

**APPENDIX I.**

**ACCEPTABLE USE DETERMINATION FOR BENEFICIAL USE  
OF STRATUS PETROLEUM SEDIMENT AND ECOMELT**

**FORMAL REQUEST FOR AUD**

**SUPPORTING DOCUMENTATION**





## State of New Jersey

### DEPARTMENT OF ENVIRONMENTAL PROTECTION

JON S. CORZINE  
*Governor*

Site Remediation Program  
Office of Dredging and Sediment Technology  
P.O. Box 028  
Trenton, NJ 08625  
(609) 292-1250  
FAX (609) 777-1914

LISA P. JACKSON  
*Commissioner*

Mr. Michael C. Mensinger  
Senior Engineer  
EnDesco Clean Harbors, LLC  
1700 S. Mount Prospect Road  
Des Plaines, IL 60018-1804

September 19, 2007

RE: Acceptable Use Determination  
Source: Stratus Petroleum, Newark  
Lower Passaic River Dredging Pilot Study

Dear Mr. Mensinger:

This letter is forwarded in response to your request, dated September 4, 2007, for an Acceptable Use Determination (AUD). The AUD application requested authorization to place approximately 295 tons cy of dredged material or processed dredged material (Ecomelt) from the above referenced sources that is currently being stored at the Cement Lock Demonstration plant located on the IMTT property in Bayonne, New Jersey. The AUD application requested authorization for placement of the dredged material from the project at the Prologis Elizabeth Seaport Business Park.

The AUD application states that the source of the 295 tons of material is as follows:

- 100 tons of dewatered sediments from the Stratus Petroleum terminal located in Newark, New Jersey
- 160 tons of screened and dewatered sediments from the Lower Passaic River Dredge Pilot Study
- 35 tons of Ecomelt - the source of this material is 30 tons from the Lower Passaic River and 5 tons from the Stratus Petroleum terminal dredging project. The raw sediment was treated in the Cement Lock Technology to form the product.

The Department has reviewed the analytical results provided with the AUD application for the material to be placed at the upland placement site, and has determined that the 100 tons of Stratus Petroleum material and the 35 tons of Ecomelt is acceptable for placement at the Prologis Elizabeth Seaport Business Park.

The analytical results provided in the AUD application for the 160 tons of Lower Passaic River material indicate elevated levels of dioxin/furans (expressed as TEQs) above the Department's placement criteria of 1ppb imposed on the Prologis site. Specifically, two of seven samples reported TEQ values at 2.5 ppb and 1.3 ppb. Thus, this material is unacceptable for placement at the Prologis site, and an alternate disposal site will need to be identified and approved by the Department for this volume of material.

Based on the information discussed above, the following conditions are imposed on the transportation of the 100 tons of Stratus Petroleum material, and the 35 tons of Ecomelt from this project:

#### Prologis Elizabeth Seaport Business Park

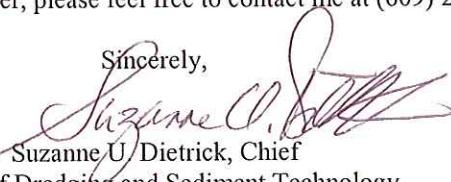
The 135 tons of dredged material and processed dredged material (Ecomelt) shall be placed in the surcharge pile area on the site. No material shall be placed in any regulated areas on the site until all permits and approvals are received for the proposed redevelopment of the site. The designated contractor shall comply with the Prologis letter dated November 6, 2006.

The material shall be placed at the site consistent with the Remedial Action Workplan approval issued in 1999 and any amendments thereto.

All trucks used to transport material to the placement site shall be tarped pursuant to the applicable State DOT requirements or applicable regulatory agency requirements.

If you have any questions regarding this letter, please feel free to contact me at (609) 292-8838.

Sincerely,



Suzanne U. Dietrick, Chief  
Office of Dredging and Sediment Technology  
Site Remediation and Waste Management

C: Scott Douglas, NJDOT Office of Maritime Resources  
Janine MacGregor, SRP  
Eric Stern, USEPA Region 2

Mr. Daniel Morrow  
Environmental Manager  
Clean Earth Dredging Technologies, Inc.  
334 South Warminster Road  
Hatboro, PA 19040



Transforming Wastes Into Resources

September 4, 2007

Ms. Suzanne Dietrick, Chief  
Site Remediation Program  
Office of Dredging and Sediment Technology  
New Jersey Department of Environmental Protection  
P.O. Box 028  
Trenton, New Jersey 08625

RE: Acceptable Use Determination –  
Origin of Dredged Material: Stratus Petroleum site, Upper Newark Bay  
File No. 0714-99-0001.1 (Stratus Petroleum WDP)  
Origin of Dredged Material: Harrison Reach of the Passaic River  
Federal Consistency Determination letter to EPA Region 2 (October 6, 2005)  
Ecomelt from Sediment

Dear Ms. Dietrick:

The purpose of this letter is to request an Acceptable Use Determination for beneficial use of the following materials and amounts:

- 1) Approximately 100 tons of sediment from the Stratus Petroleum site, Upper Newark Bay
- 2) Approximately 160 tons of sediment from the Harrison Reach of the Passaic River
- 3) Approximately 35 tons of Ecomelt – granular, remediated sediment product from the Cement-Lock technology

These materials are currently being stored on-site at the Cement-Lock demonstration plant, IMTT, Bayonne, New Jersey.

This request for an AUD includes the following sections: 1) Cement-Lock Demo Plant Operations Summary, 2) Plan for Beneficial Use, 3) Letter from Clean Earth Dredging Technologies, Inc. indicating that the above materials are suitable for surcharge material at the Prologis site, Elizabeth, New Jersey, and 4) Analytical Information in Support of AUD Request.

#### **Cement-Lock Demo Plant Operations Summary**

Passaic River sediment was processed through the Cement-Lock demo plant during campaigns in December 2006 and May 2007. During these campaigns, a total of about 30 tons of Passaic River sediment-modifier mixture was fed to the system. As part of the most recent campaign, we instituted flame management techniques to slow the accumulation of slag in the drop-out box. Slag accumulated in the drop-out box, nevertheless, and the test was terminated.

During both campaigns, Tetra Tech EMI (and their subcontractors) took environmental samples (sediment, Ecomelt, etc.) under the EPA SITE Program. AirNova took stack emission samples (upstream of the activated carbon bed as well as in the stack) during both campaigns. The results of the analytical tests on these samples have been completed and are being incorporated into project final reports.

Per the requirements of the EIPT permit, ECH is taking steps necessary to dismantle the Cement-Lock demo plant equipment and restore the site. To date, all rental equipment items have been disconnected and returned. Also, all utilities have been disconnected from the demo plant. Currently, we are arranging to have process materials (limestone, activated carbon, alumina, lime, and fluorspar) disposed.

### Plan for Beneficial Use

About 160 tons of sediment from the Harrison Reach of the Passaic River remains on-site and could be beneficially used as surcharge material at the Prologis Site in Elizabeth. Prior to being transported to the Cement-Lock demo plant site, this material had been screened and mechanically dewatered by BioGenesis Enterprises at the Bayshore Recycling Company.

About 100 tons of sediment from the Stratus Petroleum site in Upper Newark Bay remains on-site and could be beneficially used as surcharge material at the Prologis Site in Elizabeth, NJ.

About 35 tons of Ecomelt – the granular, remediated product from Cement-Lock demo plant processing – remains on-site and could be used as surcharge material at the Prologis Site in Elizabeth, NJ.

### Letter from Clean Earth Dredging Technologies, Inc.

Clean Earth Dredging Technologies has informed ECH via copy of the attached letter to NJ-DEP that it will accept the Passaic River sediment, the Stratus Petroleum site sediment, and the Ecomelt provided that an Acceptable Use Determination is issued by the NJ-DEP for these materials.

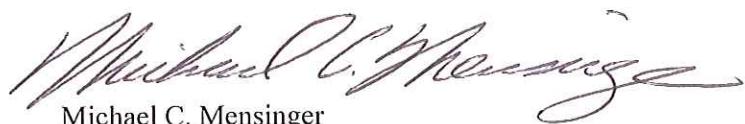
### Analytical Information in Support of AUD Request

Analyses of the above materials are attached to this AUD request including:

Input Passaic River sediment:	PCBs, Dioxins/Furans, Metals, Pesticides, and SVOCs P2-SS-01 through P2-SS-06 and average
Stratus Petroleum sediment:	Dioxins/Furans SS-01, SS-03, SS-05-03102005 and average SVOCs, Aroclors – one sample
Ecomelt Leachability:	SEM-01 through SEM-06 – TCLP; SEM-01, -03, -05 – SPLP

If you have any questions about the above, or need additional information, please contact me at 847-768-0602 (office), 630-518-2920 (cell), 847-463-0575 (fax), or [mike.mensinger@gastechnology.org](mailto:mike.mensinger@gastechnology.org). Thank you for your consideration of this request for AUD.

