

## **APPENDIX B**

### **DATA QUALITY AND STATUS**

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All analytical data were subjected to a quality assurance and quality control (QA/QC) review conducted by EcoChem, Incorporated located in Seattle. Validation reports are included in Appendix A. Field replicate results for chemical and conventional data are provided in the table at the end of this appendix. The following discussion summarizes the information in the validation reports.

### **B.1 GRAIN SIZE AND OTHER PARAMETER DATA**

- Field triplicate analysis for grain size was performed on two sample groups. Precision was acceptable for one group. Results for the other group showed some variability in the mid-range between 15.6 and 125 microns, but was acceptable above and below this range.
- Results of sulfide analysis for 13 samples were assigned a "J" qualifier due to exceedence of holding time criteria, and 13 other sulfide results were assigned a "J" qualifier due to a high relative percent difference (RPD) value of laboratory triplicate analyses. Field replicates for sulfide had percent relative standard deviation (%RSD) out of control limits, possibly due to sample heterogeneity and holding time exceedences. Field replicate analyses for all other analytes were within control limits, and no qualifiers were necessary.
- For one set of field triplicate samples, the analysis of ammonia for Sample DAC-HY-19 was 11.4 mg/kg. The results in Samples DAC-HY-31 and DAC-HY-32 (two field replicates of DAC-HY-19) were 25.3 mg/kg and 28.9 mg/kg, respectively. Sample DAC-HY-19 was reanalyzed for ammonia, past holding time, and the result was 28.0 mg/kg.

Overall, precision and accuracy were acceptable. Qualifiers were assigned for sulfide results. The data, as qualified, were deemed acceptable by EcoChem.

## **B.2 CHEMICAL DATA**

### **B.2.1 Total Acid Digestion Metals**

Analytical data for 36 sediment samples and 2 field blank (filter) samples were reviewed using NOAA (1995) QC criteria. The laboratory followed the NOAA (1995) requirements for QC sample frequency of analysis, acceptance criteria, and corrective action processes. Data qualifiers were assigned as follows:

- Mercury results for all samples were qualified as estimated (UJ), due to holding time exceedences and presence in method blank samples, at the reporting limit.
- Cadmium results in nine samples were qualified as not detected (U) due to their presence in method blank samples.
- All arsenic results were qualified as estimated (J) due to standard reference material (SRM) recoveries that were less than the certified lower control limit.

For the analysis of antimony, accuracy could not be determined as all SRM certified values were less than the laboratory method detection limit (MDL), or the measured values were less than three times the MDL. Target MDLs were not met for antimony, arsenic, chromium, lead, mercury, nickel, and zinc. No qualification of data was necessary, and data usability was determined not to be affected.

### **B.2.2 Organotin Compounds**

The laboratory followed the quality assurance plan requirements (NOAA 1995) for QC samples frequency of analysis, acceptance criteria, and corrective action processes. Precision of organotin compounds results, as measured by the RPD between duplicate sample pairs, was acceptable. Accuracy, as measured by the percent recovery of the SRMs, was acceptable for all organotin compounds species. NOAA (1995) QA/QC requirements were met, and all organotin compounds data as reported are acceptable for use.

### B.2.3 Aromatic Hydrocarbons

General analytical methodology as outlined by NOAA (1995) and laboratory standard operating procedure (SOP) were followed. Qualified data and reasons for assigning qualifiers are as follows:

- The method blank for one laboratory batch contained low levels of naphthalene, fluoranthene, and pyrene. Only the naphthalene result for the filter blank, DAC-HY-05CCB, was qualified as not detected (U) at the reported concentration.
- Bottle blanks DAC-HY-11 and DAC-HY-22 and filter blank DAC-HY-05CCB contained low levels of naphthalene. The naphthalene result for DAC-HY-05CCB was qualified as described above (U). All sample results were significantly greater than 10 times the bottle blank concentrations, so no qualifiers were assigned on this basis.
- Percent RSDs calculated for laboratory replicates exceeded the criterion of 50 percent for 2-methylnaphthalene, fluorene, phenanthrene, anthracene, fluoranthene, and pyrene in Sample DAC-HY-03. Percent RSDs exceeded 50 percent for fluorene and anthracene in Sample DAC-HY-16. Qualification of data due to laboratory replicate precision outliers will apply only to the samples used for replicate analysis. Positive results for the compounds with high percent relative standard deviation (%RSD) values are estimated (J) in the replicate samples.
- Because of matrix spike/matrix spike duplicate (MS/MSD) performance, all positive results for phenanthrene and fluoranthene in one laboratory batch were qualified as estimated (J).
- Method detection limits listed by the laboratory for four analytes (2-methylnaphthalene, acenaphthalene, fluorene, and dibenz(a,h)anthracene) were greater than the MDL specified in Table 6.1 of the quality assurance plan (NOAA, 1995). With the exception of the 2-methylnaphthalene result for Sample DAC-HY-02A, all reported results for these compounds were significantly greater than the calculated MDL, so no action was required. For analytes that were not detected, the laboratory calculated a sample-specific reporting limit based upon the response of the lowest standard, sample weight, and percent moisture. However, the only analyses that do not have positive results for all compounds are the bottle and filter blanks and the reference samples. All field sample results are significantly greater than the reporting limit and calculated MDL, so sample results were judged not to be affected.

Accuracy, as demonstrated by the recovery values of most of the surrogate, matrix spike, and SRM compounds, was acceptable. Precision, as demonstrated by the RSD of the replicate concentrations of the SRM and by the RPD of the MS/MSD pairs, was acceptable. The data, as qualified, are acceptable for use.

#### **B.2.4 Phthalates, Phenols, Chlorinated Benzenes, and Hexachlorobutadiene**

The laboratory followed NOAA (1995) requirements for QC sample frequency of analysis, acceptance criteria, and corrective action processes. Accuracy was acceptable, as demonstrated by the percent recovery values of most of the surrogate and matrix spiking compounds. Precision, as demonstrated by the RPD of the MS/MSD pairs, was acceptable. Data were qualified because of calibration outliers, method blank contamination, a low surrogate compound percent recovery value, poor laboratory replicate precision, and MS/MSD percent recovery outliers. The data, as qualified, are acceptable for use. Qualifiers were assigned as follows:

- Positive results for di-n-octyl-phthalate in one laboratory batch were qualified as estimated (J) because the initial calibration correlation coefficient of 0.9824 was less than the specified (NOAA, 1995) value of 0.990.
- Seven of 16 target compounds were detected in all of method blanks. Action levels were established at 10 times the concentration detected in method blanks, and all associated sample results less than the action levels were qualified as not detected (U) at the reported concentrations.
- Phenol was detected in all method blanks at concentrations greater than 3 times the MDL. Phenol was also detected in all field samples, including bottle blank and filter blank samples. An action level for phenol was established using a criterion similar to that used to assess the SRM results. All associated phenol results less than the action level (18.3 ng/g) were qualified as not detected (U) at the reported concentrations.
- Surrogate spike recovery for dibenzyl phthalate was less than the lower control limit at 35 percent in Sample DAC-HY-24. Dibenzyl phthalate was used to calculate the concentrations of all of the phthalate target compounds. The phthalate target compounds in Sample DAC-HY-24 are qualified as estimated (J for positive results and UJ for reporting limits of nondetected compounds) due to low recovery.

- Results of laboratory replicate analysis for di-n-octyl phthalate (DAC-HY-16) and diethyl phthalate (DAC-HY-28) had percent RSD exceeding the specified (NOAA, 1995) goal of 50 percent. Positive results for the compounds with high percent RSD values are estimated (J) in the replicate samples.
- Because of MS/MSD performance, all positive results for bis(2-ethylhexyl)phthalate not previously qualified due to calibration outliers are estimated (J).
- The laboratory method for reporting detection limits does not agree with Table 6.1 of the quality assurance plan (NOAA, 1995). However, most reported positive results are greater than the reporting limit and calculated MDL, or are qualified as not detected (U) due to blank contamination. Therefor, no qualifier was assigned on the basis of the laboratory's method of reporting detection limits.

## B.2.5 Pesticides, PCBs, and Hexachlorobenzene

The laboratory followed requirements (NOAA, 1995) for QC sample frequency of analysis, acceptance criteria, and corrective action processes. A summary of qualified data and reasons is as follows:

- Percent difference values for continuing calibration were less than the specified 10 percent, so no data were qualified on the basis of calibration parameter exceedences.
- Hexachlorobenzene was detected at a low concentration in the method blank extracted with one laboratory batch. Action levels were established at 10 times the concentration detected in the method blank. All associated hexachlorobenzene sample results were greater than the action levels, with the exception of Sample DAC-HY-02, which was qualified as not detected (U) at the reported concentration.
- Chlorobiphenyl congeners were detected in all of the method blanks at low levels, and 4 of the 17 congeners were detected in each method blank. All associated sample results less than the action level of 10 times the concentration detected in the method blank have been qualified as not detected (U) at the reported concentrations.
- Surrogate spike recoveries were within control limits specified by NOAA (1995), with the exception of Sample DAC-HY-34. All positive results in this sample are qualified as estimated (J), and the detection limits for non-detected compounds are qualified as estimated (UJ).

- Because of laboratory replicate analysis performance, positive results for alpha- and gamma-chlordane and chlorobiphenyl congener 153 (Sample DAC-HY-16) and for p,p'-DDT and chlorobiphenyl congener 195 (Sample DAC-HY-28) are estimated (J) in the replicate samples.
- No data were qualified on the basis of differences between the NOAA (1995) specified method for reporting MDLs and the laboratory's use of a method for calculating a sample-specific reporting limit rather than reporting MDLs.
- General analytical methodology as outlined in the quality assurance plan (NOAA, 1995) and laboratory SOP were followed. Accuracy, as demonstrated by the recovery values of most of the surrogate and matrix spike compounds, was acceptable. Precision, as demonstrated by the RPD of the MS/MSD pairs, was acceptable. Data qualifiers were issued due to method blank contamination, a low surrogate recovery, and poor laboratory replicate precision. The data, as qualified, are acceptable for use.

## B.2.6 Volatile Organic Compounds

The laboratory followed QC analytical criteria specified by EVS (1994b). Two sample data groups were analyzed.

- All QC criteria were met for one data group, and no qualifiers were assigned.
- For the second data group, all samples were analyzed within the specified holding period of 14 days, with the exception of the rinsate blank DAC-HY-19VB (17 days) and the trip blank (22 days). No target compounds were detected in either sample. Due to the possible low bias, the detection limits were qualified as estimated (UJ) for all target compounds in the second data group.

For the volatile organic compound analysis, precision is acceptable, as demonstrated by the RPD values of the MS/MSD analyses. Accuracy is acceptable, as demonstrated by MS/MSD and laboratory control sample recovery values. All data, as qualified, are acceptable for use.

## B.3 TOXICITY TEST DATA

Three standardized sediment toxicity tests were conducted: a 10-day amphipod test using *Rhepoxynius abronius*, a 20-day juvenile polychaete growth test using *Neanthes arenaceodentata*, and a 48-hour echinoderm larval test using *Dendraster excentricus*. Five

replicates were used for each sediment bioassay type. Sediment collected from West Beach, Whidbey Island was used as a negative control for all three bioassays.

Based on an independent data review, the data for amphipod, juvenile polychaete, and echinoderm larvae were deemed acceptable for use with the following qualifications for each test.

### **B.3.1 Amphipod Mortality Test**

The starting temperature in the positive control in Setup #1 was measured at 17°C. The elevated temperature does not appear to have affected the results. Crabs and several small starfish were observed in several of the test sediment replicates. Several replicates were missing amphipods at the termination of the test. Comparisons between mean amphipod survival from these stations and mean control survival were not summarized with the data; therefore no determinations were made to evaluate if the presence of crabs or starfish had a significant effect on the bioassay results for these particular sediments.

### **B.3.2 Juvenile Polychaete Growth Test**

Temperature measurements exceeded recommended test conditions (22 °C) during the first two days of Setup #1, and in the positive control in Setups #1 and #2. The salinity of some samples fell outside of the lower and upper values (measurements ranged from 24 to 33 ppt) specified in the protocols, but do not appear to have affected the test results. Several of the dissolved oxygen (DO) measurements made during the test did not meet acceptance criteria. Percent survival does not appear to have been affected by the occasional drop in DO in replicate jars.

### **B.3.3 Echinoderm Larval Mortality and Abnormality Test**

Test sediments were analyzed within the recommended holding times, except for samples DAC-HY-13T, DAC-HY-14T, DAC-HY-15T, DAC-HY-16T, DAC-HY-17T, DAC-HY-18T, DAC-HY-19T, and DAC-HY-25T, which were analyzed 1 or 2 days outside the recommended holding time of 14 days. Results for these samples are acceptable with proper holding conditions for sediments.

Inoculation density in Setup #1 was 15,400 embryos/L and in Setup #2 was 18,500 embryos/L. The SOP stated that recommended density is 20,000 to 40,000 embryos/L. Several samples showed survival recovery greater than controls, which resulted in negative mortality data. This may have been caused by initial inoculation and enumeration procedures.

Temperatures were measured at 16.5°C for the majority of the samples in Setup #1 (recommended range 15.0°C to 16°C), and temperature was measured at 17°C in the positive control for Setup #2. No data were available to determine if the elevated temperatures affected the bioassay results.

A few samples exceeded the upper salinity value (samples ranged from 29 to 32 ppt). The higher salinities should not have affected the test results.

One DO measurement was recorded below 60 percent saturation at 4.6 mg/L (sample range was 7.0 to 9.0 mg/L) in the water quality jar for station DAC-HY-23T. Since DO levels were measured at acceptable levels in each replicate at the termination of the test, this probably did not significantly affect the test results.

Water quality measurements recorded for each sample replicate upon termination of each bioassay generally indicated that acceptable water quality conditions existed for all tests.

#### **B.4 BENTHIC ORGANISM IDENTIFICATION AND ABUNDANCE DATA**

Benthic infauna samples were collected using a 0.06-m<sup>2</sup> van Veen grab sampler and sieved through a 1.0-mm screen. Materials retained on the screen were transferred to sample containers and fixed with a 10 percent solution of buffered formalin. In the laboratory samples were preserved in a 70 percent ethanol solution for sorting. Species were then identified and enumerated to the lowest practical taxonomic level.

All benthic data were deemed acceptable; no significant problems were encountered during the taxonomic review. The samples submitted for independent review (identification and enumeration) met the variability criterion of 5 percent or less.

## **Measurement of Conventional and Emerging Contaminants in Surface Sediments of the Hylebos Waterway for Field Replicates (mg/kg DW)**

Station	Sample	Clay, percent	Gravel, percent	Sand, percent	Slit, percent	Total solids	Total volatile solids	Ammonia-nitrogen	Sulfides	Total organic carbon
		Conc.	Qual.	Conc.	Qual.	Conc.	Qual.	Conc.	Conc.	Conc.
DAC-HY-06	06C	18.0	1.00	45.0	36.0	57.2	24400	15.6	719	1.93
DAC-HY-06	33C	21.0	3.00	43.0	33.0	58.1	24000	13.0	310	1.83
DAC-HY-06	34C	17.0	1.00	46.0	36.0	52.2	26300	16.5	224	1.98
DAC-HY-19	19C	27.0	0.00	24.0	49.0	45.9	40100	11.4	941	J 3.85
DAC-HY-19	31C	28.0	0.00	21.0	51.0	44.5	38600	25.3	996	J 3.54
DAC-HY-19	32C	26.0	0.00	25.0	49.0	44.2	37000	28.9	849	J 3.08

## Concentrations of Metals in Surface Sediments of Hylebos Waterway for Field Replicates using Strong Acid (mg/kg)

## Concentration of Metals in Surface Sediments of the Hylebos Waterway for Field Replicates using Total Acid Digestion (mg/kg DW)

Station	Sample	Antimony	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Silver	Zinc
		Conc.	Qual.	Conc.	Qual.	Conc.	Qual.	Conc.	Qual.	Conc.	Qual.
DAC-HY-06	06C	3.05	15.0	0.405	U	31.0	79.1	73.9	0.281	UJ	0.264
DAC-HY-06	38C	20.1	28.2	0.378		28.5	90.7	66.1	1.77		142
DAC-HY-06	34C	6.95	14.8	0.405		43.3	81.7	85.9	1.66		163
DAC-HY-19	19C	14.1	40.1	0.529		33.6	135	95.5	2.70		160
DAC-HY-19	31C	10.3	18.3	0.655		33.9	133	116	0.450		217
DAC-HY-19	32C	19.7	95.1	0.580		33.6	127	124	0.401		203
DAC-HY-19	33C	19.7	95.1	0.580		33.6	127	124	0.401		290

## Concentration of Organotin Compounds in Surface Sediments of the Hylebos Waterway for Field Replicates (ug/kg DW)

Station	Sample	Monobutyltin		Dibutyltin		Tributyltin		Tetrabutyltin	
		Conc.	Qual.	Conc.	Qual.	Conc.	Qual.	Conc.	Qual.
DAC-HY-06	06C	7.31	U	7.31	U	35.1	U	7.31	U
DAC-HY-06	33C	8.47	U	19.5	U	78.3	U	8.47	U
DAC-HY-06	34C	7.70	U	22.7	U	44.2	U	7.70	U
DAC-HY-19	19C	9.78	U	55.7	U	218	U	9.77	U
DAC-HY-19	31C	7.03	U	30.1	U	147	U	7.03	U
DAC-HY-19	32C	9.40	U	49.0	U	252	U	9.40	U

**Concentrations of Semivolatile Organic Compounds in Surface Sediments of the Hylebos Waterway for Field Replicates (ug/kg DW)**

Station	Sample	2-Methylnaphthalene		Acenaphthene		Acenaphthylene		Anthracene		Fluorene		Total low molecular weight PAHs	
		Conc.	Qual.	Conc.	Qual.	Conc.	Qual.	Conc.	Qual.	Conc.	Qual.	Conc.	Qual.
DAC-HY-06	06C	130		110		19.0		270		150		1470	
DAC-HY-06	33C	95.0		74.0		25.0		260		110		1190	
DAC-HY-06	34C	260		340		34.0		720		440		3760	
DAC-HY-19	19C	83.0		140		26.0		450		150		2030	
DAC-HY-19	31C	65.0		40.0		21.0		240		67.0		968	
DAC-HY-19	32C	78.0		60.0		25.0		350		90.0		1420	

