January 2025
Durez Inlet

ANCHOR QEA

Aquatic Assessment Report

Durez Inlet
New York State Department of Environmental Conservation Site No. 932018
North Tonawanda, New York

Prepared for Glenn Springs Holdings, Inc.

January 2025
Durez Inlet

Aquatic Assessment Report

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ABBREVIATIONS

µg/kg	microgram per kilogram
µgTEQ/kgOC	microgram toxic equivalency per kilogram organic carbon
Alpha Analytical	Alpha Analytical in Mansfield, Massachusetts
BAF	bioaccumulation factor
BPF	between Fisherman's Park Cove and Pettit Cove
BSAF	biota-sediment accumulation factor
cm	centimeter
Cs-137	cesium-137
CSM	conceptual site model
D/F	polychlorinated dibenzo-*p*-dioxins and furans
DFP	downstream of Fisherman's Park Cove
DQO	data quality objectives
DRA	downstream reference area
Durez NT	Durez North Tonawanda
FPC	Fisherman's Park Cove
GSH	Glenn Spring Holdings, Inc.
HRC	high-resolution core
LDPE	low-density polyethylene
ngTEQ/kg	nanogram toxic equivalency per kilogram
NYSDEC	New York State Department of Environmental Conservation
OC	organic carbon
OCC	Occidental Chemical Corporation
Pb-210	lead-210
PCA	Pettit Cove Area
PCF	Pettit Cove Flume
PWG	porewater grab samples
SCC	sediment characterization cores
SGS	SGS North America in Wilmington, North Carolina
SGV	Sediment Guidance Value
Site	Durez North Tonawanda manufacturing facility
SOP	standard operating procedure
Study Area	Niagara/Little Niagara River
TCDD	tetrachlorodibenzo-*p*-dioxin
TEF	toxic equivalency factor
TEQ	toxic equivalency
TOC	total organic carbon

UPC	upstream of Pettit Cove
URA	Upstream Reference Area
USACE	U.S. Army Corps of Engineers
Work Plan	*Aquatic Assessment Work Plan*
ww	wet weight

1 Introduction

This *Aquatic Assessment Report* has been prepared pursuant to the *Aquatic Assessment Work Plan* (Work Plan; Anchor QEA 2021) approved by New York State Department of Environmental Conservation (NYSDEC) in July 2021. The Work Plan was prepared by Anchor QEA on behalf of Glenn Spring Holdings, Inc. (GSH) in response to NYSDEC's request that GSH characterize the nature and extent of sediment polychlorinated dibenzo-*p*-dioxins and furans (D/F) concentrations and associated environmental risks in Pettit Cove and the Niagara/Little Niagara River (Study Area). Specifically, this assessment provides: 1) a summary of field activities and surveys performed in accordance with the Work Plan; 2) a summary of validated analytical data; and 3) an interpretation of data in the context of the data quality objectives (DQOs) established in the Work Plan to guide the sampling and analysis. This assessment addresses NYSDEC comments received from August 2022 to July 2024 on earlier draft reports.

1.1 Site Background

The Durez North Tonawanda (Durez NT) manufacturing facility (Site; Figure 1-1) operated from 1926 until its closure in 1995. Until 1993, noncontact cooling water and stormwater from the Site was discharged into the Pettit Cove Flume (PCF), a City of North Tonawanda (City) storm sewer draining the central portion of the City. D/F potentially associated with the historic discharges from the Site have been detected in sediments within the PCF, as well as in downstream areas.

1.2 Environmental Setting

The PCF discharges into Pettit Cove, a 0.5-acre shallow, triangular-shaped, manufactured embayment of the Little Niagara River (a tributary of the East Branch of the Niagara River; Figure 1-1). During summer, Pettit Cove supports an extensive bed of submerged aquatic vegetation, increasing the organic content of local fine-grained sediments. Fisherman's Park Cove (FPC) consists of two shallow manufactured embayments (collectively <0.5-acre) located 0.4 mile downstream of Pettit Cove on the East Niagara River that also contains organic, fine-grained sediments.

Both Petit and Fisherman's Park coves likely formed in the late 1800s between piers constructed to support the burgeoning lumber economy of the area; some of the historic wooden pier piling are still visible today. The coves were subsequently infilled from lumber milling, iron works, and other industrial operations. In 1925, Pettit Creek was converted to a concrete culvert to eliminate dumping of wastes into the creek by residents. The placement of the culvert followed the current configuration of the PCF.

In 2016 and 2017, the Engineer Research and Development Center of the U.S. Army Corps of Engineers (USACE) and the U.S. Fish and Wildlife Service performed detailed geophysical surveys of fine-grained (e.g., silt) sediment throughout the upper Niagara River to inform subsequent U.S. Great

Lakes Legacy Act sediment sampling plans (Figure 1-2; ERDC 2021). Numerous transects were surveyed adjacent to and downstream of Pettit Cove and FPC, with relatively coarse gravel substrate encountered throughout this river reach, consistent with sampling data collected for this *Aquatic Assessment Report* (see Section 3.1). The general absence of fine-grained sediment deposits in the East Niagara River study area is attributable to relatively high current velocities along the outer bend of the East Niagara River where river flows are focused, limiting sediment deposition.

1.3 Previous Source Control and Remediation Activities

Between 1977 and 2016, Occidental Chemical Corporation (OCC), GSH, and the City implemented extensive source control and remediation actions at the Site. These actions included characterization and remediation of potential D/F sources to the PCF and Pettit Cove; cleaning, lining, and/or rerouting sewer lines that previously discharged from the Site (PCF and Walck Road); and sediment removal from Pettit Cove (Figure 1-1). A summary of source control and remediation activities is as follows:

- 1977: An engineered clay cap was constructed over a portion of the Site.
- 1989: A granular activated carbon treatment system was installed to treat stormwater prior to discharge to the PCF.
- 1990: An interceptor trench was constructed around the perimeter of the Site.
- 1992: The Site and downstream City storm and sanitary sewers were cleaned.
- 1993: Portions of the PCF were rerouted by the City to the Walck Road sewer system, and the Walck Road outfall relocated to its current location in the East Niagara River.
- 1995: Sediments were dredged from Pettit Cove and a clay liner/riprap cap was constructed on the post-dredge surface; a cutoff wall was also installed to contain dense nonaqueous phase liquids in the subsurface of adjacent Pettit Cove property.
- 2000: Approximately 300 tons of sediment that had accumulated above the clay liner/riprap cap constructed in 1995 were dredged; tar was also removed from the PCF.
- 2010: Several bulkheads located in the Walck Road and Wilson Avenue sewer systems were repaired, further controlling drainage from the Site to the storm sewer.
- 2012: Sediments were removed from the eastern drainage ditch at the former Durez NT plant, and areas of the Durez NT plant were lined and regraded to prevent surface runoff from migrating off site.
- 2014: Approximately 215 tons of sediment and debris were removed from the PCF, Walck Road, Wilson Avenue, and Harding Avenue sewers; the Nash Road portion of the PCF was subsequently lined along with portions of three laterals.
- 2016: The Walck Road storm sewer adjacent to the Site was lined, including manholes, and several bulkheads were repaired.

1.4 Organization of Report

The remainder of this *Aquatic Assessment Report* has been organized into the following sections:

- Section 2 provides a summary of the DQOs established for this study and used to guide the sampling described in the Work Plan (Anchor QEA 2021).
- Section 3 provides a summary of field activities performed, including any appropriate deviations from the Work Plan, and a summary of the field and laboratory analytical data collected.
- Section 4 presents an evaluation of the data in the context of the DQOs described in Section 2.
- Section 5 summarizes the conceptual site model (CSM) informed by this study and presents a proposed supplemental work plan to further characterize the nature and extent of sediment D/F concentrations in the Study Area.

2 Data Quality Objectives

The DQOs established for this study and used to guide the sampling described in the Work Plan (Anchor QEA 2021) are as follows:

- *DQO No. 1: Characterization of Sediment D/F Concentrations*. Sediment cores were collected from various locations to a depth of 2 feet below the mudline to characterize the areal and vertical extent of D/F in sediment.
- *DQO No. 2: Assessment of Current Fish and Benthic Invertebrate Community, and Characterization of Tissue D/F Concentrations*. Surveys were conducted to characterize benthic invertebrate and fish species that reside in Pettit Cove and FPC. Analyses of representative species collected from those areas (and other areas in the East Niagara River) were conducted to characterize D/F concentrations in tissue.
- *DQO No. 3: Determination of Site-Specific Sediment Guidance Value (SGV)*. As detailed in NYSDEC guidance for *Screening and Assessment of Contaminated Sediment* (NYSDEC 2014; and supporting reference documents)[1], site-specific bioaccumulation-based SGVs for D/F can be developed using different methods, including: 1) measured organic carbon (OC) partitioning coefficient (K_{OC}; calculated as the OC-normalized sediment concentration divided by the measured dissolved porewater concentration); and/or 2) an appropriate biota-sediment accumulation field study pairing sediment and tissue measurements.
- *DQO No. 4: Assessment of Source Control Effectiveness and Characterization of Natural Recovery Processes*. Sediment cores were collected at representative locations in Pettit Cove and FPC to assess the effectiveness of prior source control efforts summarized in Section 1.3 and to evaluate physical processes that control the rate of natural recovery in the system (i.e., sedimentation and bioturbation/mixing). The assessment of source control effectiveness was supplemented by the collection and analysis of sediments that accumulated in the PCF since the completion of the PCF cleaning activities in 2014.

An evaluation of data collected under the Work Plan in the context of these DQOs is presented in Section 4.

[1] A site-specific SGV is calculated because research over the last several decades has demonstrated that soot, coal, and charcoal (collectively, "black" carbon) frequently present in urban sediments strongly bind hydrophobic chemicals (including D/F) and often limit bioavailability (Gustafsson et al. 1996; Luthy et al. 1997; Cornelissen et al. 2005; Lohmann et al. 2005).

3 Summary of Aquatic Assessment Field Activities

The aquatic assessment field activities involved the collection of sediment and tissue samples and were performed within navigable waters of the United States. Therefore, this work required a USACE permit that was covered under Nationwide Permit No. 6 Survey Activities. This work also required an NYSDEC Protection of Waters Permit. USACE and NYSDEC permits were obtained using New York State's joint permit application in consultation with the NYSDEC Division of Fish and Wildlife and the State Historic Preservation Office. In addition, utility mark outs were coordinated with Dig Safely New York prior to initiating the work.

The remainder of this section summarizes the sediment and tissue collection field activities conducted in accordance with the Work Plan (Anchor QEA 2021) and describes relevant or notable deviations from the Work Plan. Tabular summaries of analytical results for all samples (including individual D/F congener concentrations) by media are provided in Appendix A. Also, tabular summaries of calculated toxic equivalency quotient (TEQ) concentrations and other non-D/F analytes are provided by media for all samples in this section. TEQ concentrations were calculated using fish and mammal toxic equivalency factors (TEFs; Van den Berg et al. 1998, 2006). The TEFs for fish and mammals are summarized in Table 3-1. For each sample, detected concentrations[2] of the 17 D/F congeners were multiplied by their TEFs to estimate toxicity of the congeners relative to 2,3,7,8-tetrachlorodibenzo-*p*-dioxin (2,3,7,8-TCDD) and then summed to calculate the TEQ.

3.1 Sediment Sampling

Sediment sampling was performed during October 2021 in the five general areas listed as follows (in upstream to downstream order) and illustrated in Figure 3-1:[3]

- Upstream Reference Area (URA) in the Little Niagara River
- Pettit Cove Area (PCA)
- Between Pettit Cove and FPC (BPF) downstream of the confluence of Little Niagara and East Niagara rivers
- FPC
- Downstream of FPC (DFP) on the east bank of the East Niagara River

3.1.1 Sediment Porewater

Concentrations of freely dissolved D/F in sediment porewater grab samples (PWG) were measured ex situ using low-density polyethylene (LDPE) passive samplers. Bulk sediment samples from the top

[2] Non-detect results were set to zero for TEQ calculations. Estimated (i.e., J-qualified) results were treated as detected results.

[3] Note the text in parenthesis represents the abbreviated station name used in location and sample IDs for sediment samples.

6-inches of sediment (approximately 0 to 15 centimeters [cm]) were collected from three locations in Pettit Cove, two locations in FPC, and two locations in the Little Niagara River upstream of Pettit Cove (UPC; note this included the URA location and a location immediately UPC along the east bank of the Little Niagara River; Figure 3-1). These surface sediment samples were collected using a petite Ponar-type grab sampler or push corer. At locations FPC-PWG-01 and FPC-PWG-02, the Ponar was unable to collect sufficient sediment due to thick organic material overlaying the sediment surface (i.e., sticks, leaves, and submerged aquatic vegetation), which prevented sediment penetration. A push corer was instead used to collect sediment from the upper 6-inch interval at these two locations. At location UPC-PWG-01, the presence of large rocks and hard substrate impeded sample collection; therefore, this sampling location was relocated approximately 50 feet upstream of the target location identified in the Work Plan (Anchor QEA 2021; Figure 3-1).

After collection, bulk sediment samples were placed into the appropriate sample container, placed on ice, and immediately shipped to the Anchor QEA Environmental Geochemical Laboratory in Portland, Oregon for ex situ passive sampler analysis.

Upon receipt, each bulk sediment sample was split into three subsamples: one subsample was shipped to SGS North America in Wilmington, North Carolina (SGS) and analyzed for bulk D/F congeners (dry weight basis); one subsample was shipped to Alpha Analytical in Mansfield, Massachusetts (Alpha Analytical) for analysis of total solids, total organic carbon (TOC), and black (soot[4]) carbon; and the remaining subsample was retained and used for ex situ passive sampler analysis at the Environmental Geochemical Laboratory, as discussed herein.

LDPE sheets spiked with isotopically labeled (carbon-13) performance reference compounds (i.e., compounds used to estimate the degree of equilibration) were deployed in each of the bulk sediment jars and allowed to equilibrate for 33 days (from December 2021 to January 2022). A rotary agitator was used for continuous agitation to accelerate the equilibration process. After deployment, the LDPE samplers were retrieved from the bulk sediment jars, thoroughly cleaned, and shipped to SGS for D/F analysis. Sampling and analysis of the LDPE sheets was performed in accordance with the standard operating procedure (SOP) provided in Appendix A of the Work Plan.

A summary of measured D/F congener concentrations, TOC, black carbon, and total solids on the bulk sediment samples is provided in Table A-1 of Appendix A; D/F total TEQ concentrations in bulk sediment are summarized in Table 3-2. Table A-1 also includes the D/F mass measured by SGS on the LDPE sheets for each sample. Those D/F masses measured on the LDPE sheets were converted to freely dissolved porewater D/F concentrations using LDPE-water partition coefficients ($K_{LDPE\text{-}W}$) calculated using published linear free energy relationships (Adams et al. 2007), octanol-water

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[4] Black carbon is also referred to as "soot" carbon by the analytical laboratory, and is listed as such in the data summary tables provided in Section 3 and Appendix A.

partition coefficients for D/F (Hawker and Connell 1988), and the fraction of equilibrium calculated from performance reference compound recovery data. Porewater D/F total TEQ concentrations are summarized in Table 3-3.

3.1.2 High-Resolution Sediment Coring

High-resolution (i.e., finely segmented) sediment cores (identified in sample IDs using the abbreviation HRC) were collected at three locations in Pettit Cove and two locations in FPC (Figure 3-1). At each location, a sediment core was collected with a push core by advancing the core to refusal by manual push, using a slide hammer, as necessary. Cores were generally collected in the vicinity of the target locations identified in the Work Plan (Anchor QEA 2021) with one exception. Refusal due to hard substrate was encountered after multiple attempts at location FPC-HRC-02; therefore, this core was relocated 30 feet west of the original target where softer sediments were encountered (Figure 3-1).

For each high-resolution core, the top 16 cm (approximately 6 inches) were segmented into 2-cm intervals (eight samples per core)—all eight of those 2-cm intervals were submitted to SGS for analysis of bulk D/F congeners (dry weight basis) and to Alpha Analytical for total solids, TOC, and black carbon analyses. The remainder of each core was frozen intact and archived until D/F results for the surficial intervals were received and evaluated.

Additional deeper samples from each of the five archived cores were processed and submitted for analysis of bulk D/F (dry weight basis), total solids, TOC, and black carbon in December 2021, as follows:

1. Preliminary review of the D/F results indicated additional deeper finely segmented (2 cm) interval data were needed to evaluate vertical gradients in D/F concentrations in three of the five high-resolution cores, including two cores collected within FPC (FPC-HRC-01 and FPC-HRC-02) and one of three cores collected in Pettit Cove (PCA-HRC-03). Therefore, the 16- to 32-cm (approximately 6- to 12-inch) depth interval was processed in 2-cm intervals. The remaining sediment collected below 12 inches was processed as a single depth interval. The total sediment recovery in all high-resolution cores ranged between 15 and 24 inches.
2. For the remaining two cores collected in Pettit Cove (PCA-HRC-01 and PCA-HRC-02), the sediment collected deeper than 6 inches was processed into 6- to 12-inch and 12- to X-inch intervals, where "X" represents the total depth of recovery in each core.

One additional core was collected from each of the two locations sampled in FPC for radioisotope analysis (cesium-137 [Cs-137] and lead-210 [Pb-210]) to estimate net sedimentation rates and mixing/bioturbation depths.[5] For the radionuclide evaluation, the top 2 feet (or point of refusal) of recovered sediment was processed into 2-cm intervals (28 samples per core) and submitted to Teledyne Brown Engineering in Knoxville, Tennessee. Representative sediment interval samples were submitted for radionuclide analysis (i.e., all samples in the upper 16-cm and alternating 2-cm sample intervals deeper than 16 cm throughout the remainder of each core). The remaining samples were archived at the laboratory for potential future analysis.

A summary of measured D/F congener concentrations, TOC, black carbon, total solids, and radionuclides is provided in Table A-2 of Appendix A; D/F total TEQ and radionuclide concentrations are summarized by core in Tables 3-4a through 3-4e.

3.1.3 Additional Sediment Characterization

Sediment characterization cores (SCC) were collected from additional representative locations to characterize the areal and vertical extent of D/F in sediment. Specifically, cores were collected from each of four locations, including: two cores in the Little Niagara River (URA location) UPC, and two cores downstream of FPC (identified in sample IDs using the abbreviation “DFP,” Figure 3-1). At each location, a sediment core was collected with a push core device by advancing the core to refusal by manual push and/or a slide hammer. Each of the four cores was segmented into three increments for analysis (0- to 6-inch, 6- to 12-inch, and 12- to X-inch intervals), where “X” represents the total depth of sediment recovery in each core, but no more than 24 inches. Total sediment recovery at three of the four locations was >24 inches, but only the top 24 inches of sediment were submitted for analysis as described previously. Total sediment recovery at the fourth location (URA-SCC-01) was 18 inches.

Three of the target coring locations (URA-SCC-01, URA-SCC-02, and DFP-SCC-02) needed to be relocated due to either swift current, deep water or lack of soft sediment. Location DFP-SCC-02 was moved east to be closer to shore (i.e., approximately 20 feet offshore) where water depth and current were more conducive to sampling, and soft sediments were encountered. Location URA-SCC-01 was relocated upstream of the old train bridge that spans the Little Niagara River (approximately 20 feet offshore) due to a lack of soft sediments at the original Work Plan (Anchor QEA 2021) target location. Location URA-SCC-02 was also relocated (approximately 270 feet north-northwest of the original target) due to a lack of soft sediments at the original target location (Figure 3-1). Field Deviation Form No. 3 (Appendix B) provides more details on these relocations.

In addition to the four cores described previously, sediment coring was attempted at two locations BPF (per the Work Plan); however, soft sediments were not encountered at either location after multiple attempts. Although, soft sediment was located approximately 20 feet offshore near the

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[5] Radioisotope cores were not collected in Pettit Cove because prior dredging that occurred in this area disturbed the geochronological record.

northern end of the docks associated with the condominium complex in this designated sampling area. Accordingly, the two locations originally targeted for sampling in the Work Plan were abandoned, and a single Ponar grab sample was collected in this area (location BPF-SCC-01; Figure 3-1). Email communication with NYSDEC on October 15, 2021, approved the relocation of this sampling location, and Field Deviation Form Nos. 1 and 2 provide more details on this relocation (Appendix B).

Sediment samples were submitted to SGS for analysis of bulk D/F congeners (dry weight basis), and Alpha Analytical for analysis of total solids, TOC, and black carbon. A summary of measured concentrations is provided in Table A-3 of Appendix A; D/F total TEQ levels are summarized by location in Table 3-5.

3.2 Tissue Sampling

3.2.1 Fish Tissue

Fish tissue sample collection and community evaluation was performed during August 2021 in the five general areas listed as follows (in upstream to downstream order) and illustrated in Figure 3-2:[6]

- URA in the Little Niagara River (along the east riverbank and cove across from the southern tip of Tonawanda Island)
- PCA
- BPF along the east riverbank (FPC-PC)
- FPC
- DFP and the downstream reference area (DRA) for the sport fish area

The polygons shown in Figure 3-2 summarize fish sample collection area at each of these five target locations. It should be noted that fish sampling conducted at the Pettit Cove and FPC locations generally included the entirety of those coves, and portions of the East Niagara River and Little Niagara River immediately adjacent to the coves (Figure 3-2). Also, the extent of the sampling at the URA was initially identified in the Work Plan (Anchor QEA 2021) based on a review of aerial photographs and an initial field reconnaissance conducted prior to sampling; fish sampling areas were refined during sampling based on similarities in environmental conditions to Pettit Cove and FPC, including water depth, aquatic vegetation, adjacent land use, and riparian habitat.

As described in the Work Plan (Anchor QEA 2021), sport fish and forage fish were targeted for sample collection. Five forage fish composite samples were targeted at each of the five sampling areas described previously. Target forage fish species included bluegills (*Lepomis macrochirus*) and

[6] Note the text in parenthesis represents the abbreviated station name used in location/sample IDs for fish tissue samples.

bluntnose minnows (*Pimephales notatus*). For sport fish, because they have a larger home range of up to 0.5 mile (Gerber 1987; Ettinger-Dietzel et al. 2016; Mycko 2017), these fish were targeted more broadly from three larger areas, including the URA, a larger combined Pettit Cove and FPC area, and the area downstream of Fisherman's Park. Five legal size smallmouth bass (*Micropterus dolomieu*) were targeted at each of these locations. Where smallmouth bass were unavailable, largemouth bass (*Micropterus salmoides*) were sampled as an appropriate substitute.

The fish community assessments revealed that Pettit Cove and FPC support primarily yearling sunfish (*Centrarchidae*) species, including pumpkinseed, bluegill, rockbass, and young-of-year smallmouth and largemouth bass. Legal size sportfish or edible size sportfish were not found at these locations other than a single largemouth bass collected in Pettit Cove. Shallow water depths and lack of cover render these embayments unsuitable to support sportfish. However, legal and edible size sportfish were observed in the main channel of the river at locations URA, FPC-PC, and DRA. Boat houses provided cover for sportfish at the URA coves, especially for the cove closest to Tonawanda Creek.

The primary method of fish sample collection was electrofishing. This was accomplished at most locations using an 18-foot boat equipped with a variable-output, direct-current generator; however, access in Pettit Cove was not possible using the 18-foot vessel so a smaller jon boat outfitted with electrofishing equipment was used. The vessel traversed along a transect line parallel to shore and sampling coordinates were recorded on the vessel mounted GPS. Operating amperage was adjusted according to water conductivity to minimize injury to fish; stunned fish were immediately removed from the electrical field using dip nets to minimize the duration of the shock. Fish were held in live wells onboard the vessel until processing. At certain stations, additional sample collection methods were used, including minnow traps (station BPF) and beach seine, fyke/hoop net, cast net, and minnow traps (Pettit Cove). Fish collected via these methods were kept alive in buckets until commencement of field processing, and a handheld GPS was used to record a set of coordinates at the fish collection locations.

A total of 20 forage fish samples were collected and submitted to SGS for D/F and lipid analyses.[7] Each sample was a composite that included multiple similar sized fish of the same species. Composite samples of bluegill consisted of five fish each, whereas bluntnose minnow composites ranged from 12 to 25 fish depending on the size of individual fish. Collection of forage fish was attempted BPF, but none were obtained due to deep water and a lack of available habitat. A total of 15 sport fish were collected and submitted for D/F and lipid analyses, including smallmouth and largemouth bass. Sport fish were analyzed as individual samples. The numbers of forage and sportfish collected and additional sampling event information is summarized in Table 3-6. This table also includes a summary of nontarget species observed during sample collection. Summaries of

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[7] In addition, round gobies (*Neogobius melanostomus*) were encountered during sampling at two locations (in Pettit Cove [two samples] and BPF [one sample]); these fish were also submitted for analysis.

measured D/F congener concentrations and lipid content in fish tissue samples are provided in Tables A-4 (for forage fish) and A-5 (for sport fish) of Appendix A; D/F total TEQ concentrations are summarized in Tables 3-7 (for forage fish) and 3-8 (for sport fish).

3.2.2 Mussel Tissue

A focused reconnaissance survey for mussels was conducted by a licensed surveyor (Lee Harper; Riveredge Environmental, Inc.) in September 2021. This reconnaissance was performed in accordance with the methods described in the mussel survey SOP (Appendix C to the Work Plan; Anchor QEA 2021) at the same five target fish sampling areas described in Section 3.2.1 to qualitatively evaluate the presence (or absence) of mussels in those areas and, if mussels were found, collect samples for laboratory analysis. At four of the five locations (URA, PCA, FPC, and DFP), divers conducted qualitative visual surveys of the surface of hard and soft substrate areas for mussels. No native mussels were observed by the field crew—only invasive zebra mussels (*Dreissena polymorpha*) were found at the survey areas shown in Figure 3-3.

A separate diver reconnaissance survey was conducted at BPF. Mussels were not observed in or on the sediment in this predominant gravel and sand substrate area. However, zebra mussels were observed on and collected from a metal bulkhead in this area.

The mussel reconnaissance survey results are summarized in Table 3-9. Zebra mussel samples were obtained from all five survey locations and submitted to SGS for D/F and lipid analyses (sufficient mass was obtained for a composite sample at each station). A summary of measured D/F congener concentrations and lipid content in mussel tissue samples is provided in Table A-6 of Appendix A; D/F total TEQ levels are summarized in Table 3-10.

3.2.3 Non-Mussel Benthic Invertebrate Community Survey

In October 2021, a benthic community survey was performed to address DQO No. 2 by advancing sediment push cores[8] (0 to 24 inches) at two locations in the URA, three locations in Pettit Cove, two locations in FPC, and two locations DFP (Figure 3-4). Sampling followed the methods described in the SOP for this work (Appendix C to the approved Work Plan; Anchor QEA 2021). Collection of a push core was also attempted at the sediment sampling station located between Pettit Cove and FPC; however, due to limited substrate, push coring was unsuccessful, so a sediment grab sample was obtained using a Ponar.

Three replicate core samples were collected at each of the sampling locations and segmented in 6-inch intervals. The replicate 6-inch intervals collected at each location were combined and processed as a single composite sample. Each composite sample was sieved in the field to remove

[8] Sediment core diameter was 2⅞ inches.

excess sediment (silt and fine sand), and the collected benthic invertebrates were sent to a taxonomist (J. Kelly Nolan; Watershed Assessment Associates) for sorting, identification, and counting. The benthic community survey results are summarized in Table 3-12. This nonmussel benthic invertebrate community survey was used to evaluate the depth distribution of benthic organisms.

3.3 PCF Accumulated Sediment Sampling

Grab samples of sediments that accumulated in the PCF since it was last cleaned (in 2014) were collected in October 2021. These samples provide a direct measurement of D/F concentrations in sediments that have the potential to be transported to Pettit Cove during future storm events. Sample collection was targeted at three locations in the PCF (i.e., manholes "RIVER MH-1," "GILMORE MH-1," and "ROSEBROCK MH-1") where sediments were anticipated to have accumulated. Sediment was present at locations "ROSEBROCK MH-1" and "RIVER MH-1," but no accumulated sediment was encountered at "GILMORE MH-1." This station was initially relocated to "EDWARD MH-2," but no sediment was present at this location either, so the field team relocated again to "5th MH-1" where accumulated sediment was present (Figure 3-5). Samples of accumulated sediments at all three PCF locations were obtained using a Ponar. A fourth grab sample was also collected at the submerged portion of the PCF outfall apron located at the upstream end of Pettit Cove.

All four samples were submitted to SGS for analysis of bulk D/F congeners (dry weight basis), and to Alpha Analytical for analysis of total solids, TOC, and black carbon. A summary of measured concentrations is provided in Table A-7 of Appendix A; D/F total TEQ concentrations are summarized by location in Table 3-12.

4 Data Evaluation

This section presents an evaluation of the sediment and tissue data collected as part of this study, organized by DQO.

4.1 Characterization of Sediment D/F Concentrations (DQO No. 1)

Sediment cores were collected to a depth of 24 inches below the mudline to characterize the areal and vertical extent of D/F TEQ levels in sediment.

Figure 4-1a shows sediment D/F TEQ levels in all cores and depths collected from the five sediment sampling areas described in Section 3.1.[9] TEQ levels are shown normalized to TOC in Figure 4-1b. TOC normalized concentrations were calculated by dividing the bulk sediment concentration by the percent TOC (as a fraction). For locations where sediment TOC was >12%, a default maximum TOC value of 12% was used for the calculations (per Section 9.A, Screening and Assessment of Contaminated Sediments [NYSDEC 2014]).

Sediment TEQ concentrations collected for this study are correlated with TOC (and black carbon; Figure 4-2); therefore, evaluation of spatial differences in TEQ levels are best performed on a carbon-normalized basis (i.e., micrograms TEQ per kilogram OC [µgTEQ/kgOC]), consistent with NYSDEC (2014) guidance based on equilibrium partitioning and the site-specific SGV (see Section 4.3).

Surface sediment (0 to 6 inches) D/F concentrations measured UPC ranged from approximately 0.2 to 0.5 µgTEQ/kgOC (Figure 4-1b). Surface sediment D/F concentrations are higher in FPC (10 to 20 µgTEQ/kgOC), Pettit Cove (40 to 100 µgTEQ/kgOC), and in isolated fine-grained sediment patches within the East Niagara River downstream of FPC (20 to 170 µgTEQ/kgOC). D/F TEQ levels in the subsurface sediment interval (12 to 24 inches) are variable; however, the highest concentrations are generally observed in this interval, consistent with recent natural recovery (see Section 4.4).

4.2 Assessment of Current Fish and Benthic Invertebrate Community, and Characterization of Tissue D/F Concentrations (DQO No. 2)

4.2.1 Fish and Mussel Tissue

Fish and mussel tissue D/F TEQ levels are presented and evaluated in this section on both a wet-weight (ww) and lipid-normalized basis, the latter consistent with equilibrium partitioning

[9] This graphic contains three panels, one for each depth interval corresponding to the sectioning used for the Sediment Characterization Cores (0- to 6-inch, 6- to 12-inch, and 12- to 24-inch). As noted in Section 3.1.3, total recovery depth in these cores was variable generally <24 inches. Also, the values shown for cores collected in Pettit Cove and FPC represent averages calculated for these depth intervals from the appropriate 2-cm high-resolution core segments.

(NYSDEC 2014). The fish species collected for this study (forage fish and sport fish summarized in Section 3) are considered two different trophic levels—the forage fish are generally trophic level 3 (omnivores: fish that feed on herbivores) and the sport fish are generally trophic level 4 (carnivores: larger fish that eat omnivorous fish and omnivorous invertebrates). Sport fish (trophic level 4) have a much wider home range than that of forage fish (trophic level 3). The zebra mussels collected are categorized as trophic level 2 (herbivores: small fish and invertebrates that feed on primary producers). A summary of tissue data for the three trophic levels are summarized by location[10] in Table 4-1a and have been grouped into different areas[11] in Table 4-1b.

Tissue D/F TEQ levels in both trophic level 2 and 3 organisms (zebra mussels and forage fish) are generally lower in the upstream reference area compared to levels measured within or downstream of Pettit Cove. D/F TEQ levels in downstream trophic level 2 (mussel) tissue samples ranged from 0.9 to 2.2 nanograms TEQ per kilogram (ngTEQ/kg) ww—this range is generally lower than observed in the trophic level 3 (forage fish) tissue samples ranging from 0.6 to 114.5 ngTEQ/kg ww (Table 4-1b). Tissue D/F TEQ levels in trophic level 4 organisms (sport fish) collected downstream of Pettit Cove range from 0.1 to 5 ngTEQ/kg ww and are generally lower than levels in forage fish (trophic level 3). Figures 4-3a (ww) and Figure 4-3b (lipid-normalized) show average tissue TEQ levels by trophic level and location to further summarize tissue D/F TEQ levels.

D/F TEQ levels measured in sport fish in the URA are similar to sport fish levels downstream of Pettit Cove. A two-sample Student's *t*-test was used to compare D/F TEQ levels between those two populations. Because the TEQ data corresponded to a non-normal distribution (Shapiro-Wilk normality test; $p = 0.002$), the data were first log-transformed, resulting in an appropriate distribution for the *t*-test ($p = 0.44$). No statistically significant difference was found between sport fish TEQ concentrations observed at the upstream reference area versus sport fish collected in the downstream Study Area ($p = 0.57$).[12]

4.2.2 Benthic Invertebrates

One objective of the benthic community evaluation was to describe the site-specific benthic community food web, including benthic invertebrates and mussels. Figures 4-4a and 4-4b present a summary of the benthic taxa found in the Study Area (top panel) compared to taxa found in other areas of New York State (bottom panel; NYSDEC 2021) by depth. This chart illustrates that benthic organisms typically reside in the top 6 inches of sediment. However, a few chironomids, snails, and

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[10] "Locations" refer to the individual sampling locations targeted for this study (URA, Pettit Cove, FPC, and DFP).

[11] Area groupings presented in Table 4-1b include: 1) the entire Study Area (all samples); 2) the URA; and 3) all stations downstream of the URA.

[12] It should be noted that D/F concentrations were below the method detection limit in four of the five sport fish samples collected at the upstream reference area; the method detection limit was used for these samples in the statistical analysis.

amphipods were also encountered at depths below 6 inches—these findings are generally consistent with the NYSDEC summaries (Figure 4-4b).

To further evaluate the depth distribution of the nonmussel benthic community at the various sampling locations, metrics of abundance, taxa richness, and relative percent abundance are tabulated in Table 3-11 and summarized in Figure 4-5 (abundance), Figure 4-6 (richness), and Figure 4-7 (relative percent abundance). At all sampling stations, abundance, richness, and relative percent abundance of benthic organisms were greater in the top 6-inch interval. As noted previously, most (80% to 100%) benthic organisms were found in the surficial 6 inches of sediment (Figure 4-4a). Some benthic organisms, primarily midges (*chironomids*), are present in sediment intervals below 6 inches, particularly in areas with abundant submerged aquatic vegetation. Consistent with observations at other similar sites, midges are likely aggregated around plant roots in these localized regions because of higher oxygen concentrations allowing access to food at greater depths (Sagova et al. 1993).

4.3 Site-Specific Sediment Guidance Value (DQO No. 3)

Research during the last several decades has demonstrated that black carbon in sediments strongly binds hydrophobic chemicals, including D/F, reducing bioavailability, exposure, and risk. Laboratory-based K_{oc}s for D/F do not account for sequestration by black carbon and often significantly overestimate site-specific bioavailability (Gustafsson et al. 1996; Luthy et al. 1997; Cornelissen et al. 2005; Lohmann et al. 2005).

Table 4-2 summarizes surface sediment and porewater D/F concentrations for Pettit Cove and FPC. Congener-specific K_{oc}s from paired surface sediment and porewater measurements for both areas are summarized in Table 4-3. The measured $\log_{10} K_{oc}$ for 2,3,7,8-TCDD averaged 7.52 ± 0.12 in Pettit Cove (2,3,7,8-TCDD was not detected in FPC porewater). Measured $\log_{10} K_{oc}$s for other D/F congeners ranged up to 9.51 ± 0.18 (1,2,3,4,6,7,8,9-octachlorodibenzo-*p*-dioxin), consistent with variable mobility of individual D/F congeners. The higher K_{oc}s for D/F congeners in Pettit Cove compared with FPC is attributable to the higher black carbon content in Pettit Cove sediments, consistent with observations at other urban sites (Gustafsson et al. 1996; Luthy et al. 1997; Cornelissen et al. 2005; Lohmann et al. 2005). The measured site-specific $\log_{10} K_{oc}$ value for 2,3,7,8-TCDD in Pettit Cove (7.52 ± 0.12) is also more than three times greater (untransformed data) than the laboratory derived $\log_{10} K_{oc}$ for 2,3,7,8-TCDD of 7.0 provided in NYSDEC (2014) SGV guidance. Bioaccumulation equivalency concentrations were also calculated using TEFs; bioaccumulation equivalency factors calculated following the Division of Water Technical and Operational Guidance Series 1.1.1 are summarized in Table 4-2.

Site-specific SGVs for D/F TEQ were developed following NYSDEC (2014) guidance and NYSDEC direction specific to the Study Area. As discussed in Section 2, site-specific bioaccumulation-based

SGVs for D/F can be developed using different methods, including using measured K_{oc} values and/or an appropriate biota-sediment accumulation field study pairing sediment and tissue measurements. Given the observed variability of K_{oc} values in the Study Area (Table 4-3), and the availability of paired forage fish (trophic level 3) tissue data that more directly measure bioaccumulation, the biota-sediment accumulation field study provides for a robust development of the site-specific SGV, as described in the following sections.

4.3.1 Fish Flesh Criterion

As part of the SGV guidance, NYSDEC (2014) developed a fish flesh criterion for 2,3,7,8-TCDD only of 3 ngTEQ/kg ww to protect mammalian and avian wildlife piscivore receptors. This criterion represents a no observed effect concentration (the highest tested concentration with no significant effect) based on NYSDEC's (Newell et al. 1987) evaluation of potential D/F risk to potential ecological receptors, focusing on the Niagara River (as described in NYSDEC 2014, Section 9.D on deriving site-specific bioaccumulation SGVs). The 3 ng/kg ww fish flesh criterion for 2,3,7,8-TCDD only is also in line with current ecological risk assessments assessing similar exposure pathways (Anchor QEA 2018).

Though the no observed effect concentration for D/F in the current guidance (NYSDEC 2014) focuses on wildlife protection, recent studies suggest fish may be more sensitive to D/F bioaccumulation than wildlife piscivores. As directed by NYSDEC, a fish flesh criterion protective of fish receptors was also evaluated in this assessment. While NYSDEC guidance (2014) does not currently include a fish flesh criterion protective of fish receptors, the reported no observed adverse effect level for mummichog exposure (Couillard et al. 2011) of 0.89 ng/kg ww for total TEQ was conservatively applied in this assessment to evaluate potential risks to fish receptors. The 0.89 ng/kg ww criterion for total TEQ is more protective than the 3 ng/kg ww criterion for 2,3,7,8-TCDD only.

4.3.2 Site-Specific Biota-Sediment Accumulation

The biota-sediment accumulation factor (BSAF) is the ratio of the lipid-normalized concentration of a hydrophobic chemical (such as D/F) divided by the OC-normalized concentration in surface sediment (EPA 2000, Burkhard 2009). The BSAF is based on equilibrium partitioning of hydrophobic chemicals including D/F between lipid in tissue and OC in sediment. For highly bioavailable hydrophobic chemicals, a theoretical BSAF value near 1 is possible, though rarely observed in the field.

The forage fish (trophic level 3; omnivores: fish that feed on herbivores) tissue characterization data collected for this *Aquatic Assessment Report*, along with paired surface sediment data, provide a robust basis to develop the site-specific SGV, consistent with NYSDEC (2014) guidance (Section 9; Modification to SGVs for Site-Specific Conditions). As summarized in Figure 4-8, lipid-normalized forage fish tissue D/F TEQ (fish) levels are correlated with OC-normalized sediment concentrations consistent with equilibrium partitioning between these media. This correlation supports development of the site-specific bioaccumulation-based SGV using paired sediment and tissue data collected from the Study Area. Measured paired BSAF values in the Study Area are well below 1 (ranging from approximately 0.001 to 0.014; Table 4-4), revealing that D/F congeners are sequestered in sediments and have relatively low bioavailability, consistent with the K_{oc} measurements.

The correspondence of D/F congener profiles between bulk sediment, porewater, and tissue confirms equilibrium partitioning between these media and further supports the robustness of the site-specific biota-sediment accumulation field study approach for SGV derivation (Figure 4-9). Certain D/F congeners such as 2,3,7,8-TCDD are more bioaccumulative in forage fish tissue than other larger molecular weight congeners, such as penta- and hexachlorodibenzofurans prevalent in Study Area sediments. Using forage fish tissue data that directly measure bioaccumulation integrates these complex exposure mechanisms, providing a robust site-specific bioaccumulation-based SGV.

Following Burkhard (2009) guidance for BSAF derivation (i.e., using natural log-transformed average tissue and sediment concentrations of all data at a given sampling location), the regression relationship between lipid-normalized tissue and OC-normalized tissue D/F concentrations in the Study Area is presented in Figure 4-8. The resulting regression equation ($Y = e^{(0.8* \ln(X)-4.9)}$; $r^2 = 0.85$; $P < 0.05$) is equivalent to an average BSAF within the Study Area of 0.0074 OC per lipid. The site-specific bioaccumulation-based SGV for D/F total TEQ to achieve the conservative 0.89 ngTEQ/kg ww fish flesh criterion protective of potential fish exposure discussed in Section 4.3.1 is 3.1 µgTEQ/kgOC.

Baseline bioaccumulation factors (BAFs) were also calculated following NYSDEC guidance (NYSDEC 2014; Section 8) using representative diets for trophic level 3 and 4 fish (Table 4-4). BAFs were calculated using the K_{ow} for TCDD and food chain multipliers that are trophic level-specific (see Equation 1, Table 4-6). Therefore, different food chain multipliers were used to derive trophic level-specific BAFs for fish. Wildlife BAFs were also calculated using the trophic level-specific fish BAFs and average fish lipid levels for each trophic level (see Equation 2, Table 4-5). Equation 2 examples are for bluegill and largemouth bass. To derive the wildlife BAF, an estimation of the fraction of freely dissolved D/F concentrations was also needed. The calculation of the fraction freely dissolved chemical is derived with Equation 3 (Table 4-6). A summary of all calculations is presented in Table 4-6.

4.3.3 Summary of Site-Specific Sediment Guidance Values

A range of SGVs can be calculated from the various methods outlined in NYSDEC's 2014 guidance. A summary of site-specific SGVs that could be calculated using multiple approaches is presented in Table 4-7. Site-specific SGVs based on fish tissue and sediment are also presented, and NYSDEC screening levels are presented for comparison. When D/F congeners, such as TCDD, were not detected, K_{oc} and SGV values were calculated assuming the sample value was one-half of the method detection limit.

As per NYSDEC guidance (NYSDEC 2014), the default screening level for D/F TEQ to protect wildlife is 0.0005 microgram per kilogram (µg/kg; Table 4-7).

As discussed in the previous section, the site-specific fish tissue BSAF-based SGV of 3.1 µg/kgOC total TEQ is a robust and conservative site-specific SGV for chemicals of concern within the Study Area. This site-specific SGV may not apply to sediments outside of the Study Area with different D/F congener profiles.

4.4 Assessment of Source Control Effectiveness and Characterization of Natural Recovery Processes (DQO No. 4)

As described in Section 1.2, OCC and GSH implemented extensive source control and remediation actions at the Site between 1977 and 2016. The effectiveness of those source control efforts, including surface sediment natural recovery, was evaluated using high-resolution (i.e., finely segmented) sediment cores collected in Pettit Cove and FPC and samples of sediments that accumulated in the PCF since it was last cleaned in 2014.

Figure 4-10 presents depth profiles of D/F total TEQ levels measured in the five high-resolution cores collected during this study (three in Pettit Cove and two in Fisherman's Park Cove). Most of these cores show increasing D/F total TEQ levels with depth (particularly the two undisturbed cores collected in FPC), confirming surface sediment D/F TEQ levels in the Study Area are decreasing over time. Gradients are less evident in the three cores collected from Pettit Cove; however, vertical profiles in these cores are likely confounded by prior dredging that occurred in this area.

As described in Section 3.1.2, the two undisturbed cores collected in FPC were submitted for radioisotope analysis (Cs-137 and Pb-210); depth profiles of radioisotopes are shown in Figure 4-11. Cs-137 concentrations[13] in both cores were relatively low or non-detect throughout the core and did not provide data useful for interpretation. However, the Pb-210 data showed good correlation with depth. Pb-210, which is a decay product of volatilized atmospheric radon-222 (222Rn), is present in sediments primarily as a result of recent atmospheric deposition. Radon-222 is a volatile, short-lived, intermediate daughter of uranium-238 (238U), a naturally occurring radioisotope found in the earth's crust. The Pb-210 activity measured in a sediment sample represents the "total" Pb-210 activity. Total Pb-210 activity consists of the unsupported Pb-210 continuously deposited on the earth's surface via atmospheric deposition, which decays with time, and the supported Pb-210, which is the background level due to the decay of radium-226, naturally occurs in sediment, as described in the Work Plan (Anchor QEA 2021).

[13] Cs-137 is a marker of global nuclear weapons testing in the late 1950s and early 1960s and can be a useful radioisotope dating tool in areas with significant sediment deposition.

In aquatic environments, the approximate constant atmospheric flux of Pb-210 and its decay half-life of 22.3 years result in relatively homogeneous Pb-210 activities within the biologically active surface layer of the sediment. The Pb-210 activities decay exponentially below the biologically active surface layer because the deeper layers are not affected by the continuous atmospheric Pb-210 deposition occurring on the surface layer (Appleby 2001). For this reason, Pb-210 serves as a useful tracer for assessing depositional processes and mixing depth in aquatic systems. Estimating sedimentation rates using Pb-210 activity data requires estimating the unsupported fraction of the total Pb-210 activity, also referred to as excess Pb-210 activity. The unsupported fraction is estimated by subtracting the supported Pb-210 concentration from the total Pb-210 concentration.[14]

The gradients of Pb-210 concentrations measured in the two high-resolution cores collected from FPC reveal that sediments in this area are stable and have not been subjected to resuspension (Figure 4-11). Regression analyses were performed on the unsupported fraction of Pb-210 in both cores. Results of that analysis indicate that net sedimentation is occurring at a rate of approximately 0.2 cm per year, and that bioturbation and mixing depths are relatively shallow (<2 cm). The high-resolution core data, evaluated collectively, verify that natural recovery of surface sediments (0 to 2 cm) in the Study Area is progressing on the order of approximately 10% per year. Natural recovery of the top 6 inches of sediment is progressing more slowly, on the order of approximately 1% to 2% per year.

In addition to the high-resolution core data summarized previously, sediment samples collected from the PCF further verify prior source control measures (Section 1.3) have reduced D/F concentrations in the PCF (which have the potential to be transported to Pettit Cove during a storm event). At an average TOC content in downstream sediments in the Study Area of 9% (dry weight basis), OC-normalized D/F TEQ levels measured in sediments that accumulated in the PCF prior to completion of clean-out in 2014 ranged from approximately 80 to 700 µgTEQ/kgOC (Conestoga-Rovers & Associates 2015)[15], well above the 3.1 µgTEQ/kgOC site-specific SGV for D/F (Section 4.3). In comparison, D/F TEQ levels measured in PCF sediments in 2021 (also assuming an average 9% TOC value representative of potential exposure conditions in Pettit Cove) ranged from approximately 3 µgTEQ/kgOC (at two locations) to approximately 24 µgTEQ/kgOC (one location; Table 3-12),[16] slightly above the site-specific SGV. TEQs calculated using mammalian TEFs and OC-normalized concentrations using individual sample TOC are also included in Table 3-12 for reference, though overall conclusions remain the same across each metric. For reference, D/F TEQ

[14] The supported Pb-210 concentration is frequently estimated by using deep interval data from approximately 80 to 100 years after deposition (i.e., four to five half-lives of Pb-210). For these two cores, supported Pb-210 was estimated as the minimum observed Pb-210 concentration in both cores (0.1 pCi/g)

[15] These OC-normalized concentrations are based on dry weight D/F TEQm levels measured in sediments that had accumulated in the PCF prior to completion of clean-out in 2014 that ranged from approximately 7,000 to 65,000 ng/kg.

[16] Not including sample PCF-04, as it was collected downstream of the PCF.

levels in accumulated sediment samples collected from the nearby Walck Road sewer (that also previously discharged from the Site to the East Niagara River) ranged from approximately 1 to 17 µgTEQ/kgOC when sampled in 2008 and 2009, consistent with current sediment concentrations measured in the PCF (also assuming an average 9% downstream TOC value).

5 Conceptual Site Model and Supplemental Work

As discussed in EPA's *Contaminated Sediment Remediation Guidance for Hazardous Waste Sites* (EPA 2005), a CSM summarizes sources of hazardous substances, concentrations of hazardous substances, potentially contaminated media, and actual and potential exposure pathways and receptors. For sediment sites, more so than for other types of sites, the CSM is an important element for evaluating risk and risk reduction approaches. Data gaps identified through development of the CSM support collection of supplemental data as needed to complete the evaluation. Key elements of the CSM informed by data summarized in this *Aquatic Assessment Report* are as follows:

- Extensive source control and remediation actions completed by OCC and GSH at the Site between 1977 and 2016 successfully reduced D/F releases through the PCF and Walck Road sewer systems. Current sediment D/F TEQ levels in these sewer systems are similar to the site-specific SGV, contributing to natural recovery of downstream aquatic sediments in the Study Area.
- Based on detailed radioisotope analyses, sediments in depositional areas of the Study Area are stable and have not been subjected to resuspension. Because of limited sediment inputs to this area, natural recovery of depositional surface sediments in the Study Area (i.e., following source controls) is proceeding relatively slowly, on the order of approximately 1% to 2% per year over the top 6 inches of sediment.
- Because of the composition of D/F in the Study Area (e.g., prevalent penta- and hexachlorodibenzofuran congeners) along with relatively high TOC and black carbon levels in sediments that effectively sequester these chemicals, the bioavailability of D/F is reduced in the Study Area, as measured by low porewater D/F TEQ levels. Similarly, tissue D/F TEQ levels in tropic level 4 organisms (carnivores that eat carnivores; sport fish) within the Study Area are not statistically different than levels measured in the upstream reference area.
- Compared to sport fish, higher tissue D/F TEQ levels are present in trophic level 3 organisms (omnivores that eat herbivores; forage fish) with a smaller home range. Paired forage fish and surface sediment data directly measure bioaccumulation in the Study Area. The correspondence of D/F congener profiles between forage fish tissue and sediment, along with the correlation of tissue and sediment concentrations, confirm equilibrium partitioning between these media and support the use of the biota-sediment accumulation field study for SGV derivation. The conservative bioaccumulation-based SGV for potential fish exposure (3.1 µg/kgOC for total TEQ) provides a protective SGV for the Study Area. Addressing exceedances of a site-specific SGV protective of fish would also contribute to reductions in D/F concentrations in sport fish.
- Surface sediment D/F TEQ levels exceeding the site-specific SGV are largely limited to a localized fine-grained (e.g., silt) sediment deposits in Pettit Cove and FPC protected from higher velocity currents in the East Niagara River. Isolated patches of fine-grained sediment

exceeding the site-specific SGV are also present a short distance downstream of Pettit Cove and FPC.

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Tables

Table 3-1
Toxic Equivalence Factors

Chemical Class	Compound	CAS RN	Toxic Equivalence Factor	
			Fish[1]	Mammalian[2]
Dioxins	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	1	1
	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	1	1
	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	0.5	0.1
	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	0.01	0.1
	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	0.01	0.1
	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	0.001	0.01
	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	0.0001	0.0003
Furans	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	51207-31-9	0.05	0.1
	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	0.05	0.03
	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	0.5	0.3
	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	0.1	0.1
	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	0.1	0.1
	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	0.1	0.1
	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	0.1	0.1
	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	0.01	0.01
	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	0.01	0.01
	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	39001-02-0	0.0001	0.0003

Notes:

1. Van den Berg et al. 1998
2. Van den Berg et al. 2006

CAS RN: Chemical Abstracts Service Registry Number

Table 3-2
Porewater Bulk Sediment Sample Results

Chemical Name / Result Unit / Sample ID	Total Dioxin/Furan TEQ 2005 (Mammal) (U = 0 max limit) ng/kg	Total Dioxin/Furan TEQ 2005 (Mammal) (Normalization) ng/kg-OC	Total Dioxin/Furan TEQ 1998 (Fish) (U = 0 max limit) ng/kg	Total Dioxin/Furan TEQ 1998 (Fish) (Normalization) ng/kg-OC	Soot Carbon pct	Total Organic Carbon pct	Total Solids pct
FPC-PWG-01							
FPC-PWG-01	**171**	**1870**	**183**	**2000**	**0.272 J**	**9.13 J**	**23.9**
FPC-PWG-02							
FPC-PWG-02	**522 J**	**6050 J**	**561 J**	**6510 J**	**0.44 J**	**8.62 J**	**24.8**
PCA-PWG-01							
PCA-PWG-01	**6700 J**	**56000 J**	**7300 J**	**61000 J**	**1.83 J**	**14.4 J***	**30.6**
PCA-PWG-02							
PCA-PWG-02	**7700 J**	**64000 J**	**8480 J**	**71000 J**	**3.18 J**	**12.9 J***	**37.6**
PCA-PWG-03							
PCA-PWG-03	**2600 J**	**22000 J**	**2890 J**	**24000 J**	**3.38 J**	**13.3 J***	**35.8**
PCA-PWG-03-DUP04	**4900 J**	**41000 J**	**5360 J**	**45000 J**	**3.22 J**	**13.5 J***	**35.6**
UPC-PWG-01							
UPC-PWG-01	**12 J**	**190 J**	**13 J**	**210 J**	**2.64 J**	**6.21 J**	**81.2**
URA-PWG-01							
URA-PWG-01	**6.72 J**	**361 J**	**6.5 J**	**347 J**	**0.668 J**	**1.86 J**	**67.7**

Notes:
Bold: detected result
ID: identification
J: estimated value
max: maximum
ng/kg: nanograms per kilogram
pct: percent
PWG: porewater grab samples
TEQ: toxic equivalency

Location Identifier:
FPC: Fisherman's Park Cove
PCA: Pettit Cove Area
UPC: Upstream of Pettit Cove
URA: Upstream Reference Area

* - For locations where sediment TOC is greater than 12%, a default maximum TOC value of 12% was used for calculations (per Section 9.A, Screening and Assessment of Contaminated Sediments (NYSDEC 2014).

Table 3-3
Porewater Dioxin/Furan TEQ Results

Sample ID	Chemical Name / Result Unit / Depth Interval	Total Dioxin/Furan TEQ 2005 (Mammal) (U = 0 max limit)	Total Dioxin/Furan TEQ 1998 (Fish) (U = 0 max limit)
	Result Unit	µg/L J	µg/L J
	Depth Interval	Measured	Measured
FPC-PWG-01			
FPC-PWG-01	0–0.5 foot	**9.41E-02**	**1.22E-01**
FPC-PWG-02			
FPC-PWG-02	0–0.5 foot	**1.76E-01**	**2.26E-01**
PCA-PWG-01			
PCA-PWG-01	0–0.5 foot	**2.65E-01**	**3.35E-01**
PCA-PWG-02			
PCA-PWG-02	0–0.5 foot	**3.93E-01**	**4.92E-01**
PCA-PWG-03			
PCA-PWG-03	0–0.5 foot	**2.52E-01**	**3.18E-01**
PCA-PWG-03-DUP04	0–0.5 foot	**2.70E-01**	**3.40E-01**
UPC-PWG-01			
UPC-PWG-01	0–0.5 foot	**4.70E-03**	**6.46E-03**
URA-PWG-01			
URA-PWG-01	0–0.5 foot	**1.47E-04**	**7.16E-05**
TOGS 1.1.1			

Notes:
Bold: detected result
µg/L: microgram per liter
J: estimated value
max: maximum
PWG: porewater grab samples
TEQ: toxic equivalency
TOGS: Technical and Operational Guidance Series

Location Identifier:
FPC: Fisherman's Park Cove
PCA: Pettit Cove Area
UPC: upstream of Pettit Cove
URA: upstream reference area

Table 3-4a

High Resolution Sediment Sample Results for FPC-HRC-01

Chemical Name / Result Unit / Sample ID	Depth Interval of Sample (ft bss)	Total Dioxin/Furan TEQ 2005 (Mammal) (U = 0 max limit) (ng/kg)	Total Dioxin/Furan TEQ 2005 (Mammal) (Normalization) (ng/kg-OC)	Total Dioxin/Furan TEQ 1998 (Fish) (U = 0 max limit) (ng/kg)	Total Dioxin/Furan TEQ 1998 (Fish) (Normalization) (ng/kg-OC)	Soot Carbon (pct)	Total Organic Carbon (pct)	Total Solids (pct)	Cesium 137 (pCi/g)	Lead 210 (pCi/g)
FPC-HRC-01										
FPC-HRC-01-01	0.0-0.7	**110 J**	**1700 J**	**120 J**	**1800 J**	**0.282 J**	**6.62 J**	**25.3**	0.0758 U	**3.24**
FPC-HRC-01-02	0.7-0.13	**250 J**	**3000 J**	**262 J**	**3200 J**	**0.372 J**	**8.17 J**	**30.6**	0.0396 U	**2.66**
FPC-HRC-01-03	0.13-0.2	**510 J**	**7900 J**	**555 J**	**8700 J**	**0.594 J**	**6.44 J**	**35.2**	0.0134 U	**1.83**
FPC-HRC-01-04	0.2-0.26	**550 J**	**17000 J**	**613 J**	**19000 J**	**0.636 J**	**3.31 J**	**54**	0.0299 U	**1.94**
FPC-HRC-01-05	0.26-0.33	**550 J**	**17001 J**	**609 J**	**19000 J**	**1.02 J**	**3.19 J**	**55.4**	**0.0461**	**0.897**
FPC-HRC-01-05-DUP01	0.26-0.33	--	--	--	--	**0.59 J**	**2.02 J**	**73.9**	--	--
FPC-HRC-01-06	0.33-0.39	**1220 J**	**24900 J**	**1334 J**	**27300 J**	**1.2 J**	**4.89 J**	**52**	0.029 U	**0.562**
FPC-HRC-01-07	0.39-0.46	**900 J**	**20000 J**	**995 J**	**26300 J**	**1.77 J**	**3.79 J**	**51.9**	**0.0658**	**1.43**
FPC-HRC-01-08	0.46-0.52	**640 J**	**17000 J**	**704 J**	**18700 J**	**2.18 J**	**3.76 J**	**61.5**	**0.0673**	**1.11**
FPC-HRC-01-09	0.52-0.59	**860 J**	**25000 J**	**944 J**	**27400 J**	**1.41**	**3.45**	**56.6**	--	--
FPC-HRC-01-10	0.59-0.66	**957 J**	**28500 J**	**1044 J**	**31100 J**	**0.989**	**3.36**	**61.2**	**0.106**	**0.826**
FPC-HRC-01-11	0.66-0.72	**1100 J**	**36000 J**	**1238 J**	**39700 J**	**0.684**	**3.12**	**67.7**	--	--
FPC-HRC-01-12	0.72-0.79	**1600 J**	**49000 J**	**1808 J**	**54000 J**	**0.596**	**3.35**	**58.6**	**0.122**	**0.72**
FPC-HRC-01-13	0.79-0.85	**2000 J**	**70000 J**	**2184 J**	**78300 J**	**0.49**	**2.79**	**64**	--	--
FPC-HRC-01-14	0.85-0.92	**4300 J**	**170000 J**	**4800 J**	**190000 J**	**1.1**	**2.51**	**69.8**	**0.124**	**0.636**
FPC-HRC-01-15	0.92-0.98	**3200 J**	**93000 J**	**3523 J**	**102000 J**	**0.94**	**3.45**	**63.9**	--	--
FPC-HRC-01-16	0.98-1.05	**2900 J**	**170000 J**	**3153 J**	**192000 J**	**0.402**	**1.64**	**75.1**	**0.246**	**0.65**
FPC-HRC-01-17	1.05-1.12	**19000 J**	**390000 J**	**21289 J**	**437000 J**	**1.52**	**4.87**	**54.6**	--	--
FPC-HRC-01-17-DUP	1.05-1.12	**18000 J**	**330000 J**	**19909 J**	**369000 J**	**1.25**	**5.4**	**53.2**	--	--
FPC-HRC-01-18	1.12-1.18	--	--	--	--	--	--	--	**0.272**	**0.533**
FPC-HRC-01-20	1.25-1.31	--	--	--	--	--	--	--	**0.42**	**0.716**
FPC-HRC-01-22	1.38-1.44	--	--	--	--	--	--	--	**0.887**	**1.15**
FPC-HRC-01-24	1.51-1.57	--	--	--	--	--	--	--	**0.458**	**1.06**

Table 3-4a
High Resolution Sediment Sample Results for FPC-HRC-01

Chemical Name / Result Unit / Sample ID	Depth Interval of Sample (ft bss)	Total Dioxin/Furan TEQ 2005 (Mammal) (U = 0 max limit) (ng/kg)	Total Dioxin/Furan TEQ 2005 (Mammal) (Normalization) (ng/kg-OC)	Total Dioxin/Furan TEQ 1998 (Fish) (U = 0 max limit) (ng/kg)	Total Dioxin/Furan TEQ 1998 (Fish) (Normalization) (ng/kg-OC)	Soot Carbon (pct)	Total Organic Carbon (pct)	Total Solids (pct)	Cesium 137 (pCi/g)	Lead 210 (pCi/g)
FPC-HRC-01-26	1.64-1.71	--	--	--	--	--	--	--	**0.649**	**0.657**
FPC-HRC-01-28	1.77-1.84	--	--	--	--	--	--	--	**0.651**	**1.11**

Notes:

Bold: detected result

--: A sample was not submitted for analysis of this parameter

bss: below sediment surface

DUP: duplicate

FPC: Fisherman's Park Cove

ft: feet

HRC: high-resolution core

ID: identification

J: estimated value

ng/kg: nanograms per kilogram

pCi/g: picocuries per gram

pct: percent

TEQ: toxic equivalency

Table 3-4b

High Resolution Sediment Sample Results for FPC-HRC-02

Chemical Name / Result Unit / Sample ID	Depth Interval of Sample ft bss	Total Dioxin/Furan TEQ 2005 (Mammal) (U = 0 max limit) ng/kg	Total Dioxin/Furan TEQ 2005 (Mammal) (Normalization) ng/kg-OC	Total Dioxin/Furan TEQ 1998 (Fish) (U = 0 max limit) ng/kg	Total Dioxin/Furan TEQ 1998 (Fish) (Normalization) ng/kg-OC	Soot Carbon pct	Total Organic Carbon pct	Total Solids pct	Cesium 137 pci/g	Lead 210 pci/g
FPC-HRC-02										
FPC-HRC-02-01	0.0-0.07	**150 J**	**4300 J**	**146 J**	**4250 J**	**0.332 J**	**3.43 J**	**47.1**	0.0278 U	**1.44**
FPC-HRC-02-02	0.07-0.13	**150**	**9000**	**165**	**10000**	**0.468 J**	**1.65 J**	**66.6**	0.00114 U	**0.992**
FPC-HRC-02-03	0.13-0.2	**380 J**	**26000 J**	**426 J**	**28800 J**	**0.462 J**	**1.48 J**	**68.9**	0.0117 U	**0.755**
FPC-HRC-02-04	0.2-0.26	**230**	**14000**	**260**	**15000**	**0.274 J**	**1.7 J**	**68.5**	0.04224 U	**0.71**
FPC-HRC-02-05	0.26-0.33	**270**	**9800**	**301**	**11000**	**0.304 J**	**2.74 J**	**73.1**	0.0308 U	**0.475**
FPC-HRC-02-05-DUP01	0.26-0.33	**330 J**	**--**	**369 J**	**--**	--	--	--	--	--
FPC-HRC-02-06	0.33-0.39	**340 J**	**11000 J**	**384 J**	**12800 J**	**0.647 J**	**3.01 J**	**64.6**	**0.0775**	**0.427**
FPC-HRC-02-07	0.39-0.46	**320**	**21000**	**358**	**23400**	**0.664 J**	**1.53 J**	**80**	**0.126**	**0.591**
FPC-HRC-02-08	0.46-0.52	**1600 J**	**61000 J**	**1800 J**	**67000 J**	**0.504 J**	**2.67 J**	**73.9**	**0.11**	**0.412**
FPC-HRC-02-09	0.52-0.59	**1400 J**	**74000 J**	**1600 J**	**82000 J**	**0.674**	**1.94**	**74.8**	--	--
FPC-HRC-02-10	0.59-0.66	**390 J**	**31000 J**	**431 J**	**34500 J**	**0.19**	**1.25**	**75.9**	**0.0819**	**0.329**
FPC-HRC-02-11	0.66-0.72	**250**	**15000**	**280**	**17000**	**0.736**	**1.62**	**76.4**	--	--
FPC-HRC-02-12	0.72-0.79	**490 J**	**18000 J**	**549 J**	**20300 J**	**1.11**	**2.71**	**74.4**	**0.134**	**0.24**
FPC-HRC-02-13	0.79-0.85	**840 J**	**32000 J**	**929 J**	**36100 J**	**0.76**	**2.57**	**72.5**	--	--
FPC-HRC-02-14	0.85-0.92	**3100 J**	**92000 J**	**3370 J**	**100000 J**	**1.09**	**3.36**	**68.3**	0.0473 U	**0.247**
FPC-HRC-02-15	0.92-0.98	**1900 J**	**100000 J**	**2120 J**	**113000 J**	**0.582**	**1.88**	**75.9**	--	--
FPC-HRC-02-16	0.98-1.05	**1600 J**	**91000 J**	**1730 J**	**98200 J**	**0.356**	**1.76**	**78.4**	0.06459 U	**0.145**
FPC-HRC-02-17	1.05-1.12	**63 J**	**4800 J**	**67.5 J**	**5200 J**	**0.164**	**1.3**	**78.8**	--	--
FPC-HRC-02-17-DUP	1.05-1.12	**89 J**	**9200 J**	**96.2 J**	**10000 J**	**0.255**	**0.962**	**80.1**	--	--
FPC-HRC-02-18	1.12-1.18	--	--	--	--	--	--	--	0.06631 U	**0.183**
FPC-HRC-02-20	1.25-1.31	--	--	--	--	--	--	--	0.04867 U	**0.0979**
FPC-HRC-02-22	1.38-1.44	--	--	--	--	--	--	--	0.0286 U	**0.201**
FPC-HRC-02-24	1.51-1.57	--	--	--	--	--	--	--	0.0112 U	**0.183**

Table 3-4b
High Resolution Sediment Sample Results for FPC-HRC-02

Chemical Name / Result Unit / Sample ID	Depth Interval of Sample ft bss	Total Dioxin/Furan TEQ 2005 (Mammal) (U = 0 max limit) ng/kg	Total Dioxin/Furan TEQ 2005 (Mammal) (Normalization) ng/kg-OC	Total Dioxin/Furan TEQ 1998 (Fish) (U = 0 max limit) ng/kg	Total Dioxin/Furan TEQ 1998 (Fish) (Normalization) ng/kg-OC	Soot Carbon pct	Total Organic Carbon pct	Total Solids pct	Cesium 137 pci/g	Lead 210 pci/g
FPC-HRC-02-26	1.64-1.71	--	--	--	--	--	--	--	0.0595 U	**0.284**
FPC-HRC-02-28	1.77-1.84	--	--	--	--	--	--	--	0.034 U	**0.167**

Notes:
Bold: detected result
--: A sample was not submitted for analysis of this parameter
bss: below sediment surface
DUP: duplicate
FPC: Fisherman's Park Cove
ft: feet
HRC: high-resolution core
ID: identification
J: estimated value
ng/kg: nanograms per kilogram
pCi/g: picocuries per gram
pct: percent
TEQ: toxic equivalency

Table 3-4c

High Resolution Sediment Sample Results for PCA-HRC-01

Chemical Name / Result Unit / Sample ID	Depth Interval of Sample ft bss	Total Dioxin/Furan TEQ 2005 (Mammal) (U = 0 max limit) ng/kg	Total Dioxin/Furan TEQ 2005 (Mammal) (Normalization) ng/kg-OC	Total Dioxin/Furan TEQ 1998 (Fish) (U = 0 max limit) ng/kg	Total Dioxin/Furan TEQ 1998 (Fish) (Normalization) ng/kg-OC	Soot Carbon pct	Total Organic Carbon pct	Total Solids pct
PCA-HRC-01								
PCA-HRC-01-01	0.0-0.07	**3700 J**	**30800 J**	**4050 J**	**33800 J**	**1.72**	**12.4 J***	**34.1**
PCA-HRC-01-02	0.07-0.13	**6830 J**	**103000 J**	**7560 J**	**114000 J**	**0.377**	**6.66 J**	**40.5**
PCA-HRC-01-03	0.13-0.20	**2380 J**	**47400 J**	**2600 J**	**52000 J**	**0.264**	**5.01 J**	**43.1**
PCA-HRC-01-04	0.20-0.26	**2900 J**	**51000 J**	**3050 J**	**53700 J**	**0.703**	**5.68 J**	**51.8**
PCA-HRC-01-05	0.26-0.33	**5400 J**	**73000 J**	**5930 J**	**79900 J**	**1.12**	**7.43 J**	**50**
PCA-HRC-01-06	0.33-0.39	**3830 J**	**72700 J**	**4200 J**	**80000 J**	**0.804**	**5.26 J**	**53.8**
PCA-HRC-01-07	0.39-0.46	**1810 J**	**26800 J**	**1970 J**	**29200 J**	**0.872**	**6.75 J**	**49.1**
PCA-HRC-01-08	0.46-0.52	**3850 J**	**53200 J**	**4140 J**	**57200 J**	**0.527**	**7.24 J**	**44.6**
PCA-HRC-01-09	0.52-1.05	**3600 J**	**47000 J**	**3970 J**	**50700 J**	**2.23**	**7.83**	**53.7**
PCA-HRC-01-09-DUP	0.52-1.05	**4900**	**56000**	**5310**	**60500**	**2.02**	**8.78**	**49.3**
PCA-HRC-01-10	1.05-1.28	**20000 J**	**300000 J**	**21500 J**	**340000 J**	**1.73**	**6.34**	**48.1**

Notes:
Bold: detected result
bss: below sediment surface
ft: feet
HRC: high-resolution core
ID: identification
J: estimated value
ng/kg: nanograms per kilogram
PCA: Pettit Cove Area
pct: percent
TEQ: toxic equivalency
* - For locations where sediment TOC is greater than 12%, a default maximum TOC value of 12% was used for calculations (per Section 9.A, Screening and Assessment of Contaminated Sediments (NYSDEC 2014).

Table 3-4d
High Resolution Sediment Sample Results for PCA-HRC-02

Chemical Name / Result Unit / Sample ID	Depth Interval of Sample (ft bss)	Total Dioxin/Furan TEQ 2005 (Mammal) (U = 0 max limit) (ng/kg)	Total Dioxin/Furan TEQ 2005 (Mammal) (Normalization) (ng/kg-OC)	Total Dioxin/Furan TEQ 1998 (Fish) (U = 0 max limit) (ng/kg)	Total Dioxin/Furan TEQ 1998 (Fish) (Normalization) (ng/kg-OC)	Soot Carbon (pct)	Total Organic Carbon (pct)	Total Solids (pct)
PCA-HRC-02								
PCA-HRC-02-01	0.0-0.07	**7500 J**	**62500 J**	**8150 J**	**67900 J**	**1.3**	**12.5 J***	**38**
PCA-HRC-02-02	0.07-0.13	**15000 J**	**160000 J**	**16600 J**	**176000 J**	**1.53**	**9.42 J**	**35.2**
PCA-HRC-02-03	0.13-0.20	**8310 J**	**89700 J**	**9050 J**	**97700 J**	**3.34**	**9.26 J**	**48.6**
PCA-HRC-02-04	0.20-0.26	**2600 J**	**26000 J**	**2860 J**	**28900 J**	**2.81**	**9.92 J**	**38.3**
PCA-HRC-02-05	0.26-0.33	**23000 J**	**230000 J**	**24800 J**	**241000 J**	**3.35**	**10.3 J**	**36**
PCA-HRC-02-06	0.33-0.39	**8700 J**	**57000 J**	**9480 J**	**62000 J**	**2.12**	**15.3 J**	**41.8**
PCA-HRC-02-07	0.39-0.46	**12600 J**	**121000 J**	**13700 J**	**132000 J**	**2.56**	**10.4 J**	**42.9**
PCA-HRC-02-08	0.46-0.52	**6700 J**	**65000 J**	**7270 J**	**70600 J**	**1.27**	**10.3 J**	**37.2**
PCA-HRC-02-09	0.52-1.05	**5700 J**	**51000 J**	**6250 J**	**55800 J**	**3.42**	**11.2**	**51.6**
PCA-HRC-02-10	1.05-1.28	**7420 J**	**63900 J**	**8120 J**	**70000 J**	**2.59**	**11.6**	**43.9**

Notes:
Bold: detected result
bss: below sediment surface
ft: feet
HRC: high-resolution core
ID: identification
J: estimated value
ng/kg: nanograms per kilogram
PCA: Pettit Cove Area
pct: percent
TEQ: toxic equivalency
* - For locations where sediment TOC is greater than 12%, a default maximum TOC value of 12% was used for calculations (per Section 9.A, Screening and Assessment of Contaminated Sediments (NYSDEC 2014).

Table 3-4e
High Resolution Sediment Sample Results for PCA-HRC-03

Chemical Name / Result Unit / Sample ID	Depth Interval of Sample (ft bss)	Total Dioxin/Furan TEQ 2005 (Mammal) (U = 0 max limit) (ng/kg)	Total Dioxin/Furan TEQ 2005 (Mammal) (Normalization) (ng/kg-OC)	Total Dioxin/Furan TEQ 1998 (Fish) (U = 0 max limit) (ng/kg)	Total Dioxin/Furan TEQ 1998 (Fish) (Normalization) (ng/kg-OC)	Soot Carbon (pct)	Total Organic Carbon (pct)	Total Solids (pct)
PCA-HRC-03								
PCA-HRC-03-01	0.0-0.07	**3500 J**	**29000 J**	**3830 J**	**32000 J**	**1.08**	**17.4 J***	**23.2**
PCA-HRC-03-02	0.07-0.13	**5900 J**	**49000 J**	**6500 J**	**54000 J**	**2.38**	**14.7 J***	**29.8**
PCA-HRC-03-03	0.13-0.20	**2400 J**	**20000 J**	**2600 J**	**22000 J**	**2.77**	**12.1 J***	**36.8**
PCA-HRC-03-04	0.20-0.26	**2400 J**	**20000 J**	**2620 J**	**22000 J**	**2.92**	**12.6 J***	**34.5**
PCA-HRC-03-05	0.26-0.33	**3900 J**	**33000 J**	**4260 J**	**36000 J**	**1.94**	**14.2 J***	**32.5**
PCA-HRC-03-06	0.33-0.39	**2900 J**	**24000 J**	**3130 J**	**26000 J**	**2.74**	**15.9 J***	**34.8**
PCA-HRC-03-07	0.39-0.46	**7700 J**	**64000 J**	**8460 J**	**71000 J**	**1.85**	**14.8 J***	**33.4**
PCA-HRC-03-08	0.46-0.52	**11000 J**	**92000 J**	**12000 J**	**100000 J**	**1.53**	**12.7 J***	**34**
PCA-HRC-03-09	0.52-0.59	**5000 J**	**42000 J**	**5460 J**	**45500 J**	**3.17**	**13.1***	**45.8**
PCA-HRC-03-10	0.59-0.66	**7470 J**	**62000 J**	**8170 J**	**68000 J**	**3.4**	**13***	**48.2**
PCA-HRC-03-11	0.66-0.72	**4800**	**40000**	**5200**	**43000**	**3.71**	**12.6***	**43.5**
PCA-HRC-03-12	0.72-0.79	**7300 J**	**61000 J**	**7930 J**	**66000 J**	**3.22**	**12.4***	**41.9**
PCA-HRC-03-13	0.79-0.85	**7300 J**	**61000 J**	**8000 J**	**70000 J**	**3.59**	**12.1***	**50.8**
PCA-HRC-03-14	0.85-0.92	**7700 J**	**74000 J**	**8430 J**	**80300 J**	**3.22**	**10.5**	**47.8**
PCA-HRC-03-15	0.92-0.98	**5700 J**	**49000 J**	**6230 J**	**54200 J**	**2.92**	**11.5**	**48.1**
PCA-HRC-03-16	0.98-1.05	**29000 J**	**270000 J**	**31700 J**	**296000 J**	**2.52**	**10.7**	**45.1**
PCA-HRC-03-17	1.05-1.41	**4300 J**	**44000 J**	**4710 J**	**47800 J**	**2.25**	**9.84**	**44.5**

Notes:
Bold: detected result
bss: below sediment surface
ft: feet
HRC: high-resolution core
ID: identification
J: e+A1stimated value
ng/kg: nanograms per kilogram
PCA: Pettit Cove Area
pct: percent
TEQ: toxic equivalency
* - For locations where sediment TOC is greater than 12%, a default maximum TOC value of 12% was used for calculations (per Section 9.A, Screening and Assessment of Contaminated Sediments (NYSDEC 2014).

Table 3-5
Bulk Sediment Sample Results

Chemical Name / Result Unit / Sample ID	Depth Interval of Sample (ft bss)	Total Dioxin/Furan TEQ 2005 (Mammal) (U = 0 max limit) ng/kg	Total Dioxin/Furan TEQ 2005 (Mammal) (Normalization) ng/kg-OC	Total Dioxin/Furan TEQ 1998 (Fish) (U = 0 max limit) ng/kg	Total Dioxin/Furan TEQ 1998 (Fish) (Normalization) ng/kg-OC	Soot Carbon pct	Total Organic Carbon pct	Total Solids pct
BPF-SCC-01								
BPF-SCC-01	0.0-0.5	**1000 J**	**40000 J**	**1130 J**	**43500 J**	**0.249**	**2.6 J**	**53.1**
BPF-SCC-01-DUP02	0.0-0.5	**1500 J**	**55000 J**	**1610 J**	**60300 J**	**0.27**	**2.66 J**	**52.4**
DFP-SCC-01								
DFP-SCC-01-01	0.0-0.5	**1200 J**	**24000 J**	**1370 J**	**26100 J**	**1.65**	**5.26 J**	**48.8**
DFP-SCC-01-02	0.5-1.0	**3300 J**	**56000 J**	**3640 J**	**62300 J**	**1.72**	**5.84 J**	**65.9**
DFP-SCC-01-03	1.0-2.0	**6900 J**	**130000 J**	**7710 J**	**147000 J**	**0.818**	**5.24 J**	**59.4**
DFP-SCC-02								
DFP-SCC-02-01	0.0-0.5	**6400 J**	**160000 J**	**6810 J**	**175000 J**	**1.12**	**3.9 J**	**60.2**
DFP-SCC-02-02	0.5-1.0	**7800 J**	**170000 J**	**8210 J**	**177000 J**	**1.12**	**4.65 J**	**69.5**
DFP-SCC-02-03	1.0-2.0	**21000 J**	**350000 J**	**22600 J**	**372000 J**	**1.41**	**6.07 J**	**65.8**
URA-SCC-01								
URA-SCC-01-01	0.0-0.5	**7.5 J**	**240 J**	**7.14 J**	**228 J**	**0.22**	**3.14 J**	**57.4**
URA-SCC-01-02	0.5-1.0	**7.7 J**	**270 J**	**7.57 J**	**263 J**	**0.381**	**2.88 J**	**68.8**
URA-SCC-01-03	1.0-2.0	**0.24 J**	**12 J**	**0.155 J**	**7.54 J**	**0.08 J**	**2.06 J**	**73.2**
URA-SCC-01-03-DUP03	1.0-2.0	**0.222 J**	**11.6 J**	**0.137 J**	**7.16 J**	**0.412 J**	**1.91 J**	**74**

Table 3-5
Bulk Sediment Sample Results

Sample ID (Chemical Name / Result Unit)	Depth Interval of Sample (ft bss)	Total Dioxin/Furan TEQ 2005 (Mammal) (U = 0 max limit) ng/kg	Total Dioxin/Furan TEQ 2005 (Mammal) (Normalization) ng/kg-OC	Total Dioxin/Furan TEQ 1998 (Fish) (U = 0 max limit) ng/kg	Total Dioxin/Furan TEQ 1998 (Fish) (Normalization) ng/kg-OC	Soot Carbon pct	Total Organic Carbon pct	Total Solids pct
URA-SCC-02								
URA-SCC-02-01	0.0-0.5	**14 J**	**510 J**	**13.8 J**	**521 J**	**0.596**	**2.65 J**	**59.5**
URA-SCC-02-02	0.5-1.0	**6.61 J**	**155 J**	**6.74 J**	**158 J**	**0.358**	**4.26 J**	**60.1**
URA-SCC-02-03	1.0-2.0	**3.6 J**	**120 J**	**3.53 J**	**115 J**	**0.55**	**3.08 J**	**64.7**

Notes:
Bold: detected result
bss: below sediment surface
DUP: duplicate
ft: feet
ID: identification
J: estimated value
ng/kg: nanograms per kilogram
pct: percent
SCC: sediment characterization cores
TEQ: toxic equivalency

Location Identifier:
BPF: between Fisherman's Park Cove and Pettit Cove
DFP: downstream of Fisherman's Park
URA: Upstream Reference Area

Table 3-6
Fish Collection Summary

Location	Site Code	Species Collected					Sample Date	Shocking Seconds	Site Description	Notes
		SMB	LMB	BG	BNM	RG				
Downstream Fisherman's Park / Downstream Reference Area	DFP/DRA	4	1	2	3	--	8/23/2021	4,762	Vicinity of Gratwick State Park to downstream of Fisherman's Park	
Fisherman's Park Coves	FPC	--	--	5	--	--	8/23/2021	1,484	2 Coves adjacent to Fisherman's Park	
Between Fisherman's Park and Pettit Cove	FPC–PC	1	4		--	1	8/23/2021 8/27/2021	524	East shoreline between coves	RG caught in minnow trap
Pettit Cove	PC	--	--	5	--	1	8/25/2021 8/26/2021	NA	Inside cove	
Upstream Reference Area	URA	5	--	--	5	--	8/24/2021	1,307	East shoreline and cove across from southern end of Tonawanda Island	SMB collected outside cove on east side of river along concrete wall; BNM collected inside cove

Notes:

--: Species not collected

NA: Not applicable. Species collected using fyke/hoop net.

