TABLES

Table H-1. Dredging and Capping Quantities

Parameter	Alternative #2	Alternative #3	Alternative #4
Removal/Capping Areas (acres)			
RM 0.0 to RM 2.6	50	361	361
RM 2.6 to RM 4.6	21	120	120
RM 4.6 to RM 6.0	8	66	66
RM 6.0 to RM 8.3	29	114	114
RM 8.3 to RM 13.9	34	0	34
RM 13.9 to RM 14.9	6	0	6
Total	**147**	**661**	**701**
Removal Depth(s) (ft)			
RM 0.0 to RM 2.6	3.0	2.5 to 18.39	2.5 to18.39
RM 2.6 to RM 4.6	3.0	2.5 to 3.0	2.5 to 3.0
RM 4.6 to RM 6.0	3.0	2.5 to 3.0	2.5 to 3.0
RM 6.0 to RM 8.3	3.0	2.5 to 3.0	2.5 to 3.0
RM 8.3 to RM 13.9	3.0	0	3.0
RM 13.9 to RM 14.9	3.0	0	3.0
Volume of Sediment to Be Dredged (cy)			
RM 0.0 to RM 2.6	114,800	2,686,310	2,686,310
RM 0.0 to RM 2.6 Mudflats	125,239	375,274	375,274
RM 2.6 to RM 4.6	92,848	409,529	409,529
RM 2.6 to RM 4.6 Mudflats	10,391	87,769	87,769
RM 4.6 to RM 6.0	38,387	256,965	256,965
RM 4.6 to RM 6.0 Mudflats	0	15,207	15,207
RM 6.0 to RM 8.3	62,978	317,605	317,605
RM 6.0 to RM 8.3 Mudflats	76,789	155,049	155,049
RM 8.3 to RM 13.9	114,517	0	114,517
RM 8.3 to RM 13.9 Mudflats	50,767	0	50,767
RM 13.9 to RM 14.9	20,139	0	20,139
RM 13.9 to RM 14.9 Mudflats	6,955	0	6,955
Total	**713,810**	**4,303,708**	**4,496,086**
Volume of Capping Materials (cy)			
RM 0.0 to RM 2.6	114,800	658,209	658,209
RM 0.0 to RM 2.6 Mudflats	125,239	760,107	760,107
RM 2.6 to RM 4.6	92,848	399,185	399,185
RM 2.6 to RM 4.6 Mudflats	10,391	85,552	85,552
RM 4.6 to RM 6.0	38,387	250,475	250,475
RM 4.6 to RM 6.0 Mudflats	0	14,823	14,823
RM 6.0 to RM 8.3	62,978	309,583	309,583
RM 6.0 to RM 8.3 Mudflats	76,789	151,133	151,133
RM 8.3 to RM 13.9	114,517	0	114,517
RM 8.3 to RM 13.9 Mudflats	50,767	0	50,767
RM 13.9 to RM 14.9	20,139	0	20,139
RM 13.9 to RM 14.9 Mudflats	6,955	0	6,955
Total	**713,810**	**2,629,066**	**2,821,445**