Very truly yours,



Michael C. Mensinger  
Senior Engineer, Gas Technology Institute

cc: Scott Douglas, NJ-DOT/OMR  
Eric Stern, U.S. EPA Region 2  
Keith Jones, BNL  
Michael J. Roberts, ENDESCO Clean Harbors

**CLEAN EARTH DREDGING TECHNOLOGIES, INC.**  
**LETTER**



334 South Warminster Road  
Hatboro, PA 19040  
T 215-734-1400  
F 215-734-1415  
[www.cleanearthinc.com](http://www.cleanearthinc.com)

**VIA ELECTRONIC MAIL**

August 24, 2007

Suzanne Dietrick,  
Chief - Office of Dredging & Sediment Technology  
New Jersey Department of Environmental Protection  
PO Box 028  
401 E. State Street, 6<sup>th</sup> Floor  
Trenton, NJ 08625-0028

RE: Use of Stratus Petroleum & Passaic River Sediment and Ecomelt  
As Fill Material at the Prologis Elizabeth Seaport Business Park Site

Dear Ms. Dietrick:

Clean Earth Dredging Technologies, Inc. ("CEDTI") has determined that the 160 tons of Passaic River Sediment, 100 tons of Stratus Petroleum sediment and 30 tons of Ecomelt can be utilized at the Prologis Elizabeth Seaport Business Park Project as surcharge material. The sediments do not require processing at CEDTI's DMPF in Jersey City.

Should you have any questions regarding this submission, or require additional information, please feel free to contact me at 215-734-1400.

Sincerely,

CLEAN EARTH DREDGING TECHNOLOGIES, INC.

Daniel J. Morrow  
Environmental Manager

ANALYSIS OF  
INPUT PASSAIC RIVER SEDIMENT

PCBs (P2-SS-01 through P2-SS-06)  
Dioxins/Furans (P2-SS-01 through P2-SS-06)  
Metals (P2-SS-01 through P2-SS-06)  
Pesticides (P2-SS-01 through P2-SS-06)  
SVOCs (P2-SS-01 through P2-SS-06)

TABLE 1. ANALYTICAL RESULTS OF INPUT SEDIMENT SAMPLES  
PHASE 2 CEMENT-LOCK DEMONSTRATION, Bayonne, New Jersey

Compound	Class	Units	P2-SS-01	P2-SS-02	P2-SS-03	(Dup)	P2-SS-04	P2-SS-05	P2-SS-06	Average**
PCBs										
1-MoCB	Congeners	pg/g	1,370 J	1,370 J	1,820 J	2,380 J	2,720	1,640	2,180 J	1,925.7
2-MoCB	Congeners	pg/g	1,350 J	1,220 J	1,130 J	1,550 J	1,320	1,710	1,930 J	1,458.6
3-MoCB	Congeners	pg/g	1,910 J	1,920 J	2,270 J	3,250 J	3,220 J	2,680	2,980 J	2,604.3
4-DICB	Congeners	pg/g	10,100 J	7,810 J	9,780 J	11,500 J	9,520 J	9,730 J	8,870	9,615.7
5-DICB	Congeners	pg/g	2,880	1,950	3,330 U	3,920	3,960	2,170	2,830	3,005.7
6-DICB	Congeners	pg/g	7,120	5,320	8,800	11,100	11,400	6,290	6,700	8,104.3
7-DICB	Congeners	pg/g	1,570	1,070	1,320	1,270	1,610	1,340	1,480	1,380.0
8-DICB	Congeners	pg/g	26,500	20,000	21,000	26,900	25,700	24,800	26,600	24,500.0
9-DICB	Congeners	pg/g	1,710	1,250	1,880	2,520	2,370	1,450	1,610	1,827.1
10-DICB	Congeners	pg/g	223 U	387	1,310	1,480	1,310	207 U	338 U	757.9
11-DICB	Congeners	pg/g	44,500	30,400	38,100	46,200	44,500	37,500	39,200	40,057.1
12-DICB	Congeners	pg/g	7,460 C	6,010 C	8,430 C	10,200 C	10,100 C	7,220 C	7,430 C	8,121.4 C
13-DICB	Congeners	pg/g	C12	328.1 U						
14-DICB	Congeners	pg/g	349 U	149 U	352 U	540 U	471 U	216 U	220 U	
15-DICB	Congeners	pg/g	32,200	27,600	30,500	40,100 J	36,900	31,100	33,000 J	33,057.1
16-TrCB	Congeners	pg/g	22,300	20,100	15,800	17,800	20,000	16,900	20,600	19,071.4
17-TrCB	Congeners	pg/g	34,200	25,000	36,100	35,200	38,200	26,300	29,100	32,014.3
18-TrCB	Congeners	pg/g	55,500 C	41,400 C	63,300 C	61,800 C	69,600 C	42,000 C	49,700 C	54,757.1 C
19-TrCB	Congeners	pg/g	9,920	7,230	11,300 J	13,900	12,500 J	8,830	10,400	10,582.9
20-TrCB	Congeners	pg/g	120,000 C	95,700 C	121,000 C	124,000 C	126,000 C	97,700 C	106,000 C	112,914.3 C
21-TrCB	Congeners	pg/g	42,900 C	33,100 C	45,200 C	45,900 C	49,000 C	34,500 C	34,300 C	40,700.0 C
22-TrCB	Congeners	pg/g	37,900	27,200	33,000	32,200	35,100	29,900	32,300	32,514.3
23-TrCB	Congeners	pg/g	69 U	89 U	91 U	135 U	110 U	76 U	74 U	92.1 U
24-TrCB	Congeners	pg/g	1,910	12,000	2,610	17,700	19,900	1,080	1,260	8,065.7
25-TrCB	Congeners	pg/g	15,000	11,600	15,200	15,500	17,200	12,500	12,500	14,214.3
26-TrCB	Congeners	pg/g	20,300 C	15,500 C	20,100 C	18,300 C	20,600 C	17,300 C	17,800 C	18,557.1 C
27-TrCB	Congeners	pg/g	6,620	5,470	7,390	149 U	6,770	5,330	6,040	5,395.6
28-TrCB	Congeners	pg/g	C20							
29-TrCB	Congeners	pg/g	C26							
30-TrCB	Congeners	pg/g	C18							
31-TrCB	Congeners	pg/g	97,700	77,700	91 U	135 U	110 U	84,000	85,300	49,290.8
32-TrCB	Congeners	pg/g	28,200	22,500	26,600	25,900	26,900	19,700	25,500	25,042.9
33-TrCB	Congeners	pg/g	C21							
34-TrCB	Congeners	pg/g	879	642	105 U	155 U	127 U	656	652	459.4
35-TrCB	Congeners	pg/g	3,840	3,280	222 U	5,550	3,870	3,770	3,970	3,500.3 U
36-TrCB	Congeners	pg/g	180 U	174 U	208 U	319 U	248 U	132 U	175 U	205.1 U
37-TrCB	Congeners	pg/g	34,800	31,100	31,300	31,100	30,100	28,600	33,200	31,457.1
38-TrCB	Congeners	pg/g	190 U	184 U	223 U	342 U	266 U	140 U	184 U	218.4 U
39-TrCB	Congeners	pg/g	899	615	912	906	1,090	741	164 U	761.0
40-TecB	Congeners	pg/g	61,900 C	56,100 C	53,400	66,000 C	62,600 C	59,100 C	67,200 C	60,900 C
41-TecB	Congeners	pg/g	4,080	3,570	6,040 C	5,450	6,040	4,050	5,630	4,980.0
42-TecB	Congeners	pg/g	37,700	35,500	33,400	39,100	37,400	35,800	41,000	37,128.6
43-TecB	Congeners	pg/g	4,690	4,170	3,690	4,400	5,870	4,550	4,700	4,578.6
44-TecB	Congeners	pg/g	156,000 C	135,000 C	132,000 C	158,000 C	147,000 C	141,000 C	164,000 C	147,571.4 C
45-TecB	Congeners	pg/g	42,700 C	41,200 C	44,500 C	49,000 C	43,500 C	41,300 C	45,200 C	43,914.3 C
46-TecB	Congeners	pg/g	8,570	8,190	9,260	10,900	8,870	9,070	9,294.3	
47-TecB	Congeners	pg/g	C44							
48-TecB	Congeners	pg/g	23,100	18,300	21,300	24,900	26,400	20,200	22,200	22,342.9
49-TecB	Congeners	pg/g	93,900 C	81,100 C	79,500 C	96,800 C	92,900 C	84,700 C	95,300 C	89,171.4 C