#### **Concentrations of Semivolatile Organic Compounds in Surface Sediments of the Hylebos Waterway for Field Replicates (ug/kg DW) (Continued)**

Station	Sample	Naphthalene Conc.	Naphthalene Qual.	Phenanthrene Conc.	Phenanthrene Qual.	Dibenz(a,h)anthracene Conc.	Dibenz(a,h)anthracene Qual.	Benz(a)anthracene Conc.	Benz(a)anthracene Qual.	Benzo(a)pyrene Conc.	Benzo(a)pyrene Qual.	Benzo(g,h,i)perylene Conc.	Benzo(g,h,i)perylene Qual.	Chrysene Conc.	Chrysene Qual.	
DAC-HY-06	06C	260	260	660	61.0	61.0	420	410	420	430	250	260	610	630		
DAC-HY-06	33C	230	230	490	70.0	70.0	420	430	600	600	360	360	1200	1200		
DAC-HY-06	34C	730	730	1500	96.0	96.0	930	930	1100	850	940	940	2200	2200		
DAC-HY-19	19C	160	160	1100	200	200	750	750	960	180	880	880	2000	2000		
DAC-HY-19	31C	140	140	460	180	180	220	220	970	570	1200	1200	1100	1100		
DAC-HY-19	32C	330	330	570	220	220							2700	2700		

**Concentrations of Semivolatile Organic Compounds in Surface Sediments of the Hylebos Waterway for Field Replicates (ug/kg DW) (Continued)**

Station	Sample	Fluoranthene Conc.	Fluoranthene Qual.	Total high molecular weight PAHs Conc.	Total high molecular weight PAHs Qual.	Indeno(1,2,3-c,d)pyrene Conc.	Indeno(1,2,3-c,d)pyrene Qual.	Pyrene Conc.	Pyrene Qual.	Total benzofluoranthenes Conc.	Total benzofluoranthenes Qual.	2-Methylphenol Conc.	2-Methylphenol Qual.
DAC-HY-06	06C	970	970	5200	5200	250	250	1300	1300	930	930	6.30	U
DAC-HY-06	33C	1100	1100	5540	5540	280	280	1400	1400	950	950	4.30	U
DAC-HY-06	34C	2700	2700	10300	10300	360	360	2700	2700	1400	1400	7.00	U
DAC-HY-19	19C	2200	2200	15500	15500	800	800	3800	3800	3400	3400	7.50	U
DAC-HY-19	31C	1700	1700	13300	13300	710	710	2700	2700	3400	3400	8.00	U
DAC-HY-19	32C	4500	4500	20800	20800	900	900	5100	5100	4100	4100	6.70	U

**Concentrations of Semivolatile Organic Compounds in Surface Sediments of the Hylebos Waterway for Field Replicates (ug/kg DW) (Continued)**

Station	Sample	2,4-Dimethylphenol		4-Methylphenol		Pentachlorophenol		Phenol		1,2-Dichlorobenzene		1,2,4-Trichlorobenzene		1,3-Dichlorobenzene	
		Conc.	Qual.	Conc.	Qual.	Conc.	Qual.	Conc.	Qual.	Conc.	Qual.	Conc.	Qual.	Conc.	Qual.
DAC-HY-06	06C	6.10		20.0		35.0	J	40.0		10.0		97.0		11.0	
DAC-HY-06	33C	8.20		25.0		33.0		33.0		5.20		46.0		5.60	
DAC-HY-06	34C	15.0		37.0		29.0		37.0		12.0		110		19.0	
DAC-HY-19	19C	9.70		42.0		72.0	J	44.0		6.70		40.0		7.00	
DAC-HY-19	31C	9.50		42.0		56.0		47.0		7.20		39.0		6.30	
DAC-HY-19	32C	8.30		43.0		83.0		46.0		6.40		42.0		7.40	

#### **Concentrations of Semivolatile Organic Compounds in Surface Sediments of the Hylebos Waterway for Field Replicates (ug/kg DW) (Continued)**

Station	Sample	1,4-Dichlorbenzene	Hexachlorbutadiene	Di-n-octyl phthalate	Bis(2-ethylhexyl)phthalate	Butylbenzyl phthalate	Diethyl phthalate	Dimethyl phthalate	
		Conc.	Qual.	Conc.	Qual.	Conc.	Qual.	Conc.	Qual.
DAC-HY-06	06C	81.0	150	10.0	J	9.70	J	2.50	UJ
DAC-HY-06	33C	51.0	71.0	9.40	J	8.20	U	2.70	UJ
DAC-HY-06	34C	170	150	3.90	J	160	J	2.10	UJ
DAC-HY-19	19C	22.0	27.0	7.10	J	500	J	3.00	UJ
DAC-HY-19	31C	25.0	33.0	6.20	J	580	J	3.90	UJ
DAC-HY-19	32C	21.0	53.0	15.0	J	520	J	3.20	UJ
DAC-HY-19						59.0			

**Concentrations of Semivolatile Organic Compounds in Surface Sediments of the Hylebos Waterway for Field Replicates (ug/kg DW) (Continued)**

Station	Sample	Di-n-butyl phthalate Conc.	Qual.	Gamma-HCH (Lindane) Conc.	Qual.	Hexachlorobenzene Conc.	Qual.	Aldrin Conc.	Qual.	Alpha-chlordane Conc.	Qual.	Gamma-chlordane Conc.	Qual.	Chlordane Conc.	Qual.
DAC-HY-06	06C	6.20	UJ	2.00		63.0		0.062	U	3.00		4.20		7.20	
DAC-HY-06	33C	8.20	UJ	2.90		44.0		0.042	U	2.50		4.50		7.00	
DAC-HY-06	34C	7.50	UJ	5.10		99.0		3.60		4.20		0.058	U	4.20	
DAC-HY-19	19C	15.0	UJ	1.40		21.0		0.061	U	2.30		0.060	U	2.30	
DAC-HY-19	31C	27.0	UJ	1.20		22.0		0.068	U	1.30		0.066	U	1.30	
DAC-HY-19	32C	23.0	UJ	1.90		28.0		0.058	U	3.90		0.063	U	3.90	

**Concentrations of Semivolatile Organic Compounds in Surface Sediments of the Hylebos Waterway for Field Replicates (ug/kg DW) (Continued)**

Station	Sample	Dieldrin	Heptachlor	Chlorobiphenyl 10/209	Chlorobiphenyl 3/18	Chlorobiphenyl 3/28	Chlorobiphenyl 4/44	Chlorobiphenyl 4/52	
		Conc.	Qual.	Conc.	Qual.	Conc.	Qual.	Conc.	Qual.
DAC-HY-06	06C	1.40	1.90	57.0	5.80	6.20	6.40	7.00	
DAC-HY-06	33C	1.70	3.10	38.0	6.70	5.70	6.20	6.20	
DAC-HY-06	34C	2.70	6.90	99.0	0.200	U	7.40	16.0	13.0
DAC-HY-19	19C	0.062	U	19.0	14.0	9.50	12.0	20.0	
DAC-HY-19	31C	1.40	1.70	20.0	7.40	6.20	11.0	25.0	
DAC-HY-19	32C	0.640	18.0	18.0	14.0	6.00	7.20	U	14.0

**Concentrations of Semivolatile Organic Compounds in Surface Sediments of the Hylebos Waterway for Field Replicates (ug/kg DW) (Continued)**

Station	Sample	Chlorobiphenyl 4/66	Chlorobiphenyl 5/101	Chlorobiphenyl 5/105	Chlorobiphenyl 5/118	Chlorobiphenyl 6/128	Chlorobiphenyl 6/138	Chlorobiphenyl 6/153
DAC-HY-06	06C	12.0	6.20	7.40	41.0	0.048	U	11.0
DAC-HY-06	33C	5.00	6.80	6.70	38.0	2.40	18.0	8.70
DAC-HY-06	34C	11.0	9.40	0.054	U	19.0	3.10	9.90
DAC-HY-19	19C	6.00	40.0	16.0	40.0	11.0	13.0	9.10
DAC-HY-19	31C	0.090	U	40.0	0.062	U	48.0	48.0
DAC-HY-19	32C	5.00	33.0	14.0	49.0	9.60	44.0	46.0
					51.0	8.50	38.0	

**Concentrations of Semivolatile Organic Compounds in Surface Sediments of the Hylebos Waterway for Field Replicates (ug/kg DW) (Continued)**

Station	Sample	Chlorobiphenyl 7/170	Chlorobiphenyl 7/180	Chlorobiphenyl 7/187	Chlorobiphenyl 8/195	Chlorobiphenyl 9/206	PCBs, total	p,p'-DDD	
		Conc.	Qual.	Conc.	Qual.	Conc.	Qual.	Conc.	Qual.
DAC-HY-06	06C	0.940	U	31.0	5.80	3.40	44.0	510	7.40
DAC-HY-06	33C	1.10		25.0	5.40	2.80	27.0	420	6.20
DAC-HY-06	34C	2.00		16.0	7.90	3.90	60.0	580	8.30
DAC-HY-19	19C	3.20		29.0	7.40	1.70	12.0	670	14.0
DAC-HY-19	31C	2.20		23.0	7.50	1.70	11.0	610	12.0
DAC-HY-19	32C	2.90		23.0	17.0	4.30	21.0	650	15.0

**Concentrations of Semivolatile Organic Compounds in Surface Sediments of the Hylebos Waterway for Field Replicates (ug/kg DW) (Continued)**

Station	Sample	p,p-DDE		p,p-DDT	
		Conc.	Qual.	Conc.	Qual.
DAC-HY-06	06C	0.840		2.70	
DAC-HY-06	33C	0.640		3.10	
DAC-HY-06	34C	0.790		0.100	U
DAC-HY-19	19C	6.30		5.40	
DAC-HY-19	31C	3.90		3.00	
DAC-HY-19	32C	3.90		7.60	

**Concentrations of Volatile Organic Compounds in Surface Sediments of the Hylebos Waterway for Field Replicates (ug/kg DW)**

Station	Sample	Trichloroethene		Tetrachloroethene		Ethylbenzene		Xylenes		1,2-Dichlorobenzene		1,2,4-Trichlorobenzene		1,3-Dichlorobenzene		1,4-Dichlorobenzene	
		Conc.	Qual.	Conc.	Qual.	Conc.	Qual.	Conc.	Qual.	Conc.	Qual.	Conc.	Qual.	Conc.	Qual.	Conc.	Qual.
DAC-HY-06	06C	1.40	U	1.40	U	1.40	U	2.80	U	1.40	U	7.00	U	1.40	U	1.40	U
DAC-HY-06	33C	3.20	U	1.70	U	1.70	U	3.40	U	1.70	U	8.40	U	1.70	U	1.70	U
DAC-HY-06	34C	1.50	U	1.50	U	1.50	U	3.00	U	1.50	U	7.50	U	1.50	U	11.0	U
DAC-HY-19	19C	1.00	U	1.00	U	1.00	U	2.00	U	1.00	U	5.00	U	1.00	U	1.00	U
DAC-HY-19	31C	2.00	U	2.00	U	2.00	U	4.00	U	2.00	U	10.0	U	2.00	U	2.00	U
DAC-HY-19	32C	1.90	U	1.90	U	1.90	U	3.80	U	1.90	U	9.60	U	1.90	U	1.90	U

**Concentrations of Semi-Volatile Organic Compounds in Surface Sediments of Hylebos Waterway for Field Replicates (Organic Carbon Normalized)**

Station	Sample	2-Methylnaphthalene		Acenaphthene		Acenaphthylene		Anthracene		Fluorene		Total low molecular weight PAHs		Naphthalene	
		Conc.	Qual.	Conc.	Qual.	Conc.	Qual.	Conc.	Qual.	Conc.	Qual.	Conc.	Qual.	Conc.	Qual.
DAC-HY-06	06C	6740	984	5700	984	14000	7770	76100	7770	13500	34200	34200	34200	34200	34200
DAC-HY-06	33C	5190	4040	17200	1370	14200	6010	65000	6010	12600	26800	26800	26800	26800	26800
DAC-HY-06	34C	13100	17200	17200	1720	36400	22200	190000	22200	36900	75800	75800	75800	75800	75800
DAC-HY-19	19C	2160	3640	675	675	11700	3900	52600	3900	4160	28600	28600	28600	28600	28600
DAC-HY-19	31C	1840	1130	593	6780	1890	27300	1890	27300	3950	13000	13000	13000	13000	13000
DAC-HY-19	32C	2530	1950	812	11400	2920	46300	11400	2920	10700	18500	18500	18500	18500	18500

**Concentrations of Semi-Volatile Organic Compounds in Surface Sediments of Hylebos Waterway for Field Replicates (Organic Carbon Normalized) (Continued)**

Station	Sample	Dibenz(a,h)anthracene Conc.	Dibenz(a,h)anthracene Qual.	Benz(a)anthracene Conc.	Benz(a)anthracene Qual.	Benzo(a)pyrene Conc.	Benzo(a)pyrene Qual.	Benzo(g,h,i)perylene Conc.	Benzo(g,h,i)perylene Qual.	Chrysene Conc.	Chrysene Qual.	Fluoranthene Conc.	Fluoranthene Qual.	Total high molecular weight PAHs Conc.	Total high molecular weight PAHs Qual.
DAC-HY-06	06C	3160		21800		21200		13000		31600		50300		269000	
DAC-HY-06	33C	3830		23000		23500		14200		34400		60100		303000	
DAC-HY-06	34C	4850		47000		30300		18200		60600		136000		523000	
DAC-HY-19	19C	5190		22100		28600		24400		57100		57100		402000	
DAC-HY-19	31C	5080		21200		27100		24900		56500		48000		375000	
DAC-HY-19	32C	7140		31500		39000		35700		87700		146000		675000	

## Concentrations of Semi-Volatile Organic Compounds in Surface Sediments of Hylebos Waterway for Field Replicates (Organic Carbon Normalized) (Continued)

Station	Sample	Indeno(1,2,3-c,d)pyrene Conc.	Pyrene Conc.	Total benzofluoranthenes Conc.	1,2-Dichlorobenzene Conc.	1,2,4-Trichlorobenzene Conc.	1,3-Dichlorobenzene Conc.	1,4-Dichlorobenzene Conc.
DAC-HY-06	06C	13000	67400	48200	5118	5030	570	4200
DAC-HY-06	33C	15300	76500	51900	284	2510	306	2790
DAC-HY-06	34C	18200	136000	70700	606	5560	960	8590
DAC-HY-19	19C	20800	98700	88300	174	1040	182	571
DAC-HY-19	31C	20100	76300	96000	203	1100	178	706
DAC-HY-19	32C	29200	166000	133000	208	1360	240	682

**Concentrations of Semi-Volatile Organic Compounds in Surface Sediments of Hylebos Waterway for Field Replicates (Organic Carbon Normalized) (Continued)**

Station	Sample	Hexachlorobutadiene Conc.	Hexachlorobutadiene Qual.	Di-n-octyl phthalate Conc.	Di-n-octyl phthalate Qual.	Bis(2-ethylhexyl)phthalate Conc.	Bis(2-ethylhexyl)phthalate Qual.	Butylbenzyl phthalate Conc.	Butylbenzyl phthalate Qual.	Diethyl phthalate Conc.	Diethyl phthalate Qual.	Dimethyl phthalate Conc.	Dimethyl phthalate Qual.	Di-n-butyl phthalate Conc.	Di-n-butyl phthalate Qual.	Hexachlorobenzene Conc.	Hexachlorobenzene Qual.
DAC-HY-06	06C	7770	518	7250	J	503	J	130	UJ	249	J	321	UJ	3250			
DAC-HY-06	33C	3880	514	11500	J	448	U	148	UJ	257		448	UJ	2400			
DAC-HY-06	34C	7580	197	8080	J	444	U	106	UJ	172	UJ	379	UJ	5000			
DAC-HY-19	19C	701	184	13000	J	1380	J	77.9	UJ	779	J	390	UJ	545			
DAC-HY-19	31C	932	175	16400	J	3390		110	UJ	1100	J	763	UJ	621			
DAC-HY-19	32C	1720	487	16900	J	1920		104	UJ	812		747	UJ	909			

**Concentrations of Semi-Volatile Organic Compounds in Surface Sediments of Hylebos Waterway for Field Replicates (Organic Carbon Normalized) (Continued)**

Station	Sample	Chlorobiphenyl 10/209	Chlorobiphenyl 3/18	Chlorobiphenyl 3/28	Chlorobiphenyl 4/44	Chlorobiphenyl 4/52	Chlorobiphenyl 4/66	Chlorobiphenyl 5/101
		Conc.	Qual.	Conc.	Qual.	Conc.	Qual.	Conc.
DAC-HY-06	06C	2950	301	321	332	363	622	321
DAC-HY-06	33C	2080	366	311	339	339	273	372
DAC-HY-06	34C	5000	10.1	U	374	808	657	475
DAC-HY-19	19C	494	364	247	312	519	156	1040
DAC-HY-19	31C	565	209	175	311	706	2.54	1130
DAC-HY-19	32C	584	455	195	234	U	162	1070

**Concentrations of Semi-Volatile Organic Compounds in Surface Sediments of Hylebos Waterway for Field Replicates (Organic Carbon Normalized) (Continued)**

Station	Sample	Chlorobiphenyl 5/105		Chlorobiphenyl 5/118		Chlorobiphenyl 6/128		Chlorobiphenyl 6/138		Chlorobiphenyl 6/53		Chlorobiphenyl 7/170	
		Conc.	Qual.	Conc.	Qual.	Conc.	Qual.	Conc.	Qual.	Conc.	Qual.	Conc.	Qual.
DAC-HY-06	06C	383	2120	2.49	U	570	451	48.7	U	1610			
DAC-HY-06	33C	366	2080	131		984	541	60.1		1370			
DAC-HY-06	34C	2.73	U	960	157	657	460	101		808			
DAC-HY-19	19C	416	1040	286		1250	1250	83.1		753			
DAC-HY-19	31C	1.75	U	1380	271	1240	1360	62.2		650			
DAC-HY-19	32C	455	1660	276		1230	1490	94.2		747			

**Concentrations of Semi-Volatile Organic Compounds in Surface Sediments of Hylebos Waterway for Field Replicates (Organic Carbon Normalized) (Continued)**

