry's Law Constant Used in Calcs (unitless)	Normal Boiling Point BP (K)	BP Ref
Arsenic, Inorganic	-	-	1.36E+09	-	-	-		-	8.88E+02	PHYSPROP
Benzo[a]pyrene	-	-	1.36E+09	-	4.57E-07	1.87E-05	PHYSPROP	1.87E-05	7.68E+02	PHYSPROP
TCDD, 2,3,7,8-	1.96E+06	3.46E-09	1.36E+09	-	5.00E-05	2.04E-03	EPI	2.04E-03	6.52E+02	EPI
Thallium (Soluble Salts)	-	-	1.36E+09	-	-	-		-	1.73E+03	PHYSPROP
**Total Risk/HI*	-	-	-	-	-	-		-	-	

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Site-specific Risk
Composite Worker for Soil

Chemical	Critical Temperature TC (K)	TC Ref	D_{ia}\ (cm^2/s)	D_{iw}\ (cm^2/s)	Soil Concentration (mg/kg)	Ingestion Noncarcinogenic CDI (mg/kg-day)	Dermal Noncarcinogenic CDI (mg/kg-day)	Inhalation Noncarcinogenic CDI (mg/m^3)
Arsenic, Inorganic	1.67E+03	CRC89	-	-	29.7	1.53E-05	3.23E-06	4.99E-09
Benzo[a]pyrene	-		4.76E-02	5.56E-06	0.316	2.71E-07	1.49E-07	5.31E-11
TCDD, 2,3,7,8-	9.78E+02	Approx. from Tcrit=1.5xTBoil	4.70E-02	6.76E-06	0.0000174	1.49E-11	1.89E-12	2.03E-12
Thallium (Soluble Salts)	4.65E+03	YAWS	-	-	0.278	2.38E-07	-	4.67E-11
**Total Risk/HI*	-		-	-	-	-	-	-

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Site-specific Risk
Composite Worker for Soil

Chemical	Ingestion Carcinogenic CDI (mg/kg-day)	Dermal Carcinogenic CDI (mg/kg-day)	Inhalation Carcinogenic CDI (ug/m³)	Ingestion HQ	Dermal HQ	Inhalation HQ	Total HI	Ingestion Risk	Dermal Risk	Inhalation Risk	Total Risk
Arsenic, Inorganic	5.45E-06	1.15E-06	1.78E-06	5.09E-02	1.08E-02	3.33E-04	6.20E-02	8.17E-06	1.73E-06	7.66E-09	9.91E-06
Benzo[a]pyrene	9.66E-08	5.32E-08	1.90E-08	9.02E-04	4.96E-04	2.65E-05	1.42E-03	9.66E-08	5.32E-08	1.14E-11	1.50E-07
TCDD, 2,3,7,8-	5.32E-12	6.76E-13	7.24E-10	2.13E-02	2.70E-03	5.07E-05	2.40E-02	6.92E-07	8.78E-08	2.75E-08	8.07E-07
Thallium (Soluble Salts)	8.50E-08	-	1.67E-08	2.38E-02	-	-	2.38E-02	-	-	-	-
**Total Risk/HI*	-	-	-	*9.68E-02*	*1.40E-02*	*4.10E-04*	***1.11E-01***	*8.96E-06*	*1.87E-06*	*3.52E-08*	*1.09E-05*

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Site-specific Risk

Composite Worker for Soil - Percent Contribution to Total Risk by:

Chemical	Ingestion HQ	Dermal HQ	Inhalation HQ	Total HI	Ingestion Risk	Dermal Risk	Inhalation Risk	Total Risk
Arsenic, Inorganic	45.73%	9.68%	0.30%	***55.71%***	75.21%	15.92%	0.07%	***91.20%***
Benzo[a]pyrene	0.81%	0.45%	0.02%	***1.28%***	0.89%	0.49%	0.00%	***1.38%***
TCDD, 2,3,7,8-	19.14%	2.43%	0.05%	***21.61%***	6.36%	0.81%	0.25%	***7.43%***
Thallium (Soluble Salts)	21.40%	-	-	***21.40%***	-	-	-	***-***
**Total Risk/HI Percent*	*87.08%*	*12.55%*	*0.37%*	***100.0%***	*82.46%*	*17.21%*	*0.32%*	***100.0%***

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Site-specific Risk
Resident Soil Inputs

Variable	Default Value	Form-input Value
A (PEF Dispersion Constant)	16.2302	16.2302
A (VF Dispersion Constant)	11.911	11.911
A (VF Dispersion Constant - Mass Limit)	11.911	11.911
B (PEF Dispersion Constant)	18.7762	18.7762
B (VF Dispersion Constant)	18.4385	18.4385
B (VF Dispersion Constant - Mass Limit)	18.4385	18.4385
City (PEF Climate Zone) Selection	Default	Default
City (VF Climate Zone) Selection	Default	Default
C (PEF Dispersion Constant)	216.108	216.108
C (VF Dispersion Constant)	209.7845	209.7845
C (VF Dispersion Constant - Mass Limit)	209.7845	209.7845
foc (fraction organic carbon in soil) g/g	0.006	0.006
F(x) (function dependent on U_m/U_t) unitless	0.194	0.194
n (total soil porosity) L_{pore}/L_{soil}	0.43396	0.43396
p_b (dry soil bulk density) g/cm^3	1.5	1.5
p_b (dry soil bulk density - mass limit) g/cm^3	1.5	1.5
PEF (particulate emission factor) m^3/kg	1359344438	1359344438
p_s (soil particle density) g/cm^3	2.65	2.65
Q/C_{wind} (g/m^2-s per kg/m^3)	93.77	93.77
Q/C_{vol} (g/m^2-s per kg/m^3)	68.18	68.18
Q/C_{vol} (g/m^2-s per kg/m^3)	68.18	68.18
A_s (PEF acres)	0.5	0.5
A_s (VF acres)	0.5	0.5
A_s (VF mass-limit acres)	0.5	0.5
AF_{0-2} (mutagenic skin adherence factor) mg/cm^2	0.2	0.2
AF_{2-6} (mutagenic skin adherence factor) mg/cm^2	0.2	0.2
AF_{6-16} (mutagenic skin adherence factor) mg/cm^2	0.07	0.07
AF_{16-26} (mutagenic skin adherence factor) mg/cm^2	0.07	0.07
AF_{res-a} (skin adherence factor - adult) mg/cm^2	0.07	0.07
AF_{res-c} (skin adherence factor - child) mg/cm^2	0.2	0.2
AT_{res} (averaging time - resident carcinogenic)	365	365
BW_{0-2} (mutagenic body weight) kg	15	15
BW_{2-6} (mutagenic body weight) kg	15	15
BW_{6-16} (mutagenic body weight) kg	80	80

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Site-specific Risk
Resident Soil Inputs

Variable	Default Value	Form-input Value
BW_{16-26} (mutagenic body weight) kg	80	80
BW_{res-a} (body weight - adult) kg	80	80
BW_{res-c} (body weight - child) kg	15	15
$DFS_{res-adj}$ (age-adjusted soil dermal factor) mg/kg	103390	103390
$DFSM_{res-adj}$ (mutagenic age-adjusted soil dermal factor) mg/kg	428260	428260
ED_{res} (exposure duration) years	26	26
ED_{0-2} (mutagenic exposure duration) years	2	2
ED_{2-6} (mutagenic exposure duration) years	4	4
ED_{6-16} (mutagenic exposure duration) years	10	10
ED_{16-26} (mutagenic exposure duration) years	10	10
ED_{res-a} (exposure duration - adult) years	20	20
ED_{res-c} (exposure duration - child) years	6	6
EF_{res} (exposure frequency) days/year	350	350
EF_{0-2} (mutagenic exposure frequency) days/year	350	350
EF_{2-6} (mutagenic exposure frequency) days/year	350	350
EF_{6-16} (mutagenic exposure frequency) days/year	350	350
EF_{16-26} (mutagenic exposure frequency) days/year	350	350
EF_{res-a} (exposure frequency - adult) days/year	350	350
EF_{res-c} (exposure frequency - child) days/year	350	350
ET_{res} (exposure time) hours/day	24	24
ET_{0-2} (mutagenic exposure time) hours/day	24	24
ET_{2-6} (mutagenic exposure time) hours/day	24	24
ET_{6-16} (mutagenic exposure time) hours/day	24	24
ET_{16-26} (mutagenic exposure time) hours/day	24	24
ET_{res-a} (adult exposure time) hours/day	24	24
ET_{res-c} (child exposure time) hours/day	24	24
$IFS_{res-adj}$ (age-adjusted soil ingestion factor) mg/kg	36750	36750
$IFSM_{res-adj}$ (mutagenic age-adjusted soil ingestion factor) mg/kg	166833.3	166833.3
IRS_{0-2} (mutagenic soil intake rate) mg/day	200	200
IRS_{2-6} (mutagenic soil intake rate) mg/day	200	200
IRS_{6-16} (mutagenic soil intake rate) mg/day	100	100
IRS_{16-26} (mutagenic soil intake rate) mg/day	100	100
IRS_{res-a} (soil intake rate - adult) mg/day	100	100
IRS_{res-c} (soil intake rate - child) mg/day	200	200

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Site-specific Risk
Resident Soil Inputs

Variable	Default Value	Form-input Value
LT (lifetime) years	70	70
SA_{0-2} (mutagenic skin surface area) cm^2/day	2373	2373
SA_{2-6} (mutagenic skin surface area) cm^2/day	2373	2373
SA_{6-16} (mutagenic skin surface area) cm^2/day	6032	6032
SA_{16-26} (mutagenic skin surface area) cm^2/day	6032	6032
SA_{res-a} (skin surface area - adult) cm^2/day	6032	6032
SA_{res-c} (skin surface area - child) cm^2/day	2373	2373
T_w (groundwater temperature) Celsius	25	25
$Theta_a$ (air-filled soil porosity) L_{air}/L_{soil}	0.28396	0.28396
$Theta_w$ (water-filled soil porosity) L_{water}/L_{soil}	0.15	0.15
T (exposure interval) s	819936000	819936000
T (exposure interval) yr	26	26
U_m (mean annual wind speed) m/s	4.69	4.69
U_t (equivalent threshold value)	11.32	11.32
V (fraction of vegetative cover) unitless	0.5	0.5

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Site-specific Risk
Resident for Soil

Chemical	CAS Number	Mutagen?	VOC?	Chronic RfD (mg/kg-day)	RfD Ref	Chronic RfC (mg/m³)	RfC Ref	SF_o (mg/kg-day)$^{-1}$	SF_o Ref	IUR (ug/m³)$^{-1}$	IUR Ref	ABS_{gi}	ABS_{derm}	Volatilization Factor (m³/kg)
Arsenic, Inorganic	7440-38-2	No	No	3.00E-04	IRIS	1.50E-05	CALEPA	1.50E+00	IRIS	4.30E-03	IRIS	1	0.03	-
Benzo[a]pyrene	50-32-8	Yes	No	3.00E-04	IRIS	2.00E-06	IRIS	1.00E+00	IRIS	6.00E-04	IRIS	1	0.13	-
TCDD, 2,3,7,8-	1746-01-6	No	Yes	7.00E-10	IRIS	4.00E-08	CALEPA	1.30E+05	CALEPA	3.80E+01	CALEPA	1	0.03	1.96E+06
Thallium (Soluble Salts)	7440-28-0	No	No	1.00E-05	SCREEN Current	-		-		-		1	-	-
**Total Risk/HI*				-		-		-		-		-	-	-

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Site-specific Risk
Resident for Soil

Chemical	DA	Particulate Emission Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	RBA	HLC (atm-m^3/mole)	Henry's Law Constant (unitless)	H` and HLC Ref	Henry's Law Constant Used in Calcs (unitless)	Normal Boiling Point BP (K)	BP Ref	Critical Temperature TC (K)	TC Ref
Arsenic, Inorganic	-	1.36E+09	-	0.6	-	-		-	8.88E+02	PHYSPROP	1.67E+03	CRC89
Benzo[a]pyrene	-	1.36E+09	-	1	4.57E-07	1.87E-05	PHYSPROP	1.87E-05	7.68E+02	PHYSPROP	-	
TCDD, 2,3,7,8-	3.46E-09	1.36E+09	-	1	5.00E-05	2.04E-03	EPI	2.04E-03	6.52E+02	EPI	9.78E+02	Approx. from Tcrit=1.5xTBoil
Thallium (Soluble Salts)	-	1.36E+09	-	1	-	-		-	1.73E+03	PHYSPROP	4.65E+03	YAWS
**Total Risk/HI*	-	-	-	-	-	-		-	-		-	

Output generated 07FEB2020:13:50:22

Site-specific Risk
Resident for Soil

Chemical	D_{ia}\ (cm^2/s)	D_{iw}\ (cm^2/s)	Soil Concentration (mg/kg)	Child Ingestion Noncarcinogenic CDI (mg/kg-day)	Child Dermal Noncarcinogenic CDI (mg/kg-day)	Child Inhalation Noncarcinogenic CDI (mg/m^3)	Adult Ingestion Noncarcinogenic CDI (mg/kg-day)	Adult Dermal Noncarcinogenic CDI (mg/kg-day)
Arsenic, Inorganic	-	-	29.7	2.28E-04	2.70E-05	2.10E-08	2.14E-05	4.51E-06
Benzo[a]pyrene	4.76E-02	5.56E-06	0.316	4.04E-06	1.25E-06	2.23E-10	3.79E-07	2.08E-07
TCDD, 2,3,7,8-	4.70E-02	6.76E-06	0.0000174	2.22E-10	1.58E-11	8.52E-12	2.09E-11	2.64E-12
Thallium (Soluble Salts)	-	-	0.278	3.55E-06	-	1.96E-10	3.33E-07	-
Total Risk/HI	-	-	-	-	-	-	-	-

Output generated 07FEB2020:13:50:22

Site-specific Risk
Resident for Soil

Chemical	Adult Inhalation Noncarcinogenic CDI (mg/m³)	Adjusted Ingestion Noncarcinogenic CDI (mg/kg-day)	Adjusted Dermal Noncarcinogenic CDI (mg/kg-day)	Adjusted Inhalation Noncarcinogenic CDI (mg/m³)	Ingestion Carcinogenic CDI (mg/kg-day)	Dermal Carcinogenic CDI (mg/kg-day)	Inhalation Carcinogenic CDI (ug/m³)	Child Ingestion HQ	Child Dermal HQ
Arsenic, Inorganic	2.10E-08	6.90E-05	9.71E-06	2.10E-08	2.56E-05	3.61E-06	7.78E-06	7.59E-01	9.01E-02
Benzo[a]pyrene	2.23E-10	1.22E-06	4.48E-07	2.23E-10	2.06E-06	6.89E-07	2.29E-07	1.35E-02	4.15E-03
TCDD, 2,3,7,8-	8.52E-12	6.74E-11	5.69E-12	8.52E-12	2.50E-11	2.11E-12	3.16E-09	3.18E-01	2.26E-02
Thallium (Soluble Salts)	1.96E-10	1.08E-06	-	1.96E-10	4.00E-07	-	7.28E-08	3.55E-01	-
**Total Risk/HI*	-	-	-	-	-	-	-	*1.45E+00*	*1.17E-01*