TABLE 1. ANALYTICAL RESULTS OF INPUT SEDIMENT SAMPLES  
PHASE 2 CEMENT-LOCK DEMONSTRATION, Bayonne, New Jersey

Compound	Class	Units	P2-SS-01	P2-SS-02	P2-SS-03	P2-SS-03 (Dup)	P2-SS-04	P2-SS-05	Average**
50-TeCB	Congeners	pg/g	23,500 C	23,000 C	25,700 C	29,400 C	26,800 C	24,900 C	25,600.0 C
51-TeCB	Congeners	pg/g	C45	C45	C45	C45	C45	C45	C45
52-TeCB	Congeners	pg/g	145,000	125,000	140,000	165,000	152,000	132,000	151,000
53-TeCB	Congeners	pg/g	C50	C50	C50	C50	C50	C50	144,285.7
54-TeCB	Congeners	pg/g	3,260	2,750	2,820	3,810	2,860	72 U	3,230 J
55-TeCB	Congeners	pg/g	254 U	202 U	2,220	4,250	279 U	1,700	2,440
56-TeCB	Congeners	pg/g	52,300	43,100	32,800	39,800	39,000	44,400	52,500
57-TeCB	Congeners	pg/g	667	678	543	663	725	234 U	610
58-TeCB	Congeners	pg/g	247 U	641	3,930	4,520	4,160	4,670	365 U
59-TeCB	Congeners	pg/g	12,700 C	12,600 C	13,500 C	15,900 C	14,000 C	12,400 C	14,000 C
60-TeCB	Congeners	pg/g	14,500	12,000	10,800	14,300	13,900	12,600	14,200
61-TeCB	Congeners	pg/g	231,000 C	187,000 C	171,000 C	210,000 C	209,000 C	200,000 C	234,000 C
62-TeCB	Congeners	pg/g	C59	C59	C59	C59	C59	C59	206,000 C
63-TeCB	Congeners	pg/g	4,350	4,010	4,080	4,890	298 U	4,150	397 U
64-TeCB	Congeners	pg/g	54,600	48,400	51,700	63,200	58,200	50,100	58,600
65-TeCB	Congeners	pg/g	C44	C44	C44	C44	C44	C44	C44
66-TeCB	Congeners	pg/g	108,000	94,200	89,600	111,000	105,000	96,300	107,000
67-TeCB	Congeners	pg/g	4,060	3,510	3,410	4,430	4,630	3,980	4,470
68-TeCB	Congeners	pg/g	245 U	1,320	1,070	1,330	1,290	208 U	1,280
69-TeCB	Congeners	pg/g	C49	C49	C49	C49	C49	C49	C49
70-TeCB	Congeners	pg/g	C61	C61	C61	C61	C61	C61	C61
71-TeCB	Congeners	pg/g	C40	C40	C40	C40	C40	C40	C40
72-TeCB	Congeners	pg/g	1,420	1,280	265 U	1,590	1,460	1,480	1,480
73-TeCB	Congeners	pg/g	4,970	1,120	3,190 U	5,330	4,470	1,250	1,780
74-TeCB	Congeners	pg/g	C61	C61	C61	C61	C61	C61	C61
75-TeCB	Congeners	pg/g	C59	C59	C59	C59	C59	C59	C59
76-TeCB	Congeners	pg/g	C61	C61	C61	C61	C61	C61	C61
77-TeCB	Congeners	pg/g	11,000 J	10,300	10,300	24,400 J	12,500	10,900	11,300 J
78-TeCB	Congeners	pg/g	279 U	222 U	271 U	332 U	302 U	237 U	412 U
79-TeCB	Congeners	pg/g	1,570	185 U	1,310	1,930	1,330	1,430	2,050
80-TeCB	Congeners	pg/g	241 U	191 U	232 U	284 U	258 U	205 U	355 U
81-TeCB	Congeners	pg/g	261 U	201 U	217 U	270 U	249 U	201 U	374 U
82-PeCB	Congeners	pg/g	13,100	13,300	12,400	14,100	13,400	13,100	14,000
83-PeCB	Congeners	pg/g	6,670	6,370	4,800	5,250	8,360	3,030	6,450
84-PeCB	Congeners	pg/g	33,700	32,700	28,700	35,300	30,000	31,000	35,500
85-PeCB	Congeners	pg/g	18,100 C	17,900 C	15,000 C	20,400 C	19,600 C	17,000 C	19,600 C
86-PeCB	Congeners	pg/g	74,400 C	70,200 C	65,800 C	79,300 C	70,700 C	68,700 C	74,500 C
87-PeCB	Congeners	pg/g	C86	C86	C86	C86	C86	C86	C86
88-PeCB	Congeners	pg/g	11,100 C	22,500 C	22,700 C	27,100 C	23,200 C	23,100 C	25,500 C
89-PeCB	Congeners	pg/g	1,820	1,530	1,950	2,240	1,850	1,590	2,000
90-PeCB	Congeners	pg/g	117,000 C	111,000 C	109,000 C	126,000 C	113,000 C	108,000 C	121,000 C
91-PeCB	Congeners	pg/g	C88	C88	C88	C88	C88	C88	C88
92-PeCB	Congeners	pg/g	22,500	21,600	20,900	24,500	21,700	21,000	23,700
93-PeCB	Congeners	pg/g	14,000 C	80 U	10,100 C	12,700 C	10,300 C	11,600 C	11,000 C
94-PeCB	Congeners	pg/g	100 U	2,350	2,360	2,740	2,490	2,610	2,640
95-PeCB	Congeners	pg/g	91,200	92,300	92,600	110,000	95,900	88,900	98,500
96-PeCB	Congeners	pg/g	2,020	2,030	2,010	2,370	1,950	1,910	2,170
97-PeCB	Congeners	pg/g	C86	C86	C86	C86	C86	C86	C86
98-PeCB	Congeners	pg/g	9,040 C	8,070 C	7,200 C	9,500 C	7,920 C	8,210 C	9,160 C
99-PeCB	Congeners	pg/g	53,200	55,000	54,200	63,200	54,700	57,300	59,800

TABLE I. ANALYTICAL RESULTS OF INPUT SEDIMENT SAMPLES  
PHASE 2 CEMENT-LOCK DEMONSTRATION, Bayonne, New Jersey

Compound	Class	Units	P2-SS-01	P2-SS-02	P2-SS-03	P2-SS-03 (Dup)	P2-SS-04	P2-SS-05	P2-SS-06	Average**
100-PeCB	Congeners	pg/g	C93	C93	C93	C93	C93	C93	C93	C93
101-PeCB	Congeners	pg/g	C90	C90	C90	C90	C90	C90	C90	C90
102-PeCB	Congeners	pg/g	C98	C98	C98	C98	C98	C98	C98	C98
103-PeCB	Congeners	pg/g	3,950	3,900	3,580	4,530	3,690	3,790	4,190	3,947.1
104-PeCB	Congeners	pg/g	1,270	1,020	1,470 U	1,730	1,080	1,070	1,190	1,261.4
105-PeCB	Congeners	pg/g	32,000	27,700	27,300	33,600	32,800	29,000	32,600	30,714.3
106-PeCB	Congeners	pg/g	219 U	170 U	284 U	206 U	218 U	182 U	207 U	221.3 U
107-PeCB	Congeners	pg/g	3,710 C	176 U	3,200 C	4,240 C	3,520 C	3,370 C	3,550 C	3,109.4
108-PeCB	Congeners	pg/g	C86	C86	C86	C86	C86	C86	C86	C86
109-PeCB	Congeners	pg/g	8,030	7,170	7,020	8,790	8,000	7,810	8,390	7,887.1
110-PeCB	Congeners	pg/g	123,000 C	122,000 C	105,000 C	121,000 C	112,000 C	120,000 C	127,000 C	118,571.4 C
111-PeCB	Congeners	pg/g	74 U	64 U	94 U	100 U	179 U	54 U	107 U	95.8 U
112-PeCB	Congeners	pg/g	3,740	1,160	92 U	99 U	175 U	1,030	1,560	1,122.3
113-PeCB	Congeners	pg/g	C90	C90	C90	C90	C90	C90	C90	C90
114-PeCB	Congeners	pg/g	1,820	175 U	1,570	1,980	1,950	192 U	1,700	1,341.0
115-PeCB	Congeners	pg/g	C110	C110	C110	C110	C110	C110	C110	C110
116-PeCB	Congeners	pg/g	C85	C85	C85	C85	C85	C85	C85	C85
117-PeCB	Congeners	pg/g	C85	C85	C85	C85	C85	C85	C85	C85
118-PeCB	Congeners	pg/g	80,700	71,900	73,900	90,400	84,400	71,300	79,100	78,814.3
119-PeCB	Congeners	pg/g	C86	C86	C86	C86	C86	C86	C86	C86
120-PeCB	Congeners	pg/g	73 U	432	608	748	568	603	525	508.1
121-PeCB	Congeners	pg/g	72 U	63 U	94 U	100 U	178 U	181	105 U	113.2
122-PeCB	Congeners	pg/g	1,070	1,250	1,330	218 U	1,620	207 U	1,350	1,010.7
123-HxCB	Congeners	pg/g	1,500	150 U	1,710 J	2,170	1,980	189 U	1,340	1,291.3
124-HxCB	Congeners	pg/g	C107	C107	C107	C107	C107	C107	C107	C107
125-HxCB	Congeners	pg/g	C86	C86	C86	C86	C86	C86	C86	C86
126-HxCB	Congeners	pg/g	238 U	180 U	250 U	189 U	1,000	1,160	965	568.9
127-HxCB	Congeners	pg/g	227 U	176 U	266 U	193 U	204 U	189 U	280 U	219.3 U
128-HxCB	Congeners	pg/g	16,900 C	16,400 C	15,900 C	19,600 C	16,500 C	17,600 C	17,600 C	17,214.3
129-HxCB	Congeners	pg/g	392 U	115,000 C	112,000 C	132,000 C	116,000 C	128,000 C	131,000 C	104,913.1
130-HxCB	Congeners	pg/g	7,090	6,430	7,100	515 U	597 U	7,140	7,460	5,190.3
131-HxCB	Congeners	pg/g	1,710	499 U	1,220	1,630	1,290	1,560	1,880	1,398.4
132-HxCB	Congeners	pg/g	39,200	35,800	33,800	40,500	36,300	38,800	40,500	37,842.9
133-HxCB	Congeners	pg/g	2,330	447 U	2,210	3,040	559 U	263 U	2,680	1,647.0
134-HxCB	Congeners	pg/g	5,840	6,570	6,830	8,580	6,960	5,980	7,190	6,850.0
135-HxCB	Congeners	pg/g	45,000 C	42,100 C	42,400 C	49,900 C	45,300 C	46,500 C	48,400 C	45,657.1 C
136-HxCB	Congeners	pg/g	17,000	16,000	16,500	19,300	17,200	17,900	18,400	17,471.4
137-HxCB	Congeners	pg/g	4,720	4,210	4,210	4,19 U	4,510	7,200	7,920	4,741.3
138-HxCB	Congeners	pg/g	C129	C129	C129	C129	C129	C129	C129	C129
139-HxCB	Congeners	pg/g	2,320 C	2,090 C	2,260 C	2,460 C	509 U	2,250 C	2,260 C	2,021.3
140-HxCB	Congeners	pg/g	C139	C139	C139	C139	C139	C139	C139	C139
141-HxCB	Congeners	pg/g	21,100	18,300	19,300	22,900	19,800	20,100	21,100	20,371.4
142-HxCB	Congeners	pg/g	433 U	464 U	497 U	513 U	594 U	273 U	364 U	476.9 U
143-HxCB	Congeners	pg/g	419 U	449 U	448 U	462 U	535 U	264 U	547 U	446.3 U
144-HxCB	Congeners	pg/g	5,700	5,160	5,250	6,410	5,720	5,870	6,140	5,750.0
145-HxCB	Congeners	pg/g	213 U	106 U	127 U	155 U	191 U	95 U	153 U	148.5 U
146-HxCB	Congeners	pg/g	19,900	19,000	18,700	21,200	19,300	20,700	20,600	19,914.3
147-HxCB	Congeners	pg/g	107,000 C	102,000 C	94,500 C	114,000 C	102,000 C	109,000 C	113,000 C	105,928.6 C
148-HxCB	Congeners	pg/g	631	136 U	729 U	671	262 U	1,000	663	584.6
149-HxCB	Congeners	pg/g	C147	C147	C147	C147	C147	C147	C147	C147