SMB: smallmouth bass

LMB: largemouth bass

BG: Bluegill

BNM: Bluntnose Minnow

RG: Round Goby

Table 3-7
Forage Fish Tissue Sample Results

Chemical Name Result Unit Sample ID	Total Dioxin/Furan TEQ 2005 (Mammal) (U = 0 max limit) ng/kg	Total Dioxin/Furan TEQ 1998 (Fish) (U = 0 max limit) ng/kg	Lipids Percent
DFP-BG-01			
DFP-BG-01-2021-0823	**3.2 J**	**3.34 J**	**5.0**
DFP-BG-02			
DFP-BG-02-2021-0823	**2.50 J**	**2.73 J**	**3.3**
DFP-BNM-01			
DFP-BNM-01-2021-0823	**8.3 J**	**9.29 J**	**7.7**
DFP-BNM-02			
DFP-BNM-02-2021-0823	**4.2 J**	**4.60 J**	**3.2**
DFP-BNM-03			
DFP-BNM-03-2021-0823	**6.1 J**	**6.84 J**	**5.8**
FPC-BG-01			
FPC-BG-01-2021-0823	**1.1 J**	**1.13 J**	**3.2**
FPC-BG-02			
FPC-BG-02-2021-0823	**1.3 J**	**1.36 J**	**3.3**
FPC-BG-03			
FPC-BG-03-2021-0823	**2.41 J**	**2.49 J**	**4.1**
FPC-BG-04			
FPC-BG-04-2021-0823	**2.0 J**	**2.16 J**	**3.8**
FPC-BG-05			
FPC-BG-05-2021-0823	**0.64 J**	**0.597 J**	**3.4**
FPC-PC-RG-01			
FPC-PC-RG-01-2021-0827	**5.6 J**	**7.19 J**	**1.3**
PC-BG-01			
PC-BG-01-2021-0826	**4.4 J**	**4.79 J**	**4.6**
PC-BG-02			
PC-BG-02-2021-0826	**5.69 J**	**6.38 J**	**3.3**
PC-BG-03			
PC-BG-03-2021-0826	**6.1 J**	**6.83 J**	**3.0**
PC-BG-04			
PC-BG-04-2021-0826	**5.6 J**	**6.14 J**	**5.3**
PC-BG-05			
PC-BG-05-2021-0826	**4.0 J**	**4.46 J**	**3.7**

Table 3-7
Forage Fish Tissue Sample Results

Chemical Name / Result Unit / Sample ID	Total Dioxin/Furan TEQ 2005 (Mammal) (U = 0 max limit) ng/kg	Total Dioxin/Furan TEQ 1998 (Fish) (U = 0 max limit) ng/kg	Lipids Percent
PC-RG-01			
PC-RG-01-2021-0826	**6.44 J**	**7.83 J**	**1.6**
PC-RG-02			
PC-RG-02-2021-0826	**12 J**	**14.5 J**	**1.8**
URA-BNM-01			
URA-BNM-01-20210824	**0.156 J**	**0.145 J**	**4.3**
URA-BNM-02			
URA-BNM-02-20210824	**0.066 J**	**0.0331 J**	**4.4**
URA-BNM-03			
URA-BNM-03-20210824	**0.089 J**	**0.0318 J**	**4.0**
URA-BNM-04			
URA-BNM-04-20210824	**0.100 J**	**0.0741 J**	**3.5**
URA-BNM-05			
URA-BNM-05-20210824	**0.0504**	**0.0252**	**2.6**

Notes:
Bold: detected result
ID: identification
J: estimated value
ng/kg: nanograms per kilogram
TEQ: toxic equivalency

Location Identifier:
DFP: downstream of Fisherman’s Park
FPC: Fisherman’s Park Cove
PC: Pettit Cove
URA: Upstream Reference Area

Species Identifier:
BG: Bluegill
BNM: Bluntnose Minnow
RG: Round Goby

Table 3-8
Sport Fish Tissue Sample Results

Chemical Name / Result Unit / Sample ID	Total Dioxin/Furan TEQ 2005 (Mammal) (U = 0 max limit) ng/kg	Total Dioxin/Furan TEQ 1998 (Fish) (U = 0 max limit) ng/kg	Lipids Percent
DRA-LMB-01			
DRA-LMB-01-2021-0823	**0.62 J**	**0.745 J**	**0.8**
DRA-SMB-01			
DRA-SMB-01-2021-0823	**3.99 J**	**4.94 J**	**1.7**
DRA-SMB-01-2021-0823-DUP	**4.57 J**	**5.73 J**	**2.7**
DRA-SMB-02			
DRA-SMB-02-2021-0823	**0.292 J**	**0.461 J**	**2.3**
DRA-SMB-03			
DRA-SMB-03-2021-0823	**2.2 J**	**2.62 J**	**0.8**
DRA-SMB-04			
DRA-SMB-04-2021-0823	**0.845 J**	**1.26 J**	**0.9**
FPC-PC-LMB-01			
FPC-PC-LMB-01-2021-0823	**0.22 J**	**0.313 J**	**0.2**
FPC-PC-LMB-02			
FPC-PC-LMB-02-2021-0823	**2.1 J**	**2.33 J**	**0.4**
FPC-PC-LMB-03			
FPC-PC-LMB-03-2021-0823	**0.198 J**	**0.248 J**	**1.6**
FPC-PC-LMB-14			
FPC-PC-LMB-14-2021-0823	**1.8 J**	**2.17 J**	**0.9**
FPC-PC-SMB-03			
FPC-PC-SMB-03-2021-0823	**0.142 J**	**0.199 J**	**1.4**
PC-LMB-01			
PC-LMB-01-2021-0826	**0.337 J**	**0.481 J**	**0.1**
URA-SMB-01			
URA-SMB-01-20210824	**2.8 J**	**2.51 J**	**1.1**
URA-SMB-02			
URA-SMB-02-20210824	2.42 U	2.42 U	**0.6**
URA-SMB-03			
URA-SMB-03-20210824	2.43 U	2.43 U	**0.9**
URA-SMB-04			
URA-SMB-04-20210824	2.39 U	2.39 U	**0.2**

Table 3-8
Sport Fish Tissue Sample Results

Chemical Name / Result Unit / Sample ID	Total Dioxin/Furan TEQ 2005 (Mammal) (U = 0 max limit) ng/kg	Total Dioxin/Furan TEQ 1998 (Fish) (U = 0 max limit) ng/kg	Lipids Percent
URA-SMB-05			
URA-SMB-05-20210824	2.43 U	2.43 U	**0.6**

Notes:

Bold: detected result

ID: identification

DUP: duplicate

J: estimated value

ng/kg: nanograms per kilogram

TEQ: toxic equivalency

Location Identifier:

DRA: Downstream Reference Area

FPC: Fisherman's Park Cove

PC: Pettit Cove

URA: Upstream Reference Area

Species Identifier:

LMB: Largemouth Bass

SMB: Smallmouth Bass

Table 3-9

Freshwater Mussel Collection Summary

Station	Mussel Found and Collected	Water Depth (inches)	Approximate Weight[1] of Sample (grams)
URA	Zebra mussel	6 to 18	595
PC	Zebra mussel	6 to 18	413
FPC–PC	Zebra mussel	6 to 18	719
FPC	Zebra mussel	6 to 18	554
DFP	Zebra mussel	6 to 18	520

Notes:

1. Total weight of samples including shells

DFP: Downstream of Fisherman's Park Cove

FPC: Fisherman's Park Cove

FPC–PC: between Pettit Cove and Fisherman's Park Cove

PC: Pettit Cove

URA: upstream reference area

Table 3-10
Mussel Tissue Sample Results

Chemical Name / Result Unit / Sample ID	Total Dioxin/Furan TEQ 2005 (Mammal) (U = 0 max limit) ng/kg	Total Dioxin/Furan TEQ 1998 (Fish) (U = 0 max limit) ng/kg	Lipids Percent
DFP-ZBR-01			
DFP-ZBR-01-2021-0929	**1.9 J**	**2.17 J**	**0.8**
FPC-PC-ZBR-01			
FPC-PC-ZBR-01-2021-0929	**1.47 J**	**1.65 J**	**0.8**
FPC-ZBR-01			
FPC-ZBR-01-2021-0927	**0.94 J**	**1.05 J**	**0.7**
FPC-ZBR-01-2021-0927-DUP	**0.94 J**	**1.06 J**	**0.8**
PC-ZBR-01			
PC-ZBR-01-2021-0927	**1.52 J**	**1.72 J**	**0.9**
URA-ZBR-01			
URA-ZBR-01-2021-0927	**0.038 J**	**0.0160 J**	**0.6**

Notes:
Bold: detected result
ID: identification
DUP: duplicate
J: estimated value
ng/kg: nanograms per kilogram
TEQ: toxic equivalency

Location Identifier:
DFP: downstream of Fisherman's Park
FPC: Fisherman's Park Cove
PC: Pettit Cove
URA: Upstream Reference Area

Species Identifier:
ZBR: Zebra Mussel

Table 3-11
Non-Mussel Benthic Community Summary

Station	Depth (inches)	Abundance (per square meter)	Richness	Relative Abundance (percent)
URA	6	1,913	8	80.0
URA	12	399	4	16.7
URA	18	0	0	0.0
URA	24	80	1	3.3
URA	6	1,595	11	80.0
URA	12	160	2	8.0
URA	18	0	0	0.0
URA	24	239	2	12.0
PC	6	1,913	11	70.6
PC	12	80	1	3.0
PC	18	0	0	0.0
PC	24	718	5	26.5
PC	6	717	5	81.8
PC	12	160	2	18.2
PC	18	0	0	0.0
PC	6	1,435	9	85.7
PC	12	160	2	9.6
PC	18	80	1	4.8
FPC–PC	6	0	0	0.0
FPC–PC	6	387	5	100.0
FPC–PC	6	344	4	100.0
FPC	6	5,253	10	95.6
FPC	12	159	1	2.9
FPC	18	80	1	1.5
FPC	6	1,832	10	100.0
FPC	12	0	0	0.0
FPC	18	0	0	0.0
DFP	6	1,751	4	100.0
DFP	12	0	0	0.0
DFP	18	0	0	0.0
DFP	6	1,035	6	92.8
DFP	12	0	0	0.0
DFP	18	80	1	7.2

Notes:
DFP: Downstream of Fisherman's Park Cove
FPC: Fisherman's Park Cove
FPC–PC: between Pettit Cove and Fisherman's Park Cove
PC: Pettit Cove
URA: Upstream reference area

Table 3-12

PCF Accumulated Sediment Sample Results

Sample ID	Chemical Name / Result Unit / Manhole ID	Total Dioxin/Furan TEQ 2005 (Mammal) (U = 0 max limit) ng/kg	Total Dioxin/Furan TEQ 2005 (Mammal) Normalization (U = 0 max limit) ug/kg OC Sample TOC (avg TOC)[2]	Total Dioxin/Furan TEQ 1998 (Fish) (U = 0 max limit) ng/kg	Total Dioxin/Furan TEQ 1998 (Fish) Normalization (U = 0 max limit) ug/kg OC Sample TOC (avg TOC)[2]	Soot Carbon pct	Total Organic Carbon pct	Total Solids pct
PCF-01	**Rosebrock MH-1**							
PCF-01		**289 J**	**3 (4)**	**321 J**	**4 (4)**	**7.23 J**	**8.09 J**	**92.6**
PCF-02	**5th MH-1[1]**							
PCF-02		**240 J**	**3 (5)**	**265 J**	**3 (6)**	**2.51 J**	**4.45 J**	**84.2**
PCF-03	**River MH-1**							
PCF-03		**1940 J**	**22 (29)**	**2150 J**	**24 (33)**	**5.04**	**6.6 J**	**86.7**
PCF-04	**Outfall, Pettit Cove**							
PCF-04		**18000 J**	**200 (190)**	**20100 J**	**223 (209)**	**5.77 J**	**9.6 J**	**65.8**

Notes:

1. Relocated two times to find accumulated sediment. First relocation was at Gilmore MH-1, second at Edward MH-2.

2. Average TOC of downstream sediments is approximately 9% dry weight.

Bold: detected result

ID: identification

J: estimated value

MH: Manhole

ng/kg: nanograms per kilogram

PCF: Pettit Cove Flume

pct: percent

TEQ: toxic equivalency

Table 4-1a
Summary of Trophic Level Dioxin TEQ Data by Location

Location	Number of Samples	Trophic Level	WHO 2005 Mammalian TEQ Average Concentration	WHO 2005 Mammalian TEQ Range (min to max)	1998 Fish TEQ Average Concentration	1998 Fish TEQ Range (min to max)	Units	Species Included
Pettit Cove (PC)	1	2	1.52	N/A[1]	1.718	N/A[1]	ng/kg wet weight	Zebra mussel
Pettit Cove (PC)	7	3	6.35	3.99 to 12.2	7.27	4.46 to 14.45	ng/kg wet weight	Bluntnose minnow, bluegill, round goby
Pettit Cove (PC)	1	4	0.337	N/A[1]	0.481	N/A[1]	ng/kg wet weight	Largemouth bass, smallmouth bass
Pettit Cove (PC)	1	2	0.169	N/A[1]	0.1909	N/A[1]	ug/kg lipid (lipid normalized)	Zebra mussel
Pettit Cove (PC)	7	3	0.253	0.0954 to 0.680	0.293	0.104 to 0.803	ug/kg lipid (lipid normalized)	Bluntnose minnow, bluegill, round goby
Pettit Cove (PC)	1	4	0.337	N/A[1]	0.481	N/A[1]	ug/kg lipid (lipid normalized)	Largemouth bass, smallmouth bass
Fisherman's Park Cove (FPC)	1	2	0.941	N/A[1]	1.049	N/A[1]	ng/kg wet weight	Zebra mussel
Fisherman's Park Cove (FPC)	5	3	1.49	0.637 to 2.41	1.55	0.597 to 2.49	ng/kg wet weight	Bluntnose minnow, bluegill, round goby
Fisherman's Park Cove (FPC)	0	4	N/A[2]	N/A[2]	N/A[2]	N/A[2]	ng/kg wet weight	Largemouth bass, smallmouth bass
Fisherman's Park Cove (FPC)	1	2	0.134	N/A[1]	0.15	N/A[1]	ug/kg lipid (lipid normalized)	Zebra mussel
Fisherman's Park Cove (FPC)	5	3	0.0409	0.0187 to 0.0587	0.042	0.0176 to 0.0608	ug/kg lipid (lipid normalized)	Bluntnose minnow, bluegill, round goby
Fisherman's Park Cove (FPC)	0	4	N/A[2]	N/A[2]	N/A[2]	N/A[2]	ug/kg lipid (lipid normalized)	Largemouth bass, smallmouth bass
Between Fisherman's Park Cove and Pettit Cove (FPC-PC)	1	2	1.47	N/A[1]	1.647	N/A[1]	ng/kg wet weight	Zebra mussel
Between Fisherman's Park Cove and Pettit Cove (FPC-PC)	1	3	5.64	N/A[1]	7.194	N/A[1]	ng/kg wet weight	Bluntnose minnow, bluegill, round goby
Between Fisherman's Park Cove and Pettit Cove (FPC-PC)	5	4	0.9	0.142 to 2.12	1.151	0.199 to 2.33	ng/kg wet weight	Largemouth bass, smallmouth bass
Between Fisherman's Park Cove and Pettit Cove (FPC-PC)	1	2	0.184	N/A[1]	0.206	N/A[1]	ug/kg lipid (lipid normalized)	Zebra mussel
Between Fisherman's Park Cove and Pettit Cove (FPC-PC)	1	3	0.434	N/A[1]	0.553	N/A[1]	ug/kg lipid (lipid normalized)	Bluntnose minnow, bluegill, round goby
Between Fisherman's Park Cove and Pettit Cove (FPC-PC)	5	4	0.173	0.0101 to 0.529	0.203	0.0142 to 0.5822	ug/kg lipid (lipid normalized)	Largemouth bass, smallmouth bass
Downstream of Fisherman's Park Cove (DFP)	1	2	1.87	N/A[1]	2.173	N/A[1]	ng/kg wet weight	Zebra mussel
Downstream of Fisherman's Park Cove (DFP)	5	3	4.87	2.50 to 8.32	5.361	2.73 to 9.29	ng/kg wet weight	Bluntnose minnow, bluegill, round goby
Downstream of Fisherman's Park Cove (DFP)	0	4	N/A[2]	N/A[2]	N/A[2]	N/A[2]	ng/kg wet weight	Largemouth bass, smallmouth bass
Downstream of Fisherman's Park Cove (DFP)	1	2	0.234	N/A[1]	0.272	N/A[1]	ug/kg lipid (lipid normalized)	Zebra mussel
Downstream of Fisherman's Park Cove (DFP)	5	3	0.0969	0.0636 to 0.131	0.106	0.0668 to 0.144	ug/kg lipid (lipid normalized)	Bluntnose minnow, bluegill, round goby
Downstream of Fisherman's Park Cove (DFP)	0	4	N/A[2]	N/A[2]	N/A[2]	N/A[2]	ug/kg lipid (lipid normalized)	Largemouth bass, smallmouth bass
Upstream Reference Area (URA)	1	2	0.0376	N/A[1]	0.016	N/A[1]	ng/kg wet weight	Zebra mussel
Upstream Reference Area (URA)	5	3	0.0923	0.0504 to 0.156	0.0618	0.0252 to 0.145	ng/kg wet weight	Bluntnose minnow, bluegill, round goby
Upstream Reference Area (URA)	5	4	1.53	1.19 to 2.83	2.436	2.39 to 2.508	ng/kg wet weight	Largemouth bass, smallmouth bass
Upstream Reference Area (URA)	1	2	0.00626	N/A[1]	0.00267	N/A[1]	ug/kg lipid (lipid normalized)	Zebra mussel

Table 4-1a
Summary of Trophic Level Dioxin TEQ Data by Location

Location	Number of Samples	Trophic Level	WHO 2005 Mammalian TEQ		1998 Fish TEQ		Units	Species Included
			Average Concentration	Range (min to max)	Average Concentration	Range (min to max)		
Upstream Reference Area (URA)	5	3	0.00243	0.00150 to 0.00362	0.0016	0.000751 to 0.00337	ug/kg lipid (lipid normalized)	Bluntnose minnow, bluegill, round goby
Upstream Reference Area (URA)	5	4	0.279	0.135 to 0.598	0.5003	0.228 to 1.195	ug/kg lipid (lipid normalized)	Largemouth bass, smallmouth bass

Notes:
1. Only one sample was collected for this location so a range is not applicable.
2. No samples were collected for this location.
N/A: Not applicable
µg: microgram
EPA: U.S. Environmental Protection Agency
kg: kilogram
ng: nanogram

Table 4-1b
Summary of Trophic Level Dioxin TEQ Data by Area

Location	Number of Samples	Trophic Level	WHO 2005 Mammalian TEQ		1998 Fish TEQ		Units	Species Included
			Average Concentration	Range (min to max)	Average Concentration	Range (min to max)		
Entire Study Area	5	2	1.17	0.0378 to 1.87	1.32	0.0160 to 2.17	ng/kg wet weight	Zebra mussel
Entire Study Area	23	3	3.58	0.0504 to 12.2	4.04	0.0252 to 14.5	ng/kg wet weight	Bluntnose minnow, bluegill, round goby
Entire Study Area	16	4	1.28	0.142 to 3.99	1.75	0.200 to 4.94	ng/kg wet weight	Largemouth bass, smallmouth bass
Entire Study Area	5	2	0.145	0.00626 to 0.234	0.164	0.00267 to 0.272	ug/kg lipid (lipid normalized)	Zebra mussel
Entire Study Area	23	3	0.126	0.00150 to 0.680	0.146	0.000751 to 0.803	ug/kg lipid (lipid normalized)	Bluntnose minnow, bluegill, round goby
Entire Study Area	16	4	0.206	0.0101 to 0.598	0.304	0.0142 to 0.200	ug/kg lipid (lipid normalized)	Largemouth bass, smallmouth bass
Upstream Reference Area (URA)[1.]	1	2	0.0376	N/A[1]	0.016	N/A[1]	ng/kg wet weight	Zebra mussel
Upstream Reference Area (URA)	5	3	0.0923	0.0504 to 0.156	0.0618	0.0252 to 0.145	ng/kg wet weight	Bluntnose minnow, bluegill, round goby
Upstream Reference Area (URA)	5	4	1.53	1.19 to 2.83	2.44	2.39 to 2.51	ng/kg wet weight	Largemouth bass, smallmouth bass
Upstream Reference Area (URA)[1.]	1	2	0.00626	N/A[1]	0.00267	N/A[1]	ug/kg lipid (lipid normalized)	Zebra mussel
Upstream Reference Area (URA)	5	3	0.00243	0.00150 to 0.00362	0.0016	0.000751 to 0.00337	ug/kg lipid (lipid normalized)	Bluntnose minnow, bluegill, round goby
Upstream Reference Area (URA)	5	4	0.279	0.135 to 0.598	0.5	0.228 to 1.20	ug/kg lipid (lipid normalized)	Largemouth bass, smallmouth bass
Durez Inlet Site (Stations downstream of URA)	4	2	1.45	0.941 to 1.872	1.65	1.05 to 2.17	ng/kg wet weight	Zebra mussel
Durez Inlet Site (Stations downstream of URA)	18	3	4.55	0.637 to 12.2	5.14	0.597 to 14.5	ng/kg wet weight	Bluntnose minnow, bluegill, round goby
Durez Inlet Site (Stations downstream of URA)	11	4	1.16	0.142 to 3.99	1.434	0.199 to 4.94	ng/kg wet weight	Largemouth bass, smallmouth bass
Durez Inlet Site (Stations downstream of URA)	4	2	0.180	0.134 to 0.234	0.205	0.150 to 0.272	ug/kg lipid (lipid normalized)	Zebra mussel
Durez Inlet Site (Stations downstream of URA)	18	3	0.161	0.0187 to 0.680	0.186	0.0176 to 0.803	ug/kg lipid (lipid normalized)	Bluntnose minnow, bluegill, round goby
Durez Inlet Site (Stations downstream of URA)	11	4	0.172	0.0101 to 0.529	0.215	0.0142 to 0.582	ug/kg lipid (lipid normalized)	Largemouth bass, smallmouth bass
Downstream of Fisherman's Park Cove (DFP)	1	2	1.87	N/A[1]	2.17	N/A[1]	ng/kg wet weight	Zebra mussel
Downstream of Fisherman's Park Cove (DFP)	5	3	4.87	2.50 to 8.32	5.36	2.73 to 9.29	ng/kg wet weight	Bluntnose minnow, bluegill, round goby
Downstream of Fisherman's Park Cove (DFP)	0	4	--	--	--	--	ng/kg wet weight	Largemouth bass, smallmouth bass
Downstream of Fisherman's Park Cove (DFP)	1	2	0.234	N/A[1]	0.272	N/A[1]	ug/kg lipid (lipid normalized)	Zebra mussel
Downstream of Fisherman's Park Cove (DFP)	5	3	0.0969	0.0636 to 0.131	0.106	0.0668 to 0.144	ug/kg lipid (lipid normalized)	Bluntnose minnow, bluegill, round goby
Downstream of Fisherman's Park Cove (DFP)	0	4	--	--	--	--	ug/kg lipid (lipid normalized)	Largemouth bass, smallmouth bass

Notes:
1. Only one sample of Zebra mussel was collected for upstream reference area so a range is not applicable.
'--': Data was not collected at this location
N/A: Not applicable
µg: microgram
EPA: U.S. Environmental Protection Agency
kg: kilogram
ng: nanogram

Table 4-2
Surface Sediment and Porewater Data Summary

Sampling Area	Total Organic Carbon (%)	Black Carbon (% dw)	Dioxin/Furan TEQ (µg/kg dw)	OC-Normalized Dioxin/Furan TEQ (µg/kg OC)	Porewater Dioxin/Furan TEQ (pg/L)	2,3,7,8-TCDD (µg/kg dw)	OC-Normalized 2,3,7,8-TCDD (µg/kg OC)	Porewater 2,3,7,8-TCDD (pg/L)
WHO 2005 Mammalian TEQ								
Upstream Reference Area	4.0 ± 2.2	1.7 ± 1.0	0.0091 ± 0.0024	0.3 ± 0.1	0.02 U	0.0004 ± 0.0001	0.016 ± 0.011	0.02 U
Durez Inlet Site								
Pettit Cove	13.5 ± 0.4	2.8 ± 0.5	5.7 ± 1.5	41.9 ± 11.6	0.29 ± 0.03	0.13 ± 0.05	1.0 ± 0.4	0.026 ± 0.003
Fisherman's Park Cove	8.9 ± 0.3	0.4 ± 0.1	0.35 ± 0.18	4.0 ± 2.1	0.14 ± 0.04	0.005 ± 0.001	0.054 ± 0.018	0.02 U
1998 Fish TEQ								
Upstream Reference Area	4.0 ± 2.2	1.7 ± 1.0	0.0098 ± 0.0034	0.3 ± 0.1	0.02 U	0.0004 ± 0.0001	0.016 ± 0.010	0.02 U
Durez Inlet Site								
Pettit Cove	13.5 ± 0.4	2.8 ± 0.5	6.2 ± 1.7	46.1 ± 12.9	0.37 ± 0.04	0.13 ± 0.05	1.0 ± 0.4	0.026 ± 0.003
Fisherman's Park Cove	8.9 ± 0.3	0.4 ± 0.1	0.37 ± 0.19	4.3 ± 2.3	0.17 ± 0.07	0.005 ± 0.001	0.054 ± 0.015	0.02 U
NYSDEC BEQ								
Upstream Reference Area	4.0 ± 2.2	1.7 ± 1.0	0.0072 ± 0.0023	0.2 ± 0.1	0.02 U	0.0004 ± 0.0002	0.016 ± 0.011	0.02 U
Durez Inlet Site								
Pettit Cove	13.5 ± 0.4	2.8 ± 0.5	3.2 ± 0.9	24 ± 7	7.1 ± 2.1	0.13 ± 0.05	1.0 ± 0.4	0.026 ± 0.003
Fisherman's Park Cove	8.9 ± 0.3	0.4 ± 0.1	0.17 ± 0.08	2 ± 0.9	0.57 ± 0.28	0.005 ± 0.001	0.054 ± 0.018	0.02 U

Notes:
µg/kg: microgram per kilogram
BEQ: bioaccumulation equivalency
dw: dry weight
NYSDEC: New York State Department of Environmental Conservation
OC: organic carbon
pg/L: picogram per liter
TCDD: tetrachlorodibenzo-*p-dioxin*
TEQ: toxic equivalency
U: not present above method detection limit

Table 4-3
Paired Surface Sediment and Porewater Dioxin/Furan Partition Coefficients

Dioxin/Furan Congener	Partition Coeffcient; Log_{10} K_{oc} (L/kg)					
	Pettit Cove			Fisherman's Park Coves		
	Mean	±	Standard Error	Mean	±	Standard Error
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	7.52	±	0.12	Not Detected		
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	8.20	±	0.11	7.33	±	0.12
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	8.63	±	0.16	7.86	±	0.02
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	8.61	±	0.17	7.73	±	0.03
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	8.63	±	0.19	7.83	±	0.03
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	9.12	±	0.18	8.58	±	0.14
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	9.51	±	0.18	9.40	±	0.08
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	6.91	±	0.05	6.32	±	0.08
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	7.24	±	0.07	6.36	±	0.11
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	7.69	±	0.12	6.94	±	0.12
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	8.37	±	0.10	7.70	±	0.09
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	8.19	±	0.09	7.26	±	0.13
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	Not Detected			Not Detected		
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	8.47	±	0.12	7.71	±	0.14
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	9.04	±	0.18	8.30	±	0.05
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	8.96	±	0.20	8.39	±	0.02
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	9.49	±	0.23	9.01	±	0.12

Note:
L/kg: liter per kilogram

Table 4-4
Summary of Paired Surface Sediment and Tissue Dioxin/Furan Data

	Surface Sediment						Whole Body Fish Tissue				
Sampling Area	**Total Organic Carbon (OC; % dw)**	**Black Carbon (% dw)**	**Dioxin/Furan Toxicity Equivalent (TEQ; ng/kg dw; ND=0)**	**OC-Normalized Dioxin/Furan TEQ (µg/kg OC; ND=0)**	**Porewater Dioxin/Furan TEQ (pg/L; ND=0)**	**Dioxin/Furan TEQ Equilibrium Partitioning Coefficient ($Log_{10}K_{oc}$; L/kg)**	**Trophic Level 3 Target Species**	**Lipid (% ww)**	**Dioxin/Furan TEQ (ng/kg ww; ND=0)**	**Lipid-Normalized Dioxin/Furan TEQ (µg/kg lipid; ND=0)**	**Average Biota Sediment Accumulation Factor (BSAF; OC/lipid)**
WHO 2005 Mammalian TEQ											
Upstream Reference Area	4.0%	1.7%	9	0.3	0.05 U	--	Bluntnose minnow	3.8%	0.1	0.003	0.010
Pettit Cove	13.5%	2.8%	5,660	42	0.29	8.0	Bluegill	4.0%	5.2	0.137	0.003
		--			--	--	Round goby	1.7%	9.4	0.542	0.013
Fisherman's Park Coves	8.9%	0.4%	350	4.0	0.14	7.4	Bluegill	3.6%	1.0	0.026	0.007
Downstream Fisherman's Park	4.6%	1.4%	3,800	93	--	--	Bluntnose minnow	5.6%	6.2	0.115	0.001
		--			--	--	Bluegill	4.2%	2.8	0.070	0.001
1998 Fish TEQ											
Upstream Reference Area	4.0%	1.7%	10	0.4	0.05 U	--	Bluntnose minnow	3.8%	0.1	0.002	0.005
Pettit Cove	13.5%	2.8%	6,234	46	0.37	8.0	Bluegill	4.0%	5.7	0.152	0.003
		--			--	--	Round goby	1.7%	11.2	0.647	0.014
Fisherman's Park Coves	8.9%	0.4%	372	4.3	0.17	7.3	Bluegill	3.6%	1.5	0.042	0.010
Downstream Fisherman's Park	4.6%	1.4%	4,091	100	--	--	Bluntnose minnow	5.6%	6.9	0.127	0.001
		--			--	--	Bluegill	4.2%	3.0	0.075	0.001

Notes:

µg/kg: micrograms per kilogram

BSAF: biota-sediment accumulation factor

dw: dry weight

ND=0: A value of zero was utilized in the TEQ calculation formula for any non-detected compounds.

ng/kg: nanograms per kilogram

OC: organic carbon

TEQ: toxic equivalency

ww: wet weight

Table 4-5
Key Fish Diets

Family	Scientific Name	Common Name	Diet Description
Centrarchidae	*Lepomis macrochirus*	Bluegill	Adults feed upon snails, small crayfish, insects, worms, and small minnows (Page and Burr 1991). Young feed on crustaceans, insects and worms (Page and Burr 1991; Etnier and Starnes 1993).
Cyprinidae	*Pimephales notatus*	Bluntnose Minnow	Adults feed on algae, detritus, entomostraca, and immature insects, especially midge larvae and pupae (Etnier and Starnes 1993).
Centrarchidae	*Micropterus salmoides*	Largemouth Bass	Adults feed on fishes, crayfish and frogs; young feed on crustaceans, insects and small fishes. Sometimes cannibalistic. They do not feed during spawning; as well as when the water temperature is below 5°C and above 37°C (Billard 1997).
Gobiidae	*Neogobius melanostomus*	Round Goby	Adults feed on a wide variety of invertebrates and small fish, mostly on molluscs (Kottelat and Freyhof 2007).
Centrarchidae	*Micropterus dolomieu*	Smallmouth Bass	Young feed on plankton and immature aquatic insects while adults feed on crayfish, other fish, and aquatic and terrestrial insects (Scott and Crossman 1973; Etnier and Starnes 1993; Yamamoto and Tagawa 2007). Is sometimes cannibalistic (Billard 1997).

Notes:
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Billard, R., 1997. Les poissons d'eau douce des rivières de France. Identification, inventaire et répartition des 83 espèces. Lausanne, Delachaux & Niestlé.

Table 4-6
Baseline Bioaccumulation Factors

Common Name	Trophic Guild Representation	Baseline BAF (L/kg)	Average Lipid as a ratio	Baseline Wildlife BAF (L/kg)
Fish				
Bluegill	Trophic level three	149739376	0.038	1855053
Bluntnosed minnow	Trophic level three	149739376	0.044	2147425
Round goby	Trophic level three	149739376	0.017	822676
Largemouth bass	Trophic level four	274347667	0.007	594046
Smallmouth bass	Trophic level four	274347667	0.012	1063962

Notes:

The fish and wildlife BAFs are derived as follows:

Equation 1

$$Baseline\ BAF\ TL_{three} = K_{OW} \times Trophic\ Level\ Three_{food\ chain\ multiplier}$$

$$Baseline\ BAF\ TL_{four} = K_{OW} \times Trophic\ Level\ Four_{food\ chain\ multiplier}$$

where:

K_{ow} = 10,471,285, NYDEC 2014 uses Log K_{ow} that equals 7.02.

Trophic Level Three (FCM) = 14.3

Trophic Level Four (FCM) = 26.2

Equation 2

$$Baseline\ BAF\ Wildlife_{bluegill} = [(Baseline\ BAF\ TL_{three})\ \times (Bluegill\ average\ lipid) + 1] \times \text{Freely Dissolved Fraction}$$

$$Baseline\ BAF\ Wildlife_{lmb} = \left[(Baseline\ BAF\ TL_{four})\ \times (Largemouth\ bass\ average\ lipid) + 1\right] \times \text{Freely Dissolved Fraction}$$

where:

Baseline BAF TL_{three} = 149757602 (L/kg).

Baseline BAF TL_{four} = 274625378 (L/kg).

Bluegill average lipid (ratio) = Average of all billgill collected at all stations

Largemouth average lipid (ratio) = Average of all Largemouth bass collected at all stations

Freely Dissolved Fraction = 0.32.

Equation 3

$$Freely\ Dissolved\ Fraction = 1/\left(1 + \left(\frac{DOC \times K_{ow}}{10}\right) + (POC \times K_{ow})\right)$$

where:

DOC = Dissolved organic carbon in porewater. Assumed to be 0.000002 kg DOC/L (2 mg/L).

POC = Particulate organic carbon assumed to be zero according to NYDEC guidance (2014)

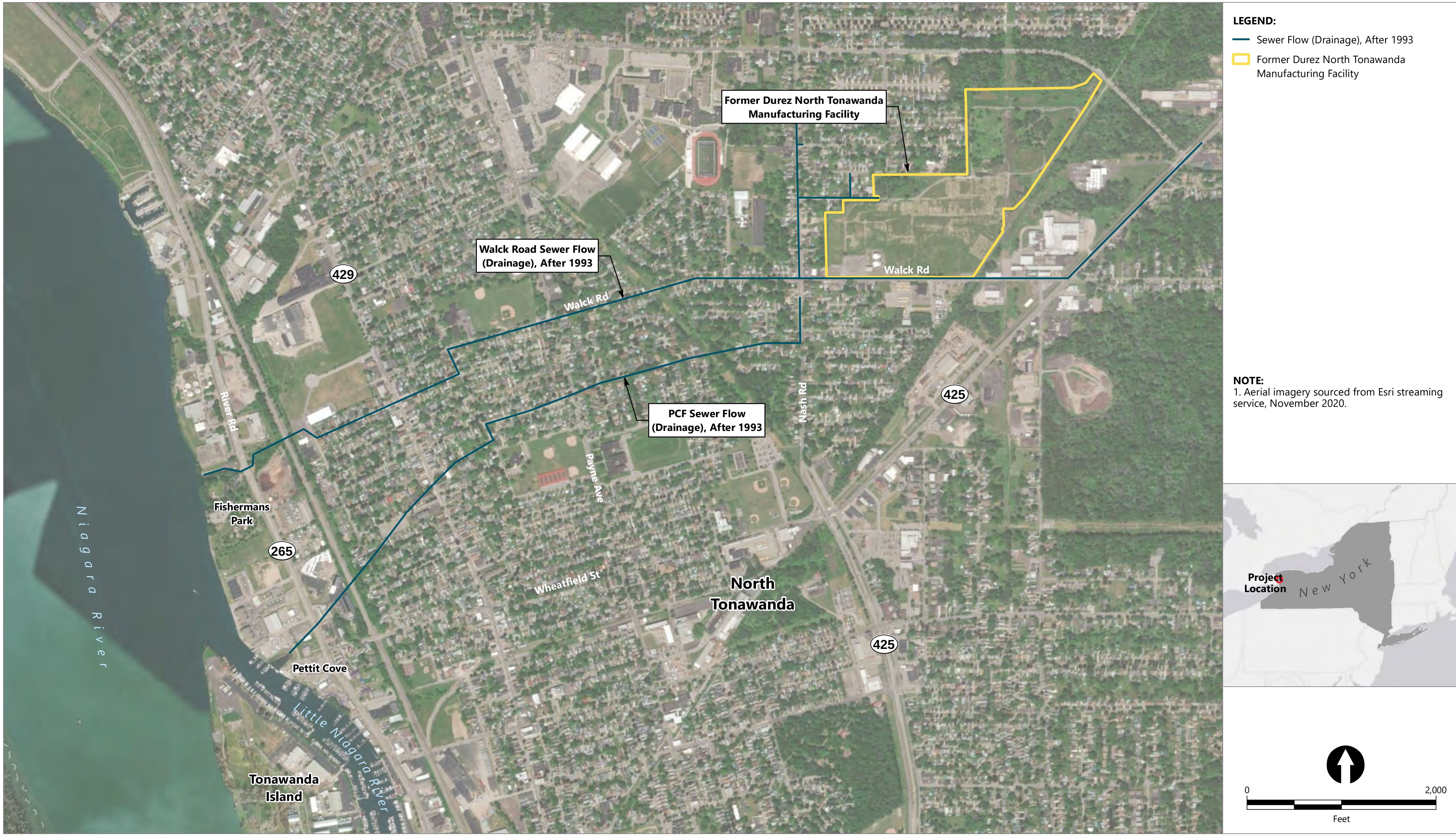
K_{ow} = 10,471,285

Table 4-7
Summary of Site-Specific Sediment Guidance Values

Name	Site-Specific SGV	Concentration	Units	Basis	Description
Site Data	Upstream Reference Area Sediment	0.3 ± 0.1	µgTEQ/kgOC	Average Upstream Reference Area TEQ-fish surface sediment	Upstream background.
	Pettit Cove Sediment	46 ± 12.9	µgTEQ/kgOC	Average Pettit Cove TEQ-fish surface sediment grabs (0–6 inches)	
	SGV: Fish	**3.1**	µgTEQ/kgOC	Target tissue ÷ regression BSAF	Site-specific bioaccumulation-based SGV for D/F TEQ to achieve the conservative 0.89 ngTEQ/kg ww fish flesh criterion protective of potential fish exposure discussed in Section 4.3.1. See Figure 4-8.
Wildlife (mammal)	SGV: AWQC	0.10	µg/kgOC	NYS AWQC * site avg. K_{oc} for TCDD	Site-specific EqP (per Workplan and NYSDEC Section 9); using NYS WQC. Pettit Cove
	SGV: AWQC	0.51	µg/kgOC	NYS AWQC * site avg. K_{oc} for TCDD	Site-specific EqP (per Workplan and NYSDEC Section 9); using NYS WQC. Fisherman's Park Cove. When TCDD was not detected K_{oc} and SGV values were calculated assuming the sample value was one-half of the method detection limit.
	SGV: Default	0.0005	µg/kg	A Class A SGV for 2,3,7,8-TCDD and equivalents. Bioaccumulation based, equilibrium partitioning SGV derived to protect piscivorous wildlife from 2,3,7,8-TCDD. NYSDEC (2014), Table 5	Default guidance value
	SGV: Default (OC)	0.025	µg/kgOC	NYSDEC (2014), Table 5	Default guidance value; OC normalized with default laboratory K_{oc}
	SGV	0.0085	µg/kgOC	Wildlife (mammal) protection WQC (mammal TCDD µg/L) * K_{oc} (L/kgOC)	
Human Health	SGV: Default	0.0001	µgTEQ/kg	NYSDEC (2014), Table 8	Table 8 default guidance value at 2% OC
	SGV: Default (OC)	0.005	µgTEQ/kgOC	NYSDEC (2014), Table 8	
	SGV: Default TOGS K_{oc}	0.0016	µgTEQ/kgOC	TOGS Human health criterion FC (mammal TEQ µg/L) x Koc (L/kgOC)	

Notes:
µg/L: microgram per liter
µg/kg: microgram per kilogram
µg/kgOC: microgram per kilogram organic carbon
µgTEQ/kg: microgram toxic equivalency per kilogram
µgTEQ/kgOC: microgram toxic equivalency per kilogram organic carbon
AWQC: Ambient Water Quality Criteria
BSAF: biota-sediment accumulation factor
D/F: polychlorinated dibenzo-*p-dioxin* s and furans
EqP: equilibrium partitioning
FC: fish consumption
L/kgOC: liter per kilogram organic carbon
ngTEQ/kg: nanogram toxic equivalency per kilogram
NYSDEC: New York State Department of Environmental Conservation
NYS WQC: New York State Water Quality Criteria
OC: organic carbon
SGV: Sediment Guidance Value
TCDD: tetrachlorodibenzo-*p-dioxin*
TEQ: toxic equivalency
TOGS: Technical and Operational Guidance Series
ww: wet weight

Figures



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ANCHOR QEA

Figure 1-1
Site Location Map

Aquatic Assessment Report
Durez Inlet

SOURCE: Spatial Distribution and Thickness of Fine-Grained Sediment along the United States Portion of the Upper Niagara River, New York. Prepared by U.S. Army Corps of Engineers, Engineering Research and Development Center (ERDC) for US Army Corps of Engineers, Buffalo District. August 2021.

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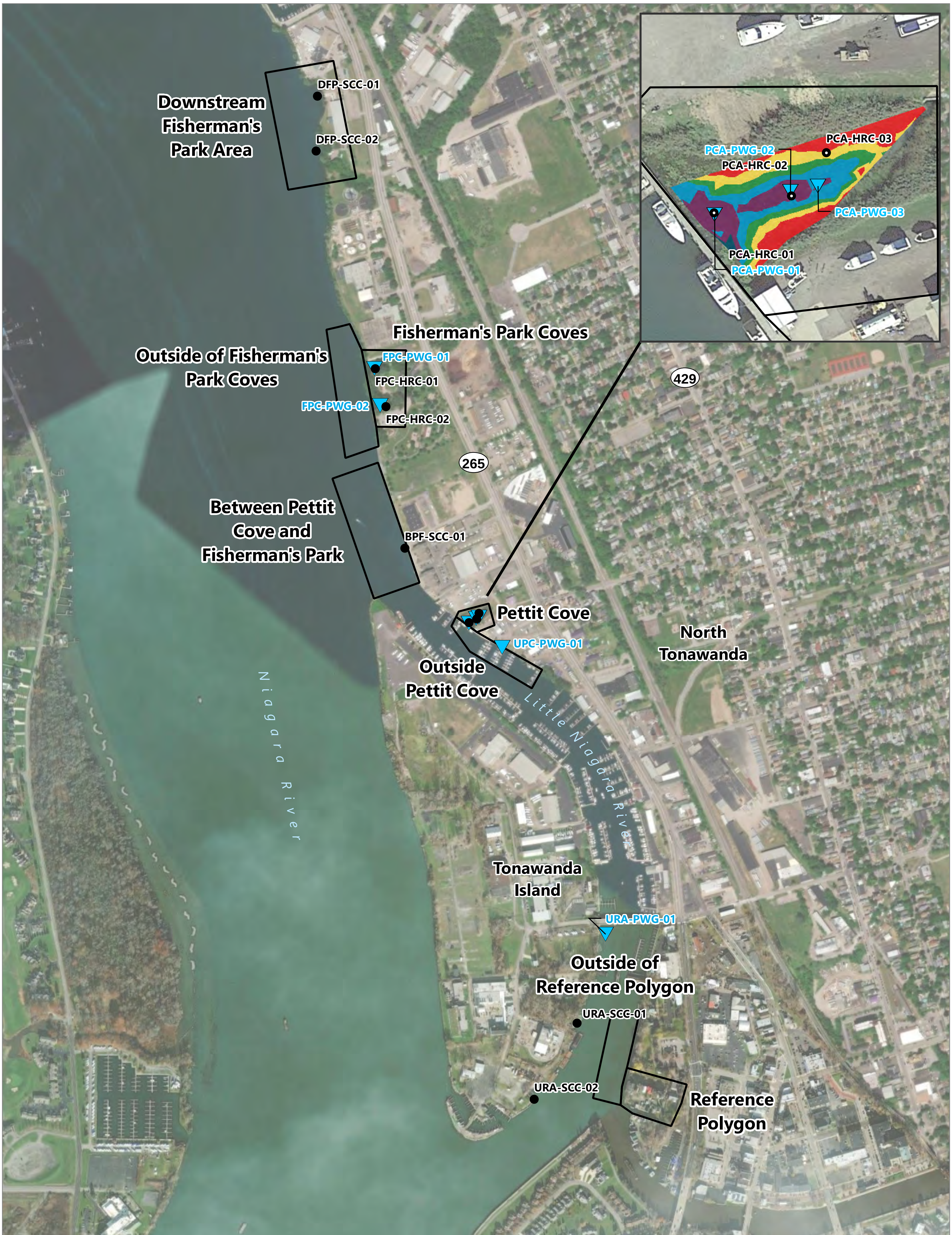
Figure 1-2
Upper Niagara River Soft Sediment Extents (from ERDC 2021)

Aquatic Assessment Report
Durez Inlet



LEGEND:

- Porewater Sample Location
- Sediment Sample Location
- Targeted Sediment Sampling Area

May 2019 Sediment Thickness Survey in Pettit Cove

THICKNESS TABLE

MINIMUM THICKNESS	MAXIMUM THICKNESS	COLOR
0.000	0.500	
0.500	1.000	
1.000	1.500	
1.500	2.000	
2.000	2.750	
2.750	3.500	

NOTE:
1. Aerial imagery sourced from Google Earth Pro, September 2018 and Esri streaming service, November 2020.
2. Sediment thickness in feet.

0 1,000
Feet

Publish Date: 2022/06/13, 9:11 AM | User: jquinley
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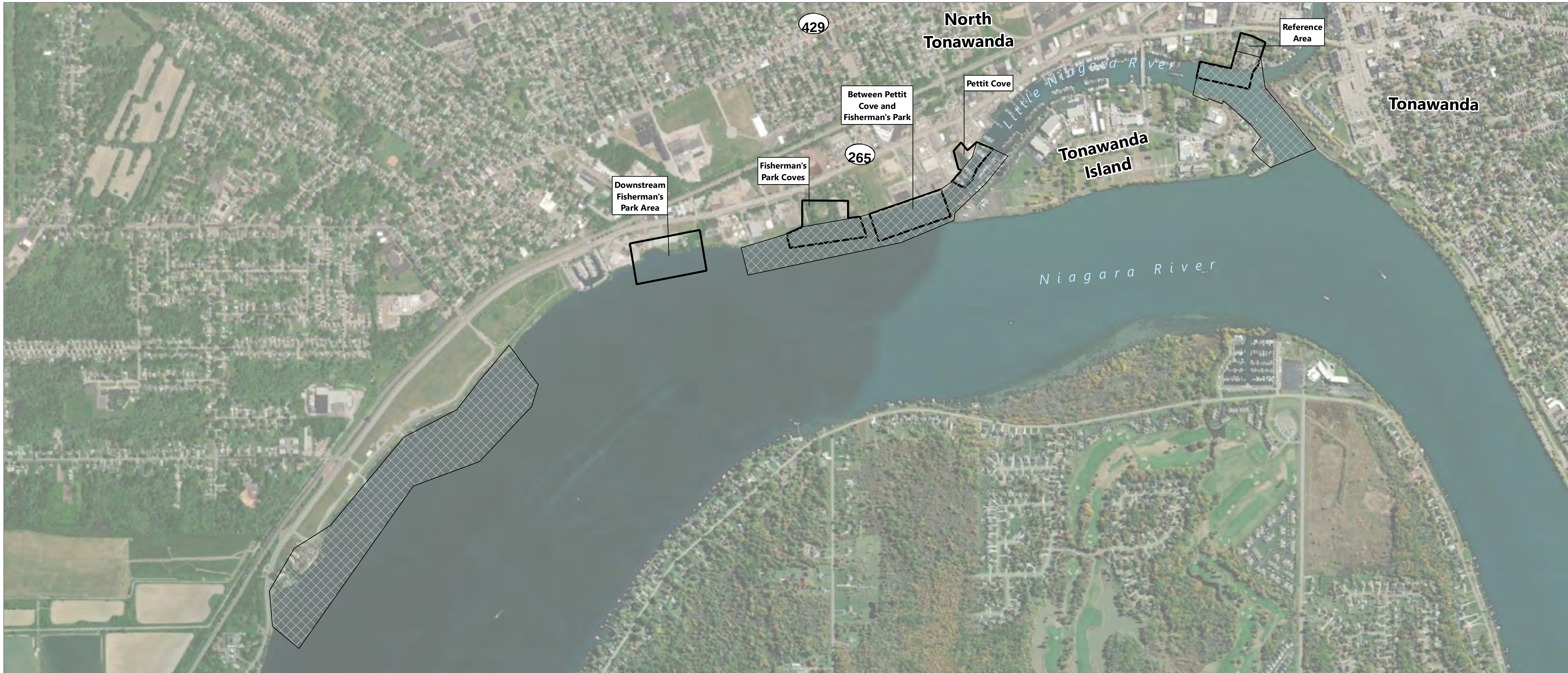
Figure 3-1
Sediment and Porewater Sampling Locations

Aquatic Assessment Report
Durez Inlet



LEGEND:

Forage fish area

Sport fish area

NOTES:

1. Aerial imagery sourced from Esri streaming service, November 2020.

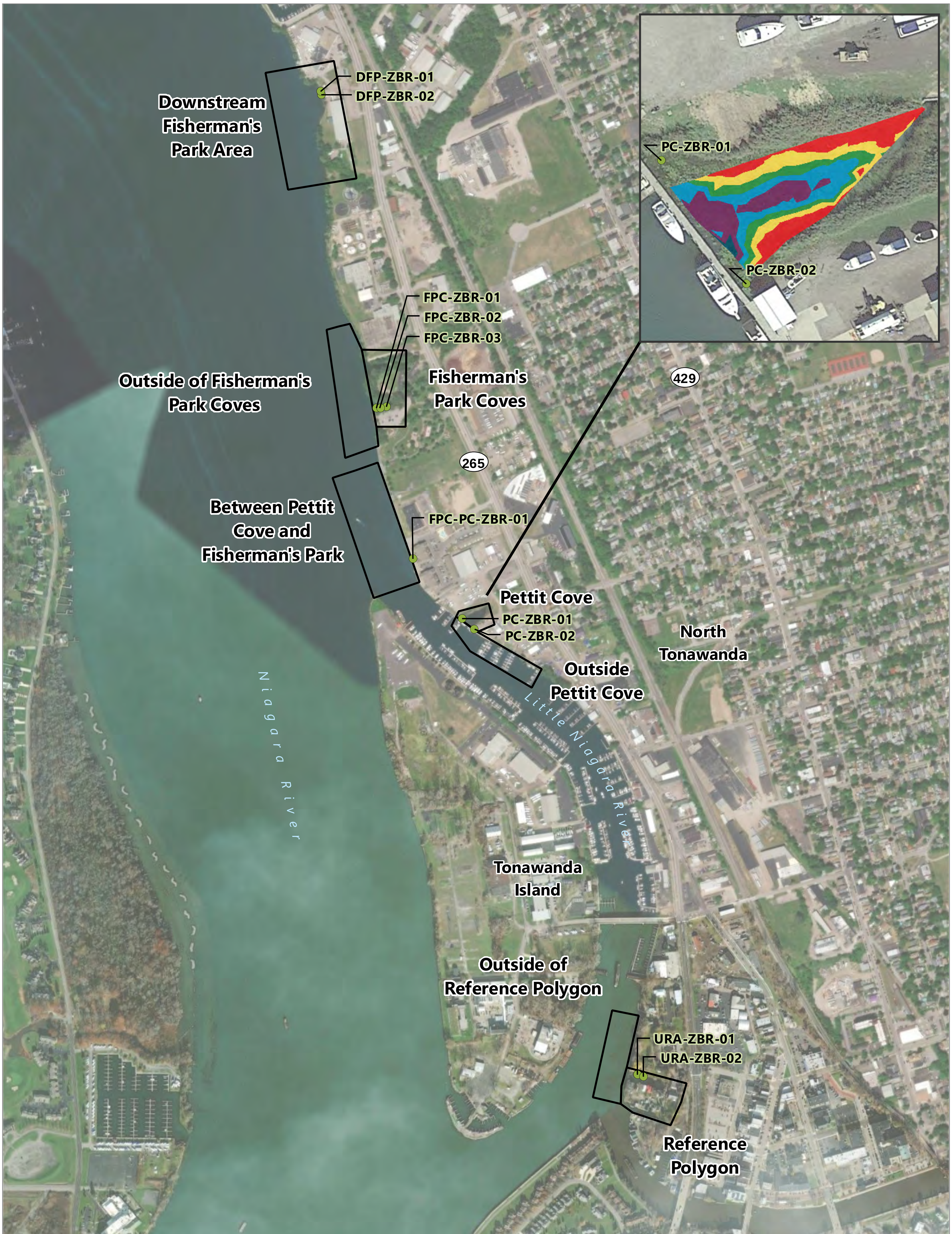
0 2,000

Feet

ANCHOR QEA

Figure 3-2
Fish Tissue Sampling Locations

Aquatic Assessment Report
Durez Inlet



LEGEND:

- Mussel Tissue Sampling Locations
- Targeted Sediment Sampling Area

May 2019 Sediment Thickness Survey in Pettit Cove

THICKNESS TABLE

MINIMUM THICKNESS	MAXIMUM THICKNESS	COLOR
0.000	0.500	
0.500	1.000	
1.000	1.500	
1.500	2.000	
2.000	2.750	
2.750	3.500	

NOTES:

1. Aerial imagery sourced from Google Earth Pro, September 2018 and Esri streaming service, November 2020.
2. Sediment thickness in feet.

BPF: Between Pettit Cove and Fisherman's Park
DFP: Downstream of Fisherman's Park
FPC: Fisherman's Park Cove
PCA: Pettit Cove Area
URA: Upstream Reference Area
ZBR: Zebra Mussel

0 1,000
Feet

Publish Date: 2023/01/06, 12:51 PM | User: jquinley
Filepath: \\orcas\GIS\Jobs\Glenn_Springs_Holdings_0049\Oxy_Durez_Inlet\Maps\2022_Aquatic_Assessment\AQ_Fig3-3_Mussel_Tissue_Sampling_Locations.mxd

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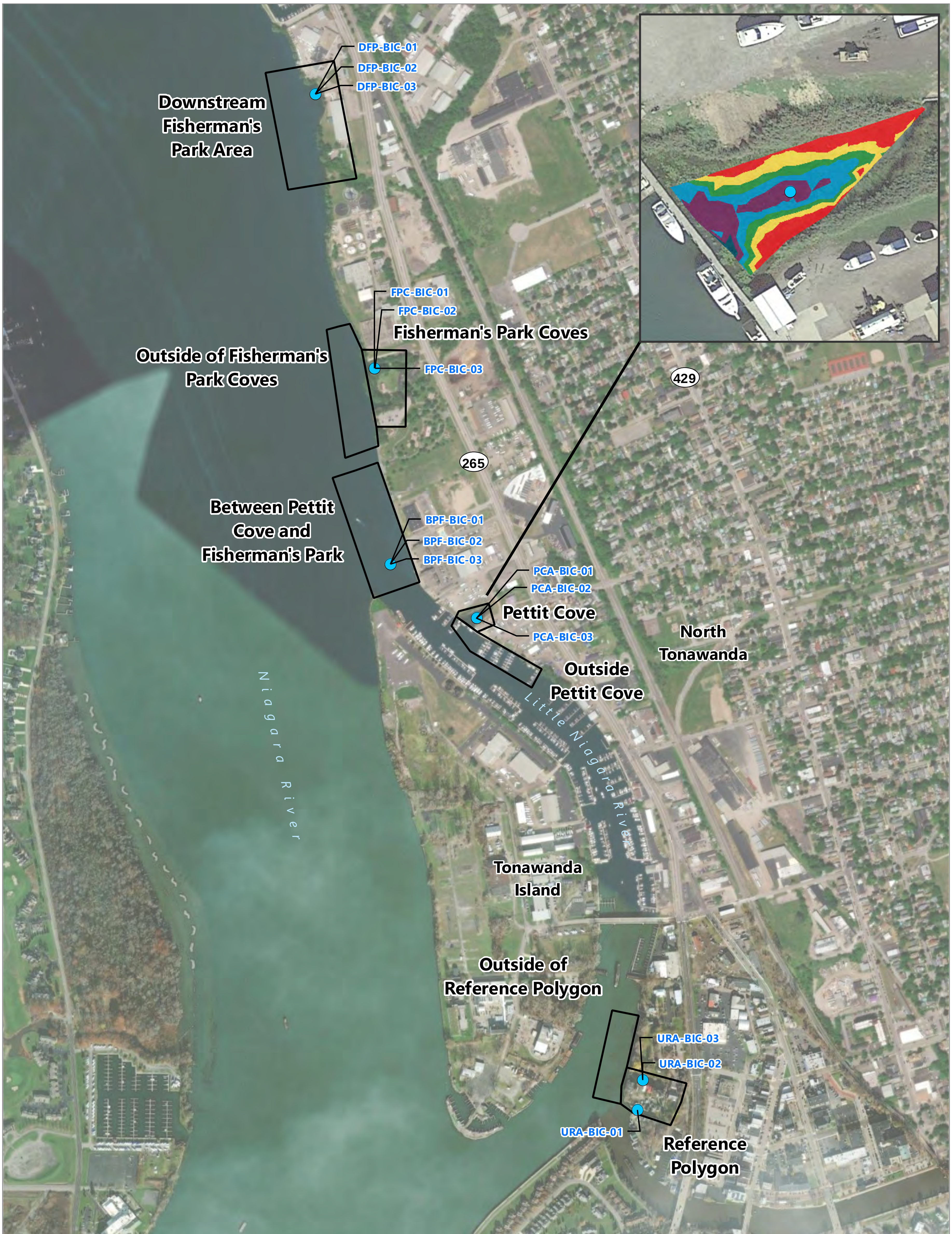
Figure 3-3
Mussel Tissue Sampling Locations



LEGEND:

- Benthic Community Survey Locations
- Targeted Sediment Sampling Area

May 2019 Sediment Thickness Survey in Pettit Cove

THICKNESS TABLE

MINIMUM THICKNESS	MAXIMUM THICKNESS	COLOR
0.000	0.500	
0.500	1.000	
1.000	1.500	
1.500	2.000	
2.000	2.750	
2.750	3.500	

NOTE:

1. Aerial imagery sourced from Google Earth Pro, September 2018 and Esri streaming service, November 2020.
2. Sediment thickness in feet.

BPF: Between Pettit Cove and Fisherman's Park
BIC: Benthic Invertebrate Community
DFP: Downstream of Fisherman's Park
FPC: Fisherman's Park Cove
PCA: Pettit Cove Area
URA: Upstream Reference Area

0 1,000
Feet

Publish Date: 2023/01/06, 12:53 PM | User: jquinley
Filepath: \\orcas\GIS\Jobs\Glenn_Springs_Holdings_0049\Oxy_Durez_Inlet\Maps\2022_Aquatic_Assessment\AQ_Fig3-4_Bentic_Community_Survey_Locations.mxd

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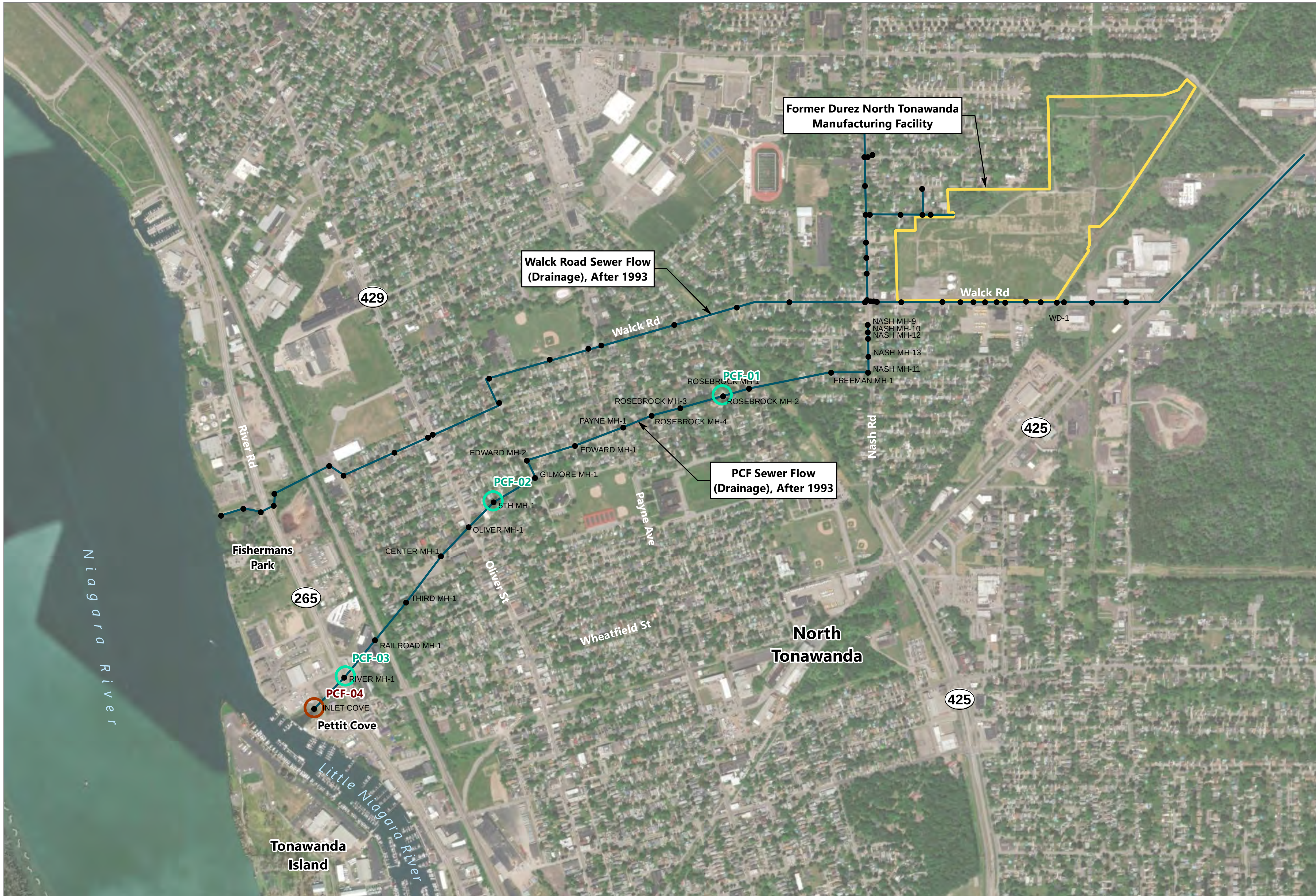
Figure 3-4
Benthic Community Survey Locations



LEGEND:

- Manhole Location
- Sewer Flow (Drainage), After 1993
- Former Durez North Tonawanda Manufacturing Facility
- PCF Manhole Sample Location
- PCF Outfall Sample Location

NOTE:
1. Aerial imagery sourced from Esri streaming service, November 2020.

0 2,000
Feet

Publish Date: 2022/05/03, 11:14 AM | User: jquinley
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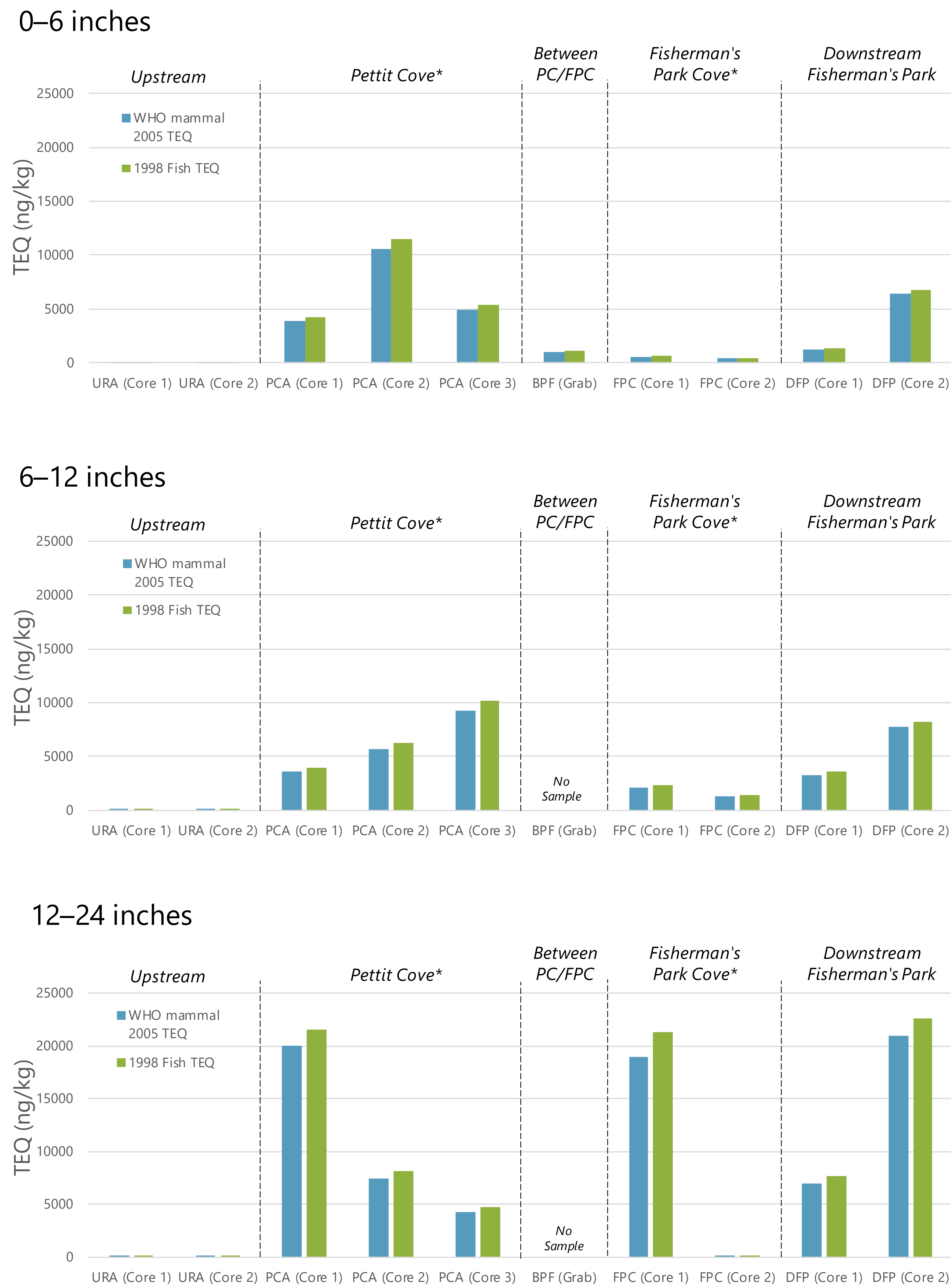
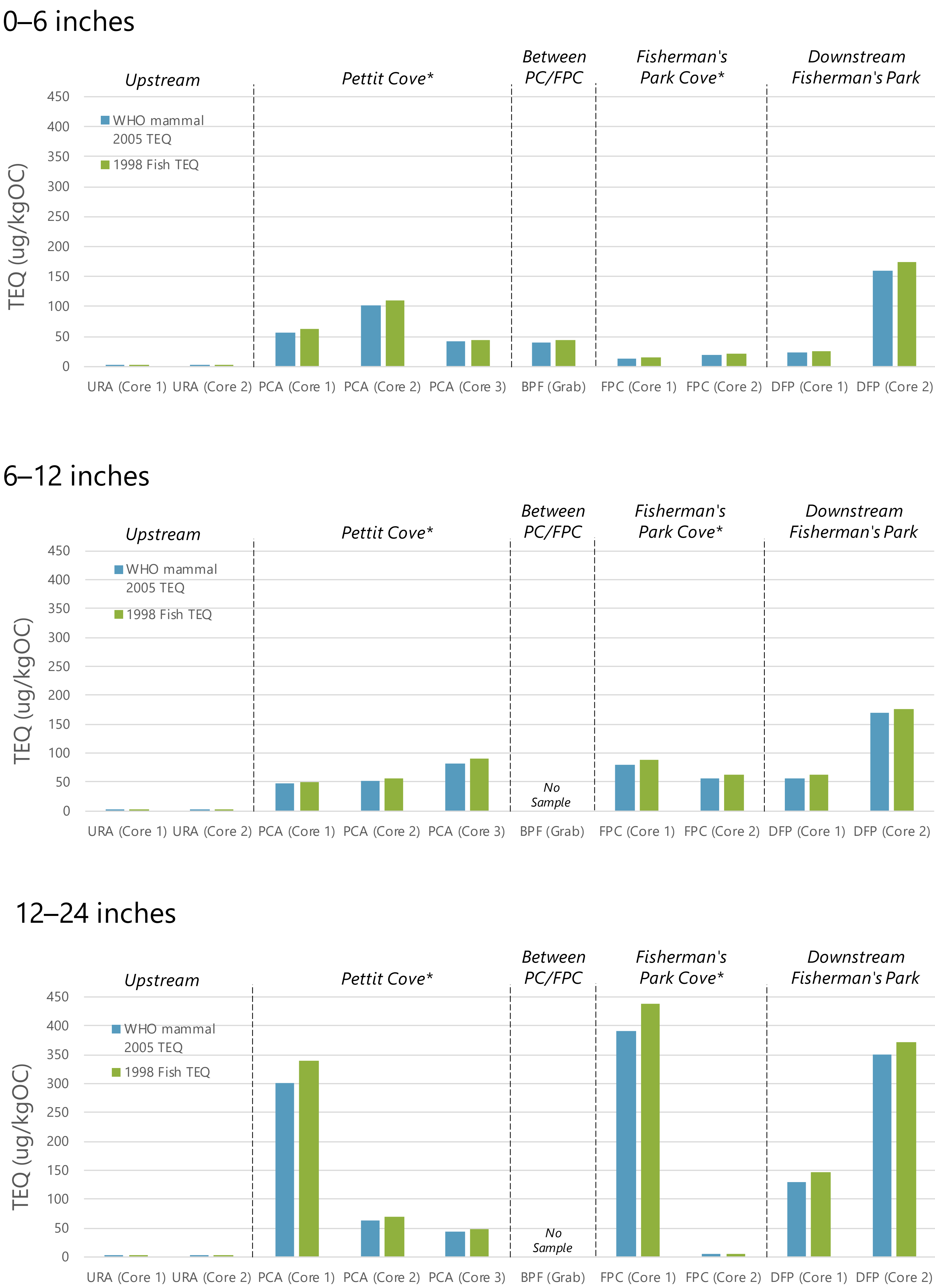
Figure 3-5
PCF Accumulated Sediment Sampling Locations

Aquatic Assessment Report
Durez Inlet

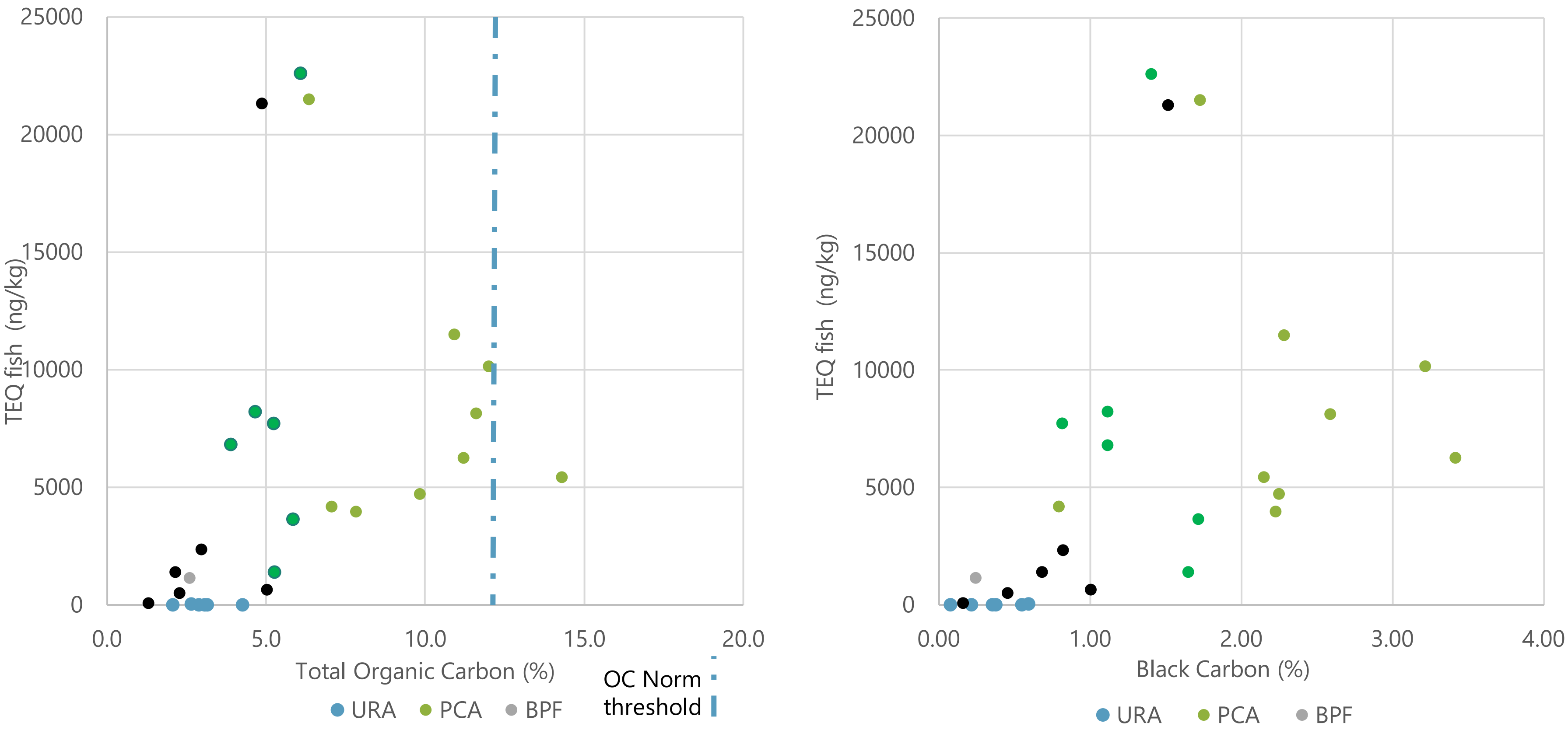


Note: * Values shown for Pettit Cove and Fisherman's Park Cove represent averages calculated from high resolution core segments.



Note: * Values shown for Pettit Cove and Fisherman's Park Cove represent averages calculated from high resolution core segments.

Figure 4-1b
Spatial Profile of Sediment TEQ (Carbon-Normalized)



Note: * Values shown represent all depths. Values shown for Pettit Cove and Fisherman's Park Cove represent averages calculated from high resolution core segments.

Figure 4-2
Relationship Between Sediment TEQ and (a) Total Organic Carbon; and (b) Black Carbon

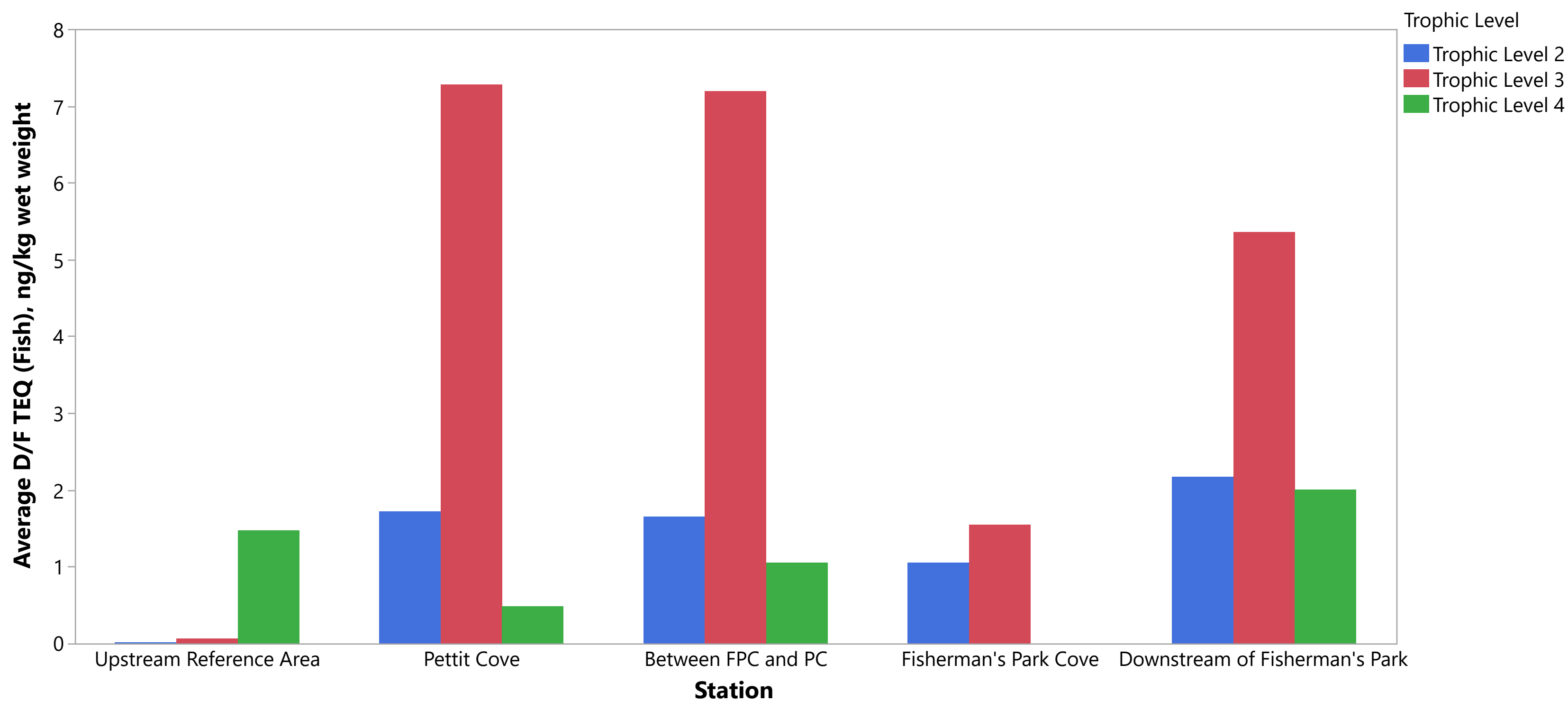


Figure 4-3a
Trophic Level Tissue Plots

Aquatic Assessment Report
Durez Inlet

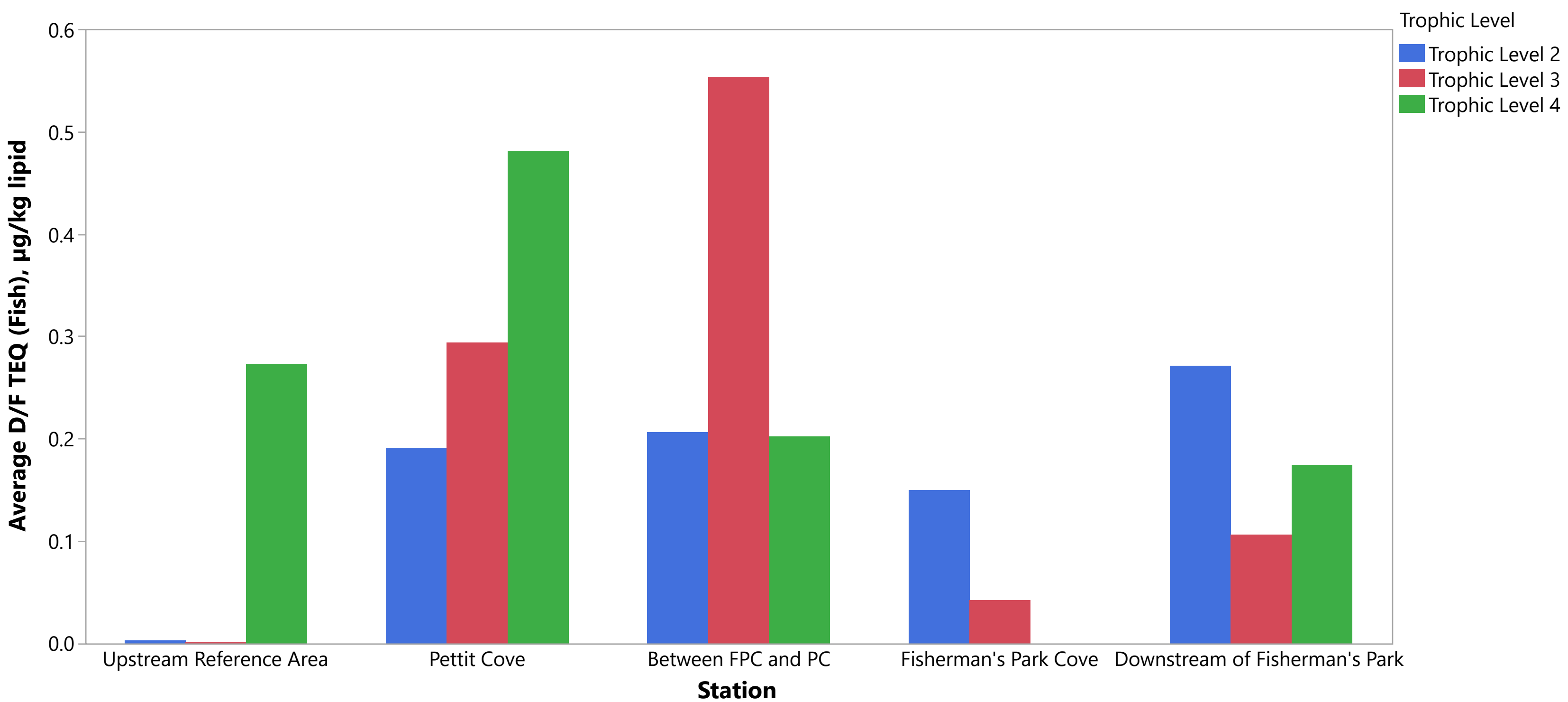


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Figure 4-3b
Trophic Level Lipid Plots
Aquatic Assessment Report
Durez Inlet

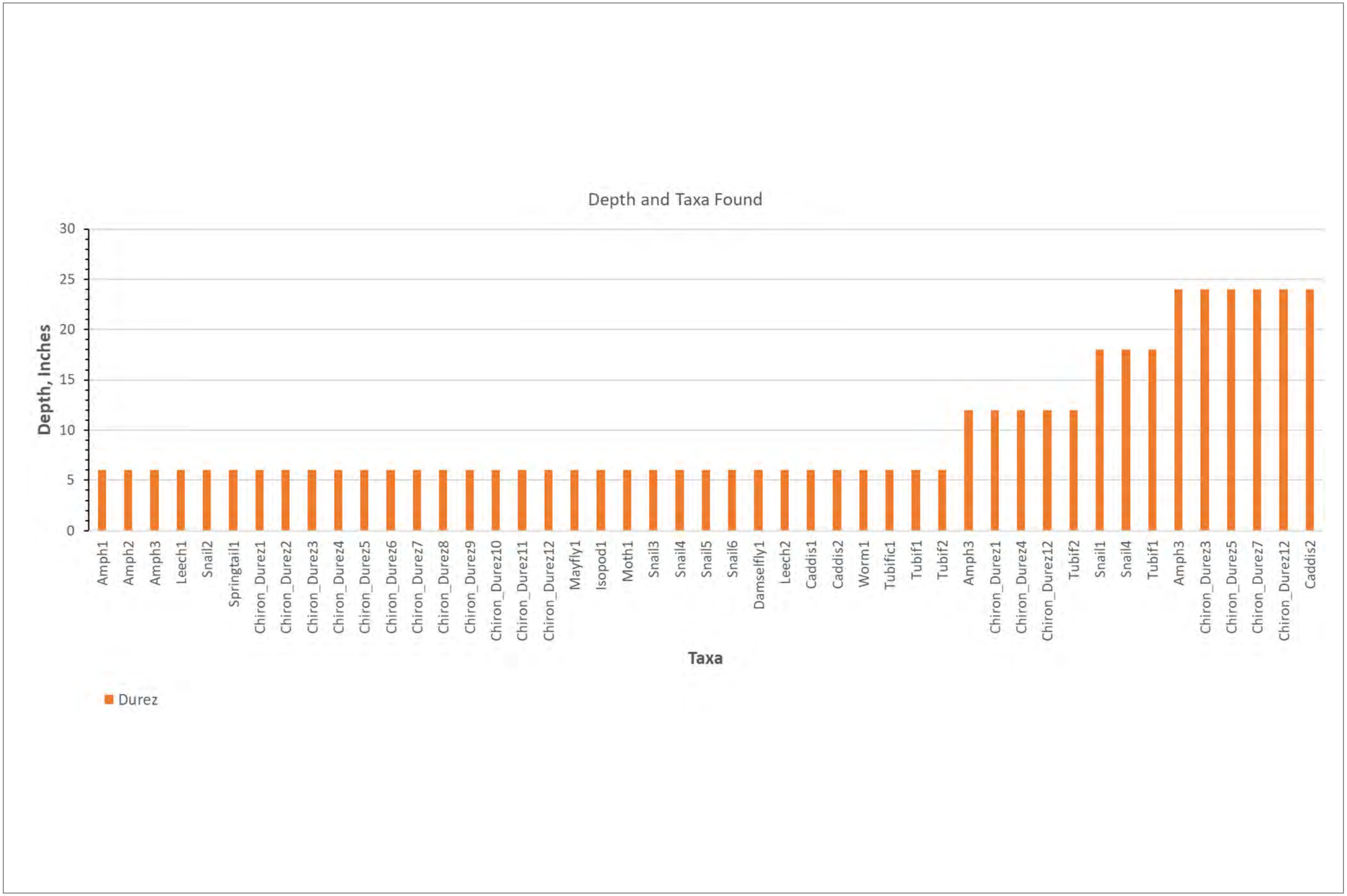


Figure 4-4a
Benthic Organisms at Various Depths for Durez Samples

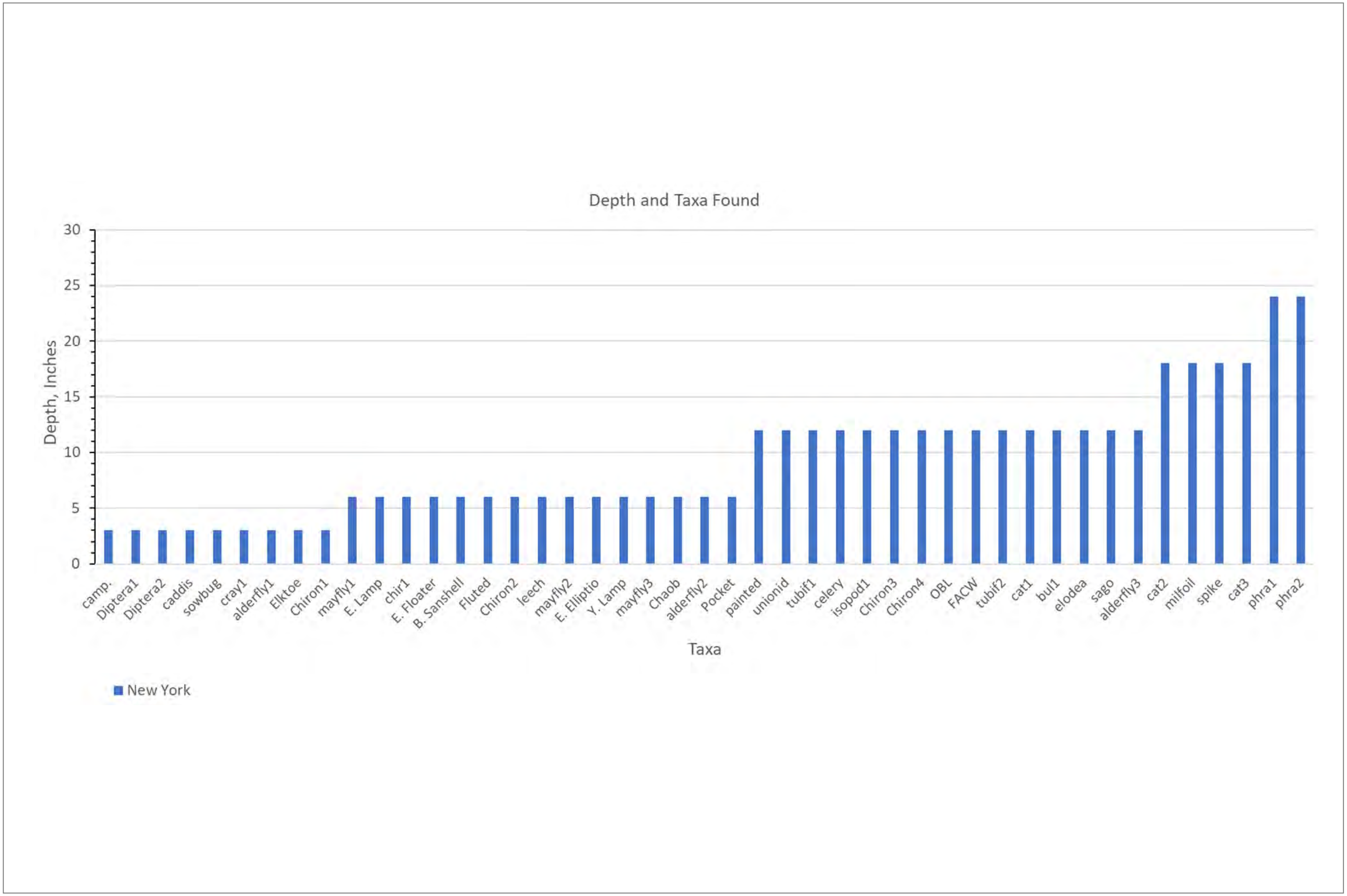
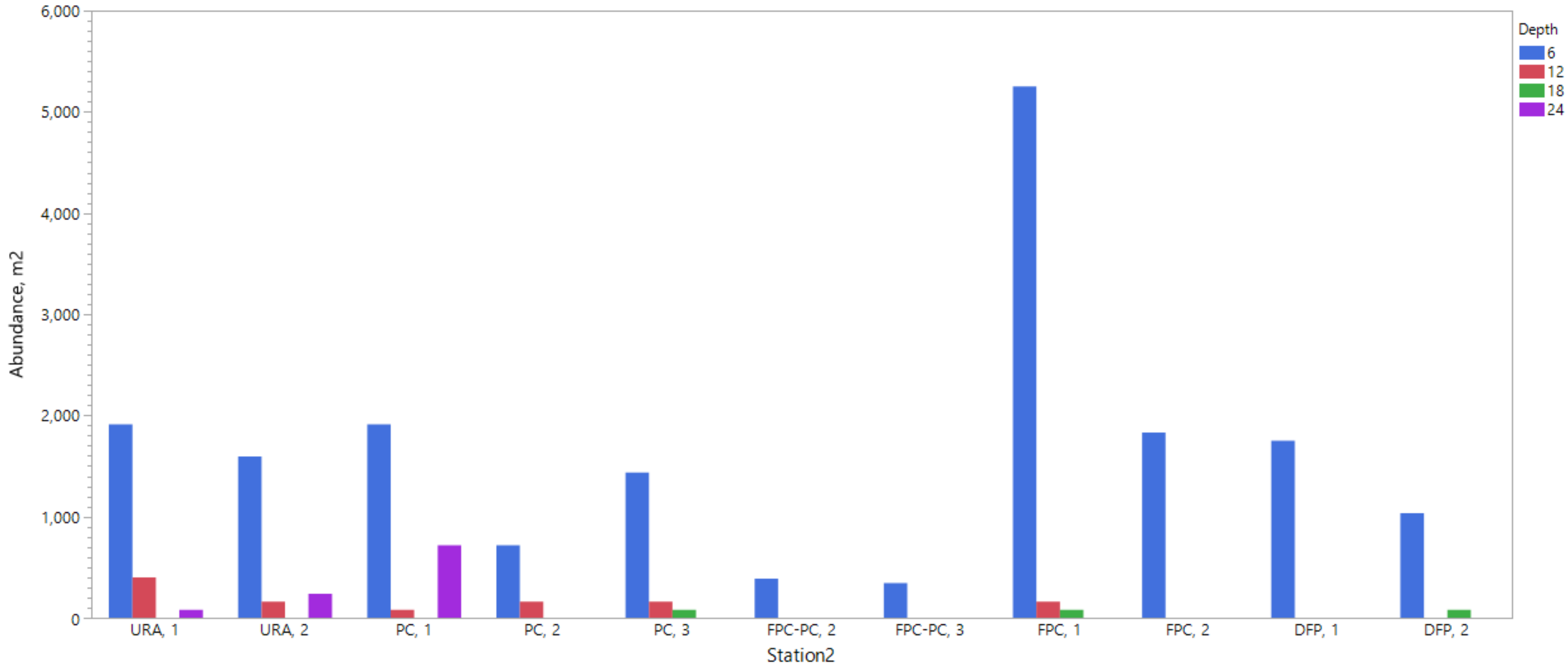