Output generated 07FEB2020:13:50:22

Site-specific Risk
Resident for Soil

Chemical	Child Inhalation HQ	Child Total HI	Adult Ingestion HQ	Adult Dermal HQ	Adult Inhalation HQ	Adult Total HI	Adjusted Ingestion HQ	Adjusted Dermal HQ	Adjusted Inhalation HQ	Adjusted Total HI	Ingestion Risk	Dermal Risk	Inhalation Risk	Total Risk
Arsenic, Inorganic	1.40E-03	8.51E-01	7.12E-02	1.50E-02	1.40E-03	8.76E-02	2.30E-01	3.24E-02	1.40E-03	2.64E-01	3.84E-05	5.41E-06	3.35E-08	4.39E-05
Benzo[a]pyrene	1.11E-04	1.77E-02	1.26E-03	6.93E-04	1.11E-04	2.07E-03	4.08E-03	1.49E-03	1.11E-04	5.68E-03	2.06E-06	6.89E-07	1.38E-10	2.75E-06
TCDD, 2,3,7,8-	2.13E-04	3.41E-01	2.98E-02	3.77E-03	2.13E-04	3.38E-02	9.63E-02	8.12E-03	2.13E-04	1.05E-01	3.25E-06	2.75E-07	1.20E-07	3.65E-06
Thallium (Soluble Salts)	-	3.55E-01	3.33E-02	-	-	3.33E-02	1.08E-01	-	-	1.08E-01	-	-	-	-
**Total Risk/HI*	*1.72E-03*	*1.56E+00*	*1.36E-01*	*1.95E-02*	*1.72E-03*	*1.57E-01*	*4.38E-01*	*4.20E-02*	*1.72E-03*	*4.82E-01*	*4.38E-05*	*6.37E-06*	*1.54E-07*	*5.03E-05*

Output generated 07FEB2020:13:50:22

Site-specific Risk

Resident for Soil - Percent Contribution to Total Risk by:

Chemical	Child Ingestion HQ	Child Dermal HQ	Child Inhalation HQ	Child Total HI	Adult Ingestion HQ	Adult Dermal HQ	Adult Inhalation HQ	Adult Total HI	Adjusted Ingestion HQ	Adjusted Dermal HQ	Adjusted Inhalation HQ	Adjusted Total HI	Ingestion Risk	Dermal Risk	Inhalation Risk	Total Risk
Arsenic, Inorganic	48.53%	5.76%	0.09%	***54.38%***	45.41%	9.59%	0.89%	***55.89%***	47.75%	6.72%	0.29%	***54.76%***	76.45%	10.75%	0.07%	***87.27%***
Benzo[a]pyrene	0.86%	0.27%	0.01%	***1.13%***	0.81%	0.44%	0.07%	***1.32%***	0.85%	0.31%	0.02%	***1.18%***	4.10%	1.37%	0.00%	***5.47%***
TCDD, 2,3,7,8-	20.31%	1.45%	0.01%	***21.77%***	19.00%	2.41%	0.14%	***21.54%***	19.98%	1.69%	0.04%	***21.71%***	6.47%	0.55%	0.24%	***7.25%***
Thallium (Soluble Salts)	22.71%	-	-	***22.71%***	21.25%	-	-	***21.25%***	22.35%	-	-	***22.35%***	-	-	-	***-***
**Total Risk/HI Percent*	*92.42%*	*7.47%*	*0.11%*	***100.0%***	*86.47%*	*12.44%*	*1.10%*	***100.0%***	*90.93%*	*8.71%*	*0.36%*	***100.0%***	*87.02%*	*12.67%*	*0.31%*	***100.0%***

Output generated 07FEB2020:13:50:22

APPENDIX G

STRATUM B RISK ASSESSMENT – RAIS OUTPUTS

Site-specific Risk

Excavation Worker Soil Inputs

Variable	Default Value	Form-input Value
A (PEF Dispersion Constant)	16.2302	16.2302
A (VF Dispersion Constant)	11.911	11.911
A (VF Dispersion Constant - Mass Limit)	11.911	11.911
B (PEF Dispersion Constant)	18.7762	18.7762
B (VF Dispersion Constant)	18.4385	18.4385
B (VF Dispersion Constant - Mass Limit)	18.4385	18.4385
City (PEF Climate Zone) Selection	Default	Default
City (VF Climate Zone) Selection	Default	Default
C (PEF Dispersion Constant)	216.108	216.108
C (VF Dispersion Constant)	209.7845	209.7845
C (VF Dispersion Constant - Mass Limit)	209.7845	209.7845
foc (fraction organic carbon in soil) g/g	0.006	0.006
F(x) (function dependent on U_m/U_t) unitless	0.194	0.194
n (total soil porosity) L_{pore}/L_{soil}	0.43396	0.43396
p_b (dry soil bulk density) g/cm^3	1.5	1.5
p_b (dry soil bulk density - mass limit) g/cm^3	1.5	1.5
PEF (particulate emission factor) m^3/kg	1359344438	1359344438
p_s (soil particle density) g/cm^3	2.65	2.65
Q/C_{wind} (g/m^2-s per kg/m^3)	93.77	93.77
Q/C_{vol} (g/m^2-s per kg/m^3)	68.18	68.18
Q/C_{vol} (g/m^2-s per kg/m^3)	68.18	68.18
A_s (PEF acres)	0.5	0.5
A_s (VF acres)	0.5	0.5
A_s (VF mass-limit acres)	0.5	0.5
AF_{ew} (skin adherence factor - excavation worker) mg/cm^2	0.3	0.3
AT_{ew} (averaging time - excavation worker)	365	365
BW_{ew} (body weight - excavation worker) kg	80	80
ED_{ew} (exposure duration - excavation worker) yr	1	1
EF_{ew} (exposure frequency - excavation worker) day/yr	20	20
ET_{ew} (exposure time - excavation worker) hr	8	8
IR_{ew} (soil ingestion rate - excavation worker) mg/day	330	330
LT (lifetime) yr	70	70
SA_{ew} (surface area - excavation worker) cm^2/day	3527	3527
T_w (groundwater temperature) Celsius	25	25

Output generated 07FEB2020:14:43:58

Site-specific Risk
Excavation Worker Soil Inputs

Variable	Default Value	Form-input Value
$Theta_a$ (air-filled soil porosity) L_{air}/L_{soil}	0.28396	0.28396
$Theta_w$ (water-filled soil porosity) L_{water}/L_{soil}	0.15	0.15
T (exposure interval) s	819936000	819936000
T (exposure interval) yr	26	26
U_m (mean annual wind speed) m/s	4.69	4.69
U_t (equivalent threshold value)	11.32	11.32
V (fraction of vegetative cover) unitless	0.5	0.5

Output generated 07FEB2020:14:43:58

Site-specific Risk
Excavation Worker for Soil

Chemical	CAS Number	Mutagen?	VOC?	Chronic RfD (mg/kg-day)	RfD Ref	Chronic RfC (mg/m^3)	RfC Ref	SF_o (mg/kg-day)$^{-1}$	SF_o Ref	IUR (ug/m^3)$^{-1}$	IUR Ref	ABS_{gi}	ABS_{derm}
Arsenic, Inorganic	7440-38-2	No	No	3.00E-04	IRIS	1.50E-05	CALEPA	1.50E+00	IRIS	4.30E-03	IRIS	1	0.03
TCDD, 2,3,7,8-	1746-01-6	No	Yes	7.00E-10	IRIS	4.00E-08	CALEPA	1.30E+05	CALEPA	3.80E+01	CALEPA	1	0.03
Thallium (Soluble Salts)	7440-28-0	No	No	1.00E-05	SCREEN Current	-		-		-		1	-
**Total Risk/HI*				-		-		-		-		-	-

Output generated 07FEB2020:14:43:58

Site-specific Risk
Excavation Worker for Soil

Chemical	Volatilization Factor (m³/kg)	DA	Particulate Emission Factor (m³/kg)	Soil Saturation Concentration (mg/kg)	HLC (atm-m³/mole)	Henry's Law Constant (unitless)	H` and HLC Ref	Henry's Law Constant Used in Calcs (unitless)	Normal Boiling Point BP (K)	BP Ref
Arsenic, Inorganic	-	-	1.36E+09	-	-	-		-	8.88E+02	PHYSPROP
TCDD, 2,3,7,8-	1.96E+06	3.46E-09	1.36E+09	-	5.00E-05	2.04E-03	EPI	2.04E-03	6.52E+02	EPI
Thallium (Soluble Salts)	-	-	1.36E+09	-	-	-		-	1.73E+03	PHYSPROP
**Total Risk/HI*	-	-	-	-	-	-		-	-	

Output generated 07FEB2020:14:43:58

Site-specific Risk

Excavation Worker for Soil

Chemical	Critical Temperature TC (K)	TC Ref	D_{ia} \ (cm^2/s)	D_{iw} \ (cm^2/s)	Soil Concentration (mg/kg)	Ingestion Noncarcinogenic CDI (mg/kg-day)	Dermal Noncarcinogenic CDI (mg/kg-day)	Inhalation Noncarcinogenic CDI (mg/m^3)
Arsenic, Inorganic	1.67E+03	CRC89	-	-	12.7	1.72E-06	2.76E-07	1.71E-10
TCDD, 2,3,7,8-	9.78E+02	Approx. from Tcrit=1.5xTBoil	4.70E-02	6.76E-06	3.25E-6	7.35E-13	7.07E-14	3.03E-14
Thallium (Soluble Salts)	4.65E+03	YAWS	-	-	0.167	3.77E-08	-	2.24E-12
*Total Risk/HI	-		-	-	-	-	-	-

Output generated 07FEB2020:14:43:58

Site-specific Risk
Excavation Worker for Soil

Chemical	Ingestion Carcinogenic CDI (mg/kg-day)	Dermal Carcinogenic CDI (mg/kg-day)	Inhalation Carcinogenic CDI (ug/m³)	Ingestion HQ	Dermal HQ	Inhalation HQ	Total HI	Ingestion Risk	Dermal Risk	Inhalation Risk	Total Risk
Arsenic, Inorganic	2.46E-08	3.94E-09	2.44E-09	5.74E-03	9.20E-04	1.14E-05	6.67E-03	3.69E-08	5.92E-09	1.05E-11	4.28E-08
TCDD, 2,3,7,8-	1.05E-14	1.01E-15	4.33E-13	1.05E-03	1.01E-04	7.58E-07	1.15E-03	1.36E-09	1.31E-10	1.64E-11	1.51E-09
Thallium (Soluble Salts)	5.39E-10	-	3.21E-11	3.77E-03	-	-	3.77E-03	-	-	-	-
**Total Risk/HI*	*-*	*-*	*-*	*1.06E-02*	*1.02E-03*	*1.21E-05*	*1.16E-02*	*3.83E-08*	*6.05E-09*	*2.69E-11*	*4.43E-08*

Output generated 07FEB2020:14:43:58

Site-specific Risk

Excavation Worker for Soil - Percent Contribution to Total Risk by:

Chemical	Ingestion HQ	Dermal HQ	Inhalation HQ	Total HI	Ingestion Risk	Dermal Risk	Inhalation Risk	Total Risk
Arsenic, Inorganic	49.50%	7.94%	0.10%	***57.53%***	83.22%	13.34%	0.02%	***96.59%***
TCDD, 2,3,7,8-	9.05%	0.87%	0.01%	***9.92%***	3.08%	0.30%	0.04%	***3.41%***
Thallium (Soluble Salts)	32.54%	-	-	***32.54%***	-	-	-	***-***
**Total Risk/HI Percent*	*91.09%*	*8.81%*	*0.10%*	***100.0%***	*86.30%*	*13.64%*	*0.06%*	***100.0%***

Output generated 07FEB2020:14:43:58

Site-specific Risk

Recreator Soil/Sediment Inputs

Variable	Default Value	Form-input Value
A (PEF Dispersion Constant)	16.2302	16.2302
A (VF Dispersion Constant)	11.911	11.911
A (VF Dispersion Constant - Mass Limit)	11.911	11.911
B (PEF Dispersion Constant)	18.7762	18.7762
B (VF Dispersion Constant)	18.4385	18.4385
B (VF Dispersion Constant - Mass Limit)	18.4385	18.4385
City (PEF Climate Zone) Selection	Default	Default
City (VF Climate Zone) Selection	Default	Default
C (PEF Dispersion Constant)	216.108	216.108
C (VF Dispersion Constant)	209.7845	209.7845
C (VF Dispersion Constant - Mass Limit)	209.7845	209.7845
foc (fraction organic carbon in soil) g/g	0.006	0.006
F(x) (function dependent on U_m/U_t) unitless	0.194	0.194
n (total soil porosity) L_{pore}/L_{soil}	0.43396	0.43396
p_b (dry soil bulk density) g/cm^3	1.5	1.5
p_b (dry soil bulk density - mass limit) g/cm^3	1.5	1.5
PEF (particulate emission factor) m^3/kg	1359344438	1359344438
p_s (soil particle density) g/cm^3	2.65	2.65
Q/C_{wind} (g/m^2-s per kg/m^3)	93.77	93.77
Q/C_{vol} (g/m^2-s per kg/m^3)	68.18	68.18
Q/C_{vol} (g/m^2-s per kg/m^3)	68.18	68.18
A_s (PEF acres)	0.5	0.5
A_s (VF acres)	0.5	0.5
A_s (VF mass-limit acres)	0.5	0.5
T_w (groundwater temperature) Celsius	25	25
$Theta_a$ (air-filled soil porosity) L_{air}/L_{soil}	0.28396	0.28396
$Theta_w$ (water-filled soil porosity) L_{water}/L_{soil}	0.15	0.15
T (exposure interval) s	819936000	819936000
T (exposure interval) yr	26	26
U_m (mean annual wind speed) m/s	4.69	4.69
U_t (equivalent threshold value)	11.32	11.32
V (fraction of vegetative cover) unitless	0.5	0.5

Output generated 07FEB2020:14:46:12

Site-specific Risk
Recreator for Soil/Sediment

Chemical	CAS Number	Mutagen?	VOC?	Chronic RfD (mg/kg-day)	RfD Ref	Chronic RfC (mg/m^3)	RfC Ref	SF_o (mg/kg-day)$^{-1}$	SF_o Ref	IUR (ug/m^3)$^{-1}$	IUR Ref	ABS_{gi}	ABS_{derm}	Volatilization Factor (m^3/kg)
Arsenic, Inorganic	7440-38-2	No	No	3.00E-04	IRIS	1.50E-05	CALEPA	1.50E+00	IRIS	4.30E-03	IRIS	1	0.03	-
TCDD, 2,3,7,8-	1746-01-6	No	Yes	7.00E-10	IRIS	4.00E-08	CALEPA	1.30E+05	CALEPA	3.80E+01	CALEPA	1	0.03	1.96E+06
Thallium (Soluble Salts)	7440-28-0	No	No	1.00E-05	SCREEN Current	-		-		-		1	-	-
**Total Risk/HI*				-		-		-		-		-	-	-

