QUALITY ASSURANCE PROJECT PLAN HUDSON RIVER DESIGN SUPPORT SEDIMENT SAMPLING AND ANALYSIS PROGRAM

SECTION: A REVISION NO: 4

DATE: OCTOBER 1, 2002

#### LIST OF TABLES

Table A-1	Data Quality Objectives
Table A-2	Decision Criteria used for Initial Disposal Classification of Sediments under
	RCRA and TSCA Disposal Rules
Table B-1	Example Sample ID and Horizontal Coordinates
Table B-2	River Section 1 Program Summary
Table B-3	River Section 2 Program Summary
Table B-4	River Section 3 Program Summary
Table B-5	Sample Container and Preservation Requirements
Table B-6	a – B-6j Reference Limit and Evaluation Tables for Analytical Methods
Table B-7	a – B-7n Measurement Performance Criteria Tables for Analytical Methods
Table B-8	Data Collected During Sediment Core Collection
Table B-9	Data Collected During Sample Processing in the Field Lab
Table B-1	0 Valid Values for PCBs
Table C-1	Summary of Analyses for Initial PE Acceptance Criteria Development
Table C-2	Summary of Analyses for Inter-Laboratory Comparison Study
Table D-1	Format of an Environmental Standards Quality Assurance Review

## **APPENDICES**

Appendix 1	SOP for Sediment Core Collection
Appendix 2	SOP for Bathymetric Survey
Appendix 3	SOP for Sub-Bottom Acoustic and Electromagnetic Surveying Equipment
Appendix 4	SOP for Sediment Probing
Appendix 5	SOP for the Analysis of PCBs by SW-846 Method 8082 (GEHR8082)
Appendix 6	SOP for the Extraction and Cleanup of Sediment/Solid Samples for PCB Analysis
	Using the Pressurized Fluid Extraction by SW-846 Method 3545 (GEHR3545)
Appendix 7	SOP for the Extraction and Cleanup of Sediment/Soil Samples for PCB Analysis
	Using the Soxhlet Extraction by SW-846 Method 3540C (GEHR3540C)
Appendix 8	SOP for Analysis of PCB Homologs by EPA Method 680 (GEHR680)
Appendix 9	SOP for Data Package Deliverable (DPSOP)
Appendix 10	SOP for Grain Size
Appendix 11	SOP for Atterberg Limit
Appendix 12	SOP for Specific Gravity
Appendix 13	SOP for Bulk Density

### QUALITY ASSURANCE PROJECT PLAN HUDSON RIVER DESIGN SUPPORT SEDIMENT SAMPLING AND ANALYSIS PROGRAM

SECTION: A REVISION NO: 4

DATE: OCTOBER 1, 2002

# **APPENDICES (Cont.)**

Appendix 14	(This appendix is no longer necessary. It has been left for convenience for potential future use).
Appendix 15	SOP for Total Organic Carbon
Appendix 15 Appendix 16	SOP for USCS Classification
Appendix 17	SOP for Side Scan Survey Procedures
Appendix 17 Appendix 18	SOP for Core Processing
Appendix 19	(This appendix is no longer necessary. It has been left for convenience for
Appendix 17	potential future use).
Appendix 20	SOP for <sup>137</sup> Cs
Appendix 21	SOP for TCLP Preparation by 1311
Appendix 22	SOP for VOAs With TCLP Preparation
Appendix 23	SOP for SVOAs With TCLP Preparation
Appendix 24	SOP for Pesticides With TCLP Preparation
Appendix 25	SOP for Herbicides With TCLP Preparation
Appendix 26	SOP for Preparation of Metals and Mercury and Analysis of Mercury in Leachate
rippelial 20	(Refer to Appendix 29 for the Analysis of Metals by ICP)
Appendix 27	SOP for Ignitability
Appendix 28	SOP for PCDD/PCDF
Appendix 29	SOP for Preparation and Analyses of Metals and Mercury in Sediment
Appendix 30	Performance and Reporting of Field Audits
Appendix 31	Performance and Reporting of Analytical Laboratory Audits
Appendix 32	SOP for Data Validation of VOA Data (DV8260B)
Appendix 33	SOP for Data Validation of SVOA Data (DV8270C)
Appendix 34	SOP for Data Validation of Pesticide Data (DV8081A)
Appendix 35	SOP for Data Validation of Herbicide Data (DV8151A)
Appendix 36	SOP for Data Validation of PCBs (DV8082)
Appendix 37	SOP for Data Validation of PCB (Homolog) Data (by GEHR680)
Appendix 38	SOP for Data Validation of PCDD and PCDF Data (DV1613B)
Appendix 39	SOP for Data Validation of ICP Metals Data (DV6010B)
Appendix 40	SOP for Data Validation of Mercury Data (DV74707471)
Appendix 41	SOP for Data Validation of TOC Data (DVTOC)
Appendix 42	EDD Specifications





STANDARD OPERATING PROCEDURE HUDSON RIVER DESIGN SUPPORT SEDIMENT SAMPLING AND ANALYSIS PROGRAM REVISION NO: 0 DATE: AUGUST 2, 2002

#### STANDARD OPERATING PROCEDURES FOR SEDIMENT PROBING

- 1. Using the on-board GPS system, maneuver the sampling vessel to within 5 ft of the preprogrammed target coordinates for each sample location. Secure the vessel in place using spuds and/or anchors.
- 2. Use a 3/8 in. steel rod or equivalent to probe the sediment. The probe will be sharpened at one end, and calibrated in 6 in. intervals.
- 3. Probing will be conducted a minimum of 3 5 ft away from the target core location to avoid disturbing the sediment at the sampling location.
- 4. Advance the probe into the river bed, noting the depth of penetration and type of resistance met by the probe.
- 5. Move the probe laterally several feet (while maintaining the minimum 3 ft distance from the target core location) and repeat the probing at least 3 times.
- 6. Record the approximate average sediment thickness (to the nearest 1/2 ft.) and estimated sediment type (e.g., rock, fine-grained, coarse-grained) in the field log. If results of probing are inconsistent between the three attempts; record the inconsistency in the manual description of the field database. Record the estimated sediment type as the most representative one of the three attempts.
- 7. Prepare to collect a core in accordance with the procedures specified in the Sediment Core Collection SOP.