Figure 4-4b
Benthic Organisms at Various Depths for NYSDEC



ANCHOR QEA

Figure 4-5
Benthic Community Survey: Abundance

Aquatic Assessment Report
Durez Inlet

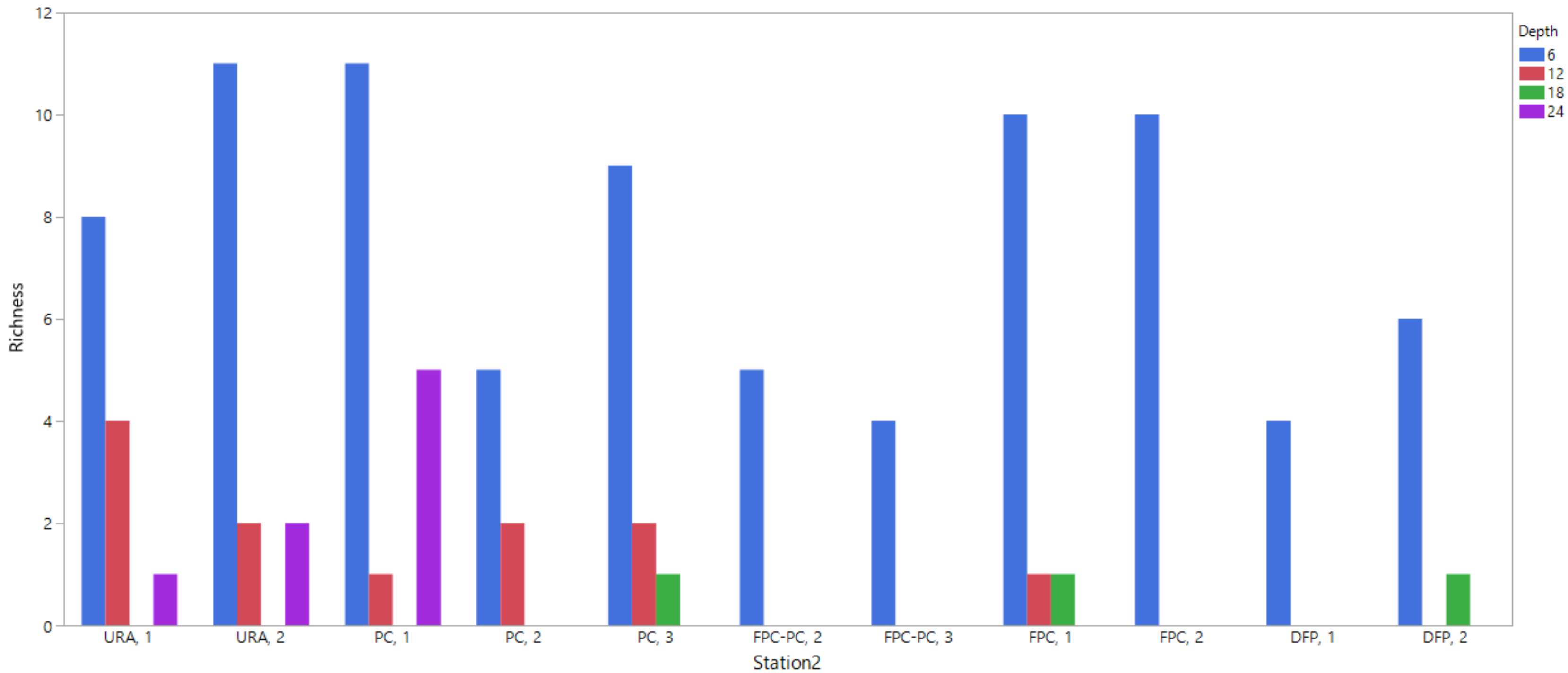


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Figure 4-6
Benthic Community Survey: Richness
Aquatic Assessment Report
Durez Inlet

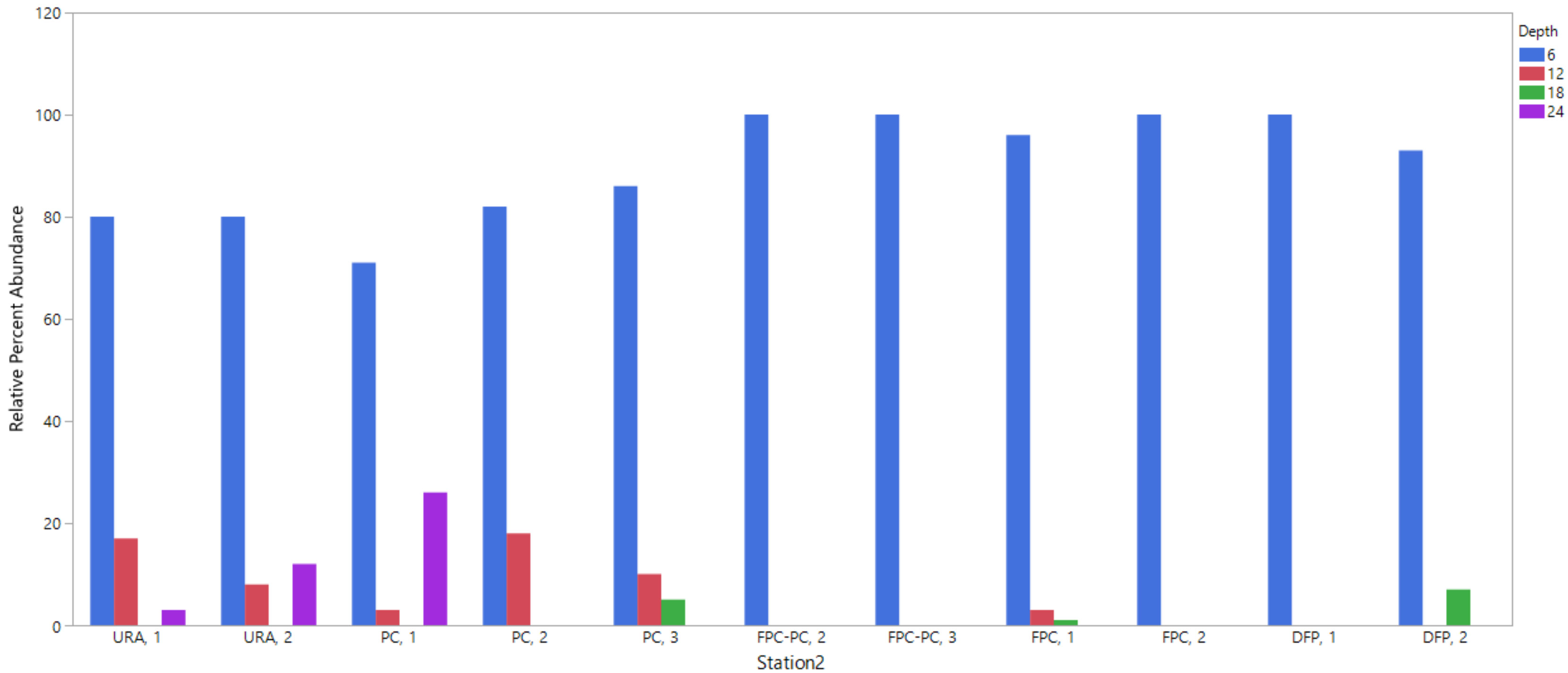

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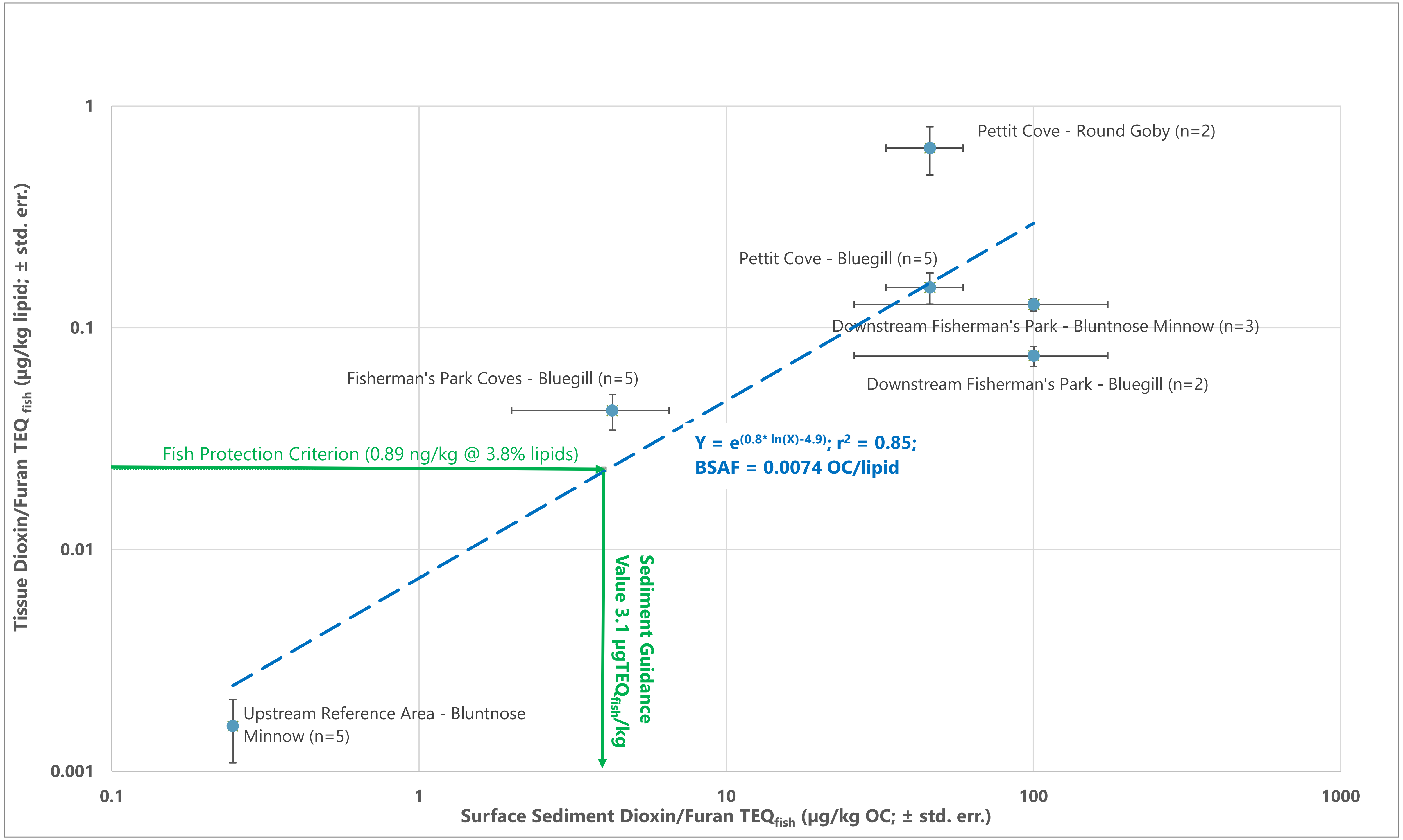
Figure 4-7
Benthic Community Survey: Relative Percent Abundance
Aquatic Assessment Report
Durez Inlet



Notes:
µg/kg: microgram per kilogram
BSAF: biota-sediment accumulation factor
ng/kg: nanogram per kilogram
OC: organic carbon
TEQ: toxic equivalency

Filepath: \\WCL-FS1\Syracuse\Projects\Glenn_Springs_Holdings\Niagara\Documents\AQ Deliverables\Aquatic Assessment Data Summary\0125_Resubmittal\Figure 4-8_drs.docx

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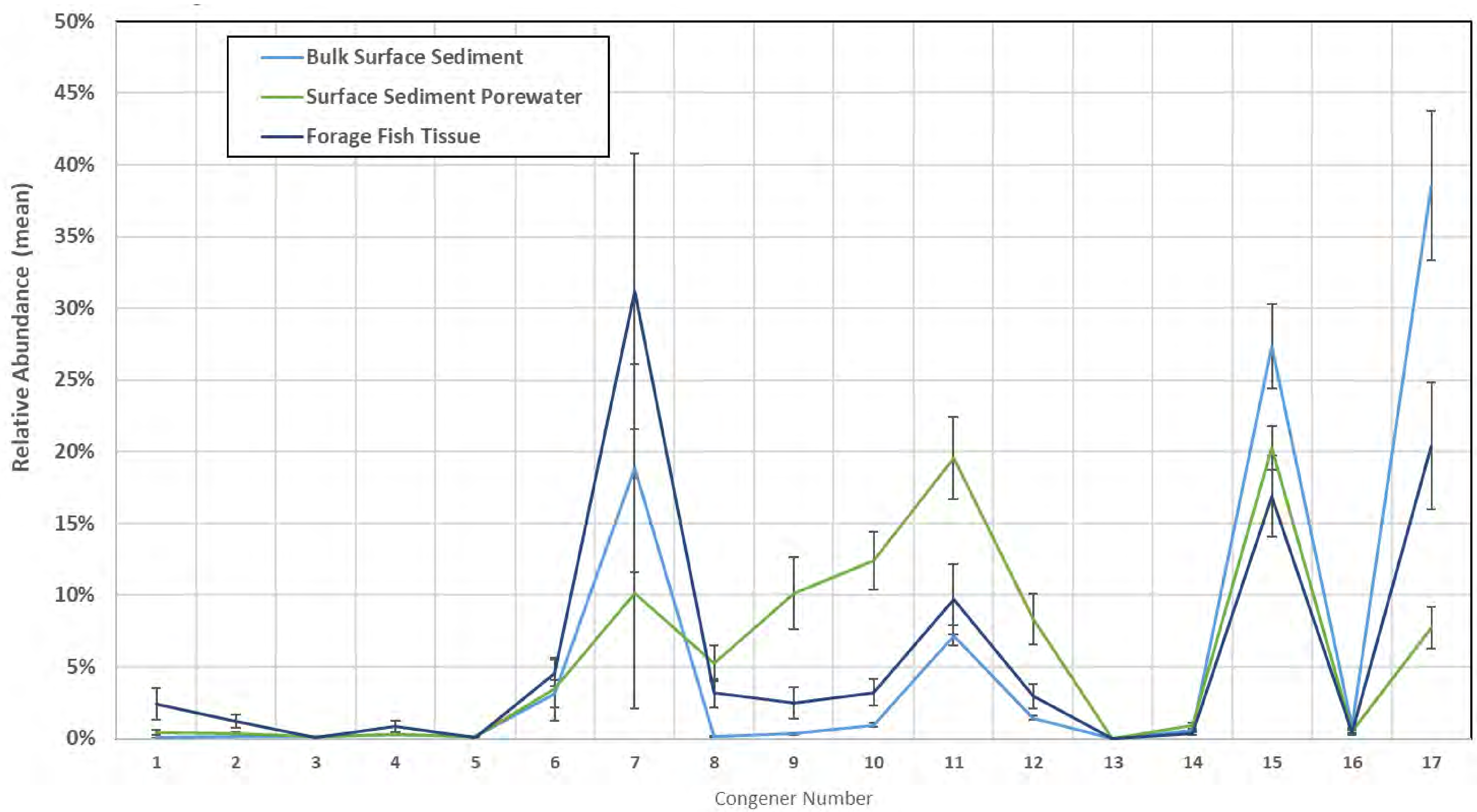
Figure 4-8
Dioxin/Furan TEQ Biota Sediment Accumulation Factor Regression
Aquatic Assessment Report
Durez Inlet

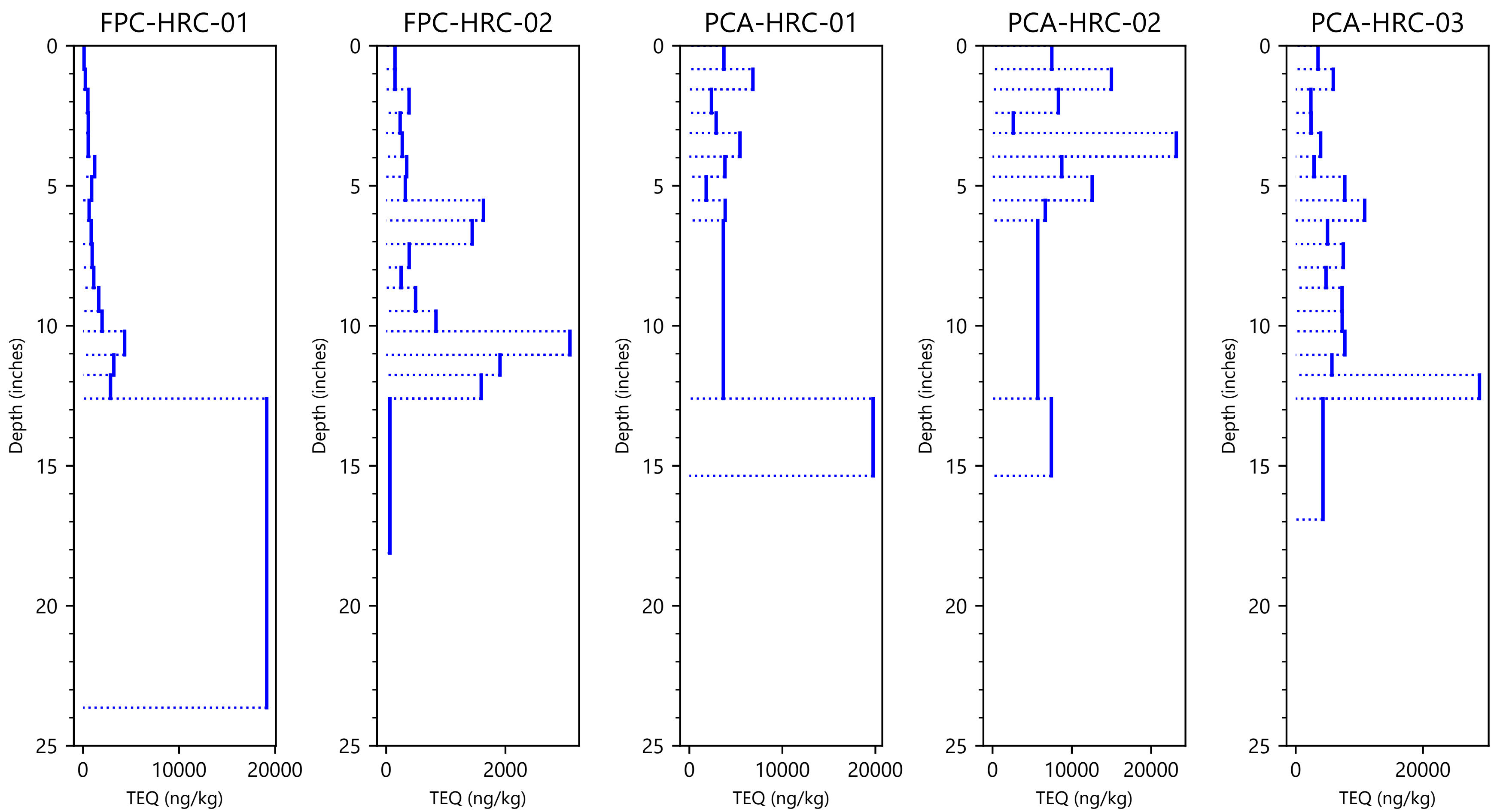
Short Congener Name	Congener Number
2,3,7,8-TCDD	1
1,2,3,7,8-PeCDD	2
1,2,3,4,7,8-HxCDD	3
1,2,3,6,7,8-HxCDD	4
1,2,3,7,8,9-HxCDD	5
1,2,3,4,6,7,8-HpCDD	6
1,2,3,4,6,7,8,9-OCDD	7
2,3,7,8-TCDF	8
1,2,3,7,8-PeCDF	9
2,3,4,7,8-PeCDF	10
1,2,3,4,7,8-HxCDF	11
1,2,3,6,7,8-HxCDF	12
1,2,3,7,8,9-HxCDF	13
2,3,4,6,7,8-HxCDF	14
1,2,3,4,6,7,8-HpCDF	15
1,2,3,4,7,8,9-HpCDF	16
1,2,3,4,6,7,8,9-OCDF	17



$$relative\ abundance = 1 - \left(\frac{[Total\ ^{D}/_{F}] - [Congener]}{[Total\ ^{D}/_{F}]} \right)$$

where:

[Total D/F] : sum of the concentration for all D/F congeners
[Congener] : concentration of the induvidial D/F congener



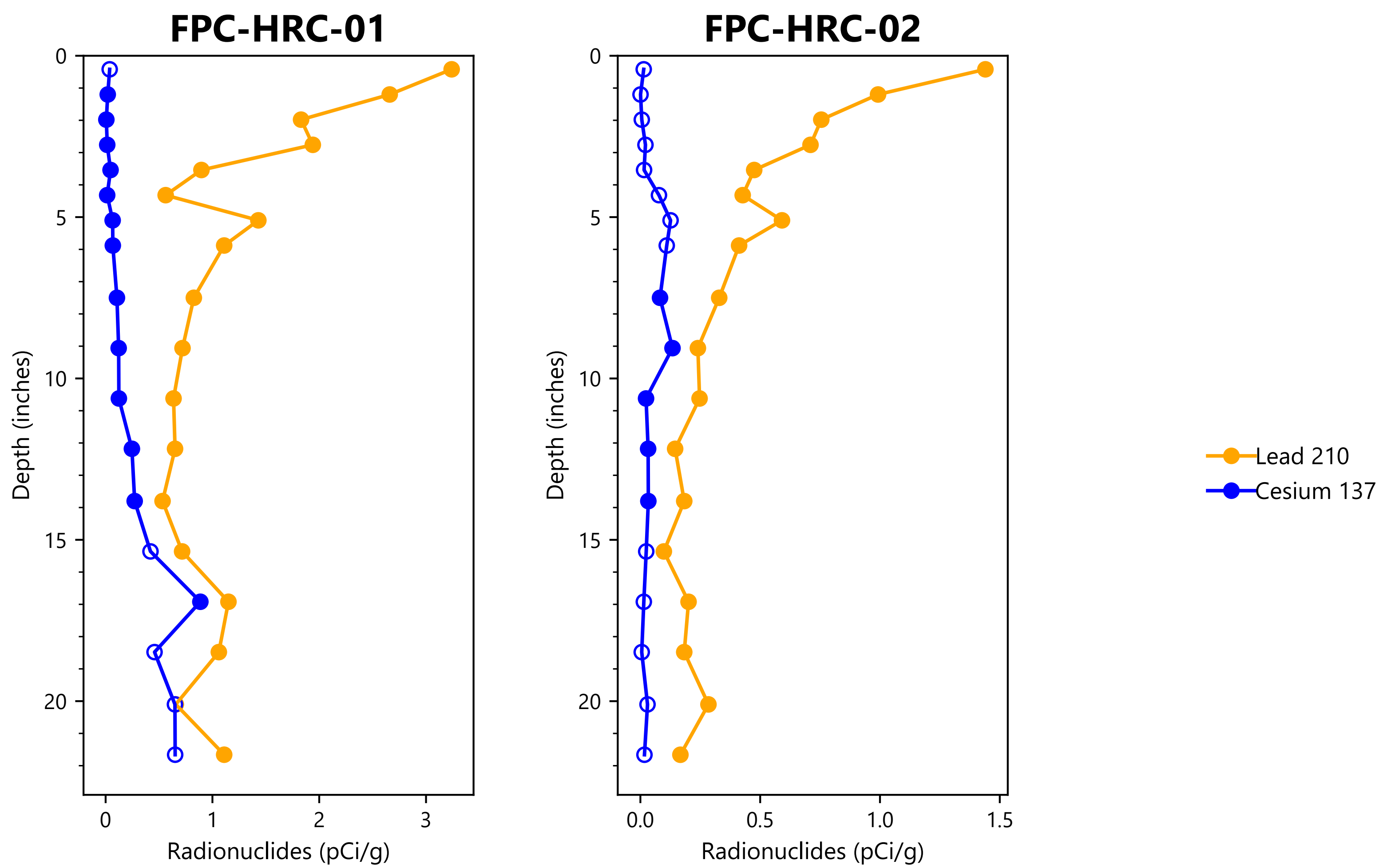
Notes: Field duplicates are not included and results are plotted as a solid vertical line from the start depth to the end depth.

Publish Date: 01/05/2023 12:15 PM | User: PT
File Path: C:\Users\ptapiawala\OneDrive - ANCHOR QEA\Documents\Projects\OXY-DUREZ\Python\HRC_plot.py

ANCHOR QEA

Figure 4-10
High-Resolution Core Data TEQ Depth Profile

Aquatic Assessment Report
Durez Inlet



Notes: Field duplicates are not included and results less than detection limit plotted at reporting limit with open circles.
Concentrations are plotted at the midpoint average between the start and end depths.

Publish Date: 01/05/2023 12:19 PM | User: PT
File Path: C:\Users\ptapiawala\OneDrive - ANCHOR QEA\Documents\Projects\OXY-DUREZ\Python\Radnuc_plot.py

ANCHOR QEA

Figure 4-11
Depth profiles of Radionuclides in High Resolution cores

Appendix A
Laboratory Analytical Data

(Analytical Reports Provided as Separate Files)

Table A-1
Analytical Results Summary - Porewater Bulk Sediment Samples

	Sample Location:	FPC-PWG-01	FPC-PWG-01	FPC-PWG-02	FPC-PWG-02	PCA-PWG-01	PCA-PWG-01	PCA-PWG-02	PCA-PWG-02	PCA-PWG-03	PCA-PWG-03	PCA-PWG-03
	Sample ID:	FPC-PWG-01	FPC-PWG-01	FPC-PWG-02	FPC-PWG-02	PCA-PWG-01	PCA-PWG-01	PCA-PWG-02	PCA-PWG-02	PCA-PWG-03	PCA-PWG-03-DUP04	PCA-PWG-03
	Sample Date:	11/3/2021	1/10/2022	11/3/2021	1/10/2022	11/3/2021	1/10/2022	11/3/2021	1/10/2022	11/3/2021	11/3/2021	1/10/2022
	Sample Depth:	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS
	matrix_code	Sediment	SM	Sediment	SM	Sediment	SM	Sediment	SM	Sediment	Sediment (Duplicate)	SM
Parameters	**Units**											
Dioxin Furans												
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg	-	122	-	542	-	525	-	1170	-	-	428
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	4850	-	17200 J	-	188000 J	-	108000 J-	-	57300 J	103000 J	-
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg	-	71.2	-	85.1 J	-	78.6	-	126	-	-	89.7
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	3670	-	5280	-	10500	-	11200 J-	-	12200	16100 J	-
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg	-	276	-	1000	-	869	-	1690	-	-	853
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	2770	-	9420 J	-	120000 J-	-	135000 J-	-	39000 J	84700 J	-
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg	-	35.8	-	63.8	-	47.1	-	74.5	-	-	52.9
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	511	-	684	-	3660 J	-	5280 J-	-	2900	4140	-
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg	-	7.62 J	-	26.3	-	29.4	-	60.7	-	-	32
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	89.5	-	329	-	3840 J-	-	3530 J-	-	1200	2240	-
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg	-	269	-	538	-	771	-	1310	-	-	776
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	726	-	2430	-	29200 J	-	29900 J-	-	12100 J	20700 J	-
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg	-	3.3 J	-	5.48 J	-	7.9 J	-	8.62 J	-	-	7.77 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	10.1	-	21.8	-	273 J-	-	350 J-	-	152	270	-
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg	-	146	-	251	-	292	-	371	-	-	201
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	131	-	448	-	5660	-	7170 J-	-	2010	4130	-
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg	-	11.1 J	-	16.3 J	-	14.9 J	-	24.6 J	-	-	16.6 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	24.8	-	50.4	-	584 J-	-	880 J-	-	291	654	-
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg	-	25 U	-	25 U	-	25 U	-	25 U	-	-	25 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	3.89 U	-	4.02 U	-	66.2 UJ	-	51.2 UJ	-	21.4 U	29.6 U	-
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg	-	4.31 J	-	6.97 J	-	7.93 J	-	14.3 J	-	-	12.3 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	12.1	-	26.6	-	331 J-	-	578 J-	-	202	391	-
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg	-	92.4	-	140	-	154	-	197	-	-	115
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	30.8	-	87.3	-	991 J-	-	1130 J-	-	436	800	-
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg	-	7.77 J	-	7.34 J	-	14.8 J	-	24.6 J	-	-	16.5 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	8.84	-	15.5	-	308 J-	-	505 J-	-	163	319	-
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg	-	19.6 J	-	30.9	-	40	-	66.1	-	-	37.4
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	49.3	-	159	-	1860 J-	-	2090 J-	-	659	1270	-
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg	-	67.1	-	96.4	-	170	-	239 J+	-	-	160
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	84.8	-	236	-	3560 J-	-	4320 J-	-	1320	2380	-
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg	-	11 J	-	12.8	-	31.9	-	44.2	-	-	28.3
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	10.7	-	20.4	-	273 J-	-	337 J-	-	160	310	-
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg	-	5 U	-	5 U	-	10.5	-	13.1	-	-	8.82 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	3.29	-	6.24	-	97.4	-	237 J-	-	67.8 J	152	-
Total heptachlorodibenzofuran (HpCDF)	pg	-	351 J	-	1170 J	-	1020 J	-	1950 J	-	-	1010 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	3460 J	-	11000 J	-	134000 J	-	150000 J	-	44200 J	94200 J	-

Table A-1
Analytical Results Summary - Porewater Bulk Sediment Samples

Sample Location:		FPC-PWG-01	FPC-PWG-01	FPC-PWG-02	FPC-PWG-02	PCA-PWG-01	PCA-PWG-01	PCA-PWG-02	PCA-PWG-02	PCA-PWG-03	PCA-PWG-03	PCA-PWG-03
Sample ID:		FPC-PWG-01	FPC-PWG-01	FPC-PWG-02	FPC-PWG-02	PCA-PWG-01	PCA-PWG-01	PCA-PWG-02	PCA-PWG-02	PCA-PWG-03	PCA-PWG-03-DUP04	PCA-PWG-03
Sample Date:		11/3/2021	1/10/2022	11/3/2021	1/10/2022	11/3/2021	1/10/2022	11/3/2021	1/10/2022	11/3/2021	11/3/2021	1/10/2022
Sample Depth:		(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS
matrix_code		Sediment	SM	Sediment	SM	Sediment	SM	Sediment	SM	Sediment	Sediment (Duplicate)	SM
Parameters	**Units**											
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg	-	65.2 J	-	110 J	-	84.7 J	-	130 J	-	-	95.7 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	925 J	-	1400 J	-	6390 J	-	9180 J	-	5040 J	7290 J	-
Total hexachlorodibenzofuran (HxCDF)	pg	-	832 J	-	1600 J	-	2180 J	-	3250 J	-	-	1950 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	1740 J	-	5590 J	-	68800 J	-	74500 J	-	26400 J	48000 J	-
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg	-	90.7 J	-	135 J	-	173 J	-	299 J	-	-	200 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	236 J	-	507 J	-	7620 J	-	12100 J	-	3970 J	8470 J	-
Total pentachlorodibenzofuran (PeCDF)	pg	-	1440 J	-	1920 J	-	3170 J	-	3920 J	-	-	2470 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	740 J	-	2070 J	-	28100 J	-	33600 J	-	11000 J	19700 J	-
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg	-	93.9 J	-	114 J	-	289 J	-	404 J	-	-	275 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	115 J	-	250 J	-	6140 J	-	9310 J	-	3190 J	6810 J	-
Total tetrachlorodibenzofuran (TCDF)	pg	-	944 J	-	1030 J	-	2410 J	-	2930 J	-	-	1700 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	381 J	-	901 J	-	13400 J	-	21400 J	-	6210 J	12300 J	-
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg	-	104 J	-	110 J	-	567 J	-	749 J	-	-	540 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	115 J	-	229 J	-	5870 J	-	13700 J	-	4260 J	8760 J	-
Misc												
% Soot (Average)	%	0.272 J	-	0.440 J	-	1.83 J	-	3.18 J	-	3.38 J	3.22 J	-
% Soot (Rep 1)	%	0.305 J	-	0.449 J	-	1.95 J	-	3.06 J	-	3.52 J	3.31 J	-
% Soot (Rep 2)	%	0.238 J	-	0.430 J	-	1.71 J	-	3.30 J	-	3.24 J	3.13 J	-
General Chemistry												
TOC averages	%	9.13 J	-	8.62 J	-	14.4 J	-	12.9 J	-	13.3 J	13.5 J	-
Total organic carbon (TOC)	%	9.78 J	-	8.91 J	-	13.4 J	-	13.8 J	-	14.0 J	13.6 J	-
Total organic carbon (TOC) (2)	%	8.48 J	-	8.34 J	-	15.4 J	-	11.9 J	-	12.5 J	13.4 J	-
Total solids	%	23.9	-	24.8	-	30.6	-	37.6	-	35.8	35.6	-

Notes:
J: Estimated concentration.
J-: Estimated concentration. Low bias.
J+: Estimated concentration. High bias.
U: Not detected at the associated reporting limit.
UJ: Not detected; associated reporting limit is estimated.
%: percent
BGS: below ground surface
ft: feet
ID: identification
pg/g: picogram per gram
pg: picogram
SM: solid matrix

Table A-1
Analytical Results Summary - Porewater Bulk Sediment Samples

Sample Location:		PCA-PWG-03	UPC-PWG-01	UPC-PWG-01	URA-PWG-01	URA-PWG-01
Sample ID:		PCA-PWG-03-DUP04	UPC-PWG-01	UPC-PWG-01	URA-PWG-01	URA-PWG-01
Sample Date:		1/10/2022	11/3/2021	1/10/2022	11/3/2021	1/10/2022
Sample Depth:		(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS
matrix_code		SM (Duplicate)	Sediment	SM	Sediment	SM
Parameters	**Units**					
Dioxin Furans						
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg	527	-	31.8 J	-	50 U
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	-	81.2	-	31.4	-
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg	99.2	-	83.7	-	71.5
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	-	225	-	513	-
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg	953	-	40.1	-	9.64 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	-	117 J	-	52.9	-
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg	62.1	-	12 J	-	15.9 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	-	27.6	-	74.3	-
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg	30.8	-	25 U	-	25 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	-	2.95 J	-	2.15 J	-
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg	800	-	15.5 J	-	25 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	-	33.7	-	11.9	-
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg	8.2 J	-	25 U	-	25 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	-	1.11 J	-	0.691 J	-
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg	252	-	11.4 J	-	25 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	-	8.19	-	4.47	-
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg	19.1 J	-	25 U	-	25 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	-	2.48 J	-	4.17	-
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg	25 U	-	25 U	-	25 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	-	2.46 U	-	2.48 U	-
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg	11.2 J	-	25 U	-	25 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	-	1.52 J	-	2.24 J	-
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg	144	-	25 U	-	25 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	-	3.24	-	1.26 J	-
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg	18 J	-	25 U	-	25 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	-	1.28 J	-	0.603 J	-
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg	38.5	-	25 U	-	25 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	-	6.35	-	3.11	-
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg	164	-	4.08 J	-	25 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	-	9.21	-	4.35	-
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg	31.9	-	5.1 U	-	5 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	-	1.65	-	1.66	-
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg	9 J	-	5 U	-	5 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	-	0.37 J	-	0.491 J	-
Total heptachlorodibenzofuran (HpCDF)	pg	1120 J	-	48.1 J	-	18.3 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	-	144 J	-	72.2 J	-

Table A-1
Analytical Results Summary - Porewater Bulk Sediment Samples

Sample Location:		PCA-PWG-03	UPC-PWG-01	UPC-PWG-01	URA-PWG-01	URA-PWG-01
Sample ID:		PCA-PWG-03-DUP04	UPC-PWG-01	UPC-PWG-01	URA-PWG-01	URA-PWG-01
Sample Date:		1/10/2022	11/3/2021	1/10/2022	11/3/2021	1/10/2022
Sample Depth:		(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS
matrix_code		SM (Duplicate)	Sediment	SM	Sediment	SM
Parameters	**Units**					
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg	107 J	-	25.7 J	-	37.6 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	-	52.2 J	-	155 J	-
Total hexachlorodibenzofuran (HxCDF)	pg	2070 J	-	69.3 J	-	14.8 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	-	142 J	-	55.7 J	-
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg	211 J	-	25 U	-	25 U
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	-	28.3 J	-	42 J	-
Total pentachlorodibenzofuran (PeCDF)	pg	2880 J	-	288 J	-	118 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	-	122 J	-	41 J	-
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg	279 J	-	25 U	-	25 U
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	-	14.9 J	-	9.11 J	-
Total tetrachlorodibenzofuran (TCDF)	pg	2110 J	-	101 J	-	65.7 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	-	50.4 J	-	40.2 J	-
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg	512 J	-	5 U	-	5 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	-	11 J	-	7.09 J	-
Misc						
% Soot (Average)	%	-	2.64 J	-	0.668 J	-
% Soot (Rep 1)	%	-	2.64 J	-	0.545 J	-
% Soot (Rep 2)	%	-	2.63 J	-	0.790 J	-
General Chemistry						
TOC averages	%	-	6.21 J	-	1.86 J	-
Total organic carbon (TOC)	%	-	5.87 J	-	1.84 J	-
Total organic carbon (TOC) (2)	%	-	6.55 J	-	1.88 J	-
Total solids	%	-	81.2	-	67.7	-

Notes:
J: Estimated concentration.
J-: Estimated concentration. Low bias.
J+: Estimated concentration. High bias.
U: Not detected at the associated reporting limit.
UJ: Not detected; associated reporting limit is estimated.
%: percent
BGS: below ground surface
ft: feet
ID: identification
pg/g: picogram per gram
pg: picogram
SM: solid matrix

Table A-2

Analytical Results Summary - High Resolution Sediment Samples

Sample Location:		**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**
Sample ID:		**FPC-HRC-01-01**	**FPC-HRC-01-02**	**FPC-HRC-01-03**	**FPC-HRC-01-04**	**FPC-HRC-01-05**	**FPC-HRC-01-06**	**FPC-HRC-01-07**	**FPC-HRC-01-08**	**FPC-HRC-01-09**	**FPC-HRC-01-10**	**FPC-HRC-01-10**	**FPC-HRC-01-12**	**FPC-HRC-01-11**
Sample Date:		**10/19/2021**	**10/19/2021**	**10/19/2021**	**10/19/2021**	**10/19/2021**	**10/19/2021**	**10/19/2021**	**10/19/2021**	**12/13/2021**	**10/19/2021**	**12/13/2021**	**10/19/2021**	**12/13/2021**
Sample Depth:		**(0-0.07) ft BGS**	**(0.07-0.13) ft BGS**	**(0.13-0.2) ft BGS**	**(0.2-0.26) ft BGS**	**(0.26-0.33) ft BGS**	**(0.33-0.39) ft BGS**	**(0.39-0.46) ft BGS**	**(0.46-0.52) ft BGS**	**(0.52-0.59) ft BGS**	**(0.59-0.66) ft BGS**	**(0.59-0.66) ft BGS**	**(0.72-0.79) ft BGS**	**(0.66-0.72) ft BGS**
matrix_code		**Sediment**	**Sediment**	**Sediment**	**Sediment**	**Sediment**	**Sediment**	**Sediment**	**Sediment**	**Sediment**	**Sediment**	**Sediment**	**Sediment**	**Sediment**
Parameters	**Units**													
Dioxin Furans														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	2670	6390	13200 J	14600 J	14000 J	32100 J	23700 J	17600 J	25400 J	-	28500 J	-	31800 J
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	2120	4060	3330	1970	1760	3350	2930	2320	2890	-	3620	-	3300
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	1780	4390	8620 J	8540 J	8840 J	21800 J	14800 J	10600 J	13900 J	-	15500 J	-	17900 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	276	581	547	420	378	716	586	451	574	-	693	-	721
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	61.3	135	302	323	326	737	553	418	505	-	606	-	715
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	451	994	2200	2380	2330	5420 J	3950	2790	3940	-	4490	-	5180 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	8.92	16.4	30.4	30.5	25.7	49.1	40.8	29	36.3	-	41.9	-	47.5
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	89.5	212	481	520	542	1260	927	665	817	-	932	-	1050
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	18.6	35.2	56.2	51.9	47.6	93.3	77.6	54.8	72.9	-	82.1	-	90
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	4.22 U	5 U	8 U	5 U	4.69 U	7.06 U	6.31 U	5.85 U	2.48 U	-	2.47 U	-	2.43 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	10.5	18.5	31	32	26.3	53.1	44	30.3	34.9	-	41.2	-	45.2
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	18 J	47.3	118	131	143	318	260	173	215	-	238	-	267
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	6.23 J	14.3	22.9	25.5	22.3	38.7	32.8	23.3	28.8	-	31.6	-	36.7
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	33.5	69	156	173	156	339	252	191	230	-	274	-	312
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	57.6	112	250	309	320	609	485	340	457	-	458 J+	-	604
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	8.89	13.7 J	27.3	32.6	29.8	46.7 J	42.5	30.1	39.1	-	49.5	-	55.5
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	2.19 J	5.8	8.95	10.3	8.5	15.2	13.3	8.46	8.99	-	11.8	-	13.4
Total heptachlorodibenzofuran (HpCDF)	pg/g	2210 J	5310 J	10100 J	9870 J	10100 J	24800 J	17000 J	12200 J	15900 J	-	17900 J	-	20700 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	513 J	1080 J	990 J	773 J	692 J	1290 J	1060 J	823 J	1070 J	-	1310 J	-	1380 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	1120 J	2540 J	5500 J	5760 J	5740 J	13300 J	9560 J	6720 J	9290 J	-	10600 J	-	12200 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	199 J	352 J	663 J	620 J	555 J	1080 J	892 J	619 J	774 J	-	958 J	-	1010 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	521 J	1070 J	2400 J	2700 J	2790 J	5670 J	4420 J	2960 J	3880 J	-	4670 J	-	5380 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	95.5 J	182 J	365 J	366 J	322 J	629 J	543 J	354 J	455 J	-	687 J	-	605 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	283 J	527 J	1120 J	1420 J	1370 J	2750 J	2270 J	1500 J	2020 J	-	2410 J	-	2930 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	80.6 J	165 J	344 J	342 J	333 J	640 J	526 J	355 J	385 J	-	465 J	-	494 J
Misc														
% Soot (Average)	%	0.282 J	0.372 J	0.594 J	0.636 J	1.02 J	1.20 J	1.77 J	2.18 J	1.41	-	0.989	-	0.684
% Soot (Rep 1)	%	0.257 J	0.370 J	0.616 J	0.633 J	1.30 J	1.15 J	1.64 J	2.07 J	1.29	-	1.06	-	0.535
% Soot (Rep 2)	%	0.307 J	0.375 J	0.571 J	0.640 J	0.735 J	1.25 J	1.90 J	2.30 J	1.54	-	0.922	-	0.832
Radiochemistry														
Cesium-137	pCi/g	0.0758 U +/- 0.04708	0.0396 U +/- 0.05119	0.0134 U +/- 0.03671	0.0299 U +/- 0.03048	0.0461 +/- 0.02766	0.029 U +/- 0.05097	0.0658 +/- 0.03346	0.0673 +/- 0.03089	-	0.106 +/- 0.04583	-	0.122 +/- 0.0524	-
Lead-210	pCi/g	3.24 +/- 0.0969	2.66 +/- 0.101	1.83 +/- 0.0825	1.94 +/- 0.0838	0.897 +/- 0.0661	0.562 +/- 0.0624	1.43 +/- 0.0822	1.11 +/- 0.0696	-	0.826 +/- 0.0645	-	0.72 +/- 0.0646	-
General Chemistry														
TOC averages	%	6.62 J	8.17 J	6.44 J	3.31 J	3.19 J	4.89 J	3.79 J	3.76 J	3.45	-	3.36	-	3.12
Total organic carbon (TOC)	%	6.89 J	7.04 J	6.76 J	2.94 J	3.45 J	4.79 J	3.49 J	3.68 J	3.49	-	3.82	-	3.17
Total organic carbon (TOC) (2)	%	6.35 J	9.30 J	6.12 J	3.68 J	2.92 J	5.00 J	4.10 J	3.84 J	3.42	-	2.91	-	3.07
Total solids	%	25.3	30.6	35.2	54.0	55.4	52.0	51.9	61.5	56.6	-	61.2	-	67.7

Notes:

J: Estimated concentration.

J-: Estimated concentration. Low bias.

J+: Estimated concentration. High bias.

U: Not detected at the associated reporting limit.

UJ: Not detected; associated reporting limit is estimated.

%: percent

BGS: below ground surface

ft: feet

ID: identification

pCi/g: picocuries per gram

pg/g: picogram per gram

Table A-2

Analytical Results Summary - High Resolution Sediment Samples

Sample Location:		**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**
Sample ID:		**FPC-HRC-01-12**	**FPC-HRC-01-13**	**FPC-HRC-01-14**	**FPC-HRC-01-14**	**FPC-HRC-01-15**	**FPC-HRC-01-16**	**FPC-HRC-01-16**	**FPC-HRC-01-17**	**FPC-HRC-01-17-DUP**	**FPC-HRC-01-18**	**FPC-HRC-01-20**	**FPC-HRC-01-22**	**FPC-HRC-01-24**
Sample Date:		**12/13/2021**	**12/13/2021**	**10/19/2021**	**12/13/2021**	**12/13/2021**	**10/19/2021**	**12/13/2021**	**12/13/2021**	**12/13/2021**	**10/19/2021**	**10/19/2021**	**10/19/2021**	**10/19/2021**
Sample Depth:		**(0.72-0.79) ft BGS**	**(0.79-0.85) ft BGS**	**(0.85-0.92) ft BGS**	**(0.85-0.92) ft BGS**	**(0.92-0.98) ft BGS**	**(0.98-1.05) ft BGS**	**(0.98-1.05) ft BGS**	**(1.05-1.12) ft BGS**	**(1.05-1.12) ft BGS**	**(1.12-1.18) ft BGS**	**(1.25-1.31) ft BGS**	**(1.38-1.44) ft BGS**	**(1.51-1.57) ft BGS**
matrix_code		**Sediment**	**Sediment**	**Sediment**	**Sediment**	**Sediment**	**Sediment**	**Sediment**	**Sediment**	**Sediment (Duplicate)**	**Sediment**	**Sediment**	**Sediment**	**Sediment**
Parameters	**Units**													
Dioxin Furans														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	48700 J	59700 J	-	120000 J	85300 J	-	72900 J	487000 J	495000 J	-	-	-	-
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	4710	4460	-	9950 J	12600 J	-	7390	38600 J	28600 J	-	-	-	-
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	26700 J	32100 J	-	73000 J	53000 J	-	43400 J	282000 J	264000 J	-	-	-	-
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	1010	1120	-	2300	2680	-	2590	9540 J	7650 J	-	-	-	-
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	1080	1310	-	2700	1990	-	1770	13100 J	12600 J	-	-	-	-
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	7640 J	9530 J	-	19800 J	14700 J	-	12900 J	90900 J	84600 J	-	-	-	-
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	65.6	77.2	-	159	174	-	215	580	516	-	-	-	-
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1540	1800	-	3650	2880	-	2450	16700 J	15500 J	-	-	-	-
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	130	160	-	329	314	-	361	1350	1310	-	-	-	-
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	2.43 U	2.41 U	-	5.61 U	2.49 U	-	2.82 U	11.2 U	11.3 U	-	-	-	-
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	60.6	73.3	-	156	170	-	198	604	492	-	-	-	-
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	370	367	-	702	645	-	563	2720	2370	-	-	-	-
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	50.3	56.6	-	145	124	-	150	555 J	460 J	-	-	-	-
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	472	492	-	1300	868	-	851	5980 J	6400 J	-	-	-	-
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	870	1040	-	2440	1630	-	1450	11400 J	10700 J	-	-	-	-
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	68.4	77.6	-	218	175	-	176	827 J	748	-	-	-	-
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	17.1	20.1	-	57.3	43.6	-	45.9	176	191 J	-	-	-	-
Total heptachlorodibenzofuran (HpCDF)	pg/g	30700 J	37000 J	-	83000 J	60900 J	-	50200 J	329000 J	308000 J	-	-	-	-
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	1900 J	2030 J	-	4180 J	5010 J	-	4600 J	16800 J	13500 J	-	-	-	-
Total hexachlorodibenzofuran (HxCDF)	pg/g	18000 J	22000 J	-	44200 J	35100 J	-	31500 J	208000 J	195000 J	-	-	-	-
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1400 J	1770 J	-	3660 J	4040 J	-	5220 J	16200 J	13400 J	-	-	-	-
Total pentachlorodibenzofuran (PeCDF)	pg/g	8000 J	9400 J	-	20100 J	15600 J	-	15000 J	97200 J	90800 J	-	-	-	-
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	813 J	976 J	-	2260 J	2170 J	-	3220 J	10600 J	8560 J	-	-	-	-
Total tetrachlorodibenzofuran (TCDF)	pg/g	4060 J	4800 J	-	12100 J	8410 J	-	7620 J	60000 J	50500 J	-	-	-	-
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	701 J	782 J	-	2010 J	1790 J	-	2280 J	8460 J	8110 J	-	-	-	-
Misc														
% Soot (Average)	%	0.596	0.490	-	1.10	0.940	-	0.402	1.52	1.25	-	-	-	-
% Soot (Rep 1)	%	0.724	0.416	-	1.13	0.835	-	0.429	1.46	1.38	-	-	-	-
% Soot (Rep 2)	%	0.467	0.563	-	1.06	1.04	-	0.375	1.57	1.12	-	-	-	-
Radiochemistry														
Cesium-137	pCi/g	-	-	0.124 +/- 0.05798	-	-	0.246 +/- 0.1184	-	-	-	0.272 +/- 0.1107	0.42 +/- 0.1144	0.887 +/- 0.1062	0.458 +/- 0.1752
Lead-210	pCi/g	-	-	0.636 +/- 0.0709	-	-	0.65 +/- 0.0666	-	-	-	0.533 +/- 0.0651	0.716 +/- 0.068	1.15 +/- 0.0668	1.06 +/- 0.0649
General Chemistry														
TOC averages	%	3.35	2.79	-	2.51	3.45	-	1.64	4.87	5.40	-	-	-	-
Total organic carbon (TOC)	%	3.33	2.87	-	2.42	3.22	-	1.55	4.65	5.12	-	-	-	-
Total organic carbon (TOC) (2)	%	3.38	2.72	-	2.60	3.67	-	1.74	5.09	5.67	-	-	-	-
Total solids	%	58.6	64.0	-	69.8	63.9	-	75.1	54.6	53.2	-	-	-	-

Notes:

J: Estimated concentration.

J-: Estimated concentration. Low bias.

J+: Estimated concentration. High bias.

U: Not detected at the associated reporting limit.

UJ: Not detected; associated reporting limit is estimated.

%: percent

BGS: below ground surface

ft: feet

ID: identification

pCi/g: picocuries per gram

pg/g: picogram per gram

Table A-2

Analytical Results Summary - High Resolution Sediment Samples

Sample Location:		FPC-HRC-01	FPC-HRC-01	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02
Sample ID:		FPC-HRC-01-26	FPC-HRC-01-28	FPC-HRC-02-01	FPC-HRC-02-01	FPC-HRC-02-02	FPC-HRC-02-03	FPC-HRC-02-02	FPC-HRC-02-03	FPC-HRC-02-04	FPC-HRC-02-04	FPC-HRC-02-05	FPC-HRC-02-06	FPC-HRC-01-05-DUP0
Sample Date:		10/19/2021	10/19/2021	10/18/2021	10/19/2021	10/18/2021	10/18/2021	10/19/2021	10/19/2021	10/18/2021	10/19/2021	10/18/2021	10/18/2021	10/19/2021
Sample Depth:		(1.64-1.71) ft BGS	(1.77-1.84) ft BGS	(0-0.07) ft BGS	(0-0.07) ft BGS	(0.07-0.13) ft BGS	(0.13-0.2) ft BGS	(0.07-0.13) ft BGS	(0.13-0.2) ft BGS	(0.2-0.26) ft BGS	(0.2-0.26) ft BGS	(0.26-0.33) ft BGS	(0.33-0.39) ft BGS	(0.26-0.33) ft BGS
matrix_code		Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment (Duplicate)
Parameters	**Units**													
Dioxin Furans														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	-	-	-	4340	-	-	3180	11200 J	-	5450	-	-	-
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	-	-	-	14000 J	-	-	855	808	-	816	-	-	-
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	-	-	-	2420	-	-	2070	6240 J	-	3390	-	-	-
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	-	-	-	1270	-	-	158	186	-	233	-	-	-
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	-	-	-	78.9	-	-	76.5	279	-	119	-	-	-
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	-	-	-	516	-	-	619	1800	-	976	-	-	-
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	-	-	-	11.6	-	-	8.54	13	-	15.5	-	-	-
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	-	-	-	107	-	-	128	322	-	198	-	-	-
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	-	-	-	32.8	-	-	16.7	30	-	31.9	-	-	-
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	-	-	-	3.06 U	-	-	3.66 U	4.66 U	-	3.01 U	-	-	-
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	-	-	-	16.4	-	-	10.9	13.4	-	20.5	-	-	-
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	-	-	-	24.4	-	-	33.4	57.2	-	58	-	-	-
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	-	-	-	8.92	-	-	7.55	9.71	-	14.3	-	-	-
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	-	-	-	42.6	-	-	46.9	123	-	69.7	-	-	-
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	-	-	-	62.6	-	-	90.8	222	-	136	-	-	-
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	-	-	-	8.22	-	-	11.2	13.4	-	14.7	-	-	-
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	-	-	-	2.91	-	-	3.9	3.8 J	-	5.29	-	-	-
Total heptachlorodibenzofuran (HpCDF)	pg/g	-	-	-	3410 J	-	-	2460 J	7290 J	-	3920 J	-	-	-
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	-	-	-	2150 J	-	-	281 J	334 J	-	414 J	-	-	-
Total hexachlorodibenzofuran (HxCDF)	pg/g	-	-	-	1370 J	-	-	1560 J	4240 J	-	2340 J	-	-	-
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	-	-	-	256 J	-	-	189 J	301 J	-	452 J	-	-	-
Total pentachlorodibenzofuran (PeCDF)	pg/g	-	-	-	577 J	-	-	808 J	1830 J	-	1250 J	-	-	-
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	-	-	-	105 J	-	-	102 J	167 J	-	304 J	-	-	-
Total tetrachlorodibenzofuran (TCDF)	pg/g	-	-	-	317 J	-	-	476 J	840 J	-	641 J	-	-	-
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	-	-	-	93.7 J	-	-	106 J	146 J	-	273 J	-	-	-
Misc														
% Soot (Average)	%	-	-	-	0.332 J	-	-	0.468 J	0.462 J	-	0.274 J	-	-	0.590 J
% Soot (Rep 1)	%	-	-	-	0.361 J	-	-	0.412 J	0.477 J	-	0.132 J	-	-	0.818 J
% Soot (Rep 2)	%	-	-	-	0.303 J	-	-	0.523 J	0.446 J	-	0.416 J	-	-	0.361 J
Radiochemistry														
Cesium-137	pCi/g	0.649 +/- 0.3056	0.651 +/- 0.1597	0.0278 U +/- 0.0483	-	0.00114 U +/- 0.03689	0.0117 U +/- 0.02194	-	-	0.04224 U +/- 0.02567	-	0.0308 U +/- 0.05602	0.0775 +/- 0.02722	-
Lead-210	pCi/g	0.657 +/- 0.0616	1.11 +/- 0.0732	1.44 +/- 0.0796	-	0.992 +/- 0.0708	0.755 +/- 0.0636	-	-	0.71 +/- 0.0586	-	0.475 +/- 0.0555	0.427 +/- 0.0564	-
General Chemistry														
TOC averages	%	-	-	-	3.43 J	-	-	1.65 J	1.48 J	-	1.70 J	-	-	2.02 J
Total organic carbon (TOC)	%	-	-	-	3.72 J	-	-	1.78 J	1.70 J	-	1.65 J	-	-	1.94 J
Total organic carbon (TOC) (2)	%	-	-	-	3.14 J	-	-	1.53 J	1.25 J	-	1.75 J	-	-	2.11 J
Total solids	%	-	-	-	47.1	-	-	66.6	68.9	-	68.5	-	-	73.9

Notes:

J: Estimated concentration.

J-: Estimated concentration. Low bias.

J+: Estimated concentration. High bias.

U: Not detected at the associated reporting limit.

UJ: Not detected; associated reporting limit is estimated.

%: percent

BGS: below ground surface

ft: feet

ID: identification

pCi/g: picocuries per gram

pg/g: picogram per gram

Table A-2

Analytical Results Summary - High Resolution Sediment Samples

Sample Location:		FPC-HRC-02	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02
Sample ID:		FPC-HRC-02-05	FPC-HRC-02-05-DUP0	FPC-HRC-02-06	FPC-HRC-02-07	FPC-HRC-02-07	FPC-HRC-02-08	FPC-HRC-02-08	FPC-HRC-02-09	FPC-HRC-02-10	FPC-HRC-02-10	FPC-HRC-02-12	FPC-HRC-02-11	FPC-HRC-02-12
Sample Date:		10/19/2021	10/19/2021	10/19/2021	10/18/2021	10/19/2021	10/18/2021	10/19/2021	12/13/2021	10/18/2021	12/13/2021	10/18/2021	12/13/2021	12/13/2021
Sample Depth:		(0.26-0.33) ft BGS	(0.26-0.33) ft BGS	(0.33-0.39) ft BGS	(0.39-0.46) ft BGS	(0.39-0.46) ft BGS	(0.46-0.52) ft BGS	(0.46-0.52) ft BGS	(0.52-0.59) ft BGS	(0.59-0.66) ft BGS	(0.59-0.66) ft BGS	(0.72-0.79) ft BGS	(0.66-0.72) ft BGS	(0.72-0.79) ft BGS
matrix_code		Sediment	Sediment (Duplicate)	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment
Parameters	**Units**													
Dioxin Furans														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	6450	7850	7820	-	6930	-	45700 J	37600 J	-	10400 J	-	7320	14600 J
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	1330	936	1360	-	866	-	3890	4470	-	914	-	683	1290
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	4130	5170 J	5000 J	-	4840	-	26600 J	23500 J	-	6330 J	-	4100	8200 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	240	251 J	270	-	195	-	802	882	-	200	-	136	242
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	150	180	201	-	194	-	1010	840	-	217	-	160	305
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1140	1430	1500	-	1380	-	7370 J	6480 J	-	1750	-	1120	2240
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	12.9	15.1	15.3	-	11.9	-	43.6	37.8	-	9.31	-	6.35	10.8
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	258	317	328	-	312	-	1640	1460	-	355	-	232	456
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	26.3	30.1	32.3	-	27	-	107	99.3	-	25	-	18.2	31.4
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	3.54 U	4.22 U	4.8 U	-	3.86 U	-	7.97 U	2.39 U	-	2.47 U	-	2.4 U	2.46 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	14.1	18.1	17.8	-	14.3	-	52.6	47.7	-	11.1	-	7.03	13.5
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	75.1	86.8	92.7	-	85.9	-	360	333	-	69.9	-	44.4	81.1
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	12.3	13.2	14.3	-	12.6	-	43.1	33.4	-	8.86	-	5.56	8.82
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	84.8	105	117	-	111	-	647	540	-	125	-	78	136
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	161	195	207	-	195	-	899	832	-	239	-	158	308
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	14.8	19.8	17.5	-	18.7	-	63.2	66.6	-	17	-	12.7	47.4
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	4.31	5.52	5.33	-	5.19	-	16.6	11.9	-	3.27	-	2.47	4.17
Total heptachlorodibenzofuran (HpCDF)	pg/g	4830 J	5930 J	5870 J	-	5610 J	-	30500 J	27000 J	-	7240 J	-	4740 J	9410 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	437 J	457 J	548 J	-	363 J	-	1560 J	1760 J	-	415 J	-	270 J	483 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	2830 J	3520 J	3680 J	-	3470 J	-	18300 J	16700 J	-	4460 J	-	2850 J	5570 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	292 J	376 J	391 J	-	300 J	-	1120 J	1050 J	-	255 J	-	175 J	291 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	1430 J	1750 J	1850 J	-	1870 J	-	8040 J	7500 J	-	2110 J	-	1400 J	2750 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	175 J	217 J	229 J	-	189 J	-	691 J	598 J	-	147 J	-	100 J	148 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	793 J	950 J	959 J	-	1150 J	-	3840 J	3800 J	-	1040 J	-	795 J	1530 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	172 J	198 J	202 J	-	179 J	-	721 J	449 J	-	115 J	-	88.7 J	145 J
Misc														
% Soot (Average)	%	0.304 J	-	0.647 J	-	0.664 J	-	0.504 J	0.674	-	0.190	-	0.736	1.11
% Soot (Rep 1)	%	0.235 J	-	0.782 J	-	0.637 J	-	0.933 J	0.623	-	0.215	-	0.420	1.16
% Soot (Rep 2)	%	0.372 J	-	0.512 J	-	0.690 J	-	0.075 J	0.725	-	0.165	-	1.05	1.06
Radiochemistry														
Cesium-137	pCi/g	-	-	-	0.126 +/- 0.02429	-	0.11 +/- 0.0416	-	-	0.0819 +/- 0.04602	-	0.134 +/- 0.05204	-	-
Lead-210	pCi/g	-	-	-	0.591 +/- 0.0556	-	0.412 +/- 0.0586	-	-	0.329 +/- 0.0467	-	0.24 +/- 0.0504	-	-
General Chemistry														
TOC averages	%	2.74 J	-	3.01 J	-	1.53 J	-	2.67 J	1.94	-	1.25	-	1.62	2.71
Total organic carbon (TOC)	%	3.68 J	-	2.89 J	-	1.57 J	-	2.58 J	1.81	-	1.36	-	1.69	2.54
Total organic carbon (TOC) (2)	%	1.80 J	-	3.14 J	-	1.50 J	-	2.76 J	2.07	-	1.14	-	1.54	2.88
Total solids	%	73.1	-	64.6	-	80.0	-	73.9	74.8	-	75.9	-	76.4	74.4

Notes:
J: Estimated concentration.
J-: Estimated concentration. Low bias.
J+: Estimated concentration. High bias.
U: Not detected at the associated reporting limit.
UJ: Not detected; associated reporting limit is estimated.
%: percent
BGS: below ground surface
ft: feet
ID: identification
pCi/g: picocuries per gram
pg/g: picogram per gram

Table A-2

Analytical Results Summary - High Resolution Sediment Samples

Sample Location:		FPC-HRC-02	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02
Sample ID:		FPC-HRC-02-13	FPC-HRC-02-14	FPC-HRC-02-14	FPC-HRC-02-15	FPC-HRC-02-16	FPC-HRC-02-16	FPC-HRC-02-17	FPC-HRC-02-17-DUP	FPC-HRC-02-18	FPC-HRC-02-20	FPC-HRC-02-22	FPC-HRC-02-24	FPC-HRC-02-26
Sample Date:		12/13/2021	10/18/2021	12/13/2021	12/13/2021	10/18/2021	12/13/2021	12/13/2021	12/13/2021	10/18/2021	10/18/2021	10/18/2021	10/18/2021	10/18/2021
Sample Depth:		(0.79-0.85) ft BGS	(0.85-0.92) ft BGS	(0.85-0.92) ft BGS	(0.92-0.98) ft BGS	(0.98-1.05) ft BGS	(0.98-1.05) ft BGS	(1.05-1.12) ft BGS	(1.05-1.12) ft BGS	(1.12-1.18) ft BGS	(1.25-1.31) ft BGS	(1.38-1.44) ft BGS	(1.51-1.57) ft BGS	(1.64-1.71) ft BGS
matrix_code		Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment (Duplicate)	Sediment	Sediment	Sediment	Sediment	Sediment
Parameters	**Units**													
Dioxin Furans														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	23000 J	-	102000 J	53600 J	-	34600 J	1120	1280	-	-	-	-	-
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	3570	-	7020	3780	-	3810	368	548	-	-	-	-	-
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	13000 J	-	47900 J	28000 J	-	23500 J	808	1000	-	-	-	-	-
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	548	-	1420	838	-	1530	103	169	-	-	-	-	-
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	505	-	2470	1160	-	729	24.8	32.4	-	-	-	-	-
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	3850	-	14900 J	9160 J	-	6970 J	221	297	-	-	-	-	-
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	22.6	-	66.9	60.6	-	161	9.44	16.2	-	-	-	-	-
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	789	-	3130 J	1630	-	1220	45.9	59	-	-	-	-	-
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	63.3	-	195 J	151	-	255	16.2	25.9	-	-	-	-	-
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	2.48 U	-	39.9 U	6.88 U	-	6.99 U	2.47 U	2.47 U	-	-	-	-	-
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	29.7	-	69.1	71.4	-	177	10.6	18.3	-	-	-	-	-
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	155	-	418	312	-	367	16.9	26.6	-	-	-	-	-
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	19.2	-	58.5	56.7	-	140	8.76	15.3	-	-	-	-	-
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	249	-	970 J	508	-	347	14.7	20.3	-	-	-	-	-
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	510	-	1590 J+	1100 J+	-	650 J+	24.5 J+	34.1 J+	-	-	-	-	-
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	31.7	-	159	93.7	-	141	8.2	12.1	-	-	-	-	-
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	6.23 J	-	33.8	28.2	-	51.7	3.55	5.1	-	-	-	-	-
Total heptachlorodibenzofuran (HpCDF)	pg/g	15000 J	-	55900 J	31700 J	-	25900 J	895 J	1120 J	-	-	-	-	-
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	1150 J	-	2770 J	1520 J	-	2550 J	176 J	275 J	-	-	-	-	-
Total hexachlorodibenzofuran (HxCDF)	pg/g	9300 J	-	33800 J	20100 J	-	15100 J	517 J	689 J	-	-	-	-	-
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	709 J	-	1850 J	1670 J	-	3770 J	231 J	394 J	-	-	-	-	-
Total pentachlorodibenzofuran (PeCDF)	pg/g	4430 J	-	12600 J	9420 J	-	6670 J	272 J	399 J	-	-	-	-	-
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	417 J	-	1040 J	1070 J	-	2470 J	161 J	272 J	-	-	-	-	-
Total tetrachlorodibenzofuran (TCDF)	pg/g	2320 J	-	7540 J	6170 J	-	5090 J	253 J	435 J	-	-	-	-	-
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	363 J	-	1040 J	1180 J	-	2860 J	281 J	410 J	-	-	-	-	-
Misc														
% Soot (Average)	%	0.760	-	1.09	0.582	-	0.356	0.164	0.255	-	-	-	-	-
% Soot (Rep 1)	%	0.814	-	1.22	0.580	-	0.367	0.139	0.416	-	-	-	-	-
% Soot (Rep 2)	%	0.706	-	0.959	0.583	-	0.346	0.188	0.094	-	-	-	-	-
Radiochemistry														
Cesium-137	pCi/g	-	0.0473 U +/- 0.04545	-	-	0.06459 U +/- 0.03928	-	-	-	0.06631 U +/- 0.04154	0.04867 U +/- 0.02955	0.0286 U +/- 0.02756	0.0112 U +/- 0.0185	0.0595 U +/- 0.05534
Lead-210	pCi/g	-	0.247 +/- 0.0577	-	-	0.145 +/- 0.0522	-	-	-	0.183 +/- 0.0509	0.0979 +/- 0.0496	0.201 +/- 0.0447	0.183 +/- 0.0466	0.284 +/- 0.0495
General Chemistry														
TOC averages	%	2.57	-	3.36	1.88	-	1.76	1.30	0.962	-	-	-	-	-
Total organic carbon (TOC)	%	2.51	-	3.44	1.68	-	1.88	1.26	0.932	-	-	-	-	-
Total organic carbon (TOC) (2)	%	2.64	-	3.28	2.08	-	1.64	1.34	0.993	-	-	-	-	-
Total solids	%	72.5	-	68.3	75.9	-	78.4	78.8	80.1	-	-	-	-	-

Notes:
J: Estimated concentration.
J-: Estimated concentration. Low bias.
J+: Estimated concentration. High bias.
U: Not detected at the associated reporting limit.
UJ: Not detected; associated reporting limit is estimated.
%: percent
BGS: below ground surface
ft: feet
ID: identification
pCi/g: picocuries per gram
pg/g: picogram per gram

Table A-2

Analytical Results Summary - High Resolution Sediment Samples

Sample Location:		FPC-HRC-02	PCA-HRC-01	PCA-HRC-01	PCA-HRC-01	PCA-HRC-01	PCA-HRC-01	PCA-HRC-01	PCA-HRC-01	PCA-HRC-01	PCA-HRC-01	PCA-HRC-01	PCA-HRC-01	PCA-HRC-02
Sample ID:		FPC-HRC-02-28	PCA-HRC-01-01	PCA-HRC-01-02	PCA-HRC-01-03	PCA-HRC-01-04	PCA-HRC-01-05	PCA-HRC-01-06	PCA-HRC-01-07	PCA-HRC-01-08	PCA-HRC-01-09	PCA-HRC-01-09-DUP	PCA-HRC-01-10	PCA-HRC-02-01
Sample Date:		10/18/2021	10/21/2021	10/21/2021	10/21/2021	10/21/2021	10/21/2021	10/21/2021	10/21/2021	10/21/2021	12/13/2021	12/13/2021	12/13/2021	10/21/2021
Sample Depth:		(1.77-1.84) ft BGS	(0-0.07) ft BGS	(0.07-0.13) ft BGS	(0.13-0.2) ft BGS	(0.2-0.26) ft BGS	(0.26-0.33) ft BGS	(0.33-0.39) ft BGS	(0.39-0.46) ft BGS	(0.46-0.52) ft BGS	(0.52-1.05) ft BGS	(0.52-1.05) ft BGS	(1.05-1.28) ft BGS	(0-0.07) ft BGS
matrix_code		Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment (Duplicate)	Sediment	Sediment
Parameters	**Units**													
Dioxin Furans														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	-	75200 J	189000 J	62100 J	78700 J	87400 J	69300 J	51300 J	92200 J	101000 J	129000	555000 J	132000 J
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	-	8750	7210	6140	5950	6700	6060	4970	7470	8700	9930	22700	14800 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	-	65800 J	112000 J	37100 J	74500 J	91800 J	65800 J	30200 J	68500 J	54200 J	82800	350000 J	123000 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	-	2530	3710	1850	1930 J	3030	2420	1330	2980 J	2760	3600	10600	5650
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	-	1660	4620 J-	1280	1420 J	3470 J	2360 J	1080	1950 J	1860	2370	9580	4190
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	-	14400 J	29800 J	11200 J	12300 J	21800 J	16400 J	8260	18500 J	16900 J	22800	91900	32000 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	-	165	292	133	126 J	197	247 J-	102	185	210	276	911	442
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	-	3210 J	5180 J	1760	2720 J	5000 J	3120 J	1470	3290 J	3060	4100	16900	6260 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	-	448	625	275	244	756 J	492	187	388	439	469	1860	984
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	-	32.8 U	49.5 U	13.8 U	63.5 UJ	52.6 UJ	39.2 U	12.8 U	34.8 UJ	35 U	60.5 U	58.9 U	70.5 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	-	324 J	492 J-	182	150	410 J	259	123	232	283	338	1080	624
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	-	689	1130	351	361	765	662	305	581	659	830	2890	1260
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	-	297 J	375	113	101	426 J	227	94.7	166	188	222	802	512
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	-	1170 J	1770	581	604	1530	1090	466	935	827	1180	4930	2330 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	-	1890	3890	1210	931	2800	1890	852	1570	1730 J+	2260	9440	3540
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	-	240	301	98.4	115	249 J	211	101	189	239	286	895	282 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	-	109	148 J	44.4	58.8 J	148	102	35.4	60.2 J	106	82.2	310	201
Total heptachlorodibenzofuran (HpCDF)	pg/g	-	73100 J	127000 J	41600 J	80300 J	104000 J	74200 J	34000 J	75700 J	60700 J	92500 J	389000 J	139000 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	-	4250 J	6470 J	3250 J	3330 J	5140 J	4130 J	2290 J	5120 J	4800 J	6160 J	18400 J	9610 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	-	35900 J	67300 J	23700 J	27500 J	54800 J	38600 J	18000 J	39000 J	35300 J	51200 J	207000 J	76800 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	-	5780 J	9620 J	3660 J	3390 J	8310 J	6580 J	2520 J	5620 J	5970 J	7050 J	25500 J	13100 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	-	16100 J	30900 J	9900 J	8210 J	22200 J	16300 J	7070 J	14000 J	14800 J	19500 J	80900 J	31700 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	-	5810 J	7890 J	2280 J	2140 J	8490 J	4780 J	1760 J	3780 J	4130 J	4790 J	18200 J	10100 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	-	9670 J	15700 J	5120 J	4550 J	16900 J	9850 J	3980 J	7280 J	8930 J	10300 J	42700 J	18300 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	-	6230 J	11000 J	2450 J	3180 J	8690 J	6310 J	2000 J	4000 J	5660 J	4930 J	17900 J	11400 J
Misc														
% Soot (Average)	%	-	1.72	0.377	0.264	0.703	1.12	0.804	0.872	0.527	2.23	2.02	1.73	1.30
% Soot (Rep 1)	%	-	1.77	0.392	0.260	0.742	1.24	0.776	0.904	0.550	2.18	1.98	1.74	1.48
% Soot (Rep 2)	%	-	1.67	0.362	0.268	0.664	0.993	0.831	0.841	0.504	2.28	2.06	1.72	1.13
Radiochemistry														
Cesium-137	pCi/g	0.034 U +/- 0.02361	-	-	-	-	-	-	-	-	-	-	-	-
Lead-210	pCi/g	0.167 +/- 0.0474	-	-	-	-	-	-	-	-	-	-	-	-
General Chemistry														
TOC averages	%	-	12.4 J	6.66 J	5.01 J	5.68 J	7.43 J	5.26 J	6.75 J	7.24 J	7.83	8.78	6.34	12.5 J
Total organic carbon (TOC)	%	-	12.0 J	6.78 J	4.99 J	5.70 J	8.16 J	5.30 J	6.37 J	6.96 J	7.94	9.54	7.06	14.1 J
Total organic carbon (TOC) (2)	%	-	12.7 J	6.53 J	5.03 J	5.65 J	6.69 J	5.23 J	7.13 J	7.53 J	7.72	8.03	5.61	11.0 J
Total solids	%	-	34.1	40.5	43.1	51.8	50.0	53.8	49.1	44.6	53.7	49.3	48.1	38.0

Notes:

J: Estimated concentration.

J-: Estimated concentration. Low bias.

J+: Estimated concentration. High bias.

U: Not detected at the associated reporting limit.

UJ: Not detected; associated reporting limit is estimated.

%: percent

BGS: below ground surface

ft: feet

ID: identification

pCi/g: picocuries per gram

pg/g: picogram per gram

Table A-2

Analytical Results Summary - High Resolution Sediment Samples

Sample Location:		**PCA-HRC-02**	**PCA-HRC-02**	**PCA-HRC-02**	**PCA-HRC-02**	**PCA-HRC-02**	**PCA-HRC-02**	**PCA-HRC-02**	**PCA-HRC-02**	**PCA-HRC-02**	**PCA-HRC-03**	**PCA-HRC-03**	**PCA-HRC-03**	**PCA-HRC-03**
Sample ID:		**PCA-HRC-02-02**	**PCA-HRC-02-03**	**PCA-HRC-02-04**	**PCA-HRC-02-05**	**PCA-HRC-02-06**	**PCA-HRC-02-07**	**PCA-HRC-02-08**	**PCA-HRC-02-09**	**PCA-HRC-02-10**	**PCA-HRC-03-01**	**PCA-HRC-03-02**	**PCA-HRC-03-03**	**PCA-HRC-03-04**
Sample Date:		**10/21/2021**	**10/21/2021**	**10/21/2021**	**10/21/2021**	**10/21/2021**	**10/21/2021**	**10/21/2021**	**12/13/2021**	**12/13/2021**	**10/21/2021**	**10/21/2021**	**10/21/2021**	**10/21/2021**
Sample Depth:		**(0.07-0.13) ft BGS**	**(0.13-0.2) ft BGS**	**(0.2-0.26) ft BGS**	**(0.26-0.33) ft BGS**	**(0.33-0.39) ft BGS**	**(0.39-0.46) ft BGS**	**(0.46-0.52) ft BGS**	**(0.52-1.05) ft BGS**	**(1.05-1.28) ft BGS**	**(0-0.07) ft BGS**	**(0.07-0.13) ft BGS**	**(0.13-0.2) ft BGS**	**(0.2-0.26) ft BGS**
matrix_code		**Sediment**	**Sediment**	**Sediment**	**Sediment**	**Sediment**	**Sediment**	**Sediment**	**Sediment**	**Sediment**	**Sediment**	**Sediment**	**Sediment**	**Sediment**
Parameters	**Units**													
Dioxin Furans														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	219000 J	142000 J	59600 J	543000 J	201000 J	241000 J	130000 J	151000	165000	73700 J	135000 J	52800 J	60800 J
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	15500 J	12600 J	7410	41700 J	15000 J	13100 J	12000 J	11400	16600	10900	11900	9920	8430
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	223000 J	115000 J	43000 J	313000 J	121000 J	171000 J	101000 J	94100	123000 J	57800 J	84500 J	34500 J	39200 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	6510 J	5670 J	2110	17300 J	6210 J	8580 J-	5310 J-	4120	6020	2870	3630	2500	1950
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	7260 J	3990	1460 J	12900 J	4750	5450 J	2440	2930	3420	1710	3040	1190 J-	1270 J-
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	60400 J	34300 J	10600 J	113000 J	42300 J	61600 J	31800 J	26300	33100	15200 J	27100 J	10300 J	10900 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	703	483	174 J	1590	580 J	622 J-	289 J-	285	415	204	306	186 J-	141 J-
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	16300 J	7830 J	2610 J	18600 J	7160 J	9460 J	4670	4720	6130	2770	5140	1890	1950
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1720	1180	319	2720	1120	1430 J-	764 J-	564	877	433	645	346 J-	286 J-
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	82.7 U	45.3 U	25.1 U	119 U	41.4 U	94.6 UJ	58.4 UJ	62.1 U	60.4 U	15.8 U	47.3 U	12.6 UJ	13.5 UJ
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1190 J	767	234 J	2510 J	601	715 J-	290	357	515	287	425 J	236 J-	170 J-
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	2550	1510	461	4630	1380	2820 J-	1130 J-	905	1260	590	874	443	397
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	914	715	169	1800 J	508	704 J-	388 J-	234	394	221	302	177	138
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	4560	2520	762	5800 J	2140	3260 J-	1700 J-	1640 J	1950	931	1630	623 J-	622 J-
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	8180 J	3990	1300	8510 J	3820	6090 J-	3330 J	2920 J+	3720 J+	1750	3120	1150	1130
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	652 J	568 J	146	1430 J	437	698 J-	320 J-	334	388	205	242	163	121 J-
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	557 J	295	72.2	512	221	248	118 J	85.4	153	87.8	133	73.1	52
Total heptachlorodibenzofuran (HpCDF)	pg/g	250000 J	129000 J	48600 J	348000 J	138000 J	189000 J	111000 J	106000 J	138000 J	65200 J	95800 J	39100 J	44200 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	11300 J	9610 J	3660 J	28600 J	10700 J	14700 J	9200 J	7020 J	10500 J	4970 J	6270 J	4390 J	3430 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	162000 J	85400 J	26500 J	225000 J	90300 J	126000 J	68600 J	60900 J	77700 J	34700 J	62200 J	23200 J	24200 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	23000 J	16200 J	4510 J	42200 J	15000 J	18600 J	8680 J	7670 J	11900 J	5570 J	8510 J	4820 J	3590 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	70100 J	35700 J	11500 J	85500 J	35100 J	61200 J	29500 J	24400 J	32000 J	14900 J	25700 J	9910 J	9830 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	17300 J	14600 J	3160 J	36700 J	10600 J	15500 J	8380 J	5240 J	8080 J	4190 J	6070 J	3480 J	2670 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	41000 J	24900 J	6810 J	39600 J	19100 J	28600 J	17100 J	13500 J	18700 J	8600 J	13500 J	5890 J	5480 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	28800 J	17000 J	3620 J	34700 J	13400 J	18400 J	9210 J	5450 J	8150 J	4920 J	6970 J	4110 J	2770 J
Misc														
% Soot (Average)	%	1.53	3.34	2.81	3.35	2.12	2.56	1.27	3.42	2.59	1.08	2.38	2.77	2.92
% Soot (Rep 1)	%	1.41	3.06	3.11	4.12	2.18	2.65	1.34	3.52	2.55	1.13	2.16	2.53	2.86
% Soot (Rep 2)	%	1.65	3.62	2.51	2.57	2.05	2.47	1.20	3.34	2.63	1.02	2.60	3.00	2.97
Radiochemistry														
Cesium-137	pCi/g	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead-210	pCi/g	-	-	-	-	-	-	-	-	-	-	-	-	-
General Chemistry														
TOC averages	%	9.42 J	9.26 J	9.92 J	10.3 J	15.3 J	10.4 J	10.3 J	11.2	11.6	17.4 J	14.7 J	12.1 J	12.6 J
Total organic carbon (TOC)	%	9.04 J	9.47 J	9.88 J	11.8 J	16.5 J	10.5 J	10.4 J	10.6	10.6	18.2 J	14.4 J	12.0 J	12.4 J
Total organic carbon (TOC) (2)	%	9.81 J	9.04 J	9.96 J	8.77 J	14.1 J	10.2 J	10.2 J	11.7	12.5	16.6 J	15.0 J	12.2 J	12.9 J
Total solids	%	35.2	48.6	38.3	36.0	41.8	42.9	37.2	51.6	43.9	23.2	29.8	36.8	34.5

Notes:

J: Estimated concentration.

J-: Estimated concentration. Low bias.

J+: Estimated concentration. High bias.

U: Not detected at the associated reporting limit.

UJ: Not detected; associated reporting limit is estimated.

%: percent

BGS: below ground surface

ft: feet

ID: identification

pCi/g: picocuries per gram

pg/g: picogram per gram

Table A-2

Analytical Results Summary - High Resolution Sediment Samples

Sample Location:		PCA-HRC-03	PCA-HRC-03	PCA-HRC-03	PCA-HRC-03	PCA-HRC-03	PCA-HRC-03	PCA-HRC-03	PCA-HRC-03	PCA-HRC-03	PCA-HRC-03	PCA-HRC-03	PCA-HRC-03	PCA-HRC-03
Sample ID:		PCA-HRC-03-05	PCA-HRC-03-06	PCA-HRC-03-07	PCA-HRC-03-08	PCA-HRC-03-09	PCA-HRC-03-10	PCA-HRC-03-11	PCA-HRC-03-12	PCA-HRC-03-13	PCA-HRC-03-14	PCA-HRC-03-15	PCA-HRC-03-16	PCA-HRC-03-17
Sample Date:		10/21/2021	10/21/2021	10/21/2021	10/21/2021	12/13/2021	12/13/2021	12/13/2021	12/13/2021	12/13/2021	12/13/2021	12/13/2021	12/13/2021	12/13/2021
Sample Depth:		(0.26-0.33) ft BGS	(0.33-0.39) ft BGS	(0.39-0.46) ft BGS	(0.46-0.52) ft BGS	(0.52-0.59) ft BGS	(0.59-0.66) ft BGS	(0.66-0.72) ft BGS	(0.72-0.79) ft BGS	(0.79-0.85) ft BGS	(0.85-0.92) ft BGS	(0.92-0.98) ft BGS	(0.98-1.05) ft BGS	(1.05-1.41) ft BGS
matrix_code		Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment
Parameters	**Units**													
Dioxin Furans														
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	95400 J	74400 J	132000 J	301000 J	114000 J	134000	119000	201000	223000	229000	136000	564000 J	109000
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	9780	9090	12600 J	20100 J	12700 J	15200	13600	14100	12300	12100	12000	33100	11500
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	65500 J	45700 J	120000 J	139000 J	68600 J	124000 J	77700	127000 J	129000 J	140000 J	93900	473000 J	72000
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2980	2270	4500	9000 J	4130 J	5440	4700	5010	3700	4200	4170	15000	3170
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	2110 J-	1470	3800	6730 J	2960	3460	2370	3830	4170	3930	3410	14600	2010
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	17800 J	13300 J	32500 J	48700 J	21200 J	31400	21100	34200	35300	37500	26300	128000 J	19500
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	218 J-	163	388 J-	721	282	418	307	338	262	310	264 J	1160	201 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	3300	2340	7100 J	7960 J	4290 J	6750	3850	5870	5930	6000	4640	25700	3550
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	427	333	976 J-	1550 J	663	965	629	714	534	598	571	3140	419
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	23.5 UJ	19.5 U	26.5 UJ	73.7 UJ	45.9 U	59.4 U	60.7 U	64 U	62.1 U	88.4 U	60.4 U	59.3 U	58.6 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	258	207	588 J-	840	469	572	427	433	298	367	342	1810	257
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	615	495	1250 J-	1940 J	1020 J	1380	849	1000	950	1050	955	4500	749
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	213	156	515	713	367	475	273	293	198	236	225	1470	158 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1050 J-	711	2370 J-	2800	1340	2180	1130	1900	1970	1950	1510	9050	1150
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	1800	1360	3950	6000 J	2570 J+	3710	2360	3510 J+	3730 J+	3760	2920	15000 J+	2280 J+
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	177	176	341 J-	953 J	375 J	494	328	382	348	297	382	1270	298
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	82	61	224 J-	274	173 J	193	92.6	98.9 J	50.9 J	72.3	98.4	554	73.5
Total heptachlorodibenzofuran (HpCDF)	pg/g	73800 J	51200 J	135000 J	160000 J	78500 J	139000 J	87600 J	143000 J	146000 J	157000 J	107000 J	534000 J	80800 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	5260 J	3980 J	7850 J	15600 J	7160 J	9540 J	8110 J	8610 J	6590 J	7320 J	7190 J	27900 J	5640 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	41300 J	28500 J	80000 J	108000 J	48600 J	78900 J	48300 J	77900 J	79300 J	83500 J	60300 J	316000 J	45700 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	5840 J	4180 J	12100 J	20700 J	8740 J	12100 J	8730 J	8850 J	6340 J	7800 J	6770 J	36900 J	5450 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	15800 J	11400 J	33300 J	48000 J	21900 J	33500 J	19800 J	30400 J	29900 J	30900 J	24300 J	126000 J	19200 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	4250 J	2760 J	9620 J	15300 J	7180 J	9720 J	5940 J	5920 J	4180 J	5000 J	4870 J	30400 J	3860 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	8250 J	6460 J	20200 J	25200 J	13700 J	20100 J	11500 J	15100 J	14000 J	13300 J	13700 J	67200 J	11400 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	4550 J	3410 J	11300 J	18700 J	8810 J	10700 J	5870 J	6040 J	4020 J	4350 J	5070 J	31200 J	4370 J
Misc														
% Soot (Average)	%	1.94	2.74	1.85	1.53	3.17	3.40	3.71	3.22	3.59	3.22	2.92	2.52	2.25
% Soot (Rep 1)	%	1.69	2.92	1.72	1.54	2.98	3.47	3.63	3.14	3.41	3.18	2.86	2.52	2.31
% Soot (Rep 2)	%	2.19	2.55	1.97	1.52	3.36	3.33	3.78	3.31	3.76	3.25	2.97	2.53	2.20
Radiochemistry														
Cesium-137	pCi/g	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead-210	pCi/g	-	-	-	-	-	-	-	-	-	-	-	-	-
General Chemistry														
TOC averages	%	14.2 J	15.9 J	14.8 J	12.7 J	13.1	13.0	12.6	12.4	12.1	10.5	11.5	10.7	9.84
Total organic carbon (TOC)	%	14.2 J	14.8 J	13.0 J	12.8 J	13.4	12.2	12.8	12.0	12.9	10.5	11.9	10.7	10.2
Total organic carbon (TOC) (2)	%	14.2 J	16.9 J	16.5 J	12.6 J	12.8	13.8	12.3	12.8	11.3	10.5	11.1	10.7	9.44
Total solids	%	32.5	34.8	33.4	34.0	45.8	48.2	43.5	41.9	50.8	47.8	48.1	45.1	44.5

Notes:

J: Estimated concentration.

J-: Estimated concentration. Low bias.

J+: Estimated concentration. High bias.

U: Not detected at the associated reporting limit.

UJ: Not detected; associated reporting limit is estimated.