Station	Sample	Chlorobiphenyl 7/187		Chlorobiphenyl 8/195		Chlorobiphenyl 9/206		PCBs, total	
		Conc.	Qual.	Conc.	Qual.	Conc.	Qual.	Conc.	Qual.
DAC-HY-06	06C	301		176		2280		26400	
DAC-HY-06	33C	295		153		1480		23000	
DAC-HY-06	34C	399		197		3030		29300	
DAC-HY-19	19C	192		44.2		312		17400	
DAC-HY-19	31C	212		48		311		17200	
DAC-HY-19	32C	552		140		682		21100	

**Concentrations of Volatile Organic Compounds in Surface Sediments of Hylebos Waterway for Field Replicates (Organic Carbon Normalized)**

Station	Sample	Trichloroethene	Tetrachloroethene	Ethylbenzene	Xylenes	1,2-Dichlorobenzene	1,2,4-Trichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene
		Conc.	Qual.	Conc.	Qual.	Conc.	Qual.	Conc.	Qual.
DAC-HY-06	06C	72.5	U	72.5	U	145	U	72.5	U
DAC-HY-06	33C	175		92.9	U	186	U	459	U
DAC-HY-06	34C	75.8	U	75.8	U	152	U	75.8	U
DAC-HY-19	19C	26.0	U	26.0	U	52.0	U	26.0	U
DAC-HY-19	31C	56.5	U	56.5	U	113	U	56.5	U
DAC-HY-19	32C	61.7	U	61.7	U	123	U	61.7	U

**APPENDIX C**

**ANALYTICAL RESULTS**

**FOR SURFACE SEDIMENT SAMPLES**

## Measurement of Conventionals in Surface Sediments of the Hylebos Waterway and Reference Stations (mg/kg DW)

Station	Sample	Clay, percent Conc.	Clay, percent Qual.	Gravel, percent Conc.	Gravel, percent Qual.	Sand, percent Conc.	Sand, percent Qual.	Total solids Conc.	Total solids Qual.	Ammonia-nitrogen Conc.	Ammonia-nitrogen Qual.	Sulfides Conc.	Sulfides Qual.	Total organic carbon Conc.	Total organic carbon Qual.
DAC-HY-01	01C	16.0	4.00	42.0		38.0		63.3		1.80		30.0		1.50	
DAC-HY-02	02C	14.0	19.0	37.0		30.0		63.8		2.66		337		1.80	
DAC-HY-03	03C	25.0	0.00	32.0		43.0		55.4		9.03		740		1.92	
DAC-HY-04	04C	23.0	1.00	36.0		40.0		60.0		22.0		179		1.75	
DAC-HY-05	05C	22.0	0.00	39.0		39.0		58.0		28400		145		1.97	
DAC-HY-06	06C	18.0	1.00	45.0		36.0		57.2		24400		15.6		719	
DAC-HY-07	07C	19.0	1.00	48.0		32.0		59.7		23200		19.0		151	
DAC-HY-08	08C	31.0	0.00	13.0		56.0		49.5		29600		9.84		1450	
DAC-HY-09	09C	23.0	1.00	31.0		45.0		52.0		26900		22.0		270	
DAC-HY-10	10C	26.0	1.00	24.0		49.0		48.4		28600		26.5		307	
DAC-HY-11	11C	22.0	1.00	31.0		46.0		53.9		28500		21.5		153	J
DAC-HY-12	12C	22.0	0.00	34.0		44.0		53.6		31100		18.6		9.44	J
DAC-HY-13	13C	11.0	28.0	38.0		23.0		65.1		26000		11.7		108	J
DAC-HY-14	14C	16.0	2.00	55.0		27.0		61.2		24300		11.1		46.8	J
DAC-HY-15	15C	29.0	0.00	19.0		52.0		45.2		34000		21.0		79.0	J
DAC-HY-16	16C	30.0	0.00	12.0		58.0		41.2		33100		20.0		813	J
DAC-HY-17	17C	16.0	1.00	36.0		47.0		62.1		26300		8.81		210	J
DAC-HY-18	18C	28.0	0.00	21.0		51.0		43.7		37500		16.7		916	J
DAC-HY-19	19C	27.0	0.00	24.0		49.0		45.9		40100		28.0		941	J
DAC-HY-20	20C	36.0	0.00	7.00		57.0		41.8		38800		25.7		2350	
DAC-HY-21	21C	33.0	0.00	10.0		57.0		40.6		39000		25.9		2820	
DAC-HY-22	22C	19.0	1.00	51.0		29.0		52.6		28500		18.5		621	
DAC-HY-23	23C	28.0	1.00	32.0		39.0		44.2		40500		15.9		1610	
DAC-HY-24	24C	23.0	2.00	23.0		52.0		35.5		61500		25.0		5650	
DAC-HY-25	25C	33.0	0.00	15.0		52.0		37.7		45200		28.6		2690	
DAC-HY-26	26C	29.0	1.00	10.0		60.0		37.6		47900		19.2		5290	
DAC-HY-27	27C	30.0	2.00	11.0		57.0		44.6		39400		30.7		1670	J
DAC-HY-28	28C	37.0	0.00	10.0		53.0		39.8		46300		19.3		2970	
DAC-CR-02	02C-REF	5.00	4.00	59.0		32.0		68.8		13700		5.49		1.46	U
DAC-CR-02A	02AC-REF	9.00	0.00	25.0		66.0		61.1		16100		2.50		4.03	0.740
DAC-HY-30	30C-REF	36.0	1.00	16.0		47.0		49.36		39000		9.66		961	2.42
DAC-HY-35	35C-REF	29.0	3.00	32.0		36.0		55.0		27800		3.53		172	1.71

# Concentration of Metals in Surface Sediments of the Hylebos Waterway and Reference Stations using Strong Acid Digestion (mg/kg DW)

Station	Sample	Antimony	Arsenic	Cadmium	Chromium	Copper	Lead	Nickel	Silver	Zinc
		Conc.	Qual.	Conc.	Qual.	Conc.	Qual.	Conc.	Qual.	Conc.
DAC-HY-01	01C	0.995	U	13.0	U	0.184	22.7	48.5	21.5	0.269
DAC-HY-02	02C	0.995	U	16.6	U	0.255	30.9	76.4	58.9	0.325
DAC-HY-03	03C	0.995	U	14.2	U	0.261	32.4	152	72.3	0.429
DAC-HY-04	04C	0.995	U	13.0	U	0.281	28.0	98.0	47.4	0.396
DAC-HY-05	05C	0.995	U	13.0	U	0.234	29.3	80.2	54.0	0.416
DAC-HY-06	06C	0.995	U	20.7	U	0.331	35.9	80.2	68.6	0.356
DAC-HY-07	07C	0.995	U	13.0	U	0.206	28.2	76.1	58.5	0.315
DAC-HY-08	08C	0.995	U	27.6	U	0.400	32.5	82.3	82.5	0.334
DAC-HY-09	09C	0.995	U	18.6	U	0.292	27.6	84.0	66.3	0.399
DAC-HY-10	10C	0.995	U	13.0	U	0.343	32.8	110	176	0.473
DAC-HY-11	11C	0.995	U	13.9	U	0.335	28.3	83.7	57.9	0.391
DAC-HY-12	12C	0.995	U	21.4	U	0.308	27.8	89.7	68.5	0.424
DAC-HY-13	13C	0.995	U	21.6	U	0.230	28.9	59.2	33.0	0.239
DAC-HY-14	14C	1.12	U	14.9	U	0.236	23.1	71.3	40.7	0.242
DAC-HY-15	15C	0.995	U	34.6	U	0.447	36.6	115	75.4	0.459
DAC-HY-16	16C	0.995	U	34.6	U	0.560	37.3	125	64.4	0.528
DAC-HY-17	17C	2.07	U	22.4	U	0.202	20.3	43.4	35.2	0.207
DAC-HY-18	18C	1.46	U	41.1	U	0.618	33.7	121	72.3	0.558
DAC-HY-19	19C	1.45	U	42.0	U	0.676	32.6	120	74.1	0.595
DAC-HY-20	20C	0.995	U	48.9	U	0.762	49.3	155	90.8	0.759
DAC-HY-21	21C	1.17	U	51.5	U	0.830	36.4	147	89.1	0.801
DAC-HY-22	22C	1.12	U	47.2	U	0.685	30.8	114	68.9	0.605
DAC-HY-23	23C	1.36	U	52.6	U	1.14	34.5	166	84.2	0.578
DAC-HY-24	24C	1.83	U	54.5	U	1.18	45.6	151	77.9	0.976
DAC-HY-25	25C	2.27	U	63.4	U	1.35	48.8	184	83.2	0.911
DAC-HY-26	26C	1.54	U	54.5	U	1.05	50.2	181	91.0	0.997
DAC-HY-27	27C	0.995	U	40.5	U	0.694	40.7	115	52.1	0.619
DAC-HY-28	28C	0.995	U	38.4	U	1.50	43.6	140	65.0	0.747
DAC-CHR-02	02C-REF	0.995	U	13.0	U	0.156	25.8	12.2	4.02	0.084
DAC-CHR-02A	02AC-REF	0.995	U	13.0	U	0.311	31.4	18.7	6.09	0.113
DAC-HY-30	30-C-REF	0.995	U	13.0	U	0.207	28.3	65.7	27.3	0.386
DAC-HY-35	35C-REF	0.995	U	13.0	U	0.195	23.3	53.8	32.5	0.279
DAC-HY-26	26FB	0.995	U	13.0	U	0.005	U	0.967	U	0.179
DAC-HY-05	05CCB	0.995	U	13.0	U	0.005	U	0.967	U	0.179

**Concentration of Metals in Surface Sediments of the Hylebos Waterway and Reference Stations using Total Acid Digestion (mg/kg DW)**

Station	Sample	Antimony	Arsenic	Cadmium	Chromium	Copper	Lead	Nickel	Silver	Zinc
		Conc.	Qual.	Conc.	Qual.	Conc.	Qual.	Conc.	Qual.	Conc.
DAC-HY-01	01C	1.73	5.45	0.216	U	29.0	53.6	23.4	0.082	U
DAC-HY-02	02C	5.81	15.2	0.303	U	31.5	90.7	44.9	0.221	U
DAC-HY-03	03C	3.40	12.9	0.296	U	31.6	159	50.3	0.160	U
DAC-HY-04	04C	4.40	10.7	0.298	U	31.4	121	63.0	0.195	U
DAC-HY-05	05C	3.10	12.2	0.301	U	31.2	80.8	40.8	0.200	U
DAC-HY-06	06C	3.05	15.0	0.405	U	31.0	79.1	73.9	0.281	U
DAC-HY-07	07C		10.8	0.323	U	29.1	84.4	56.4	0.209	U
DAC-HY-08	08C	3.44	17.3	0.456	U	30.5	94.7	86.4	0.303	U
DAC-HY-09	09C	2.87	11.3	0.318	U	30.5	104	64.2	0.206	U
DAC-HY-10	10C	4.59	8.64	0.339	U	91.7	113	158	0.239	U
DAC-HY-11	11C	3.28	15.8	0.382	U	29.2	94.5	59.6	0.250	U
DAC-HY-12	12C	3.84	16.0	0.356	U	28.7	103	65.1	0.248	U
DAC-HY-13	13C	3.69	7.88	0.241	U	29.2	80.7	30.7	0.116	U
DAC-HY-14	14C	15.2	21.1	0.269	U	35.2	77.6	55.3	0.152	U
DAC-HY-15	15C	10.9	15.8	0.383	U	35.0	132	89.3	0.358	U
DAC-HY-16	16C	7.88	34.9	0.477	U	37.1	136	83.1	0.393	U
DAC-HY-17	17C	4.57	9.92	0.202	U	28.7	53.8	207	0.174	U
DAC-HY-18	18C	10.4	17.5	0.474	U	34.8	130	87.9	0.366	U
DAC-HY-19	19C	14.1	40.1	0.529	U	33.6	135	95.5	2.70	U
DAC-HY-20	20C	10.6	45.9	0.674	U	36.2	160	105	0.569	U
DAC-HY-21	21C	16.5	32.2	0.703	U	39.3	161	103	0.774	U
DAC-HY-22	22C	7.13	30.9	0.492	U	34.4	101	57.0	0.357	U
DAC-HY-23	23C	16.5	22.9	1.07	U	39.8	190	105	0.414	U
DAC-HY-24	24C	11.6	120	1.95	U	39.4	154	114	2.73	U
DAC-HY-25	25C	13.8	61.4	1.36	U	40.7	230	122	0.631	U
DAC-HY-26	26C	14.5	55.1	0.981	U	40.4	183	129	0.715	U
DAC-HY-27	27C	6.77	97.6	0.633	U	33.7	127	64.0	0.396	U
DAC-HY-28	28C	8.59	37.0	0.803	U	38.8	141	73.6	0.501	U
DAC-CR-02	02C-REF	1.22	U	3.06	U	61.4	16.0	10.4	0.088	U
DAC-CR-02A	02AC-REF	1.22	U	1.87	U	45.8	9.80	8.49	0.024	U
DAC-HY-30	30C-REF	1.22	U	6.41	U	27.7	71.4	28.7	0.251	U
DAC-HY-35	35C-REF	1.22	U	6.61	U	0.217	20.9	52.1	40.9	0.169
DAC-HY-26	26FB	1.22	U	0.136	U	1.75	U	0.602	U	0.783
DAC-HY-05	05CCB	1.22	U	0.136	U	1.75	U	0.602	U	0.783

**Concentration of Organotin Compounds in Surface Sediments of the Hylebos Waterway and Reference Stations (ug/kg DW)**

Station	Sample	Monobutyltin		Dibutyltin		Tributyltin		Tetrabutyltin	
		Conc.	Qual.	Conc.	Qual.	Conc.	Qual.	Conc.	Qual.
DAC-HY-01	01C	7.13	U	13.2		37.1		7.13	U
DAC-HY-02	02C	6.80	U	19.0		43.6		6.60	U
DAC-HY-03	03C	8.28	U	82.8		236		8.28	U
DAC-HY-04	04C	7.12	U	54.1		122		7.12	U
DAC-HY-05	05C	8.39	U	22.4		64.8		8.39	U
DAC-HY-06	06C	7.31	U	7.31		35.1		7.31	U
DAC-HY-07	07C	6.63	U	33.4		90.2		6.63	U
DAC-HY-08	08C	9.32	U	9.32		31.0		9.32	U
DAC-HY-09	09C	9.20	U	52.3		169		9.20	U
DAC-HY-10	10C	10.4	U	52.5		179		10.4	U
DAC-HY-11	11C	7.93	U	10.8		50.6		7.93	U
DAC-HY-12	12C	8.63	U	42.7		78.8		8.63	U
DAC-HY-13	13C	6.25	U	6.25		14.9		6.25	U
DAC-HY-14	14C	7.58	U	12.2		140		7.58	U
DAC-HY-15	15C	9.71	U	32.0		133		9.71	U
DAC-HY-16	16C	9.79	U	41.7		199		9.79	U
DAC-HY-17	17C	5.78	U	5.78		15.5		5.78	U
DAC-HY-18	18C	10.4	U	32.8		184		10.4	U
DAC-HY-19	19C	9.78	U	55.7		218		9.77	U
DAC-HY-20	20C	11.1	U	70.3		225		11.1	U
DAC-HY-21	21C	11.8	U	64.1		174		11.8	U
DAC-HY-22	22C	7.01	U	47.0		81.9		7.01	U
DAC-HY-23	23C	10.7	U	73.7		128		10.7	U
DAC-HY-24	24C	12.8	U	70.0		212		12.8	U
DAC-HY-25	25C	12.7	U	79.1		238		12.7	U
DAC-HY-26	26C	11.9	U	82.6		181		11.9	U
DAC-HY-27	27C	10.6	U	46.5		136		10.6	U
DAC-HY-28	28C	11.6	U	35.5		174		11.6	U
DAC-CR-02	02C-REF	5.75	U	5.75		5.75		5.75	U
DAC-CR-02A	02AC-REF	7.26	U	7.26		7.26		7.26	U
DAC-HY-30	30C-REF	10.5	U	19.9		25.5		10.5	U
DAC-HY-35	35C-REF	7.14	U	7.14		7.14		7.14	U

**Concentrations of Semivolatile Organic Compounds in Surface Sediments of the Hylebos Waterway and Reference Stations (ug/kg DW)**

Station	Sample	2-Methylnaphthalene Conc.	2-Methylnaphthalene Qual.	Acenaphthene Conc.	Acenaphthene Qual.	Acenaphthyrene Conc.	Acenaphthyrene Qual.	Anthracene Conc.	Anthracene Qual.	Fluorene Conc.	Fluorene Qual.	Total low molecular weight PAHs Conc.	Total low molecular weight PAHs Qual.
DAC-HY-01	01C	57.0	J	17.0		9.80		71.0		31.0		372	
DAC-HY-02	02C	61.0		46.0		19.0		130		64.0		789	
DAC-HY-03	03C	150	J	190		22.0		740	J	310	J	2880	J
DAC-HY-04	04C	87.0		61.0		20.0		170		71.0		902	
DAC-HY-05	05C	100		51.0		25.0		800		190		2170	
DAC-HY-06	06C	130		110		19.0		270		150		1470	
DAC-HY-07	07C	130		64.0		21.0		520		110		1460	
DAC-HY-08	08C	190		86.0		47.0		310		140		1530	
DAC-HY-09	09C	120		63.0		19.0		300		110		1360	
DAC-HY-10	10C	110		87.0		26.0		330		140		1610	
DAC-HY-11	11C	75.0		38.0		21.0		160		60.0		769	
DAC-HY-12	12C	100		62.0		30.0		250		97.0		1150	
DAC-HY-13	13C	100		61.0		23.0		120		68.0		862	
DAC-HY-14	14C	65.0		34.0		22.0		110		47.0		643	
DAC-HY-15	15C	83.0		56.0		32.0		290		97.0		1220	
DAC-HY-16	16C	72.0		44.0		23.0		160	J	66.0	J	913	J
DAC-HY-17	17C	21.0		11.0		5.30		60.0		18.0		248	
DAC-HY-18	18C	73.0		41.0		21.0		240		73.0		985	
DAC-HY-19	19C	83.0		140		26.0		450		150		2030	
DAC-HY-20	20C	63.0		44.0		20.0		270		71.0		1080	
DAC-HY-21	21C	72.0		57.0		25.0		300		83.0		1160	
DAC-HY-22	22C	47.0		42.0		13.0		430		69.0		2640	
DAC-HY-23	23C	51.0		42.0		16.0		250		66.0		964	
DAC-HY-24	24C	59.0		61.0		17.0		990		170		2100	
DAC-HY-25	25C	53.0		40.0		22.0		270		68.0		955	
DAC-HY-26	26C	42.0		28.0		22.0		170		60.0		728	
DAC-HY-27	27C	33.0		23.0		14.0		130		39.0		531	
DAC-HY-28	28C	57.0		35.0		20.0		240		70.0		841	
DAC-CR-02	02C-REF	0.700	U	0.820	U	0.480	U	0.420	U	0.660	U	6.58	<
DAC-CR-02A	02AC-REF	2.30		1.90	U	1.10	U	1.40		1.50	U	16.9	<
DAC-HY-30	30C-REF	63.0		66.0		12.0		190		82.0		1062	J
DAC-HY-35	35C-REF	99.0		100		23.0		230		110		1450	
DAC-HY-05	05CCB	1.10	U	1.40	U	0.830	U	0.740	U	1.10	U	6.69	
DAC-HY-22	22FB	0.650	U	0.760	U	0.440	U	0.390	U	0.610	U	3.04	