Notes:
cy = cubic yard
RM = river mile

FOIA_001406_0082002

Table H-2. Dredge Production Rates

Parameter	Alternative #2	Alternative #3	Alternative #4
Number and Size of Dredges			
RM 0.0 to RM 2.6	1 - 10 cy dredge	1 - 10 cy dredge	1 - 10 cy dredge
RM 0.0 to RM 2.6 Mudflats	1 - 5 cy dredge	1 - 5 cy dredge	1 - 5 cy dredge
RM 2.6 to RM 4.6	1 - 10 cy dredge	1 - 10 cy dredge	1 - 10 cy dredge
RM 2.6 to RM 4.6 Mudflats	1 - 3 cy dredge	1 - 3 cy dredge	1 - 3 cy dredge
RM 4.6 to RM 6.0	1 - 5 cy dredge	1 - 5 cy dredge	1 - 5 cy dredge
RM 4.6 to RM 6.0 Mudflats	1 - 3 cy dredge	1 - 3 cy dredge	1 - 3 cy dredge
RM 6.0 to RM 8.3	1 - 5 cy dredge	1 - 5 cy dredge	1 - 5 cy dredge
RM 6.0 to RM 8.3 Mudflats	1 - 3 cy dredge	1 - 3 cy dredge	1 - 3 cy dredge
RM 8.3 to RM 13.9	1 - 5 cy dredge	NA	1 - 5 cy dredge
RM 8.3 to RM 13.9 Mudflats	1 - 3 cy dredge	NA	1 - 3 cy dredge
RM 13.9 to RM 14.9	Land Based Removal	NA	Land Based Removal
RM 13.9 to RM 14.9 Mudflats	Land Based Removal	NA	Land Based Removal
Small Dredge (3 cy Dredge)			
Average Dredge Uptime	55%	55%	55%
Percent Solids of Dewatered Sediment	65	65	65
Oversized Debris	7%	7%	7%
Bucket Efficiency[a]	70 - 80%	70 - 80%	70 - 80%
Bucket Cycle Time[b]	3 - 4 minutes	3 - 4 minutes	3 - 4 minutes
Medium Dredge (5 cy Dredge)			
Average Dredge Uptime	55%	55%	55%
Percent Solids of Dewatered Sediment	65	65	65
Oversized Debris	7%	7%	7%
Bucket Efficiency	70 - 80%	70 - 80%	70 - 80%
Bucket Cycle Time	3 - 4 minutes	3 - 4 minutes	3 - 4 minutes
Large Dredge (10 cy Dredge)			
Average Dredge Uptime	65%	65%	65%
Percent Solids of Dewatered Sediment	65	65	65
Oversized Debris	7%	7%	7%
Bucket Efficiency	70 - 80%	70 - 80%	70 - 80%
Bucket Cycle Time	3 - 4 minutes	3 - 4 minutes	3 - 4 minutes
Dredge Operational Parameters			
Fish Window for Dredging	138 days	138 days	138 days
Available Time for Dredging	24 hours/day	24 hours/day	24 hours/day
Effective Dredge Daily Operating Time	22 hours/day	22 hours/day	22 hours/day
Effective Dredge Weekly Operating Time	6 days/week	6 days/week	6 days/week
Dredging Production Rates (cy/day)[c]			
RM 0.0 to RM 2.6	1,936	1,936	1,936
RM 0.0 to RM 2.6 Mudflats	818	818	818
RM 2.6 to RM 4.6	1,936	1,936	1,936
RM 2.6 to RM 4.6 Mudflats	477	477	477
RM 4.6 to RM 6.0	818	818	818
RM 4.6 to RM 6.0 Mudflats	477	477	477

FOIA_001406_0082003

Table H-2. Dredge Production Rates

Parameter	Alternative #2	Alternative #3	Alternative #4
RM 6.0 to RM 8.3	818	818	818
RM 6.0 to RM 8.3 Mudflats	477	477	477
RM 8.3 to RM 13.9	818	NA	818
RM 8.3 to RM 13.9 Mudflats	477	NA	477
RM 13.9 to RM 14.9	477	NA	477
RM 13.9 to RM 14.9 Mudflats	477	NA	477

Notes:

cy = cubic yard

NA = not applicable

RM = river mile

[a]Specific bucket efficiencies selected within range based on Adair (2004), *Estimating Production and Cost for Clamshell Mechanical Dredges,* and best professional judgment.

[b]Bucket cycle time range in accordance with U.S. Army Corps of Engineers (USACE) guidelines (see note c). Specific bucket cycle times selected within range based on best professional judgment.

[c]USACE 2008, *Technical Guidelines for Environmental Dredging of Contaminated Sediments,* Chapter 6.3.2: Mechanical production rates based on operating parameters.

