PTI

ENVIRONMENTAL SERVICES

Puget Sound Dredged Disposal Analysis

BASELINE SURVEY OF PHASE II DISPOSAL SITES

APPENDIX B
Bellingham Bay Disposal Site Data

For

Washington Department of Ecology
Olympia, Washington

June 1989

Ecology pub. no. 89-09-004b

PTI Environmental Services
15375 SE 30th Place
Suite 250
Bellevue, Washington 98007

PUGET SOUND DREDGED DISPOSAL ANALYSIS BASELINE SURVEY OF PHASE II DISPOSAL SITES

For

Washington Department of Ecology
Olympia, Washington 98504-8711

Ecology Contract C0089128
PTI Contract C878-04

June 1989

APPENDIX B

BELLINGHAM BAY DISPOSAL SITE DATA

CONTENTS

	Page
LIST OF TABLES	B-ii
BELLINGHAM BAY DATA	B-1
SEDIMENT CHEMISTRY	B-1
BIOACCUMULATION	B-2
BENTHIC INFAUNA	B-4
BIOASSAY	B-4
REMOTS®	B-4
PSDDA SEDIMENT GUIDELINE VALUES	B-5

TABLES

		Page
Table B-1.	Concentrations of metals and metalloids in Bellingham Bay sediment samples	B-7
Table B-2.	Concentrations of tributyltin in Bellingham Bay sediment samples	B-8
Table B-3.	Concentrations of phenol and substituted phenols in Bellingham Bay sediment samples	B-9
Table B-4.	Concentrations of low molecular weight polycyclic aromatic hydrocarbons in Bellingham Bay sediment samples	B-10
Table B-5.	Concentrations of high molecular weight polycyclic aromatic hydrocarbons in Bellingham Bay sediment samples	B-11
Table B-6.	Concentrations of chlorinated aromatic and chlorinated aliphatic hydrocarbons in Bellingham Bay sediment samples	B-12
Table B-7.	Concentrations of phthalate esters in Bellingham Bay sediment samples	B-13
Table B-8.	Concentrations of miscellaneous oxygenated compound and organonitrogen compounds in Bellingham Bay sediment samples	B-14
Table B-9.	Concentrations of pesticides and PCB in Bellingham Bay sediment samples	B-15
Table B-10.	Concentrations of volatile organic compounds in Bellingham Bay sediment samples	B-16
Table B-11.	Concentrations of polycyclic aromatic hydrocarbons and polychlorinated biphenyls in Bellingham Bay sediment samples	B-17
Table B-12.	Conventionals data for Bellingham Bay sediment samples	B-18
Table B-13.	Concentrations of metals and metalloids in Bellingham Bay tissue samples	B-19
Table B-14.	Concentrations of phenol and substituted phenols in Bellingham Bay tissue samples	B-20
Table B-15.	Concentrations of low molecular weight polycyclic aromatic hydrocarbons in Bellingham Bay tissue samples	B-21
Table B-16.	Concentrations of high molecular weight polycyclic aromatic hydrocarbons in Bellingham Bay tissue samples	B-22
Table B-17.	Concentrations of chlorinated aromatic and chlorinated aliphatic hydrocarbons in Bellingham Bay tissue samples	B-23

		Page
Table B-18.	Concentrations of phthalate esters in Bellingham Bay tissue samples	B-24
Table B-19.	Concentrations of miscellaneous oxygenated compound and organonitrogen compounds in Bellingham Bay tissue samples	B-25
Table B-20.	Concentrations of pesticides and PCB in Bellingham Bay tissue samples	B-26
Table B-21.	Total extractable organic material from Bellingham Bay	B-27
Table B-22.	Species abundance summarized by sample for Bellingham Bay samples	B-28
Table B-23.	Average major taxa abundance by station	B-31
Table B-24.	Amphipod 10-day bioassay and oyster larvae bivalve bioassay percent change Bellingham Bay samples	B-32
Table B-25.	Survival data for the amphipod 10-day bioassay on Bellingham Bay samples by lab replicate	B-33
Table B-26.	Abnormality data for the oyster larvae bioassay on Bellingham Bay samples by lab replicate	B-34
Table B-27.	Bellingham Bay disposal site physical REMOTS® parameters	B-35
Table B-28.	PSDDA Phase II SL and ML values	B-37

BELLINGHAM BAY DATA

SEDIMENT CHEMISTRY

PSDDA guideline values are given for organics and metals at all offsite stations. Guideline values are 125 percent of the reported value. Detection limits are given when the chemical was undetected or the concentration was blank-corrected to the detection limit (qualified by the letter U or the letter B).

Table B-1

Metals (Strong Acid Digestion)—Concentrations of metals and metalloids (mg/kg dry weight). Mercury was analyzed by persulphate digest; all others were analyzed by strong acid digestion. (SEDQUAL output with guideline values added.)

Table B-2

Tributyltin—Concentrations of tributyltin reported as tin (μg/kg dry weight). (SEDQUAL output with guideline values added.)

Table B-3

Phenols—(μg/kg dry weight). (SEDQUAL output with guideline values added.)

Table B-4

LPAH Compounds—Concentrations of low molecular weight polycyclic aromatic hydrocarbons (μg/kg dry weight). (SEDQUAL output with guideline values added.)

Table B-5

HPAH Compounds—Concentrations of high molecular weight polycyclic aromatic hydrocarbons (μg/kg dry weight). (SEDQUAL output with guideline values added.)

Table B-6

Chlorinated Hydrocarbons—Concentrations of chlorinated aromatic and chlorinated aliphatic hydrocarbons (μg/kg dry weight). (SEDQUAL output with guideline values added.)

Table B-7

Phthalates—(μg/kg dry weight). (SEDQUAL output with guideline values added.)

Table B-8

Oxygenated Compounds and Organonitrogen Compounds—(μg/kg dry weight). (SEDQUAL output with guideline values added.)

Table B-9

Pesticides and PCB—(μg/kg dry weight). (SEDQUAL output with guideline values added.)

Table B-10

Volatiles—(μg/kg dry weight). (SEDQUAL output with guideline values added.)

Table B-11

Total PAH and PCB—Sums of low and high molecular weight polycyclic aromatic hydrocarbons, and total polychlorinated biphenyls (μg/kg dry weight). (SEDQUAL output with guideline values added.)

Table B-12

Conventionals—Data for sediment conventionals [e.g., grain size, total solids, total organic carbon (TOC)]. Includes data for the archived sediment samples of the transect stations (SEDQUAL output).

BIOACCUMULATION

Table B-13

Metals—Concentrations of metals in tissues of *Compsomyax subdiaphana* (mg/kg wet weight) (SEDQUAL output).

Table B-14

Phenols—Concentrations of phenols in tissues of *Compsomyax subdiaphana* (μg/kg wet weight).

Table B-15

LPAH Compounds—Concentrations of LPAH compounds in tissues of *Compsomyax subdiaphana* (μg/kg wet weight).

Table B-16

HPAH Compounds—Concentrations of HPAH compounds in tissues of *Compsomyax subdiaphana* (μg/kg wet weight).

Table B-17

Chlorinated Hydrocarbons—Concentrations of chlorinated hydrocarbons in tissues of *Compsomyax subdiaphana* (μg/kg wet weight).

Table B-18

Phthalates—Concentrations of phthalates in tissues of *Compsomyax subdiaphana* (μg/kg wet weight).

Table B-19

Oxygenated Compounds and Organonitrogen Compounds—Concentrations of oxygenated compounds and organonitrogen compounds in tissues of *Compsomyax subdiaphana* (μg/kg wet weight).

Table B-20

Pesticides and PCB—Concentrations of pesticides and PCB in tissues of *Compsomyax subdiaphana* (μg/kg wet weight).

Table B-21

Lipid—Concentrations of lipid in tissues of *Compsomyax subdiaphana* (μg/kg wet weight).

BENTHIC INFAUNA

Table B-22

Major Taxa Summarized by Field Replicate—Abundance of total macrofauna, major taxa, and species for each replicate box corer. (SEDQUAL output with total macrofauna and major taxa added.)

Table B-23

Major Taxa Abundance Summarized by Station—Mean abundance of benthic infauna species summarized by station (SEDQUAL output).

BIOASSAY

Table B-24

Bioassay Percent Change by Station—Summary of bioassay data (amphipod mortality and mussel larvae abnormality). Microtox showed no effect and was therefore not listed.

Table B-25

Bioassay Data for Amphipods by Laboratory Replicate—Individual data values for amphipod survival (SEDQUAL output). Results of pairwise t-tests are included.

Table B-26

Bioassay Data for Mussel Larvae by Laboratory Replicate—Individual data values for mussel larvae abnormality; includes number of survivors, number of normal survivors, and percent abnormality. "-1" indicates that a value cannot be computed. See Appendix F for a detailed discussion (SEDQUAL output).

REMOTS®

Table B-27

REMOTS® Data—Data from analysis of REMOTS® images.

PSDDA SEDIMENT GUIDELINE VALUES

Table B-28

PSDDA SL and ML Values—Screening level and maximum level values applied to PSDDA Phase II baseline data.

Qualifier codes used in all tables are as follows:

Qualifier Code	Description
B	Blank-corrected down to detection limit
C	Combined with unresolved substances
E	Estimate
G	Estimate is greater than value shown
K	Detected at less than the detection limit shown
L	Value is less than maximum shown
M	Value is a mean
Q	Questionable value
T	Detected below quantification limit shown
U	Undetected at the detection limit shown
X	Recovery less than 10 percent
Z	Blank-corrected, still above detection limit

For further details on averaging and reporting features, please refer to the SEDQUAL User's Guide (Nielsen, D. 1989 SEDQUAL User's Guide. Prepared for Washington Department of Ecology. PTI Environmental Services, Bellevue, WA).

TABLE B1. CONCENTRATIONS OF METALS AND METALLOIDS IN BELLINGHAM BAY SEDIMENT SAMPLES (Dry weight, ppm).