**Concentrations of Semivolatile Organic Compounds in Surface Sediments of the Hylebos Waterway and Reference Stations (Continued)**

Station	Sample	Naphthalene Conc.	Naphthalene Qual.	Phenanthrene Conc.	Phenanthrene Qual.	Dibenz(a,h)anthracene Conc.	Dibenz(a,h)anthracene Qual.	Benz(a)anthracene Conc.	Benz(a)anthracene Qual.	Benzo(a)pyrene Conc.	Benzo(a)pyrene Qual.	Benzo(g,h,i)perylene Conc.	Benzo(g,h,i)perylene Qual.	Chrysene Conc.	Chrysene Qual.
DAC-HY-01	01C	83.0		160		15.0		98.0		92.0		65.0		140	
DAC-HY-02	02C	130		400	J	38.0		200		230		160		290	
DAC-HY-03	03C	220		1400	J	110		990		800		410		1200	
DAC-HY-04	04C	160		420		51.0		340		340		200		480	
DAC-HY-05	05C	170		830		56.0		560		390		220		810	
DAC-HY-06	06C	260		660		61.0		420		410		250		610	
DAC-HY-07	07C	200		550		55.0		520		400		220		680	
DAC-HY-08	08C	300		650		80.0		530		520		410		1100	
DAC-HY-09	09C	300		570		67.0		520		420		250		760	
DAC-HY-10	10C	240		790		92.0		710		620		360		1100	
DAC-HY-11	11C	150		340		57.0		350		350		240		610	
DAC-HY-12	12C	230		480		94.0		590		590		350		1000	
DAC-HY-13	13C	320		270		24.0		180		150		110		330	
DAC-HY-14	14C	170		260		45.0		240		280		190		470	
DAC-HY-15	15C	200		540		110		520		550		450		1100	
DAC-HY-16	16C	150		470		110		390		550		460		880	
DAC-HY-17	17C	54.0		100		48.0		130		290		230		430	
DAC-HY-18	18C	130		480		140		510		720		620		1300	
DAC-HY-19	19C	160		1100		200		850		1100		940		2200	
DAC-HY-20	20C	140		530		190		730		910		870		1800	
DAC-HY-21	21C	130		560		210		670		1000		880		1800	
DAC-HY-22	22C	91.0		2000		150		640		700		590		1500	
DAC-HY-23	23C	100		490		210		770		1100		870		1900	
DAC-HY-24	24C	86.0		780		340		1900		1800		1300		3700	
DAC-HY-25	25C	85.0		470	J	280		740		1300		1000		2100	
DAC-HY-26	26C	78.0		370	J	240		470		1000		870		1500	
DAC-HY-27	27C	55.0		270	J	150		330		690		550		980	
DAC-HY-28	28C	66.0		410	J	180		670		850		640		1600	
DAC-CF-02	02C-REF	1.30		2.90		0.720		U		0.570		U		0.680	U
DAC-CF-02A	02AC-REF	4.00		7.00		1.10		U		3.50		3.50		4.90	6.40
DAC-HY-30	30C-REF	94.0		550	J	43.0		240		260		170		340	
DAC-HY-35	35C-REF	170		820		34.0		340		250		150		370	
DAC-HY-05	05CCB	1.90	U	0.720		U		0.650		U		0.780	U	0.600	U
DAC-HY-22	22FB	0.450	U	0.390		0.530		U		0.420		0.500	U	0.390	U

**Concentrations of Semivolatile Organic Compounds in Surface Sediments of the Hylebos Waterway and Reference Stations (ug/kg DW)**  
**(Continued)**

Station	Sample	Fluoranthene Conc.	Fluoranthene Qual.	Total high molecular weight PAHs Conc.	Total high molecular weight PAHs Qual.	Indeno(1,2,3-c,d)pyrene Conc.	Indeno(1,2,3-c,d)pyrene Qual.	Pyrene Conc.	Pyrene Qual.	Total benzofluoranthenes Conc.	Total benzofluoranthenes Qual.	2-Methylphenol Conc.	2-Methylphenol Qual.
DAC-HY-01	01C	240		1270		61.0		320		240		2.90	U
DAC-HY-02	02C	570		2970		160		760		560		4.50	U
DAC-HY-03	03C	2400	J	10200	J	440		1900	J	1900		6.90	U
DAC-HY-04	04C	900		4380		200		1000		870		4.70	U
DAC-HY-05	05C	1600		6160		220		1300		1000		5.50	U
DAC-HY-06	06C	970		5200		250		1300		930		6.30	U
DAC-HY-07	07C	1200		5540		230		1300		930		5.10	U
DAC-HY-08	08C	1100		7190		350		1500		1600		9.50	U
DAC-HY-09	09C	1400		6070		250		1300		1100		11.0	U
DAC-HY-10	10C	1900		8450		370		1600		1700		12.0	U
DAC-HY-11	11C	830		4750		210		1000		1100		7.30	U
DAC-HY-12	12C	1100		6970		350		1300		1600		9.40	U
DAC-HY-13	13C	560		2920		91.0		630		440		6.20	U
DAC-HY-14	14C	600		3620		170		780		840		18.0	U
DAC-HY-15	15C	1200		7640		410		1500		1800		8.00	U
DAC-HY-16	16C	970		6960		400		1400		1800		8.20	U
DAC-HY-17	17C	300		3450		180		950		890		1.80	U
DAC-HY-18	18C	1400		9620		530		2100		2300		23.0	U
DAC-HY-19	19C	220		15500		800		3800		3400		7.50	U
DAC-HY-20	20C	1800		12700		720		2400		3300		8.40	U
DAC-HY-21	21C	1700		13200		780		2800		3400		7.80	U
DAC-HY-22	22C	2900		12100		540		2700		2400		4.70	U
DAC-HY-23	23C	1600		13400		750		2300		3900		10.0	U
DAC-HY-24	24C	6100		28500		1100		5700		6600		14.0	U
DAC-HY-25	25C	2000	J	16600	J	930		3400		4800		7.90	U
DAC-HY-26	26C	1100	J	12400	J	800		2500		3900		8.80	U
DAC-HY-27	27C	1100	J	8590	J	490		1800		2500		4.80	U
DAC-HY-28	28C	2200	J	11800	J	600		2100		3000		7.30	U
DAC-CR-02	02C-REF	6.10		17.4	<	<		0.720	U	4.90		1.10	U
DAC-CR-02A	02AC-REF	15.0		62.1	<	<		3.70		12.0		12.0	U
DAC-HY-30	30C-REF	670		3183	J	180		750		530		4.60	U
DAC-HY-35	35C-REF	780		3410		140		890		460		4.50	U
DAC-HY-35	05CCB	0.650	U	6.25		0.870	U	0.620	U	0.590	U	0.640	U
DAC-HY-22	22FB	0.360	U	3.89		0.530	U	0.350	U	0.400	U	10.0	U

**Concentrations of Semivolatile Organic Compounds in Surface Sediments of the Hylebos Waterway and Reference Stations (Continued)**

Station	Sample	2,4-Dimethylphenol	4-Methylphenol	Pentachlorophenol	Phenol	1,2-Dichlorobenzene	1,2,4-Trichlorobenzene	1,3-Dichlorobenzene
		Conc.	Qual.	Conc.	Qual.	Conc.	Qual.	Conc.
DAC-HY-01	01C	3.70	26.0	13.0	J	33.0	1.50	6.90
DAC-HY-02	02C	4.40	23.0	27.0	J	38.0	4.10	29.0
DAC-HY-03	03C	8.30	33.0	56.0	J	57.0	5.50	16.0
DAC-HY-04	04C	5.60	27.0	55.0	J	45.0	4.00	22.0
DAC-HY-05	05C	5.10	26.0	40.0	J	45.0	4.70	31.0
DAC-HY-06	06C	6.10	20.0	35.0	J	40.0	10.0	97.0
DAC-HY-07	07C	9.80	20.0	45.0	J	39.0	4.90	45.0
DAC-HY-08	08C	13.0	120	37.0	J	38.0	10.0	74.0
DAC-HY-09	09C	11.0	40.0	790	J	49.0	8.50	59.0
DAC-HY-10	10C	18.0	38.0	180	J	45.0	13.0	110
DAC-HY-11	11C	7.50	27.0	64.0	J	40.0	5.90	42.0
DAC-HY-12	12C	12.0	34.0	150	J	44.0	5.30	35.0
DAC-HY-13	13C	7.10	37.0	17.0	J	30.0	1.40	7.40
DAC-HY-14	14C	4.90	24.0	26.0	J	27.0	2.40	15.0
DAC-HY-15	15C	11.0	43.0	53.0	J	38.0	3.10	19.0
DAC-HY-16	16C	7.90	40.0	95.0	J	42.0	3.70	22.0
DAC-HY-17	17C	12.0	16.0	15.0	J	53.0	2.00	14.0
DAC-HY-18	18C	10.0	32.0	69.0	J	38.0	4.60	30.0
DAC-HY-19	19C	9.70	42.0	72.0	J	44.0	6.70	40.0
DAC-HY-20	20C	16.0	40.0	75.0	J	68.0	3.60	25.0
DAC-HY-21	21C	11.0	42.0	91.0	J	47.0	6.60	37.0
DAC-HY-22	22C	6.50	22.0	42.0	J	33.0	4.50	21.0
DAC-HY-23	23C	8.20	44.0	52.0	J	53.0	3.40	15.0
DAC-HY-24	24C	11.0	72.0	55.0	J	53.0	3.00	12.0
DAC-HY-25	25C	8.00	53.0	74.0	J	57.0	3.40	14.0
DAC-HY-26	26C	7.10	53.0	93.0	J	56.0	2.40	11.0
DAC-HY-27	27C	4.90	36.0	52.0	J	43.0	2.00	7.70
DAC-HY-28	28C	7.50	49.0	65.0	J	49.0	2.00	8.00
DAC-CR-02	02C-REF	0.410	3.90	0.760	J	21.0	0.300	U
DAC-CR-02A	02AC-REF	1.50	4.00	0.700	J	16.0	0.400	U
DAC-HY-30	30C-REF	4.40	25.0	13.0	J	31.0	1.60	2.50
DAC-HY-35	35C-REF	6.00	32.0	7.80	J	31.0	1.80	2.00
DAC-HY-05	05CCB	0.670	U	0.340	U	26.0	0.480	U
DAC-HY-22	22FB	0.440	U	0.660	U	16.0	0.350	U

**Concentrations of Semivolatile Organic Compounds in Surface Sediments of the Hylebos Waterway and Reference Stations (ug/kg DW)**  
**(Continued)**

Station	Sample	1,4-Dichlorobenzene	Hexachlorobutadiene	Di-n-octyl phthalate	Bis(2-ethylhexyl)phthalate	Butylbenzyl phthalate	Diethyl phthalate	Dimethyl phthalate
		Conc.	Qual.	Conc.	Qual.	Conc.	Conc.	Conc.
DAC-HY-01	01C	8.60	U	14.0	3.00	94.0	J	3.30
DAC-HY-02	02C	19.0		49.0	3.30	89.0	J	2.80
DAC-HY-03	03C	61.0		25.0	11.0	470	J	2.20
DAC-HY-04	04C	47.0		37.0	7.70	250	J	2.60
DAC-HY-05	05C	31.0		75.0	5.30	550	J	15.0
DAC-HY-06	06C	81.0		150	10.0	140	J	9.70
DAC-HY-07	07C	25.0		260	5.40	270	J	8.80
DAC-HY-08	08C	35.0		240	5.80	160	J	13.0
DAC-HY-09	09C	40.0		220	9.90	1100	J	22.0
DAC-HY-10	10C	50.0		120	14.0	460	J	46.0
DAC-HY-11	11C	28.0		66.0	7.70	310	J	20.0
DAC-HY-12	12C	44.0		62.0	11.0	330	J	36.0
DAC-HY-13	13C	7.30	U	16.0	2.70	100	U	5.10
DAC-HY-14	14C	12.0		23.0	4.00	180	J	19.0
DAC-HY-15	15C	17.0	U	25.0	8.70	520	J	63.0
DAC-HY-16	16C	20.0	U	25.0	3.80	580	J	93.0
DAC-HY-17	17C	5.70	U	8.80	1.90	71.0	U	8.10
DAC-HY-18	18C	21.0		24.0	8.20	560	J	67.0
DAC-HY-19	19C	22.0		27.0	7.10	500	J	53.0
DAC-HY-20	20C	17.0	U	19.0	7.60	760	J	120
DAC-HY-21	21C	23.0		24.0	5.80	770	J	82.0
DAC-HY-22	22C	14.0		17.0	7.90	600	J	70.0
DAC-HY-23	23C	15.0	U	12.0	14.0	920	J	580
DAC-HY-24	24C	16.0	U	12.0	12.0	1400	J	150
DAC-HY-25	25C	16.0		9.60	12.0	1000	J	88.0
DAC-HY-26	26C	12.0		6.60	6.40	920	J	55.0
DAC-HY-27	27C	10.0		5.70	13.0	1200	J	67.0
DAC-HY-28	28C	13.0		6.80	11.0	1200	J	100
DAC-CR-02	02C-REF	1.20	U	1.10	U	0.190	U	7.90
DAC-CR-02A	02AC-REF	1.80	U	1.50	U	0.350	U	18.0
DAC-HY-30	30C-REF	10.0		3.30		7.80	U	150
DAC-HY-35	35C-REF	7.70	U	3.20		1.80	U	97.0
DAC-HY-05	05CCB	1.60	U	1.50	U	0.960	J	140
DAC-HY-22	22FB	1.00	U	1.20	U	2.70	U	900

**Concentrations of Semivolatile Organic Compounds in Surface Sediments of the Hylebos Waterway and Reference Stations (Continued)**

Station	Sample	Di-n-butyl phthalate Conc.	Qual.	Gamma-HCH (Lindane) Conc.	Qual.	Hexachlorobenzene Conc.	Qual.	Aldrin Conc.	Qual.	Alpha-chlordane Conc.	Qual.	Gamma-chlordane Conc.	Qual.	Chlordane Conc.	Qual.
DAC-HY-01	01C	72.0	J	0.470		11.0		0.088	U	0.610		0.910		1.50	
DAC-HY-02	02C	6.20	UJ	0.990		20.0		0.065	U	2.00		2.10		4.10	
DAC-HY-03	03C	30.0	UJ	0.840		22.0		8.00		1.90		0.070	U	1.90	
DAC-HY-04	04C	14.0	UJ	0.940		22.0		0.076	U	1.80		2.90		4.70	
DAC-HY-05	05C	76.0	J	1.20		41.0		0.078	U	1.90		3.20		5.10	
DAC-HY-06	06C	6.20	UJ	2.00		63.0		0.062	U	3.00		4.20		7.20	
DAC-HY-07	07C	13.0	UJ	2.60		64.0		0.500		2.40		5.90		8.30	
DAC-HY-08	08C	9.40	U	3.00		54.0		0.086	U	3.40		0.062	U	3.40	
DAC-HY-09	09C	30.0	U	4.80		120		0.040	U	2.00		3.40		5.40	
DAC-HY-10	10C	25.0	U	3.80		64.0		0.043	U	5.10		2.20		7.30	
DAC-HY-11	11C	14.0	U	1.90		40.0		0.081	U	2.00		2.50		4.50	
DAC-HY-12	12C	11.0	U	1.90		45.0		0.088	U	2.90		0.064	U	2.90	
DAC-HY-13	13C	5.50	U	0.670		12.0		0.076	U	0.670		1.70		2.40	
DAC-HY-14	14C	8.50	U	0.740		16.0		0.075	U	1.10		2.00		3.20	
DAC-HY-15	15C	21.0	U	1.40		28.0		0.082	U	1.20		0.080	U	1.20	
DAC-HY-16	16C	26.0	U	1.20		23.0		6.30		1.80		J	4.10	J	5.90
DAC-HY-17	17C	5.90	U	1.00		9.90		0.057	U	1.10		1.00		2.10	
DAC-HY-18	18C	20.0	U	1.10		21.0		0.067	U	1.90		0.065	U	1.90	
DAC-HY-19	19C	15.0	U	1.40		21.0		0.061	U	2.30		0.060	U	2.30	
DAC-HY-20	20C	34.0	U	1.30		23.0		0.082	U	1.50		0.080	U	1.50	
DAC-HY-21	21C	30.0	U	1.80		29.0		0.066	U	3.00		3.50		6.40	
DAC-HY-22	22C	24.0	U	0.780		12.0		0.059	U	1.30		0.058	U	1.30	
DAC-HY-23	23C	28.0	U	0.590		11.0		7.70		1.20		4.10		5.30	
DAC-HY-24	24C	79.0	U	0.610		12.0		6.70		1.40		0.480		1.90	
DAC-HY-25	25C	23.0	U	0.760		13.0		5.30		2.00		1.20		3.10	
DAC-HY-26	26C	17.0	U	0.550		12.0		5.20		2.60		0.130	U	2.70	
DAC-HY-27	27C	20.0	U	0.410		8.10		3.30		1.80		4.20		6.00	
DAC-HY-28	28C	23.0	U	0.400		8.70		4.10		2.50		0.550		3.10	
DAC-CR-02	02C-REF	2.70	UJ	0.070		0.110		0.100		0.130		0.110		0.240	
DAC-CR-02A	02AC-REF	5.40	UJ	0.110		0.180		0.082	U	0.390		0.550		0.940	
DAC-HY-30	30C-REF	11.0	UJ	0.530		4.60		0.090	U	0.540		0.097	U	0.540	
DAC-HY-35	35C-REF	6.80	UJ	0.210		4.30		0.120	U	0.350		1.80		2.20	
DAC-HY-05	05CCB	1800	J	0.068	U	0.064	U	0.062	U	0.140		0.120			
DAC-HY-22	22FB	2900	J	0.037	U	0.480		0.066	U	0.045	U	0.048			

