

APPENDIX Q
GLOSSERY OF TERMS

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<i>Term</i>	<i>Definition</i>
Area of Influence	The extent of area around a node with elevated PCB concentrations that is subject to further response action (re-dredging or capping).
Backfill	The material (sand or sand and gravel) used to cover dredged areas to sequester residual concentrations and help achieve planned elevations.
Blinding	The material being treated completely clogs the screen, causing it to be ineffective.
Booms	A curtain-like device deployed to contain and prevent the further spread of oil or sheens on the water surface.
Bridging	The sediment or material being unloaded braces itself between the openings of the grizzly screen, blocking the open area, thus not allowing additional sediment or material to pass through the screen.
Bucket cycle	Duration to dredge and empty one bucket. This includes submersion of the bucket in the water, closure of the bucket to "dig" material, hoisting of the bucket through the water column to the hopper barge, emptying the bucket contents into the hopper barge, and returning the bucket to its starting position.
Capping	The material used to cover dredge areas when PCB concentrations are too high to allow backfill. Unlike backfill, caps have an erosion protection layer to help ensure they stay in place during higher flows.
Case	The eight different action levels governing further response actions, as set forth in the Residual Performance Standards. The cases go from Case A through Case H.
Check dams	Small dams built to reduce erosion by lowering the velocity of stormwater and allowing the sediments to settle.
Coarse material	Includes material that is rejected by the trommel's grizzly screen, material that is screened by the trommel, material that is separated by the intermediate screen, and sand that is removed from the sediment by the hydrocyclones.
Confidence level	An indicator of the relative certainty of the calculated Tri+ mass per unit area (MPA). High confidence are complete cores (i.e., those with a total PCB concentration less than 1 mg/kg in the bottom section, thus indicating that the complete PCB inventory was captured). Low confidence cores include all other cores where the depth to clean sediment was estimated using extrapolation or other means. No confidence cores are cores where the depth to clean sediment was highly uncertain or unknown.
Certification Unit (CU)	Discrete dredge areas approximately 5 acres in size (with some exceptions). Dredging occurred in 10 of the 18 CUs targeted in Phase 1.
Depth of contamination	The depth to the first 6-inch slice with Total PCB concentration less than or equal to 1 mg/kg.
Design cut pass	Refers to the initial dredge pass. The volume associated with dredging the design cut is the same as the volume associated with the design inventory.
Design cut prism	The dredge prism associated with the design cut pass.
Design inventory	The inventory sediment contained within the Design Dredge Prism, as modified to account for offsets and setbacks from in-river and shoreline structures.
Effective working time	The time spent working on the planned activity for the period during which equipment was crewed and available to work. Effective working time does not include planned or unplanned delays.
Extra inventory	The additional volume of sediment identified for removal based on residual sampling results collected after the dredging achieved the required design elevations. Extra inventory is calculated as any volume associated with re-dredge cuts greater than 6 inches conducted after the design cut pass.
Feed chute	The intake to the trommel barrel where sediments are loaded prior to being screened.
Filter cake	The dewatered sediment produced by the filter presses during the dewatering process.
Filter press	A piece of equipment that utilizes high pressure to squeeze excess water from thickened fine sediments.
Fines	Sediments made up of particles less than 400 mesh or smaller in diameter.
Grab samples	Ponar grab samples which sampled nominally 6 inches of sediment. These types of samples are collected when cores could not be obtained after three attempts.
Granular activated carbon (GAC)	The form of carbon that has been processed to make it extremely porous and thus to have a very large surface area available for adsorption of PCBs. Vapor-phase GAC is used to remove PCBs from air inside the filter cake staging enclosures. Liquid-phase GAC is used in the Water Treatment Plant to remove PCBs from process water and stormwater prior to discharge.
Gravity thickener	A large tank in which fine-grained sediment is mixed with a stabilizing polymer and then allowed to settle and thicken. The bottom of the tank is shaped like a cone (with the tip pointing downward) to enhance the gravitational force that pulls the sediments together. A low-speed rotating rake at the bottom of the thickener moves the thickened sediment to the center of the cone so that it can be pumped out of the tank. "Clear" water from the settling process flows over a weir at the top of the gravity thickener tank and is then pumped to the Recycle Water Storage Tank, where it is recycled as process water through the Sediment Processing Facility.
Grizzly screen	A protective metal screen with 12-inch openings fitted to the feed chute of the trommel and designed to prevent debris and materials larger than 12 inches in diameter from entering the feed chute and potentially damaging the rotating screen of the trommel.
Hopper barges	Non-powered vessels used to receive dredged sediment/debris and transport the material within the river and to the Sediment Processing Facility. Tug boats were used to reposition and transport the hopper barges. Two types of hopper barges were used during Phase 1. Regular hopper barges had dimensions of 195 feet long, 35 feet wide, and 12 feet deep and were used to transport dredged material to the Sediment Processing Facility. Mini-hopper barges and supermini-hopper barges were used to support dredging in shallow water areas and to transport dredged material to a transloading operation for re-loading of the material into regular hopper barges prior to transport to the Sediment Processing Facility.
Hydrocyclone	A piece of equipment that uses centrifugal force to separate the fine particle sediment fraction from the heavier sand fraction.
Inclined-plate clarifier	Another type of gravity settler used to settle and remove suspended solids from process water or stormwater. The plates in the unit provide a large surface area for the settling of the solids to occur.
Ineffective time	Time spent not working on the planned activity due to delays. See non-effective working time.
Intermediate screen	A secondary screen that further separates materials by size. Materials greater than ¼ inch are screened from the dredged sediment at this step and staged for disposal without further processing.