Output generated 07FEB2020:14:46:12

Site-specific Risk
Recreator for Soil/Sediment

Chemical	DA	Particulate Emission Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	RBA	HLC (atm-m^3/mole)	Henry's Law Constant (unitless)	H` and HLC Ref	Henry's Law Constant Used in Calcs (unitless)	Normal Boiling Point BP (K)	BP Ref	Critical Temperature TC (K)	TC Ref
Arsenic, Inorganic	-	1.36E+09	-	0.6	-	-		-	8.88E+02	PHYSPROP	1.67E+03	CRC89
TCDD, 2,3,7,8-	3.46E-09	1.36E+09	-	1	5.00E-05	2.04E-03	EPI	2.04E-03	6.52E+02	EPI	9.78E+02	Approx. from Tcrit=1.5xTBoil
Thallium (Soluble Salts)	-	1.36E+09	-	1	-	-		-	1.73E+03	PHYSPROP	4.65E+03	YAWS
**Total Risk/HI*	-	-	-	-	-	-		-	-		-	

Output generated 07FEB2020:14:46:12

Site-specific Risk
Recreator for Soil/Sediment

Chemical	D_{ia} \ (cm^2/s)	D_{iw} \ (cm^2/s)	Soil Concentration (mg/kg)	Child Ingestion Noncarcinogenic CDI (mg/kg-day)	Child Dermal Noncarcinogenic CDI (mg/kg-day)	Child Inhalation Noncarcinogenic CDI (mg/m^3)	Adult Ingestion Noncarcinogenic CDI (mg/kg-day)	Adult Dermal Noncarcinogenic CDI (mg/kg-day)
Arsenic, Inorganic	-	-	12.7	2.09E-05	2.48E-06	8.00E-11	1.96E-06	4.13E-07
TCDD, 2,3,7,8-	4.70E-02	6.76E-06	3.25E-6	8.90E-12	6.34E-13	1.42E-14	8.35E-13	1.06E-13
Thallium (Soluble Salts)	-	-	0.167	4.58E-07	-	1.05E-12	4.29E-08	-
*Total Risk/HI	-	-	-	-	-	-	-	-

Output generated 07FEB2020:14:46:12

Site-specific Risk
Recreator for Soil/Sediment

Chemical	Adult Inhalation Noncarcinogenic CDI (mg/m³)	Adjusted Ingestion Noncarcinogenic CDI (mg/kg-day)	Adjusted Dermal Noncarcinogenic CDI (mg/kg-day)	Adjusted Inhalation Noncarcinogenic CDI (mg/m³)	Ingestion Carcinogenic CDI (mg/kg-day)	Dermal Carcinogenic CDI (mg/kg-day)	Inhalation Carcinogenic CDI (ug/m³)	Child Ingestion HQ	Child Dermal HQ
Arsenic, Inorganic	8.00E-11	6.32E-06	8.89E-07	8.00E-11	2.35E-06	3.30E-07	2.97E-08	6.96E-02	8.26E-03
TCDD, 2,3,7,8-	1.42E-14	2.70E-12	2.28E-13	1.42E-14	1.00E-12	8.45E-14	5.28E-12	1.27E-02	9.06E-04
Thallium (Soluble Salts)	1.05E-12	1.39E-07	-	1.05E-12	5.15E-08	-	3.91E-10	4.58E-02	-
**Total Risk/HI*	-	-	-	-	-	-	-	***1.28E-01***	*9.16E-03*

Output generated 07FEB2020:14:46:12

Site-specific Risk
Recreator for Soil/Sediment

Chemical	Child Inhalation HQ	Child Total HI	Adult Ingestion HQ	Adult Dermal HQ	Adult Inhalation HQ	Adult Total HI	Adjusted Ingestion HQ	Adjusted Dermal HQ	Adjusted Inhalation HQ	Adjusted Total HI	Ingestion Risk	Dermal Risk	Inhalation Risk	Total Risk
Arsenic, Inorganic	5.33E-06	7.79E-02	6.52E-03	1.38E-03	5.33E-06	7.91E-03	2.11E-02	2.96E-03	5.33E-06	2.40E-02	3.52E-06	4.96E-07	1.28E-10	4.02E-06
TCDD, 2,3,7,8-	3.55E-07	1.36E-02	1.19E-03	1.51E-04	3.55E-07	1.34E-03	3.85E-03	3.25E-04	3.55E-07	4.18E-03	1.30E-07	1.10E-08	2.00E-10	1.41E-07
Thallium (Soluble Salts)	-	4.58E-02	4.29E-03	-	-	4.29E-03	1.39E-02	-	-	1.39E-02	-	-	-	-
**Total Risk/HI*	*5.69E-06*	***1.37E-01***	*1.20E-02*	*1.53E-03*	*5.69E-06*	*1.35E-02*	*3.88E-02*	*3.29E-03*	*5.69E-06*	*4.21E-02*	*3.65E-06*	*5.07E-07*	*3.28E-10*	*4.16E-06*

Output generated 07FEB2020:14:46:12

Site-specific Risk

Recreator for Soil/Sediment - Percent Contribution to Total Risk by:

Chemical	Child Ingestion HQ	Child Dermal HQ	Child Inhalation HQ	Child Total HI	Adult Ingestion HQ	Adult Dermal HQ	Adult Inhalation HQ	Adult Total HI	Adjusted Ingestion HQ	Adjusted Dermal HQ	Adjusted Inhalation HQ	Adjusted Total HI	Ingestion Risk	Dermal Risk	Inhalation Risk	Total Risk
Arsenic, Inorganic	50.71%	6.02%	0.00%	***56.73%***	48.18%	10.17%	0.04%	***58.39%***	50.08%	7.05%	0.01%	***57.14%***	84.69%	11.91%	0.00%	***96.60%***
TCDD, 2,3,7,8-	9.27%	0.66%	0.00%	***9.93%***	8.81%	1.12%	0.00%	***9.93%***	9.15%	0.77%	0.00%	***9.93%***	3.13%	0.26%	0.00%	***3.40%***
Thallium (Soluble Salts)	33.34%	-	-	***33.34%***	31.68%	-	-	***31.68%***	32.93%	-	-	***32.93%***	-	-	-	***-***
**Total Risk/HI Percent*	*93.32%*	*6.68%*	*0.00%*	***100.0%***	*88.67%*	*11.29%*	*0.04%*	***100.0%***	*92.17%*	*7.82%*	*0.01%*	***100.0%***	*87.82%*	*12.18%*	*0.01%*	***100.0%***

Output generated 07FEB2020:14:46:12

Site-specific Risk
Outdoor Worker Soil Inputs

Variable	Default Value	Form-input Value
A (PEF Dispersion Constant)	16.2302	16.2302
A (VF Dispersion Constant)	11.911	11.911
A (VF Dispersion Constant - Mass Limit)	11.911	11.911
B (PEF Dispersion Constant)	18.7762	18.7762
B (VF Dispersion Constant)	18.4385	18.4385
B (VF Dispersion Constant - Mass Limit)	18.4385	18.4385
City (PEF Climate Zone) Selection	Default	Default
City (VF Climate Zone) Selection	Default	Default
C (PEF Dispersion Constant)	216.108	216.108
C (VF Dispersion Constant)	209.7845	209.7845
C (VF Dispersion Constant - Mass Limit)	209.7845	209.7845
foc (fraction organic carbon in soil) g/g	0.006	0.006
F(x) (function dependent on U_m/U_t) unitless	0.194	0.194
n (total soil porosity) L_{pore}/L_{soil}	0.43396	0.43396
p_b (dry soil bulk density) g/cm^3	1.5	1.5
p_b (dry soil bulk density - mass limit) g/cm^3	1.5	1.5
PEF (particulate emission factor) m^3/kg	1359344438	1359344438
p_s (soil particle density) g/cm^3	2.65	2.65
Q/C_{wind} (g/m^2-s per kg/m^3)	93.77	93.77
Q/C_{vol} (g/m^2-s per kg/m^3)	68.18	68.18
Q/C_{vol} (g/m^2-s per kg/m^3)	68.18	68.18
A_s (PEF acres)	0.5	0.5
A_s (VF acres)	0.5	0.5
A_s (VF mass-limit acres)	0.5	0.5
AF_{ow} (skin adherence factor - outdoor worker) mg/cm^2	0.12	0.12
AT_{ow} (averaging time - outdoor worker)	365	365
BW_{ow} (body weight - outdoor worker)	80	80
ED_{ow} (exposure duration - outdoor worker) yr	25	25
EF_{ow} (exposure frequency - outdoor worker) day/yr	225	225
ET_{ow} (exposure time - outdoor worker) hr	8	8
IRS_{ow} (soil ingestion rate - outdoor worker) mg/day	100	100
LT (lifetime) yr	70	70
SA_{ow} (surface area - outdoor worker) cm^2/day	3527	3527
T_w (groundwater temperature) Celsius	25	25

Output generated 07FEB2020:14:47:47

Site-specific Risk
Outdoor Worker Soil Inputs

Variable	Default Value	Form-input Value
$Theta_a$ (air-filled soil porosity) L_{air}/L_{soil}	0.28396	0.28396
$Theta_w$ (water-filled soil porosity) L_{water}/L_{soil}	0.15	0.15
T (exposure interval) s	819936000	819936000
T (exposure interval) yr	26	26
U_m (mean annual wind speed) m/s	4.69	4.69
U_t (equivalent threshold value)	11.32	11.32
V (fraction of vegetative cover) unitless	0.5	0.5

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Site-specific Risk
Outdoor Worker for Soil

Chemical	CAS Number	Mutagen?	VOC?	Chronic RfD (mg/kg-day)	RfD Ref	Chronic RfC (mg/m^3)	RfC Ref	SF_o $(mg/kg\text{-}day)^{-1}$	SF_o Ref	IUR $(ug/m^3)^{-1}$	IUR Ref	ABS_{gi}	ABS_{derm}
Arsenic, Inorganic	7440-38-2	No	No	3.00E-04	IRIS	1.50E-05	CALEPA	1.50E+00	IRIS	4.30E-03	IRIS	1	0.03
TCDD, 2,3,7,8-	1746-01-6	No	Yes	7.00E-10	IRIS	4.00E-08	CALEPA	1.30E+05	CALEPA	3.80E+01	CALEPA	1	0.03
Thallium (Soluble Salts)	7440-28-0	No	No	1.00E-05	SCREEN Current	-		-		-		1	-
**Total Risk/HI*				-		-		-		-		-	-

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Site-specific Risk
Outdoor Worker for Soil

Chemical	Volatilization Factor (m^3/kg)	DA	Particulate Emission Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	HLC (atm-m^3/mole)	Henry's Law Constant (unitless)	H` and HLC Ref	Henry's Law Constant Used in Calcs (unitless)	Normal Boiling Point BP (K)	BP Ref
Arsenic, Inorganic	-	-	1.36E+09	-	-	-		-	8.88E+02	PHYSPROP
TCDD, 2,3,7,8-	1.96E+06	3.46E-09	1.36E+09	-	5.00E-05	2.04E-03	EPI	2.04E-03	6.52E+02	EPI
Thallium (Soluble Salts)	-	-	1.36E+09	-	-	-		-	1.73E+03	PHYSPROP
**Total Risk/HI*	-	-	-	-	-	-		-	-	

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Site-specific Risk
Outdoor Worker for Soil

Chemical	Critical Temperature TC (K)	TC Ref	D_{ia} \ (cm^2/s)	D_{iw} \ (cm^2/s)	Soil Concentration (mg/kg)	Ingestion Noncarcinogenic CDI (mg/kg-day)	Dermal Noncarcinogenic CDI (mg/kg-day)	Inhalation Noncarcinogenic CDI (mg/m^3)
Arsenic, Inorganic	1.67E+03	CRC89	-	-	12.7	5.87E-06	1.24E-06	1.92E-09
TCDD, 2,3,7,8-	9.78E+02	Approx. from Tcrit=1.5xTBoil	4.70E-02	6.76E-06	3.25E-6	2.50E-12	3.18E-13	3.41E-13
Thallium (Soluble Salts)	4.65E+03	YAWS	-	-	0.167	1.29E-07	-	2.52E-11
*Total Risk/HI	-		-	-	-	-	-	-

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Site-specific Risk
Outdoor Worker for Soil

Chemical	Ingestion Carcinogenic CDI (mg/kg-day)	Dermal Carcinogenic CDI (mg/kg-day)	Inhalation Carcinogenic CDI (ug/m³)	Ingestion HQ	Dermal HQ	Inhalation HQ	Total HI	Ingestion Risk	Dermal Risk	Inhalation Risk	Total Risk
Arsenic, Inorganic	2.10E-06	4.44E-07	6.86E-07	1.96E-02	4.14E-03	1.28E-04	2.38E-02	3.15E-06	6.66E-07	2.95E-09	3.81E-06
TCDD, 2,3,7,8-	8.94E-13	1.14E-13	1.22E-10	3.58E-03	4.54E-04	8.52E-06	4.04E-03	1.16E-07	1.48E-08	4.63E-09	1.36E-07
Thallium (Soluble Salts)	4.60E-08	-	9.02E-09	1.29E-02	-	-	1.29E-02	-	-	-	-
**Total Risk/HI*	*-*	*-*	*-*	*3.60E-02*	*4.60E-03*	*1.37E-04*	*4.08E-02*	*3.26E-06*	*6.80E-07*	*7.57E-09*	*3.95E-06*

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Site-specific Risk

Outdoor Worker for Soil - Percent Contribution to Total Risk by:

Chemical	Ingestion HQ	Dermal HQ	Inhalation HQ	Total HI	Ingestion Risk	Dermal Risk	Inhalation Risk	Total Risk
Arsenic, Inorganic	48.03%	10.16%	0.31%	***58.51%***	79.64%	16.85%	0.07%	***96.57%***
TCDD, 2,3,7,8-	8.78%	1.11%	0.02%	***9.91%***	2.94%	0.37%	0.12%	***3.43%***
Thallium (Soluble Salts)	31.58%	-	-	***31.58%***	-	-	-	***-***
**Total Risk/HI Percent*	*88.39%*	*11.28%*	*0.33%*	***100.0%***	*82.58%*	*17.23%*	*0.19%*	***100.0%***

