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FIELD ACTIVITIES AND METHODS

This appendix summarizes field activities conducted between February 1996 and January 1997 as part of the Whatcom Waterway Remedial Investigation for Georgia-Pacific West Inc; assesses the adequacy of the project Health and Safety Plan (HSP); and presents the logs of explorations and sampling data. Field sampling, handling, and documenting were conducted in general accordance with the approved Project Plans (Hart Crowser, 1996a, 1996b, and 1996c). Refer to these Project Plans which contain the HSP, SAP, and QAPP for specific details. A brief summary of field activities and sample collection methods are provided below along with a discussion of modifications to the approved plans.

A.1 Summary of Field Activities

Water, surface sediment, underpier sediment, and subsurface sediment quality sampling was performed in the Whatcom Waterway Area (WW Area). The WW Area includes the Whatcom and I&J Street Waterways, the mouth of the Whatcom Creek, the G-P Log Pond, and subtidal areas around the G-P biotreatment lagoon and the Cornwall Avenue Landfill. The majority of field work was conducted from August 29 through October 19, 1996. A physical survey of waterway shoreline and structures was conducted on February 13, 1996, and wet season seep/outfall sampling was conducted on April 23, 1996. Sediment traps were initially deployed on October 8, 1996, and were redeployed on January 30, 1997. The second round of sediment trap samples will be collected in May 1997. This sampling was performed by Hart Crowser and subcontractor personnel. Field activities included the following:

- van Veen grab sampling of surface sediments;
- Structures survey;
- Underpier diver core sampling;
- Potentially significant source sampling (seeps, creeks, outfalls) during the wet and dry season;
- Subsurface sediment core sampling;
- Natural recovery core profiling;
- Sediment trap deployment and suspended particulate material sampling;
- Water column sampling;
- Bathymetry survey; and
- Shoreline Habitat Survey

A chronology of field sampling activities is presented in Table A-1.

A.2 Water Sampling

A.2.1 Wet and Dry Season Potential Significant Source Sampling

The wet season sampling event was conducted on April 23, 1996, after a locally recorded rainfall of 0.68 inch for the previous 24-hour period (7 a.m. to 7 a.m. of 4/23/96) the highest daily accumulation recorded for the month of April. The low tide for April 23, 1996, was 0.6 foot MLLW at 3:30 p.m. Seattle time. Nine water samples were collected plus one field duplicate and one field blank.

The dry season sampling event was conducted on September 26, 1996, after three days of no recorded rainfall in Bellingham, Washington. The low tide for September 26, 1996 was 1.1 feet MLLW at 10:27 a.m. Seattle time. Eight water samples were collected plus one field duplicate and one field blank.

Both sampling events were conducted in one day during the low tide period in general accordance with Section 2.2 of the approved SAP. All samples were collected by direct bottle filling or peristaltic pump methods. When the pump was used, the tubing was placed directly into the flow and pumped directly into sample bottles. A peristaltic pump and in-line 0.45 micron filter were used for all dissolved metal samples. Sample locations are presented on Figure 8-1. Field parameters (temperature, pH, salinity, dissolved oxygen, turbidity, and flow rate) were measured at each sampling locations and are summarized on Tables A-2A and A-2B for wet and dry season sampling, respectively.

A.2.2 Water Column Sampling

Water samples were collected from five locations for low-level mercury analysis using a peristaltic pump and direct bottle filling techniques on January 27 and 28, 1997 (Figure 8-2). Samples were collected under the direction of Battelle from the *R/V Shelley Marie* vessel and submitted to Battelle Laboratory for dissolved mercury, filtrate mercury, and TSS analysis. Samples were collected in general accordance with Addendum No. 1 to the Project Plans dated November 27, 1996 (Hart Crowser, 1996d). Two bottom water samples (HC-SW-100 and HC-SW-101) were co-located with the sediment trap locations and collected 3 to 5 feet above the seafloor. One final effluent sample (HC-SW-99) was collected at the discharge from the G-P biotreatment lagoon. Two background samples (HC-BC-100 and HC-BC-101) were collected in Bellingham Bay. HC-BC-100 was surface sampled (upper 3 feet of the water column) near the mouth of the Nooksack River, and HC-BC-101 was bottom sampled at an ambient background area located near the outer coast of Lummi Island.

The five water samples will field filtered using a peristaltic pump, teflon tubing, and in-line 0.45 micron filter. The dissolved water fraction and the filtrate fraction (retained on the filter) were analyzed for low-level mercury and total suspended solids. These values were used to help derive a site-specific mercury K_d for the WW Area (see Section 8.1 and Table 8-1 for discussion).

Ultra-clean sampling techniques were used to preserve the integrity of the samples for low-level mercury analysis. All sampling equipment, including sample bottles, peristaltic tubing, Niskin bottles, and sampling weights were coated with teflon and pre-cleaned with an acid wash.

QA/QC Samples. During potential source sampling events, two field duplicates labeled HC-SW-100-W and HC-SW-100-D were collected from locations HC-SW-07-W and HC-SW-11-D, respectively. To "homogenize" these water samples and their duplicates, each sample container was partially filled with equal volumes of sample water from the discharge flow (approximately one-third), and continued in the same manner with subsequent collections until all sample jars (including the duplicate) were filled. Two field blanks labeled HC-SW-FB-W and HC-SW-FB-D were collected using direct bottle filling and peristaltic pumps methods near the HC-SW-02 and HC-SW-04A locations, respectively.

Five field replicates (HC-BC-100R, HC-BC-101R, HC-SW-99R, HC-SW-100R, and HC-SW-101R) were collected, one at each sampling location, during the low-level mercury sampling to assess natural variability of the seawater samples. Replicates were co-located within 10 feet of sampling locations and analyzed for dissolved and particulate mercury. One field blank (HC-FB-03) was collected by running deionized water through the peristaltic pump and tubing and collecting the water in a sample bottle. The MS/MSD sample was collected at HC-BC-100 sample location.

A.2.3 Modifications to the Water Sampling Plans

Modifications to the RI/FS Project Plans for water sampling and significant comments include the following:

- During the wet season sampling event, proposed locations HC-SW-03, HC-SW-05, HC-SW-08, and HC-SW-09 did not exhibit any flow and therefore were not sampled.

- During the dry season sampling event, proposed locations HC-SW-03, HC-SW-05, HC-SW-06, HC-SW-08, and HC-SW-09 did not exhibit any flow and therefore were not sampled.

- No significant seep was observed along the intertidal bank near the proposed HC-SW-01 location. The adjacent City of Bellingham storm drain outfall located near the former R.G. Haley site was sampled instead.

- Water sample HC-BC-100 was not collected at the mouth of the Nooksack River because of shallow water and limited vessel access; the sample was collected approximately one mile upstream from a bridge located near the Town of Marietta.

- Published accuracy of the *R/V Shelley Marie's* DGPS is approximately 6 meters.

- The designation "BC" was used for background samples instead of "BG."

A.3 Surface Sediment Sampling Methods

Surface sediment samples (0 to 10 centimeters) were collected at sixty-four locations, including forty-eight surface sediment chemistry locations, and sixteen surface samples co-located with core locations using van Veen grab methods as described briefly below. All samples were submitted for chemical and physical testing and twenty-two of these samples plus three reference site samples were also submitted for bioassay analyses based on rush Mercury results as discussed in Section 3.2 of the SAP. Surface sediment sampling was conducted in general accordance with the approved Project Plans; modifications to the SAP are described at the end of each section. Refer to Section 3.0 of the SAP and Section 5.0 of the QAPP for detailed descriptions of sampling methods, sample handling, decontamination, and custody protocols.

Surface sediment sample locations are presented on Figures 2-2 and 2-3. A summary of surface sediment sample locations, dates, and mudline elevations is presented in Table A-3. Surface sediment (van Veen) sampling information (deployment record, recovery, sample depth, and volume) is summarized in Table A-4A; visual van Veen sediment sample descriptions are summarized in Table A-4B.

A.3.1 van Veen Surface Grab Sampling

A 60-liter (20 liters in the top 10 cm) stainless steel hydraulic van Veen grab sampler deployed from the vessel *R/V Nancy Anne* was used to collect surficial (0 to 10 cm) sediment samples for chemical, biological, and physical testing. This sampler was designed by Marine Sampling Systems (MSS) to collect large volumes of sediment from difficult matrices and bottom conditions. Other

instruments used to collect surficial samples included a siphon hose to remove standing water, and stainless steel trowels, spoons, and bowls to sample and mix the sediments as described in Section 3.7 of the SAP. A qualified field geologist logged each sediment sample after van Veen retrieval and acceptance. Sample information recorded at each location included coordinates, mudline elevation, date, time, visual description of sediment, estimations of percent wood by volume, number of deployments, recovery depth, sample I.D., and list of analytes as described in Section 3.8 of the SAP. Sampling equipment was decontaminated prior to and between sampling activities as outlined in Section 3.5 of the SAP. Sample containers were placed in cooled ice chests until transfer to specified laboratory as described in Sections 5.4 through 5.7 of the QAPP.

Field QA/QC. Three homogenized field duplicates were collected from surface sample locations HC-SS-25, HC-SS-30, and HC-SS-41 and labeled HC-SS-202, HC-SS-203, and HC-SS-204, respectively. One homogenized field duplicate was collected from co-located surface sample HC-SC-79 and labeled HC-SS-205. Homogenized duplicates were collected as separate jars filled from the same mixing bowl to assess laboratory variability. Duplicates were analyzed for SMS chemicals, TOC , grain size, and total solids (TS).

Two rinseate blanks were collected during surface sampling activities to assess the effectiveness of decontamination procedures. The rinseate blanks consisted of deionized water collected from decontaminated stainless steel sampling spoons and bowls and/or the van Veen grab sampler. The rinseate blanks were labeled HC-RB-1 (collected from the mixing bowls during collection of surface sediment samples) and HC-RB-2 (collected from the van Veen sampler during collection of surface sediment samples). Rinseate blanks were analyzed for SMS metals, PCBs, TOC, and semivolatiles.

A.3.2 Modifications to the Surface Sediment Sampling Plans

Modifications to the RI/FS Project Plans and other significant comments for surface sediment sampling include the following:

- A 0.3-cubic-foot (60 L) hydraulic van Veen sampler designed by marine sampling system (MSS) was used for surface grab sampling instead of a 0.1 m^2 sampler.

- Surface sediment grab samples were homogenized using a motorized stainless steel paddle wheel operated from a portable makita drill.

- Because of the volume of jars generated for bioassay testing, blue ice was supplemented with crushed ice to keep the samples at 4°C.

- The beaker used for field wet sieving broke, therefore a "rough" volume container was used for sieving volumes on selected samples (see notes), these results have accuracy of ±10 to 15 percent. In addition, samples collected on the last two days were sieved in the EVS lab and not in the field.

- Surface sediment samples HC-SS-38 and HC-SS-39, located in Whatcom Creek were not accessible by large vessel at high tide or by foot at low tide. These samples were collected from a small skiff using a ponar sampler. Maximum penetration ranged from 8 to 10 centimeters. Approximately 30 to 50 deployments were necessary at each location to collect adequate volume for analyses.

- The *R/V Nancy Anne* vessel was used for sediment grab sample collection and processing.

- Regarding van Veen grab acceptances, if the sampler was overfilled in the very center, but the sediment appeared to be intact with overlying water and low turbidity further out from the center, the grab was occasionally accepted. Typically, such samples were accepted only at difficult locations following multiple rejections of the grab samples. Samples were collected only from the areas of the sampler that appeared intact with overlying water and not in contact with the top of the sampler.

A.4 Subsurface Sediment Core Sampling and Processing

Eighteen chemistry cores, three natural recovery cores (discussed in Section A.5), and eight diver cores were collected during the RI/FS field activities in September and October 1996. The three core types listed above were processed differently, and each method is summarized below. The subsurface sediment cores and natural recovery cores were advanced using vibracoring methods deployed from the research vessel *R/V Nancy Anne*. The underpier cores were advanced using hand-pushed diver cores deployed from the research vessel *R/V Shelley Marie*. Sediment core sampling, decontamination, and processing were conducted in general accordance with the approved project plans (Sections 4.4, 4.5, 4.7, and 4.8 of the SAP).

Core locations are presented on Figures 2-2 and 2-3. Core positioning coordinates, water depths, subsampling, and percent recoveries are summarized in Tables A-3 and A-5. Core logs and geologic descriptions are compiled on

Figures A-2 through A-28. A key to sediment log descriptions is presented on Figure A-1.

Sediment core depths ranged from 4 feet below mudline in the underpier areas to 22 feet below mudline near the mouth of the waterway. Some compaction of sediments was expected during core tube advancement as a result of the vibracoring and hand-pushing techniques. Compaction ranged from 0 to 50 percent. Compactions greater than 35 percent were generally not accepted unless difficult coring conditions (e.g., wood, concrete debris) precluded better recovery.

A.4.1 Bulk Chemistry Cores

Bulk chemistry subsurface sediment cores were advanced at eighteen locations (HC-VC-70 through HC-VC-85) using a vibracore operated by MSS of Burley, Washington, from September 10 through 13, 1996. Sediment cores advanced in the Whatcom Waterway were spaced approximately 400 to 700 feet apart and advanced to depths of 10 to 22 feet below mudline. Sediment cores located in the I&J Street Waterway were spaced approximately 1,000 feet apart and advanced to depths of 10 feet below mudline. Proposed depths were designed to extend 5 feet below the contact with native sediments, generally corresponding to the depth of the deepest historical dredging event.

After the cores were retrieved and accepted, core tubes were sectioned, capped, sealed, labeled, and stored upright in an insulated core box filled with ice until transport to the on-site Hart Crowser mobile laboratory for processing. Cores were handled in general accordance with Section 4.7 of the SAP.

Subsample intervals from cores HC-VC-70 through HC-VC-85 depended on visual inspection of the cores. Unless the observed stratigraphy indicated otherwise, three to four vertically composited subsamples were at approximately 2.5-foot-depth intervals. The intervals and thicknesses for each core subsample are recorded in Table A-5 and on Figures A-2 through A-28. In addition, a co-located surface grab sample (0 to 10 cm) was collected at each of the subsurface core locations and labeled HC-SC-70 through HC-SC-85.

Intervals and thicknesses were corrected for artificial compaction during sampling, likely caused by sediment dewatering by the vibracore. Percent recovery is the ratio of the thickness of recovered sediment to the total length that the core tube was advanced, expressed as a percentage. Percent compaction is the complement of percent recovery [100 - (recovery length/drive length) * 100]. A core expansion factor can also be calculated as the ratio of drive length to recovery length. Core subsampling intervals have

been corrected for sampling-induced compaction and adjusted to fill the entire drive length by multiplying by an appropriate expansion factor.

In total, 55 subsurface core samples and 54 natural recovery sediment samples from selected depths were submitted to MultiChem Analytical Services (MultiChem) for chemical analyses and the Hart Crowser Geotechnical lab for physical analyses. Remaining depth interval samples were archived (frozen) for possible future analysis.

Field QA/QC. Two homogenized sediment duplicates were collected from the bulk chemistry samples in subsurface cores. Duplicates were processed in the Hart Crowser on-site mobile laboratory under the direction of the on-site Hart Crowser field geologist. Duplicates of HC-VC-80-S2 and HC-VC-81-S1 were collected and labeled as HC-VC-206 and HC-VC-207, respectively.

A rinseate blank of a decontaminated core barrel was collected by pouring deionized water down the inside of the core barrel and collecting the water directly into sample containers. The field rinseate blank was labeled HC-RB-03. One rinseate blank of laboratory core sample processing tools was collected and labeled HC-RB-05. Rinseate blanks were analyzed for SMS metals, PCBs, TOC, and semivolatiles.

A.4.2 Underpier Diver Cores

Eight diver hand-pushed cores (HC-DC-86 through HC-DC-93) were collected from selected underpier areas of the G-P and WIST piers located in the Whatcom Waterway. Cores were collected and processed on October 8, 1996, from the research vessel *R/V Shelley Marie*.

Prior to sampling, the diver observed the following bottom conditions near the proposed sampling area: visibility, slope, surface bottom characteristics, presence of debris and biota, water depth, average sediment accumulation, and general condition of underwater piles. Sediment accumulation was estimated using a 4-foot-long, 1/2-inch-diameter stainless steel T-probe in a radial area around the location. The diver used a 4-foot-long, 3-inch-diameter, stainless steel T-handled push core fitted with a plexiglass inner sleeve to collect the underpier cores. After driving the corer, surrounding sediment was brushed away and a bottom cap was placed on the corer prior to retrieval. Total drive depth below mudline was generally 3 to 4 feet. Drive depth was limited to diver manageability of the equipment and not based on sediment refusal (i.e., hitting riprap). Compaction values ranged from 30 to 50 percent (smaller diameter cores tend to have larger compaction values). Two subsamples were collected

per diver core and depths were recalculated to account for sampling-induced compaction.

Seventeen diver core sediment samples were submitted to MultiChem for chemical analyses and to Hart Crowser for physical analyses. No samples were archived.

Field QA/QC. A rinseate blank of a decontaminated diver hand-push core barrel was collected by pouring deionized water down the inside of the core barrel and collecting the water directly into sample containers. The field rinseate blank was labeled HC-RB-04 and was analyzed for SMS metals, PCBs, TOC, and semivolatiles.

A.4.3 Modifications to the Subsurface Sediment Sampling Plans

Modifications to the RI/FS Project Plans and other significant comments for subsurface sediment sampling include the following:

- Vibracoring methods were used for subsurface cores instead of the proposed impact coring methods because of contractor availability. Core sample nomenclature changed from "HC-IC-70" with the "IC" representing impact core sampling methods to "HC-VC-70" with the "VC" representing vibracor sampling methods.

- The vertical extent of the underpier sediment profile (from mudline down to riprap) was not concluded. Most of the diver cores were advanced to a maximum depth of 4 feet below mudline, with soft sediments still encountered at 4-foot depths.

- Diver core HC-DC-93 had 2 feet of core penetration; only one sample (0 to 2 feet) was collected.

- Sediment cores HC-VC-75, HC-VC-80, HC-VC-84, HC-VC-85, and HC-VC-86 were accepted with less than 75% recovery. Several core attempts were made to improve sediment recovery; extremely soft sediment, the nature of the sampling methods, and wood debris were the likely causes of reduced recovery.

A.5 Natural Recovery Sample Collection Methods

A.5.1 Natural Recovery Core Profiling

Three natural recovery sediment cores (HC-NR-100, HC-NR-101, HC-NR-102) were advanced for radionuclide and mercury profiling using vibracoring methods. Core locations were selected to represent a range of depositional environments and bathymetric depths encountered in the project area.

After the cores were accepted based on guidelines stated in Section 7.4.1 of the SAP, core tubes were packaged and transported to the on-site mobile laboratory for processing. Methodologies for sample collection, packaging, processing, location control, and documentation followed protocols outlined in the Section 7.4 of the project SAP. Table A-6 presents a summary of core subsample data.

Core tubes were stored in a stand-up freezer located at the G-P plant or a vessel core box until processing. The upper 90 centimeters of each core was subsectioned into 2 cm intervals, for a total of 45 samples from each core location. Fifty-four of the 2-cm core subsamples (eighteen from each core) were analyzed for lead-210, cesium-137, mercury, and total solids per the following guidelines:

- Every depth interval from the upper 20 cm of core was analyzed (10 samples);
- Every third interval (one sample every 6 cm) from the 20 to 50 cm section of each core was analyzed (5 samples); and
- Every seventh interval (one sample every 15 cm) from the 50 to 90 cm section of the core was analyzed (3 samples).

All remaining samples were archived at 4°C for possible future analysis. Although subsamples were cut at 2-cm intervals, these sample intervals were recalculated to account for sediment compaction during vibracoring. Recalculated subsample interval thicknesses range from 2.4 to 2.6 cm thick, as shown in Table A-6.

Field QA/QC. Three homogenized duplicates (one from each core) were collected and labeled HC-NR-209, HC-NR-211, and HC-NR-212 (HC-NR-210 was not collected) from cores HC-NR-100, HC-NR-101, and HC-NR-102, respectively. For adequate sample volume, the subsamples S-16 and S-17 from each core were combined, homogenized, and split into a 4-cm sample and a duplicate sample. The duplicate sample and the S-16/S-17 sample represents a

4-cm interval from 30- to 34-cm depths. Duplicate samples were analyzed for lead-210, cesium-137, mercury, and total solids. No rinseate blank was collected.

A.5.2 Sediment Trap Deployment

Two moored sediment traps were deployed on October 8, 1996, within 15 feet of core locations HC-NR-100 and HC-NR-101 and were designated HC-ST-100 and HC-ST-101 in general accordance with Section 7.4.2 of the SAP. These traps were moored approximately one meter off the bottom for approximately 3 months during typical low runoff (Fall/Winter 1996) conditions. Traps were retrieved on January 30, 1997, and redeployed to assess typical high runoff conditions (Winter/Spring 1997). The second round of sediment trap samples will be collected in May 1997.

Sediment traps used in this study were straight-sided glass cylinders with a collection area of 102.6 cm^2 and a height-to-width ratio of 5:1. Each sediment trap is 50.8 cm high and 11.43 cm inside diameter with a container volume of 5.21 liters. Traps were designed to hold 6 glass cylinders clustered in a 55-gallon plastic drum filled with 300 pounds of concrete mix at the bottom. The cylinders were encased in 5-inch PVC sleeves and secured inside the plastic drum.

After deployment, the sediment trap condition, placement, and surrounding sediment bottom was confirmed by divers. Moored traps were connected to 130-foot of weighted grappling line fitted with 5-pound weights and stretched-out for grapple hook retrieval.

Deployment procedures included the following:

1. Secure decontaminated glass cylinders inside PVC housing;
2. Fill cylinders half way with 2 liters of saline sodium azide solution containing blue dye for visual examination;
3. Top off cylinders with local seawater and cap each cylinder;
4. Lower trap to pre-determined location;
5. Before releasing the tethered line, confirm trap placement with diver;
6. Once placement has been approved, diver removes cylinder caps;
7. Remove tether line and drop 5-pound weight and weighted-line approximately 10-feet from trap;
8. Pull the grapple-line taut away from the trap and secure the end with 5-pound weight;
9. Record direction of the grapple-line and retrieve diver;

Retrieval procedures included the following:

1. Use grapple hook to find weighted line connected to trap frame;
2. Diver assesses condition of trap prior to retrieval;
3. Sediment trap is winched aboard the boat and hosed off;
4. Salinity and height of SPM accumulation is measured in each of the six cylinders;
5. Standing water (must be non-turbid) is siphoned off;
6. Remaining water, SPM material and DI spray water is decanted into 85 oz. wide-mouth amber glass containers; and
7. Each cylinder is decontaminated and filled with fresh sodium azide for redeployment.

A.5.3 Current Meters

This task was not completed during the RI/FS field activities. Western Washington University (WWU) conducted a study of currents, sediment transport, and water quality in Whatcom Waterway and inner Bellingham Bay (Colyer, in prep.). These data will be used to support the RI, and if needed, will be supplemented with additional current meter data.

A.5.4 Modifications to Natural Recovery Plans

Modifications to the RI/FS Project Plans for natural recovery sampling and significant comments include the following:

- Sediment traps were deployed from the *R/V Shelley Marie* research vessel. Natural Recovery cores were collected using vibracoring methods from the *R/V Nancy Anne* research vessel operated by MSS.

- Current meters were not deployed as noted above; information will be obtained from WWU.

A.6 Field Equipment Decontamination

Decontamination was conducted on all sampling equipment which may have contacted sample media as outlined in Section 3.5 and 4.5 of the final SAP. No solvents were used in the field to decontaminate sampling equipment.

No modifications to the approved project plans were noted.

A.7 Location Control and Documentation

Sampling location control was performed in general accordance with Sections 2.3, 3.6 and 4.6 of the SAP. Location control was set-up and performed by the Blue Water Engineering (Blue). Elevations in this study are referenced to Mean Lower Low Water (MLLW) datum. Horizontal locations are referenced to State Plane coordinates (SPC) NAD 83 North Zone datum. Confirmed SPCs and mudline elevations for each sample location are presented in Table A-3.

Sample locations were located by a Trimble DGPS positioning system to an accuracy of ± 3 meters. The trimble system accuracy is less than one meter; however, the project accuracy is ± 3 meters to account for other sampling errors such as recording delay, angle of winch line etc. Actual sample locations were located within 10 feet of the proposed locations unless otherwise noted. If necessary (i.e., refusal, obstructions), sampling locations were moved up to 50 feet from the proposed locations without Ecology approval. If a sampling location needed to be moved greater than 50 feet from the proposed location, Ecology approval was sought prior to sampling. If the sampling vessel could not reach the proposed location because of DGPS problems and/or interference from overhead objects, the sampling at that location was attempted at a later time when the satellites were in a different configuration. In cases when DGPS positioning methods were not accessible, horizontal triangulation methods were used and later translated to State Plane coordinates on AUTOCAD base maps.

Two wooden tide gages were installed in the Whatcom Waterway (end of WIST pier, near Colony Wharf dock) for local elevation references during field activities. Local tide readings were compared to a tidal software package used for predicted tide elevations at time of sampling.

A.7.1 Modifications to the Location Control Plans

Modifications to the RI/FS Project Plans and significant comments for location control methods include the following:

- Location control coordinates presented in the SAP were in LAT/LONG and NAD 27 datums. Coordinates used in the field were in NAD 83 North Zone datum. The confirmed coordinates for each location are presented in both SPC and LAT/LONG NAD83 datums for this report. Coordinate conversions were performed by the Blue Water Engineering for compatibility with the DGPS unit.

- Surface sediment sampling locations HC-SS-28, HC-SS-35, HC-SS-36, HC-SS-40, HC-SS-42, HC-SS-45, and HC-SS-48 were sampled 15 to 72 feet

from their proposed sampling locations. Reasons for relocation included poor recovery and penetration, rocky bottom conditions, or vessel obstructions.

- Location HC-SS-28 was moved 27 feet from proposed location after several unsuccessful attempts were made to penetrate through the wood chip mat on the sediment surface.

- Location HC-SS-35 was moved closer to shore to correlate with the City C Street outfall (25 feet from proposed location).

- Location HC-SS-36 was moved because of vessel obstructions with Ecology approval (72 feet from proposed location).

- Location HC-SS-40 was moved closer to shore to better represent sediments under the floating docks/undredged area (31 feet from proposed location).

- Location HC-SS-42 was moved eastward to the base of the riprap slope to gain adequate sample recovery after several unsuccessful attempts on the riprap slope (66 feet from proposed location).

- Location HC-SS-45 was moved closer to shore to characterize sediments close to the boat haul-out area with Ecology approval (60 feet from proposed location).

- Location HC-SS-48 was moved further offshore to improve sample recovery after several unsuccessful grab attempts from scattered surface debris. Location was also moved further northwest to collect sediment directly downstream of the City storm water outfall located at the head of the I&J Street Waterway (150 feet from proposed location).

▸ Tide readings from a predicted tide table software program were used at each sampling location. The tide table was then compared (5 times per day) to the tide gage installed near the mouth of the Whatcom Waterway.

▸ Other deviations from the work plans regarding specific location control are discussed in the appropriate sections above depending on the type of sample collected.

A.8 Sediment Quality Sample Handling

Sediment quality sample handling (collecting, packaging, transporting, and documenting) was performed in general accordance with Sections 3.7 and 4.7 of the SAP. On the sampling vessel, the field representative in the "support zone" labeled each jar with the sample identification information, filled and signed the custody forms, and checked each sample set before transport to the laboratory. The field person working in the "hot zone" composited and mixed the sediment samples, filled the sample jars with sediment, and placed the jars into cooled ice chests until transport to the specified laboratory.

Samples were transported to the MultiChem, EVS Consultants, on-site core processing area, and the Hart Crowser Soils Laboratory as appropriate every one or two days following proper chain of custody procedures as outlined in Section 5.4 of the QAPP. Subsurface core samples were processed in the Hart Crowser Mobile Laboratory situated in a covered area at the G-P Bellingham Plant. Cores were extruded (pushed or cut with a circular saw), logged, composited, and processed in this designated area. The sediment samples were submitted to the laboratories for selected chemical, physical, and biological analyses as specified in Appendices B, D, and E of this document.

No modifications to the approved project plans were noted.

A.9 Bathymetry Survey

A waterway bottom and underpier bathymetry survey was completed from October 7 to 10, 1996, by Blue Water Engineering, Inc., as outlined in Section 6.4 of the approved SAP. In summary, specific areas adjacent to the Whatcom and I&J Street Waterways (not covered by Corps Maintenance Surveys in dredgable areas) were mapped using hydrographic, sonar, and conventional (lead-line) survey techniques and included areas beneath selected structures over the water including but not limited to marinas, pier decking, and docks. Bathymetric cross-line traverses were completed, resulting in 1-foot elevation contours over the project area. The areal extent of the bathymetric survey and the trackline survey are presented on Figure A-29. The project base maps have been updated to include the new bathymetric data.

The following was completed during the hydrographic and conventional survey of the waterways:

- Bathymetric cross-line traverses were completed parallel and perpendicular to the shorelines in selected areas around the Whatcom and I&J Street Waterways. The traverses were spaced at 300-foot to 500-foot intervals

adjacent to the waterways and at 50-foot intervals in the G-P log pond. Elevations were taken along traverse lines at intervals not exceeding 10 feet. Layout may vary for localized areas with limited access, but general pattern and density of coverage were maintained.

- Survey methods and accuracy met requirements for U.S. Army Corps of Engineers Class 1 Hydrographic Survey (EM 1110-2-1003, 31 October 1994) (Corps, 1994). The Corps criteria identify the allowable error for the Class 1 survey as ± 0.5 foot for depth and ± 3 meters horizontal position.

- Underpier measurements were completed beneath selected structures over water in the Whatcom and I&J Street Waterways including but not limited to marinas, pier decking, and docks. In areas of potential obstructions transect lines may be skewed or offset.

- Hydrographic survey results were presented as non-biased data (e.g., not shoal- nor deep-biased); and

- The survey points used the North American Datum 1983 (NAD 83) State Plane Coordinate System 83 (SPCS 83) for horizontal control and Corps of Engineers (MLLW) datum for vertical control.

No deviations to the approved project plans were noted.

A.10 Shoreline Structures and Habitat Survey

A preliminary shoreline structures and habitat survey of the Port WIST, G-P pier, and other waterfront structures was conducted during the shoreline video survey, the underpier diver core sampling, the underpier bathymetry survey, and during vessel tours along the pier and shoreline areas. The structures survey pertaining to piers included the following observations:

- Pier deck construction and condition;
- Pile size, type, taper, and length;
- Spacing of pilings, bents, and fender piles;
- Presence of batter piles, cross beams, and other features limiting access;
- Slope protection or armoring beneath the piers;
- Structural condition of piles and piers; and
- Slope angle, construction, matrix, and presence of debris.

The shoreline habitat survey in non-pier areas included the following observations:

- Presence of debris (glass, wood, metal);
- Presence of biota;
- Substrate matrix and size (silt, sand, riprap, vertical bulkhead),
- Slope angle, and
- Outfalls.

Findings and observations from the shoreline survey are summarized on Figure 3-6 and in Table 3-1. The shoreline video survey of the WW Area was conducted on February 13 and October 6, 1996 and is summarized in Table A-7. A copy of the video survey is available upon request from the Hart Crowser project files.

A.11 Health and Safety Plan Assessment

This section presents an assessment of the Health and Safety Plan (HSP) for the Whatcom Waterway RI Sampling Project. The purpose of this assessment is to evaluate the adequacy of this plan for ensuring protection of personnel. We reviewed monitoring requirements, personal protective equipment (PPE), potential contaminant exposure, and physical hazards as they relate to field sampling tasks. Actual conditions encountered are discussed in relation to anticipated hazards. References to audits, accidents, exposures, or exceedence of monitoring levels are also included as applicable.

Field sampling includes sample collection, field and lab processing, and field transport.

Sample Collection. Limited exposure potential was observed during van Veen grab and subsurface sampling activities. Personnel handling the sediments were wearing modified Level D protection with uncoated Tyvek and chemical-resistant gloves. Respirators were available but not needed. Air monitoring equipment (MSA) was on site during collection activities and used when initial odors were observed. All air monitoring levels were below action levels. Field activities were monitored for hydrogen sulfide (H_2S) exposure by personal H_2S-sensitive badges. We observed no evidence of exposure during field activities.

Personnel on board the sampling vessel were required to wear personal flotation devices. Personnel followed decontamination procedures before moving from the exclusion zone, returning to the shore after intertidal sampling by foot, and before leaving the vessel.

Sample Processing. Field processing of water and sediments required direct handling of the sediments. Possible skin contact and ingestion of sediments

were kept to a minimum by wearing safety protection which included chemical-resistant gloves, tyvek suits, hard hats, safety glasses, and steel-toed boots. Inhalation routes of exposure for H_2S were minimized by working in well ventilated areas and wearing H_2S badges. Slight H_2S odors were often present in the van Veen grabs samples but the H_2S badges never changed color indicating that hydrogen sulfide never exceeded the PEL-TWA of 10 ppm.

Limited exposure potential was encountered during core processing on the vessel. The exterior of the core barrels were sprayed with seawater before placing on the vessel deck and direct handling of the sediments was limited. Laboratory processing required direct handling of the sediments for sample collection, handling, and packaging. Lab counters and tools were cleaned and decontaminated between each sample processing event, and at the end of each day.

Core processing was conducted at the Georgia-Pacific Plant facility. As part of the G-P Plant Health and Safety, Hart Crowser field representatives were required to attend a contractor safety orientation class. Field representatives were required to wear hard hats and contractor "safety stickers", safety glasses, and bail-out emergency respirators at all times in the core processing area.

Field Transport. Proper storing and packaging procedures for sample containers were followed to reduce exposure during field transport of samples. N-dex gloves were worn while handling sample jars. No other protective measures to prevent exposure were necessary.

Physical Testing. Physical testing included grain size analysis, Atterberg limits, and specific gravity tests. The testing of site sediments at the Hart Crowser Soils Laboratory followed the same Health and Safety laboratory procedures as indicated in sample logging and processing. Contaminated material was handling in a restricted area of the lab specifically for hazardous materials and a vacuum hood was used for sediments with heavy odors. No exposures from site sediments were noted.

A.12 References for Appendix A

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Hart Crowser, 1996a. Remedial Investigation/Feasibility Study Health and Safety Plan, Whatcom Waterway Site, Bellingham, Washington, April 8, 1996.

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Table A-1 - RI Field Sampling Chronology

Dates	Activity	Sampling Location
February 13, 1996	Site Reconnaissance and Shoreline/Structures Survey Video Survey	See Figure 3-6
April 23, 1996	Wet Season Water Sampling	HC-SW-01-W, HC-SW-02-W, HC-SW-04A-W/04B-W, HC-SW-06-W, HC-SW-07-W, HC-SW-10-W through, HC-SW-12-W
August 29 through September 10, 1996	Surface Sediment Grab Sampling	HC-SS-01 through HC-SS-48; HC-SC-70 through HC-SC-85
September 10, through September 13, 1996	Subsurface Sediment Coring	HC-VC-70 through HC-VC-85
September 13, 1996	Natural Recovery Core Collection	HC-NR-100, HC-NR-101, HC-NR-102
September 18, 1996	Underpier Diver Coring	HC-DC-86 through HC-DC-93
September 26, 1996	Dry Season Water Sampling	HC-SW-01-D, HC-SW-02-D, HC-SW-04A-D/04B-D, HC-SW-07-D, HC-SW-10-D through HC-SW-12-D
October 7, 1996	Underpier Leadline Bathymetry Survey	See Figure A-29
October 8, 1996	Sediment Trap Deployment Video Survey Completion	HC-ST-100, HC-ST-101 see Figure 3-6
October 9 and 10, 1996	Bathymetry Survey	See Figure A-29
January 27 and 28, 1997	Low Level Mercury Water Column Sampling	HC-SW-99, HC-SW-100, HC-SW-101, HC-BC-100, HC-BC-101

Table A-1 - RI Field Sampling Chronology

Dates	Activity	Sampling Locations
January 30, 1997	First Round Sediment Trap Retrieval	HC-ST-100, HC-ST-101
May 8, 1997	Second Round Sediment Trap Retrieval	HC-ST-100, HC-ST-101

Table A-2A- Field Parameter Measurements for Potential Significant Source Sampling Event - Wet Season
Whatcom Waterway Sediment Remediation Project

Location I.D.	Location Description	Flow Obser.	Sample Date	Sample Time	Temp in C	pH	Cond in uMos	Diss. Oxy in mg/L	Turbidity in NTU	Salinity in o/oo	Estimated Flow Rate in gpm	Observations
HC-SW-01-W	Haley outfall	Y	4/23/96	1710	13.1	7.5	223	10	39	0	480	sampled outfall, seep not observed. clear, no sheen/odor
HC-SW-02-W	City Storm	Y	4/23/96	1345	12.1	7.2	2450	5.1	17	0.11	24	clear, no sheen/odor
HC-SW-03-W	Head of Whatcom	N	Not sampled									
HC-SW-04A-W	Lower creek	Y	4/23/96	1515	12.7	7.4	940	9.7	37	0.04	142,730	brownish tinge, no sheen.odor
HC-SW-04B-W	Upper creek	Y	4/23/96	1530	12.7	7.3	131	9.6	9	0	same	brownish tinge, no sheen/odor
HC-SW-05-W	BMI outfall	N	Not sampled									
HC-SW-06-W	BMI surface seep	Y	4/23/96	1900	13	8.6	290	10	NR	0	2 to 5	clear, slight sheen on surface
HC-SW-07-W	City CSO outfall	Y	4/23/96	1630	12.2	7.4	173	9.2	44	0	800	brownish tinge, med-low turbid, no sheen/odor
HC-SW-08-W	C Street	N	Not sampled									
HC-SW-09-W	Hawleys	N	Not sampled									
HC-SW-10-W	Bornsteins	Y	4/23/96	1455	14	8.6	1850	7.5	52	1.5	0.07	green-black-red color, slight odor and sheen
HC-SW-11-W	City I&J Outfll	Y	4/23/96	1532	14.5	8.5	160	10	11	0	2	light gray, slightly turbid, no sheen/ odor
HC-SW-12-W	Ambient	Y	4/23/96	1900	11.2	7.8	37.2	NR	50	23.2	na	no sheen/odor
HC-SW-100-W	C street outfall	Y	4/23/96	1640	Duplicate of HC-SW-07-W							

Notes:
1. No seep was observed at HC-SW-01, so the nearby city outfall was sampled.
2. A field blank was collected near HC-SW-02 location through a peristaltic pump and tubing.
3. Samples were filled by direct-bottling methods except for dissolved metals, which used a peristaltic pump, tubing, and in-line filter.
4. Rainfall for the previous 24 hours (7am to 7am on 4/23/96) was 0.67 inch of rain in Bellingham, WA.

Table A-2B - Field Parameter Measurements for Potential Significant Source Sampling Event - Dry Season
Whatcom Waterway Sediment Remediation Project

Location I.D.	Location Description	Flow Obser.	Sample Date	Sample Time	Temp in C	pH	Cond in uMos	Diss. Oxy in mg/L	Turbidity in NTU	Salinity in o/oo	Estimated Flow Rate in gpm	Observations
HC-SW-01-D	Haley St. outfall	Y	9/26/1996	1120	15.6	8	435	7.3	2	0.01	120	sampled outfall, seep not observed. clear, no sheen/odor
HC-SW-02-D	City Storm	Y	9/26/1996	1015	15.4	8	770	2.4	1	0.41	4	clear, no sheen/odor
HC-SW-03-D	Head of Whatcom	N	Not sampled									
HC-SW-04A-D	Lower creek	Y	9/26/1996	1230	16.3	8.5	635	7	3	0.33	6,284	yellowish-brown tinge, no sheen.odor
HC-SW-04B-D	Upper creek	Y	9/26/1996	1310	14.5	8.9	182	7.1	4	0	9,800	brownish tinge, no sheen/odor
HC-SW-05-D	BMI outfall	N	Not sampled									
HC-SW-06-D	BMI surface seep	N	Not sampled									
HC-SW-07-D	City CSO outfall	Y	9/26/1996	1120	15.5	7.5	960	6.5	low	6.5 ppt	115	brownish tinge, mostly clear, no sheen/odor
HC-SW-08-D	C Street	N	Not sampled									
HC-SW-09-D	Hawleys	N	Not sampled									
HC-SW-10-D	Bornsteins	Y	9/26/1996	1300	17.2	7.8	480	7.5	low	2.5 ppt	1.8	reddish color, slight fishy odor, variable dishcharge rates
HC-SW-11-D	City I&J Outfll	Y	9/26/1996	1035	16.9	7.4	490	7.9	low	2.5 ppt	7	clear, no sheen /odor
HC-SW-12-D	Ambient	Y	9/26/1996	1330	14.7	7.5	1990	7	low	15 ppt	na	no sheen/odor
HC-SW-100-D	C street outfall	Y	9/26/1996	1035	Duplicate of HC-SW-11-D							

Notes:
1. No seep was observed at HC-SW-01, so the nearby city outfall was sampled. Variable discharge rate; within 5 minutes, discharge increased approx. 10 x..
2. A field blank was collected near HC-SW-04A location through a peristaltic pump and tubing and direct bottle filling.
3. Samples were filled by direct-bottling methods except for dissolved metals, which used a peristaltic pump, tubing, and in-line filter.
4. No recorded rainfall for the previous 3 days. Last recorded rainfall in Bellingham, WA. was on Sunday, 9/22/96. Stable, warm weather pattern all week.
5. Creek flow was very low compared to the wet season flow rates.