Survey	Station	ANTIMONY (SB)	Guideline**	ARSENIC	Guideline	CADMIUM	Guideline	COPPER	Guideline	LEAD	Guideline	MERCURY	Guideline
PSDDA2	BBB01	0.16 G		8.5		0.78		51		18		0.56	
PSDDA2	BBB02	0.3 G		8.6		0.52		45.1		19.6		0.39	
PSDDA2	BBB04	0.15 G		7.6		0.31		38.6		17.2		0.2	
PSDDA2	BBP01	0.26 G	0.33	7.7	9.63	0.36	0.45	41.5	52	18.7	23	0.22	0.28
PSDDA2	BBP02	0.28 G	0.35	7.9	9.88	0.45	0.56	44.2	55	18.3	23	0.38	0.48
PSDDA2	BBP03	0.22 G	0.28	7.8	9.75	0.44	0.55	45.1	56	18.4	23	0.38	0.48
PSDDA2	BBP04	0.14 G	0.18	6.9	8.63	0.45	0.56	44.8	56	19.3	24	0.31	0.39
PSDDA2	BBZ01	0.25 G	N/A	6.9	N/A	0.46	N/A	44.5	N/A	19.4	N/A	0.34	N/A
PSDDA2	CRR01	2.9 G	N/A	14.3	N/A	0.47	N/A	45.7	N/A	27.6	N/A	0.17	N/A

Survey	Station	NICKEL	Guideline	SILVER	Guideline	ZINC	Guideline
PSDDA2	BBB01	106		0.33		120	
PSDDA2	BBB02	74.6		0.43		106	
PSDDA2	BBB04	62		0.28		111	
PSDDA2	BBP01	65.2	82	0.3	0.38	109	136
PSDDA2	BBP02	73.6	92	0.33	0.41	108	135
PSDDA2	BBP03	84.2	105	0.33	0.41	104	130
PSDDA2	BBP04	78.4	98	0.32	0.40	114	143
PSDDA2	BBZ01	77	N/A	0.31	N/A	112	N/A
PSDDA2	CRR01	31.7	N/A	0.38	N/A	96.9	N/A

** PSDDA guideline values are given for all off-site stations. Guideline values are 125% of reported value; detection limits are given when the chemical was undetected, or the concentration was blank corrected to the detection limit (qualified by a 'U' or a 'B'). For a full explanation of qualifiers see table following the table of contents.

TABLE B2. CONCENTRATIONS OF TRIBUTYLTIN (REPORTED AS TIN) IN BELLINGHAM BAY SEDIMENT SAMPLES (Dry weight, ppb).

Survey	Station	TRIBUTYLTIN	Guideline**
PSDDA2	BBB01	3 E	
PSDDA2	BBB02	12 E	
PSDDA2	BBB04	2.6	
PSDDA2	BBP01	6 E	8
PSDDA2	BBP02	4.3 E	5
PSDDA2	BBP03	4 E	5
PSDDA2	BBP04	3 U	4
PSDDA2	BBZ01	3.2 E	N/A
PSDDA2	CRR01	2.4 E	N/A

** PSDDA guideline values are given for all off-site stations. Guideline values are 125% of reported value; detection limits are given when the chemical was undetected, or the concentration was blank corrected to the detection limit (qualified by a 'U' or a 'B'). For a full explanation of qualifiers see table folowing the table of contents.

TABLE B3. CONCENTRATIONS OF PHENOL AND SUBSTITUTED PHENOLS IN BELLINGHAM BAY SEDIMENT SAMPLES (Dry weight, ppb).

Survey	Station	PHENOL	Guideline**	2-METHYLPHENOL	Guideline	4-METHYL PHENOL	Guideline	PENTACHLOROPHENOL	Guideline
PSDDA2	BBB01	93 E		14 U		280		23 U	
PSDDA2	BBB02	34 U		17 U		100		27 U	
PSDDA2	BBB04	29 U		14 U		14 U		23 U	
PSDDA2	BBP01	65 E	81	16 U	20	16 U	20	25 U	31
PSDDA2	BBP02	32 U	40	16 U	20	16 U	20	26 U	33
PSDDA2	BBP03	30 U	38	15 U	19	15 U	19	24 U	30
PSDDA2	BBP04	4800 E	6000	12 U	15	12 U	15	19 U	24
PSDDA2	BBZ01	28 U	N/A	14 U	N/A	14 U	N/A	23 U	N/A
PSDDA2	CRR01	21 U	N/A	11 U	N/A	11 U	N/A	17 U	N/A

** PSDDA guideline values are given for all off-site stations. Guideline values are 125% of reported value; detection limits are given when the chemical was undetected, or the concentration was blank corrected to the detection limit (qualified by a 'U' or a 'B'). For a full explanation of qualifiers see table following the table of contents.

TABLE B4. CONCENTRATIONS OF LOW MOLECULAR WEIGHT POLYCYCLIC AROMATIC HYDROCARBONS IN BELLINGHAM BAY SEDIMENT SAMPLES (Dry weight, ppb).

Survey	Station	NAPHTHALENE	Guideline**	2-METHYLNAPHTHALENE	Guideline	ACENAPHTHYLENE	Guideline	ACENAPHTHENE	Guideline	FLUORENE	Guideline
PSDDA2	BBB01	190		27		49 E		14 U		11 E	
PSDDA2	BBB02	120		27		25 E		17 U		12 E	
PSDDA2	BBB04	14 U		14 U		14 U		14 U		14 U	
PSDDA2	BBP01	35 E	44	16 E	20	16 U	20	16 U	20	16 U	20
PSDDA2	BBP02	65 E	81	27 E	34	16 U	20	16 U	20	16 U	20
PSDDA2	BBP03	67 E	84	23 E	29	12 E	15	15 U	19	15 U	19
PSDDA2	BBP04	16	20	11 E	14	6 E	7.5	12 U	15	6 E	8
PSDDA2	BBZ01	33 E	N/A	23 E	N/A	14 U	N/A	14 U	N/A	14 U	N/A
PSDDA2	CRR01	11 U	N/A	11 U	N/A	11 U	N/A	11 U	N/A	11 U	N/A

Survey	Station	PHENANTHRENE	Guideline	ANTHRACENE	Guideline
PSDDA2	BBB01	140		23	
PSDDA2	BBB02	250		45	
PSDDA2	BBB04	96		8.3 E	
PSDDA2	BBP01	93	116	12 E	15
PSDDA2	BBP02	190	238	19 E	24
PSDDA2	BBP03	150	188	18 E	23
PSDDA2	BBP04	16	20	4 E	5.0
PSDDA2	BBZ01	100	N/A	16 E	N/A
PSDDA2	CRR01	27 E	N/A	11 U	N/A

** PSDDA guideline values are given for all off-site stations. Guideline values are 125% of reported value; detection limits are given when the chemical was undetected, or the concentration was blank corrected to the detection limit (qualified by a 'U' or a 'B'). For a full explanation of qualifiers see table folowing the table of contents.

TABLE B5. CONCENTRATIONS OF HIGH MOLECULAR WEIGHT POLYCYCLIC AROMATIC HYDROCARBONS IN BELLINGHAM BAY SEDIMENT SAMPLES (Dry weight, ppb).

Survey	Station	FLUORANTHENE	Guideline**	PYRENE	Guideline	BENZO(A)ANTHRACENE	Guideline	CHRYSENE	Guideline	TOTAL BENZOFLUORANTHENES (B + K)	Guideline
PSDDA2	BBB01	200		180		92 L		110 L		160	
PSDDA2	BBB02	190		120 L		87 L		110 L		170	
PSDDA2	BBB04	72		46 L		31 L		40 L		67 L	
PSDDA2	BBP01	70	88	69 L	86	32 L	40	42 L	53	74 L	93
PSDDA2	BBP02	160	200	130 L	163	65 L	81	76 L	95	130 E	163
PSDDA2	BBP03	130	163	100 L	125	44 E	55	59 L	74	110 E	138
PSDDA2	BBP04	41	51	34 L	43	16 L	20	20 L	25	50 L	63
PSDDA2	BBZ01	140	N/A	72 L	N/A	47 L	N/A	64 L	N/A	100 E	N/A
PSDDA2	CRR01	54	N/A	43 L	N/A	20 L	N/A	30 E	N/A	59 E	N/A

Survey	Station	BENZO(A)PYRENE	Guideline	INDENO(1,2,3-CD)PYRENE	Guideline	DIBENZO(A,H)ANTHRACENE	Guideline	BENZO(G,H,I)PERYLENE	Guideline
PSDDA2	BBB01	93 L		14 U		14 U		14 U	
PSDDA2	BBB02	92 L		47 E		17 U		76 L	
PSDDA2	BBB04	28 L		14 U		14 U		14 U	
PSDDA2	BBP01	32 L	40	15 E	19	16 U	20	23 E	29
PSDDA2	BBP02	71 L	89	33 E	41	16 U	20	61 E	76
PSDDA2	BBP03	49 L	61	23 E	29	15 U	19	42 E	53
PSDDA2	BBP04	17 L	21	10 L	13	12 U	15	16 E	20
PSDDA2	BBZ01	53 L	N/A	22 E	N/A	14 U	N/A	38 E	N/A
PSDDA2	CRR01	20 E	N/A	11 U	N/A	11 U	N/A	11 U	N/A

** PSDDA guideline values are given for all off-site stations. Guideline values are 125% of reported value; detection limits are given when the chemical was undetected, or the concentration was blank corrected to the detection limit (qualified by a 'U' or a 'B'). For a full explanation of qualifiers see table following the table of contents.

TABLE B6. CONCENTRATIONS OF CHLORINATED AROMATIC AND CHLORINATED ALIPHATIC HYDROCARBONS IN BELLINGHAM BAY SEDIMENT SAMPLES (Dry weight, ppb).