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Site-specific Risk

Composite Worker Soil Inputs

Variable	Default Value	Form-input Value
A (PEF Dispersion Constant)	16.2302	16.2302
A (VF Dispersion Constant)	11.911	11.911
A (VF Dispersion Constant - Mass Limit)	11.911	11.911
B (PEF Dispersion Constant)	18.7762	18.7762
B (VF Dispersion Constant)	18.4385	18.4385
B (VF Dispersion Constant - Mass Limit)	18.4385	18.4385
City (PEF Climate Zone) Selection	Default	Default
City (VF Climate Zone) Selection	Default	Default
C (PEF Dispersion Constant)	216.108	216.108
C (VF Dispersion Constant)	209.7845	209.7845
C (VF Dispersion Constant - Mass Limit)	209.7845	209.7845
foc (fraction organic carbon in soil) g/g	0.006	0.006
F(x) (function dependent on U_m/U_t) unitless	0.194	0.194
n (total soil porosity) L_{pore}/L_{soil}	0.43396	0.43396
p_b (dry soil bulk density) g/cm^3	1.5	1.5
p_b (dry soil bulk density - mass limit) g/cm^3	1.5	1.5
PEF (particulate emission factor) m^3/kg	1359344438	1359344438
p_s (soil particle density) g/cm^3	2.65	2.65
Q/C_{wind} (g/m^2-s per kg/m^3)	93.77	93.77
Q/C_{vol} (g/m^2-s per kg/m^3)	68.18	68.18
Q/C_{vol} (g/m^2-s per kg/m^3)	68.18	68.18
A_s (PEF acres)	0.5	0.5
A_s (VF acres)	0.5	0.5
A_s (VF mass-limit acres)	0.5	0.5
AF_w (skin adherence factor - composite worker) mg/cm^2	0.12	0.12
AT_w (averaging time - composite worker)	365	365
BW_w (body weight - composite worker)	80	80
ED_w (exposure duration - composite worker) yr	25	25
EF_w (exposure frequency - composite worker) day/yr	250	250
ET_w (exposure time - composite worker) hr	8	8
IRS_w (soil ingestion rate - composite worker) mg/day	100	100
LT (lifetime) yr	70	70
SA_w (surface area - composite worker) cm^2/day	3527	3527
T_w (groundwater temperature) Celsius	25	25

Output generated 07FEB2020:14:49:21

Site-specific Risk
Composite Worker Soil Inputs

Variable	Default Value	Form-input Value
$Theta_a$ (air-filled soil porosity) L_{air}/L_{soil}	0.28396	0.28396
$Theta_w$ (water-filled soil porosity) L_{water}/L_{soil}	0.15	0.15
T (exposure interval) s	819936000	819936000
T (exposure interval) yr	26	26
U_m (mean annual wind speed) m/s	4.69	4.69
U_t (equivalent threshold value)	11.32	11.32
V (fraction of vegetative cover) unitless	0.5	0.5

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Site-specific Risk

Composite Worker for Soil

Chemical	CAS Number	Mutagen?	VOC?	Chronic RfD (mg/kg-day)	RfD Ref	Chronic RfC (mg/m^3)	RfC Ref	SF_o (mg/kg-day)$^{-1}$	SF_o Ref	IUR (ug/m^3)$^{-1}$	IUR Ref	ABS_{gi}	ABS_{derm}
Arsenic, Inorganic	7440-38-2	No	No	3.00E-04	IRIS	1.50E-05	CALEPA	1.50E+00	IRIS	4.30E-03	IRIS	1	0.03
TCDD, 2,3,7,8-	1746-01-6	No	Yes	7.00E-10	IRIS	4.00E-08	CALEPA	1.30E+05	CALEPA	3.80E+01	CALEPA	1	0.03
Thallium (Soluble Salts)	7440-28-0	No	No	1.00E-05	SCREEN Current	-		-		-		1	-
**Total Risk/HI*				-		-		-		-		-	-

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Site-specific Risk
Composite Worker for Soil

Chemical	Volatilization Factor (m³/kg)	DA	Particulate Emission Factor (m³/kg)	Soil Saturation Concentration (mg/kg)	HLC (atm-m³/mole)	Henry's Law Constant (unitless)	H` and HLC Ref	Henry's Law Constant Used in Calcs (unitless)	Normal Boiling Point BP (K)	BP Ref
Arsenic, Inorganic	-	-	1.36E+09	-	-	-		-	8.88E+02	PHYSPROP
TCDD, 2,3,7,8-	1.96E+06	3.46E-09	1.36E+09	-	5.00E-05	2.04E-03	EPI	2.04E-03	6.52E+02	EPI
Thallium (Soluble Salts)	-	-	1.36E+09	-	-	-		-	1.73E+03	PHYSPROP
**Total Risk/HI*	-	-	-	-	-	-		-	-	

Output generated 07FEB2020:14:49:21

Site-specific Risk
Composite Worker for Soil

Chemical	Critical Temperature TC (K)	TC Ref	D_{ia} \ (cm^2/s)	D_{iw} \ (cm^2/s)	Soil Concentration (mg/kg)	Ingestion Noncarcinogenic CDI (mg/kg-day)	Dermal Noncarcinogenic CDI (mg/kg-day)	Inhalation Noncarcinogenic CDI (mg/m^3)
Arsenic, Inorganic	1.67E+03	CRC89	-	-	12.7	6.52E-06	1.38E-06	2.13E-09
TCDD, 2,3,7,8-	9.78E+02	Approx. from Tcrit=1.5xTBoil	4.70E-02	6.76E-06	3.25E-6	2.78E-12	3.53E-13	3.79E-13
Thallium (Soluble Salts)	4.65E+03	YAWS	-	-	0.167	1.43E-07	-	2.80E-11
**Total Risk/HI*	-		-	-	-	-	-	-

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Site-specific Risk
Composite Worker for Soil

Chemical	Ingestion Carcinogenic CDI (mg/kg-day)	Dermal Carcinogenic CDI (mg/kg-day)	Inhalation Carcinogenic CDI (ug/m^3)	Ingestion HQ	Dermal HQ	Inhalation HQ	Total HI	Ingestion Risk	Dermal Risk	Inhalation Risk	Total Risk
Arsenic, Inorganic	2.33E-06	4.93E-07	7.62E-07	2.17E-02	4.60E-03	1.42E-04	2.65E-02	3.49E-06	7.40E-07	3.28E-09	4.24E-06
TCDD, 2,3,7,8-	9.94E-13	1.26E-13	1.35E-10	3.98E-03	5.05E-04	9.47E-06	4.49E-03	1.29E-07	1.64E-08	5.14E-09	1.51E-07
Thallium (Soluble Salts)	5.11E-08	-	1.00E-08	1.43E-02	-	-	1.43E-02	-	-	-	-
**Total Risk/HI*	*-*	*-*	*-*	*4.00E-02*	*5.11E-03*	*1.52E-04*	*4.53E-02*	*3.62E-06*	*7.56E-07*	*8.42E-09*	*4.39E-06*

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Site-specific Risk

Composite Worker for Soil - Percent Contribution to Total Risk by:

Chemical	Ingestion HQ	Dermal HQ	Inhalation HQ	Total HI	Ingestion Risk	Dermal Risk	Inhalation Risk	Total Risk
Arsenic, Inorganic	48.03%	10.16%	0.31%	***58.51%***	79.64%	16.85%	0.07%	***96.57%***
TCDD, 2,3,7,8-	8.78%	1.11%	0.02%	***9.91%***	2.94%	0.37%	0.12%	***3.43%***
Thallium (Soluble Salts)	31.58%	-	-	***31.58%***	-	-	-	***-***
**Total Risk/HI Percent*	*88.39%*	*11.28%*	*0.33%*	***100.0%***	*82.58%*	*17.23%*	*0.19%*	***100.0%***

Output generated 07FEB2020:14:49:21

Site-specific Risk

Resident Soil Inputs

Variable	Default Value	Form-input Value
A (PEF Dispersion Constant)	16.2302	16.2302
A (VF Dispersion Constant)	11.911	11.911
A (VF Dispersion Constant - Mass Limit)	11.911	11.911
B (PEF Dispersion Constant)	18.7762	18.7762
B (VF Dispersion Constant)	18.4385	18.4385
B (VF Dispersion Constant - Mass Limit)	18.4385	18.4385
City (PEF Climate Zone) Selection	Default	Default
City (VF Climate Zone) Selection	Default	Default
C (PEF Dispersion Constant)	216.108	216.108
C (VF Dispersion Constant)	209.7845	209.7845
C (VF Dispersion Constant - Mass Limit)	209.7845	209.7845
foc (fraction organic carbon in soil) g/g	0.006	0.006
F(x) (function dependent on U_m/U_t) unitless	0.194	0.194
n (total soil porosity) L_{pore}/L_{soil}	0.43396	0.43396
p_b (dry soil bulk density) g/cm^3	1.5	1.5
p_b (dry soil bulk density - mass limit) g/cm^3	1.5	1.5
PEF (particulate emission factor) m^3/kg	1359344438	1359344438
p_s (soil particle density) g/cm^3	2.65	2.65
Q/C_{wind} (g/m^2-s per kg/m^3)	93.77	93.77
Q/C_{vol} (g/m^2-s per kg/m^3)	68.18	68.18
Q/C_{vol} (g/m^2-s per kg/m^3)	68.18	68.18
A_s (PEF acres)	0.5	0.5
A_s (VF acres)	0.5	0.5
A_s (VF mass-limit acres)	0.5	0.5
AF_{0-2} (mutagenic skin adherence factor) mg/cm^2	0.2	0.2
AF_{2-6} (mutagenic skin adherence factor) mg/cm^2	0.2	0.2
AF_{6-16} (mutagenic skin adherence factor) mg/cm^2	0.07	0.07
AF_{16-26} (mutagenic skin adherence factor) mg/cm^2	0.07	0.07
AF_{res-a} (skin adherence factor - adult) mg/cm^2	0.07	0.07
AF_{res-c} (skin adherence factor - child) mg/cm^2	0.2	0.2
AT_{res} (averaging time - resident carcinogenic)	365	365
BW_{0-2} (mutagenic body weight) kg	15	15
BW_{2-6} (mutagenic body weight) kg	15	15
BW_{6-16} (mutagenic body weight) kg	80	80

Output generated 07FEB2020:14:50:33

Site-specific Risk
Resident Soil Inputs

Variable	Default Value	Form-input Value
BW_{16-26} (mutagenic body weight) kg	80	80
BW_{res-a} (body weight - adult) kg	80	80
BW_{res-c} (body weight - child) kg	15	15
$DFS_{res-adj}$ (age-adjusted soil dermal factor) mg/kg	103390	103390
$DFSM_{res-adj}$ (mutagenic age-adjusted soil dermal factor) mg/kg	428260	428260
ED_{res} (exposure duration) years	26	26
ED_{0-2} (mutagenic exposure duration) years	2	2
ED_{2-6} (mutagenic exposure duration) years	4	4
ED_{6-16} (mutagenic exposure duration) years	10	10
ED_{16-26} (mutagenic exposure duration) years	10	10
ED_{res-a} (exposure duration - adult) years	20	20
ED_{res-c} (exposure duration - child) years	6	6
EF_{res} (exposure frequency) days/year	350	350
EF_{0-2} (mutagenic exposure frequency) days/year	350	350
EF_{2-6} (mutagenic exposure frequency) days/year	350	350
EF_{6-16} (mutagenic exposure frequency) days/year	350	350
EF_{16-26} (mutagenic exposure frequency) days/year	350	350
EF_{res-a} (exposure frequency - adult) days/year	350	350
EF_{res-c} (exposure frequency - child) days/year	350	350
ET_{res} (exposure time) hours/day	24	24
ET_{0-2} (mutagenic exposure time) hours/day	24	24
ET_{2-6} (mutagenic exposure time) hours/day	24	24
ET_{6-16} (mutagenic exposure time) hours/day	24	24
ET_{16-26} (mutagenic exposure time) hours/day	24	24
ET_{res-a} (adult exposure time) hours/day	24	24
ET_{res-c} (child exposure time) hours/day	24	24
$IFS_{res-adj}$ (age-adjusted soil ingestion factor) mg/kg	36750	36750
$IFSM_{res-adj}$ (mutagenic age-adjusted soil ingestion factor) mg/kg	166833.3	166833.3
IRS_{0-2} (mutagenic soil intake rate) mg/day	200	200
IRS_{2-6} (mutagenic soil intake rate) mg/day	200	200
IRS_{6-16} (mutagenic soil intake rate) mg/day	100	100
IRS_{16-26} (mutagenic soil intake rate) mg/day	100	100
IRS_{res-a} (soil intake rate - adult) mg/day	100	100
IRS_{res-c} (soil intake rate - child) mg/day	200	200

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Site-specific Risk

Resident Soil Inputs

Variable	Default Value	Form-input Value
LT (lifetime) years	70	70
SA_{0-2} (mutagenic skin surface area) cm^2/day	2373	2373
SA_{2-6} (mutagenic skin surface area) cm^2/day	2373	2373
SA_{6-16} (mutagenic skin surface area) cm^2/day	6032	6032
SA_{16-26} (mutagenic skin surface area) cm^2/day	6032	6032
SA_{res-a} (skin surface area - adult) cm^2/day	6032	6032
SA_{res-c} (skin surface area - child) cm^2/day	2373	2373
T_w (groundwater temperature) Celsius	25	25
$Theta_a$ (air-filled soil porosity) L_{air}/L_{soil}	0.28396	0.28396
$Theta_w$ (water-filled soil porosity) L_{water}/L_{soil}	0.15	0.15
T (exposure interval) s	819936000	819936000
T (exposure interval) yr	26	26
U_m (mean annual wind speed) m/s	4.69	4.69
U_t (equivalent threshold value)	11.32	11.32
V (fraction of vegetative cover) unitless	0.5	0.5

Output generated 07FEB2020:14:50:33

Site-specific Risk
Resident for Soil

Chemical	CAS Number	Mutagen?	VOC?	Chronic RfD (mg/kg-day)	RfD Ref	Chronic RfC (mg/m^3)	RfC Ref	SF_o $(mg/kg\text{-}day)^{-1}$	SF_o Ref	IUR $(ug/m^3)^{-1}$	IUR Ref	ABS_{gi}	ABS_{derm}	Volatilization Factor (m^3/kg)
Arsenic, Inorganic	7440-38-2	No	No	3.00E-04	IRIS	1.50E-05	CALEPA	1.50E+00	IRIS	4.30E-03	IRIS	1	0.03	-
TCDD, 2,3,7,8-	1746-01-6	No	Yes	7.00E-10	IRIS	4.00E-08	CALEPA	1.30E+05	CALEPA	3.80E+01	CALEPA	1	0.03	1.96E+06
Thallium (Soluble Salts)	7440-28-0	No	No	1.00E-05	SCREEN Current	-		-		-		1	-	-
**Total Risk/HI*				-		-		-		-		-	-	-

Output generated 07FEB2020:14:50:33

Site-specific Risk
Resident for Soil

Chemical	DA	Particulate Emission Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	RBA	HLC (atm-m^3/mole)	Henry's Law Constant (unitless)	H` and HLC Ref	Henry's Law Constant Used in Calcs (unitless)	Normal Boiling Point BP (K)	BP Ref	Critical Temperature TC (K)	TC Ref
Arsenic, Inorganic	-	1.36E+09	-	0.6	-	-		-	8.88E+02	PHYSPROP	1.67E+03	CRC89
TCDD, 2,3,7,8-	3.46E-09	1.36E+09	-	1	5.00E-05	2.04E-03	EPI	2.04E-03	6.52E+02	EPI	9.78E+02	Approx. from Tcrit=1.5xTBoil
Thallium (Soluble Salts)	-	1.36E+09	-	1	-	-		-	1.73E+03	PHYSPROP	4.65E+03	YAWS
**Total Risk/HI*	-	-	-	-	-	-		-	-		-	