Table A-3 - Confirmed Water and Sediment Sampling Locations

Sample Location	Easting in Feet	Northing in Feet	Mudline Elevation in Feet MLLW	Sampling Date
Surface Sediment Samples				
HC-SS-01	1,235,572	635,118	-43.6	9/3/96
HC-SS-02	1,235,640	637,240	-44.2	9/3/96
HC-SS-03	1,236,360	636,362	-42.4	9/6/96
HC-SS-04	1,236,667	637,934	-36.2	9/3/96
HC-SS-05	1,236,927	639,729	-28.3	9/3/96
HC-SS-06	1,237,067	637,025	-34.0	9/6/96
HC-SS-07	1,237,724	637,014	-29.5	9/3/96
HC-SS-08	1,237,824	638,182	-28.5	9/6/96
HC-SS-09	1,238,594	637,895	-23.0	9/3/96
HC-SS-10	1,237,782	639,335	-36.0	9/3/96
HC-SS-11	1,237,805	640,558	-23.3	9/3/96
HC-SS-12	1,237,505	641,211	-21.0	9/3/96
HC-SS-13	1,238,613	640,933	-19.8	9/4/96
HC-SS-14	1,238,603	642,144	-18.0	9/4/96
HC-SS-15	1,237,983	642,066	-17.8	9/4/96
HC-SS-16	1,237,647	642,862	-16.0	9/4/96
HC-SS-17	1,238,059	643,366	-14.0	9/4/96
HC-SS-18	1,238,446	643,713	-10.3	9/4/96
HC-SS-19	1,238,593	639,252	-25.0	9/6/96
HC-SS-20	1,239,117	638,943	-19.4	9/4/96
HC-SS-21	1,239,186	639,779	-21.0	9/6/96
HC-SS-22	1,239,136	640,443	-31.0	9/6/96
HC-SS-23	1,239,113	641,449	-16.0	9/6/96
HC-SS-24	1,239,133	641,931	-15.3	9/6/96
HC-SS-25	1,239,118	642,429	-9.6	9/6/96
HC-SS-26	1,239,120	642,947	-6.9	9/5/96
HC-SS-27	1,239,111	643,452	-8.6	9/4/96
HC-SS-28	1,239,653	639,430	-15.8	9/6/96
HC-SS-29	1,240,409	639,988	-11.3	9/6/96
HC-SS-30	1,239,941	640,211	-25.6	9/6/96
HC-SS-31	1,239,623	640,425	-29.5	9/9/96
HC-SS-32	1,239,654	641,661	-9.0	9/5/96
HC-SS-33	1,240,108	641,965	-7.5	9/9/96
HC-SS-34	1,240,616	642,431	-12.9	9/9/96
HC-SS-35	1,240,832	642,775	-10.5	9/3/96
HC-SS-36	1,240,986	642,740	-16.0	9/5/96
HC-SS-37	1,241,408	643,119	-14.5	9/3/96
HC-SS-38	1,242,199	643,837	-0.2	9/9/96
HC-SS-39	1,242,379	644,089	-2.6	9/9/96
HC-SS-40	1,240,266	641,424	-8.4	9/5/96

Table A-3 - Confirmed Water and Sediment Sampling Locations

Sample Location	Easting in Feet	Northing in Feet	Mudline Elevation in Feet MLLW	Sampling Date
HC-SS-41	1,239,620	643,451	-3.3	9/5/96
HC-SS-42	1,238,912	643,884	-11.6	9/5/96
HC-SS-43	1,239,620	643,947	-3.9	9/5/96
HC-SS-44	1,239,500	644,070	-10.1	9/5/96
HC-SS-45	1,239,793	644,131	-13.1	9/4/96
HC-SS-46	1,239,963	644,572	-7.0	9/5/96
HC-SS-47	1,240,107	644,449	-7.1	9/4/96
HC-SS-48	1,240,194	644,711	-2.3	9/5/96
Co-Located Surface Sediment Samples				
HC-SC-70	1,238,700	640,282	-35.2	9/9/96
HC-SC-71	1,239,491	640,861	-34.1	9/9/96
HC-SC-72	1,239,946	641,307	-37.1	9/9/96
HC-SC-73	1,240,017	641,689	-27.4	9/9/96
HC-SC-74	1,240,483	641,267	-4.2	9/10/96
HC-SC-75	1,240,495	641,654	-12.2	9/10/96
HC-SC-76	1,240,833	641,868	-9.7	9/10/96
HC-SC-77	1,240,416	641,753	-30.7	9/9/96
HC-SC-78	1,240,478	642,121	-28.0	9/9/96
HC-SC-79	1,240,864	642,185	-33.8	9/9/96
HC-SC-80	1,241,173	642,673	-25.0	9/9/96
HC-SC-81	1,241,679	643,141	-19.2	9/9/96
HC-SC-82	1,241,932	643,281	-15.6	9/9/96
HC-SC-83	1,238,644	643,148	-17.7	9/9/96
HC-SC-84	1,239,327	643,846	-17.8	9/9/96
HC-SC-85	1,240,186	644,634	-16.6	9/9/96
Vibracore Sediment Samples				
HC-VC-70	1,238,704	640,281	-35.1	9/11/96
HC-VC-71	1,239,508	640,858	-32.0	9/11/96
HC-VC-72	1,239,961	641,299	-36.0	9/11/96
HC-VC-73	1,240,019	641,693	-28.0	9/12/96
HC-VC-74	1,240,477	641,275	-4.2	9/13/96
HC-VC-75	1,240,497	641,655	-12.0	9/12/96
HC-VC-76	1,240,831	641,877	-11.7	9/13/96
HC-VC-77	1,240,416	641,750	-30.7	9/12/96
HC-VC-78	1,240,479	642,119	-28.1	9/11/96
HC-VC-79	1,240,867	642,184	-35.0	9/12/96
HC-VC-80	1,241,171	642,673	-28.0	9/12/96
HC-VC-81	1,241,681	643,139	-20.0	9/12/96
HC-VC-82	1,241,927	643,277	-16.0	9/12/96
HC-VC-83	1,238,634	643,136	-17.8	9/10/96

Table A-3 - Confirmed Water and Sediment Sampling Locations

Sample Location	Easting in Feet	Northing in Feet	Mudline Elevation in Feet MLLW	Sampling Date
HC-VC-84	1,239,330	643,851	-17.6	9/11/96
HC-VC-85	1,240,185	644,634	-16.3	9/11/96
HC-NR-100	1,238,882	639,523	-21.9	9/13/96
HC-NR-101	1,238,858	641,865	-16.3	9/13/96
HC-NR-102	1,237,113	640,083	-26.0	9/13/96
Diver Core Samples				
HC-DC-86	1,239,364	640,641	-15 to 17.5	9/18/96
HC-DC-87	1,239,637	640,918	-15	9/18/96
HC-DC-88	1,239,909	641,181	-3 to -6	9/18/96
HC-DC-89	1,240,142	641,367	-2 to -6	9/18/96
HC-DC-90	1,240,823	642,033	-2	9/18/96
HC-DC-91	1,241,183	642,417	-1 to -5	9/18/96
HC-DC-92	1,241,460	642,699	-5	9/18/96
HC-DC-93	1,241,775	643,519	-5	9/18/96
Outfalls/Water Samples				
HC-SW-01	1,240,375	639,680	8	4/23/96 & 9/26/96
HC-SW-02	1,240,651	641,427	5	4/23/96 & 9/26/96
HC-SW-04A	1,242,179	643,879	3	4/23/96 & 9/26/96
HC-SW-04B	1,242,603	644,532	9	4/23/96 & 9/26/96
HC-SW-06	1,241,374	643,128	11	4/23/1996
HC-SW-07	1,240,812	642,967	4	4/23/96 & 9/26/96
HC-SW-08	1,240,801	642,960	6	not sampled
HC-SW-09	1,239,872	644,211	12	not sampled
HC-SW-10	1,240,008	644,377	8	4/23/96 & 9/26/96
HC-SW-11	1,240,266	644,798	5	4/23/96 & 9/26/96
HC-SW-12	1,236,654	641,255		4/23/96 & 9/26/96
HC-SW-99	1,239,768	642,102	NA	1/28/1997
HC-SW-100	1,238,849	641,847	-21	1/27/1997
HC-SW-101	1,238,899	639,535	-14	1/28/1997
HC-BC-100	1,216,500	658,600	-2.5	1/27/1997
HC-BC-101	1,195,322	618,985	-12	1/27/1997
Sediment Traps				
HC-ST-100	1,238,898	639,536	-14	1/30/1997
HC-ST-101	1,238,869	641,849	-21.8	1/30/1997

Table A-3 - Confirmed Water and Sediment Sampling Locations

Sample Location	Easting in Feet	Northing in Feet	Mudline Elevation in Feet MLLW	Sampling Date
Sediment Reference Sites				
HC-CR-02	1,186,451	127,903	-15.4	9/12/1996
HC-CR-22	1,183,186	126,893	-16.5	9/12/1996
HC-CR-24	1,184,115	127,029	-14	9/12/1996

Notes:
NAD 83 North Zone horizontal datum

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Table A-4A - van Veen Grab Surface Sediment Sample Collection Data

Sample Location	Sample Type	Sampling Date	Time	Sample Depth in cm.	No. of Deploy-ments	Recovery Depth in Inches	Redox Layer Depth in Inches	Selected Parameter List #	Analyses (1)	Comments
HC-SS-01	van Veen	9/3/96	9:30	0 to 10 cm	1	10	3	1	C, P, B	
HC-SS-02	van Veen	9/3/96	10:45	0 to 10 cm	1	11	5.5	1	C, P	
HC-SS-03	van Veen	9/6/96	15:20	0 to 10 cm	1	10	none	5	C, P, B	
HC-SS-04	van Veen	9/3/96	11:20	0 to 10 cm	1	10	5	1	C, P	
HC-SS-05	van Veen	9/3/96	12:00	0 to 10 cm	1	10.5	4	1	C, P	
HC-SS-06	van Veen	9/6/96	15:45	0 to 10 cm	1	10	none	5	C, P, B	
HC-SS-07	van Veen	9/3/96	12:30	0 to 10 cm	1	10	0 - 1	1	C, P	
HC-SS-08	van Veen	9/6/96	16:30	0 to 10 cm	1	8.5	none	5	C, P, B	
HC-SS-09	van Veen	9/3/96	13:15	0 to 10 cm	1	10.5	none	1	C, P	
HC-SS-10	van Veen	9/3/96	14:45	0 to 10 cm	1	9	3	1	C, P	
HC-SS-11	van Veen	9/3/96	17:30	0 to 10 cm	1	9.5	none	1	C, P	
HC-SS-12	van Veen	9/3/96	18:10	0 to 10 cm	1	9	none	1	C, P	
HC-SS-13	van Veen	9/4/96	9:00	0 to 10 cm	1	11	none	1	C, P, B	
HC-SS-14	van Veen	9/4/96	9:35	0 to 10 cm	1	10.5	5	1	C, P, B	
HC-SS-15	van Veen	9/4/96	10:15	0 to 10 cm	1	9	none	1	C, P, B	
HC-SS-16	van Veen	9/4/96	10:45	0 to 10 cm	1	10 *	none	1	C, P	
HC-SS-17	van Veen	9/4/96	11:20	0 to 10 cm	1	9	4	1	C, P, B	
HC-SS-18	van Veen	9/4/96	11:50	0 to 10 cm	1	9.5	none	1	C, P	
HC-SS-19	van Veen	9/6/96	16:50	0 to 10 cm	1	9.5	none	1	C, P, B	
HC-SS-20	van Veen	9/4/96	13:45	0 to 10 cm	1	9	4	1	C, P	
HC-SS-21	van Veen	9/6/96	17:10	0 to 10 cm	1	8	4	2	C, P, B	
HC-SS-22	van Veen	9/6/96	13:00	0 to 10 cm	1	10	4	2	C, P, B	
HC-SS-23	van Veen	9/6/96	12:15	0 to 10 cm	1	9	none	4	C, P, B	
HC-SS-24	van Veen	9/6/96	12:40	0 to 10 cm	1	10	none	4	C, P, B	
HC-SS-25	van Veen	9/6/96	14:35	0 to 10 cm	5	10	4	4	C, P, B	Dup collected HC-SS-202

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Table A-4A - van Veen Grab Surface Sediment Sample Collection Data

Sample Location	Sample Type	Sampling Date	Time	Sample Depth in cm.	No. of Deploy-ments	Recovery Depth in Inches	Redox Layer Depth in Inches	Selected Parameter List #	Analyses (1)	Comments
HC-SS-26	van Veen	9/5/96	16:30	0 to 10 cm	1	8.5	0	4	C, P, B	
HC-SS-27	van Veen	9/4/95	14:20	0 to 10 cm	1	8	2	1	C, P	
HC-SS-28	van Veen	9/6/96	11:40	0 to 10 cm	4	10 - 12	3 - 4 *	2	C, P	Wood bark/chips on surface
HC-SS-29	van Veen	9/6/96	10:50	0 to 10 cm	1	10 - 12	0	5	C, P, B	
HC-SS-30	van Veen	9/6/96	10:30	0 to 10 cm	1	12	0 - 1	5	C, P, B	Dup collected HC-SS-203
HC-SS-31	van Veen	9/9/96	9:00	0 to 10 cm	2	10	4	4	C, P, B	
HC-SS-32	van Veen	9/5/96	18:10	0 to 10 cm	2	7 - 9	0 - 1	4	C, P, B	
HC-SS-33	van Veen	9/9/96	10:00	0 to 10 cm	4	7 - 8	2	4	C, P, B	Wood logs on surface
HC-SS-34	van Veen	9/9/96	10:50	0 to 10 cm	1	8	1 - 2	5	C, P, B	
HC-SS-35	van Veen	9/3/96	16:10	0 to 10 cm	2	10	0 - 1	3	C, P, B	
HC-SS-36	van Veen	9/5/96	17:30	0 to 10 cm	1	10	0 - 1	3	C, P	
HC-SS-37	van Veen	8/3/96	17:00	0 to 10 cm	3	9	0 - 1	3	C, P	
HC-SS-38	van Veen	9/9/96	14:00	0 to 8 cm	32	2 - 4	1 *	3	C, P	
HC-SS-39	van Veen	9/9/96	16:30	0 to 8 cm	29	2 - 4	1 *	3	C, P	
HC-SS-40	van Veen	9/5/96	16:50	0 to 10 cm	1	10	0 - 1	1	C, P	
HC-SS-41	van Veen	9/5/96	15:15	0 to 10 cm	2	5	none	1	C, P, B	Dup collected HC-SS-204
HC-SS-42	van Veen	9/5/96	10:00	0 to 10 cm	2	8.5	none	1	C, P	
HC-SS-43	van Veen	9/5/96	14:20	0 to 10 cm	2	9	0 - 1	1	C, P	
HC-SS-44	van Veen	9/5/96	10:40	0 to 10 cm	1	10	none	1	C, P	
HC-SS-45	van Veen	9/4/96	15:00	0 to 10 cm	1	9.5	1	3	C, P	
HC-SS-46	van Veen	9/5/96	11:30	0 to 10 cm	2	8	1	1	C, P	
HC-SS-47	van Veen	9/4/96	16:05	0 to 10 cm	1	9	none	3	C, P	
HC-SS-48	van Veen	9/5/96	12:20	0 to 10 cm	9	8	0	3	C, P	Gravel & wood frag. on surface

Table A-4A - van Veen Grab Surface Sediment Sample Collection Data

Sample Location	Sample Type	Sampling Date	Time	Sample Depth in cm.	No. of Deploy-ments	Recovery Depth in Inches	Redox Layer Depth in Inches	Selected Parameter List #	Analyses (1)	Comments
HC-SC-70	van Veen	9/9/96	12:40	0 to 10 cm	1	8 - 9	none	3	C, P	
HC-SC-71	van Veen	9/9/96	13:00	0 to 10 cm	1	9 - 10	6	3	C, P	
HC-SC-72	van Veen	9/9/96	14:35	0 to 10 cm	1	9	none	3	C, P	
HC-SC-73	van Veen	9/9/96	15:00	0 to 10 cm	2	7	none	3	C, P	
HC-SC-74	van Veen	9/10/96	8:45	0 to 10 cm	2	8 - 9	1	3	C, P	
HC-SC-75	van Veen	9/10/96	10:10	0 to 10 cm	7	4 - 10	0 - 1	3	C, P	Wood logs on surface
HC-SC-76	van Veen	9/10/96	9:30	0 to 10 cm	1	8 - 10 *	0 - 1	3	C, P	
HC-SC-77	van Veen	9/9/96	15:25	0 to 10 cm	1	9	3	3	C, P	
HC-SC-78	van Veen	9/9/96	15:40	0 to 10 cm	1	10	1	3	C, P	
HC-SC-79	van Veen	9/9/96	16:00	0 to 10 cm	1	8 - 9	1	3	C, P	Dup collected HC-SC-205
HC-SC-80	van Veen	9/9/96	16:25	0 to 10 cm	1	8 - 9	4 *	3	C, P	
HC-SC-81	van Veen	9/9/96	16:40	0 to 10 cm	1	9	1.5	3	C, P	
HC-SC-82	van Veen	9/9/96	16:55	0 to 10 cm	1	8 - 10	1 *	3	C, P	
HC-SC-83	van Veen	9/9/96	11:30	0 to 10 cm	1	9	none	3	C, P	
HC-SC-84	van Veen	9/9/96	11:45	0 to 10 cm	1	9	none	3	C, P	
HC-SC-85	van Veen	9/9/96	12:10	0 to 10 cm	1	9	2.5	3	C, P	
HC-CR-02	van Veen	9/12/96	14:00	0 to 10 cm	1	ND	ND	-	B,P	Reference sediment from Carr Inlet
HC-CR-22	van Veen	9/12/96	17:00	0 to 10 cm	1	ND	ND	-	B,P	Reference sediment from Carr Inlet
HC-CR-24	van Veen	9/12/96	15:30	0 to 10 cm	1	ND	ND	-	B,P	Reference sediment from Carr Inlet

* approximate values
ND No data
(1) C = Chemistry P = Physical testing B = Biological testing

Table A-4B - Visual Descriptions of van Veen Surface Sediment Samples

Sample Location	Estimated % Wood	Visual Description (0 to 10 cm)
HC-SS-01	none	Crab pots, tube worms, and scattered wood fragments over (very soft), wet, brownish greenish black, clayey SILT with trace nudibranchs. Soupy texture.
HC-SS-02	none	Greenish gray SILT dusting and tube worms over (very soft), wet, black, slightly sandy, clayey SILT with moderate worms, trace brittle stars and shrimp.
HC-SS-03	none	(Soft), wet, green-brown, slightly sandy, clayey SILT with substantial tube worms and moderate snails (0 to 5 cm) over (stiff), black, silty CLAY with trace shell fragments.
HC-SS-04	> 50 %	(Very soft), wet, grayish green SILT with tube worms and soupy texture (0 to 4 cm) over (soft), wet, dark gray to black, slightly sandy, clayey, silty WOOD FRAGMENTS (80% - wood chips, wood bark, < 4 inches long).
HC-SS-05	trace	Large piece of wood chip (red cedar) and tube worms over (very soft), wet, green-gray, clayey SILT with trace worms and soupy texture.
HC-SS-06	trace	Brown-green SILT dusting over (soft), wet, gray-green, very clayey SILT with moderate tube worms and brittle stars.
HC-SS-07	trace	1 cm of (soft), brown SILT with substantial tube worms and trace shells over (medium stiff), wet, black, very clayey SILT with moderate hydrogen sulfide-like odor.
HC-SS-08	none	1 cm of olive-brown SILT with substantial tube worms and brittle stars over (medium stiff), wet, gray to black, slightly sandy, very clayey SILT with worms.
HC-SS-09	none	Greenish brown SILT dusting over (very soft), wet, brown, clayey SILT with tube worms and shell fragments.
HC-SS-10	trace to scatter.	(Very soft), wet, greenish brown to gray, clayey SILT with trace tube worms and wood fragments (twigs, piece of wood bark 8 inches long).
HC-SS-11	none	(Very soft), wet, greenish gray-brown, clayey SILT with moderate tube worms and trace algae.
HC-SS-12	trace	(Soft to medium stiff), wet, greenish brown to gray, sandy, very clayey SILT with moderate shell fragments, 1/2 clam shells, and trace tube worms.
HC-SS-13	trace	(Very soft to medium stiff), wet, greenish brownish gray to light gray, clayey SILT with shell fragments and substantial tube worms.
HC-SS-14	none	1 cm of green-brown SILT over (very soft to medium stiff), wet, mottled gray and black, clayey SILT (homogenous).
HC-SS-15	none	(Very soft), wet, green-brown, clayey SILT with substantial tube worms and one sea anemone.
HC-SS-16	none	(Very soft), wet, green-brown SILT with moderate tube worms and trace shell fragments (0 to 4 cm) over (medium stiff), wet, gray, clayey silt with tube worms and one sea anenome.
HC-SS-17	none	(Soft), wet, olive-green, clayey SILT with scattered tube worms (0 to 4 cm) over (stiff), dark gray to black, clayey SILT.
HC-SS-18	moderate to subst.	One starfish over (very soft), wet, mottled greenish brown and gray, slightly sandy, very clayey SILT with moderate wood fragments (wood bark and chips up to 8 inches long), tube worms, and flat worms. Below 4 cm, 30% wood fragments up to 10 inches long.
HC-SS-19	scattered	Olive-green SILT dusting over (soft), wet, greenish gray, clayey SILT with moderate tube worms, plant organics, and scattered wood chips.
HC-SS-20	moderate	1 cm of olive-green SILT over (soft), wet, dark gray to black, slightly sandy, clayey SILT with moderate wood fragments (wood chips and bark), tube worms, and slight hydrogen sulfide-like odor.
HC-SS-21	moderate	Green-brown SILT dusting over (soft), wet, green-black, slightly sandy, clayey SILT with moderate wood fragments (20% wood chips up to 4 inches long), tube worms, and trace shell fragments. Below 4 cm, black, very clayey SILT with slight hydrogen sulfide-like odor.

Table A-4B - Visual Descriptions of van Veen Surface Sediment Samples

Sample Location	Estimated % Wood	Visual Description (0 to 10 cm)
HC-SS-22	trace	1cm of (very soft), olive-gray SILT with substantial tube worms over (very soft), wet, mottled olive-gray and dark gray, slightly sandy, very clayey SILT with substantial worms, trace shell and wood fragments, and brittle stars.
HC-SS-23	none	1cm of (very soft), olive-gray SILT with tube worms over (medium stiff), wet, dark gray, clayey, sandy SILT with substantial worms and scattered shell and plant fragments.
HC-SS-24	moderate	Olive-gray SILT dusting over (soft to medium stiff), wet, dark gray, sandy, clayey SILT with substantial brittle stars, moderate wood fragments (wood chips up to 1/4 inch long), trace shell fragments, and trace hydrogen sulfide-like odor.
HC-SS-25	trace	Olive-gray SILT dusting with wood chips and brittle stars over (soft), wet, dark gray, sandy, clayey SILT with trace small wood and shell fragments, moderate worms, moderate hydrogen sulfide-like odor, and 1 snail.
HC-SS-26	scattered	Green-brown SILT dusting over (medium dense), wet, dark gray, clayey, silty SAND with scattered wood chips and strong hydrogen sulfide-like odor.
HC-SS-27	none	(Loose), wet, mottled dark brown and green, slightly clayey, slightly silty SAND with tube worms, shell fragments, trace algae and hydrogen sulfide-like odor (0 to 5 cm) over (loose), wet, black to dark gray SAND.
HC-SS-28	scattered to substantial	(Very soft), wet, olive-gray SILT dusting with intermittent wood chip mat over (medium stiff), wet, dark gray, very clayey SILT with scattered wood fragments (wood chips up to 8 inches long and 3 inches wide, worm eaten, stiff, non-decomposed but "holey", covered with barnacles), debris (rope, carpet), worms, and slight hydrogen sulfide-like odor.
HC-SS-29	substantial	Olive-gray SILT dusting over (very soft), wet, mottled dark gray to black, sandy, clayey SILT with substantial wood chips (dark red, slightly worm eaten, stiff, up to 8 inches long), 4-inch-long white shrimp, strong hydrogen sulfide-like odor, trace sheen patches, and trace shell fragments.
HC-SS-30	moderate	1 cm of greenish gray, slightly sandy SILT over (very soft), wet, dark gray to black, clayey SILT with moderate wood chips (10 to 20 %, shredded, stringy fibers and hard chips up to 6 inches long and 2 inches wide), scattered shell fragments, roots, tube worms, and moderate hydrogen sulfide-like odor.
HC-SS-31	moderate	Olive-brown SILT dusting over (soft), wet, dark gray, slightly sandy, very clayey SILT with moderate wood fragments (5 to 10 %, up to 4 inches long), trace tube worms, trace sheen globules, and moderate hydrogen sulfide-like odor. Below 4 cm, (medium stiff), wet, clayey SILT with 10 to 20 % wood fragments.
HC-SS-32	> 50%	Olive-green SILT dusting over (loose), wet, dark gray, slightly clayey, silty SAND with trace wood chips. Below 4 cm, (loose), wet, black, silty, sandy WOOD CHIPS (red, worm eaten, holey, slightly decomposed, up to 3 inches long) with gravel and substantial shell fragments.
HC-SS-33	> 50 %	Brown SILT dusting with wood chips, algae, snails, and clamshells over (loose), wet, brown to black, slightly gravelly, silty, sandy WOOD FRAGMENTS (70 to 90 %, twigs, bark, stiff, intact wood chips up to 10 inches long) with scattered worms, trace shell fragments, strong hydrogen sulfide-like odor, and a white shrimp.
HC-SS-34	substantial	2 cm of olive-brown SILT with wood and shell fragments, snails, tube worms, shrimp, over (loose), wet, black, slightly clayey, slightly gravelly, silty SAND with substantial wood chips (30%, untreated, hard, up to 8 inches long), moderate shell fragments, trace roots, and strong hydrogen sulfide-like odor (2 to 8 cm) over (medium stiff), brown, slightly sandy SILT with substantial wood fragments (40%).
HC-SS-35	scattered	Trace surface sheen and greenish brown SILT dusting over (soft), wet, black, slightly sandy, clayey SILT with scattered shell, wood bark, and chip fragments, and trace tube worms.
HC-SS-36	trace	Olive-green SILT dusting over (loose), wet, dark gray, clayey, very silty SAND with tube worms, shell and wood fragments, and hydrogen sulfide-like odor.
HC-SS-37	trace to scattered	Olive-green SILT dusting over (soft to medium stiff), wet, black-gray, clayey, very sandy SILT with moderate shell fragments, sheen globules, hydrogen sulfide-like odor, trace gravel, trace wood bark, and a Quartzite cobble 1 ft diameter.

Table A-4B - Visual Descriptions of van Veen Surface Sediment Samples

Sample Location	Estimated % Wood	Visual Description (0 to 10 cm)
HC-SS-38	moderate	(Soft), wet, dark gray to black, slightly clayey, silty SAND with moderate rocks, wood fragments, and fishing gear, trace sheen globules and hydrogen sulfide-like odor.
HC-SS-39	moderate	Surface sheen over (soft), wet, dark gray to black, gravelly, silty SAND with moderate pebbles, wood and plant fragments, fishing gear, and trace hydrogen sulfide-like odor.
HC-SS-40	> 50 %	Surface snails over (soft), wet, gray-black, clayey, very silty, very sandy WOOD CHIPS (50 to 60 %, up to 2 ft long) with trace shell fragments, strong hydrogen sulfide-like odor, and trace sheen.
HC-SS-41	trace	1 cm of greenish brown SAND with a live clam, moderate eelgrass and roots over (medium dense), wet, dark gray, slightly silty SAND with scattered shell fragments.
HC-SS-42	none	Green-brown SILT dusting over (stiff), wet, medium gray, sandy, very clayey SILT with moderate tube worms and seaweed/ algae.
HC-SS-43	none	1 cm of greenish brown SILT with substantial eelgrass, shells, snails, twigs, and kelp(?) over (loose to medium dense), wet, dark-gray to black, silty SAND with flatworms, substantial twigs, roots, plant fragments, and moderate hydrogen sulfide-like odor.
HC-SS-44	none	(Soft), wet, olive-green, slightly sandy, clayey SILT with small worms and trace shell fragments.
HC-SS-45	trace	2 cm of (very soft), olive-green SILT over (soft), wet, dark gray, slightly sandy, clayey SILT with moderate worms, shrimp, trace shell fragments, and spotty sheen.
HC-SS-46	none	Greenish brown SILT dusting over (medium dense), wet, dark gray to black, clayey, sandy, silty GRAVEL with trace shell fragments.
HC-SS-47	moderate	(Loose), wet, black, slightly clayey, very silty SAND with trace gravel, substantial shell fragments, moderate wood fragments (wood chips, twigs), other organic detritus, and moderate sheen.
HC-SS-48	scattered	(Medium dense), wet, gray-black, slightly gravelly, fine SAND with scattered wood and shell fragments, and moderate tube worms.
HC-SC-70	scattered	4 cm of (very soft), olive-brown, clayey SILT with substantial worms, scattered wood chips (5%, decomposed, up to 4 inches long), trace shrimp and snails over (soft), wet, brownish gray, slightly sandy, very clayey SILT with trace clam shells and worms.
HC-SC-71	scattered	2 cm of (very soft), olive-brown SILT with substantial tube worms over (soft), wet, mottled brown and dark gray, slightly sandy, very clayey SILT with scattered wood chips, shell fragments, and other debris (vinyl, steel).
HC-SC-72	scattered	2 cm of (very soft), olive-green, clayey SILT with substantial tube worms over (very soft), wet, mottled dark gray to brown, sandy, clayey SILT with scattered wood chips, shell fragments, and debris (pieces of vinyl and steel). Trace sheen observed during washing.
HC-SC-73	substantial	2 cm of (very soft), olive-green SILT with substantial tube worms, shrimp, and snails, over (soft), wet, gray-brown, slightly sandy, clayey SILT with scattered, decomposed wood chips, trace shell fragments, and one live clam. Below 4 cm, substantial wood chips (20%, up to 6 inches long). Trace sheen observed during washing.
HC-SC-74	> 50%	2 cm of (very soft), olive-brown SILT with substantial wood debris (chips, leaves, twigs), shrimp, and tube worms over (soft), wet, dark gray to black, clayey, sandy, silty WOOD CHIPS (sandy 60 %, fibrous, degraded, pulpy with hard fragments, up to 6 inches long), with moderate hydrogen sulfide-like odor and trace sheen.
HC-SC-75	> 50%	Olive-green SILT dusting with barnacles, snails, wood debris, and tube worms, over (very soft), wet, dark gray to black, clayey, sandy, silty WOOD DEBRIS (60 to 70%, chips, lumber, timbers,bark, twigs, up to 6 feet long) with plant fragments and strong hydrogen sulfide-like odor.
HC-SC-76	moderate	Olive-green SILT dusting over (very soft), wet, black, sandy, clayey SILT with moderate wood chips (decomposed, up to 8 inches long), with very strong hydrogen sulfide-like odor and trace shell fragments, twigs, and sheen globules.

Table A-4B - Visual Descriptions of van Veen Surface Sediment Samples

Sample Location	Estimated % Wood	Visual Description (0 to 10 cm)
HC-SC-77	moderate	7 cm of (very soft), wet, olive-green to gray, slightly sandy, very clayey SILT with substantial tube worms, shrimp, polycheate worms, over (soft), black, very clayey SILT with moderate wood chips (20%, up to 6 inches long) and moderate hydrogen sulfide-like odor.
HC-SC-78	moderate	2 cm of (very soft), wet, olive-brown clayey SILT with substantial tube worms, and snails, over (very soft), dark gray-black, slightly sandy, clayey SILT with scattered wood fragments. Below 4 inches, moderate wood chips (up to 6 inches long) and moderate hydrogen sulfike-like odor.
HC-SC-79	scattered to moderate	2 cm of (very soft), olive-brown, clayey SILT with moderate tube worms over (very soft), wet, dark gray to black, sandy, very clayey SILT with scattered wood chips and shell fragments, and moderate hydrogen sulfide-like odor. Below 4 cm, moderate wood chips (10%, up to 6 inches long).
HC-SC-80	trace	2 cm of (very soft), olive-brown, clayey SILT with tube worms over (very soft), wet, dark gray-black, slightly sandy, clayey SILT with trace wood chips.
HC-SC-81	trace	4 cm of (very soft), olive-green, clayey SILT over (very soft), wet, dark gray to black, slightly clayey, sandy SILT with trace wood chips and moderate hydrogen sulfide-like odor. Soupy consistency.
HC-SC-82	trace	2 cm of (very soft), olive-brown, clayey SILT with snails and one beer can over (very soft), wet, dark gray to black, sandy, clayey SILT with trace wood and shell fragments, and slight hydrogen sulfide-like odor.
HC-SC-83	scattered	3 cm of (very soft), olive-brown SILT over (very soft), wet, gray-brown, slightly sandy, very clayey SILT with mottled black SILT, scattered wood fragments, twigs, and worms.
HC-SC-84	scattered	4 cm of (very soft), olive-brown SILT with worms over (soft), wet, dark gray, slightly sandy, very clayey SILT with moderate worms and snails. Below 4 cm, scattered wood fragments.
HC-SC-85	scattered	2 cm of (very soft), olive-green SILT over (very soft), wet, dark gray to black, sandy, clayey SILT with scattered wood chips (up to 4 inches long), trace twigs, shell fragments, sheen, and paint chips.

Notes:
Trace = Just Discernable
Scattered = < 5 %
Moderate = > 5 % to 20 %
Substantial = > 20 % to 50 %
Majority = > 50 %

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Table A-5 - Core Sample Numbers and Depths Intervals

Core Sample I.D.	Core Location	Total Penetration Depth in Feet below Mudline	Core Recovery in Percent	Sample Interval in Feet\ below Mudline (corrected depth)
Vibracores				
HC-VC-70-S1	Mouth of Whatcom Waterway	10.1	94%	0 to 1.5
HC-VC-70-S2				3.7 to 5.8
HC-VC-70-S3				1.5 to 3.7
HC-VC-71-S1	Mouth of Whatcom Waterway	14.9	91%	0 to 1.6
HC-VC-71-S2				1.6 to 4.8
HC-VC-71-S3				6.0 to 7.6
HC-VC-71-S4				9.8 to 11.4
HC-VC-71-S5				0 to 4
HC-VC-71-S6				7.6 to 9.8
HC-VC-71-S7				13.1 to 14.9
HC-VC-72-S1	Mouth of Whatcom Waterway	15.0	95%	0 to 3.2
HC-VC-72-S2				3.2 to 4
HC-VC-72-S3				4 to 7
HC-VC-72-S4				8.4 to 10
HC-VC-72-S5				0 to 3.8
HC-VC-72-S6				7 to 8.4
HC-VC-72-S7				12 to 13.1
HC-VC-73-S1	Middle of Whatcom Waterway	10.1	86%	0 to 1.9
HC-VC-73-S2				1.9 to 4.6
HC-VC-73-S3				5.1 to 7.4
HC-VC-73-S4				7.4 to 9.7
HC-VC-74-S1	G-P Log Pond	15.0	79%	0 to 2.4
HC-VC-74-S2				2.4 to 4.1
HC-VC-74-S3				4.5 to 6.9
HC-VC-74-S4				9 to 11.5
HC-VC-75-S1	G-P Log Pond	10.0	72%	0 to 3.3
HC-VC-75-S2				3.6 to 5.8
HC-VC-75-S3				6.4 to 9
HC-VC-76-S1	G-P Log Pond	15.5	56%	0 to 3.5
HC-VC-76-S2				3.5 to 7.9
HC-VC-76-S3				8.9 to 13.8
HC-VC-76-S4				14.2 to 15.5
HC-VC-77-S1	Middle of Whatcom Waterway	20.2	92%	0 to 2.1
HC-VC-77-S2				2.1 to 3.9
HC-VC-77-S3				3.9 to 5.4
HC-VC-77-S4				5.4 to 8.6
HC-VC-77-S5				11.3 to 15.1
HC-VC-77-S6				15.1 to 18.9
HC-VC-78-S1	Middle of Whatcom Waterway	10.0	81%	0 to 2.4
HC-VC-78-S2				2.7 to 4.0
HC-VC-78-S3				4.5 to 7.0

Table A-5 - Core Sample Numbers and Depths Intervals

Core Sample I.D.	Core Location	Total Penetration Depth in Feet below Mudline	Core Recovery in Percent	Sample Interval in Feet\ below Mudline (corrected depth)
HC-VC-79-S1	Middle of Whatcom Waterway	21.8	92%	0 to 2
HC-VC-79-S2				2 to 3.8
HC-VC-79-S3				4 to 4.9
HC-VC-79-S4				4.9 to 7
HC-VC-79-S5				10.8 to 13
HC-VC-79-S6				19 to 21
HC-VC-80-S1	Head of Whatcom Waterway	10.9	72%	0 to 1.7
HC-VC-80-S2				1.9 to 5.3
HC-VC-80-S3				6.3 to 9.0
HC-VC-81-S1	Head of Whatcom Waterway	10.3	94%	0 to 1.6
HC-VC-81-S2				1.6 to 3.2
HC-VC-81-S3				3.2 to 4.7
HC-VC-81-S4				5.3 to 8
HC-VC-82-S1	Head of Whatcom Waterway	10.5	81%	0 to 2.3
HC-VC-82-S2				2.6 to 5.2
HC-VC-82-S3				5.3 to 6.8
HC-VC-82-S4				7.0 to 10.1
HC-VC-83-S1	I&J Street Waterway	9.5	76%	0 to 2.6
HC-VC-83-S2				5.9 to 7.9
HC-VC-83-S3				2.6 to 5.3
HC-VC-84-S1	I&J Street Waterway	10.3	68%	0 to 1.4
HC-VC-84-S2				2.0 to 4.9
HC-VC-84-S3				5.3 to 6.3
HC-VC-84-S4				6.6 to 9.6
HC-VC-85-S1	I&J Street Waterway	10.1	69%	0 to 4.5
HC-VC-85-S2				4.7 to 7.1
HC-VC-85-S3				7.7 to 9.7
Diver Cores				
HC-DC-86-S1	Mouth of Whatcom Waterway	3.8	53%	0 to 1.9
HC-DC-86-S2				1.9 to 3.8
HC-DC-87-S1	Mouth of Whatcom Waterway	3.8	68%	0 to 2.3
HC-DC-87-S2				2.3 to 3.8
HC-DC-88-S1	Mouth of Whatcom Waterway	3.8	50%	0 to 1.6
HC-DC-88-S2				1.6 to 3.8
HC-DC-89-S1	Middle of Whatcom Waterway	3.8	55%	0 to 1.6
HC-DC-89-S2				1.6 to 3.8
HC-DC-90-S1	Middle of Whatcom Waterway	3.8	55%	0 to 1.6
HC-DC-90-S2				1.6 to 3.8
HC-DC-91-S1	Middle of Whatcom Waterway	3.0	43%	0 to 1.6
HC-DC-91-S2				1.6 to 3.0
HC-DC-92-S1	Head of Whatcom Waterway	2.8	50%	0 to 1.4
HC-DC-92-S2				1.4 to 2.8
HC-DC-93-S1	Head of Whatcom Waterway	2.0	70%	0 to 2.0

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Table A-6 - Natural Recovery Sub-Sample Data

Sample ID	Initial Depth	Final Depth	Depth Interval	Correction Factor	Corrected Initial	Corrected Final	Archived
HC-NR-100-S1	0	2	0-2 cm	1.25	0	2.5	
HC-NR-100-S2	2	4	2-4 cm	1.25	2.5	5	
HC-NR-100-S3	4	6	4-6 cm	1.25	5	7.5	
HC-NR-100-S4	6	8	6-8 cm	1.25	7.5	10	
HC-NR-100-S5	8	10	8-10 cm	1.25	10	12.5	
HC-NR-100-S6	10	12	10-12 cm	1.25	12.5	15	
HC-NR-100-S7	12	14	12-14 cm	1.25	15	17.5	
HC-NR-100-S8	14	16	14-16 cm	1.25	17.5	20	
HC-NR-100-S9	16	18	16-18 cm	1.25	20	22.5	
HC-NR-100-S10	18	20	18-20 cm	1.25	22.5	25	
HC-NR-100-S11	20	22	20-22 cm	1.25	25	27.5	X
HC-NR-100-S12	22	24	22-24 cm	1.25	27.5	30	X
HC-NR-100-S13	24	26	24-26 cm	1.25	30	32.5	
HC-NR-100-S14	26	28	26-28 cm	1.25	32.5	35	X
HC-NR-100-S15	28	30	28-30 cm	1.25	35	37.5	X
HC-NR-100-S16	30	32	30-32 cm	1.25	37.5	40	
HC-NR-100-S17	32	34	32-34 cm	1.25	40	42.5	X
HC-NR-100-S18	34	36	34-36 cm	1.25	42.5	45	X
HC-NR-100-S19	36	38	36-38 cm	1.25	45	47.5	
HC-NR-100-S20	38	40	38-40 cm	1.25	47.5	50	X
HC-NR-100-S21	40	42	40-42 cm	1.25	50	52.5	X
HC-NR-100-S22	42	44	42-44 cm	1.25	52.5	55	
HC-NR-100-S23	44	46	44-46 cm	1.25	55	57.5	X
HC-NR-100-S24	46	48	46-48 cm	1.25	57.5	60	X
HC-NR-100-S25	48	50	48-50 cm	1.25	60	62.5	
HC-NR-100-S26	50	52	50-52 cm	1.25	62.5	65	X
HC-NR-100-S27	52	54	52-54 cm	1.25	65	67.5	X
HC-NR-100-S28	54	56	54-56 cm	1.25	67.5	70	X
HC-NR-100-S29	56	58	56-58 cm	1.25	70	72.5	X
HC-NR-100-S30	58	60	58-60 cm	1.25	72.5	75	X
HC-NR-100-S31	60	62	60-62 cm	1.25	75	77.5	X
HC-NR-100-S32	62	64	62-64 cm	1.25	77.5	80	X
HC-NR-100-S33	64	66	64-66 cm	1.25	80	82.5	
HC-NR-100-S34	66	68	66-68 cm	1.25	82.5	85	X
HC-NR-100-S35	68	70	68-70 cm	1.25	85	87.5	X
HC-NR-100-S36	70	72	70-72 cm	1.25	87.5	90	X
HC-NR-100-S37	72	74	72-74 cm	1.25	90	92.5	X
HC-NR-100-S38	74	76	74-76 cm	1.25	92.5	95	X
HC-NR-100-S39	76	78	76-78 cm	1.25	95	97.5	X
HC-NR-100-S40	78	80	78-80 cm	1.25	97.5	100	
HC-NR-100-S41	80	82	80-82 cm	1.25	100	102.5	X
HC-NR-100-S42	82	84	82-84 cm	1.25	102.5	105	X
HC-NR-100-S43	84	86	84-86 cm	1.25	105	107.5	X
HC-NR-100-S44	86	88	86-88 cm	1.25	107.5	110	X
HC-NR-100-S45	88	90	88-90 cm	1.25	110	112.5	
HC-NR-101-S1	0	2	0-2 cm	1.3	0	2.6	
HC-NR-101-S2	2	4	2-4 cm	1.3	2.6	5.2	
HC-NR-101-S3	4	6	4-6 cm	1.3	5.2	7.8	

Table A-6 - Natural Recovery Sub-Sample Data

Sample ID	Initial Depth	Final Depth	Depth Interval	Correction Factor	Corrected Initial	Corrected Final	Archived
HC-NR-101-S4	6	8	6-8 cm	1.3	7.8	10.4	
HC-NR-101-S5	8	10	8-10 cm	1.3	10.4	13	
HC-NR-101-S6	10	12	10-12 cm	1.3	13	15.6	
HC-NR-101-S7	12	14	12-14 cm	1.3	15.6	18.2	
HC-NR-101-S8	14	16	14-16 cm	1.3	18.2	20.8	
HC-NR-101-S9	16	18	16-18 cm	1.3	20.8	23.4	
HC-NR-101-S10	18	20	18-20 cm	1.3	23.4	26	
HC-NR-101-S11	20	22	20-22 cm	1.3	26	28.6	X
HC-NR-101-S12	22	24	22-24 cm	1.3	28.6	31.2	X
HC-NR-101-S13	24	26	24-26 cm	1.3	31.2	33.8	
HC-NR-101-S14	26	28	26-28 cm	1.3	33.8	36.4	X
HC-NR-101-S15	28	30	28-30 cm	1.3	36.4	39	X
HC-NR-101-S16	30	32	30-32 cm	1.3	39	41.6	
HC-NR-101-S17	32	34	32-34 cm	1.3	41.6	44.2	X
HC-NR-101-S18	34	36	34-36 cm	1.3	44.2	46.8	X
HC-NR-101-S19	36	38	36-38 cm	1.3	46.8	49.4	
HC-NR-101-S20	38	40	38-40 cm	1.3	49.4	52	X
HC-NR-101-S21	40	42	40-42 cm	1.3	52	54.6	X
HC-NR-101-S22	42	44	42-44 cm	1.3	54.6	57.2	
HC-NR-101-S23	44	46	44-46 cm	1.3	57.2	59.8	X
HC-NR-101-S24	46	48	46-48 cm	1.3	59.8	62.4	X
HC-NR-101-S25	48	50	48-50 cm	1.3	62.4	65	
HC-NR-101-S26	50	52	50-52 cm	1.3	65	67.6	X
HC-NR-101-S27	52	54	52-54 cm	1.3	67.6	70.2	X
HC-NR-101-S28	54	56	54-56 cm	1.3	70.2	72.8	X
HC-NR-101-S29	56	58	56-58 cm	1.3	72.8	75.4	X
HC-NR-101-S30	58	60	58-60 cm	1.3	75.4	78	X
HC-NR-101-S31	60	62	60-62 cm	1.3	78	80.6	X
HC-NR-101-S32	62	64	62-64 cm	1.3	80.6	83.2	X
HC-NR-101-S33	64	66	64-66 cm	1.3	83.2	85.8	
HC-NR-101-S34	66	68	66-68 cm	1.3	85.8	88.4	X
HC-NR-101-S35	68	70	68-70 cm	1.3	88.4	91	X
HC-NR-101-S36	70	72	70-72 cm	1.3	91	93.6	X
HC-NR-101-S37	72	74	72-74 cm	1.3	93.6	96.2	X
HC-NR-101-S38	74	76	74-76 cm	1.3	96.2	98.8	X
HC-NR-101-S39	76	78	76-78 cm	1.3	98.8	101.4	X
HC-NR-101-S40	78	80	78-80 cm	1.3	101.4	104	
HC-NR-101-S41	80	82	80-82 cm	1.3	104	106.6	X
HC-NR-101-S42	82	84	82-84 cm	1.3	106.6	109.2	X
HC-NR-101-S43	84	86	84-86 cm	1.3	109.2	111.8	X
HC-NR-101-S44	86	88	86-88 cm	1.3	111.8	114.4	X
HC-NR-101-S45	88	90	88-90 cm	1.3	114.4	117	
HC-NR-102-S1	0	2	0-2 cm	1.2	0	2.4	
HC-NR-102-S2	2	4	2-4 cm	1.2	2.4	4.8	
HC-NR-102-S3	4	6	4-6 cm	1.2	4.8	7.2	
HC-NR-102-S4	6	8	6-8 cm	1.2	7.2	9.6	
HC-NR-102-S5	8	10	8-10 cm	1.2	9.6	12	
HC-NR-102-S6	10	12	10-12 cm	1.2	12	14.4	

Table A-6 - Natural Recovery Sub-Sample Data

Sample ID	Initial Depth	Final Depth	Depth Interval	Correction Factor	Corrected Initial	Corrected Final	Archived
HC-NR-102-S7	12	14	12-14 cm	1.2	14.4	16.8	
HC-NR-102-S8	14	16	14-16 cm	1.2	16.8	19.2	
HC-NR-102-S9	16	18	16-18 cm	1.2	19.2	21.6	
HC-NR-102-S10	18	20	18-20 cm	1.2	21.6	24	
HC-NR-102-S11	20	22	20-22 cm	1.2	24	26.4	X
HC-NR-102-S12	22	24	22-24 cm	1.2	26.4	28.8	X
HC-NR-102-S13	24	26	24-26 cm	1.2	28.8	31.2	
HC-NR-102-S14	26	28	26-28 cm	1.2	31.2	33.6	X
HC-NR-102-S15	28	30	28-30 cm	1.2	33.6	36	X
HC-NR-102-S16	30	32	30-32 cm	1.2	36	38.4	
HC-NR-102-S17	32	34	32-34 cm	1.2	38.4	40.8	X
HC-NR-102-S18	34	36	34-36 cm	1.2	40.8	43.2	X
HC-NR-102-S19	36	38	36-38 cm	1.2	43.2	45.6	
HC-NR-102-S20	38	40	38-40 cm	1.2	45.6	48	X
HC-NR-102-S21	40	42	40-42 cm	1.2	48	50.4	X
HC-NR-102-S22	42	44	42-44 cm	1.2	50.4	52.8	
HC-NR-102-S23	44	46	44-46 cm	1.2	52.8	55.2	X
HC-NR-102-S24	46	48	46-48 cm	1.2	55.2	57.6	X
HC-NR-102-S25	48	50	48-50 cm	1.2	57.6	60	
HC-NR-102-S26	50	52	50-52 cm	1.2	60	62.4	X
HC-NR-102-S27	52	54	52-54 cm	1.2	62.4	64.8	X
HC-NR-102-S28	54	56	54-56 cm	1.2	64.8	67.2	X
HC-NR-102-S29	56	58	56-58 cm	1.2	67.2	69.6	X
HC-NR-102-S30	58	60	58-60 cm	1.2	69.6	72	X
HC-NR-102-S31	60	62	60-62 cm	1.2	72	74.4	X
HC-NR-102-S32	62	64	62-64 cm	1.2	74.4	76.8	X
HC-NR-102-S33	64	66	64-66 cm	1.2	76.8	79.2	
HC-NR-102-S34	66	68	66-68 cm	1.2	79.2	81.6	X
HC-NR-102-S35	68	70	68-70 cm	1.2	81.6	84	X
HC-NR-102-S36	70	72	70-72 cm	1.2	84	86.4	X
HC-NR-102-S37	72	74	72-74 cm	1.2	86.4	88.8	X
HC-NR-102-S38	74	76	74-76 cm	1.2	88.8	91.2	X
HC-NR-102-S39	76	78	76-78 cm	1.2	91.2	93.6	X
HC-NR-102-S40	78	80	78-80 cm	1.2	93.6	96	
HC-NR-102-S41	80	82	80-82 cm	1.2	96	98.4	X
HC-NR-102-S42	82	84	82-84 cm	1.2	98.4	100.8	X
HC-NR-102-S43	84	86	84-86 cm	1.2	100.8	103.2	X
HC-NR-102-S44	86	88	86-88 cm	1.2	103.2	105.6	X
HC-NR-102-S45	88	90	88-90 cm	1.2	105.6	108	

NR-DEPTH.XLS

Table A-7 Shoreline Structures and Habitat Video Survey
Whatcom Waterway Area

Counter Number	Time	Shoreline Area	Description and Comments
Survey Date: February 13, 1996-Whatcom Waterway			
00:00		Overview - near Cornwall Ave Landfill	Riprap <5', 2:1 slope
00:50		West of Cornwall Avenue Landfill - along riprap tracks	Coarse beach, concrete debris, logs
01:45		Cornwall Ave. Landfill	American Fabricators Bldg.
03:15		move to north side	broken concrete 1:1 slope to shallow beach cobbles < 2' scattered pilings 50% coverage of green lichen lower slope - less cobbles & rocks
08:20		Fence line/RG Haley	gentle slope, less cobbles & rales fine grained sediment to beach sand with glass debris
10:40		square concrete outfall (SW01) baseflow	
12:23		General area	dock remnants, log rafts
13:06		End of Cornwell Ave/East corner of R G Haley	piling remnants, riprap shallow beach, sand SW-02 outfall - base flow
14:16 15:50 17:54		Port of Bellingham - West side chemical dock - interbay loading dock	concrete debris <6", cable, wire, timbers, 1:1 slope broken up, riprap to steep slope, concrete gravel 6" to 3' diameter
20:00		WIST PIER - south side & general	wooden pilings, batter piles, 10' space b/w bents, fender pier. Difficult access
22:30		West end of WIST Pier	Barnacles
23:38		WIST Pier - Northside	wooden pilings 80% has cross beams (below water line) open decking
27:18			change to steel piles (new), 36" diameter 20' b/w space bents Some near shore timber piles with 12' space b/w bents
28:59			change to older steel piles 14" with wooden fender piles and bent heads 20' space b/w bents. Some near shore timber piles with 12' space b/w bents
32:17		East end of WIST Pier	

Table A-7 Shoreline Structures and Habitat Video Survey
Whatcom Waterway Area

Counter Number	Time	Shoreline Area	Description and Comments
33:06		GP Log Pond - Marina	East POB - wooden lagging and piling gravel rock behind partially builtup bulkhead - some exposed areas.
35:20		GP Log Pond - South End	Outfall #7 area, shallow slope, beach sand and gravel, and concrete. 2:1 slope to 1:1 slope. Varied conditions - pea gravel, riprap, concrete debris, concrete slabs/scattered pilings
38:52		GP Log Pond - East end	45^0 slope, coarse grained concrete and gravel (6" - 12")
39:21		GP Pier	west corner - wooden piles, new fender piles, no batter piles. 10' space b/w bents, 3' space b/w piles near station 15+00 - cross beam timbers begin. 3:1 slope riprap <2' diameter
43:29		GP Pier	Historic GP outfall #3
43:58		Pipeline area	Underpier pump housing and chainlink fence.
46:50 47:52			Wooden bulkhead (tongue and groove) Eroded bank/gravel beach area wooden piling remnants, timber piles, no decking
49:20		Corner of Roeder Avenue/ Head of Whatcom Creek	1:1 slope, shallow beach gravelly sand
50:19 50:47			Citizens Dock Whatcom Creek
51:16		BMI / Chevron / North side of Whatcom Creek waterway	varied shoreline - wooden piles and decking, steep 2:1 slope, concrete bulkheads, concrete slab debris, wire, timbers, poured concrete debris
52:20 53:13		Crack in concrete wall/seep Eroding bulkhead - Chevron	shallow bank corner of property coarse sandy gravel beach
53:40		"C" Street Outfall	noted 3 outfalls CSO <10gpm - square concrete vault. Other outfall approx. 12" diam with <.5gpm baseflow
54:16		Treatment lagoon - South side	

Table A-7 Shoreline Structures and Habitat Video Survey
Whatcom Waterway Area

Counter Number	Time	Shoreline Area	Description and Comments
54:44		End of Tape 1	
00:00		Tape 2 Treatment Lagoon and General North & West Sides	
01:03		Entrance to I & J Waterway	
Survey Date: October 6, 1996-I and J Waterway Waterway			
O-1141		Whatcom Creek Survey	
Start 1141	08:17	I and J Waterway	Corner of Hawleys Marina. West shore sheet pile metal. Wooden pier. Barnacles.
1322		Texaco gas dock	Boat haul out, metal sheet pile-flush.
1350	08:20	Corner Marina/Bornsteins	Armor, concrete slabs, gravel, timbers. No seeps.
Stop 1440		Northwest corner-Bornsteins	Wood lagging bulkhead.
Record 1444	08:22	Pan-Bornsteins corner	Fish pump water.
Record 1512		Side view	Under Bornsteins dock.
1551	08:25	Bornsteins pier	Wood deck piles 8 to 10-inch diameter. Fender piles 12 to 14 inches. Bent space ~ 12 feet, barnacles. Wood lagging.
1706		East end Bornsteins pier	Small riprap and gravel, not much max size-2 feet.
1800		East end Bornsteins pier corner	Tank (AST).
1822		Green outfall (sample spot)	Green pipe 4 inches, low flow elevation ~ 12 foot. extending out of Bornsteins wood bulkhead.
1900	08:30	Bornsteins pier fall	Scan back under pier.
1940			Red tile 8-inch outfall, no flow; looks abandoned.
2015		Eroding bulkhead	Concrete debris and cobbles, no seeps, mostly armor, broken concrete, outfall pipes, and old appliance.