%: percent

BGS: below ground surface

ft: feet

ID: identification

pCi/g: picocuries per gram

pg/g: picogram per gram

Table A-3
Analytical Results Summary - Bulk Sediment Samples

Sample Location:		BPF-SCC-01	BPF-SCC-01	BPF-SCC-01	BPF-SCC-01	BPF-SCC-01	DFP-SCC-02	DFP-SCC-02	DFP-SCC-02	URA-SCC-01	URA-SCC-01	URA-SCC-01	URA-SCC-01
Sample ID:		BPF-SCC-01	BPF-SCC-01-DUP02	DFP-SCC-01-01	DFP-SCC-01-02	DFP-SCC-01-03	DFP-SCC-02-01	DFP-SCC-02-02	DFP-SCC-02-03	URA-SCC-01-01	URA-SCC-01-02	URA-SCC-01-03	URA-SCC-01-03-DUP03
Sample Date:		10/20/2021	10/20/2021	10/20/2021	10/20/2021	10/20/2021	10/20/2021	10/20/2021	10/20/2021	10/21/2021	10/21/2021	10/21/2021	10/21/2021
Sample Depth:		(0-0.5) ft BGS	(0-0.5) ft BGS	(0-0.5) ft BGS	(0.5-1) ft BGS	(1-2) ft BGS	(0-0.5) ft BGS	(0.5-1) ft BGS	(1-2) ft BGS	(0-0.5) ft BGS	(0.5-1) ft BGS	(1-2) ft BGS	(1-2) ft BGS
matrix_code		Sediment	Sediment (Duplicate)	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment (Duplicate)
Parameters	**Units**												
Dioxin Furans													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	34800 J	46000 J	32200 J	85900 J	115000 J	152000 J	159000 J	497000 J	111	78.3	3.4 J	3.49 J
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	2310	2190	2650	6540	17000 J	22000 J	28400 J	54200 J	979	988	120	128
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	18800 J+	24600 J+	18800 J+	52400 J+	108000 J+	103000 J+	113000 J+	265000 J+	77.3	51.6	4.92 U	4.16 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	636	591	680	2350	7520 J	8610 J	13000 J	30700 J	96.8	92.8	7.05	6.59
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	590	927	691	1770	3560	2950	2930	11900 J	3.04 J	2.6 J	2.49 U	2.49 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	4990	7360 J	5590 J	14000 J	27200 J	26700 J	29000 J	93300 J	11.8	10.6	1.36 J	1.17 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	49.8	40.5	55	162	1340	770	1210	3310	1.72 J	1.95 J	2.49 U	2.49 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	808	1160	1050	2820	6170 J	4880	5410 J	16100 J	4.41	4.32	2.49 U	2.49 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	94.4	101	110	352	1110	1220	2140	4800	4.84	4.15 J	2.49 U	2.49 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	7 U	7.84 U	8.28 U	22.2 U	25.6 U	23.8 U	31 U	72.2 UJ	2.47 U	2.48 U	2.49 U	2.49 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	58.1	47.6	59.6	207	677	845	1540	3520	3.37	3.38 J	2.49 U	2.49 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	127	129	236	621	1950	1500	2090	4320	1.82 J	2.36 J	2.49 U	2.49 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	37.1	32.6	51.8	166	775	595	1130	2360	1.04 J	1.26 J	2.49 U	2.49 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	260	379	342	963	1560	1450	1330	3580	2.8 J	3.91	2.49 U	2.49 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	483	760	707	1840	2370	2160	2240	5840 J	4.1	4.73 J	2.49 U	2.49 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	33.2	31	73.4	206	718	632	976	2710 J	2.21 J	3.08	0.497 U	0.498 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	13.2	12.1	25.7	90.2	297	234	404	1040 J	0.729 U	0.628 U	0.587 U	0.524 U
Total heptachlorodibenzofuran (HpCDF)	pg/g	21000 J	27900 J	21400 J	59100 J	120000 J	113000 J	123000 J	295000 J	113 J	89.9 J	4.92 J	4.16 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	1120 J	1090 J	1210 J	3950 J	11600 J	14000 J	21800 J	50300 J	210 J	194 J	16.6 J	16.1 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	10700 J	15400 J	12900 J	33700 J	63600 J	60300 J	62200 J	183000 J	58.2 J	63.1 J	1.36 J	1.17 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1300 J	1140 J	1410 J	5310 J	11600 J	20500 J	37700 J	84300 J	50 J	52.7 J	4.4 J	4.04 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	3980 J	5650 J	6280 J	17000 J	33900 J	29300 J	28000 J	88900 J	42.1 J	56.1 J	2.49 U	2.49 U
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	757 J	680 J	961 J	3430 J	6540 J	12200 J	27300 J	54100 J	14.1 J	17.9 J	2.49 U	2.49 U
Total tetrachlorodibenzofuran (TCDF)	pg/g	1850 J	2520 J	3870 J	10400 J	24000 J	23500 J	20800 J	66000 J	43.7 J	54.3 J	0.736 J	0.735 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	611 J	639 J	1140 J	3760 J	6670 J	14100 J	30500 J	64600 J	8.22 J	10.7 J	0.587 U	0.524 U
Misc													
% Soot (Average)	%	0.249	0.270	1.65	1.72	0.818	1.12	1.12	1.41	0.220	0.381	0.080 J	0.412 J
% Soot (Rep 1)	%	0.287	0.311	1.38	1.72	0.860	1.00	1.04	1.34	0.201	0.397	0.079	0.457
% Soot (Rep 2)	%	0.211	0.230	1.92	1.71	0.776	1.23	1.21	1.48	0.238	0.365	0.080	0.368
General Chemistry													
TOC averages	%	2.60 J	2.66 J	5.26 J	5.84 J	5.24 J	3.90 J	4.65 J	6.07 J	3.14 J	2.88 J	2.06 J	1.91 J
Total organic carbon (TOC)	%	2.48 J	2.99 J	5.03 J	5.79 J	4.84 J	3.51 J	4.36 J	6.38 J	2.52 J	2.99 J	2.14 J	2.03 J
Total organic carbon (TOC) (2)	%	2.72 J	2.34 J	5.48 J	5.88 J	5.65 J	4.29 J	4.94 J	5.76 J	3.76 J	2.76 J	1.99 J	1.80 J
Total solids	%	53.1	52.4	48.8	65.9	59.4	60.2	69.5	65.8	57.4	68.8	73.2	74.0

Notes:
J: Estimated concentration.
J+: Estimated concentration. High bias.
U: Not detected at the associated reporting limit.
UJ: Not detected; associated reporting limit is estimated.
%: percent
BGS: below ground surface
ft: feet
ID: identification
pg/g: picogram per gram

Table A-3
Analytical Results Summary - Bulk Sediment Samples

Sample Location:		URA-SCC-02	URA-SCC-02	URA-SCC-02
Sample ID:		URA-SCC-02-01	URA-SCC-02-02	URA-SCC-02-03
Sample Date:		10/20/2021	10/20/2021	10/20/2021
Sample Depth:		(0-0.5) ft BGS	(0.5-1) ft BGS	(1-2) ft BGS
matrix_code		Sediment	Sediment	Sediment
Parameters	**Units**			
Dioxin Furans				
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	116	41.8	32.9
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	1350	674	651
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	80 J+	36.1 J+	29.1 J+
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	131	33.1	19.1
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	3.99	3.49	2.49 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	15.6	11.1	7.3
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.4 J	2.49 U	2.49 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	6.99	4.39	3.26
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	6.86	2.48 J	1.75 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	2.46 U	2.49 U	2.49 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	5.09	1.36 J	1.51 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	3.39	3.99	1.76 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.17 J	1.06 J	2.49 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	6.97	3.84	2.17 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	10.2	5.49	3.28
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	5.37	5.21	2.39 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.702 J	0.916 U	0.581 U
Total heptachlorodibenzofuran (HpCDF)	pg/g	147 J	53.6 J	40.4 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	266 J	69.1 J	42.4 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	110 J	56.1 J	34.1 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	68.6 J	23.6 J	18 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	96.2 J	62.2 J	37 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	23.9 J	10.2 J	6.38 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	89.8 J	60.4 J	40.7 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	19.3 J	3.96 J	3.83 J
Misc				
% Soot (Average)	%	0.596	0.358	0.550
% Soot (Rep 1)	%	0.608	0.345	0.619
% Soot (Rep 2)	%	0.585	0.372	0.482
General Chemistry				
TOC averages	%	2.65 J	4.26 J	3.08 J
Total organic carbon (TOC)	%	2.55 J	4.11 J	3.22 J
Total organic carbon (TOC) (2)	%	2.75 J	4.40 J	2.93 J
Total solids	%	59.5	60.1	64.7

Notes:
J: Estimated concentration.
J+: Estimated concentration. High bias.
U: Not detected at the associated reporting limit.
UJ: Not detected; associated reporting limit is estimated.
%: percent
BGS: below ground surface
ft: feet
ID: identification
pg/g: picogram per gram

Table A-4
Analytical Results Summary - Forage Fish Tissue Samples

Sample Location:		Downstream Fisherman's Park	Downstream Fisherman's Park	Downstream Fisherman's Park	Downstream Fisherman's Park	Downstream Fisherman's Park
Sample ID:		DFP-BG-01-2021-0823	DFP-BG-02-2021-0823	DFP-BNM-01-2021-0823	DFP-BNM-02-2021-0823	DFP-BNM-03-2021-0823
Sample Date:		8/23/2021	8/23/2021	8/23/2021	8/23/2021	8/23/2021
Sample Depth:		-	-	-	-	-
matrix_code		TA	TA	TA	TA	TA
Parameters	**Units**					
Dioxin Furans						
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	2.08 J	2.28 J	21	4.09 J	35.9
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	1.42 J	1.18 J	8.32 J	6.28	12.1
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	2.26 J	3.88	17.2	4.91	26
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	0.47 J	0.346 J	2.14 J	0.658 J	2.82
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	2.47 U	2.38 U	0.693 J	0.159 J	0.855 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	3.36	3.13	10.1	5.73	9.01
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.47 U	0.233 J	0.635 J	2.42 U	0.49 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1.03 J	1.29 J	2.26 J	1.77 J	2.08 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.47 U	0.516 J	0.595 J	0.492 J	0.687 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	2.47 U	2.38 U	2.43 U	2.42 U	2.41 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.47 U	2.38 U	0.355 J	2.42 U	0.365 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	1.54 J	1.24 J	2.45	1.6 J	1.52 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.739 J	0.368 J	2.09 J	0.928 J	1.18 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.47 U	0.179 J	0.687 J	0.234 J	0.623 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.932 J	1.11 J	5.39	2.46 J	3.98
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	1.09 J	1.27	5.94	1.26	3.88
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1.54	1.06	2.27	1.47	1.7
Total heptachlorodibenzofuran (HpCDF)	pg/g	2.26 J	4 J	19.7 J	5.66 J	29.5 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	0.724 J	0.662 J	3.57 J	1.1 J	5.04 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	5.13 J	5.66 J	19.4 J	10.1 J	18.9 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.47 U	0.749 J	3.89 J	0.796 J	4.79 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	4.54 J	6 J	24.7 J	8.76 J	18.3 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.739 J	0.368 J	4.58 J	0.928 J	3.73 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	5.96 J	6.92 J	35.6 J	6.02 J	21.1 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	2.41 J	1.54 J	18.4 J	2.24 J	10.2 J
Miscellaneous						
Lipids	%	5.0	3.3	7.7	3.2	5.8

Notes:
J: Estimated concentration.
U: Not detected at the associated reporting limit.
UJ: Not detected; associated reporting limit is estimated.
%: percent
ID: identification
pg/g: picogram per gram
TA: tissue

Table A-4
Analytical Results Summary - Forage Fish Tissue Samples

Sample Location:		Fisherman's Park Cove	Fisherman's Park Cove	Fisherman's Park Cove	Fisherman's Park Cove	Fisherman's Park Cove	Fisherman's Park Cove-Pettite Cove
Sample ID:		FPC-BG-01-2021-0823	FPC-BG-02-2021-0823	FPC-BG-03-2021-0823	FPC-BG-04-2021-0823	FPC-BG-05-2021-0823	FPC-PC-RG-01-2021-0827
Sample Date:		8/23/2021	8/23/2021	8/23/2021	8/23/2021	8/23/2021	8/27/2021
Sample Depth:		-	-	-	-	-	-
matrix_code		TA	TA	TA	TA	TA	TA
Parameters	**Units**						
Dioxin Furans							
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.653 J	4.87	0.647 J	2 J	1.53 J	2.82 J
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	0.798 J	4.53 J	9.07	2.03 J	2.6 J	8.18 U
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.991 J	2.76	1.47 J	3.66	4.57	4.83
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2.38 U	1.36 J	1.38 J	0.41 J	0.506 J	4.09 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	2.38 U	2.4 U	2.47 U	2.4 U	2.49 U	4.09 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1.55 J	1.98 J	1.79 J	2.43	2.7 J	13.4
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.38 U	2.4 U	2.47 U	2.4 U	2.49 U	4.09 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.425 J	0.596 J	0.491 J	1.17 J	1.58 J	3.03 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.38 U	0.643 J	0.374 J	0.294 J	2.49 U	0.757 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	2.38 U	2.4 U	2.47 U	2.4 U	2.49 U	4.09 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.38 U	2.4 U	2.47 U	2.4 U	2.49 U	4.09 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.38 J	0.8 J	0.832 J	1.09 J	1.25 J	0.787 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.38 U	2.4 U	2.47 U	0.391 J	3.33 U	0.836 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.38 U	2.4 U	0.0896 J	2.4 U	2.49 U	0.345 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.305 J	0.646 J	0.842 J	0.893 J	3.37 UJ	8.05
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.513 J	0.621 J	1.05	0.785	1.2	0.818 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.724	0.677 J	1.72	0.824	1.41 U	0.56 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.991 J	3.27 J	2.3 J	3.85 J	4.98 J	4.83 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2.38 U	2.44 J	2.93 J	0.622 J	0.899 J	0.43 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	2.4 J	3.31 J	3.64 J	4.45 J	5.13 J	18.2 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.38 U	1.69 J	1.65 J	0.294 J	2.49 U	0.757 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	1.05 J	2.27 J	2.61 J	3.89 J	4.35 J	9.14 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.38 U	2.4 U	2.47 U	0.391 J	3.33 U	0.836 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	1.43 J	2.22 J	2.69 J	4.8 J	4.22 J	2.57 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.724 J	0.677 J	1.72 J	0.824 J	1.41 U	0.56 J
Miscellaneous							
Lipids	%	3.2	3.3	4.1	3.8	3.4	1.3

Notes:
J: Estimated concentration.
U: Not detected at the associated reporting limit.
UJ: Not detected; associated reporting limit is estimated.
%: percent
ID: identification
pg/g: picogram per gram
TA: tissue

Table A-4
Analytical Results Summary - Forage Fish Tissue Samples

Sample Location:		Pettite Cove	Pettite Cove	Pettite Cove	Pettite Cove	Pettite Cove	Pettite Cove	Pettite Cove
Sample ID:		PC-BG-01-2021-0826	PC-BG-02-2021-0826	PC-BG-03-2021-0826	PC-BG-04-2021-0826	PC-BG-05-2021-0826	PC-RG-01-2021-0826	PC-RG-02-2021-0826
Sample Date:		8/26/2021	8/26/2021	8/26/2021	8/26/2021	8/26/2021	8/26/2021	8/26/2021
Sample Depth:		-	-	-	-	-	-	-
matrix_code		TA	TA	TA	TA	TA	TA	TA
Parameters	**Units**							
Dioxin Furans								
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	5.34	5.77	12.1	29.9	3.51 J	8.83	13.5
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	4.73 U	6.49 U	4.83 U	14.4 U	4.8 U	6.67 U	4.86 U
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	6.27	6.15	12.1	23.4	2.82	9.56	18
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2.37 U	2.47 U	2.41 U	2.5	2.4 U	3.33 U	2.38 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.205 J	0.188 J	0.559 J	0.726 J	2.4 U	0.446 J	1.24 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	9.65	9.73	11.6	8.91	5.79	18.5	48.8
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.37 U	0.128 J	0.257 J	0.236 J	2.4 U	3.33 U	0.569 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.39	2.55	3.47	2.32 J	1.54 J	3.22 J	6.59
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.842 J	0.571 J	0.917 J	0.443 J	0.548 J	0.604 J	1.22 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	2.37 U	2.47 U	2.41 U	2.42 U	2.4 U	3.33 U	2.38 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.22 J	0.333 J	0.453 J	0.317 J	2.4 U	3.33 U	0.291 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	1.86 J	1.97 J	2.3 J	1.85 J	1.78 J	1.25 J	0.786 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.824 J	1.14 J	1.16 J	1.16 J	0.589 J	0.847 J	1.72 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.35 J	0.426 J	0.587 J	0.452 J	0.32 J	0.667 J	1.32 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	2.69	3.68	3.85	3.45	2.66	7.26	10.6
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	1.48	0.976 J	1.37 J	4.01	0.976	0.485 J	0.333 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1.14	1.85 J	1.73 J	1.42	1.6	0.925	1.21
Total heptachlorodibenzofuran (HpCDF)	pg/g	6.75 J	6.84 J	14 J	26.2 J	3.26 J	10.8 J	19.9 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	0.539 J	1.17 J	1.51 J	4.35 J	2.4 U	3.33 U	1.59 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	15.6 J	15.2 J	19.9 J	17.2 J	9.58 J	24.6 J	58 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.06 J	1.2 J	2.17 J	3.03 J	0.548 J	0.604 J	2.08 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	10.7 J	9.35 J	13 J	17.5 J	7 J	9.8 J	12.4 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.824 J	1.14 J	1.16 J	2.87 J	0.589 J	0.847 J	1.72 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	4.31 J	6.33 J	9.59 J	23.1 J	3.19 J	1.99 J	1.65 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1.83 J	2.45 J	2.67 J	10.1 J	1.6 J	0.925 J	1.21 J
Miscellaneous								
Lipids	%	4.6	3.3	3.0	5.3	3.7	1.6	1.8

Notes:
J: Estimated concentration.
U: Not detected at the associated reporting limit.
UJ: Not detected; associated reporting limit is estimated.
%: percent
ID: identification
pg/g: picogram per gram
TA: tissue

Table A-4
Analytical Results Summary - Forage Fish Tissue Samples

Sample Location:		Upsteam Reference Area	Upsteam Reference Area	Upsteam Reference Area	Upsteam Reference Area	Upsteam Reference Area
Sample ID:		URA-BNM-01-20210824	URA-BNM-02-20210824	URA-BNM-03-20210824	URA-BNM-04-20210824	URA-BNM-05-20210824
Sample Date:		8/24/2021	8/24/2021	8/24/2021	8/24/2021	8/24/2021
Sample Depth:		-	-	-	-	-
matrix_code		TA	TA	TA	TA	TA
Parameters	**Units**					
Dioxin Furans						
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	1.52 J	1.1 J	1.21 J	0.773 J	4.69 U
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	6.24 U	12 U	10.5 U	6.83 U	8.4 U
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	2.48 U	2.36 U	2.43 U	2.45 U	2.34 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2.48 U	2.36 U	2.43 U	2.45 U	2.34 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	2.48 U	2.36 U	2.43 U	2.45 U	2.34 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.48 U	2.36 U	2.43 U	0.293 J	2.34 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.48 U	2.36 U	2.43 U	2.45 U	2.34 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.48 U	2.36 U	2.43 U	0.188 J	2.34 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.48 U	2.36 U	0.314 J	2.45 U	2.34 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	2.48 U	2.36 U	2.43 U	2.45 U	2.34 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.48 U	2.36 U	2.43 U	2.45 U	2.34 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	2.48 U	2.36 U	2.43 U	2.45 U	2.34 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.48 U	2.36 U	2.43 U	2.45 U	2.34 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.48 U	2.36 U	2.43 U	2.45 U	2.34 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.192 J	2.36 U	2.43 U	2.45 U	2.34 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.976	0.659	0.57 J	0.519	0.504
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.497 U	0.472 U	0.486 U	0.49 U	0.469 U
Total heptachlorodibenzofuran (HpCDF)	pg/g	1.13 J	1.35 J	1.91 J	1.21 J	1.28 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	1.65 J	2.69 J	2.79 J	1.63 J	2.26 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.612 J	2.36 U	0.735 J	1.15 J	2.34 U
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.48 U	2.36 U	0.945 J	2.45 U	2.34 U
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.192 J	2.36 U	2.43 U	2.45 U	2.34 U
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.48 U	2.36 U	2.43 U	2.45 U	2.34 U
Total tetrachlorodibenzofuran (TCDF)	pg/g	1.73 J	1.2 J	0.878 J	0.949 J	0.875 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.497 U	0.472 U	0.486 U	0.49 U	0.469 U
Miscellaneous						
Lipids	%	4.3	4.4	4.0	3.5	2.6

Notes:
J: Estimated concentration.
U: Not detected at the associated reporting limit.
UJ: Not detected; associated reporting limit is estimated.
%: percent
ID: identification
pg/g: picogram per gram
TA: tissue

Table A-5
Analytical Results Summary - Sport Fish Tissue Samples

	Sample Location:	Downstream Reference Area	Downstream Reference Area	Downstream Reference Area	Downstream Reference Area	Downstream Reference Area
	Sample ID:	DRA-LMB-01-2021-0823	DRA-SMB-01-2021-0823	DRA-SMB-01-2021-0823-DUP	DRA-SMB-02-2021-0823	DRA-SMB-03-2021-0823
	Sample Date:	8/23/2021	8/23/2021	8/23/2021	8/23/2021	8/23/2021
	Sample Depth:	-	-	-	-	-
	matrix_code	TA	TA	TA (Duplicate)	TA	TA
Parameters	**Units**					
Dioxin Furans						
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	4.96 U	4.84 U	4.79 U	4.77 U	0.83 J
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	4.43 J	4.84 U	4.79 U	4.77 U	4.84 U
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.462 J	1.36 J	1.83 J	2.39 U	0.557 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	0.63 J	2.42 U	0.326 J	2.39 U	2.42 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	2.48 U	2.42 U	2.39 U	2.39 U	2.42 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.818 J	6.03	6.94	0.382 J	1.43 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.48 U	2.42 U	2.39 U	2.39 U	2.42 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.257 J	1.36 J	1.45 J	2.39 U	0.367 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.48 U	2.42 U	2.39 U	2.39 U	2.42 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	2.48 U	2.42 U	2.39 U	2.39 U	2.42 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.48 U	2.42 U	2.39 U	2.39 U	2.42 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	2.48 U	1.39 J	1.84 J	2.39 U	0.608 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.48 U	0.884 J	0.962 J	2.39 U	0.724 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.48 U	0.247 J	0.378 J	2.39 U	2.42 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.649 J	4.77	5.79	0.845 J	2.02 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.496 U	0.753	0.732 J	0.477 U	0.484 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.307 J	0.785	0.848	0.477 U	0.673 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.952 J	1.36 J	2.09 J	2.39 U	0.557 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	1.23 J	2.42 U	0.662 J	2.39 U	2.42 U
Total hexachlorodibenzofuran (HxCDF)	pg/g	1.08 J	8.14 J	9.43 J	0.382 J	1.8 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.48 U	2.42 U	2.39 U	2.39 U	2.42 U
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.649 J	6.99 J	8.71 J	0.845 J	2.63 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.48 U	0.884 J	0.962 J	2.39 U	0.724 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	0.496 U	1.45 J	2.14 J	0.477 U	0.35 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.307 J	0.785 J	0.848 J	0.477 U	0.673 J
Miscellaneous						
Lipids	%	0.8	1.7	2.7	2.3	0.8

Notes:
J: Estimated concentration.
U: Not detected at the associated reporting limit.
%: percent
ID: identification
pg/g: picogram per gram
TA: tissue

Table A-5
Analytical Results Summary - Sport Fish Tissue Samples

Sample Location:		Downstream Reference Area	Fisherman's Park Cove-Pettite Cove	Fisherman's Park Cove-Pettite Cove	Fisherman's Park Cove-Pettite Cove
Sample ID:		DRA-SMB-04-2021-0823	FPC-PC-LMB-01-2021-0823	FPC-PC-LMB-02-2021-0823	FPC-PC-LMB-03-2021-0823
Sample Date:		8/23/2021	8/23/2021	8/23/2021	8/23/2021
Sample Depth:		-	-	-	-
matrix_code		TA	TA	TA	TA
Parameters	**Units**				
Dioxin Furans					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	4.75 U	4.91 U	1.76 J	4.82 U
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	4.75 U	4.91 U	8.58	4.82 U
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.286 J	0.139 J	1.37 J	2.41 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2.37 U	2.45 U	1.58 J	2.41 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	2.37 U	2.45 U	2.45 U	2.41 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1.59 J	0.768 J	2.36 J	0.464 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.37 U	2.45 U	2.45 U	2.41 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.37 U	2.45 U	0.632 J	2.41 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.37 U	2.45 U	2.45 U	2.41 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	2.37 U	2.45 U	2.45 U	2.41 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.37 U	2.45 U	2.45 U	2.41 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.552 J	2.45 U	0.446 J	2.41 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.37 U	2.45 U	0.613 J	2.41 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.37 U	2.45 U	2.45 U	2.41 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	2.11 J	0.47 J	1.1 J	0.361 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.333 J	0.491 U	0.49 U	0.428 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.475 U	0.491 U	0.828	0.482 U
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.286 J	0.139 J	2.29 J	2.41 U
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2.37 U	2.45 U	3.11 J	2.41 U
Total hexachlorodibenzofuran (HxCDF)	pg/g	1.59 J	0.768 J	3.39 J	0.464 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.37 U	2.45 U	0.278 J	2.41 U
Total pentachlorodibenzofuran (PeCDF)	pg/g	3.01 J	0.47 J	1.55 J	0.361 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.37 U	2.45 U	0.613 J	2.41 U
Total tetrachlorodibenzofuran (TCDF)	pg/g	0.333 J	0.491 U	0.255 J	0.428 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.475 U	0.491 U	0.828 J	0.482 U
Miscellaneous					
Lipids	%	0.9	0.2	0.4	1.6

Notes:
J: Estimated concentration.
U: Not detected at the associated reporting limit.
%: percent
ID: identification
pg/g: picogram per gram
TA: tissue

Table A-5
Analytical Results Summary - Sport Fish Tissue Samples

Sample Location:		Fisherman's Park Cove-Pettite Cove	Fisherman's Park Cove-Pettite Cove	Pettite Cove	Upsteam Reference Area	Upsteam Reference Area
Sample ID:		FPC-PC-LMB-14-2021-0823	FPC-PC-SMB-03-2021-0823	PC-LMB-01-2021-0826	URA-SMB-01-20210824	URA-SMB-02-20210824
Sample Date:		8/23/2021	8/23/2021	8/26/2021	8/24/2021	8/24/2021
Sample Depth:		-	-	-	-	-
matrix_code		TA	TA	TA	TA	TA
Parameters	**Units**					
Dioxin Furans						
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	4.9 U	4.81 U	4.95 U	8 J	4.84 U
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	4.9 U	4.81 U	4.95 U	51.3	4.84 U
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.363 J	2.41 U	0.328 J	9.67	2.42 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2.45 U	2.41 U	2.47 U	23.9	2.42 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	2.45 U	2.41 U	2.47 U	0.641 J	2.42 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.45 J	2.41 U	1.17 J	0.613 J	2.42 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.45 U	2.41 U	2.47 U	1.07 J	2.42 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.595 J	2.41 U	2.47 U	0.42 J	2.42 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.45 U	2.41 U	2.47 U	4.14 J	2.42 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	2.45 U	2.41 U	2.47 U	2.5 U	2.42 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.45 U	2.41 U	2.47 U	2.85	2.42 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.408 J	2.41 U	2.47 U	2.5 U	2.42 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.468 J	2.41 U	2.47 U	1.33 J	2.42 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.45 U	2.41 U	2.47 U	0.681 J	2.42 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	1.69 J	0.366 J	0.721 J	0.537 J	2.42 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.49 U	0.318 J	0.495 U	0.499 U	0.484 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.53 J	0.481 U	0.495 U	0.499 U	0.484 U
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.363 J	2.41 U	0.328 J	24.3 J	2.42 U
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2.45 U	2.41 U	2.47 U	40.7 J	2.42 U
Total hexachlorodibenzofuran (HxCDF)	pg/g	3.04 J	2.41 U	1.17 J	12.5 J	2.42 U
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.45 U	2.41 U	2.47 U	29.7 J	2.42 U
Total pentachlorodibenzofuran (PeCDF)	pg/g	2.1 J	0.366 J	0.721 J	2.34 J	2.42 U
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.468 J	2.41 U	2.47 U	9.65 J	2.42 U
Total tetrachlorodibenzofuran (TCDF)	pg/g	0.49 U	0.318 J	0.495 U	0.499 U	0.484 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.53 J	0.481 U	0.495 U	0.499 U	0.484 U
Miscellaneous						
Lipids	%	0.9	1.4	0.1	1.1	0.6

Notes:
J: Estimated concentration.
U: Not detected at the associated reporting limit.
%: percent
ID: identification
pg/g: picogram per gram
TA: tissue

Table A-5
Analytical Results Summary - Sport Fish Tissue Samples

Sample Location:		Upsteam Reference Area	Upsteam Reference Area	Upsteam Reference Area
Sample ID:		URA-SMB-03-20210824	URA-SMB-04-20210824	URA-SMB-05-20210824
Sample Date:		8/24/2021	8/24/2021	8/24/2021
Sample Depth:		-	-	-
matrix_code		TA	TA	TA
Parameters	**Units**			
Dioxin Furans				
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	4.85 U	4.77 U	4.86 U
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	4.85 U	4.77 U	4.86 U
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	2.43 U	2.39 U	2.43 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2.43 U	2.39 U	2.43 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	2.43 U	2.39 U	2.43 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.43 U	2.39 U	2.43 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.43 U	2.39 U	2.43 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.43 U	2.39 U	2.43 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.43 U	2.39 U	2.43 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	2.43 U	2.39 U	2.43 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.43 U	2.39 U	2.43 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	2.43 U	2.39 U	2.43 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.43 U	2.39 U	2.43 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.43 U	2.39 U	2.43 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	2.43 U	2.39 U	2.43 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.485 U	0.477 U	0.486 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.485 U	0.477 U	0.486 U
Total heptachlorodibenzofuran (HpCDF)	pg/g	2.43 U	2.39 U	2.43 U
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2.43 U	2.39 U	2.43 U
Total hexachlorodibenzofuran (HxCDF)	pg/g	2.43 U	2.39 U	2.43 U
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.43 U	2.39 U	2.43 U
Total pentachlorodibenzofuran (PeCDF)	pg/g	2.43 U	2.39 U	2.43 U
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.43 U	2.39 U	2.43 U
Total tetrachlorodibenzofuran (TCDF)	pg/g	0.485 U	0.477 U	0.486 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.485 U	0.477 U	0.486 U
Miscellaneous				
Lipids	%	0.9	0.2	0.6

Notes:
J: Estimated concentration.
U: Not detected at the associated reporting limit.
%: percent
ID: identification
pg/g: picogram per gram
TA: tissue

Table A-6
Analytical Results Summary - Mussel Tissue Samples

Sample Location:		Downstream Fisherman's Park	Fisherman's Park Cove	Fisherman's Park Cove	Fisherman's Park Cove-Pettite Cove	Pettite Cove	Upsteam Reference Area
Sample ID:		DFP-ZBR-01-2021-0929	FPC-ZBR-01-2021-0927	FPC-ZBR-01-2021-0927-DUP	FPC-PC-ZBR-01-2021-0929	PC-ZBR-01-2021-0927	URA-ZBR-01-2021-0927
Sample Date:		9/29/2021	9/27/2021	9/27/2021	9/29/2021	9/27/2021	9/27/2021
Sample Depth:		-	-	-	-	-	-
matrix_code		TA	TA	TA (Duplicate)	TA	TA	TA
Parameters	**Units**						
Dioxin Furans							
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	33.3 J	17 J	14.9 J	31.7 J	43.7 J	1.94 J
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	11 J	22.7 J	21.4 J	14.7 J	14.8 J	19.3 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	25.3	12.5	11.5	23.4	27.6	1.2 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2.84 J	3.3	3.25	2.03 J	1.91 J	1.92 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.694 J	0.643 J	2.48 U	0.851 J	0.934 J	2.45 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	6.83	4.28	3.65	6.42 J	7.16	2.45 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.451 J	2.45 U	2.48 U	2.46 U	2.47 U	2.45 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1.58 J	0.679 J	0.61 J	1.23 J	1.39 J	2.45 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.66 J	2.45 U	2.48 U	2.46 U	2.47 U	2.45 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	2.47 U	2.45 U	2.48 U	2.46 U	2.47 U	2.45 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.467 J	2.45 U	2.48 U	2.46 U	2.47 U	2.45 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.605 J	2.45 U	2.48 U	2.46 U	2.47 U	2.45 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.47 U	2.45 U	2.48 U	2.46 U	2.47 U	2.45 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.54 J	0.504 J	0.484 J	0.396 J	2.47 U	2.45 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	1.41 J	0.728 J	0.886 J	1.14 J	1.14 J	2.45 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.766 J	0.49 U	0.38 J	0.465 J	0.494 U	0.49 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.495 U	0.49 U	0.496 U	0.492 U	0.494 U	0.49 U
Total heptachlorodibenzofuran (HpCDF)	pg/g	27.7 J	15.3 J	13.6 J	26.1 J	30.9 J	2.62 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	5.46 J	5.86 J	6.31 J	3.85 J	3.92 J	4.63 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	15.6 J	9.31 J	8.86 J	15.2 J	14.5 J	0.925 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	7.31 J	1.82 J	1.68 J	1.55 J	2.47 U	2.45 U
Total pentachlorodibenzofuran (PeCDF)	pg/g	10.9 J	5.28 J	5.78 J	9.59 J	6.4 J	2.45 U
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	4.84 J	2.45 U	2.48 U	0.751 J	2.47 U	2.45 U
Total tetrachlorodibenzofuran (TCDF)	pg/g	20 J	8.06 J	8.53 J	11.4 J	5.73 J	0.49 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	11.7 J	1.88 J	1.49 J	2.41 J	1.82 J	0.49 U
Miscellaneous							
Lipids	%	0.8	0.7	0.8	0.8	0.9	0.6

Notes:

J: Estimated concentration.

U: Not detected at the associated reporting limit.

%: percent

ID: identification

pg/g: picogram per gram

TA: tissue

Table A-7
Analytical Results Summary - PCF Accumulated Sediment Samples

	Sample Location:	**PCF-01**	**PCF-02**	**PCF-03**	**PCF-04**
	Sample ID:	**PCF-01**	**PCF-02**	**PCF-03**	**PCF-04**
	Sample Date:	**10/21/2021**	**10/21/2021**	**10/21/2021**	**10/21/2021**
	Sample Depth:	**(0-0.25) ft BGS**	**(0-0.25) ft BGS**	**(0-0.25) ft BGS**	**(0-0.25) ft BGS**
	matrix_code	**Sediment**	**Sediment**	**Sediment**	**Sediment**
Parameters	**Units**				
Dioxin Furans					
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	8230 J	5780	32900 J	156000 J
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	495 J	601 J	1730	12000 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	4240	3770	30500 J	279000 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	152	104	682	10600 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	157 J	149	1080	9280 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1350	1120	8650 J	69700 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	11.3 J	7.02	53.5	1000 J-
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	214	161	1710	19800 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	30.4 J	19.4	185	2660
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	7.02 U	6.67 U	15.5 UJ	71.1 UJ
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	17.8 J	9.36	81.3	1320 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	40.3	39.8	234	3330
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	14.6	16.9 J	81.4 J	1400
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	78.5	51	582	5170 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	177	130	1150	9980 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	16.4 J	7.81 J	59.5	786
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	3.31 U	4.07 J	38.1 J	595
Total heptachlorodibenzofuran (HpCDF)	pg/g	4780 J	4330 J	34600 J	315000 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	260 J	177 J	1170 J	17800 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	2870 J	2320 J	20400 J	192000 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	381 J	192 J	1900 J	31800 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	1390 J	1300 J	8440 J	90300 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	253 J	240 J	1760 J	27000 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	962 J	1260 J	4710 J	63700 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	397 J	471 J	2180 J	33500 J
Misc					
% Soot (Average)	%	7.23 J	2.51 J	5.04	5.77 J
% Soot (Rep 1)	%	6.01 J	2.51 J	4.41	5.32 J
% Soot (Rep 2)	%	8.45 J	2.52 J	5.67	6.22 J
General Chemistry					
TOC averages	%	8.09 J	4.45 J	6.60 J	9.60 J
Total organic carbon (TOC)	%	6.72 J	7.65 J	5.90 J	8.52 J
Total organic carbon (TOC) (2)	%	9.46 J	1.26 J	7.29 J	10.7 J
Total solids	%	92.6	84.2	86.7	65.8

Notes:
J: Estimated concentration.
J-: Estimated concentration. Low bias.
U: Not detected at the associated reporting limit.
UJ: Not detected; associated reporting limit is estimated.
%: percent
BGS: below ground surface
ft: feet
ID: identification
pg/g: picogram per gram

Appendix B
Field Data Records

Field Deviation Forms

Field Deviation Form

Form No. 1

Deviation subject:

- Sample method modification.

Project name:

- Durez Inlet

Standard procedure for field collection:

- Porewater collection with a ponar grab sampler.
- Sediment Characterization Core collection with Push Corer.

Reason for deviation:

- Ponar grab sampler was unable to collect sediment due to thick organic matter (i.e. sticks, leaves, benthic plants) on the sediment surface preventing penetration of the ponar.
- Push Core sampler was unable to collect sediment due to no soft sediment present. Per DEC Email conversation on 10/15/2021, approval of collection with a ponar grab sampler for samples BPF-SCC-01 and 02 is acceptable.

Description of deviation:

- Collected grab samples at locations FPC-PWG-01 and FPC-PWG-02 with the push corer. Top 6 inches of sediment was processed.
- Collected sediment samples with a Petite Ponar grab sampler for BPF-SCC-01 instead of a push core.

Special equipment, materials, or personnel required:

- N/A

Initiator's name: Justin Drehs	Date: 10/18/2021
Project Manager: Mike Werth	Date: 10/18/2021

Field Deviation Form

Form No. 2

Deviation subject:

- Proposed locations unable to be sampled.

Project name:

- Durez Inlet

Standard procedure for field collection:

- Samples will be collected at or near proposed locations.

Reason for deviation:

- Water depth and current too great to attempt push core. Grab sampler was used to attempt sample.
- No soft sediment found. Grab sampler not able to collect sample. Hard bottom (and some small to large gravel) encountered in all attempts.

Description of deviation:

- Sample was not able to be collected at location BPF-SCC-02. Sample BPF-SCC-01 was re-located and used to represent this sampling area.

Special equipment, materials, or personnel required:

- N/A

Initiator's name: Justin Drehs	Date: 10/19/2021
Project Manager: Mike Werth	Date: 10/19/2021

ANCHOR QEA

Field Deviation Form

Form No. 3

Deviation subject:

- Proposed locations re-located.

Project name:

- Durez Inlet

Standard procedure for field collection:

- Samples will be collected at or near target coordinates.

Reason for deviation:

- Sample was not able to be collected at target coordinates due to lack of sediment present and/or difficulty accessing target location (high flows or water depth).

Description of deviation:

- UPC-PWG-01 – after three ponar attempts, this location was re-located 50 ft upstream.
- BPF-SCC-01 - after 2 ponar attempts on hard bottom with large gravel, relocated sample to 20 feet offshore of new condo docks to find soft sediment.
- URA-SCC-01 – Current too strong and water depth (21 ft) too deep to attempt core. Tried two locations before targeting a third on the island side of the river. This third attempt was just upstream of the old train bridge approximately 20 feet offshore.
- URA-SCC-02 – Current and wind very stiff, water depth was too deep (17 ft). Relocate 270 feet NNW of target location. Re-location is approximately 20 feet offshore.
- DFP-SCC-02 – Hard bottom and deep waters (17 ft) too difficult to bring up core. Relocate to 20 feet offshore.
- PCF-02- grab samples were attempted at the target sewer PCF-02 "Gilmore MH-1", no sediment at bottom of manhole. Relocate to "Edward-MH-2", no sediment at bottom of manhole. Relocate to "5th MH-1" where sediment was found and collected.
- FPC-HRC-02 – at target location hard rock refusal was encountered multiple times. Relocated 30 feet west further into the cove.

Special equipment, materials, or personnel required:

- N/A

Initiator's name: Justin Drehs	Date: 10/18/21 through 10/21/21
Project Manager: Mike Werth	Date: 10/18/21 through 10/21/21

Field Notes – Fish Sample Collection

August 23, 2021 – August 27, 2021

8/23/21
Durez Inlet - Electrofishing
Meet @ Gratwick State Park boat
launch @ 10:00
Conduct safety/tailgate meeting - 10:00 - 10:20
Mostly sunny, 80°, wind 5-10 mph W
Begin shocking at Downstream reference
area off State Park.
Start: 10:55 End: 11:55
Collected 4 SMB and 1 LMB for tissue
analysis.
Shocking seconds: 3117
Check Fish Community log for species list

12:50 - Downstream Fishermans ~~Cove~~ Park
start: 12:50 End: 13:25
Shocking seconds: 1645
Collected: 2 BG composites and 3 BNM
species - Carp, Goldfish, Round Goby, Roach,
White sucker, redhorse, BB, SMB, LMB,
Rockbass, PKSD, BC, Spottail, Bluntnose,
River Chub, Silverside, yellow perch
BNM - were 12 fish composites

Fishermans Park Cove
Start: 13:35 End: 14:05
Collected ~~3~~ 5 BG composites
Seconds: 1239 + 245
Collected 1 LMB
Goldfish, Carp, Rudd, LMB, Rudd, BB, White Sucker
SMB, Bluegill, PKSD, Rock bass, NP, Gar,
Round Goby,
Between PC and FP
Start: 14:10 End: 1425
Seconds: 524
No composites collected
Lack of habitat available
SMB, Rock bass, Round Goby
2 SMB Collected, 2 LMB collected

Pettit Cove
Start: 14:30 End: 14:45
Seconds: 803
White Sucker, pike golden shiner,
yellow perch, rock bass, carp, LMB,
SMB, Round Goby, Silverside, Bluntnose
minnow

Processing
Scale Calibration: 200g / 199.9g

FPC - Fishermans Park Cove.

Bluegill

		Length (mm)	Weight (g)
BG-01	-1	97	19.2
	2	109	26.6
	3	106	24.6
	4	117	35.2
	5	93	16.5
BG-02	-1	90	15.2
	2	92	16.0
	3	90	14.9
	4	82	10.7
	5	90	14.6
BG-03	-1	100	20.6
	2	102	25.3
	3	103	25.9
	4	111	30.4
	5	99	22.3
BG-04	-1	96	19.0
	2	82	11.8
	3	91	18.3
	4	87	13.5
	5	85	13.5

FPC - Fisherman's Park Cove

Bluegill

		Length (mm)	Weight (g)
BG-05	-1	95	17.7
	2	107	26.1
	3	100	20.2
	4	100	20.7
	5	88	14.8

DFP - Downstream Fisherman's Park

Bluegill

		Length (mm)	(weight)
BG-01	-1	96	19.8
	2	101	24.5
	3	93	19.1
	4	98	20.3
	5	99	21.4
BG-02	-1	90	14.9
	-2	88	15.1
	-3	95	18.6
	-4	89	15.4
	-5	83	12.4

Bluntnose Minnow

BNM-01	- Min 75	67.6 total	n=12
	Max 80		
BNM-02	Min 70	57.8 total	n=12
	Max 78		
BNM-03	Min 64	45.6 total	n=12
	Max 75		

FPC-PC
Beteween Fisherman Park Cove and Pettit Cove

Largemouth Bass	Length (mm)	Weight (g)
~~FPC-PC~~ LMB - 01	345	750
LMB - 02	349	657
LMB - 03	361	881
LMB - 04	412	1218

~~LMB - 0~~

Smallmouth Bass

SMB - 01	375	695

Lesion on ventral side, Wound entire head

DRA - Downstream Reference Area

Smallmouth Bass

SMB - 01	471	1793
SMB - 02	440	1365
SMB - 03	405	1115
SMB - 04	360	784

Largemouth Bass

LMB - 01	362	869

8/24/21

Meet @ 8:00 at Gratwick State Park
8:00 - Safety/Tailgate meeting
8:35 - Leave dock, head for upstream reference area
Mostly Sunny, 75°, Calm, dry
Normal river conditions
Crew - JR, DB, NF
Upstream Reference Area - URA
Start: 9:05 End: 945
Seconds: 1307
Collected 5 BNM composites
1-NP, Carp, Rudd, BB, White sucker, LMB, YP, PKSD, BG, Golden Shiner, BNM, Silverside, Round Goby
Collected 5 SMB outside cove
Bluntnose collected in cove
SMB, Redhorse, Goby, Rudd, carp outside of cove.
SMB caught along concrete wall in river channel

URA - Upstream Reference Area

Bluntnose Minnow		Length (mm)	Weight (g)	
BNM -	01	71-81	60.4	n=12
	02	68-81	63.0	n=~~12~~ 15
	03	61-72	64.1	n=20
	04	58-72	58.5	n=20
	05	56-69	60.2	n=25
Smallmouth bass				
SMB -	01	452	1438	
	02	354	642	
	03	366	723	
	04	316	411	
	05	307	412	

8/25/21
Meet @ Pettit Cove at 10:00
JR, JV, DM, PT
Hot, Dry, 85°, Mostly Sunny, wind
NW @ 10-15 mph
10:00 - 10:15 - Safety/Tailgate meeting
10:30 - Pull Fyke net deployed previous afternoon
Collected 6 BG plus Rock bass, YOY LMB, Creek Chub, PKSD, Redbreast Sunfish, Silversides
11:00 - 11:30 - Deployed 3 minnow trap attached to dock at cove mouth
11:30 - 12:00 - Deployed 2 fyke nets off of culvert end of cove
13:30 - 14:10 - Deployed 3 minnow traps in area between coves. Used cast net.

Also attempted cast net and scap nets, and beach seine in Pettit Cove - No fish collected.

8/26/21

Notes

Meet at Pettite Cove @ 7:30 am
JV, PT, DG

Hot, Dry ~~Bo~~ Sunny @ 75°, Some wind

7:45 Safety Briefing

8:00am pulled 1st Fykie Net which was deployed previous afternoon

Collected: 2 crayfish, pumkin seed, round gobies, Rock bass, 404 LMB

8:15 am pulled 2nd Fykie Net which was also deployed previous afternoon

Collected: pumpkin Seed, (1) Blue gill, Redbreast Sunfish, 404 LMB

9:20 - 9:40 - Set up minnow traps by the riff raff (6 traps)

10:40 am - Arcadis arrives

10:45 - 11:20 am - Arcadis setup equipment for electrofishing

(continue)

Processing: Scale = 200g/199.9g

PC - Pettite Cove

Blue gill	length (mm)	weight (g)
BG-01-1 →	155	85
BG-01-2 →	157	103
BG-01-3 →	150	74
Bg-01-4 →	145	67
Bg-01-5 →	141	68

Blue gill

Bg-02-1	105	25
BG-02-2	100	23
-3	90	17
-4	101	22
-5	95	18
BG-03-1	105	23
-2	104	22
-3	97	21
-4	89	20
-5	80	11

(continue)

"Large Mouth Bass"		length(mm)	weight(g)
LMB -01 -01 →		407	1110

"Blue Gill"

BG -04 →	1 →	100	20
	2 →	88	12
	3 →	75	9.0
	4 →	95	17.9
	5 →	101	20.4

"Round Gobi"

~~RG~~ RG-01	1 →	82	9.3
	2 →	75	~~8~~ 7.4
	3 →	59	2.5
	4 →	58	3.0
	5 →	55	2.8
	6 →	42	1.1

"Blue Gill"		Length (mm)	Weight(g)
BG -05 –	1 →	100	23.8
"	2 →	105	24.9
	3 →	95	18.1
	4 →	90	13.6
	5 →	86	12.8

Notes

11:20 – ~~1:30~~ 1:10 pm – Processing / COCs / Electrofishing.

2pm → check on minow traps

No Collection
Reset traps.

8/27/21

~~Met~~ meet at 8:00 am [JV, PT, DG]
Sunny, windy, cool, @ 73°F

8:10 - 8:15 - Safety meeting

8:15 - 8:45 - Picking up traps
2 - Gobies collected
2 - 404 LMB

FPC - PC

Round Gobies	Length (mm)	Weight (g)
RG - 01 - 1	70	3.9
- 2	75	4.5

Field Notes – Mussel Survey

September 27, 2021 – September 29, 2021

Mussel Survey #1

Durez Inlet

Mussel Survey

Location Code

09/27/2021

Downstream of FPC

= DFP

AT Fisherman's

Park Cove = FPC

At Pettit Cove

= PC

Between FCC and PC

= FPC - PC

Upstream Reference

Area = URA

#2 Mussel Survey
Dune 2 Inlet
09/27/2021

Species	Code
Quagga	QGG
Zebra	ZBR
Giant Floater	GTF
Fat mucket	FMT
Eastern Elliptio	EEP

Fishermans Cove
Park
9:40
09/27/2021

Whole body		#	g
1	ZBR	20.	19.8
2	ZBR	10	8.1
3	ZBR	70	46.7
4	ZBR	20	17.0
5	ZBR	30	16.0
6	ZBR	30	19.0
7	ZBR	20	12.0
8	ZBR		200.0
9	ZBR		100.0

FCP g #9
10 ZBR 40

FCP 09/27/2021
Mussel Survey
~~Rattlet Survey~~
Mussel Survey
Four People search
for 120 minutes, 4X
at FCP and
found no native
mussels,
Zebra mussels
are on the under
side of cement
riprap. Some
size in breakwater
all fairly small

#4 Mussel Survey
Pettibone Cove
11:00
09/27/2021

Elmer Diver
Lise Expert
Lee Expert Lead

3x In Pettibone
Cove 30 minutes
each
Elmer on scuba
50 minutes
and found nothing
on pilings, on
anchors, on
bottom. High
current
Nothing found
in Pettibone cove
Lee thinks the
cove freezes keeping
ever Zebra out

09/27/2021 #5
Pettibone Cove
Mussel Survey

1. ZBR = 420 grams
need to double
check at home
This is total
weight of sample

#6 Mussel Survey
Ups from Refirma
D lim
09/27/2021
12:45

2x at start
for about 20
minutes then
went to Zebra
mussel

1, ZBR = 525g
ZBR (total weight)
need to check

Habitat had
lots of woody debris
and soft sediment
to anoxic
Shore edge brick
and rip-rap
concrete Both
good for Zebra
mussel

#7
PC Mussel Survey
09/27/2021
Check tissue amount
#	Shell/total	Wet
7	3.6	0.6

Small zip-lock
9.2g

PC 427.1g +bag
9.2g bag
417.9

	Shell	Wet
#7	2.1g	0.6-0.8g
	total 2.8g	

After removal
421.8
9.2
412.6
total weight of
sample for PC

#8 FPC 09/27/2021

B 9.2g

~~540.2~~ with bag

563.8g

9.2

553.8g total weight of sample

#	total wt	Shell	Web
7	5.4g	2.7	0.9

Shell + Web 3.5g

Mussel Survey 09/27/2021

URA

~~597.3~~g

604.0g

9.2

594.8 Total Weight of Sample

~~7.7g~~ 8.2g 7.7g

total Shell

1.1g 1.6-1.8 w

no tiquid and juice

5.4g

#9 DFP Mussel Survey

09/29/2021

09:10

09:20 - 09:51

Survey 4x

2-hr person/hr

Generally good habitat, But no native mussels

Big rip-rap near shore, with fine gravel (Eisa) in between

Out deeper more fine material but still, Eisa think ice scour may effect presence

Isabel Porter

Hannes

520g total weight of sample

#10 Mussel Survey
FPC - PC
09/29/2021
10:40
Rep-Ray not
productive
But the shed
water along
new dock was
good for ZBR
and Corbicula (dead)
as well

Silt near the
dock but clay
out deeper.
Maybe Elmer thinks
due to canal
So maybe near
the dock for
core

? 719 g/
total sample
weight

Field Notes – Sediment Sample Collection

October 18, 2021 – October 21, 2021

Durez 10/18/2021 50s Partly sun windy

1040 Arrive @ Durez NT Staging area where Processing will take Place.
Nick S. Joe V. Chris Y & J. Ochs onsite.
Meet w/Darnell to get lay of land.
Unload Trucks.

1200 Head to Gratwick launch to get boat in water.

1330 Boat in water.
Heading out to Fishermans Cove & Recon trip.

1350 Attempt North cove @ fisherman's Park.
Waves to unsafe to attempt w/pilings.

1405 Attempt Fisherman's Park ~~North~~ South JD
43° 2' 19.573 N 78° 53' 19.253 W
FPC-S-ATP1 WD: 3.8 Rec 0 in Pen 3 in
→ 3 in of silt, hard Rock refusal. cannot collect core move Further into Cove for Attempt 2

Attempt 2 WD: 3.6 Rec: 3 in Pen: 18 in
FPC-S-ATP2 Plant material on sed surface.
43° 2' 19.583 N 78 53' 18.719 JD
Attempt 3 → WD: 3.6 in Rec 23 Pen Pen: 24 in
Core 1 (Radioisotope)
Core 2: Pen 24 in Rec: 18.5 in (D-F core)

1530 Meet with city of North Tonawanda water engineer for water pipe locate.

1610 Attempt 1 of PW Grab Sample at FPC-S [illegible] w/Ponar
Woody debris & seewee/moss on cove bottom. 12 trys w/Ponar.
WD: 3.6 Pen: 0 in

1645 Attempt PW Grab Sample at FPC-S w/Core tube.
Recover 4 inches of sediment 3 times.

1720 Attempt 1 Fishermans Park North
43° 2' 22.462 N 78° 53' 19.847 W
FPC-N-ATP 1
Woody debris & vegetation on Sediment JD Surface.
~~Core 1 Rec 24" Pen 24" WD 3.5" D-F~~
~~Core 2 Rec~~
Core 1 D-F - Pen: 25" Rec: 25" WD: 3.5'
Core 2 Radionuclide - Pen 24" Rec 24" WD: 3.5'

Sheen Observed as Core 2 was brought out of water. Trace sheen. Photo taken.

1745 Attempt PW Grab Sample at 10 Attempts @ FPC-S w/Ponar. Woody debris & Seeweed/moss on Cove bottom. Ponar no recovery.
WD: 3.6 Pen: 0 in

1800 Attempt PW Grab sample at FPC-N w/core tube. Recover 6 inches of sediment with 2 core tubes.

1830 Back at Marina dock.

1850 leaving Marina to head to Processing area.

1930 Offsite @ Processing Area

South = 02
North = 01

Durez 10/19/2021 40's - 60's Sunny

0730 J. Drews, C. Yard, N. Smith onsite @ Processing area.

1055 Meet w/ Tony (N. Grid) ~~to~~ at little Niagara River to go over 240 kV line crossing the river.

1130 Store Run & help Processing.

1500 Head to boat slip to collect cores.

1530 On location BPF-SCC-01
2 Ponar Grabs with small to large gravel. No sediment recovery.
Had to relocate sample to just 20 feet off New condo docks (northern end of docks). 1 Ponar collected.
Also collected 3 Benthic Ponars (BPF-~~B~~BC-01) at this spot. ~~[illegible]~~
All Ponars collected @ BPF-01 were observed to be soft sediment.

1600 On location BPF-SCC-02
2 Ponar Grabs w/ medium + large gravel
NO sediment recovery. Will use sediment collected by docks (by condos) ~~[illegible]~~ to represent area.

1650 At location DFP-SCC-01
WD=67" Pen:30" Rec: 24"

1715 At location DFP-SCC-02
WD=17' Pen:0" Rec:0"
Hard bottom, even with 20 blows of slide hammer no penetration.
Move closer to shore for ~~less~~ shallower water depth. Also very stiff current and wind @ target location.
1745 Attempt at relocation closer to shore
WD: 8' Pen: 30" Rec:30"
Refusal hit @ 30"
1820 Back @ Marina.
1840 Back @ Processing Area.
1920 offsite.

50's-60's
Sunny.

Durez 10/20/2021
0730 Onsite and on boat. with C. Yard. Rest of Crew @ Processing Area.
0800 Navigate back to DFP-SCC-01 to collect DFP-BIC-01.
0815 collect DFP-BIC-01
3 Benthic Rep cores
Rep 1 Rec = 19" Rep2 Rec = 14" Rep3 Rec = 17"
Petroleum like odor & Sheen when collecting each of the 3 cores. Bluish grey
0830 ~~collect DFP-~~ JD. Navigate back to DFP-SCC-02 (Relocated point) to collect DFP-BIC-02
3 Benthic Rep cores.
Rep 1 Rec = 14" Rep 2 Rec = 14" Rep3 Rec = 15"
Petroleum like odor & sheen when collecting each of 3 cores.
0845 Navigate back to FPC-~~HRC~~-01 to collect FPC-BIC-01
3 Benthic Rep cores
Rep1 Rec: 19" Rep2 Rec: 20" Rep3 Rec: 17"
Petroleum like odor & bluish grey Sheen w/ some rainbow strands & a brown strand.

0915 Navigate back to FPC-HRC-02 (Rebucket)
to collect FPC-BIC-02.
3 Benthic Rep Core S.
Rep 1 Rec: 14" Rep 2 Rec: 14 Rep 3 Rec: 12"
1040 Arrive at URA-SCC-02
Current, wind very stiff and WD is
17 feet. Cannot core.
Relocate 270 feet North North West of
target location. Tie off to end of
dock of the Shores Marina. Relocation
is about 20 feet offshore.
WD: 10 feet Rec: 39 Pen: 45"
Hit Refusal
Trace grey sheen.
1115 Arrive at URA-BIC-03. Heavy veg.
WD: 4.5' ~~Rec Pen~~ Rocky shoreline.
Rep 1 Rec: 23" Rep 2 Rec: 16" Rep 3 Rec: 22"
Trace sheen when pulling up cores.

1145 Arrive at URA-BIC-01 Veg Present
WD: 6.0' near boats and dock in cove.
Rep 1 Rec: 19" Rep 2 Rec: 20" Rep 3 Rec: 13"

1220 Arrive at URA-SCC-01
and URA-PWG-01
Current too strong and water depth (21 ft)
to collect samples.
Headed North 240 feet to collect
Porewater Sample just off docks
in 18 ft of water and less current.
URA-PWG-01 Successful at relocation.
Tried to core URA-SCC-01 at
relocation. Too deep for pushcore
and current. Tried slide hammer
and Refusal, bent core tube.

1245 Re-located URA-SCC-01 North
of car bridge by 20 ft on Plant
side of river offshore by 20 ft.
Refusal, bent core tube.
1300 Core tube ~~Res~~ is stuck in ~~core~~
Pushcore device.
1640 Re-Attempt URA-SCC-01 core upstream of train
bridge on the island side of River
20 feet offshore. Core successful.
WD: 8 ft
Pen: 20"
Rec: 18.5"

10 1800 Push small boat into Pettit Cove.
See Pg.11 Per Sampling Def'l's

11

Pettit Cove - Cove Flume Outfall 10/20/21
PCF~~[illegible]~~-04 6:02 PM

Lg. grabbed samples w/ PONAR
observered rainbow sheen
(multiple strands - rainbow color)

~~[illegible]~~

Sample	Recovery (in)	Notes
PCA-HRC-03	20.5	Pen 20.5"
Rep #1	16.0	
Rep #2	15.25	
Rep #3	8.25	

1430 J.Ochs, C.Yard + J.Voloshin leave Processing Facility.

12 Durez 10/31/2021 50's-60 Cloud scream

0715 Arrive at Pettit Cove.

0800 On Point at PCA-HRC-02

Collect core WD: 4.5ft Rec: 17.75" Pen: 20"

Collect PCA-PWG-02

Collect PCA-BIC-02 Replicates

Rep1 Rec: 13.25" Rep 2 Rec: 13" Rep 3 Rec: 18.75"

0830 on Point at PCA-HRC-01

Collect core WD: 4.5 ft Rec: 19" Pen: 20"

Collect PCA-PWG-01

Collect PCA-BIC-01 Replicates

Rep1 Rec: 12" Rep 2 Rec: 21" Rep 3 Rec 19"

0915 ~~Collect~~ Meet w/ North Tonawanda Sewer to ~~meet~~ Perform grab samples at manholes

At PCF-03 to collect sample at Manhole ID "River MH-1". Sediment Recovered.

0930 At PCF-02 to collect sample at manhole ID "Gilmore MH-1". NO sediment present.

Relocate to "Edward MH-2". NO sediment present.

Relocate to "8th MH-1". Recovered sediment PCF-02 - Relocate 03.

1020 At PCF-01 to collect sample at manhole ID "Rosebrock MH-1" Sediment Recovered.

1115 At UPC-PWG-01, No sediment at location after 3 Ponar attempts. Relocate 50 feet upstream to collect sample.

1330 Back at Processing Area to help ship samples & clean up.

1540 AQ Crew offsite, head back to hotel & travel back to Syracuse.

Rite in the Rain

Field Notes – Sediment Sample Processing

October 18, 2021 – October 21, 2021

Location: DURKEE INLET

Project / Client:

Date: 10/18/21

CORE PCF-S-ATP3 REC 33"

DEPTH	SAMPLE	WT	COMM
0-2	1	58 g	contains woody organics w silt, organ
2-4	2	110 g	some organic material
4-6	3	112	wood + sand
6-8	4	110	sandy matrix w wood stem
8-10	5	120	contains misc fill (GEAR HOLDER)
10-12	6	175 g	mf SAND, little SILT
12-14	7	113 g	mf SAND, some SILT
14-16	8	165	mf SAND, little SILT
16-18	9	160	SAA
18-20	10	115	SAA
20-22	11	142	cmf Sand, little SILT, trace organics
22-24	12	160	cmf sand, little silt
24-26	13	163	cmf SAND, some SILT, tr ORGANICS odor
26-28	14	115 g	SAA, trace septic odor
28-30	15	138	cmf SAND, little SILT, dark GREY
30-32	16	141	SAA
32-34	17	148	SAA
34-36	18	154	SAA, SLIGHT [illegible] ODOR
36-38	19	134	SAA, [illegible]
38-40	20	129	mf SAND, little SILT
40-42	21	144	cmf sand, little SILT
42-44	22	127	SAA

Location: DURKEE INLET

Project / Client:

Date: 10/18/21

PCF-S-ATP-3

DEPTH	SAMPLE	WT	COMM
44-46	23	126 g	mf SAND, little SILT
46-48	24	105 g	SAA
48-50	25	110 g	SAA
50-52	26	121	mf SAND, some SILT
52-54	27	114	SAA
54-56	28	65	SAA

OUT OF SAMPLE MATERIAL

SAMPLE ID: PCF-HRC-02

TIME 1600

Location DUKE INLET Date 10/18/21

Project / Client

JAR INVENTORY

SIZE	#
8 OZ AMB JAR	10
4 OZ AMB JAR	20+2+4B+12 = 38
2 OZ AMB JAR	100
32 OZ JAR WM	12+12
1L AMBER	10

Location DUKE INLET Date 10/19/21

Project / Client

SAMPLE ID FPC-HRC-02 LAB TIME 0944

SAMP #	TIME	DEPTH	VOL	COMM
01	0945	0-2cm		SILT & cmf SAND, WOODY ORGANICS
02	1000	2-4		cmf SAND, SOME SILT, WOODY ORG
03	1010	4-6		SAA
04	1017	6-8		SAA
05	1030	8-10 + DUP01		cmf SAND, LITTLE SILT, TR ORG
06	1055	10-12 + MS/MSD		cmf SAND, SOME SILT, WOODY ORG
07	1105	12-14		cmf SAND, LITTLE SILT, TR ORG
08	1111	14-16		cmf SAND, SOME SILT, TR SMALL GRAVEL

SAMPLE ID FPC-HRC-01 LAB TIME 1127

SAMP #	TIME	DEPTH	COMM
01	1127	0-2cm	SILT & WOODY ORGANICS
02	1145	2-4	SAA
03	1154	4-6	SAA
04	1200	6-8	SILT, LITTLE cmf SAND, WOODY ORG
05	1210	8-10	SAA
06	1220	10-12	SAA
07	1225	12-14	SAA
08	1234	14-16	

Location DUREZ INLET

Project / Client Date 10/19/21

CORE FPC-HRC-01 RADIOCHEM

SAMPLE TIME 1400

SAMP #	DEPTH	WT	COMM
1	0-2	86g	SILT, ORGANICS, wt SAND
2	2-4	132g	SAA
3	4-6	89g	SAA
4	6-8	101	SAA
5	8-10	109	SILT, cmf SAND ORGANICS
6	10-12	124	cmf SAND & SILT, little ORGA
7	12-14	108	SILT, some smf SAND + ORGANICS
8	14-16	135	SAA
9	16-18	152	SAA
10	18-20	119	SAA
11	20-22	123	SILT & SAND, TRACE OF [illegible]
12	22-24	106	SAA
13	24-26	152	SILT SAND WOOD PIECE
14	26-28	90	SAA
15	28-30	120	SILT mf SAND TR ORG
16	30-32	123	SAA
17	32-34	111	SILT, Some cmf SAND, tr. ORG
18	34-36	125	SAA

Location DUREZ INLET Date 10/20/21

Project / Client

CORE FPC-HRC-01 RADIOCHEM

SAMP #	DEPTH	WT	COMM
19	36-38	114	SILT, some cmf SAND, tr ORG
20	38-40	130	SAA
21	40-42	101	SAA, CONTAINS WALNUT
22	42-44	77	SILT, little mf SAND
23	44-46	117	SILT, Some mf SAND, little woody ORG
24	46-48	115	SAA, tr ORGANICS
25	48-50	98	SAA
26	50-52	106	SAA
27	52-54	91	SILT, little mf SAND & ORGANICS
28	54-56	109	SAA

DFS SCL-01 36" PEN / 24" REC

DFS SCL-02 3' PEN / 30" REC

Location: DUNER INLET
Project / Client: SUPP SED CHAR. Date: 10/20/21

SAMPLE ID: BPF-SCC-01
TIME 10:00
DEPTH 0-6" (PONAR)
DESC. Br. SILT & cf SAND, tr ORGANIC MATERIAL
ANALYSIS: PCB/PCDF, TOT SOLIDS, TOC, SUT CARBON
QA: DUP02 + LAB DUP + MS/MSD

SAMPLE ID DFP-SCC-02
TIME 1230 CORE REC 30"
DEPTHS: (1) 0-6" (2) 6-12" (3) 12-24"
DESC: 0-6 GRAY BLACK SILT, little cf SAND + ORGANICS ...
6-12 GRAY/BLACK SILT + cmf SAND, tr ORGANICS
12-24 BLACK SILT, little cmf SAND
SHEEN PRESENT FROM ~9"-21"

SAMPLE ID DFP-SCC-01
TIME 1330 CORE REC 24"
DEPTHS - 01 - 0-6" / 02 - 6-12" / 03 - 12-24"
DESC: 0-6 GR/BLK SILT, little mf SAND + ORGANICS
6-12 GR/BLK cmf SAND + SILT, tr WOODY ORGANICS
12-24 Gr/BLK SILT, SOME cmf SAND

SAMPLE ID URA-PWG-01 TIME 1440
Cmf SAND, SILT, leafy ORGANICS
PORE WATER EXTRACTION

Location: DUNER INLET Date: 10/20/21
Project / Client: SUPP SC

SAMPLE ID URA-SCC-02 REC 37"
TIME 1500
DEPTH 01 - 0-6" / 02 - 6-12" / 03 12-24"
DESC 0-6" GR/BLACK SILT, little cf SAND + ORG
6-12" BLK, SAA
12-24" BLK SILT & cmf SAND, tr ORGANICS

~~ANAL~~ PCB...

Location DUREZ INLET

Project / Client

Date 10/21/21

SEDIMENT CORES

CORES ON SITE: URA-SCC-01 (SUP CHAIN)

IDs URA-SCC-01-01 / 0-6"

URA SCC-01-02 / 6-12"

URA-SCC-01-03 / 12-18½" + DUP03 & MS/MSD

TIME 0800

DESC 0-10": Gray SILT, little m f SAND, trace gray organics

10-18½" Gray SILT and m f SAND, tr. organics

HIGH RES CORE SAMPLE PCA-HRC-03

TIME 0920 REC: 21"

DESC Br/Gr SILT, trace m f SAND & ORGANICS

VERY SOFT MATERIAL, COMPRESSING IN CORE TUBE

ANALYSES: DIOX/FUR, TOT SOLID, TOC, SOOT CARBON

ID	DEPTH
01	0-2cm
02	2-4
03	4-6
04	6-8
05	8-10
06	10-12
07	12-14
08	14-16

…" LEFT AFTER EXTRUDING & CUTTING - ARCHIVED

Location DUREZ INLET

Date 10/21/21

Project / Client SEDIMENT CORES

HIGH RES CORE SAMPLE PCA-HRC-02

TIME 1015 REC 17.5"

DES DK GREY SILT, little fine SAND, ORGANICS

ANALYSES DIOX/FUR, TOT SOL, TOC, SOOT CARBON

ID	DEPTH
01	0-2cm
02	2-4cm
03	4-6cm
04	6-8cm
05	8-10cm
06	10-12 cm
07	12-14 cm
08	14-16cm

HIGH RES CORE SAMPLE PCA-HRC-01

TIME 1130 REC 19"

DESC BR/GR SILT, little fine SAND, ORGANICS, trace CLAY

ID	DEPTH
01	0-2cm
02	2-4
03	4-6
04	6-8
05	8-10
06	10-12
07	12-14
08	14-16

Location DUREZ INLET

Project / Client MANHOLE/OUTFALL SAMPLING Date 10/21/21

ID PCF-03
TIME 1030
DESC mf GRAVEL, little cmf SAND, trace SILT ← [illegible] BRICK + ASPHALT FRAGMENTS
ANALYSIS DIOX/FUR, TOT SOLID, TOC, SOOT CARBON

ID PCF-01
TIME 1240
DESC cmf GRAVEL, little cmf Sand, tr Silt, tr [illegible]
ANALYSIS DIOX/FUR, TOT SOLID TOC, SOOT CARBON

ID PCF-02
TIME 1250
DESC cmf GRAVEL, trace cmf SAND, trace SILT, tr [illegible]
ANALYSES DIOX/FUR, TOT SOLID, TOC, SOOT CARBON

ID PCF-04 [illegible] PETTIT COVE OUTFALL
TIME 1315
DESC GY/DK cmf SAND, some mf GRAVEL, tr SILT + ORGANIC MATERIAL
ANALYSES DIOX/FUR, TOT SOLID, TOC SOOT CARB

Location DUREZ INLET Date 10/21/21

Project / Client PORE WATER EXTRACTION SUMMARY

SAMPLE ID	TIME	DESC
PCA PWG-01	1330	BLK SILT + ORGANICS
PCA-PWG-02	1345	BLK SILT, ORGANICS
PCA-PWG-03 + DUP-01	1400	DK BR SILT, tr f SAND, [illegible]
UPC-PWG-01	1430	cmf GRAVEL, some cmf SAND, tr silt

Location DUNCZ Date 10/22/21

Project / Client

RINSE BLANKS

SAMPLE ID: DUR-RB-01 + DUR-RB-01-DUP05
TIME: 1030
COLLECTED FROM: 3" LEXAN CORE TUBE & CAP
ANALYSIS: DIOXIN/FURAN

SAMPLE ID: DUR-RB-02
TIME: 1050
COLLECTED FROM: DECONTAMINATED SAMPLING SPOON
ANALYSIS: DIOXIN FURAN

Field Notes – Benthic Community Survey

October 20, 2021 – October 21, 2021

#1 10/20/2021 Benthic Community
Taken on 10/19
Between FPC and PC. 3 Ponar Grabs treated as separate samples

FPC-PC-BC-01-A-2021
~~TOO~~ on 1019
About 900 ml in sample. Fine sand almost no silt

FPC-PC-BC-02-A-2021
1019
About 900 ml in samle. Again fine sand no silt

FPC-PC-BC-03-A
2021-1019
About 800 ml in sample all fine sand.
c 100 ml Alcohol per sample

#2 10/20/2021
Benthic Community
FPC-BC-01
A to C
A was silt and of sand

B and C were silt sand and both had a sheen

Needed and bottle for B

Benthic Community

DFP-BC-02 and 01
Mostly silt > 500 μm. Oily sheen in A & B on all cores
A & B as two bottles

Rite in the Rain

#3 Benthic Community

MRA - BC - 01
and 03
silty with
most mass > 500 µm

Oil in one core
down to D

A + B as two bottles

10 | 21 | 2021

PC - BC - 01, 02, 03
03 not much
oil two bottle
for A + B

02 same oil
C. two bottles
for A + B
same silt > 500 µm

#4 Benthic Community
PC - 01 10/21/2021
Did see a
Damsel fly larva
hopefully in sample
it was swimming in
the tube

Some oil in B
layer
A + B two bottles

Not Benthic Community
1. Cal Sim
2. A pul of [illegible]
arguing [illegible]
3. Drift [illegible]
core expired
Box Core
3a Dig d Core
3,5 Flecc 2c Core
3c

Field Notes – Archive Sample Processing

December 13, 2021

Location DUREZ Date 12/13/21

Project / Client ARCHIVE SAMPLING

0800 ARRIVE AT SHOP
NICK SMITH
JUSTIN DROHS } ARCADIS

CORES THAWED OVER WEEKEND, TO BE PROCESSED PER EMAIL FROM MIKE NORTH ON 12/6/2021

CORE ID: FPC-HRC-01
TIME: 0830

ID	DEPTH	
09	16-18cm	SILT, SOME CMF SAND & WOODY ORGANIC
10	18-20	SDA
11	20-22	SILT and CMF SAND, TR ORG
12	22-24	SDA
13	24-26	SILT + CMF SAND + WOODY ORG
14	26-28	SILT, SOME cmf SAND
15	28-30	SDA
16	30-32	SILT, LITTLE cmf SAND, LITTLE ORG
17	32-60 (12.23.5")	SDA, MOD SEPTIC ODOR

DUP FPC-HRC-01-17 DUP (COLLECTED)
D/F MS/MSD COLLECTED (8oz)

Rite in the Rain

Location DURBZ Date 12/13/21

Project / Client ARCHIVE SAMPLING

CORE ID: FPR-HRB0002
TIME 1000

ID	DEPTH	COMM
09	16-18cm	SILT & c-f SAND, 3" COBBLE
10	18-20	SILT & c-f SAND, tr. ORGANICS
11	20-22	SILT & c-f SAND
12	22-24	SAA
13	24-26	SAA
14	26-28	SILT, some c-f SAND, little org
15	28-30	c-f SAND, some SILT
16	30-32	SAA
17	32-46 (12-18")	SAA

DUP: FPR-HRC-02-DUP
MS/MSD ALSO COLLECTED FOR D/F (8Oz)

Project / Client ARCHIVE SAMPLING

CORE ID PCA-HRC-01

TIME 11:00

ID	DEPTH	
		16-32cm DUP/ MS/MSD COLLECTED 009
09	6-12"	CL BLK SILT, little ORG, tr mfSAND
10	12-15.5" 32-39cm	SILT, some ORG, tr mfSAND

CORE ID PCA-HRC-02

TIME 11:30

ID	DEPTH	
09	6-12" 16-32cm	SILT, little mfSAND, TRACE FGRAVEL, STICKS, ORGANICS
10	12-15.5" 32-39cm	SILT, little ORGANICS, tr SAND

CORE ID: PCA-HRC-03

TIME 12:30

ID	DEPTH	COMM
09	16-18cm	SILT, little organics
10	18-20	SAA
11	20-22	SAA
12	22-24	SAA
13	24-26	SILT, little organics, tr mfSAND
14	26-28	SAA
15	28-30	SAA
16	30-32	SAA
17	32-43	SILT, tr ORGANICS, tr mfSAND

Location DURR Date 12/13/21

Project / Client ARCHIVE SAMPLING

RINSE BLANK

SAMPLE ID DUR-RB-03

DUP ID DUR-RB-03-DUP06

COLLECTED FROM DECONTAMINATED SAMPLING SPOON

ANALYSIS: DIOX/FURAN

TIME. 13:20

Chain of Custody Forms
Fish Samples

August 23, 2021 – August 27, 2021

ANCHOR QEA

CHAIN OF CUSTODY

Client Information		Facility Information	
Name	Jim Ryan	Project Name	Durez Inlet
Address		Location	Tonawanda, NY
Project Manager	Mike Werth	Project #	
Send Report to: Phone #:	Delaney Petersen	Report Submittal Contact E-mail	

Sample ID	Collection Date	Collection Time	Sampled By	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	None	Dioxin/Furan	Lipid								For Lab Use
FPC-BG-01-2021-0823	8/23/21	1601	JR	Tissue	1/per					X	✓	✓								
FPC-BG-02-2021-0823	↓	1606	↓	↓	↓					↓	↓	↓								
FPC-BG-03-2021-0823	↓	1611	↓	↓	↓					↓	↓	↓								
FPC-BG-04-2021-0823	↓	1616	↓	↓	↓					↓	↓	↓								
FPC-BG-05-2021-0823	↓	1621	↓	↓	↓					↓	↓	↓								
DFP-BG-01-2021-0823	↓	1626	↓	↓	↓					↓	↓	↓								
DFP-BG-02-2021-0823	↓	1631	↓	↓	↓					↓	↓	↓								
DFP-BNM-01-2021-0823	↓	1636	↓	↓	↓					↓	↓	↓								
DFP-BNM-02-2021-0823	↓	1641	↓	↓	↓					↓	↓	↓								

Turnaround Information

- [ ] 21 Day Standard
- [ ] 14 Day
- [ ] 7 Days
- [ ] Other ________ (Days)

Ambient or Chilled
RUSH TAT is for FAX data unless previously approved.

Comments/Remarks

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
[signature]	8/23/21 17:30	UPS			
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
Relinquished by Sampler:	Date Time:	Received By:	Seal #	Preserved where applicable	On Ice:

ANCHOR QEA

CHAIN OF CUSTODY

Client Information	Facility Information
Name	Project Name
Address	Location
Project Manager	Project #
Send Report to: Phone #:	Report Submittal Contact E-mail

Analytical Information: Dioxin/Furan; Lipid; For Lab Use

Sample ID	Collection Date	Collection Time	Sampled By	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	None	Dioxin/Furan	Lipid
DFP-BNM-03-2021-0823	8/23/21	1646	JR	Tissue	1/per					X	↓	↓
FPC-PC-LMB-01-2021-0823	↓	1651	↓	↓	↓					↓	↓	↓
FPC-PC-LMB-02-2021-0823	↓	1656	↓	↓	↓					↓	↓	↓
FPC-PC-LMB-03-2021-0823	↓	1701	↓	↓	↓					↓	↓	↓
FPC-PC-LMB-14-2021-0823	↓	1706	↓	↓	↓					↓	↓	↓
FPC-PC-SMB-01-2021-0823	↓	1711	↓	↓	↓					↓	↓	↓
DRA-SMB-01-2021-0823	↓	1716	↓	↓	↓					↓	↓	↓
DRA-SMB-02-2021-0823	↓	1721	↓	↓	↓					↓	↓	↓
DRA-SMB-03-2021-0823	↓	1726	↓	↓	↓					↓	↓	↓

Turnaround Information

- [ ] 21 Day Standard
- [ ] 14 Day
- [ ] 7 Days
- [ ] Other ________ (Days)

Ambient or Chilled
RUSH TAT is for FAX data unless previously approved.

Comments/Remarks

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
JR	8/23/21 17:30	UPS			
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
Relinquished by Sampler:	Date Time:	Received By:	Seal #	Preserved where applicable	On Ice:

ANCHOR QEA

CHAIN OF CUSTODY

Client Information		Facility Information	
Name		Project Name	
Address		Location	
Project Manager		Project #	
Send Report to:		Report Submittal Contact	
Phone #:		E-mail	

Sample ID	Collection Date	Collection Time	Sampled By	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	None	Dioxin/Furan	Lipid							For Lab Use
DRA-SMB-04-2021-0823	8/23/21	1731	JR	Tissue	1/jar					X	↓	↓							
DRA-LMB-01-2021-0823	↓	1736	↓	↓	↓					↓	↓	↓							

Turnaround Information

- ☐ 21 Day Standard
- ☐ 14 Day
- ☐ 7 Days
- ☐ Other ______ (Days)

Ambient or Chilled
RUSH TAT is for FAX data unless previously approved.

Comments/Remarks

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
[signature]	8/23/21 17:30	UPS			
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
Relinquished by Sampler:	Date Time:	Received By:	Seal #	Preserved where applicable	On Ice:

Q:\QEAman\Forms\COC_form_20080506.xls

ANCHOR QEA

CHAIN OF CUSTODY

314
B5618

Client Information

Name: Jim Ryan

Address:

Project Manager: Mike Werth

Send Report to: Delaney Petersen

Phone #:

Facility Information

Project Name: Durez Inlet

Location: Tonawanda, NY

Project #:

Report Submittal Contact

E-mail:

Analytical Information: Dioxin/Furan; Lipid

	Sample ID	Collection Date	Collection Time	Sampled By	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	None	Dioxin/Furan	Lipid	For Lab Use
	VRA-BNM-01-20210824	8/24/21	1115	JR	Tissue	1/per								
	VRA-BNM-02-20210824		1120											
	VRA-BNM-03-20210824		1125											
	VRA-BNM-04-20210824		1130											
	VRA-BNM-05-20210824		1135											
-011	VRA-SMB-01-20210824		1140											
-012	VRA-SMB-02-20210824		1145											
-013	VRA-SMB-03-20210824		1150											
-014	VRA-SMB-04-20210824		1155											
-015	VRA-SMB-05-20210824	X	1200	X	X	X						X	X	

Turnaround Information

- [ ] 21 Day Standard
- [ ] 14 Day
- [ ] 7 Days
- [ ] Other ________ (Days)

Ambient or Chilled
RUSH TAT is for FAX data unless previously approved.

Comments/Remarks

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
[signature]	8/24/21 12:30	UPS			
Relinquished by Sampler:	Date Time: 8/25/21 10:04	Received By: Ashley Owens	Relinquished By:	Date Time:	Received By:
Relinquished by Sampler:	Date Time:	Received By:	Seal #	Preserved where applicable	On Ice: 2.0°C

Q:\QEAman\Forms\COC_form_20080506.xls

ANCHOR QEA

CHAIN OF CUSTODY

Client Information

Name: Joe Volosin

Address:

Project Manager: Mike Werth

Send Report to:

Phone #: Delaney Petersen

Facility Information

Project Name: Durez Inlet

Location: Tonawanda, NY

Project #:

Report Submittal Contact

E-mail:

Analytical Information

Sample ID	Collection Date	Collection Time	Sampled By	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	None	Dioxin / Furan	Lipid	Percent Moisture							For Lab Use
PC-BG-01-2021-0826	08/26/21	12:00pm	JV	Tissue	1/pck					X										
PC-BG-02-2021-0826	08/26/21	12:11pm																		
PC-BG-03-2021-0826	08/26/21	12:18pm																		
PC-LMB-01-2021-0826	08/26/21	12:30pm																		
PC-BG-04-2021-~~[illegible]~~ 0826	08/26/21	12:38pm																		
PC-RG-01-2021-0826	08/26	12:50pm																		
PC-BG-05-2021-0826	08/26/21	~~[illegible]~~ 1:00pm																		

Turnaround Information

- [ ] 21 Day Standard
- [ ] 14 Day
- [ ] 7 Days
- [ ] Other ________ (Days)

Ambient or Chilled
RUSH TAT is for FAX data unless previously approved.

Comments/Remarks

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
Joseph J. Volosin	08/26/21 15:00				
Relinquished by Sampler:	**Date Time:**	**Received By:**	**Relinquished By:**	**Date Time:**	**Received By:**
	8/27/21 10:22	Ashley Owens			
Relinquished by Sampler:	**Date Time:**	**Received By:**	**Seal #**	**Preserved where applicable**	**On Ice:** 0.4°C

ANCHOR QEA

Chain of Custody Record & Laboratory Analysis Request

Anchor QEA
1201 3rd Avenue, Suite 2600
Seattle, Washington 98101
Phone 206.287.9130
Fax 206.287.9131

Turnaround Requested: **Anchor Contact: Delaney Peterson**

Lab Contact:	Project: **Durez Inlet**
Lab: **SGS North America**	
Address: **5500 Business Dr**	Proj. No.: 210049-01.01
City, etc: **Wilmington, NC 28405**	Sampler: **Joe Volosin**
Phone:	Shipping Method: **Air**
Fax:	AirBill #:

Analyses Requested: SVOC/Dioxin

Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	SVOC/Dioxin										Notes/ Comments:
FPC-PC-RG-01-2021-0827	08/27/2021	12:00 PM	Tissue	1	1										Sample kept frozen until ship date

Relinquished: (Signature) Joseph V.	Relinquished: (Signature)	Relinquished: (Signature)	Special Instructions/Notes
Printed Name: Joseph S. Volosin	Printed Name:	Printed Name:	
Company: Anchor QEA	Company:	Company:	
Date/Time: 09/07/2021: 1500	Date/Time:	Date/Time:	
Received By:	Received By:	Received By:	
Printed Name:	Printed Name:	Printed Name:	
Company:	Company:	Company:	# of Coolers: / Cooler Temp(s):
Date/Time:	Date/Time:	Date/Time:	COC Seals Intact? / Bottles Intact?

Chain of Custody Forms
Zebra Mussel Samples

September 27, 2021 – September 29, 2021

ANCHOR QEA

Chain of Custody Record & Laboratory Analysis Request

Anchor QEA
1201 3rd Avenue, Suite 2600
Seattle, Washington 98101
Phone 206.287.9130
Fax 206.287.9131

Turnaround Requested: Anchor Contact: Delaney Peterson B5737 Page 1 of 1

Lab Contact:	Project: Durez Inlet
Lab: SGS North America	
Address: 5500 Business Dr	Proj. No.: 210049-01.01, T04
City: Wilmington, NC 28405	Sampler: Joe Volosin
Phone: 910.350.1903	Shipping Method: Air
Fax:	AirBill #: 774838994370

Analyses Requested

Notes/ Comments: Talk to Delaney about feasibility of shucking these mussels

Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	DIOXINS / FURANS	LIPIDS	PERCENT MOISTURE							
FPC-ZBR-01-2021-0927	09/27/2021	10:00	Tissue	1	✓	✓	✓							
PC-ZBR-01-2021-0927	09/27/2021	12:00	Tissue	1	✓	✓	✓							
URA-ZBR-01-2021-0927	09/27/2021	13:30	Tissue	1	✓	✓	✓							
DFP- ZBR- 01-2021-0929	09/29/2021	09:40	Tissue	1	✓	✓	✓							
FPC-PC- ZBR-01-2021-0929	09/29/2021	11:00	Tissue	1	✓	✓	✓							

Relinquished: (Signature) [signature]	Relinquished: (Signature)	Relinquished: (Signature)
Printed Name: Joseph S. Volosin	Printed Name:	Printed Name:
Company: Anchor QEA	Company:	Company:
Date/Time: 09/29/21 ; 15:55	Date/Time:	Date/Time:
Received By: Ashley Owens	Received By:	Received By:
Printed Name: Ashley Owens	Printed Name:	Printed Name:
Company: SGS	Company:	Company:
Date/Time: 10/1/2021 10:49	Date/Time:	Date/Time:

Special Instructions/Notes

# of Coolers:	Cooler Temp(s):
COC Seals Intact?	Bottles Intact?

Chain of Custody Forms
Sediment Samples

October 18, 2021 – October 22, 2021

NEW YORK CHAIN OF CUSTODY

ALPHA

Westborough, MA 01581
8 Walkup Dr.
TEL. 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page | of

Date Rec'd in Lab

ALPHA Job #

Project Information

Project Name: DUREZ NT ASSESSMENT
Project Location: NORTH TONAWANDA, NY
Project # 210049-01.01
(Use Project name as Project #) ☐
Project Manager: M. WERTH
ALPHAQuote #:

Client Information

Client: ANCHOR QEA
Address: 290 ELWOOD DAVIS RD
LIVERPOOL NY 13088
Phone: 315-414-2025
Fax:
Email: Mwerth@anchorqea.com

Turn-Around Time

Standard ☐ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables

☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Billing Information

☐ Same as Client Info
PO #

Regulatory Requirement

☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Disposal Site Information

Please identify below location of applicable disposal facilities.

Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

CONTACT MIKE WERTH AT 315-414-2025 WITH ANY QUESTIONS

Please specify Metals or TAL.

ANALYSIS

Sample Filtration
☐ **Done**
☐ **Lab to do**
Preservation
☐ **Lab to do**
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	POREWATER [illegible]							Sample Specific Comments	Total Bottle
	FPC-PWG-01	10/19/21	14:00	S	JD	X								
	FPC-PWG-02	10/19/21	14:10	S	JD	X								

Container Type	G						
Preservative	A						

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
[illegible]	10/?/21 / 1830		

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

ALPHA

NEW YORK CHAIN OF CUSTODY

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 2

Date Rec'd in Lab

ALPHA Job #

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Project Information
Project Name: OXY DUREZ INLET
Project Location: NORTH TONAWANDA, NY
Project # 210049-01.01
(Use Project name as Project #) ☐
Project Manager: M. WERTH
ALPHAQuote #:

Turn-Around Time
Standard ☐ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Billing Information
☐ Same as Client Info
PO #

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

Client Information
Client: ANCHOR QEA
Address: 290 ELWOOD DAVIS RD
LIVERPOOL, NY 13088
Phone: 315-414-2025
Fax:
Email: mwerth@anchorqea.com

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:
CONTACT MIKE WERTH AT 315-414-2025 WITH ANY QUESTIONS

Please specify Metals or TAL.

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time *	Sample Matrix	Sampler's Initials	TOTAL SOLIDS	TOC	SOOT CARBON	TOC/SOOT CARBON (MS/MSD)					Sample Specific Comments	Total Bottle
	FPC-HRC-02-01	10/19/21	0945	S	JD	X	X	X						* DISREGARD	
	FPC-HRC-02-02	10/19/21	1000	S	JD	X	X	X						TIME ON SAMPLE	
	FPC-HRC-02-03	10/19/21	1010	S	JD	X	X	X						LABEL -	
	FPC-HRC-02-04	10/19/21	1017	S	JD	X	X	X						CORRECT TIME	
	FPC-HRC-02-05	10/19/21	1030	S	JD	X	X	X						IS ON JAR	
	FPC-HRC-02-06	10/19/21	1055	S	JD	X	X	X	X					CAPS	
	FPC-HRC-02-07	10/19/21	1105	S	JD	X	X	X							
	FPC-HRC-02-08	10/19/21	1111	S	JD	X	X	X							
	FPC-HRC-01-01	10/19/21	1127	S	JD	X	X	X							
	FPC-HRC-01-02	10/19/21	1145	S	JD	X	X	X							

Container Type	A	A	A	A					
Preservative	A	A	A	A					

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	10/19/21 @1830		

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

ALPHA

NEW YORK CHAIN OF CUSTODY

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 2 of 2

Date Rec'd in Lab

ALPHA Job #

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Project Information
Project Name: OXY DUREZ INLET
Project Location: NORTH TONAWANDA, NY
Project # 210049-01.01
(Use Project name as Project #) ☐
Project Manager: M. WERTH
ALPHAQuote #:

Turn-Around Time
Standard ☐ Due Date:
Rush (only if pre approved) ☐ # of Days:

Client Information
Client: ANCHOR QEA
Address: 290 ELWOOD DAVIS RD
LIVERPOOL, NY 13088
Phone: 315-414-2025
Fax:
Email: mwerth@anchorqea.com

Deliverables
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Billing Information
☐ Same as Client Info
PO #

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:
CONTACT MIKE WERTH AT 315-414-2025 WITH ANY QUESTIONS

Please specify Metals or TAL.

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time *	Sample Matrix	Sampler's Initials	TOTAL SOLIDS	TOC	SOOT CARBON						Sample Specific Comments	Total Bottle
	FPC-HRC-01-03	10/19/21	1154	S	JD	X	X	X						* DISREGARD	
	FPC-HRC-01-04	10/19/21	1200	S	JD	X	X	X						TIME ON SAMPLE	
	FPC-HRC-01-05	10/19/21	1210	S	JD	X	X	X						LABELS - CORRECT	
	FPC-HRC-01-06	10/19/21	1220	S	JD	X	X	X						TIME IS ON	
	FPC-HRC-01-07	10/19/21	1225	S	JD	X	X	X						JAR CAPS	
	FPC-HRC-01-08	10/19/21	1234	S	JD	X	X	X							
	FPC-HRC-01-09-DUP01	10/19/21	1030	S	JD	X	X	X							

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

	TOTAL SOLIDS	TOC	SOOT CARBON
Container Type	A	A	A
Preservative	A	A	A

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	10/19/21 @ 830		

Please print clearly, legibly and completely. Samples can not be logged in and turnaround clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

ALPHA ANALYTICAL

NEW YORK CHAIN OF CUSTODY

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Date Rec'd in Lab

ALPHA Job #

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Project Information

Project Name: OXY DUREZ WLET
Project Location: NORTH TONAWANDA, NY
Project # 210649-01.01
(Use Project name as Project #) ☐
Project Manager: M. WIRTH
ALPHAQuote #:

Client Information

Client: ANCHOR QEA
Address: 290 ELWOOD DAVIS RD
LIVERPOOL, NY 13088
Phone: 315-414-2025
Fax:
Email: mwirth@anchorqea.com

Turn-Around Time

Standard ☐ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables

☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement

☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information

☐ Same as Client Info
PO #

Disposal Site Information

Please identify below location of applicable disposal facilities.

Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

CONTACT MIKE WIRTH AT 315-414-2025 WITH ANY QUESTIONS

Please specify Metals or TAL.

ANALYSIS: DIOXIN/FURAN

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time *	Sample Matrix	Sampler's Initials	DIOXIN/FURAN								Sample Specific Comments	Total Bottles
	FPC-HRC-02-01	10/19/21	0945	S	JD	X								* DISREGARD	
	FPC-HRC-02-02	10/19/21	1000	S	JD	X								TIMES ON	
	FPC-HRC-02-03	10/19/21	1010	S	JD	X								SAMPLE LABELS	
	FPC-HRC-02-04	10/19/21	1017	S	JD	X								- CORRECT TIME	
	FPC-HRC-02-05	10/19/21	1030	S	JD	X								IS ON JAR CAPS	
	FPC-HRC-02-05-DUP01	10/19/21	1035	S	JD	X									
	FPC-HRC-02-06	10/19/21	1055	S	JD	X									
	FPC-HRC-02-07	10/19/21	1105	S	JD	X									
	FPC-HRC-02-08	10/19/21	1111	S	JD	X									
	FPC-HRC-01-01	10/19/21	1127	S	JD	X									

	DIOXIN/FURAN
Container Type	A
Preservative	N

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	10/19/21 @ 1830		

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

ALPHA

NEW YORK CHAIN OF CUSTODY

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Date Rec'd in Lab

ALPHA Job #

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Project Information
Project Name: OXY DUREZ WLLT
Project Location: NORTH TONAWANDA, NY
Project # 210049-01.01
(Use Project name as Project #) ☐
Project Manager: M. WERTH
ALPHAQuote #:

Turn-Around Time
Standard ☐ Due Date:
Rush (only if pre approved) ☐ # of Days:

Client Information
Client: ANCHOR QEA
Address: 290 ELWOOD DAVIS RD
LIVERPOOL, NY 13088
Phone: 315-414-2025
Fax:
Email: mwerth@anchorqea.com

Deliverables
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Billing Information
☐ Same as Client Info
PO #

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:
CONTACT MIKE WERTH AT 315-414-2025 WITH ANY QUESTIONS

Please specify Metals or TAL.

ANALYSIS: DIOXIN/FURAN

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

Total Bottle

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time *	Sample Matrix	Sampler's Initials	DIOXIN/FURAN	Sample Specific Comments
	FPC-HRC-01-02	10/19/21	1145	S	JD	X	* DISREGARD
	FPC-HRC-01-03	10/19/21	1154	S	JD	X	TIMES ON
	FPC-HRC-01-04	10/19/21	1200	S	JD	X	SAMPLE LABELS
	FPC-HRC-01-05	10/19/21	1210	S	JD	X	- CORRECT TIME
	FPC-HRC-01-06	10/19/21	1220	S	JD	X	IS ON JAR LIDS
	FPC-HRC-01-07	10/19/21	1225	S	JD	X	
	FPC-HRC-01-08	10/19/21	1234	S	JD	X	

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

	DIOXIN/FURAN
Container Type	A
Preservative	N

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	10/19/21 @ 1830		

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

ANCHOR QEA

CHAIN OF CUSTODY

Client Information	Facility Information
Name ANCHOR QEA	Project Name OXY DUREZ INLET
Address 290 ELLWOOD DAVIS RD LIVERPOOL NY 13088	Location NORTH TONAWANDA, NY
Project Manager MIKE WERTH	Project # 210049-01.01
Send Report to: Phone #: 315-414-2025	Report Submittal Contact E-mail mwerth@anchorqea.com

Analytical Information: PORE WATER EXTRACTION

Sample ID	Collection Date	Collection Time	Sampled By	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	None	PORE WATER EXTRACTION									For Lab Use
URA-PWG-01	10/20/21	1440	JD	S	1					X	X									

Turnaround Information

- ☐ 21 Day Standard
- ☐ 14 Day
- ☐ 7 Days
- ☐ Other ________ (Days)

Ambient or Chilled
RUSH TAT is for FAX data unless previously approved.

Comments/Remarks

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
[signature]	10/20/21 @ 1830				
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
Relinquished by Sampler:	Date Time:	Received By:	Seal #	Preserved where applicable	On Ice:

ANCHOR QEA

CHAIN OF CUSTODY

Client Information		Facility Information	
Name	ANCHOR QEA	Project Name	OXY DUREZ INLET
Address	290 ELWOOD DAVIS RD LIVERPOOL, NY	Location	NORTH TONAWANDA, NY
Project Manager	MIKE WERTH	Project #	210049-01.01
Send Report to: Phone #:	315-414-2025	Report Submittal Contact E-mail	mwerth@anchorqea.com

Sample ID	Date	Time	Sampled By	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	None	TOTAL SOLIDS	TOC	SOOT CARBON	TOC/SOOT CARBON MS/MSD						For Lab Use
BPF-SCC-01	10/20/21	1000	JD	S	2					X	X	X	X	X						
BPF-SCC-01-DUP02	10/20/21	1000	JD	S	3					X	X	X	X	X						
DFP-SCC-02-01	10/20/21	1230	JD	S	1					X	X	X	X							
DFP-SCC-02-02	10/20/21	1230	JD	S	1					X	X	X	X							
DFP-SCC-02-03	10/20/21	1230	JD	S	1					X	X	X	X							
DFP-SCC-01-01	10/20/21	1330	JD	S	1					X	X	X	X							
DFP-SCC-01-02	10/20/21	1330	JD	S	1					X	X	X	X							
DFP-SCC-01-03	10/20/21	1330	JD	S	1					X	X	X	X							

Turnaround Information

- ☐ 21 Day Standard
- ☐ 14 Day
- ☐ 7 Days
- ☐ Other ______ (Days)

Ambient or Chilled
RUSH TAT is for FAX data unless previously approved.

Comments/Remarks

BPF-SCC-01-DUP02: EXTRA VOLUME PROVIDED FOR LAB DUP IN ADDITION TO FIELD SAMPLE

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
[signature]	10/20/21 @1830				
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
Relinquished by Sampler:	Date Time:	Received By:	Seal #	Preserved where applicable	On Ice:

ANCHOR QEA

CHAIN OF CUSTODY

Client Information		Facility Information	
Name	ANCHOR QEA	Project Name	OXY DUREZ INLET
Address	290 ELWOOD DAVIS RD LIVERPOOL, NY	Location	NORTH TONAWANDA, NY
Project Manager	MIKE WERTH	Project #	210049-01.01
Send Report to: Phone #:	315-414-2025	Report Submittal Contact E-mail	mwerth@anchorqea.com

Sample ID	Collection Date	Collection Time	Sampled By	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	None	TOTAL SOLIDS	TOC	SOOT CARBON							For Lab Use
URA-SCC-02-01	10/20/21	1500	JD	S	1					X	X	X	X							
URA-SCC-02-02	10/20/21	1500	JD	S	1					X	X	X	X							
URA-SCC-02-03	10/20/21	1500	JD	S	1					X	X	X	X							

Turnaround Information

- [ ] 21 Day Standard
- [ ] 14 Day
- [ ] 7 Days
- [ ] Other ________ (Days)

Ambient or Chilled
RUSH TAT is for FAX data unless previously approved.

Comments/Remarks

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
[signature]	10/20/21 @ 1830				
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
Relinquished by Sampler:	Date Time:	Received By:	Seal #	Preserved where applicable	On Ice:

ANCHOR QEA

CHAIN OF CUSTODY

Client Information		Facility Information	
Name	ANCHOR QEA	Project Name	OXY DUREZ INLET
Address	240 ELLWOOD DAVIS RD LIVERPOOL, NY	Location	NORTH TONAWANDA, NY
Project Manager	MIKE WERTH	Project #	210049-01.01
Send Report to: Phone #:	315-414-2025	Report Submittal Contact E-mail	mwerth@anchorqea.com

Analytical Information / For Lab Use

Sample ID	Date	Time	Sampled By	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	None	DIOXIN/FURAN
BPF-SCC-01	10/20/21	1000	JD	S	1					X	X
BPF-SCC-01-DUP02	10/20/21	1000	JD	S	2					X	X
DFP-SCC-02-01	10/20/21	1230	JD	S	1					X	X
DFP-SCC-02-02	10/20/21	1230	JD	S	1					X	X
DFP-SCC-02-03	10/20/21	1230	JD	S	1					X	X
DFP-SCC-01-01	10/20/21	1330	JD	S	1					X	X
DFP-SCC-01-02	10/20/21	1330	JD	S	1					X	X
DFP-SCC-01-03	10/20/21	1330	JD	S	1					X	X

Collection: Date, Time, Sampled By. Preservation: HCl, NaOH, HNO_3, H_2SO_4, None.

Turnaround Information

- [ ] 21 Day Standard
- [ ] 14 Day
- [ ] 7 Days
- [ ] Other ________ (Days)

Ambient or Chilled
RUSH TAT is for FAX data unless previously approved.

Comments/Remarks

BPF-SCC-01-DUP02: EXTRA VOLUME PROVIDED FOR LAB DUPLICATE IN ADDITION TO FIELD SAMPLE

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
[signature]	10/20/21 @ 1836				
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
Relinquished by Sampler:	Date Time:	Received By:	Seal #	Preserved where applicable	On Ice:

ANCHOR QEA

CHAIN OF CUSTODY

Client Information		Facility Information	
Name	ANCHOR QEA	Project Name	OXY DUREZ INLET
Address	290 ELWOOD DAVIS RD LIVERPOOL, NY	Location	NORTH TONAWANDA, NY
Project Manager	MIKE WERTH	Project #	210049-01.01
Send Report to: Phone #:	315-414-2025	Report Submittal Contact E-mail	mwerth@anchorqea.com

Sample ID	Collection Date	Collection Time	Sampled By	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	None	DIOXIN/FURAN									For Lab Use
URA-SCC-02-01	10/20/21	1500	JD	S	1					X	X									
URA-SCC-02-02	10/20/21	1500	JD	S	1					X	X									
URA-SCC-02-03	10/20/21	1500	JD	S	1					X	X									

Turnaround Information

- ☐ 21 Day Standard
- ☐ 14 Day
- ☐ 7 Days
- ☐ Other ________ (Days)

Ambient or Chilled
RUSH TAT is for FAX data unless previously approved.

Comments/Remarks

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
[signature]	10/20/21 @1830				
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
Relinquished by Sampler:	Date Time:	Received By:	Seal #	Preserved where applicable	On Ice:

ANCHOR QEA

CHAIN OF CUSTODY

Client Information		Facility Information	
Name	ANCHOR QEA	Project Name	OXY DUREZ INLET
Address	290 ELWOOD DAVIS RD LIVERPOOL NY	Location	NORTH TONAWANDA NY
Project Manager	MIKE WERTH	Project #	210049-01.01
Send Report to: Phone #:	315-414-2025	Report Submittal Contact E-mail	mwerth@anchorqea.com

Analytical Information: RADIOISOTOPES Pb210/Cs137 — For Lab Use

Sample ID	Collection Date	Collection Time	Sampled By	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	None	RADIOISOTOPES Pb210/Cs137										For Lab Use
FPC-HRC-02-01	10/18/21	1600	JD	S	1					X	X										
FPC-HRC-02-02	10/18/21	1600	JD	S	1					X	X										
FPC-HRC-02-03	10/18/21	1600	JD	S	1					X	X										
FPC-HRC-02-04	10/18/21	1600	JD	S	1					X	X										
FPC-HRC-02-05	10/18/21	1600	JD	S	1					X	X										
FPC-HRC-02-06	10/18/21	1600	JD	S	1					X	X										
FPC-HRC-02-07	10/18/21	1600	JD	S	1					X	X										
FPC-HRC-02-08	10/18/21	1600	JD	S	1					X	X										
FPC-HRC-02-10	10/18/21	1600	JD	S	1					X	X										

Turnaround Information

- ☐ 21 Day Standard
- ☐ 14 Day
- ☐ 7 Days
- ☐ Other ________ (Days)

Ambient or Chilled
RUSH TAT is for FAX data unless previously approved.

Comments/Remarks

- SAMPLES FPC-HRC-02-06 & FPC-HRC-02-08 ARE SUGGESTED TO USE FOR LABORATORY QA/QC PURPOSES (DUP/MS/MSD) - NO EXTRA VOLUME AVAILABLE TO PROVIDE. OK TO USE OTHER LOCATIONS AS NEEDED

- SOME SAMPLES ARE LOW ON WEIGHT DUE TO LIMITED MATERIAL AVAILABLE. IF THIS WILL IMPACT THE RESULTS, PLEASE CONTACT ANCHOR QEA PM TO DISCUSS.

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
[signature]	10/20/21 @1830				
Relinquished by Sampler:	**Date Time:**	**Received By:**	**Relinquished By:**	**Date Time:**	**Received By:**
Relinquished by Sampler:	**Date Time:**	**Received By:**	**Seal #**	**Preserved where applicable**	**On Ice:**

ANCHOR QEA

CHAIN OF CUSTODY

Client Information		Facility Information	
Name	ANCHOR QEA	Project Name	OXY DUREZ INLET
Address	290 ELWOOD DAVIS RD LIVERPOOL NY	Location	NORTH TONAWANDA NY
Project Manager	MIKE WERTH	Project #	210049-01.01
Send Report to: Phone #:	315-414-2025	Report Submittal Contact E-mail	mwerth@anchorqea.com

Analytical Information: RADIOISOTOPES Pb210/Cs137

Sample ID	Date	Time	Sampled By	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	None	RADIOISOTOPES Pb210/Cs137									For Lab Use
FPC-HRC-02-12	10/18/21	1600	JD	S	1					X	X									
FPC-HRC-02-14	10/18/21	1600	JD	S	1					X	X									
FPC-HRC-02-16	10/18/21	1600	JD	S	1					X	X									
FPC-HRC-02-18	10/18/21	1600	JD	S	1					X	X									
FPC-HRC-02-20	10/18/21	1600	JD	S	1					X	X									
FPC-HRC-02-22	10/18/21	1600	JD	S	1					X	X									
FPC-HRC-02-24	10/18/21	1600	JD	S	1					X	X									
FPC-HRC-02-26	10/18/21	1600	JD	S	1					X	X									
FPC-HRC-02-28	10/18/21	1600	JD	S	1					X	X									

Turnaround Information

- [ ] 21 Day Standard
- [ ] 14 Day
- [ ] 7 Days
- [ ] Other ________ (Days)

Ambient or Chilled
RUSH TAT is for FAX data unless previously approved.

Comments/Remarks

SOME SAMPLES ARE LOW ON WEIGHT DUE TO LIMITED MATERIAL AVAILABLE. IF THIS WILL IMPACT THE RESULTS, PLEASE CONTACT THE ANCHOR QEA PM TO DISCUSS.

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
[signature]	10/20/21 @ 1830				
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
Relinquished by Sampler:	Date Time:	Received By:	Seal #	Preserved where applicable	On Ice:

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ANCHOR QEA

CHAIN OF CUSTODY

Client Information		Facility Information	
Name	ANCHOR QEA	Project Name	OXY DUREZ INLET
Address	290 ELWOOD DAVIS RD LIVERPOOL NY	Location	NORTH TONAWANDA, NY
Project Manager	MIKE WERTH	Project #	210049-01.01
Send Report to: Phone #:	315-414-2025	Report Submittal Contact E-mail	mwerth@anchorqea.com

Analytical Information: RADIOISOTOPES Pb210/Cs137

Sample ID	Date	Time	Sampled By	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	None	RADIOISOTOPES Pb210/Cs137									For Lab Use
FPC-HRC-01-01	10/19/21	1400	JD	S	1					X	X									
FPC-HRC-01-02	10/19/21	1400	JD	S	1					X	X									
FPC-HRC-01-03	10/19/21	1400	JD	S	1					X	X									
FPC-HRC-01-04	10/19/21	1400	JD	S	1					X	X									
FPC-HRC-01-05	10/19/21	1400	JD	S	1					X	X									
FPC-HRC-01-06	10/19/21	1400	JD	S	1					X	X									
FPC-HRC-01-07	10/19/21	1400	JD	S	1					X	X									
FPC-HRC-01-08	10/19/21	1400	JD	S	1					X	X									
FPC-HRC-01-10	10/19/21	1400	JD	S	1					X	X									

Turnaround Information

- ☐ 21 Day Standard
- ☐ 14 Day
- ☐ 7 Days
- ☐ Other ________ (Days)

Ambient or Chilled
RUSH TAT is for FAX data unless previously approved.

Comments/Remarks

SOME SAMPLES ARE LOW ON WEIGHT DUE TO LIMITED MATERIAL AVAILABLE. IF THIS WILL IMPACT THE RESULTS, PLEASE CONTACT ANCHOR QEA PM TO DISCUSS.

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
[signature]	10/20/21 @ 0830				
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
Relinquished by Sampler:	Date Time:	Received By:	Seal #	Preserved where applicable	On Ice:

ANCHOR QEA

CHAIN OF CUSTODY

Client Information		Facility Information	
Name	ANCHOR QEA	Project Name	OXY DUREZ INLET
Address	290 ELWOOD DAVIS RD LIVERPOOL NY	Location	NORTH TONAWANDA, NY
Project Manager	MIKE WORTH	Project #	210049-01.01
Send Report to: Phone #:	315-414-2025	Report Submittal Contact E-mail	mworth@anchorqea.com

Analytical Information: RADIOISOTOPES Pb210/Cs137

For Lab Use

Sample ID	Date	Time	Sampled By	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	None	RADIOISOTOPES Pb210/Cs137
FPC-HRC-01-12	10/19/21	1400	JD	S	1					X	X
FPC-HRC-01-14	10/19/21	1400	JD	S	1					X	X
FPC-HRC-01-16	10/19/21	1400	JD	S	1					X	X
FPC-HRC-01-18	10/19/21	1400	JD	S	1					X	X
FPC-HRC-01-20	10/19/21	1400	JD	S	1					X	X
FPC-HRC-01-22	10/19/21	1400	JD	S	1					X	X
FPC-HRC-01-24	10/19/21	1400	JD	S	1					X	X
FPC-HRC-01-26	10/19/21	1400	JD	S	1					X	X
FPC-HRC-01-28	10/19/21	1400	JD	S	1					X	X

Turnaround Information

- ☐ 21 Day Standard
- ☐ 14 Day
- ☐ 7 Days
- ☐ Other ________ (Days)

Ambient or Chilled
RUSH TAT is for FAX data unless previously approved.

Comments/Remarks

SOME SAMPLES ARE LOW ON WEIGHT DUE TO LIMITED MATERIAL AVAILABLE. IF THIS WILL IMPACT THE RESULTS, PLEASE CONTACT THE ANCHOR QEA PM TO DISCUSS.

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
[signature]	10/20/21 @1830				
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
Relinquished by Sampler:	Date Time:	Received By:	Seal #	Preserved where applicable	On Ice:

ANCHOR QEA

CHAIN OF CUSTODY

Client Information		Facility Information	
Name	ANCHOR QEA	Project Name	OXY DUREZ INLET
Address	290 ELWOOD DAVIS RD LIVERPOOL NY	Location	NORTH TONAWANDA, NY
Project Manager	MIKE WERTH	Project #	210049-01.01
Send Report to: Phone #:	315-414-2025	Report Submittal Contact E-mail	mwerth@anchorqea.com

Analytical Information: ARCHIVE*

For Lab Use

Sample ID	Collection Date	Collection Time	Sampled By	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	None	ARCHIVE*
FPC-HRC-02-09	10/18/21	1600	JD	S	1					X	X
FPC-HRC-02-11	10/18/21	1600	JD	S	1					X	X
FPC-HRC-02-13	10/18/21	1600	JD	S	1					X	X
FPC-HRC-02-15	10/18/21	1600	JD	S	1					X	X
FPC-HRC-02-17	10/18/21	1600	JD	S	1					X	X
FPC-HRC-02-19	10/18/21	1600	JD	S	1					X	X
FPC-HRC-02-21	10/18/21	1600	JD	S	1					X	X
FPC-HRC-02-23	10/18/21	1600	JD	S	1					X	X
FPC-HRC-02-25	10/18/21	1600	JD	S	1					X	X

Turnaround Information

- ☐ 21 Day Standard
- ☐ 14 Day
- ☐ 7 Days
- ☐ Other ________ (Days)

Ambient or Chilled
RUSH TAT is for FAX data unless previously approved.

Comments/Remarks

* SAMPLES TO BE ARCHIVED FOR POTENTIAL FUTURE USE. CONTACT ANCHOR QEA PM WITH ANY QUESTIONS.

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
[signature]	10/20/21 0830				
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
Relinquished by Sampler:	Date Time:	Received By:	Seal #	Preserved where applicable	On Ice:

ANCHOR QEA

CHAIN OF CUSTODY

Client Information		Facility Information	
Name	ANCHOR QEA	Project Name	OXY DUREZ INLET
Address	290 ELWOOD DAVIS RD LIVERPOOL NY	Location	NORTH TONAWANDA, NY
Project Manager	MIKE WERTH	Project #	210049-01.01
Send Report to: Phone #:	315-414-2025	Report Submittal Contact E-mail	mwerth@anchorqea.com

Sample ID	Date	Time	Sampled By	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	None	ARCHIVE *										For Lab Use
FPC-HRC-02-27	10/18/21	1600	JD	S	1					X	X										
FPC-HRC-01-09	10/19/21	1400	JD	S	1					X	X										
FPC-HRC-01-11	10/19/21	1400	JD	S	1					X	X										
FPC-HRC-01-13	10/19/21	1400	JD	S	1					X	X										
FPC-HRC-01-15	10/19/21	1400	JD	S	1					X	X										
FPC-HRC-01-17	10/19/21	1400	JD	S	1					X	X										
FPC-HRC-01-19	10/19/21	1400	JD	S	1					X	X										
FPC-HRC-01-21	10/19/21	1400	JD	S	1					X	X										
FPC-HRC-01-23	10/19/21	1400	JD	S	1					X	X										

Turnaround Information

- [ ] 21 Day Standard
- [ ] 14 Day
- [ ] 7 Days
- [ ] Other ________ (Days)

Ambient or Chilled
RUSH TAT is for FAX data unless previously approved.

Comments/Remarks

* SAMPLES TO BE ARCHIVED FOR POTENTIAL FUTURE USE.
CONTACT ANCHOR QEA PM WITH ANY QUESTIONS

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
[signature]	10/20/21 6:18:36				
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
Relinquished by Sampler:	Date Time:	Received By:	Seal #	Preserved where applicable	On Ice:

ANCHOR QEA

CHAIN OF CUSTODY

Client Information		Facility Information	
Name	ANCHOR QEA	Project Name	OXY DUREZ INLET
Address	290 ELWOOD DAVIS RD LIVERPOOL NY	Location	NORTH TONAWANDA, NY
Project Manager	MIKE WERTH	Project #	210049-01.01
Send Report to: Phone #:	315-414-2025	Report Submittal Contact E-mail	mwerth@anchorqea.com

Sample ID	Date	Time	Sampled By	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	None	ARCHIVE *	For Lab Use
FPC-HRC-01-25	10/19/21	1400	JD	S	1					X	X	
FPC-HRC-01-27	10/19/21	1400	JD	S	1					X	X	

Turnaround Information

- [ ] 21 Day Standard
- [ ] 14 Day
- [ ] 7 Days
- [ ] Other ________ (Days)

Ambient or Chilled
RUSH TAT is for FAX data unless previously approved.

Comments/Remarks

* SAMPLES TO BE ARCHIVED FOR POTENTIAL FUTURE USE. CONTACT ANCHOR QEA PM WITH ANY QUESTIONS

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
[signature]	10/20/21 @ 1830				
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
Relinquished by Sampler:	Date Time:	Received By:	Seal #	Preserved where applicable	On Ice:

ANCHOR QEA

CHAIN OF CUSTODY

Page 1 of 1

Client Information		Facility Information	
Name	ANCHOR QEA	Project Name	OXY DUREZ INLET
Address	290 ELWOOD DAVIS RD LIVERPOOL NY	Location	NORTH TONAWANDA, NY
Project Manager	MIKE WERTH	Project #	200049-01.01
Send Report to: Phone #:	315-414-2025	Report Submittal Contact E-mail	mwerth@anchorqea.com

Analytical Information: POREWATER EXTRACTION; For Lab Use

Sample ID	Collection Date	Collection Time	Sampled By	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	None	POREWATER EXTRACTION									For Lab Use
PCA-PWG-01	10/21/21	1330	JD	S	1					X	X									
PCA-PWG-02	10/21/21	1345	JD	S	1					X	X									
PCA-PWG-03	10/21/21	1400	JD	S	1					X	X									
PCA-PWG-03-DUP04	10/21/21	1400	JD	S	1					X	X									
UPC-PWG-01	10/21/21	1430	JD	S	1					X	X									

Turnaround Information	Comments/Remarks
☐ 21 Day Standard ☐ 14 Day ☐ 7 Days ☐ Other ________ (Days) Ambient or Chilled RUSH TAT is for FAX data unless previously approved.	

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
[signature]	6/21/21 @1700				
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
Relinquished by Sampler:	Date Time:	Received By:	Seal #	Preserved where applicable	On Ice:

Q:\QEAman\Forms\COC_form_20080506.xls

ANCHOR QEA

CHAIN OF CUSTODY

Client Information		Facility Information	
Name	ANCHOR QEA	Project Name	OXY DUREZ INLET
Address	290 ELWOOD DAVIS RD LIVERPOOL NY	Location	NORTH TONAWANDA, NY
Project Manager	MIKE WERTH	Project #	210049-01.01
Send Report to: Phone #:	315-414-2025	Report Submittal Contact E-mail	mwerth@anchorqea.com

Analytical Information

Sample ID	Collection Date	Collection Time	Sampled By	Matrix	# of bottles	Preservation HCl	NaOH	HNO_3	H_2SO_4	None	TOTAL SOLIDS	TOC	SOOT CARBON	TOC/SOOT CARBON MS/MSD						For Lab Use
URA-SCC-01-01	10/21/21	0800	JD	S	1					X	X	X	X							
URA-SCC-01-02	10/21/21	0800	JD	S	1					X	X	X	X							
URA-SCC-01-03	10/21/21	0800	JD	S	3					X	X	X	X	X						
URA-SCC-01-03-DUP03	10/21/21	0800	JD	S	1					X	X	X	X							
PCA-HRC-03-01	10/21/21	0920	JD	S	1					X	X	X	X							
PCA-HRC-03-02	10/21/21	0920	JD	S	1					X	X	X	X							
PCA-HRC-03-03	10/21/21	0920	JD	S	1					X	X	X	X							
PCA-HRC-03-04	10/21/21	0920	JD	S	1					X	X	X	X							
PCA-HRC-03-05	10/21/21	0920	JD	S	1					X	X	X	X							

Turnaround Information

- ☐ 21 Day Standard
- ☐ 14 Day
- ☐ 7 Days
- ☐ Other ________ (Days)

Ambient or Chilled
RUSH TAT is for FAX data unless previously approved.

Comments/Remarks

URA-SCC-01-03: EXTRA VOLUME PROVIDED FOR LAB DUPLICATE & MS/MSD

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
[signature]	10/21/21 @ 1700				
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
Relinquished by Sampler:	Date Time:	Received By:	Seal #	Preserved where applicable	On Ice:

ANCHOR QEA

CHAIN OF CUSTODY

Page 2 of 4

Client Information		Facility Information	
Name	ANCHOR QEA	Project Name	OXY DUREZ INLET
Address	290 ELWOOD DAVIS RD LIVERPOOL NY	Location	NORTH TONAWANDA, NY
Project Manager	MIKE WERTH	Project #	210049-01.01
Send Report to: Phone #:	315-414-2025	Report Submittal Contact E-mail	mwerth@anchorqea.com

Sample ID	Collection Date	Collection Time	Sampled By	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	None	TOTAL SOLIDS	TOC	SOOT CARBON						For Lab Use
PCA-HRC-03-06	10/21/21	0920	JD	S	1					X	X	X	X						
PCA-HRC-03-07	10/21/21	0920	JD	S	1					X	X	X	X						
PCA-HRC-03-08	10/21/21	0920	JD	S	1					X	X	X	X						
PCA-HRC-02-01	10/21/21	1015	JD	S	1					X	X	X	X						
PCA-HRC-02-02	10/21/21	1015	JD	S	1					X	X	X	X						
PCA-HRC-02-03	10/21/21	1015	JD	S	1					X	X	X	X						
PCA-HRC-02-04	10/21/21	1015	JD	S	1					X	X	X	X						
PCA-HRC-02-05	10/21/21	1015	JD	S	1					X	X	X	X						
PCA-HRC-02-06	10/21/21	1015	JD	S	1					X	X	X	X						

Turnaround Information

- ☐ 21 Day Standard
- ☐ 14 Day
- ☐ 7 Days
- ☐ Other ________ (Days)

Ambient or Chilled
RUSH TAT is for FAX data unless previously approved.

Comments/Remarks

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
[signature]	10/21/21 @ 1700				
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
Relinquished by Sampler:	Date Time:	Received By:	Seal #	Preserved where applicable	On Ice:

ANCHOR QEA

CHAIN OF CUSTODY

Client Information		Facility Information	
Name	ANCHOR QEA	Project Name	OXY DUREZ INLET
Address	290 ELWOOD DAVIS RD LIVERPOOL NY	Location	NORTH TONAWANDA, NY
Project Manager	MIKE WERTH	Project #	210049-01.01
Send Report to: Phone #:	315-414-2025	Report Submittal Contact/ E-mail	mwerth@anchorqea.com

Analytical Information

Sample ID	Date	Time	Sampled By	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	None	TOTAL SOLIDS	TOC	SOOT CARBON							For Lab Use
PCA-HRC-02-07	10/21/21	1015	JD	S	1					X	X	X	X							
PCA-HRC-02-08	10/21/21	1015	JD	S	1					X	X	X	X							
PCF-03	10/21/21	1030	JD	S	1					X	X	X	X							
PCA-HRC-01-01	10/21/21	1130	JD	S	1					X	X	X	X							
PCA-HRC-01-02	10/21/21	1130	JD	S	1					X	X	X	X							
PCA-HRC-01-03	10/21/21	1130	JD	S	1					X	X	X	X							
PCA-HRC-01-04	10/21/21	1130	JD	S	1					X	X	X	X							
PCA-HRC-01-05	10/21/21	1130	JD	S	1					X	X	X	X							
PCA-HRC-01-06	10/21/21	1130	JD	S	1					X	X	X	X							

Turnaround Information	Comments/Remarks
☐ 21 Day Standard ☐ 14 Day ☐ 7 Days ☐ Other ________ (Days) Ambient or Chilled RUSH TAT is for FAX data unless previously approved.	

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
[signature]	6/21/21 @ 1700				
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
Relinquished by Sampler:	Date Time:	Received By:	Seal #	Preserved where applicable	On Ice:

ANCHOR QEA

CHAIN OF CUSTODY

Client Information		Facility Information	
Name	ANCHOR QEA	Project Name	OXY DUREZ INLET
Address	290 ELWOOD DAVIS RD LIVERPOOL NY	Location	NORTH TONAWANDA, NY
Project Manager	MIKE WERTH	Project #	210049-01.01
Send Report to: Phone #:	315-414-2025	Report Submittal Contact E-mail	mwerth@anchorqea.com

Sample ID	Collection Date	Collection Time	Sampled By	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	None	TOTAL SOLIDS	TOC	SOOT CARBON							For Lab Use
PCA-HRC-01-07	10/21/21	1130	JD	S	1					X	X	X	X							
PCA-HRC-01-08	10/21/21	1130	JD	S	1					X	X	X	X							
PCF-01	10/21/21	1240	JD	S	1					X	X	X	X							
PCF-02	10/21/21	1250	JD	S	1					X	X	X	X							
PCF-04	10/21/21	1315	JD	S	1					X	X	X	X							

Turnaround Information

- ☐ 21 Day Standard
- ☐ 14 Day
- ☐ 7 Days
- ☐ Other ________ (Days)

Ambient or Chilled
RUSH TAT is for FAX data unless previously approved.

Comments/Remarks

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
[signature]	10/21/21 @ 1700				
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
Relinquished by Sampler:	Date Time:	Received By:	Seal #	Preserved where applicable	On Ice:

ANCHOR QEA

CHAIN OF CUSTODY

Client Information	
Name	ANCHOR QEA
Address	290 ELWOOD DAVIS RD LIVERPOOL NY
Project Manager	MIKE WERTH
Send Report to: Phone #:	315-414-2025

Facility Information	
Project Name	OXY DUREZ INLET
Location	NORTH TONAWANDA, NY
Project #	210049-01.01
Report Submittal Contact E-mail	mwerth@anchorqea.com

Analytical Information

Sample ID	Collection Date	Collection Time	Sampled By	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	None	DIOX W/ FURAN										For Lab Use
URA-SCC-01-01	10/21/21	0800	JD	S	1					X	X										
URA-SCC-01-02	10/21/21	0800	JD	S	1					X	X										
URA-SCC-01-03	10/21/21	0800	JD	S	2					X	X										
URA-SCC-01-03-DUP03	10/21/21	0800	JD	S	1					X	X										
PCA-HRC-03-01	10/21/21	0920	JD	S	1					X	X										
PCA-HRC-03-02	10/21/21	0920	JD	S	1					X	X										
PCA-HRC-03-03	10/21/21	0920	JD	S	1					X	X										
PCA-HRC-03-04	10/21/21	0920	JD	S	1					X	X										
PCA-HRC-03-05	10/21/21	0920	JD	S	1					X	X										

Turnaround Information

- [ ] 21 Day Standard
- [ ] 14 Day
- [ ] 7 Days
- [ ] Other ________ (Days)

Ambient or Chilled
RUSH TAT is for FAX data unless previously approved.

Comments/Remarks

URA-SCC-01-03: EXTRA VOLUME PROVIDED FOR USE AS LAB DUPLICATE, IF NEEDED.

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
[signature]	10/21/21 @ 1700				
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
Relinquished by Sampler:	Date Time:	Received By:	Seal #	Preserved where applicable	On Ice:

ANCHOR QEA

CHAIN OF CUSTODY

Client Information		Facility Information	
Name	ANCHOR QEA	Project Name	OXY DUREZ INLET
Address	290 ELWOOD DAVIS RD LIVERPOOL NY	Location	NORTH TONAWANDA, NY
Project Manager	MIKE WERTH	Project #	210049-01.01
Send Report to: Phone #:	315-414-2025	Report Submittal Contact E-mail	mwerth@anchorqea.com

Analytical Information: DIOXIN/FURAN; For Lab Use

Sample ID	Date	Time	Sampled By	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	None	DIOXIN/FURAN
PCA-HRC-03-06	0920	10/21/21	JD	S	1					X	
PCA-HRC-03-07	0920	10/21/21	JD	S	1					X	
PCA-HRC-03-08	0920	10/21/21	JD	S	1					X	
PCA-HRC-02-01	1015	10/21/21	JD	S	1					X	
PCA-HRC-02-02	1015	10/21/21	JD	S	1					X	
PCA-HRC-02-03	1015	10/21/21	JD	S	1					X	
PCA-HRC-02-04	1015	10/21/21	JD	S	1					X	
PCA-HRC-02-05	1015	10/21/21	JD	S	1					X	
PCA-HRC-02-06	1015	10/21/21	JD	S	1					X	

Turnaround Information

- [ ] 21 Day Standard
- [ ] 14 Day
- [ ] 7 Days
- [ ] Other ________ (Days)

Ambient or Chilled
RUSH TAT is for FAX data unless previously approved.

Comments/Remarks

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
[signature]	10/21/21 @1700				
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
Relinquished by Sampler:	Date Time:	Received By:	Seal #	Preserved where applicable	On Ice:

Q:\QEAman\Forms\COC_form_20080506.xls

ANCHOR QEA

CHAIN OF CUSTODY

Client Information		Facility Information	
Name	ANCHOR QEA	Project Name	OXY DUREZ INLET
Address	290 ELWOOD DAVIS RD LIVERPOOL NY	Location	NORTH TONAWANDA, NY
Project Manager	MIKE WORTH	Project #	210049-01.01
Send Report to: Phone #:	315-414-2025	Report Submittal Contact E-mail	mworth@anchorqea.com

Analytical Information: DIOXIN/FURAN

For Lab Use

Sample ID	Collection Date	Collection Time	Sampled By	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	None	DIOXIN/FURAN
PCA-HRC-02-07	10/21/21	1015	JD	S	1					X	X
PCA-HRC-02-08	10/21/21	1015	JD	S	1					X	X
PCF-03	10/21/21	1030	JD	S	1					X	X
PCA-HRC-01-01	10/21/21	1130	JD	S	1					X	X
PCA-HRC-01-02	10/21/21	1130	JD	S	1					X	X
PCA-HRC-01-03	10/21/21	1130	JD	S	1					X	X
PCA-HRC-01-04	10/21/21	1130	JD	S	1					X	X
PCA-HRC-01-05	10/21/21	1130	JD	S	1					X	X
PCA-HRC-01-06	10/21/21	1130	JD	S	1					X	X

Turnaround Information

- ☐ 21 Day Standard
- ☐ 14 Day
- ☐ 7 Days
- ☐ Other ________ (Days)

Ambient or Chilled
RUSH TAT is for FAX data unless previously approved.

Comments/Remarks

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
[signature]	10/21/21 @1700				
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
Relinquished by Sampler:	Date Time:	Received By:	Seal #	Preserved where applicable	On Ice:

ANCHOR QEA

CHAIN OF CUSTODY

Client Information		Facility Information	
Name	ANCHOR QEA	Project Name	OXY DUREZ INLET
Address	290 ELWOOD DAVIS RD LIVERPOOL NY	Location	NORTH TONAWANDA, NY
Project Manager	MIKE WERTH	Project #	210049-01.01
Send Report to: Phone #:	315-414-2025	Report Submittal Contact E-mail	mwerth@anchorqea.com

Analytical Information: DIOXIN/FURAN

Sample ID	Date	Time	Sampled By	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	None	DIOXIN/FURAN
PCA-HRC-01-07	10/21/21	1130	JD	S	1					X	X
PCA-HRC-01-08	10/21/21	1130	JD	S	1					X	X
PCF-01	10/21/21	1240	JD	S	1					X	X
PCF-02	10/21/21	1250	JD	S	1					X	X
PCF-04	10/21/21	1315	JD	S	1					X	X

For Lab Use

Turnaround Information

- ☐ 21 Day Standard
- ☐ 14 Day
- ☐ 7 Days
- ☐ Other ________ (Days)

Ambient or Chilled

RUSH TAT is for FAX data unless previously approved.

Comments/Remarks

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
[signature]	10/21/21 @ 1700				
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
Relinquished by Sampler:	Date Time:	Received By:	Seal #	Preserved where applicable	On Ice:

ANCHOR QEA

CHAIN OF CUSTODY

Page 1 of 1

Client Information		Facility Information	
Name	ANCHOR QEA	Project Name	OXY DUREZ INLET
Address	290 ELWOOD DAVIS RD LIVERPOOL, NY	Location	NORTH TONAWANDA, NY
Project Manager	MIKE WERTH	Project #	210049-01.01
Send Report to: Phone #:	315-414-2025	Report Submittal Contact E-mail	mwerth@anchorqea.com

Analytical Information: DIOXIN/FURAN

For Lab Use

Sample ID	Collection Date	Collection Time	Collection Sampled By	Matrix	# of bottles	Preservation HCl	Preservation NaOH	Preservation HNO_3	Preservation H_2SO_4	Preservation None	DIOXIN/FURAN
DUR-RB-01	10/22/21	1030	JD	W	2					X	X
DUR-RB-01-DUP05	10/22/21	1030	JD	W	2					X	X
DUR-RB-02	10/22/21	1050	JD	W	2					X	X

Turnaround Information

- ☐ 21 Day Standard
- ☐ 14 Day
- ☐ 7 Days
- ☐ Other ________ (Days)

Ambient or Chilled
RUSH TAT is for FAX data unless previously approved.

Comments/Remarks

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
[signature]	10/22/21 1200				
Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
Relinquished by Sampler:	Date Time:	Received By:	Seal #	Preserved where applicable	On Ice:

Chain of Custody Forms
Archive Samples

December 13, 2021

ANCHOR QEA

Chain of Custody Record & Laboratory Analysis Request

Anchor QEA
290 Elwood Davis Rd., Suite 340
Liverpool, New York 13088
Phone 315.453.9009
Fax 315.453.9010

Turnaround Requested: **Laboratory:** **SGS North America**

Contact: **Mike Werth**	Project: **OXY Durez Inlet North Tonawanda, NY**
Organization: **Anchor QEA**	
Address: **290 Elwood Davis Road**	Proj. No.: **210049-01.01**
City, etc: **Liverpool, Ny 13088**	Sampler: **JD**
Phone: **315-414-2025**	Shipping Method: **FEDEX**
E-mail: **mwerth@anchorqea.com**	AirBill #:

Analyses Requested

Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Dioxin / Furan									Notes/ Comments:
FPC-HRC-01-09	12/13/2021	8:30	S	1	X									
FPC-HRC-01-10	12/13/2021		S	1	X									
FPC-HRC-01-11	12/13/2021		S	1	X									
FPC-HRC-01-12	12/13/2021		S	1	X									
FPC-HRC-01-13	12/13/2021		S	1	X									
FPC-HRC-01-14	12/13/2021		S	1	X									
FPC-HRC-01-15	12/13/2021		S	1	X									
FPC-HRC-01-16	12/13/2021		S	1	X									
FPC-HRC-01-17	12/13/2021		S	2	X									← MS/MSD Taken here
FPC-HRC-01-17-DUP	12/13/2021		S	1	X									
FPC-HRC-02-09	12/13/2021	10:00	S	1	X									
FPC-HRC-02-10	12/13/2021		S	1	X									
FPC-HRC-02-11	12/13/2021		S	1	X									
FPC-HRC-02-12	12/13/2021		S	1	X									
FPC-HRC-02-13	12/13/2021		S	1	X									

Relinquished: (Signature) [illegible signature]	Relinquished: (Signature)	Relinquished: (Signature)	Special Instructions/Notes
Printed Name: Justin Drehs	Printed Name:	Printed Name:	
Company: Anchor QEA	Company:	Company:	
Date/Time: 12/13/21 1500	Date/Time:	Date/Time:	
Received By:	Received By:	Received By:	
Printed Name:	Printed Name:	Printed Name:	
Company:	Company:	Company:	# of Coolers: / Cooler Temp(s):
Date/Time:	Date/Time:	Date/Time:	COC Seals Intact? / Bottles Intact?

ANCHOR QEA

Chain of Custody Record & Laboratory Analysis Request

Anchor QEA
290 Elwood Davis Rd., Suite 340
Liverpool, New York 13088
Phone 315.453.9009
Fax 315.453.9010

Turnaround Requested: **Laboratory:** **SGS North America**

Contact: **Mike Werth**	Project: **OXY Durez Inlet North Tonawanda, NY**
Organization: **Anchor QEA**	Proj. No.: **210049-01.01**
Address: **290 Elwood Davis Road**	Sampler: **JD**
City, etc: **Liverpool, Ny 13088**	Shipping Method: **FEDEX**
Phone: **315-414-2025**	AirBill #:
E-mail: **mwerth@anchorqea.com**	

Analyses Requested

Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Dioxin / Furan	Notes/ Comments:
FPC-HRC-02-14	12/13/2021	10:00	S	1	X	
FPC-HRC-02-15	12/13/2021	↓	S	1	X	
FPC-HRC-02-16	12/13/2021	↓	S	1	X	
FPC-HRC-02-17	12/13/2021	↓	S	2	X	← MS/MSD taken Here
FPC-HRC-02-17-DUP	12/13/2021	↓	S	1	X	
PCA-HRC-01-09	12/13/2021	11:00	S	2	X	← MS/MSD taken here
PCA-HRC-01-10	12/13/2021	11:00	S	1	X	
PCA-HRC-01-09-DUP	12/13/2021	11:00	S	1	X	
PCA-HRC-02-09	12/13/2021	11:30	S	1	X	
PCA-HRC-02-10	12/13/2021	11:30	S	1	X	
PCA-HRC-03-09	12/13/2021	12:30	S	1	X	
PCA-HRC-03-10	12/13/2021	↓	S	1	X	
PCA-HRC-03-11	12/13/2021	↓	S	1	X	
PCA-HRC-03-12	12/13/2021	↓	S	1	X	

Relinquished: (Signature) [signature]	Relinquished: (Signature)	Relinquished: (Signature)	Special Instructions/Notes
Printed Name: Justin Dechs	Printed Name:	Printed Name:	
Company: Anchor QEA	Company:	Company:	
Date/Time: 12/13/21 1500	Date/Time:	Date/Time:	
Received By:	Received By:	Received By:	
Printed Name:	Printed Name:	Printed Name:	
Company:	Company:	Company:	# of Coolers: / Cooler Temp(s):
Date/Time:	Date/Time:	Date/Time:	COC Seals Intact? / Bottles Intact?

ANCHOR QEA

Chain of Custody Record & Laboratory Analysis Request

Anchor QEA
290 Elwood Davis Rd., Suite 340
Liverpool, New York 13088
Phone 315.453.9009
Fax 315.453.9010

Turnaround Requested: **Laboratory:** **SGS North America**

Contact: **Mike Werth**	Project: **OXY Durez Inlet North Tonawanda, NY**	Analyses Requested	Notes/ Comments:
Organization: **Anchor QEA**			
Address: **290 Elwood Davis Road**	Proj. No.: **210049-01.01**		
City, etc: **Liverpool, Ny 13088**	Sampler: **JD**		
Phone: **315-414-2025**	Shipping Method: **FEDEX**		
E-mail: **mwerth@anchorqea.com**	AirBill #:		

Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Con-tainers	Dioxin / Furan										Notes/ Comments
PCA-HRC-03-13	12/13/2021	12:30	S	1	X										
PCA-HRC-03-14	12/13/2021		S	1	X										
PCA-HRC-03-15	12/13/2021		S	1	X										
PCA-HRC-03-16	12/13/2021		S	1	X										
PCA-HRC-03-17	12/12/2021		S	1	X										

Relinquished: (Signature)	Relinquished: (Signature)	Relinquished: (Signature)	Special Instructions/Notes
Printed Name: Justin Dels	Printed Name:	Printed Name:	
Company: Anchor QEA	Company:	Company:	
Date/Time: 12/13/21 1500	Date/Time:	Date/Time:	
Received By:	Received By:	Received By:	
Printed Name:	Printed Name:	Printed Name:	
Company:	Company:	Company:	# of Coolers: / Cooler Temp(s):
Date/Time:	Date/Time:	Date/Time:	COC Seals Intact? / Bottles Intact?

ANCHOR QEA

Chain of Custody Record & Laboratory Analysis Request

Anchor QEA
290 Elwood Davis Rd., Suite 340
Liverpool, New York 13088
Phone 315.453.9009
Fax 315.453.9010

Turnaround Requested: **Laboratory:** SGS North America

Contact: Mike Werth	Project: OXY Durez Inlet North Tonawanda, NY
Organization: Anchor QEA	
Address: 290 Elwood Davis Road	Proj. No.: 210049-01.01
City, etc: Liverpool, Ny 13088	Sampler: JD
Phone: 315-414-2025	Shipping Method: FEDEX
E-mail: mwerth@anchorqea.com	AirBill #:

Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Dioxin / Furan										Notes/ Comments:
DUR-RB-03	12/13/2021	13:20	W	2	X										
DUR-RB-03-DUP06	12/13/2021	13:20	W	2	X										

Relinquished: (Signature)	Relinquished: (Signature)	Relinquished: (Signature)	Special Instructions/Notes
Printed Name: Justin Drehs	Printed Name:	Printed Name:	
Company: Anchor QEA	Company:	Company:	
Date/Time: 12/13/21 1500	Date/Time:	Date/Time:	
Received By:	Received By:	Received By:	
Printed Name:	Printed Name:	Printed Name:	
Company:	Company:	Company:	# of Coolers: / Cooler Temp(s):
Date/Time:	Date/Time:	Date/Time:	COC Seals Intact? / Bottles Intact?

ANCHOR QEA

Chain of Custody Record & Laboratory Analysis Request

Anchor QEA
290 Elwood Davis Rd., Suite 340
Liverpool, New York 13088
Phone 315.453.9009
Fax 315.453.9010

Turnaround Requested: **Laboratory:** **Alpha Analytical**

Contact: Mike Werth	Project: OXY Durez Inlet
Organization: Anchor QEA	North Tonawanda, NY
Address: 290 Elwood Davis Road	Proj. No.: 210049-01.01
City, etc: Liverpool, Ny 13088	Sampler: JD
Phone: 315-414-2025	Shipping Method: FEDEX
E-mail: mwerth@anchorqea.com	AirBill #:

Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Con-tainers	Total; Solids	TOC	Soot Carbon								Notes/ Comments:
FPC-HRC-01-09	12/13/2021	8:30	S	1	X	X	X								
FPC-HRC-01-10	12/13/2021		S	1	X	X	X								
FPC-HRC-01-11	12/13/2021		S	1	X	X	X								
FPC-HRC-01-12	12/13/2021		S	1	X	X	X								
FPC-HRC-01-13	12/13/2021		S	1	X	X	X								
FPC-HRC-01-14	12/13/2021		S	1	X	X	X								
FPC-HRC-01-15	12/13/2021		S	1	X	X	X								
FPC-HRC-01-16	12/13/2021		S	1	X	X	X								
FPC-HRC-01-17	12/13/2021		S	1	X	X	X								
FPC-HRC-01-17-DUP	12/13/2021		S	1	X	X	X								
FPC-HRC-02-09	12/13/2021	10:00	S	1	X	X	X								
FPC-HRC-02-10	12/13/2021		S	1	X	X	X								
FPC-HRC-02-11	12/13/2021		S	1	X	X	X								
FPC-HRC-02-12	12/13/2021		S	1	X	X	X								
FPC-HRC-02-13	12/13/2021		S	1	X	X	X								

Relinquished: (Signature)	Relinquished: (Signature)	Relinquished: (Signature)	Special Instructions/Notes
Printed Name: John Drehs	Printed Name:	Printed Name:	
Company: Anchor QEA	Company:	Company:	
Date/Time: 12/13/2021 1500	Date/Time:	Date/Time:	
Received By:	Received By:	Received By:	
Printed Name:	Printed Name:	Printed Name:	
Company:	Company:	Company:	# of Coolers: / Cooler Temp(s):
Date/Time:	Date/Time:	Date/Time:	COC Seals Intact? / Bottles Intact?

ANCHOR QEA

Chain of Custody Record & Laboratory Analysis Request

Anchor QEA
290 Elwood Davis Rd., Suite 340
Liverpool, New York 13088
Phone 315.453.9009
Fax 315.453.9010

Turnaround Requested: **Laboratory:** Alpha Analytical

Contact: Mike Werth	Project: OXY Durez Inlet
Organization: Anchor QEA	North Tonawanda, NY
Address: 290 Elwood Davis Road	Proj. No.: 210049-01.01
City, etc: Liverpool, Ny 13088	Sampler: JD
Phone: 315-414-2025	Shipping Method: FEDEX
E-mail: mwerth@anchorqea.com	AirBill #:

Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Total; Solids	TOC	Soot Carbon							Notes/ Comments:
FPC-HRC-02-14	12/13/2021	10:00	S	1	X	X	X							
FPC-HRC-02-15	12/13/2021	↓	S	1	X	X	X							
FPC-HRC-02-16	12/13/2021	↓	S	1	X	X	X							
FPC-HRC-02-17	12/13/2021	↓	S	1	X	X	X							
FPC-HRC-02-17-DUP	12/13/2021	↓	S	1	X	X	X							
PCA-HRC-01-09	12/13/2021	11:00	S	1	X	X	X							
PCA-HRC-01-10	12/13/2021	↓	S	1	X	X	X							
PCA-HRC-01-09-DUP	12/13/2021	↓	S	1	X	X	X							
PCA-HRC-02-09	12/13/2021	11:30	S	1	X	X	X							
PCA-HRC-02-10	12/13/2021	11:30	S	1	X	X	X							
PCA-HRC-03-09	12/13/2021	12:30	S	1	X	X	X							
PCA-HRC-03-10	12/13/2021	↓	S	1	X	X	X							
PCA-HRC-03-11	12/13/2021	↓	S	1	X	X	X							
PCA-HRC-03-12	12/13/2021	↓	S	1	X	X	X							

Relinquished: (Signature) [signature]	Relinquished: (Signature)	Relinquished: (Signature)	Special Instructions/Notes
Printed Name: Justin Drehs	Printed Name:	Printed Name:	
Company: Anchor QEA	Company:	Company:	
Date/Time: 12/13/2021 1500	Date/Time:	Date/Time:	
Received By:	Received By:	Received By:	
Printed Name:	Printed Name:	Printed Name:	
Company:	Company:	Company:	# of Coolers: / Cooler Temp(s):
Date/Time:	Date/Time:	Date/Time:	COC Seals Intact? / Bottles Intact?

ANCHOR QEA

Chain of Custody Record & Laboratory Analysis Request

Anchor QEA
290 Elwood Davis Rd., Suite 340
Liverpool, New York 13088
Phone 315.453.9009
Fax 315.453.9010

Turnaround Requested: **Laboratory:** **Alpha Analytical** Page 3 of 3

Contact: **Mike Werth**	Project: **OXY Durez Inlet North Tonawanda, NY**
Organization: **Anchor QEA**	Proj. No.: **210049-01.01**
Address: **290 Elwood Davis Road**	Sampler: **JD**
City, etc: **Liverpool, Ny 13088**	Shipping Method: **FEDEX**
Phone: **315-414-2025**	AirBill #:
E-mail: **mwerth@anchorqea.com**	

Analyses Requested

Sample ID	Sample Date	Sample Time	Sample Matrix	Number of Containers	Total; Solids	TOC	Soot Carbon								Notes/ Comments:
PCA-HRC-03-13	12/13/2021	12:30	S	1	X	X	X								
PCA-HRC-03-14	12/13/2021	↓	S	1	X	X	X								
PCA-HRC-03-15	12/13/2021	↓	S	1	X	X	X								
PCA-HRC-03-16	12/13/2021	↓	S	1	X	X	X								
PCA-HRC-03-17	12/12/2021	↓	S	1	X	X	X								

Relinquished: (Signature) [signature]	Relinquished: (Signature)	Relinquished: (Signature)	Special Instructions/Notes	
Printed Name: Justin Drels	Printed Name:	Printed Name:		
Company: Anchor QEA	Company:	Company:		
Date/Time: 12/13/21 1500	Date/Time:	Date/Time:		
Received By:	Received By:	Received By:		
Printed Name:	Printed Name:	Printed Name:		
Company:	Company:	Company:	# of Coolers:	Cooler Temp(s):
Date/Time:	Date/Time:	Date/Time:	COC Seals Intact?	Bottles Intact?

Appendix C
Data Validation Reports

Appendix C-1
Data Validation Report

High Resolution Dioxins and Furans Analyses

August through November 2021

Technical Memorandum

20 December 2021

To	Clint Babcock; Mike Werth	**Tel**	561-688-9008
Copy to	Paul McMahon	**Email**	Marisa.Oriaku@ghd.com
From	Marisa Oriaku/eew/18-NF	**Ref. No.**	11223794
Subject	**Analytical Results and Validation – High Resolution Dioxins and Furans** **Durez Inlet Aquatic Assessment** **North Tonawanda, New York** **August through November 2021**		

1. Introduction

This document details a validation of analytical results for tissue and sediment samples collected in support of the Durez Inlet Aquatic Assessment at the North Tonawanda, New York Site from August through November 2021. Samples were submitted to SGS North America, Inc. located in Wilmington, North Carolina. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Table 2. A summary of the analytical methodology is presented in Table 3.

Full Contract Laboratory Program (CLP) equivalent raw data deliverables were provided by the laboratory. The sample delivery groups covered in the report are identified in Table 1. Evaluation of the data was based on information obtained from the finished data sheets, raw data, chain of custody forms, calibration data, blank data, recovery data from surrogate spikes/laboratory control samples (LCS), and field Quality Assurance/Quality Control (QA/QC) samples. The assessment of analytical and in-house data included checks for: data consistency (by observing comparability of duplicate analyses), adherence to accuracy and precision criteria, and transmittal errors

The QA/QC criteria by which these data have been assessed are outlined in the analytical method referenced in Table 3 and applicable guidance from the documents entitled:

i) "National Functional Guidelines for High Resolution Superfund Methods Data Review", OLEM 9200.3-115, EPA 542-B-16-001, April 2016

Item i) will subsequently be referred to as the "Guidelines" in this Memorandum.

2. Sample Holding Time and Preservation

The sample holding time criterion and sample preservation requirements for the analysis are summarized in Table 3. The sample chain of custody documents and analytical reports were used to determine sample holding times. All samples were prepared and analyzed within the required holding times.

All samples were delivered on ice and stored by the laboratory at the required temperature (0-6°C).

3. Gas Chromatography/Mass Spectrometry (GC/MS) – Tuning and Mass Calibration (Instrument Performance Check)

Prior to Polychlorinated Dibenzodioxins/Polychlorinated Dibenzo-p-furan (PCDD/PCDF) analyses, GC/MS instrumentation is tuned to ensure optimization over the mass range of interest. To evaluate instrument tuning, the method requires the analysis of the specific tuning compound perfluorokerosene (PFK). The resulting spectra must meet the criteria cited in the method before analysis is initiated. Analysis of the tuning compound must then be repeated every 12 hours throughout sample analysis to ensure the continued optimization of the instrument.

Tuning compounds were analyzed at the required frequency throughout the analysis period. All tuning criteria were met, indicating that proper optimization of the instrumentation was achieved.

4. Initial Calibration

To quantify PCDDs/PCDFs of interest in samples, calibration of the GC/MS over a specific concentration range must be performed. Initially, a minimum of a five-point calibration curve containing all compounds of interest is analyzed to characterize instrument response for each analyte over a specific concentration range. Linearity of the calibration curve, instrument sensitivity, and ion abundance ratios are evaluated against the criteria cited in the Guidelines.

The initial calibration data were reviewed. All compounds met the criteria for sensitivity, linearity, and ion abundance ratios.

5. Continuing Calibration

To ensure that instrument calibration for the analyses is acceptable throughout the sample analysis period, continuing calibration standards must be analyzed and compared to the initial calibration curve every 12 hours.

Calibration standards were analyzed at the required frequency. Most results met the criteria for instrument sensitivity, stability, and ion abundance ratios with the exception of a two labeled analytes that were slightly above the percent difference criteria. All associated results were qualified as estimated as shown in Table 4.

6. Laboratory Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with the investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of one per analytical batch.

Most method blank results were non-detect. Several method blanks had low level concentrations of various analytes. Sample results with similar concentrations to those found in the method blanks were qualified as non-detect (U) as shown in Table 5.

7. Spiked C13 Labelled PCDDs/PCDFs

In accordance with the method employed, all samples, blanks, and QC samples analyzed for PCDDs/PCDFs are spiked with labeled congeners prior to extraction to be an internal standard for the quantitation of native congeners, and to serve as surrogates for the assessment of method performance in the sample matrix.

All samples submitted were spiked with the appropriate number of labeled compounds prior to sample extraction and analysis.

Labeled congener recoveries were assessed against method control limits. Most labeled PCDD/PCDF recoveries were within the method acceptance ranges with the exception of some outlying labeled analytes listed in Table 6. All associated sample results were qualified as estimated.

Labeled congener ion abundance ratios were assessed against method control limits. Most ion abundance ratios within the method acceptable ranges with the exception of those listed in Table 7. The associated sample results were qualified as estimated to reflect a potential bias.

8. Clean-up Standard Recoveries

A C13 labeled cleanup standard is added to all samples, blanks, and QC samples after extraction, but prior to the cleanup procedures to assess the efficiency of the cleanup process.

All cleanup standard recoveries were within the method acceptance range.

9. Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD) Analyses

LCS and laboratory control sample duplicates (LCSD) are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects.

For this study, an LCS was analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

The LCS contained all compounds of interest. Most LCS recoveries were within the laboratory control limits, demonstrating acceptable analytical accuracy with the exception of a slightly high LCSD recovery for 1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF). All associated positive sample results were qualified as estimated to reflect the potential high bias (See Table 8).

10. Field QA/QC Samples

The field QA/QC consisted of three rinse blanks and six field duplicate sample sets.

10.1 Rinse Blank Sample Analysis

To assess field decontamination procedures, ambient conditions at the site, and cleanliness of sample containers, three rinse blanks were submitted for analysis, as identified in Table 1. All results were non-detect for the analytes of interest.

10.2 Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, six field duplicate samples were collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with these duplicate samples must be less than 100 percent for solid and tissue samples. If the reported concentration in either the investigative sample or its duplicate is less than five times the reporting limit (RL), the evaluation criteria is two times the RL value.

All field duplicate results were within acceptable agreement, demonstrating acceptable sampling and analytical precision.

11. Target Compound Identification/Sample Quantitation

To minimize erroneous compound identification during PCDD/PCDF analyses, qualitative criteria including compound retention time, ion abundance ratio, and chromatography were evaluated according to the identification criteria established by the methods. An erroneous identification can be either a false-positive (reporting a target compound when it is not present in the sample) or false-negative (not reporting a compound that is present in the sample).

The samples identified in Table 1 were reviewed. Most compounds reported adhered to the specified identification criteria. Some sample results were reported as positive hits although the ion abundance ratio was not met. The associated results were qualified as the estimated maximum possible concentration. A summary of these qualified data is presented in Table 9.

12. Analyte Reporting

The laboratory reported detected results down to the laboratory's estimated detection limit (EDL) for each analyte. Positive analyte detections less than the reporting limit (RL) but greater than the EDL were reported as estimated (J) in Table 2 unless otherwise qualified in the Memorandum. Non-detect results were presented as non-detect at the reporting limit (RL) in Table 2.

All solid/sediment results were reported on a dry weight basis. Tissue samples were reported on a wet weight basis.

Those sample results that exceeded the range of the calibration curve were qualified as estimated (J) as shown in Table 10.

13. Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable with the specific qualifications herein.

Regards,

Marisa Oriaku
Data Management - Data Validator

Table 1

Sample Collection and Analysis Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Sample Delivery Group	Sample Identification	Location	Matrix	Initial Sample Depth (ft. bgs.)	Final Sample Depth (ft. bgs.)	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters PCDDs/PCDFs	Comments
B5618	DRA-SMB-01-2021-0823	Downstream Refernce Area	Tissue	--	--	08/23/2021	17:16	X	
	DRA-SMB-03-2021-0823	Downstream Refernce Area	Tissue	--	--	08/23/2021	17:26	X	
	DRA-SMB-04-2021-0823	Downstream Refernce Area	Tissue	--	--	08/23/2021	17:31	X	
	DRA-LMB-01-2021-0823	Downstream Refernce Area	Tissue	--	--	08/23/2021	17:36	X	
	DRA-SMB-02-2021-0823	Downstream Refernce Area	Tissue	--	--	08/23/2021	17:21	X	
	DRA-SMB-01-2021-0823-DUP	Downstream Refernce Area	Tissue	--	--	08/23/2021	17:16	X	FD (DRA-SMB-01-2021-0823)
	FPC-PC-LMB-01-2021-0823	Fisherman's Park Cove-Pettite Cove	Tissue	--	--	08/23/2021	16:51	X	
	FPC-PC-LMB-02-2021-0823	Fisherman's Park Cove-Pettite Cove	Tissue	--	--	08/23/2021	16:56	X	
	FPC-PC-LMB-03-2021-0823	Fisherman's Park Cove-Pettite Cove	Tissue	--	--	08/23/2021	17:01	X	
	FPC-PC-LMB-14-2021-0823	Fisherman's Park Cove-Pettite Cove	Tissue	--	--	08/23/2021	17:06	X	
	FPC-PC-SMB-03-2021-0823	Fisherman's Park Cove-Pettite Cove	Tissue	--	--	08/23/2021	17:11	X	
	PC-LMB-01-2021-0826	Pettite Cove	Tissue	--	--	08/26/2021	12:30	X	
	SRM WMF-02	SRM3	--	--	--	09/12/2021	--	X	Certified Reference Material
	URA-SMB-01-20210824	Upsteam Reference Area	Tissue	--	--	08/24/2021	11:40	X	
	URA-SMB-02-20210824	Upsteam Reference Area	Tissue	--	--	08/24/2021	11:45	X	
	URA-SMB-03-20210824	Upsteam Reference Area	Tissue	--	--	08/24/2021	11:50	X	
	URA-SMB-04-20210824	Upsteam Reference Area	Tissue	--	--	08/24/2021	11:55	X	
	URA-SMB-05-20210824	Upsteam Reference Area	Tissue	--	--	08/24/2021	12:00	X	
B5619	DFP-BG-01-2021-0823	Downstream Fisherman's Park	Tissue	--	--	08/23/2021	16:26	X	
	DFP-BG-02-2021-0823	Downstream Fisherman's Park	Tissue	--	--	08/23/2021	16:31	X	
	DFP-BNM-01-2021-0823	Downstream Fisherman's Park	Tissue	--	--	08/23/2021	16:36	X	
	DFP-BNM-02-2021-0823	Downstream Fisherman's Park	Tissue	--	--	08/23/2021	16:41	X	
	DFP-BNM-03-2021-0823	Downstream Fisherman's Park	Tissue	--	--	08/23/2021	16:46	X	
	FPC-BG-01-2021-0823	Fisherman's Park Cove	Tissue	--	--	08/23/2021	16:01	X	
	FPC-BG-02-2021-0823	Fisherman's Park Cove	Tissue	--	--	08/23/2021	16:06	X	
	FPC-BG-03-2021-0823	Fisherman's Park Cove	Tissue	--	--	08/23/2021	16:11	X	
	FPC-BG-04-2021-0823	Fisherman's Park Cove	Tissue	--	--	08/23/2021	16:16	X	
	FPC-BG-05-2021-0823	Fisherman's Park Cove	Tissue	--	--	08/23/2021	16:21	X	
	SRM WMF-02	SRM1	--	--	--	08/23/2021	--	X	

Table 1

Sample Collection and Analysis Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Sample Delivery Group	Sample Identification	Location	Matrix	Initial Sample Depth (ft. bgs.)	Final Sample Depth (ft. bgs.)	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters PCDDs/PCDFs	Comments
B5620	FPC-PC-RG-01-2021-0827	Fisherman's Park Cove-Pettite Cove	Tissue	--	--	08/27/2021	12:00	X	
	PC-BG-01-2021-0826	Pettite Cove	Tissue	--	--	08/26/2021	12:50	X	
	PC-BG-02-2021-0826	Pettite Cove	Tissue	--	--	08/26/2021	12:11	X	
	PC-BG-03-2021-0826	Pettite Cove	Tissue	--	--	08/26/2021	12:18	X	
	PC-BG-04-2021-0826	Pettite Cove	Tissue	--	--	08/26/2021	12:38	X	
	PC-RG-01-2021-0826	Pettite Cove	Tissue	--	--	08/26/2021	12:50		
	PC-RG-02-2021-0826	Pettite Cove	Tissue	--	--	08/26/2021	12:50	X	
	PC-BG-05-2021-0826	Pettite Cove	Tissue	--	--	08/26/2021	13:00	X	
	SRM WMF-02	SRM2	--	--	--	09/12/2021	--	X	Certified Reference Material
	URA-BNM-01-20210824	Upsteam Reference Area	Tissue	--	--	08/24/2021	11:15	X	
	URA-BNM-02-20210824	Upsteam Reference Area	Tissue	--	--	08/24/2021	11:20	X	
	URA-BNM-03-20210824	Upsteam Reference Area	Tissue	--	--	08/24/2021	11:25	X	
	URA-BNM-04-20210824	Upsteam Reference Area	Tissue	--	--	08/24/2021	11:30	X	
	URA-BNM-05-20210824	Upsteam Reference Area	Tissue	--	--	08/24/2021	11:35	X	
B5737	DFP-ZBR-01-2021-0929	Downstream Fisherman's Park	Tissue			09/29/2021	09:40	X	
	FPC-ZBR-01-2021-0927	Fisherman's Park Cove	Tissue			09/27/2021	10:00	X	
	FPC-ZBR-01-2021-0927-DUP	Fisherman's Park Cove	Tissue			09/27/2021	10:00	X	FD (FPC-ZBR-01-2021-0927)
	FPC-PC-ZBR-01-2021-0929	Fisherman's Park Cove-Pettite Cove	Tissue			09/29/2021	11:00	X	
	PC-ZBR-01-2021-0927	Pettite Cove	Tissue			09/27/2021	12:00	X	
	SRM WMF-02	SRM4	--			10/01/2021	--	X	Certified Reference Material
	URA-ZBR-01-2021-0927	Upsteam Reference Area	Tissue			09/27/2021	13:30	X	
B5812	FPC-HRC-01-03	FPC-HRC-01	Solid	0.13	0.2	10/19/2021	11:54	X	
	FPC-HRC-01-04	FPC-HRC-01	Solid	0.2	0.26	10/19/2021	12:00	X	
	FPC-HRC-01-05	FPC-HRC-01	Solid	0.26	0.33	10/19/2021	12:10	X	
	FPC-HRC-01-06	FPC-HRC-01	Solid	0.33	0.39	10/19/2021	12:20	X	
	FPC-HRC-01-07	FPC-HRC-01	Solid	0.39	0.46	10/19/2021	12:25	X	
	FPC-HRC-01-08	FPC-HRC-01	Solid	0.46	0.52	10/19/2021	12:34	X	
	FPC-HRC-01-01	FPC-HRC-01	Solid	0	0.07	10/19/2021	11:27	X	

Table 1

Sample Collection and Analysis Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Sample Delivery Group	Sample Identification	Location	Matrix	Initial Sample Depth (ft. bgs.)	Final Sample Depth (ft. bgs.)	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters PCDDs/PCDFs	Comments
B5812	FPC-HRC-01-02	FPC-HRC-01	Solid	0.07	0.13	10/19/2021	11:45	X	
	FPC-HRC-02-03	FPC-HRC-02	Solid	0.13	0.2	10/19/2021	10:10	X	
	FPC-HRC-02-04	FPC-HRC-02	Solid	0.2	0.26	10/19/2021	10:17	X	
	FPC-HRC-02-05	FPC-HRC-02	Solid	0.26	0.33	10/19/2021	10:30	X	
	FPC-HRC-02-05-DUP01	FPC-HRC-02	Solid	0.26	0.33	10/19/2021	10:30	X	FD (FPC-HRC-02-05)
	FPC-HRC-02-06	FPC-HRC-02	Solid	0.33	0.39	10/19/2021	10:55	X	
	FPC-HRC-02-07	FPC-HRC-02	Solid	0.39	0.46	10/19/2021	11:05	X	
	FPC-HRC-02-08	FPC-HRC-02	Solid	0.46	0.52	10/19/2021	11:11	X	
	FPC-HRC-02-01	FPC-HRC-02	Solid	0	0.07	10/19/2021	09:45	X	
	FPC-HRC-02-02	FPC-HRC-02	Solid	0.07	0.13	10/19/2021	10:00	X	
	SRM 1944	SRM 1944	--	--	--	10/19/2021	--	X	Certified Reference Material
B5814	DFP-SCC-01-02	BPF-SCC-01	Solid	0.5	1	10/20/2021	13:30	X	
	DFP-SCC-01-03	BPF-SCC-01	Solid	1	2	10/20/2021	13:30	X	
	BPF-SCC-01	BPF-SCC-01	Solid	0	0.5	10/20/2021	10:00	X	
	DFP-SCC-01-01	BPF-SCC-01	Solid	0	0.5	10/20/2021	13:30	X	
	BPF-SCC-01-DUP02	BPF-SCC-01	Solid	0	0.5	10/20/2021	10:00	X	FD (BPF-SCC-01)
	DFP-SCC-02-02	DFP-SCC-02	Solid	0.5	1	10/20/2021	12:30	X	
	DFP-SCC-02-03	DFP-SCC-02	Solid	1	2	10/20/2021	12:30	X	
	DFP-SCC-02-01	DFP-SCC-02	Solid	0	0.5	10/20/2021	12:30	X	
	URA-SCC-02-02	URA-SCC-02	Solid	0.5	1	10/20/2021	15:00	X	
	URA-SCC-02-03	URA-SCC-02	Solid	1	2	10/20/2021	15:00	X	
	URA-SCC-02-01	URA-SCC-02	Solid	0	0.5	10/20/2021	15:00	X	
	SRM 1944	SRM 1944	--	--	--	--	--	X	Certified Reference Material
B5816	PCA-HRC-02-03	PCA-HRC-02	Solid	0.13	0.2	10/21/2021	10:15	X	
	PCA-HRC-02-04	PCA-HRC-02	Solid	0.2	0.26	10/21/2021	10:15	X	
	PCA-HRC-02-05	PCA-HRC-02	Solid	0.26	0.33	10/21/2021	10:15	X	
	PCA-HRC-02-06	PCA-HRC-02	Solid	0.33	0.39	10/21/2021	10:15	X	
	PCA-HRC-02-01	PCA-HRC-02	Solid	0	0.07	10/21/2021	10:15	X	

Table 1

Sample Collection and Analysis Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Sample Delivery Group	Sample Identification	Location	Matrix	Initial Sample Depth (ft. bgs.)	Final Sample Depth (ft. bgs.)	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters PCDDs/PCDFs	Comments
B5816	PCA-HRC-02-02	PCA-HRC-02	Solid	0.07	0.13	10/21/2021	10:15	X	
	PCA-HRC-03-03	PCA-HRC-03	Solid	0.13	0.2	10/21/2021	09:20	X	
	PCA-HRC-03-04	PCA-HRC-03	Solid	0.2	0.26	10/21/2021	09:20	X	
	PCA-HRC-03-05	PCA-HRC-03	Solid	0.26	0.33	10/21/2021	09:20	X	
	PCA-HRC-03-06	PCA-HRC-03	Solid	0.33	0.39	10/21/2021	09:20	X	
	PCA-HRC-03-07	PCA-HRC-03	Solid	0.39	0.46	10/21/2021	09:20	X	
	PCA-HRC-03-08	PCA-HRC-03	Solid	0.46	0.52	10/21/2021	09:20	X	
	PCA-HRC-03-01	PCA-HRC-03	Solid	0	0.07	10/21/2021	09:20	X	
	PCA-HRC-03-02	PCA-HRC-03	Solid	0.07	0.13	10/21/2021	09:20	X	
	URA-SCC-01-02	URA-SCC-01	Solid	0.5	1	10/21/2021	08:00	X	
	URA-SCC-01-03	URA-SCC-01	Solid	1	2	10/21/2021	08:00	X	
	URA-SCC-01-03-DUP03	URA-SCC-01	Solid	1	2	10/21/2021	08:00	X	FD (URA-SCC-01-03)
	URA-SCC-01-01	URA-SCC-01	Solid	0	0.5	10/21/2021	08:00	X	
	SRM 1944	SRM 1944	--	--	--	--	--	X	Certified Reference Material
B5817	PCA-HRC-01-03	PCA-HRC-01	Solid	0.13	0.2	10/21/2021	11:30	X	
	PCA-HRC-01-04	PCA-HRC-01	Solid	0.2	0.26	10/21/2021	11:30	X	
	PCA-HRC-01-05	PCA-HRC-01	Solid	0.26	0.33	10/21/2021	11:30	X	
	PCA-HRC-01-06	PCA-HRC-01	Solid	0.33	0.39	10/21/2021	11:30	X	
	PCA-HRC-01-07	PCA-HRC-01	Solid	0.39	0.46	10/21/2021	11:30	X	
	PCA-HRC-01-08	PCA-HRC-01	Solid	0.46	0.52	10/21/2021	11:30	X	
	PCA-HRC-01-01	PCA-HRC-01	Solid	0	0.07	10/21/2021	11:30	X	
	PCA-HRC-01-02	PCA-HRC-01	Solid	0.07	0.13	10/21/2021	11:30	X	
	PCA-HRC-02-07	PCA-HRC-02	Solid	0.39	0.46	10/21/2021	10:15	X	
	PCA-HRC-02-08	PCA-HRC-02	Solid	0.46	0.52	10/21/2021	10:15	X	
	PCF-01	PCF-01	Solid	0	0.25	10/21/2021	12:40	X	
	PCF-02	PCF-02	Solid	0	0.25	10/21/2021	12:50	X	
	PCF-03	PCF-03	Solid	0	0.25	10/21/2021	10:30	X	
	PCF-04	PCF-04	Solid	0	0.25	10/21/2021	13:15	X	
	SRM 1944	SRM 1944	--	--	--	--	--	X	Certified Reference Material

Table 1

Sample Collection and Analysis Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Sample Delivery Group	Sample Identification	Location	Matrix	Initial Sample Depth (ft. bgs.)	Final Sample Depth (ft. bgs.)	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters PCDDs/PCDFs	Comments
B5822	DUR-RB-01	Lexan Tube	Water	--	--	10/22/2021	10:30	X	Rinse Blanks
	DUR-RB-01-DUP05	Lexan Tube	Water	--	--	10/22/2021	10:30	X	Rinse Blanks
	DUR-RB-02	Stainless Steel Spoon	Water	--	--	10/22/2021	10:50	X	Rinse Blanks
B5884	FPC-PWG-01	FPC-PWG-01	Sediment	0	0.5	11/03/2021	14:30	X	
	FPC-PWG-02	FPC-PWG-02	Sediment	0	0.5	11/03/2021	15:00	X	
	PCA-PWG-01	PCA-PWG-01	Sediment	0	0.5	11/03/2021	14:00	X	
	PCA-PWG-02	PCA-PWG-02	Sediment	0	0.5	11/03/2021	13:00	X	
	PCA-PWG-03	PCA-PWG-03	Sediment	0	0.5	11/03/2021	12:30	X	
	PCA-PWG-03-DUP04	PCA-PWG-03	Sediment	0	0.5	11/03/2021	13:30	X	FD (PCA-PWG-03)
	UPC-PWG-01	UPC-PWG-01	Sediment	0	0.5	11/03/2021	12:15	X	
	URA-PWG-01	URA-PWG-01	Sediment	0	0.5	11/03/2021	12:00	X	
	SRM 1944	SRM 1944	--	--	--	--	--	X	Certified Reference Material

Notes:

ft. bgs. - Feet below ground surface
FD - Field duplicate of sample in parentheses
PCDDs - Polychlorinated Dibenzodioxins
PCDFs - Polychlorinated Dibenzofurans
"--" - Not applicable

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Location ID:		BPF-SCC-01	BPF-SCC-01	BPF-SCC-01	BPF-SCC-01	BPF-SCC-01	DFP-SCC-02	DFP-SCC-02	DFP-SCC-02
Sample Name:		DFP-SCC-01-02	DFP-SCC-01-03	BPF-SCC-01	DFP-SCC-01-01	BPF-SCC-01-DUP02	DFP-SCC-02-02	DFP-SCC-02-03	DFP-SCC-02-01
Sample Date:		10/20/2021	10/20/2021	10/20/2021	10/20/2021	10/20/2021	10/20/2021	10/20/2021	10/20/2021
Depth:		0.5-1 ft bgs	1-2 ft bgs	0-0.5 ft bgs	0-0.5 ft bgs	0-0.5 ft bgs Duplicate	0.5-1 ft bgs	1-2 ft bgs	0-0.5 ft bgs
Parameters	**Unit**								
Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)									
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	6540	17000 J	2310	2650	2190	28400 J	54200 J	22000 J
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	85900 J	115000 J	34800 J	32200 J	46000 J	159000 J	497000 J	152000 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2350	7520 J	636	680	591	13000 J	30700 J	8610 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	52400 J+	108000 J+	18800 J+	18800 J+	24600 J+	113000 J+	265000 J+	103000 J+
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	1770	3560	590	691	927	2930	11900 J	2950
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	162	1340	49.8	55	40.5	1210	3310	770
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	14000 J	27200 J	4990	5590 J	7360 J	29000 J	93300 J	26700 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	352	1110	94.4	110	101	2140	4800	1220
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2820	6170 J	808	1050	1160	5410 J	16100 J	4880
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	207	677	58.1	59.6	47.6	1540	3520	845
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	22.2 U	25.6 U	7 U	8.28 U	7.84 U	31 U	72.2 UJ	23.8 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	166	775	37.1	51.8	32.6	1130	2360	595
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	621	1950	127	236	129	2090	4320	1500
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	963	1560	260	342	379	1330	3580	1450
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	1840	2370	483	707	760	2240	5840 J	2160
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	90.2	297	13.2	25.7	12.1	404	1040 J	234
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	206	718	33.2	73.4	31	976	2710 J	632
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	3950 J	11600 J	1120 J	1210 J	1090 J	21800 J	50300 J	14000 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	59100 J	120000 J	21000 J	21400 J	27900 J	123000 J	295000 J	113000 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	5310 J	11600 J	1300 J	1410 J	1140 J	37700 J	84300 J	20500 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	33700 J	63600 J	10700 J	12900 J	15400 J	62200 J	183000 J	60300 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	3430 J	6540 J	757 J	961 J	680 J	27300 J	54100 J	12200 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	17000 J	33900 J	3980 J	6280 J	5650 J	28000 J	88900 J	29300 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	3760 J	6670 J	611 J	1140 J	639 J	30500 J	64600 J	14100 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	10400 J	24000 J	1850 J	3870 J	2520 J	20800 J	66000 J	23500 J

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Location ID:		Downstream Fisherman's Park	Downstream Fisherman's Park	Downstream Fisherman's Park	Downstream Fisherman's Park
Sample Name:		DFP-BG-01-2021-0823	DFP-BG-02-2021-0823	DFP-BNM-01-2021-0823	DFP-BNM-02-2021-0823
Sample Date:		08/23/2021	08/23/2021	08/23/2021	08/23/2021
Depth:		--	--	--	--
Parameters	**Unit**				
Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)					
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	1.42 J	1.18 J	8.32 J	6.28
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	2.08 J	2.28 J	21	4.09 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	0.47 J	0.346 J	2.14 J	0.658 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	2.26 J	3.88	17.2	4.91
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	2.47 U	2.38 U	0.693 J	0.159 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.47 U	0.233 J	0.635 J	2.42 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	3.36	3.13	10.1	5.73
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.47 U	0.516 J	0.595 J	0.492 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1.03 J	1.29 J	2.26 J	1.77 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.47 U	2.38 U	0.355 J	2.42 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	2.47 U	2.38 U	2.43 U	2.42 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.739 J	0.368 J	2.09 J	0.928 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	1.54 J	1.24 J	2.45	1.6 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.47 U	0.179 J	0.687 J	0.234 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.932 J	1.11 J	5.39	2.46 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1.54	1.06	2.27	1.47
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	1.09 J	1.27	5.94	1.26
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	0.724 J	0.662 J	3.57 J	1.1 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	2.26 J	4 J	19.7 J	5.66 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.47 U	0.749 J	3.89 J	0.796 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	5.13 J	5.66 J	19.4 J	10.1 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.739 J	0.368 J	4.58 J	0.928 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	4.54 J	6 J	24.7 J	8.76 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	2.41 J	1.54 J	18.4 J	2.24 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	5.96 J	6.92 J	35.6 J	6.02 J