TABLE I. ANALYTICAL RESULTS OF INPUT SEDIMENT SAMPLES  
PHASE 2 CEMENT-LOCK DEMONSTRATION, Bayonne, New Jersey

Compound	Class	Units	P2-SS-01	P2-SS-02	P2-SS-03	P2-SS-04 (Dup)	P2-SS-05	P2-SS-06	Average**
150-HxCB	Congeners	pg/g	193 U	873	853	1,060	1,030	1,130	1,010
151-HxCB	Congeners	pg/g	C135	C135	C135	C135	C135	C135	878.4
152-HxCB	Congeners	pg/g	205 U	102 U	466 U	395	203 U	91 U	590
153-HxCB	Congeners	pg/g	337 U	108,000 C	101,000 C	115,000 C	107,000 C	122,000 C	96,333.9
154-HxCB	Congeners	pg/g	223 U	3,860	4,120	4,780	5,160	99 U	4,230
155-HxCB	Congeners	pg/g	5,640	5,610	5,500	7,370	6,290	6,440 J	6,820
156-HxCB	Congeners	pg/g	11,700 C	10,000 C	10,900 C	12,300 C	11,000 C	11,400 JC	11,500 C
157-HxCB	Congeners	pg/g	C156	C156	C156	C156	C156	C156	11,257.1 C
158-HxCB	Congeners	pg/g	11,100	10,300	10,500	12,200	10,900	11,200	11,300
159-HxCB	Congeners	pg/g	1,730	1,470	1,740	1,940	1,640	2,400	285 U
160-HxCB	Congeners	pg/g	297 U	319 U	308 U	318 U	1,760	188 U	388 U
161-HxCB	Congeners	pg/g	311 U	333 U	336 U	346 U	401 U	196 U	406 U
162-HxCB	Congeners	pg/g	206 U	197 U	1,281 U	1,193 U	1,315 U	320 U	271 U
163-HxCB	Congeners	pg/g	C129	C129	C129	C129	C129	C129	683.3 U
164-HxCB	Congeners	pg/g	8,420	7,410	7,770	9,170	8,040	6,270	6,060
165-HxCB	Congeners	pg/g	333 U	358 U	350 U	361 U	418 U	210 U	435 U
166-HxCB	Congeners	pg/g	C128	C128	C128	C128	C128	C128	332.7 U
167-HxCB	Congeners	pg/g	4,050	3,720	4,270 J	4,470	4,390	4,080	4,050
168-HxCB	Congeners	pg/g	C153	C153	C153	C153	C153	C153	4,147.1
169-HxCB	Congeners	pg/g	208 UJ	174 U	1,137 U	1,121 U	1,220 U	291 U	278 U
170-HpCB	Congeners	pg/g	32,400	30,300	31,500	37,800	33,500	37,600	32,500
171-HpCB	Congeners	pg/g	10,800 C	11,000 C	9,550 C	10,500 C	10,500 C	12,400 C	11,400 C
172-HpCB	Congeners	pg/g	5,820	5,870	6,170	6,860	6,400	6,830	6,140
173-HpCB	Congeners	pg/g	C171	C171	C171	C171	C171	C171	6,298.6
174-HpCB	Congeners	pg/g	36,400	34,700	31,600	40,200	38,900	44,000	38,500
175-HpCB	Congeners	pg/g	1,600	1,610	1,390	1,680	204 U	1,800	1,800
176-HpCB	Congeners	pg/g	5,410	4,710	5,030	5,460	5,220	5,750	5,390
177-HpCB	Congeners	pg/g	21,400	21,600	20,100	24,700	23,300	25,200	23,800
178-HpCB	Congeners	pg/g	8,140	7,860	8,120	9,380	8,260	9,510	8,240
179-HpCB	Congeners	pg/g	18,200	17,000	17,600	18,900	17,800	20,200	18,700
180-HpCB	Congeners	pg/g	72,900 C	72,200 C	70,200 C	85,200 C	75,800 C	90,800 C	76,800 C
181-HpCB	Congeners	pg/g	313 U	241 U	370 U	250 U	455 U	220 U	196 U
182-HpCB	Congeners	pg/g	167 U	130 U	219 U	151 U	194 U	185 U	192 U
183-HpCB	Congeners	pg/g	23,900 C	22,200 C	25,100 C	30,000 C	25,800 C	28,000 C	25,900 C
184-HpCB	Congeners	pg/g	129 U	277	224 U	306	283	143 U	271
185-HpCB	Congeners	pg/g	C183	C183	C183	C183	C183	C183	233.3
186-HpCB	Congeners	pg/g	132 U	103 U	117 U	122 U	157 U	147 U	152 U
187-HpCB	Congeners	pg/g	47,200	45,500	42,000	52,700	47,400	59,000	48,800
188-HpCB	Congeners	pg/g	133 U	239	211 U	295	136 U	142 U	159 U
189-HpCB	Congeners	pg/g	1,080	999	1,160	1,220	1,290	1,250	1,110
190-HpCB	Congeners	pg/g	7,380	6,690	6,420	7,610	6,820	7,190 U	1,158.4
191-HpCB	Congeners	pg/g	1,440	196 U	1,330	1,590	1,670	1,610	1,540
192-HpCB	Congeners	pg/g	253 U	195 U	320 U	216 U	393 U	178 U	244.9 U
193-HpCB	Congeners	pg/g	C180	C180	C180	C180	C180	C180	21,300
194-OcCB	Congeners	pg/g	19,600	17,800	18,700	21,300	19,500	26,700	22,128.6
195-OcCB	Congeners	pg/g	7,870	6,860	7,520	8,880	8,180	12,800	8,537.0
196-OcCB	Congeners	pg/g	10,900	9,750	9,930	12,000	11,200	20,800	11,300
197-OcCB	Congeners	pg/g	1,040 C	2,990 C	2,650 C	3,070 C	2,550 C	5,000 C	3,450 C
198-OcCB	Congeners	pg/g	22,100 C	21,200 C	21,600 C	25,500 C	22,500 C	33,500 C	23,700 C
199-OcCB	Congeners	pg/g	C198	C198	C198	C198	C198	C198	24,300.0 C

TABLE 1. ANALYTICAL RESULTS OF INPUT SEDIMENT SAMPLES  
PHASE 2 CEMENT-LOCK DEMONSTRATION, Bayonne, New Jersey

Compound	Class	Units	P2-SS-01	P2-SS-02	P2-SS-03	P2-SS-04 (Dup)	P2-SS-04	P2-SS-05	P2-SS-06	Average**
200-OcCB	Congeners	pg/g	C197	C197	C197	C197	C197	C197	C197	C197
201-OcCB	Congeners	pg/g	3,250	2,780	2,480	3,440	2,900	4,480	3,160	3,212.9
202-OcCB	Congeners	pg/g	4,630 J	4,240	4,940	5,490	5,030	7,420	5,110	5,265.7
203-OcCB	Congeners	pg/g	12,500	12,100	12,800	14,500	13,600	16,800	13,300	13,657.1
204-OcCB	Congeners	pg/g	103 U	239 U	255 U	217 U	243 U	160 U	177 U	199.1 U
205-OcCB	Congeners	pg/g	161 U	769	1,030 J	220 U	1,050 J	90 U	154 U	496.3
206-NoCB	Congeners	pg/g	9,670	9,170	10,600	11,800	11,100	17,400	11,500	11,605.7
207-NoCB	Congeners	pg/g	1,360	1,420	1,400	1,720	1,590	2,750	1,520	1,680.0
208-NoCB	Congeners	pg/g	3,480	3,500	3,650	191 U	4,450 J	4,610	4,370	3,464.4
209-DeCB	Congeners	pg/g	8,110	7,820	8,410 J	8,060	7,930	8,180	10,300	8,401.4
Total of PCB Congeners*			3,252,077	3,114,840	3,109,518	3,644,480	3,417,274	3,371,196	3,551,332	3,351,530.9
TEQ (PCB)	TEQ	ng/kg	32.4	26.5	35.9	37.4	125.9	134.8	117.1	72.9
Mono			4,630	4,510	5,220	7,180	7,260	6,030	7,090	5,988.6
Di			134,612	101,946	124,802	155,730	147,841	122,023	128,328	130,754.6
Tri			533,307	430,584	430,752	446,991	477,691	430,155	469,219	459,814.2
Tetra			1,107,064	955,040	952,048	1,161,179	1,084,621	1,002,967	1,140,935	1,057,693.4
Penta			729,643	694,615	677,488	804,993	728,662	697,377	769,742	728,931.2
Hexa			342,851	543,887	534,512	616,279	554,894	596,810	616,680	543,701.8
Hepa			295,197	283,620	278,731	335,740	304,482	345,144	302,057	306,424.4
Octa			82,154	78,728	81,905	94,617	86,753	137,750	89,591	93,071.1
Nona			14,510	14,090	15,650	13,711	17,140	24,760	17,390	16,750.1
Deca	Congeners	pg/L	8,110	7,820	8,410	8,060	7,930	8,180	10,300	8,401.4
			3,252,077	3,114,840	3,109,518	3,644,480	3,417,274	3,371,196	3,551,332	3,351,530.9