Table A-7 Shoreline Structures and Habitat Video Survey
Whatcom Waterway Area

Counter Number	Time	Shoreline Area	Description and Comments
2123	08:32	End of eroding beach	Max size 2-foot diameter. Treated wood.
		Former Olivine site	Wood, lagging + bulkhead debris in water, tire, concrete, metal piles, 12-inch diameter. Some barnacles, good condition, overlap lagging, 4 x 12 not flush with steel tiebacks.
2324		Former Olivine site	Green pipe, elbows out of wall and into water 8-inch diameter, possibly disconnected. No flow.
Stop 2405	08:35	Former Olivine site	
2406		Head of I and J Waterway	Soft subslate, small gravel near 10 feet elevation. Scattered timbers, near top. No seeps.
2506		Head of I and J Waterway	City storm outfall, old timber pile heads, gravel near outfall. Concrete debris maximum 3 feet near outfall.
2606		North I and J Waterway	Slope1:1, small armor most riprap from ½ to 1 foot generally small, slight bench at high tide good condition.
2657	08:40	1/3 down, I and J Waterway North side	Starfish (1), some barnacles. Slope 2:1, no seeps. Gradually smaller riprap/armor <0.5 foot.
2840		1/2 down, I and J Waterway	Slope 2:1, more gentle slope, dead seal, starfish (1), small armor exposed near waterline, possibly eroding bank
2940	08:45	Up 1/3 I and J Waterway Up 1/2 Way	Larger riprap up to 2-feet diameter scattered <3 feet mostly 1 foot or .5 inches. Slope 2:1, No debris, so seeps. One pocket, armor exposed exposed, barnacles, starfish (1).
3330		3/4 of I and J Waterway	Entrance to marina, large riprap <3 feet. Steep 1:1 slope.
3350		Entrance to Marina	
Pause 3405	08:48		
3405	08:50	West side of entrance breakwater and around outside.	Large riprap <4 feet 1 1/2:1, discarded fish net, heron, barnacles, all large riprap average 1 to 2 feet, scattered drift wood.
3530			
3605	08:51	End of project area outside breakwater	Same
Start 3605	08:53	Marine entrance east harbor	Riprap.
3727		East side of breakwater	East shore, small riprap steep 2:1, less intact, slough near top. Maximum size 3 feet, average 1 foot. Average larger riprap 1 1/2:1, 3 feet diameter.
3830	08:55	Marina entrance	Panning view.
3853	08:56	Video Stop	

447806\Table A-7.xls

Key for Sediment Logs

Sample Description

Classification of soils in this report is based on visual field and laboratory observations which include density/consistency, moisture condition, grain size, and plasticity estimates and should not be construed to imply field nor laboratory testing unless presented herein. Visual–manual classification methods of ASTM D 2488 were used as an identification guide.

Soil descriptions consist of the following:
Density/consistency, moisture, color, minor constituents, MAJOR CONSTITUENT, additional remarks.

Density/Consistency

Soil density/consistency in borings is related primarily to the Standard Penetration Resistance.
Soil density/consistency in test pits is estimated based on visual observation and is presented parenthetically on the test pit logs.

SAND or GRAVEL Density	Standard Penetration Resistance (N) in Blows/Foot	SILT or CLAY Consistency	Standard Penetration Resistance (N) in Blows/Foot	Approximate Shear Strength in TSF
Very loose	0 – 4	Very soft	0 – 2	<0.125
Loose	4 – 10	Soft	2 – 4	0.125 – 0.25
Medium dense	10 – 30	Medium stiff	4 – 8	0.25 – 0.5
Dense	30 – 50	Stiff	8 – 15	0.5 – 1.0
Very dense	>50	Very stiff	15 – 30	1.0 – 2.0
		Hard	>30	>2.0

Moisture

Dry	Little perceptible moisture
Damp	Some perceptible moisture, probably below optimum
Moist	Probably near optimum moisture content
Wet	Much perceptible moisture, probably above optimum

Minor Constituents

	Estimated Percentage
Not identified in description	0 – 5
Slightly (clayey, silty, etc.)	5 – 12
Clayey, silty, sandy, gravelly	12 – 30
Very (clayey, silty, etc.)	30 – 50

Legends

Sample Acceptability Criteria:

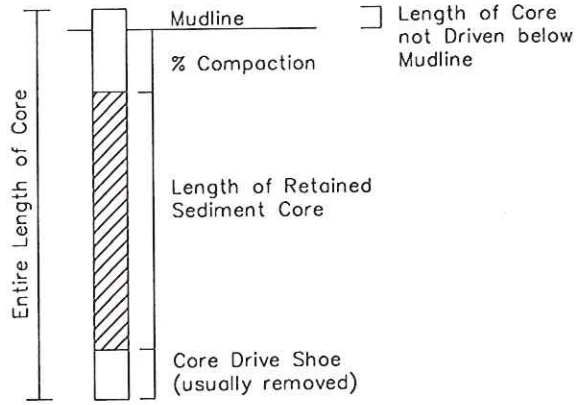
1. Overlying water is present
2. Water has low turbidity
3. Sampler is not overfilled
4. Surface is flat
5. Penetration depth is acceptable
6. Compaction is less than 25 percent
7. Core tube is intact

Estimated Percentage of Other Minor Constituents

(i.e.. shells, wood, organics, plastic, metal brick, refuse)

Description	Estimated Percentage
Dusting	Trace on Surface
Trace	Discernible
Scattered	0–5
Moderate	5–20
Substantial	20–50
Major Constituent	>50

Core Observations



Test Symbols

CHEM	Chemical Testing
GS	Grain Size
ARCH	Archive
▨	Continuous Vibracore
AL	Atterberg Limits
SP GR	Specfic Gravity
Rad	Radio Isotopes Pb–210 and Cs–137

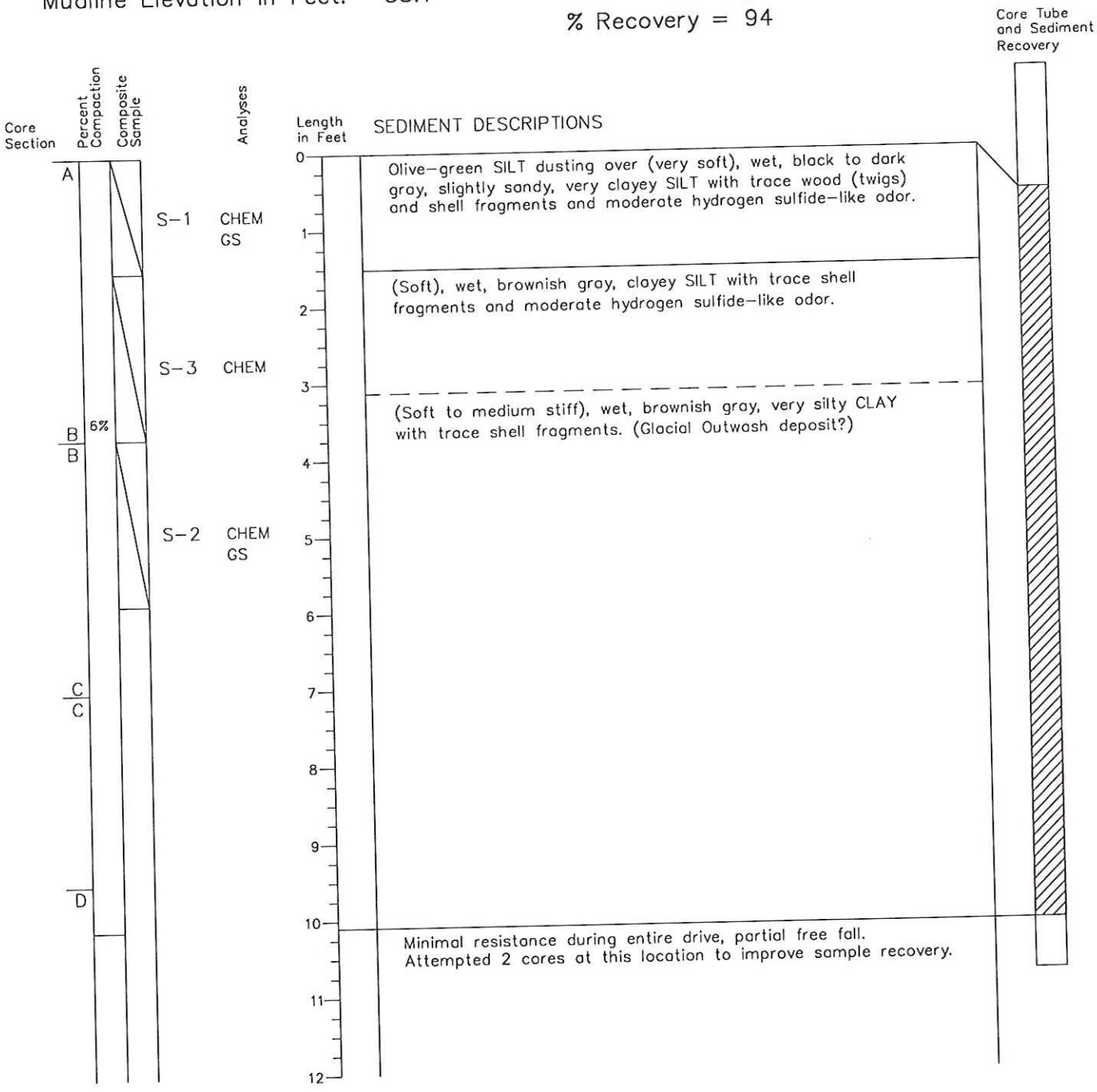
——— Major Sediment Unit Contacts
— — — — Minor Sediment Unit Contacts

HARTCROWSER
J-4478-06 5/97
Figure A-1

Sediment Core Log HC-VC-70

Type of Sample: 4-inch Vibracore
Date/Time: 9/11/96 1130
Recovery Length in Feet: 9.5
Mudline Elevation in Feet: -35.1

Northing: 640,281
Easting: 1,238,704
Drive Depth in Feet: 10.1
Core Tube Length in Feet: 12.0
% Recovery = 94



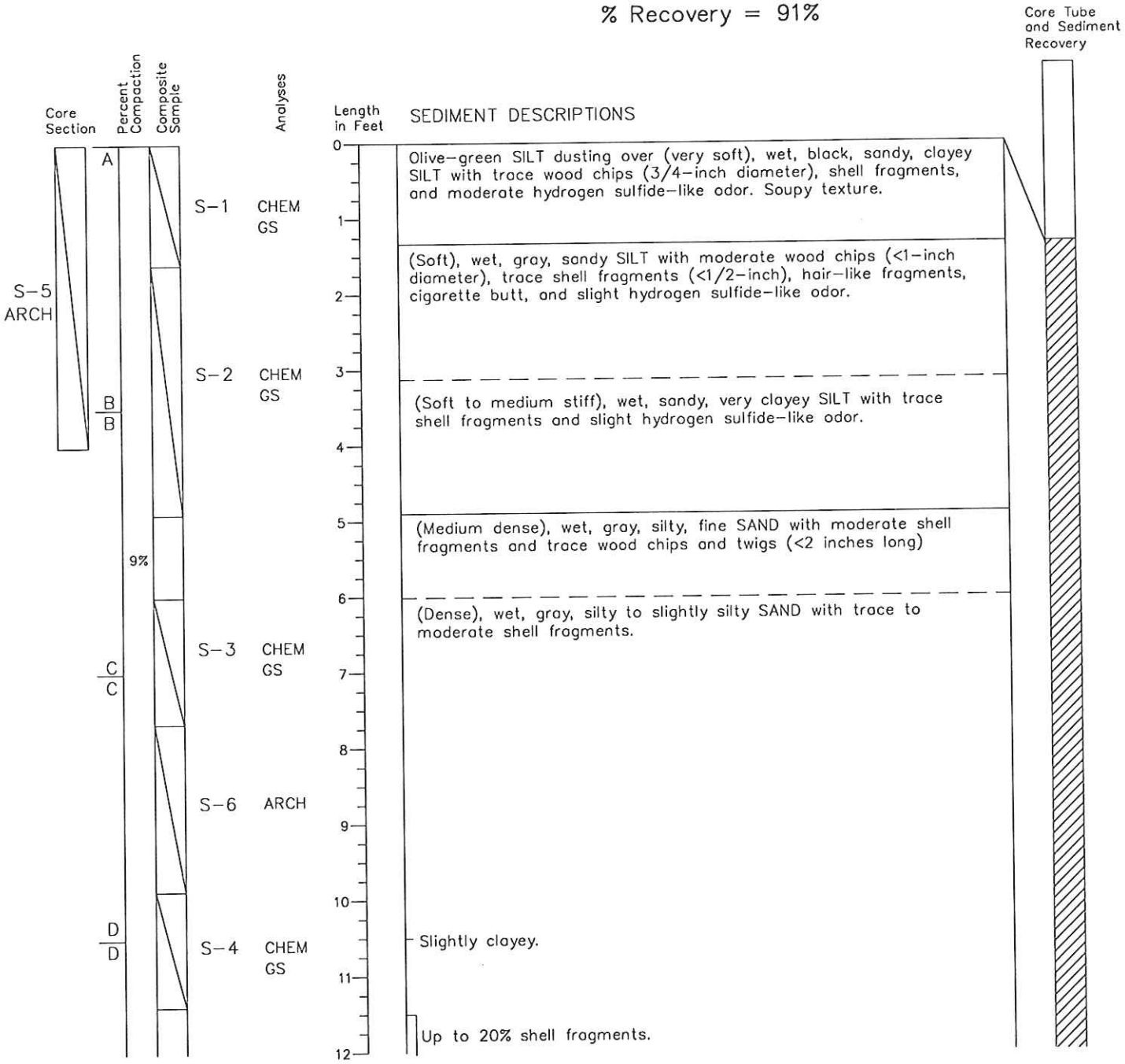
Notes:
1. Horizontal control is based on NAD 83 datum (DGPS) - North Zone and vertical control is based on MLLW datum.
2. Composite sample depths and sediment contacts shown above were recalculated to account for percent compaction during driving.
3. Collocated surface samples were collected with van Veen grab sampler.
4. See Figure A-1 for key and legend.

HARTCROWSER
J-4478-05 9/96
Figure A-2

Sediment Core Log HC-VC-71

Type of Sample: 4-inch Vibracore
Date/Time: 9/11/96 1630
Recovery Length in Feet: 13.7
Mudline Elevation in Feet: -32.0

Northing: 640,858
Easting: 1,239,508
Drive Depth in Feet: 14.9
Core Tube Length in Feet: 20
% Recovery = 91%

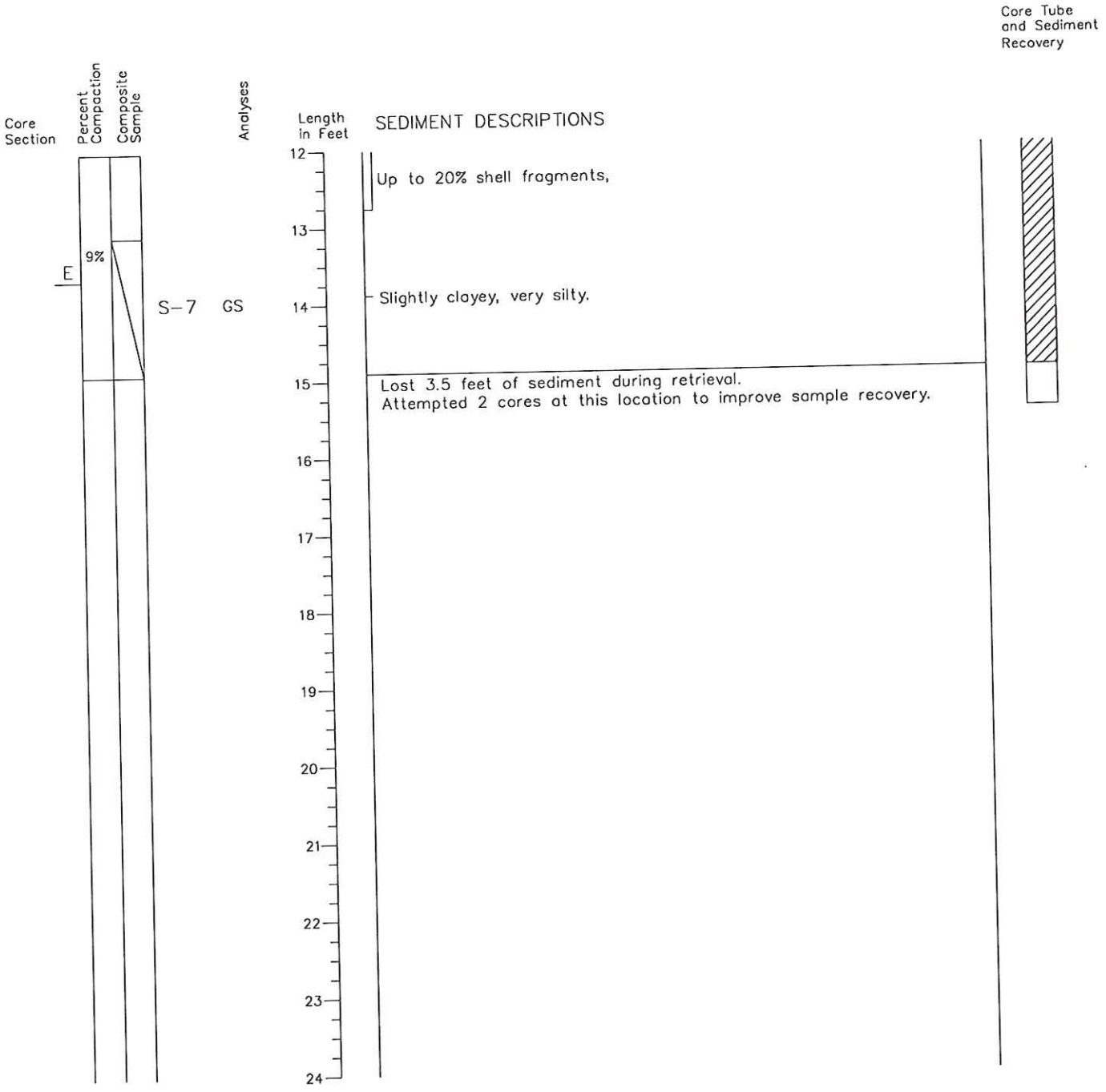


1=1 ACAD LOG

Notes:
1. Horizontal control is based on NAD 83 datum (DGPS) - North Zone and vertical control is based on MLLW datum.
2. Composite sample depths and sediment contacts shown above were recalculated to account for percent compaction during driving.
3. Collocated surface samples were collected with van Veen grab sampler.
4. See Figure A-1 for key and legend.

HARTCROWSER
J-4478-05 9/96
Figure A-3 1/2

Sediment Core Log HC-VC-71



Notes:
1. Horizontal control is based on NAD 83 datum (DGPS) – North Zone and vertical control is based on MLLW datum.
2. Composite sample depths and sediment contacts shown above were recalculated to account for percent compaction during driving.
3. Collocated surface samples were collected with van Veen grab sampler.
4. See Figure A–1 for key and legend.

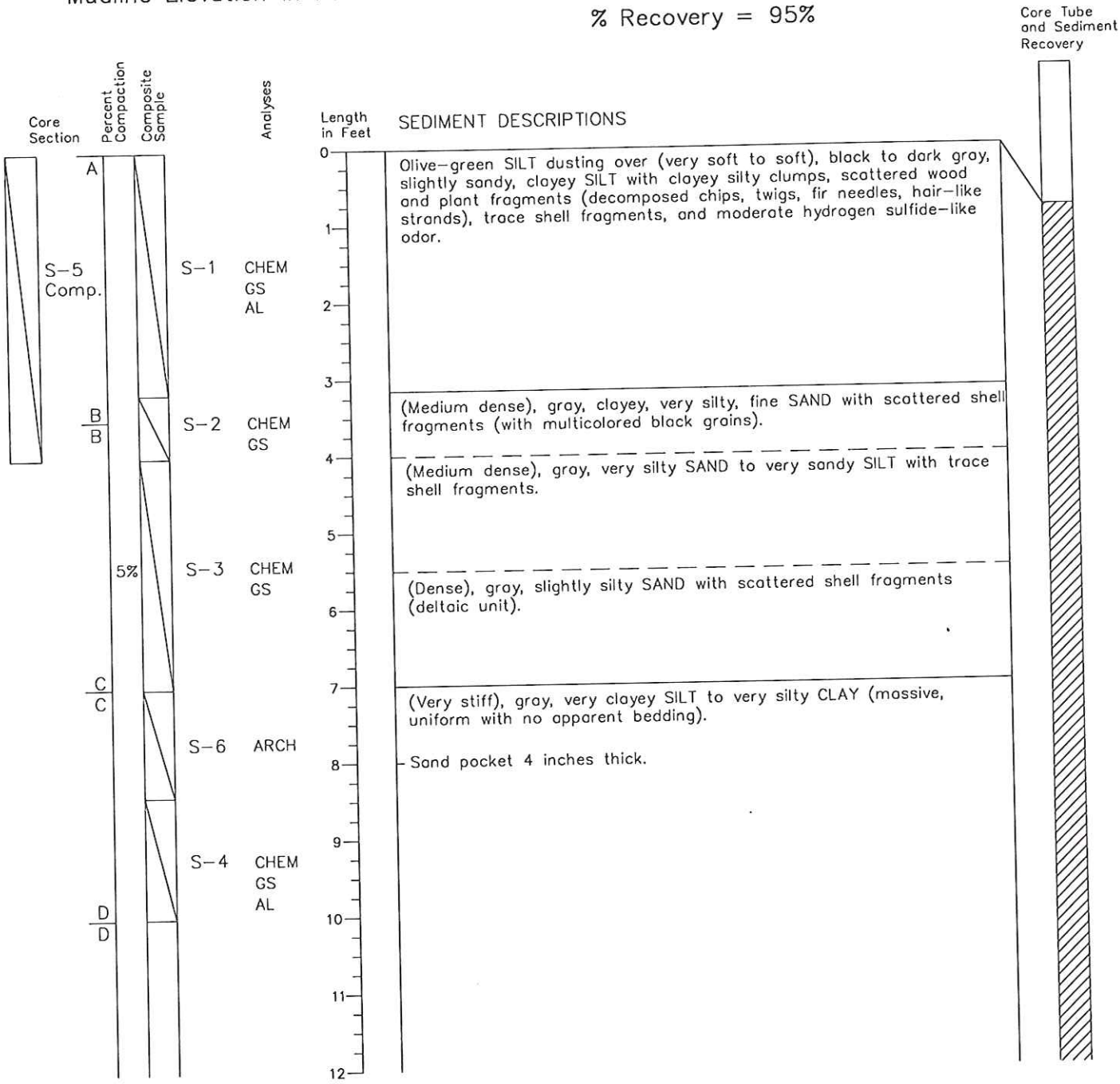
HARTCROWSER
J-4478-05 9/96
Figure A-3 2/2

cvd 1/14/97 1=1 hc-pcp
HCVC71x

Sediment Core Log HC-VC-72

Type of Sample: 4-inch Vibracore
Date/Time: 9/11/96 1730
Recovery Length in Feet: 14.2
Mudline Elevation in Feet: -36.0

Northing: 641,299
Easting: 1,239,961
Drive Depth in Feet: 15
Core Tube Length in Feet: 17.1
% Recovery = 95%

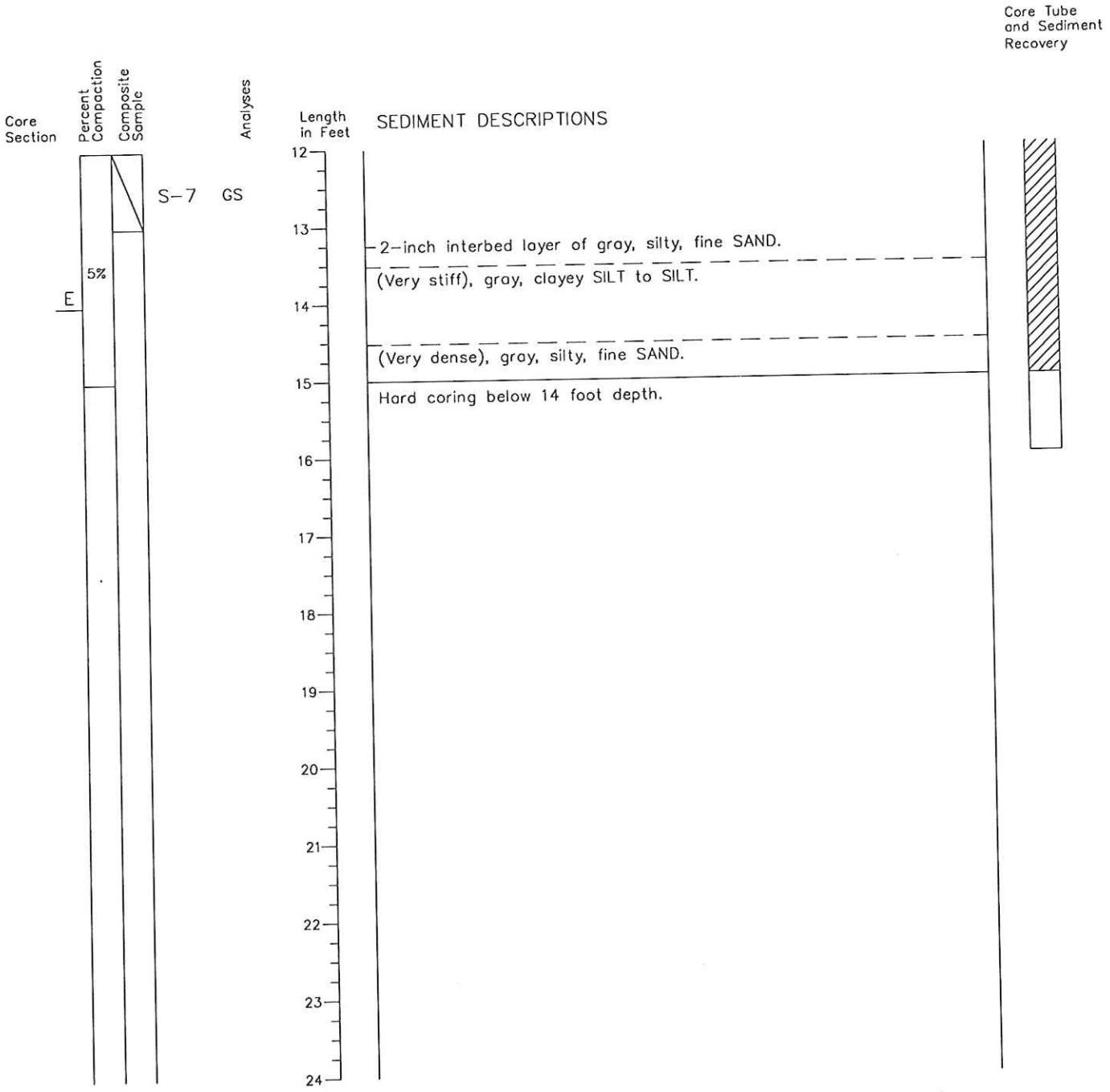


Notes:
1. Horizontal control is based on NAD 83 datum (DGPS) - North Zone and vertical control is based on MLLW datum.
2. Composite sample depths and sediment contacts shown above were recalculated to account for percent compaction during driving.
3. Collocated surface samples were collected with van Veen grab sampler.
4. See Figure A-1 for key and legend.

1=1 ACAD LOG

HARTCROWSER
J-4478-05 9/96
Figure A-4 1/2

Sediment Core Log HC-VC-72



Notes:
1. Horizontal control is based on NAD 83 datum (DGPS) – North Zone and vertical control is based on MLLW datum.
2. Composite sample depths and sediment contacts shown above were recalculated to account for percent compaction during driving.
3. Collocated surface samples were collected with van Veen grab sampler.
4. See Figure A-1 for key and legend.

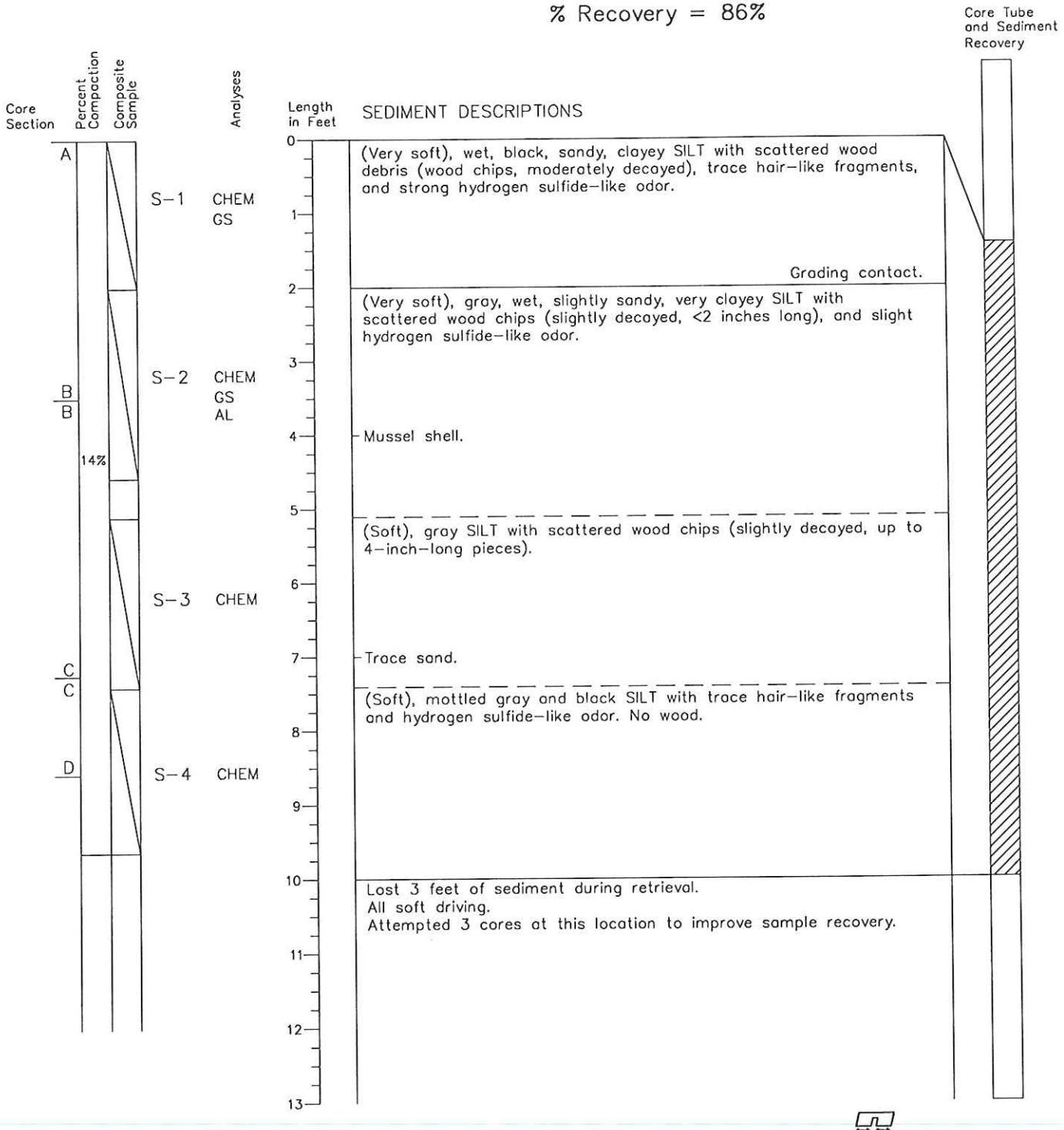
HARTCROWSER
J-4478-05 9/96
Figure A-4 2/2

cvd 1/14/97 1=. hc-pcp
HCVC72X

Sediment Core Log HC-VC-73

Type of Sample: 4-inch Vibracore
Date/Time: 9/12/96 0845
Recovery Length in Feet: 8.6
Mudline Elevation in Feet: -28.0

Northing: 641,693
Easting: 1,240,019
Drive Depth in Feet: 10.0
Core Tube Length in Feet: 15.0
% Recovery = 86%



Notes:
1. Horizontal control is based on NAD 83 datum (DGPS) - North Zone and vertical control is based on MLLW datum.
2. Composite sample depths and sediment contacts shown above were recalculated to account for percent compaction during driving.
3. Collocated surface samples were collected with van Veen grab sampler.
4. See Figure A-1 for key and legend.

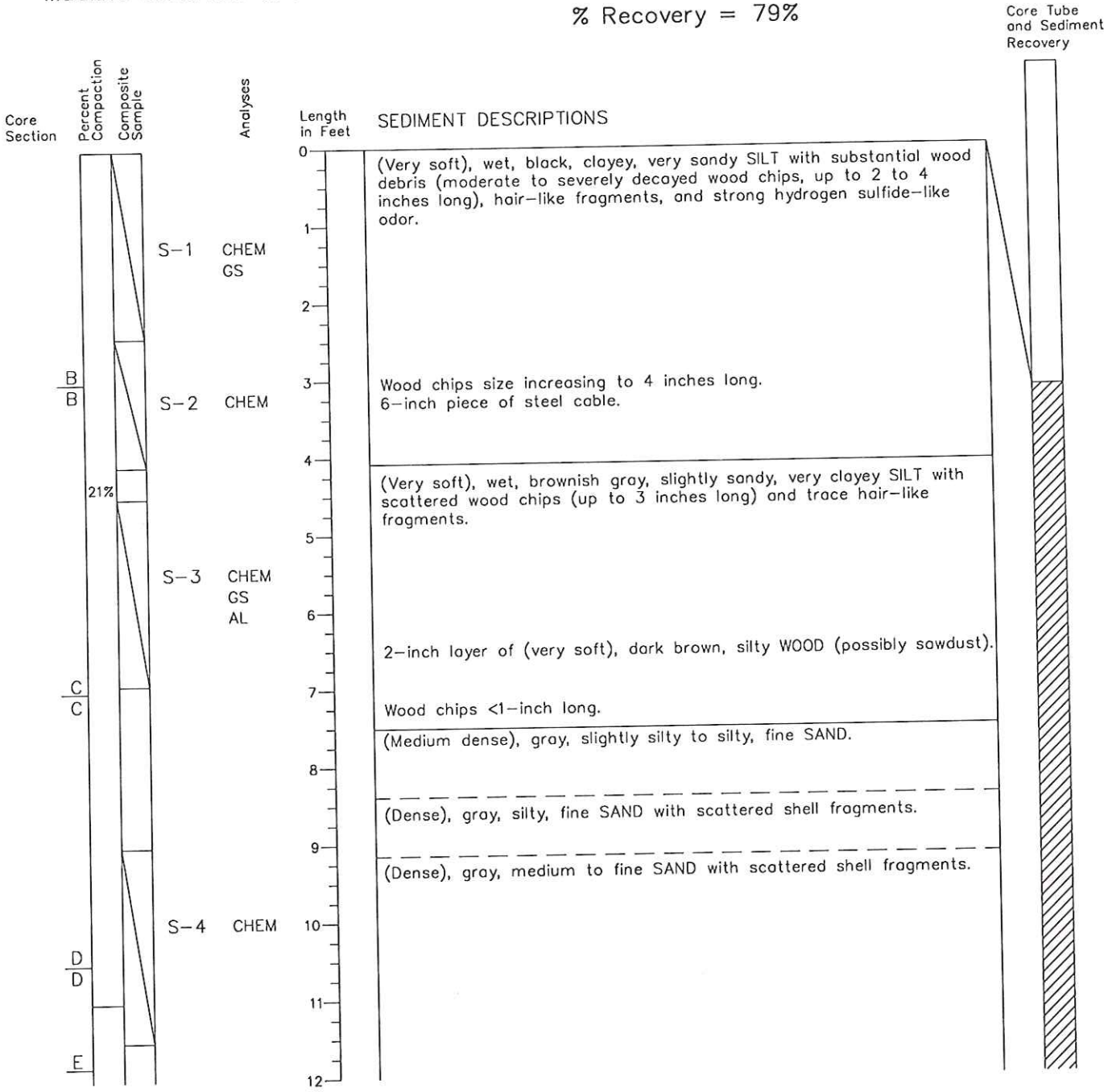
1=1 ACAD LOG

HARTCROWSER
J-4478-05 9/96
Figure A-5

Sediment Core Log HC-VC-74

Type of Sample: 4-inch Vibracore
Date/Time: 9/13/96 1500
Recovery Length in Feet: 11.8
Mudline Elevation in Feet: -4.2

Northing: 641,275
Easting: 1,240,477
Drive Depth in Feet: 15.0
Core Tube Length in Feet: 17
% Recovery = 79%

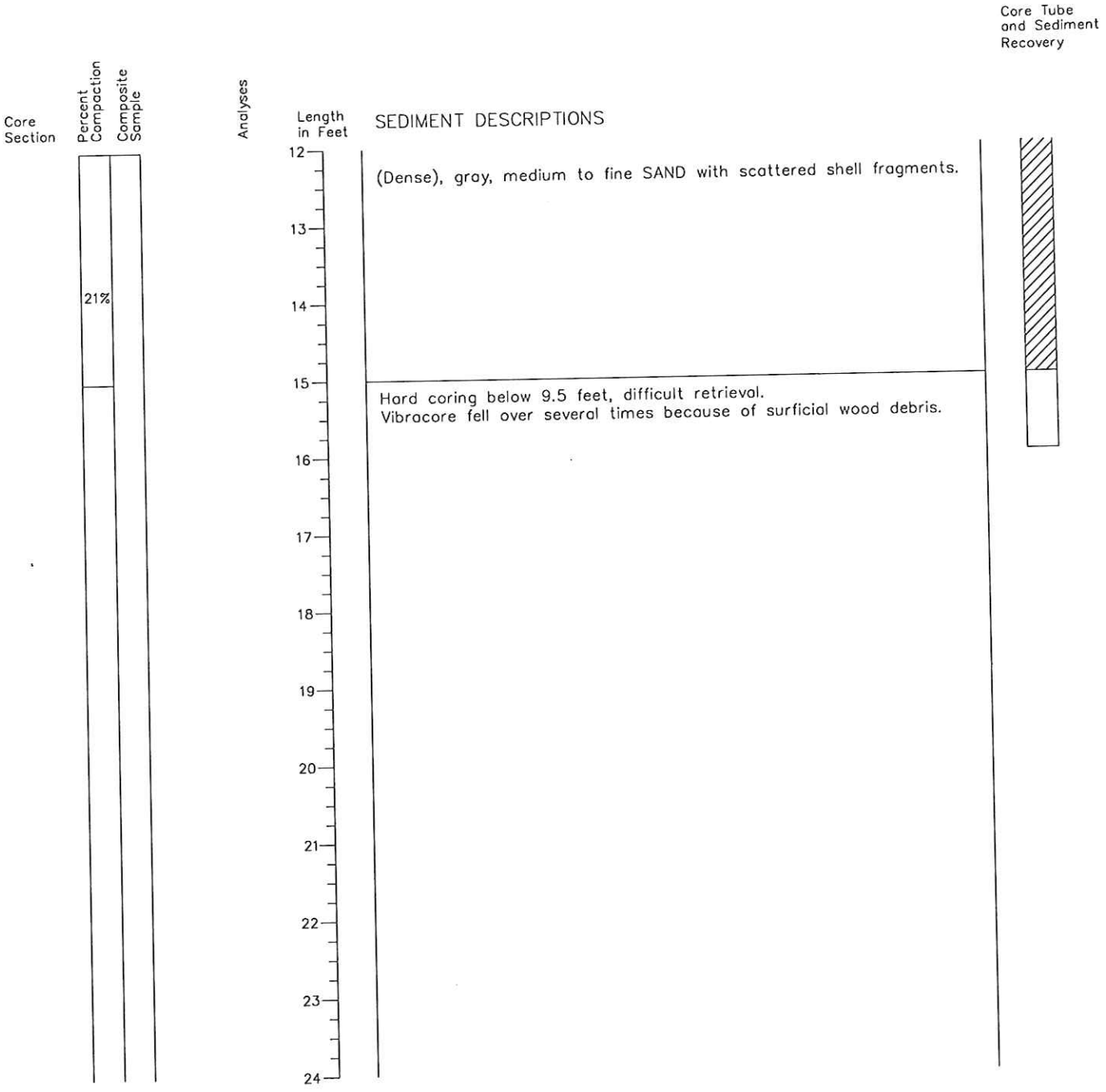


Notes:
1. Horizontal control is based on NAD 83 datum (DGPS) - North Zone and vertical control is based on MLLW datum.
2. Composite sample depths and sediment contacts shown above were recalculated to account for percent compaction during driving.
3. Collocated surface samples were collected with van Veen grab sampler.
4. See Figure A-1 for key and legend.

HARTCROWSER
J-4478-05 9/96
Figure A-6 1/2

1-, ACAD LOG

Sediment Core Log HC-VC-74



Notes:
1. Horizontal control is based on NAD 83 datum (DGPS) – North Zone and vertical control is based on MLLW datum.
2. Composite sample depths and sediment contacts shown above were recalculated to account for percent compaction during driving.
3. Collocated surface samples were collected with van Veen grab sampler.
4. See Figure A–1 for key and legend.