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Lost time	The time spent not working due to delays that were unforeseen or normally considered outside of the project's control. Examples are weather-related delays and delays associated with resuspension standard related shutdowns.
Next action	The further response action at a node in a CU as required by the residual performance standards. The three possible next actions are backfill, re-dredge, or cap.
Non-effective working time	The time spent not working on the planned activity due to delays that are considered necessary for the dredging process, during the time period that equipment was crewed and available to work. Non-effective working time does not include any lost-time delays.
Pass	The removal of all sediment within a CU to the elevations defined by a dredging prism (either prism set during design or the prism established for re-dredging).
PCB transect surveys	PCB sampling was conducted along cross-channel transects and set points around specific dredging operations to determine the effect of dredging operations on the PCB load measured at the Thompson Island Dam far-field station.
Plume	The area downstream of dredging operations discernable by visible changes in color or measured turbidity vales.
Polymer optimization	The process of adjusting the amount of polymer added to the gravity thickener and filter press under flow. The purpose of this step is to achieve the addition of an agent at the gravity thickening stage to stabilize fine sediments and consolidate them for further processing.
Process water	Water recycled and used in the sediment treatment process.
Re-dredge pass	Refers to all subsequent dredging passes after the initial design cut dredge pass was completed.
Residual cores	Cores sampled after each dredging pass to assess compliance with the Residuals Standard
Residual dredging	The dredging necessary to remove the thin layer of residual sediment following the design or extra inventory dredge cuts. Residual dredging volumes are calculated as any volume associated with last dredge cuts of 6 inches or less.
Residual node	Refers to the target locations for residual core sampling. There were generally 40 locations in a triangular grid in each CU, in addition to shoreline nodes located in shoreline areas.
Scow	Vessels used to receive dredged sediment/debris and transport the material within the river and to the Sediment Processing Facility. See also hopper barges.
Shoreline area	Areas parallel to the shoreline where the depth of dredging was defined using a 2-foot vertical cut at the shoreline and a 3:1 slope away from that cut until it intersected the original dredge prism based on the depth of contamination. Shoreline areas were subject to a different set of residual standards - individual sample Total PCB concentrations were compared to a 50 mg/kg Total PCB level for determination of appropriate next actions.
Slurry	A mixture of dredged sediments and excess river water. Additional process water is added to the slurry at various locations in the Sediment Processing Facility so that the slurry may be conveyed to the various unit processes.
Spill plate	A large steel plate positioned between the barge and the unloading wharf to prevent sediment from entering the Champlain Canal during unloading.
SSAP cores	Cores collected during the dredge delineation and design include data from the Sediment Sampling Analysis Program (SSAP), the Supplemental Engineering Data Collection programs, and numerous data gap sampling programs, including shoreline coring programs. In this report, cores from all of these sampling efforts are collectively referred to as the SSAP cores. These cores were collected from 2002 to 2008.
Sub-unit	Divisions of a certification unit, nominally 1 acre in size, used for managing field operations and surveying.
Transloading	The process of moving sediment from a regular hopper barge or mini-hopper barge to another regular hopper barge prior to transport to the Sediment Processing Facility.
Trommel	A large (10-foot-diameter) revolving screen used to remove rocks and coarse material greater than 5/8 inch in diameter from the dredged sediment.
Unavailable time	The time spent not working as equipment or crew are not available. Examples of this are maintenance day shutdowns, and holidays.
Unit train	A train composed of 81 rail cars.
Vibratory dewatering	A process by which rapid vibrations are used to help separate solids from process stream. Material from the intermediate screen and hydrocyclones is discharged onto a vibratory screen and shaken to release the excess water before it is transferred to the coarse material staging area prior to transportation and disposal.
Weigh-in-motion scale	A scale installed at the side of the track to capture and record rail car weights as they roll over a sensor.