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Site-specific Risk
Resident for Soil

Chemical	D_{ia}\ (cm²/s)	D_{iw}\ (cm²/s)	Soil Concentration (mg/kg)	Child Ingestion Noncarcinogenic CDI (mg/kg-day)	Child Dermal Noncarcinogenic CDI (mg/kg-day)	Child Inhalation Noncarcinogenic CDI (mg/m³)	Adult Ingestion Noncarcinogenic CDI (mg/kg-day)	Adult Dermal Noncarcinogenic CDI (mg/kg-day)
Arsenic, Inorganic	-	-	12.7	9.74E-05	1.16E-05	8.96E-09	9.13E-06	1.93E-06
TCDD, 2,3,7,8-	4.70E-02	6.76E-06	3.25E-6	4.16E-11	2.96E-12	1.59E-12	3.90E-12	4.93E-13
Thallium (Soluble Salts)	-	-	0.167	2.14E-06	-	1.18E-10	2.00E-07	-
*Total Risk/HI	-	-	-	-	-	-	-	-

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Site-specific Risk
Resident for Soil

Chemical	Adult Inhalation Noncarcinogenic CDI (mg/m³)	Adjusted Ingestion Noncarcinogenic CDI (mg/kg-day)	Adjusted Dermal Noncarcinogenic CDI (mg/kg-day)	Adjusted Inhalation Noncarcinogenic CDI (mg/m³)	Ingestion Carcinogenic CDI (mg/kg-day)	Dermal Carcinogenic CDI (mg/kg-day)	Inhalation Carcinogenic CDI (ug/m³)	Child Ingestion HQ	Child Dermal HQ
Arsenic, Inorganic	8.96E-09	2.95E-05	4.15E-06	8.96E-09	1.10E-05	1.54E-06	3.33E-06	**3.25E-01**	3.85E-02
TCDD, 2,3,7,8-	1.59E-12	1.26E-11	1.06E-12	1.59E-12	4.67E-12	3.95E-13	5.91E-10	5.94E-02	4.23E-03
Thallium (Soluble Salts)	1.18E-10	6.47E-07	-	1.18E-10	2.40E-07	-	4.38E-08	**2.14E-01**	-
**Total Risk/HI*	-	-	-	-	-	-	-	***5.98E-01***	*4.28E-02*

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Site-specific Risk
Resident for Soil

Chemical	Child Inhalation HQ	Child Total HI	Adult Ingestion HQ	Adult Dermal HQ	Adult Inhalation HQ	Adult Total HI	Adjusted Ingestion HQ	Adjusted Dermal HQ	Adjusted Inhalation HQ	Adjusted Total HI	Ingestion Risk	Dermal Risk	Inhalation Risk	Total Risk
Arsenic, Inorganic	5.97E-04	3.64E-01	3.04E-02	6.43E-03	5.97E-04	3.75E-02	9.84E-02	1.38E-02	5.97E-04	1.13E-01	1.64E-05	2.31E-06	1.43E-08	1.88E-05
TCDD, 2,3,7,8-	3.98E-05	6.36E-02	5.57E-03	7.05E-04	3.98E-05	6.31E-03	1.80E-02	1.52E-03	3.98E-05	1.95E-02	6.08E-07	5.13E-08	2.25E-08	6.81E-07
Thallium (Soluble Salts)	-	2.14E-01	2.00E-02	-	-	2.00E-02	6.47E-02	-	-	6.47E-02	-	-	-	-
**Total Risk/HI*	*6.37E-04*	*6.41E-01*	*5.60E-02*	*7.13E-03*	*6.37E-04*	*6.38E-02*	*1.81E-01*	*1.54E-02*	*6.37E-04*	*1.97E-01*	*1.70E-05*	*2.36E-06*	*3.68E-08*	*1.94E-05*

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Site-specific Risk

Resident for Soil - Percent Contribution to Total Risk by:

Chemical	Child Ingestion HQ	Child Dermal HQ	Child Inhalation HQ	Child Total HI	Adult Ingestion HQ	Adult Dermal HQ	Adult Inhalation HQ	Adult Total HI
Arsenic, Inorganic	50.66%	6.01%	0.09%	***56.77%***	47.72%	10.08%	0.94%	***58.73%***
TCDD, 2,3,7,8-	9.26%	0.66%	0.01%	***9.93%***	8.72%	1.10%	0.06%	***9.89%***
Thallium (Soluble Salts)	33.31%	-	-	***33.31%***	31.38%	-	-	***31.38%***
**Total Risk/HI Percent*	*93.23%*	*6.67%*	*0.10%*	***100.0%***	*87.82%*	*11.18%*	*1.00%*	***100.0%***

Adjusted Ingestion HQ	Adjusted Dermal HQ	Adjusted Inhalation HQ	Adjusted Total HI	Ingestion Risk	Dermal Risk	Inhalation Risk	Total Risk
49.93%	7.02%	0.30%	***57.26%***	84.53%	11.89%	0.07%	***96.50%***
9.13%	0.77%	0.02%	***9.92%***	3.12%	0.26%	0.12%	***3.50%***
32.83%	-	-	***32.83%***	-	-	-	***-***
91.88%	*7.79%*	*0.32%*	***100.0%***	*87.66%*	*12.15%*	*0.19%*	***100.0%***

Output generated 07FEB2020:14:50:33

APPENDIX H

STRATUM C RISK ASSESSMENT – RAIS OUTPUTS

Site-specific Risk

Composite Worker Soil Inputs

Variable	Default Value	Form-input Value
A (PEF Dispersion Constant)	16.2302	16.2302
A (VF Dispersion Constant)	11.911	11.911
A (VF Dispersion Constant - Mass Limit)	11.911	11.911
B (PEF Dispersion Constant)	18.7762	18.7762
B (VF Dispersion Constant)	18.4385	18.4385
B (VF Dispersion Constant - Mass Limit)	18.4385	18.4385
$City_{PEF}$ (Climate Zone) Selection	Default	Default
$City_{VF}$ (Climate Zone) Selection	Default	Default
C (PEF Dispersion Constant)	216.108	216.108
C (VF Dispersion Constant)	209.7845	209.7845
C (VF Dispersion Constant - Mass Limit)	209.7845	209.7845
foc (fraction organic carbon in soil) g/g	0.006	0.006
F(x) (function dependent on U_m/U_t) unitless	0.194	0.194
n (total soil porosity) L_{pore}/L_{soil}	0.43396	0.43396
p_b (dry soil bulk density) g/cm^3	1.5	1.5
p_b (dry soil bulk density - mass limit) g/cm^3	1.5	1.5
PEF (particulate emission factor) m^3/kg	1359344438	1359344438
p_s (soil particle density) g/cm^3	2.65	2.65
Q/C_{wind} (g/m^2-s per kg/m^3)	93.77	93.77
Q/C_{vol} (g/m^2-s per kg/m^3)	68.18	68.18
Q/C_{vol} (g/m^2-s per kg/m^3)	68.18	68.18
A_s (PEF acres)	0.5	0.5
A_s (VF acres)	0.5	0.5
A_s (VF mass-limit acres)	0.5	0.5
AF_w (skin adherence factor - composite worker) mg/cm^2	0.12	0.12
AT_w (averaging time - composite worker)	365	365
BW_w (body weight - composite worker)	80	80
ED_w (exposure duration - composite worker) yr	25	25
EF_w (exposure frequency - composite worker) day/yr	250	250
ET_w (exposure time - composite worker) hr	8	8
IR_w (soil ingestion rate - composite worker) mg/day	100	100
LT (lifetime) yr	70	70
SA_w (surface area - composite worker) cm^2/day	3527	3527

Output generated 01NOV2019:09:23:00

Site-specific Risk
Composite Worker Soil Inputs

Variable	Default Value	Form-input Value
T_w (groundwater temperature) Celsius	25	25
$Theta_a$ (air-filled soil porosity) L_{air}/L_{soil}	0.28396	0.28396
$Theta_w$ (water-filled soil porosity) L_{water}/L_{soil}	0.15	0.15
T (exposure interval) s	819936000	819936000
T (exposure interval) yr	26	26
U_m (mean annual wind speed) m/s	4.69	4.69
U_t (equivalent threshold value)	11.32	11.32
V (fraction of vegetative cover) unitless	0.5	0.5

Output generated 01NOV2019:09:23:00

Site-specific Risk
Composite Worker for Soil

Chemical	CAS Number	Mutagen?	VOC?	Chronic RfD (mg/kg-day)	RfD Ref	Chronic RfC (mg/m^3)	RfC Ref	SF_o (mg/kg-day)$^{-1}$	SF_o Ref	IUR (ug/m^3)$^{-1}$	IUR Ref	ABS_{gi}	ABS_{derm}	Volatilization Factor (m^3/kg)	DA
Iron	7439-89-6	No	No	7.00E-01	P	-		-		-		1	-	-	-
*Total Risk/HI				-		-		-		-		-	-	-	-

Chemical	Particulate Emission Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	HLC (atm-m^3/mole)	Henry's Law Constant (unitless)	H` and HLC Ref	Henry's Law Constant Used in Calcs (unitless)	Normal Boiling Point BP (K)	BP Ref	Critical Temperature TC (K)	TC Ref	D_{ia}\ (cm^2/s)	D_{iw}\ (cm^2/s)
Iron	1.36E+09	-	-	-		-	3.27E+03	PERRY	9.34E+03	CRC89	-	-
*Total Risk/HI	-	-	-	-		-	-		-		-	-

Chemical	Soil Concentration (mg/kg)	Ingestion Noncarcinogenic CDI (mg/kg-day)	Inhalation Noncarcinogenic CDI (mg/m³)	Dermal Noncarcinogenic CDI (mg/kg-day)	Ingestion Carcinogenic CDI (mg/kg-day)	Inhalation Carcinogenic CDI (µg/m³)	Dermal Carcinogenic CDI (mg/kg-day)
Iron	86700	7.42E-02	1.46E-05	-	2.65E-02	5.20E-03	-
*Total Risk/HI	-	-	-	-	-	-	-

Chemical	Ingestion HQ	Inhalation HQ	Dermal HQ	Total HI	Ingestion Risk	Inhalation Risk	Dermal Risk	Total Risk
Iron	1.06E-01	-	-	1.06E-01	-	-	-	-
*Total Risk/HI	1.06E-01	-	-	1.06E-01	-	-	-	-

Output generated 01NOV2019:09:23:00

Site-specific Risk
Composite Worker for Soil - Percent Contribution to Total Risk by:

Chemical	Ingestion HQ %	Inhalation HQ %	Dermal HQ %	Total HI %	Ingestion Risk %	Inhalation Risk %	Dermal Risk %	Total Risk %
Iron	100.0%	-	-	***100.0%***	-	-	-	**-**
**Total Risk/HI Percent*	*100.0%*	*-*	*-*	***100.0%***	*-*	*-*	*-*	***-***

Output generated 01NOV2019:09:23:00

Site-specific Risk

Excavation Worker Soil Inputs

Variable	Default Value	Form-input Value
A (PEF Dispersion Constant)	16.2302	16.2302
A (VF Dispersion Constant)	11.911	11.911
A (VF Dispersion Constant - Mass Limit)	11.911	11.911
B (PEF Dispersion Constant)	18.7762	18.7762
B (VF Dispersion Constant)	18.4385	18.4385
B (VF Dispersion Constant - Mass Limit)	18.4385	18.4385
$City_{PEF}$ (Climate Zone) Selection	Default	Default
$City_{VF}$ (Climate Zone) Selection	Default	Default
C (PEF Dispersion Constant)	216.108	216.108
C (VF Dispersion Constant)	209.7845	209.7845
C (VF Dispersion Constant - Mass Limit)	209.7845	209.7845
foc (fraction organic carbon in soil) g/g	0.006	0.006
F(x) (function dependent on U_m/U_t) unitless	0.194	0.194
n (total soil porosity) L_{pore}/L_{soil}	0.43396	0.43396
p_b (dry soil bulk density) g/cm^3	1.5	1.5
p_b (dry soil bulk density - mass limit) g/cm^3	1.5	1.5
PEF (particulate emission factor) m^3/kg	1359344438	1359344438
p_s (soil particle density) g/cm^3	2.65	2.65
Q/C_{wind} (g/m^2-s per kg/m^3)	93.77	93.77
Q/C_{vol} (g/m^2-s per kg/m^3)	68.18	68.18
Q/C_{vol} (g/m^2-s per kg/m^3)	68.18	68.18
A_s (PEF acres)	0.5	0.5
A_s (VF acres)	0.5	0.5
A_s (VF mass-limit acres)	0.5	0.5
AF_{ew} (skin adherence factor - excavation worker) mg/cm^2	0.3	0.3
AT_{ew} (averaging time - excavation worker)	365	365
BW_{ew} (body weight - excavation worker) kg	80	80
ED_{ew} (exposure duration - excavation worker) yr	1	1
EF_{ew} (exposure frequency - excavation worker) day/yr	20	20
ET_{ew} (exposure time - excavation worker) hr	8	8
IR_{ew} (soil ingestion rate - excavation worker) mg/day	330	330
LT (lifetime) yr	70	70
SA_{ew} (surface area - excavation worker) cm^2/day	3527	3527

Output generated 01NOV2019:09:19:03

Site-specific Risk

Excavation Worker Soil Inputs

Variable	Default Value	Form-input Value
T_w (groundwater temperature) Celsius	25	25
$Theta_a$ (air-filled soil porosity) L_{air}/L_{soil}	0.28396	0.28396
$Theta_w$ (water-filled soil porosity) L_{water}/L_{soil}	0.15	0.15
T (exposure interval) s	819936000	819936000
T (exposure interval) yr	26	26
U_m (mean annual wind speed) m/s	4.69	4.69
U_t (equivalent threshold value)	11.32	11.32
V (fraction of vegetative cover) unitless	0.5	0.5

Output generated 01NOV2019:09:19:03

Site-specific Risk
Excavation Worker for Soil

Chemical	CAS Number	Mutagen?	VOC?	Chronic RfD (mg/kg-day)	RfD Ref	Chronic RfC (mg/m^3)	RfC Ref	SF_o $(mg/kg\text{-}day)^{-1}$	SF_o Ref	IUR $(ug/m^3)^{-1}$	IUR Ref	ABS_{gi}	ABS_{derm}	Volatilization Factor (m^3/kg)	DA
Iron	7439-89-6	No	No	7.00E-01	P	-		-		-		1	-	-	-
**Total Risk/HI*				-		-		-		-		-	-	-	-

Chemical	Particulate Emission Factor (m^3/kg)	Soil Saturation Concentration (mg/kg)	HLC (atm-m^3/mole)	Henry's Law Constant (unitless)	H` and HLC Ref	Henry's Law Constant Used in Calcs (unitless)	Normal Boiling Point BP (K)	BP Ref	Critical Temperature TC (K)	TC Ref	D_{ia}\ (cm^2/s)	D_{iw}\ (cm^2/s)
Iron	1.36E+09	-	-	-		-	3.27E+03	PERRY	9.34E+03	CRC89	-	-
**Total Risk/HI*	-	-	-	-		-	-		-		-	-