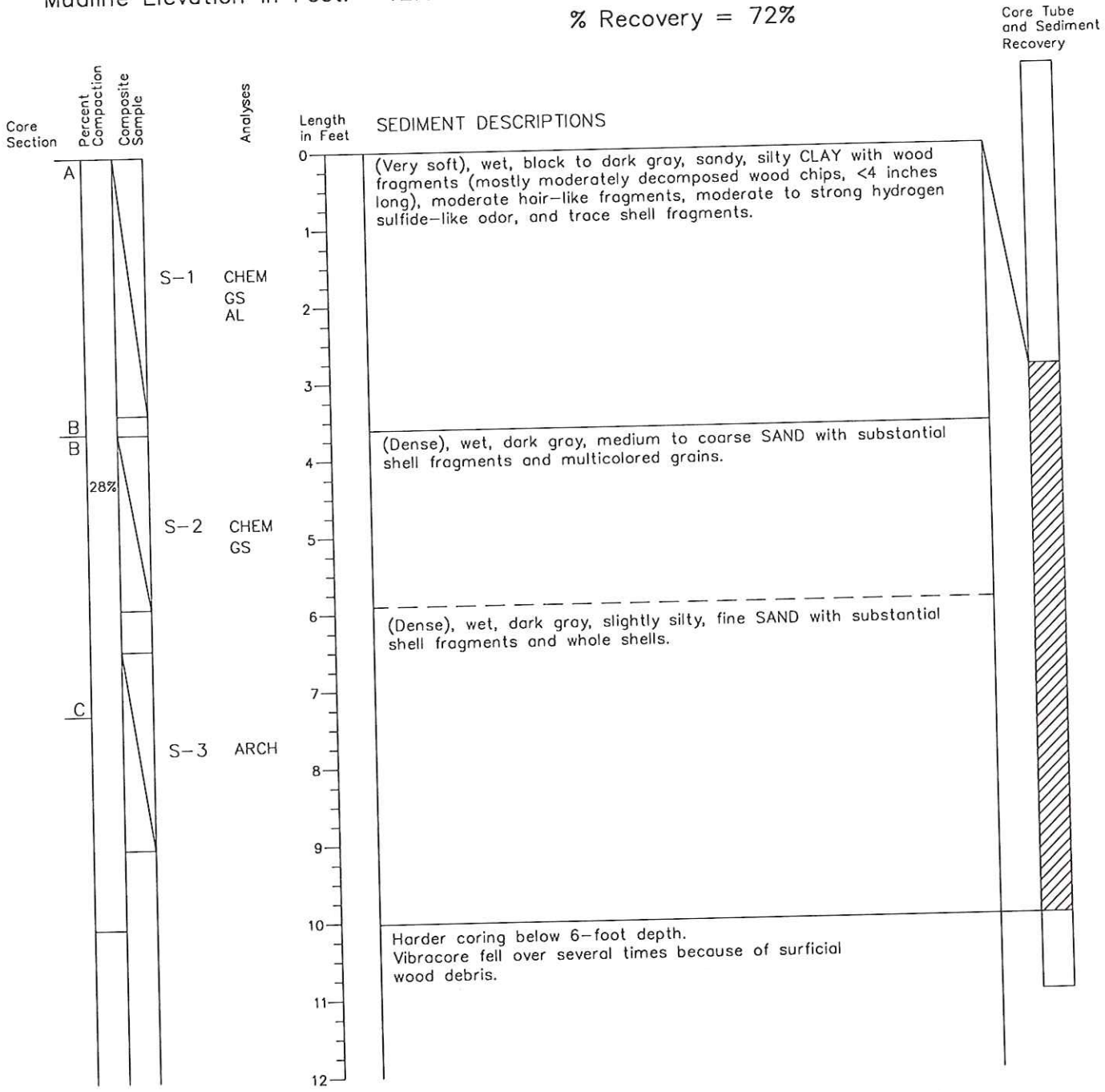
HARTCROWSER
J-4478-05 9/96
Figure A-6 2/2

hc-pcp
cvd 1/14/97 1=1
HCVC70

Sediment Core Log HC-VC-75

Type of Sample: 4–inch Vibracore
Date/Time: 9/12/96 1715
Recovery Length in Feet: 7.1
Mudline Elevation in Feet: –12.0

Northing: 641,655
Easting: 1,240,497
Drive Depth in Feet: 10.0
Core Tube Length in Feet: 12.0
% Recovery = 72%



Notes:
1. Horizontal control is based on NAD 83 datum (DGPS) – North Zone and vertical control is based on MLLW datum.
2. Composite sample depths and sediment contacts shown above were recalculated to account for percent compaction during driving.
3. Collocated surface samples were collected with van Veen grab sampler.
4. See Figure A–1 for key and legend.

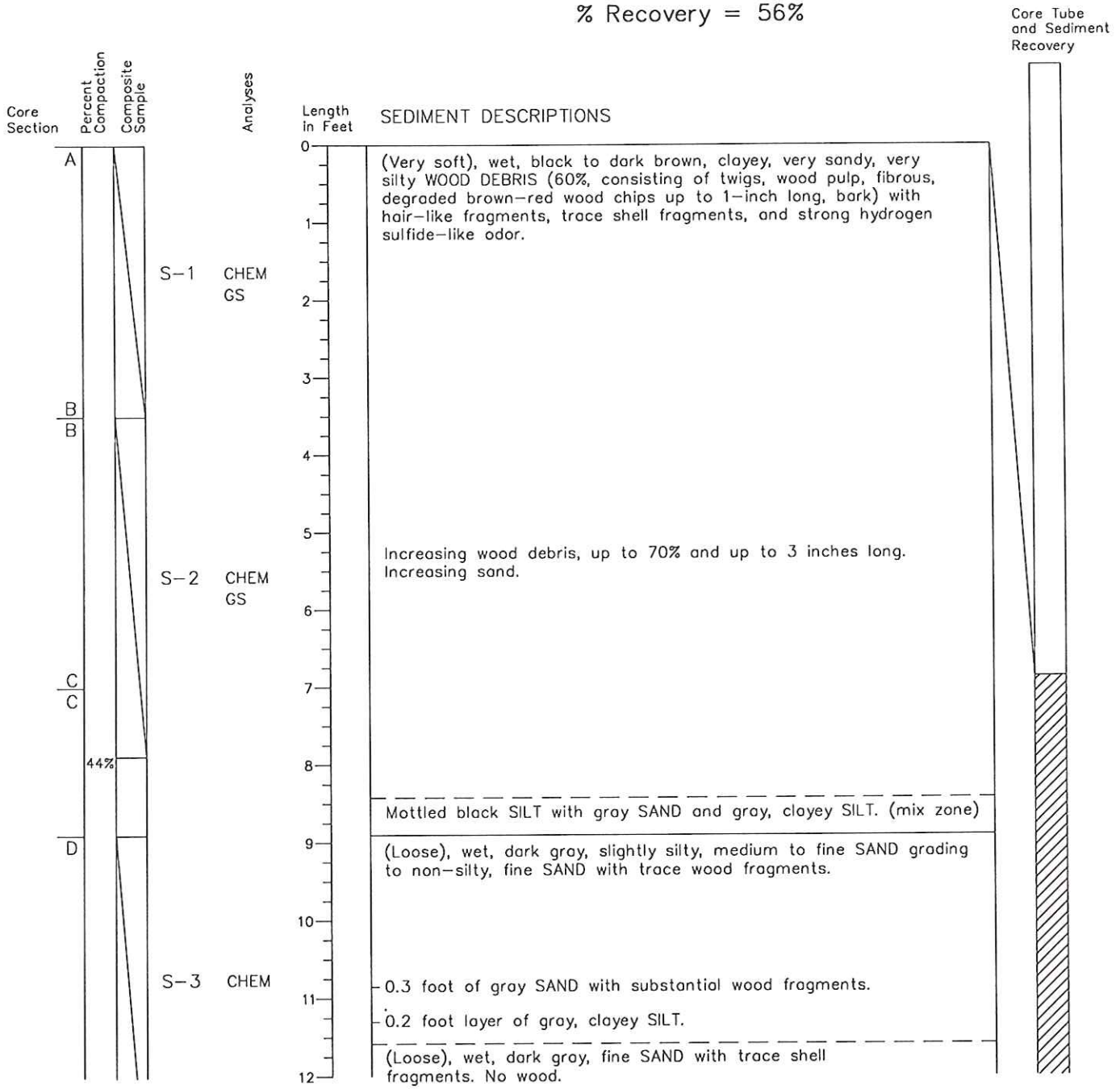
HARTCROWSER
J-4478-05 9/96
Figure A-7

cvd 1/14/97 1=1 hc-pcp
HCVC75

Sediment Core Log HC-VC-76

Type of Sample: 4–inch Vibracore
Date/Time: 9/13/96 1530
Recovery Length in Feet: 8.7
Mudline Elevation in Feet: –11.7

Northing: 641,877
Easting: 1,240,831
Drive Length in Feet: 15.5
Core Tube Length in Feet: 17.0
% Recovery = 56%

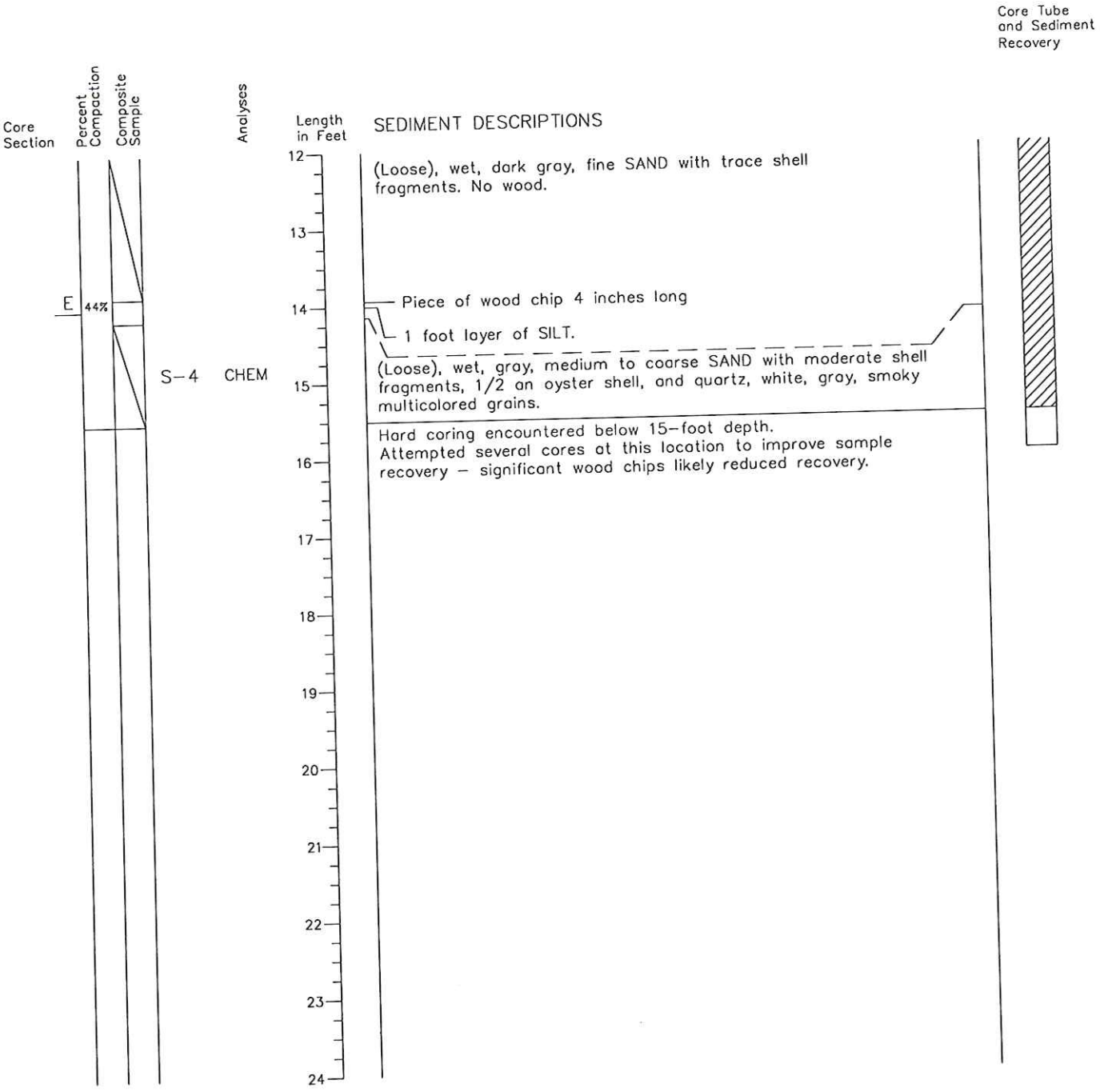


Notes:
1. Horizontal control is based on NAD 83 datum (DGPS) – North Zone and vertical control is based on MLLW datum.
2. Composite sample depths and sediment contacts shown above were recalculated to account for percent compaction during driving.
3. Collocated surface samples were collected with van Veen grab sampler.
4. See Figure A–1 for key and legend.

1=1 ACAD LOG

HARTCROWSER
J-4478-05 9/96
Figure A-8 1/2

Sediment Core Log HC-VC-76



Notes:
1. Horizontal control is based on NAD 83 datum (DGPS) - North Zone and vertical control is based on MLLW datum.
2. Composite sample depths and sediment contacts shown above were recalculated to account for percent compaction during driving.
3. Collocated surface samples were collected with van Veen grab sampler.
4. See Figure A-1 for key and legend.

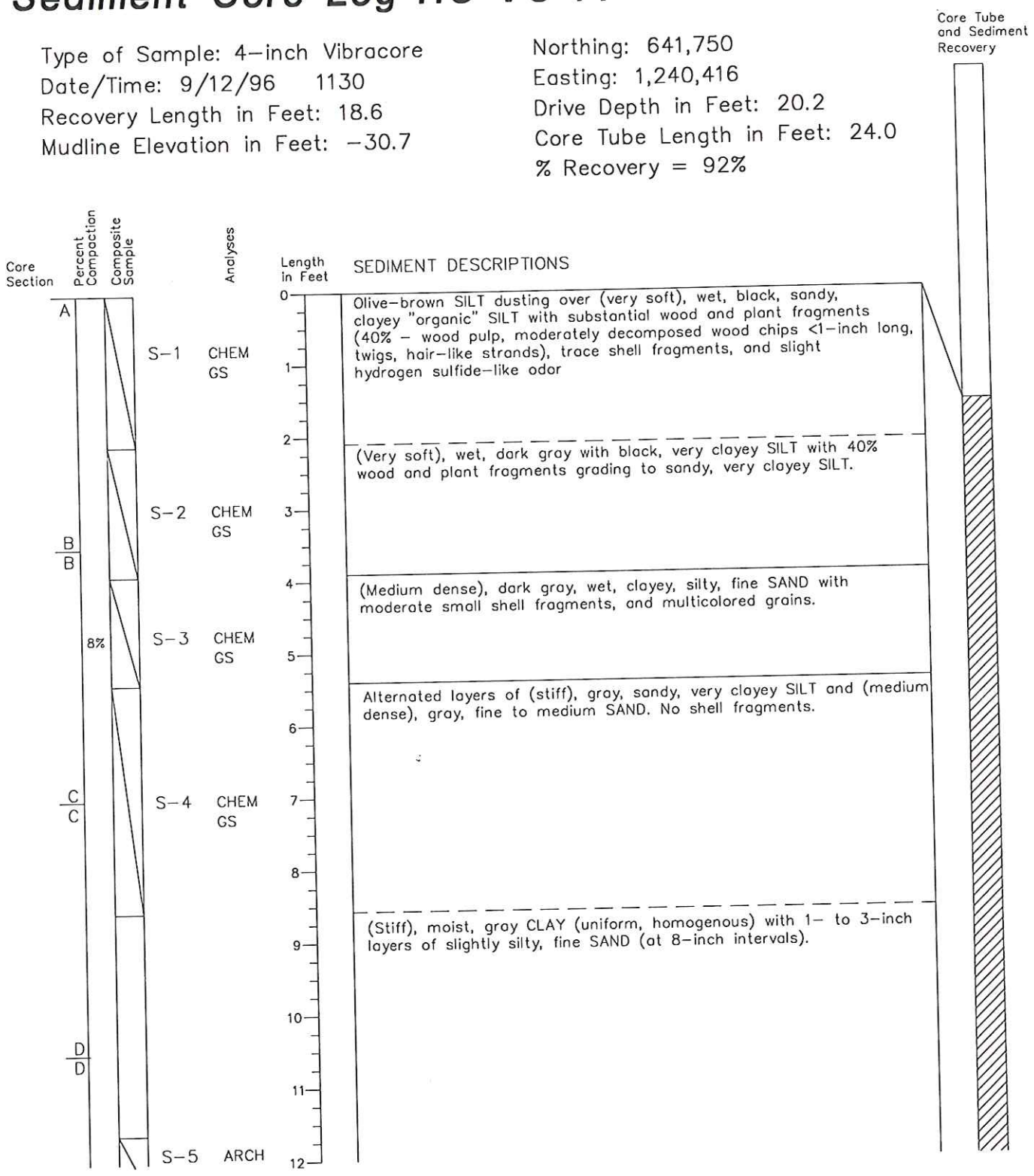
1=1 ACAD LOG HCVC76X

HARTCROWSER
J-4478-05 9/96
Figure A-8 2/2

Sediment Core Log HC-VC-77

Type of Sample: 4–inch Vibracore
Date/Time: 9/12/96 1130
Recovery Length in Feet: 18.6
Mudline Elevation in Feet: –30.7

Northing: 641,750
Easting: 1,240,416
Drive Depth in Feet: 20.2
Core Tube Length in Feet: 24.0
% Recovery = 92%

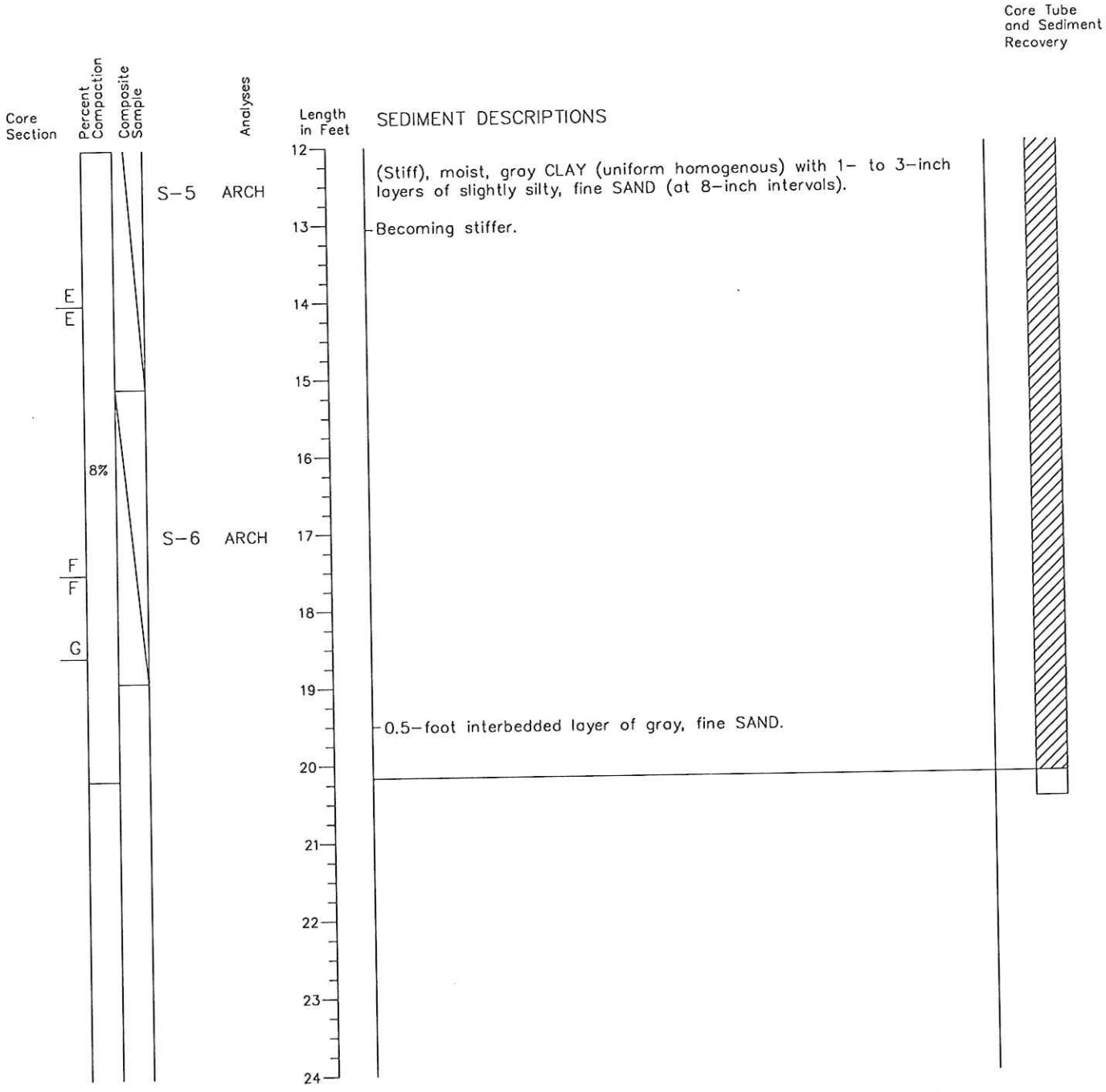


Notes:
1. Horizontal control is based on NAD 83 datum (DGPS) – North Zone and vertical control is based on MLLW datum.
2. Composite sample depths and sediment contacts shown above were recalculated to account for percent compaction during driving.
3. Collocated surface samples were collected with van Veen grab sampler.
4. See Figure A–1 for key and legend.

HARTCROWSER
J-4478-05 9/96
Figure A-9 1/2

ACAD LOG 1=1

Sediment Core Log HC-VC-77



Notes:
1. Horizontal control is based on NAD 83 datum (DGPS) – North Zone and vertical control is based on MLLW datum.
2. Composite sample depths and sediment contacts shown above were recalculated to account for percent compaction during driving.
3. Collocated surface samples were collected with van Veen grab sampler.
4. See Figure A-1 for key and legend.

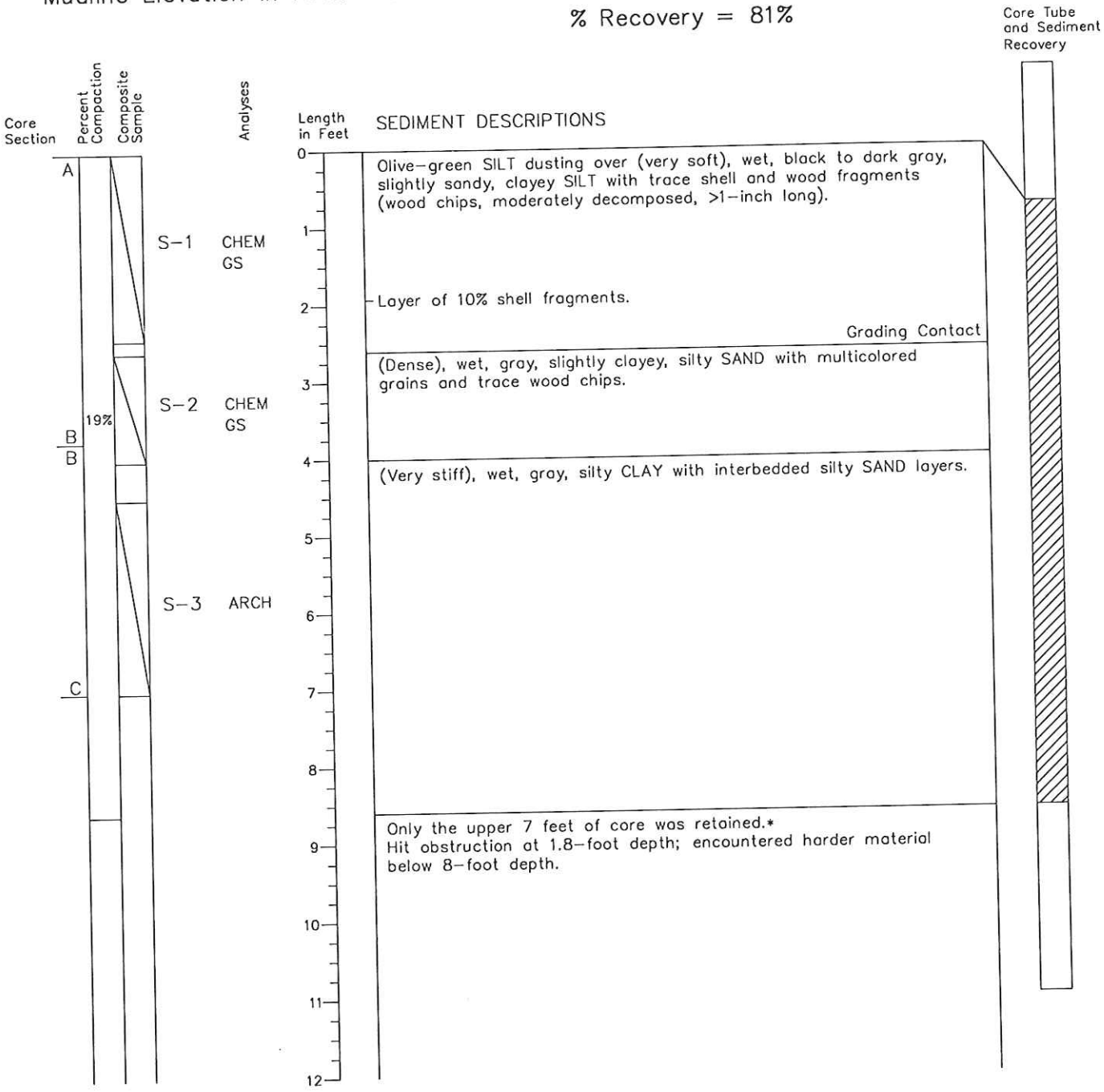
cvd 10/4/96 1=1 hc-pcp
HCVC77X

HARTCROWSER
J-4478-05 9/96
Figure A-9 2/2

Sediment Core Log HC-VC-78

Type of Sample: 4–inch Vibracore
Date/Time: 9/11/96 1200
Recovery Length in Feet: 7.9*
Mudline Elevation in Feet: –28.1

Northing: 642,119
Easting: 1,240,479
Drive Depth in Feet: 10.0
Core Tube Length in Feet: 12.1
% Recovery = 81%



Notes:
1. Horizontal control is based on NAD 83 datum (DGPS) – North Zone and vertical control is based on MLLW datum.
2. Composite sample depths and sediment contacts shown above were recalculated to account for percent compaction during driving.
3. Collocated surface samples were collected with van Veen grab sampler.
4. See Figure A–1 for key and legend.

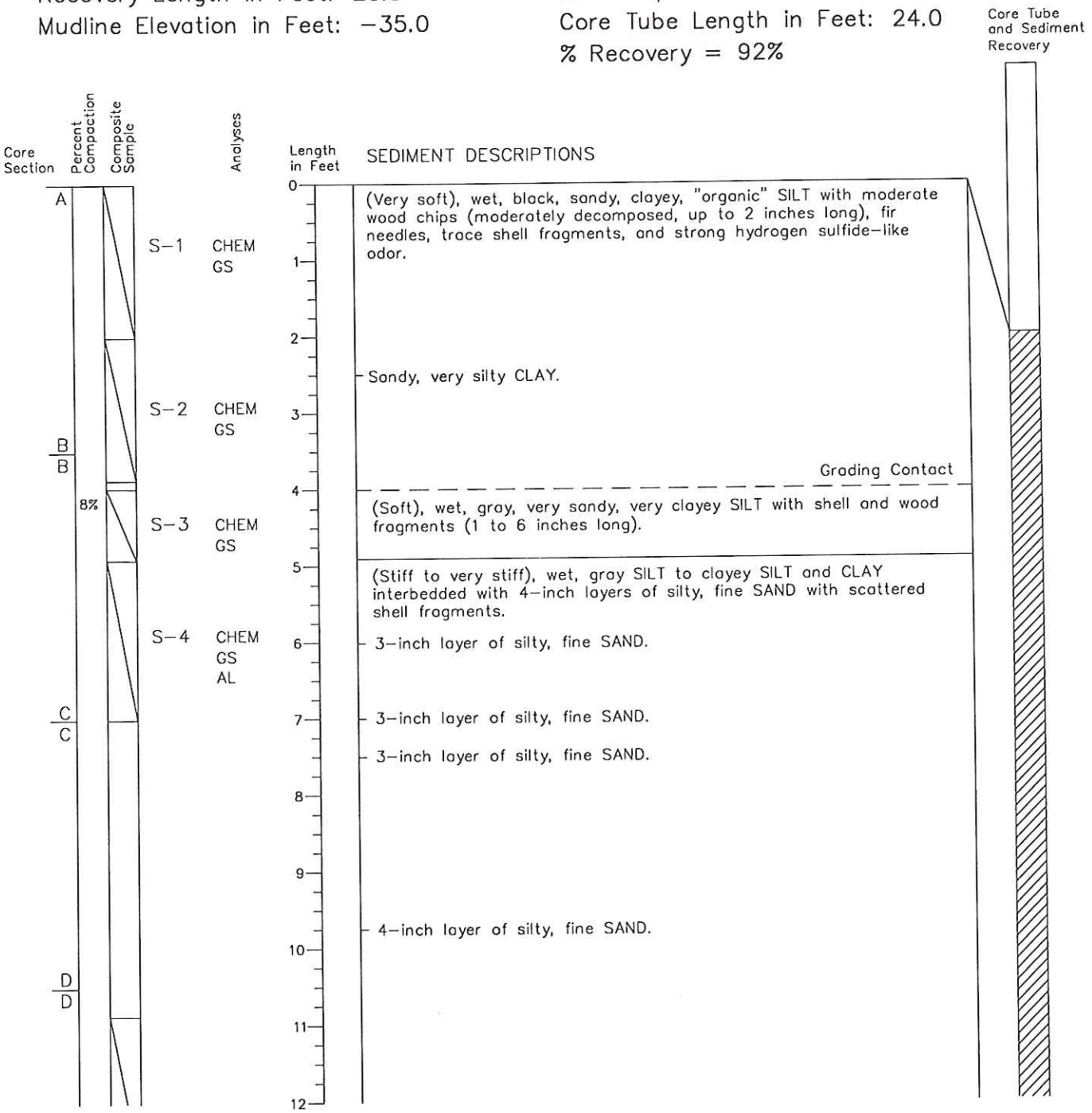
HARTCROWSER
J-4478-05 9/96
Figure A-10

hc–pdp
cwd 1/14/97
HCVC70

Sediment Core Log HC-VC-79

Type of Sample: 4–inch Vibracore
Date/Time: 9/12/96 1300
Recovery Length in Feet: 20.3
Mudline Elevation in Feet: –35.0

Northing: 642,184
Easting: 1,240,867
Drive Depth in Feet: 21.8
Core Tube Length in Feet: 24.0
% Recovery = 92%

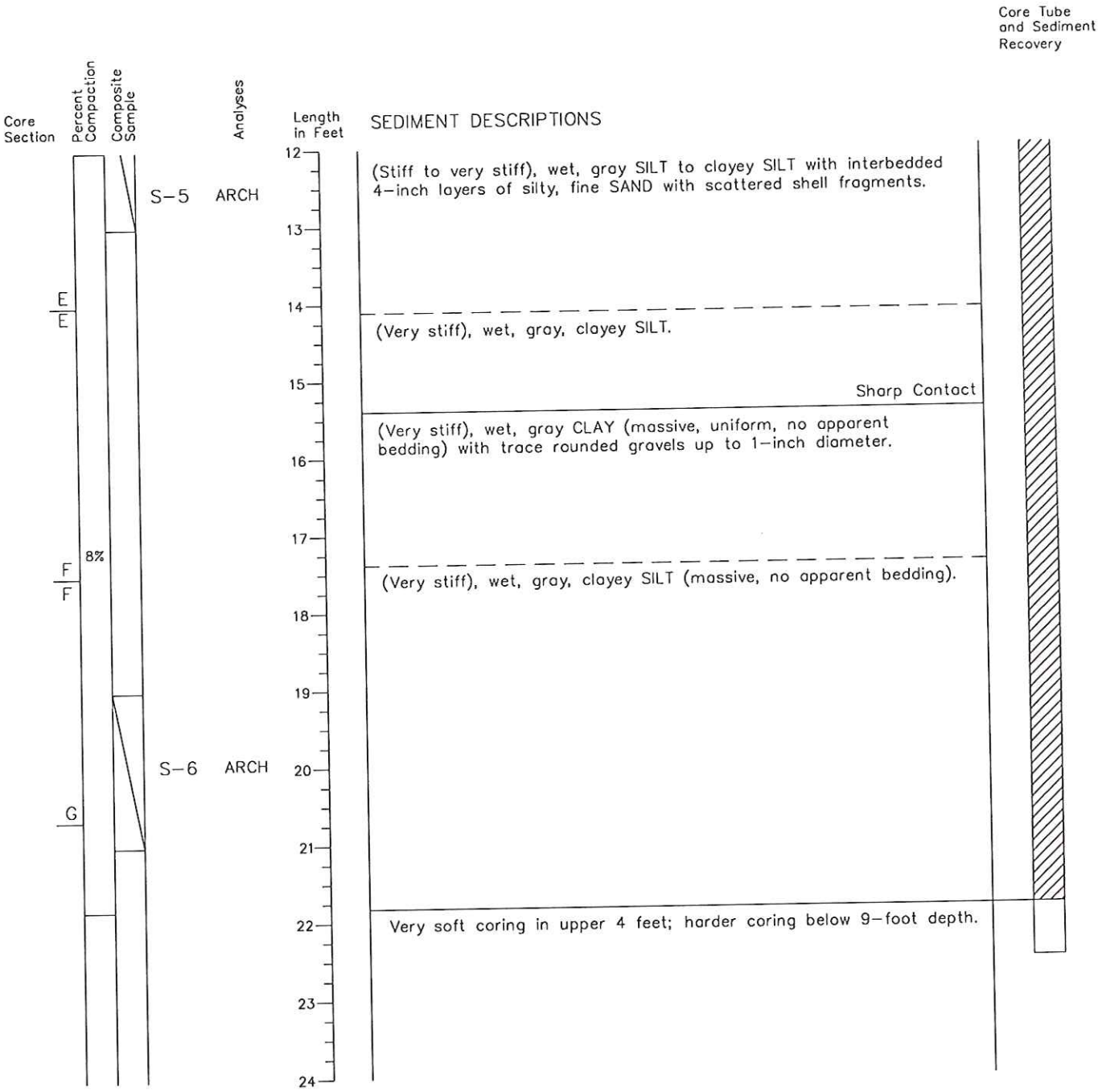


Notes:
1. Horizontal control is based on NAD 83 datum (DGPS) – North Zone and vertical control is based on MLLW datum.
2. Composite sample depths and sediment contacts shown above were recalculated to account for percent compaction during driving.
3. Collocated surface samples were collected with van Veen grab sampler.
4. See Figure A–1 for key and legend.

cvd 1/15/97 1=1 hc–pcp
HCVC79

HARTCROWSER
J-4478-05 9/96
Figure A-11 1/2

Sediment Core Log HC-VC-79



Notes:
1. Horizontal control is based on NAD 83 datum (DGPS) – North Zone and vertical control is based on MLLW datum.
2. Composite sample depths and sediment contacts shown above were recalculated to account for percent compaction during driving.
3. Collocated surface samples were collected with van Veen grab sampler.
4. See Figure A-1 for key and legend.

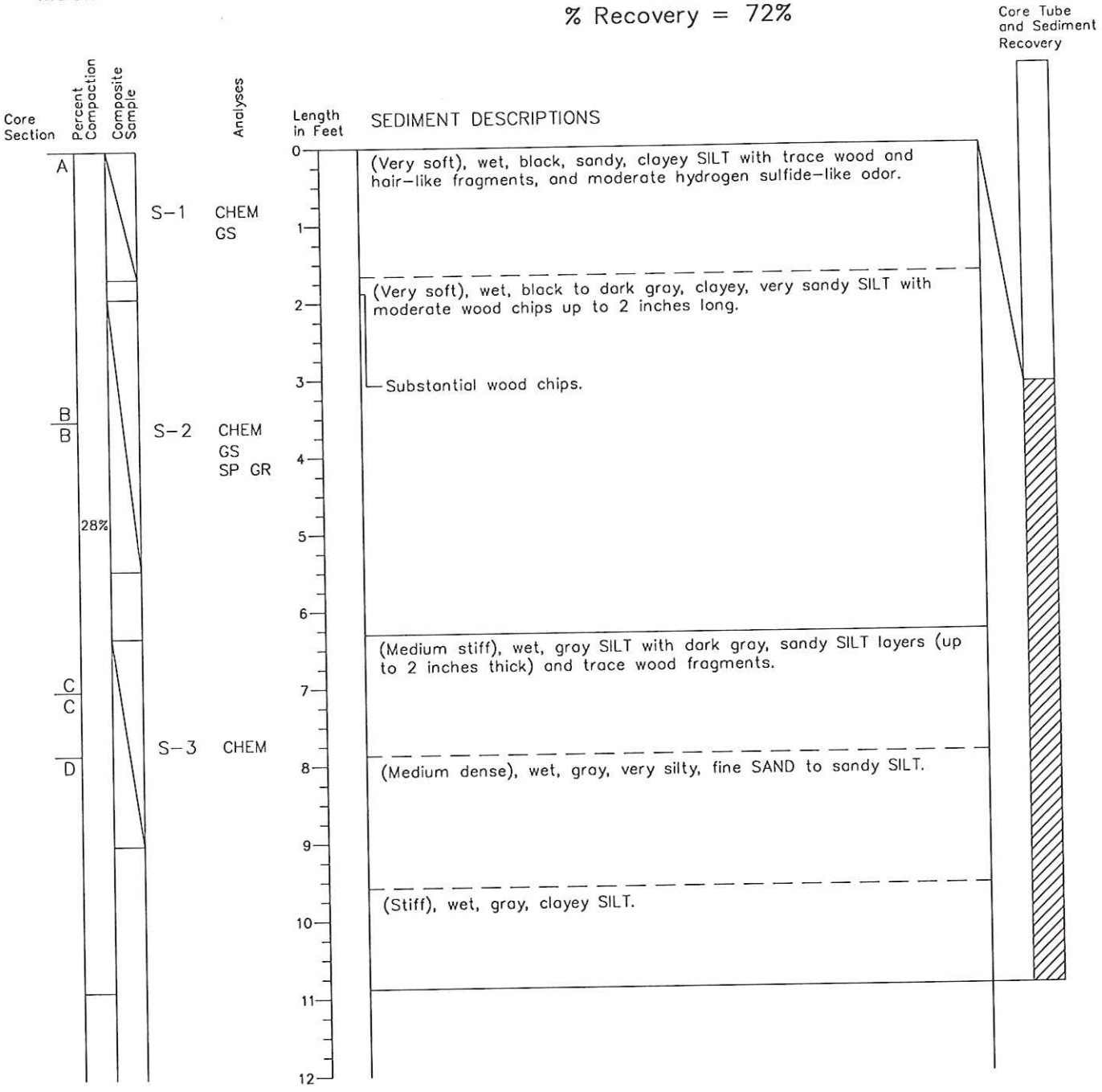
HARTCROWSER
J-4478-05 9/96
Figure A-11 2/2

cvd 1/15/97 1=1 hc-pcp
HCVC79x

Sediment Core Log HC-VC-80

Type of Sample: 4-inch Vibracore
Date/Time: 9/12/96 1500
Recovery Length in Feet: 7.8
Mudline Elevation in Feet: -28.0

Northing: 642,673
Easting: 1,241,171
Drive Depth in Feet: 10.9
Core Tube Length in Feet: 12.0
% Recovery = 72%



Notes:
1. Horizontal control is based on NAD 83 datum (DGPS) - North Zone and vertical control is based on MLLW datum.
2. Composite sample depths and sediment contacts shown above were recalculated to account for percent compaction during driving.
3. Collocated surface samples were collected with van Veen grab sampler.
4. See Figure A-1 for key and legend.
5. A duplicate of HC-VC-80-S2 was collected and labeled HC-VC-206.

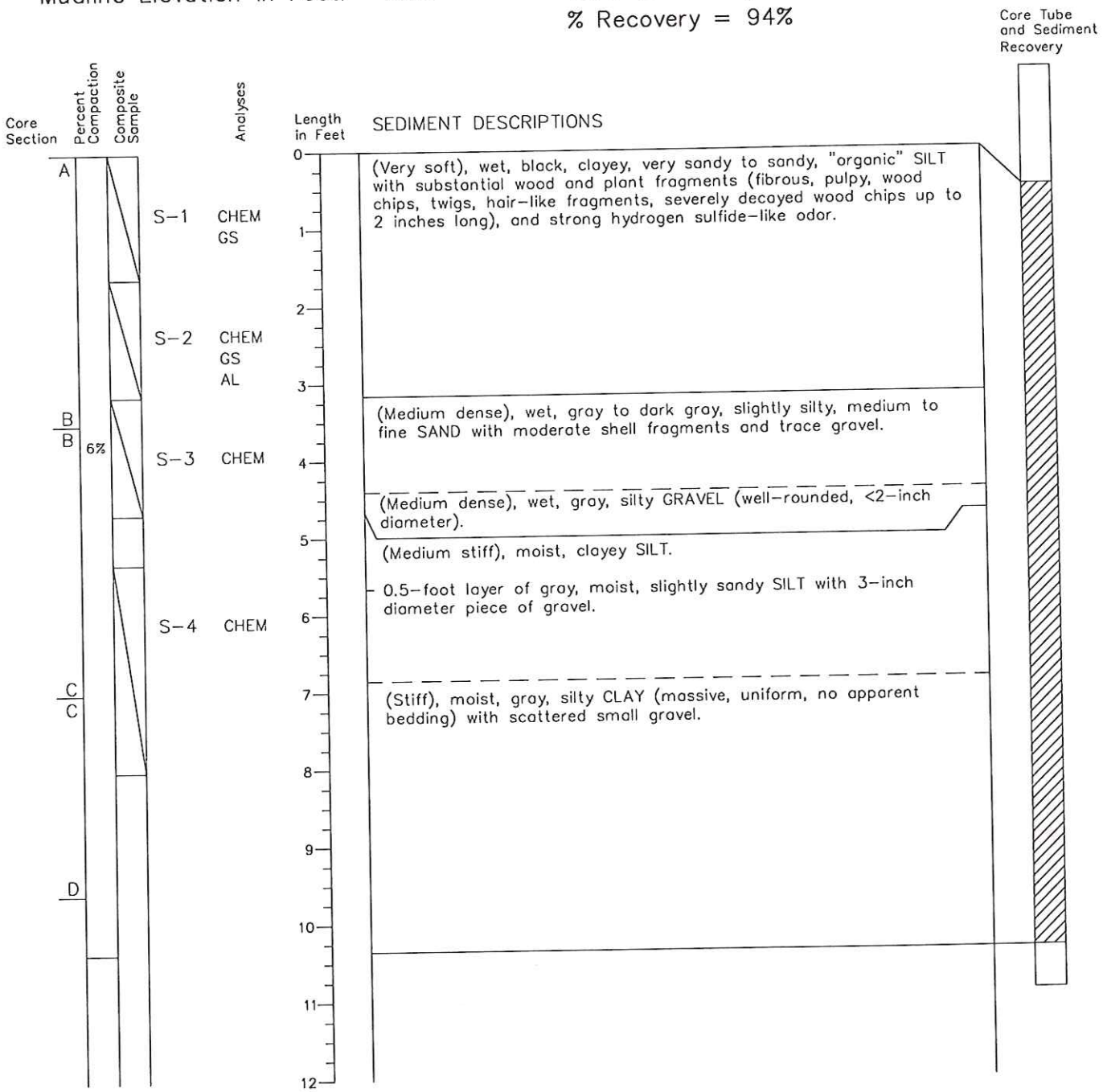
HARTCROWSER
J-4478-05 9/96
Figure A-12

ACAD LOG 1=1

Sediment Core Log HC-VC-81

Type of Sample: 4-inch Vibracore
Date/Time: 9/12/96 1530
Recovery Length in Feet: 9.7
Mudline Elevation in Feet: -20.0

Northing: 643,139
Easting: 1,241,681
Drive Depth in Feet: 10.3
Core Tube Length in Feet: 12.0
% Recovery = 94%



Notes:
1. Horizontal control is based on NAD 83 datum (DGPS) - North Zone and vertical control is based on MLLW datum.
2. Composite sample depths and sediment contacts shown above were recalculated to account for percent compaction during driving.
3. Collocated surface samples were collected with van Veen grab sampler.
4. See Figure A-1 for key and legend.
5. A duplicate of HC-VC-81-S1 was collected and labeled HC-VC-207.