TABLE 1. ANALYTICAL RESULTS OF INPUT SEDIMENT SAMPLES  
PHASE 2 CEMENT-LOCK DEMONSTRATION, Bayonne, New Jersey

Compound	Class	Units	P2-SS-01	P2-SS-02	P2-SS-03	P2-SS-03 (Dup)	P2-SS-04	P2-SS-05	P2-SS-06	Average**
<b>DIOXINS/FURANS</b>										
1,2,3,4,6,7,8-HxCDD	Dioxins-Furans	pg/g	1,170	1,100	1,010	969	1,080	1,020	1,060 J	1,058.4
1,2,3,4,6,7,8-HpCDD	Dioxins-Furans	pg/g	1,130	1,660	1,010	917	1,200	1,010	1,020 J	1,135.3
1,2,3,4,7,8,9-HpCDF	Dioxins-Furans	pg/g	36	44 J	32 J	28 J	35 J	36	35	35.2
1,2,3,4,7,8-HxCDD	Dioxins-Furans	pg/g	12	10 J	11 J	9 J	10 J	11	11	10.6
1,2,3,4,7,8-HxCDF	Dioxins-Furans	pg/g	276	279	214	201	242	241	237	241.4
1,2,3,6,7,8-HxCDD	Dioxins-Furans	pg/g	80	70	62 J	62 J	66 J	70	68	68.2
1,2,3,6,7,8-HpCDF	Dioxins-Furans	pg/g	71	76	55 J	55 J	65 J	71	64	65.3
2,3,4,6,7,8-HxCDF	Dioxins-Furans	pg/g	49	45 J	41 J	37 J	41 J	40	40	41.9
1,2,3,7,8,9-HxCDD	Dioxins-Furans	pg/g	39	34 J	33 J	30 J	36 J	33	32	33.8
1,2,3,7,8,9-HxCDF	Dioxins-Furans	pg/g	13	11 J	10	10 J	11 J	11	10	10.9
1,2,3,7,8,9-HxCDF	Dioxins-Furans	pg/g	71,1J Q	6 U	13 J	12 J	8 U	16 J	20	12.4
1,2,3,7,8-PeCDD	Dioxins-Furans	pg/g	26,6J Q	24 JQ	22 J	20 J	22 JQ	26 J	26	23.4
1,2,3,7,8-PeCDF	Dioxins-Furans	pg/g	112J JQ	98	90	85	90 JQ	73 J	91 J	87.9
2,3,4,7,8-PeCDF	Dioxins-Furans	pg/g	2,330 JQ	704	644	589	569	571 J	994 J	914.4
2,3,7,8-TCDD	Dioxins-Furans	pg/g	58 JQ	2 U	39	40	36	30 J	270 J	67.8
2,3,7,8-TCDF	Dioxins-Furans	pg/g	12,600 JE	11,400	10,400	10,100	11,200	10,600 J	11,300 J	11,085.7
OCDD	Dioxins-Furans	pg/g	1,900	2,490	1,580	1,360	1,950	1,780	1,940 J	1,857.1
OCDF	Dioxins-Furans	pg/g	2,580	2,370	2,170	2,110	2,320	2,260 J	2,370	2,311.4
Total HpCDDs	Dioxins-Furans	pg/g	1,660	2,150	1,440	1,340	1,680	1,530	1,530	1,618.6
Total HpCDFs	Dioxins-Furans	pg/g	576 J	524	480 J	469	504 J	513 J	551	516.7
Total HxCDDs	Dioxins-Furans	pg/g	846 J	1,080 J	915 J	847	955 J	939 J	889 J	924.4
Total HxCDFs	Dioxins-Furans	pg/g	404 J	136 J	140 J	130 J	113 J	138 J	208	181.3
Total PeCDDs	Dioxins-Furans	pg/g	1,220 J	1,280 J	1,140 J	1,070 J	1,120 J	1,090 J	1,140 J	1,151.4
Total PeCDFs	Dioxins-Furans	pg/g	3,550 J	944	847	766	768	806 J	1,670 J	1,335.9
Total TCDDs	Dioxins-Furans	pg/g	1,280 J	1,180 J	1,140 J	1,080	1,140	1,170 J	1,520 J	1,215.7
Total TCDFs	Dioxins-Furans	pg/g	26,616	23,554	20,252	19,272	21,750	20,826	23,118	22,198.3
Total of TCDD/DF Congeners*										
TEQ (Dioxin)	TEQ	ng/kg	2,543.1	844.7	771.1	709.2	694.1	696.8	1,157.0	1,059.4
Total TEQ	TEQ	ng/kg	2,575.4	871.2	807.0	746.7	820.1	831.6	1,274.1	1,132.3
<b>METALS</b>										
Arsenic	Metals	mg/kg	15.3	15.2	14.7	14.1	14	13.7	14.44	
Barium	Metals	mg/kg	185	189	187	190	174	193	186.86	
Cadmium	Metals	mg/kg	7.9	7.6 J	7.9 J	7.8 J	6.9 J	8.3 J	8.5 J	7.84 J
Chromium	Metals	mg/kg	207	210	219	212	211	204	205	209.71
Cobalt	Metals	mg/kg	12.7	12.2	12.7	12.4	12.2	12.6	12.7	12.50
Copper	Metals	mg/kg	262	269	264	274	239	247	260	259.29
Lead	Metals	mg/kg	395	384	399	388	358	381	379	383.43
Manganese	Metals	mg/kg	418	446	455	431	453	474	432	444.14
Mercury	Metals	mg/kg	4.8	5.3	5.6	5.5	5.4	4.9	5.27	
Nickel	Metals	mg/kg	58.6 J	54.7 J	57.7 J	53.8 J	54.6 J	55.2 J	53.3 J	55.41 J
Selenium	Metals	mg/kg	3.1 U	3.2 U	3.4 U	3.2 U	3.1 U	3.3 U	3.7	3.29 U
Silver	Metals	mg/kg	5.6	5.8	6	5.9	5.3	5.9	6.4	5.84
Zinc	Metals	mg/kg	649 J	651 J	674 J	666 J	605 J	671 J	662 J	654.00 J

TABLE 1. ANALYTICAL RESULTS OF INPUT SEDIMENT SAMPLES  
PHASE 2 CEMENT-LOCK DEMONSTRATION, Bayonne, New Jersey

Compound	Class	Units	P2-SS-01	P2-SS-02	P2-SS-03	P2-SS-03 (Dup)	P2-SS-04	P2-SS-05	P2-SS-06	Average**
<b>PESTICIDES</b>										
4,4'-DDD	Pest	ug/kg	19.6	19	18.4	22.4	20.8	29.7	32.2	23.2
4,4'-DDE	Pest	ug/kg	32 J	31.9 J	26.7 J	34.9 J	29.1 J	47.9	46.6 J	35.6
4,4'-DDT	Pest	ug/kg	28.2 J	25.2 J	28	34.4 J	27.7 J	29.7 J	87.9 J	37.3
Dieldrin	Pest	ug/kg	0.53 U	0.54 U	0.55 U	0.54 U	0.53 U	0.54 U	0.54 U	0.5
<b>SVOCs</b>										
Acenaphthene	SVOC	ug/kg	61.9	69.3	51.1	51.3	72.2	76.8	79.9	66.1
Acenaphthylene	SVOC	ug/kg	178	221	236	243	283	251	292	243.4
Anthracene	SVOC	ug/kg	212	221	219	215	262	352	369	264.3
Benz(a)anthracene	SVOC	ug/kg	643	697	700	709	790	1140	1110	827.0
Benz(a)pyrene	SVOC	ug/kg	675	658	649	648	879	1120	1090 J	817.0
Benz(b)fluoranthene	SVOC	ug/kg	701	751	712	700	937	1280	1200	897.3
Benz(g,h,i)perylene	SVOC	ug/kg	143	140	193	170	250	484	408	255.4
Benz(k)fluoranthene	SVOC	ug/kg	599	694	691	639	754	1110	1050	791.0
bis(2-Ethylhexyl)phthalate	SVOC	ug/kg	15700	15700	12300	12300	13200	17900	37300 J	17,800.0
Chrysene	SVOC	ug/kg	526	588	586	613	708	1010	985	716.6
Dibenzo(a,h)anthracene	SVOC	ug/kg	70.4	68.4	97.9	82.3	115	231	205	124.3
Di-n-octyl phthalate	SVOC	ug/kg	670	647	674	232	10 U	960	2150 J	763.3
Fluoranthene	SVOC	ug/kg	1190	1300	1180	1090	1460	1900	1860	1,425.7
Fluorene	SVOC	ug/kg	123	145	131	58.6	80.1	183	196	131.0
Indeno(1,2,3-cd)pyrene	SVOC	ug/kg	145	142	182	170	236	440	379	242.0
Naphthalene	SVOC	ug/kg	40.9	48.5	37.7	33.5	39.1	71.1	58.3	47.0
Phenanthrene	SVOC	ug/kg	466	523	448	423	656	717	706	562.7
Pyrene	SVOC	ug/kg	1410	1640	1460	1310	1710	2430	2370	1,761.4

Notes:

U - Analyte was not detected. The associated value is the estimated detection limit.