Survey	Station	1,2-DICHLORO - BENZENE	Guideline**	1,3-DICHLORO - BENZENE	Guideline	1,4-DICHLORO - BENZENE	Guideline	1,2,4-TRICHLORO - BENZENE	Guideline	HEXACHLORO - BENZENE	Guideline	HEXACHLORO - BUTADIENE	Guideline
PSDDA2	BBB01	14 U		14 U		14 U		14 U		14 U		16 U	
PSDDA2	BBB02	17 U		17 U		17 U		17 U		17 U		19 U	
PSDDA2	BBB04	14 U		14 U		14 U		14 U		14 U		16 U	
PSDDA2	BBP01	16 U	20	16 U	20	16 U	20	16 U	20	16 U	20	17 U	21
PSDDA2	BBP02	16 U	20	16 U	20	16 U	20	16 U	20	16 U	20	18 U	23
PSDDA2	BBP03	15 U	19	15 U	19	15 U	19	15 U	19	15 U	19	17 U	21
PSDDA2	BBP04	12 U	15	12 U	15	12 U	15	12 U	15	12 U	15	13 U	16
PSDDA2	BBZ01	14 U	N/A	14 U	N/A	14 U	N/A	14 U	N/A	14 U	N/A	16 U	N/A
PSDDA2	CRR01	11 U	N/A	11 U	N/A	11 U	N/A	11 U	N/A	11 U	N/A	12 U	N/A

Survey	Station	HEXACHLOROETHANE	Guideline
PSDDA2	BBB01	29 U	
PSDDA2	BBB02	34 U	
PSDDA2	BBB04	ND*	--
PSDDA2	BBP01	ND*	--
PSDDA2	BBP02	ND*	--
PSDDA2	BBP03	ND*	--
PSDDA2	BBP04	24 U	30
PSDDA2	BBZ01	ND*	N/A
PSDDA2	CRR01	31 U	N/A

* Data rejected in QA/QC process.

** PSDDA guideline values are given for all off-site stations. Guideline values are 125% of reported value; detection limits are given when the chemical was undetected, or the concentration was blank corrected to the detection limit (qualified by a 'U' or a 'B'). For a full explanation of qualifiers see table following the table of contents.

TABLE B7. CONCENTRATIONS OF PHTHALATE ESTERS IN BELLINGHAM BAY SEDIMENT SAMPLES (Dry weight, ppb).

Survey	Station	DIMETHYL - PHTHALATE	Guideline**	DIETHYL - PHTHALATE	Guideline	DI-N-BUTYL - PHTHALATE	Guideline	BUTYL BENZYL - PHTHALATE	Guideline	BIS(2-ETHYLHEXYL) - PHTHALATE	Guideline	DI-N-OCTYL - PHTHALATE	Guideline
PSDDA2	BBB01	14 U		26 E		14 U		14 U		220 Z		14 U	
PSDDA2	BBB02	17 U		17 U		17 U		17 U		220 Z		17 U	
PSDDA2	BBB04	14 U		14 U		14 U		14 U		100 Z		14 U	
PSDDA2	BBP01	16 U	20	16 U	20	16 U	20	16 U	20	48 Z	60	16 U	20
PSDDA2	BBP02	16 U	20	16 U	20	16 U	20	16 U	20	63 Z	79	16 U	20
PSDDA2	BBP03	15 U	19	20 E	25	43 T	54	15 U	19	88 Z	110	15 U	19
PSDDA2	BBP04	12 U	15	12 U	15	12 U	15	12 U	15	12 U	15	12 U	15
PSDDA2	BBZ01	14 U	N/A	21 E	N/A	15 E	N/A	14 U	N/A	37 Z	N/A	14 U	N/A
PSDDA2	CRR01	11 U	N/A	11 U	N/A	11 U	N/A	11 U	N/A	62 Z	N/A	11 U	N/A

** PSDDA guideline values are given for all off-site stations. Guideline values are 125% of reported value; detection limits are given when the chemical was undetected, or the concentration was blank corrected to the detection limit (qualified by a 'U' or a 'B'). For a full explanation of qualifiers see table following the table of contents.

TABLE B8. CONCENTRATIONS OF MISCELLANEOUS OXYGENATED COMPOUND AND ORGANONITROGEN COMPOUNDS IN BELLINGHAM BAY SEDIMENT SAMPLES (Dry weight, ppb).

Survey	Station	BENZYL ALCOHOL	Guideline**	DIBENZOFURAN	Guideline	BENZOIC ACID	Guideline	N-NITROSO - DIPHENYLAMINE	Guideline
PSDDA2	BBB01	140 U		37 E		140 U		14 U	
PSDDA2	BBB02	170 U		27 E		170 U		17 U	
PSDDA2	BBB04	140 U		14 U		56 E		14 U	
PSDDA2	BBP01	160 U	200	16 U	20	55 E	69	16 U	20
PSDDA2	BBP02	160 U	200	17 E	21	160 U	200	16 U	20
PSDDA2	BBP03	150 U	188	12 E	15	150 U	188	15 U	19
PSDDA2	BBP04	120 U	150	12 U	15	410	513	12 U	15
PSDDA2	BBZ01	140 U	N/A	14 U	N/A	140 U	N/A	14 U	N/A
PSDDA2	CRR01	100 U	N/A	11 U	N/A	100 U	N/A	11 U	N/A

** PSDDA guideline values are given for all off-site stations. Guideline values are 125% of reported value; detection limits are given when the chemical was undetected, or the concentration was blank corrected to the detection limit (qualified by a 'U' or a 'B'). For a full explanation of qualifiers see table following the table of contents.

TABLE B9. CONCENTRATIONS OF PESTICIDES AND PCBS IN BELLINGHAM BAY SEDIMENT SAMPLES (Dry weight, ppb).

Survey	Station	P,P'-DDT	Guideline**	P,P'-DDE	Guideline	P,P'-DDD	Guideline	HEPTACHLOR	Guideline	ALPHA CHLORDANE	Guideline	ALDRIN	Guideline
PSDDA2	BBB01	4 U		3 U		4 U		2 U		2 U		2 U	
PSDDA2	BBB02	6 U		4.5 U		6 U		3 U		3 U		3 U	
PSDDA2	BBB04	6 U		4.5 U		6 U		3 U		3 U		3 U	
PSDDA2	BBP01	6 U	7.5	4.5 U	5.6	6 U	7.5	3 U	3.8	3 U	3.8	3 U	3.8
PSDDA2	BBP02	6 U	7.5	4.5 U	5.6	6 U	7.5	3 U	3.8	3 U	3.8	3 U	3.8
PSDDA2	BBP03	6 U	7.5	4.5 U	5.6	6 U	7.5	3 U	3.8	3 U	3.8	3 U	3.8
PSDDA2	BBP04	6 U	7.5	4.5 U	5.6	6 U	7.5	3 U	3.8	3 U	3.8	3 U	3.8
PSDDA2	BBZ01	4 U	N/A	3 U	N/A	4 U	N/A	2 U	N/A	2 U	N/A	2 U	N/A
PSDDA2	CRR01	4 U	N/A	3 U	N/A	4 U	N/A	2 U	N/A	2 U	N/A	2 U	N/A

Survey	Station	DIELDRIN	Guideline	HEXACHLOROCYCLOHEXANE-GAMMA (LINDANE)	Guideline	PCB-1242	Guideline	PCB-1248	Guideline	PCB-1254	Guideline	PCB-1260	Guideline
PSDDA2	BBB01	3 U		2 U		40 U		40 U		40 U		40 U	
PSDDA2	BBB02	4.5 U		3 U		60 U		60 U		60 U		60 U	
PSDDA2	BBB04	4.5 U		3 U		60 U		60 U		60 U		60 U	
PSDDA2	BBP01	4.5 U	5.6	3 U	3.8	60 U	75	60 U	75	60 U	75	60 U	75
PSDDA2	BBP02	4.5 U	5.6	3 U	3.8	60 U	75	60 U	75	60 U	75	60 U	75
PSDDA2	BBP03	4.5 U	5.6	3 U	3.8	60 U	75	60 U	75	60 U	75	60 U	75
PSDDA2	BBP04	4.5 U	5.6	3 U	3.8	60 U	75	60 U	75	60 U	75	60 U	75
PSDDA2	BBZ01	3 U	N/A	2 U	N/A	40 U	N/A	40 U	N/A	40 U	N/A	40 U	N/A
PSDDA2	CRR01	3 U	N/A	2 U	N/A	40 U	N/A	40 U	N/A	40 U	N/A	40 U	N/A

** PSDDA guideline values are given for all off-site stations. Guideline values are 125% of reported value; detection limits are given when the chemical was undetected, or the concentration was blank corrected to the detection limit (qualified by a 'U' or a 'B'). For a full explanation of qualifiers see table following the table of contents.

TABLE B10. CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS IN BELLINGHAM BAY SEDIMENT SAMPLES (Dry weight, ppb).

Survey	Station	TRICHLORO - ETHYLENE	Guideline**	TETRACHLORO - ETHYLENE	Guideline	ETHYLBENZENE	Guideline	TOTAL XYLENES	Guideline
PSDDA2	BBB01	1.1 U		0.9 U		1.4 U		3.2 U	
PSDDA2	BBB02	2 U		2 U		2 U		4.1 U	
PSDDA2	BBB04	1.1 U		0.9 U		1.4 U		3.2 U	
PSDDA2	BBP01	1.1 U	1.4	0.9 U	1.1	1.5 U	1.9	3.3 U	4.1
PSDDA2	BBP02	2 U	2.5	2 U	2.5	2 U	2.5	3.9 U	4.9
PSDDA2	BBP03	2.1 U	2.6	2.1 U	2.6	2.1 U	2.6	4.2 U	5.3
PSDDA2	BBP04	1.7 U	2.1	1.4 U	1.8	2.3 U	2.9	5.2 U	6.5
PSDDA2	BBZ01	1.6 U	N/A	1.6 U	N/A	1.6 U	N/A	3.2 U	N/A
PSDDA2	CRR01	0.7 U	N/A	0.6 U	N/A	1 U	N/A	2.2 U	N/A

** PSDDA guideline values are given for all off-site stations. Guideline values are 125% of reported value; detection limits are given when the chemical was undetected, or the concentration was blank corrected to the detection limit (qualified by a 'U' or a 'B'). For a full explanation of qualifiers see table following the table of contents.

TABLE B11. CONCENTRATIONS OF POLYCYCLIC AROMATIC HYDROCARBONS AND POLYCHLORINATED BIPHENYLS IN BELLINGHAM BAY SEDIMENT SAMPLES (Dry weight, ppb).

Survey	Station	POLYCYCLIC AROMATIC HYDROCARBON-LIGHT	Guideline**	POLYCYCLIC AROMATIC HYDROCARBON-HEAVY	Guideline	POLYCHLORINATED BIPHENYLS	Guideline
PSDDA2	BBB01	430 E		880 L		40 U	
PSDDA2	BBB02	470 E		910 L		60 U	
PSDDA2	BBB04	160 E		326 L		60 U	
PSDDA2	BBP01	188 E	235	373 E	466	60 U	75
PSDDA2	BBP02	320 E	400	740 E	925	60 U	75
PSDDA2	BBP03	280 E	350	570 E	713	60 U	75
PSDDA2	BBP04	60 E	75	216 E	270	60 U	75
PSDDA2	BBZ01	190 E	N/A	550 E	N/A	40 U	N/A
PSDDA2	CRR01	82 L	N/A	259 L	N/A	40 U	N/A

** PSDDA guideline values are given for all off-site stations. Guideline values are 125% of reported value; detection limits are given when the chemical was undetected, or the concentration was blank corrected to the detection limit (qualified by a 'U' or a 'B'). For a full explanation of qualifiers see table following the table of contents.