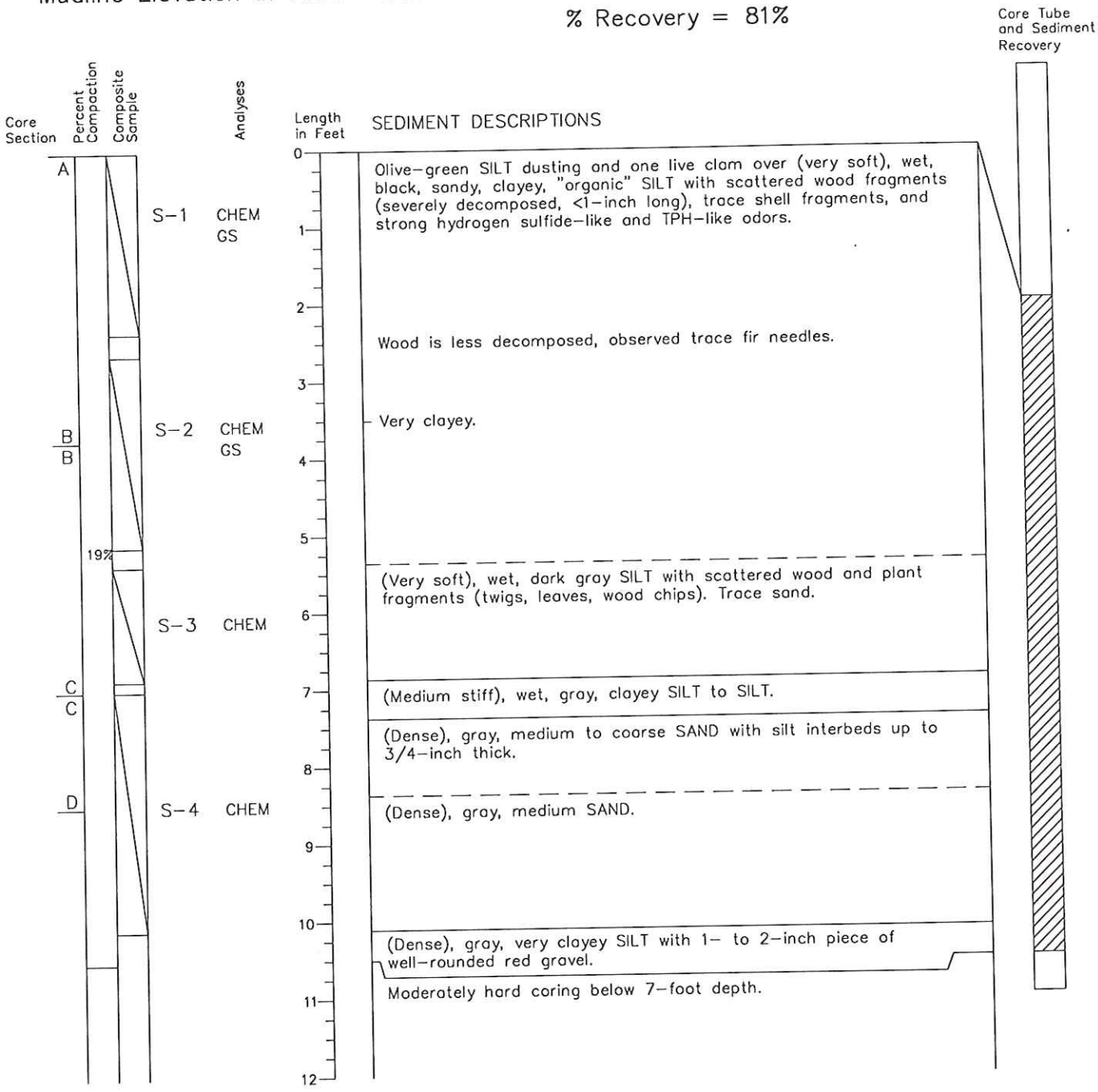
HARTCROWSER
J-4478-05 9/96
Figure A-13

ACAD LOG 1=1

Sediment Core Log HC-VC-82

Type of Sample: 4-inch Vibracore
Date/Time: 9/12/96 1610
Recovery Length in Feet: 8.5
Mudline Elevation in Feet: -16.0

Northing: 643,227
Easting: 1,241,927
Drive Depth in Feet: 10.5
Core Tube Length in Feet: 12.0
% Recovery = 81%



Notes:
1. Horizontal control is based on NAD 83 datum (DGPS) - North Zone and vertical control is based on MLLW datum.
2. Composite sample depths and sediment contacts shown above were recalculated to account for percent compaction during driving.
3. Collocated surface samples were collected with van Veen grab sampler.
4. See Figure A-1 for key and legend.

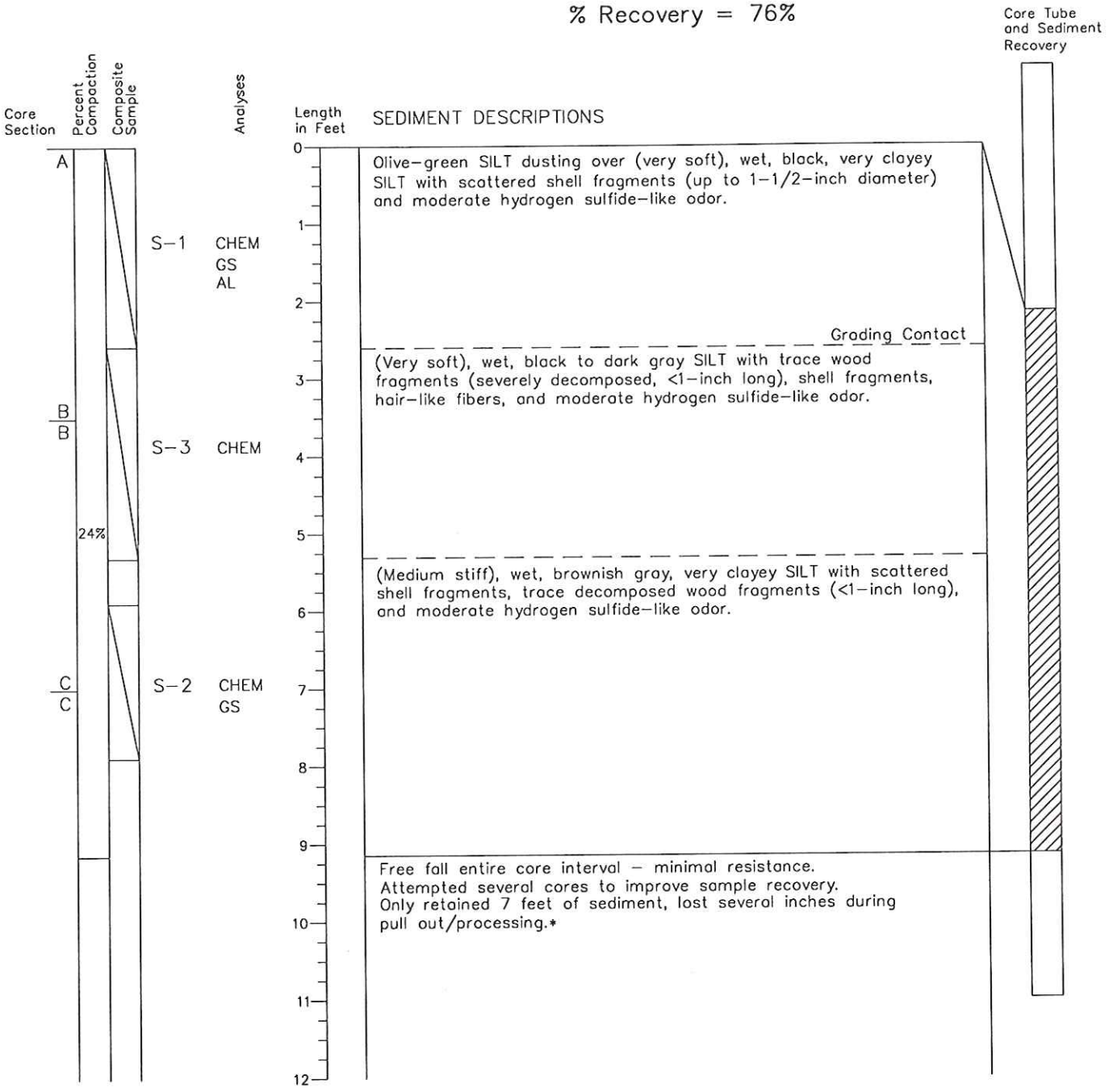
HARTCROWSER
J-4478-05 9/96
Figure A-14

ACAD LOG 1=1

Sediment Core Log HC-VC-83

Type of Sample: 4-inch Vibracore
Date/Time: 9/10/96 1630
Recovery Length in Feet: 7.2*
Mudline Elevation in Feet: -17.8

Northing: 643,136
Easting: 1,238,634
Drive Depth in Feet: 9.5
Core Tube Length in Feet: 12.0
% Recovery = 76%



Notes:
1. Horizontal control is based on NAD 83 datum (DGPS) - North Zone and vertical control is based on MLLW datum.
2. Composite sample depths and sediment contacts shown above were recalculated to account for percent compaction during driving.
3. Collocated surface samples were collected with van Veen grab sampler.
4. See Figure A-1 for key and legend.

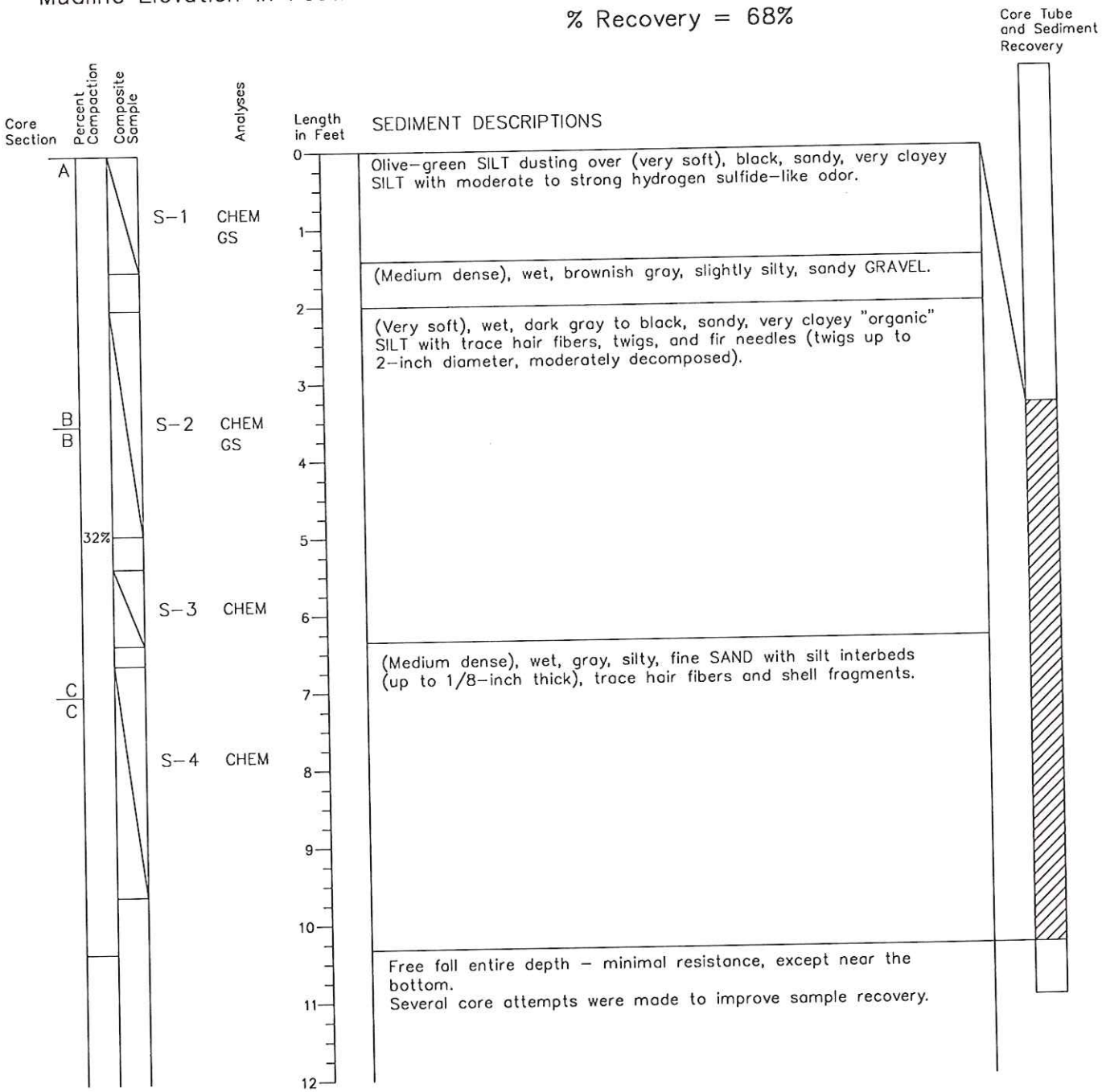
HARTCROWSER
J-4478-05 9/96
Figure A-15

ACAD LOG 1=1

Sediment Core Log HC-VC-84

Type of Sample: 4-inch Vibracore
Date/Time: 9/11/96 0840
Recovery Length in Feet: 7.0
Mudline Elevation in Feet: -17.6

Northing: 643,851
Easting: 1,239,330
Drive Depth in Feet: 10.3
Core Tube Length in Feet: 12.0
% Recovery = 68%



Notes:
1. Horizontal control is based on NAD 83 datum (DGPS) - North Zone and vertical control is based on MLLW datum.
2. Composite sample depths and sediment contacts shown above were recalculated to account for percent compaction during driving.
3. Collocated surface samples were collected with van Veen grab sampler.
4. See Figure A-1 for key and legend.

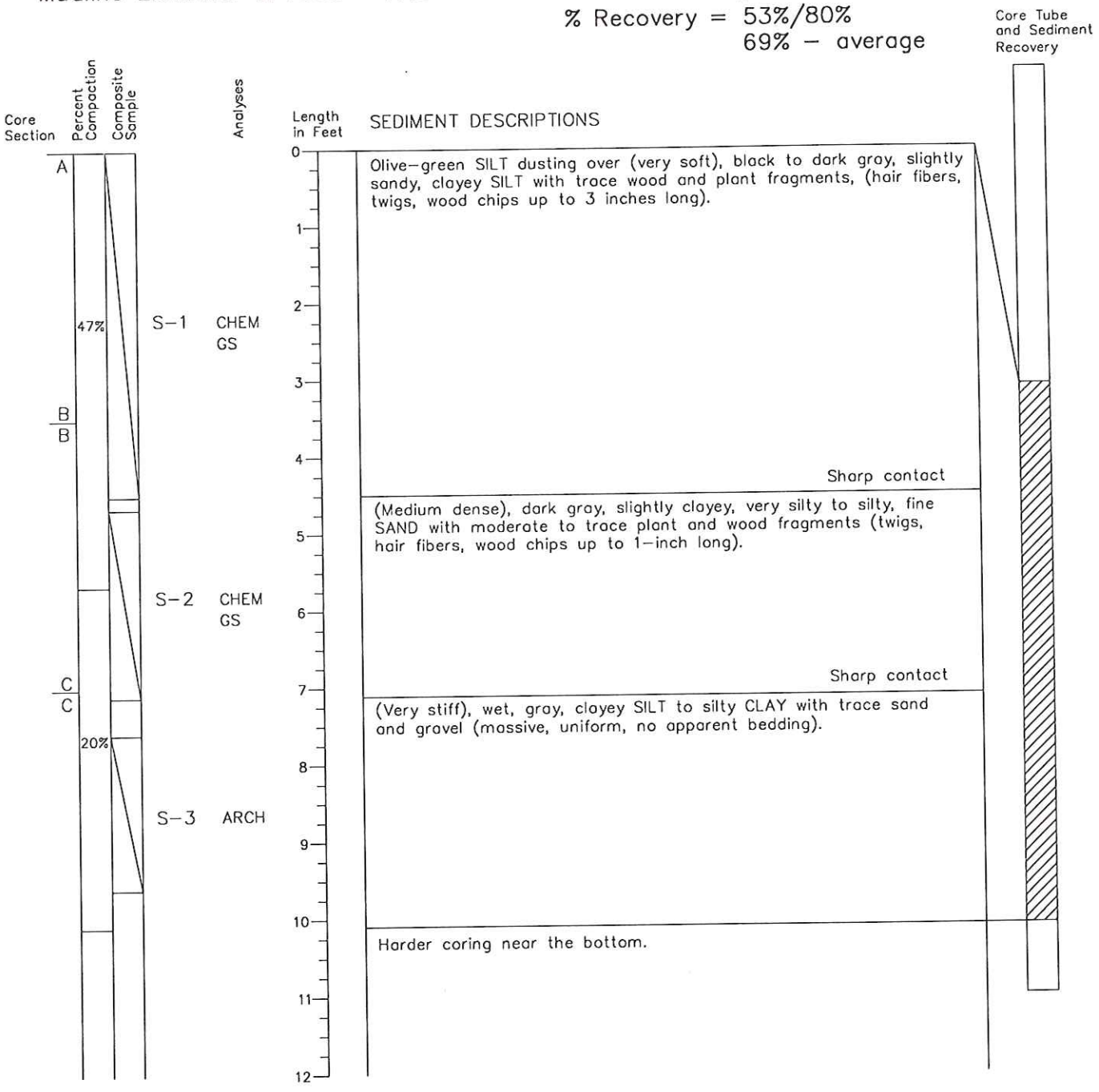
HARTCROWSER
J-4478-05 9/96
Figure A-16

ACAD LOG 1=1

Sediment Core Log HC-VC-85

Type of Sample: 4–inch Vibracore
Date/Time: 9/11/96 1015
Recovery Length in Feet: 7.0
Mudline Elevation in Feet: –16.3

Northing: 644,634
Easting: 1,240,185
Drive Depth in Feet: 10.1
Core Tube Length in Feet: 12.0
% Recovery = 53%/80%
69% – average



Notes:
1. Horizontal control is based on NAD 83 datum (DGPS) – North Zone and vertical control is based on MLLW datum.
2. Composite sample depths and sediment contacts shown above were recalculated to account for percent compaction during driving.
3. Collocated surface samples were collected with van Veen grab sampler.
4. See Figure A–1 for key and legend.

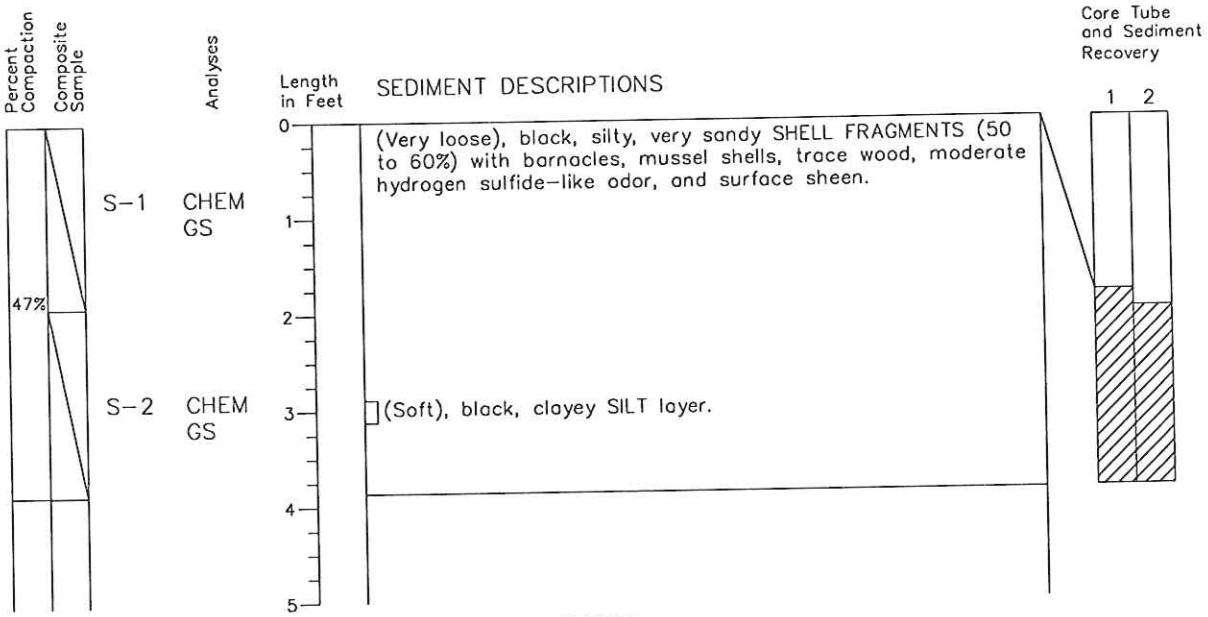
HARTCROWSER
J-4478-05 9/96
Figure A-17

cvd 1/15/97 1=1 hc-pcp
HCVC85

Sediment Core Log HC-DC-86

Type of Sample: 3-inch Push Diver Core
Date/Time: 9/18/96 1630
Recovery Length in Feet: 2.0/1.8
Mudline Elevation in Feet: −15.1 to −17.5
Distance Inward from Pier Face in Feet: 12

Northing: 640,641
Easting: 1,239,364
Drive Depth in Feet: 3.8
Core Tube Length in Feet: 3.8
% Recovery = 53%



DIVER OBSERVATIONS

Visibility	0 Ft
Slope	5 to 10°
Surface Characteristics	Shell mat bottom, medium dense
Debris	NA
Biota	NA
Accumulation	Over 3.8 ft, no resistance, consistent penetration
Condition of Piles	Intact, lots of batter piles, wood construction
Other	Diver could not progress further upslope because of batter piles

Notes:
1. Horizontal control is based on NAD 83 datum (DGPS) − North Zone and vertical control is based on MLLW datum.
2. Composite sample depths and sediment contacts shown above were recalculated to account for percent compaction during driving.
3. For adequate sample volume, core drives 1 and 2 were composited into S−1 and S−2 samples.
4. Descriptions and compaction are based on Core Drive 1.
5. NA = Not Available, diver couldn't see.
6. Sediment accumulation based on several T−probe penetrations around area.
7. See Figure A−1 for key and legend.

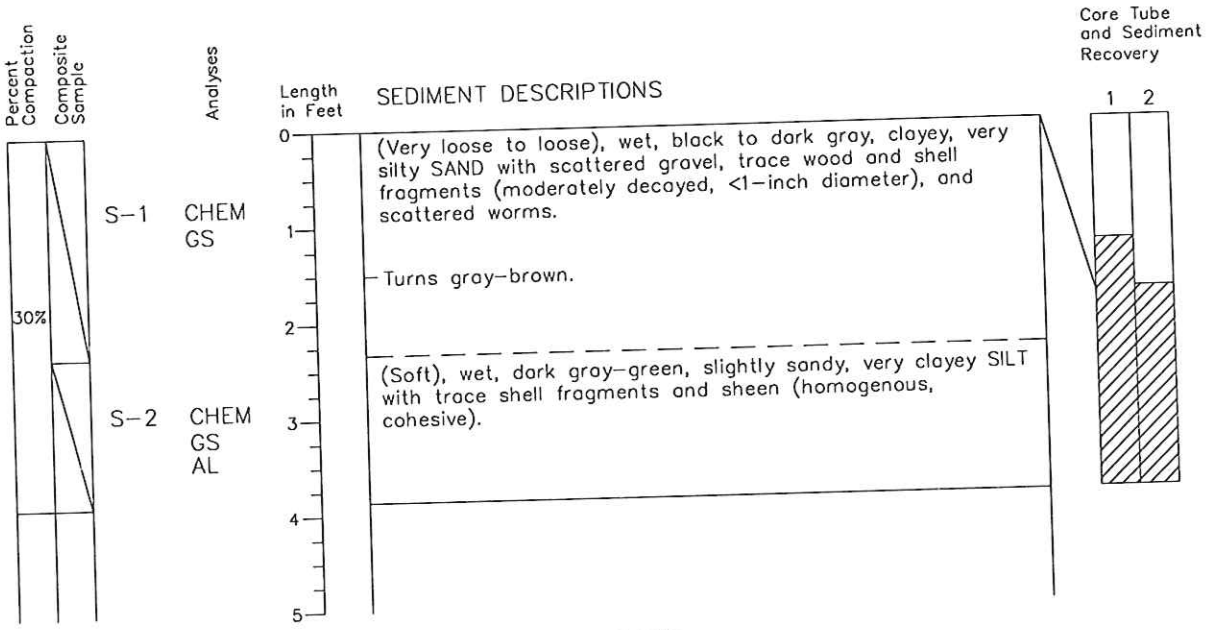
HARTCROWSER
J-4478-05 9/96
Figure A-18

ACAD LOG 1=1

Sediment Core Log HC-DC-87

Type of Sample: 3-inch Push Diver Core
Date/Time: 9/18/96 1600
Recovery Length in Feet: 2.6/2.1
Mudline Elevation in Feet: −15.0
Distance Inward from Pier Face in Feet: 12

Northing: 640,918
Easting: 1,239,637
Drive Depth in Feet: 3.8
Core Tube Length in Feet: 3.8
% Recovery = 68%



DIVER OBSERVATIONS

Visibility	0 Ft
Slope	35°
Surface Characteristics	100% coverage of silt/sand, soft substrate
Debris	NA
Biota	NA
Accumulation	Over 3.8 ft, no resistance, scattered submerged wood
Condition of Piles	Intact, lots of batter piles, wood construction
Other	Diver could not progress further upslope because of batter piles

Notes:
1. Horizontal control is based on NAD 83 datum (DGPS) – North Zone and vertical control is based on MLLW datum.
2. Composite sample depths and sediment contacts shown above were recalculated to account for percent compaction during driving.
3. For adequate sample volume, core drives 1 and 2 were composted into S-1 and S-2 samples.
4. Descriptions and compaction are based on Core Drive 1.
5. NA = Not Available, diver couldn't see.
6. Sediment accumulation based on several T-probe penetrations around area.
7. A duplicate of HC-DC-87-S1 was collected and labeled HC-DC-208.
8. See Figure A-1 for key and legend.

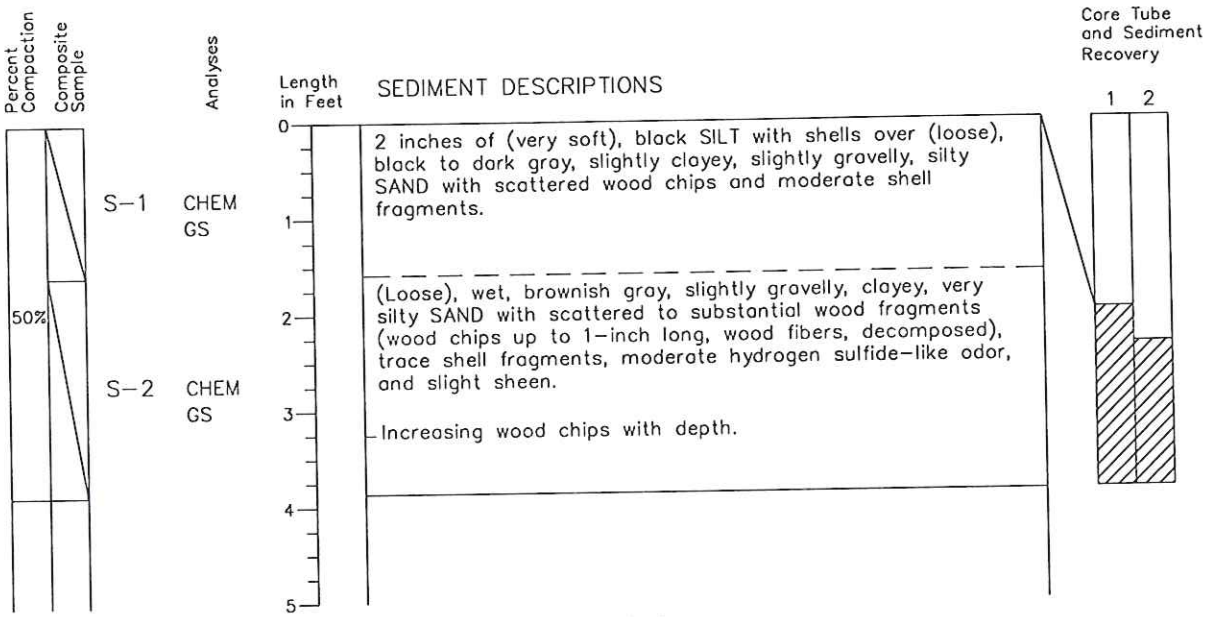
cvd 1/16/97 1=1 hc-psp
HCDC87

HARTCROWSER
J-4478-05 9/96
Figure A-19

Sediment Core Log HC-DC-88

Type of Sample: 3-inch Push Diver Core
Date/Time: 9/18/96 1430
Recovery Length in Feet: 1.9/1.5
Mudline Elevation in Feet: −3.0 to −6.0
Distance Inward from Pier Face in Feet: 12

Northing: 641,181
Easting: 1,239,909
Drive Depth in Feet: 3.8
Core Tube Length in Feet: 3.8
% Recovery = 50



DIVER OBSERVATIONS

Visibility	0 Ft
Slope	40°
Surface Characteristics	90% coverage of medium SAND and SILT, scattered exposed riprap
Debris	None observed
Biota	Starfish, crabs (4), sea anemones
Accumulation	Over 3.8 ft, firm resistance, felt scattered cobbles at 2-foot depth
Condition of Piles	Very good, new steel piles
Other	Concrete bulkhead with 3-foot concrete slabs and riprap

Notes:
1. Horizontal control is based on NAD 83 datum (DGPS) – North Zone and vertical control is based on MLLW datum.
2. Composite sample depths and sediment contacts shown above were recalculated to account for percent compaction during driving.
3. For adequate sample volume, core drives 1 and 2 were composited into S−1 and S−2 samples.
4. Descriptions and compaction are based on Core Drive 1.
5. NA = Not Available, diver couldn't see.
6. Sediment accumulation based on several T-probe penetrations around area.
7. See Figure A−1 for key and legend.

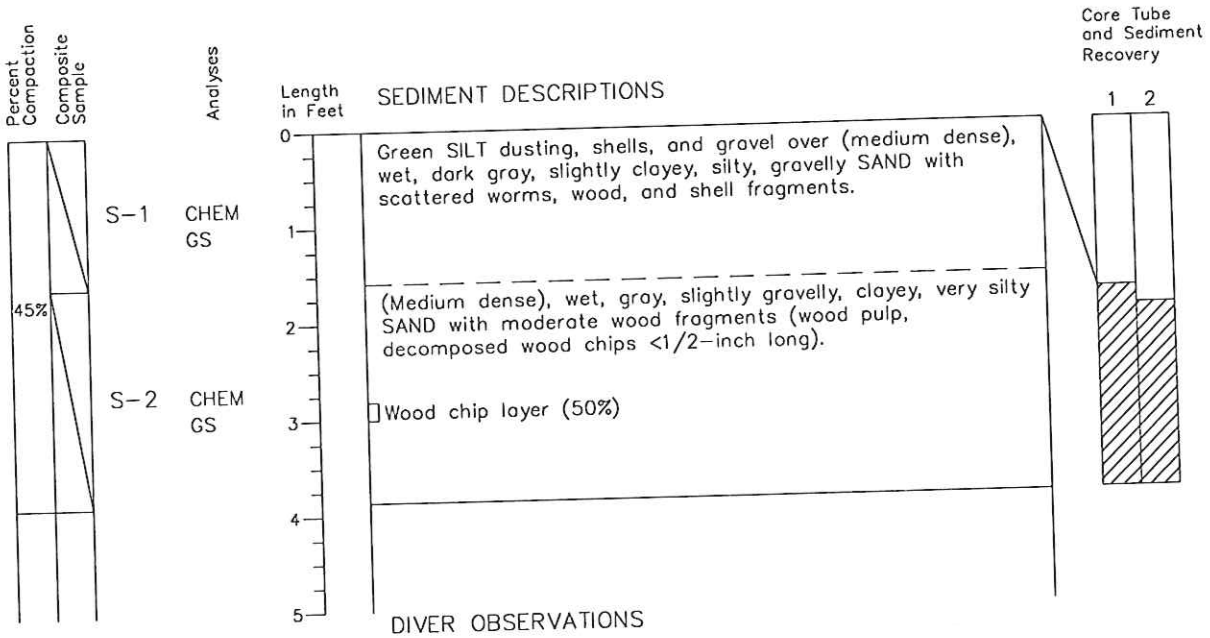
cvd 10/4/96 1=1 hc-pcp
HCDC88

HARTCROWSER
J-4478-05 9/96
Figure A-20

Sediment Core Log HC-DC-89

Type of Sample: 3-inch Push Diver Core
Date/Time: 9/18/96 1400
Recovery Length in Feet: 2.1/1.9
Mudline Elevation in Feet: −2.0 to −6.0
Distance Inward from Pier Face in Feet: 45

Northing: 641,367
Easting: 1,240,142
Drive Depth in Feet: 3.8
Core Tube Length in Feet: 3.8
% Recovery = 55



DIVER OBSERVATIONS

Visibility	0 Ft
Slope	30°
Surface Characteristics	98% coverage of SILT, scattered gravels, firm
Debris	None observed
Biota	Sculpins, starfish, crabs, mussels, barnacles
Accumulation	Over 3.8 ft.
Condition of Piles	Intact, steel piles, wood headers
Other	Concrete bulkhead

Notes:
1. Horizontal control is based on NAD 83 datum (DGPS) – North Zone and vertical control is based on MLLW datum.
2. Composite sample depths and sediment contacts shown above were recalculated to account for percent compaction during driving.
3. For adequate sample volume, core drives 1 and 2 were composited into S-1 and S-2 samples.
4. Descriptions and compaction are based on Core Drive 1.
5. NA = Not Available, diver couldn't see.
6. Sediment accumulation based on several T-probe penetrations around area.
7. See Figure A-1 for key and legend.

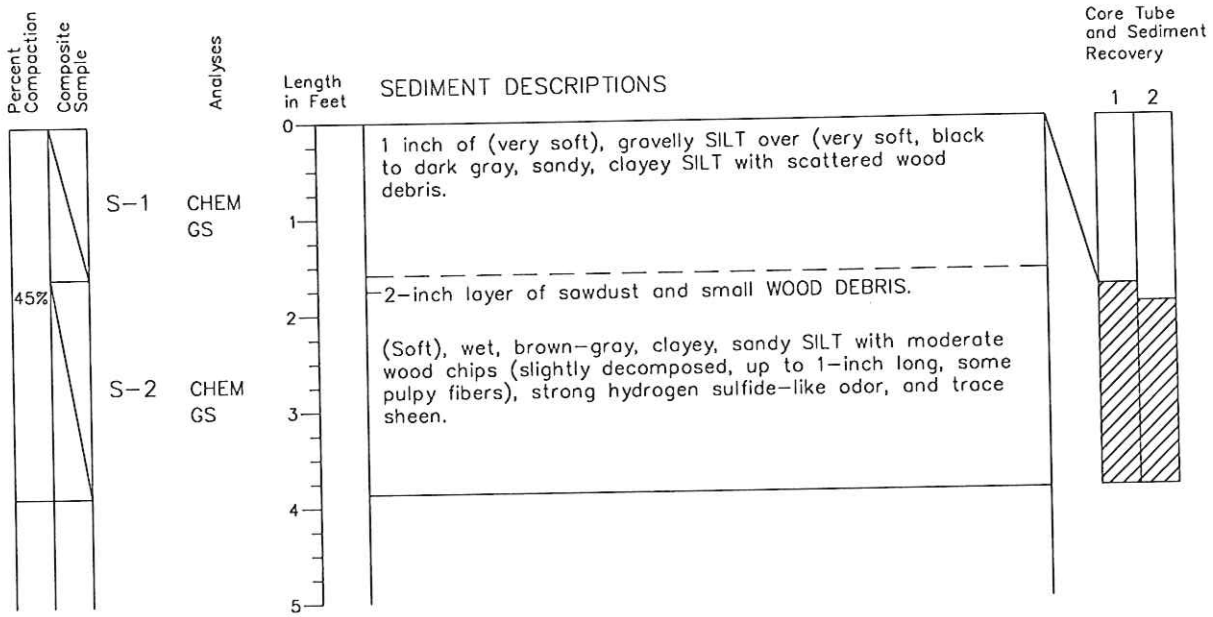
HARTCROWSER
J-4478-05 9/96
Figure A-21

cvd 10/4/96 1=1 hc-pcp
HCDC89

Sediment Core Log HC-DC-90

Type of Sample: 3–inch Push Diver Core
Date/Time: 9/18/96 1300
Recovery Length in Feet: 2.1/1.8
Mudline Elevation in Feet: –1.0
Distance Inward from Pier Face in Feet: 45

Northing: 642,033
Easting: 1,240,823
Drive Depth in Feet: 3.8
Core Tube Length in Feet: 3.8
% Recovery = 55%



DIVER OBSERVATIONS

Visibility	0 to 2 ft.
Slope	35°, then flattens out
Surface Characteristics	100% Coverage of firm silt
Debris	None observed
Biota	Crabs on pilings (12), barnacles
Accumulation	Over 3.8 ft., soft penetration; near pier face – only 3 ft. of penetration
Condition of Piles	Intact, 14–inch–diameter wood piles, 12–foot bent spacing, 3–foot pile spacing
Other	Pier opens to log pond on south side

Notes:
1. Horizontal control is based on NAD 83 datum (DGPS) – North Zone and vertical control is based on MLLW datum.
2. Composite sample depths and sediment contacts shown above were recalculated to account for percent compaction during driving.
3. For adequate sample volume, core drives 1 and 2 were composited into S–1 and S–2 samples.
4. Descriptions and compaction are based on Core Drive 1.
5. NA = Not Available, diver couldn't see.
6. Sediment accumulation based on several T–probe penetrations around area.
7. See Figure A–1 for key and legend.

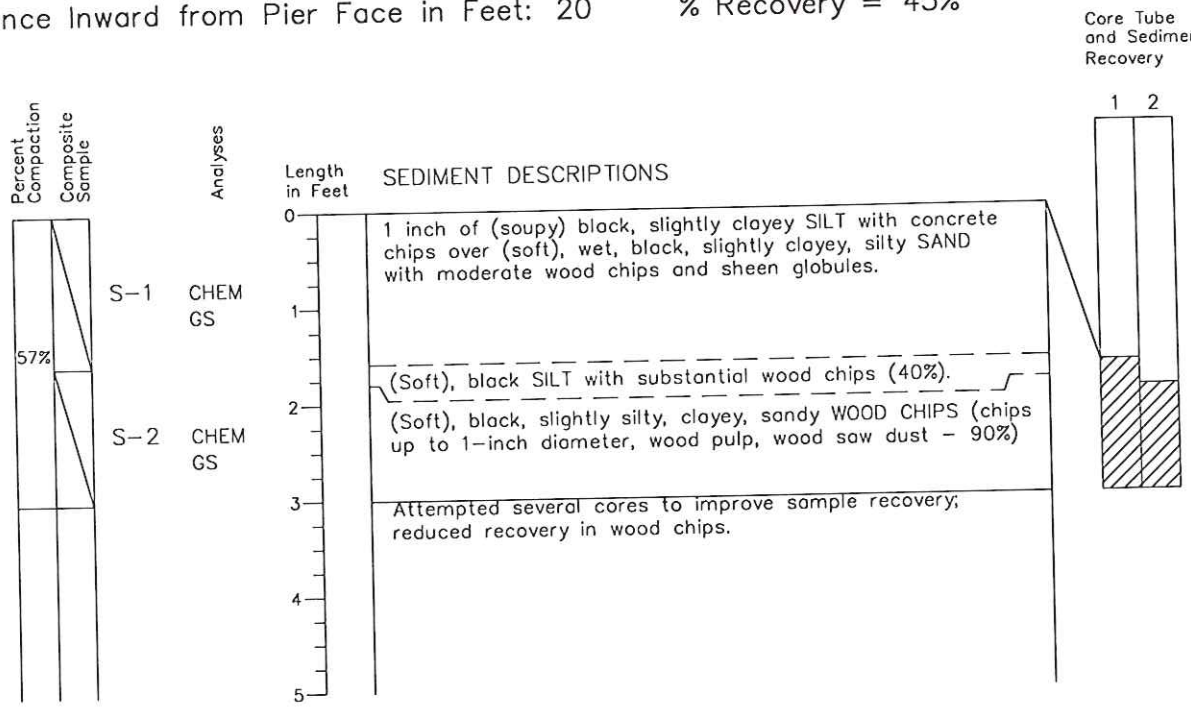
hc–pap
cwd 10/4/96 HCDC90

HARTCROWSER
J-4478-05 9/96
Figure A-22

Sediment Core Log HC-DC-91

Type of Sample: 3-inch Push Diver Core
Date/Time: 9/18/96 1130
Recovery Length in Feet: 1.3/1.1
Mudline Elevation in Feet: −1.0 to −5.0
Distance Inward from Pier Face in Feet: 20

Northing: 642,417
Easting: 1,241,183
Drive Depth in Feet: 3.0
Core Tube Length in Feet: 3.8
% Recovery = 43%



DIVER OBSERVATIONS

Visibility	1 to 2 ft
Slope	Flat
Surface Characteristics	95% Coverage of (very soft) silt, 5% exposed riprap (<1.5−foot diameter)
Debris	Wood pilings
Biota	Few crabs on pilings, barnacles
Accumulation	3 ft. to > 3.8 ft.
Condition of Piles	Intact, 18−inch−diameter wood piles, 12−foot bent spacing, 5−foot pile spacing
Other	Wooden bulkhead, exposed riprap near building. Difficult diver access − lots of cross beams and stubby 8−foot piles

Notes:
1. Horizontal control is based on NAD 83 datum (DGPS) − North Zone and vertical control is based on MLLW datum.
2. Composite sample depths and sediment contacts shown above were recalculated to account for percent compaction during driving.
3. For adequate sample volume, core drives 1 and 2 were composited into S−1 and S−2 samples.
4. Descriptions and compaction are based on Core Drive 1.
5. NA = Not Available, diver couldn't see.
6. Sediment accumulation based on several T−probe penetrations around area.
7. See Figure A−1 for key and legend.

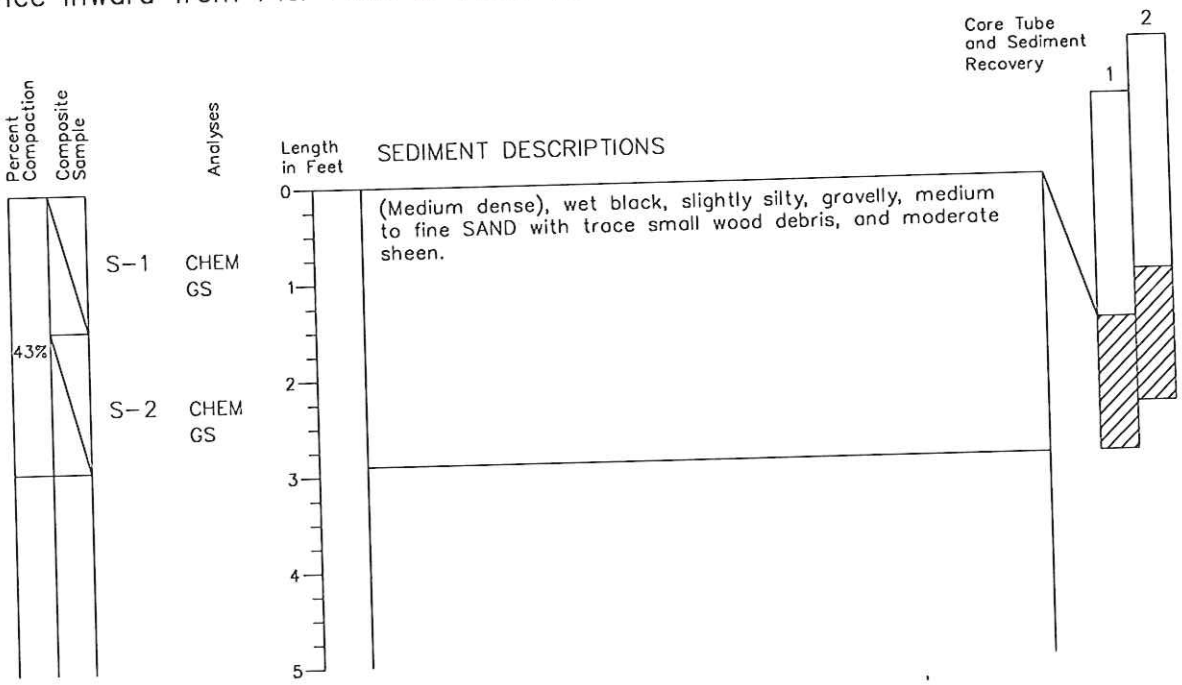
cvd 1/16/97 1=1 hc-pcp
HCDC91

HARTCROWSER
J-4478-05 9/96
Figure A-23

Sediment Core Log HC-DC-92

Type of Sample: 3-inch Push Diver Core
Date/Time: 9/18/96 1045
Recovery Length in Feet: 1.3
Mudline Elevation in Feet: -5.0
Distance Inward from Pier Face in Feet: 12

Northing: 642,699
Easting: 1,241,460
Drive Depth in Feet: 2.8
Core Tube Length in Feet: 3.8
% Recovery = 50% to 57%



DIVER OBSERVATIONS

Visibility	1 to 2 ft
Slope	10 to 15°
Surface Characteristics	100 % Sediment coverage
Debris	Discarded pilings
Biota	1 crab, sea anemones
Accumulation	6-inch layer of fluffy, soft silt over silty, gritty SAND. Greater than 3-foot penetration
Condition of Piles	Intact wood pilings, 12-foot bent spacing, 4-foot pile spacing
Other	Limited access because of fence and G-P pump house located 20 feet inward from pier face

Notes:
1. Horizontal control is based on NAD 83 datum (DGPS) - North Zone and vertical control is based on MLLW datum.
2. Composite sample depths and sediment contacts shown above were recalculated to account for percent compaction during driving.
3. For adequate sample volume, core drives 1 and 2 were composited into S-1 and S-2 samples.
4. Descriptions and compaction are based on Core Drive 1.
5. NA = Not Available, diver couldn't see.
6. Sediment accumulation based on several T-probe penetrations around area.
7. See Figure A-1 for key and legend.