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Location ID:		**Downstream Fisherman's Park**	**Downstream Fisherman's Park**	**Downstream Refernce Area**	**Downstream Refernce Area**
Sample Name:		**DFP-BNM-03-2021-0823**	**DFP-ZBR-01-2021-0929**	**DRA-LMB-01-2021-0823**	**DRA-SMB-01-2021-0823**
Sample Date:		**08/23/2021**	**09/29/2021**	**08/23/2021**	**08/23/2021**
Depth:		**--**	**--**	**--**	**--**
Parameters	**Unit**				
Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)					
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	12.1	11 J	4.43 J	4.84 U
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	35.9	33.3 J	4.96 U	4.84 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2.82	2.84 J	0.63 J	2.42 U
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	26	25.3	0.462 J	1.36 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.855 J	0.694 J	2.48 U	2.42 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.49 J	0.451 J	2.48 U	2.42 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	9.01	6.83	0.818 J	6.03
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.687 J	0.66 J	2.48 U	2.42 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.08 J	1.58 J	0.257 J	1.36 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.365 J	0.467 J	2.48 U	2.42 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	2.41 U	2.47 U	2.48 U	2.42 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	1.18 J	2.47 U	2.48 U	0.884 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	1.52 J	0.605 J	2.48 U	1.39 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.623 J	0.54 J	2.48 U	0.247 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	3.98	1.41 J	0.649 J	4.77
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1.7	0.495 U	0.307 J	0.785
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	3.88	0.766 J	0.496 U	0.753
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	5.04 J	5.46 J	1.23 J	2.42 U
Total heptachlorodibenzofuran (HpCDF)	pg/g	29.5 J	27.7 J	0.952 J	1.36 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	4.79 J	7.31 J	2.48 U	2.42 U
Total hexachlorodibenzofuran (HxCDF)	pg/g	18.9 J	15.6 J	1.08 J	8.14 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	3.73 J	4.84 J	2.48 U	0.884 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	18.3 J	10.9 J	0.649 J	6.99 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	10.2 J	11.7 J	0.307 J	0.785 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	21.1 J	20 J	0.496 U	1.45 J

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Location ID:		Downstream Refernce Area	Downstream Refernce Area	Downstream Refernce Area	Downstream Refernce Area
Sample Name:		DRA-SMB-02-2021-0823	DRA-SMB-03-2021-0823	DRA-SMB-04-2021-0823	DRA-SMB-01-2021-0823-DUP
Sample Date:		08/23/2021	08/23/2021	08/23/2021	08/23/2021
Depth:		--	--	--	--
					Duplicate
Parameters	**Unit**				
Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)					
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	4.77 U	4.84 U	4.75 U	4.79 U
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	4.77 U	0.83 J	4.75 U	4.79 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2.39 U	2.42 U	2.37 U	0.326 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	2.39 U	0.557 J	0.286 J	1.83 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	2.39 U	2.42 U	2.37 U	2.39 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.39 U	2.42 U	2.37 U	2.39 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.382 J	1.43 J	1.59 J	6.94
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.39 U	2.42 U	2.37 U	2.39 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.39 U	0.367 J	2.37 U	1.45 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.39 U	2.42 U	2.37 U	2.39 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	2.39 U	2.42 U	2.37 U	2.39 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.39 U	0.724 J	2.37 U	0.962 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	2.39 U	0.608 J	0.552 J	1.84 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.39 U	2.42 U	2.37 U	0.378 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.845 J	2.02 J	2.11 J	5.79
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.477 U	0.673 J	0.475 U	0.848
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.477 U	0.484 U	0.333 J	0.732 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2.39 U	2.42 U	2.37 U	0.662 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	2.39 U	0.557 J	0.286 J	2.09 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.39 U	2.42 U	2.37 U	2.39 U
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.382 J	1.8 J	1.59 J	9.43 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.39 U	0.724 J	2.37 U	0.962 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.845 J	2.63 J	3.01 J	8.71 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.477 U	0.673 J	0.475 U	0.848 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	0.477 U	0.35 J	0.333 J	2.14 J

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Location ID:		**Fisherman's Park Cove**	**Fisherman's Park Cove**	**Fisherman's Park Cove**	**Fisherman's Park Cove**	**Fisherman's Park Cove**
Sample Name:		**FPC-BG-01-2021-0823**	**FPC-BG-02-2021-0823**	**FPC-BG-03-2021-0823**	**FPC-BG-04-2021-0823**	**FPC-BG-05-2021-0823**
Sample Date:		**08/23/2021**	**08/23/2021**	**08/23/2021**	**08/23/2021**	**08/23/2021**
Depth:		**--**	**--**	**--**	**--**	**--**
Parameters	**Unit**					
Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)						
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	0.798 J	4.53 J	9.07	2.03 J	2.6 J
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	0.653 J	4.87	0.647 J	2 J	1.53 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2.38 U	1.36 J	1.38 J	0.41 J	0.506 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	0.991 J	2.76	1.47 J	3.66	4.57
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	2.38 U	2.4 U	2.47 U	2.4 U	2.49 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.38 U	2.4 U	2.47 U	2.4 U	2.49 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1.55 J	1.98 J	1.79 J	2.43	2.7 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.38 U	0.643 J	0.374 J	0.294 J	2.49 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.425 J	0.596 J	0.491 J	1.17 J	1.58 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.38 U	2.4 U	2.47 U	2.4 U	2.49 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	2.38 U	2.4 U	2.47 U	2.4 U	2.49 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.38 U	2.4 U	2.47 U	0.391 J	3.33 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.38 J	0.8 J	0.832 J	1.09 J	1.25 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.38 U	2.4 U	0.0896 J	2.4 U	2.49 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.305 J	0.646 J	0.842 J	0.893 J	3.37 UJ
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.724	0.677 J	1.72	0.824	1.41 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.513 J	0.621 J	1.05	0.785	1.2
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2.38 U	2.44 J	2.93 J	0.622 J	0.899 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	0.991 J	3.27 J	2.3 J	3.85 J	4.98 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.38 U	1.69 J	1.65 J	0.294 J	2.49 U
Total hexachlorodibenzofuran (HxCDF)	pg/g	2.4 J	3.31 J	3.64 J	4.45 J	5.13 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.38 U	2.4 U	2.47 U	0.391 J	3.33 U
Total pentachlorodibenzofuran (PeCDF)	pg/g	1.05 J	2.27 J	2.61 J	3.89 J	4.35 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.724 J	0.677 J	1.72 J	0.824 J	1.41 U
Total tetrachlorodibenzofuran (TCDF)	pg/g	1.43 J	2.22 J	2.69 J	4.8 J	4.22 J

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

	Location ID:	**Fisherman's Park Cove**	**Fisherman's Park Cove**	**Fisherman's Park Cove-Pettite Cove**	**Fisherman's Park Cove-Pettite Cove**
	Sample Name:	**FPC-ZBR-01-2021-0927**	**FPC-ZBR-01-2021-0927-DUP**	**FPC-PC-LMB-01-2021-0823**	**FPC-PC-LMB-02-2021-0823**
	Sample Date:	**09/27/2021**	**09/27/2021**	**08/23/2021**	**08/23/2021**
	Depth:	**--**	**--**	**--**	**--**
			Duplicate		
Parameters	**Unit**				
Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)					
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	22.7 J	21.4 J	4.91 U	8.58
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	17 J	14.9 J	4.91 U	1.76 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	3.3	3.25	2.45 U	1.58 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	12.5	11.5	0.139 J	1.37 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.643 J	2.48 U	2.45 U	2.45 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.45 U	2.48 U	2.45 U	2.45 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	4.28	3.65	0.768 J	2.36 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.45 U	2.48 U	2.45 U	2.45 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.679 J	0.61 J	2.45 U	0.632 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.45 U	2.48 U	2.45 U	2.45 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	2.45 U	2.48 U	2.45 U	2.45 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.45 U	2.48 U	2.45 U	0.613 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	2.45 U	2.48 U	2.45 U	0.446 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.504 J	0.484 J	2.45 U	2.45 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.728 J	0.886 J	0.47 J	1.1 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.49 U	0.496 U	0.491 U	0.828
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.49 U	0.38 J	0.491 U	0.49 U
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	5.86 J	6.31 J	2.45 U	3.11 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	15.3 J	13.6 J	0.139 J	2.29 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.82 J	1.68 J	2.45 U	0.278 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	9.31 J	8.86 J	0.768 J	3.39 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.45 U	2.48 U	2.45 U	0.613 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	5.28 J	5.78 J	0.47 J	1.55 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1.88 J	1.49 J	0.491 U	0.828 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	8.06 J	8.53 J	0.491 U	0.255 J

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Location ID:		Fisherman's Park Cove-Pettite Cove	Fisherman's Park Cove-Pettite Cove	Fisherman's Park Cove-Pettite Cove	Fisherman's Park Cove-Pettite Cove
Sample Name:		FPC-PC-LMB-03-2021-0823	FPC-PC-LMB-14-2021-0823	FPC-PC-SMB-03-2021-0823	FPC-PC-RG-01-2021-0827
Sample Date:		08/23/2021	08/23/2021	08/23/2021	08/27/2021
Depth:		--	--	--	--
Parameters	**Unit**				
Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)					
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	4.82 U	4.9 U	4.81 U	8.18 U
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	4.82 U	4.9 U	4.81 U	2.82 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2.41 U	2.45 U	2.41 U	4.09 U
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	2.41 U	0.363 J	2.41 U	4.83
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	2.41 U	2.45 U	2.41 U	4.09 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.41 U	2.45 U	2.41 U	4.09 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.464 J	2.45 J	2.41 U	13.4
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.41 U	2.45 U	2.41 U	0.757 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.41 U	0.595 J	2.41 U	3.03 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.41 U	2.45 U	2.41 U	4.09 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	2.41 U	2.45 U	2.41 U	4.09 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.41 U	0.468 J	2.41 U	0.836 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	2.41 U	0.408 J	2.41 U	0.787 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.41 U	2.45 U	2.41 U	0.345 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	0.361 J	1.69 J	0.366 J	8.05
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.482 U	0.53 J	0.481 U	0.56 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.428 J	0.49 U	0.318 J	0.818 U
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2.41 U	2.45 U	2.41 U	0.43 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	2.41 U	0.363 J	2.41 U	4.83 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.41 U	2.45 U	2.41 U	0.757 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.464 J	3.04 J	2.41 U	18.2 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.41 U	0.468 J	2.41 U	0.836 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	0.361 J	2.1 J	0.366 J	9.14 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.482 U	0.53 J	0.481 U	0.56 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	0.428 J	0.49 U	0.318 J	2.57 J

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Location ID:		Fisherman's Park Cove-Pettite Cove	FPC-HRC-01	FPC-HRC-01	FPC-HRC-01	FPC-HRC-01	FPC-HRC-01
Sample Name:		FPC-PC-ZBR-01-2021-0929	FPC-HRC-01-03	FPC-HRC-01-04	FPC-HRC-01-05	FPC-HRC-01-06	FPC-HRC-01-07
Sample Date:		09/29/2021	10/19/2021	10/19/2021	10/19/2021	10/19/2021	10/19/2021
Depth:		--	0.13-0.2 ft bgs	0.2-0.26 ft bgs	0.26-0.33 ft bgs	0.33-0.39 ft bgs	0.39-0.46 ft bgs
Parameters	**Unit**						
Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)							
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	14.7 J	3330	1970	1760	3350	2930
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	31.7 J	13200 J	14600 J	14000 J	32100 J	23700 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2.03 J	547	420	378	716	586
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	23.4	8620 J	8540 J	8840 J	21800 J	14800 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.851 J	302	323	326	737	553
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.46 U	30.4	30.5	25.7	49.1	40.8
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	6.42 J	2200	2380	2330	5420 J	3950
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.46 U	56.2	51.9	47.6	93.3	77.6
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1.23 J	481	520	542	1260	927
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.46 U	31	32	26.3	53.1	44
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	2.46 U	8 U	5 U	4.69 U	7.06 U	6.31 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.46 U	22.9	25.5	22.3	38.7	32.8
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	2.46 U	118	131	143	318	260
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.396 J	156	173	156	339	252
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	1.14 J	250	309	320	609	485
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.492 U	8.95	10.3	8.5	15.2	13.3
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.465 J	27.3	32.6	29.8	46.7 J	42.5
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	3.85 J	990 J	773 J	692 J	1290 J	1060 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	26.1 J	10100 J	9870 J	10100 J	24800 J	17000 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.55 J	663 J	620 J	555 J	1080 J	892 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	15.2 J	5500 J	5760 J	5740 J	13300 J	9560 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.751 J	365 J	366 J	322 J	629 J	543 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	9.59 J	2400 J	2700 J	2790 J	5670 J	4420 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	2.41 J	344 J	342 J	333 J	640 J	526 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	11.4 J	1120 J	1420 J	1370 J	2750 J	2270 J

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Location ID:		FPC-HRC-01	FPC-HRC-01	FPC-HRC-01	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02
Sample Name:		FPC-HRC-01-08	FPC-HRC-01-01	FPC-HRC-01-02	FPC-HRC-02-03	FPC-HRC-02-04	FPC-HRC-02-05
Sample Date:		10/19/2021	10/19/2021	10/19/2021	10/19/2021	10/19/2021	10/19/2021
Depth:		0.46-0.52 ft bgs	0-0.07 ft bgs	0.07-0.13 ft bgs	0.13-0.2 ft bgs	0.2-0.26 ft bgs	0.26-0.33 ft bgs
Parameters	**Unit**						
Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)							
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	2320	2120	4060	808	816	1330
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	17600 J	2670	6390	11200 J	5450	6450
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	451	276	581	186	233	240
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	10600 J	1780	4390	6240 J	3390	4130
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	418	61.3	135	279	119	150
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	29	8.92	16.4	13	15.5	12.9
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2790	451	994	1800	976	1140
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	54.8	18.6	35.2	30	31.9	26.3
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	665	89.5	212	322	198	258
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	30.3	10.5	18.5	13.4	20.5	14.1
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	5.85 U	4.22 U	5 U	4.66 U	3.01 U	3.54 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	23.3	6.23 J	14.3	9.71	14.3	12.3
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	173	18 J	47.3	57.2	58	75.1
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	191	33.5	69	123	69.7	84.8
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	340	57.6	112	222	136	161
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	8.46	2.19 J	5.8	3.8 J	5.29	4.31
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	30.1	8.89	13.7 J	13.4	14.7	14.8
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	823 J	513 J	1080 J	334 J	414 J	437 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	12200 J	2210 J	5310 J	7290 J	3920 J	4830 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	619 J	199 J	352 J	301 J	452 J	292 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	6720 J	1120 J	2540 J	4240 J	2340 J	2830 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	354 J	95.5 J	182 J	167 J	304 J	175 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	2960 J	521 J	1070 J	1830 J	1250 J	1430 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	355 J	80.6 J	165 J	146 J	273 J	172 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	1500 J	283 J	527 J	840 J	641 J	793 J

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Location ID:		FPC-HRC-02	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02
Sample Name:		FPC-HRC-02-05-DUP01	FPC-HRC-02-06	FPC-HRC-02-07	FPC-HRC-02-08	FPC-HRC-02-01	FPC-HRC-02-02
Sample Date:		10/19/2021	10/19/2021	10/19/2021	10/19/2021	10/19/2021	10/19/2021
Depth:		0.26-0.33 ft bgs Duplicate	0.33-0.39 ft bgs	0.39-0.46 ft bgs	0.46-0.52 ft bgs	0-0.07 ft bgs	0.07-0.13 ft bgs
Parameters	**Unit**						
Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)							
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	936	1360	866	3890	14000 J	855
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	7850	7820	6930	45700 J	4340	3180
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	251 J	270	195	802	1270	158
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	5170 J	5000 J	4840	26600 J	2420	2070
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	180	201	194	1010	78.9	76.5
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	15.1	15.3	11.9	43.6	11.6	8.54
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1430	1500	1380	7370 J	516	619
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	30.1	32.3	27	107	32.8	16.7
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	317	328	312	1640	107	128
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	18.1	17.8	14.3	52.6	16.4	10.9
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF) 1,2,3,7,8-	pg/g	4.22 U	4.8 U	3.86 U	7.97 U	3.06 U	3.66 U
Pentachlorodibenzo-p-dioxin (PeCDD) 1,2,3,7,8-	pg/g	13.2	14.3	12.6	43.1	8.92	7.55
Pentachlorodibenzofuran (PeCDF) 2,3,4,6,7,8-	pg/g	86.8	92.7	85.9	360	24.4	33.4
Hexachlorodibenzofuran (HxCDF) 2,3,4,7,8-	pg/g	105	117	111	647	42.6	46.9
Pentachlorodibenzofuran (PeCDF)	pg/g	195	207	195	899	62.6	90.8
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	5.52	5.33	5.19	16.6	2.91	3.9
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	19.8	17.5	18.7	63.2	8.22	11.2
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	457 J	548 J	363 J	1560 J	2150 J	281 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	5930 J	5870 J	5610 J	30500 J	3410 J	2460 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	376 J	391 J	300 J	1120 J	256 J	189 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	3520 J	3680 J	3470 J	18300 J	1370 J	1560 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	217 J	229 J	189 J	691 J	105 J	102 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	1750 J	1850 J	1870 J	8040 J	577 J	808 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	198 J	202 J	179 J	721 J	93.7 J	106 J
	pg/g	950 J	959 J	1150 J	3840 J	317 J	476 J

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Location ID:		FPC-PWG-01	FPC-PWG-02	PCA-HRC-01	PCA-HRC-01	PCA-HRC-01	PCA-HRC-01
Sample Name:		FPC-PWG-01	FPC-PWG-02	PCA-HRC-01-03	PCA-HRC-01-04	PCA-HRC-01-05	PCA-HRC-01-06
Sample Date:		11/03/2021	11/03/2021	10/21/2021	10/21/2021	10/21/2021	10/21/2021
Depth:		0-0.5 ft bgs	0-0.5 ft bgs	0.13-0.2 ft bgs	0.2-0.26 ft bgs	0.26-0.33 ft bgs	0.33-0.39 ft bgs
Parameters	**Unit**						
Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)							
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	3670	5280	6140	5950	6700	6060
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	4850	17200 J	62100 J	78700 J	87400 J	69300 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	511	684	1850	1930 J	3030	2420
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	2770	9420 J	37100 J	74500 J	91800 J	65800 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	89.5	329	1280	1420 J	3470 J	2360 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	10.1	21.8	133	126 J	197	247 J-
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	726	2430	11200 J	12300 J	21800 J	16400 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	24.8	50.4	275	244	756 J	492
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	131	448	1760	2720 J	5000 J	3120 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	12.1	26.6	182	150	410 J	259
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	3.89 U	4.02 U	13.8 U	63.5 UJ	52.6 UJ	39.2 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	8.84	15.5	113	101	426 J	227
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	30.8	87.3	351	361	765	662
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	49.3	159	581	604	1530	1090
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	84.8	236	1210	931	2800	1890
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	3.29	6.24	44.4	58.8 J	148	102
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	10.7	20.4	98.4	115	249 J	211
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	925 J	1400 J	3250 J	3330 J	5140 J	4130 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	3460 J	11000 J	41600 J	80300 J	104000 J	74200 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	236 J	507 J	3660 J	3390 J	8310 J	6580 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	1740 J	5590 J	23700 J	27500 J	54800 J	38600 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	115 J	250 J	2280 J	2140 J	8490 J	4780 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	740 J	2070 J	9900 J	8210 J	22200 J	16300 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	115 J	229 J	2450 J	3180 J	8690 J	6310 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	381 J	901 J	5120 J	4550 J	16900 J	9850 J

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Location ID:		PCA-HRC-01	PCA-HRC-01	PCA-HRC-01	PCA-HRC-01	PCA-HRC-02	PCA-HRC-02
Sample Name:		PCA-HRC-01-07	PCA-HRC-01-08	PCA-HRC-01-01	PCA-HRC-01-02	PCA-HRC-02-03	PCA-HRC-02-04
Sample Date:		10/21/2021	10/21/2021	10/21/2021	10/21/2021	10/21/2021	10/21/2021
Depth:		0.39-0.46 ft bgs	0.46-0.52 ft bgs	0-0.07 ft bgs	0.07-0.13 ft bgs	0.13-0.2 ft bgs	0.2-0.26 ft bgs
Parameters	**Unit**						
Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)							
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	4970	7470	8750	7210	12600 J	7410
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	51300 J	92200 J	75200 J	189000 J	142000 J	59600 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	1330	2980 J	2530	3710	5670 J	2110
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	30200 J	68500 J	65800 J	112000 J	115000 J	43000 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	1080	1950 J	1660	4620 J-	3990	1460 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	102	185	165	292	483	174 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	8260	18500 J	14400 J	29800 J	34300 J	10600 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	187	388	448	625	1180	319
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1470	3290 J	3210 J	5180 J	7830 J	2610 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	123	232	324 J	492 J-	767	234 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	12.8 U	34.8 UJ	32.8 U	49.5 U	45.3 U	25.1 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	94.7	166	297 J	375	715	169
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	305	581	689	1130	1510	461
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	466	935	1170 J	1770	2520	762
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	852	1570	1890	3890	3990	1300
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	35.4	60.2 J	109	148 J	295	72.2
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	101	189	240	301	568 J	146
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2290 J	5120 J	4250 J	6470 J	9610 J	3660 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	34000 J	75700 J	73100 J	127000 J	129000 J	48600 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2520 J	5620 J	5780 J	9620 J	16200 J	4510 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	18000 J	39000 J	35900 J	67300 J	85400 J	26500 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	1760 J	3780 J	5810 J	7890 J	14600 J	3160 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	7070 J	14000 J	16100 J	30900 J	35700 J	11500 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	2000 J	4000 J	6230 J	11000 J	17000 J	3620 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	3980 J	7280 J	9670 J	15700 J	24900 J	6810 J

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Location ID:		**PCA-HRC-02**	**PCA-HRC-02**	**PCA-HRC-02**	**PCA-HRC-02**	**PCA-HRC-02**	**PCA-HRC-02**
Sample Name:		**PCA-HRC-02-05**	**PCA-HRC-02-06**	**PCA-HRC-02-07**	**PCA-HRC-02-08**	**PCA-HRC-02-01**	**PCA-HRC-02-02**
Sample Date:		**10/21/2021**	**10/21/2021**	**10/21/2021**	**10/21/2021**	**10/21/2021**	**10/21/2021**
Depth:		**0.26-0.33 ft bgs**	**0.33-0.39 ft bgs**	**0.39-0.46 ft bgs**	**0.46-0.52 ft bgs**	**0-0.07 ft bgs**	**0.07-0.13 ft bgs**
Parameters	**Unit**						
Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)							
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	41700 J	15000 J	13100 J	12000 J	14800 J	15500 J
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	543000 J	201000 J	241000 J	130000 J	132000 J	219000 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	17300 J	6210 J	8580 J-	5310 J-	5650	6510 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	313000 J	121000 J	171000 J	101000 J	123000 J	223000 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	12900 J	4750	5450 J	2440	4190	7260 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1590	580 J	622 J-	289 J-	442	703
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	113000 J	42300 J	61600 J	31800 J	32000 J	60400 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2720	1120	1430 J-	764 J-	984	1720
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	18600 J	7160 J	9460 J	4670	6260 J	16300 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2510 J	601	715 J-	290	624	1190 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	119 U	41.4 U	94.6 UJ	58.4 UJ	70.5 U	82.7 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	1800 J	508	704 J-	388 J-	512	914
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	4630	1380	2820 J-	1130 J-	1260	2550
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	5800 J	2140	3260 J-	1700 J-	2330 J	4560
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	8510 J	3820	6090 J-	3330 J	3540	8180 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	512	221	248	118 J	201	557 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	1430 J	437	698 J-	320 J-	282 J	652 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	28600 J	10700 J	14700 J	9200 J	9610 J	11300 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	348000 J	138000 J	189000 J	111000 J	139000 J	250000 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	42200 J	15000 J	18600 J	8680 J	13100 J	23000 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	225000 J	90300 J	126000 J	68600 J	76800 J	162000 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	36700 J	10600 J	15500 J	8380 J	10100 J	17300 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	85500 J	35100 J	61200 J	29500 J	31700 J	70100 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	34700 J	13400 J	18400 J	9210 J	11400 J	28800 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	39600 J	19100 J	28600 J	17100 J	18300 J	41000 J

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

	Location ID:	PCA-HRC-03	PCA-HRC-03	PCA-HRC-03	PCA-HRC-03	PCA-HRC-03	PCA-HRC-03
	Sample Name:	PCA-HRC-03-03	PCA-HRC-03-04	PCA-HRC-03-05	PCA-HRC-03-06	PCA-HRC-03-07	PCA-HRC-03-08
	Sample Date:	10/21/2021	10/21/2021	10/21/2021	10/21/2021	10/21/2021	10/21/2021
	Depth:	0.13-0.2 ft bgs	0.2-0.26 ft bgs	0.26-0.33 ft bgs	0.33-0.39 ft bgs	0.39-0.46 ft bgs	0.46-0.52 ft bgs
Parameters	**Unit**						
Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)							
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	9920	8430	9780	9090	12600 J	20100 J
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	52800 J	60800 J	95400 J	74400 J	132000 J	301000 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2500	1950	2980	2270	4500	9000 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	34500 J	39200 J	65500 J	45700 J	120000 J	139000 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	1190 J-	1270 J-	2110 J-	1470	3800	6730 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	186 J-	141 J-	218 J-	163	388 J-	721
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	10300 J	10900 J	17800 J	13300 J	32500 J	48700 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	346 J-	286 J-	427	333	976 J-	1550 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1890	1950	3300	2340	7100 J	7960 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	236 J-	170 J-	258	207	588 J-	840
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	12.6 UJ	13.5 UJ	23.5 UJ	19.5 U	26.5 UJ	73.7 UJ
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	177	138	213	156	515	713
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	443	397	615	495	1250 J-	1940 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	623 J-	622 J-	1050 J-	711	2370 J-	2800
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	1150	1130	1800	1360	3950	6000 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	73.1	52	82	61	224 J-	274
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	163	121 J-	177	176	341 J-	953 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	4390 J	3430 J	5260 J	3980 J	7850 J	15600 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	39100 J	44200 J	73800 J	51200 J	135000 J	160000 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	4820 J	3590 J	5840 J	4180 J	12100 J	20700 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	23200 J	24200 J	41300 J	28500 J	80000 J	108000 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	3480 J	2670 J	4250 J	2760 J	9620 J	15300 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	9910 J	9830 J	15800 J	11400 J	33300 J	48000 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	4110 J	2770 J	4550 J	3410 J	11300 J	18700 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	5890 J	5480 J	8250 J	6460 J	20200 J	25200 J

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Location ID:		PCA-HRC-03	PCA-HRC-03	PCA-PWG-01	PCA-PWG-02	PCA-PWG-03	PCA-PWG-03	PCF-01
Sample Name:		PCA-HRC-03-01	PCA-HRC-03-02	PCA-PWG-01	PCA-PWG-02	PCA-PWG-03	PCA-PWG-03-DUP04	PCF-01
Sample Date:		10/21/2021	10/21/2021	11/03/2021	11/03/2021	11/03/2021	11/03/2021	10/21/2021
Depth:		0-0.07 ft bgs	0.07-0.13 ft bgs	0-0.5 ft bgs	0-0.5 ft bgs	0-0.5 ft bgs	0-0.5 ft bgs Duplicate	0-0.25 ft bgs
Parameters	**Unit**							
Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)								
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	10900	11900	10500	11200 J-	12200	16100 J	495 J
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	73700 J	135000 J	188000 J	108000 J-	57300 J	103000 J	8230 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2870	3630	3660 J	5280 J-	2900	4140	152
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	57800 J	84500 J	120000 J-	135000 J-	39000 J	84700 J	4240
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	1710	3040	3840 J-	3530 J-	1200	2240	157 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	204	306	273 J-	350 J-	152	270	11.3 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	15200 J	27100 J	29200 J	29900 J-	12100 J	20700 J	1350
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	433	645	584 J-	880 J-	291	654	30.4 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2770	5140	5660	7170 J-	2010	4130	214
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	287	425 J	331 J-	578 J-	202	391	17.8 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	15.8 U	47.3 U	66.2 UJ	51.2 UJ	21.4 U	29.6 U	7.02 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	221	302	308 J-	505 J-	163	319	14.6
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	590	874	991 J-	1130 J-	436	800	40.3
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	931	1630	1860 J-	2090 J-	659	1270	78.5
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	1750	3120	3560 J-	4320 J-	1320	2380	177
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	87.8	133	97.4	237 J-	67.8 J	152	3.31 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	205	242	273 J-	337 J-	160	310	16.4 J
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	4970 J	6270 J	6390 J	9180 J	5040 J	7290 J	260 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	65200 J	95800 J	134000 J	150000 J	44200 J	94200 J	4780 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	5570 J	8510 J	7620 J	12100 J	3970 J	8470 J	381 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	34700 J	62200 J	68800 J	74500 J	26400 J	48000 J	2870 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	4190 J	6070 J	6140 J	9310 J	3190 J	6810 J	253 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	14900 J	25700 J	28100 J	33600 J	11000 J	19700 J	1390 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	4920 J	6970 J	5870 J	13700 J	4260 J	8760 J	397 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	8600 J	13500 J	13400 J	21400 J	6210 J	12300 J	962 J

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Location ID:		PCF-02	PCF-03	PCF-04	Pettite Cove	Pettite Cove	Pettite Cove	Pettite Cove
Sample Name:		PCF-02	PCF-03	PCF-04	PC-BG-01-2021-0826	PC-BG-02-2021-0826	PC-BG-03-2021-0826	PC-BG-04-2021-0826
Sample Date:		10/21/2021	10/21/2021	10/21/2021	08/26/2021	08/26/2021	08/26/2021	08/26/2021
Depth:		0-0.25 ft bgs	0-0.25 ft bgs	0-0.25 ft bgs	--	--	--	--
Parameters	**Unit**							
Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)								
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	601 J	1730	12000 J	4.73 U	6.49 U	4.83 U	14.4 U
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	5780	32900 J	156000 J	5.34	5.77	12.1	29.9
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	104	682	10600 J	2.37 U	2.47 U	2.41 U	2.5
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	3770	30500 J	279000 J	6.27	6.15	12.1	23.4
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	149	1080	9280 J	0.205 J	0.188 J	0.559 J	0.726 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	7.02	53.5	1000 J-	2.37 U	0.128 J	0.257 J	0.236 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1120	8650 J	69700 J	9.65	9.73	11.6	8.91
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	19.4	185	2660	0.842 J	0.571 J	0.917 J	0.443 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	161	1710	19800 J	2.39	2.55	3.47	2.32 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	9.36	81.3	1320 J	0.22 J	0.333 J	0.453 J	0.317 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	6.67 U	15.5 UJ	71.1 UJ	2.37 U	2.47 U	2.41 U	2.42 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	16.9 J	81.4 J	1400	0.824 J	1.14 J	1.16 J	1.16 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	39.8	234	3330	1.86 J	1.97 J	2.3 J	1.85 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	51	582	5170 J	0.35 J	0.426 J	0.587 J	0.452 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	130	1150	9980 J	2.69	3.68	3.85	3.45
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	4.07 J	38.1 J	595	1.14	1.85 J	1.73 J	1.42
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	7.81 J	59.5	786	1.48	0.976 J	1.37 J	4.01
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	177 J	1170 J	17800 J	0.539 J	1.17 J	1.51 J	4.35 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	4330 J	34600 J	315000 J	6.75 J	6.84 J	14 J	26.2 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	192 J	1900 J	31800 J	1.06 J	1.2 J	2.17 J	3.03 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	2320 J	20400 J	192000 J	15.6 J	15.2 J	19.9 J	17.2 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	240 J	1760 J	27000 J	0.824 J	1.14 J	1.16 J	2.87 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	1300 J	8440 J	90300 J	10.7 J	9.35 J	13 J	17.5 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	471 J	2180 J	33500 J	1.83 J	2.45 J	2.67 J	10.1 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	1260 J	4710 J	63700 J	4.31 J	6.33 J	9.59 J	23.1 J

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Location ID:		Pettite Cove	Pettite Cove	Pettite Cove	Pettite Cove	Pettite Cove	SRM1
Sample Name:		PC-BG-05-2021-0826	PC-LMB-01-2021-0826	PC-RG-01-2021-0826	PC-RG-02-2021-0826	PC-ZBR-01-2021-0927	SRM WMF-02
Sample Date:		08/26/2021	08/26/2021	08/26/2021	08/26/2021	09/27/2021	08/23/2021
Depth:		--	--	--	--	--	--
Parameters	**Unit**						
Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)							
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	4.8 U	4.95 U	6.67 U	4.86 U	14.8 J	4.96 J
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	3.51 J	4.95 U	8.83	13.5	43.7 J	19.7 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2.4 U	2.47 U	3.33 U	2.38 U	1.91 J	2.42 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	2.82	0.328 J	9.56	18	27.6	1.31 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	2.4 U	2.47 U	0.446 J	1.24 J	0.934 J	9.84 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.4 U	2.47 U	3.33 U	0.569 J	2.47 U	1.07 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	5.79	1.17 J	18.5	48.8	7.16	1.82 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.548 J	2.47 U	0.604 J	1.22 J	2.47 U	1.35 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1.54 J	2.47 U	3.22 J	6.59	1.39 J	1.51 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.4 U	2.47 U	3.33 U	0.291 J	2.47 U	1.01 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	2.4 U	2.47 U	3.33 U	2.38 U	2.47 U	1.01 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.589 J	2.47 U	0.847 J	1.72 J	2.47 U	2 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	1.78 J	2.47 U	1.25 J	0.786 J	2.47 U	3.3 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	0.32 J	2.47 U	0.667 J	1.32 J	2.47 U	1.4 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	2.66	0.721 J	7.26	10.6	1.14 J	4.68 J
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1.6	0.495 U	0.925	1.21	0.494 U	1.97 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.976	0.495 U	0.485 J	0.333 J	0.494 U	14.3
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2.4 U	2.47 U	3.33 U	1.59 J	3.92 J	3.56
Total heptachlorodibenzofuran (HpCDF)	pg/g	3.26 J	0.328 J	10.8 J	19.9 J	30.9 J	1.31
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.548 J	2.47 U	0.604 J	2.08 J	2.47 U	3.42
Total hexachlorodibenzofuran (HxCDF)	pg/g	9.58 J	1.17 J	24.6 J	58 J	14.5 J	7.34
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	0.589 J	2.47 U	0.847 J	1.72 J	2.47 U	2
Total pentachlorodibenzofuran (PeCDF)	pg/g	7 J	0.721 J	9.8 J	12.4 J	6.4 J	12.9
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1.6 J	0.495 U	0.925 J	1.21 J	1.82 J	1.97 U
Total tetrachlorodibenzofuran (TCDF)	pg/g	3.19 J	0.495 U	1.99 J	1.65 J	5.73 J	14.3

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Location ID:		SRM2	SRM3	SRM4	UPC-PWG-01	Upsteam Reference Area	Upsteam Reference Area
Sample Name:		SRM WMF-02	SRM WMF-02	SRM WMF-02	UPC-PWG-01	URA-BNM-01-20210824	URA-BNM-02-20210824
Sample Date:		09/12/2021	09/12/2021	10/01/2021	11/03/2021	08/24/2021	08/24/2021
Depth:		--	--	--	0-0.5 ft bgs	--	--
Parameters	**Unit**						
Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)							
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	3.01 J	19.2 U	6.26 J	225	6.24 U	12 U
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	19.9 U	19.2 U	19.8 U	81.2	1.52 J	1.1 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2.25 J	3.21 J	4.28 J	27.6	2.48 U	2.36 U
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	1.3 J	1.88 J	1.97 J	117 J	2.48 U	2.36 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	0.937 J	9.58 U	9.88 U	2.95 J	2.48 U	2.36 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.55 J	9.58 U	9.88 U	1.11 J	2.48 U	2.36 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1.44 J	2.12 J	2.6 J	33.7	2.48 U	2.36 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.88 J	1.86 J	9.88 U	2.48 J	2.48 U	2.36 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1.62 J	2.77 J	1.51 J	8.19	2.48 U	2.36 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.27 J	9.58 U	9.88 U	1.52 J	2.48 U	2.36 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	0.707 J	9.58 U	9.88 U	2.46 U	2.48 U	2.36 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.96 J	2.81 J	3.29 J	1.28 J	2.48 U	2.36 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	3.32 J	3.42 J	3.99 J	3.24	2.48 U	2.36 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1.32 J	1.59 J	1.86 J	6.35	2.48 U	2.36 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	4.91 J	5.33 J	5.73 J	9.21	0.192 J	2.36 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1.99 U	1.92 U	1.98 U	0.37 J	0.497 U	0.472 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	14.7	14.9	15.7	1.65	0.976	0.659
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	3.43	4.87	7.47	52.2 J	1.65 J	2.69 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	2.24	1.88	1.97	144 J	1.13 J	1.35 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	5.97	1.86	9.88 U	28.3 J	2.48 U	2.36 U
Total hexachlorodibenzofuran (HxCDF)	pg/g	6.1	8.02	7.66	142 J	0.612 J	2.36 U
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.96	2.81	3.29	14.9 J	2.48 U	2.36 U
Total pentachlorodibenzofuran (PeCDF)	pg/g	12.5	11.5	12.6	122 J	0.192 J	2.36 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1.99 U	1.92 U	1.98 U	11 J	0.497 U	0.472 U
Total tetrachlorodibenzofuran (TCDF)	pg/g	16.6	17.9	15.7	50.4 J	1.73 J	1.2 J

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Location ID:		Upsteam Reference Area	Upsteam Reference Area	Upsteam Reference Area	Upsteam Reference Area	Upsteam Reference Area
Sample Name:		URA-BNM-03-20210824	URA-BNM-04-20210824	URA-BNM-05-20210824	URA-SMB-01-20210824	URA-SMB-02-20210824
Sample Date:		08/24/2021	08/24/2021	08/24/2021	08/24/2021	08/24/2021
Depth:		--	--	--	--	--
Parameters	**Unit**					
Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)						
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	10.5 U	6.83 U	8.4 U	51.3	4.84 U
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	1.21 J	0.773 J	4.69 U	8 J	4.84 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2.43 U	2.45 U	2.34 U	23.9	2.42 U
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	2.43 U	2.45 U	2.34 U	9.67	2.42 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	2.43 U	2.45 U	2.34 U	0.641 J	2.42 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.43 U	2.45 U	2.34 U	1.07 J	2.42 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.43 U	0.293 J	2.34 U	0.613 J	2.42 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.314 J	2.45 U	2.34 U	4.14 J	2.42 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.43 U	0.188 J	2.34 U	0.42 J	2.42 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.43 U	2.45 U	2.34 U	2.85	2.42 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	2.43 U	2.45 U	2.34 U	2.5 U	2.42 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.43 U	2.45 U	2.34 U	1.33 J	2.42 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	2.43 U	2.45 U	2.34 U	2.5 U	2.42 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.43 U	2.45 U	2.34 U	0.681 J	2.42 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	2.43 U	2.45 U	2.34 U	0.537 J	2.42 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.486 U	0.49 U	0.469 U	0.499 U	0.484 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.57 J	0.519	0.504	0.499 U	0.484 U
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2.79 J	1.63 J	2.26 J	40.7 J	2.42 U
Total heptachlorodibenzofuran (HpCDF)	pg/g	1.91 J	1.21 J	1.28 J	24.3 J	2.42 U
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	0.945 J	2.45 U	2.34 U	29.7 J	2.42 U
Total hexachlorodibenzofuran (HxCDF)	pg/g	0.735 J	1.15 J	2.34 U	12.5 J	2.42 U
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.43 U	2.45 U	2.34 U	9.65 J	2.42 U
Total pentachlorodibenzofuran (PeCDF)	pg/g	2.43 U	2.45 U	2.34 U	2.34 J	2.42 U
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.486 U	0.49 U	0.469 U	0.499 U	0.484 U
Total tetrachlorodibenzofuran (TCDF)	pg/g	0.878 J	0.949 J	0.875 J	0.499 U	0.484 U

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Location ID:		Upsteam Reference Area	Upsteam Reference Area	Upsteam Reference Area	Upsteam Reference Area	URA-PWG-01
Sample Name:		URA-SMB-03-20210824	URA-SMB-04-20210824	URA-SMB-05-20210824	URA-ZBR-01-2021-0927	URA-PWG-01
Sample Date:		08/24/2021	08/24/2021	08/24/2021	09/27/2021	11/03/2021
Depth:		--	--	--	--	0-0.5 ft bgs
Parameters	**Unit**					
Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)						
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	4.85 U	4.77 U	4.86 U	19.3 J	513
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	4.85 U	4.77 U	4.86 U	1.94 J	31.4
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2.43 U	2.39 U	2.43 U	1.92 J	74.3
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	2.43 U	2.39 U	2.43 U	1.2 J	52.9
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	2.43 U	2.39 U	2.43 U	2.45 U	2.15 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.43 U	2.39 U	2.43 U	2.45 U	0.691 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.43 U	2.39 U	2.43 U	2.45 U	11.9
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.43 U	2.39 U	2.43 U	2.45 U	4.17
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.43 U	2.39 U	2.43 U	2.45 U	4.47
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.43 U	2.39 U	2.43 U	2.45 U	2.24 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	2.43 U	2.39 U	2.43 U	2.45 U	2.48 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.43 U	2.39 U	2.43 U	2.45 U	0.603 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	2.43 U	2.39 U	2.43 U	2.45 U	1.26 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2.43 U	2.39 U	2.43 U	2.45 U	3.11
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	2.43 U	2.39 U	2.43 U	2.45 U	4.35
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.485 U	0.477 U	0.486 U	0.49 U	0.491 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	0.485 U	0.477 U	0.486 U	0.49 U	1.66
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2.43 U	2.39 U	2.43 U	4.63 J	155 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	2.43 U	2.39 U	2.43 U	2.62 J	72.2 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	2.43 U	2.39 U	2.43 U	2.45 U	42 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	2.43 U	2.39 U	2.43 U	0.925 J	55.7 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2.43 U	2.39 U	2.43 U	2.45 U	9.11 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	2.43 U	2.39 U	2.43 U	2.45 U	41 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.485 U	0.477 U	0.486 U	0.49 U	7.09 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	0.485 U	0.477 U	0.486 U	0.49 U	40.2 J

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Location ID:		URA-SCC-01	URA-SCC-01	URA-SCC-01	URA-SCC-01	URA-SCC-02	URA-SCC-02	URA-SCC-02
Sample Name:		URA-SCC-01-02	URA-SCC-01-03	URA-SCC-01-03-DUP03	URA-SCC-01-01	URA-SCC-02-02	URA-SCC-02-03	URA-SCC-02-01
Sample Date:		10/21/2021	10/21/2021	10/21/2021	10/21/2021	10/20/2021	10/20/2021	10/20/2021
Depth:		0.5-1 ft bgs	1-2 ft bgs	1-2 ft bgs Duplicate	0-0.5 ft bgs	0.5-1 ft bgs	1-2 ft bgs	0-0.5 ft bgs
Parameters	**Unit**							
Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)								
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	988	120	128	979	674	651	1350
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	78.3	3.4 J	3.49 J	111	41.8	32.9	116
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	92.8	7.05	6.59	96.8	33.1	19.1	131
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	51.6	4.92 U	4.16 U	77.3	36.1 J+	29.1 J+	80 J+
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	2.6 J	2.49 U	2.49 U	3.04 J	3.49	2.49 U	3.99
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	1.95 J	2.49 U	2.49 U	1.72 J	2.49 U	2.49 U	2.4 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	10.6	1.36 J	1.17 J	11.8	11.1	7.3	15.6
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	4.15 J	2.49 U	2.49 U	4.84	2.48 J	1.75 J	6.86
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	4.32	2.49 U	2.49 U	4.41	4.39	3.26	6.99
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	3.38 J	2.49 U	2.49 U	3.37	1.36 J	1.51 J	5.09
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	2.48 U	2.49 U	2.49 U	2.47 U	2.49 U	2.49 U	2.46 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	1.26 J	2.49 U	2.49 U	1.04 J	1.06 J	2.49 U	2.17 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	2.36 J	2.49 U	2.49 U	1.82 J	3.99	1.76 J	3.39
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	3.91	2.49 U	2.49 U	2.8 J	3.84	2.17 J	6.97
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	4.73 J	2.49 U	2.49 U	4.1	5.49	3.28	10.2
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	0.628 U	0.587 U	0.524 U	0.729 U	0.916 U	0.581 U	0.702 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	3.08	0.497 U	0.498 U	2.21 J	5.21	2.39 J	5.37
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	194 J	16.6 J	16.1 J	210 J	69.1 J	42.4 J	266 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	89.9 J	4.92 J	4.16 J	113 J	53.6 J	40.4 J	147 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	52.7 J	4.4 J	4.04 J	50 J	23.6 J	18 J	68.6 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	63.1 J	1.36 J	1.17 J	58.2 J	56.1 J	34.1 J	110 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	17.9 J	2.49 U	2.49 U	14.1 J	10.2 J	6.38 J	23.9 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	56.1 J	2.49 U	2.49 U	42.1 J	62.2 J	37 J	96.2 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	10.7 J	0.587 U	0.524 U	8.22 J	3.96 J	3.83 J	19.3 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	54.3 J	0.736 J	0.735 J	43.7 J	60.4 J	40.7 J	89.8 J

Notes:

U - Not detected at the associated reporting limit
UJ - Not detected; associated reporting limit is estimated
J - Estimated concentration
J- - Estimated concentration; implied low bias
J+ - Estimated concentration; implied high bias
ft bgs - Feet below ground surface

Table 3

Analytical Methods
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

				Holding Time	
Parameter	**Method**	**Matrix**	**Preservation**	**Collection to Extraction (Days)**	**Extraction to Analysis (Days)**
PCDDs/PCDFs	EPA 1613B	Soil	Iced, 0-6° C	365	365

Notes:

EPA - Environmental Protection Agency Office of Water
PCDDs - Polychlorinated Dibenzodioxins
PCDFs - Polychlorinated Dibenzofurans

Table 4

Qualified Sample Results Due to Outlying Continuing Calibration Results
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Parameter	Analyte	Calibration Date (mm/dd/yyyy)	%D	Analyte	Associated Sample ID	Qualified Result		Units
Dioxin/Furan	13C-OCDF	10/22/2021	39	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	FPC-ZBR-01-2021-0927	17	J	pg/g
				1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	FPC-ZBR-01-2021-0927-DUP	14.9	J	pg/g
				1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	PC-ZBR-01-2021-0927	43.7	J	pg/g
				1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	URA-ZBR-01-2021-0927	1.94	J	pg/g
				1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	DFP-ZBR-01-2021-0929	33.3	J	pg/g
				1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	FPC-PC-ZBR-01-2021-0929	31.7	J	pg/g
	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD) C13	10/22/2021	41	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	FPC-ZBR-01-2021-0927	22.7	J	pg/g
				1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	FPC-ZBR-01-2021-0927-DUP	21.4	J	pg/g
				1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	PC-ZBR-01-2021-0927	14.8	J	pg/g
				1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	URA-ZBR-01-2021-0927	19.3	J	pg/g
				1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	DFP-ZBR-01-2021-0929	11	J	pg/g
				1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	FPC-PC-ZBR-01-2021-0929	14.7	J	pg/g

Notes:

%D - Percent difference
J - Estimated concentration

Table 5

Qualified Sample Results Due to Analyte Concentrations in the Method Blanks
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Parameter	Analyte	Extraction Date (mm/dd/yyyy)	Blank Result *	Sample ID	Original Result	Qualified Result	Units
Dioxin/Furan	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	09/24/2021	3.27 J	URA-BNM-01-20210824	6.24	6.24 U	pg/g
				URA-BNM-02-20210824	12	12 U	pg/g
				URA-BNM-03-20210824	10.5	10.5 U	pg/g
				URA-BNM-04-20210824	6.83	6.83 U	pg/g
				URA-BNM-05-20210824	8.4	8.4 U	pg/g
				PC-BG-01-2021-0826	1.01 J	4.73 U	pg/g
				PC-BG-02-2021-0826	6.49	6.49 U	pg/g
				PC-BG-03-2021-0826	2.49 J	4.83 U	pg/g
				PC-BG-04-2021-0826	14.4	14.4 U	pg/g
				PC-RG-01-2021-0826	1.54 J	6.67 U	pg/g
				PC-RG-02-2021-0826	4.39 J	4.86 U	pg/g
				PC-BG-05-2021-0826	1.85 J	4.8 U	pg/g
	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	09/24/2021	0.177 J	URA-BNM-01-20210824	0.546 J	2.48 U	pg/g
				URA-BNM-02-20210824	0.829 J	2.36 U	pg/g
				URA-BNM-03-20210824	0.87 J	2.43 U	pg/g
				URA-BNM-04-20210824	0.689 J	2.45 U	pg/g
				URA-BNM-05-20210824	0.657 J	2.34 U	pg/g
	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	09/24/2021	0.339 J	URA-BNM-01-20210824	0.964 J	2.48 U	pg/g
				URA-BNM-02-20210824	1.21 J	2.36 U	pg/g
				URA-BNM-03-20210824	1.58 J	2.43 U	pg/g

Table 5

Qualified Sample Results Due to Analyte Concentrations in the Method Blanks
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Parameter	Analyte	Extraction Date (mm/dd/yyyy)	Blank Result *	Sample ID	Original Result	Qualified Result	Units
Dioxin/Furan	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	09/24/2021	0.339 J	URA-BNM-04-20210824	0.835 J	2.45 U	pg/g
				URA-BNM-05-20210824	1.15 J	2.34 U	pg/g
				PC-BG-01-2021-0826	0.539 J	2.37 U	pg/g
				PC-BG-02-2021-0826	0.782 J	2.47 U	pg/g
				PC-BG-03-2021-0826	0.925 J	2.41 U	pg/g
				PC-RG-02-2021-0826	1.22 J	2.38 U	pg/g
				FPC-PC-RG-01-2021-0827	0.43 J	4.09 U	pg/g
	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	11/08/2021	1.31 J	URA-SCC-01-03	4.92	4.92 U	pg/g

Notes:

* \- Blank result adjusted for sample factors where applicable
U - Not detected at the associated reporting limit
J - Estimated concentration

Table 6

Qualified Sample Data Due to Outlying of Surrogate Recoveries
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Parameter	Sample ID	Surrogate	Surrogate % Recovery	Control Limits % Recovery	Analyte	Qualified Result		Units
Dioxin/Furan	FPC-BG-05-2021-0823	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF) C13	17.7	21-178	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	3.37	UJ	pg/g
	DFP-SCC-02-03	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF) C13	166	28-143	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	265000	J+	pg/g
	PCA-HRC-03-03	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF) C13	25.5	26-138	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	1190	J-	pg/g
		1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) C13	24.3	32-141	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	186	J-	pg/g
		1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) C13	25.2	28-130	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	346	J-	pg/g
		1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF) C13	26.2	29-147	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	12.6	UJ	pg/g
		13C12-123789-HxCDD	25.1	28-130	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	236	J-	pg/g
		2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF) C13	25.2	28-136	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	623	J-	pg/g
	PCA-HRC-03-04	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF) C13	25.8	26-138	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	1270	J-	pg/g
		1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) C13	25.6	32-141	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	141	J-	pg/g
		1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) C13	25.4	28-130	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	286	J-	pg/g
		1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF) C13	26.9	29-147	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	13.5	UJ	pg/g
		13C12-123789-HxCDD	26.1	28-130	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	170	J-	pg/g
		2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF) C13	25.8	28-136	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	622	J-	pg/g
		2,3,7,8-Tetrachlorodibenzofuran (TCDF) C13	23.6	24-169	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	121	J-	pg/g
	PCA-HRC-03-05	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF) C13	25.8	26-138	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	2110	J-	pg/g
		1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) C13	31.1	32-141	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	218	J-	pg/g
		1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF) C13	27.6	29-147	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	23.5	UJ	pg/g
		2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF) C13	26.8	28-136	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	1050	J-	pg/g
	PCA-HRC-03-07	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) C13	25.9	32-141	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	388	J-	pg/g
		1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) C13	24.7	28-130	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	976	J-	pg/g
		1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF) C13	26.2	29-147	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	26.5	UJ	pg/g
		1,2,3,7,8-Pentachlorodibenzofuran (PeCDF) C13	23.7	24-185	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	1250	J-	pg/g
		13C12-123789-HxCDD	23	28-130	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	588	J-	pg/g

Table 6

Qualified Sample Data Due to Outlying of Surrogate Recoveries
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Parameter	Sample ID	Surrogate	Surrogate % Recovery	Control Limits % Recovery	Analyte	Qualified Result		Units
Dioxin/Furan	PCA-HRC-03-07	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF) C13	25.8	28-136	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	2370	J-	pg/g
		2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) 13C	24.9	25-164	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	224	J-	pg/g
		2,3,7,8-Tetrachlorodibenzofuran (TCDF) C13	22.3	24-169	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	341	J-	pg/g
	PCA-HRC-03-08	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF) C13	27.1	29-147	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	73.7	UJ	pg/g
	PCA-HRC-02-07	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD) C13	20.9	23-140	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	8580	J-	pg/g
		1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) C13	27	32-141	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	622	J-	pg/g
		1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) C13	22.6	28-130	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	1430	J-	pg/g
		1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF) C13	28.1	29-147	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	94.6	UJ	pg/g
		1,2,3,7,8-Pentachlorodibenzofuran (PeCDF) C13	15.8	24-185	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	2820	J-	pg/g
		1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD) C13	24.6	25-181	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	704	J-	pg/g
		13C12-123789-HxCDD	25.1	28-130	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	715	J-	pg/g
		2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF) C13	20	28-136	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	3260	J-	pg/g
		2,3,4,7,8-Pentachlorodibenzofuran (PeCDF) C13	20.7	21-178	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	6090	J-	pg/g
		2,3,7,8-Tetrachlorodibenzofuran (TCDF) C13	22.7	24-169	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	698	J-	pg/g
	PCA-HRC-02-08	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD) C13	17.2	23-140	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	5310	J-	pg/g
		1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) C13	26.5	32-141	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	289	J-	pg/g
		1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) C13	22.4	28-130	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	764	J-	pg/g
		1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF) C13	22.5	29-147	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	58.4	UJ	pg/g
		1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD) C13	24.7	25-181	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	388	J-	pg/g
		1,2,3,7,8-Pentachlorodibenzofuran (PeCDF) C13	22.3	24-185	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	1130	J-	pg/g
		2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF) C13	24.9	28-136	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	1700	J-	pg/g
		2,3,7,8-Tetrachlorodibenzofuran (TCDF) C13	21.8	24-169	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	320	J-	pg/g
	PCA-HRC-01-02	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF) C13	25	26-138	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	4620	J-	pg/g
		13C12-123789-HxCDD	27.8	28-130	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	492	J-	pg/g
	PCA-HRC-01-06	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) C13	30.2	32-141	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	247	J-	pg/g

Table 6

Qualified Sample Data Due to Outlying of Surrogate Recoveries
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Parameter	Sample ID	Surrogate	Surrogate % Recovery	Control Limits % Recovery	Analyte	Qualified Result		Units
Dioxin/Furan	PCF-04	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) C13	25.7	32-141	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	1000	J-	pg/g
		1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF) C13	26.6	29-147	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	71.1	UJ	pg/g
	PCA-PWG-02	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD) C13	15.5	17-157	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	11200	J-	pg/g
		1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD) C13	14.9	23-140	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	5280	J-	pg/g
		1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF) C13	18.7	28-143	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	135000	J-	pg/g
		1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF) C13	20.3	26-138	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	3530	J-	pg/g
		1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) C13	20.3	32-141	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	350	J-	pg/g
		1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF) C13	22.4	26-152	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	29900	J-	pg/g
		1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) C13	21.7	28-130	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	880	J-	pg/g
		1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF) C13	21.7	26-123	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	7170	J-	pg/g
		1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF) C13	22.8	29-147	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	51.2	UJ	pg/g
		1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD) C13	22.8	25-181	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	505	J-	pg/g
		1,2,3,7,8-Pentachlorodibenzofuran (PeCDF) C13	21.9	24-185	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	1130	J-	pg/g
		13C-OCDF	16.4	17-157	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	108000	J-	pg/g
		13C12-123789-HxCDD	16.6	28-130	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	578	J-	pg/g
		2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF) C13	20.1	28-136	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	2090	J-	pg/g
		2,3,4,7,8-Pentachlorodibenzofuran (PeCDF) C13	16.9	21-178	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	4320	J-	pg/g
		2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) 13C	20.9	25-164	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	237	J-	pg/g
		2,3,7,8-Tetrachlorodibenzofuran (TCDF) C13	18.8	24-169	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	337	J-	pg/g
	PCA-PWG-01	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF) C13	26.4	28-143	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	120000	J-	pg/g
		1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF) C13	21.5	26-138	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	3840	J-	pg/g
		1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) C13	27.1	32-141	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	273	J-	pg/g
		1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) C13	25.6	28-130	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	584	J-	pg/g
		1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF) C13	21	29-147	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	331	J-	pg/g
		1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD) C13	21.9	25-181	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	308	J-	pg/g
		1,2,3,7,8-Pentachlorodibenzofuran (PeCDF) C13	23.7	24-185	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	991	J-	pg/g
		13C12-123789-HxCDD	24.9	28-130	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	66.2	UJ	pg/g
		2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF) C13	21.3	28-136	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	1860	J-	pg/g

Table 6

Qualified Sample Data Due to Outlying of Surrogate Recoveries
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Parameter	Sample ID	Surrogate	Surrogate % Recovery	Control Limits % Recovery	Analyte	Qualified Result		Units
Dioxin/Furan	PCA-PWG-01	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF) C13	20.9	21-178	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	3560	J-	pg/g
		2,3,7,8-Tetrachlorodibenzofuran (TCDF) C13	23.2	24-169	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	273	J-	pg/g

Notes:

J- - Estimated concentration, result may be biased low
J+ - Estimated concentration, result may be biased high
UJ - Not detected; associated reporting limit is estimated

Table 7

Qualified Sample Data Due to Outlying Surrogate Ion Abundance Ratios
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Parameter	Sample ID	Surrogate	Surrogate IAR	Control Limits IAR	Analyte	Qualified Result		Units
Dioxin/Furan	FPC-HRC-02-05-DUP01	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD) C13	1.21	0.88 - 1.20	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	251		pg/g
	DFP-SCC-02-01	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF) C13	0.59	0.37 - 0.51	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	103000	J+	pg/g
	DFP-SCC-02-02	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF) C13	0.62	0.37 - 0.51	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	113000	J+	pg/g
	DFP-SCC-01-03	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF) C13	0.62	0.37 - 0.51	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	108000	J+	pg/g
	DFP-SCC-02-03	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF) C13	0.87	0.37 - 0.51	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	265000	J+	pg/g
		1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF) C13	0.53	0.37 - 0.51	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	11900	J	pg/g
		2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) 13C	0.92	0.65 - 0.89	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1040	J	pg/g
	DFP-SCC-02-03	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF) C13	0.62	0.43 - 0.59	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72.2	UJ	pg/g
	PCA-HRC-03-01	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF) C13	0.52	0.37 - 0.51	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	57800	J	pg/g
	PCA-HRC-03-05	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF) C13	0.53	0.37 - 0.51	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	65500	J	pg/g
	PCA-HRC-03-02	13C12-123789-HxCDD	1.51	1.05 - 1.43	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	425	J	pg/g
	PCA-HRC-03-07	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF) C13	0.60	0.37 - 0.51	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	120000	J	pg/g
	PCA-HRC-03-08	13C-OCDF	1.07	0.76 - 1.02	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	301000	J	pg/g
		1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) C13	1.01	1.05 - 1.43	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	139000	J	pg/g
		1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF) C13	0.42	0.43 - 0.59	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	1550	J	pg/g
		1,2,3,7,8-Pentachlorodibenzofuran (PeCDF) C13	1.25	1.32 - 1.78	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	1940	J	pg/g
		1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF) C13	0.57	0.37 - 0.51	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	953	J	pg/g
		2,3,7,8-Tetrachlorodibenzofuran (TCDF) C13	0.96	0.65 - 0.89	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	73.7	UJ	pg/g

Table 7

Qualified Sample Data Due to Outlying Surrogate Ion Abundance Ratios
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Parameter	Sample ID	Surrogate	Surrogate IAR	Control Limits IAR	Analyte	Qualified Result	Units
Dioxin/Furan	PCA-HRC-02-01	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF) C13	0.72	0.37 - 0.51	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	123000 J	pg/g
		2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF) C13	0.68	0.43 - 0.59	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	2330 J	pg/g
		2,3,7,8-Tetrachlorodibenzofuran (TCDF) C13	0.90	0.65 - 0.89	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	282 J	pg/g
	PCA-HRC-02-02	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF) C13	0.75	0.37 - 0.51	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	223000 J	pg/g
		13C12-123789-HxCDD	0.89	1.05 - 1.43	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	1190 J	pg/g
		2,3,7,8-Tetrachlorodibenzofuran (TCDF) C13	1.06	0.65 - 0.89	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	652 J	pg/g
		2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) 13C	0.93	0.65 - 0.89	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	557 J	pg/g
	PCA-HRC-02-03	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF) C13	0.65	0.37 - 0.51	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	115000 J	pg/g
		1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF) C13	0.61	0.43 - 0.59	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	7830 J	pg/g
		2,3,7,8-Tetrachlorodibenzofuran (TCDF) C13	0.92	0.65 - 0.89	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	568 J	pg/g
	PCA-HRC-02-04	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF) C13	0.59	0.37 - 0.51	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	1460 J	pg/g
		1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) C13	0.99	1.05 - 1.43	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	174 J	pg/g
		1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF) C13	0.60	0.43 - 0.59	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	2610 J	pg/g
		13C12-123789-HxCDD	1.49	1.05 - 1.43	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	234 J	pg/g
	PCA-HRC-02-06	13C-OCDF	1.05	0.76 - 1.02	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	201000 J	pg/g
		1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF) C13	0.66	0.37 - 0.51	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	121000 J	pg/g
		1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF) C13	0.68	0.43 - 0.59	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	42300 J	pg/g
		1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) C13	1.46	1.05 - 1.43	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	580 J	pg/g
	PCA-HRC-02-05	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD) C13	0.64	0.76 - 1.02	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	41700 J	pg/g
		1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF) C13	0.80	0.37 - 0.51	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	313000 J	pg/g
		1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF) C13	0.53	0.37 - 0.51	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	12900 J	pg/g
		1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF) C13	0.72	0.43 - 0.59	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	18600 J	pg/g
		1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD) C13	1.27	1.32 - 1.78	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	2510 J	pg/g
		13C12-123789-HxCDD	1.53	1.05 - 1.43	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	1800 J	pg/g
		2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF) C13	0.72	0.43 - 0.59	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	5800 J	pg/g

Table 7

Qualified Sample Data Due to Outlying Surrogate Ion Abundance Ratios
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Parameter	Sample ID	Surrogate	Surrogate IAR	Control Limits IAR	Analyte	Qualified Result		Units
Dioxin/Furan	PCA-HRC-02-07	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD) C13	1.05	0.76 - 1.02	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	13100	J	pg/g
		1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF) C13	0.58	0.37 - 0.51	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	171000	J	pg/g
		1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD) C13	0.71	0.88 - 1.20	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	8580	J-	pg/g
		1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) C13	1.77	1.05 - 1.43	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	1430	J-	pg/g
		1,2,3,7,8-Pentachlorodibenzofuran (PeCDF) C13	1.94	1.32 - 1.78	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	2820	J-	pg/g
		2,3,7,8-Tetrachlorodibenzofuran (TCDF) C13	0.90	0.65 - 0.89	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	698	J-	pg/g
	PCA-HRC-02-08	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD) C13	1.11	0.76 - 1.02	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	12000	J	pg/g
		1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF) C13	0.54	0.37 - 0.51	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	101000	J	pg/g
		1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD) C13	1.26	0.88 - 1.20	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	5310	J-	pg/g
		1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF) C13	0.74	0.43 - 0.59	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	31800	J	pg/g
		1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) C13	1.01	1.05 - 1.43	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	289	J-	pg/g
		1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) C13	1.5	1.05 - 1.43	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	764	J-	pg/g
		1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF) C13	0.68	0.43 - 0.59	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	58.4	UJ	pg/g
		1,2,3,7,8-Pentachlorodibenzofuran (PeCDF) C13	1.96	1.32 - 1.78	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	1130	J-	pg/g
		2,3,4,7,8-Pentachlorodibenzofuran (PeCDF) C13	1.8	1.32 - 1.78	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	3330	J	pg/g
		2,3,7,8-Tetrachlorodibenzofuran (TCDF) C13	0.59	0.65 - 0.89	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	320	J-	pg/g
	PCF-03	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF) C13	0.54	0.37 - 0.51	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	30500	J	pg/g
		1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF) C13	0.63	0.43 - 0.59	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	15.5	UJ	pg/g
	PCA-HRC-01-01	13C-OCDF	0.66	0.76 - 1.02	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	75200	J	pg/g
		1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF) C13	0.59	0.37 - 0.51	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	65800	J	pg/g
		1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF) C13	0.60	0.43 - 0.59	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	3210	J	pg/g
		13C12-123789-HxCDD	1.44	1.05 - 1.43	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	324	J	pg/g
		1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD) C13	1.82	1.32 - 1.78	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	297	J	pg/g
		2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF) C13	0.60	0.43 - 0.59	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	1170	J	pg/g

Table 7

Qualified Sample Data Due to Outlying Surrogate Ion Abundance Ratios
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Parameter	Sample ID	Surrogate	Surrogate IAR	Control Limits IAR	Analyte	Qualified Result	Units
Dioxin/Furan	PCA-HRC-01-02	13C-OCDF	0.56	0.76 - 1.02	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	189000 J	pg/g
		1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF) C13	0.55	0.37 - 0.51	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	112000 J	pg/g
		1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF) C13	0.98	0.37 - 0.51	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	4620 J-	pg/g
	PCA-HRC-01-04	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD) C13	0.83	0.88 - 1.20	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	1930 J	pg/g
		1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF) C13	0.53	0.37 - 0.51	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	1420 J	pg/g
		1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF) C13	0.69	0.43 - 0.59	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	12300 J	pg/g
		1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) C13	1.01	1.05 - 1.43	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	126 J	pg/g
		1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF) C13	0.60	0.43 - 0.59	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	2720 J	pg/g
		1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF) C13	0.60	0.43 - 0.59	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	63.5 UJ	pg/g
		2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) 13C	1.11	0.65 - 0.89	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	58.8 J	pg/g
	PCA-HRC-01-05	13C-OCDF	0.72	0.76 - 1.02	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	87400 J	pg/g
		1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF) C13	0.59	0.37 - 0.51	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	3470 J	pg/g
		1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF) C13	0.61	0.43 - 0.59	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	21800 J	pg/g
		1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) C13	0.96	1.05 - 1.43	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	756 J	pg/g
		1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF) C13	0.62	0.43 - 0.59	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	52.6 UJ	pg/g
		13C12-123789-HxCDD	0.89	1.05 - 1.43	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	410 J	pg/g
		1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD) C13	2.27	1.32 - 1.78	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	426 J	pg/g
		2,3,7,8-Tetrachlorodibenzofuran (TCDF) C13	0.62	0.65 - 0.89	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	249 J	pg/g
	PCA-HRC-01-06	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF) C13	0.36	0.37 - 0.51	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	2360 J	pg/g
		1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF) C13	0.60	0.43 - 0.59	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	3120 J	pg/g
		1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF) C13	0.61	0.43 - 0.59	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	39.2 UJ	pg/g
	PCA-HRC-01-08	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF) C13	0.62	0.37 - 0.51	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	68500 J	pg/g
		1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD) C13	1.21	0.88 - 1.20	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	2980 J	pg/g
		1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF) C13	0.54	0.37 - 0.51	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	1950 J	pg/g
		1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF) C13	0.61	0.43 - 0.59	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	18500 J	pg/g

Table 7

Qualified Sample Data Due to Outlying Surrogate Ion Abundance Ratios
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Parameter	Sample ID	Surrogate	Surrogate IAR	Control Limits IAR	Analyte	Qualified Result	Units
Dioxin/Furan	PCA-HRC-01-08	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF) C13	0.66	0.43 - 0.59	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	3290 J	pg/g
		1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF) C13	0.66	0.43 - 0.59	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	34.8 UJ	pg/g
	PCF-01	13C-OCDF	1.07	0.76 - 1.02	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	8230 J	pg/g
		1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD) C13	0.73	0.76 - 1.02	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	495 J	pg/g
		1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF) C13	0.54	0.37 - 0.51	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	157 J	pg/g
		1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) C13	1.59	1.05 - 1.43	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	30.4 J	pg/g
		13C12-123789-HxCDD	1.57	1.05 - 1.43	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	17.8 J	pg/g
	PCF-02	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD) C13	1.07	0.76 - 1.02	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	601 J	pg/g
		1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD) C13	2.01	1.32 - 1.78	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	16.9 J	pg/g
	PCF-04	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF) C13	0.62	0.37 - 0.51	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	279000 J	pg/g
		1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF) C13	0.55	0.37 - 0.51	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	9280 J	pg/g
		13C12-123789-HxCDD	1.62	1.05 - 1.43	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	1320 J	pg/g
		1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) C13	1.67	1.05 - 1.43	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	1000 J-	pg/g
	UPC-PWG-01	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF) C13	0.52	0.37 - 0.51	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	117 J	pg/g
	PCA-PWG-03-DUP04	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF) C13	0.59	0.37 - 0.51	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	84700 J	pg/g
		2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) 13C	0.93	0.65 - 0.89	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	67.8 J	pg/g
	PCA-PWG-02	13C-OCDF	1.07	0.76 - 1.02	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	108000 J-	pg/g
		1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD) C13	0.82	0.88 - 1.20	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	5280 J-	pg/g
		1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF) C13	0.58	0.37 - 0.51	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	135000 J-	pg/g
		13C12-123789-HxCDD	1.45	1.05 - 1.43	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	578 J-	pg/g
		2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) 13C	1.00	0.65 - 0.89	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	237 J-	pg/g

Table 7

Qualified Sample Data Due to Outlying Surrogate Ion Abundance Ratios
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Parameter	Sample ID	Surrogate	Surrogate IAR	Control Limits IAR	Analyte	Qualified Result		Units
Dioxin/Furan	PCA-PWG-01	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD) C13	1.24	0.88 - 1.20	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	3660	J	pg/g
		1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF) C13	0.68	0.43 - 0.59	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	66.2	UJ	pg/g
		1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD) C13	1.23	1.32 - 1.78	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	308	J-	pg/g
		2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF) C13	0.61	0.43 - 0.59	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	1860	J-	pg/g

Notes:

J	- Estimated concentration
J-	- Estimated concentration, result may be biased low
J+	- Estimated concentration, result may be biased high
UJ	- Not detected; associated reporting limit is estimated
IAR	- Ion abundance ratio

Table 8

Qualified Sample Results Due to Outlying LCS/LCSD Results
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Parameter	Analyte	LCS Date (mm/dd/yyyy)	LCS % Recovery	LCSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Associated Sample ID	Qualified Result		Units
Dioxin/Furan	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	10/28/2021	106.8	122.2	13.5	82-122	30	BPF-SCC-01	18800	J+	pg/g
								BPF-SCC-01-DUP02	24600	J+	pg/g
								DFP-SCC-02-01	103000	J+	pg/g
								DFP-SCC-02-02	113000	J+	pg/g
								DFP-SCC-02-03	265000	J+	pg/g
								DFP-SCC-01-01	18800	J+	pg/g
								DFP-SCC-01-02	52400	J+	pg/g
								DFP-SCC-01-03	108000	J+	pg/g
								URA-SCC-02-01	80	J+	pg/g
								URA-SCC-02-02	36.1	J+	pg/g
								URA-SCC-02-03	29.1	J+	pg/g

Notes:

LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
RPD - Relative Percent Difference
J+ - Estimated concentration, result may be biased high

Table 9

Qualified Sample Results Due to Outlying Identification Criteria
Durez Inlet Aquatic Assessment
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Parameter	Sample ID	Analyte	Qualified Result		Units
Dioxin/Furan	FPC-PC-LMB-01-2021-0823	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.139	J	pg/g
	FPC-PC-LMB-03-2021-0823	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.361	J	pg/g
	FPC-PC-LMB-03-2021-0823	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.428	J	pg/g
	FPC-PC-LMB-14-2021-0823	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.363	J	pg/g
	FPC-PC-LMB-14-2021-0823	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.408	J	pg/g
	FPC-PC-LMB-14-2021-0823	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.53	J	pg/g
	FPC-PC-SMB-03-2021-0823	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.366	J	pg/g
	FPC-PC-SMB-03-2021-0823	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.318	J	pg/g
	DRA-SMB-01-2021-0823	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	1.39	J	pg/g
	DRA-SMB-01-2021-0823	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.247	J	pg/g
	DRA-SMB-01-2021-0823-DUP	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	1.83	J	pg/g
	DRA-SMB-01-2021-0823-DUP	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.326	J	pg/g
	DRA-SMB-01-2021-0823-DUP	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.962	J	pg/g
	DRA-SMB-01-2021-0823-DUP	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.378	J	pg/g
	DRA-SMB-01-2021-0823-DUP	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.732	J	pg/g
	DRA-SMB-03-2021-0823	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	0.83	J	pg/g
	DRA-SMB-03-2021-0823	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.673	J	pg/g
	DRA-SMB-04-2021-0823	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	2.11	J	pg/g
	DRA-LMB-01-2021-0823	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.818	J	pg/g
	URA-SMB-01-20210824	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	8	J	pg/g
	URA-SMB-01-20210824	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.641	J	pg/g
	URA-SMB-01-20210824	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.613	J	pg/g
	URA-SMB-01-20210824	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	4.14	J	pg/g
	URA-SMB-01-20210824	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.42	J	pg/g
	URA-SMB-01-20210824	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.537	J	pg/g
	PC-LMB-01-2021-0826	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.328	J	pg/g
	PC-LMB-01-2021-0826	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	1.17	J	pg/g
	PC-LMB-01-2021-0826	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.721	J	pg/g
	FPC-BG-01-2021-0823	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	0.798	J	pg/g
	FPC-BG-01-2021-0823	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	0.653	J	pg/g
	FPC-BG-01-2021-0823	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.425	J	pg/g
	FPC-BG-01-2021-0823	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.38	J	pg/g

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Parameter	Sample ID	Analyte	Qualified Result		Units
Dioxin/Furan	FPC-BG-01-2021-0823	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.305	J	pg/g
	FPC-BG-01-2021-0823	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.513	J	pg/g
	FPC-BG-02-2021-0823	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	1.36	J	pg/g
	FPC-BG-02-2021-0823	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.596	J	pg/g
	FPC-BG-02-2021-0823	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.8	J	pg/g
	FPC-BG-02-2021-0823	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.646	J	pg/g
	FPC-BG-02-2021-0823	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.677	J	pg/g
	FPC-BG-02-2021-0823	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.621	J	pg/g
	FPC-BG-03-2021-0823	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	0.647	J	pg/g
	FPC-BG-03-2021-0823	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.374	J	pg/g
	FPC-BG-03-2021-0823	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.491	J	pg/g
	FPC-BG-03-2021-0823	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.832	J	pg/g
	FPC-BG-03-2021-0823	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.0896	J	pg/g
	FPC-BG-04-2021-0823	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	2.03	J	pg/g
	FPC-BG-04-2021-0823	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.294	J	pg/g
	FPC-BG-04-2021-0823	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	1.17	J	pg/g
	FPC-BG-04-2021-0823	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.391	J	pg/g
	FPC-BG-04-2021-0823	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.893	J	pg/g
	FPC-BG-05-2021-0823	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	1.53	J	pg/g
	FPC-BG-05-2021-0823	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	2.7	J	pg/g
	FPC-BG-05-2021-0823	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	1.58	J	pg/g
	DFP-BG-01-2021-0823	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	2.26	J	pg/g
	DFP-BG-01-2021-0823	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.932	J	pg/g
	DFP-BG-01-2021-0823	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	1.09	J	pg/g
	DFP-BG-02-2021-0823	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	1.18	J	pg/g
	DFP-BG-02-2021-0823	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	2.28	J	pg/g
	DFP-BG-02-2021-0823	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.346	J	pg/g
	DFP-BG-02-2021-0823	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	1.29	J	pg/g
	DFP-BG-02-2021-0823	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.368	J	pg/g
	DFP-BG-02-2021-0823	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.179	J	pg/g
	DFP-BNM-01-2021-0823	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	8.32	J	pg/g
	DFP-BNM-01-2021-0823	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.595	J	pg/g

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Dioxin/Furan	DFP-BNM-01-2021-0823	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.687	J	pg/g
	DFP-BNM-02-2021-0823	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.658	J	pg/g
	DFP-BNM-02-2021-0823	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.159	J	pg/g
	DFP-BNM-02-2021-0823	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.492	J	pg/g
	DFP-BNM-02-2021-0823	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	2.46	J	pg/g
	DFP-BNM-03-2021-0823	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.855	J	pg/g
	DFP-BNM-03-2021-0823	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.365	J	pg/g
	DFP-BNM-03-2021-0823	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	1.18	J	pg/g
	DFP-BNM-03-2021-0823	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	1.52	J	pg/g
	URA-BNM-04-20210824	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	0.773	J	pg/g
	FPC-PC-RG-01-2021-0827	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	2.82	J	pg/g
	PC-BG-03-2021-0826	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.559	J	pg/g
	PC-RG-01-2021-0826	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.446	J	pg/g
	PC-RG-02-2021-0826	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	1.24	J	pg/g
	PC-BG-02-2021-0826	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.128	J	pg/g
	PC-BG-03-2021-0826	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.257	J	pg/g
	PC-BG-04-2021-0826	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.236	J	pg/g
	PC-BG-05-2021-0826	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	1.54	J	pg/g
	PC-BG-02-2021-0826	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.571	J	pg/g
	PC-BG-03-2021-0826	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.917	J	pg/g
	PC-BG-04-2021-0826	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.443	J	pg/g
	PC-RG-01-2021-0826	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.604	J	pg/g
	PC-BG-01-2021-0826	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.22	J	pg/g
	PC-BG-02-2021-0826	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.333	J	pg/g
	PC-BG-03-2021-0826	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.453	J	pg/g
	PC-BG-04-2021-0826	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.317	J	pg/g
	PC-RG-02-2021-0826	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.291	J	pg/g
	FPC-PC-RG-01-2021-0827	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.787	J	pg/g
	PC-BG-03-2021-0826	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	1.16	J	pg/g
	PC-BG-04-2021-0826	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	1.16	J	pg/g
	PC-RG-01-2021-0826	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.847	J	pg/g
	PC-BG-05-2021-0826	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.589	J	pg/g

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Dioxin/Furan	PC-BG-01-2021-0826	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.35	J	pg/g
	PC-BG-02-2021-0826	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.426	J	pg/g
	PC-BG-03-2021-0826	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.587	J	pg/g
	PC-BG-04-2021-0826	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.452	J	pg/g
	PC-RG-01-2021-0826	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.667	J	pg/g
	PC-BG-05-2021-0826	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.32	J	pg/g
	FPC-PC-RG-01-2021-0827	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.345	J	pg/g
	URA-BNM-01-20210824	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.192	J	pg/g
	URA-BNM-03-20210824	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.57	J	pg/g
	PC-BG-02-2021-0826	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.976	J	pg/g
	PC-BG-03-2021-0826	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	1.37	J	pg/g
	PC-RG-01-2021-0826	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.485	J	pg/g
	PC-RG-02-2021-0826	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.333	J	pg/g
	PC-BG-02-2021-0826	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1.85	J	pg/g
	PC-BG-03-2021-0826	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1.73	J	pg/g
	FPC-PC-RG-01-2021-0827	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.56	J	pg/g
	URA-ZBR-01-2021-0927	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	1.94	J	pg/g
	FPC-ZBR-01-2021-0927	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.643	J	pg/g
	FPC-ZBR-01-2021-0927-DUP	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.61	J	pg/g
	URA-ZBR-01-2021-0927	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	1.92	J	pg/g
	DFP-ZBR-01-2021-0929	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	2.84	J	pg/g
	FPC-ZBR-01-2021-0927-DUP	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.38	J	pg/g
	DFP-ZBR-01-2021-0929	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.694	J	pg/g
	FPC-PC-ZBR-01-2021-0929	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.851	J	pg/g
	FPC-ZBR-01-2021-0927	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.728	J	pg/g
	FPC-PC-ZBR-01-2021-0929	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	6.42	J	pg/g
	DFP-ZBR-01-2021-0929	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.451	J	pg/g
	DFP-ZBR-01-2021-0929	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	1.58	J	pg/g
	FPC-PC-ZBR-01-2021-0929	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	1.23	J	pg/g
	DFP-ZBR-01-2021-0929	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.66	J	pg/g
	DFP-ZBR-01-2021-0929	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.467	J	pg/g
	DFP-ZBR-01-2021-0929	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.605	J	pg/g

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Dioxin/Furan	FPC-PC-ZBR-01-2021-0929	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.396	J	pg/g
	FPC-PC-ZBR-01-2021-0929	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	1.14	J	pg/g
	DFP-ZBR-01-2021-0929	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.766	J	pg/g
	FPC-HRC-01-01	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	18	J	pg/g
	FPC-HRC-01-01	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	6.23	J	pg/g
	FPC-HRC-01-02	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	13.7	J	pg/g
	FPC-HRC-01-06	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	46.7	J	pg/g
	FPC-HRC-02-03	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	3.8	J	pg/g
	FPC-HRC-01-01	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	2.19	J	pg/g
	URA-SCC-02-01	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	2.17	J	pg/g
	URA-SCC-02-01	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.702	J	pg/g
	URA-SCC-02-02	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	1.36	J	pg/g
	URA-SCC-02-02	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	1.06	J	pg/g
	URA-SCC-02-03	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	1.75	J	pg/g
	URA-SCC-02-03	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	1.51	J	pg/g
	URA-SCC-02-03	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	2.17	J	pg/g
	URA-SCC-02-03	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	2.39	J	pg/g
	URA-SCC-01-01	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	3.04	J	pg/g
	URA-SCC-01-02	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	2.6	J	pg/g
	URA-SCC-01-01	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	1.72	J	pg/g
	URA-SCC-01-02	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	4.15	J	pg/g
	URA-SCC-01-02	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	3.38	J	pg/g
	URA-SCC-01-01	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	1.04	J	pg/g
	URA-SCC-01-02	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	1.26	J	pg/g
	URA-SCC-01-01	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	2.8	J	pg/g
	URA-SCC-01-02	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	4.73	J	pg/g
	URA-SCC-01-01	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	2.21	J	pg/g
	PCA-HRC-02-01	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	282	J	pg/g
	PCA-HRC-02-08	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	289	J-	pg/g
	PCA-HRC-02-08	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	118	J	pg/g
	PCF-03	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	81.4	J	pg/g
	PCF-03	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	38.1	J	pg/g

Table 9

Qualified Sample Results Due to Outlying Identification Criteria
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Parameter	Sample ID	Analyte	Qualified Result	Units
Dioxin/Furan	PCA-HRC-01-02	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	148 J	pg/g
	PCA-HRC-01-08	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	60.2 J	pg/g
	PCF-01	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	11.3 J	pg/g
	PCF-01	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	30.4 J	pg/g
	PCF-01	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	16.4 J	pg/g
	PCF-02	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	4.07 J	pg/g
	PCF-02	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	7.81 J	pg/g
	URA-PWG-01	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.691 J	pg/g
	URA-PWG-01	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.603 J	pg/g
	URA-PWG-01	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	1.26 J	pg/g
	URA-PWG-01	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.491 J	pg/g
	UPC-PWG-01	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	2.95 J	pg/g
	UPC-PWG-01	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	2.48 J	pg/g
	UPC-PWG-01	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.37 J	pg/g
	PCA-PWG-03	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	67.8 J	pg/g

Notes:

J - Estimated concentration

J- - Estimated concentration; implied low bias

Table 10

Qualified Sample Data Due to Exceedance of Calibration Range
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Parameter	Sample ID	Analyte	Qualified Result		Units
Dioxin/Furan	FPC-HRC-01-03	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	13200	J	pg/g
	FPC-HRC-01-03	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	8620	J	pg/g
	FPC-HRC-01-04	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	14600	J	pg/g
	FPC-HRC-01-04	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	8540	J	pg/g
	FPC-HRC-01-05	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	14000	J	pg/g
	FPC-HRC-01-05	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	8840	J	pg/g
	FPC-HRC-01-06	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	32100	J	pg/g
	FPC-HRC-01-06	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	21800	J	pg/g
	FPC-HRC-01-06	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	5420	J	pg/g
	FPC-HRC-01-07	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	23700	J	pg/g
	FPC-HRC-01-07	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	14800	J	pg/g
	FPC-HRC-01-08	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	17600	J	pg/g
	FPC-HRC-01-08	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	10600	J	pg/g
	FPC-HRC-02-01	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	14000	J	pg/g
	FPC-HRC-02-03	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	11200	J	pg/g
	FPC-HRC-02-03	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	6240	J	pg/g
	FPC-HRC-02-05-DUP01	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	5170	J	pg/g
	FPC-HRC-02-06	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	5000	J	pg/g
	FPC-HRC-02-08	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	45700	J	pg/g
	FPC-HRC-02-08	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	26600	J	pg/g
	FPC-HRC-02-08	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	7370	J	pg/g
	BPF-SCC-01	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	34800	J	pg/g
	BPF-SCC-01	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	18800	J+	pg/g
	BPF-SCC-01-DUP02	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	46000	J	pg/g
	BPF-SCC-01-DUP02	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	24600	J+	pg/g
	BPF-SCC-01-DUP02	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	7360	J	pg/g
	DFP-SCC-02-01	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	22000	J	pg/g
	DFP-SCC-02-01	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	152000	J	pg/g
	DFP-SCC-02-01	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	8610	J	pg/g
	DFP-SCC-02-01	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	103000	J+	pg/g

Table 10

Qualified Sample Data Due to Exceedance of Calibration Range
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Parameter	Sample ID	Analyte	Qualified Result		Units
Dioxin/Furan	DFP-SCC-02-01	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	26700	J	pg/g
	DFP-SCC-02-02	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	28400	J	pg/g
	DFP-SCC-02-02	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	159000	J	pg/g
	DFP-SCC-02-02	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	13000	J	pg/g
	DFP-SCC-02-02	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	113000	J+	pg/g
	DFP-SCC-02-02	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	29000	J	pg/g
	DFP-SCC-02-02	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	5410	J	pg/g
	DFP-SCC-02-03	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	54200	J	pg/g
	DFP-SCC-02-03	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	497000	J	pg/g
	DFP-SCC-02-03	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	30700	J	pg/g
	DFP-SCC-02-03	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	265000	J+	pg/g
	DFP-SCC-02-03	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	11900	J	pg/g
	DFP-SCC-02-03	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	93300	J	pg/g
	DFP-SCC-02-03	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	16100	J	pg/g
	DFP-SCC-02-03	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	5840	J	pg/g
	DFP-SCC-02-03	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1040	J	pg/g
	DFP-SCC-02-03	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	2710	J	pg/g
	DFP-SCC-01-01	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	32200	J	pg/g
	DFP-SCC-01-01	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	18800	J+	pg/g
	DFP-SCC-01-01	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	5590	J	pg/g
	DFP-SCC-01-02	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	85900	J	pg/g
	DFP-SCC-01-02	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	52400	J+	pg/g
	DFP-SCC-01-02	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	14000	J	pg/g
	DFP-SCC-01-03	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	17000	J	pg/g
	DFP-SCC-01-03	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	115000	J	pg/g
	DFP-SCC-01-03	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	7520	J	pg/g
	DFP-SCC-01-03	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	108000	J+	pg/g
	DFP-SCC-01-03	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	27200	J	pg/g
	DFP-SCC-01-03	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	6170	J	pg/g
	PCA-HRC-03-01	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	73700	J	pg/g

Table 10

Qualified Sample Data Due to Exceedance of Calibration Range
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Parameter	Sample ID	Analyte	Qualified Result	Units
Dioxin/Furan	PCA-HRC-03-02	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	135000 J	pg/g
	PCA-HRC-03-03	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	52800 J	pg/g
	PCA-HRC-03-04	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	60800 J	pg/g
	PCA-HRC-03-05	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	95400 J	pg/g
	PCA-HRC-03-07	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	132000 J	pg/g
	PCA-HRC-03-08	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	301000 J	pg/g
	PCA-HRC-02-01	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	132000 J	pg/g
	PCA-HRC-02-02	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	219000 J	pg/g
	PCA-HRC-02-03	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	142000 J	pg/g
	PCA-HRC-02-04	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	59600 J	pg/g
	PCA-HRC-02-05	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	543000 J	pg/g
	PCA-HRC-02-06	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	201000 J	pg/g
	PCA-HRC-03-07	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	12600 J	pg/g
	PCA-HRC-03-08	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	20100 J	pg/g
	PCA-HRC-02-01	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	14800 J	pg/g
	PCA-HRC-02-02	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	15500 J	pg/g
	PCA-HRC-02-03	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	12600 J	pg/g
	PCA-HRC-02-05	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	41700 J	pg/g
	PCA-HRC-02-06	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	15000 J	pg/g
	PCA-HRC-03-01	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	57800 J	pg/g
	PCA-HRC-03-02	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	84500 J	pg/g
	PCA-HRC-03-03	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	34500 J	pg/g
	PCA-HRC-03-04	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	39200 J	pg/g
	PCA-HRC-03-05	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	65500 J	pg/g
	PCA-HRC-03-07	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	120000 J	pg/g
	PCA-HRC-03-08	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	139000 J	pg/g
	PCA-HRC-02-01	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	123000 J	pg/g
	PCA-HRC-02-02	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	223000 J	pg/g
	PCA-HRC-02-03	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	115000 J	pg/g
	PCA-HRC-02-04	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	43000 J	pg/g

Table 10

Qualified Sample Data Due to Exceedance of Calibration Range
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Parameter	Sample ID	Analyte	Qualified Result	Units
Dioxin/Furan	PCA-HRC-02-05	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	313000 J	pg/g
	PCA-HRC-02-06	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	121000 J	pg/g
	PCA-HRC-03-08	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	9000 J	pg/g
	PCA-HRC-02-02	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	6510 J	pg/g
	PCA-HRC-02-03	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	5670 J	pg/g
	PCA-HRC-02-05	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	17300 J	pg/g
	PCA-HRC-02-06	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	6210 J	pg/g
	PCA-HRC-03-08	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	6730 J	pg/g
	PCA-HRC-02-02	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	7260 J	pg/g
	PCA-HRC-02-05	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	12900 J	pg/g
	PCA-HRC-03-01	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	15200 J	pg/g
	PCA-HRC-03-02	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	27100 J	pg/g
	PCA-HRC-03-04	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	10900 J	pg/g
	PCA-HRC-03-05	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	17800 J	pg/g
	PCA-HRC-03-07	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	32500 J	pg/g
	PCA-HRC-03-08	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	48700 J	pg/g
	PCA-HRC-02-01	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	32000 J	pg/g
	PCA-HRC-02-02	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	60400 J	pg/g
	PCA-HRC-02-03	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	34300 J	pg/g
	PCA-HRC-02-04	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	10600 J	pg/g
	PCA-HRC-02-05	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	113000 J	pg/g
	PCA-HRC-02-06	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	42300 J	pg/g
	PCA-HRC-03-07	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	7100 J	pg/g
	PCA-HRC-03-08	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	7960 J	pg/g
	PCA-HRC-02-01	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	6260 J	pg/g
	PCA-HRC-02-02	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	16300 J	pg/g
	PCA-HRC-02-03	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	7830 J	pg/g
	PCA-HRC-02-05	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	18600 J	pg/g
	PCA-HRC-02-06	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	7160 J	pg/g
	PCA-HRC-03-03	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	10300 J	pg/g

Table 10

Qualified Sample Data Due to Exceedance of Calibration Range
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Parameter	Sample ID	Analyte	Qualified Result		Units
Dioxin/Furan	PCA-HRC-03-08	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	6000	J	pg/g
	PCA-HRC-02-02	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	8180	J	pg/g
	PCA-HRC-02-05	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	8510	J	pg/g
	PCA-HRC-02-05	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	1430	J	pg/g
	PCA-HRC-03-06	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	74400	J	pg/g
	PCA-HRC-03-06	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	45700	J	pg/g
	PCA-HRC-03-06	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	13300	J	pg/g
	PCA-HRC-02-07	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	13100	J	pg/g
	PCA-HRC-02-07	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	241000	J	pg/g
	PCA-HRC-02-07	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	171000	J	pg/g
	PCA-HRC-02-07	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	5450	J	pg/g
	PCA-HRC-02-07	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	61600	J	pg/g
	PCA-HRC-02-07	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	9460	J	pg/g
	PCA-HRC-02-07	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	8580	J-	pg/g
	PCA-HRC-02-07	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	6090	J-	pg/g
	PCA-HRC-02-08	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	12000	J	pg/g
	PCA-HRC-02-08	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	130000	J	pg/g
	PCA-HRC-02-08	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	101000	J	pg/g
	PCA-HRC-02-08	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	31800	J	pg/g
	PCA-HRC-02-08	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	5310	J-	pg/g
	PCF-03	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	32900	J	pg/g
	PCF-03	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	30500	J	pg/g
	PCF-03	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	8650	J	pg/g
	PCA-HRC-01-01	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	75200	J	pg/g
	PCA-HRC-01-01	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	65800	J	pg/g
	PCA-HRC-01-01	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	14400	J	pg/g
	PCA-HRC-01-02	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	189000	J	pg/g
	PCA-HRC-01-02	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	112000	J	pg/g
	PCA-HRC-01-02	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	29800	J	pg/g
	PCA-HRC-01-02	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	5180	J	pg/g

Table 10

Qualified Sample Data Due to Exceedance of Calibration Range
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Parameter	Sample ID	Analyte	Qualified Result	Units
Dioxin/Furan	PCA-HRC-01-04	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	78700 J	pg/g
	PCA-HRC-01-04	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	74500 J	pg/g
	PCA-HRC-01-04	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	12300 J	pg/g
	PCA-HRC-01-05	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	87400 J	pg/g
	PCA-HRC-01-05	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	91800 J	pg/g
	PCA-HRC-01-05	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	21800 J	pg/g
	PCA-HRC-01-05	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	5000 J	pg/g
	PCA-HRC-01-06	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	69300 J	pg/g
	PCA-HRC-01-06	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	65800 J	pg/g
	PCA-HRC-01-06	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	16400 J	pg/g
	PCA-HRC-01-08	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	92200 J	pg/g
	PCA-HRC-01-08	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	68500 J	pg/g
	PCA-HRC-01-08	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	18500 J	pg/g
	PCF-04	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	12000 J	pg/g
	PCF-04	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	156000 J	pg/g
	PCF-04	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	10600 J	pg/g
	PCF-04	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	279000 J	pg/g
	PCF-04	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	9280 J	pg/g
	PCF-04	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	69700 J	pg/g
	PCF-04	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	19800 J	pg/g
	PCF-04	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	5170 J	pg/g
	PCF-04	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	9980 J	pg/g
	PCA-HRC-01-03	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	62100 J	pg/g
	PCA-HRC-01-03	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	37100 J	pg/g
	PCA-HRC-01-03	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	11200 J	pg/g
	PCA-HRC-01-07	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	51300 J	pg/g
	PCA-HRC-01-07	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	30200 J	pg/g
	PCA-PWG-02	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	108000 J-	pg/g
	PCA-PWG-02	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	135000 J-	pg/g
	PCA-PWG-02	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	29900 J-	pg/g

Table 10

Qualified Sample Data Due to Exceedance of Calibration Range
Durez Inlet Aquatic Assessment
North Tonawanda, New York
August through November 2021

Parameter	Sample ID	Analyte	Qualified Result	Units
Dioxin/Furan	PCA-PWG-02	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	7170 J-	pg/g
	PCA-PWG-01	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	188000 J	pg/g
	PCA-PWG-01	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	29200 J	pg/g
	PCA-PWG-01	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	120000 J-	pg/g
	FPC-PWG-02	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	17200 J	pg/g
	FPC-PWG-02	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	9420 J	pg/g
	PCA-PWG-03	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	57300 J	pg/g
	PCA-PWG-03	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	39000 J	pg/g
	PCA-PWG-03	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	12100 J	pg/g
	PCA-PWG-03-DUP04	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	103000 J	pg/g
	PCA-PWG-03-DUP04	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	16100 J	pg/g
	PCA-PWG-03-DUP04	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	84700 J	pg/g
	PCA-PWG-03-DUP04	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	20700 J	pg/g

Notes:

J - Estimated concentration
J- - Estimated concentration; implied low bias
J+ - Estimated concentration; implied high bias

Appendix C-2
Data Validation Report

High Resolution Dioxins and Furans Analyses

December 2021 through January 2022

Technical Memorandum

February 21, 2022

To	Clint Babcock; Mike Werth	**Tel**	561-688-9008
Copy to	Paul McMahon	**Email**	Marisa.Oriaku@ghd.com
From	Marisa Oriaku/cs/22-NF	**Ref. No.**	11223794
Subject	**Analytical Results and Validation – High Resolution Dioxins and Furans** **Durez Inlet Aquatic Assessment** **North Tonawanda, New York** **December 2021 through January 2022**		

1. Introduction

This document details a validation of analytical results for strip and sediment samples collected in support of the Durez Inlet Aquatic Assessment at the North Tonawanda, New York Site from December 2021 through January 2022. Samples were submitted to SGS North America, Inc. located in Wilmington, North Carolina. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Tables 2A and 2B. A summary of the analytical methodology is presented in Table 3.