TABLE B12. CONVENTIONALS DATA FOR BELLINGHAM BAY SEDIMENT SAMPLES (Dry weight, ppm unless otherwise noted).

Survey	Station	AMMONIA (as Nitrogen)	PERCENT CLAY	PERCENT SAND	PERCENT SILT	PERCENT FINES (Clay + Silt)	SULFIDES	TOTAL ORGANIC CARBON	TOTAL SOLIDS (dry wt. as % of wet wt.)	TOTAL VOLATILE SOLIDS
PSDDA2	BBB01	232	41.25 M	3.38 M	55.37 M	96.62	1 U	2.8 M	27.5	9
PSDDA2	BBB02	197	38 M	3 M	59.01 M	97.01	1 U	2.5 M	23	9.8
PSDDA2	BBB03	--	35.24	1.61	63.16	98.4	--	1.7	--	--
PSDDA2	BBB04	71	38.79 M	2.75 M	58.5 M	97.29	1 U	1.9 M	28	7.5
PSDDA2	BBP01	95.5	50.2	0.22	49.58	99.78	2.6	2.4	25.6	8.6
PSDDA2	BBP02	169	54.45	0.18	45.37	99.82	1.6	2.6	22.2	9
PSDDA2	BBP03	150	51.47	0.59	47.93	99.4	1 U	2.1	23	9.6
PSDDA2	BBP04	125	39.98	0.34	59.68	99.66	1 U	2	23.2	8.5
PSDDA2	BBT01	--	43.94	0.71	55.34	99.28	--	2.2	--	--
PSDDA2	BBT02	--	48.32	1.48	50.2	98.52	--	2.3	--	--
PSDDA2	BBT03	--	43.89	2.36	53.76	97.65	--	2.2	--	--
PSDDA2	BBT04	--	37.24	2.58	60.18	97.42	--	2.5	--	--
PSDDA2	BBT05	--	39.96	3.18	56.68	96.64	--	2.4	--	--
PSDDA2	BBT06	--	42.01	2.69	55.31	97.32	--	2.5	--	--
PSDDA2	BBT07	--	46.74	1.04	52.22	98.96	--	2.4	--	--
PSDDA2	BBT08	--	51.36	0.88	47.77	99.13	--	2.2	--	--
PSDDA2	BBT09	--	57.33	1.93	40.73	98.06	--	2.2	--	--
PSDDA2	BBT10	--	34.41	2.5	63.09	97.5	--	2.7	--	--
PSDDA2	BBT11	--	34.25	2.91	62.83	97.08	--	2.6	--	--
PSDDA2	BBT12	--	45.65	8.15	46.21	91.86	--	2.7	--	--
PSDDA2	BBZ01	69.1	17.11	1.1	81.79	98.9	1 U	2	29.3	8.2
PSDDA2	CRR01	85.8	18.83	50.09	31.08	49.91	1 U	1.3	40.8	5.3

** PSDDA guideline values are given for all off-site stations. Guideline values are 125% of reported value; detection limits are given when the chemical was undetected, or the concentration was blank corrected to the detection limit (qualified by a 'U' or a 'B'). For a full explanation of qualifiers see table folowing the table of contents.

TABLE B13. CONCENTRATIONS OF METALS AND METALLOIDS IN BELLINGHAM BAY TISSUE SAMPLES (Wet weight, ppm).

Survey	Station	Sample	ANTIMONY	ARSENIC	CADMIUM	COPPER	LEAD	MERCURY	NICKEL	SILVER	ZINC
PSDDA2	BBB01	BBB01A	0.05 U	0.96 E	0.34	1.1	0.02 Z	0.03	0.59	0.11 E	8.2
PSDDA2	BBB03	BBB03A	0.05 U	1.7	0.6	4.6	1.4	0.04	0.78	0.89 E	7.3
PSDDA2	BBB04	BBB04A	0.05 U	1.2	0.51	0.99	0.85	0.02	0.69	0.35 E	9.7
PSDDA2	BBT01	BBT01A	0.02 U	1.6	0.53	0.94	0.87	0.05	0.62	0.23 E	8.1
PSDDA2	BBT02	BBT02A	0.04 U	1.6	0.55	0.73	0.82	0.04	0.54	0.36 E	7.4
PSDDA2	BBT03	BBT03A	0.02 U	1.4 E	0.51	0.93	1.0	0.05	0.69	0.56 E	11.8
PSDDA2	BBT04	BBT04A	0.02 U	1.5	0.46	1.2	0.76	0.04	0.58	0.31 E	12
PSDDA2	BBT05	BBT05A	0.02 U	0.16	0.49	1.4	0.63	0.03	0.59	0.19 E	9.5
PSDDA2	BBT06	BBT06A	0.07 U	1.7 E	0.44	1.6	0.78	0.04	0.75	0.38 E	10.6
PSDDA2	BBT07	BBT07A	0.02 U	1.2	0.43	1.5	0.56	0.04	0.62	0.23 E	12.8
PSDDA2	BBT08	BBT08A	0.02 U	1.3	0.49	1.3	0.82	0.03	0.56	0.19 E	10.1
PSDDA2	BBT09	BBT09A	0.02 U	1.7	0.51	1.3	0.7	0.04	0.48	0.36 E	10.4
PSDDA2	BBT10	BBT10A	0.05 U	1.2	0.44	1.3	0.84	0.03	0.58	0.34 E	10.6
PSDDA2	BBT11	BBT11A	0.04 U	1.5	0.58	3.7	1.6	0.04	0.64	0.45 E	7.9
PSDDA2	BBT12	BBT12A	0.04 U	1.1	0.29	3.0	0.58	0.02	0.4	0.42 E	10.5
PSDDA2	BBZ01	BBZ01A	0.05 U	2.3 E	0.43	0.91	0.86	0.02	0.71	0.34 E	6.1

TABLE B14. CONCENTRATIONS OF PHENOL AND SUBSTITUTED PHENOLS IN BELLINGHAM BAY TISSUE SAMPLES (Wet weight, ppb).

Survey	Station	Sample	PHENOL	2-METHYLPHENOL	4-METHYL PHENOL	PENTACHLOROPHENOL
PSDDA2	BBB01	BBB01A	200 U	180 E	100 U	160 U
PSDDA2	BBB03	BBB03A	320 U	160 U	160 U	260 U
PSDDA2	BBB04	BBB04A	180 U	92 U	92 U	150 U
PSDDA2	BBT01	BBT01A	185 UM	93.5 UM	93.5 UM	150 UM
PSDDA2	BBT02	BBT02A	220 U	110 U	110 U	
PSDDA2	BBT03	BBT03A	190 U	94 U	94 U	150 U
PSDDA2	BBT04	BBT04A	160 U	82 U	82 U	130 U
PSDDA2	BBT05	BBT05A	160 U	82 U	82 U	130 U
PSDDA2	BBT06	BBT06A	170 U	87 U	87 U	140 U
PSDDA2	BBT07	BBT07A	190 U	100 U	100 U	
PSDDA2	BBT08	BBT08A	180 U	89 U	89 U	
PSDDA2	BBT09	BBT09A	170 U	85 U	85 U	
PSDDA2	BBT10	BBT10A	190 U	97 U	97 U	160 U
PSDDA2	BBT11	BBT11A	120 U	58 U	58 U	93 U
PSDDA2	BBT12	BBT12A				
PSDDA2	BBZ01	BBZ01A	230 U	120 U	120 U	190 U

TABLE B15. CONCENTRATIONS OF LOW MOLECULAR WEIGHT POLYCYCLIC AROMATIC HYDROCARBONS IN BELLINGHAM BAY TISSUE SAMPLES (Wet weight, ppb).

Survey	Station	Sample	NAPHTHALENE	2-METHYLNAPHTHALENE	ACENAPHTHYLENE	ACENAPHTHENE	FLUORENE	PHENANTHRENE	ANTHRACENE
PSDDA2	BBB01	BBB01A	100 U	100 U	100 U	100 U	100 U	100 U	100 U
PSDDA2	BBB03	BBB03A	160 U	160 U	160 U	160 U	160 U	160 U	160 U
PSDDA2	BBB04	BBB04A	92 U	92 U	92 U	92 U	92 U	92 U	92 U
PSDDA2	BBT01	BBT01A	93.5 UM	93.5 UM	93.5 UM	93.5 UM	93.5 UM	93.5 UM	93.5 UM
PSDDA2	BBT02	BBT02A	110 U	110 U	110 U	110 U	110 U	110 U	110 U
PSDDA2	BBT03	BBT03A	94 U	94 U	94 U	94 U	94 U	94 U	94 U
PSDDA2	BBT04	BBT04A	82 U	82 U	82 U	82 U	82 U	82 U	82 U
PSDDA2	BBT05	BBT05A	82 U	82 U	82 U	82 U	82 U	82 U	82 U
PSDDA2	BBT06	BBT06A	87 U	87 U	87 U	87 U	87 U	87 U	87 U
PSDDA2	BBT07	BBT07A	100 U	100 U	100 U	100 U	100 U	100 U	100 U
PSDDA2	BBT08	BBT08A	89 U	89 U	89 U	89 U	89 U	89 U	89 U
PSDDA2	BBT09	BBT09A	85 U	85 U	85 U	85 U	85 U	85 U	85 U
PSDDA2	BBT10	BBT10A	97 U	97 U	97 U	97 U	97 U	97 U	97 U
PSDDA2	BBT11	BBT11A	58 U	58 U	58 U	58 U	58 U	58 U	58 U
PSDDA2	BBT12	BBT12A							
PSDDA2	BBZ01	BBZ01A	120 U	120 U	120 U	120 U	120 U	120 U	120 U

TABLE B16. CONCENTRATIONS OF HIGH MOLECULAR WEIGHT POLYCYCLIC AROMATIC HYDROCARBONS IN BELLINGHAM BAY TISSUE SAMPLES (Wet weight, ppb).