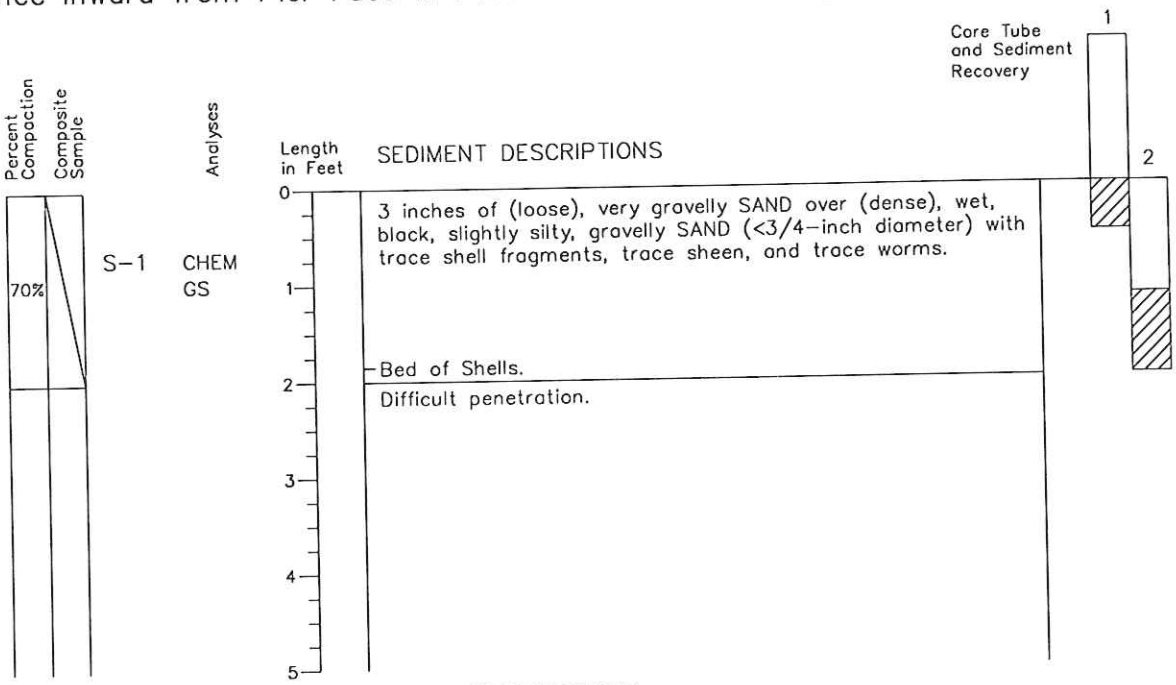
HARTCROWSER
J-4478-05 9/96
Figure A-24

cvd 1/16/97 1=1 hc-pap
HCVC92

Sediment Core Log HC-DC-93

Type of Sample: 3-inch Push Diver Core
Date/Time: 9/18/96 1015
Recovery Length in Feet: 0.5/0.8
Mudline Elevation in Feet: −5.0
Distance Inward from Pier Face in Feet: 5

Northing: 643,519
Easting: 1,241,775
Drive Depth in Feet: 0.5/2
Core Tube Length in Feet: 3
% Recovery = 40% to 100%



DIVER OBSERVATIONS

Visibility	1 ft.
Slope	10°, Moderate
Surface Characteristics	Shells, boulders up to 2-foot diameter, riprap, interstitial sediment, soft silt near pier face
Debris	Concrete, wood lumber, rope, steel cable, hose, abandoned wood pile
Biota	2 crabs, barnacles
Accumulation	6 inches to 2.5 feet of interstitial penetration
Condition of Piles	Intact
Other	

Notes:
1. Horizontal control is based on NAD 83 datum (DGPS) – North Zone and vertical control is based on MLLW datum.
2. Composite sample depths and sediment contacts shown above were recalculated to account for percent compaction during driving.
3. For adequate sample volume, core drives 1 and 2 were composited into S-1 and S-2 samples.
4. Descriptions and compaction are based on Core Drive 1.
5. NA = Not Available, diver couldn't see.
6. Sediment accumulation based on several T-probe penetrations around area.
7. See Figure A-1 for key and legend.

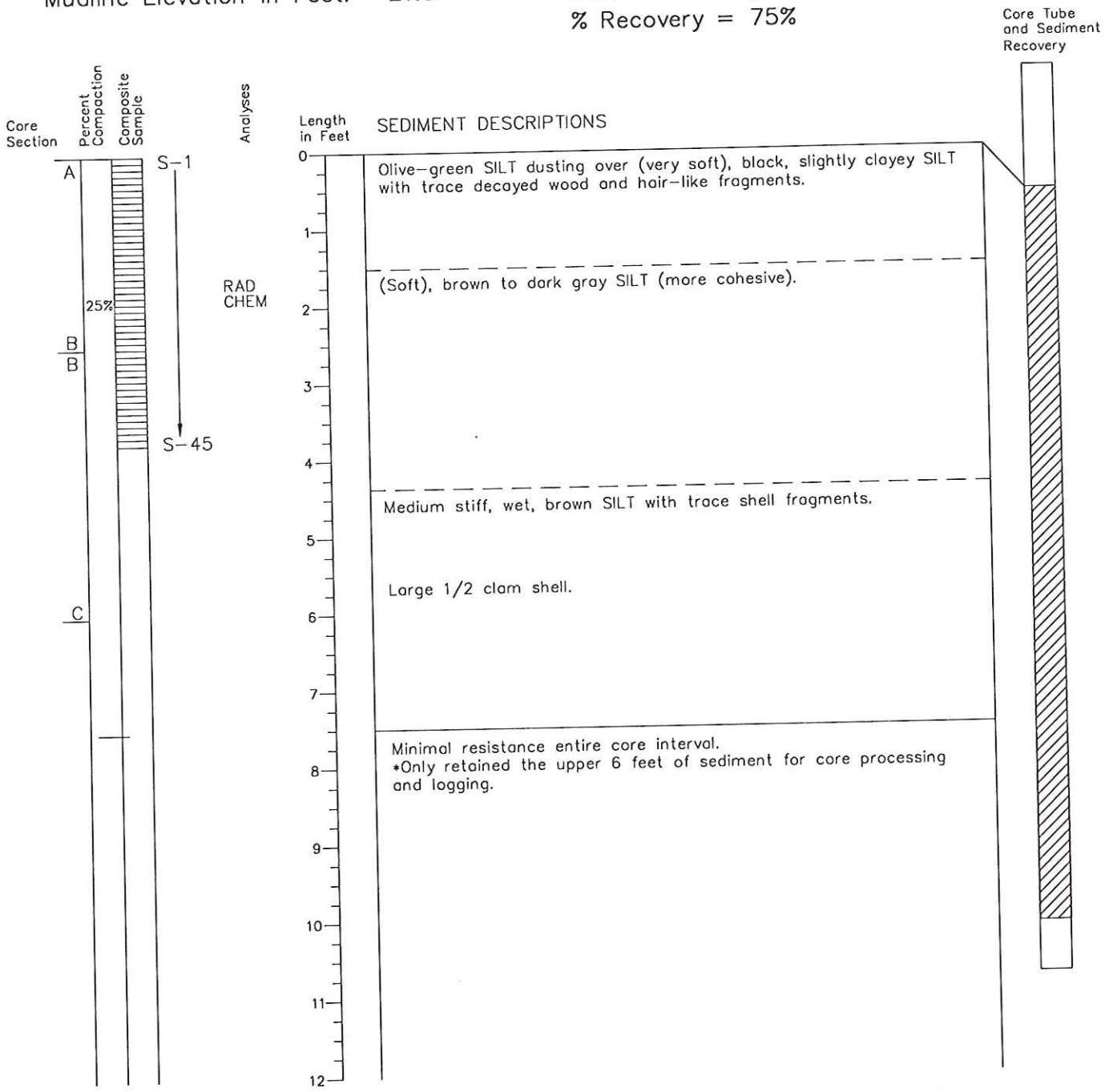
HARTCROWSER
J-4478-05 9/96
Figure A-25

cvd 1/16/97 1=1 hc-pcp
HCVC93

Sediment Core Log HC-NR-100

Type of Sample: 4-inch Vibracore
Date/Time: 9/13/96 1130
Recovery Length in Feet: 8.2*
Mudline Elevation in Feet: -21.9

Northing: 639,523
Easting: 1,238,882
Drive Depth in Feet: 11
Core Tube Length in Feet: 12.0
% Recovery = 75%



Notes:
1. Horizontal control is based on NAD 83 datum (DGPS) - North Zone and vertical control is based on MLLW datum.
2. Sample depths and sediment contacts shown above were recalculated to account for percent compaction during driving.
3. The upper 3 feet of the sediment core was subsectioned into 45 subsamples at 2-cm intervals of actual measurements.
4. Each 2-cm subsample recalculated to represent 2.5-cm intervals.
5. Subsamples HC-NR-S16 and HC-NR-S17 were combined and split into a duplicate sample HC-NR-209 for Total solids and Hg analyses. A duplicate of subsample HC-NR-S19 was collected and labeled HC-NR-210 for Pb-120 and Cs-137 analyses.
6. See Figure A-1 for key and legend.

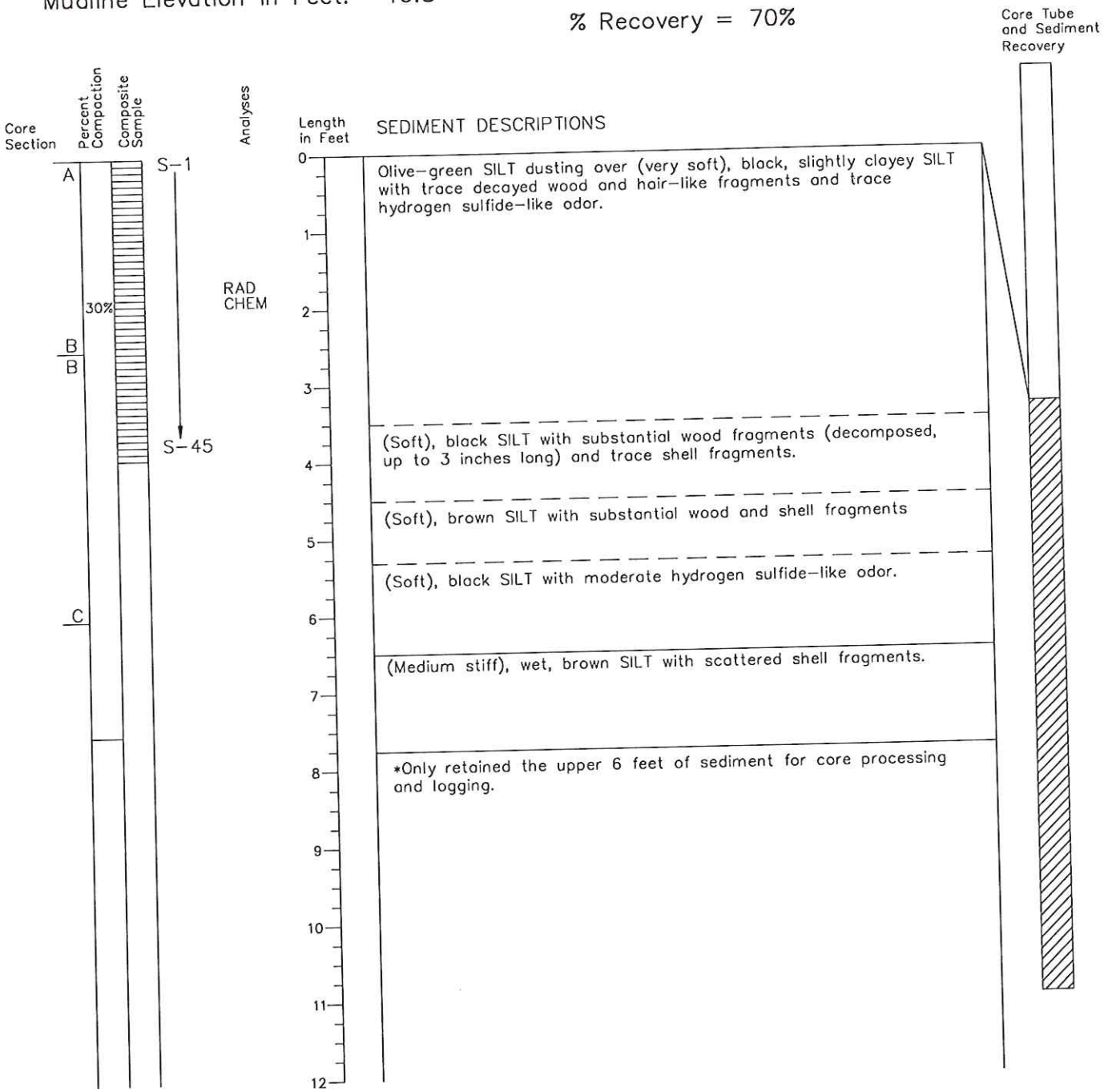
HARTCROWSER
J-4478-05 9/96
Figure A-26

cvd 1/16/97 1=1 hc-pcp
HCNR100

Sediment Core Log HC-NR-101

Type of Sample: 4-inch Vibracore
Date/Time: 9/13/96 1000
Recovery Length in Feet: 7.7*
Mudline Elevation in Feet: -16.3

Northing: 641,865
Easting: 1,238,858
Drive Depth in Feet: 11
Core Tube Length in Feet: 12.0
% Recovery = 70%



Notes:
1. Horizontal control is based on NAD 83 datum (DGPS) - North Zone and vertical control is based on MLLW datum.
2. Sample depths and sediment contacts shown above were recalculated to account for percent compaction during driving.
3. The upper 3 feet of the sediment core was subsectioned into 45 subsamples at 2-cm intervals of actual measurements.
4. Each 2-cm subsample recalculated to represent 2.6-cm intervals.
5. Subsamples HC-NR-S16 and HC-NR-S17 were combined into one 4-cm interval sample and split into duplicate sample HC-NR-211.
6. See Figure A-1 for key and legend.

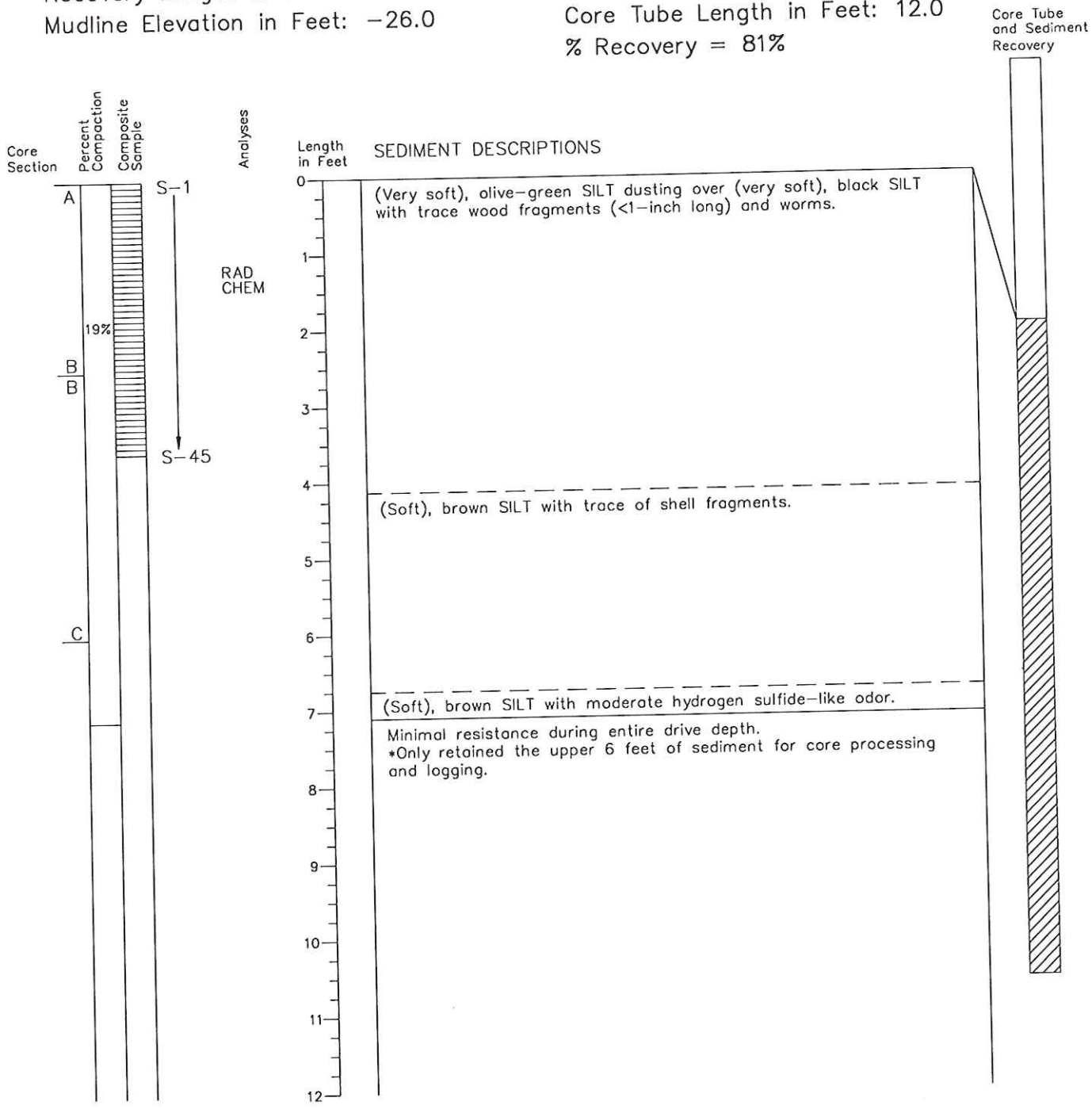
HARTCROWSER
J-4478-05 9/96
Figure A-27

cvd 1/16/97 1=1 hc-pcp
HCNR101

Sediment Core Log HC-NR-102

Type of Sample: 4-inch Vibracore
Date/Time: 9/13/96 0915
Recovery Length in Feet: 8.6*
Mudline Elevation in Feet: -26.0

Northing: 640,083
Easting: 1,237,113
Drive Depth in Feet: 10.6
Core Tube Length in Feet: 12.0
% Recovery = 81%



Notes:
1. Horizontal control is based on NAD 83 datum (DGPS) - North Zone and vertical control is based on MLLW datum.
2. Sample depths and sediment contacts shown above were recalculated to account for percent compaction during driving.
3. The upper 3 feet of the sediment core was subsectioned into 45 subsamples at 2-cm intervals of actual measurements.
4. Each 2-cm subsample recalculated to represent 2.4-cm intervals.
5. Subsamples HC-NR-S16 and HC-NR-S17 were combined into one 4-cm interval sample and split into duplicate sample HC-NR-212.
6. See Figure A-1 for key and legend.

HARTCROWSER
J-4478-05 9/96
Figure A-28

cvd 1/16/97 1=1 hc-pcp
HCNR102

Bathymetric Trackline Location Plan

Whatcom Waterway Area

"SQUALICUM CREEK" DISPOSAL SITE

BELLINGHAM BAY

MARINA

STA 50+00 STA 45+00 STA 40+00 STA 35+00 STA 30+00 STA 25+00 STA 20+00 STA 15+00 STA 10+00 STA 05+00 STA 00+00

I AND J STREET WATERWAY

Diffuser Section (2000')

Diffuser Outfall

G-P BIOTREATMENT LAGOON

STA 100+00 STA 95+00 STA 90+00 STA 85+00 STA 80+00 STA 75+00 STA 70+00 STA 65+00 STA 60+00 STA 55+00 STA 50+00 STA 45+00 STA 40+00 STA 35+00 STA 30+00 STA 25+00 STA 20+00 STA 15+00 STA 10+00 STA 05+00 STA 00+00

WHATCOM CREEK

WHATCOM WATERWAY

W1ST

OUTER HARBOR LINE - WDNR STATE

"STARR ROCK" DISPOSAL SITE

SAMPLE LOCATION

- SUBSURFACE SEDIMENT VIBRA CORE
- SURFACE SEDIMENT
- UNDERPIER/SLOPE DIVER CORE
- NATURAL RECOVERY CORE
- SEDIMENT TRAP DEPLOYMENT

BATHYMETRIC TRANSECT SURVEY RUN LINE (BWE, 1996)

UNDERPIER TRANSECT SURVEY RUN LINE (BWE, 1996)

NOTES:

1. BASE MAP GENERATED FROM "BELLINGHAM MILLSITE PLOT PLAN" BY CASCADE AERIAL MAPS AND SURVEYS, INC. DATED JULY 1990, SUPPLIED BY GEORGIA-PACIFIC CORPORATION.

2. WW AREA BATHYMETRIC DATA AND TRANSECT LOCATIONS PROVIDED BY BLUE WATER ENGINEERING (BWE) SEPTEMBER 1996 SURVEY DURING WHATCOM WATERWAY RI/FS ACTIVITIES.

N

0 1000 2000

Scale in Feet

HARTCROWSER

J-4478-06 5/97

Figure A-29

CVD 5/6/97 1=1000 franklin.pcp
44780619

EcoChem, Inc.

Environmental Science and Chemistry

APPENDIX B
DATA QUALIFIER SUMMARY TABLE

DATA QUALIFIER SUMMARY TABLE - SEDIMENT

SDG	FIELD ID	LAB ID	MATRIX	ANALYTE	CONC.	LAB QUALIFIER	UNITS	VALIDATION QUALIFIER
609011	HC-SS-01	609011-1	Sediment	sulfide	0.025	<	mg/L	UE
609011	HC-SS-02	609011-2	Sediment	sulfide	0.025	<	mg/L	UE
609011	HC-SS-04	609011-3	Sediment	sulfide	0.025	<	mg/L	UE
609011	HC-SS-05	609011-4	Sediment	sulfide	0.025	<	mg/L	UE
609011	HC-SS-07	609011-5	Sediment	sulfide	0.025	<	mg/L	UE
609011	HC-SS-09	609011-6	Sediment	sulfide	0.025	<	mg/L	UE
609011	HC-SS-10	609011-7	Sediment	sulfide	0.025	<	mg/L	UE
609011	HC-SS-11	609011-8	Sediment	sulfide	0.025	<	mg/L	UE
609011	HC-SS-12	609011-9	Sediment	sulfide	0.025	<	mg/L	UE
609011	HC-SS-13	609011-10	Sediment	sulfide	0.025	<	mg/L	UE
609011	HC-SS-14	609011-11	Sediment	sulfide	0.025	<	mg/L	UE
609011	HC-SS-15	609011-12	Sediment	sulfide	0.025	<	mg/L	UE
609011	HC-SS-16	609011-13	Sediment	sulfide	0.025	<	mg/L	UE
609011	HC-SS-17	609011-14	Sediment	sulfide	0.025	<	mg/L	UE
609011	HC-SS-18	609011-15	Sediment	sulfide	0.025	<	mg/L	UE
609011	HC-SS-20	609011-16	Sediment	sulfide	0.025	<	mg/L	UE
609011	HC-SS-27	609011-17	Sediment	sulfide	0.025	<	mg/L	UE
609011	HC-SS-42	609011-18	Sediment	sulfide	0.025	<	mg/L	UE
609011	HC-SS-44	609011-19	Sediment	sulfide	0.025	<	mg/L	UE
609011	HC-SS-46	609011-20	Sediment	sulfide	0.025	<	mg/L	UE
609012	HC-SC-70	609012-12	Sediment	arsenic	17	D3	mg/Kg	E
609012	HC-SC-70	609012-12	Sediment	benzo(b)fluoranthene	0.13	T	mg/Kg	C
609012	HC-SC-70	609012-12	Sediment	benzo(k)fluoranthene	0.13	T	mg/Kg	C
609012	HC-SC-70	609012-12	Sediment	benzoic acid	160	JB	ug/Kg	UE
609012	HC-SC-71	609012-13	Sediment	arsenic	11	D3	mg/Kg	E
609012	HC-SC-71	609012-13	Sediment	benzoic acid	170	JB	ug/Kg	UE
609012	HC-SC-72	609012-14	Sediment	arsenic	11	D3	mg/Kg	E
609012	HC-SC-72	609012-14	Sediment	benzoic acid	160	JB	ug/Kg	UE
609012	HC-SC-73	609012-15	Sediment	arsenic	10	D3	mg/Kg	E
609012	HC-SC-73	609012-15	Sediment	benzo(b)fluoranthene	0.26	T	mg/Kg	C
609012	HC-SC-73	609012-15	Sediment	benzo(k)fluoranthene	0.26	T	mg/Kg	C
609012	HC-SC-73	609012-15	Sediment	benzoic acid	180	JB	ug/Kg	UE
609012	HC-SC-77	609012-16	Sediment	arsenic	12	D3	mg/Kg	E
609012	HC-SC-77	609012-16	Sediment	benzo(b)fluoranthene	0.14	T	mg/Kg	C
609012	HC-SC-77	609012-16	Sediment	benzo(k)fluoranthene	0.14	T	mg/Kg	C
609012	HC-SC-77	609012-16	Sediment	benzoic acid	200	JB	ug/Kg	UE
609012	HC-SC-78	609012-17	Sediment	arsenic	11	D3	mg/Kg	E
609012	HC-SC-78	609012-17	Sediment	benzo(b)fluoranthene	0.28	T	mg/Kg	C
609012	HC-SC-78	609012-17	Sediment	benzo(k)fluoranthene	0.28	T	mg/Kg	C
609012	HC-SC-78	609012-17	Sediment	benzoic acid	240	JB	ug/Kg	UE
609012	HC-SC-79	609012-18	Sediment	arsenic	13	D3	mg/Kg	E
609012	HC-SC-79	609012-18	Sediment	benzo(b)fluoranthene	0.29	T	mg/Kg	C
609012	HC-SC-79	609012-18	Sediment	benzo(k)fluoranthene	0.29	T	mg/Kg	C
609012	HC-SC-79	609012-18	Sediment	benzoic acid	180	JB	ug/Kg	UE
609012	HC-SC-80	609012-20	Sediment	arsenic	10	D3	mg/Kg	E
609012	HC-SC-80	609012-20	Sediment	benzo(b)fluoranthene	0.26	T	mg/Kg	C
609012	HC-SC-80	609012-20	Sediment	benzo(k)fluoranthene	0.26	T	mg/Kg	C
609012	HC-SC-80	609012-20	Sediment	benzoic acid	220	JB	ug/Kg	UE
609012	HC-SC-83	609012-9	Sediment	arsenic	12	D3	mg/Kg	E
609012	HC-SC-83	609012-9	Sediment	benzoic acid	160	JB	ug/Kg	UE
609012	HC-SC-83	609012-9	Sediment	bis(2-ethylhexyl)phthalate	0.05	B	mg/Kg	U
609012	HC-SC-84	609012-10	Sediment	arsenic	12	D3	mg/Kg	E

DATA QUALIFIER SUMMARY TABLE - SEDIMENT

SDG	FIELD ID	LAB ID	MATRIX	ANALYTE	CONC.	LAB QUALIFIER	UNITS	VALIDATION QUALIFIER
609012	HC-SC-84	609012-10	Sediment	benzo(b)fluoranthene	0.081	T	mg/Kg	C
609012	HC-SC-84	609012-10	Sediment	benzo(k)fluoranthene	0.081	T	mg/Kg	C
609012	HC-SC-84	609012-10	Sediment	benzoic acid	190	JB	ug/Kg	UE
609012	HC-SC-85	609012-11	Sediment	arsenic	9.6	D3	mg/Kg	E
609012	HC-SC-85	609012-11	Sediment	benzoic acid	190	JB	ug/Kg	UE
609012	HC-SC-205	609012-19	Sediment	arsenic	11	D3	mg/Kg	E
609012	HC-SC-205	609012-19	Sediment	benzo(b)fluoranthene	0.39	T	mg/Kg	C
609012	HC-SC-205	609012-19	Sediment	benzo(k)fluoranthene	0.39	T	mg/Kg	C
609012	HC-SC-205	609012-19	Sediment	benzoic acid	210	JB	ug/Kg	UE
609012	HC-SS-35	609012-1	Sediment	arsenic	11	D3	mg/Kg	E
609012	HC-SS-35	609012-1	Sediment	benzo(b)fluoranthene	0.25	T	mg/Kg	C
609012	HC-SS-35	609012-1	Sediment	benzo(k)fluoranthene	0.25	T	mg/Kg	C
609012	HC-SS-35	609012-1	Sediment	benzoic acid	390	B	ug/Kg	U
609012	HC-SS-35	609012-1	Sediment	sulfide	0.025	<	mg/L	UE
609012	HC-SS-36	609012-6	Sediment	arsenic	9.5	D3	mg/Kg	E
609012	HC-SS-36	609012-6	Sediment	benzo(b)fluoranthene	0.17	T	mg/Kg	C
609012	HC-SS-36	609012-6	Sediment	benzo(k)fluoranthene	0.17	T	mg/Kg	C
609012	HC-SS-36	609012-6	Sediment	benzoic acid	180	JB	ug/Kg	UE
609012	HC-SS-36	609012-6	Sediment	sulfide	0.025	<	mg/L	UE
609012	HC-SS-37	609012-2	Sediment	arsenic	9.5	D3	mg/Kg	E
609012	HC-SS-37	609012-2	Sediment	benzo(b)fluoranthene	0.51	T	mg/Kg	C
609012	HC-SS-37	609012-2	Sediment	benzo(k)fluoranthene	0.51	T	mg/Kg	C
609012	HC-SS-37	609012-2	Sediment	benzoic acid	340	B	ug/Kg	U
609012	HC-SS-37	609012-2	Sediment	sulfide	0.025	<	mg/L	UE
609012	HC-SS-38	609012-7	Sediment	arsenic	6.3	D3	mg/Kg	E
609012	HC-SS-38	609012-7	Sediment	benzo(b)fluoranthene	0.86	T	mg/Kg	C
609012	HC-SS-38	609012-7	Sediment	benzo(k)fluoranthene	0.86	T	mg/Kg	C
609012	HC-SS-38	609012-7	Sediment	benzoic acid	350	B	ug/Kg	U
609012	HC-SS-39	609012-8	Sediment	arsenic	7.2	D3	mg/Kg	E
609012	HC-SS-39	609012-8	Sediment	benzo(b)fluoranthene	0.58	T	mg/Kg	C
609012	HC-SS-39	609012-8	Sediment	benzo(k)fluoranthene	0.58	T	mg/Kg	C
609012	HC-SS-39	609012-8	Sediment	benzoic acid	59	JB	ug/Kg	UE
609012	HC-SS-45	609012-3	Sediment	arsenic	11	D3	mg/Kg	E
609012	HC-SS-45	609012-3	Sediment	benzo(b)fluoranthene	0.29	T	mg/Kg	C
609012	HC-SS-45	609012-3	Sediment	benzo(k)fluoranthene	0.29	T	mg/Kg	C
609012	HC-SS-45	609012-3	Sediment	benzoic acid	230	JB	ug/Kg	UE
609012	HC-SS-45	609012-3	Sediment	sulfide	0.025	<	mg/L	UE
609012	HC-SS-47	609012-4	Sediment	arsenic	9.2	D3	mg/Kg	E
609012	HC-SS-47	609012-4	Sediment	benzo(b)fluoranthene	1.4	T D1	mg/Kg	C
609012	HC-SS-47	609012-4	Sediment	benzo(k)fluoranthene	1.4	T D1	mg/Kg	C
609012	HC-SS-47	609012-4	Sediment	benzoic acid	290	B	ug/Kg	U
609012	HC-SS-47	609012-4	Sediment	sulfide	0.025	<	mg/L	UE
609012	HC-SS-48	609012-5	Sediment	arsenic	3.2	D3	mg/Kg	E
609012	HC-SS-48	609012-5	Sediment	benzoic acid	89	JB	ug/Kg	UE
609012	HC-SS-48	609012-5	Sediment	sulfide	0.025	<	mg/L	UE
609021	HC-SS-26	609021-3	Sediment	sulfide	0.025	<	mg/L	UE
609021	HC-SS-32	609021-4	Sediment	sulfide	0.025	<	mg/L	UE
609021	HC-SS-41	609021-2	Sediment	sulfide	0.025	<	mg/L	UE
609021	HC-SS-204	609021-1	Sediment	sulfide	0.025	<	mg/L	UE
609021	HC-SS-19	609021-11	Sediment	chromium	67	D3	mg/Kg	E
609021	HC-SS-21	609021-12	Sediment	chromium	66	D3	mg/Kg	E
609021	HC-SS-22	609021-8	Sediment	chromium	61	D3	mg/Kg	E

DATA QUALIFIER SUMMARY TABLE - SEDIMENT

SDG	FIELD ID	LAB ID	MATRIX	ANALYTE	CONC.	LAB QUALIFIER	UNITS	VALIDATION QUALIFIER
609021	HC-SS-23	609021-6	Sediment	chromium	69	D3	mg/Kg	E
609021	HC-SS-24	609021-7	Sediment	chromium	54	D3	mg/Kg	E
609021	HC-SS-25	609021-9	Sediment	chromium	57	D3	mg/Kg	E
609021	HC-SS-26	609021-3	Sediment	chromium	35	D3	mg/Kg	E
609021	HC-SS-28	609021-5	Sediment	chromium	84	D3	mg/Kg	E
609021	HC-SS-31	609021-13	Sediment	chromium	75	D3	mg/Kg	E
609021	HC-SS-32	609021-4	Sediment	chromium	24	D3	mg/Kg	E
609021	HC-SS-41	609021-2	Sediment	chromium	10	D3	mg/Kg	E
609021	HC-SS-202	609021-10	Sediment	chromium	59	D3	mg/Kg	E
609021	HC-SS-204	609021-1	Sediment	chromium	9.5	D3	mg/Kg	E
609022	HC-RB-01	609022-3	Water	bis(2-ethylhexyl)phthalate	1	JB	ug/L	U
609024	HC-RB-2	609024-14	Water	bis(2-ethylhexyl)phthalate	9	JB	ug/L	U
609024	HC-SC-74	609024-11	Sediment	benzo(b)fluoranthene	0.61	T	mg/Kg	C
609024	HC-SC-74	609024-11	Sediment	benzo(k)fluoroanthene	0.61	T	mg/Kg	C
609024	HC-SC-75	609024-13	Sediment	benzo(b)fluoranthene	0.9	T	mg/Kg	C
609024	HC-SC-75	609024-13	Sediment	benzo(k)fluoroanthene	0.9	T	mg/Kg	C
609024	HC-SC-76	609024-12	Sediment	benzo(b)fluoranthene	0.93	T	mg/Kg	C
609024	HC-SC-76	609024-12	Sediment	benzo(k)fluoroanthene	0.93	T	mg/Kg	C
609024	HC-SC-82	609024-10	Sediment	benzo(b)fluoranthene	0.47	T	mg/Kg	C
609024	HC-SC-82	609024-10	Sediment	benzo(k)fluoroanthene	0.47	T	mg/Kg	C
609024	HC-SC-82	609024-10	Sediment	benzoic acid	230	JB	ug/Kg	UE
609024	HC-SS-03	609024-4	Sediment	1,2,4-trichlorobenzene	0.047	<	mg/Kg	UE
609024	HC-SS-03	609024-4	Sediment	1,2-dichlorobenzene	0.055	<	mg/Kg	UE
609024	HC-SS-03	609024-4	Sediment	1,4-dichlorobenzene	0.05	<	mg/Kg	UE
609024	HC-SS-03	609024-4	Sediment	2,4-dimethylphenol	23	<X	ug/Kg	UE
609024	HC-SS-03	609024-4	Sediment	2-methylnaphthalene	0.05	<	mg/Kg	UE
609024	HC-SS-03	609024-4	Sediment	2-methylphenol	9.1	J	ug/Kg	E
609024	HC-SS-03	609024-4	Sediment	4-methylphenol	1600	D4	ug/Kg	E
609024	HC-SS-03	609024-4	Sediment	acenaphthene	0.051	<	mg/Kg	UE
609024	HC-SS-03	609024-4	Sediment	acenaphthylene	0.046	<	mg/Kg	UE
609024	HC-SS-03	609024-4	Sediment	anthracene	0.054	<	mg/Kg	UE
609024	HC-SS-03	609024-4	Sediment	benzo(a)anthracene	0.066	<	mg/Kg	UE
609024	HC-SS-03	609024-4	Sediment	benzo(a)pyrene	0.019	J	mg/Kg	E
609024	HC-SS-03	609024-4	Sediment	benzo(b)fluoranthene	0.037	JT	mg/Kg	EC
609024	HC-SS-03	609024-4	Sediment	benzo(g,h,i)perylene	0.093	<	mg/Kg	UE
609024	HC-SS-03	609024-4	Sediment	benzo(k)fluoranthene	0.037	JT	mg/Kg	EC
609024	HC-SS-03	609024-4	Sediment	benzoic acid	220	JB	ug/Kg	UE
609024	HC-SS-03	609024-4	Sediment	benzyl alcohol	4.4	JX	ug/Kg	E
609024	HC-SS-03	609024-4	Sediment	bis(2-ethylhexyl)phthalate	0.21	B	mg/Kg	E
609024	HC-SS-03	609024-4	Sediment	butylbenzylphthalate	0.093	<	mg/Kg	UE
609024	HC-SS-03	609024-4	Sediment	chrysene	0.028	J	mg/Kg	E
609024	HC-SS-03	609024-4	Sediment	di-n-butylphthalate	0.072	<	mg/Kg	UE
609024	HC-SS-03	609024-4	Sediment	di-n-octylphthalate	0.087	<	mg/Kg	UE
609024	HC-SS-03	609024-4	Sediment	dibenzo(a,h)anthracene	0.093	<	mg/Kg	UE
609024	HC-SS-03	609024-4	Sediment	dibenzofuran	0.021	J	mg/Kg	E
609024	HC-SS-03	609024-4	Sediment	diethylphthalate	0.12	<	mg/Kg	UE
609024	HC-SS-03	609024-4	Sediment	dimethylphthalate	0.1	<	mg/Kg	UE
609024	HC-SS-03	609024-4	Sediment	fluoranthene	0.073		mg/Kg	E
609024	HC-SS-03	609024-4	Sediment	fluorene	0.059	<	mg/Kg	UE
609024	HC-SS-03	609024-4	Sediment	indeno(1,2,3-cd)pyrene	0.09	<	mg/Kg	UE
609024	HC-SS-03	609024-4	Sediment	n-nitrosodiphenylamine	0.062	<	mg/Kg	UE
609024	HC-SS-03	609024-4	Sediment	naphthalene	0.15		mg/Kg	E

DATA QUALIFIER SUMMARY TABLE - SEDIMENT

SDG	FIELD ID	LAB ID	MATRIX	ANALYTE	CONC.	LAB QUALIFIER	UNITS	VALIDATION QUALIFIER
609024	HC-SS-03	609024-4	Sediment	pentachlorophenol	6.5	J	ug/Kg	E
609024	HC-SS-03	609024-4	Sediment	phenanthrene	0.081		mg/Kg	E
609024	HC-SS-03	609024-4	Sediment	phenol	900	D4	ug/Kg	E
609024	HC-SS-03	609024-4	Sediment	pyrene	0.078		mg/Kg	E
609024	HC-SS-06	609024-5	Sediment	1,2,4-trichlorobenzene	0.048	<	mg/Kg	UE
609024	HC-SS-06	609024-5	Sediment	1,2-dichlorobenzene	0.057	<	mg/Kg	UE
609024	HC-SS-06	609024-5	Sediment	1,4-dichlorobenzene	0.052	<	mg/Kg	UE
609024	HC-SS-06	609024-5	Sediment	2,4-dimethylphenol	24	<X	ug/Kg	UE
609024	HC-SS-06	609024-5	Sediment	2-methylnaphthalene	0.052	<	mg/Kg	UE
609024	HC-SS-06	609024-5	Sediment	2-methylphenol	13	J	ug/Kg	E
609024	HC-SS-06	609024-5	Sediment	4-methylphenol	1900	D4	ug/Kg	E
609024	HC-SS-06	609024-5	Sediment	acenaphthene	0.053	<	mg/Kg	UE
609024	HC-SS-06	609024-5	Sediment	acenaphthylene	0.048	<	mg/Kg	UE
609024	HC-SS-06	609024-5	Sediment	anthracene	0.056	<	mg/Kg	UE
609024	HC-SS-06	609024-5	Sediment	benzo(a)anthracene	0.027	J	mg/Kg	E
609024	HC-SS-06	609024-5	Sediment	benzo(a)pyrene	0.03	J	mg/Kg	E
609024	HC-SS-06	609024-5	Sediment	benzo(b)fluoranthene	0.031	J	mg/Kg	E
609024	HC-SS-06	609024-5	Sediment	benzo(g,h,i)perylene	0.032	J	mg/Kg	E
609024	HC-SS-06	609024-5	Sediment	benzo(k)fluoranthene	0.023	J	mg/Kg	E
609024	HC-SS-06	609024-5	Sediment	benzoic acid	340	JB	ug/Kg	E
609024	HC-SS-06	609024-5	Sediment	benzyl alcohol	5.1	JX	ug/Kg	E
609024	HC-SS-06	609024-5	Sediment	bis(2-ethylhexyl)phthalate	0.083	B	mg/Kg	E
609024	HC-SS-06	609024-5	Sediment	butylbenzylphthalate	0.096	<	mg/Kg	UE
609024	HC-SS-06	609024-5	Sediment	chrysene	0.043	J	mg/Kg	E
609024	HC-SS-06	609024-5	Sediment	di-n-butylphthalate	0.074	<	mg/Kg	UE
609024	HC-SS-06	609024-5	Sediment	di-n-octylphthalate	0.089	<	mg/Kg	UE
609024	HC-SS-06	609024-5	Sediment	dibenzo(a,h)anthracene	0.096	<	mg/Kg	UE
609024	HC-SS-06	609024-5	Sediment	dibenzofuran	0.021	J	mg/Kg	E
609024	HC-SS-06	609024-5	Sediment	diethylphthalate	0.13	<	mg/Kg	UE
609024	HC-SS-06	609024-5	Sediment	dimethylphthalate	0.11	<	mg/Kg	UE
609024	HC-SS-06	609024-5	Sediment	fluoranthene	0.088		mg/Kg	E
609024	HC-SS-06	609024-5	Sediment	fluorene	0.061	<	mg/Kg	UE
609024	HC-SS-06	609024-5	Sediment	indeno(1,2,3-cd)pyrene	0.093	<	mg/Kg	UE
609024	HC-SS-06	609024-5	Sediment	n-nitrosodiphenylamine	0.064	<	mg/Kg	UE
609024	HC-SS-06	609024-5	Sediment	naphthalene	0.14		mg/Kg	E
609024	HC-SS-06	609024-5	Sediment	pentachlorophenol	4.7	JX	ug/Kg	E
609024	HC-SS-06	609024-5	Sediment	phenanthrene	0.088		mg/Kg	E
609024	HC-SS-06	609024-5	Sediment	phenol	2200	D4	ug/Kg	E
609024	HC-SS-06	609024-5	Sediment	pyrene	0.098		mg/Kg	E
609024	HC-SS-08	609024-6	Sediment	1,2,4-trichlorobenzene	0.039	<	mg/Kg	UE
609024	HC-SS-08	609024-6	Sediment	1,2-dichlorobenzene	0.047	<	mg/Kg	UE
609024	HC-SS-08	609024-6	Sediment	1,4-dichlorobenzene	0.042	<	mg/Kg	UE
609024	HC-SS-08	609024-6	Sediment	2,4-dimethylphenol	2.3	JX	ug/Kg	E
609024	HC-SS-08	609024-6	Sediment	2-methylnaphthalene	0.041	J	mg/Kg	E
609024	HC-SS-08	609024-6	Sediment	2-methylphenol	3	JX	ug/Kg	E
609024	HC-SS-08	609024-6	Sediment	4-methylphenol	870	D4	ug/Kg	E
609024	HC-SS-08	609024-6	Sediment	acenaphthene	0.043	<	mg/Kg	UE
609024	HC-SS-08	609024-6	Sediment	acenaphthylene	0.044		mg/Kg	E
609024	HC-SS-08	609024-6	Sediment	anthracene	0.037	J	mg/Kg	E
609024	HC-SS-08	609024-6	Sediment	benzo(a)anthracene	0.056	<	mg/Kg	UE
609024	HC-SS-08	609024-6	Sediment	benzo(a)pyrene	0.056		mg/Kg	E
609024	HC-SS-08	609024-6	Sediment	benzo(b)fluoranthene	0.061		mg/Kg	E

DATA QUALIFIER SUMMARY TABLE - SEDIMENT

SDG	FIELD ID	LAB ID	MATRIX	ANALYTE	CONC.	LAB QUALIFIER	UNITS	VALIDATION QUALIFIER
609024	HC-SS-08	609024-6	Sediment	benzo(g,h,i)perylene	0.093		mg/Kg	E
609024	HC-SS-08	609024-6	Sediment	benzo(k)fluoranthene	0.054	J	mg/Kg	E
609024	HC-SS-08	609024-6	Sediment	benzoic acid	250	JB	ug/Kg	UE
609024	HC-SS-08	609024-6	Sediment	benzyl alcohol	7.1	J	ug/Kg	E
609024	HC-SS-08	609024-6	Sediment	bis(2-ethylhexyl)phthalate	0.16	B	mg/Kg	E
609024	HC-SS-08	609024-6	Sediment	butylbenzylphthalate	0.023	J	mg/Kg	E
609024	HC-SS-08	609024-6	Sediment	chrysene	0.073		mg/Kg	E
609024	HC-SS-08	609024-6	Sediment	di-n-butylphthalate	0.024	J	mg/Kg	E
609024	HC-SS-08	609024-6	Sediment	di-n-octylphthalate	0.073	<	mg/Kg	UE
609024	HC-SS-08	609024-6	Sediment	dibenzo(a,h)anthracene	0.079	<	mg/Kg	UE
609024	HC-SS-08	609024-6	Sediment	dibenzofuran	0.063		mg/Kg	E
609024	HC-SS-08	609024-6	Sediment	diethylphthalate	0.1	<	mg/Kg	UE
609024	HC-SS-08	609024-6	Sediment	dimethylphthalate	0.088	<	mg/Kg	UE
609024	HC-SS-08	609024-6	Sediment	fluoranthene	0.2		mg/Kg	E
609024	HC-SS-08	609024-6	Sediment	fluorene	0.021	J	mg/Kg	E
609024	HC-SS-08	609024-6	Sediment	indeno(1,2,3-cd)pyrene	0.059	J	mg/Kg	E
609024	HC-SS-08	609024-6	Sediment	n-nitrosodiphenylamine	0.053	<	mg/Kg	UE
609024	HC-SS-08	609024-6	Sediment	naphthalene	0.32		mg/Kg	E
609024	HC-SS-08	609024-6	Sediment	pentachlorophenol	8.2	J	ug/Kg	E
609024	HC-SS-08	609024-6	Sediment	phenanthrene	0.22		mg/Kg	E
609024	HC-SS-08	609024-6	Sediment	phenol	1000	D4	ug/Kg	E
609024	HC-SS-08	609024-6	Sediment	pyrene	0.23		mg/Kg	E
609024	HC-SS-203	609024-3	Sediment	pyrene	0.27		mg/Kg	E
609024	HC-SS-29	609024-2	Sediment	1,2,4-trichlorobenzene	0.041	<	mg/Kg	UE
609024	HC-SS-29	609024-2	Sediment	1,2-dichlorobenzene	0.048	<	mg/Kg	UE
609024	HC-SS-29	609024-2	Sediment	1,4-dichlorobenzene	0.044	<	mg/Kg	UE
609024	HC-SS-29	609024-2	Sediment	2,4-dimethylphenol	6.3	J	ug/Kg	E
609024	HC-SS-29	609024-2	Sediment	2-methylnaphthalene	0.12		mg/Kg	E
609024	HC-SS-29	609024-2	Sediment	2-methylphenol	8	J	ug/Kg	E
609024	HC-SS-29	609024-2	Sediment	4-methylphenol	410		ug/Kg	E
609024	HC-SS-29	609024-2	Sediment	acenaphthene	0.062		mg/Kg	E
609024	HC-SS-29	609024-2	Sediment	acenaphthylene	0.04	J	mg/Kg	E
609024	HC-SS-29	609024-2	Sediment	anthracene	0.13		mg/Kg	E
609024	HC-SS-29	609024-2	Sediment	benzo(a)anthracene	0.24		mg/Kg	E
609024	HC-SS-29	609024-2	Sediment	benzo(a)pyrene	0.22		mg/Kg	E
609024	HC-SS-29	609024-2	Sediment	benzo(b)fluoranthene	0.22		mg/Kg	E
609024	HC-SS-29	609024-2	Sediment	benzo(g,h,i)perylene	0.24		mg/Kg	E
609024	HC-SS-29	609024-2	Sediment	benzo(k)fluoranthene	0.23		mg/Kg	E
609024	HC-SS-29	609024-2	Sediment	benzoic acid	230	JB	ug/Kg	UE
609024	HC-SS-29	609024-2	Sediment	benzyl alcohol	12	J	ug/Kg	E
609024	HC-SS-29	609024-2	Sediment	bis(2-ethylhexyl)phthalate	0.23	B	mg/Kg	E
609024	HC-SS-29	609024-2	Sediment	butylbenzylphthalate	0.081	<	mg/Kg	UE
609024	HC-SS-29	609024-2	Sediment	chrysene	0.41		mg/Kg	E
609024	HC-SS-29	609024-2	Sediment	di-n-butylphthalate	0.024	J	mg/Kg	E
609024	HC-SS-29	609024-2	Sediment	di-n-octylphthalate	0.075	<	mg/Kg	UE
609024	HC-SS-29	609024-2	Sediment	dibenzo(a,h)anthracene	0.088		mg/Kg	E
609024	HC-SS-29	609024-2	Sediment	dibenzofuran	0.079		mg/Kg	E
609024	HC-SS-29	609024-2	Sediment	diethylphthalate	0.11	<	mg/Kg	UE
609024	HC-SS-29	609024-2	Sediment	dimethylphthalate	0.09	<	mg/Kg	UE
609024	HC-SS-29	609024-2	Sediment	fluoranthene	0.63		mg/Kg	E
609024	HC-SS-29	609024-2	Sediment	fluorene	0.093		mg/Kg	E
609024	HC-SS-29	609024-2	Sediment	indeno(1,2,3-cd)pyrene	0.2		mg/Kg	E