J - The analyte is present, but the concentration is below the quantitation limit. The concentration is estimated

UJ - The detection limit is estimated.

C - The isomer coeluted with another of its homologue group. If followed by a number, the number indicates the lowest numbered congener among the coelution set.

"u" - The sample was not analyzed for that analyte.

\* The total of these analytes includes non-detected values at the detection limit

\*\* Average includes "U", "C", or "J" only if all 6 samples include the modifier

ANALYSIS OF  
STRATUS PETROLEUM SEDIMENT

Dioxins/Furans (SS-01-03102005, SS-03-03102005, SS-05-03102005)  
SVOCs (one sample)  
Aroclors (one sample)

## SOLID SAMPLES

Table 3. Dioxins/Furans of Samples, ng/kg (pg/g)

Sample	SL-01-03102005 Solid/Lime	SM-01-03102005 Solid/Lime	SM-02-03102005 Solid/Modifier	SS-01-03102005 Solid/Sediment (as fed)	SS-03-03102005 Solid/Sediment	SS-05-03102005
2,3,7,8-Tetrachlorodibenzo(p)dioxin	0.184 U	0.196 U	0.283 U	71.4	77.7	117
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	0.235 U	0.245 U	0.257 J	3.94 J	4.28 J	4.99 J
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	0.282 U	0.277 U	0.245 U	3.32 U	3.72 J	4.21 J
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	0.274 U	0.262 U	0.21 J	16	16.3	16.7
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	0.28 U	0.268 U	0.249 J	8.96	9.83	9.55
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	0.198 J	0.245 U	2.11 J	264	264	256
Octachlorodibenzo(p)dioxin	1.41 J	1.19 J	17.7	2820	2810	2770
2,3,7,8-Tetrachlorodibenzofuran	0.115 U	0.175 J	0.276 U	12.4	15.3 U	13.7
1,2,3,7,8-Pentachlorodibenzofuran	0.235 U	0.245 U	0.486 U	10.8	10.7	11.9
2,3,4,7,8-Pentachlorodibenzofuran	0.235 U	0.245 U	0.486 U	23.5	25.3	30.3
1,2,3,4,7,8-Hexachlorodibenzofuran	0.235 U	0.245 U	0.486 U	132	134	211
1,2,3,6,7,8-Hexachlorodibenzofuran	0.235 U	0.245 U	0.206 J	29.7	29.4	38.7
2,3,4,6,7,8-Hexachlorodibenzofuran	0.235 U	0.245 U	0.486 U	16.3	18	19.7
1,2,3,7,8,9-Hexachlorodibenzofuran	0.235 U	0.245 U	0.486 U	5 J	5.46 J	7.63
1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.235 U	0.245 U	1.1 U	484	474	691
1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.235 U	0.245 U	0.486 U	14.9	15.2	23.3
Octachlorodibenzofuran	0.471 U	0.491 U	1.69 J	636	654	1160
Total tetrachlorodibenzo(p)dioxins	0.184 U	0.371 U	0.751 U	122 J	126 J	169 J
Total pentachlorodibenzo(p)dioxins	0.439 U	0.442 U	0.257 J	48.4 J	50.5 J	53.7
Total hexachlorodibenzo(p)dioxins	0.61 U	0.559 U	0.459 J	157	164	177
Total heptachlorodibenzo(p)dioxins	0.198 J	0.245 U	4.08 J	646	642	628
Total tetrachlorodibenzofurans	0.115 U	0.175 J	0.451 U	303 J	309 J	328 J
Total pentachlorodibenzofurans	0.235 U	0.245 U	0.163 J	259 J	306 J	318
Total hexachlorodibenzofurans	0.235 U	0.245 U	0.696 J	389	429	556
Total heptachlorodibenzofurans	0.235 U	0.245 U	0.704 U	625	618	863
Total TEQ	0.373	0.398	0.741	118	126	180

## SOLID SAMPLES

Table 3. Dioxins/Furans of Samples, ng/k<sub>c</sub>

Sample	SEM-02-013102005	SEM-03-03102005	SEM-05-03102005	SB-01-03102005
	Solid/EcoAggMat	Solid/EcoAggMat	SS-03102005	Solid/Baghause
2,3,7,8-Tetrachlorodibenzo(p)dioxin	88.70	0.50 U		
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	4.40	0.67 U		
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	3.75	0.71 U		
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	16.33	0.70 U		
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	9.45	0.71 U		
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	280.00	0.68		
Octachlorodibenzo(p)dioxin	2800.00	3.81		
2,3,7,8-Tetrachlorodibenzofuran	13.80	0.45		
1,2,3,7,8-Pentachlorodibenzofuran	11.13	0.55		
2,3,4,7,8-Pentachlorodibenzofuran	26.37	0.67 U		
1,2,3,4,7,8-Hexachlorodibenzofuran	159.00	0.67 U		
1,2,3,6,7,8-Hexachlorodibenzofuran	32.60	0.67 U		
2,3,4,6,7,8-Hexachlorodibenzofuran	18.00	0.67 U		
1,2,3,7,8,9-Hexachlorodibenzofuran	6.03	0.67 U		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	549.67	0.52		
1,2,3,4,7,8,9-Heptachlorodibenzofuran	17.80	0.67 U		
Octachlorodibenzofuran	823.33	0.95		
Total tetrachlorodibenzo(p)dioxins	139.00	1.07 U		
Total pentachlorodibenzo(p)dioxins	50.87	1.42		
Total hexachlorodibenzo(p)dioxins	166.00	1.64 U		
Total heptachlorodibenzo(p)dioxins	638.67	0.62		
Total tetrachlorodibenzofurans	313.33	0.45		
Total pentachlorodibenzofurans	294.33	0.55		
Total hexachlorodibenzofurans	458.00	0.67 U		
Total heptachlorodibenzofurans	702.00	0.59		
Total TEQ (DL/2)	141.33	1.070		
Total PCDD/PCDFs	6385.53	11.77		
Total TEQ (full DL)	141.376	2.082		



Mr. Mike Mensinger  
Gas Technology Institute  
1700 S. Mount Prospect Rd  
Des Plaines IL 60018

Report Number: G733-5

Client Project ID NA

Dear Mr. Mensinger:

Enclosed are the results of the analytical services performed under the referenced project. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of five years in the event they are required for future reference. Any samples submitted to our laboratory will be retained for a maximum of thirty (30) days from the date of this report unless other arrangements are requested.

If there are any questions about the report or the services performed during this project, please call SGS/Paradigm at (910) 350-1903. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS/Paradigm Analytical Labs for your analytical services. We look forward to working with you again on any additional analytical needs which you may have.

Sincerely,  
SGS/Paradigm Analytical Laboratories, Inc.

JM Craig J. Honig 4/13/07  
Laboratory Director Date  
J. Patrick Weaver

Results for Semivolatiles  
by GCMS 8270

Client Sample ID: Sediment Sample

Client Project ID:

Lab Sample ID: G733-5-1B

Lab Project ID: G733-5

Report Basis: Dry weight

Analyzed By: EAW  
Date Collected: 6/1/2007 0:00  
Date Received: 6/5/2007  
Date Extracted: 6/7/2007  
Matrix: Sediment  
% Solids: 79.89

Compound	Result ug/Kg	RL ug/Kg	Dilution Factor	Date Analyzed
Acenaphthene	BQL	384	1	6/12/2007
Acenaphthylene	BQL	384	1	6/12/2007
Anthracene	BQL	384	1	6/12/2007
Benzo[a]anthracene	714	384	1	6/12/2007
Benzo[a]pyrene	922	384	1	6/12/2007
Benzo[b]fluoranthene	1110	384	1	6/12/2007
Benzo[g,h,i]perylene	891	384	1	6/12/2007
Benzo[k]fluoranthene	415	384	1	6/12/2007
Benzolic Acid	BQL	768	1	6/12/2007
Bis(2-chloroethoxy)methane	BQL	384	1	6/12/2007
Bis(2-chloroethyl)ether	BQL	384	1	6/12/2007
Bis(2-chloroisopropyl)ether	BQL	384	1	6/12/2007
Bis(2-ethylhexyl)phthalate	1570	384	1	6/12/2007
4-bromophenyl phenyl ether	BQL	384	1	6/12/2007
Butylbenzylphthalate	BQL	384	1	6/12/2007
2-Chloronaphthalene	BQL	384	1	6/12/2007
2-Chlorophenol	BQL	384	1	6/12/2007
4-Chloro-3-methylphenol	BQL	384	1	6/12/2007
4-Chloroaniline	BQL	1920	1	6/12/2007
4-Chlorophenyl phenyl ether	BQL	384	1	6/12/2007
Chrysene	895	384	1	6/12/2007
Dibenzo[a,h]anthracene	438	384	1	6/12/2007
Dibenzofuran	BQL	384	1	6/12/2007
Di-n-Butylphthalate	BQL	384	1	6/12/2007
1,2-Dichlorobenzene	BQL	384	1	6/12/2007
1,3-Dichlorobenzene	BQL	384	1	6/12/2007
1,4-Dichlorobenzene	BQL	384	1	6/12/2007
3,3'-Dichlorobenzidine	BQL	768	1	6/12/2007
2,4-Dichlorophenol	BQL	384	1	6/12/2007
Diethylphthalate	BQL	384	1	6/12/2007
Dimethylphthalate	BQL	384	1	6/12/2007
2,4-Dimethylphenol	BQL	384	1	6/12/2007
Di-n-octylphthalate	BQL	384	1	6/12/2007
4,6-Dinitro-2-methylphenol	BQL	1920	1	6/12/2007
2,4-Dinitrophenol	BQL	1920	1	6/12/2007
2,4-Dinitrotoluene	BQL	384	1	6/12/2007
2,6-Dinitrotoluene	BQL	384	1	6/12/2007
Diphenylamine *	BQL	384	1	6/12/2007
Fluoranthene	1130	384	1	6/12/2007
Fluorene	BQL	384	1	6/12/2007
Hexachlorobenzene	BQL	384	1	6/12/2007
Hexachlorobutadiene	BQL	384	1	6/12/2007
Hexachlorocyclopentadiene	BQL	768	1	6/12/2007
Hexachloroethane	BQL	384	1	6/12/2007