Survey	Station	Sample	FLUORANTHENE	PYRENE	BENZO(A) - ANTHRACENE	CHRYSENE	TOTAL BENZO-FLUORANTHENES (B + K)	BENZO(A)PYRENE	INDENO - (1,2,3-CD)PYRENE	DIBENZO(A,H)-ANTHRACENE	BENZO(G,H,I)-PERYLENE
PSDDA2	BBB01	BBB01A	100 U	100 U	100 U	100 U	200 U	100 U	100 U	100 U	100 U
PSDDA2	BBB03	BBB03A	160 U	160 U	160 U	160 U	160 U	160 U	160 U	160 U	160 U
PSDDA2	BBB04	BBB04A	92 U	92 U	92 U	92 U	180 U	92 U	92 U	92 U	92 U
PSDDA2	BBT01	BBT01A	93.5 UM	93.5 UM	93.5 UM	93.5 UM	190 UM	93.5 UM	93.5 UM	93.5 UM	93.5 UM
PSDDA2	BBT02	BBT02A	110 U	110 U	110 U	110 U	220 U	110 U	110 U	110 U	110 U
PSDDA2	BBT03	BBT03A	94 U	94 U	94 U	94 U	190 U	94 U	94 U	94 U	94 U
PSDDA2	BBT04	BBT04A	82 U	82 U	82 U	82 U	160 U	82 U	82 U	82 U	82 U
PSDDA2	BBT05	BBT05A	82 U	82 U	82 U	82 U	160 U	82 U	82 U	82 U	82 U
PSDDA2	BBT06	BBT06A	87 U	87 U	87 U	87 U	170 U	87 U	87 U	87 U	87 U
PSDDA2	BBT07	BBT07A	100 U	100 U	100 U	100 U	190 U	100 U	100 U	100 U	100 U
PSDDA2	BBT08	BBT08A	89 U	89 U	89 U	89 U	180 U	89 U	89 U	89 U	89 U
PSDDA2	BBT09	BBT09A	85 U	85 U	85 U	85 U	170 U	85 U	85 U	85 U	85 U
PSDDA2	BBT10	BBT10A	97 U	97 U	97 U	97 U	190 U	97 U	97 U	97 U	97 U
PSDDA2	BBT11	BBT11A	58 U	58 U	58 U	58 U	120 U	58 U	58 U	58 U	58 U
PSDDA2	BBT12	BBT12A									
PSDDA2	BBZ01	BBZ01A	120 U	120 U	120 U	120 U	230 U	120 U	120 U	120 U	120 U

TABLE B17. CONCENTRATIONS OF CHLORINATED AROMATIC AND CHLORINATED ALIPHATIC HYDROCARBONS IN BELLINGHAM BAY TISSUE SAMPLES (Wet weight, ppb).

Survey	Station	Sample	1,2-DICHLOROBENZENE	1,3-DICHLOROBENZENE	1,4-DICHLOROBENZENE	1,2,4-TRICHLOROBENZENE	HEXACHLOROBENZENE	HEXACHLOROBUTADIENE	HEXACHLOROETHANE
PSDDA2	BBB01	BBB01A	100 U	100 U	100 U	100 U	100 U	110 U	
PSDDA2	BBB03	BBB03A	160 U	160 U	160 U	160 U	160 U	180 U	320 U
PSDDA2	BBB04	BBB04A	92 U	92 U	92 U	92 U	92 U	100 U	
PSDDA2	BBT01	BBT01A	93.5 UM	93.5 UM	93.5 UM	93.5 UM	93.5 UM	100 UM	
PSDDA2	BBT02	BBT02A		110 U	110 U	110 U	110 U		
PSDDA2	BBT03	BBT03A	94 U	94 U	94 U	94 U	94 U	100 U	
PSDDA2	BBT04	BBT04A	82 U	82 U	82 U	82 U	82 U	90 U	
PSDDA2	BBT05	BBT05A	82 U	82 U	82 U	82 U	82 U	90 U	
PSDDA2	BBT06	BBT06A	87 U	87 U	87 U	87 U	87 U	96 U	
PSDDA2	BBT07	BBT07A	100 U	100 U	100 U	100 U	100 U		
PSDDA2	BBT08	BBT08A	89 U	89 U	89 U	89 U	89 U		
PSDDA2	BBT09	BBT09A	85 U	85 U	85 U	85 U	85 U		
PSDDA2	BBT10	BBT10A	97 U	97 U	97 U	97 U	97 U		
PSDDA2	BBT11	BBT11A	58 U	58 U	58 U	58 U	58 U	64 U	120 U
PSDDA2	BBT12	BBT12A							
PSDDA2	BBZ01	BBZ01A	120 U	120 U	120 U	120 U	120 U	130 U	

TABLE B18. CONCENTRATIONS OF PHTHALATE ESTERS IN BELLINGHAM BAY TISSUE SAMPLES (Wet weight, ppb).

Survey	Station	Sample	DIMETHYL PHTHALATE	DIETHYL PHTHALATE	DI-N-BUTYL PHTHALATE	BUTYL BENZYL PHTHALATE	BIS(2-ETHYLHEXYL)-PHTHALATE	DI-N-OCTYL -PHTHALATE
PSDDA2	BBB01	BBB01A	100 U	100 U	100 U	100 U	3000	100 U
PSDDA2	BBB03	BBB03A	160 U	160 U	160 U	160 U	160 U	160 U
PSDDA2	BBB04	BBB04A	92 U	92 U	92 U	92 U	92 U	92 U
PSDDA2	BBT01	BBT01A	93.5 UM	93.5 UM	93.5 UM	93.5 UM	93.5 UM	93.5 UM
PSDDA2	BBT02	BBT02A	110 U	110 U	110 U	110 U	110 U	110 U
PSDDA2	BBT03	BBT03A	94 U	94 U	94 U	94 U	94 U	94 U
PSDDA2	BBT04	BBT04A	82 U	82 U	82 U	82 U	82 U	82 U
PSDDA2	BBT05	BBT05A	82 U	82 U	82 U	82 U	82 U	82 U
PSDDA2	BBT06	BBT06A	87 U	87 U	87 U	87 U	87 U	87 U
PSDDA2	BBT07	BBT07A	100 U	100 U	100 U	100 U	100 U	100 U
PSDDA2	BBT08	BBT08A	89 U	89 U	89 U	89 U	89 U	89 U
PSDDA2	BBT09	BBT09A	85 U	85 U	85 U	85 U	85 U	85 U
PSDDA2	BBT10	BBT10A	97 U	97 U	97 U	97 U	97 U	97 U
PSDDA2	BBT11	BBT11A	58 U	58 U	58 U	58 U	460	58 U
PSDDA2	BBT12	BBT12A						
PSDDA2	BBZ01	BBZ01A	120 U	120 U	120 U	120 U	120 U	120 U

TABLE B19. CONCENTRATIONS OF MISCELLANEOUS OXYGENATED COMPOUND AND ORGANONITROGEN COMPOUNDS IN BELLINGHAM BAY TISSUE SAMPLES (Wet weight, ppb).

Survey	Station	Sample	BENZYL ALCOHOL	DIBENZOFURAN	BENZOIC ACID	N-NITROSO - DIPHENYLAMINE
PSDDA2	BBB01	BBB01A	510 U	100 U	11000 E	100 U
PSDDA2	BBB03	BBB03A	810 U	160 U	25000 E	160 U
PSDDA2	BBB04	BBB04A	460 U	92 U	9500 E	92 U
PSDDA2	BBT01	BBT01A	470 UM	93.5 UM	2750 EM	93.5 UM
PSDDA2	BBT02	BBT02A	540 U	110 U	5100 E	110 U
PSDDA2	BBT03	BBT03A	470 U	94 U	10000 E	94 U
PSDDA2	BBT04	BBT04A	410 U	82 U	7000 E	82 U
PSDDA2	BBT05	BBT05A	410 U	82 U	5700 E	82 U
PSDDA2	BBT06	BBT06A	440 U	87 U	7300 E	87 U
PSDDA2	BBT07	BBT07A	480 U	100 U	9300 E	
PSDDA2	BBT08	BBT08A	440 U	89 U	6000 E	
PSDDA2	BBT09	BBT09A	420 U	85 U	6000 E	85 U
PSDDA2	BBT10	BBT10A	490 U	97 U	5900 E	97 U
PSDDA2	BBT11	BBT11A	290 U	58 U	9700 E	58 U
PSDDA2	BBT12	BBT12A				
PSDDA2	BBZ01	BBZ01A	580 U	120 U	14000 E	120 U

TABLE B20. CONCENTRATIONS OF PESTICIDES AND PCBS IN BELLINGHAM BAY TISSUE SAMPLES (Wet weight, ppb).

Survey	Station	Sample	P,P'-DDT	P,P'-DDE	P,P'-DDD	HEPTACHLOR	ALPHA CHLORDANE	ALDRIN	DIELDRIN	HEXACHLOROCYCLO - HEXANE-GAMMA (LINDANE)
PSDDA2	BBB01	BBB01A	0.9 U	0.6 U	0.9 U	0.3 U	0.5 U	0.3 U	0.6 U	0.3 U
PSDDA2	BBB03	BBB03A	4.5 U	3 U	4.5 U	1.5 U	2.5 U	1.5 U	3 U	1.5 U
PSDDA2	BBB04	BBB04A	0.9 U	0.6 U	0.9 U	0.3 U	0.5 U	0.3 U	0.6 U	0.3 U
PSDDA2	BBT01	BBT01A	0.9 U	0.6 U	0.9 U	0.3 U	0.5 U	0.3 U	0.6 U	0.3 U
PSDDA2	BBT02	BBT02A	0.9 U	0.6 U	0.9 U	0.3 U	0.5 U	0.3 U	0.6 U	0.3 U
PSDDA2	BBT03	BBT03A	0.9 UM	0.6 UM	0.9 UM	0.3 UM	0.5 UM	0.3 UM	0.6 UM	0.3 UM
PSDDA2	BBT04	BBT04A	0.9 UM	1.15 UM	0.9 UM	0.3 UM	0.5 UM	0.3 UM	0.6 UM	0.3 UM
PSDDA2	BBT05	BBT05A	0.9 U	1 U	0.9 U	0.3 U	0.5 U	0.3 U	0.6 U	0.3 U
PSDDA2	BBT06	BBT06A	0.9 U	0.6 U	0.9 U	0.3 U	0.5 U	0.3 U	0.6 U	0.3 U
PSDDA2	BBT07	BBT07A	0.9 U	1 U	0.9 U	0.3 U	0.5 U	0.3 U	0.6 U	0.3 U
PSDDA2	BBT08	BBT08A	0.9 U	0.7 U	0.9 U	0.3 U	0.5 U	0.3 U	0.6 U	0.3 U
PSDDA2	BBT09	BBT09A	0.9 U	0.6 U	0.9 U	0.3 U	0.5 U	0.3 U	0.6 U	0.3 U
PSDDA2	BBT10	BBT10A	0.9 U	0.6 U	0.9 U	0.3 U	0.5 U	0.3 U	1.1 U	0.3 U
PSDDA2	BBT11	BBT11A	0.9 U	0.6 U	0.9 U	0.3 U	0.5 U	0.3 U	0.6 U	0.3 U
PSDDA2	BBT12	BBT12A								
PSDDA2	BBZ01	BBZ01A	0.9 U	0.6 U	0.9 U	0.3 U	0.5 U	0.3 U	0.6 U	0.3 U