DATA QUALIFIER SUMMARY TABLE - SEDIMENT

SDG	FIELD ID	LAB ID	MATRIX	ANALYTE	CONC.	LAB QUALIFIER	UNITS	VALIDATION QUALIFIER
609024	HC-SS-29	609024-2	Sediment	n-nitrosodiphenylamine	0.054	<	mg/Kg	UE
609024	HC-SS-29	609024-2	Sediment	naphthalene	0.41		mg/Kg	E
609024	HC-SS-29	609024-2	Sediment	pentachlorophenol	100		ug/Kg	E
609024	HC-SS-29	609024-2	Sediment	phenanthrene	0.47		mg/Kg	E
609024	HC-SS-29	609024-2	Sediment	phenol	1000	D4	ug/Kg	E
609024	HC-SS-29	609024-2	Sediment	pyrene	0.95		mg/Kg	E
609024	HC-SS-30	609024-1	Sediment	1,2,4-trichlorobenzene	0.042	<	mg/Kg	UE
609024	HC-SS-30	609024-1	Sediment	1,2-dichlorobenzene	0.049	<	mg/Kg	UE
609024	HC-SS-30	609024-1	Sediment	1,4-dichlorobenzene	0.045	<	mg/Kg	UE
609024	HC-SS-30	609024-1	Sediment	2,4-dimethylphenol	2.1	JX	ug/Kg	E
609024	HC-SS-30	609024-1	Sediment	2-methylnaphthalene	0.015	J	mg/Kg	E
609024	HC-SS-30	609024-1	Sediment	2-methylphenol	3.9	JX	ug/Kg	E
609024	HC-SS-30	609024-1	Sediment	4-methylphenol	680	D4	ug/Kg	E
609024	HC-SS-30	609024-1	Sediment	acenaphthene	0.046	<	mg/Kg	UE
609024	HC-SS-30	609024-1	Sediment	acenaphthylene	0.041	<	mg/Kg	UE
609024	HC-SS-30	609024-1	Sediment	anthracene	0.05		mg/Kg	E
609024	HC-SS-30	609024-1	Sediment	benzo(a)anthracene	0.15		mg/Kg	E
609024	HC-SS-30	609024-1	Sediment	benzo(a)pyrene	0.082		mg/Kg	E
609024	HC-SS-30	609024-1	Sediment	benzo(b)fluoranthene	0.11		mg/Kg	E
609024	HC-SS-30	609024-1	Sediment	benzo(g,h,i)perylene	0.068	J	mg/Kg	E
609024	HC-SS-30	609024-1	Sediment	benzo(k)fluoranthene	0.11		mg/Kg	E
609024	HC-SS-30	609024-1	Sediment	benzoic acid	260	JB	ug/Kg	UE
609024	HC-SS-30	609024-1	Sediment	benzyl alcohol	49	J	ug/Kg	E
609024	HC-SS-30	609024-1	Sediment	bis(2-ethylhexyl)phthalate	0.1	B	mg/Kg	E
609024	HC-SS-30	609024-1	Sediment	butylbenzylphthalate	0.018	J	mg/Kg	E
609024	HC-SS-30	609024-1	Sediment	chrysene	0.24		mg/Kg	E
609024	HC-SS-30	609024-1	Sediment	di-n-butylphthalate	0.026	J	mg/Kg	E
609024	HC-SS-30	609024-1	Sediment	di-n-octylphthalate	0.077	<	mg/Kg	UE
609024	HC-SS-30	609024-1	Sediment	dibenzo(a,h)anthracene	0.083	<	mg/Kg	UE
609024	HC-SS-30	609024-1	Sediment	dibenzofuran	0.02	J	mg/Kg	E
609024	HC-SS-30	609024-1	Sediment	diethylphthalate	0.11	<	mg/Kg	UE
609024	HC-SS-30	609024-1	Sediment	dimethylphthalate	0.092	<	mg/Kg	UE
609024	HC-SS-30	609024-1	Sediment	fluoranthene	0.3		mg/Kg	E
609024	HC-SS-30	609024-1	Sediment	fluorene	0.024	J	mg/Kg	E
609024	HC-SS-30	609024-1	Sediment	indeno(1,2,3-cd)pyrene	0.058	J	mg/Kg	E
609024	HC-SS-30	609024-1	Sediment	n-nitrosodiphenylamine	0.055	<	mg/Kg	UE
609024	HC-SS-30	609024-1	Sediment	naphthalene	0.042	J	mg/Kg	E
609024	HC-SS-30	609024-1	Sediment	pentachlorophenol	24	J	ug/Kg	E
609024	HC-SS-30	609024-1	Sediment	phenanthrene	0.14		mg/Kg	E
609024	HC-SS-30	609024-1	Sediment	phenol	1300	D4	ug/Kg	E
609024	HC-SS-30	609024-1	Sediment	pyrene	0.32		mg/Kg	E
609024	HC-SS-33	609024-7	Sediment	benzo(b)fluoranthene	0.16	T	mg/Kg	C
609024	HC-SS-33	609024-7	Sediment	benzo(k)fluoroanthene	0.16	T	mg/Kg	C
609024	HC-SS-33	609024-7	Sediment	benzoic acid	180	JB	ug/Kg	UE
609024	HC-SS-34	609024-8	Sediment	benzoic acid	160	JB	ug/Kg	UE
609024	HC-SS-203	609024-3	Sediment	1,2,4-trichlorobenzene	0.043	<	mg/Kg	UE
609024	HC-SS-203	609024-3	Sediment	1,2-dichlorobenzene	0.051	<	mg/Kg	UE
609024	HC-SS-203	609024-3	Sediment	1,4-dichlorobenzene	0.046	<	mg/Kg	UE
609024	HC-SS-203	609024-3	Sediment	2,4-dimethylphenol	42	<	ug/Kg	UE
609024	HC-SS-203	609024-3	Sediment	2-methylnaphthalene	0.046	<	mg/Kg	UE
609024	HC-SS-203	609024-3	Sediment	2-methylphenol	17	J	ug/Kg	E
609024	HC-SS-203	609024-3	Sediment	4-methylphenol	1100	D4	ug/Kg	E

DATA QUALIFIER SUMMARY TABLE - SEDIMENT

SDG	FIELD ID	LAB ID	MATRIX	ANALYTE	CONC.	LAB QUALIFIER	UNITS	VALIDATION QUALIFIER
609024	HC-SS-203	609024-3	Sediment	acenaphthene	0.047	<	mg/Kg	UE
609024	HC-SS-203	609024-3	Sediment	acenaphthylene	0.042	<	mg/Kg	UE
609024	HC-SS-203	609024-3	Sediment	anthracene	0.039	J	mg/Kg	E
609024	HC-SS-203	609024-3	Sediment	benzo(a)anthracene	0.1		mg/Kg	E
609024	HC-SS-203	609024-3	Sediment	benzo(a)pyrene	0.063		mg/Kg	E
609024	HC-SS-203	609024-3	Sediment	benzo(b)fluoranthene	0.1		mg/Kg	E
609024	HC-SS-203	609024-3	Sediment	benzo(g,h,i)perylene	0.052	J	mg/Kg	E
609024	HC-SS-203	609024-3	Sediment	benzo(k)fluoranthene	0.074	J	mg/Kg	E
609024	HC-SS-203	609024-3	Sediment	benzoic acid	240	JB	ug/Kg	UE
609024	HC-SS-203	609024-3	Sediment	benzyl alcohol	31	J	ug/Kg	E
609024	HC-SS-203	609024-3	Sediment	bis(2-ethylhexyl)phthalate	0.11	B	mg/Kg	E
609024	HC-SS-203	609024-3	Sediment	butylbenzylphthalate	0.085	<	mg/Kg	UE
609024	HC-SS-203	609024-3	Sediment	chrysene	0.21		mg/Kg	E
609024	HC-SS-203	609024-3	Sediment	di-n-butylphthalate	0.066	<	mg/Kg	UE
609024	HC-SS-203	609024-3	Sediment	di-n-octylphthalate	0.079	<	mg/Kg	UE
609024	HC-SS-203	609024-3	Sediment	dibenzo(a,h)anthracene	0.086	<	mg/Kg	UE
609024	HC-SS-203	609024-3	Sediment	dibenzofuran	0.019	J	mg/Kg	E
609024	HC-SS-203	609024-3	Sediment	diethylphthalate	0.11	<	mg/Kg	UE
609024	HC-SS-203	609024-3	Sediment	dimethylphthalate	0.095	<	mg/Kg	UE
609024	HC-SS-203	609024-3	Sediment	fluoranthene	0.26		mg/Kg	E
609024	HC-SS-203	609024-3	Sediment	fluorene	0.027	J	mg/Kg	E
609024	HC-SS-203	609024-3	Sediment	indeno(1,2,3-cd)pyrene	0.046	J	mg/Kg	E
609024	HC-SS-203	609024-3	Sediment	n-nitrosodiphenylamine	0.057	<	mg/Kg	UE
609024	HC-SS-203	609024-3	Sediment	naphthalene	0.047	<	mg/Kg	UE
609024	HC-SS-203	609024-3	Sediment	pentachlorophenol	19	J	ug/Kg	E
609024	HC-SS-203	609024-3	Sediment	phenanthrene	0.15		mg/Kg	E
609024	HC-SS-203	609024-3	Sediment	phenol	1500	D4	ug/Kg	E
609024	HC-VC-70-S1	609024-19	Sediment	benzoic acid	100	JB	ug/Kg	UE
609024	HC-VC-70-S2	609024-20	Sediment	benzoic acid	120	JB	ug/Kg	UE
609024	HC-VC-71-S1	609024-15	Sediment	benzoic acid	160	JB	ug/Kg	UE
609024	HC-VC-71-S2	609024-16	Sediment	benzo(b)fluoranthene	1.2	T	mg/Kg	C
609024	HC-VC-71-S2	609024-16	Sediment	benzo(k)fluoroanthene	1.2	T	mg/Kg	C
609024	HC-VC-71-S2	609024-16	Sediment	benzoic acid	140	JB	ug/Kg	UE
609024	HC-VC-71-S3	609024-17	Sediment	benzoic acid	51	JB	ug/Kg	UE
609024	HC-VC-71-S4	609024-18	Sediment	benzoic acid	50	JB	ug/Kg	UE
609041	HC-VC-72-S1	609041-1	Sediment	benzo(b)fluoranthene	0.42	T	mg/Kg	C
609041	HC-VC-72-S1	609041-1	Sediment	benzo(k)fluoroanthene	0.42	T	mg/Kg	C
609041	HC-VC-72-S1	609041-1	Sediment	benzoic acid	140	JB	ug/Kg	UE
609041	HC-VC-72-S2	609041-2	Sediment	benzo(b)fluoranthene	0.098	T	mg/Kg	C
609041	HC-VC-72-S2	609041-2	Sediment	benzo(k)fluoroanthene	0.098	T	mg/Kg	C
609041	HC-VC-72-S2	609041-2	Sediment	benzoic acid	82	JB	ug/Kg	UE
609041	HC-VC-72-S2	609041-2	Sediment	bis(2-ethylhexyl)phthalate	0.016	JB	mg/Kg	UE
609041	HC-VC-72-S2	609041-2	Sediment	phenol	10	JB	ug/Kg	UE
609041	HC-VC-72-S3	609041-3	Sediment	benzo(b)fluoranthene	0.0093	JT	mg/Kg	C
609041	HC-VC-72-S3	609041-3	Sediment	benzo(k)fluoroanthene	0.0093	JT	mg/Kg	C
609041	HC-VC-72-S3	609041-3	Sediment	benzoic acid	42	JB	ug/Kg	UE
609041	HC-VC-72-S3	609041-3	Sediment	bis(2-ethylhexyl)phthalate	0.032	B	mg/Kg	U
609041	HC-VC-72-S3	609041-3	Sediment	phenol	3.5	JB	ug/Kg	UE
609041	HC-VC-72-S4	609041-4	Sediment	benzoic acid	63	JB	ug/Kg	UE
609041	HC-VC-72-S4	609041-4	Sediment	bis(2-ethylhexyl)phthalate	0.04	B	mg/Kg	U
609041	HC-VC-72-S4	609041-4	Sediment	phenol	3.9	JB	ug/Kg	UE
609041	HC-VC-74-S1	609041-19	Sediment	benzo(b)fluoranthene	3.1	T	mg/Kg	C

DATA QUALIFIER SUMMARY TABLE - SEDIMENT

SDG	FIELD ID	LAB ID	MATRIX	ANALYTE	CONC.	LAB QUALIFIER	UNITS	VALIDATION QUALIFIER
609041	HC-VC-74-S1	609041-19	Sediment	benzo(k)fluoranthene	3.1	T	mg/Kg	C
609041	HC-VC-74-S1	609041-19	Sediment	benzoic acid	220	JB	ug/Kg	UE
609041	HC-VC-74-S3	609041-20	Sediment	benzoic acid	200	JB	ug/Kg	UE
609041	HC-VC-75S-1	609041-7	Sediment	1,2,4-trichlorobenzene	0.042	<	mg/Kg	UE
609041	HC-VC-75S-1	609041-7	Sediment	1,2-dichlorobenzene	0.049	<	mg/Kg	UE
609041	HC-VC-75S-1	609041-7	Sediment	1,4-dichlorobenzene	0.045	<	mg/Kg	UE
609041	HC-VC-75S-1	609041-7	Sediment	2,4-dimethylphenol	5.5	J	ug/Kg	E
609041	HC-VC-75S-1	609041-7	Sediment	2-methylnaphthalene	0.13		mg/Kg	E
609041	HC-VC-75S-1	609041-7	Sediment	2-methylphenol	7.2	J	ug/Kg	E
609041	HC-VC-75S-1	609041-7	Sediment	4-methylphenol	830	D4	ug/Kg	E
609041	HC-VC-75S-1	609041-7	Sediment	acenaphthene	0.29		mg/Kg	E
609041	HC-VC-75S-1	609041-7	Sediment	acenaphthylene	0.031	J	mg/Kg	E
609041	HC-VC-75S-1	609041-7	Sediment	anthracene	0.42		mg/Kg	E
609041	HC-VC-75S-1	609041-7	Sediment	benzo(a)anthracene	0.53		mg/Kg	E
609041	HC-VC-75S-1	609041-7	Sediment	benzo(a)pyrene	0.27		mg/Kg	E
609041	HC-VC-75S-1	609041-7	Sediment	benzo(b)fluoranthene	0.66	T	mg/Kg	EC
609041	HC-VC-75S-1	609041-7	Sediment	benzo(g,h,i)perylene	0.2		mg/Kg	E
609041	HC-VC-75S-1	609041-7	Sediment	benzo(k)fluoranthene	0.66	T	mg/Kg	EC
609041	HC-VC-75S-1	609041-7	Sediment	benzoic acid	290	JB	ug/Kg	E
609041	HC-VC-75S-1	609041-7	Sediment	benzyl alcohol	5.6	J	ug/Kg	E
609041	HC-VC-75S-1	609041-7	Sediment	bis(2-ethylhexyl)phthalate	0.26	B	mg/Kg	E
609041	HC-VC-75S-1	609041-7	Sediment	butylbenzylphthalate	0.033	J	mg/Kg	E
609041	HC-VC-75S-1	609041-7	Sediment	chrysene	0.79		mg/Kg	E
609041	HC-VC-75S-1	609041-7	Sediment	di-n-butylphthalate	0.064	<	mg/Kg	UE
609041	HC-VC-75S-1	609041-7	Sediment	di-n-octylphthalate	0.077	<	mg/Kg	UE
609041	HC-VC-75S-1	609041-7	Sediment	dibenzo(a,h)anthracene	0.099		mg/Kg	E
609041	HC-VC-75S-1	609041-7	Sediment	dibenzofuran	0.26		mg/Kg	E
609041	HC-VC-75S-1	609041-7	Sediment	diethylphthalate	0.11	<	mg/Kg	UE
609041	HC-VC-75S-1	609041-7	Sediment	dimethylphthalate	0.092	<	mg/Kg	UE
609041	HC-VC-75S-1	609041-7	Sediment	fluoranthene	2		mg/Kg	E
609041	HC-VC-75S-1	609041-7	Sediment	fluorene	0.44		mg/Kg	E
609041	HC-VC-75S-1	609041-7	Sediment	indeno(1,2,3-cd)pyrene	0.19		mg/Kg	E
609041	HC-VC-75S-1	609041-7	Sediment	n-nitrosodiphenylamine	0.055	<	mg/Kg	UE
609041	HC-VC-75S-1	609041-7	Sediment	naphthalene	0.31		mg/Kg	E
609041	HC-VC-75S-1	609041-7	Sediment	pentachlorophenol	12	J	ug/Kg	E
609041	HC-VC-75S-1	609041-7	Sediment	phenanthrene	1.2		mg/Kg	E
609041	HC-VC-75S-1	609041-7	Sediment	phenol	310	B	ug/Kg	E
609041	HC-VC-75S-1	609041-7	Sediment	pyrene	1.5		mg/Kg	E
609041	HC-VC-75S-2	609041-8	Sediment	1,2,4-trichlorobenzene	0.009	<X	mg/Kg	UE
609041	HC-VC-75S-2	609041-8	Sediment	1,2-dichlorobenzene	0.011	<X	mg/Kg	UE
609041	HC-VC-75S-2	609041-8	Sediment	1,4-dichlorobenzene	0.01	<X	mg/Kg	UE
609041	HC-VC-75S-2	609041-8	Sediment	2,4-dimethylphenol	17	<	ug/Kg	UE
609041	HC-VC-75S-2	609041-8	Sediment	2-methylnaphthalene	0.019	<	mg/Kg	UE
609041	HC-VC-75S-2	609041-8	Sediment	2-methylphenol	19	<	ug/Kg	UE
609041	HC-VC-75S-2	609041-8	Sediment	4-methylphenol	20	<	ug/Kg	UE
609041	HC-VC-75S-2	609041-8	Sediment	acenaphthene	0.019	<	mg/Kg	UE
609041	HC-VC-75S-2	609041-8	Sediment	acenaphthylene	0.017	<	mg/Kg	UE
609041	HC-VC-75S-2	609041-8	Sediment	anthracene	0.02	<	mg/Kg	UE
609041	HC-VC-75S-2	609041-8	Sediment	benzo(a)anthracene	0.025	<	mg/Kg	UE
609041	HC-VC-75S-2	609041-8	Sediment	benzo(a)pyrene	0.022	<	mg/Kg	UE
609041	HC-VC-75S-2	609041-8	Sediment	benzo(b)fluoranthene	0.027	<	mg/Kg	UE
609041	HC-VC-75S-2	609041-8	Sediment	benzo(g,h,i)perylene	0.035	<	mg/Kg	UE

DATA QUALIFIER SUMMARY TABLE - SEDIMENT

SDG	FIELD ID	LAB ID	MATRIX	ANALYTE	CONC.	LAB QUALIFIER	UNITS	VALIDATION QUALIFIER
609041	HC-VC-75S-2	609041-8	Sediment	benzo(k)fluoranthene	0.034	<	mg/Kg	UE
609041	HC-VC-75S-2	609041-8	Sediment	benzoic acid	38	JB	ug/Kg	UE
609041	HC-VC-75S-2	609041-8	Sediment	benzyl alcohol	30	<	ug/Kg	UE
609041	HC-VC-75S-2	609041-8	Sediment	bis(2-ethylhexyl)phthalate	0.016	JB	mg/Kg	UE
609041	HC-VC-75S-2	609041-8	Sediment	butylbenzylphthalate	0.018	<X	mg/Kg	UE
609041	HC-VC-75S-2	609041-8	Sediment	chrysene	0.025	<	mg/Kg	UE
609041	HC-VC-75S-2	609041-8	Sediment	di-n-butylphthalate	0.007	J	mg/Kg	E
609041	HC-VC-75S-2	609041-8	Sediment	di-n-octylphthalate	0.033	<	mg/Kg	UE
609041	HC-VC-75S-2	609041-8	Sediment	dibenzo(a,h)anthracene	0.035	<	mg/Kg	UE
609041	HC-VC-75S-2	609041-8	Sediment	dibenzofuran	0.02	<	mg/Kg	UE
609041	HC-VC-75S-2	609041-8	Sediment	diethylphthalate	0.046	<	mg/Kg	UE
609041	HC-VC-75S-2	609041-8	Sediment	dimethylphthalate	0.039	<	mg/Kg	UE
609041	HC-VC-75S-2	609041-8	Sediment	fluoranthene	0.021	<	mg/Kg	UE
609041	HC-VC-75S-2	609041-8	Sediment	fluorene	0.022	<	mg/Kg	UE
609041	HC-VC-75S-2	609041-8	Sediment	indeno(1,2,3-cd)pyrene	0.034	<	mg/Kg	UE
609041	HC-VC-75S-2	609041-8	Sediment	n-nitrosodiphenylamine	0.023	<	mg/Kg	UE
609041	HC-VC-75S-2	609041-8	Sediment	naphthalene	0.019	<	mg/Kg	UE
609041	HC-VC-75S-2	609041-8	Sediment	pentachlorophenol	33	<	ug/Kg	UE
609041	HC-VC-75S-2	609041-8	Sediment	phenanthrene	0.022	<	mg/Kg	UE
609041	HC-VC-75S-2	609041-8	Sediment	phenol	3.1	JB	ug/Kg	UE
609041	HC-VC-75S-2	609041-8	Sediment	pyrene	0.027	<	mg/Kg	UE
609041	HC-VC-78-S1	609041-17	Sediment	1,2,4-trichlorobenzene	0.038	<	mg/Kg	UE
609041	HC-VC-78-S1	609041-17	Sediment	1,2-dichlorobenzene	0.044	<	mg/Kg	UE
609041	HC-VC-78-S1	609041-17	Sediment	1,4-dichlorobenzene	0.012	J	mg/Kg	E
609041	HC-VC-78-S1	609041-17	Sediment	2,4-dimethylphenol	4.5	J	ug/Kg	E
609041	HC-VC-78-S1	609041-17	Sediment	2-methylnaphthalene	0.076		mg/Kg	E
609041	HC-VC-78-S1	609041-17	Sediment	2-methylphenol	5.1	J	ug/Kg	E
609041	HC-VC-78-S1	609041-17	Sediment	4-methylphenol	610	D4	ug/Kg	E
609041	HC-VC-78-S1	609041-17	Sediment	acenaphthene	0.051		mg/Kg	E
609041	HC-VC-78-S1	609041-17	Sediment	acenaphthylene	0.031	J	mg/Kg	E
609041	HC-VC-78-S1	609041-17	Sediment	anthracene	0.11		mg/Kg	E
609041	HC-VC-78-S1	609041-17	Sediment	benzo(a)anthracene	0.2		mg/Kg	E
609041	HC-VC-78-S1	609041-17	Sediment	benzo(a)pyrene	0.16		mg/Kg	E
609041	HC-VC-78-S1	609041-17	Sediment	benzo(b)fluoranthene	0.36	T	mg/Kg	EC
609041	HC-VC-78-S1	609041-17	Sediment	benzo(g,h,i)perylene	0.18		mg/Kg	E
609041	HC-VC-78-S1	609041-17	Sediment	benzo(k)fluoranthene	0.36	T	mg/Kg	EC
609041	HC-VC-78-S1	609041-17	Sediment	benzoic acid	170	JB	ug/Kg	UE
609041	HC-VC-78-S1	609041-17	Sediment	benzyl alcohol	8.1	J	ug/Kg	E
609041	HC-VC-78-S1	609041-17	Sediment	bis(2-ethylhexyl)phthalate	0.31	B	mg/Kg	E
609041	HC-VC-78-S1	609041-17	Sediment	butylbenzylphthalate	0.052	J	mg/Kg	E
609041	HC-VC-78-S1	609041-17	Sediment	chrysene	0.29		mg/Kg	E
609041	HC-VC-78-S1	609041-17	Sediment	di-n-butylphthalate	0.058	<	mg/Kg	UE
609041	HC-VC-78-S1	609041-17	Sediment	di-n-octylphthalate	0.02	J	mg/Kg	E
609041	HC-VC-78-S1	609041-17	Sediment	dibenzo(a,h)anthracene	0.063	J	mg/Kg	E
609041	HC-VC-78-S1	609041-17	Sediment	dibenzofuran	0.084		mg/Kg	E
609041	HC-VC-78-S1	609041-17	Sediment	diethylphthalate	0.098	<	mg/Kg	UE
609041	HC-VC-78-S1	609041-17	Sediment	dimethylphthalate	0.01	J	mg/Kg	E
609041	HC-VC-78-S1	609041-17	Sediment	fluoranthene	0.46		mg/Kg	E
609041	HC-VC-78-S1	609041-17	Sediment	fluorene	0.086		mg/Kg	E
609041	HC-VC-78-S1	609041-17	Sediment	indeno(1,2,3-cd)pyrene	0.14		mg/Kg	E
609041	HC-VC-78-S1	609041-17	Sediment	n-nitrosodiphenylamine	0.05	<	mg/Kg	UE
609041	HC-VC-78-S1	609041-17	Sediment	naphthalene	0.25		mg/Kg	E

DATA QUALIFIER SUMMARY TABLE - SEDIMENT

SDG	FIELD ID	LAB ID	MATRIX	ANALYTE	CONC.	LAB QUALIFIER	UNITS	VALIDATION QUALIFIER
609041	HC-VC-78-S1	609041-17	Sediment	pentachlorophenol	10	J	ug/Kg	E
609041	HC-VC-78-S1	609041-17	Sediment	phenanthrene	0.32		mg/Kg	E
609041	HC-VC-78-S1	609041-17	Sediment	phenol	310	B	ug/Kg	E
609041	HC-VC-78-S1	609041-17	Sediment	pyrene	0.56		mg/Kg	E
609041	HC-VC-78-S2	609041-18	Sediment	1,2,4-trichlorobenzene	0.023	<	mg/Kg	UE
609041	HC-VC-78-S2	609041-18	Sediment	1,2-dichlorobenzene	0.027	<	mg/Kg	UE
609041	HC-VC-78-S2	609041-18	Sediment	1,4-dichlorobenzene	0.025	<	mg/Kg	UE
609041	HC-VC-78-S2	609041-18	Sediment	2,4-dimethylphenol	3.9	J	ug/Kg	E
609041	HC-VC-78-S2	609041-18	Sediment	2-methylnaphthalene	0.069		mg/Kg	E
609041	HC-VC-78-S2	609041-18	Sediment	2-methylphenol	2.8	J	ug/Kg	E
609041	HC-VC-78-S2	609041-18	Sediment	4-methylphenol	810	D4	ug/Kg	E
609041	HC-VC-78-S2	609041-18	Sediment	acenaphthene	0.054		mg/Kg	E
609041	HC-VC-78-S2	609041-18	Sediment	acenaphthylene	0.0086	J	mg/Kg	E
609041	HC-VC-78-S2	609041-18	Sediment	anthracene	0.059		mg/Kg	E
609041	HC-VC-78-S2	609041-18	Sediment	benzo(a)anthracene	0.073		mg/Kg	E
609041	HC-VC-78-S2	609041-18	Sediment	benzo(a)pyrene	0.035		mg/Kg	E
609041	HC-VC-78-S2	609041-18	Sediment	benzo(b)fluoranthene	0.071	T	mg/Kg	EC
609041	HC-VC-78-S2	609041-18	Sediment	benzo(g,h,i)perylene	0.046	<	mg/Kg	UE
609041	HC-VC-78-S2	609041-18	Sediment	benzo(k)fluoranthene	0.071	T	mg/Kg	EC
609041	HC-VC-78-S2	609041-18	Sediment	benzoic acid	97	JB	ug/Kg	UE
609041	HC-VC-78-S2	609041-18	Sediment	benzyl alcohol	1.6	J	ug/Kg	E
609041	HC-VC-78-S2	609041-18	Sediment	bis(2-ethylhexyl)phthalate	0.11	B	mg/Kg	E
609041	HC-VC-78-S2	609041-18	Sediment	butylbenzylphthalate	0.046	<	mg/Kg	UE
609041	HC-VC-78-S2	609041-18	Sediment	chrysene	0.081		mg/Kg	E
609041	HC-VC-78-S2	609041-18	Sediment	di-n-butylphthalate	0.035	<	mg/Kg	UE
609041	HC-VC-78-S2	609041-18	Sediment	di-n-octylphthalate	0.043	<	mg/Kg	UE
609041	HC-VC-78-S2	609041-18	Sediment	dibenzo(a,h)anthracene	0.046	<	mg/Kg	UE
609041	HC-VC-78-S2	609041-18	Sediment	dibenzofuran	0.049		mg/Kg	E
609041	HC-VC-78-S2	609041-18	Sediment	diethylphthalate	0.06	<	mg/Kg	UE
609041	HC-VC-78-S2	609041-18	Sediment	dimethylphthalate	0.051	<	mg/Kg	UE
609041	HC-VC-78-S2	609041-18	Sediment	fluoranthene	0.29		mg/Kg	E
609041	HC-VC-78-S2	609041-18	Sediment	fluorene	0.08		mg/Kg	E
609041	HC-VC-78-S2	609041-18	Sediment	indeno(1,2,3-cd)pyrene	0.021	J	mg/Kg	E
609041	HC-VC-78-S2	609041-18	Sediment	n-nitrosodiphenylamine	0.096		mg/Kg	E
609041	HC-VC-78-S2	609041-18	Sediment	naphthalene	0.1		mg/Kg	E
609041	HC-VC-78-S2	609041-18	Sediment	pentachlorophenol	6.7	J	ug/Kg	E
609041	HC-VC-78-S2	609041-18	Sediment	phenanthrene	0.34		mg/Kg	E
609041	HC-VC-78-S2	609041-18	Sediment	phenol	54	B	ug/Kg	E
609041	HC-VC-78-S2	609041-18	Sediment	pyrene	0.22		mg/Kg	E
609041	HC-VC-79-S-1	609041-9	Sediment	1,2,4-trichlorobenzene	0.034	<	mg/Kg	UE
609041	HC-VC-79-S-1	609041-9	Sediment	1,2-dichlorobenzene	0.013	J	mg/Kg	E
609041	HC-VC-79-S-1	609041-9	Sediment	1,4-dichlorobenzene	0.024	J	mg/Kg	E
609041	HC-VC-79-S-1	609041-9	Sediment	2,4-dimethylphenol	27	J	ug/Kg	E
609041	HC-VC-79-S-1	609041-9	Sediment	2-methylnaphthalene	0.25		mg/Kg	E
609041	HC-VC-79-S-1	609041-9	Sediment	2-methylphenol	16	J	ug/Kg	E
609041	HC-VC-79-S-1	609041-9	Sediment	4-methylphenol	3200	D4	ug/Kg	E
609041	HC-VC-79-S-1	609041-9	Sediment	acenaphthene	0.17		mg/Kg	E
609041	HC-VC-79-S-1	609041-9	Sediment	acenaphthylene	0.045		mg/Kg	E
609041	HC-VC-79-S-1	609041-9	Sediment	anthracene	0.17		mg/Kg	E
609041	HC-VC-79-S-1	609041-9	Sediment	benzo(a)anthracene	0.2		mg/Kg	E
609041	HC-VC-79-S-1	609041-9	Sediment	benzo(a)pyrene	0.14		mg/Kg	E
609041	HC-VC-79-S-1	609041-9	Sediment	benzo(b)fluoranthene	0.26	T	mg/Kg	EC

DATA QUALIFIER SUMMARY TABLE - SEDIMENT

SDG	FIELD ID	LAB ID	MATRIX	ANALYTE	CONC.	LAB QUALIFIER	UNITS	VALIDATION QUALIFIER
609041	HC-VC-79-S-1	609041-9	Sediment	benzo(g,h,i)perylene	0.13		mg/Kg	E
609041	HC-VC-79-S-1	609041-9	Sediment	benzo(k)fluoranthene	0.26	T	mg/Kg	EC
609041	HC-VC-79-S-1	609041-9	Sediment	benzoic acid	170	JB	ug/Kg	UE
609041	HC-VC-79-S-1	609041-9	Sediment	benzyl alcohol	4.6	J	ug/Kg	E
609041	HC-VC-79-S-1	609041-9	Sediment	bis(2-ethylhexyl)phthalate	0.35	B	mg/Kg	E
609041	HC-VC-79-S-1	609041-9	Sediment	butylbenzylphthalate	0.068	<	mg/Kg	UE
609041	HC-VC-79-S-1	609041-9	Sediment	chrysene	0.28		mg/Kg	E
609041	HC-VC-79-S-1	609041-9	Sediment	di-n-butylphthalate	0.052	<	mg/Kg	UE
609041	HC-VC-79-S-1	609041-9	Sediment	di-n-octylphthalate	0.064	<	mg/Kg	UE
609041	HC-VC-79-S-1	609041-9	Sediment	dibenzo(a,h)anthracene	0.052	J	mg/Kg	E
609041	HC-VC-79-S-1	609041-9	Sediment	dibenzofuran	0.12		mg/Kg	E
609041	HC-VC-79-S-1	609041-9	Sediment	diethylphthalate	0.089	<	mg/Kg	UE
609041	HC-VC-79-S-1	609041-9	Sediment	dimethylphthalate	0.076	<	mg/Kg	UE
609041	HC-VC-79-S-1	609041-9	Sediment	fluoranthene	0.59		mg/Kg	E
609041	HC-VC-79-S-1	609041-9	Sediment	fluorene	0.22		mg/Kg	E
609041	HC-VC-79-S-1	609041-9	Sediment	indeno(1,2,3-cd)pyrene	0.1		mg/Kg	E
609041	HC-VC-79-S-1	609041-9	Sediment	n-nitrosodiphenylamine	0.046	<	mg/Kg	UE
609041	HC-VC-79-S-1	609041-9	Sediment	naphthalene	0.54		mg/Kg	E
609041	HC-VC-79-S-1	609041-9	Sediment	pentachlorophenol	22	J	ug/Kg	E
609041	HC-VC-79-S-1	609041-9	Sediment	phenanthrene	0.82		mg/Kg	E
609041	HC-VC-79-S-1	609041-9	Sediment	phenol	130	B	ug/Kg	E
609041	HC-VC-79-S-1	609041-9	Sediment	pyrene	0.46		mg/Kg	E
609041	HC-VC-79-S-2	609041-10	Sediment	1,2,4-trichlorobenzene	0.029	<	mg/Kg	UE
609041	HC-VC-79-S-2	609041-10	Sediment	1,2-dichlorobenzene	0.011	J	mg/Kg	E
609041	HC-VC-79-S-2	609041-10	Sediment	1,4-dichlorobenzene	0.02	J	mg/Kg	E
609041	HC-VC-79-S-2	609041-10	Sediment	2,4-dimethylphenol	27	J	ug/Kg	E
609041	HC-VC-79-S-2	609041-10	Sediment	2-methylnaphthalene	0.38		mg/Kg	E
609041	HC-VC-79-S-2	609041-10	Sediment	2-methylphenol	17	J	ug/Kg	E
609041	HC-VC-79-S-2	609041-10	Sediment	4-methylphenol	3400	D5	ug/Kg	E
609041	HC-VC-79-S-2	609041-10	Sediment	acenaphthene	0.21		mg/Kg	E
609041	HC-VC-79-S-2	609041-10	Sediment	acenaphthylene	0.077		mg/Kg	E
609041	HC-VC-79-S-2	609041-10	Sediment	anthracene	0.22		mg/Kg	E
609041	HC-VC-79-S-2	609041-10	Sediment	benzo(a)anthracene	0.24		mg/Kg	E
609041	HC-VC-79-S-2	609041-10	Sediment	benzo(a)pyrene	0.18		mg/Kg	E
609041	HC-VC-79-S-2	609041-10	Sediment	benzo(b)fluoranthene	0.31	T	mg/Kg	EC
609041	HC-VC-79-S-2	609041-10	Sediment	benzo(g,h,i)perylene	0.14		mg/Kg	E
609041	HC-VC-79-S-2	609041-10	Sediment	benzo(k)fluoranthene	0.31	T	mg/Kg	EC
609041	HC-VC-79-S-2	609041-10	Sediment	benzoic acid	180	JB	ug/Kg	UE
609041	HC-VC-79-S-2	609041-10	Sediment	benzyl alcohol	4.5	J	ug/Kg	E
609041	HC-VC-79-S-2	609041-10	Sediment	bis(2-ethylhexyl)phthalate	0.16	B	mg/Kg	UE
609041	HC-VC-79-S-2	609041-10	Sediment	butylbenzylphthalate	0.057	<	mg/Kg	UE
609041	HC-VC-79-S-2	609041-10	Sediment	chrysene	0.32		mg/Kg	E
609041	HC-VC-79-S-2	609041-10	Sediment	di-n-butylphthalate	0.044	<	mg/Kg	UE
609041	HC-VC-79-S-2	609041-10	Sediment	di-n-octylphthalate	0.053	<	mg/Kg	UE
609041	HC-VC-79-S-2	609041-10	Sediment	dibenzo(a,h)anthracene	0.057	<	mg/Kg	UE
609041	HC-VC-79-S-2	609041-10	Sediment	dibenzofuran	0.16		mg/Kg	E
609041	HC-VC-79-S-2	609041-10	Sediment	diethylphthalate	0.074	<	mg/Kg	UE
609041	HC-VC-79-S-2	609041-10	Sediment	dimethylphthalate	0.063	<	mg/Kg	UE
609041	HC-VC-79-S-2	609041-10	Sediment	fluoranthene	0.73		mg/Kg	E
609041	HC-VC-79-S-2	609041-10	Sediment	fluorene	0.28		mg/Kg	E
609041	HC-VC-79-S-2	609041-10	Sediment	indeno(1,2,3-cd)pyrene	0.12		mg/Kg	E
609041	HC-VC-79-S-2	609041-10	Sediment	n-nitrosodiphenylamine	0.11		mg/Kg	E

DATA QUALIFIER SUMMARY TABLE - SEDIMENT

SDG	FIELD ID	LAB ID	MATRIX	ANALYTE	CONC.	LAB QUALIFIER	UNITS	VALIDATION QUALIFIER
609041	HC-VC-79-S-2	609041-10	Sediment	naphthalene	0.8		mg/Kg	E
609041	HC-VC-79-S-2	609041-10	Sediment	pentachlorophenol	23	J	ug/Kg	E
609041	HC-VC-79-S-2	609041-10	Sediment	phenanthrene	1.1		mg/Kg	E
609041	HC-VC-79-S-2	609041-10	Sediment	phenol	62	B	ug/Kg	E
609041	HC-VC-79-S-2	609041-10	Sediment	pyrene	0.65		mg/Kg	E
609041	HC-VC-79-S-3	609041-11	Sediment	1,2,4-trichlorobenzene	0.0051	<X	mg/Kg	UE
609041	HC-VC-79-S-3	609041-11	Sediment	1,2-dichlorobenzene	0.0061	<X	mg/Kg	UE
609041	HC-VC-79-S-3	609041-11	Sediment	1,4-dichlorobenzene	0.0055	<X	mg/Kg	UE
609041	HC-VC-79-S-3	609041-11	Sediment	2,4-dimethylphenol	20	<	ug/Kg	UE
609041	HC-VC-79-S-3	609041-11	Sediment	2-methylnaphthalene	0.041		mg/Kg	E
609041	HC-VC-79-S-3	609041-11	Sediment	2-methylphenol	22	<	ug/Kg	UE
609041	HC-VC-79-S-3	609041-11	Sediment	4-methylphenol	74		ug/Kg	E
609041	HC-VC-79-S-3	609041-11	Sediment	acenaphthene	0.0069	J	mg/Kg	E
609041	HC-VC-79-S-3	609041-11	Sediment	acenaphthylene	0.02	<	mg/Kg	UE
609041	HC-VC-79-S-3	609041-11	Sediment	anthracene	0.0081	J	mg/Kg	E
609041	HC-VC-79-S-3	609041-11	Sediment	benzo(a)anthracene	0.029	<	mg/Kg	UE
609041	HC-VC-79-S-3	609041-11	Sediment	benzo(a)pyrene	0.0062	J	mg/Kg	E
609041	HC-VC-79-S-3	609041-11	Sediment	benzo(b)fluoranthene	0.015	T	mg/Kg	EC
609041	HC-VC-79-S-3	609041-11	Sediment	benzo(g,h,i)perylene	0.019	J	mg/Kg	E
609041	HC-VC-79-S-3	609041-11	Sediment	benzo(k)fluoranthene	0.015	T	mg/Kg	EC
609041	HC-VC-79-S-3	609041-11	Sediment	benzoic acid	66	JB	ug/Kg	UE
609041	HC-VC-79-S-3	609041-11	Sediment	benzyl alcohol	35	<	ug/Kg	UE
609041	HC-VC-79-S-3	609041-11	Sediment	bis(2-ethylhexyl)phthalate	0.015	JB	mg/Kg	UE
609041	HC-VC-79-S-3	609041-11	Sediment	butylbenzylphthalate	0.0037	JX	mg/Kg	E
609041	HC-VC-79-S-3	609041-11	Sediment	chrysene	0.03	<	mg/Kg	UE
609041	HC-VC-79-S-3	609041-11	Sediment	di-n-butylphthalate	0.01	J	mg/Kg	E
609041	HC-VC-79-S-3	609041-11	Sediment	di-n-octylphthalate	0.038	<	mg/Kg	UE
609041	HC-VC-79-S-3	609041-11	Sediment	dibenzo(a,h)anthracene	0.041	<	mg/Kg	UE
609041	HC-VC-79-S-3	609041-11	Sediment	dibenzofuran	0.0073	J	mg/Kg	E
609041	HC-VC-79-S-3	609041-11	Sediment	diethylphthalate	0.054	<	mg/Kg	UE
609041	HC-VC-79-S-3	609041-11	Sediment	dimethylphthalate	0.046	<	mg/Kg	UE
609041	HC-VC-79-S-3	609041-11	Sediment	fluoranthene	0.027		mg/Kg	E
609041	HC-VC-79-S-3	609041-11	Sediment	fluorene	0.021	J	mg/Kg	E
609041	HC-VC-79-S-3	609041-11	Sediment	indeno(1,2,3-cd)pyrene	0.039	<	mg/Kg	UE
609041	HC-VC-79-S-3	609041-11	Sediment	n-nitrosodiphenylamine	0.027	<	mg/Kg	UE
609041	HC-VC-79-S-3	609041-11	Sediment	naphthalene	0.035		mg/Kg	E
609041	HC-VC-79-S-3	609041-11	Sediment	pentachlorophenol	39	<	ug/Kg	UE
609041	HC-VC-79-S-3	609041-11	Sediment	phenanthrene	0.07		mg/Kg	E
609041	HC-VC-79-S-3	609041-11	Sediment	phenol	5	JB	ug/Kg	UE
609041	HC-VC-79-S-3	609041-11	Sediment	pyrene	0.047		mg/Kg	E
609041	HC-VC-79S-4	609041-12	Sediment	1,2,4-trichlorobenzene	0.0049	<X	mg/Kg	UE
609041	HC-VC-79S-4	609041-12	Sediment	1,2-dichlorobenzene	0.0058	<X	mg/Kg	UE
609041	HC-VC-79S-4	609041-12	Sediment	1,4-dichlorobenzene	0.0052	<X	mg/Kg	UE
609041	HC-VC-79S-4	609041-12	Sediment	2,4-dimethylphenol	19	<	ug/Kg	UE
609041	HC-VC-79S-4	609041-12	Sediment	2-methylnaphthalene	0.035		mg/Kg	E
609041	HC-VC-79S-4	609041-12	Sediment	2-methylphenol	21	<	ug/Kg	UE
609041	HC-VC-79S-4	609041-12	Sediment	4-methylphenol	22	<	ug/Kg	UE
609041	HC-VC-79S-4	609041-12	Sediment	acenaphthene	0.021	<	mg/Kg	UE
609041	HC-VC-79S-4	609041-12	Sediment	acenaphthylene	0.019	<	mg/Kg	UE
609041	HC-VC-79S-4	609041-12	Sediment	anthracene	0.044		mg/Kg	E
609041	HC-VC-79S-4	609041-12	Sediment	benzo(a)anthracene	0.028	<	mg/Kg	UE
609041	HC-VC-79S-4	609041-12	Sediment	benzo(a)pyrene	0.024	<	mg/Kg	UE