Chemical	Soil Concentration (mg/kg)	Ingestion Noncarcinogenic CDI (mg/kg-day)	Inhalation Noncarcinogenic CDI (mg/m³)	Dermal Noncarcinogenic CDI (mg/kg-day)	Ingestion Carcinogenic CDI (mg/kg-day)	Inhalation Carcinogenic CDI (µg/m³)	Dermal Carcinogenic CDI (mg/kg-day)
Iron	86700	1.96E-02	1.16E-06	-	2.80E-04	1.66E-05	-
**Total Risk/HI*	-	-	-	-	-	-	-

Chemical	Ingestion HQ	Inhalation HQ	Dermal HQ	Total HI	Ingestion Risk	Inhalation Risk	Dermal Risk	Total Risk
Iron	2.80E-02	-	-	2.80E-02	-	-	-	-
**Total Risk/HI*	*2.80E-02*	-	-	*2.80E-02*	-	-	-	-

Output generated 01NOV2019:09:19:03

Site-specific Risk
Excavation Worker for Soil - Percent Contribution to Total Risk by:

Chemical	Ingestion HQ %	Inhalation HQ %	Dermal HQ %	Total HI %	Ingestion Risk %	Inhalation Risk %	Dermal Risk %	Total Risk %
Iron	100.0%	-	-	***100.0%***	-	-	-	***-***
**Total Risk/HI Percent*	*100.0%*	*-*	*-*	***100.0%***	*-*	*-*	*-*	***-***

Output generated 01NOV2019:09:19:03

Site-specific Risk

Outdoor Worker Soil Inputs

Variable	Default Value	Form-input Value
A (PEF Dispersion Constant)	16.2302	16.2302
A (VF Dispersion Constant)	11.911	11.911
A (VF Dispersion Constant - Mass Limit)	11.911	11.911
B (PEF Dispersion Constant)	18.7762	18.7762
B (VF Dispersion Constant)	18.4385	18.4385
B (VF Dispersion Constant - Mass Limit)	18.4385	18.4385
$City_{PEF}$ (Climate Zone) Selection	Default	Default
$City_{VF}$ (Climate Zone) Selection	Default	Default
C (PEF Dispersion Constant)	216.108	216.108
C (VF Dispersion Constant)	209.7845	209.7845
C (VF Dispersion Constant - Mass Limit)	209.7845	209.7845
foc (fraction organic carbon in soil) g/g	0.006	0.006
F(x) (function dependent on U_m/U_t) unitless	0.194	0.194
n (total soil porosity) L_{pore}/L_{soil}	0.43396	0.43396
p_b (dry soil bulk density) g/cm^3	1.5	1.5
p_b (dry soil bulk density - mass limit) g/cm^3	1.5	1.5
PEF (particulate emission factor) m^3/kg	1359344438	1359344438
p_s (soil particle density) g/cm^3	2.65	2.65
Q/C_{wind} (g/m^2-s per kg/m^3)	93.77	93.77
Q/C_{vol} (g/m^2-s per kg/m^3)	68.18	68.18
Q/C_{vol} (g/m^2-s per kg/m^3)	68.18	68.18
A_s (PEF acres)	0.5	0.5
A_s (VF acres)	0.5	0.5
A_s (VF mass-limit acres)	0.5	0.5
AF_{ow} (skin adherence factor - outdoor worker) mg/cm^2	0.12	0.12
AT_{ow} (averaging time - outdoor worker)	365	365
BW_{ow} (body weight - outdoor worker)	80	80
ED_{ow} (exposure duration - outdoor worker) yr	25	25
EF_{ow} (exposure frequency - outdoor worker) day/yr	225	225
ET_{ow} (exposure time - outdoor worker) hr	8	8
IRS_{ow} (soil ingestion rate - outdoor worker) mg/day	100	100
LT (lifetime) yr	70	70
SA_{ow} (surface area - outdoor worker) cm^2/day	3527	3527

Output generated 01NOV2019:09:22:13

Site-specific Risk
Outdoor Worker Soil Inputs

Variable	Default Value	Form-input Value
T_w (groundwater temperature) Celsius	25	25
$Theta_a$ (air-filled soil porosity) L_{air}/L_{soil}	0.28396	0.28396
$Theta_w$ (water-filled soil porosity) L_{water}/L_{soil}	0.15	0.15
T (exposure interval) s	819936000	819936000
T (exposure interval) yr	26	26
U_m (mean annual wind speed) m/s	4.69	4.69
U_t (equivalent threshold value)	11.32	11.32
V (fraction of vegetative cover) unitless	0.5	0.5

Output generated 01NOV2019:09:22:13

Site-specific Risk
Outdoor Worker for Soil

Chemical	CAS Number	Mutagen?	VOC?	Chronic RfD (mg/kg-day)	RfD Ref	Chronic RfC (mg/m ^{3})	RfC Ref	SF_o (mg/kg-day) $^{-1}$	SF_o Ref	IUR (ug/m ^{3}) $^{-1}$	IUR Ref	ABS_{gi}	ABS_{derm}	Volatilization Factor (m ^{3}/kg)	DA
Iron	7439-89-6	No	No	7.00E-01	P	-		-		-		1	-	-	-
*Total Risk/HI				-		-		-		-		-	-	-	-

Chemical	Particulate Emission Factor (m ^{3}/kg)	Soil Saturation Concentration (mg/kg)	HLC (atm-m ^{3}/mole)	Henry's Law Constant (unitless)	H` and HLC Ref	Henry's Law Constant Used in Calcs (unitless)	Normal Boiling Point BP (K)	BP Ref	Critical Temperature TC (K)	TC Ref	D_{ia}\ (cm ^{2}/s)	D_{iw}\ (cm ^{2}/s)
Iron	1.36E+09	-	-	-		-	3.27E+03	PERRY	9.34E+03	CRC89	-	-
*Total Risk/HI	-	-	-	-		-	-		-		-	-

Chemical	Soil Concentration (mg/kg)	Ingestion Noncarcinogenic CDI (mg/kg-day)	Inhalation Noncarcinogenic CDI (mg/m³)	Dermal Noncarcinogenic CDI (mg/kg-day)	Ingestion Carcinogenic CDI (mg/kg-day)	Inhalation Carcinogenic CDI (µg/m³)	Dermal Carcinogenic CDI (mg/kg-day)
Iron	86700	6.68E-02	1.31E-05	-	2.39E-02	4.68E-03	-
*Total Risk/HI	-	-	-	-	-	-	-

Chemical	Ingestion HQ	Inhalation HQ	Dermal HQ	Total HI	Ingestion Risk	Inhalation Risk	Dermal Risk	Total Risk
Iron	9.54E-02	-	-	9.54E-02	-	-	-	-
*Total Risk/HI	9.54E-02	-	-	9.54E-02	-	-	-	-

Output generated 01NOV2019:09:22:13

Site-specific Risk
Outdoor Worker for Soil - Percent Contribution to Total Risk by:

Chemical	Ingestion HQ %	Inhalation HQ %	Dermal HQ %	Total HI %	Ingestion Risk %	Inhalation Risk %	Dermal Risk %	Total Risk %
Iron	100.0%	-	-	***100.0%***	-	-	-	**-**
**Total Risk/HI Percent*	*100.0%*	-	-	***100.0%***	-	-	-	**-**

Output generated 01NOV2019:09:22:13

Site-specific Risk

Recreator Soil/Sediment Inputs

Variable	Default Value	Form-input Value
A (PEF Dispersion Constant)	16.2302	16.2302
A (VF Dispersion Constant)	11.911	11.911
A (VF Dispersion Constant - Mass Limit)	11.911	11.911
B (PEF Dispersion Constant)	18.7762	18.7762
B (VF Dispersion Constant)	18.4385	18.4385
B (VF Dispersion Constant - Mass Limit)	18.4385	18.4385
$City_{PEF}$ (Climate Zone) Selection	Default	Default
$City_{VF}$ (Climate Zone) Selection	Default	Default
C (PEF Dispersion Constant)	216.108	216.108
C (VF Dispersion Constant)	209.7845	209.7845
C (VF Dispersion Constant - Mass Limit)	209.7845	209.7845
foc (fraction organic carbon in soil) g/g	0.006	0.006
F(x) (function dependent on U_m/U_t) unitless	0.194	0.194
n (total soil porosity) L_{pore}/L_{soil}	0.43396	0.43396
p_b (dry soil bulk density) g/cm^3	1.5	1.5
p_b (dry soil bulk density - mass limit) g/cm^3	1.5	1.5
PEF (particulate emission factor) m^3/kg	1359344438	1359344438
p_s (soil particle density) g/cm^3	2.65	2.65
Q/C_{wind} (g/m^2-s per kg/m^3)	93.77	93.77
Q/C_{vol} (g/m^2-s per kg/m^3)	68.18	68.18
Q/C_{vol} (g/m^2-s per kg/m^3)	68.18	68.18
A_s (PEF acres)	0.5	0.5
A_s (VF acres)	0.5	0.5
A_s (VF mass-limit acres)	0.5	0.5
T_w (groundwater temperature) Celsius	25	25
$Theta_a$ (air-filled soil porosity) L_{air}/L_{soil}	0.28396	0.28396
$Theta_w$ (water-filled soil porosity) L_{water}/L_{soil}	0.15	0.15
T (exposure interval) s	819936000	819936000
T (exposure interval) yr	26	26
U_m (mean annual wind speed) m/s	4.69	4.69
U_t (equivalent threshold value)	11.32	11.32
V (fraction of vegetative cover) unitless	0.5	0.5

Output generated 01NOV2019:09:20:26

Site-specific Risk
Recreator for Soil/Sediment

Chemical	CAS Number	Mutagen?	VOC?	Chronic RfD (mg/kg-day)	RfD Ref	Chronic RfC (mg/m^3)	RfC Ref	SF_o (mg/kg-day)$^{-1}$	SF_o Ref	IUR (ug/m^3)$^{-1}$	IUR Ref	ABS_{gi}	ABS_{derm}	Volatilization Factor (m^3/kg)	DA	Particulate Emission Factor (m^3/kg)
Iron	7439-89-6	No	No	7.00E-01	P	-		-		-		1	-	-	-	1.36E+09
**Total Risk/HI*				-		-		-		-		-	-	-	-	-

Output generated 01NOV2019:09:20:26

Site-specific Risk
Recreator for Soil/Sediment

Chemical	Soil Saturation Concentration (mg/kg)	RBA	HLC (atm-m^3/mole)	Henry's Law Constant (unitless)	H` and HLC Ref	Henry's Law Constant Used in Calcs (unitless)	Normal Boiling Point BP (K)	BP Ref	Critical Temperature TC (K)	TC Ref	D_{ia} \ (cm^2/s)	D_{iw} \ (cm^2/s)	Soil Concentration (mg/kg)
Iron	-	1	-	-		-	3.27E+03	PERRY	9.34E+03	CRC89	-	-	86700
**Total Risk/HI*	-	-	-	-		-	-		-		-	-	-

Output generated 01NOV2019:09:20:26

Site-specific Risk
Recreator for Soil/Sediment

Chemical	Child Ingestion Noncarcinogenic CDI (mg/kg-day)	Child Inhalation Noncarcinogenic CDI (mg/m³)	Child Dermal Noncarcinogenic CDI (mg/kg-day)	Adult Ingestion Noncarcinogenic CDI (mg/kg-day)	Adult Inhalation Noncarcinogenic CDI (mg/m³)	Adult Dermal Noncarcinogenic CDI (mg/kg-day)	Adjusted Ingestion Noncarcinogenic CDI (mg/kg-day)
Iron	2.38E-01	5.46E-07	-	2.23E-02	5.46E-07	-	7.19E-02
**Total Risk/HI*	-	-	-	-	-	-	-

Output generated 01NOV2019:09:20:26

Site-specific Risk
Recreator for Soil/Sediment

Chemical	Adjusted Inhalation Noncarcinogenic CDI (mg/m³)	Adjusted Dermal Noncarcinogenic CDI (mg/kg-day)	Ingestion Carcinogenic CDI (mg/kg-day)	Inhalation Carcinogenic CDI (µg/m³)	Dermal Carcinogenic CDI (mg/kg-day)	Child Ingestion HQ	Child Inhalation HQ	Child Dermal HQ	Child Total HI
Iron	5.46E-07	-	2.67E-02	2.03E-04	-	3.39E-01	-	-	3.39E-01
Total Risk/HI	-	-	-	-	-	*3.39E-01*	-	-	*3.39E-01*

Output generated 01NOV2019:09:20:26

Site-specific Risk
Recreator for Soil/Sediment

Chemical	Adult Ingestion HQ	Adult Inhalation HQ	Adult Dermal HQ	Adult Total HI	Adjusted Ingestion HQ	Adjusted Inhalation HQ	Adjusted Dermal HQ	Adjusted Total HI	Ingestion Risk	Inhalation Risk	Dermal Risk	Total Risk
Iron	3.18E-02	-	-	3.18E-02	**1.03E-01**	-	-	**1.03E-01**	-	-	-	-
**Total Risk/HI*	*3.18E-02*	*-*	*-*	*3.18E-02*	***1.03E-01***	*-*	*-*	***1.03E-01***	*-*	*-*	*-*	*-*

Output generated 01NOV2019:09:20:26

Site-specific Risk
Recreator for Soil/Sediment - Percent Contribution to Total Risk by:

Chemical	Child Ingestion HQ %	Child Inhalation HQ %	Child Dermal HQ %	Child Total HI %	Adult Ingestion HQ %	Adult Inhalation HQ %	Adult Dermal HQ %	Adult Total HI %	Adjusted Ingestion HQ %	Adjusted Inhalation HQ %	Adjusted Dermal HQ %	Adjusted Total HI %	Ingestion Risk %	Inhalation Risk %	Dermal Risk %	Total Risk %
Iron	100.0%	-	-	***100.0%***	100.0%	-	-	***100.0%***	100.0%	-	-	***100.0%***	-	-	-	***-***
**Total Risk/HI Percent*	*100.0%*	*-*	*-*	***100.0%***	*100.0%*	*-*	*-*	***100.0%***	*100.0%*	*-*	*-*	***100.0%***	*-*	*-*	*-*	***-***