TABLE B-21. TOTAL EXTRACTABLE ORGANIC MATERIAL FROM BELLINGHAM BAY (*COMPSOMYAX* TISSUES)

Survey	Station	Sample	Percent Lipid
PSDDA2	BBB01	BBB01A	0.57
PSDDA2	BBB03	BBB03A	0.39
PSDDA2	BBZ02	BBZ01A	0.34
PSDDA2	BBT01	BBT01A	0.29
PSDDA2	BBT02	BBT02A	0.17
PSDDA2	BBT04	BBT04A	0.42
PSDDA2	BBT05	BBT05A	0.51
PSDDA2	BBT06	BBT06A	0.40
PSDDA2	BBT07	BBT07A	0.45
PSDDA2	BBT08	BBT08A	0.44
PSDDA2	BBT09	BBT09A	0.48
PSDDA2	BBT10	BBT10A	0.40
PSDDA2	BBT11	BBT11A	0.47

TABLE B-22. SPECIES ABUNDANCE SUMMARIZED BY SAMPLE FOR BELLINGHAM BAY SAMPLES.

SURVEY	STN_ID	DATE	SRV_SAMPID	FIELD_REP	SUBSAMPLE	SPECIES	ABUNDANCE	UNITS
PSDDA2	BBB01	04/18/89	BBB01I	1		Total abundance of all polychaetes	762	IND
PSDDA2	BBB01	04/18/89	BBB01I	1		Total Mollusks	134	IND
PSDDA2	BBB01	04/18/89	BBB01I	1		Total Crustaceans	33	IND
PSDDA2	BBB01	04/18/89	BBB01I	1		Total Miscellaneous Taxa	1	IND
PSDDA2	BBB01	04/18/89	BBB01I	2		Total abundance of all polychaetes	1584	IND
PSDDA2	BBB01	04/18/89	BBB01I	2		Total Mollusks	188	IND
PSDDA2	BBB01	04/18/89	BBB01I	2		Total Crustaceans	40	IND
PSDDA2	BBB01	04/18/89	BBB01I	2		Total Miscellaneous Taxa	5	IND
PSDDA2	BBB01	04/18/89	BBB01I	3		Total abundance of all polychaetes	1800	IND
PSDDA2	BBB01	04/18/89	BBB01I	3		Total Mollusks	189	IND
PSDDA2	BBB01	04/18/89	BBB01I	3		Total Crustaceans	10	IND
PSDDA2	BBB01	04/18/89	BBB01I	4		Total abundance of all polychaetes	882	IND
PSDDA2	BBB01	04/18/89	BBB01I	4		Total Mollusks	218	IND
PSDDA2	BBB01	04/18/89	BBB01I	4		Total Crustaceans	52	IND
PSDDA2	BBB01	04/18/89	BBB01I	4		Total Miscellaneous Taxa	13	IND
PSDDA2	BBB01	04/18/89	BBB01I	5		Total abundance of all polychaetes	1115	IND
PSDDA2	BBB01	04/18/89	BBB01I	5		Total Mollusks	313	IND
PSDDA2	BBB01	04/18/89	BBB01I	5		Total Crustaceans	29	IND
PSDDA2	BBB01	04/18/89	BBB01I	5		Total Miscellaneous Taxa	7	IND
PSDDA2	BBB02	04/17/89	BBB02I	1		Total abundance of all polychaetes	71	IND
PSDDA2	BBB02	04/17/89	BBB02I	1		Total Mollusks	43	IND
PSDDA2	BBB02	04/17/89	BBB02I	1		Total Crustaceans	9	IND
PSDDA2	BBB02	04/17/89	BBB02I	1		Total Miscellaneous Taxa	3	IND
PSDDA2	BBB02	04/17/89	BBB02I	2		Total Mollusks	74	IND
PSDDA2	BBB02	04/17/89	BBB02I	2		Total abundance of all polychaetes	65	IND
PSDDA2	BBB02	04/17/89	BBB02I	2		Total Crustaceans	7	IND
PSDDA2	BBB02	04/17/89	BBB02I	2		Total Miscellaneous Taxa	4	IND
PSDDA2	BBB02	04/17/89	BBB02I	3		Total Mollusks	65	IND
PSDDA2	BBB02	04/17/89	BBB02I	3		Total abundance of all polychaetes	47	IND
PSDDA2	BBB02	04/17/89	BBB02I	3		Total Crustaceans	19	IND
PSDDA2	BBB02	04/17/89	BBB02I	3		Total Miscellaneous Taxa	3	IND
PSDDA2	BBB02	04/17/89	BBB02I	4		Total Mollusks	94	IND
PSDDA2	BBB02	04/17/89	BBB02I	4		Total abundance of all polychaetes	76	IND
PSDDA2	BBB02	04/17/89	BBB02I	4		Total Crustaceans	13	IND
PSDDA2	BBB02	04/17/89	BBB02I	4		Total Miscellaneous Taxa	6	IND
PSDDA2	BBB02	04/17/89	BBB02I	5		Total Mollusks	78	IND
PSDDA2	BBB02	04/17/89	BBB02I	5		Total abundance of all polychaetes	60	IND
PSDDA2	BBB02	04/17/89	BBB02I	5		Total Crustaceans	10	IND
PSDDA2	BBB02	04/17/89	BBB02I	5		Total Miscellaneous Taxa	4	IND
PSDDA2	BBB03	04/17/89	BBB03I	1		Total Crustaceans	39	IND
PSDDA2	BBB03	04/17/89	BBB03I	1		Total Mollusks	35	IND
PSDDA2	BBB03	04/17/89	BBB03I	1		Total abundance of all polychaetes	17	IND
PSDDA2	BBB03	04/17/89	BBB03I	1		Total Miscellaneous Taxa	7	IND
PSDDA2	BBB03	04/17/89	BBB03I	2		Total Mollusks	47	IND
PSDDA2	BBB03	04/17/89	BBB03I	2		Total Crustaceans	35	IND
PSDDA2	BBB03	04/17/89	BBB03I	2		Total abundance of all polychaetes	30	IND
PSDDA2	BBB03	04/17/89	BBB03I	2		Total Miscellaneous Taxa	6	IND
PSDDA2	BBB03	04/17/89	BBB03I	3		Total Mollusks	68	IND
PSDDA2	BBB03	04/17/89	BBB03I	3		Total Crustaceans	48	IND
PSDDA2	BBB03	04/17/89	BBB03I	3		Total abundance of all polychaetes	46	IND
PSDDA2	BBB03	04/17/89	BBB03I	3		Total Miscellaneous Taxa	12	IND
PSDDA2	BBB03	04/17/89	BBB03I	4		Total Crustaceans	76	IND

PSDDA2	BBB03	04/17/89	BBB03I	4
PSDDA2	BBB03	04/17/89	BBB03I	4
PSDDA2	BBB03	04/17/89	BBB03I	4
PSDDA2	BBB03	04/17/89	BBB03I	5
PSDDA2	BBB03	04/17/89	BBB03I	5
PSDDA2	BBB03	04/17/89	BBB03I	5
PSDDA2	BBB03	04/17/89	BBB03I	5
PSDDA2	BBB04	04/25/89	BBB04I	1
PSDDA2	BBB04	04/25/89	BBB04I	1
PSDDA2	BBB04	04/25/89	BBB04I	1
PSDDA2	BBB04	04/25/89	BBB04I	1
PSDDA2	BBB04	04/25/89	BBB04I	2
PSDDA2	BBB04	04/25/89	BBB04I	2
PSDDA2	BBB04	04/25/89	BBB04I	2
PSDDA2	BBB04	04/25/89	BBB04I	2
PSDDA2	BBB04	04/25/89	BBB04I	3
PSDDA2	BBB04	04/25/89	BBB04I	3
PSDDA2	BBB04	04/25/89	BBB04I	3
PSDDA2	BBB04	04/25/89	BBB04I	3
PSDDA2	BBB04	04/25/89	BBB04I	4
PSDDA2	BBB04	04/25/89	BBB04I	4
PSDDA2	BBB04	04/25/89	BBB04I	4
PSDDA2	BBB04	04/25/89	BBB04I	4
PSDDA2	BBB04	04/25/89	BBB04I	5
PSDDA2	BBB04	04/25/89	BBB04I	5
PSDDA2	BBB04	04/25/89	BBB04I	5
PSDDA2	BBB04	04/25/89	BBB04I	5
PSDDA2	BBT01	04/14/89	BBT01I	1
PSDDA2	BBT01	04/14/89	BBT01I	1
PSDDA2	BBT01	04/14/89	BBT01I	1
PSDDA2	BBT01	04/14/89	BBT01I	1
PSDDA2	BBT01	04/14/89	BBT01I	2
PSDDA2	BBT01	04/14/89	BBT01I	2
PSDDA2	BBT01	04/14/89	BBT01I	2
PSDDA2	BBT01	04/14/89	BBT01I	2
PSDDA2	BBT01	04/14/89	BBT01I	3
PSDDA2	BBT01	04/14/89	BBT01I	3
PSDDA2	BBT01	04/14/89	BBT01I	3
PSDDA2	BBT01	04/14/89	BBT01I	3
PSDDA2	BBT01	04/14/89	BBT01I	4
PSDDA2	BBT01	04/14/89	BBT01I	4
PSDDA2	BBT01	04/14/89	BBT01I	4
PSDDA2	BBT01	04/14/89	BBT01I	4
PSDDA2	BBT01	04/14/89	BBT01I	5
PSDDA2	BBT01	04/14/89	BBT01I	5
PSDDA2	BBT01	04/14/89	BBT01I	5
PSDDA2	BBT01	04/14/89	BBT01I	5
PSDDA2	BBT02	04/14/89	BBT02I	1
PSDDA2	BBT02	04/14/89	BBT02I	1
PSDDA2	BBT02	04/14/89	BBT02I	1
PSDDA2	BBT02	04/14/89	BBT02I	1
PSDDA2	BBT02	04/14/89	BBT02I	2
PSDDA2	BBT02	04/14/89	BBT02I	2
PSDDA2	BBT02	04/14/89	BBT02I	2
PSDDA2	BBT02	04/14/89	BBT02I	2
PSDDA2	BBT02	04/14/89	BBT02I	3
PSDDA2	BBT02	04/14/89	BBT02I	3
PSDDA2	BBT02	04/14/89	BBT02I	3
PSDDA2	BBT02	04/14/89	BBT02I	3