DATA QUALIFIER SUMMARY TABLE - SEDIMENT

SDG	FIELD ID	LAB ID	MATRIX	ANALYTE	CONC.	LAB QUALIFIER	UNITS	VALIDATION QUALIFIER
609041	HC-VC-79S-4	609041-12	Sediment	benzo(b)fluoranthene	0.0074	T	mg/Kg	EC
609041	HC-VC-79S-4	609041-12	Sediment	benzo(g,h,i)perylene	0.015	J	mg/Kg	E
609041	HC-VC-79S-4	609041-12	Sediment	benzo(k)fluoranthene	0.0074	T	mg/Kg	EC
609041	HC-VC-79S-4	609041-12	Sediment	benzoic acid	44	JB	ug/Kg	UE
609041	HC-VC-79S-4	609041-12	Sediment	benzyl alcohol	33	<	ug/Kg	UE
609041	HC-VC-79S-4	609041-12	Sediment	bis(2-ethylhexyl)phthalate	0.018	JB	mg/Kg	UE
609041	HC-VC-79S-4	609041-12	Sediment	butylbenzylphthalate	0.018	J	mg/Kg	E
609041	HC-VC-79S-4	609041-12	Sediment	chrysene	0.011	J	mg/Kg	E
609041	HC-VC-79S-4	609041-12	Sediment	di-n-butylphthalate	0.0084	J	mg/Kg	E
609041	HC-VC-79S-4	609041-12	Sediment	di-n-octylphthalate	0.036	<	mg/Kg	UE
609041	HC-VC-79S-4	609041-12	Sediment	dibenzo(a,h)anthracene	0.039	<	mg/Kg	UE
609041	HC-VC-79S-4	609041-12	Sediment	dibenzofuran	0.022	<	mg/Kg	UE
609041	HC-VC-79S-4	609041-12	Sediment	diethylphthalate	0.051	<	mg/Kg	UE
609041	HC-VC-79S-4	609041-12	Sediment	dimethylphthalate	0.043	<	mg/Kg	UE
609041	HC-VC-79S-4	609041-12	Sediment	fluoranthene	0.024	<	mg/Kg	UE
609041	HC-VC-79S-4	609041-12	Sediment	fluorene	0.015	J	mg/Kg	E
609041	HC-VC-79S-4	609041-12	Sediment	indeno(1,2,3-cd)pyrene	0.037	<	mg/Kg	UE
609041	HC-VC-79S-4	609041-12	Sediment	n-nitrosodiphenylamine	0.026	<	mg/Kg	UE
609041	HC-VC-79S-4	609041-12	Sediment	naphthalene	0.0088	J	mg/Kg	E
609041	HC-VC-79S-4	609041-12	Sediment	pentachlorophenol	37	<	ug/Kg	UE
609041	HC-VC-79S-4	609041-12	Sediment	phenanthrene	0.043		mg/Kg	E
609041	HC-VC-79S-4	609041-12	Sediment	phenol	19	<	ug/Kg	UE
609041	HC-VC-79S-4	609041-12	Sediment	pyrene	0.014	J	mg/Kg	E
609041	HC-VC-83-S1	609041-5	Sediment	benzo(b)fluoranthene	0.15	T	mg/Kg	C
609041	HC-VC-83-S1	609041-5	Sediment	benzo(k)fluoroanthene	0.15	T	mg/Kg	C
609041	HC-VC-83-S1	609041-5	Sediment	benzoic acid	220	JB	ug/Kg	UE
609041	HC-VC-83-S2	609041-6	Sediment	benzo(b)fluoranthene	0.064	T	mg/Kg	C
609041	HC-VC-83-S2	609041-6	Sediment	benzo(k)fluoroanthene	0.064	T	mg/Kg	C
609041	HC-VC-83-S2	609041-6	Sediment	benzoic acid	130	JB	ug/Kg	UE
609041	HC-VC-83-S2	609041-6	Sediment	bis(2-ethylhexyl)phthalate	0.033	JB	mg/Kg	UE
609041	HC-VC-84-S-1	609041-13	Sediment	1,2,4-trichlorobenzene	0.031	<	mg/Kg	UE
609041	HC-VC-84-S-1	609041-13	Sediment	1,2-dichlorobenzene	0.037	<	mg/Kg	UE
609041	HC-VC-84-S-1	609041-13	Sediment	1,4-dichlorobenzene	0.034	<	mg/Kg	UE
609041	HC-VC-84-S-1	609041-13	Sediment	2,4-dimethylphenol	16	J	ug/Kg	E
609041	HC-VC-84-S-1	609041-13	Sediment	2-methylnaphthalene	0.056		mg/Kg	E
609041	HC-VC-84-S-1	609041-13	Sediment	2-methylphenol	10	J	ug/Kg	E
609041	HC-VC-84-S-1	609041-13	Sediment	4-methylphenol	100		ug/Kg	E
609041	HC-VC-84-S-1	609041-13	Sediment	acenaphthene	0.015	J	mg/Kg	E
609041	HC-VC-84-S-1	609041-13	Sediment	acenaphthylene	0.014	J	mg/Kg	E
609041	HC-VC-84-S-1	609041-13	Sediment	anthracene	0.035	J	mg/Kg	E
609041	HC-VC-84-S-1	609041-13	Sediment	benzo(a)anthracene	0.056		mg/Kg	E
609041	HC-VC-84-S-1	609041-13	Sediment	benzo(a)pyrene	0.045		mg/Kg	E
609041	HC-VC-84-S-1	609041-13	Sediment	benzo(b)fluoranthene	0.12	T	mg/Kg	EC
609041	HC-VC-84-S-1	609041-13	Sediment	benzo(g,h,i)perylene	0.049	J	mg/Kg	E
609041	HC-VC-84-S-1	609041-13	Sediment	benzo(k)fluoranthene	0.12	T	mg/Kg	EC
609041	HC-VC-84-S-1	609041-13	Sediment	benzoic acid	130	JB	ug/Kg	UE
609041	HC-VC-84-S-1	609041-13	Sediment	benzyl alcohol	2.4	J	ug/Kg	E
609041	HC-VC-84-S-1	609041-13	Sediment	bis(2-ethylhexyl)phthalate	0.15	B	mg/Kg	UE
609041	HC-VC-84-S-1	609041-13	Sediment	butylbenzylphthalate	0.02	J	mg/Kg	E
609041	HC-VC-84-S-1	609041-13	Sediment	chrysene	0.094		mg/Kg	E
609041	HC-VC-84-S-1	609041-13	Sediment	di-n-butylphthalate	0.017	J	mg/Kg	E
609041	HC-VC-84-S-1	609041-13	Sediment	di-n-octylphthalate	0.013	J	mg/Kg	E

DATA QUALIFIER SUMMARY TABLE - SEDIMENT

SDG	FIELD ID	LAB ID	MATRIX	ANALYTE	CONC.	LAB QUALIFIER	UNITS	VALIDATION QUALIFIER
609041	HC-VC-84-S-1	609041-13	Sediment	dibenzo(a,h)anthracene	0.019	J	mg/Kg	E
609041	HC-VC-84-S-1	609041-13	Sediment	dibenzofuran	0.041		mg/Kg	E
609041	HC-VC-84-S-1	609041-13	Sediment	diethylphthalate	0.082	<	mg/Kg	UE
609041	HC-VC-84-S-1	609041-13	Sediment	dimethylphthalate	0.0099	J	mg/Kg	E
609041	HC-VC-84-S-1	609041-13	Sediment	fluoranthene	0.16		mg/Kg	E
609041	HC-VC-84-S-1	609041-13	Sediment	fluorene	0.03	J	mg/Kg	E
609041	HC-VC-84-S-1	609041-13	Sediment	indeno(1,2,3-cd)pyrene	0.039	J	mg/Kg	E
609041	HC-VC-84-S-1	609041-13	Sediment	n-nitrosodiphenylamine	0.042	<	mg/Kg	UE
609041	HC-VC-84-S-1	609041-13	Sediment	naphthalene	0.12		mg/Kg	E
609041	HC-VC-84-S-1	609041-13	Sediment	pentachlorophenol	3.9	J	ug/Kg	E
609041	HC-VC-84-S-1	609041-13	Sediment	phenanthrene	0.12		mg/Kg	E
609041	HC-VC-84-S-1	609041-13	Sediment	phenol	100	B	ug/Kg	E
609041	HC-VC-84-S-1	609041-13	Sediment	pyrene	0.2		mg/Kg	E
609041	HC-VC-84-S-2	609041-14	Sediment	1,2,4-trichlorobenzene	0.03	<	mg/Kg	UE
609041	HC-VC-84-S-2	609041-14	Sediment	1,2-dichlorobenzene	0.036	<	mg/Kg	UE
609041	HC-VC-84-S-2	609041-14	Sediment	1,4-dichlorobenzene	0.016	J	mg/Kg	E
609041	HC-VC-84-S-2	609041-14	Sediment	2,4-dimethylphenol	74		ug/Kg	E
609041	HC-VC-84-S-2	609041-14	Sediment	2-methylnaphthalene	0.22		mg/Kg	E
609041	HC-VC-84-S-2	609041-14	Sediment	2-methylphenol	46		ug/Kg	E
609041	HC-VC-84-S-2	609041-14	Sediment	4-methylphenol	490	D4	ug/Kg	E
609041	HC-VC-84-S-2	609041-14	Sediment	acenaphthene	0.063		mg/Kg	E
609041	HC-VC-84-S-2	609041-14	Sediment	acenaphthylene	0.03	J	mg/Kg	E
609041	HC-VC-84-S-2	609041-14	Sediment	anthracene	0.12		mg/Kg	E
609041	HC-VC-84-S-2	609041-14	Sediment	benzo(a)anthracene	0.13		mg/Kg	E
609041	HC-VC-84-S-2	609041-14	Sediment	benzo(a)pyrene	0.089		mg/Kg	E
609041	HC-VC-84-S-2	609041-14	Sediment	benzo(b)fluoranthene	0.17	T	mg/Kg	EC
609041	HC-VC-84-S-2	609041-14	Sediment	benzo(g,h,i)perylene	0.1		mg/Kg	E
609041	HC-VC-84-S-2	609041-14	Sediment	benzo(k)fluoranthene	0.17	T	mg/Kg	EC
609041	HC-VC-84-S-2	609041-14	Sediment	benzoic acid	220	JB	ug/Kg	UE
609041	HC-VC-84-S-2	609041-14	Sediment	benzyl alcohol	4.1	J	ug/Kg	E
609041	HC-VC-84-S-2	609041-14	Sediment	bis(2-ethylhexyl)phthalate	0.33	B	mg/Kg	E
609041	HC-VC-84-S-2	609041-14	Sediment	butylbenzylphthalate	0.024	J	mg/Kg	E
609041	HC-VC-84-S-2	609041-14	Sediment	chrysene	0.17		mg/Kg	E
609041	HC-VC-84-S-2	609041-14	Sediment	di-n-butylphthalate	0.046	<	mg/Kg	UE
609041	HC-VC-84-S-2	609041-14	Sediment	di-n-octylphthalate	0.056	<	mg/Kg	UE
609041	HC-VC-84-S-2	609041-14	Sediment	dibenzo(a,h)anthracene	0.04	J	mg/Kg	E
609041	HC-VC-84-S-2	609041-14	Sediment	dibenzofuran	0.14		mg/Kg	E
609041	HC-VC-84-S-2	609041-14	Sediment	diethylphthalate	0.079	<	mg/Kg	UE
609041	HC-VC-84-S-2	609041-14	Sediment	dimethylphthalate	0.067	<	mg/Kg	UE
609041	HC-VC-84-S-2	609041-14	Sediment	fluoranthene	0.39		mg/Kg	E
609041	HC-VC-84-S-2	609041-14	Sediment	fluorene	0.14		mg/Kg	E
609041	HC-VC-84-S-2	609041-14	Sediment	indeno(1,2,3-cd)pyrene	0.076		mg/Kg	E
609041	HC-VC-84-S-2	609041-14	Sediment	n-nitrosodiphenylamine	0.04	<	mg/Kg	UE
609041	HC-VC-84-S-2	609041-14	Sediment	naphthalene	0.35		mg/Kg	E
609041	HC-VC-84-S-2	609041-14	Sediment	pentachlorophenol	13	J	ug/Kg	E
609041	HC-VC-84-S-2	609041-14	Sediment	phenanthrene	0.32		mg/Kg	E
609041	HC-VC-84-S-2	609041-14	Sediment	phenol	86	B	ug/Kg	E
609041	HC-VC-84-S-2	609041-14	Sediment	pyrene	0.43		mg/Kg	E
609041	HC-VC-85-S1	609041-15	Sediment	1,2,4-trichlorobenzene	0.036	<	mg/Kg	UE
609041	HC-VC-85-S1	609041-15	Sediment	1,2-dichlorobenzene	0.042	<	mg/Kg	UE
609041	HC-VC-85-S1	609041-15	Sediment	1,4-dichlorobenzene	0.038	<	mg/Kg	UE
609041	HC-VC-85-S1	609041-15	Sediment	2,4-dimethylphenol	38		ug/Kg	E

SDG	FIELD ID	LAB ID	MATRIX	ANALYTE	CONC.	LAB QUALIFIER	UNITS	VALIDATION QUALIFIER
609041	HC-VC-85-S1	609041-15	Sediment	2-methylnaphthalene	0.21		mg/Kg	E
609041	HC-VC-85-S1	609041-15	Sediment	2-methylphenol	23	J	ug/Kg	E
609041	HC-VC-85-S1	609041-15	Sediment	4-methylphenol	200		ug/Kg	E
609041	HC-VC-85-S1	609041-15	Sediment	acenaphthene	0.079		mg/Kg	E
609041	HC-VC-85-S1	609041-15	Sediment	acenaphthylene	0.034	J	mg/Kg	E
609041	HC-VC-85-S1	609041-15	Sediment	anthracene	0.14		mg/Kg	E
609041	HC-VC-85-S1	609041-15	Sediment	benzo(a)anthracene	0.28		mg/Kg	E
609041	HC-VC-85-S1	609041-15	Sediment	benzo(a)pyrene	0.21		mg/Kg	E
609041	HC-VC-85-S1	609041-15	Sediment	benzo(b)fluoranthene	0.27		mg/Kg	E
609041	HC-VC-85-S1	609041-15	Sediment	benzo(g,h,i)perylene	0.23		mg/Kg	E
609041	HC-VC-85-S1	609041-15	Sediment	benzo(k)fluoranthene	0.24		mg/Kg	E
609041	HC-VC-85-S1	609041-15	Sediment	benzoic acid	200	JB	ug/Kg	UE
609041	HC-VC-85-S1	609041-15	Sediment	benzyl alcohol	4.8	J	ug/Kg	E
609041	HC-VC-85-S1	609041-15	Sediment	bis(2-ethylhexyl)phthalate	2.1	B	mg/Kg	E
609041	HC-VC-85-S1	609041-15	Sediment	butylbenzylphthalate	0.072		mg/Kg	E
609041	HC-VC-85-S1	609041-15	Sediment	chrysene	0.43		mg/Kg	E
609041	HC-VC-85-S1	609041-15	Sediment	di-n-butylphthalate	0.036	J	mg/Kg	E
609041	HC-VC-85-S1	609041-15	Sediment	di-n-octylphthalate	0.11		mg/Kg	E
609041	HC-VC-85-S1	609041-15	Sediment	dibenzo(a,h)anthracene	0.081		mg/Kg	E
609041	HC-VC-85-S1	609041-15	Sediment	dibenzofuran	0.16		mg/Kg	E
609041	HC-VC-85-S1	609041-15	Sediment	diethylphthalate	0.093	<	mg/Kg	UE
609041	HC-VC-85-S1	609041-15	Sediment	dimethylphthalate	0.021	J	mg/Kg	E
609041	HC-VC-85-S1	609041-15	Sediment	fluoranthene	0.55		mg/Kg	E
609041	HC-VC-85-S1	609041-15	Sediment	fluorene	0.12		mg/Kg	E
609041	HC-VC-85-S1	609041-15	Sediment	indeno(1,2,3-cd)pyrene	0.18		mg/Kg	E
609041	HC-VC-85-S1	609041-15	Sediment	n-nitrosodiphenylamine	0.023	J	mg/Kg	E
609041	HC-VC-85-S1	609041-15	Sediment	naphthalene	0.27		mg/Kg	E
609041	HC-VC-85-S1	609041-15	Sediment	pentachlorophenol	9.8	J	ug/Kg	E
609041	HC-VC-85-S1	609041-15	Sediment	phenanthrene	0.34		mg/Kg	E
609041	HC-VC-85-S1	609041-15	Sediment	phenol	280	B	ug/Kg	E
609041	HC-VC-85-S1	609041-15	Sediment	pyrene	0.86		mg/Kg	E
609041	HC-VC-85-S2	609041-16	Sediment	1,2,4-trichlorobenzene	0.026	<	mg/Kg	UE
609041	HC-VC-85-S2	609041-16	Sediment	1,2-dichlorobenzene	0.007	J	mg/Kg	E
609041	HC-VC-85-S2	609041-16	Sediment	1,4-dichlorobenzene	0.01	J	mg/Kg	E
609041	HC-VC-85-S2	609041-16	Sediment	2,4-dimethylphenol	610	D4	ug/Kg	E
609041	HC-VC-85-S2	609041-16	Sediment	2-methylnaphthalene	1		mg/Kg	E
609041	HC-VC-85-S2	609041-16	Sediment	2-methylphenol	400	D4	ug/Kg	E
609041	HC-VC-85-S2	609041-16	Sediment	4-methylphenol	1500	D4	ug/Kg	E
609041	HC-VC-85-S2	609041-16	Sediment	acenaphthene	0.24		mg/Kg	E
609041	HC-VC-85-S2	609041-16	Sediment	acenaphthylene	0.17		mg/Kg	E
609041	HC-VC-85-S2	609041-16	Sediment	anthracene	0.28		mg/Kg	E
609041	HC-VC-85-S2	609041-16	Sediment	benzo(a)anthracene	0.22		mg/Kg	E
609041	HC-VC-85-S2	609041-16	Sediment	benzo(a)pyrene	0.16		mg/Kg	E
609041	HC-VC-85-S2	609041-16	Sediment	benzo(b)fluoranthene	0.25	T	mg/Kg	EC
609041	HC-VC-85-S2	609041-16	Sediment	benzo(g,h,i)perylene	0.098		mg/Kg	E
609041	HC-VC-85-S2	609041-16	Sediment	benzo(k)fluoranthene	0.25	T	mg/Kg	EC
609041	HC-VC-85-S2	609041-16	Sediment	benzoic acid	47	JB	ug/Kg	UE
609041	HC-VC-85-S2	609041-16	Sediment	benzyl alcohol	4.4	J	ug/Kg	E
609041	HC-VC-85-S2	609041-16	Sediment	bis(2-ethylhexyl)phthalate	0.16	B	mg/Kg	UE
609041	HC-VC-85-S2	609041-16	Sediment	butylbenzylphthalate	0.052	<	mg/Kg	UE
609041	HC-VC-85-S2	609041-16	Sediment	chrysene	0.27		mg/Kg	E
609041	HC-VC-85-S2	609041-16	Sediment	di-n-butylphthalate	0.019	J	mg/Kg	E

SDG	FIELD ID	LAB ID	MATRIX	ANALYTE	CONC.	LAB QUALIFIER	UNITS	VALIDATION QUALIFIER
609041	HC-VC-85-S2	609041-16	Sediment	di-n-octylphthalate	0.048	<	mg/Kg	UE
609041	HC-VC-85-S2	609041-16	Sediment	dibenzo(a,h)anthracene	0.052	<	mg/Kg	UE
609041	HC-VC-85-S2	609041-16	Sediment	dibenzofuran	0.61		mg/Kg	E
609041	HC-VC-85-S2	609041-16	Sediment	diethylphthalate	0.03	J	mg/Kg	E
609041	HC-VC-85-S2	609041-16	Sediment	dimethylphthalate	0.054	J	mg/Kg	E
609041	HC-VC-85-S2	609041-16	Sediment	fluoranthene	0.76		mg/Kg	E
609041	HC-VC-85-S2	609041-16	Sediment	fluorene	0.39		mg/Kg	E
609041	HC-VC-85-S2	609041-16	Sediment	indeno(1,2,3-cd)pyrene	0.076		mg/Kg	E
609041	HC-VC-85-S2	609041-16	Sediment	n-nitrosodiphenylamine	0.12		mg/Kg	E
609041	HC-VC-85-S2	609041-16	Sediment	naphthalene	1.2		mg/Kg	E
609041	HC-VC-85-S2	609041-16	Sediment	pentachlorophenol	28	J	ug/Kg	E
609041	HC-VC-85-S2	609041-16	Sediment	phenanthrene	0.99		mg/Kg	E
609041	HC-VC-85-S2	609041-16	Sediment	phenol	370	D4 B	ug/Kg	E
609041	HC-VC-85-S2	609041-16	Sediment	pyrene	0.43		mg/Kg	E
609048	HC-DC-92-S1	609048-19	Sediment	benzo(b)fluoranthene	6.1	T D3	mg/Kg	C
609048	HC-DC-92-S1	609048-19	Sediment	benzo(k)fluoranthene	6.1	T D3	mg/Kg	C
609048	HC-DC-92-S1	609048-19	Sediment	benzoic acid	110	JB	ug/Kg	UE
609048	HC-DC-92-S1	609048-19	Sediment	chromium	40		mg/Kg	E
609048	HC-DC-92-S1	609048-19	Sediment	copper	180		mg/Kg	E
609048	HC-DC-92-S1	609048-19	Sediment	di-n-butylphthalate	0.023	J	mg/Kg	U
609048	HC-DC-92-S1	609048-19	Sediment	lead	130		mg/Kg	E
609048	HC-DC-92-S2	609048-20	Sediment	benzo(b)fluoranthene	1.1	T	mg/Kg	C
609048	HC-DC-92-S2	609048-20	Sediment	benzo(k)fluoranthene	1.1	T	mg/Kg	C
609048	HC-DC-92-S2	609048-20	Sediment	benzoic acid	150	JB	ug/Kg	UE
609048	HC-DC-92-S2	609048-20	Sediment	chromium	46		mg/Kg	E
609048	HC-DC-92-S2	609048-20	Sediment	copper	180		mg/Kg	E
609048	HC-DC-92-S2	609048-20	Sediment	di-n-butylphthalate	0.034	J	mg/Kg	U
609048	HC-DC-92-S2	609048-20	Sediment	lead	190		mg/Kg	E
609048	HC-DC-93-S1	609048-18	Sediment	benzo(b)fluoranthene	0.35	T	mg/Kg	C
609048	HC-DC-93-S1	609048-18	Sediment	benzo(k)fluoranthene	0.35	T	mg/Kg	C
609048	HC-DC-93-S1	609048-18	Sediment	benzoic acid	150	JB	ug/Kg	UE
609048	HC-DC-93-S1	609048-18	Sediment	chromium	22		mg/Kg	E
609048	HC-DC-93-S1	609048-18	Sediment	copper	46		mg/Kg	E
609048	HC-DC-93-S1	609048-18	Sediment	di-n-butylphthalate	0.06		mg/Kg	U
609048	HC-DC-93-S1	609048-18	Sediment	lead	26		mg/Kg	E
609048	HC-RB-05	609048-12	Water	bis(2-ethylhexyl)phthalate	1	JB	ug/L	U
609048	HC-VC-206	609048-15	Sediment	benzo(b)fluoranthene	0.51	T	mg/Kg	C
609048	HC-VC-206	609048-15	Sediment	benzo(k)fluoranthene	0.51	T	mg/Kg	C
609048	HC-VC-206	609048-15	Sediment	chromium	150		mg/Kg	E
609048	HC-VC-206	609048-15	Sediment	copper	140		mg/Kg	E
609048	HC-VC-206	609048-15	Sediment	lead	300		mg/Kg	E
609048	HC-VC-207	609048-5	Sediment	benzo(b)fluoranthene	1.1	T	mg/Kg	C
609048	HC-VC-207	609048-5	Sediment	benzo(k)fluoranthene	1.1	T	mg/Kg	C
609048	HC-VC-207	609048-5	Sediment	chromium	54		mg/Kg	E
609048	HC-VC-207	609048-5	Sediment	copper	67		mg/Kg	E
609048	HC-VC-207	609048-5	Sediment	di-n-butylphthalate	0.044	J	mg/Kg	U
609048	HC-VC-207	609048-5	Sediment	lead	69		mg/Kg	E
609048	HC-VC-73-S1	609048-1	Sediment	benzoic acid	72	JB	ug/Kg	UE
609048	HC-VC-73-S1	609048-1	Sediment	bis(2-ethylhexyl)phthalate	0.25	J	mg/Kg	U
609048	HC-VC-73-S1	609048-1	Sediment	chromium	62		mg/Kg	E
609048	HC-VC-73-S1	609048-1	Sediment	copper	61		mg/Kg	E
609048	HC-VC-73-S1	609048-1	Sediment	di-n-butylphthalate	0.028	J	mg/Kg	U

DATA QUALIFIER SUMMARY TABLE - SEDIMENT

SDG	FIELD ID	LAB ID	MATRIX	ANALYTE	CONC.	LAB QUALIFIER	UNITS	VALIDATION QUALIFIER
609048	HC-VC-73-S1	609048-1	Sediment	lead	22		mg/Kg	E
609048	HC-VC-73-S2	609048-2	Sediment	benzo(b)fluoranthene	0.19	T	mg/Kg	C
609048	HC-VC-73-S2	609048-2	Sediment	benzo(k)fluoranthene	0.19	T	mg/Kg	C
609048	HC-VC-73-S2	609048-2	Sediment	bis(2-ethylhexyl)phthalate	0.19	B	mg/Kg	U
609048	HC-VC-73-S2	609048-2	Sediment	chromium	66		mg/Kg	E
609048	HC-VC-73-S2	609048-2	Sediment	copper	84		mg/Kg	E
609048	HC-VC-73-S2	609048-2	Sediment	lead	50		mg/Kg	E
609048	HC-VC-76-S1	609048-10	Sediment	bis(2-ethylhexyl)phthalate	0.24	B	mg/Kg	U
609048	HC-VC-76-S1	609048-10	Sediment	chromium	53		mg/Kg	E
609048	HC-VC-76-S1	609048-10	Sediment	copper	60		mg/Kg	E
609048	HC-VC-76-S1	609048-10	Sediment	di-n-butylphthalate	0.04	J	mg/Kg	U
609048	HC-VC-76-S1	609048-10	Sediment	lead	31		mg/Kg	E
609048	HC-VC-76-S2	609048-11	Sediment	benzo(b)fluoranthene	0.45	T	mg/Kg	C
609048	HC-VC-76-S2	609048-11	Sediment	benzo(k)fluoranthene	0.45	T	mg/Kg	C
609048	HC-VC-76-S2	609048-11	Sediment	bis(2-ethylhexyl)phthalate	0.23	B	mg/Kg	U
609048	HC-VC-76-S2	609048-12	Sediment	chromium	39		mg/Kg	E
609048	HC-VC-76-S2	609048-12	Sediment	copper	42		mg/Kg	E
609048	HC-VC-76-S2	609048-11	Sediment	di-n-butylphthalate	0.045	J	mg/Kg	U
609048	HC-VC-76-S2	609048-12	Sediment	lead	23		mg/Kg	E
609048	HC-VC-77-S1	609048-6	Sediment	benzo(b)fluoranthene	1.5	T	mg/Kg	C
609048	HC-VC-77-S1	609048-6	Sediment	benzo(k)fluoranthene	1.5	T	mg/Kg	C
609048	HC-VC-77-S1	609048-6	Sediment	benzoic acid	170	JB	ug/Kg	UE
609048	HC-VC-77-S1	609048-6	Sediment	bis(2-ethylhexyl)phthalate	0.26	B	mg/Kg	U
609048	HC-VC-77-S1	609048-6	Sediment	chromium	69		mg/Kg	E
609048	HC-VC-77-S1	609048-6	Sediment	copper	75		mg/Kg	E
609048	HC-VC-77-S1	609048-6	Sediment	lead	42		mg/Kg	E
609048	HC-VC-77-S2	609048-7	Sediment	benzo(b)fluoranthene	0.54	T	mg/Kg	C
609048	HC-VC-77-S2	609048-7	Sediment	benzo(k)fluoranthene	0.54	T	mg/Kg	C
609048	HC-VC-77-S2	609048-7	Sediment	benzoic acid	180	JB	ug/Kg	UE
609048	HC-VC-77-S2	609048-7	Sediment	bis(2-ethylhexyl)phthalate	0.21	B	mg/Kg	U
609048	HC-VC-77-S2	609048-7	Sediment	chromium	59		mg/Kg	E
609048	HC-VC-77-S2	609048-7	Sediment	copper	64		mg/Kg	E
609048	HC-VC-77-S2	609048-7	Sediment	lead	37		mg/Kg	E
609048	HC-VC-77-S3	609048-8	Sediment	benzo(b)fluoranthene	0.01	JT	mg/Kg	C
609048	HC-VC-77-S3	609048-8	Sediment	benzo(k)fluoranthene	0.01	JT	mg/Kg	C
609048	HC-VC-77-S3	609048-8	Sediment	benzoic acid	35	JB	ug/Kg	UE
609048	HC-VC-77-S3	609048-8	Sediment	bis(2-ethylhexyl)phthalate	0.019	JB	mg/Kg	UE
609048	HC-VC-77-S3	609048-8	Sediment	chromium	23		mg/Kg	E
609048	HC-VC-77-S3	609048-8	Sediment	copper	20		mg/Kg	E
609048	HC-VC-77-S3	609048-8	Sediment	di-n-butylphthalate	0.012	J	mg/Kg	U
609048	HC-VC-77-S3	609048-8	Sediment	lead	3.9	<	mg/Kg	UE
609048	HC-VC-77-S4	609048-9	Sediment	benzo(b)fluoranthene	0.0079	JT	mg/Kg	C
609048	HC-VC-77-S4	609048-9	Sediment	benzo(k)fluoranthene	0.0079	JT	mg/Kg	C
609048	HC-VC-77-S4	609048-9	Sediment	benzoic acid	48	JB	ug/Kg	UE
609048	HC-VC-77-S4	609048-9	Sediment	bis(2-ethylhexyl)phthalate	0.022	JB	mg/Kg	UE
609048	HC-VC-77-S4	609048-9	Sediment	chromium	27		mg/Kg	E
609048	HC-VC-77-S4	609048-9	Sediment	copper	38		mg/Kg	E
609048	HC-VC-77-S4	609048-9	Sediment	di-n-butylphthalate	0.0097	J	mg/Kg	U
609048	HC-VC-77-S4	609048-9	Sediment	lead	3.9	<	mg/Kg	UE
609048	HC-VC-80-S1	609048-13	Sediment	benzo(b)fluoranthene	0.69	T	mg/Kg	C
609048	HC-VC-80-S1	609048-13	Sediment	benzo(k)fluoranthene	0.69	T	mg/Kg	C
609048	HC-VC-80-S1	609048-13	Sediment	chromium	68		mg/Kg	E

DATA QUALIFIER SUMMARY TABLE - SEDIMENT

SDG	FIELD ID	LAB ID	MATRIX	ANALYTE	CONC.	LAB QUALIFIER	UNITS	VALIDATION QUALIFIER
609048	HC-VC-80-S1	609048-13	Sediment	copper	73		mg/Kg	E
609048	HC-VC-80-S1	609048-13	Sediment	di-n-butylphthalate	0.064		mg/Kg	U
609048	HC-VC-80-S1	609048-13	Sediment	lead	73		mg/Kg	E
609048	HC-VC-80-S2	609048-14	Sediment	benzo(b)fluoranthene	0.46	T D1	mg/Kg	C
609048	HC-VC-80-S2	609048-14	Sediment	benzo(k)fluoranthene	0.46	T D1	mg/Kg	C
609048	HC-VC-80-S2	609048-14	Sediment	chromium	140		mg/Kg	E
609048	HC-VC-80-S2	609048-14	Sediment	copper	120		mg/Kg	E
609048	HC-VC-80-S2	609048-14	Sediment	lead	260		mg/Kg	E
609048	HC-VC-81-S1	609048-3	Sediment	benzo(b)fluoranthene	1.3	T	mg/Kg	C
609048	HC-VC-81-S1	609048-3	Sediment	benzo(k)fluoranthene	1.3	T	mg/Kg	C
609048	HC-VC-81-S1	609048-3	Sediment	chromium	59		mg/Kg	E
609048	HC-VC-81-S1	609048-3	Sediment	copper	68		mg/Kg	E
609048	HC-VC-81-S1	609048-3	Sediment	di-n-butylphthalate	0.05	J	mg/Kg	U
609048	HC-VC-81-S1	609048-3	Sediment	lead	75		mg/Kg	E
609048	HC-VC-81-S2	609048-4	Sediment	benzo(b)fluoranthene	1.2	T	mg/Kg	C
609048	HC-VC-81-S2	609048-4	Sediment	benzo(k)fluoranthene	1.2	T	mg/Kg	C
609048	HC-VC-81-S2	609048-4	Sediment	chromium	87		mg/Kg	E
609048	HC-VC-81-S2	609048-4	Sediment	copper	84		mg/Kg	E
609048	HC-VC-81-S2	609048-4	Sediment	lead	110		mg/Kg	E
609048	HC-VC-82-S1	609048-16	Sediment	benzo(b)fluoranthene	0.85	T	mg/Kg	C
609048	HC-VC-82-S1	609048-16	Sediment	benzo(k)fluoranthene	0.85	T	mg/Kg	C
609048	HC-VC-82-S1	609048-16	Sediment	chromium	78		mg/Kg	E
609048	HC-VC-82-S1	609048-16	Sediment	copper	83		mg/Kg	E
609048	HC-VC-82-S1	609048-16	Sediment	di-n-butylphthalate	0.072		mg/Kg	U
609048	HC-VC-82-S1	609048-16	Sediment	lead	140		mg/Kg	E
609048	HC-VC-82-S2	609048-17	Sediment	1,2,4-trichlorobenzene	0.044	<	mg/Kg	UE
609048	HC-VC-82-S2	609048-17	Sediment	1,2-dichlorobenzene	0.052	<	mg/Kg	UE
609048	HC-VC-82-S2	609048-17	Sediment	1,4-dichlorobenzene	0.021	J	mg/Kg	E
609048	HC-VC-82-S2	609048-17	Sediment	2-methylnaphthalene	1.1		mg/Kg	E
609048	HC-VC-82-S2	609048-17	Sediment	acenaphthene	0.54		mg/Kg	E
609048	HC-VC-82-S2	609048-17	Sediment	acenaphthylene	0.17		mg/Kg	E
609048	HC-VC-82-S2	609048-17	Sediment	anthracene	0.5		mg/Kg	E
609048	HC-VC-82-S2	609048-17	Sediment	benzo(a)anthracene	0.52		mg/Kg	E
609048	HC-VC-82-S2	609048-17	Sediment	benzo(a)pyrene	0.39		mg/Kg	E
609048	HC-VC-82-S2	609048-17	Sediment	benzo(b)fluoranthene	0.38		mg/Kg	E
609048	HC-VC-82-S2	609048-17	Sediment	benzo(g,h,i)perylene	0.26		mg/Kg	E
609048	HC-VC-82-S2	609048-17	Sediment	benzo(k)fluoranthene	0.33		mg/Kg	E
609048	HC-VC-82-S2	609048-17	Sediment	bis(2-ethylhexyl)phthalate	0.69	B	mg/Kg	E
609048	HC-VC-82-S2	609048-17	Sediment	butylbenzylphthalate	0.095		mg/Kg	E
609048	HC-VC-82-S2	609048-17	Sediment	chromium	110		mg/Kg	E
609048	HC-VC-82-S2	609048-17	Sediment	chrysene	0.75		mg/Kg	E
609048	HC-VC-82-S2	609048-17	Sediment	copper	360		mg/Kg	E
609048	HC-VC-82-S2	609048-17	Sediment	di-n-butylphthalate	0.1		mg/Kg	E
609048	HC-VC-82-S2	609048-17	Sediment	di-n-octylphthalate	0.082	<	mg/Kg	UE
609048	HC-VC-82-S2	609048-17	Sediment	dibenzo(a,h)anthracene	0.12		mg/Kg	E
609048	HC-VC-82-S2	609048-17	Sediment	dibenzofuran	0.4		mg/Kg	E
609048	HC-VC-82-S2	609048-17	Sediment	diethylphthalate	0.11	<	mg/Kg	UE
609048	HC-VC-82-S2	609048-17	Sediment	dimethylphthalate	0.098	<	mg/Kg	UE
609048	HC-VC-82-S2	609048-17	Sediment	fluoranthene	1.7		mg/Kg	E
609048	HC-VC-82-S2	609048-17	Sediment	fluorene	0.69		mg/Kg	E
609048	HC-VC-82-S2	609048-17	Sediment	indeno(1,2,3-cd)pyrene	0.22		mg/Kg	E
609048	HC-VC-82-S2	609048-17	Sediment	lead	140		mg/Kg	E

DATA QUALIFIER SUMMARY TABLE - SEDIMENT

SDG	FIELD ID	LAB ID	MATRIX	ANALYTE	CONC.	LAB QUALIFIER	UNITS	VALIDATION QUALIFIER
609048	HC-VC-82-S2	609048-17	Sediment	n-nitrosodiphenylamine	0.43		mg/Kg	E
609048	HC-VC-82-S2	609048-17	Sediment	naphthalene	2.2		mg/Kg	E
609048	HC-VC-82-S2	609048-17	Sediment	phenanthrene	2.4		mg/Kg	E
609048	HC-VC-82-S2	609048-17	Sediment	pyrene	0.87		mg/Kg	E
609062	HC-DC-208	609062-13	Sediment	arsenic	4.8	D3	mg/Kg	E
609062	HC-DC-208	609062-13	Sediment	benzo(b)fluoranthene	2.7	T	mg/Kg	C
609062	HC-DC-208	609062-13	Sediment	benzo(k)fluoranthene	2.7	T	mg/Kg	C
609062	HC-DC-208	609062-13	Sediment	benzoic acid	170	JB	ug/Kg	UE
609062	HC-DC-208	609062-13	Sediment	bis(2-ethylhexyl)phthalate	0.16	B	mg/Kg	U
609062	HC-DC-86-S1	609062-11	Sediment	arsenic	4.5	D3	mg/Kg	E
609062	HC-DC-86-S1	609062-11	Sediment	benzo(b)fluoranthene	2.4	T	mg/Kg	C
609062	HC-DC-86-S1	609062-11	Sediment	benzo(k)fluoranthene	2.4	T	mg/Kg	C
609062	HC-DC-86-S1	609062-11	Sediment	benzoic acid	190	JB	ug/Kg	UE
609062	HC-DC-86-S1	609062-11	Sediment	bis(2-ethylhexyl)phthalate	0.087	B	mg/Kg	U
609062	HC-DC-86-S2	609062-12	Sediment	arsenic	3.4	D3	mg/Kg	E
609062	HC-DC-86-S2	609062-12	Sediment	benzo(b)fluoranthene	2.2	T	mg/Kg	C
609062	HC-DC-86-S2	609062-12	Sediment	benzo(k)fluoranthene	2.2	T	mg/Kg	C
609062	HC-DC-86-S2	609062-12	Sediment	benzoic acid	130	JB	ug/Kg	UE
609062	HC-DC-86-S2	609062-12	Sediment	bis(2-ethylhexyl)phthalate	0.07	B	mg/Kg	U
609062	HC-DC-87-S1	609062-9	Sediment	arsenic	11	D3	mg/Kg	E
609062	HC-DC-87-S1	609062-9	Sediment	benzo(b)fluoranthene	11	T D3	mg/Kg	C
609062	HC-DC-87-S1	609062-9	Sediment	benzo(k)fluoranthene	11	T D3	mg/Kg	C
609062	HC-DC-87-S1	609062-9	Sediment	benzoic acid	170	JB	ug/Kg	UE
609062	HC-DC-87-S1	609062-9	Sediment	bis(2-ethylhexyl)phthalate	0.12	B	mg/Kg	U
609062	HC-DC-87-S2	609062-10	Sediment	arsenic	9.5	D3	mg/Kg	E
609062	HC-DC-87-S2	609062-10	Sediment	benzo(b)fluoranthene	2.7	T	mg/Kg	C
609062	HC-DC-87-S2	609062-10	Sediment	benzo(k)fluoranthene	2.7	T	mg/Kg	C
609062	HC-DC-87-S2	609062-10	Sediment	benzoic acid	240	JB	ug/Kg	UE
609062	HC-DC-87-S2	609062-10	Sediment	bis(2-ethylhexyl)phthalate	0.11	B	mg/Kg	U
609062	HC-DC-88-S1	609062-7	Sediment	2,4-dimethylphenol	3.6	J	ug/Kg	E
609062	HC-DC-88-S1	609062-7	Sediment	2-methylphenol	3.3	J	ug/Kg	E
609062	HC-DC-88-S1	609062-7	Sediment	4-methylphenol	140		ug/Kg	E
609062	HC-DC-88-S1	609062-7	Sediment	arsenic	5.1	D3	mg/Kg	E
609062	HC-DC-88-S1	609062-7	Sediment	benzo(b)fluoranthene	5	T D3	mg/Kg	C
609062	HC-DC-88-S1	609062-7	Sediment	benzo(k)fluoranthene	5	T D3	mg/Kg	C
609062	HC-DC-88-S1	609062-7	Sediment	benzoic acid	120	JB	ug/Kg	UE
609062	HC-DC-88-S1	609062-7	Sediment	benzyl alcohol	3.5	J	ug/Kg	E
609062	HC-DC-88-S1	609062-7	Sediment	bis(2-ethylhexyl)phthalate	0.19	B	mg/Kg	U
609062	HC-DC-88-S1	609062-7	Sediment	pentachlorophenol	460	D3	ug/Kg	E
609062	HC-DC-88-S1	609062-7	Sediment	phenol	47		ug/Kg	E
609062	HC-DC-88-S2	609062-8	Sediment	arsenic	10	D3	mg/Kg	E
609062	HC-DC-88-S2	609062-8	Sediment	benzo(b)fluoranthene	3.5	T D1	mg/Kg	C
609062	HC-DC-88-S2	609062-8	Sediment	benzo(k)fluoranthene	3.5	T D1	mg/Kg	C
609062	HC-DC-88-S2	609062-8	Sediment	bis(2-ethylhexyl)phthalate	0.12	B	mg/Kg	U
609062	HC-DC-89-S1	609062-5	Sediment	arsenic	6	D3	mg/Kg	E
609062	HC-DC-89-S1	609062-5	Sediment	benzoic acid	170	JB	ug/Kg	UE
609062	HC-DC-89-S2	609062-6	Sediment	arsenic	6.4	D3	mg/Kg	E
609062	HC-DC-89-S2	609062-6	Sediment	benzo(b)fluoranthene	2.6	T	mg/Kg	C
609062	HC-DC-89-S2	609062-6	Sediment	benzo(k)fluoranthene	2.6	T	mg/Kg	C
609062	HC-DC-90-S1	609062-3	Sediment	arsenic	8.9	D3	mg/Kg	E
609062	HC-DC-90-S1	609062-3	Sediment	benzo(b)fluoranthene	1.2	T	mg/Kg	C
609062	HC-DC-90-S1	609062-3	Sediment	benzo(k)fluoranthene	1.2	T	mg/Kg	C

DATA QUALIFIER SUMMARY TABLE - SEDIMENT

SDG	FIELD ID	LAB ID	MATRIX	ANALYTE	CONC.	LAB QUALIFIER	UNITS	VALIDATION QUALIFIER
609062	HC-DC-90-S1	609062-3	Sediment	benzoic acid	77	JB	ug/Kg	UE
609062	HC-DC-90-S2	609062-4	Sediment	arsenic	17	D3	mg/Kg	E
609062	HC-DC-90-S2	609062-4	Sediment	benzo(b)fluoranthene	0.97	T	mg/Kg	C
609062	HC-DC-90-S2	609062-4	Sediment	benzo(k)fluoranthene	0.97	T	mg/Kg	C
609062	HC-DC-91-S1	609062-1	Sediment	arsenic	11	D3	mg/Kg	E
609062	HC-DC-91-S1	609062-1	Sediment	benzo(b)fluoranthene	2.9	T	mg/Kg	C
609062	HC-DC-91-S1	609062-1	Sediment	benzo(k)fluoranthene	2.9	T	mg/Kg	C
609062	HC-DC-91-S1	609062-1	Sediment	benzoic acid	180	JB	ug/Kg	UE
609062	HC-DC-91-S2	609062-2	Sediment	arsenic	6.6	D3	mg/Kg	E
609062	HC-DC-92-S2	609062-2	Sediment	benzo(b)fluoranthene	0.76	T	mg/Kg	C
609062	HC-DC-92-S2	609062-2	Sediment	benzo(k)fluoranthene	0.76	T	mg/Kg	C
609062	HC-DC-92-S2	609062-2	Sediment	benzoic acid	220	JB	ug/Kg	UE
609062	HC-RB-03	609062-14	Water	bis(2-ethylhexyl)phthalate	9	JB	ug/L	UE
609062	HC-RB-04	609062-15	Water	bis(2-ethylhexyl)phthalate	9	JB	ug/L	UE

DATA QUALIFIER SUMMARY TABLE - WATER

SDG	FIELD ID	LAB ID	MATRIX	ANALYTE	CONC.	LAB QUALIFIER	UNITS	VALIDATION QUALIFIER
1066BELL	HC-BC-101 r1	1066BELL*1	Water	TSS	0.667		mg/L	E
1066BELL	HC-BC-101 r2	1066BELL*2	Water	TSS	0.667		mg/L	E
1066BELL	HC-BC-100 r1	1066BELL*3	Water	TSS	31.700		mg/L	E
1066BELL	HC-BC-100 r2	1066BELL*4	Water	TSS	31.700		mg/L	E
1066BELL	HC-SW-100 r1	1066BELL*5	Water	TSS	0.750		mg/L	E
1066BELL	HC-SW-100 r2	1066BELL*6	Water	TSS	0.750		mg/L	E
1066BELL	HC-SW-101 r1	1066BELL*7	Water	TSS	2.330		mg/L	E
1066BELL	HC-SW-101 r2	1066BELL*8	Water	TSS	2.330		mg/L	E
1066BELL	HC-SW-99 r1	1066BELL*9	Water	TSS	98.000		mg/L	E
1066BELL	HC-SW-99 r2	1066BELL*10	Water	TSS	98.000		mg/L	E
1066BELL	HC-FB-03	1066BELL*11	Water	TSS	1.00 est		mg/L	E
1066BELL	HC-FB-03	1066BELL*11	Water	Particulate Hg	0.356		ug/g	E