

Draft Technical Report
for
Tentative Cleanup and Abatement
Order No. ~~R9-2011-0001~~R9-2012-0024

APPENDIX FOR SECTION 17

ALTERNATIVE REFERENCE POOLS

~~September 15, 2010~~March 14, 2012

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Table A17-1 2003 Final Reference Pool

Regional Board Recommended Final Reference Pool for NASSCO and BAE Systems (formerly Southwest Marine) Sediment Investigation¹

Study	Station
2001 Chollas/Paletta	2238
	2433
2001 NASSCO/ BAE Systems (formerly Southwest Marine)	2441
	2433
	2243
Bight'98	2231
	2233
	2238
	2240
	2241
	2242
	2243
	2244
	2247
	2252
	2256
	2257
	2265
	2433
2435	
2436	
2440	

1. Regional Water Quality Control Board – San Diego. “Regional Board Position on a Reference Pool for the NASSCO, Southwest Marine, Mouth of Chollas Creek, and Seventh Street Channel Sediment Investigations. June 9, 2003.”

Table A17-2 San Diego Bay Council Reference Pool

San Diego Bay Council Recommended Reference Pool for NASSCO and BAE Systems (formerly Southwest Marine) Sediment Investigation²

Study	Station
Bight'98	2227
	2229
	2252
	2433
	2434
	2435
	2441

2. San Diego Bay Council – Elaine M. Carlin, Scientific Consultant. “Selecting a Pool of Reference Stations for San Diego Bay - April 28, 2003.”

Table A17-3 NOAA Reference Pool

NOAA Recommended Reference Pool for NASSCO and BAE Systems (formerly Southwest Marine) Sediment Investigation³

Study	Station
2001 Chollas/Paleta	2243
	2433
	2243
2001 NASSCO/ BAE Systems (formerly Southwest Marine)	2441
	2433
	2243
Bight'98	2224
	2227
	2228
	2229
	2231
	2233
	2239
	2242
	2243
	2433
	2434
	2435
	2436
2440	

3. NOAA - Donald MacDonald and Denise Klimas. "An Approach for Selecting a San Diego Bay Reference Envelope to Evaluate Site-Specific Reference Stations - January 16, 2003."

Table A17-4 Comparison of Mean Values Between the 2003 Final Reference Pool, San Diego Bay Council Reference Pool, and NOAA Reference Pool

Sediment Chemistry ²	Units	Mean Values ¹		
		2003 Final Pool	Bay Council Pool	NOAA Pool
		n = 22	n = 7	n = 20
Arsenic	mg/kg	5.45	6.76	5.45
Cadmium	mg/kg	0.14	0.16	0.15
Chromium	mg/kg	30.8	31.8	32.3
Copper	mg/kg	56.7	54.9	54.9
Lead	mg/kg	23.5	19.7	23.1
Mercury	mg/kg	0.26	0.18	0.28
Nickel	mg/kg	9.37	11.1	9.87
Silver	mg/kg	0.52	0.56	0.50
Zinc	mg/kg	112	103	109
Total PP-PAHs³	µg/kg	346	803	513
Total PCBs	µg/kg	43.3	51.3	42.0
Toxicity				
Amphipod Survival (control-adjusted)	%	95	98	95
Benthic Community				
BRI-E⁴	unitless	27.6	15.1	26.0

1. Sediment quality data taken from April 10,2003 document produced by SCCWRP, Navy, and Exponent (Bay et. al., 2003).
2. One-half of the method detection limit was substituted for nondetect values, except for the Shipyard data, where one-half of the reporting was used (Bay et. al., 2003).
3. Total PP-PAHs = Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benz[a]anthracene, Chrysene, Benzo[b]fluoranthene, Benzo[k]fluoranthene, Benzo [a] pyrene, Indeno [1,2,3-cd]pyrene, Dibenz[a,h]anthracene, and Benzo[ghi]perylene.
4. BRI-E = Benthic Response Index – Embayments