Total Mollusks	46	IND
Total abundance of all polychaetes	39	IND
Total Miscellaneous Taxa	2	IND
Total Mollusks	57	IND
Total abundance of all polychaetes	53	IND
Total Crustaceans	18	IND
Total Miscellaneous Taxa	8	IND
Total abundance of all polychaetes	111	IND
Total Mollusks	108	IND
Total Crustaceans	9	IND
Total Miscellaneous Taxa	7	IND
Total Mollusks	82	IND
Total abundance of all polychaetes	51	IND
Total Crustaceans	34	IND
Total Miscellaneous Taxa	7	IND
Total Mollusks	50	IND
Total Crustaceans	32	IND
Total abundance of all polychaetes	21	IND
Total Miscellaneous Taxa	8	IND
Total Mollusks	53	IND
Total abundance of all polychaetes	35	IND
Total Crustaceans	14	IND
Total Miscellaneous Taxa	4	IND
Total abundance of all polychaetes	71	IND
Total Mollusks	40	IND
Total Crustaceans	27	IND
Total Miscellaneous Taxa	4	IND
Total Mollusks	91	IND
Total abundance of all polychaetes	40	IND
Total Crustaceans	3	IND
Total Miscellaneous Taxa	3	IND
Total Mollusks	102	IND
Total abundance of all polychaetes	29	IND
Total Crustaceans	6	IND
Total Miscellaneous Taxa	2	IND
Total Mollusks	70	IND
Total abundance of all polychaetes	49	IND
Total Crustaceans	8	IND
Total Miscellaneous Taxa	4	IND
Total Mollusks	107	IND
Total abundance of all polychaetes	30	IND
Total Crustaceans	7	IND
Total Miscellaneous Taxa	4	IND
Total Mollusks	159	IND
Total abundance of all polychaetes	24	IND
Total Crustaceans	8	IND
Total Miscellaneous Taxa	6	IND
Total Mollusks	88	IND
Total abundance of all polychaetes	34	IND
Total Crustaceans	10	IND
Total Miscellaneous Taxa	2	IND
Total Mollusks	101	IND
Total abundance of all polychaetes	45	IND
Total Crustaceans	16	IND
Total Miscellaneous Taxa	2	IND
Total Mollusks	107	IND
Total abundance of all polychaetes	62	IND
Total Crustaceans	15	IND
Total Miscellaneous Taxa	3	IND

PSDDA2	BBT02	04/14/89	BBT02I	4	Total Mollusks	82	IND
PSDDA2	BBT02	04/14/89	BBT02I	4	Total abundance of all polychaetes	26	IND
PSDDA2	BBT02	04/14/89	BBT02I	4	Total Crustaceans	5	IND
PSDDA2	BBT02	04/14/89	BBT02I	5	Total Mollusks	92	IND
PSDDA2	BBT02	04/14/89	BBT02I	5	Total abundance of all polychaetes	60	IND
PSDDA2	BBT02	04/14/89	BBT02I	5	Total Crustaceans	8	IND
PSDDA2	BBT02	04/14/89	BBT02I	5	Total Miscellaneous Taxa	7	IND
PSDDA2	BBT03	04/14/89	BBT03I	1	Total Mollusks	86	IND
PSDDA2	BBT03	04/14/89	BBT03I	1	Total abundance of all polychaetes	29	IND
PSDDA2	BBT03	04/14/89	BBT03I	1	Total Crustaceans	19	IND
PSDDA2	BBT03	04/14/89	BBT03I	1	Total Miscellaneous Taxa	4	IND
PSDDA2	BBT03	04/14/89	BBT03I	2	Total Mollusks	121	IND
PSDDA2	BBT03	04/14/89	BBT03I	2	Total abundance of all polychaetes	26	IND
PSDDA2	BBT03	04/14/89	BBT03I	2	Total Crustaceans	25	IND
PSDDA2	BBT03	04/14/89	BBT03I	2	Total Miscellaneous Taxa	5	IND
PSDDA2	BBT03	04/14/89	BBT03I	3	Total Mollusks	69	IND
PSDDA2	BBT03	04/14/89	BBT03I	3	Total abundance of all polychaetes	27	IND
PSDDA2	BBT03	04/14/89	BBT03I	3	Total Crustaceans	19	IND
PSDDA2	BBT03	04/14/89	BBT03I	3	Total Miscellaneous Taxa	1	IND
PSDDA2	BBT03	04/14/89	BBT03I	4	Total Mollusks	79	IND
PSDDA2	BBT03	04/14/89	BBT03I	4	Total abundance of all polychaetes	33	IND
PSDDA2	BBT03	04/14/89	BBT03I	4	Total Crustaceans	14	IND
PSDDA2	BBT03	04/14/89	BBT03I	4	Total Miscellaneous Taxa	7	IND
PSDDA2	BBT03	04/14/89	BBT03I	5	Total Mollusks	183	IND
PSDDA2	BBT03	04/14/89	BBT03I	5	Total abundance of all polychaetes	47	IND
PSDDA2	BBT03	04/14/89	BBT03I	5	Total Crustaceans	25	IND
PSDDA2	BBT03	04/14/89	BBT03I	5	Total Miscellaneous Taxa	10	IND

TABLE B-23. Average Major taxa abundance by station.

08/25/89

SURVEY	STN_ID	DATE	SRV_SAMPID	SUBSAMPLE	SPECIES	ABUNDANCE	NUM_OBS	COEFF_VAR
PSDDA2	BBB01	04/18/89	BBB01I		Total abundance of all polychaetes	1229	5	36.48
PSDDA2	BBB01	04/18/89	BBB01I		Total Mollusks	208	5	31.61
PSDDA2	BBB01	04/18/89	BBB01I		Total Crustaceans	33	5	47.10
PSDDA2	BBB01	04/18/89	BBB01I		Total Miscellaneous Taxa	5	4	100.30
PSDDA2	BBB02	04/17/89	BBB02I		Total Mollusks	71	5	26.49
PSDDA2	BBB02	04/17/89	BBB02I		Total abundance of all polychaetes	64	5	17.50
PSDDA2	BBB02	04/17/89	BBB02I		Total Crustaceans	12	5	40.25
PSDDA2	BBB02	04/17/89	BBB02I		Total Miscellaneous Taxa	4	5	30.62
PSDDA2	BBB03	04/17/89	BBB03I		Total Mollusks	51	5	24.63
PSDDA2	BBB03	04/17/89	BBB03I		Total Crustaceans	43	5	49.36
PSDDA2	BBB03	04/17/89	BBB03I		Total abundance of all polychaetes	37	5	37.98
PSDDA2	BBB03	04/17/89	BBB03I		Total Miscellaneous Taxa	7	5	51.51
PSDDA2	BBB04	04/25/89	BBB04I		Total Mollusks	67	5	41.93
PSDDA2	BBB04	04/25/89	BBB04I		Total abundance of all polychaetes	58	5	60.71
PSDDA2	BBB04	04/25/89	BBB04I		Total Crustaceans	23	5	47.94
PSDDA2	BBB04	04/25/89	BBB04I		Total Miscellaneous Taxa	6	5	31.18
PSDDA2	BBT01	04/14/89	BBT01I		Total Mollusks	106	5	31.16
PSDDA2	BBT01	04/14/89	BBT01I		Total abundance of all polychaetes	34	5	29.11
PSDDA2	BBT01	04/14/89	BBT01I		Total Crustaceans	6	5	32.40
PSDDA2	BBT01	04/14/89	BBT01I		Total Miscellaneous Taxa	4	5	39.03
PSDDA2	BBT02	04/14/89	BBT02I		Total Mollusks	94	5	10.66
PSDDA2	BBT02	04/14/89	BBT02I		Total abundance of all polychaetes	45	5	34.74
PSDDA2	BBT02	04/14/89	BBT02I		Total Crustaceans	11	5	43.13
PSDDA2	BBT02	04/14/89	BBT02I		Total Miscellaneous Taxa	3	4	92.44
PSDDA2	BBT03	04/14/89	BBT03I		Total Mollusks	108	5	43.19
PSDDA2	BBT03	04/14/89	BBT03I		Total abundance of all polychaetes	32	5	26.51
PSDDA2	BBT03	04/14/89	BBT03I		Total Crustaceans	20	5	22.89
PSDDA2	BBT03	04/14/89	BBT03I		Total Miscellaneous Taxa	5	5	62.25

07/27/89

TABLE B-24. AMPHIPOD 10-DAY BIOASSAY AND OYSTER LARVAE BIVALVE BIOASSAY PERCENT CHANGE BELLINGHAM BAY SAMPLES.

Sets of bioassay results (percent change and abnormality) are coded as follows:

Code	Type	Var.	Species	Dilution
B1	AMP10	MORT	Rhepoxynius abronius	100
B2	BIVLV	ABNM	Crassostrea gigas (Temp PSDDA2)	100

Survey	Station	Date	Sample	B1	B2
PSDDA2	BBB01	05/06/89	BBB01B	9	20.8
PSDDA2	BBB02	05/06/89	BBB02B	16	15.02
PSDDA2	BBB04	05/06/89	BBB04B	10	6.99
PSDDA2	BBZ01	05/06/89	BBZ01B	19	9.57
PSDDA2	CRR01	05/06/89	CRR01B	4	4.5

07/27/89

TABLE B-25. SURVIVAL DATA FOR THE AMPHIPOD 10-DAY BIOASSAY ON BELINGHAM BAY SAMPLES BY LAB REPLICATE.