Table H-3. Cap Placement Rates

Parameter	Alternative #2	Alternative #3	Alternative #4
Number and Size of Dredges			
RM 0.0 to RM 2.6	2 - 10 cy dredge	2 - 10 cy dredge	2 - 10 cy dredge
RM 0.0 to RM 2.6 Mudflats	2 - 5 cy dredge	2 - 5 cy dredge	2 - 5 cy dredge
RM 2.6 to RM 4.6	1 - 10 cy dredge	1 - 10 cy dredge	1 - 10 cy dredge
RM 2.6 to RM 4.6 Mudflats	1 - 5 cy dredge	1 - 5 cy dredge	1 - 5 cy dredge
RM 4.6 to RM 6.0	1 - 5 cy dredge	1 - 5 cy dredge	1 - 5 cy dredge
RM 4.6 to RM 6.0 Mudflats	1 - 5 cy dredge	1 - 5 cy dredge	1 - 5 cy dredge
RM 6.0 to RM 8.3	1 - 5 cy dredge	1 - 5 cy dredge	1 - 5 cy dredge
RM 6.0 to RM 8.3 Mudflats	1 - 5 cy dredge	1 - 5 cy dredge	1 - 5 cy dredge
RM 8.3 to RM 13.9	1 - 5 cy dredge	NA	1 - 5 cy dredge
RM 8.3 to RM 13.9 Mudflats	1 - 5 cy dredge	NA	1 - 5 cy dredge
RM 13.9 to RM 14.9	Land Based	NA	Land Based
RM 13.9 to RM 14.9 Mudflats	Land Based	NA	Land Based
Capping Operational Parameters			
Fish Window for Capping	138 days	138 days	138 days
Effective Capping Daily Operating Time	11 hours/day	11 hours/day	11 hours/day
Effective Capping Weekly Operating Time	6 days/week	6 days/week	6 days/week
Capping Placement Rates (cy/day)			
RM 0.0 to RM 2.6	4,402	4,402	4,402
RM 0.0 to RM 2.6 Mudflats	2,201	2,201	2,201
RM 2.6 to RM 4.6	2,201	2,201	2,201
RM 2.6 to RM 4.6 Mudflats	1,041	1,041	1,041
RM 4.6 to RM 6.0	1,041	1,041	1,041
RM 4.6 to RM 6.0 Mudflats	1,041	1,041	1,041
RM 6.0 to RM 8.3	1,041	1,041	1,041
RM 6.0 to RM 8.3 Mudflats	1,041	1,041	1,041
RM 8.3 to RM 13.9	1,041	NA	1,041
RM 8.3 to RM 13.9 Mudflats	1,041	NA	1,041
RM 13.9 to RM 14.9	520	NA	520
RM 13.9 to RM 14.9 Mudflats	520	NA	520

Notes:
cy = cubic yard
NA = not applicable
RM = river mile

FOIA_001406_0082005

Table H-4. Sediment Processing and Disposal Quantities

Parameter	Alternative #2	Alternative #3	Alternative #4
***In Situ* Sediment**			
Solids Content Prior to Dewatering (% by weight)	56	51	51
Specific Gravity	1.51	1.44	1.44
% Debris	5	5	5
Density of Debris (tons/cy)	2.0	2.0	2.0
Sediment Processing and Water Treatment			
Filter Cake Percent Solids (% by weight)	65	65	65
Treated *In Situ* Volume - Dewatering (cy)	678,120	4,088,523	4,271,282
Treated Water (MG)	111	584	610
Water Demand for Slurry Flow (MG)	83	327	342
Area for Process Plant (acres)	24	24	24
Transportation and Disposal			
Rail Cars Required Per Day[a]	20	20	20
Dewatered Sediment Disposal Weight (tons)	740,848	3,892,066	4,066,044
Debris Disposal Weight (tons)	71,381	430,071	449,609
Confined Aquatic Disposal (CAD)			
Number of Cells	1	2	2
Area (acres)	12.91	75.76	82.64
Volume to Upland Processing and Disposal (cy)	81,568	241,375	263,479
Volume to CAD (cy)	0	241,375	263,479
Volume to HARS (cy)	769,214	4,992,953	5,485,218
Cap Volume (cy)	61,505	363,211	396,411

Notes:

cy = cubic yard

HARS = Historic Area Remediation Site (located about 6 miles off Sandy Hook, New Jersey, in the Atlantic Ocean)

MG = million gallons

[a]Assumes standard gondola railcars with capacity to hold 100 tons of filter cake and maximum filter cake production of 2,000 tons per day.

FOIA_001406_0082006

Table H-5. Construction Duration

Parameter	Alternative #2	Alternative #3	Alternative #4
Construction Duration (years)			
Mobilization and Plant Construction	0.50	0.50	0.50
Dredging and Processing			
RM 0.0 to RM 2.6	0.43	10.05	10.05
RM 0.0 to RM 2.6 Mudflats	1.11	3.33	3.33
RM 2.6 to RM 4.6	0.35	1.53	1.53
RM 2.6 to RM 4.6 Mudflats	0.16	1.33	1.33
RM 4.6 to RM 6.0	0.34	2.28	2.28
RM 4.6 to RM 6.0 Mudflats	0.00	0.23	0.23
RM 6.0 to RM 8.3	0.56	2.81	2.81
RM 6.0 to RM 8.3 Mudflats	1.17	2.36	2.36
RM 8.3 to RM 13.9	1.01	0.00	1.01
RM 8.3 to RM 13.9 Mudflats	0.77	0.00	0.77
RM 13.9 to RM 14.9	0.31	0.00	0.31
RM 13.9 to RM 14.9 Mudflats	0.11	0.00	0.11
Dredging and Processing Subtotal	6.31	23.93	26.13
Capping at End of Dredging and Demobilization	0.52	0.52	0.52
Total Construction Duration	**7.33**	**24.95**	**27.15**

Notes:
RM = river mile

FOIA_001406_0082007