Full Contract Laboratory Program (CLP) equivalent raw data deliverables were provided by the laboratory. The sample delivery groups covered in the report are identified in Table 1. Evaluation of the data was based on information obtained from the finished data sheets, raw data, chain of custody forms, calibration data, blank data, recovery data from surrogate spikes/laboratory control samples (LCS), and field Quality Assurance/Quality Control (QA/QC) samples. The assessment of analytical and in-house data included checks for data consistency (by observing comparability of duplicate analyses), adherence to accuracy and precision criteria, and transmittal errors.

The QA/QC criteria by which these data have been assessed are outlined in the analytical method referenced in Table 3 and applicable guidance from the documents entitled:

i) "National Functional Guidelines for High Resolution Superfund Methods Data Review", OLEM 9200.3-115, EPA 542-B-16-001, April 2016

Item i) will subsequently be referred to as the "Guidelines" in this Memorandum.

2. Sample Holding Time and Preservation

The sample holding time criterion and sample preservation requirements for the analysis are summarized in Table 3. The sample chain of custody documents and analytical reports were used to determine sample holding times. All samples were prepared and analyzed within the required holding times.

All samples were delivered on ice and stored by the laboratory at the required temperature (0-6°C).

3. Gas Chromatography/Mass Spectrometry (GC/MS) – Tuning and Mass Calibration (Instrument Performance Check)

Prior to Polychlorinated Dibenzodioxins/Polychlorinated Dibenzo-p-furan (PCDD/PCDF) analyses, GC/MS instrumentation is tuned to ensure optimization over the mass range of interest. To evaluate instrument tuning, the method requires the analysis of the specific tuning compound perfluorokerosene (PFK). The resulting spectra must meet the criteria cited in the method before analysis is initiated. Analysis of the tuning compound must then be repeated every 12 hours throughout sample analysis to ensure the continued optimization of the instrument.

Tuning compounds were analyzed at the required frequency throughout the analysis period. All tuning criteria were met, indicating that proper optimization of the instrumentation was achieved.

4. Initial Calibration

To quantify PCDDs/PCDFs of interest in samples, calibration of the GC/MS over a specific concentration range must be performed. Initially, a minimum of a five-point calibration curve containing all compounds of interest is analyzed to characterize instrument response for each analyte over a specific concentration range. Linearity of the calibration curve, instrument sensitivity, and ion abundance ratios are evaluated against the criteria cited in the Guidelines.

The initial calibration data were reviewed. All compounds met the criteria for sensitivity, linearity, and ion abundance ratios.

5. Continuing Calibration

To ensure that instrument calibration for the analyses is acceptable throughout the sample analysis period, continuing calibration standards must be analyzed and compared to the initial calibration curve every 12 hours.

Calibration standards were analyzed at the required frequency. All of the results met the criteria for instrument sensitivity, stability, and ion abundance ratios.

6. Laboratory Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with the investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of one per analytical batch. Low concentrations of several target analytes were detected in two of the method blanks. Associated sample results were significantly greater than the blank concentrations and were reported without qualification.

7. Spiked C13 Labelled PCDDs/PCDFs

In accordance with the method employed, all samples, blanks, and QC samples analyzed for PCDDs/PCDFs are spiked with labeled congeners prior to extraction to be an internal standard for the quantitation of native congeners, and to serve as surrogates for the assessment of method performance in the sample matrix.

All samples submitted were spiked with the appropriate number of labeled compounds prior to sample extraction and analysis.

Labeled congener recoveries were assessed against method control limits. All labeled PCDD/PCDF recoveries were within the method control limits.

Labeled congener ion abundance ratios were assessed against method control limits. Most ion abundance ratios within the control limits with the exception of those listed in Table 4. The associated sample results were qualified as estimated to reflect a potential bias.

8. Clean-up Standard Recoveries

A C13 labeled cleanup standard is added to all samples, blanks, and QC samples after extraction, but prior to the cleanup procedures to assess the efficiency of the cleanup process.

Most cleanup standard recoveries were within the method acceptance range, with the exception of one slightly high recovery for 1,2,3,4,6,8,9-HpCDF-C13. The associated labeled furan was acceptable, so no qualification of the data was performed.

9. Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD) Analyses

LCS and laboratory control sample duplicates (LCSD) are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects. The relative percent difference (RPD) of the LCS/LCSD recoveries is used to evaluate analytical precision.

For this study, an LCS/LCSD was analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

The LCS contained all compounds of interest. All LCS recoveries and RPDs were within the laboratory control limits, demonstrating acceptable analytical accuracy and precision.

10. Field QA/QC Samples

The field QA/QC consisted of two rinse blanks and four field duplicate sample sets.

10.1 Rinse Blank Sample Analysis

To assess field decontamination procedures, ambient conditions at the site, and cleanliness of sample containers, two rinse blanks were submitted for analysis, as identified in Table 1. Most results were non-detect for the analytes of interest with the exception of low concentrations of a few target analytes. All associated sample results were significantly greater than the rinse blank results and were not qualified.

10.2 Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, four field duplicate samples were collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with these duplicate samples must be less than 100 percent for sediment and strip samples. If the reported concentration in either the investigative sample or its duplicate is less than five times the reporting limit (RL), the evaluation criteria is two times the RL value.

All field duplicate results were within acceptable agreement, demonstrating acceptable sampling and analytical precision.

11. Target Compound Identification/Sample Quantitation

To minimize erroneous compound identification during PCDD/PCDF analyses, qualitative criteria including compound retention time, ion abundance ratio, and chromatography were evaluated according to the identification criteria established by the methods. An erroneous identification can be either a false-positive (reporting a target compound when it is not present in the sample) or false-negative (not reporting a compound that is present in the sample).

The samples identified in Table 1 were reviewed. Most compounds reported adhered to the specified identification criteria. Some sample results were reported as positive hits although the ion abundance ratio was not met. The associated results were qualified as the estimated maximum possible concentration. A summary of these qualified data is presented in Table 5.

In several samples, poor resolution was observed with 2,3,4,7,8-PeCF. The impacted data were qualified as estimated to reflect the potential high bias (see Table 6).

12. Analyte Reporting

The laboratory reported detected results down to the laboratory's estimated detection limit (EDL) for each analyte. Positive analyte detections less than the reporting limit (RL) but greater than the EDL were reported as estimated (J) in Tables 2A and 2B unless otherwise qualified in the Memorandum. Non-detect results were presented as non-detect at the reporting limit (RL) in Tables 2A and 2B.

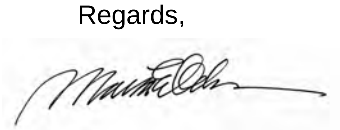
All solid/sediment results were reported on a dry weight basis. Strip samples were reported as total pg.

Those sample results that exceeded the range of the calibration curve were qualified as estimated (J) as shown in Table 7.

13. Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Tables 2A and 2B are acceptable with the specific qualifications herein.

Regards,



Marisa Oriaku
Data Management - Data Validator

Table 1

Sample Collection and Analysis Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
December 2021 through January 2022

Sample Delivery Group	Sample Identification	Location	Matrix	Initial Sample Depth (ft. bgs)	Final Sample Depth (ft. bgs)	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters PCDDs/PCDFs	Comments
B6049	DUR-RB-03	Rinse Blank	Water	--	--	12/13/2021	13:20	X	
	DUR-RB-03-DUP06	Rinse Blank	Water	--	--	12/13/2021	13:20	X	
B6050	FPC-HRC-01-09	FPC-HRC-01	Sediment	0.52	0.59	12/13/2021	08:30	X	
	FPC-HRC-01-10	FPC-HRC-01	Sediment	0.59	0.66	12/13/2021	08:30	X	
	FPC-HRC-01-11	FPC-HRC-01	Sediment	0.66	0.72	12/13/2021	08:30	X	
	FPC-HRC-01-12	FPC-HRC-01	Sediment	0.72	0.79	12/13/2021	08:30	X	
	FPC-HRC-01-13	FPC-HRC-01	Sediment	0.79	0.85	12/13/2021	08:30	X	
	FPC-HRC-01-14	FPC-HRC-01	Sediment	0.85	0.92	12/13/2021	08:30	X	
	FPC-HRC-01-15	FPC-HRC-01	Sediment	0.92	0.98	12/13/2021	08:30	X	
	FPC-HRC-01-16	FPC-HRC-01	Sediment	0.98	1.05	12/13/2021	08:30	X	
	FPC-HRC-01-17	FPC-HRC-01	Sediment	1.05	1.12	12/13/2021	08:30	X	
	FPC-HRC-01-17-DUP	FPC-HRC-01	Sediment	1.05	1.12	12/13/2021	08:30	X	FD (FPC-HRC-01-17)
	FPC-HRC-02-09	FPC-HRC-02	Sediment	0.52	0.59	12/13/2021	10:00	X	
	FPC-HRC-02-10	FPC-HRC-02	Sediment	0.59	0.66	12/13/2021	10:00	X	
	FPC-HRC-02-11	FPC-HRC-02	Sediment	0.66	0.72	12/13/2021	10:00	X	
	FPC-HRC-02-12	FPC-HRC-02	Sediment	0.72	0.79	12/13/2021	10:00	X	
	FPC-HRC-02-13	FPC-HRC-02	Sediment	0.79	0.85	12/13/2021	10:00	X	
	SRM 1944	SRM 1944	Sediment	--	--	--	--	X	Certified Reference Material
B6051	FPC-HRC-02-14	FPC-HRC-02	Sediment	0.85	0.92	12/13/2021	10:00	X	
	FPC-HRC-02-15	FPC-HRC-02	Sediment	0.92	0.98	12/13/2021	10:00	X	
	FPC-HRC-02-16	FPC-HRC-02	Sediment	0.98	1.05	12/13/2021	10:00	X	
	FPC-HRC-02-17	FPC-HRC-02	Sediment	1.05	1.12	12/13/2021	10:00	X	
	FPC-HRC-02-17-DUP	FPC-HRC-02	Sediment	1.05	1.12	12/13/2021	10:00	X	FD (FPC-HRC-02-17)
	PCA-HRC-01-09	PCA-HRC-01	Sediment	0.52	1.05	12/13/2021	11:00	X	
	PCA-HRC-01-09-DUP	PCA-HRC-01	Sediment	0.52	1.05	12/13/2021	11:00	X	FD (PCA-HRC-01-09)
	PCA-HRC-01-10	PCA-HRC-01	Sediment	1.05	1.28	12/13/2021	11:00	X	
	PCA-HRC-02-09	PCA-HRC-02	Sediment	0.52	1.05	12/13/2021	11:30	X	
	PCA-HRC-02-10	PCA-HRC-02	Sediment	1.05	1.28	12/13/2021	11:30	X	
	PCA-HRC-03-09	PCA-HRC-03	Sediment	0.52	0.59	12/13/2021	11:30	X	
	PCA-HRC-03-10	PCA-HRC-03	Sediment	0.59	0.66	12/13/2021	12:30	X	
	PCA-HRC-03-11	PCA-HRC-03	Sediment	0.66	0.72	12/13/2021	12:30	X	
	PCA-HRC-03-12	PCA-HRC-03	Sediment	0.72	0.79	12/13/2021	12:30	X	
	PCA-HRC-03-13	PCA-HRC-03	Sediment	0.79	0.85	12/13/2021	12:30	X	
	PCA-HRC-03-14	PCA-HRC-03	Sediment	0.85	0.92	12/13/2021	12:30	X	
	PCA-HRC-03-15	PCA-HRC-03	Sediment	0.92	0.98	12/13/2021	12:30	X	
	PCA-HRC-03-16	PCA-HRC-03	Sediment	0.98	1.05	12/13/2021	12:30	X	
	PCA-HRC-03-17	PCA-HRC-03	Sediment	1.05	1.41	12/13/2021	12:30	X	
	SRM 1944	SRM 1944	Sediment	--	--	--	--	X	Certified Reference Material

Table 1

Sample Collection and Analysis Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
December 2021 through January 2022

Sample Delivery Group	Sample Identification	Location	Matrix	Initial Sample Depth (ft. bgs)	Final Sample Depth (ft. bgs)	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters PCDDs/PCDFs	Comments
B6187	FPC-PWG-01	FPC-PWG-01	Strip	0	0.5	01/10/2022	15:00	X	
	FPC-PWG-02	FPC-PWG-02	Strip	0	0.5	01/10/2022	15:10	X	
	PCA-PWG-01	PCA-PWG-01	Strip	0	0.5	01/10/2022	14:50	X	
	PCA-PWG-02	PCA-PWG-02	Strip	0	0.5	01/10/2022	14:30	X	
	PCA-PWG-03	PCA-PWG-03	Strip	0	0.5	01/10/2022	14:20	X	
	PCA-PWG-03-DUP04	PCA-PWG-03	Strip	0	0.5	01/10/2022	14:40	X	FD (PCA-PWG-03)
	UPC-PWG-01	UPC-PWG-01	Strip	0	0.5	01/10/2022	14:10	X	
	URA-PWG-01	URA-PWG-01	Strip	0	0.5	01/10/2022	14:00	X	

Notes:

ft. bgs.	- Feet below ground surface
FD	- Field duplicate of sample in parentheses
PCDDs	- Polychlorinated Dibenzodioxins
PCDFs	- Polychlorinated Dibenzofurans
--	- Not applicable

Table 2A

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
December 2021 through January 2022

	Location ID:	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**
	Sample Name:	**FPC-HRC-01-09**	**FPC-HRC-01-10**	**FPC-HRC-01-11**	**FPC-HRC-01-12**	**FPC-HRC-01-13**	**FPC-HRC-01-14**
	Sample Date:	**12/13/2021**	**12/13/2021**	**12/13/2021**	**12/13/2021**	**12/13/2021**	**12/13/2021**
	Depth:	**0.52-0.59 ft BGS**	**0.59-0.66 ft BGS**	**0.66-0.72 ft BGS**	**0.72-0.79 ft BGS**	**0.79-0.85 ft BGS**	**0.85-0.92 ft BGS**
Parameters	**Unit**						
Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)							
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	2890	3620	3300	4710	4460	9950 J
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	25400 J	28500 J	31800 J	48700 J	59700 J	120000 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	574	693	721	1010	1120	2300
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	13900 J	15500 J	17900 J	26700 J	32100 J	73000 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	505	606	715	1080	1310	2700
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	36.3	41.9	47.5	65.6	77.2	159
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	3940	4490	5180 J	7640 J	9530 J	19800 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	72.9	82.1	90	130	160	329
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	817	932	1050	1540	1800	3650
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	34.9	41.2	45.2	60.6	73.3	156
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	2.48 U	2.47 U	2.43 U	2.43 U	2.41 U	5.61 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	28.8	31.6	36.7	50.3	56.6	145
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	215	238	267	370	367	702
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	230	274	312	472	492	1300
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	457	458 J+	604	870	1040	2440
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	8.99	11.8	13.4	17.1	20.1	57.3
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	39.1	49.5	55.5	68.4	77.6	218
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	1070 J	1310 J	1380 J	1900 J	2030 J	4180 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	15900 J	17900 J	20700 J	30700 J	37000 J	83000 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	774 J	958 J	1010 J	1400 J	1770 J	3660 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	9290 J	10600 J	12200 J	18000 J	22000 J	44200 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	455 J	687 J	605 J	813 J	976 J	2260 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	3880 J	4670 J	5380 J	8000 J	9400 J	20100 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	385 J	465 J	494 J	701 J	782 J	2010 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	2020 J	2410 J	2930 J	4060 J	4800 J	12100 J

Table 2A

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
December 2021 through January 2022

Location ID:		**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-02**	**FPC-HRC-02**
Sample Name:		**FPC-HRC-01-15**	**FPC-HRC-01-16**	**FPC-HRC-01-17**	**FPC-HRC-01-17-DUP**	**FPC-HRC-02-09**	**FPC-HRC-02-10**
Sample Date:		**12/13/2021**	**12/13/2021**	**12/13/2021**	**12/13/2021**	**12/13/2021**	**12/13/2021**
Depth:		**0.92-0.98 ft BGS**	**0.98-1.05 ft BGS**	**1.05-1.12 ft BGS**	**1.05-1.12 ft BGS**	**0.52-0.59 ft BGS**	**0.59-0.66 ft BGS**
					Duplicate		
Parameters	**Unit**						
Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)							
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	12600 J	7390	38600 J	28600 J	4470	914
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	85300 J	72900 J	487000 J	495000 J	37600 J	10400 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	2680	2590	9540 J	7650 J	882	200
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	53000 J	43400 J	282000 J	264000 J	23500 J	6330 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	1990	1770	13100 J	12600 J	840	217
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	174	215	580	516	37.8	9.31
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	14700 J	12900 J	90900 J	84600 J	6480 J	1750
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	314	361	1350	1310	99.3	25
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	2880	2450	16700 J	15500 J	1460	355
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	170	198	604	492	47.7	11.1
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	2.49 U	2.82 U	11.2 U	11.3 U	2.39 U	2.47 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	124	150	555 J	460 J	33.4	8.86
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	645	563	2720	2370	333	69.9
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	868	851	5980 J	6400 J	540	125
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	1630	1450	11400 J	10700 J	832	239
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	43.6	45.9	176	191 J	11.9	3.27
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	175	176	827 J	748	66.6	17
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	5010 J	4600 J	16800 J	13500 J	1760 J	415 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	60900 J	50200 J	329000 J	308000 J	27000 J	7240 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	4040 J	5220 J	16200 J	13400 J	1050 J	255 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	35100 J	31500 J	208000 J	195000 J	16700 J	4460 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	2170 J	3220 J	10600 J	8560 J	598 J	147 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	15600 J	15000 J	97200 J	90800 J	7500 J	2110 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	1790 J	2280 J	8460 J	8110 J	449 J	115 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	8410 J	7620 J	60000 J	50500 J	3800 J	1040 J

Table 2A

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
December 2021 through January 2022

	Location ID:	**FPC-HRC-02**	**FPC-HRC-02**	**FPC-HRC-02**	**FPC-HRC-02**	**FPC-HRC-02**	**FPC-HRC-02**
	Sample Name:	**FPC-HRC-02-11**	**FPC-HRC-02-12**	**FPC-HRC-02-13**	**FPC-HRC-02-14**	**FPC-HRC-02-15**	**FPC-HRC-02-16**
	Sample Date:	**12/13/2021**	**12/13/2021**	**12/13/2021**	**12/13/2021**	**12/13/2021**	**12/13/2021**
	Depth:	**0.66-0.72 ft BGS**	**0.72-0.79 ft BGS**	**0.79-0.85 ft BGS**	**0.85-0.92 ft BGS**	**0.92-0.98 ft BGS**	**0.98-1.05 ft BGS**
Parameters	**Unit**						
Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)							
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	683	1290	3570	7020	3780	3810
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	7320	14600 J	23000 J	102000 J	53600 J	34600 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	136	242	548	1420	838	1530
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	4100	8200 J	13000 J	47900 J	28000 J	23500 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	160	305	505	2470	1160	729
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	6.35	10.8	22.6	66.9	60.6	161
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1120	2240	3850	14900 J	9160 J	6970 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	18.2	31.4	63.3	195 J	151	255
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	232	456	789	3130 J	1630	1220
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	7.03	13.5	29.7	69.1	71.4	177
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	2.4 U	2.46 U	2.48 U	39.9 U	6.88 U	6.99 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	5.56	8.82	19.2	58.5	56.7	140
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	44.4	81.1	155	418	312	367
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	78	136	249	970 J	508	347
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	158	308	510	1590 J+	1100 J+	650 J+
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	2.47	4.17	6.23 J	33.8	28.2	51.7
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	12.7	47.4	31.7	159	93.7	141
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	270 J	483 J	1150 J	2770 J	1520 J	2550 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	4740 J	9410 J	15000 J	55900 J	31700 J	25900 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	175 J	291 J	709 J	1850 J	1670 J	3770 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	2850 J	5570 J	9300 J	33800 J	20100 J	15100 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	100 J	148 J	417 J	1040 J	1070 J	2470 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	1400 J	2750 J	4430 J	12600 J	9420 J	6670 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	88.7 J	145 J	363 J	1040 J	1180 J	2860 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	795 J	1530 J	2320 J	7540 J	6170 J	5090 J

Table 2A

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
December 2021 through January 2022

	Location ID:	**FPC-HRC-02**	**FPC-HRC-02**	**PCA-HRC-01**	**PCA-HRC-01**	**PCA-HRC-01**	**PCA-HRC-02**
	Sample Name:	**FPC-HRC-02-17**	**FPC-HRC-02-17-DUP**	**PCA-HRC-01-09**	**PCA-HRC-01-09-DUP**	**PCA-HRC-01-10**	**PCA-HRC-02-09**
	Sample Date:	**12/13/2021**	**12/13/2021**	**12/13/2021**	**12/13/2021**	**12/13/2021**	**12/13/2021**
	Depth:	**1.05-1.12 ft BGS**	**1.05-1.12 ft BGS**	**0.52-1.05 ft BGS**	**0.52-1.05 ft BGS**	**1.05-1.28 ft BGS**	**0.52-1.05 ft BGS**
			Duplicate		**Duplicate**		
Parameters	**Unit**						
Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)							
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	368	548	8700	9930	22700	11400
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	1120	1280	101000 J	129000	555000 J	151000
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	103	169	2760	3600	10600	4120
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	808	1000	54200 J	82800	350000 J	94100
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	24.8	32.4	1860	2370	9580	2930
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	9.44	16.2	210	276	911	285
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	221	297	16900 J	22800	91900	26300
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	16.2	25.9	439	469	1860	564
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	45.9	59	3060	4100	16900	4720
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	10.6	18.3	283	338	1080	357
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	2.47 U	2.47 U	35 U	60.5 U	58.9 U	62.1 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	8.76	15.3	188	222	802	234
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	16.9	26.6	659	830	2890	905
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	14.7	20.3	827	1180	4930	1640 J
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	24.5 J+	34.1 J+	1730 J+	2260	9440	2920 J+
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	3.55	5.1	106	82.2	310	85.4
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	8.2	12.1	239	286	895	334
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	176 J	275 J	4800 J	6160 J	18400 J	7020 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	895 J	1120 J	60700 J	92500 J	389000 J	106000 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	231 J	394 J	5970 J	7050 J	25500 J	7670 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	517 J	689 J	35300 J	51200 J	207000 J	60900 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	161 J	272 J	4130 J	4790 J	18200 J	5240 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	272 J	399 J	14800 J	19500 J	80900 J	24400 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	281 J	410 J	5660 J	4930 J	17900 J	5450 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	253 J	435 J	8930 J	10300 J	42700 J	13500 J

Table 2A

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
December 2021 through January 2022

	Location ID:	**PCA-HRC-02**	**PCA-HRC-03**	**PCA-HRC-03**	**PCA-HRC-03**	**PCA-HRC-03**
	Sample Name:	**PCA-HRC-02-10**	**PCA-HRC-03-09**	**PCA-HRC-03-10**	**PCA-HRC-03-11**	**PCA-HRC-03-12**
	Sample Date:	**12/13/2021**	**12/13/2021**	**12/13/2021**	**12/13/2021**	**12/13/2021**
	Depth:	**1.05-1.28 ft BGS**	**0.52-0.59 ft BGS**	**0.59-0.66 ft BGS**	**0.66-0.72 ft BGS**	**0.72-0.79 ft BGS**
Parameters	**Unit**					
Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)						
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	16600	12700 J	15200	13600	14100
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	165000	114000 J	134000	119000	201000
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	6020	4130 J	5440	4700	5010
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	123000 J	68600 J	124000 J	77700	127000 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	3420	2960	3460	2370	3830
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	415	282	418	307	338
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	33100	21200 J	31400	21100	34200
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	877	663	965	629	714
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	6130	4290 J	6750	3850	5870
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	515	469	572	427	433
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	60.4 U	45.9 U	59.4 U	60.7 U	64 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	394	367	475	273	293
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	1260	1020 J	1380	849	1000
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1950	1340	2180	1130	1900
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	3720 J+	2570 J+	3710	2360	3510 J+
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	153	173 J	193	92.6	98.9 J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	388	375 J	494	328	382
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	10500 J	7160 J	9540 J	8110 J	8610 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	138000 J	78500 J	139000 J	87600 J	143000 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	11900 J	8740 J	12100 J	8730 J	8850 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	77700 J	48600 J	78900 J	48300 J	77900 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	8080 J	7180 J	9720 J	5940 J	5920 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	32000 J	21900 J	33500 J	19800 J	30400 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	8150 J	8810 J	10700 J	5870 J	6040 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	18700 J	13700 J	20100 J	11500 J	15100 J

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Table 2A

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
December 2021 through January 2022

Location ID:		**PCA-HRC-03**	**PCA-HRC-03**	**PCA-HRC-03**	**PCA-HRC-03**	**PCA-HRC-03**
Sample Name:		**PCA-HRC-03-13**	**PCA-HRC-03-14**	**PCA-HRC-03-15**	**PCA-HRC-03-16**	**PCA-HRC-03-17**
Sample Date:		**12/13/2021**	**12/13/2021**	**12/13/2021**	**12/13/2021**	**12/13/2021**
Depth:		**0.79-0.85 ft BGS**	**0.85-0.92 ft BGS**	**0.92-0.98 ft BGS**	**0.98-1.05 ft BGS**	**1.05-1.41 ft BGS**
Parameters	**Unit**					
Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)						
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/g	12300	12100	12000	33100	11500
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	223000	229000	136000	564000 J	109000
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	3700	4200	4170	15000	3170
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	129000 J	140000 J	93900	473000 J	72000
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	4170	3930	3410	14600	2010
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	262	310	264 J	1160	201 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	35300	37500	26300	128000 J	19500
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	534	598	571	3140	419
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	5930	6000	4640	25700	3550
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	298	367	342	1810	257
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	62.1 U	88.4 U	60.4 U	59.3 U	58.6 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	198	236	225	1470	158 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	950	1050	955	4500	749
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	1970	1950	1510	9050	1150
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	3730 J+	3760	2920	15000 J+	2280 J+
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	50.9 J	72.3	98.4	554	73.5
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	348	297	382	1270	298
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	6590 J	7320 J	7190 J	27900 J	5640 J
Total heptachlorodibenzofuran (HpCDF)	pg/g	146000 J	157000 J	107000 J	534000 J	80800 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	6340 J	7800 J	6770 J	36900 J	5450 J
Total hexachlorodibenzofuran (HxCDF)	pg/g	79300 J	83500 J	60300 J	316000 J	45700 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	4180 J	5000 J	4870 J	30400 J	3860 J
Total pentachlorodibenzofuran (PeCDF)	pg/g	29900 J	30900 J	24300 J	126000 J	19200 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	4020 J	4350 J	5070 J	31200 J	4370 J
Total tetrachlorodibenzofuran (TCDF)	pg/g	14000 J	13300 J	13700 J	67200 J	11400 J

Notes:

U	- Not detected at the associated reporting limit
J	- Estimated concentration
J+	- Estimated concentration, result may be biased high
ft BGS	- Feet below ground surface

Table 2B

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
December 2021 through January 2022

Location ID:		**FPC-PWG-01**	**FPC-PWG-02**	**PCA-PWG-01**	**PCA-PWG-02**
Sample Name:		**FPC-PWG-01**	**FPC-PWG-02**	**PCA-PWG-01**	**PCA-PWG-02**
Sample Date:		**01/10/2022**	**01/10/2022**	**01/10/2022**	**01/10/2022**
Depth:		**0-0.5 ft BGS**	**0-0.5 ft BGS**	**0-0.5 ft BGS**	**0-0.5 ft BGS**
Parameters	**Unit**				
Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)					
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg	71.2	85.1 J	78.6	126
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg	122	542	525	1170
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg	35.8	63.8	47.1	74.5
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg	276	1000	869	1690
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg	7.62 J	26.3	29.4	60.7
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg	3.3 J	5.48 J	7.9 J	8.62 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg	269	538	771	1310
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg	11.1 J	16.3 J	14.9 J	24.6 J
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg	146	251	292	371
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg	4.31 J	6.97 J	7.93 J	14.3 J
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg	25 U	25 U	25 U	25 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg	7.77 J	7.34 J	14.8 J	24.6 J
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg	92.4	140	154	197
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg	19.6 J	30.9	40	66.1
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg	67.1	96.4	170	239 J+
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg	5 U	5 U	10.5	13.1
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg	11 J	12.8	31.9	44.2
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg	65.2 J	110 J	84.7 J	130 J
Total heptachlorodibenzofuran (HpCDF)	pg	351 J	1170 J	1020 J	1950 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg	90.7 J	135 J	173 J	299 J
Total hexachlorodibenzofuran (HxCDF)	pg	832 J	1600 J	2180 J	3250 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg	93.9 J	114 J	289 J	404 J
Total pentachlorodibenzofuran (PeCDF)	pg	1440 J	1920 J	3170 J	3920 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg	104 J	110 J	567 J	749 J
Total tetrachlorodibenzofuran (TCDF)	pg	944 J	1030 J	2410 J	2930 J

Table 2B

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
December 2021 through January 2022

	Location ID:	**PCA-PWG-03**	**PCA-PWG-03**	**UPC-PWG-01**	**URA-PWG-01**
	Sample Name:	**PCA-PWG-03**	**PCA-PWG-03-DUP04**	**UPC-PWG-01**	**URA-PWG-01**
	Sample Date:	**01/10/2022**	**01/10/2022**	**01/10/2022**	**01/10/2022**
	Depth:	**0-0.5 ft BGS**	**0-0.5 ft BGS**	**0-0.5 ft BGS**	**0-0.5 ft BGS**
			Duplicate		
Parameters	**Unit**				
Polychlorinated Dibenzodioxins (PCDDs) & Polychlorinated Dibenzofurans (PCDFs)					
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg	89.7	99.2	83.7	71.5
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg	428	527	31.8 J	50 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg	52.9	62.1	12 J	15.9 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg	853	953	40.1	9.64 J
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg	32	30.8	25 U	25 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg	7.77 J	8.2 J	25 U	25 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg	776	800	15.5 J	25 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg	16.6 J	19.1 J	25 U	25 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg	201	252	11.4 J	25 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg	12.3 J	11.2 J	25 U	25 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg	25 U	25 U	25 U	25 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg	16.5 J	18 J	25 U	25 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg	115	144	25 U	25 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg	37.4	38.5	25 U	25 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg	160	164	4.08 J	25 U
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg	8.82 J	9 J	5 U	5 U
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg	28.3	31.9	5.1 U	5 U
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg	95.7 J	107 J	25.7 J	37.6 J
Total heptachlorodibenzofuran (HpCDF)	pg	1010 J	1120 J	48.1 J	18.3 J
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg	200 J	211 J	25 U	25 U
Total hexachlorodibenzofuran (HxCDF)	pg	1950 J	2070 J	69.3 J	14.8 J
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg	275 J	279 J	25 U	25 U
Total pentachlorodibenzofuran (PeCDF)	pg	2470 J	2880 J	288 J	118 J
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg	540 J	512 J	5 U	5 U
Total tetrachlorodibenzofuran (TCDF)	pg	1700 J	2110 J	101 J	65.7 J

Notes:

U	- Not detected at the associated reporting limit
J	- Estimated concentration
J+	- Estimated concentration, result may be biased high
ft BGS	- Feet below ground surface

Table 3

Analytical Methods
Durez Inlet Aquatic Assessment
North Tonawanda, New York
December 2021 through January 2022

Parameter	Method	Matrix	Preservation	Holding Time	
				Collection to Extraction (Days)	Extraction to Analysis (Days)
PCDDs/PCDFs	EPA 1613B	Soil	Iced, 0-6° C	365	365

Notes:

EPA - Environmental Protection Agency Office of Water
PCDDs - Polychlorinated Dibenzodioxins
PCDFs - Polychlorinated Dibenzofurans

Table 4

Qualified Sample Data Due to Outlying Surrogate Ion Abundance Ratios
Durez Inlet Aquatic Assessment
North Tonawanda, New York
December 2021 through January 2022

Parameter	Sample ID	Surrogate	Surrogate IAR	Control Limits IAR	Analyte	Qualified Result	Units
Dioxin/Furan	FPC-HRC-01-17	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD) C13	1.10	0.76 - 1.02	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	38600 J	pg/g
		1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF) C13	0.66	0.37 - 0.51	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	282000 J	pg/g
		1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD) C13	1.83	1.32 - 1.78	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	555 J	pg/g
		2,3,7,8-Tetrachlorodibenzofuran (TCDF) C13	0.90	0.65 - 0.89	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	827 J	pg/g
	FPC-HRC-01-14	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF) C13	0.59	0.37 - 0.51	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	73000 J	pg/g
	FPC-HRC-01-17-DUP	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF) C13	0.56	0.37 - 0.51	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	264000 J	pg/g
		1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF) C13	0.52	0.37 - 0.51	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	12600 J	pg/g
		1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD) C13	1.86	1.32 - 1.78	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	460 J	pg/g
		2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) 13C	0.60	0.65 - 0.89	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	191 J	pg/g
	FPC-HRC-02-14	13C-OCDF	1.09	0.76 - 1.02	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	102000 J	pg/g
		1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF) C13	0.53	0.37 - 0.51	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	47900 J	pg/g
		1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD) C13	1.59	1.05 - 1.43	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	195 J	pg/g
		1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF) C13	0.60	0.43 - 0.59	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	3130 J	pg/g
		2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF) C13	0.60	0.43 - 0.59	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	970 J	pg/g
	PCA-HRC-01-09	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF) C13	0.53	0.37 - 0.51	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	54200 J	pg/g
	PCA-HRC-02-09	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF) C13	0.60	0.43 - 0.59	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	1640 J	pg/g
	PCA-HRC-03-09	13C-OCDF	1.09	0.76 - 1.02	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	114000 J	pg/g
		1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD) C13	1.29	0.88 - 1.20	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	4130 J	pg/g
		1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF) C13	0.61	0.43 - 0.59	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	4290 J	pg/g
		1,2,3,7,8-Pentachlorodibenzofuran (PeCDF) C13	1.92	1.32 - 1.78	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	1020 J	pg/g
		2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) 13C	0.96	0.65 - 0.89	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	173 J	pg/g
		2,3,7,8-Tetrachlorodibenzofuran (TCDF) C13	0.94	0.65 - 0.89	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	375 J	pg/g

Notes:

J - Estimated concentration
IAR - Ion abundance ratio

Table 5

Qualified Sample Results Due to Outlying Identification Criteria
Durez Inlet Aquatic Assessment
North Tonawanda, New York
December 2021 through January 2022

Parameter	Sample ID	Analyte	Qualified Result		Units
Dioxin/Furan	FPC-HRC-02-13	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	6.23	J	pg/g
	PCA-HRC-03-12	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	98.9	J	pg/g
	PCA-HRC-03-13	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	50.9	J	pg/g
	PCA-HRC-03-15	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	264	J	pg/g
	PCA-HRC-03-17	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	201	J	pg/g
	PCA-HRC-03-17	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	158	J	pg/g
	URA-PWG-01	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	15.9	J	pg
	UPC-PWG-01	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	11.4	J	pg
	UPC-PWG-01	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	4.08	J	pg
	PCA-PWG-03	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	16.6	J	pg
	PCA-PWG-03	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	8.82	J	pg
	PCA-PWG-02	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	8.62	J	pg
	PCA-PWG-02	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	14.3	J	pg
	PCA-PWG-03-DUP04	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	9	J	pg
	PCA-PWG-01	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	7.9	J	pg
	PCA-PWG-01	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	7.93	J	pg
	FPC-PWG-01	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	7.62	J	pg
	FPC-PWG-01	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	3.3	J	pg
	FPC-PWG-01	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	4.31	J	pg
	FPC-PWG-01	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	11	J	pg
	FPC-PWG-02	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	85.1	J	pg
	FPC-PWG-02	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	5.48	J	pg
	FPC-PWG-02	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	7.34	J	pg

Notes:

J - Estimated concentration

Table 6

Qualified Sample Results Due to Poor Resolution
Durez Inlet Aquatic Assessment
North Tonawanda, New York
December 2021 through January 2022

Parameter	Sample ID	Analyte	Qualified Result		Units
Dioxin/Furan	FPC-HRC-01-10	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	458	J+	pg/g
	FPC-HRC-02-14	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	1590	J+	pg/g
	FPC-HRC-02-15	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	1100	J+	pg/g
	FPC-HRC-02-16	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	650	J+	pg/g
	FPC-HRC-02-17	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	24.5	J+	pg/g
	FPC-HRC-02-17-DUP	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	34.1	J+	pg/g
	PCA-HRC-01-09	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	1730	J+	pg/g
	PCA-HRC-03-09	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	2570	J+	pg/g
	PCA-HRC-02-09	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	2920	J+	pg/g
	PCA-HRC-02-10	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	3720	J+	pg/g
	PCA-HRC-03-12	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	3510	J+	pg/g
	PCA-HRC-03-13	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	3730	J+	pg/g
	PCA-HRC-03-16	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	15000	J+	pg/g
	PCA-HRC-03-17	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	2280	J+	pg/g
	PCA-PWG-02	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	239	J+	pg

Notes:

J+ - Estimated concentration, result may be biased high

Table 7

Qualified Sample Data Due to Exceedance of Calibration Range
Durez Inlet Aquatic Assessment
North Tonawanda, New York
December 2021 through January 2022

Parameter	Sample ID	Analyte	Qualified Result		Units
Dioxin/Furan	FPC-HRC-01-09	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	25400	J	pg/g
	FPC-HRC-01-09	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	13900	J	pg/g
	FPC-HRC-01-10	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	28500	J	pg/g
	FPC-HRC-01-10	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	15500	J	pg/g
	FPC-HRC-01-11	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	31800	J	pg/g
	FPC-HRC-01-11	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	17900	J	pg/g
	FPC-HRC-01-11	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	5180	J	pg/g
	FPC-HRC-01-12	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	48700	J	pg/g
	FPC-HRC-01-12	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	26700	J	pg/g
	FPC-HRC-01-12	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	7640	J	pg/g
	FPC-HRC-01-13	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	59700	J	pg/g
	FPC-HRC-01-13	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	32100	J	pg/g
	FPC-HRC-01-13	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	9530	J	pg/g
	FPC-HRC-01-14	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	9950	J	pg/g
	FPC-HRC-01-14	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	120000	J	pg/g
	FPC-HRC-01-14	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	73000	J	pg/g
	FPC-HRC-01-14	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	19800	J	pg/g
	FPC-HRC-01-15	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	12600	J	pg/g
	FPC-HRC-01-15	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	85300	J	pg/g
	FPC-HRC-01-15	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	53000	J	pg/g
	FPC-HRC-01-15	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	14700	J	pg/g
	FPC-HRC-01-16	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	72900	J	pg/g
	FPC-HRC-01-16	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	43400	J	pg/g
	FPC-HRC-01-16	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	12900	J	pg/g
	FPC-HRC-01-17	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	38600	J	pg/g
	FPC-HRC-01-17	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	487000	J	pg/g
	FPC-HRC-01-17	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	9540	J	pg/g
	FPC-HRC-01-17	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	282000	J	pg/g
	FPC-HRC-01-17	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	13100	J	pg/g

Table 7

Qualified Sample Data Due to Exceedance of Calibration Range
Durez Inlet Aquatic Assessment
North Tonawanda, New York
December 2021 through January 2022

Parameter	Sample ID	Analyte	Qualified Result	Units
Dioxin/Furan	FPC-HRC-01-17	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	90900 J	pg/g
	FPC-HRC-01-17	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	16700 J	pg/g
	FPC-HRC-01-17	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	5980 J	pg/g
	FPC-HRC-01-17	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	11400 J	pg/g
	FPC-HRC-01-17-DUP	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	28600 J	pg/g
	FPC-HRC-01-17-DUP	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	495000 J	pg/g
	FPC-HRC-01-17-DUP	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	7650 J	pg/g
	FPC-HRC-01-17-DUP	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	264000 J	pg/g
	FPC-HRC-01-17-DUP	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	12600 J	pg/g
	FPC-HRC-01-17-DUP	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	84600 J	pg/g
	FPC-HRC-01-17-DUP	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	15500 J	pg/g
	FPC-HRC-01-17-DUP	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	6400 J	pg/g
	FPC-HRC-01-17-DUP	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	10700 J	pg/g
	FPC-HRC-02-09	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	37600 J	pg/g
	FPC-HRC-02-09	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	23500 J	pg/g
	FPC-HRC-02-09	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	6480 J	pg/g
	FPC-HRC-02-10	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	10400 J	pg/g
	FPC-HRC-02-10	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	6330 J	pg/g
	FPC-HRC-02-12	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	14600 J	pg/g
	FPC-HRC-02-12	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	8200 J	pg/g
	FPC-HRC-02-13	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	23000 J	pg/g
	FPC-HRC-02-13	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	13000 J	pg/g
	FPC-HRC-02-14	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	102000 J	pg/g
	FPC-HRC-02-14	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	47900 J	pg/g
	FPC-HRC-02-14	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	14900 J	pg/g
	FPC-HRC-02-15	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	53600 J	pg/g
	FPC-HRC-02-15	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	28000 J	pg/g
	FPC-HRC-02-15	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	9160 J	pg/g
	FPC-HRC-02-16	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	34600 J	pg/g

Table 7

Qualified Sample Data Due to Exceedance of Calibration Range
Durez Inlet Aquatic Assessment
North Tonawanda, New York
December 2021 through January 2022

Parameter	Sample ID	Analyte	Qualified Result	Units
Dioxin/Furan	FPC-HRC-02-16	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	23500 J	pg/g
	FPC-HRC-02-16	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	6970 J	pg/g
	PCA-HRC-01-09	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	101000 J	pg/g
	PCA-HRC-01-09	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	54200 J	pg/g
	PCA-HRC-01-09	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	16900 J	pg/g
	PCA-HRC-03-09	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	12700 J	pg/g
	PCA-HRC-03-09	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	114000 J	pg/g
	PCA-HRC-03-09	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	68600 J	pg/g
	PCA-HRC-03-09	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	21200 J	pg/g
	PCA-HRC-01-10	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	555000 J	pg/g
	PCA-HRC-01-10	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	350000 J	pg/g
	PCA-HRC-02-10	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	123000 J	pg/g
	PCA-HRC-03-10	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	124000 J	pg/g
	PCA-HRC-03-12	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	127000 J	pg/g
	PCA-HRC-03-13	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	129000 J	pg/g
	PCA-HRC-03-14	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	140000 J	pg/g
	PCA-HRC-03-16	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	564000 J	pg/g
	PCA-HRC-03-16	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	473000 J	pg/g
	PCA-HRC-03-16	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	128000 J	pg/g

Notes:

J - Estimated concentration

Appendix C-3
Data Validation Report

Total Organic Carbon and Soot Analyses

October through December 2021

Technical Memorandum

February 21, 2022

To	Clint Babcock; Mike Werth	**Tel**	612-524-6872
Copy to	Paul McMahon	**Email**	Ruth.Mickle@ghd.com
From	Ruth Mickle/ro/21-NF	**Ref. No.**	11223794
Subject	**Analytical Results and Validation - Total Organic Carbon and Soot Analyses** **Durez Inlet Aquatic Assessment** **North Tonawanda, New York** **October through December 2021**		

1. Introduction

This document details a validation of analytical results for sediment samples collected in support of the Durez Inlet Aquatic Assessment at the North Tonawanda, New York Site from October through December 2021. Samples were submitted to Alpha Analytical located in Mansfield, Massachusetts. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Table 2. A summary of the analytical methodology is presented in Table 3.

Full Contract Laboratory Program (CLP) equivalent raw data deliverables were provided by the laboratory. The sample delivery groups covered in the report are identified in Table 1. Evaluation of the data was based on information obtained from the finished data sheets, raw data, chain of custody forms, calibration data, blank data, duplicate data, recovery data from matrix spikes spikes/laboratory control samples (LCS), and field Quality Assurance/Quality Control (QA/QC) samples. The assessment of analytical and in-house data included checks for: data consistency (by observing comparability of duplicate analyses), adherence to accuracy and precision criteria, and transmittal errors.

The QA/QC criteria by which these data have been assessed are outlined in the analytical method referenced in Table 3 and applicable guidance from the document entitled:

i) "National Functional Guidelines for Inorganic Superfund Methods Data Review", EPA 542-R-20-006, November 2020

Item i) will subsequently be referred to as the "Guidelines" in this Memorandum.

2. Sample Holding Time and Preservation

Samples were stored frozen at the time of sample receipt. The sample holding time criteria for the analyses are summarized in Table 3. Sample chain of custody documents and analytical reports were used to determine sample holding times. All samples were prepared and analyzed within the required holding times.

All samples were properly preserved, delivered on ice, and stored by the laboratory at the required temperature (4+/-2°C). Samples were then frozen until ready to analyze. They were defrosted and analyzed within the method holding times.

3. Initial Calibration – Inorganic Analyses

Initial calibration of the instruments ensures that they are capable of producing satisfactory quantitative data at the beginning of a series of analyses. For soot and total organic carbon analyses, calibration blanks and multiple standards must be analyzed to establish K factors and resulting three K-factors must be within +/-0.15 % for carbon.

After the analyses of the calibration curves, an initial calibration verification (ICV) standard must reproduce from the mean value within +/- 0.15%.

Upon review of the data, it was determined that the calibration curves and ICVs were analyzed at the proper frequencies and that all of the above-specified criteria were met. The laboratory effectively demonstrated that the instrumentation used for TOC and soot analyses were properly calibrated prior to sample analysis.

4. Continuing Calibration - Inorganic Analyses

To ensure that instrument calibration is acceptable throughout the sample analysis period, continuing calibration verification (CCV) standards are analyzed at a minimum of every 10 burns. Each CCV is deemed acceptable if all analyte recoveries are within 80-120% of the true value. If some of the CCV analyte recoveries are outside the control limits, samples analyzed before and after the CCV, up until the previous and proceeding CCV analyses, are affected.

For this study, CCVs were analyzed at the proper frequency. All analyte recoveries reported for the CCVs were within the specified limits.

5. Laboratory Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures. Additionally, initial and continuing calibration blanks (ICBs/CCBs) are routinely analyzed after each ICV/CCV for the target parameters.

For this study, laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

The ICBs, CCBs, and method blank results were either non-detect or yielded a detection that did not require qualification, indicating that laboratory contamination was not a factor for this investigation.

6. Laboratory Control Sample Analyses

LCS are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects.

For this study, LCS were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

The LCS contained all analytes of interest. LCS recoveries were assessed per the laboratory SOP. All LCS recoveries were within the control limits, demonstrating acceptable analytical accuracy.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

To evaluate the effects of sample matrices on the preparation process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as MS/MSD samples. The relative percent difference (RPD) between the MS and MSD is used to assess analytical precision. If the original sample concentration is significantly greater than the spike concentration, the recovery is not assessed. The laboratory performed site-specific MS/MSD analyses internally.

The MS/MSD or MS samples were spiked with the analytes of interest. In several instances, the spike recoveries and/or RPD data were outside control limits. Sample matrix interference and/or non-homogeneity are suspected since the associated laboratory control sample (LCS) recovery data were within acceptance limits. The associated sample results were qualified estimated, as noted in Table 4.

8. Duplicate Sample Analyses – Inorganic Analyses

Analytical precision is evaluated based on the analysis of laboratory duplicate samples. For this study, duplicate samples were prepared and analyzed for soot and TOC.

Duplicate analyses performed were acceptable, demonstrating acceptable analytical precision based on RPD averages.

9. Field QA/QC Samples

The field QA/QC consisted of seven field duplicate sample sets.

9.1 Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, seven field duplicate samples were collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with these duplicate samples must be less than 100 percent for sediment samples. If the reported concentration in either the investigative sample or its duplicate is less than five times the reporting limit (RL), the evaluation criteria is two times the RL value.

Most of the field duplicate results were within acceptable agreement, demonstrating acceptable sampling and analytical precision. Table 5 presents outlying soot average data from one field duplicate set. The associated sample results were qualified estimated, as noted in the table.

10. Analyte Reporting

The laboratory reported detected results down to the laboratory's reporting limit (RL) for each analyte.

All sample results were reported on a dry weight basis. Sediment samples have high moisture contents which can lead to analytical variability.

11. Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable with the qualifications noted herein.

Regards

Ruth Mickle
Data Management - Data Validator

Table 1

Sample Collection and Analysis Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
October through December 2021

Sample Delivery Group	Sample Identification	Location	Matrix	Initial Sample Depth (ft. bgs.)	Final Sample Depth (ft. bgs.)	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters SOOT	TOC	Comments
L2157385	FPC-HRC-02-01	FPC-HRC-02	Sediment	0	0.07	10/19/2021	09:45	X	X	
	FPC-HRC-02-02	FPC-HRC-02	Sediment	0.07	0.13	10/19/2021	10:00	X	X	
	FPC-HRC-02-03	FPC-HRC-02	Sediment	0.13	0.2	10/19/2021	10:10	X	X	
	FPC-HRC-02-04	FPC-HRC-02	Sediment	0.2	0.26	10/19/2021	10:17	X	X	
	FPC-HRC-02-05	FPC-HRC-02	Sediment	0.26	0.33	10/19/2021	10:30	X	X	
	FPC-HRC-02-06	FPC-HRC-02	Sediment	0.33	0.39	10/19/2021	10:55	X	X	
	FPC-HRC-02-07	FPC-HRC-02	Sediment	0.39	0.46	10/19/2021	11:05	X	X	
	FPC-HRC-02-08	FPC-HRC-02	Sediment	0.46	0.52	10/19/2021	11:11	X	X	
	FPC-HRC-01-01	FPC-HRC-01	Sediment	0	0.07	10/19/2021	11:27	X	X	
	FPC-HRC-01-02	FPC-HRC-01	Sediment	0.07	0.13	10/19/2021	11:45	X	X	
	FPC-HRC-01-03	FPC-HRC-01	Sediment	0.13	0.2	10/19/2021	11:54	X	X	
	FPC-HRC-01-04	FPC-HRC-01	Sediment	0.2	0.26	10/19/2021	12:00	X	X	
	FPC-HRC-01-05	FPC-HRC-01	Sediment	0.26	0.33	10/19/2021	12:10	X	X	
	FPC-HRC-01-06	FPC-HRC-01	Sediment	0.33	0.39	10/19/2021	12:20	X	X	
	FPC-HRC-01-07	FPC-HRC-01	Sediment	0.39	0.46	10/19/2021	12:25	X	X	
	FPC-HRC-01-08	FPC-HRC-01	Sediment	0.46	0.52	10/19/2021	12:34	X	X	
	FPC-HRC-01-05-DUP01	FPC-HRC-02	Sediment	0.26	0.33	10/19/2021	10:30	X	X	FD(FPC-HRC-02-05)
L2157860	BPF-SCC-01	BPF-SCC-01	Sediment	0	0.5	10/20/2021	10:00	X	X	
	BPF-SCC-01-DUP02	BPF-SCC-01	Sediment	0	0.5	10/20/2021	10:00	X	X	FD (BPF-SCC-01)
	DFP-SCC-02-01	DFP-SCC-02	Sediment	0	0.5	10/20/2021	12:30	X	X	
	DFP-SCC-02-02	DFP-SCC-02	Sediment	0.5	1	10/20/2021	12:30	X	X	
	DFP-SCC-02-03	DFP-SCC-02	Sediment	1	2	10/20/2021	12:30	X	X	
	DFP-SCC-01-01	BPF-SCC-01	Sediment	0	0.5	10/20/2021	13:30	X	X	
	DFP-SCC-01-02	BPF-SCC-01	Sediment	0.5	1	10/20/2021	13:30	X	X	
	DFP-SCC-01-03	BPF-SCC-01	Sediment	1	2	10/20/2021	13:30	X	X	
	URA-SCC-02-01	URA-SCC-02	Sediment	0	0.5	10/20/2021	15:00	X	X	
	URA-SCC-02-02	URA-SCC-02	Sediment	0.5	1	10/20/2021	15:00	X	X	

Table 1

Sample Collection and Analysis Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
October through December 2021

Sample Delivery Group	Sample Identification	Location	Matrix	Initial Sample Depth (ft. bgs.)	Final Sample Depth (ft. bgs.)	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters SOOT	TOC	Comments
L2157860 (Continued)	URA-SCC-02-03	URA-SCC-02	Sediment	1	2	10/20/2021	15:00	X	X	
	URA-SCC-01-01	URA-SCC-01	Sediment	0	0.5	10/21/2021	08:00	X	X	
	URA-SCC-01-02	URA-SCC-01	Sediment	0.5	1	10/21/2021	08:00	X	X	
	URA-SCC-01-03	URA-SCC-01	Sediment	1	2	10/21/2021	08:00	X	X	
	URA-SCC-01-03-DUP03	URA-SCC-01	Sediment	1	2	10/21/2021	08:00	X	X	FD (URA-SCC-01-03)
	PCA-HRC-03-01	PCA-HRC-03	Sediment	0	0.07	10/21/2021	09:20	X	X	
	PCA-HRC-03-02	PCA-HRC-03	Sediment	0.07	0.13	10/21/2021	09:20	X	X	
	PCA-HRC-03-03	PCA-HRC-03	Sediment	0.13	0.2	10/21/2021	09:20	X	X	
	PCA-HRC-03-04	PCA-HRC-03	Sediment	0.2	0.26	10/21/2021	09:20	X	X	
	PCA-HRC-03-05	PCA-HRC-03	Sediment	0.26	0.33	10/21/2021	09:20	X	X	
	PCA-HRC-03-06	PCA-HRC-03	Sediment	0.33	0.39	10/21/2021	09:20	X	X	
	PCA-HRC-03-07	PCA-HRC-03	Sediment	0.39	0.46	10/21/2021	09:20	X	X	
	PCA-HRC-03-08	PCA-HRC-03	Sediment	0.46	0.52	10/21/2021	09:20	X	X	
	PCA-HRC-02-01	PCA-HRC-02	Sediment	0	0.07	10/21/2021	10:15	X	X	
	PCA-HRC-02-02	PCA-HRC-02	Sediment	0.07	0.13	10/21/2021	10:15	X	X	
	PCA-HRC-02-03	PCA-HRC-02	Sediment	0.13	0.2	10/21/2021	10:15	X	X	
	PCA-HRC-02-04	PCA-HRC-02	Sediment	0.2	0.26	10/21/2021	10:15	X	X	
	PCA-HRC-02-05	PCA-HRC-02	Sediment	0.26	0.33	10/21/2021	10:15	X	X	
	PCA-HRC-02-06	PCA-HRC-02	Sediment	0.33	0.39	10/21/2021	10:15	X	X	
	PCA-HRC-02-07	PCA-HRC-02	Sediment	0.39	0.46	10/21/2021	10:15	X	X	
	PCA-HRC-02-08	PCA-HRC-02	Sediment	0.46	0.52	10/21/2021	10:15	X	X	
	PCF-03	PCF-03	Sediment	0	0.25	10/21/2021	10:30	X	X	
	PCA-HRC-01-01	PCA-HRC-01	Sediment	0	0.07	10/21/2021	11:30	X	X	
	PCA-HRC-01-02	PCA-HRC-01	Sediment	0.07	0.13	10/21/2021	11:30	X	X	
	PCA-HRC-01-03	PCA-HRC-01	Sediment	0.13	0.2	10/21/2021	11:30	X	X	
	PCA-HRC-01-04	PCA-HRC-01	Sediment	0.2	0.26	10/21/2021	11:30	X	X	
	PCA-HRC-01-05	PCA-HRC-01	Sediment	0.26	0.33	10/21/2021	11:30	X	X	
	PCA-HRC-01-06	PCA-HRC-01	Sediment	0.33	0.39	10/21/2021	11:30	X	X	
	PCA-HRC-01-07	PCA-HRC-01	Sediment	0.39	0.46	10/21/2021	11:30	X	X	
	PCA-HRC-01-08	PCA-HRC-01	Sediment	0.46	0.52	10/21/2021	11:30	X	X	
	PCF-01	PCF-01	Sediment	0	0.25	10/21/2021	12:40	X	X	
	PCF-02	PCF-02	Sediment	0	0.25	10/21/2021	12:50	X	X	
	PCF-04	PCF-04	Sediment	0	0.25	10/21/2021	13:15	X	X	

Table 1

Sample Collection and Analysis Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
October through December 2021

Sample Delivery Group	Sample Identification	Location	Matrix	Initial Sample Depth (ft. bgs.)	Final Sample Depth (ft. bgs.)	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters SOOT	TOC	Comments
L2160599	URA-PWG-01	URA-PWG-01	Sediment	0	0.5	11/03/2021	12:00	X	X	
	UPC-PWG-01	UPC-PWG-01	Sediment	0	0.5	11/03/2021	12:15	X	X	
	PCA-PWG-03	PCA-PWG-03	Sediment	0	0.5	11/03/2021	12:30	X	X	
	PCA-PWG-02	PCA-PWG-02	Sediment	0	0.5	11/03/2021	13:00	X	X	
	PCA-PWG-03-DUP04	PCA-PWG-03	Sediment	0	0.5	11/03/2021	13:30	X	X	FD (PCA-PWG-03)
	PCA-PWG-01	PCA-PWG-01	Sediment	0	0.5	11/03/2021	14:00	X	X	
	FPC-PWG-01	FPC-PWG-01	Sediment	0	0.5	11/03/2021	14:30	X	X	
	FPC-PWG-02	FPC-PWG-02	Sediment	0	0.5	11/03/2021	15:00	X	X	
L2168731	FPC-HRC-01-09	FPC-HRC-01	Sediment	0.52	0.59	12/13/2021	08:30	X	X	
	FPC-HRC-01-10	FPC-HRC-01	Sediment	0.59	0.66	12/13/2021	08:30	X	X	
	FPC-HRC-01-11	FPC-HRC-01	Sediment	0.66	0.72	12/13/2021	08:30	X	X	
	FPC-HRC-01-12	FPC-HRC-01	Sediment	0.72	0.79	12/13/2021	08:30	X	X	
	FPC-HRC-01-13	FPC-HRC-01	Sediment	0.79	0.85	12/13/2021	08:30	X	X	
	FPC-HRC-01-14	FPC-HRC-01	Sediment	0.85	0.92	12/13/2021	08:30	X	X	
	FPC-HRC-01-15	FPC-HRC-01	Sediment	0.92	0.98	12/13/2021	08:30	X	X	
	FPC-HRC-01-16	FPC-HRC-01	Sediment	0.98	1.05	12/13/2021	08:30	X	X	
	FPC-HRC-01-17	FPC-HRC-01	Sediment	1.05	1.12	12/13/2021	08:30	X	X	
	FPC-HRC-01-17-DUP	FPC-HRC-01	Sediment	1.05	1.12	12/13/2021	08:30	X	X	FD (FPC-HRC-01-17)
	FPC-HRC-02-09	FPC-HRC-02	Sediment	0.52	0.59	12/13/2021	10:00	X	X	
	FPC-HRC-02-10	FPC-HRC-02	Sediment	0.59	0.66	12/13/2021	10:00	X	X	
	FPC-HRC-02-11	FPC-HRC-02	Sediment	0.66	0.72	12/13/2021	10:00	X	X	
	FPC-HRC-02-12	FPC-HRC-02	Sediment	0.72	0.79	12/13/2021	10:00	X	X	
	FPC-HRC-02-13	FPC-HRC-02	Sediment	0.79	0.85	12/13/2021	10:00	X	X	
	FPC-HRC-02-14	FPC-HRC-02	Sediment	0.85	0.92	12/13/2021	10:00	X	X	
	FPC-HRC-02-15	FPC-HRC-02	Sediment	0.92	0.98	12/13/2021	10:00	X	X	
	FPC-HRC-02-16	FPC-HRC-02	Sediment	0.98	1.05	12/13/2021	10:00	X	X	
	FPC-HRC-02-17	FPC-HRC-02	Sediment	1.05	1.12	12/13/2021	10:00	X	X	
	FPC-HRC-02-17-DUP	FPC-HRC-02	Sediment	1.05	1.12	12/13/2021	10:00	X	X	FD (FPC-HRC-02-17)
	PCA-HRC-01-09	PCA-HRC-01	Sediment	0.52	1.05	12/13/2021	11:00	X	X	
	PCA-HRC-01-10	PCA-HRC-01	Sediment	1.05	1.28	12/13/2021	11:00	X	X	
	PCA-HRC-01-09-DUP	PCA-HRC-01	Sediment	0.52	1.05	12/13/2021	11:00	X	X	FD (PCA-HRC-01-09)

Table 1

Sample Collection and Analysis Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
October through December 2021

Sample Delivery Group	Sample Identification	Location	Matrix	Initial Sample Depth (ft. bgs.)	Final Sample Depth (ft. bgs.)	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters SOOT	TOC	Comments
L2168731 (Continued)	PCA-HRC-02-09	PCA-HRC-02	Sediment	0.52	1.05	12/13/2021	11:30	X	X	
	PCA-HRC-02-10	PCA-HRC-02	Sediment	1.05	1.28	12/13/2021	11:30	X	X	
	PCA-HRC-03-09	PCA-HRC-03	Sediment	0.52	0.59	12/13/2021	12:30	X	X	
	PCA-HRC-03-10	PCA-HRC-03	Sediment	0.59	0.66	12/13/2021	12:30	X	X	
	PCA-HRC-03-11	PCA-HRC-03	Sediment	0.66	0.72	12/13/2021	12:30	X	X	
	PCA-HRC-03-12	PCA-HRC-03	Sediment	0.72	0.79	12/13/2021	12:30	X	X	
	PCA-HRC-03-13	PCA-HRC-03	Sediment	0.79	0.85	12/13/2021	12:30	X	X	
	PCA-HRC-03-14	PCA-HRC-03	Sediment	0.85	0.92	12/13/2021	12:30	X	X	
	PCA-HRC-03-15	PCA-HRC-03	Sediment	0.92	0.98	12/13/2021	12:30	X	X	
	PCA-HRC-03-16	PCA-HRC-03	Sediment	0.98	1.05	12/13/2021	12:30	X	X	
	PCA-HRC-03-17	PCA-HRC-03	Sediment	1.05	1.41	12/13/2021	12:30	X	X	

Notes:

ft. bgs. - Feet below ground surface
FD - Field duplicate of sample in parentheses

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
October through December 2021

Location ID:		**BPF-SCC-01**	**BPF-SCC-01**	**BPF-SCC-01**	**BPF-SCC-01**	**BPF-SCC-01**	**DFP-SCC-02**	**DFP-SCC-02**	**DFP-SCC-02**
Sample Name:		**DFP-SCC-01-02**	**DFP-SCC-01-03**	**DFP-SCC-01-01**	**BPF-SCC-01**	**BPF-SCC-01-DUP02**	**DFP-SCC-02-02**	**DFP-SCC-02-03**	**DFP-SCC-02-01**
Sample Date:		**10/20/2021**	**10/20/2021**	**10/20/2021**	**10/20/2021**	**10/20/2021**	**10/20/2021**	**10/20/2021**	**10/20/2021**
Depth:		**0.5-1 ft BGS**	**1-2 ft BGS**	**0-0.5 ft BGS**	**0-0.5 ft BGS**	**0-0.5 ft BGS Duplicate**	**0.5-1 ft BGS**	**1-2 ft BGS**	**0-0.5 ft BGS**
Parameters	**Unit**								
General Chemistry									
% Soot (Average)	%	1.72	0.818	1.65	0.249	0.270	1.12	1.41	1.12
% Soot (Rep 1)	%	1.72	0.860	1.38	0.287	0.311	1.04	1.34	1.00
% Soot (Rep 2)	%	1.71	0.776	1.92	0.211	0.230	1.21	1.48	1.23
TOC averages	%	5.84 J	5.24 J	5.26 J	2.60 J	2.66 J	4.65 J	6.07 J	3.90 J
Total organic carbon (TOC)	%	5.79 J	4.84 J	5.03 J	2.48 J	2.99 J	4.36 J	6.38 J	3.51 J
Total organic carbon (TOC) (2)	%	5.88 J	5.65 J	5.48 J	2.72 J	2.34 J	4.94 J	5.76 J	4.29 J
Total solids	%	65.9	59.4	48.8	53.1	52.4	69.5	65.8	60.2

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
October through December 2021

Location ID:		FPC-HRC-01	FPC-HRC-01	FPC-HRC-01	FPC-HRC-01	FPC-HRC-01	FPC-HRC-01	FPC-HRC-01	FPC-HRC-01
Sample Name:		FPC-HRC-01-03	FPC-HRC-01-04	FPC-HRC-01-05	FPC-HRC-01-06	FPC-HRC-01-07	FPC-HRC-01-08	FPC-HRC-01-01	FPC-HRC-01-02
Sample Date:		10/19/2021	10/19/2021	10/19/2021	10/19/2021	10/19/2021	10/19/2021	10/19/2021	10/19/2021
Depth:		0.13-0.2 ft BGS	0.2-0.26 ft BGS	0.26-0.33 ft BGS	0.33-0.39 ft BGS	0.39-0.46 ft BGS	0.46-0.52 ft BGS	0-0.07 ft BGS	0.07-0.13 ft BGS
Parameters	**Unit**								
General Chemistry									
% Soot (Average)	%	0.594 J	0.636 J	1.02 J	1.20 J	1.77 J	2.18 J	0.282 J	0.372 J
% Soot (Rep 1)	%	0.616 J	0.633 J	1.30 J	1.15 J	1.64 J	2.07 J	0.257 J	0.370 J
% Soot (Rep 2)	%	0.571 J	0.640 J	0.735 J	1.25 J	1.90 J	2.30 J	0.307 J	0.375 J
TOC averages	%	6.44 J	3.31 J	3.19 J	4.89 J	3.79 J	3.76 J	6.62 J	8.17 J
Total organic carbon (TOC)	%	6.76 J	2.94 J	3.45 J	4.79 J	3.49 J	3.68 J	6.89 J	7.04 J
Total organic carbon (TOC) (2)	%	6.12 J	3.68 J	2.92 J	5.00 J	4.10 J	3.84 J	6.35 J	9.30 J
Total solids	%	35.2	54.0	55.4	52.0	51.9	61.5	25.3	30.6

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
October through December 2021

	Location ID:	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**
	Sample Name:	**FPC-HRC-01-09**	**FPC-HRC-01-10**	**FPC-HRC-01-11**	**FPC-HRC-01-12**	**FPC-HRC-01-13**	**FPC-HRC-01-14**	**FPC-HRC-01-15**
	Sample Date:	**12/13/2021**	**12/13/2021**	**12/13/2021**	**12/13/2021**	**12/13/2021**	**12/13/2021**	**12/13/2021**
	Depth:	**0.52-0.59 ft BGS**	**0.59-0.66 ft BGS**	**0.66-0.72 ft BGS**	**0.72-0.79 ft BGS**	**0.79-0.85 ft BGS**	**0.85-0.92 ft BGS**	**0.92-0.98 ft BGS**
Parameters	**Unit**							
General Chemistry								
% Soot (Average)	%	1.41	0.989	0.684	0.596	0.490	1.10	0.940
% Soot (Rep 1)	%	1.29	1.06	0.535	0.724	0.416	1.13	0.835
% Soot (Rep 2)	%	1.54	0.922	0.832	0.467	0.563	1.06	1.04
TOC averages	%	3.45	3.36	3.12	3.35	2.79	2.51	3.45
Total organic carbon (TOC)	%	3.49	3.82	3.17	3.33	2.87	2.42	3.22
Total organic carbon (TOC) (2)	%	3.42	2.91	3.07	3.38	2.72	2.60	3.67
Total solids	%	56.6	61.2	67.7	58.6	64.0	69.8	63.9

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
October through December 2021

Location ID:		FPC-HRC-01	FPC-HRC-01	FPC-HRC-01	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02
Sample Name:		FPC-HRC-01-16	FPC-HRC-01-17	FPC-HRC-01-17-DUP	FPC-HRC-02-03	FPC-HRC-02-04	FPC-HRC-02-05	FPC-HRC-01-05-DUP01
Sample Date:		12/13/2021	12/13/2021	12/13/2021	10/19/2021	10/19/2021	10/19/2021	10/19/2021
Depth:		0.98-1.05 ft BGS	1.05-1.12 ft BGS	1.05-1.12 ft BGS Duplicate	0.13-0.2 ft BGS	0.2-0.26 ft BGS	0.26-0.33 ft BGS	0.26-0.33 ft BGS Duplicate
Parameters	**Unit**							
General Chemistry								
% Soot (Average)	%	0.402	1.52	1.25	0.462 J	0.274 J	0.304 J	0.590 J
% Soot (Rep 1)	%	0.429	1.46	1.38	0.477 J	0.132 J	0.235 J	0.818 J
% Soot (Rep 2)	%	0.375	1.57	1.12	0.446 J	0.416 J	0.372 J	0.361 J
TOC averages	%	1.64	4.87	5.40	1.48 J	1.70 J	2.74 J	2.02 J
Total organic carbon (TOC)	%	1.55	4.65	5.12	1.70 J	1.65 J	3.68 J	1.94 J
Total organic carbon (TOC) (2)	%	1.74	5.09	5.67	1.25 J	1.75 J	1.80 J	2.11 J
	%	75.1	54.6	53.2	68.9	68.5	73.1	73.9

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
October through December 2021

Location ID:		FPC-HRC-02	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02
Sample Name:		FPC-HRC-02-06	FPC-HRC-02-07	FPC-HRC-02-08	FPC-HRC-02-01	FPC-HRC-02-02	FPC-HRC-02-09	FPC-HRC-02-10
Sample Date:		10/19/2021	10/19/2021	10/19/2021	10/19/2021	10/19/2021	12/13/2021	12/13/2021
Depth:		0.33-0.39 ft BGS	0.39-0.46 ft BGS	0.46-0.52 ft BGS	0-0.07 ft BGS	0.07-0.13 ft BGS	0.52-0.59 ft BGS	0.59-0.66 ft BGS
Parameters	**Unit**							
General Chemistry								
% Soot (Average)	%	0.647 J	0.664 J	0.504 J	0.332 J	0.468 J	0.674	0.190
% Soot (Rep 1)	%	0.782 J	0.637 J	0.933 J	0.361 J	0.412 J	0.623	0.215
% Soot (Rep 2)	%	0.512 J	0.690 J	0.075 J	0.303 J	0.523 J	0.725	0.165
TOC averages	%	3.01 J	1.53 J	2.67 J	3.43 J	1.65 J	1.94	1.25
Total organic carbon (TOC)	%	2.89 J	1.57 J	2.58 J	3.72 J	1.78 J	1.81	1.36
Total organic carbon (TOC) (2)	%	3.14 J	1.50 J	2.76 J	3.14 J	1.53 J	2.07	1.14
Total solids	%	64.6	80.0	73.9	47.1	66.6	74.8	75.9

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
October through December 2021

Location ID:		FPC-HRC-02	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02	FPC-HRC-02
Sample Name:		FPC-HRC-02-11	FPC-HRC-02-12	FPC-HRC-02-13	FPC-HRC-02-14	FPC-HRC-02-15	FPC-HRC-02-16	FPC-HRC-02-17
Sample Date:		12/13/2021	12/13/2021	12/13/2021	12/13/2021	12/13/2021	12/13/2021	12/13/2021
Depth:		0.66-0.72 ft BGS	0.72-0.79 ft BGS	0.79-0.85 ft BGS	0.85-0.92 ft BGS	0.92-0.98 ft BGS	0.98-1.05 ft BGS	1.05-1.12 ft BGS
Parameters	**Unit**							
General Chemistry								
% Soot (Average)	%	0.736	1.11	0.760	1.09	0.582	0.356	0.164
% Soot (Rep 1)	%	0.420	1.16	0.814	1.22	0.580	0.367	0.139
% Soot (Rep 2)	%	1.05	1.06	0.706	0.959	0.583	0.346	0.188
TOC averages	%	1.62	2.71	2.57	3.36	1.88	1.76	1.30
Total organic carbon (TOC)	%	1.69	2.54	2.51	3.44	1.68	1.88	1.26
Total organic carbon (TOC) (2)	%	1.54	2.88	2.64	3.28	2.08	1.64	1.34
Total solids	%	76.4	74.4	72.5	68.3	75.9	78.4	78.8

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
October through December 2021

Location ID: Sample Name: Sample Date: Depth:		FPC-HRC-02 FPC-HRC-02-17-DUP 12/13/2021 1.05-1.12 ft BGS Duplicate	FPC-PWG-01 FPC-PWG-01 11/03/2021 0-0.5 ft BGS	FPC-PWG-02 FPC-PWG-02 11/03/2021 0-0.5 ft BGS	PCA-HRC-01 PCA-HRC-01-03 10/21/2021 0.13-0.2 ft BGS	PCA-HRC-01 PCA-HRC-01-04 10/21/2021 0.2-0.26 ft BGS	PCA-HRC-01 PCA-HRC-01-05 10/21/2021 0.26-0.33 ft BGS	PCA-HRC-01 PCA-HRC-01-06 10/21/2021 0.33-0.39 ft BGS	PCA-HRC-01 PCA-HRC-01-07 10/21/2021 0.39-0.46 ft BGS
Parameters	**Unit**								
General Chemistry									
% Soot (Average)	%	0.255	0.272 J	0.440 J	0.264	0.703	1.12	0.804	0.872
% Soot (Rep 1)	%	0.416	0.305 J	0.449 J	0.260	0.742	1.24	0.776	0.904
% Soot (Rep 2)	%	0.094	0.238 J	0.430 J	0.268	0.664	0.993	0.831	0.841
TOC averages	%	0.962	9.13 J	8.62 J	5.01 J	5.68 J	7.43 J	5.26 J	6.75 J
Total organic carbon (TOC)	%	0.932	9.78 J	8.91 J	4.99 J	5.70 J	8.16 J	5.30 J	6.37 J
Total organic carbon (TOC) (2)	%	0.993	8.48 J	8.34 J	5.03 J	5.65 J	6.69 J	5.23 J	7.13 J
Total solids	%	80.1	23.9	24.8	43.1	51.8	50.0	53.8	49.1

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
October through December 2021

Location ID:		**PCA-HRC-01**	**PCA-HRC-01**	**PCA-HRC-01**	**PCA-HRC-01**	**PCA-HRC-01**	**PCA-HRC-01**	**PCA-HRC-02**
Sample Name:		**PCA-HRC-01-08**	**PCA-HRC-01-01**	**PCA-HRC-01-02**	**PCA-HRC-01-09**	**PCA-HRC-01-09-DUP**	**PCA-HRC-01-10**	**PCA-HRC-02-03**
Sample Date:		**10/21/2021**	**10/21/2021**	**10/21/2021**	**12/13/2021**	**12/13/2021**	**12/13/2021**	**10/21/2021**
Depth:		**0.46-0.52 ft BGS**	**0-0.07 ft BGS**	**0.07-0.13 ft BGS**	**0.52-1.05 ft BGS**	**0.52-1.05 ft BGS Duplicate**	**1.05-1.28 ft BGS**	**0.13-0.2 ft BGS**
Parameters	**Unit**							
General Chemistry								
% Soot (Average)	%	0.527	1.72	0.377	2.23	2.02	1.73	3.34
% Soot (Rep 1)	%	0.550	1.77	0.392	2.18	1.98	1.74	3.06
% Soot (Rep 2)	%	0.504	1.67	0.362	2.28	2.06	1.72	3.62
TOC averages	%	7.24 J	12.4 J	6.66 J	7.83	8.78	6.34	9.26 J
Total organic carbon (TOC)	%	6.96 J	12.0 J	6.78 J	7.94	9.54	7.06	9.47 J
Total organic carbon (TOC) (2)	%	7.53 J	12.7 J	6.53 J	7.72	8.03	5.61	9.04 J
Total solids	%	44.6	34.1	40.5	53.7	49.3	48.1	48.6

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
October through December 2021

Location ID:		PCA-HRC-02	PCA-HRC-02	PCA-HRC-02	PCA-HRC-02	PCA-HRC-02	PCA-HRC-02	PCA-HRC-02
Sample Name:		PCA-HRC-02-04	PCA-HRC-02-05	PCA-HRC-02-06	PCA-HRC-02-07	PCA-HRC-02-08	PCA-HRC-02-01	PCA-HRC-02-02
Sample Date:		10/21/2021	10/21/2021	10/21/2021	10/21/2021	10/21/2021	10/21/2021	10/21/2021
Depth:		0.2-0.26 ft BGS	0.26-0.33 ft BGS	0.33-0.39 ft BGS	0.39-0.46 ft BGS	0.46-0.52 ft BGS	0-0.07 ft BGS	0.07-0.13 ft BGS
Parameters	**Unit**							
General Chemistry								
% Soot (Average)	%	2.81	3.35	2.12	2.56	1.27	1.30	1.53
% Soot (Rep 1)	%	3.11	4.12	2.18	2.65	1.34	1.48	1.41
% Soot (Rep 2)	%	2.51	2.57	2.05	2.47	1.20	1.13	1.65
TOC averages	%	9.92 J	10.3 J	15.3 J	10.4 J	10.3 J	12.5 J	9.42 J
Total organic carbon (TOC)	%	9.88 J	11.8 J	16.5 J	10.5 J	10.4 J	14.1 J	9.04 J
Total organic carbon (TOC) (2)	%	9.96 J	8.77 J	14.1 J	10.2 J	10.2 J	11.0 J	9.81 J
Total solids	%	38.3	36.0	41.8	42.9	37.2	38.0	35.2

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
October through December 2021

Location ID:		PCA-HRC-02	PCA-HRC-02	PCA-HRC-03	PCA-HRC-03	PCA-HRC-03	PCA-HRC-03	PCA-HRC-03
Sample Name:		PCA-HRC-02-09	PCA-HRC-02-10	PCA-HRC-03-03	PCA-HRC-03-04	PCA-HRC-03-05	PCA-HRC-03-06	PCA-HRC-03-07
Sample Date:		12/13/2021	12/13/2021	10/21/2021	10/21/2021	10/21/2021	10/21/2021	10/21/2021
Depth:		0.52-1.05 ft BGS	1.05-1.28 ft BGS	0.13-0.2 ft BGS	0.2-0.26 ft BGS	0.26-0.33 ft BGS	0.33-0.39 ft BGS	0.39-0.46 ft BGS
Parameters	**Unit**							
General Chemistry								
% Soot (Average)	%	3.42	2.59	2.77	2.92	1.94	2.74	1.85
% Soot (Rep 1)	%	3.52	2.55	2.53	2.86	1.69	2.92	1.72
% Soot (Rep 2)	%	3.34	2.63	3.00	2.97	2.19	2.55	1.97
TOC averages	%	11.2	11.6	12.1 J	12.6 J	14.2 J	15.9 J	14.8 J
Total organic carbon (TOC)	%	10.6	10.6	12.0 J	12.4 J	14.2 J	14.8 J	13.0 J
Total organic carbon (TOC) (2)	%	11.7	12.5	12.2 J	12.9 J	14.2 J	16.9 J	16.5 J
Total solids	%	51.6	43.9	36.8	34.5	32.5	34.8	33.4