**Concentrations of Semivolatile Organic Compounds in Surface Sediments of the Hylebos Waterway and Reference Stations (Continued)**

Station	Sample	Dieldrin Conc.	Dieldrin Qual.	Heptachlor Conc.	Heptachlor Qual.	Chlorobiphenyl 10/20/9 Conc.	Chlorobiphenyl 10/20/9 Qual.	Chlorobiphenyl 3/1/8 Conc.	Chlorobiphenyl 3/1/8 Qual.	Chlorobiphenyl 3/28 Conc.	Chlorobiphenyl 3/28 Qual.	Chlorobiphenyl 4/44 Conc.	Chlorobiphenyl 4/44 Qual.	Chlorobiphenyl 4/52 Conc.	Chlorobiphenyl 4/52 Qual.
DAC-HY-01	01C	0.120	U	0.200	U	12.0	2.10	0.510	U	1.30	U	3.10	U	0.800	U
DAC-HY-02	02C	0.520	U	0.800	U	35.0	5.40	3.20	U	3.10	U	4.50	U	2.10	U
DAC-HY-03	03C	0.750	U	0.500	U	25.0	4.50	2.30	U	3.10	U	3.10	U	3.10	U
DAC-HY-04	04C	0.590	U	0.500	U	15.0	5.70	2.90	U	3.00	U	3.10	U	3.10	U
DAC-HY-05	05C	0.790	U	0.800	U	40.0	6.20	3.40	U	3.50	U	3.10	U	3.10	U
DAC-HY-06	06C	1.40	U	1.90	U	57.0	5.80	6.20	U	6.40	U	7.00	U	3.10	U
DAC-HY-07	07C	0.340	U	4.10	U	29.0	12.0	5.70	U	4.40	U	4.20	U	3.10	U
DAC-HY-08	08C	1.40	U	1.90	U	140	11.0	9.00	U	10.0	U	5.10	U	5.10	U
DAC-HY-09	09C	1.40	U	4.10	U	12.0	22.0	3.90	U	2.60	U	3.60	U	3.60	U
DAC-HY-10	10C	2.30	U	0.500	U	16.0	15.0	3.60	U	2.40	U	9.50	U	4.20	U
DAC-HY-11	11C	1.60	U	0.800	U	25.0	9.90	2.40	U	4.70	U	4.60	U	4.60	U
DAC-HY-12	12C	2.50	U	0.400	U	19.0	10.0	3.60	U	4.40	U	4.40	U	4.40	U
DAC-HY-13	13C	0.055	U	0.400	U	6.00	3.40	0.880	U	1.60	U	2.70	U	2.70	U
DAC-HY-14	14C	0.054	U	0.500	U	10.0	4.10	1.40	U	4.00	U	4.50	U	4.50	U
DAC-HY-15	15C	1.90	U	1.80	U	22.0	3.80	2.20	U	6.90	U	8.90	U	8.90	U
DAC-HY-16	16C	1.30	U	0.700	U	26.0	4.70	4.10	U	8.50	U	9.20	U	9.20	U
DAC-HY-17	17C	0.057	U	1.10	U	9.50	6.40	4.10	U	9.80	U	31.0	U	31.0	U
DAC-HY-18	18C	1.20	U	1.60	U	22.0	11.0	6.30	U	8.70	U	16.0	U	16.0	U
DAC-HY-19	19C	0.062	U	0.900	U	19.0	14.0	9.50	U	12.0	U	20.0	U	20.0	U
DAC-HY-20	20C	3.50	U	1.40	U	19.0	5.90	5.00	U	10.0	U	16.0	U	16.0	U
DAC-HY-21	21C	3.30	U	0.800	U	22.0	21.0	8.80	U	11.0	U	16.0	U	16.0	U
DAC-HY-22	22C	1.40	U	0.400	U	11.0	8.60	6.10	U	7.20	U	11.0	U	11.0	U
DAC-HY-23	23C	1.50	U	0.500	U	13.0	8.70	12.0	U	12.0	U	17.0	U	17.0	U
DAC-HY-24	24C	1.40	U	0.400	U	9.30	5.90	8.50	U	11.0	U	14.0	U	14.0	U
DAC-HY-25	25C	2.10	U	0.900	U	18.0	6.90	8.00	U	13.0	U	14.0	U	14.0	U
DAC-HY-26	26C	2.20	U	0.700	U	17.0	4.10	5.50	U	13.0	U	15.0	U	15.0	U
DAC-HY-27	27C	2.00	U	0.500	U	12.0	3.70	4.40	U	8.50	U	12.0	U	12.0	U
DAC-HY-28	28C	2.30	U	0.700	U	10.0	4.00	4.80	U	8.20	U	11.0	U	11.0	U
DAC-CR-02	02C-REF	0.054	U	0.100	U	0.055	U	0.190	U	0.180	U	0.530	U	0.180	U
DAC-CR-02A	02AC-REF	0.086	U	0.100	U	0.150	0.280	0.220	U	0.560	U	0.210	U	0.210	U
DAC-HY-30	30C-REF	0.570	U	0.300	U	3.90	2.30	0.770	U	2.00	U	2.10	U	2.10	U
DAC-HY-35	35C-REF	0.340	U	0.100	U	1.50	2.60	0.980	U	1.20	U	1.70	U	1.70	U
DAC-HY-05	05CCB	0.063	U	0.076	U	0.160	U	0.320	U	0.220	U	0.900	U	0.210	U
DAC-HY-22	22FB	0.048	U	0.029	U	0.500	U	0.180	U	0.170	U	0.510	U	0.130	U

**Concentrations of Semivolatile Organic Compounds in Surface Sediments of the Hylebos Waterway and Reference Stations (Continued)**

Station	Sample	Chlorobiphenyl 4/66	Chlorobiphenyl 5/101	Chlorotriphenyl 5/105	Chlorobiphenyl 5/118	Chlorobiphenyl 6/128	Chlorobiphenyl 6/138	Chlorobiphenyl 6/153	
		Conc.	Qual.	Conc.	Qual.	Conc.	Qual.	Conc.	Qual.
DAC-HY-01	01C	0.100	U	2.00	1.00	5.40	0.590	2.90	3.50
DAC-HY-02	02C	6.00	U	5.60	5.30	31.0	1.50	12.0	7.90
DAC-HY-03	03C	1.00	U	3.70	1.60	2.30	1.20	5.90	6.20
DAC-HY-04	04C	4.00	U	5.00	5.00	22.0	1.40	6.70	7.10
DAC-HY-05	05C	4.00	U	7.90	3.70	26.0	3.70	12.0	15.0
DAC-HY-06	06C	12.0	U	6.20	7.40	41.0	0.048	U	8.70
DAC-HY-07	07C	7.00	U	3.10	6.50	20.0	0.042	U	0.070
DAC-HY-08	08C	10.0	U	6.90	4.70	50.0	0.067	U	15.0
DAC-HY-09	09C	9.00	U	1.70	3.30	25.0	0.031	U	5.70
DAC-HY-10	10C	9.00	U	0.060	9.40	54.0	3.40	13.0	55.0
DAC-HY-11	11C	5.00	U	5.40	7.70	47.0	0.760	14.0	13.0
DAC-HY-12	12C	6.00	U	8.30	8.00	45.0	3.90	19.0	J
DAC-HY-13	13C	2.00	U	4.80	2.80	13.0	1.30	6.10	2.90
DAC-HY-14	14C	2.00	U	8.70	4.70	7.50	3.30	14.0	15.0
DAC-HY-15	15C	0.100	U	18.0	0.075	U	24.0	5.40	28.0
DAC-HY-16	16C	8.00	U	28.0	11.0	28.0	8.60	37.0	J
DAC-HY-17	17C	0.100	U	50.0	20.0	63.0	10.0	46.0	47.0
DAC-HY-18	18C	0.100	U	33.0	13.0	35.0	8.00	43.0	43.0
DAC-HY-19	19C	6.00	U	40.0	16.0	40.0	11.0	48.0	48.0
DAC-HY-20	20C	0.100	U	39.0	0.074	U	50.0	12.0	40.0
DAC-HY-21	21C	7.00	U	35.0	27.0	45.0	0.070	U	45.0
DAC-HY-22	22C	0.100	U	24.0	8.80	33.0	7.00	26.0	30.0
DAC-HY-23	23C	13.0	U	33.0	0.085	U	35.0	9.90	43.0
DAC-HY-24	24C	0.400	U	32.0	0.110	U	36.0	6.90	39.0
DAC-HY-25	25C	12.0	U	29.0	9.20	26.0	6.70	35.0	38.0
DAC-HY-26	26C	10.0	U	26.0	7.90	19.0	5.70	32.0	36.0
DAC-HY-27	27C	8.00	U	21.0	6.80	24.0	5.10	25.0	28.0
DAC-HY-28	28C	7.00	U	19.0	7.00	15.0	4.70	24.0	26.0
DAC-CR-02	02C-REF	0.080	U	0.200	U	0.160	0.250	0.077	U
DAC-CR-02A	02AC-REF	0.200	U	0.270	U	0.075	0.390	0.071	U
DAC-HY-30	30C-REF	0.200	U	2.50	0.520	2.70	0.710	0.510	U
DAC-HY-35	35C-REF	0.100	U	2.90	1.30	5.10	0.500	2.80	3.10
DAC-HY-05	05CCB	0.500	U	0.230	U	0.070	U	0.110	U
DAC-HY-22	22FB	0.090	U	0.200	U	0.057	U	0.069	U
						0.250	0.051	U	0.290

**Concentrations of Semivolatile Organic Compounds in Surface Sediments of the Hylebos Waterway and Reference Stations (Continued)**

Station	Sample	Chlorobiphenyl 7/170 Conc.	Chlorobiphenyl 7/180 Conc.	Chlorobiphenyl 7/187 Conc.	Chlorobiphenyl 8/195 Conc.	Chlorobiphenyl 9/206 Conc.	PCBs, total Conc.	p,p'-DDD Conc.
DAC-HY-01	01C	0.680	U	4.40	2.20	0.620	6.80	94.0
DAC-HY-02	02C	0.670	U	20.0	4.10	2.00	20.0	2.00
DAC-HY-03	03C	1.80		11.0	3.20	1.30	12.0	5.20
DAC-HY-04	04C	1.60		12.0	3.30	1.30	11.0	3.50
DAC-HY-05	05C	2.40		20.0	4.60	1.80	17.0	3.80
DAC-HY-06	06C	0.940	U	31.0	5.80	3.40	44.0	3.70
DAC-HY-07	07C	2.40		19.0	6.70	1.60	13.0	7.40
DAC-HY-08	08C	0.067	U	42.0	9.20	5.20	66.0	1.40
DAC-HY-09	09C	0.840		13.0	2.20	0.910	8.10	7.20
DAC-HY-10	10C	1.20		28.0	3.00	0.620	11.0	3.90
DAC-HY-11	11C	1.70		27.0	6.30	2.10	18.0	5.50
DAC-HY-12	12C	2.20		27.0	6.50	2.00	16.0	400
DAC-HY-13	13C	0.210		11.0	4.60	1.00	6.00	150
DAC-HY-14	14C	1.10		16.0	6.70	1.40	8.30	230
DAC-HY-15	15C	2.30		28.0	14.0	2.40	15.0	410
DAC-HY-16	16C	6.20		29.0	12.0	2.00	15.0	600
DAC-HY-17	17C	1.30		15.0	3.50	0.950	7.00	650
DAC-HY-18	18C	3.00		27.0	7.40	1.60	11.0	580
DAC-HY-19	19C	3.20		29.0	7.40	1.70	12.0	670
DAC-HY-20	20C	2.70		24.0	10.0	1.70	13.0	600
DAC-HY-21	21C	3.10		37.0	7.70	2.10	12.0	600
DAC-HY-22	22C	2.50		17.0	5.00	1.10	7.00	7.60
DAC-HY-23	23C	4.90		17.0	7.10	1.00	7.40	14.0
DAC-HY-24	24C	5.60		16.0	6.80	1.20	8.20	470
DAC-HY-25	25C	5.30		17.0	5.90	1.70	8.70	510
DAC-HY-26	26C	5.00		15.0	5.80	1.80	7.50	450
DAC-HY-27	27C	3.30		11.0	5.30	2.90	5.30	370
DAC-HY-28	28C	4.30		11.0	5.90	3.40	J	16.0
							J	21.0
DAC-CR-02	02C-REF	0.460	U	0.160	0.066	0.050	U	0.110
DAC-CR-02A	02AC-REF	0.130	U	0.210	0.100	0.059	U	0.079
DAC-HY-30	30C-REF	1.20		2.20	2.00	0.320	2.30	8.00
DAC-HY-35	35C-REF	0.930	U	1.70	1.10	0.087	U	0.710
DAC-HY-05	05CCB	0.071	U	0.072	U	0.071	U	0.072
DAC-HY-22	22FB	0.052	U	0.130	0.065	0.049	U	0.330
							U	0.093
							5	0.098

**Concentrations of Semivolatile Organic Compounds in Surface Sediments of the Hylebos Waterway and Reference Stations (ug/kg DW)**  
**(Continued)**

Station	Sample	P,p-DDE		P,p-DDT	
		Conc.	Qual.	Conc.	Qual.
DAC-HY-01	01C	0.220		0.074	U
DAC-HY-02	02C	0.490		6.50	
DAC-HY-03	03C	0.100		0.860	
DAC-HY-04	04C	0.830		1.50	
DAC-HY-05	05C	0.540		0.360	
DAC-HY-06	06C	0.840		2.70	
DAC-HY-07	07C	0.038	U	0.055	U
DAC-HY-08	08C	0.180		0.072	U
DAC-HY-09	09C	0.470		0.520	
DAC-HY-10	10C	0.640		2.70	
DAC-HY-11	11C	1.20		2.20	
DAC-HY-12	12C	1.80		2.90	
DAC-HY-13	13C	2.10		0.280	
DAC-HY-14	14C	1.10		0.960	
DAC-HY-15	15C	1.80		5.70	
DAC-HY-16	16C	3.10		2.90	
DAC-HY-17	17C	4.50		1.60	
DAC-HY-18	18C	4.10		5.10	
DAC-HY-19	19C	6.30		5.40	
DAC-HY-20	20C	3.90		7.60	
DAC-HY-21	21C	4.10		19.0	
DAC-HY-22	22C	2.70		2.10	
DAC-HY-23	23C	3.80		3.50	
DAC-HY-24	24C	6.90		2.50	
DAC-HY-25	25C	9.60		2.80	
DAC-HY-26	26C	13.0		2.40	
DAC-HY-27	27C	8.90		2.20	
DAC-HY-28	28C	12.0		1.90	J
DAC-CR-02	02C-REF	0.110		0.057	U
DAC-CR-02A	02AC-REF	0.210		0.140	U
DAC-HY-30	30C-REF	0.380		0.210	
DAC-HY-35	35C-REF	0.190		0.200	
DAC-HY-05	05CQB	0.059	U	0.086	U
DAC-HY-22	22FB	0.052	U	0.056	U

**Concentrations of Volatile Organic Compounds in Surface Sediments of the Hylebos Waterway and Reference Stations (ug/kg DW)**

Station	Sample	Trichloroethene Conc.	Qua.	Tetrachloroethylene Conc.	Qua.	Xylenes Conc.	Qua.	1,2-Dichlorobenzene Conc.	Qua.	1,2,4-Trichlorobenzene Conc.	Qua.	1,3-Dichlorobenzene Conc.	Qua.	1,4-Dichlorobenzene Conc.	Qua.
DAC-HY-01	01C	1.40	U	1.40	U	1.40	U	1.40	U	7.10	U	1.40	U	1.40	U
DAC-HY-02	02C	1.40	U	1.40	U	2.80	U	1.40	U	6.90	U	1.40	U	1.40	U
DAC-HY-03	03C	1.60	U	1.60	U	3.30	U	1.60	U	8.20	U	1.60	U	1.60	U
DAC-HY-04	04C	1.40	U	1.40	U	2.90	U	1.40	U	7.20	U	1.40	U	1.40	U
DAC-HY-05	05C	1.20	U	1.20	U	2.50	U	1.20	U	6.20	U	1.20	U	1.20	U
DAC-HY-06	06C	1.40	U	1.40	U	2.80	U	1.40	U	7.00	U	1.40	U	1.40	U
DAC-HY-07	07C	2.40	U	1.40	U	2.70	U	1.40	U	6.80	U	1.40	U	1.40	U
DAC-HY-08	08C	1.60	U	1.60	U	3.10	U	1.60	U	7.80	U	1.60	U	1.60	U
DAC-HY-09	09C	1.00	U	1.00	U	2.00	U	1.00	U	5.00	U	1.00	U	1.00	U
DAC-HY-10	10C	1.80	U	1.80	U	3.60	U	1.80	U	9.00	U	1.80	U	1.80	U
DAC-HY-11	11C	1.60	U	1.60	U	3.20	U	1.60	U	8.00	U	1.60	U	1.60	U
DAC-HY-12	12C	1.50	U	1.50	U	3.10	U	1.50	U	7.70	U	1.50	U	1.50	U
DAC-HY-13	13C	1.60	U	1.60	U	3.20	U	1.60	U	8.10	U	1.60	U	1.60	U
DAC-HY-14	14C	1.20	U	1.20	U	2.50	U	1.20	U	6.20	U	1.20	U	1.20	U
DAC-HY-15	15C	1.90	U	1.90	U	3.70	U	1.90	U	9.30	U	1.90	U	1.90	U
DAC-HY-16	16C	2.20	U	2.20	U	4.50	U	2.20	U	11.0	U	2.20	U	2.20	U
DAC-HY-17	17C	1.40	U	1.40	U	2.80	U	1.40	U	7.00	U	1.40	U	1.40	U
DAC-HY-18	18C	1.80	U	1.80	U	3.50	U	1.80	U	8.90	U	1.80	U	1.80	U
DAC-HY-19	19C	1.00	U	1.00	U	2.00	U	1.00	U	5.00	U	1.00	U	1.00	U
DAC-HY-20	20C	2.10	U	2.10	U	4.30	U	2.10	U	11.0	U	2.10	U	2.10	U
DAC-HY-21	21C	1.00	U	1.00	U	2.00	U	1.00	U	5.00	U	1.00	U	1.00	U
DAC-HY-22	22C	1.70	U	1.70	U	3.40	U	1.70	U	8.50	U	1.70	U	1.70	U
DAC-HY-23	23C	1.70	U	1.70	U	3.40	U	1.70	U	8.50	U	1.70	U	1.70	U
DAC-HY-24	24C	2.30	U	2.30	U	4.70	U	2.30	U	12.0	U	2.30	U	2.30	U
DAC-HY-25	25C	2.00	U	2.00	U	4.00	U	2.00	U	9.90	U	2.00	U	2.00	U
DAC-HY-26	26C	2.30	U	2.30	U	4.60	U	2.30	U	12.0	U	2.30	U	2.30	U
DAC-HY-27	27C	1.90	U	1.90	U	3.80	U	1.90	U	9.50	U	1.90	U	1.90	U
DAC-HY-28	28C	2.30	U	2.30	U	4.80	U	2.30	U	11.0	U	2.30	U	2.30	U
DAC-CR-02	02C-REF	1.20	U	1.20	U	2.40	U	1.20	U	6.10	U	1.20	U	1.20	U
DAC-CR-02A	02AC-REF	1.00	U	1.00	U	2.00	U	1.00	U	5.00	U	1.00	U	1.00	U
DAC-HY-30	30C-REF	1.70	U	1.70	U	3.30	U	1.70	U	8.30	U	1.70	U	1.70	U
DAC-HY-35	35C-REF	1.60	U	1.60	U	3.20	U	1.60	U	8.00	U	1.60	U	1.60	U
DAC-HY-30	30C-VB	1.00	U	1.00	U	2.00	U	1.00	U	5.00	U	1.00	U	1.00	U