Results for Semivolatiles  
by GCMS 8270

Client Sample ID: Sediment Sample  
Client Project ID:  
Lab Sample ID: G733-5-1B  
Lab Project ID: G733-5  
Report Basis: Dry weight

Analyzed By: EAW  
Date Collected: 6/1/2007 0:00  
Date Received: 6/5/2007  
Date Extracted: 6/7/2007  
Matrix: Sediment  
% Solids: 79.89

Compound	Result ug/Kg	RL ug/Kg	Dilution Factor	Date Analyzed
Indeno(1,2,3-c,d)pyrene	784	384	1	6/12/2007
Isophorone	BQL	384	1	6/12/2007
2-Methylnaphthalene	BQL	384	1	6/12/2007
2-Methylphenol	BQL	384	1	6/12/2007
3- & 4-Methylphenol	BQL	384	1	6/12/2007
Naphthalene	BQL	384	1	6/12/2007
2-Nitroaniline	BQL	384	1	6/12/2007
3-Nitroaniline	BQL	1920	1	6/12/2007
4-Nitroaniline	BQL	1920	1	6/12/2007
Nitrobenzene	BQL	384	1	6/12/2007
2-Nitrophenol	BQL	384	1	6/12/2007
4-Nitrophenol	BQL	1920	1	6/12/2007
N-Nitrosodi-n-propylamine	BQL	384	1	6/12/2007
Pentachlorophenol	BQL	1920	1	6/12/2007
Phenanthrone	BQL	384	1	6/12/2007
Phenol	BQL	384	1	6/12/2007
Pyrene	976	384	1	6/12/2007
1,2,4-Trichlorobenzene	BQL	384	1	6/12/2007
2,4,5-Trichlorophenol	BQL	384	1	6/12/2007
2,4,6-Trichlorophenol	BQL	384	1	6/12/2007

	Spike Added	Spike Result	Percent Recovered
2-Fluorobiphenyl	10	7.7	77
2-Fluorophenol	10	9	90
Nitrobenzene-d5	10	8.9	89
Phenol-d6	10	9.3	93
2,4,6-Tribromophenol	10	8.8	88
4-Terphenyl-d14	10	7.2	72

## Comments:

\* N-Nitrosodiphenylamine is reported as the breakdown product Diphenylamine.

## Flags:

BQL = Below Quantitation Limits.

Reviewed By: MM

**Results for PCBs**  
by EPA 8082

Client Sample ID: Sediment Sample                          Analyzed By: DCS  
Client Project ID:    Date Collected: 6/1/2007 0:00  
Lab Sample ID: G733-5-1C                                      Date Received: 6/5/2007  
Lab Project ID: G733-5                                        Date Extracted: 6/7/2007  
Sample Wt/Vol: 32.67 ColumnID: STX-CLPest              Matrix: Sediment  
Report Basis: Dry Weight                                      %SOLIDS: 79.9

Compound	Result ug/KG	Quantitation Limit ug/KG	Dilution Factor	Date Analyzed
Aroclor-1016	BQL	38.3	1	06/08/07
Aroclor-1221	BQL	38.3	1	06/08/07
Aroclor-1232	BQL	38.3	1	06/08/07
Aroclor-1242	BQL	38.3	1	06/08/07
Aroclor-1248	BQL	38.3	1	06/08/07
Aroclor-1254	138	38.3	1	06/08/07
Aroclor-1260	97.2	38.3	1	06/08/07

Surrogate Spike Recoveries	Spike Added	Spike Result	Percent Recovered
TCMX	100	98.6	98.6
DCBP	100	74.1	74.1

**Comments:**

BQL = Below Quantitation Limit

NA = Not applicable, surrogate diluted out.

Reviewed By: JML  
8082

**List of Reporting Abbreviations  
and Data Qualifiers**

B = Compound also detected in batch blank

BQL = Below Quantitation Limit (RL or MDL)

DF = Dilution Factor

Dup = Duplicate

D = Detected, but RPD is > 40% between results in dual column method.

E = Estimated concentration, exceeds calibration range.

J = Estimated concentration, below calibration range and above MDL

LCS(D) = Laboratory Control Spike (Duplicate)

MDL = Method Detection Limit

MS(D) = Matrix Spike (Duplicate)

PQL = Practical Quantitation Limit

RL = Reporting Limit

RPD = Relative Percent Difference

mg/kg = milligram per kilogram, ppm, parts per million

ug/kg = micrograms per kilogram, ppb, parts per billion

mg/L = milligram per liter, ppm, parts per million

ug/L = micrograms per liter, ppb, parts per billion

% Rec = Percent Recovery

% solids = Percent Solids

**Special Notes:**

- 1) Metals and mercury samples are digested with a hot block, see the standard operating procedure document for details.
- 2) Uncertainty for all reported data is less than or equal to 30 percent.

LEACHING CHARACTERISTICS OF ECOMELT  
FROM PASSAIC RIVER SEDIMENT

TCLP (average of 6 samples (SEM-01 through -06)

SPLP (average of 3 samples (SEM-01, -03, and -06))

Compound	TCLP Limit	SEM-01	SEM-02	SEM-03	SEM-04	SEM-05	SEM-06	Average SEM
mg/L								
Arsenic	5	0.5 U						
Barium	100	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Cadmium	1	0.0092	0.005 U	0.0057				
Chromium	5	0.01	0.01 U	0.01 U	0.01 U	0.014	0.011	0.01083
Cobalt	--	0.05 U						
Copper	--	0.15	0.025 U	0.025 U	0.025 U	0.034	0.026	0.0475
Lead	5	0.5 U						
Manganese	--	0.21	0.071	0.037	0.032	0.037	0.034	0.070
Mercury	0.2	0.0002 U						
Nickel	--	0.12	0.04	0.04 U	0.04 U	0.04 U	0.04 U	0.0533
Selenium	1	0.5 U						
Silver	5	0.01 U						
Zinc	--	0.7	0.31	0.16	0.13	0.22	0.17	0.282

## Notes:

Values are in units of milligrams per liter (mg/L).

TCLP - Toxicity characteristics leaching procedure

"U" Analyte was not detected. The associated value is the detection limit.

Highlighted cells indicate exceedences with respect to Detection Limit

Compound	Leaching Method	NJ Ground Water Standards <sup>(1)</sup>	SEM-01	SEM-03	SEM-06	Average SEM
Arsenic	SPLP	0.003	0.008 U	0.008 U	0.008 U	0.008 U
Barium	SPLP	2	1 U	1 U	1 U	1 U
Cadmium	SPLP	0.004	0.004 U	0.004 U	0.004 U	0.004 U
Chromium	SPLP	0.07	0.01 U	0.01 U	0.01 U	0.01 U
Cobalt	SPLP	--	0.05 U	0.05 U	0.05 U	0.05 U
Copper	SPLP	1.3	0.025 U	0.025 U	0.025 U	0.025 U
Lead	SPLP	0.005	0.01 U	0.017	0.032	0.0197
Manganese	SPLP	0.05	0.084	0.021	0.023	0.04267
Mercury	SPLP	0.002	0.0002 U	0.00029	0.0002 U	0.00023
Nickel	SPLP	0.1	0.043	0.04 U	0.04 U	0.041
Selenium	SPLP	0.04	0.05 U	0.05 U	0.05 U	0.05 U
Silver	SPLP	0.04	0.01 U	0.01 U	0.01 U	0.01 U
Zinc	SPLP	2	0.13	0.1 U	0.12	0.117
4,4'-DDD	SPLP	0.0001	0.00002 U	0.00002 U	0.00002 U	0.00002 U
4,4'-DDE	SPLP	0.0001	0.00002 U	0.00002 U	0.00002 U	0.00002 U
4,4'-DDT	SPLP	0.0001	0.00002 U	0.00002 U	0.00002 U	0.00002 U
Dieldrin	SPLP	0.00003	0.00002 U	0.00002 U	0.00002 U	0.00002 U
Benzo(a)anthracene	SPLP	0.0001	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Benzo(a)pyrene	SPLP	0.0001	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Benzo(b)fluoranthene	SPLP	0.0002	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Benzo(k)fluoranthene	SPLP	0.0005	0.0002 U	0.0002 U	0.0002 U	0.0002 U
bis(2-Ethylhexyl)phthalate	SPLP	0.0003	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Chrysene	SPLP	0.0005	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Indeno[1,2,3-cd]pyrene	SPLP	0.0002	0.0002 U	0.0002 U	0.0002 U	0.0002 U

Notes:

Values are in units of milligrams per liter (mg/L).