Output generated 01NOV2019:09:20:26

Site-specific Risk

Resident Soil Inputs

Variable	Default Value	Form-input Value
A (PEF Dispersion Constant)	16.2302	16.2302
A (VF Dispersion Constant)	11.911	11.911
A (VF Dispersion Constant - Mass Limit)	11.911	11.911
B (PEF Dispersion Constant)	18.7762	18.7762
B (VF Dispersion Constant)	18.4385	18.4385
B (VF Dispersion Constant - Mass Limit)	18.4385	18.4385
$City_{PEF}$ (Climate Zone) Selection	Default	Default
$City_{VF}$ (Climate Zone) Selection	Default	Default
C (PEF Dispersion Constant)	216.108	216.108
C (VF Dispersion Constant)	209.7845	209.7845
C (VF Dispersion Constant - Mass Limit)	209.7845	209.7845
foc (fraction organic carbon in soil) g/g	0.006	0.006
F(x) (function dependent on U_m/U_t) unitless	0.194	0.194
n (total soil porosity) L_{pore}/L_{soil}	0.43396	0.43396
p_b (dry soil bulk density) g/cm^3	1.5	1.5
p_b (dry soil bulk density - mass limit) g/cm^3	1.5	1.5
PEF (particulate emission factor) m^3/kg	1359344438	1359344438
p_s (soil particle density) g/cm^3	2.65	2.65
Q/C_{wind} (g/m^2-s per kg/m^3)	93.77	93.77
Q/C_{vol} (g/m^2-s per kg/m^3)	68.18	68.18
Q/C_{vol} (g/m^2-s per kg/m^3)	68.18	68.18
A_s (PEF acres)	0.5	0.5
A_s (VF acres)	0.5	0.5
A_s (VF mass-limit acres)	0.5	0.5
AF_{0-2} (mutagenic skin adherence factor) mg/cm^2	0.2	0.2
AF_{2-6} (mutagenic skin adherence factor) mg/cm^2	0.2	0.2
AF_{6-16} (mutagenic skin adherence factor) mg/cm^2	0.07	0.07
AF_{16-26} (mutagenic skin adherence factor) mg/cm^2	0.07	0.07
AF_{res-a} (skin adherence factor - adult) mg/cm^2	0.07	0.07
AF_{res-c} (skin adherence factor - child) mg/cm^2	0.2	0.2
AT_{res} (averaging time - resident carcinogenic)	365	365
BW_{0-2} (mutagenic body weight) kg	15	15
BW_{2-6} (mutagenic body weight) kg	15	15

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Site-specific Risk

Resident Soil Inputs

Variable	Default Value	Form-input Value
BW_{6-16} (mutagenic body weight) kg	80	80
BW_{16-26} (mutagenic body weight) kg	80	80
BW_{res-a} (body weight - adult) kg	80	80
BW_{res-c} (body weight - child) kg	15	15
$DFS_{res-adj}$ (age-adjusted soil dermal factor) mg/kg	103390	103390
$DFSM_{res-adj}$ (mutagenic age-adjusted soil dermal factor) mg/kg	428260	428260
ED_{res} (exposure duration) years	26	26
ED_{0-2} (mutagenic exposure duration) years	2	2
ED_{2-6} (mutagenic exposure duration) years	4	4
ED_{6-16} (mutagenic exposure duration) years	10	10
ED_{16-26} (mutagenic exposure duration) years	10	10
ED_{res-a} (exposure duration - adult) years	20	20
ED_{res-c} (exposure duration - child) years	6	6
EF_{res} (exposure frequency) days/year	350	350
EF_{0-2} (mutagenic exposure frequency) days/year	350	350
EF_{2-6} (mutagenic exposure frequency) days/year	350	350
EF_{6-16} (mutagenic exposure frequency) days/year	350	350
EF_{16-26} (mutagenic exposure frequency) days/year	350	350
EF_{res-a} (exposure frequency - adult) days/year	350	350
EF_{res-c} (exposure frequency - child) days/year	350	350
ET_{res} (exposure time) hours/day	24	24
ET_{0-2} (mutagenic exposure time) hours/day	24	24
ET_{2-6} (mutagenic exposure time) hours/day	24	24
ET_{6-16} (mutagenic exposure time) hours/day	24	24
ET_{16-26} (mutagenic exposure time) hours/day	24	24
ET_{res-a} (adult exposure time) hours/day	24	24
ET_{res-c} (child exposure time) hours/day	24	24
$IFS_{res-adj}$ (age-adjusted soil ingestion factor) mg/kg	36750	36750
$IFSM_{res-adj}$ (mutagenic age-adjusted soil ingestion factor) mg/kg	166833.3	166833.3
IRS_{0-2} (mutagenic soil intake rate) mg/day	200	200
IRS_{2-6} (mutagenic soil intake rate) mg/day	200	200
IRS_{6-16} (mutagenic soil intake rate) mg/day	100	100
IRS_{16-26} (mutagenic soil intake rate) mg/day	100	100

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Site-specific Risk

Resident Soil Inputs

Variable	Default Value	Form-input Value
IRS_{res-a} (soil intake rate - adult) mg/day	100	100
IRS_{res-c} (soil intake rate - child) mg/day	200	200
LT (lifetime) years	70	70
SA_{0-2} (mutagenic skin surface area) cm^2/day	2373	2373
SA_{2-6} (mutagenic skin surface area) cm^2/day	2373	2373
SA_{6-16} (mutagenic skin surface area) cm^2/day	6032	6032
SA_{16-26} (mutagenic skin surface area) cm^2/day	6032	6032
SA_{res-a} (skin surface area - adult) cm^2/day	6032	6032
SA_{res-c} (skin surface area - child) cm^2/day	2373	2373
T_w (groundwater temperature) Celsius	25	25
$Theta_a$ (air-filled soil porosity) L_{air}/L_{soil}	0.28396	0.28396
$Theta_w$ (water-filled soil porosity) L_{water}/L_{soil}	0.15	0.15
T (exposure interval) s	819936000	819936000
T (exposure interval) yr	26	26
U_m (mean annual wind speed) m/s	4.69	4.69
U_t (equivalent threshold value)	11.32	11.32
V (fraction of vegetative cover) unitless	0.5	0.5

Output generated 01NOV2019:09:21:16

Site-specific Risk
Resident for Soil

Chemical	CAS Number	Mutagen?	VOC?	Chronic RfD (mg/kg-day)	RfD Ref	Chronic RfC (mg/m^3)	RfC Ref	SF_o (mg/kg-day)$^{-1}$	SF_o Ref	IUR (ug/m^3)$^{-1}$	IUR Ref	ABS_{gi}	ABS_{derm}	Volatilization Factor (m^3/kg)	DA	Particulate Emission Factor (m^3/kg)
Iron	7439-89-6	No	No	7.00E-01	P	-		-		-		1	-	-	-	1.36E+09
**Total Risk/HI*				-		-		-		-		-	-	-	-	-

Output generated 01NOV2019:09:21:16

Site-specific Risk
Resident for Soil

Chemical	Soil Saturation Concentration (mg/kg)	RBA	HLC (atm-m^3/mole)	Henry's Law Constant (unitless)	H` and HLC Ref	Henry's Law Constant Used in Calcs (unitless)	Normal Boiling Point BP (K)	BP Ref	Critical Temperature TC (K)	TC Ref	D_{ia}\ (cm^2/s)	D_{iw}\ (cm^2/s)	Soil Concentration (mg/kg)
Iron	-	1	-	-		-	3.27E+03	PERRY	9.34E+03	CRC89	-	-	86700
*Total Risk/HI	-	-	-	-		-	-		-		-	-	-

Output generated 01NOV2019:09:21:16

Site-specific Risk
Resident for Soil

Chemical	Child Ingestion Noncarcinogenic CDI (mg/kg-day)	Child Inhalation Noncarcinogenic CDI (mg/m³)	Child Dermal Noncarcinogenic CDI (mg/kg-day)	Adult Ingestion Noncarcinogenic CDI (mg/kg-day)	Adult Inhalation Noncarcinogenic CDI (mg/m³)	Adult Dermal Noncarcinogenic CDI (mg/kg-day)	Adjusted Ingestion Noncarcinogenic CDI (mg/kg-day)
Iron	1.11E+00	6.12E-05	-	1.04E-01	6.12E-05	-	3.36E-01
**Total Risk/HI*	-	-	-	-	-	-	-

Output generated 01NOV2019:09:21:16

Site-specific Risk
Resident for Soil

Chemical	Adjusted Inhalation Noncarcinogenic CDI (mg/m³)	Adjusted Dermal Noncarcinogenic CDI (mg/kg-day)	Ingestion Carcinogenic CDI (mg/kg-day)	Inhalation Carcinogenic CDI (µg/m³)	Dermal Carcinogenic CDI (mg/kg-day)	Child Ingestion HQ	Child Inhalation HQ	Child Dermal HQ	Child Total HI
Iron	6.12E-05	-	1.25E-01	2.27E-02	-	**1.58E+00**	-	-	**1.58E+00**
**Total Risk/HI*	-	-	-	-	-	***1.58E+00***	-	-	***1.58E+00***

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Site-specific Risk
Resident for Soil

Chemical	Adult Ingestion HQ	Adult Inhalation HQ	Adult Dermal HQ	Adult Total HI	Adjusted Ingestion HQ	Adjusted Inhalation HQ	Adjusted Dermal HQ	Adjusted Total HI	Ingestion Risk	Inhalation Risk	Dermal Risk	Total Risk
Iron	1.48E-01	-	-	1.48E-01	4.80E-01	-	-	4.80E-01	-	-	-	-
**Total Risk/HI*	*1.48E-01*	-	-	*1.48E-01*	*4.80E-01*	-	-	*4.80E-01*	-	-	-	-

Output generated 01NOV2019:09:21:16

Site-specific Risk
Resident for Soil - Percent Contribution to Total Risk by:

Chemical	Child Ingestion HQ %	Child Inhalation HQ %	Child Dermal HQ %	Child Total HI %	Adult Ingestion HQ %	Adult Inhalation HQ %	Adult Dermal HQ %	Adult Total HI %	Adjusted Ingestion HQ %	Adjusted Inhalation HQ %	Adjusted Dermal HQ %	Adjusted Total HI %	Ingestion Risk %	Inhalation Risk %	Dermal Risk %	Total Risk %
Iron	100.0%	-	-	***100.0%***	100.0%	-	-	***100.0%***	100.0%	-	-	***100.0%***	-	-	-	***-***
**Total Risk/HI Percent*	*100.0%*	*-*	*-*	***100.0%***	*100.0%*	*-*	*-*	***100.0%***	*100.0%*	*-*	*-*	***100.0%***	*-*	*-*	*-*	***-***

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APPENDIX I

CALCULATIONS –
ESTIMATED WEIGHT OF SEDIMENT BEING SEQUESTERED WITH PCBS ADSORBED

Calculation of Tons of Sediment with PCBs Adsorbed

	Stratum A	Stratum B	Stratum C
	mg/kg		
	95% UCL	95% UCL	Average
[Total PCB]	0.963	0.337	2.66E-08

Estimated volume of stratum A material to be removed:
915,000 cubic yards
Estimated volume of stratum B material to be removed:
925,000 cubic yards
Estimated volume of stratum C material to be removed:
1,490,000 cubic yards

	Volume (cy)	cy to m3	Volume (m^3)
Stratum A	915,000	0.7645552	700,000
Stratum B	925,000	0.7645552	707,000
Stratum C	1,490,000	0.7645552	1,140,000

Assumed particle density (ρ) = 2.65 g/cm^3
2,650 kg/m^3

Estimated weight of Sediment Removed with Total PCBs Adsorbed (W_{sed}):

W_{sed} = Volume (m^3) x ρ (kg/m^3) x C_{PCBs} (mg/kg) x (1 ton / (9.07×10^8) mg)

For stratum A,

W_{sed} = 700,000 m^3 x 2,650 kg/m^3 x 0.963 mg/kg x $\frac{1 \text{ ton}}{9.07E+08 \text{ mg}}$ = 2.0 tons of sediment with PCBs adsorbed

W_{sed} = 707,000 m^3 x 2,650 kg/m^3 x 0.337 mg/kg x $\frac{1 \text{ ton}}{9.07E+08 \text{ mg}}$ = 0.70 tons of sediment with PCBs adsorbed

W_{sed} = 1,140,000 m^3 x 2,650 kg/m^3 x 2.66E-08 mg/kg x $\frac{1 \text{ ton}}{9.07E+08 \text{ mg}}$ = 8.9E-08 tons of sediment with PCBs adsorbed

Total Weight of Sediment with PCBs Adsorbed = 2.7 tons of sediment with PCBs adsorbed

APPENDIX J

EXAMPLE CALCULATION

Example Calculation

Terms for determining TSS Concentration in Influent Dredge Slurry:

$V_{1,A}$ =	volume during dredge cycle 1 of stratum A material
$V_{1,B}$ =	volume during dredge cycle 1 of stratum B material
$V_{1,C}$ =	volume during dredge cycle 1 of stratum C material
V_{PW} =	volume of porewater
$V_{PW,1A}$ =	volume of porewater in dredge cycle 1 of stratum A material
$V_{PW,1B}$ =	volume of porewater in dredge cycle 1 of stratum B material
$V_{PW,1C}$ =	volume of porewater in dredge cycle 1 of stratum C material
$\%m_A$ =	percent moisture in stratum A material
$\%m_B$ =	percent moisture in stratum B material
$\%m_C$ =	percent moisture in stratum C material
V_1 =	total volume of sediment and porewater estimated to be dredged
$V_{PW,1}$ =	total volume of porewater estimated to be dredged during dredge cycle 1
$V_{S,1}$ =	total volume of sediment estimated to be dredged during dredge cycle 1
ρ_s =	assumed particle density of typical sediment, 2.65 g/cm^3
m_P =	mass of particles of sediment estimated in dredge cycle 1
V_{rw} =	volume of river water in dredge slurry assuming 65% dredge water and 35% sediment in slurry
V_{slurry} =	volume of dredge slurry including sediment and water
$V_{slurry,sed}$ =	volume of sediment in dredge slurry
$V_{W,1}$ =	total volume of water including porewater and dredge slurry during dredge cycle 1
$[TSS]_{inf,1}$ =	estimated total suspended solids concentration in influent dredge slurry into CDF during dredge cycle 1

1) Find TSS concentration estimated in influent dredge slurry:

Dredge volumes in Cycle 1:

$$V_{1,A} = 915{,}000 \text{ cubic yards (cy)} \times \frac{1 \text{ m}^3}{1.30795 \text{ cy}} = 700{,}000 \text{ m}^3$$

$$V_{1,B} = 925{,}000 \text{ cy} \times \frac{1 \text{ m}^3}{1.30795 \text{ cy}} = 707{,}000 \text{ m}^3$$

$$V_{1,C} = 400{,}000 \text{ cy} \times \frac{1 \text{ m}^3}{1.30795 \text{ cy}} = 306{,}000 \text{ m}^3$$

Find Porewater Volume

$\%m_A =$ 75.6

$\%m_B =$ 18.1

$\%m_C =$ 20.5

$V_{PW,1A} = V_{1,A} \times \%m_A$

$V_{S,1} = V_{1,A} - V_{PW}$

$V_1 = V_{1,A} + V_{1,B} + V_{1,C}$

$V_1 = 700{,}000 + 707{,}000 + 306{,}000 = 1{,}710{,}000\ m^3$

$V_{PW,1A} = 700{,}000\ m^3 \times \frac{75.6}{100} = 529{,}000\ m^3$

$V_{PW,1A} = 707{,}000\ m^3 \times \frac{18.1}{100} = 128{,}000\ m^3$

$V_{PW,1A} = 306{,}000\ m^3 \times \frac{20.5}{100} = 62{,}700\ m^3$

$V_{PW,1} = V_{PW,1A} + V_{PW,1B} + V_{PW,1C}$

$V_{PW,1} = 529{,}000 + 128{,}000 + 62{,}700 = 720{,}000\ m^3$

Find mass of sediment

$V_{S,1} = V_1 - V_{PW,1}$

$V_{S,1} = 1{,}710{,}000 - 720{,}000 = 990{,}000\ m^3$

$m_P = V_s \times \rho_s$

$990{,}000\ m^3 \times 2.65\ \frac{g}{cm^3} \times \frac{1{,}000{,}000\ cm^3}{1\ m^3} = 2.62E+12\ g\ sediment$