**Concentrations of Semi-Volatile Organic Compounds in Surface Sediments of Hylebos Waterway and Reference Stations (Organic Carbon Normalized)**

Station	Sample	2-Methylnaphthalene Conc.	2-Methylnaphthalene Qual.	Acenaphthene Conc.	Acenaphthene Qual.	Anthracene Conc.	Anthracene Qual.	Acenaphthalena Conc.	Acenaphthalena Qual.	Fluorene Conc.	Fluorene Conc.	Total low molecular weight PAHs Conc.	Naphthalene Conc.	Naphthalene Conc.	Phenanthrene Conc.
DAC-HY-01	01C	3800	1130	653	4730	2070	24800	5530	5530	67.3	67.3	<	133	296	
DAC-HY-02	02C	3390	2560	1060	7220	3560	43800	7220	7220	U	203	<	541	946	
DAC-HY-03	03C	7810	J	9900	1150	38500	J	16100	J	150000	J	11500	72900	J	22200
DAC-HY-04	04C	4970	3490	1140	9710	4060	51500	9140	9140				24000		
DAC-HY-05	05C	5080	2590	1270	40600	9640	105000	8630	8630				42100		
DAC-HY-06	06C	6740	5700	984	14000	7770	76100	13500	13500				34200		
DAC-HY-07	07C	7430	3660	1200	29700	6290	83700	11400	11400				31400		
DAC-HY-08	08C	6600	2990	1630	10800	4860	53200	10400	10400				22800		
DAC-HY-09	09C	5940	3120	941	14900	5450	67400	14900	14900				28200		
DAC-HY-10	10C	5390	4260	1270	16200	6860	79100	11800	11800				38700		
DAC-HY-11	11C	3570	1810	1000	7620	2860	36800	7140	7140				16200		
DAC-HY-12	12C	4000	2480	1200	10000	3880	46000	9200	9200				19200		
DAC-HY-13	13C	5290	3230	1220	6350	3600	45600	16900	16900				14300		
DAC-HY-14	14C	4420	2310	1500	7480	3200	43700	11600	11600				17700		
DAC-HY-15	15C	3450	2200	1250	11400	3800	47600	7840	7840				21200		
DAC-HY-16	16C	2310	1410	737	5130	J	2120	J	29300	J	4810		15100		
DAC-HY-17	17C	921	482	232	2630	789	10900	2370	2370				4390		
DAC-HY-18	18C	2170	1220	623	7120	2170	29200	3860	3860				14200		
DAC-HY-19	19C	2160	3640	675	11700	3900	52600	4160	4160				28600		
DAC-HY-20	20C	1680	1090	495	6680	1760	26600	3470	3470				13100		
DAC-HY-21	21C	1840	1450	638	7650	2120	29500	3320	3320				14300		
DAC-HY-22	22C	1460	1310	405	13400	2150	82400	2830	2830				62300		
DAC-HY-23	23C	1350	1110	423	6610	1750	25500	2650	2650				13000		
DAC-HY-24	24C	1010	1040	291	16900	2910	36000	1470	1470				13300		
DAC-HY-25	25C	839	633	348	4270	1080	15100	J	J				7440	J	
DAC-HY-26	26C	691	461	362	2800	987	12000	1280	1280				6090	J	
DAC-HY-27	27C	878	612	372	3460	1040	14100	J	J				7180	J	
DAC-HY-28	28C	1160	711	406	4880	1420	17100	J	J				8330	J	
DAC-CR-02	02C-REF	71.4	U	83.6	U	42.8	U	67.3	U	67.3	U	<	133	296	
DAC-CR-02A	02AC-REF	311	257	149	U	189	203	U	2280	U		<	541	946	
DAC-HY-30	30C-REF	2810	2730	496	7850	3390	41100	J	3880	J			22700	J	
DAC-HY-35	35C-REF	5790	5850	1350	13500	6430	85000	9940	9940				48000		

**Concentrations of Semi-Volatile Organic Compounds in Surface Sediments of Hylebos Waterway and Reference Stations (Organic Carbon Normalized) (Continued)**

Station	Sample	Dibenz(a,h)anthracene Conc. Qual.	Benz(a)anthracene Conc. Qual.	Benzo(a)pyrene Conc. Qual.	Benzo(g,h,i)perylene Conc. Qual.	Chrysene Conc. Qual.	Fluoranthene Conc. Qual.	Total high molecular weight PAHs Conc. Qual.
DAC-HY-01	01C	1000	6530	6130	4330	9330	16000	84700
DAC-HY-02	02C	2110	11100	12800	8890	16100	31700	165000
DAC-HY-03	03C	5730	51600	41700	21400	62500	125000	529000
DAC-HY-04	04C	2910	19400	19400	11400	27400	51400	250000
DAC-HY-05	05C	2840	28400	19800	11200	41100	81200	312000
DAC-HY-06	06C	3160	21800	21200	13000	31600	50300	269000
DAC-HY-07	07C	3140	29700	22900	12600	38900	68600	316000
DAC-HY-08	08C	2780	18400	18100	14200	38200	38200	250000
DAC-HY-09	09C	3320	25700	20800	12400	37600	69300	300000
DAC-HY-10	10C	4510	34800	30400	17600	53900	93100	414000
DAC-HY-11	11C	2710	16700	16700	11400	29000	39500	226000
DAC-HY-12	12C	3760	23600	23600	14000	40000	44000	279000
DAC-HY-13	13C	1270	9520	7940	5820	17500	29600	133600
DAC-HY-14	14C	3060	16300	19000	12900	32000	40800	246000
DAC-HY-15	15C	4310	20400	21600	17600	43100	47100	300000
DAC-HY-16	16C	3530	12500	12500	14700	28200	31100	223000
DAC-HY-17	17C	2110	5700	12700	10100	18900	13200	151000
DAC-HY-18	18C	4150	15100	21400	18400	38600	41500	285000
DAC-HY-19	19C	5190	22100	28800	24400	57100	57100	402000
DAC-HY-20	20C	4700	18100	22500	21500	44600	44600	315000
DAC-HY-21	21C	5360	17100	25500	22400	45900	43400	338000
DAC-HY-22	22C	4670	19900	21800	18400	46700	90300	378000
DAC-HY-23	23C	5560	20400	29100	23000	50300	42300	354000
DAC-HY-24	24C	5810	32500	30800	22200	63200	104000	488000
DAC-HY-25	25C	4430	11700	20600	15800	32200	31600	262000
DAC-HY-26	26C	3950	7730	16400	14300	24700	18100	204000
DAC-HY-27	27C	3990	8780	18400	14600	26100	29300	228000
DAC-HY-28	28C	3660	13600	17300	13000	32500	44700	241000
DAC-CR-02	02C-REF	73.4	U	58.1	U	56.1	U	622
DAC-CR-02A	02AC-REF	149	U	473		662	2030	<
DAC-HY-30	30C-REF	1780		9920	10700	7020	14000	8390
DAC-HY-35	35C-REF	1990		19900	14600	8770	21600	132000
							27700	<
							45600	200000

**Concentrations of Semi-Volatile Organic Compounds in Surface Sediments of Hylebos Waterway and Reference Stations (Organic Carbon Normalized) (Continued)**

Station	Sample	Indeno(1,2,3-c,d)pyrene Conc.	Qual.	Pyrene Conc.	Qual.	Total benzofluoranthenes Conc.	Qual.	1,2-Dichlorobenzene Conc.	Qual.	1,2,4-Trichlorobenzene Conc.	Qual.	1,3-Dichlorobenzene Conc.	Qual.	1,4-Dichlorobenzene Conc.	Qual.
DAC-HY-01	01C	4070		21300		6000	100	460		80.0		573	U		
DAC-HY-02	02C	8890		42200		31100	228	1610		172		1060			
DAC-HY-03	03C	22900	J	99000		99000	286	833		115		3180			
DAC-HY-04	04C	11400		57100		49700	229	1260		171		2690			
DAC-HY-05	05C	11200		66000		50800	239	1570		198		1570			
DAC-HY-06	06C	13000		67400		48200	518	5030		570		4200			
DAC-HY-07	07C	13100		74300		53100	280	2570		297		1430			
DAC-HY-08	08C	12200		52100		55600	347	2570		382		1220			
DAC-HY-09	09C	12400		64400		54500	421	2920		485		1980			
DAC-HY-10	10C	18100		78400		83300	637	5390		686		2450			
DAC-HY-11	11C	10000		47600		52400	281	2000		300		1330			
DAC-HY-12	12C	14000		52000		64000	212	1400		212		1760			
DAC-HY-13	13C	4810		33300		23300	74.1	392		84.7		386	U		
DAC-HY-14	14C	11600		53100		57100	163	1020		170		816			
DAC-HY-15	15C	16100		58800		70600	122	745		118		667	U		
DAC-HY-16	16C	12800		44900		57700	119	705		131		641			
DAC-HY-17	17C	7890		41700		39000	87.7	614		101		250	U		
DAC-HY-18	18C	15700		62300		68200	136	890		157		623			
DAC-HY-19	19C	20800		98700		88300	174	1040		182		571			
DAC-HY-20	20C	17800		58400		81700	89.1	619		99		421	U		
DAC-HY-21	21C	19900		71400		86700	168	944		171		587			
DAC-HY-22	22C	16800		84100		74800	140	654		128		436			
DAC-HY-23	23C	19800		60800		103000	90.0	397		74.1		397	U		
DAC-HY-24	24C	18800		97400		113000	51.3	205		51.3		274			
DAC-HY-25	25C	14700		58800		75900	53.8	222		45.9		253			
DAC-HY-26	26C	13200		41100		64100	39.5	181		37.8		197			
DAC-HY-27	27C	13000		47900		66500	53.2	205		42.6		266			
DAC-HY-28	28C	12200		42700		61000	40.6	163		38.6		264			
DAC-CR-02	02C-REF	73.4	U	499		112	30.6	27.5		26.5		122	U		
DAC-CR-02A	02AC-REF	500		1620		1620	54.0	43.2	U	51.4		243	U		
DAC-HY-30	30C-REF	7440		31000		21900	66.1	103		41.3		413			
DAC-HY-35	35C-REF	8190		52000		26900	105	117		40.4		450	U		

**Concentrations of Semi-Volatile Organic Compounds in Surface Sediments of Hylebos Waterway and Reference Stations (Organic Carbon Normalized) (Continued)**

Station	Sample	Hexachlorobutadiene Conc.	Qual.	Di-n-octyl phthalate Conc.	Qual.	Bis(2-ethylhexyl)phthalate Conc.	Qual.	Butylbenzyl phthalate Conc.	Qual.	Diethyl phthalate Conc.	Qual.	Dimethyl phthalate Conc.	Qual.	Di-n-butyl phthalate Conc.	Qual.	Hexachlorobenzene Conc.	Qual.
DAC-HY-01	01C	933	200	6270	J	800	J	220	UJ	160	J	4800	J	344	UJ	1110	733
DAC-HY-02	02C	2720	183	4940	J	483	UJ	156	UJ	128	J	1560	J	411	J	1150	1260
DAC-HY-03	03C	1300	573	24500	J	1820	J	115	UJ	297	J	800	UJ	24300	J	2080	3260
DAC-HY-04	04C	2110	440	14300	J	1140	J	149	UJ	152	UJ	3860	J	321	UJ	3660	1880
DAC-HY-05	05C	3810	269	27900	J	761	J	130	UJ	249	J	149	UJ	800	J	2080	3260
DAC-HY-06	06C	7770	518	7250	J	503	J	146	U	181	U	326	U	743	UJ	1880	3660
DAC-HY-07	07C	14900	309	15400	J	503	UJ	124	U	452	J	1490	U	667	UJ	5940	3140
DAC-HY-08	08C	8330	201	5560	J	451	J	1090	UJ	475	U	2300	J	1230	UJ	1900	1800
DAC-HY-09	09C	10900	490	54500	J	22500	J	250	U	186	U	440	U	122	U	1800	635
DAC-HY-10	10C	5880	686	14800	J	952	J	186	U	524	J	824	J	122	U	1090	1100
DAC-HY-11	11C	3140	367	13200	J	1440	J	180	U	480	J	833	J	1220	J	737	737
DAC-HY-12	12C	2480	440	5290	J	270	U	122	U	365	J	421	J	291	UJ	5940	3140
DAC-HY-13	13C	847	143	1560	272	12200	J	1290	U	204	U	422	J	578	UJ	1900	1800
DAC-HY-14	14C	341	341	20400	J	2470	J	169	U	1290	J	101	U	1220	J	1220	1220
DAC-HY-15	15C	980	122	18600	J	2980	J	196	U	1360	J	1360	J	1360	J	1360	1360
DAC-HY-16	16C	801	J	3110	UJ	355	UJ	83.3	UJ	97.9	UJ	950	J	593	UJ	623	545
DAC-HY-17	17C	386	83.3	16600	J	1380	J	77.9	UJ	77.9	J	390	J	842	UJ	569	569
DAC-HY-18	18C	712	243	13000	J	2970	J	101	UJ	1660	J	1660	J	1660	J	740	434
DAC-HY-19	19C	701	184	18800	J	18800	J	163	UJ	2180	J	16.2	UJ	592	J	374	374
DAC-HY-20	20C	470	188	19600	J	2090	J	90.0	UJ	15300	J	90.0	J	952	J	291	291
DAC-HY-21	21C	612	148	15800	J	23900	J	2560	J	142	UJ	1280	J	1350	J	205	205
DAC-HY-22	22C	530	246	15100	J	31900	J	1390	UJ	15100	J	905	J	82.2	UJ	197	197
DAC-HY-23	23C	317	370	31900	J	24400	J	1780	UJ	31900	J	1780	J	55.8	UJ	532	532
DAC-HY-24	24C	205	205	190	105	15100	J	24400	J	24400	J	2030	J	1600	J	467	467
DAC-HY-25	25C	152	152	346	152	152	J	15800	J	15800	J	15800	J	15800	J	364	364
DAC-HY-26	26C	109	105	346	105	105	J	15100	J	15100	J	15100	J	15100	J	280	280
DAC-HY-27	27C	152	224	224	138	138	J	31900	J	31900	J	31900	J	31900	J	197	197
DAC-HY-28	28C	138	J	24400	J	24400	J	24400	J	24400	J	24400	J	24400	J	251	251
DAC-CR-02	02C-REF	112	U	19.4	U	805	U	98.9	UJ	214	U	21.4	J	275	UJ	11.2	U
DAC-CR-02A	02AC-REF	203	U	47.3	U	2430	U	257	UJ	338	U	56.8	UJ	730	UJ	24.3	24.3
DAC-HY-30	30C-REF	136	322	6200	J	537	J	132	UJ	826	J	455	J	158	UJ	190	190
DAC-HY-35	35C-REF	187	105	5670	J	333	J	158	UJ	322	J	398	J	398	J	251	251

**Concentrations of Semi-Volatile Organic Compounds in Surface Sediments of Hylebos Waterway and Reference Stations (Organic Carbon Normalized) (Continued)**