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
October through December 2021

	Location ID:	PCA-HRC-03	PCA-HRC-03	PCA-HRC-03	PCA-HRC-03	PCA-HRC-03	PCA-HRC-03	PCA-HRC-03
	Sample Name:	PCA-HRC-03-08	PCA-HRC-03-01	PCA-HRC-03-02	PCA-HRC-03-09	PCA-HRC-03-10	PCA-HRC-03-11	PCA-HRC-03-12
	Sample Date:	10/21/2021	10/21/2021	10/21/2021	12/13/2021	12/13/2021	12/13/2021	12/13/2021
	Depth:	0.46-0.52 ft BGS	0-0.07 ft BGS	0.07-0.13 ft BGS	0.52-0.59 ft BGS	0.59-0.66 ft BGS	0.66-0.72 ft BGS	0.72-0.79 ft BGS
Parameters	**Unit**							
General Chemistry								
% Soot (Average)	%	1.53	1.08	2.38	3.17	3.40	3.71	3.22
% Soot (Rep 1)	%	1.54	1.13	2.16	2.98	3.47	3.63	3.14
% Soot (Rep 2)	%	1.52	1.02	2.60	3.36	3.33	3.78	3.31
TOC averages	%	12.7 J	17.4 J	14.7 J	13.1	13.0	12.6	12.4
Total organic carbon (TOC)	%	12.8 J	18.2 J	14.4 J	13.4	12.2	12.8	12.0
Total organic carbon (TOC) (2)	%	12.6 J	16.6 J	15.0 J	12.8	13.8	12.3	12.8
Total solids	%	34.0	23.2	29.8	45.8	48.2	43.5	41.9

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
October through December 2021

Location ID:		PCA-HRC-03	PCA-HRC-03	PCA-HRC-03	PCA-HRC-03	PCA-HRC-03	PCA-PWG-01	PCA-PWG-02	PCA-PWG-03
Sample Name:		PCA-HRC-03-13	PCA-HRC-03-14	PCA-HRC-03-15	PCA-HRC-03-16	PCA-HRC-03-17	PCA-PWG-01	PCA-PWG-02	PCA-PWG-03
Sample Date:		12/13/2021	12/13/2021	12/13/2021	12/13/2021	12/13/2021	11/03/2021	11/03/2021	11/03/2021
Depth:		0.79-0.85 ft BGS	0.85-0.92 ft BGS	0.92-0.98 ft BGS	0.98-1.05 ft BGS	1.05-1.41 ft BGS	0-0.5 ft BGS	0-0.5 ft BGS	0-0.5 ft BGS
Parameters	**Unit**								
General Chemistry									
% Soot (Average)	%	3.59	3.22	2.92	2.52	2.25	1.83 J	3.18 J	3.38 J
% Soot (Rep 1)	%	3.41	3.18	2.86	2.52	2.31	1.95 J	3.06 J	3.52 J
% Soot (Rep 2)	%	3.76	3.25	2.97	2.53	2.20	1.71 J	3.30 J	3.24 J
TOC averages	%	12.1	10.5	11.5	10.7	9.84	14.4 J	12.9 J	13.3 J
Total organic carbon (TOC)	%	12.9	10.5	11.9	10.7	10.2	13.4 J	13.8 J	14.0 J
Total organic carbon (TOC) (2)	%	11.3	10.5	11.1	10.7	9.44	15.4 J	11.9 J	12.5 J
Total solids	%	50.8	47.8	48.1	45.1	44.5	30.6	37.6	35.8

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
October through December 2021

Location ID:		PCA-PWG-03	PCF-01	PCF-02	PCF-03	PCF-04	UPC-PWG-01	URA-PWG-01	URA-SCC-01
Sample Name:		PCA-PWG-03-DUP04	PCF-01	PCF-02	PCF-03	PCF-04	UPC-PWG-01	URA-PWG-01	URA-SCC-01-02
Sample Date:		11/03/2021	10/21/2021	10/21/2021	10/21/2021	10/21/2021	11/03/2021	11/03/2021	10/21/2021
Depth:		0-0.5 ft BGS Duplicate	0-0.25 ft BGS	0-0.25 ft BGS	0-0.25 ft BGS	0-0.25 ft BGS	0-0.5 ft BGS	0-0.5 ft BGS	0.5-1 ft BGS
Parameters	**Unit**								
General Chemistry									
% Soot (Average)	%	3.22 J	7.23 J	2.51 J	5.04	5.77 J	2.64 J	0.668 J	0.381
% Soot (Rep 1)	%	3.31 J	6.01 J	2.51 J	4.41	5.32 J	2.64 J	0.545 J	0.397
% Soot (Rep 2)	%	3.13 J	8.45 J	2.52 J	5.67	6.22 J	2.63 J	0.790 J	0.365
TOC averages	%	13.5 J	8.09 J	4.45 J	6.60 J	9.60 J	6.21 J	1.86 J	2.88 J
Total organic carbon (TOC)	%	13.6 J	6.72 J	7.65 J	5.90 J	8.52 J	5.87 J	1.84 J	2.99 J
Total organic carbon (TOC) (2)	%	13.4 J	9.46 J	1.26 J	7.29 J	10.7 J	6.55 J	1.88 J	2.76 J
Total solids	%	35.6	92.6	84.2	86.7	65.8	81.2	67.7	68.8

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
North Tonawanda, New York
October through December 2021

Location ID:		URA-SCC-01	URA-SCC-01	URA-SCC-01	URA-SCC-02	URA-SCC-02	URA-SCC-02
Sample Name:		URA-SCC-01-03	URA-SCC-01-03-DUP03	URA-SCC-01-01	URA-SCC-02-02	URA-SCC-02-03	URA-SCC-02-01
Sample Date:		10/21/2021	10/21/2021	10/21/2021	10/20/2021	10/20/2021	10/20/2021
Depth:		1-2 ft BGS	1-2 ft BGS Duplicate	0-0.5 ft BGS	0.5-1 ft BGS	1-2 ft BGS	0-0.5 ft BGS
Parameters	**Unit**						
General Chemistry							
% Soot (Average)	%	0.080 J	0.412 J	0.220	0.358	0.550	0.596
% Soot (Rep 1)	%	0.079	0.457	0.201	0.345	0.619	0.608
% Soot (Rep 2)	%	0.080	0.368	0.238	0.372	0.482	0.585
TOC averages	%	2.06 J	1.91 J	3.14 J	4.26 J	3.08 J	2.65 J
Total organic carbon (TOC)	%	2.14 J	2.03 J	2.52 J	4.11 J	3.22 J	2.55 J
Total organic carbon (TOC) (2)	%	1.99 J	1.80 J	3.76 J	4.40 J	2.93 J	2.75 J
Total solids	%	73.2	74.0	57.4	60.1	64.7	59.5

Note:

J - Estimated result

Table 3

Analytical Methods
Durez Inlet Aquatic Assessment
North Tonawanda, New York
October through December 2021

Parameter	Method	Matrix	Preservation	Collection/Thaw to Analysis (Days)
Total Organic Carbon (TOC)	SW-846 9060	Sediment	Frozen	28
Soot	SW-846 9060 modified/Soot method	Sediment	Frozen	28

Method References:

SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions
Soot method - Analysis of Soot following ES&T publications by Accardi-Dey and Gschwend, 2003; and Gustafsson (et. al.), 1997

Table 4

Qualified Sample Results Due to Outlying MS/MSD Results
Durez Inlet Aquatic Assessment
North Tonawanda, New York
October through December 2021

Parameter	Sample ID	Analyte	MS % Recovery	MSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Parameter	Associated Samples	Qualified Result		Units
General Chemistry	FPC-HRC-02-06	TOC Rep #1	77	0	41	75-125	25	TOC averages	FPC-HRC-01-01	6.62	J	%
		TOC Rep #2	154	0	55	75-125	25	Total organic carbon (TOC)	FPC-HRC-01-01	6.89	J	%
								Total organic carbon (TOC) (2)	FPC-HRC-01-01	6.35	J	%
								TOC averages	FPC-HRC-01-03	6.44	J	%
								Total organic carbon (TOC)	FPC-HRC-01-03	6.76	J	%
								Total organic carbon (TOC) (2)	FPC-HRC-01-03	6.12	J	%
								TOC averages	FPC-HRC-02-01	3.43	J	%
								Total organic carbon (TOC)	FPC-HRC-02-01	3.72	J	%
								Total organic carbon (TOC) (2)	FPC-HRC-02-01	3.14	J	%
								TOC averages	FPC-HRC-02-02	1.65	J	%
								Total organic carbon (TOC)	FPC-HRC-02-02	1.78	J	%
								Total organic carbon (TOC) (2)	FPC-HRC-02-02	1.53	J	%
								TOC averages	FPC-HRC-02-03	1.48	J	%
								Total organic carbon (TOC)	FPC-HRC-02-03	1.70	J	%
								Total organic carbon (TOC) (2)	FPC-HRC-02-03	1.25	J	%
								TOC averages	FPC-HRC-02-04	1.70	J	%
								Total organic carbon (TOC)	FPC-HRC-02-04	1.65	J	%
								Total organic carbon (TOC) (2)	FPC-HRC-02-04	1.75	J	%
								TOC averages	FPC-HRC-02-05	2.74	J	%
								Total organic carbon (TOC)	FPC-HRC-02-05	3.68	J	%
								Total organic carbon (TOC) (2)	FPC-HRC-02-05	1.80	J	%
								TOC averages	FPC-HRC-02-06	3.01	J	%
								Total organic carbon (TOC)	FPC-HRC-02-06	2.89	J	%
								Total organic carbon (TOC) (2)	FPC-HRC-02-06	3.14	J	%
								TOC averages	FPC-HRC-02-07	1.53	J	%
								Total organic carbon (TOC)	FPC-HRC-02-07	1.57	J	%
								Total organic carbon (TOC) (2)	FPC-HRC-02-07	1.50	J	%
								TOC averages	FPC-HRC-02-08	2.67	J	%
								Total organic carbon (TOC)	FPC-HRC-02-08	2.58	J	%
								Total organic carbon (TOC) (2)	FPC-HRC-02-08	2.76	J	%
General Chemistry	FPC-HRC-01-04	TOC Rep #1	208	210	2	75-125	25	TOC averages	FPC-HRC-01-02	8.17	J	%
		TOC Rep #2	121	133	11	75-125	25	Total organic carbon (TOC)	FPC-HRC-01-02	7.04	J	%
								Total organic carbon (TOC) (2)	FPC-HRC-01-02	9.30	J	%
								TOC averages	FPC-HRC-01-04	3.31	J	%
								Total organic carbon (TOC)	FPC-HRC-01-04	2.94	J	%
								Total organic carbon (TOC) (2)	FPC-HRC-01-04	3.68	J	%
								TOC averages	FPC-HRC-01-05	3.19	J	%
								Total organic carbon (TOC)	FPC-HRC-01-05	3.45	J	%
								Total organic carbon (TOC) (2)	FPC-HRC-01-05	2.92	J	%
								TOC averages	FPC-HRC-01-05-DUP01	2.02	J	%

Table 4

Qualified Sample Results Due to Outlying MS/MSD Results
Durez Inlet Aquatic Assessment
North Tonawanda, New York
October through December 2021

Parameter	Sample ID	Analyte	MS % Recovery	MSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Parameter	Associated Samples	Qualified Result		Units
General Chemistry	FPC-HRC-01-04 (Continued)	TOC Rep #1	208	210	2	75-125	25	Total organic carbon (TOC)	FPC-HRC-01-05-DUP01	1.94	J	%
		TOC Rep #2	121	133	11	75-125	25	Total organic carbon (TOC) (2)	FPC-HRC-01-05-DUP01	2.11	J	%
								TOC averages	FPC-HRC-01-06	4.89	J	%
								Total organic carbon (TOC)	FPC-HRC-01-06	4.79	J	%
								Total organic carbon (TOC) (2)	FPC-HRC-01-06	5.00	J	%
								TOC averages	FPC-HRC-01-07	3.79	J	%
								Total organic carbon (TOC)	FPC-HRC-01-07	3.49	J	%
								Total organic carbon (TOC) (2)	FPC-HRC-01-07	4.10	J	%
								TOC averages	FPC-HRC-01-08	3.76	J	%
								Total organic carbon (TOC)	FPC-HRC-01-08	3.68	J	%
								Total organic carbon (TOC) (2)	FPC-HRC-01-08	3.84	J	%
General Chemistry	FPC-HRC-02-06	Soot Rep #1	55	55	6	75-125	25	% Soot (Average)	FPC-HRC-01-01	0.282	J	%
		Soot Rep #2	80	0	73	75-125	25	% Soot (Rep 1)	FPC-HRC-01-01	0.257	J	%
								% Soot (Rep 2)	FPC-HRC-01-01	0.307	J	%
								% Soot (Average)	FPC-HRC-01-02	0.372	J	%
								% Soot (Rep 1)	FPC-HRC-01-02	0.370	J	%
								% Soot (Rep 2)	FPC-HRC-01-02	0.375	J	%
								% Soot (Average)	FPC-HRC-01-03	0.594	J	%
								% Soot (Rep 1)	FPC-HRC-01-03	0.616	J	%
								% Soot (Rep 2)	FPC-HRC-01-03	0.571	J	%
								% Soot (Average)	FPC-HRC-01-04	0.636	J	%
								% Soot (Rep 1)	FPC-HRC-01-04	0.633	J	%
								% Soot (Rep 2)	FPC-HRC-01-04	0.640	J	%
								% Soot (Average)	FPC-HRC-01-05	1.02	J	%
								% Soot (Rep 1)	FPC-HRC-01-05	1.30	J	%
								% Soot (Rep 2)	FPC-HRC-01-05	0.735	J	%
								% Soot (Average)	FPC-HRC-01-05-DUP01	0.590	J	%
								% Soot (Rep 1)	FPC-HRC-01-05-DUP01	0.818	J	%
								% Soot (Rep 2)	FPC-HRC-01-05-DUP01	0.361	J	%
								% Soot (Average)	FPC-HRC-01-06	1.20	J	%
								% Soot (Rep 1)	FPC-HRC-01-06	1.15	J	%
								% Soot (Rep 2)	FPC-HRC-01-06	1.25	J	%
								% Soot (Average)	FPC-HRC-01-07	1.77	J	%
								% Soot (Rep 1)	FPC-HRC-01-07	1.64	J	%
								% Soot (Rep 2)	FPC-HRC-01-07	1.90	J	%
								% Soot (Average)	FPC-HRC-01-08	2.18	J	%
								% Soot (Rep 1)	FPC-HRC-01-08	2.07	J	%
								% Soot (Rep 2)	FPC-HRC-01-08	2.30	J	%
								% Soot (Average)	FPC-HRC-02-01	0.332	J	%

Table 4

Qualified Sample Results Due to Outlying MS/MSD Results
Durez Inlet Aquatic Assessment
North Tonawanda, New York
October through December 2021

Parameter	Sample ID	Analyte	MS % Recovery	MSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Parameter	Associated Samples	Qualified Result	Units
General Chemistry	FPC-HRC-02-06 (Continued)	Soot Rep #1	55	55	6	75-125	25	% Soot (Rep 1)	FPC-HRC-02-01	0.361 J	%
		Soot Rep #2	80	0	73	75-125	25	% Soot (Rep 2)	FPC-HRC-02-01	0.303 J	%
								% Soot (Average)	FPC-HRC-02-02	0.468 J	%
								% Soot (Rep 1)	FPC-HRC-02-02	0.412 J	%
								% Soot (Rep 2)	FPC-HRC-02-02	0.523 J	%
								% Soot (Average)	FPC-HRC-02-03	0.462 J	%
								% Soot (Rep 1)	FPC-HRC-02-03	0.477 J	%
								% Soot (Rep 2)	FPC-HRC-02-03	0.446 J	%
								% Soot (Average)	FPC-HRC-02-04	0.274 J	%
								% Soot (Rep 1)	FPC-HRC-02-04	0.132 J	%
								% Soot (Rep 2)	FPC-HRC-02-04	0.416 J	%
								% Soot (Average)	FPC-HRC-02-05	0.304 J	%
								% Soot (Rep 1)	FPC-HRC-02-05	0.235 J	%
								% Soot (Rep 2)	FPC-HRC-02-05	0.372 J	%
								% Soot (Average)	FPC-HRC-02-06	0.647 J	%
								% Soot (Rep 1)	FPC-HRC-02-06	0.782 J	%
								% Soot (Rep 2)	FPC-HRC-02-06	0.512 J	%
								% Soot (Average)	FPC-HRC-02-07	0.664 J	%
								% Soot (Rep 1)	FPC-HRC-02-07	0.637 J	%
								% Soot (Rep 2)	FPC-HRC-02-07	0.690 J	%
								% Soot (Average)	FPC-HRC-02-08	0.504 J	%
								% Soot (Rep 1)	FPC-HRC-02-08	0.933 J	%
								% Soot (Rep 2)	FPC-HRC-02-08	0.075 J	%
								% Soot (Average)	PCF-01	7.23 J	%
								% Soot (Rep 1)	PCF-01	6.01 J	%
								% Soot (Rep 2)	PCF-01	8.45 J	%
								% Soot (Average)	PCF-02	2.51 J	%
								% Soot (Rep 1)	PCF-02	2.51 J	%
								% Soot (Rep 2)	PCF-02	2.52 J	%
								% Soot (Average)	PCF-04	5.77 J	%
								% Soot (Rep 1)	PCF-04	5.32 J	%
								% Soot (Rep 2)	PCF-04	6.22 J	%
General Chemistry	URA-PWG-01	TOC Rep #1	60	71	8	75-125	25	TOC averages	FPC-PWG-01	9.13 J	%
		TOC Rep #2	85	43	30	75-125	25	Total organic carbon (TOC)	FPC-PWG-01	9.78 J	%
								Total organic carbon (TOC) (2)	FPC-PWG-01	8.48 J	%
								TOC averages	FPC-PWG-02	8.62 J	%
								Total organic carbon (TOC)	FPC-PWG-02	8.91 J	%
								Total organic carbon (TOC) (2)	FPC-PWG-02	8.34 J	%
								TOC averages	PCA-PWG-01	14.4 J	%

Table 4

Qualified Sample Results Due to Outlying MS/MSD Results
Durez Inlet Aquatic Assessment
North Tonawanda, New York
October through December 2021

Parameter	Sample ID	Analyte	MS % Recovery	MSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Parameter	Associated Samples	Qualified Result		Units
General Chemistry	URA-PWG-01 (Continued)	TOC Rep #1	60	71	8	75-125	25	Total organic carbon (TOC)	PCA-PWG-01	13.4	J	%
		TOC Rep #2	85	43	30	75-125	25	Total organic carbon (TOC) (2)	PCA-PWG-01	15.4	J	%
								TOC averages	PCA-PWG-02	12.9	J	%
								Total organic carbon (TOC)	PCA-PWG-02	13.8	J	%
								Total organic carbon (TOC) (2)	PCA-PWG-02	11.9	J	%
								TOC averages	PCA-PWG-03	13.3	J	%
								Total organic carbon (TOC)	PCA-PWG-03	14.0	J	%
								Total organic carbon (TOC) (2)	PCA-PWG-03	12.5	J	%
								TOC averages	PCA-PWG-03-DUP04	13.5	J	%
								Total organic carbon (TOC)	PCA-PWG-03-DUP04	13.6	J	%
								Total organic carbon (TOC) (2)	PCA-PWG-03-DUP04	13.4	J	%
								TOC averages	UPC-PWG-01	6.21	J	%
								Total organic carbon (TOC)	UPC-PWG-01	5.87	J	%
								Total organic carbon (TOC) (2)	UPC-PWG-01	6.55	J	%
								TOC averages	URA-PWG-01	1.86	J	%
								Total organic carbon (TOC)	URA-PWG-01	1.84	J	%
								Total organic carbon (TOC) (2)	URA-PWG-01	1.88	J	%
General Chemistry	UPC-PWG-01	Soot Rep #1	150	NA	NA	75-125	25	% Soot (Average)	FPC-PWG-01	0.272	J	%
		Soot Rep #2	130	NA	NA	75-125	25	% Soot (Rep 1)	FPC-PWG-01	0.305	J	%
								% Soot (Rep 2)	FPC-PWG-01	0.238	J	%
								% Soot (Average)	FPC-PWG-02	0.440	J	%
								% Soot (Rep 1)	FPC-PWG-02	0.449	J	%
								% Soot (Rep 2)	FPC-PWG-02	0.430	J	%
								% Soot (Average)	PCA-PWG-01	1.83	J	%
								% Soot (Rep 1)	PCA-PWG-01	1.95	J	%
								% Soot (Rep 2)	PCA-PWG-01	1.71	J	%
								% Soot (Average)	PCA-PWG-02	3.18	J	%
								% Soot (Rep 1)	PCA-PWG-02	3.06	J	%
								% Soot (Rep 2)	PCA-PWG-02	3.30	J	%
								% Soot (Average)	PCA-PWG-03	3.38	J	%
								% Soot (Rep 1)	PCA-PWG-03	3.52	J	%
								% Soot (Rep 2)	PCA-PWG-03	3.24	J	%
								% Soot (Average)	PCA-PWG-03-DUP04	3.22	J	%
								% Soot (Rep 1)	PCA-PWG-03-DUP04	3.31	J	%
								% Soot (Rep 2)	PCA-PWG-03-DUP04	3.13	J	%
								% Soot (Average)	UPC-PWG-01	2.64	J	%
								% Soot (Rep 1)	UPC-PWG-01	2.64	J	%
								% Soot (Rep 2)	UPC-PWG-01	2.63	J	%
								% Soot (Average)	URA-PWG-01	0.668	J	%

Table 4

Qualified Sample Results Due to Outlying MS/MSD Results
Durez Inlet Aquatic Assessment
North Tonawanda, New York
October through December 2021

Parameter	Sample ID	Analyte	MS % Recovery	MSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Parameter	Associated Samples	Qualified Result		Units
General Chemistry	UPC-PWG-01 (Continued)	Soot Rep #1	150	NA	NA	75-125	25	% Soot (Rep 1)	URA-PWG-01	0.545	J	%
		Soot Rep #2	130	NA	NA	75-125	25	% Soot (Rep 2)	URA-PWG-01	0.790	J	%
General Chemistry	URA-SCC-01-03-01	TOC Rep #1	82	139	4	75-125	25	TOC averages	PCA-HRC-01-01	12.4	J	%
		TOC Rep #2	148	106	16	75-125	25	Total organic carbon (TOC)	PCA-HRC-01-01	12.0	J	%
								Total organic carbon (TOC) (2)	PCA-HRC-01-01	12.7	J	%
								TOC averages	PCA-HRC-01-02	6.66	J	%
								Total organic carbon (TOC)	PCA-HRC-01-02	6.78	J	%
								Total organic carbon (TOC) (2)	PCA-HRC-01-02	6.53	J	%
								TOC averages	PCA-HRC-01-03	5.01	J	%
								Total organic carbon (TOC)	PCA-HRC-01-03	4.99	J	%
								Total organic carbon (TOC) (2)	PCA-HRC-01-03	5.03	J	%
								TOC averages	PCA-HRC-01-04	5.68	J	%
								Total organic carbon (TOC)	PCA-HRC-01-04	5.70	J	%
								Total organic carbon (TOC) (2)	PCA-HRC-01-04	5.65	J	%
								TOC averages	PCA-HRC-01-05	7.43	J	%
								Total organic carbon (TOC)	PCA-HRC-01-05	8.16	J	%
								Total organic carbon (TOC) (2)	PCA-HRC-01-05	6.69	J	%
								TOC averages	PCA-HRC-01-06	5.26	J	%
								Total organic carbon (TOC)	PCA-HRC-01-06	5.30	J	%
								Total organic carbon (TOC) (2)	PCA-HRC-01-06	5.23	J	%
								TOC averages	PCA-HRC-01-07	6.75	J	%
								Total organic carbon (TOC)	PCA-HRC-01-07	6.37	J	%
								Total organic carbon (TOC) (2)	PCA-HRC-01-07	7.13	J	%
								TOC averages	PCA-HRC-01-08	7.24	J	%
								Total organic carbon (TOC)	PCA-HRC-01-08	6.96	J	%
								Total organic carbon (TOC) (2)	PCA-HRC-01-08	7.53	J	%
								TOC averages	PCF-01	8.09	J	%
								Total organic carbon (TOC)	PCF-01	6.72	J	%
								Total organic carbon (TOC) (2)	PCF-01	9.46	J	%
								TOC averages	PCF-02	4.45	J	%
								Total organic carbon (TOC)	PCF-02	7.65	J	%
								Total organic carbon (TOC) (2)	PCF-02	1.26	J	%
								TOC averages	PCF-04	9.60	J	%
								Total organic carbon (TOC)	PCF-04	8.52	J	%
								Total organic carbon (TOC) (2)	PCF-04	10.7	J	%
								TOC averages	URA-SCC-01-03	2.06	J	%
								Total organic carbon (TOC)	URA-SCC-01-03	2.14	J	%
								Total organic carbon (TOC) (2)	URA-SCC-01-03	1.99	J	%

Table 4

Qualified Sample Results Due to Outlying MS/MSD Results
Durez Inlet Aquatic Assessment
North Tonawanda, New York
October through December 2021

Parameter	Sample ID	Analyte	MS % Recovery	MSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Parameter	Associated Samples	Qualified Result		Units
General Chemistry	BPF-SCC-01-DUP02	TOC Rep #1	75	145	30	75-125	25	TOC averages	BPF-SCC-01-DUP02	2.66	J	%
		TOC Rep #2	168	236	30	75-125	25	Total organic carbon (TOC)	BPF-SCC-01-DUP02	2.99	J	%
								Total organic carbon (TOC) (2)	BPF-SCC-01-DUP02	2.34	J	%
								TOC averages	PCA-HRC-02-01	12.5	J	%
								Total organic carbon (TOC)	PCA-HRC-02-01	14.1	J	%
								Total organic carbon (TOC) (2)	PCA-HRC-02-01	11.0	J	%
								TOC averages	PCA-HRC-02-07	10.4	J	%
								Total organic carbon (TOC)	PCA-HRC-02-07	10.5	J	%
								Total organic carbon (TOC) (2)	PCA-HRC-02-07	10.2	J	%
								TOC averages	PCA-HRC-02-08	10.3	J	%
								Total organic carbon (TOC)	PCA-HRC-02-08	10.4	J	%
								Total organic carbon (TOC) (2)	PCA-HRC-02-08	10.2	J	%
								TOC averages	PCA-HRC-03-01	17.4	J	%
								Total organic carbon (TOC)	PCA-HRC-03-01	18.2	J	%
								Total organic carbon (TOC) (2)	PCA-HRC-03-01	16.6	J	%
								TOC averages	PCA-HRC-03-02	14.7	J	%
								Total organic carbon (TOC)	PCA-HRC-03-02	14.4	J	%
								Total organic carbon (TOC) (2)	PCA-HRC-03-02	15.0	J	%
								TOC averages	PCA-HRC-03-06	15.9	J	%
								Total organic carbon (TOC)	PCA-HRC-03-06	14.8	J	%
								Total organic carbon (TOC) (2)	PCA-HRC-03-06	16.9	J	%
								TOC averages	PCA-HRC-03-08	12.7	J	%
								Total organic carbon (TOC)	PCA-HRC-03-08	12.8	J	%
								Total organic carbon (TOC) (2)	PCA-HRC-03-08	12.6	J	%
								TOC averages	PCF-03	6.60	J	%
								Total organic carbon (TOC)	PCF-03	5.90	J	%
								Total organic carbon (TOC) (2)	PCF-03	7.29	J	%
								TOC averages	URA-SCC-01-01	3.14	J	%
								Total organic carbon (TOC)	URA-SCC-01-01	2.52	J	%
								Total organic carbon (TOC) (2)	URA-SCC-01-01	3.76	J	%
								TOC averages	URA-SCC-01-02	2.88	J	%
								Total organic carbon (TOC)	URA-SCC-01-02	2.99	J	%
								Total organic carbon (TOC) (2)	URA-SCC-01-02	2.76	J	%
								TOC averages	URA-SCC-01-03-DUP03	1.91	J	%
								Total organic carbon (TOC)	URA-SCC-01-03-DUP03	2.03	J	%
								Total organic carbon (TOC) (2)	URA-SCC-01-03-DUP03	1.80	J	%
								TOC averages	URA-SCC-02-02	4.26	J	%
								Total organic carbon (TOC)	URA-SCC-02-02	4.11	J	%
								Total organic carbon (TOC) (2)	URA-SCC-02-02	4.40	J	%
								TOC averages	URA-SCC-02-03	3.08	J	%
								Total organic carbon (TOC)	URA-SCC-02-03	3.22	J	%
								Total organic carbon (TOC) (2)	URA-SCC-02-03	2.93	J	%

Table 4

Qualified Sample Results Due to Outlying MS/MSD Results
Durez Inlet Aquatic Assessment
North Tonawanda, New York
October through December 2021

Parameter	Sample ID	Analyte	MS % Recovery	MSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Parameter	Associated Samples	Qualified Result	Units
General Chemistry	BPF-SCC-01	TOC Rep #1	163	184	2	75-125	25	TOC averages	BPF-SCC-01	2.60 J	%
		TOC Rep #2	112	183	13	75-125	25	Total organic carbon (TOC)	BPF-SCC-01	2.48 J	%
								Total organic carbon (TOC) (2)	BPF-SCC-01	2.72 J	%
								TOC averages	DFP-SCC-01-01	5.26 J	%
								Total organic carbon (TOC)	DFP-SCC-01-01	5.03 J	%
								Total organic carbon (TOC) (2)	DFP-SCC-01-01	5.48 J	%
								TOC averages	DFP-SCC-01-02	5.84 J	%
								Total organic carbon (TOC)	DFP-SCC-01-02	5.79 J	%
								Total organic carbon (TOC) (2)	DFP-SCC-01-02	5.88 J	%
								TOC averages	DFP-SCC-01-03	5.24 J	%
								Total organic carbon (TOC)	DFP-SCC-01-03	4.84 J	%
								Total organic carbon (TOC) (2)	DFP-SCC-01-03	5.65 J	%
								TOC averages	DFP-SCC-02-01	3.90 J	%
								Total organic carbon (TOC)	DFP-SCC-02-01	3.51 J	%
								Total organic carbon (TOC) (2)	DFP-SCC-02-01	4.29 J	%
								TOC averages	DFP-SCC-02-02	4.65 J	%
								Total organic carbon (TOC)	DFP-SCC-02-02	4.36 J	%
								Total organic carbon (TOC) (2)	DFP-SCC-02-02	4.94 J	%
								TOC averages	DFP-SCC-02-03	6.07 J	%
								Total organic carbon (TOC)	DFP-SCC-02-03	6.38 J	%
								Total organic carbon (TOC) (2)	DFP-SCC-02-03	5.76 J	%
								TOC averages	PCA-HRC-02-02	9.42 J	%
								Total organic carbon (TOC)	PCA-HRC-02-02	9.04 J	%
								Total organic carbon (TOC) (2)	PCA-HRC-02-02	9.81 J	%
								TOC averages	PCA-HRC-02-03	9.26 J	%
								Total organic carbon (TOC)	PCA-HRC-02-03	9.47 J	%
								Total organic carbon (TOC) (2)	PCA-HRC-02-03	9.04 J	%
								TOC averages	PCA-HRC-02-04	9.92 J	%
								Total organic carbon (TOC)	PCA-HRC-02-04	9.88 J	%
								Total organic carbon (TOC) (2)	PCA-HRC-02-04	9.96 J	%
								TOC averages	PCA-HRC-02-05	10.3 J	%
								Total organic carbon (TOC)	PCA-HRC-02-05	11.8 J	%
								Total organic carbon (TOC) (2)	PCA-HRC-02-05	8.77 J	%
								TOC averages	PCA-HRC-02-06	15.3 J	%
								Total organic carbon (TOC)	PCA-HRC-02-06	16.5 J	%
								Total organic carbon (TOC) (2)	PCA-HRC-02-06	14.1 J	%
								TOC averages	PCA-HRC-03-03	12.1 J	%
								Total organic carbon (TOC)	PCA-HRC-03-03	12.0 J	%
								Total organic carbon (TOC) (2)	PCA-HRC-03-03	12.2 J	%
								TOC averages	PCA-HRC-03-04	12.6 J	%
								Total organic carbon (TOC)	PCA-HRC-03-04	12.4 J	%

Table 4

Qualified Sample Results Due to Outlying MS/MSD Results
Durez Inlet Aquatic Assessment
North Tonawanda, New York
October through December 2021

Parameter	Sample ID	Analyte	MS % Recovery	MSD % Recovery	RPD (percent)	Control Limits % Recovery	Control Limits RPD	Parameter	Associated Samples	Qualified Result		Units
General Chemistry	BPF-SCC-01 (Continued)	TOC Rep #1	163	184	2	75-125	25	Total organic carbon (TOC) (2)	PCA-HRC-03-04	12.9	J	%
		TOC Rep #2	112	183	13	75-125	25	TOC averages	PCA-HRC-03-05	14.2	J	%
								Total organic carbon (TOC)	PCA-HRC-03-05	14.2	J	%
								Total organic carbon (TOC) (2)	PCA-HRC-03-05	14.2	J	%
								TOC averages	PCA-HRC-03-07	14.8	J	%
								Total organic carbon (TOC)	PCA-HRC-03-07	13.0	J	%
								Total organic carbon (TOC) (2)	PCA-HRC-03-07	16.5	J	%
								TOC averages	URA-SCC-02-01	2.65	J	%
								Total organic carbon (TOC)	URA-SCC-02-01	2.55	J	%
								Total organic carbon (TOC) (2)	URA-SCC-02-01	2.75	J	%

Notes:

MSD - Matrix Spike Duplicate
RPD - Relative Percent Difference
J - Estimated result

Table 5

Qualified Sample Data Due to Variability in Field Duplicate Results
Durez Inlet Aquatic Assessment
North Tonawanda, New York
October through December 2021

Parameter	Analyte	RPD/Diff	Sample ID	Qualified Result		Field Duplicate Sample ID	Qualified Result		Units
General Chemistry	Soot (Average)	135	URA-SCC-01-03	0.080	J	URA-SCC-01-03-DUP03	0.412	J	%

Notes:

J - Estimated result

Appendix C-4
Data Validation Report

Radiological Analyses

October 2021

Technical Memorandum

03 March 2022

To	Clint Babcock (clint_babcock@oxy.com) Mike Werth (mwerth@anchorquea.com)	**Tel**	315-802-0343
Copy to	Paul McMahon	**Email**	Linda.Waters@ghd.com
From	Linda Waters/cs/24-NF	**Ref. No.**	11223794
Subject	Analytical Results and Validation – Radiological Analyses Durez Inlet Aquatic Assessment Glenn Springs Holdings, Inc. North Tonawanda, New York October 2021		

1. Introduction

This document details a validation of radiological analytical results for sediment samples collected in support of the Durez Inlet Aquatic Assessment at the NT Durez Inlet site in North Tonawanda, New York during October 2021. Samples were submitted to Teledyne Brown Engineering, Inc., located in Knoxville, Tennessee for Cesium-137 (Cs-137) and Lead-210 (Pb-210) determinations. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Table 2. A summary of the analytical methodology is presented in Table 3.

Full Contract Laboratory Program (CLP) equivalent raw data deliverables were provided by the laboratory. Evaluation of the data was based on information obtained from the finished data sheets, raw data, chain of custody form, calibration data, blank data, duplicate data, recovery data from carrier yield/laboratory control samples (LCS)/matrix spike (MS) samples, and field quality assurance/quality (QA/QC) samples. The assessment of analytical and in-house data included checks for: data consistency (by observing comparability of duplicate analyses), adherence to accuracy and precision criteria, and transmittal errors.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 3 and applicable guidance from the documents entitled:

1. U.S. Environmental Protection Agency, Multi Agency Radiological Laboratory Analytical Protocols Manual (MARLAP). USEPA 402 B 04 00IA. July 2004
2. U.S. Department of Energy, Evaluation of Radiochemical Data Usability, April 1997

Items 1 and 2 will subsequently be referred to as the "Guidelines" in this Memorandum.

2. Sample Holding Time and Preservation

The sample holding time criteria for the analyses are summarized in Table 3. Sample chain of custody documents and the analytical report were used to determine sample holding times.

All samples were analyzed within the required holding times.

3. Calibrations and Instrument Background

Initial calibration of the instrument ensures that it is capable of producing satisfactory quantitative data at the beginning of a series of analyses. The laboratory shall set up radiation measurement systems to produce consistent, comparable results across multiple detectors used for a common method. The laboratory shall establish the configuration and operating parameters for each radiation measurement system used consistent with the method requirements. After the analyses of the calibration curves, initial calibration verification (ICV) standards must be analyzed to verify the analytical accuracy of the calibration curves.

3.1 Gamma Spectrometry (Cs-137)

Initial and continuing calibrations have been performed at the proper frequency and includes acceptable peak energy, efficiency, background, and peak resolution. The laboratory effectively demonstrated that the instrumentation used for radiation measurement systems were properly calibrated prior to sample analysis.

3.2 Pb-210

Calibrations were performed at the proper frequency and daily source and background checks were acceptable. The laboratory effectively demonstrated that the instrumentation used for the measurement system was properly calibrated prior to sample analysis.

4. Laboratory Blank Analyses (Pb-210)

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation.

5. Chemical Separation (Yield)

Yield assesses the effects of the sample matrix and the chemical separation steps on the analytical result and estimates the analyte loss throughout the total analytical process. Yield is typically measured gravimetrically (with a carrier) or radiometrically (with a radiotracer).

In accordance with the method employed, all samples, blanks, and QC samples analyzed for Pb-210 were spiked with the appropriate lead carrier and results were acceptable.

6. Laboratory Control Sample Analyses (Pb-210)

LCS are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects.

For this study, LCS were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

The LCS contained the compound of interest. All LCS recoveries were within the laboratory control limits, demonstrating acceptable analytical accuracy.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

To evaluate the effects of sample matrices on the preparation process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as MS/MSD samples. The RPD between the MS and MSD is used to assess analytical precision.

MS/MSD analyses were performed as specified in Table 1 and analyzed for Pb-210 only.

The MS/MSD samples were spiked with the analyte of interest All percent recoveries and RPD values were within the laboratory control limits, demonstrating acceptable analytical accuracy and precision.

8. Duplicate Sample Analyses

Analytical precision is evaluated based on the analysis of laboratory duplicate samples. For this study, duplicate samples were prepared and analyzed by the laboratory as specified in Table 1. The duplicate results were evaluated per the "Guidelines".

8.1 Pb-210

All duplicate analyses performed were acceptable, demonstrating acceptable analytical precision.

8.2 Cs-137

All duplicate analyses performed were acceptable, demonstrating acceptable analytical precision.

9. Field QA/QC Samples

No field QA/QC were submitted with this data set.

10. Analyte Reporting

The laboratory reported results detected results down to the laboratory's MDC for each analyte. Non-detect results were presented as non-detect at the MDC in Table 2. Negative results with an uncertainty greater than the absolute value of the result were qualified as non-detect at the MDC.

All sediment results were reported on a dry weight basis.

11. Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable without qualification.

Regards,

Linda Waters

Linda Waters
Data Management – Data Validator - Chemist

Table 1

Sample Collection and Analysis Summary
Durez Inlet Aquatic Assessment
Glenn Springs Holding, Inc.
North Tonawanda, New York
October 2021

Sample Identification	Location	Matrix	Initial Sample Depth (ft. bgs.)	Final Sample Depth (ft. bgs.)	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters: Cesium-137	Analysis/Parameters: Lead-210	Comments
FPC-HRC-02-01	FPC-HRC-02	Sediment	0	0.07	10/18/2021	16:00	X	X	
FPC-HRC-02-12	FPC-HRC-02	Sediment	0.72	0.79	10/18/2021	16:00	X	X	
FPC-HRC-02-14	FPC-HRC-02	Sediment	0.85	0.92	10/18/2021	16:00	X	X	
FPC-HRC-02-16	FPC-HRC-02	Sediment	0.98	1.05	10/18/2021	16:00	X	X	
FPC-HRC-02-18	FPC-HRC-02	Sediment	1.12	1.18	10/18/2021	16:00	X	X	
FPC-HRC-02-20	FPC-HRC-02	Sediment	1.25	1.31	10/18/2021	16:00	X	X	
FPC-HRC-02-22	FPC-HRC-02	Sediment	1.38	1.44	10/18/2021	16:00	X	X	
FPC-HRC-02-24	FPC-HRC-02	Sediment	1.51	1.57	10/18/2021	16:00	X	X	
FPC-HRC-02-26	FPC-HRC-02	Sediment	1.64	1.71	10/18/2021	16:00	X	X	
FPC-HRC-02-28	FPC-HRC-02	Sediment	1.77	1.84	10/18/2021	16:00	X	X	
FPC-HRC-01-01	FPC-HRC-01	Sediment	0	0.07	10/19/2021	14:00	X	X	
FPC-HRC-02-02	FPC-HRC-02	Sediment	0.07	0.13	10/18/2021	16:00	X	X	
FPC-HRC-01-03	FPC-HRC-01	Sediment	0.13	0.2	10/19/2021	14:00	X	X	
FPC-HRC-01-04	FPC-HRC-01	Sediment	0.2	0.26	10/19/2021	14:00	X	X	
FPC-HRC-01-05	FPC-HRC-01	Sediment	0.26	0.33	10/19/2021	14:00	X	X	
FPC-HRC-01-06	FPC-HRC-01	Sediment	0.33	0.39	10/19/2021	14:00	X	X	
FPC-HRC-01-07	FPC-HRC-01	Sediment	0.39	0.46	10/19/2021	14:00	X	X	

Table 1

Sample Collection and Analysis Summary
Durez Inlet Aquatic Assessment
Glenn Springs Holding, Inc.
North Tonawanda, New York
October 2021

Sample Identification	Location	Matrix	Initial Sample Depth (ft. bgs.)	Final Sample Depth (ft. bgs.)	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters: Cesium-137	Analysis/Parameters: Lead-210	Comments
FPC-HRC-01-08	FPC-HRC-01	Sediment	0.46	0.52	10/19/2021	14:00	X	X	
FPC-HRC-01-10	FPC-HRC-01	Sediment	0.59	0.66	10/19/2021	14:00	X	X	
FPC-HRC-01-12	FPC-HRC-01	Sediment	0.72	0.79	10/19/2021	14:00	X	X	
FPC-HRC-01-14	FPC-HRC-01	Sediment	0.85	0.92	10/19/2021	14:00	X	X	
FPC-HRC-02-02	FPC-HRC-02	Sediment	0.07	0.13	10/18/2021	16:00	X	X	
FPC-HRC-02-03	FPC-HRC-02	Sediment	0.13	0.2	10/18/2021	16:00	X	X	
FPC-HRC-01-16	FPC-HRC-01	Sediment	0.98	1.05	10/19/2021	14:00	X	X	
FPC-HRC-01-18	FPC-HRC-01	Sediment	1.12	1.18	10/19/2021	14:00	X	X	
FPC-HRC-01-20	FPC-HRC-01	Sediment	1.25	1.31	10/19/2021	14:00	X	X	
FPC-HRC-01-22	FPC-HRC-01	Sediment	1.38	1.44	10/19/2021	14:00	X	X	
FPC-HRC-01-24	FPC-HRC-01	Sediment	1.51	1.57	10/19/2021	14:00	X	X	
FPC-HRC-01-26	FPC-HRC-01	Sediment	1.64	1.71	10/19/2021	14:00	X	X	
FPC-HRC-01-28	FPC-HRC-01	Sediment	1.77	1.84	10/19/2021	14:00	X	X	
FPC-HRC-02-04	FPC-HRC-02	Sediment	0.2	0.26	10/18/2021	16:00	X	X	
FPC-HRC-02-05	FPC-HRC-02	Sediment	0.26	0.33	10/18/2021	16:00	X	X	
FPC-HRC-02-06	FPC-HRC-02	Sediment	0.33	0.39	10/18/2021	16:00	X	X	MS/MSD/DUP
FPC-HRC-02-07	FPC-HRC-02	Sediment	0.39	0.46	10/18/2021	16:00	X	X	
FPC-HRC-02-08	FPC-HRC-02	Sediment	0.46	0.52	10/18/2021	16:00	X	X	MS/MSD/DUP
FPC-HRC-02-10	FPC-HRC-02	Sediment	0.59	0.66	10/18/2021	16:00	X	X	

Notes:

ft. bgs.	- Feet below ground surface
DUP	- Laboratory Duplicate
MS/MSD	- Matrix Spike/Matrix Spike Duplicate

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
Glenn Springs Holdings, Inc.
North Tonawanda, New York
October 2021

	Location ID:	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**
	Sample Name:	**FPC-HRC-01-03**	**FPC-HRC-01-04**	**FPC-HRC-01-05**	**FPC-HRC-01-06**	**FPC-HRC-01-07**	**FPC-HRC-01-08**
	Sample Date:	**10/19/2021**	**10/19/2021**	**10/19/2021**	**10/19/2021**	**10/19/2021**	**10/19/2021**
	Depth:	**0.13-0.2 ft BGS**	**0.2-0.26 ft BGS**	**0.26-0.33 ft BGS**	**0.33-0.39 ft BGS**	**0.39-0.46 ft BGS**	**0.46-0.52 ft BGS**
Parameters	**Unit**						
Radiochemistry							
Cesium-137	pCi/g	0.0134 ± 0.03671 U	0.0299 ± 0.03048 U	0.0461 ± 0.02766	0.029 ± 0.05097 U	0.0658 ± 0.03346	0.0673 ± 0.03089
Lead-210	pCi/g	1.83 ± 0.0825	1.94 ± 0.0838	0.897 ± 0.0661	0.562 ± 0.0624	1.43 ± 0.0822	1.11 ± 0.0696

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
Glenn Springs Holdings, Inc.
North Tonawanda, New York
October 2021

	Location ID:	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**
	Sample Name:	**FPC-HRC-01-10**	**FPC-HRC-01-12**	**FPC-HRC-01-14**	**FPC-HRC-01-16**	**FPC-HRC-01-18**	**FPC-HRC-01-20**	**FPC-HRC-01-22**
	Sample Date:	**10/19/2021**	**10/19/2021**	**10/19/2021**	**10/19/2021**	**10/19/2021**	**10/19/2021**	**10/19/2021**
	Depth:	**0.59-0.66 ft BGS**	**0.72-0.79 ft BGS**	**0.85-0.92 ft BGS**	**0.98-1.05 ft BGS**	**1.12-1.18 ft BGS**	**1.25-1.31 ft BGS**	**1.38-1.44 ft BGS**
Parameters	**Unit**							
Radiochemistry								
Cesium-137	pCi/g	0.106 ± 0.04583	0.122 ± 0.0524	0.124 ± 0.05798	0.246 ± 0.1184	0.272 ± 0.1107	0.42 ± 0.1144	0.887 ± 0.1062
Lead-210	pCi/g	0.826 ± 0.0645	0.72 ± 0.0646	0.636 ± 0.0709	0.65 ± 0.0666	0.533 ± 0.0651	0.716 ± 0.068	1.15 ± 0.0668

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
Glenn Springs Holdings, Inc.
North Tonawanda, New York
October 2021

Location ID:		**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-01**	**FPC-HRC-02**
Sample Name:		**FPC-HRC-01-24**	**FPC-HRC-01-26**	**FPC-HRC-01-28**	**FPC-HRC-01-01**	**FPC-HRC-01-02**	**FPC-HRC-02-03**
Sample Date:		**10/19/2021**	**10/19/2021**	**10/19/2021**	**10/19/2021**	**10/19/2021**	**10/18/2021**
Depth:		**1.51-1.57 ft BGS**	**1.64-1.71 ft BGS**	**1.77-1.84 ft BGS**	**0-0.07 ft BGS**	**0.07-0.13 ft BGS**	**0.13-0.2 ft BGS**
Parameters	**Unit**						
Radiochemistry							
Cesium-137	pCi/g	0.458 ± 0.1752	0.649 ± 0.3056	0.651 ± 0.1597	0.0758 ± 0.04708 U	0.0396 ± 0.05119 U	0.0117 ± 0.02194 U
Lead-210	pCi/g	1.06 ± 0.0649	0.657 ± 0.0616	1.11 ± 0.0732	3.24 ± 0.0969	2.66 ± 0.101	0.755 ± 0.0636

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
Glenn Springs Holdings, Inc.
North Tonawanda, New York
October 2021

Location ID:		**FPC-HRC-02**	**FPC-HRC-02**	**FPC-HRC-02**	**FPC-HRC-02**	**FPC-HRC-02**	**FPC-HRC-02**
Sample Name:		**FPC-HRC-02-04**	**FPC-HRC-02-05**	**FPC-HRC-02-06**	**FPC-HRC-02-07**	**FPC-HRC-02-08**	**FPC-HRC-02-10**
Sample Date:		**10/18/2021**	**10/18/2021**	**10/18/2021**	**10/18/2021**	**10/18/2021**	**10/18/2021**
Depth:		**0.2-0.26 ft BGS**	**0.26-0.33 ft BGS**	**0.33-0.39 ft BGS**	**0.39-0.46 ft BGS**	**0.46-0.52 ft BGS**	**0.59-0.66 ft BGS**
Parameters	**Unit**						
Radiochemistry							
Cesium-137	pCi/g	0.04224 ± 0.02567 U	0.0308 ± 0.05602 U	0.0775 ± 0.02722	0.126 ± 0.02429	0.11 ± 0.0416	0.0819 ± 0.04602
Lead-210	pCi/g	0.71 ± 0.0586	0.475 ± 0.0555	0.427 ± 0.0564	0.591 ± 0.0556	0.412 ± 0.0586	0.329 ± 0.0467

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
Glenn Springs Holdings, Inc.
North Tonawanda, New York
October 2021

Location ID:		**FPC-HRC-02**	**FPC-HRC-02**	**FPC-HRC-02**	**FPC-HRC-02**	**FPC-HRC-02**	**FPC-HRC-02**
Sample Name:		**FPC-HRC-02-12**	**FPC-HRC-02-14**	**FPC-HRC-02-16**	**FPC-HRC-02-18**	**FPC-HRC-02-20**	**FPC-HRC-02-22**
Sample Date:		**10/18/2021**	**10/18/2021**	**10/18/2021**	**10/18/2021**	**10/18/2021**	**10/18/2021**
Depth:		**0.72-0.79 ft BGS**	**0.85-0.92 ft BGS**	**0.98-1.05 ft BGS**	**1.12-1.18 ft BGS**	**1.25-1.31 ft BGS**	**1.38-1.44 ft BGS**
Parameters	**Unit**						
Radiochemistry							
Cesium-137	pCi/g	0.134 ± 0.05204	0.0473 ± 0.04545 U	0.06459 ± 0.03928 U	0.06631 ± 0.04154 U	0.04867 ± 0.02955 U	0.0286 ± 0.02756 U
Lead-210	pCi/g	0.24 ± 0.0504	0.247 ± 0.0577	0.145 ± 0.0522	0.183 ± 0.0509	0.0979 ± 0.0496	0.201 ± 0.0447

Table 2

Analytical Results Summary
Durez Inlet Aquatic Assessment
Glenn Springs Holdings, Inc.
North Tonawanda, New York
October 2021

	Location ID:	**FPC-HRC-02**	**FPC-HRC-02**	**FPC-HRC-02**	**FPC-HRC-02**	**FPC-HRC-02**
	Sample Name:	**FPC-HRC-02-24**	**FPC-HRC-02-26**	**FPC-HRC-02-28**	**FPC-HRC-02-01**	**FPC-HRC-02-02**
	Sample Date:	**10/18/2021**	**10/18/2021**	**10/18/2021**	**10/18/2021**	**10/18/2021**
	Depth:	**1.51-1.57 ft BGS**	**1.64-1.71 ft BGS**	**1.77-1.84 ft BGS**	**0-0.07 ft BGS**	**0.07-0.13 ft BGS**
Parameters	**Unit**					
Radiochemistry						
Cesium-137	pCi/g	0.0112 ± 0.0185 U	0.0595 ± 0.05534 U	0.034 ± 0.02361 U	0.0278 ± 0.0483 U	0.00114 ± 0.03689 U
Lead-210	pCi/g	0.183 ± 0.0466	0.284 ± 0.0495	0.167 ± 0.0474	1.44 ± 0.0796	0.992 ± 0.0708

Notes:

U - Not detected at the associated reporting limit

Table 3

Analytical Methods
Durez Inlet Aquatic Assessment
Glenn Springs Holding, Inc.
North Tonawanda, New York
October 2021

Parameter	Method	Matrix	Holding Time Collection to Analysis (Days)
Gamma Spectrometry (Cesium-137)	EPA 901.1[1]	Soil	180
Lead-210	PBS01VBS[2]	Soil	180

Notes:

Method References:
[1] - EPA - U.S. Environmental protection Agency. Analytical Methodology (October, 2007)
[2] - Eichrom Technologies, LLC

Appendix D
Standard Operating Procedure for Sediment Probing

Standard Operating Procedure – Sediment Probing

Standard Operating Procedure Acknowledgement Form

Project Number: 210049-01.03 Project Name: Durez Inlet

My signature below certifies that I have read, understand, and will follow the procedures specified in this Standard Operating Procedure.

Date	Name (print)	Signature	Company

Scope and Application

This Standard Operating Procedure (SOP) describes the methods expected to be used for sediment probing in the Niagara River to confirm soft sediment thickness. Substantive deviations from the procedures detailed in this SOP will be recorded on the Daily Activity Log or in the field notes associated with the survey activities and reported to the field lead or project manager.

Health and Safety Warnings

Health and safety issues for the work associated with this SOP, including physical, chemical, and biological hazards, are addressed in the Health and Safety Plan (HASP; Anchor QEA 2021). The HASP will be followed during all activities conducted by Anchor QEA, LLC (Anchor QEA) personnel.

Personnel Qualifications

Field personnel executing these procedures will have read, be familiar with, and comply with the requirements of this SOP and the sediment probing activities proposed in the Aquatic Assessment Report (Anchor QEA 2022). All field personnel are required to take a 40-hour Occupational Safety and Health Administration Hazardous Waste Operations and Emergency Response training course and annual refresher courses, as well as participate in a medical monitoring program. Additionally, field personnel will be under the direct supervision of qualified professionals who are experienced in performing the specified survey activities.

Equipment and Supplies

The following is a list of equipment that may be necessary to carry out the procedures contained in this SOP. Additional equipment may be required, pending field conditions.

- Sampling vessel equipped with differential global positioning system (DGPS) navigation and communication equipment
- Target coordinates for probing locations
- 0.5-inch steel rod or equivalent marked in 1-inch intervals, extendable to the maximum water depth to be encountered
- Calibrated weighted line or electronic depth finder
- Field log book or field database
- Appropriate personal protective equipment and clothing as defined in the project HASP (Anchor QEA 2021)
- Tape measure

Procedures for Sediment Probing

As described in the Aquatic Assessment Report (Anchor QEA 2022), probing will be performed along predetermined transects located perpendicular to the shoreline, to survey the soft sediment depth.

Sediment probing will be performed using the following procedures:

1. Navigate the vessel to each location to be probed in accordance with the proposed investigations contained in the Aquatic Assessment Report (Anchor QEA 2022).
2. Perform the probing using “live boating” under calm, low current velocity conditions. If maintaining position is problematic, secure the vessel in place using anchors or spuds, as appropriate.
3. Measure the water depth (from the top of the water surface to the top of the sediment surface) using a calibrated weighted line or electronic depth finder.
4. Use a 0.5-inch steel rod or equivalent to probe the sediment. Sharpen the probe on one end and calibrate in 1-inch intervals.
5. Lower the probe to the surface of the sediment, then advance the probe into the sediment bed manually until it can no longer be advanced.
6. Record the following information at each probing location in the field log book or field database:
   a. Coordinates using DGPS
   b. Distance from the top to the bottom of soft sediment (if any)
   c. Type of resistance (e.g., minimal, difficult, rough, abrasive, impenetrable)
   d. Sediment type (e.g., rock, fine-grained)

Quality Assurance/Quality Control

Entries in the field log books will be double-checked by the field team staff to verify that the information is correct. It is the responsibility of the Field Coordinator to periodically check to ensure that the procedures are in conformance with those stated in this SOP.

References

Anchor QEA, 2021. *Health and Safety Plan*. Durez Inlet, North Tonawanda, New York, NYSDEC Site No. 932018. Prepared for Glenn Springs Holdings, Inc., August 2021.

Anchor QEA, 2022. *Aquatic Assessment Report*. Durez Inlet, North Tonawanda, New York, NYSDEC Site No. 932018. Prepared for Glenn Springs Holdings, Inc., June 2022.

Appendix E
Benthic Laboratory Report

Watershed Assessment Associates
Environmental Services / Biomonitoring / Invertebrate Taxonomy / Professional Training

1861 Chrisler Ave.
Schenectady, NY 12303
Telephone 518 346-0225
Fax 518 346-0225
www.rwaa.us

To: Joe Volosin
ANCHOR QEA, LLC
157 Highland Ave.
Orchard Park, NY 14127

Date: December 2021

Project: Durez Inlet

From: J. Kelly Nolan
Director Environmental Services

Re: macroinvertebrate QC

In summary, the Anchor QEA Durez Inlet Project benthic macroinvertebrate laboratory sample processing included:

- Delivery of samples from Anchor QEA and receipt at the Watershed Assessment Associates (WAA) lab, at which time samples were checked against the chain of custody, inspected for leakage or damage, and logged into the WAA data base before sample processing began.
- Sample processing involved
  - Draining the sample preservative, homogenizing the sample contents, and rinsing the sample contents with water using an appropriate size sieve, even distribution of the rinsed matrix in a Caton subsample tray, the random removal of one gridded portion of the matrix from the Caton tray to a Petri dish where, under a dissecting microscope, organisms were picked from the matrix and placed into vials with 70% ethyl alcohol, which became the subsample. The process was repeated until appropriate subsample target counts were reached or the entire sample contents were picked.
- The subsampled organisms were labeled and stored in a vial for further taxonomic identification.
- Taxonomic identification was to the lowest practical level (genus/species) using appropriate high quality dissecting microscopes and light sources, and appropriate references and keys.
- Organisms requiring slide mounting were processed using CMCP-10 mounting media, and identified using a compound microscope.
- All individuals were identified and enumerated, and the information was directly entered into the WAA database.

Quality Control (QC) checks included:

Five random samples (10% of the total project samples) were selected from the benthic macroinvertebrate samples for taxonomy QC. Taxonomic re-identification and enumeration was performed by another WAA SFS certified taxonomist.

Taxonomy QC errors are classified as one of three types: Type I (errors are straight disagreements in the final identification); type II (errors are hierarchal differences) and type III (errors are missing specimens). Overall Type I and II taxonomy errors are reported as the Percent Taxonomic Disagreement (PTD) and Type III taxonomy errors are reported as the Percent Disagreement in Enumeration (PDE). All samples met national standards for minimum data quality objectives (PTD< 15%; PDE<5%: (Stribling et al. 2003; Stribling et al. 2008; USEPA 2012)).

QC scores and comparative taxa lists are included with this report.

References

Stribling JB, Moulton II SR, Lester GT. 2003. Determining the quality of taxonomic data. J North Am Benthol Soc. 22(4):621–631. doi:10.2307/1468357.

Stribling JB, Pavlik KL, Holdsworth SM, Leppo EW. 2008. Data quality, performance, and uncertainty in taxonomic identification for biological assessments. J North Am Benthol Soc. 27(4):906–919. doi:10.1899/07-175.1.

USEPA. 2012. Laboratory Operations Manual. Natl Rivers Streams Assess 2013-2014 Lab Oper Man. EPA- 841-B:225.

WAA QC

Station	Taxa	Orginal Taxonomist	QC Taxonomist	**agree**	**diff**	**error type**
350.5-031	Cryptochironomus sp.	1	1	1	0	
350.5-031	Tubificidae w/o cap. setae	1	1	1	0	
				0	0	
				0	0	
				0	0	
				0	0	
				0	0	
				0	0	
				0	0	
				0	0	
				0	0	
				0	0	
	TOTAL INDIVIDUALS	2	2	2	0	
	TOTAL TAXA	2	2			
	TOTAL TAXA DIFFERENCE	0				

Error Type	**Error count**	**Rel % dis**	**Actual %Dis**
I	0	0	0
II	0	0	0
III	0	0	0
%similarity	1		0
% dissimilarit	0		

I ***straight disagreements***

II ***hierarchical differences***

III ***missing specimens***

350.5-031	**Presence/Absence %**	**100**
	PDE (precision counts) %	**0.00**
	PTD (taxonomic disagreement) %	**0.00**

WAA QC

Station	Taxa	Orginal Taxonomist	QC Taxonomist	agree	diff	error type
350.5-021	Valvata lewisi	1	1	1	0	
350.5-021	Procladius sp.	4	4	4	0	
350.5-021	Tribelos sp.	1	1	1	0	
350.5-021	Chironomus sp.	2	2	2	0	
				0	0	
				0	0	
				0	0	
				0	0	
				0	0	
				0	0	
				0	0	
				0	0	
	TOTAL INDIVIDUALS	8	8	8	0	
	TOTAL TAXA	4	4			
	TOTAL TAXA DIFFERENCE	0				

Error Type	Error count	Rel % dis	Actual %Dis
I	0	0	0
II	0	0	0
III	0	0	0
%similarity	1		0
% dissimilarity	0		

I ***straight disagreements***

II ***hierarchical differences***

III ***missing specimens***

350.5-021	**Presence/Absence %**	**100**
	PDE (precision counts) %	**0.00**
	PTD (taxonomic disagreement) %	**0.00**

WAA QC

Station	Taxa	Orginal Taxonomist	QC Taxonomist	agree	diff	error type
350.5-014	Amnicola sp.	1	1	1	0	
				0	0	
				0	0	
				0	0	
				0	0	
				0	0	
				0	0	
				0	0	
				0	0	
				0	0	
				0	0	
				0	0	
	TOTAL INDIVIDUALS	1	1	1	0	
	TOTAL TAXA	1	1			
	TOTAL TAXA DIFFERENCE	0				

Error Type	Error count	Rel % dis	Actual %Dis
I	0	0	0
II	0	0	0
III	0	0	0
%similarity	1		0
% dissimilarity	0		

I ***straight disagreements***

II ***hierarchical differences***

III ***missing specimens***

350.5-014	**Presence/Absence %**	**100**
	PDE (precision counts) %	**0.00**
	PTD (taxonomic disagreement) %	**0.00**

WAA QC

Station	Taxa	Orginal Taxonomist	QC Taxonomist	agree	diff	error type
350.5-045	Hyalella sp.	7	7	7	0	
350.5-045	Valvata tricarinata	0	1	0	1	**ii**
350.5-045	Valvata sp.	1	0	0	1	**ii**
350.5-045	Tubificidae w/o cap. setae	1	1	1	0	
350.5-045	Ablabesmyia sp.	1	1	1	0	
350.5-045	Tubificidae w/ cap. setae	1	1	1	0	
350.5-045	Tanypus sp.	1	1	1	0	
350.5-045	Polypedilum halterale gr.	1	1	1	0	
350.5-045	Parachironomus sp.	1	1	1	0	
350.5-045	Caenis sp.	2	2	2	0	
350.5-045	Collembola	3	3	3	0	
350.5-045	Paratanytarsus sp.	1	1	1	0	
				0	0	
				0	0	
	TOTAL INDIVIDUALS	20	20	19	2	
	TOTAL TAXA	11	11			
	TOTAL TAXA DIFFERENCE	0				

Error Type	Error count	Rel % dis	Actual %Dis
I	0	0	0
II	2	1	0.05
III	0	0	0
%similarity	0.95		0.05
% dissimilarity	0.05		

I ***straight disagreements***

II ***hierarchical differences***

III ***missing specimens***

350.5-045	**Presence/Absence %**	**100**
	PDE (precision counts) %	**0.00**
	PTD (taxonomic disagreement) %	**0.05**

WAA QC

Station	Taxa	Orginal Taxonomist	QC Taxonomist	agree	diff	error type
350.5-007	Polypedilum flavum	1	1	1	0	
350.5-007	Tubificidae w/o cap. setae	3	3	3	0	
350.5-007	Chironomus sp.	2	2	2	0	
350.5-007	Dicrotendipes sp.	1	1	1	0	
350.5-007	Collembola	2	2	2	0	
350.5-007	Hyalella sp.	4	4	4	0	
				0	0	
				0	0	
	TOTAL INDIVIDUALS	13	13	13	0	
	TOTAL TAXA	6	6			
	TOTAL TAXA DIFFERENCE	0				

Error Type	Error count	Rel % dis	Actual %Dis
I	0	0	0
II	0	0	0
III	0	0	0
%similarity	1		0
% dissimilarity	0		

I ***straight disagreements***

II ***hierarchical differences***

III ***missing specimens***

350.5-007	**Presence/Absence %**	**100**
	PDE (precision counts) %	**0.00**
	PTD (taxonomic disagreement) %	**0.00**

Table E-1
Benthic Laboratory Report

Client Project Name	WAA ID	Station ID	Collection Date	Collect	Phylum	Class	Order	Family	Genus Species	Individual	Stage	Total Individual	Comments	No. Grids of 30	Excluded Taxa	Common Name
Durez Inlet	350.5-001	DFP-BC-01-A-2021-1020	10/20/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Tribelos sp.	2	L	22		30.00	FALSE	midge
Durez Inlet	350.5-001	DFP-BC-01-A-2021-1020	10/20/2021	Core	Arthropoda	Insecta	Lepidoptera	Pyralidae	Acentria sp.	1	L	22		30.00	FALSE	moth
Durez Inlet	350.5-001	DFP-BC-01-A-2021-1020	10/20/2021	Core	Arthropoda	Crustacea	Amphipoda	Talitridae	Hyalella sp.	17	L	22		30.00	FALSE	scud
Durez Inlet	350.5-001	DFP-BC-01-A-2021-1020	10/20/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Dicrotendipes sp.	2	L	22		30.00	FALSE	midge
Durez Inlet	350.5-003	DFP-BC-01-B-2021-1020	10/20/2021	Core					No Specimens present in sample	0	L	0		30.00	FALSE	
Durez Inlet	350.5-005	DFP-BC-01-C- 2021-1020	10/20/2021	Core					No Specimens present in sample	0	L	0		30.00	FALSE	
Durez Inlet	350.5-007	DFP-BC-02-A-2021-1020	10/20/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Polypedilum flavum	1	L	13		30.00	FALSE	midge
Durez Inlet	350.5-007	DFP-BC-02-A-2021-1020	10/20/2021	Core	Annelida	Oligochaeta	Tubificida	Tubificidae	Tubificidae w/o cap. setae	3	L	13		30.00	FALSE	worm
Durez Inlet	350.5-007	DFP-BC-02-A-2021-1020	10/20/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Chironomus sp.	2	L	13		30.00	FALSE	midge
Durez Inlet	350.5-007	DFP-BC-02-A-2021-1020	10/20/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Dicrotendipes sp.	1	L	13		30.00	FALSE	midge
Durez Inlet	350.5-007	DFP-BC-02-A-2021-1020	10/20/2021	Core	Arthropoda	Insecta	Collembola		Collembola	2	L	13		30.00	FALSE	Springtail
Durez Inlet	350.5-007	DFP-BC-02-A-2021-1020	10/20/2021	Core	Arthropoda	Crustacea	Amphipoda	Talitridae	Hyalella sp.	4	L	13		30.00	FALSE	scud
Durez Inlet	350.5-009	DFP-BC-02-B- 2021-1020	10/20/2021	Core					No Specimens present in sample	0	L	0		30.00	FALSE	
Durez Inlet	350.5-010	DFP-BC-02-C-2021-1020	10/20/2021	Core	Mollusca	Gastropoda	Basommatophora	Ancylidae	Ferrissia sp.	1	L	1		30.00	FALSE	snail
Durez Inlet	350.5-011	FPC-BC-01-A-2021-1020	10/20/2021	Core	Arthropoda	Insecta	Collembola		Collembola	2	L	66		30.00	FALSE	Springtail
Durez Inlet	350.5-011	FPC-BC-01-A-2021-1020	10/20/2021	Core	Mollusca	Gastropoda	Mesogastropoda	Hydrobiidae	Amnicola sp.	7	L	66		30.00	FALSE	snail
Durez Inlet	350.5-011	FPC-BC-01-A-2021-1020	10/20/2021	Core	Annelida	Oligochaeta	Tubificida	Tubificidae	Tubificidae w/ cap. setae	2	L	66		30.00	FALSE	worm
Durez Inlet	350.5-011	FPC-BC-01-A-2021-1020	10/20/2021	Core	Arthropoda	Crustacea	Amphipoda	Talitridae	Hyalella sp.	45	L	66		30.00	FALSE	scud
Durez Inlet	350.5-011	FPC-BC-01-A-2021-1020	10/20/2021	Core	Arthropoda	Insecta	Trichoptera	Leptoceridae	Triaenodes sp.	1	L	66		30.00	FALSE	caddisfly
Durez Inlet	350.5-011	FPC-BC-01-A-2021-1020	10/20/2021	Core	Annelida	Hirudinea	Rhynchobdellida	Glossiphoniidae	Glossiphoniidae	1	L	66	early	30.00	FALSE	leech
Durez Inlet	350.5-011	FPC-BC-01-A-2021-1020	10/20/2021	Core	Annelida	Hirudinea	Arhynchobdellida	Erpobdellidae	Erpobdella sp.	2	L	66		30.00	FALSE	leech
Durez Inlet	350.5-011	FPC-BC-01-A-2021-1020	10/20/2021	Core	Arthropoda	Insecta	Odonata	Coenagrionidae	Enallagma sp.	2	L	66		30.00	FALSE	damselfly
Durez Inlet	350.5-011	FPC-BC-01-A-2021-1020	10/20/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Polypedilum flavum	1	L	66		30.00	FALSE	midge
Durez Inlet	350.5-011	FPC-BC-01-A-2021-1020	10/20/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Dicrotendipes sp.	3	L	66		30.00	FALSE	midge
Durez Inlet	350.5-013	FPC-BC-01-B-2021-1020	10/20/2021	Core	Arthropoda	Crustacea	Amphipoda	Talitridae	Hyalella sp.	2	L	2		30.00	FALSE	scud
Durez Inlet	350.5-014	FPC-BC-01-C-2021-1020	10/20/2021	Core	Mollusca	Gastropoda	Mesogastropoda	Hydrobiidae	Amnicola sp.	1	L	1		30.00	FALSE	snail
Durez Inlet	350.5-015	FPC-BC-02-A-2021-1020	10/20/2021	Core	Mollusca	Gastropoda	Mesogastropoda	Hydrobiidae	Amnicola sp.	3	L	23		30.00	FALSE	snail
Durez Inlet	350.5-015	FPC-BC-02-A-2021-1020	10/20/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Chironomus sp.	1	L	23		30.00	FALSE	midge
Durez Inlet	350.5-015	FPC-BC-02-A-2021-1020	10/20/2021	Core	Annelida	Oligochaeta	Tubificida	Tubificidae	Tubificidae w/o cap. setae	1	L	23		30.00	FALSE	worm
Durez Inlet	350.5-015	FPC-BC-02-A-2021-1020	10/20/2021	Core	Mollusca	Gastropoda	Basommatophora	Planorbidae	Gyraulus sp.	5	L	23		30.00	FALSE	snail
Durez Inlet	350.5-015	FPC-BC-02-A-2021-1020	10/20/2021	Core	Annelida	Oligochaeta	Tubificida	Naididae	Naididae	1	L	23		30.00	FALSE	worm
Durez Inlet	350.5-015	FPC-BC-02-A-2021-1020	10/20/2021	Core	Arthropoda	Insecta	Collembola		Collembola	2	L	23		30.00	FALSE	Springtail
Durez Inlet	350.5-015	FPC-BC-02-A-2021-1020	10/20/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Cryptochironomus sp.	3	L	23		30.00	FALSE	midge
Durez Inlet	350.5-015	FPC-BC-02-A-2021-1020	10/20/2021	Core	Arthropoda	Crustacea	Isopoda	Asellidae	Caecidotea sp.	2	L	23		30.00	FALSE	sowbug
Durez Inlet	350.5-015	FPC-BC-02-A-2021-1020	10/20/2021	Core	Arthropoda	Crustacea	Amphipoda	Gammaridae	Gammarus sp.	2	L	23		30.00	FALSE	scud
Durez Inlet	350.5-015	FPC-BC-02-A-2021-1020	10/20/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Dicrotendipes sp.	3	L	23		30.00	FALSE	midge
Durez Inlet	350.5-017	FPC-BC-02-B-2021-1020	10/20/2021	Core					No Specimens present in sample	0	L	0		30.00	FALSE	
Durez Inlet	350.5-018	FPC-BC-02-C-2021-1020	10/20/2021	Core					No Specimens present in sample	0	L	0		30.00	FALSE	
Durez Inlet	350.5-019	FPC-PC-BC-01-A-2021-1019	10/19/2021	Core					No Specimens present in sample	0	L	0		30.00	FALSE	
Durez Inlet	350.5-020	FPC-PC-BC-02-A-2021-1019	10/19/2021	Core	Mollusca	Gastropoda	Mesogastropoda	Valvatidae	Valvata lewisi	1	L	9		30.00	FALSE	snail
Durez Inlet	350.5-020	FPC-PC-BC-02-A-2021-1019	10/19/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Procladius sp.	1	L	9		30.00	FALSE	midge
Durez Inlet	350.5-020	FPC-PC-BC-02-A-2021-1019	10/19/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Chironomus sp.	4	L	9		30.00	FALSE	midge
Durez Inlet	350.5-020	FPC-PC-BC-02-A-2021-1019	10/19/2021	Core	Annelida	Oligochaeta	Tubificida	Tubificidae	Limnodrilus sp.	1	L	9		30.00	FALSE	worm
Durez Inlet	350.5-020	FPC-PC-BC-02-A-2021-1019	10/19/2021	Core	Annelida	Oligochaeta	Tubificida	Tubificidae	Tubificidae w/ cap. setae	2	L	9		30.00	FALSE	worm
Durez Inlet	350.5-021	FPC-PC-BC-03-A-2021-1019	10/19/2021	Core	Mollusca	Gastropoda	Mesogastropoda	Valvatidae	Valvata lewisi	1	L	8		30.00	FALSE	snail
Durez Inlet	350.5-021	FPC-PC-BC-03-A-2021-1019	10/19/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Procladius sp.	4	L	8		30.00	FALSE	midge
Durez Inlet	350.5-021	FPC-PC-BC-03-A-2021-1019	10/19/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Tribelos sp.	1	L	8		30.00	FALSE	midge
Durez Inlet	350.5-021	FPC-PC-BC-03-A-2021-1019	10/19/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Chironomus sp.	2	L	8		30.00	FALSE	midge
Durez Inlet	350.5-023	PC-BC-01-A- 2021-1021	10/21/2021	Core	Arthropoda	Insecta	Trichoptera	Hydroptilidae	Oxyethira sp.	1	L	24		30.00	FALSE	caddisfly
Durez Inlet	350.5-023	PC-BC-01-A- 2021-1021	10/21/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Chironomus sp.	1	L	24		30.00	FALSE	midge
Durez Inlet	350.5-023	PC-BC-01-A- 2021-1021	10/21/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Cladopelma sp.	1	L	24		30.00	FALSE	midge

Table E-1
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Client Project Name	WAA ID	Station ID	Collection Date	Collect	Phylum	Class	Order	Family	Genus Species	Individual	Stage	Total Individual	Comments	No. Grids of 30	Excluded Taxa	Common Name
Durez Inlet	350.5-023	PC-BC-01-A- 2021-1021	10/21/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Dicrotendipes sp.	1	L	24		30.00	FALSE	midge
Durez Inlet	350.5-023	PC-BC-01-A- 2021-1021	10/21/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Paratanytarsus sp.	3	L	24		30.00	FALSE	midge
Durez Inlet	350.5-023	PC-BC-01-A- 2021-1021	10/21/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Cryptochironomus sp.	4	L	24		30.00	FALSE	midge
Durez Inlet	350.5-023	PC-BC-01-A- 2021-1021	10/21/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Tribelos sp.	6	L	24		30.00	FALSE	midge
Durez Inlet	350.5-023	PC-BC-01-A- 2021-1021	10/21/2021	Core	Arthropoda	Insecta	Odonata	Coenagrionidae	Enallagma sp.	1	L	24		30.00	FALSE	damselfly
Durez Inlet	350.5-023	PC-BC-01-A- 2021-1021	10/21/2021	Core	Arthropoda	Crustacea	Amphipoda	Crangonyctidae	Crangonyx sp.	4	L	24		30.00	FALSE	scud
Durez Inlet	350.5-023	PC-BC-01-A- 2021-1021	10/21/2021	Core	Annelida	Hirudinea	Rhynchobdellida	Glossiphoniidae	Glossiphoniidae	1	L	24	early	30.00	FALSE	leech
Durez Inlet	350.5-023	PC-BC-01-A- 2021-1021	10/21/2021	Core	Arthropoda	Crustacea	Amphipoda	Gammaridae	Gammarus sp.	1	L	24		30.00	FALSE	scud
Durez Inlet	350.5-025	PC-BC-01-B- 2021-1021	10/21/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Cryptochironomus sp.	1	L	1		30.00	FALSE	midge
Durez Inlet	350.5-026	PC-BC-01-C-2021-1021	10/21/2021	Core					No Specimens present in sample	0	L	0		30.00	FALSE	
Durez Inlet	350.5-027	PC-BC-01-D-2021-1021	10/21/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Cladopelma sp.	1	L	9		30.00	FALSE	midge
Durez Inlet	350.5-027	PC-BC-01-D-2021-1021	10/21/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Paratanytarsus sp.	1	L	9		30.00	FALSE	midge
Durez Inlet	350.5-027	PC-BC-01-D-2021-1021	10/21/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Tribelos sp.	1	L	9		30.00	FALSE	midge
Durez Inlet	350.5-027	PC-BC-01-D-2021-1021	10/21/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Dicrotendipes sp.	3	L	9		30.00	FALSE	midge
Durez Inlet	350.5-027	PC-BC-01-D-2021-1021	10/21/2021	Core	Arthropoda	Crustacea	Amphipoda	Talitridae	Hyalella sp.	3	L	9		30.00	FALSE	scud
Durez Inlet	350.5-029	PC-BC-02-A-2021-1021	10/21/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Paratanytarsus sp.	1	L	9		30.00	FALSE	midge
Durez Inlet	350.5-029	PC-BC-02-A-2021-1021	10/21/2021	Core	Annelida	Oligochaeta	Tubificida	Tubificidae	Tubificidae w/o cap. setae	1	L	9		30.00	FALSE	worm
Durez Inlet	350.5-029	PC-BC-02-A-2021-1021	10/21/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Cladopelma sp.	2	L	9		30.00	FALSE	midge
Durez Inlet	350.5-029	PC-BC-02-A-2021-1021	10/21/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Dicrotendipes sp.	1	L	9		30.00	FALSE	midge
Durez Inlet	350.5-029	PC-BC-02-A-2021-1021	10/21/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Cryptochironomus sp.	4	L	9		30.00	FALSE	midge
Durez Inlet	350.5-030	PC-BC-02-C-2021-1021	10/21/2021	Core					No Specimens present in sample	0	L	0		30.00	FALSE	
Durez Inlet	350.5-031	PC-BC-02-B-2021-1021	10/21/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Cryptochironomus sp.	1	L	2		30.00	FALSE	midge
Durez Inlet	350.5-031	PC-BC-02-B-2021-1021	10/21/2021	Core	Annelida	Oligochaeta	Tubificida	Tubificidae	Tubificidae w/o cap. setae	1	L	2		30.00	FALSE	worm
Durez Inlet	350.5-033	PC-BC-03-A-2021-1021	10/21/2021	Core	Mollusca	Gastropoda	Basommatophora	Planorbidae	Gyraulus sp.	1	L	18		30.00	FALSE	snail
Durez Inlet	350.5-033	PC-BC-03-A-2021-1021	10/21/2021	Core	Mollusca	Gastropoda	Mesogastropoda	Valvatidae	Valvata lewisi	1	L	18		30.00	FALSE	snail
Durez Inlet	350.5-033	PC-BC-03-A-2021-1021	10/21/2021	Core	Annelida	Oligochaeta	Tubificida	Tubificidae	Tubificidae w/o cap. setae	2	L	18		30.00	FALSE	worm
Durez Inlet	350.5-033	PC-BC-03-A-2021-1021	10/21/2021	Core	Annelida	Oligochaeta	Tubificida	Tubificidae	Tubificidae w/ cap. setae	1	L	18		30.00	FALSE	worm
Durez Inlet	350.5-033	PC-BC-03-A-2021-1021	10/21/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Cryptochironomus sp.	7	L	18		30.00	FALSE	midge
Durez Inlet	350.5-033	PC-BC-03-A-2021-1021	10/21/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Procladius sp.	1	L	18		30.00	FALSE	midge
Durez Inlet	350.5-033	PC-BC-03-A-2021-1021	10/21/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Paratanytarsus sp.	1	L	18		30.00	FALSE	midge
Durez Inlet	350.5-033	PC-BC-03-A-2021-1021	10/21/2021	Core	Arthropoda	Insecta	Collembola		Collembola	3	L	18		30.00	FALSE	Springtail
Durez Inlet	350.5-033	PC-BC-03-A-2021-1021	10/21/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Cladopelma sp.	1	L	18		30.00	FALSE	midge
Durez Inlet	350.5-035	PC-BC-03-C-2021-1021	10/21/2021	Core	Annelida	Oligochaeta	Tubificida	Tubificidae	Tubificidae w/ cap. setae	1	L	1		30.00	FALSE	worm
Durez Inlet	350.5-037	PC-BC-03-B-2021-1021	10/21/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Cryptochironomus sp.	1	L	2		30.00	FALSE	midge
Durez Inlet	350.5-037	PC-BC-03-B-2021-1021	10/21/2021	Core	Annelida	Oligochaeta	Tubificida	Tubificidae	Tubificidae w/o cap. setae	1	L	2		30.00	FALSE	worm
Durez Inlet	350.5-038	URA-BC-01-D-2021-1020	10/20/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Dicrotendipes sp.	1	L	1		30.00	FALSE	midge
Durez Inlet	350.5-039	URA-BC-01-A-2021-1020	10/20/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Tribelos sp.	10	L	24		30.00	FALSE	midge
Durez Inlet	350.5-039	URA-BC-01-A-2021-1020	10/20/2021	Core	Mollusca	Gastropoda	Mesogastropoda	Valvatidae	Valvata tricarinata	1	L	24		30.00	FALSE	snail
Durez Inlet	350.5-039	URA-BC-01-A-2021-1020	10/20/2021	Core	Mollusca	Gastropoda	Mesogastropoda	Bithyniidae	Bithynia sp.	1	L	24		30.00	FALSE	snail
Durez Inlet	350.5-039	URA-BC-01-A-2021-1020	10/20/2021	Core	Arthropoda	Crustacea	Amphipoda	Talitridae	Hyalella sp.	1	L	24		30.00	FALSE	scud
Durez Inlet	350.5-039	URA-BC-01-A-2021-1020	10/20/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Parachironomus sp.	1	L	24		30.00	FALSE	midge
Durez Inlet	350.5-039	URA-BC-01-A-2021-1020	10/20/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Ablabesmyia sp.	1	L	24		30.00	FALSE	midge
Durez Inlet	350.5-039	URA-BC-01-A-2021-1020	10/20/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Chironomus sp.	1	L	24		30.00	FALSE	midge
Durez Inlet	350.5-039	URA-BC-01-A-2021-1020	10/20/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Dicrotendipes sp.	8	L	24		30.00	FALSE	midge
Durez Inlet	350.5-041	URA-BC-01-B-2021-1020	10/20/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Ablabesmyia sp.	1	L	5		30.00	FALSE	midge
Durez Inlet	350.5-041	URA-BC-01-B-2021-1020	10/20/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Tribelos sp.	1	L	5		30.00	FALSE	midge
Durez Inlet	350.5-041	URA-BC-01-B-2021-1020	10/20/2021	Core	Arthropoda	Crustacea	Amphipoda	Talitridae	Hyalella sp.	2	L	5		30.00	FALSE	scud
Durez Inlet	350.5-041	URA-BC-01-B-2021-1020	10/20/2021	Core	Annelida	Oligochaeta	Tubificida	Tubificidae	Tubificidae w/o cap. setae	1	L	5		30.00	FALSE	worm
Durez Inlet	350.5-043	URA-BC-01-C-2021-1020	10/20/2021	Core					No Specimens present in sample	0	L	0		30.00	FALSE	
Durez Inlet	350.5-044	URA-BC-02-D-2021-1020	10/20/2021	Core	Arthropoda	Crustacea	Amphipoda	Talitridae	Hyalella sp.	2	L	3		30.00	FALSE	scud
Durez Inlet	350.5-044	URA-BC-02-D-2021-1020	10/20/2021	Core	Arthropoda	Insecta	Trichoptera	Leptoceridae	Triaenodes sp.	1	L	3		30.00	FALSE	caddisfly

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Client Project Name	WAA ID	Station ID	Collection Date	Collect	Phylum	Class	Order	Family	Genus Species	Individual	Stage	Total Individual	Comments	No. Grids of 30	Excluded Taxa	Common Name
Durez Inlet	350.5-045	URA-BC-02-A-2021-1020	10/20/2021	Core	Arthropoda	Crustacea	Amphipoda	Talitridae	Hyalella sp.	7	L	20		30.00	FALSE	scud
Durez Inlet	350.5-045	URA-BC-02-A-2021-1020	10/20/2021	Core	Mollusca	Gastropoda	Mesogastropoda	Valvatidae	Valvata tricarinata	1	L	20		30.00	FALSE	snail
Durez Inlet	350.5-045	URA-BC-02-A-2021-1020	10/20/2021	Core	Annelida	Oligochaeta	Tubificida	Tubificidae	Tubificidae w/o cap. setae	1	L	20		30.00	FALSE	worm
Durez Inlet	350.5-045	URA-BC-02-A-2021-1020	10/20/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Ablabesmyia sp.	1	L	20		30.00	FALSE	midge
Durez Inlet	350.5-045	URA-BC-02-A-2021-1020	10/20/2021	Core	Annelida	Oligochaeta	Tubificida	Tubificidae	Tubificidae w/ cap. setae	1	L	20		30.00	FALSE	worm
Durez Inlet	350.5-045	URA-BC-02-A-2021-1020	10/20/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Tanypus sp.	1	L	20		30.00	FALSE	midge
Durez Inlet	350.5-045	URA-BC-02-A-2021-1020	10/20/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Polypedilum halterale gr.	1	L	20		30.00	FALSE	midge
Durez Inlet	350.5-045	URA-BC-02-A-2021-1020	10/20/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Parachironomus sp.	1	L	20		30.00	FALSE	midge
Durez Inlet	350.5-045	URA-BC-02-A-2021-1020	10/20/2021	Core	Arthropoda	Insecta	Ephemeroptera	Caenidae	Caenis sp.	2	L	20		30.00	FALSE	mayfly
Durez Inlet	350.5-045	URA-BC-02-A-2021-1020	10/20/2021	Core	Arthropoda	Insecta	Collembola		Collembola	3	L	20		30.00	FALSE	Springtail
Durez Inlet	350.5-045	URA-BC-02-A-2021-1020	10/20/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Paratanytarsus sp.	1	L	20		30.00	FALSE	midge
Durez Inlet	350.5-047	URA-BC-02-B-2021-1020	10/20/2021	Core	Arthropoda	Insecta	Diptera	Chironomidae	Cryptochironomus sp.	1	L	2		30.00	FALSE	midge
Durez Inlet	350.5-047	URA-BC-02-B-2021-1020	10/20/2021	Core	Arthropoda	Crustacea	Amphipoda	Talitridae	Hyalella sp.	1	L	2		30.00	FALSE	scud
Durez Inlet	350.5-049	URA-BC-02-C-2021-1020	10/20/2021	Core					No Specimens present in sample	0	L	0		30.00	FALSE	

Notes:
ID: identification
WAA: Watershed Assessment Associates