Find Volume of River Water

$V_{slurry} = (0.35 \times V_{slurry}) + (0.65 \times V_{slurry})$

$V_{slurry,sed} = 0.35 \times V_{slurry}$

$0.35 \times V_{slurry} = 1{,}710{,}000\ m^3$

$V_{slurry} = \frac{1{,}710{,}000\ m^3}{0.35} = 4{,}890{,}000\ m^3$

$V_{rw} = 0.65 \times V_{slurry}$

$0.65 \times 4{,}890{,}000\ m^3 = 3{,}180{,}000\ m^3$

$V_{W,1} = V_{rw,1} + V_{PW,1}$

$3{,}180{,}000 + 720{,}000 = 3{,}900{,}000\ m^3$

Find $[TSS]_{inf,1}$

$[TSS]_{inf,1} = \frac{m_P}{V_{W,1}} = \frac{2.62E+12\ g\ sediment}{3{,}900{,}000\ m^3} \times \frac{1{,}000\ mg}{1\ g} \times \frac{1\ m^3}{1{,}000\ L}$

$[TSS]_{inf,1} = 674{,}000\ \frac{mg}{L}$

2) Find concentrations of substances composited by volume

Concentrations used for Strata A and B are 95 % UCL values

Concentrations used for Stratum C are average values due to dataset of 5 (not a statistical dataset of ≥10)

$C_{sed,A}$ =	concentration in stratum A
$C_{sed,B}$ =	concentration in stratum B
$C_{sed,C}$ =	concentration in stratum C
$C_{sed,ABC}$ =	concentration as composited between strata A, B, and C
C_{PW} =	concentration in porewater
K_{eq} =	equilibrium partitioning coefficient
K_{oc} =	octanol-water partitioning coefficient
TOC =	total organic carbon
f_d =	dissolved fraction of substance in water
f_p =	fraction of substance sorbed to particulate
C_T =	total concentration of substance dissolved in water
C_d =	concentration of substance dissolved in water
C_p =	concentration of substance sorbed to particulate
C_{sw} =	concentration of substance in surface water
C_{slurry} =	concentration of substance in effluent slurry
C_{eff} =	concentration of substance in effluent

Using Mass Balance:

$$C_{sed,ABC} = \frac{V_{1,A}}{V_1} \times C_{sed,A} + \frac{V_{1,B}}{V_1} \times C_{sed,B} + \frac{V_{1,C}}{V_1} \times C_{sed,C}$$

For Benzo(a)pyrene,

$$C_{sed,ABC} = \frac{700{,}000\ m^3}{1{,}710{,}000\ m^3} \times 0.32\ mg/kg + \frac{707{,}000\ m^3}{1{,}710{,}000\ m^3} \times 0.0055\ mg/kg + \frac{306{,}000\ m^3}{1{,}710{,}000\ m^3}\ 0.072\ mg/kg$$

$$C_{sed,ABC} = 0.13\ mg/kg + 0.0023\ mg/kg + 0.013\ mg/kg = 0.145\ mg/kg$$

3) Find porewater concentration and fractions in water vs. sediment:

$$C_{PW} = C_{sed,ABC} \times [TSS]_{inf,1}$$

$$0.145\ \frac{mg}{kg} \times 674{,}000\ \frac{mg}{L} \times \frac{1\ kg}{1{,}000\ g} \times \frac{1\ g}{1{,}000\ mg} \times 1{,}000\ \frac{\mu g}{mg}$$

$$C_{PW} = 97\ \mu g/L$$

For organics,

Log K_{oc} values found by desktop search in liters of water per kilogram of organic carbon (L/kg)

TOC_{stratA} = 0.0241 kg/kg

TOC_{stratB} = 0.00704 kg/kg

TOC_{stratC} = 0.0142 kg/kg

$$TOC_{ABC} = \frac{V_{1,A}}{V_1} \times TOC_{stratA} \quad \frac{V_{1,B}}{V_1} \times TOC_{stratB} + \frac{V_{1,C}}{V_1} \times TOC_{stratC}$$

$$TOC_{ABC} = \frac{700{,}000\ m^3}{1{,}710{,}000\ m^3} \times 0.0241\ kg/kg + \frac{707{,}000\ m^3}{1{,}710{,}000\ m^3} \times 0.00704\ kg/kg + \frac{306{,}000\ m^3}{1{,}710{,}000\ m^3} \times 0.014\ kg/kg$$

$$TOC_{ABC} = 0.0099\ kg/kg + 0.0029\ kg/kg + 0.0025\ kg/kg = 0.0153\ kg/kg$$

Continuing to use Benzo(a)pyrene as an example.

Log K_{oc} = 6.01

K_{oc} = 1,020,000 L/kg

$$K_{eq} = \frac{2 \times [TOC]_{ABC} \times K_{oc}}{1 + ([TSS]_{inf,1}/10^6) \times (TOC_{ABC}) \times (K_{oc}/1.4)}$$

(the equilibrium coefficient is estimated by accounting for both sorbed and solid form of substsances in water column)

$$K_{eq} = \frac{2 \times 0.0153\ kg/kg \times 1{,}020{,}000\ L/kg}{1 + 674{,}000\ \frac{mg}{L} \times \frac{1\ kg}{1000000\ mg} \times 0.0153\ kg/kg \times 728{,}571\ L/kg}$$

K_{eq} = 4.15 L/kg

$$f_d = \frac{1}{1 + (K_{eq} \times [TSS]_{inf,1}/10^6)}$$

$$f_d = \frac{1}{1 + 4.15\ L/kg \times 674{,}000\ mg/L \times 1E\text{-}06\ kg/mg} = 0.26$$

$$f_P = \frac{(K_{eq} \times [TSS]_{inf,1}/10^6)}{1 + (K_{eq} \times [TSS]_{inf,1}/10^6)}$$

$$\frac{4.15\ L/kg \times 674{,}000\ mg/L \times 1E\text{-}06\ kg/mg}{1 + 4.15\ L/kg \times 674{,}000\ mg/L \times 1E\text{-}06\ kg/mg} = 0.74$$

$$C_T = \frac{C_{PW}}{f_P} = \frac{97\ \mu g/L}{0.74} = 130\ \mu g/L$$

C_p = $C_T \times f_P$ = 130 µg/L x 0.74 = 96 µg/L

C_d = $C_T \times f_d$ = 130 µg/L x 0.26 = 34 µg/L

For Inorganics,

Log K_d values found by desktop search in Liters of water per kilogram of sediment

Using chromium as an example.

$\log K_d =$ 5.1 L/kg

$[TSS]_{inf,1} =$ 674,000 mg/L

$$f_d = \frac{1}{1 + ([TSS]_{inf,1}/10^6) \times 10^{\log K_d}}$$

$$f_d = \frac{1}{1 + (674{,}000 \text{ mg/L} \times 1\text{E-}06 \text{ kg/mg}) \times 126{,}000 \text{ L/kg}}$$

$f_d =$ 0.000012

$f_P = 1 - f_d$

$f_P =$ 1 - 0.000012 = 0.999988

$C_{sed,ABC} =$ 63.9 mg/kg using the same methodology as was used at the beginning of step 2

$$C_T = \frac{[TSS]_{inf,1} \times C_{sed,ABC}}{1{,}000 \ \mu g/mg}$$

$$C_T = 674{,}000 \text{ mg/L} \times 63.9 \text{ mg/kg} \times \frac{1 \text{ g}}{1{,}000 \text{ mg}} \times \frac{1 \text{ kg}}{1{,}000 \text{ g}} \times \frac{1{,}000 \ \mu g}{1 \text{ mg}}$$

$C_T =$ 43,100 µg/L

$C_p = C_T \times f_P$ = 43,100 µg/L x 0.999988 = 43,100 µg/L

$C_d = C_T \times f_d$ = 43,100 µg/L x 0.000012 = 0.508 µg/L

4) Determine CDF effluent concentration using mass balance:

$C_{eff} = C_{sw} + C_d + C_P \times 0.2$

$C_p \times 0.2 =$ Particulate only taken into account for substances with standards determined on a 'total recoverable basis' including aluminum, iron, and selenium.

for chromium as an example:

$C_{eff} =$ 4 µg/L + 0.508 µg/L = 4.51 µg/L

The effluent concentration is below the DRBC SQOs for acute and chronic aquatic life exposures, as well as the systemic toxicant for human health through fish ingestion.

The next step is to check the allowable mixing zone concentration per DNREC Surface Water Quality Standards

5) Determine the concentration of substances in the river mixing zone at 20% of the width of the river at the CDF discharge

Using aluminum concentrations during dredge cycle 1 as an example,

V_{mz} or $V_{Ri} =$ volume of the mixing zone or initial river volume

Find cross-sectional area of mixing zone (see sketch below):

Triangle ABC:

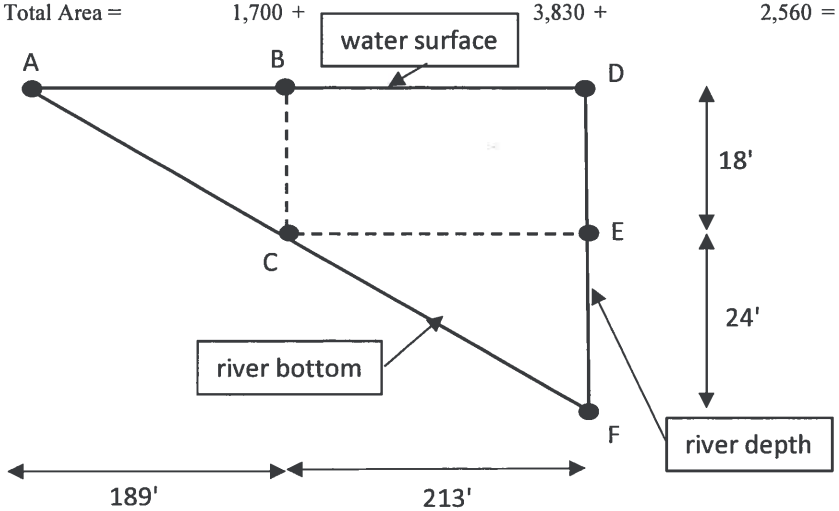
0.5 x AB x BC

Area_ABC = 0.5 x 189 x 18 = 1,700 sq.ft.

Rectangle BDEC:

BD x DE

Area BDEC =	213 x	18 =	3,830 sq.ft.	
Triangle CEF:				
0.5 x CE x EF				
Area_CEF =	0.5 x	213 x	24 =	2,560 sq.ft.
Total Area =	1,700 +	3,830 +	2,560 =	8,090 sq.ft.



Assuming a square surface of mixing zone, the length of the mixing zone is equal to the length of AD = 402 feet.

V_{mz} = 8,090 x 400 = 3,240,000 cubic feet

To calculate the concentration resulting in the river mixing zone after CDF effluent is discharged, assume worst-case scenario time frame of low currents around slacktide (~t = 0.5 hours) where little to no new river water moves into mixing zone:

$C_{R,f}$ = final concentration of substance when re-entering river mixing zone from CDF
$C_{R,i} = C_{sw}$ initial, ambient concentration of substance in river mixing zone or surface water concentration
V_{mz} or V_{Ri} = initial volume of river mixing zone
Q_{eff} = flowrate of effluent from broad-crested weir

Assume,
weir width, L = 8 feet
hydraulic head, H = 0.17 feet

$Q_{eff} = 3.09 \times L \times H^{3/2}$

Q_{eff} = 1.68 cfs

(equation from Streeter and Wylie. Sixth Edition Fluid Mechanics. 1975. New York, NY. McGraw-Hill, Inc.)

$V_{R,f}$ = final volume of the river mixing zone including CDF effluent re-entering river
t = designated time frame of worst-case scenario, 0.5 hours

$$C_{R,f} = \frac{(C_{R,i} \times V_{Ri}) + (C_{eff} \times Q_{eff} \times t)}{V_{R,f}}$$

$V_{R,f} = V_{R,i} + (Q_{eff} \times t)$

$V_{R,f} = 3{,}240{,}000$ cubic feet + (1.68 cfs x 1800 seconds) = 3,243,000 cubic feet

$$C_{R,f} = \frac{(3{,}240{,}000 \text{ cubic feet} \times 885\ \mu g/L) + (8{,}040\ \mu g/L \times 1.68 \text{ cfs} \times 1800 \text{ sec})}{3{,}243{,}000 \text{ cubic feet}}$$

$C_{R,f} =$ 892 µg/L

The concentration ofaluminum in the final river mixing zone is > DRBC SQOs due to existing elevated concentrations in the river water

6) Apply TSS concentration constraints to effluent to limit substance concentrations mixing into the river

Limits based on recent real estate approvals issued for the United States Army Corps of Engineers (USACE):

$[TSS]_{inst,limit} =$ 4,000 mg/L

$[TSS]_{avg,limit} =$ 3,000 mg/L

Perform calculations in steps 3 through 5 utilizing the above TSS limits instead of $[TSS]_{inf,1}$

7) If concentrations resulting in final river mixing zone (C_{Rf}) are greater than the initial concentration in the river mixing zone (C_{Ri}) or the DRBC SQOs (whichever is higher), determine % removal of substance through CDF

$C_{inf} = C_d$ @ TSS = TSS_{slurry} or $[TSS]_{inf,1}$

$$\% \text{ removal} = \frac{C_{inf} - C_{eff}}{C_{inf}} \times 100 = \text{removal efficiency of CDF}$$

$$\frac{1{,}610{,}000\ \mu g/L - 8{,}040\ \mu g/L}{1{,}610{,}000\ \mu g/L} \times 100 = 99.5$$ % removal of aluminum through CDF

and determine how elevated the initial substance concentration is in the river (C_{Ri}) compared to DRBC SQOs for acute aquatic life exposure versus how elevated the final substance concentration in the river mixing zone is ($C_{R,f}$) above C_{Ri}.

$$\frac{C_{R,f} - C_{Ri}}{C_{Ri}} = \text{\% change in concentration in river mixing zone due to CDF effluent discharge}$$

$$\frac{892\ \mu g/L - 885\ \mu g/L}{885\ \mu g/L} \times 100 = 0.79$$ % change in concentration of aluminum in river mixing zone due to CDF effluent discharge during worst case scenario.

$$\frac{C_{Ri} - C_{DRBC,SQO}}{C_{DRBC,SQO}} = \text{\% concentration existing in river mixing zone is elevated above DRBC SQOs.}$$

$$\frac{885\ \mu g/L - 750\ \mu g/L}{885\ \mu g/L} \times 100 = 15$$ % concentration existing in river mixing zone is elevated above DRBC SQO for acute aquatic life exposure