Station	Sample	Chlorobiphenyl 10/209	Chlorobiphenyl 3/18	Chlorobiphenyl 3/28	Chlorobiphenyl 4/44	Chlorobiphenyl 4/52	Chlorobiphenyl 4/66	Chlorobiphenyl 5/101
		Conc.	Qual.	Conc.	Qual.	Conc.	Qual.	Conc.
DAC-HY-01	01C	800	140	34.0	U	86.7	U	53.3
DAC-HY-02	02C	1940	300	178	U	172	U	250
DAC-HY-03	03C	1300	234	120	U	161	U	109
DAC-HY-04	04C	857	326	166	U	171	U	177
DAC-HY-05	05C	2030	315	173	U	178	U	157
DAC-HY-06	06C	2950	301	321	U	332	U	363
DAC-HY-07	07C	1660	686	326	U	251	U	177
DAC-HY-08	08C	4860	382	312	U	347	U	177
DAC-HY-09	09C	594	1090	193	U	129	U	178
DAC-HY-10	10C	784	735	176	U	118	U	466
DAC-HY-11	11C	1190	471	114	U	224	U	200
DAC-HY-12	12C	760	400	144	U	176	U	184
DAC-HY-13	13C	317	180	46.6	U	84.7	U	143
DAC-HY-14	14C	680	279	95.2	U	272	U	306
DAC-HY-15	15C	863	149	86.3	U	271	U	349
DAC-HY-16	16C	833	151	131	U	272	U	295
DAC-HY-17	17C	417	281	180	U	430	U	1360
DAC-HY-18	18C	653	326	187	U	258	U	475
DAC-HY-19	19C	494	364	247	U	312	U	519
DAC-HY-20	20C	470	146	124	U	248	U	396
DAC-HY-21	21C	561	536	224	U	281	U	408
DAC-HY-22	22C	343	268	190	U	224	U	343
DAC-HY-23	23C	344	230	317	U	317	U	450
DAC-HY-24	24C	159	101	145	U	188	U	239
DAC-HY-25	25C	285	109	127	U	206	U	222
DAC-HY-26	26C	280	67.4	90.5	U	214	U	247
DAC-HY-27	27C	319	98.4	117	U	226	U	319
DAC-HY-28	28C	203	81.3	97.6	U	167	U	167
DAC-CR-02	02C-REF	5.61	U	19.4	U	18.4	U	54.0
DAC-CR-02A	02AC-REF	20.3	U	37.8	U	29.7	U	75.7
DAC-HY-30	30C-REF	161	95.0	31.8	U	82.6	U	86.8
DAC-HY-35	35C-REF	87.7	152	57.3	U	70.2	U	99.4

**Concentrations of Semi-Volatile Organic Compounds in Surface Sediments of Hylebos Waterway and Reference Stations (Organic Carbon Normalized) (Continued)**

Station	Sample	Chlorobiphenyl 5/105 Conc.	Chlorobiphenyl 5/118 Qual.	Chlorobiphenyl 5/118 Conc.	Chlorobiphenyl 6/128 Qual.	Chlorobiphenyl 6/128 Conc.	Chlorobiphenyl 6/138 Qual.	Chlorobiphenyl 6/138 Conc.	Chlorobiphenyl 6/153 Qual.	Chlorobiphenyl 6/153 Conc.	Chlorobiphenyl 7/170 Qual.	Chlorobiphenyl 7/170 Conc.	Chlorobiphenyl 7/180 Qual.	Chlorobiphenyl 7/180 Conc.	
DAC-HY-01	01C	66.7	360	39.3	193	233	45.3	U	293						
DAC-HY-02	02C	322	1720	83.3	667	439	37.2	U							
DAC-HY-03	03C	83.3	120	62.5	307	323	93.8								
DAC-HY-04	04C	286	1260	80.0	383	406	91.4								
DAC-HY-05	05C	188	1320	188	609	761	122								
DAC-HY-06	06C	383	2120	2.49	570	451	48.7	U							
DAC-HY-07	07C	371	1140	2.40	480	4.00	137								
DAC-HY-08	08C	163	1740	2.33	U	319	521	U							
DAC-HY-09	09C	163	1240	1.53	U	282	144								
DAC-HY-10	10C	461	2650	167	637	2700	58.8								
DAC-HY-11	11C	367	2240	36.2	667	619	J								
DAC-HY-12	12C	320	1800	156	760	560	88.0								
DAC-HY-13	13C	148	688	68.8	323	487	11.1								
DAC-HY-14	14C	320	510	224	952	1020	74.8								
DAC-HY-15	15C	2.94	U	941	212	1100	941								
DAC-HY-16	16C	353	897	276	1190	1960	J								
DAC-HY-17	17C	877	2760	439	2020	2060	57.0								
DAC-HY-18	18C	386	1040	237	1280	1280	89.0								
DAC-HY-19	19C	416	1040	286	1250	1250	83.1								
DAC-HY-20	20C	1.83	U	1240	297	1290	990								
DAC-HY-21	21C	689	1150	1.79	U	1150	3.06	U							
DAC-HY-22	22C	274	1030	218	810	935	77.9								
DAC-HY-23	23C	2.25	U	926	262	1140	847								
DAC-HY-24	24C	1.88	U	615	118	667	564								
DAC-HY-25	25C	146	411	106	554	601	83.9								
DAC-HY-26	26C	130	312	93.8	526	592	82.2								
DAC-HY-27	27C	181	638	136	665	745	87.8								
DAC-HY-28	28C	142	305	95.5	488	528	87.4								
DAC-CR-02	02C-REF	16.3	25.5	7.85	U	31.6	46.9	U							
DAC-CR-02A	02AC-REF	10.1	52.7	9.59	U	51.4	17.6	U							
DAC-HY-30	30C-REF	21.5	112	29.3	116	128	49.6								
DAC-HY-35	35C-REF	76.0	298	29.2	240	316	54.4	U							

**Concentrations of Semi-Volatile Organic Compounds in Surface Sediments of Hylebos Waterway and Reference Stations (Organic Carbon Normalized) (Continued)**

Station	Sample	Chlorobiphenyl 7/187 Conc.	Chlorobiphenyl 7/187 Qual.	Chlorobiphenyl 8/195 Conc.	Chlorobiphenyl 8/195 Qual.	Chlorobiphenyl 9/206 Conc.	Chlorobiphenyl 9/206 Qual.	PCBs, total Conc.	PCBs, total Qual.
DAC-HY-01	01C	147		41.3		453		6270	
DAC-HY-02	02C	228		111		1110		18300	
DAC-HY-03	03C	167		67.7		625		9380	
DAC-HY-04	04C	189		74.3		629		12600	
DAC-HY-05	05C	234		91.4		863		17800	
DAC-HY-06	06C	301		176		2280		26400	
DAC-HY-07	07C	383		91.4		743		16000	
DAC-HY-08	08C	319		181		2290		27400	
DAC-HY-09	09C	109		45.0		401		11400	
DAC-HY-10	10C	147		30.4		539		23000	
DAC-HY-11	11C	300		100		857		18800	
DAC-HY-12	12C	260		80.0		640		16000	
DAC-HY-13	13C	243		52.9		317		7940	
DAC-HY-14	14C	456		95.2		565		15600	
DAC-HY-15	15C	549		94.1		588		16100	
DAC-HY-16	16C	385		64.1		481		19200	
DAC-HY-17	17C	154		41.7		307		28500	
DAC-HY-18	18C	220		47.5		326		17200	
DAC-HY-19	19C	192		44.2		312		17400	
DAC-HY-20	20C	248		42.1		322		14900	
DAC-HY-21	21C	196		53.6		306		15500	
DAC-HY-22	22C	156		34.3		218		12800	
DAC-HY-23	23C	188		26.5		196		14000	
DAC-HY-24	24C	116		20.5		140		8030	
DAC-HY-25	25C	93.4		26.9		138		8070	
DAC-HY-26	26C	95.4		29.6		123		7400	
DAC-HY-27	27C	141		77.1		141		9840	
DAC-HY-28	28C	120		69.1	J	130		7110	
DAC-CR-02	02C-REF	6.73	U	5.10	U	112		612	
DAC-CR-02A	02AC-REF	13.5		7.97	U	10.7		1080	
DAC-HY-30	30C-REF	82.6		13.2		950		2640	
DAC-HY-35	35C-REF	64.3		5.09	U	415		3680	

**Concentrations of Volatile Organic Compounds in Surface Sediments of Hylebos Waterway and Reference Stations (Organic Carbon Normalized)**

Station	Sample	Trichloroethene	Tetrachloroethene	Ethylbenzene	Xylenes	1,2-Dichlorobenzene	1,2,4-Trichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene
		Conc.	Qual.	Conc.	Qual.	Conc.	Qual.	Conc.	Qual.
DAC-HY-01	01C	93.3	U	93.3	U	93.3	U	93.3	U
DAC-HY-02	02C	77.8	U	77.8	U	156	U	77.8	U
DAC-HY-03	03C	83.3	U	83.3	U	172	U	83.3	U
DAC-HY-04	04C	80.0	U	80.0	U	166	U	80.0	U
DAC-HY-05	05C	60.9	U	60.9	U	127	U	60.9	U
DAC-HY-06	06C	72.5	U	72.5	U	145	U	72.5	U
DAC-HY-07	07C	137	U	80.0	U	154	U	80.0	U
DAC-HY-08	08C	55.6	U	55.6	U	108	U	55.6	U
DAC-HY-09	09C	49.5	U	49.5	U	99.0	U	49.5	U
DAC-HY-10	10C	88.2	U	88.2	U	176	U	88.2	U
DAC-HY-11	11C	76.2	U	76.2	U	152	U	76.2	U
DAC-HY-12	12C	60.0	U	60.0	U	124	U	60.0	U
DAC-HY-13	13C	84.7	U	84.7	U	169	U	84.7	U
DAC-HY-14	14C	81.6	U	81.6	U	170	U	81.6	U
DAC-HY-15	15C	74.5	U	74.5	U	145	U	74.5	U
DAC-HY-16	16C	70.5	U	70.5	U	144	U	70.5	U
DAC-HY-17	17C	61.4	U	61.4	U	123	U	61.4	U
DAC-HY-18	18C	53.4	U	53.4	U	104	U	53.4	U
DAC-HY-19	19C	26.0	U	26.0	U	52.0	U	26.0	U
DAC-HY-20	20C	52.0	U	52.0	U	106	U	52.0	U
DAC-HY-21	21C	25.5	U	25.5	U	51.0	U	25.5	U
DAC-HY-22	22C	53.0	U	53.0	U	106	U	53.0	U
DAC-HY-23	23C	45.0	U	45.0	U	90.0	U	45.0	U
DAC-HY-24	24C	39.3	U	39.3	U	80.3	U	39.3	U
DAC-HY-25	25C	31.6	U	31.6	U	63.3	U	31.6	U
DAC-HY-26	26C	37.8	U	37.8	U	75.7	U	37.8	U
DAC-HY-27	27C	50.5	U	50.5	U	101	U	50.5	U
DAC-HY-28	28C	46.8	U	46.8	U	93.5	U	46.8	U
DAC-CR-02	02C-REF	122	U	122	U	245	U	122	U
DAC-CR-02A	02AC-REF	135	U	135	U	270	U	135	U
DAC-HY-30	30C-REF	70.2	U	70.2	U	136	U	70.2	U
DAC-HY-35	35C-REF	93.6	U	93.6	U	187	U	93.6	U

**Ratio of metal concentrations as analyzed by total digestion and strong acid digestion methods**

Station	Sample	Variable	Method	Value	Qualifier	Method	Value	Qualifier	TD/SA ratio
CR-02	02C-REF	ANTIMONY	TD	1.22	U	SA	0.995	U	1.23
CR-02A	02AC-REF	ANTIMONY	TD	1.22	U	SA	0.995	U	1.23
HY-01	01C	ANTIMONY	TD	1.73		SA	0.995	U	1.74
HY-02	02C	ANTIMONY	TD	5.81		SA	0.995	U	5.84
HY-03	03C	ANTIMONY	TD	3.4		SA	0.995	U	3.42
HY-04	04C	ANTIMONY	TD	4.4		SA	0.995	U	4.42
HY-05	05C	ANTIMONY	TD	3.1		SA	0.995	U	3.12
HY-06	06C	ANTIMONY	TD	3.05		SA	0.995	U	3.07
HY-07	07C	ANTIMONY	TD	2.15		SA	0.995	U	2.16
HY-08	08C	ANTIMONY	TD	3.44		SA	0.995	U	3.46
HY-09	09C	ANTIMONY	TD	2.87		SA	0.995	U	2.88
HY-10	10C	ANTIMONY	TD	4.59		SA	0.995	U	4.61
HY-11	11C	ANTIMONY	TD	3.28		SA	0.995	U	3.3
HY-12	12C	ANTIMONY	TD	3.84		SA	0.995	U	3.86
HY-13	13C	ANTIMONY	TD	3.69		SA	0.995	U	3.71
HY-14	14C	ANTIMONY	TD	15.2		SA	1.12		13.57
HY-15	15C	ANTIMONY	TD	10.9		SA	0.995	U	10.95
HY-16	16C	ANTIMONY	TD	7.88		SA	0.995	U	7.92
HY-17	17C	ANTIMONY	TD	4.57		SA	2.07		2.21
HY-18	18C	ANTIMONY	TD	10.4		SA	1.46		7.12
HY-19	19C	ANTIMONY	TD	14.1		SA	1.45		9.72
HY-20	20C	ANTIMONY	TD	10.6		SA	0.995	U	10.65
HY-21	21C	ANTIMONY	TD	16.5		SA	1.17		14.1
HY-22	22C	ANTIMONY	TD	7.13		SA	1.12		6.37
HY-23	23C	ANTIMONY	TD	16.5		SA	1.36		12.13
HY-24	24C	ANTIMONY	TD	11.6		SA	1.83		6.34
HY-25	25C	ANTIMONY	TD	13.8		SA	2.27		6.08
HY-26	26C	ANTIMONY	TD	14.5		SA	1.54		9.42
HY-27	27C	ANTIMONY	TD	6.77		SA	0.995	U	6.8
HY-28	28C	ANTIMONY	TD	8.59		SA	0.995	U	8.63
HY-30	30C-REF	ANTIMONY	TD	1.22	U	SA	0.995	U	1.23

Average: 5.85

CR-02	02C-REF	ARSENIC	TD	3.06		SA	13	U	0.24
CR-02A	02AC-REF	ARSENIC	TD	1.87		SA	13	U	0.14
HY-01	01C	ARSENIC	TD	5.45		SA	13	U	0.42
HY-02	02C	ARSENIC	TD	15.2		SA	16.6		0.92
HY-03	03C	ARSENIC	TD	12.9		SA	14.2		0.91
HY-04	04C	ARSENIC	TD	10.7		SA	13	U	0.82
HY-05	05C	ARSENIC	TD	12.2		SA	13	U	0.94
HY-06	06C	ARSENIC	TD	15		SA	20.7		0.72
HY-07	07C	ARSENIC	TD	10.8		SA	13	U	0.83
HY-08	08C	ARSENIC	TD	17.3		SA	27.6		0.63
HY-09	09C	ARSENIC	TD	11.3		SA	18.6		0.61
HY-10	10C	ARSENIC	TD	8.64		SA	13	U	0.66
HY-11	11C	ARSENIC	TD	15.8		SA	13.9		1.14

Ratio of metal concentrations as analyzed by total digestion and strong acid digestion methods (continued)

Station	Sample	Variable	Method	Value	Qualifier	Method	Value	Qualifier	TD/SA ratio
HY-12	12C	ARSENIC	TD	16	SA	21.4			0.75
HY-13	13C	ARSENIC	TD	7.88	SA	21.6			0.36
HY-14	14C	ARSENIC	TD	21.1	SA	14.9			1.42
HY-15	15C	ARSENIC	TD	15.8	SA	34.6			0.46
HY-16	16C	ARSENIC	TD	34.9	SA	34.6			1.01
HY-17	17C	ARSENIC	TD	9.92	SA	22.4			0.44
HY-18	18C	ARSENIC	TD	17.5	SA	41.1			0.43
HY-19	19C	ARSENIC	TD	40.1	SA	42			0.95
HY-20	20C	ARSENIC	TD	45.9	SA	48.9			0.94
HY-21	21C	ARSENIC	TD	32.2	SA	51.5			0.63
HY-22	22C	ARSENIC	TD	30.9	SA	47.2			0.65
HY-23	23C	ARSENIC	TD	22.9	SA	52.6			0.44
HY-24	24C	ARSENIC	TD	120	SA	54.5			2.2
HY-25	25C	ARSENIC	TD	61.4	SA	63.4			0.97
HY-26	26C	ARSENIC	TD	55.1	SA	54.5			1.01
HY-27	27C	ARSENIC	TD	97.6	SA	40.5			2.41
HY-28	28C	ARSENIC	TD	37	SA	38.4			0.96
HY-30	30C-REF	ARSENIC	TD	6.41	SA	13 U			0.49
						Average:			0.82

CR-02	02C-REF	CADMIUM	TD	0.348	SA	0.156			2.23
CR-02A	02AC-REF	CADMIUM	TD	0.18	SA	0.311			0.58
HY-01	01C	CADMIUM	TD	0.216 U	SA	0.184			1.17
HY-02	02C	CADMIUM	TD	0.303 U	SA	0.255			1.19
HY-03	03C	CADMIUM	TD	0.296 U	SA	0.261			1.13
HY-04	04C	CADMIUM	TD	0.298 U	SA	0.281			1.06
HY-05	05C	CADMIUM	TD	0.301 U	SA	0.234			1.29
HY-06	06C	CADMIUM	TD	0.405 U	SA	0.331			1.22
HY-07	07C	CADMIUM	TD	0.323 U	SA	0.206			1.57
HY-08	08C	CADMIUM	TD	0.456	SA	0.4			1.14
HY-09	09C	CADMIUM	TD	0.318	SA	0.292			1.09
HY-10	10C	CADMIUM	TD	0.339	SA	0.343			0.99
HY-11	11C	CADMIUM	TD	0.382	SA	0.335			1.14
HY-12	12C	CADMIUM	TD	0.356	SA	0.308			1.16
HY-13	13C	CADMIUM	TD	0.241	SA	0.23			1.05
HY-14	14C	CADMIUM	TD	0.269	SA	0.236			1.14
HY-15	15C	CADMIUM	TD	0.383	SA	0.447			0.86
HY-16	16C	CADMIUM	TD	0.477	SA	0.56			0.85
HY-17	17C	CADMIUM	TD	0.202	SA	0.202			1
HY-18	18C	CADMIUM	TD	0.474	SA	0.618			0.77
HY-19	19C	CADMIUM	TD	0.529	SA	0.676			0.78
HY-20	20C	CADMIUM	TD	0.674	SA	0.762			0.88
HY-21	21C	CADMIUM	TD	0.703	SA	0.83			0.85
HY-22	22C	CADMIUM	TD	0.492	SA	0.685			0.72
HY-23	23C	CADMIUM	TD	1.07	SA	1.14			0.94
HY-24	24C	CADMIUM	TD	1.95	SA	1.18			1.65
HY-25	25C	CADMIUM	TD	1.36	SA	1.35			1.01
HY-26	26C	CADMIUM	TD	0.981	SA	1.05			0.93

Ratio of metal concentrations as analyzed by total digestion and strong acid digestion methods (continued)