SPLP - Synthetic precipitation leaching procedure

SVOC - Semivolatile organic compound

"U" Analyte was not detected. The associated value is the detection limit.

UCL - Upper confidence limit

1 - New Jersey ground water standards from New Jersey Administrative Code N.J.A.C 7:9C.

2 - There were not enough analyses to conduct a meaningful UCL for SPLP analysis. A UCL was conducted for TCLP when one or more analytes were detected. Non detected concentrations were assumed to be present at concentrations equal to one-half the detection limit.

**Highlighted cells indicate exceedences with respect to Detection Limit**



**SUBJECT TO JOINT PROSECUTION  
AND CIVIL LIABILITY AGREEMENT  
NOT SUBJECT TO PUBLIC RELEASE  
FOIA/OPRA EXEMPT**

**State of New Jersey**

Department of Environmental Protection

Richard J. Codey  
*Acting Governor*

Bradley M. Campbell  
*Commissioner*

Site Remediation Program  
Office of Dredging and Sediment Technology  
P.O. Box 028  
Trenton, NJ 08625  
(609) 292-1250  
FAX (609) 777-1914

October 6, 2005

Ms. Alice Yeh  
United States Environmental Protection Agency Region 2  
290 Broadway New York, NY 10007-1866

Re: Federal Consistency Determination/Water Quality Certificate  
Lower Passaic River Restoration Project Pilot Study  
City of Newark; Essex County  
NJDEP File No. 0000-04-0020.1

Dear Ms. Yeh:

This letter is forwarded in response to your August 1, 2005 request for a Federal Consistency (FC), as required by Section 307 of the federal Coastal Zone Management Act (16 USC 1451 *et seq.*) and Water Quality Certification (WQC) as required by Section 401 of the federal Clean Water Act (33 USC 1251 *et seq.*) for the dredging of the Lower Passaic River Restoration Project. This FC/WQC serves to authorize a one-time environmental dredging event removing approximately 5,000 cubic yards of sediment from the Passaic River Harrison Reach identified as river mile 2.85.

The subject dredging activity encompasses approximately 1.5-acre area of river bottom or an area 300' in length by 225' in width. The maximum project depth is ~15' below mean low water (MLW) plus 0.5' overdredge. The maximum volume of material to be removed (including overdredge) as part of this dredging pilot is approximately 5,000 cubic yards (cy) of material. The dredged material is to be mechanically dredged via an environmental clamshell bucket, loaded into watertight scows and transferred to the Bayshore Recycling Facility located in Keasbey, NJ. Subsequently, the dredged material will be divided into two quantities of 2,500 cy, respectively and sent to two decontamination technology vendors identified as BioGenesis and the Endesco/ Clean Harbors facility.

The authorized work is identified within the document entitled "Lower Passaic River Dredging Pilot Study", dated June 2005 and in the NJDOT Project Specifications, specifically the section entitled "**DIVISION 200 - EARTHWORK SECTION 201 - DREDGING**". The authorized site plans consist of three sheets entitled "New Jersey Department of Transportation, Office of Maritime Resources, Lower Passaic River Dredging Pilot Study, dated August 2005.

Subsequent to treatment, and prior to final deposition, the treated dredged material is subject to the oversight of the Superfund Innovative Technology Evaluation (SITE) Program Quality Assurance Project Plan (QAPP). It is understood that the EPA and NJDOT will require the two decontamination vendors to apply for and obtain an Acceptable Use Determination (AUD) from the Department prior to final placement of the subject treated dredged material. The decontamination vendor will also be required to

Federal Consistency Determination/Water Quality Certificate  
Lower Passaic River Restoration Project Pilot Study  
NJDEP File No. 0000-04-0020.1

SUBJECT TO JOINT PROSECUTION  
**AND CIVIL LIABILITY AGREEMENT**  
NOT FOR PUBLIC RELEASE  
FOIA/OPRA EXEMPT

secure all necessary permits and approvals for the proposed upland placement site for the material. This information would then be submitted to NJDOT and USEPA as part of the contract procurement procedure for the treatability studies. The Department finds this process acceptable provided the EPA submits a request for an amendment to this federal consistency determination once an acceptable permitted upland site is identified.

The Rules on Coastal Zone Management (N.J.A.C. 7:7E et. Seq.) constitute New Jersey's enforceable policies under its federally approved Coastal Zone Management Program. The Lower Passaic River Restoration Project Pilot Study Dredging Project has been reviewed under the following Rules on Coastal Zone Management: Navigation Channels (7:7E-3.7), Ports (7:7E-3.11), Maintenance Dredging (7:7E-4.6), Dredged Material Disposal (7:7E-4.8), Dredged Material Disposal on Land (7:7E-7.12), Marine Fish and Fisheries (7:7E-8.2) and Water Quality (7:7-8.4). Based on the above summary of details of the project as presented in the August 1, 2005 request for a FC/WQC and supporting information, I have **CONDITIONALLY** determined that Lower Passaic River Restoration Project Study is consistent with the Rules on Coastal Zone Management and New Jersey's federally approved Coastal Management Program provided that all of the activities are performed as depicted on the referenced plans and that all specifications and conditions are adhered to by the applicant.

I have also reviewed this project for potential water quality impacts. Provided that the following conditions are met, I have determined that this project is not likely to cause a violation of New Jersey's Surface Water Quality Standards (N.J.A.C. 7:9B-1.1 et seq.). Therefore, this determination includes the State's Water Quality Certification pursuant to Section 401 of the federal Water Pollution Control Act (33 USC 1251 et seq.) subject to the following conditions:

1. Dredging is prohibited between November 15<sup>th</sup> and May 31<sup>st</sup> of any given year in order to protect the early life stages of winter flounder.
2. All material removed via this project shall only be dredged using a closed clamshell "environmental" bucket dredge.
3. Dredged material shall be placed deliberately in the barge in order to prevent spillage of material overboard.
4. No discharge of dredged material decant water is permitted.
5. The dredge shall be operated so as to maximize the bite of the clamshell bucket.
6. The clamshell bucket shall be lifted slowly through the water column, generally 2 feet per second or less.
7. All barges or scows used to transport sediment shall be of solid hull construction or be sealed with concrete.
8. The gunwales of the dredge scows shall not be rinsed or hosed during dredging.
9. Only bucket rinse water from this project may be discharged into the Passaic River and this shall be limited to conditional release only within the dredging contract area.
10. The bucket rinse water holding tank(s) shall be watertight.

Federal Consistency Determination/Water Quality Certificate  
Lower Passaic River Restoration Project Pilot Study  
NJDEP File No. 0000-04-0020.1

**SUBJECT TO JOINT PROSECUTION  
AND CONFIDENTIALITY AGREEMENT  
NOT FOR PUBLIC RELEASE  
FOIA/OPRA EXEMPT**

11. The bucket rinse water shall be held in a tank a minimum of 24 hours after the last addition of water to the rinse water holding tank. Said water shall only be discharge after the mandatory 24-hour retention time.

Should the contractor wish to reduce the required holding time, the contractor shall demonstrate that the reduced holding time is sufficient to meet a total suspended solids (TSS) background value of 30 mg/L. The total suspended solids shall be determined through gravimetric analysis. No discharge shall be permitted from the rinse water holding tank until the results of the gravimetric analysis have confirmed that the 30-mg/L-background level has been achieved. No additional water shall be added to the rinse water holding tank between the time of sample acquisition and discharge. Upon successful demonstration that the reduced holding time is sufficient to meet the TSS background level of 30 mg/L, the monitoring of TSS may be suspended and the demonstrated settling time shall replace the 24 hour minimum. A successful demonstration of the reduced holding time efficiency shall be determined once three consecutive TSS analyses have confirmed that the 30 mg/L action level has been achieved by the reduced holding time.

Should the contractor wish to demonstrate this reduced holding time, all records including time of last addition of rinse water holding tank, time of TSS sampling and the results of TSS sampling shall be submitted to the NJDEP as soon as they become available, together with a request for a reduced holding time.

12. During pumping of the rinse water from the holding tank, care shall be taken to avoid resuspending or pumping sediment that has settled in the tank.

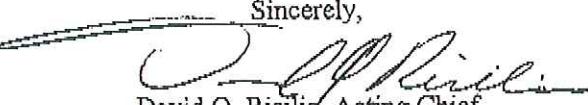
13. REPORTING REQUIREMENTS: At the completion of the environmental dredging pilot, the EPA shall submit the following information to the Department. This information shall be submitted within six months of contract completion.

- Start and finish date of contract
- Post-dredge hydrographic survey
- Completed "Notice of Completion of Work" attached.

14. EPA shall require the two decontamination vendors to apply for and obtain an Acceptable Use Determination (AUD) from the Department prior to final placement of the subject treated dredged material.

Should you have any questions regarding this determination and certification, please do not hesitate to contact me at (609) 292-9342.

Sincerely,



David Q. Risilia, Acting Chief

Office of Dredging and Sediment Technology

Federal Consistency Determination/Water Quality Certificate  
Lower Passaic River Restoration Project Pilot Study  
NJDEP File No. 0000-04-0020.1

C: Lisa Baron, NJDOT, Office of Maritime Resources  
Joanne Cubberley, Bureau of Tidelands Management

**SUBJECT TO JOINT PROSECUTION  
AND CONFIDENTIALITY AGREEMENT  
NOT FOR PUBLIC RELEASE  
FOIA/OPRA EXEMPT**