Station	Sample	Variable	Method	Value	Qualifier	Method	Value	Qualifier	TD/SA ratio
HY-27	27C	CADMIUM	TD	0.633		SA	0.694		0.91
HY-28	28C	CADMIUM	TD	0.803		SA	1.5 U		0.54
HY-30	30C-REF	CADMIUM	TD	0.295		SA	0.207 U		1.43
Average:									1.07
CR-02	02C-REF	CHROMIUM	TD	61.4		SA	25.8		2.38
CR-02A	02AC-REF	CHROMIUM	TD	45.8		SA	31.4		1.46
HY-01	01C	CHROMIUM	TD	29		SA	22.7		1.28
HY-02	02C	CHROMIUM	TD	31.5		SA	30.9		1.02
HY-03	03C	CHROMIUM	TD	31.6		SA	32.4		0.98
HY-04	04C	CHROMIUM	TD	31.4		SA	28		1.12
HY-05	05C	CHROMIUM	TD	31.2		SA	29.3		1.06
HY-06	06C	CHROMIUM	TD	31		SA	35.9		0.86
HY-07	07C	CHROMIUM	TD	29.1		SA	28.2		1.03
HY-08	08C	CHROMIUM	TD	30.5		SA	32.5		0.94
HY-09	09C	CHROMIUM	TD	30.5		SA	27.6		1.11
HY-10	10C	CHROMIUM	TD	91.7		SA	32.8		2.8
HY-11	11C	CHROMIUM	TD	29.2		SA	28.3		1.03
HY-12	12C	CHROMIUM	TD	28.7		SA	27.8		1.03
HY-13	13C	CHROMIUM	TD	29.2		SA	28.9		1.01
HY-14	14C	CHROMIUM	TD	35.2		SA	23.1		1.52
HY-15	15C	CHROMIUM	TD	35		SA	36.6		0.96
HY-16	16C	CHROMIUM	TD	37.1		SA	37.3		0.99
HY-17	17C	CHROMIUM	TD	28.7		SA	20.3		1.41
HY-18	18C	CHROMIUM	TD	34.8		SA	33.7		1.03
HY-19	19C	CHROMIUM	TD	33.6		SA	32.6		1.03
HY-20	20C	CHROMIUM	TD	36.2		SA	49.3		0.73
HY-21	21C	CHROMIUM	TD	39.3		SA	36.4		1.08
HY-22	22C	CHROMIUM	TD	34.4		SA	30.8		1.12
HY-23	23C	CHROMIUM	TD	39.8		SA	34.5		1.15
HY-24	24C	CHROMIUM	TD	39.4		SA	45.6		0.86
HY-25	25C	CHROMIUM	TD	40.7		SA	48.8		0.83
HY-26	26C	CHROMIUM	TD	40.4		SA	50.2		0.8
HY-27	27C	CHROMIUM	TD	33.7		SA	40.7		0.83
HY-28	28C	CHROMIUM	TD	38.8		SA	43.6		0.89
HY-30	30C-REF	CHROMIUM	TD	27.7		SA	28.3		0.98
Average:									1.14
CR-02	02C-REF	COPPER	TD	16		SA	12.2		1.31
CR-02A	02AC-REF	COPPER	TD	9.8		SA	18.7		0.52
HY-01	01C	COPPER	TD	53.6		SA	48.5		1.11
HY-02	02C	COPPER	TD	90.7		SA	76.4		1.19
HY-03	03C	COPPER	TD	159		SA	152.2		1.04
HY-04	04C	COPPER	TD	121		SA	98		1.23
HY-05	05C	COPPER	TD	80.8		SA	80.2		1.01
HY-06	06C	COPPER	TD	79.1		SA	80.2		0.99
HY-07	07C	COPPER	TD	84.4		SA	76.1		1.11
HY-08	08C	COPPER	TD	94.7		SA	82.3		1.15

Ratio of metal concentrations as analyzed by total digestion and strong acid digestion methods (continued)

Station	Sample	Variable	Method	Value	Qualifier	Method	Value	Qualifier	TD/SA ratio
HY-09	09C	COPPER	TD	104	SA	84			1.24
HY-10	10C	COPPER	TD	113	SA	110.4			1.02
HY-11	11C	COPPER	TD	94.5	SA	83.7			1.13
HY-12	12C	COPPER	TD	103	SA	89.7			1.15
HY-13	13C	COPPER	TD	60.7	SA	59.2			1.03
HY-14	14C	COPPER	TD	77.6	SA	71.3			1.09
HY-15	15C	COPPER	TD	132	SA	114.6			1.15
HY-16	16C	COPPER	TD	136	SA	125.1			1.09
HY-17	17C	COPPER	TD	53.8	SA	43.4			1.24
HY-18	18C	COPPER	TD	130	SA	121.1			1.07
HY-19	19C	COPPER	TD	135	SA	119.7			1.13
HY-20	20C	COPPER	TD	160	SA	154.6			1.03
HY-21	21C	COPPER	TD	161	SA	146.6			1.1
HY-22	22C	COPPER	TD	101	SA	114.2			0.88
HY-23	23C	COPPER	TD	190	SA	165.5			1.15
HY-24	24C	COPPER	TD	154	SA	151.3			1.02
HY-25	25C	COPPER	TD	230	SA	183.9			1.25
HY-26	26C	COPPER	TD	183	SA	180.7			1.01
HY-27	27C	COPPER	TD	127	SA	114.7			1.11
HY-28	28C	COPPER	TD	141	SA	139.7			1.01
HY-30	30C-REF	COPPER	TD	71.4	SA	65.7			1.09
					Average:		1.09		

CR-02	02C-REF	LEAD	TD	10.4	SA	4.02			2.59
CR-02A	02AC-REF	LEAD	TD	8.49	SA	6.09			1.39
HY-01	01C	LEAD	TD	23.4	SA	21.5			1.09
HY-02	02C	LEAD	TD	44.9	SA	58.9			0.76
HY-03	03C	LEAD	TD	50.3	SA	72.3			0.7
HY-04	04C	LEAD	TD	63	SA	47.4			1.33
HY-05	05C	LEAD	TD	40.8	SA	54			0.76
HY-06	06C	LEAD	TD	73.9	SA	68.6			1.08
HY-07	07C	LEAD	TD	56.4	SA	58.5			0.96
HY-08	08C	LEAD	TD	86.4	SA	82.5			1.05
HY-09	09C	LEAD	TD	64.2	SA	66.3			0.97
HY-10	10C	LEAD	TD	158	SA	176			0.9
HY-11	11C	LEAD	TD	59.6	SA	57.9			1.03
HY-12	12C	LEAD	TD	65.1	SA	68.5			0.95
HY-13	13C	LEAD	TD	30.7	SA	33			0.93
HY-14	14C	LEAD	TD	55.3	SA	40.7			1.36
HY-15	15C	LEAD	TD	89.3	SA	75.4			1.18
HY-16	16C	LEAD	TD	83.1	SA	64.4			1.29
HY-17	17C	LEAD	TD	207	SA	35.2			5.88
HY-18	18C	LEAD	TD	87.9	SA	72.3			1.22
HY-19	19C	LEAD	TD	95.5	SA	74.1			1.29
HY-20	20C	LEAD	TD	105	SA	90.8			1.16
HY-21	21C	LEAD	TD	103	SA	89.1			1.16
HY-22	22C	LEAD	TD	57	SA	68.9			0.83
HY-23	23C	LEAD	TD	105	SA	84.2			1.25

Ratio of metal concentrations as analyzed by total digestion and strong acid digestion methods (continued)

Station	Sample	Variable	Method	Value	Qualifier	Method	Value	Qualifier	TD/SA ratio
HY-24	24C	LEAD	TD	114	SA		77.9		1.46
HY-25	25C	LEAD	TD	122	SA		83.2		1.47
HY-26	26C	LEAD	TD	129	SA		91		1.42
HY-27	27C	LEAD	TD	64	SA		52.1		1.23
HY-28	28C	LEAD	TD	73.6	SA		65		1.13
HY-30	30C-REF	LEAD	TD	28.7	SA		27.3		1.05
					Average:				1.32
CR-02	02C-REF	MERCURY	TD	0.038 UJ	SA		0.084 UJ		0.45
CR-02A	02AC-REF	MERCURY	TD	0.024 UJ	SA		0.113 UJ		0.21
HY-01	01C	MERCURY	TD	0.082 UJ	SA		0.222 UJ		0.37
HY-02	02C	MERCURY	TD	0.221 UJ	SA		0.304 UJ		0.73
HY-03	03C	MERCURY	TD	0.16	SA		0.387 UJ		0.41
HY-04	04C	MERCURY	TD	0.195 UJ	SA		0.255 UJ		0.76
HY-05	05C	MERCURY	TD	0.2 UJ	SA		0.268 UJ		0.75
HY-06	06C	MERCURY	TD	0.281 UJ	SA		0.365 UJ		0.77
HY-07	07C	MERCURY	TD	0.209 UJ	SA		0.241 UJ		0.87
HY-08	08C	MERCURY	TD	0.303 UJ	SA		0.487 UJ		0.62
HY-09	09C	MERCURY	TD	0.206 UJ	SA		0.317 UJ		0.65
HY-10	10C	MERCURY	TD	0.239 UJ	SA		0.395 UJ		0.61
HY-11	11C	MERCURY	TD	0.25 U	SA		0.348 U		0.72
HY-12	12C	MERCURY	TD	0.248 UJ	SA		0.392 UJ		0.63
HY-13	13C	MERCURY	TD	0.116 UJ	SA		0.239 UJ		0.49
HY-14	14C	MERCURY	TD	0.152 UJ	SA		0.242 UJ		0.63
HY-15	15C	MERCURY	TD	0.358 UJ	SA		0.459 UJ		0.78
HY-16	16C	MERCURY	TD	0.393 UJ	SA		0.528 UJ		0.74
HY-17	17C	MERCURY	TD	0.174 UJ	SA		0.207 UJ		0.84
HY-18	18C	MERCURY	TD	0.366 UJ	SA		0.558 UJ		0.66
HY-19	19C	MERCURY	TD	2.7 UJ	SA		0.595 UJ		4.54
HY-20	20C	MERCURY	TD	0.569 UJ	SA		0.759 UJ		0.75
HY-21	21C	MERCURY	TD	0.774 UJ	SA		0.801 UJ		0.97
HY-22	22C	MERCURY	TD	0.357 UJ	SA		0.605 UJ		0.59
HY-23	23C	MERCURY	TD	0.414 UJ	SA		0.578 UJ		0.72
HY-24	24C	MERCURY	TD	2.73 UJ	SA		0.976 UJ		2.8
HY-25	25C	MERCURY	TD	0.631 UJ	SA		0.911 UJ		0.69
HY-26	26C	MERCURY	TD	0.715 UJ	SA		0.997 UJ		0.72
HY-27	27C	MERCURY	TD	0.396 UJ	SA		0.619 UJ		0.64
HY-28	28C	MERCURY	TD	0.501 UJ	SA		0.747 UJ		0.67
HY-30	30C-REF	MERCURY	TD	0.251 UJ	SA		0.386 UJ		0.65
					Average:				0.85
CR-02	02C-REF	NICKEL	TD	33.9	SA		20.4		1.66
CR-02A	02AC-REF	NICKEL	TD	27.5	SA		27.4		1
HY-01	01C	NICKEL	TD	24.8	SA		14.6		1.7
HY-02	02C	NICKEL	TD	28.8	SA		18		1.6
HY-03	03C	NICKEL	TD	28.6	SA		19.3		1.48
HY-04	04C	NICKEL	TD	28.3	SA		18.5		1.53
HY-05	05C	NICKEL	TD	27.7	SA		16.7		1.66

Ratio of metal concentrations as analyzed by total digestion and strong acid digestion methods (continued)

Station	Sample	Variable	Method	Value	Qualifier	Method	Value	Qualifier	TD/SA ratio
HY-06	06C	NICKEL	TD	35	SA		22.7		1.54
HY-07	07C	NICKEL	TD	30.7	SA		19.6		1.57
HY-08	08C	NICKEL	TD	36.4	SA		24.6		1.48
HY-09	09C	NICKEL	TD	29.9	SA		17.9		1.67
HY-10	10C	NICKEL	TD	32.8	SA		25.7		1.28
HY-11	11C	NICKEL	TD	30	SA		19.1		1.57
HY-12	12C	NICKEL	TD	30.2	SA		18.1		1.67
HY-13	13C	NICKEL	TD	27.1	SA		18.8		1.44
HY-14	14C	NICKEL	TD	28.2	SA		16.9		1.67
HY-15	15C	NICKEL	TD	32.1	SA		22.2		1.45
HY-16	16C	NICKEL	TD	37.5	SA		23.7		1.58
HY-17	17C	NICKEL	TD	29.5	SA		15.6		1.89
HY-18	18C	NICKEL	TD	34.4	SA		24.9		1.38
HY-19	19C	NICKEL	TD	36.7	SA		28.4		1.29
HY-20	20C	NICKEL	TD	40.3	SA		35.1		1.15
HY-21	21C	NICKEL	TD	43.7	SA		39.5		1.11
HY-22	22C	NICKEL	TD	35.9	SA		26.5		1.35
HY-23	23C	NICKEL	TD	39.8	SA		31.4		1.27
HY-24	24C	NICKEL	TD	38.2	SA		21.2		1.8
HY-25	25C	NICKEL	TD	39.4	SA		18		2.19
HY-26	26C	NICKEL	TD	41.2	SA		38.2		1.08
HY-27	27C	NICKEL	TD	36.4	SA		22.5		1.62
HY-28	28C	NICKEL	TD	38.8	SA		32.7		1.19
HY-30	30C-REF	NICKEL	TD	26.1	SA		20.3		1.29
Average:								1.49	
CR-02	02C-REF	SILVER	TD	0.076	SA		0.045		1.69
CR-02A	02AC-REF	SILVER	TD	0.043	SA		0.096		0.45
HY-01	01C	SILVER	TD	0.189	SA		0.269		0.7
HY-02	02C	SILVER	TD	0.229	SA		0.325		0.7
HY-03	03C	SILVER	TD	0.309	SA		0.429		0.72
HY-04	04C	SILVER	TD	0.259	SA		0.396		0.65
HY-05	05C	SILVER	TD	0.268	SA		0.416		0.64
HY-06	06C	SILVER	TD	0.264	SA		0.356		0.74
HY-07	07C	SILVER	TD	0.254	SA		0.315		0.81
HY-08	08C	SILVER	TD	0.295	SA		0.334		0.88
HY-09	09C	SILVER	TD	0.307	SA		0.399		0.77
HY-10	10C	SILVER	TD	0.328	SA		0.473		0.69
HY-11	11C	SILVER	TD	0.309	SA		0.391		0.79
HY-12	12C	SILVER	TD	0.306	SA		0.424		0.72
HY-13	13C	SILVER	TD	0.14	SA		0.198		0.71
HY-14	14C	SILVER	TD	0.173	SA		0.229		0.76
HY-15	15C	SILVER	TD	0.368	SA		0.465		0.79
HY-16	16C	SILVER	TD	0.363	SA		0.449		0.81
HY-17	17C	SILVER	TD	0.095	SA		0.112		0.85
HY-18	18C	SILVER	TD	0.325	SA		0.481		0.68
HY-19	19C	SILVER	TD	0.34	SA		0.438		0.78
HY-20	20C	SILVER	TD	0.37	SA		0.507		0.73

Ratio of metal concentrations prepared by total digestion and strong acid digestion methods (continued)

Station	Sample	Variable	Method	Value	Qualifier	Method	Value	Qualifier	TD/SA ratio
HY-22	22C	SILVER	TD	0.206	SA	0.341			0.6
HY-23	23C	SILVER	TD	0.288	SA	0.356			0.81
HY-24	24C	SILVER	TD	0.248	SA	0.352			0.7
HY-25	25C	SILVER	TD	0.289	SA	0.399			0.72
HY-26	26C	SILVER	TD	0.289	SA	0.46			0.63
HY-27	27C	SILVER	TD	0.202	SA	0.257			0.79
HY-28	28C	SILVER	TD	0.245	SA	0.438			0.56
HY-30	30C-REF	SILVER	TD	0.24	SA	0.371			0.65
					Average:				0.75
CR-02	02C-REF	ZINC	TD	17.2	SA	37.5			0.46
CR-02A	02AC-REF	ZINC	TD	15.7 U	SA	51.3			0.31
HY-01	01C	ZINC	TD	100	SA	63.4			1.72
HY-02	02C	ZINC	TD	135	SA	98.1			1.38
HY-03	03C	ZINC	TD	210	SA	142			1.48
HY-04	04C	ZINC	TD	176	SA	124			1.42
HY-05	05C	ZINC	TD	119	SA	97.7			1.22
HY-06	06C	ZINC	TD	142	SA	130			1.09
HY-07	07C	ZINC	TD	145	SA	103			1.41
HY-08	08C	ZINC	TD	135	SA	97.2			1.39
HY-09	09C	ZINC	TD	155	SA	109			1.42
HY-10	10C	ZINC	TD	161	SA	129			1.25
HY-11	11C	ZINC	TD	140	SA	97.4			1.44
HY-12	12C	ZINC	TD	113	SA	104			1.09
HY-13	13C	ZINC	TD	105	SA	71.4			1.47
HY-14	14C	ZINC	TD	144	SA	86.6			1.66
HY-15	15C	ZINC	TD	173	SA	132			1.31
HY-16	16C	ZINC	TD	579	SA	530			1.09
HY-17	17C	ZINC	TD	99.4	SA	95.5			1.04
HY-18	18C	ZINC	TD	213	SA	173			1.23
HY-19	19C	ZINC	TD	217	SA	169			1.28
HY-20	20C	ZINC	TD	261	SA	243			1.07
HY-21	21C	ZINC	TD	279	SA	221			1.26
HY-22	22C	ZINC	TD	196	SA	200			0.98
HY-23	23C	ZINC	TD	434	SA	380			1.14
HY-24	24C	ZINC	TD	295	SA	329			0.9
HY-25	25C	ZINC	TD	384	SA	376			1.02
HY-26	26C	ZINC	TD	324	SA	347			0.93
HY-27	27C	ZINC	TD	216	SA	210			1.03
HY-28	28C	ZINC	TD	250	SA	263			0.95
HY-30	30C-REF	ZINC	TD	75.5	SA	86.5			0.87
					Average:				1.17