Bioassay Type	Variable	Survey	Station	Date	Sample	Species	Dilution	Lab Rep	Initial Value	# Survivors	Units	% Mortality
AMP10	MORT	PSDDA2	BBB01	05/06/89	BBB01B	Rhepoxynius abronius	100	1	20	17	IND	15
AMP10	MORT	PSDDA2	BBB01	05/06/89	BBB01B	Rhepoxynius abronius	100	2	20	18	IND	10
AMP10	MORT	PSDDA2	BBB01	05/06/89	BBB01B	Rhepoxynius abronius	100	3	20	18	IND	10
AMP10	MORT	PSDDA2	BBB01	05/06/89	BBB01B	Rhepoxynius abronius	100	4	20	19	IND	5
AMP10	MORT	PSDDA2	BBB01	05/06/89	BBB01B	Rhepoxynius abronius	100	5	20	19	IND	5
AMP10	MORT	PSDDA2	BBB02	05/06/89	BBB02B	Rhepoxynius abronius	100	1	20	17	IND	15
AMP10	MORT	PSDDA2	BBB02	05/06/89	BBB02B	Rhepoxynius abronius	100	2	20	18	IND	10
AMP10	MORT	PSDDA2	BBB02	05/06/89	BBB02B	Rhepoxynius abronius	100	3	20	16	IND	20
AMP10	MORT	PSDDA2	BBB02	05/06/89	BBB02B	Rhepoxynius abronius	100	4	20	17	IND	15
AMP10	MORT	PSDDA2	BBB02	05/06/89	BBB02B	Rhepoxynius abronius	100	5	20	16	IND	20
AMP10	MORT	PSDDA2	BBB04	05/06/89	BBB04B	Rhepoxynius abronius	100	1	20	17	IND	15
AMP10	MORT	PSDDA2	BBB04	05/06/89	BBB04B	Rhepoxynius abronius	100	2	20	18	IND	10
AMP10	MORT	PSDDA2	BBB04	05/06/89	BBB04B	Rhepoxynius abronius	100	3	20	17	IND	15
AMP10	MORT	PSDDA2	BBB04	05/06/89	BBB04B	Rhepoxynius abronius	100	4	20	19	IND	5
AMP10	MORT	PSDDA2	BBB04	05/06/89	BBB04B	Rhepoxynius abronius	100	5	20	19	IND	5
AMP10	MORT	PSDDA2	BBZ01	05/06/89	BBZ01B	Rhepoxynius abronius	100	1	20	16	IND	20
AMP10	MORT	PSDDA2	BBZ01	05/06/89	BBZ01B	Rhepoxynius abronius	100	2	20	17	IND	15
AMP10	MORT	PSDDA2	BBZ01	05/06/89	BBZ01B	Rhepoxynius abronius	100	3	20	13	IND	35
AMP10	MORT	PSDDA2	BBZ01	05/06/89	BBZ01B	Rhepoxynius abronius	100	4	20	18	IND	10
AMP10	MORT	PSDDA2	BBZ01	05/06/89	BBZ01B	Rhepoxynius abronius	100	5	20	17	IND	15
AMP10	MORT	PSDDA2	CRR01	05/06/89	CRR01B	Rhepoxynius abronius	100	1	20	20	IND	0
AMP10	MORT	PSDDA2	CRR01	05/06/89	CRR01B	Rhepoxynius abronius	100	2	20	19	IND	5
AMP10	MORT	PSDDA2	CRR01	05/06/89	CRR01B	Rhepoxynius abronius	100	3	20	20	IND	0
AMP10	MORT	PSDDA2	CRR01	05/06/89	CRR01B	Rhepoxynius abronius	100	4	20	18	IND	10
AMP10	MORT	PSDDA2	CRR01	05/06/89	CRR01B	Rhepoxynius abronius	100	5	20	19	IND	5

IND = individual

Station BBB02 is significantly different from Carr Inlet reference (Station CRR01) and difference is <30 percent. $t = -4.54$, $t_{0.10[8]} = 1.86$.

Station BBZ02 is significantly different from Carr Inlet reference (Station CRR01) and difference is <30 percent. $t = -3.20$, $t_{0.10[8]} = 1.86$.

07/27/89

TABLE B-26. ABNORMALITY DATA FOR THE OYSTER LARVAE BIOASSAY ON BELLINGHAM BAY SAMPLES BY LAB REPLICATE.

Bioassay Type	Variable	Survey	Station	Date	Sample	Species	Dilution	Lab Rep	# Survivors	# Normal	Units	% Abnormality
BIVLV	ABNM	PSDDA2	BBB01	05/06/89	BBB01B	Crassostrea gigas	100	1	62	43	IND	30.6
BIVLV	ABNM	PSDDA2	BBB01	05/06/89	BBB01B	Crassostrea gigas	100	2	70	57	IND	18.6
BIVLV	ABNM	PSDDA2	BBB01	05/06/89	BBB01B	Crassostrea gigas	100	3	52	43	IND	17.3
BIVLV	ABNM	PSDDA2	BBB01	05/06/89	BBB01B	Crassostrea gigas	100	4	64	50	IND	21.9
BIVLV	ABNM	PSDDA2	BBB01	05/06/89	BBB01B	Crassostrea gigas	100	5	96	81	IND	15.6
BIVLV	ABNM	PSDDA2	BBB02	05/06/89	BBB02B	Crassostrea gigas	100	1	177	156	IND	11.9
BIVLV	ABNM	PSDDA2	BBB02	05/06/89	BBB02B	Crassostrea gigas	100	2	85	78	IND	8.2
BIVLV	ABNM	PSDDA2	BBB02	05/06/89	BBB02B	Crassostrea gigas	100	3	103	82	IND	20.4
BIVLV	ABNM	PSDDA2	BBB02	05/06/89	BBB02B	Crassostrea gigas	100	4	96	81	IND	15.6
BIVLV	ABNM	PSDDA2	BBB02	05/06/89	BBB02B	Crassostrea gigas	100	5	58	47	IND	19.0
BIVLV	ABNM	PSDDA2	BBB04	05/06/89	BBB04B	Crassostrea gigas	100	1	91	84	IND	7.7
BIVLV	ABNM	PSDDA2	BBB04	05/06/89	BBB04B	Crassostrea gigas	100	2	71	61	IND	14.1
BIVLV	ABNM	PSDDA2	BBB04	05/06/89	BBB04B	Crassostrea gigas	100	3	103	100	IND	2.9
BIVLV	ABNM	PSDDA2	BBB04	05/06/89	BBB04B	Crassostrea gigas	100	4	53	51	IND	3.8
BIVLV	ABNM	PSDDA2	BBB04	05/06/89	BBB04B	Crassostrea gigas	100	5	77	72	IND	6.5
BIVLV	ABNM	PSDDA2	BBZ01	05/06/89	BBZ01B	Crassostrea gigas	100	1	102	94	IND	7.8
BIVLV	ABNM	PSDDA2	BBZ01	05/06/89	BBZ01B	Crassostrea gigas	100	2	68	61	IND	10.3
BIVLV	ABNM	PSDDA2	BBZ01	05/06/89	BBZ01B	Crassostrea gigas	100	3	53	49	IND	7.5
BIVLV	ABNM	PSDDA2	BBZ01	05/06/89	BBZ01B	Crassostrea gigas	100	4	69	63	IND	8.7
BIVLV	ABNM	PSDDA2	BBZ01	05/06/89	BBZ01B	Crassostrea gigas	100	5	52	45	IND	13.5
BIVLV	ABNM	PSDDA2	CRR01	05/06/89	CRR01B	Crassostrea gigas	100	1	75	72	IND	4.0
BIVLV	ABNM	PSDDA2	CRR01	05/06/89	CRR01B	Crassostrea gigas	100	2	58	57	IND	1.7
BIVLV	ABNM	PSDDA2	CRR01	05/06/89	CRR01B	Crassostrea gigas	100	3	54	52	IND	3.7
BIVLV	ABNM	PSDDA2	CRR01	05/06/89	CRR01B	Crassostrea gigas	100	4	85	82	IND	3.5
BIVLV	ABNM	PSDDA2	CRR01	05/06/89	CRR01B	Crassostrea gigas	100	5	42	38	IND	9.5

IND = individual

TABLE B-27. BELLINGHAM BAY DISPOSAL SITE
PHYSICAL REMOTS® PARAMETERS

Station/ Replicate	Grain-Size Major Mode (phi units)	Boundary Roughness (cm)	Apparent RPD Depth (cm)
BBT3/A	≥4	1.22	4.24
BBT3/B	≥4	1.07	3.19
BBT14/A	≥4	1.15	3.24
BBT14/B	≥4	1.3	2.76
BBT2/A	≥4	1.07	3.11
BBT2/B	≥4	0.31	3.32
BBT13/B	≥4	0.31	2.58
BBT13/C	≥4	0.61	3.13
BBT1/A	≥4	0.84	3.84
BBT1/B	≥4	0.76	3.84
BBP1/A	≥4	0.76	3.3
BBP1/B	≥4	1.68	4.39
BBP5/A	≥4	0.69	3.35
BBP6/A	≥4	0.76	3.62
BBP7/A	≥4	1.53	3.49
BBP2/8	≥4	1.15	3.28
BBP2/C	≥4	0.61	3.91
BBT10/A	≥4	0.69	2.46
BBT10/B	≥4	0.08	2.71
BBT12/A	≥4	0.46	2.09
BBT20/A	≥4	0.38	2.8
BBT11/A	≥4	1.15	0.89
BBT11/B	≥4	2.68	4.04
BBT19/A	≥4	0.84	1.93
BBP8/A	≥4	0.69	3.07
BBP9/A	≥4	0.76	2.41
BBP10/A	≥4	0.54	3.23
BBP3/A	≥4	0.61	1.17
BBT4/A	≥4	1.46	1.06
BBT15/A	≥4	0.84	2.38
BBT6/A	≥4	0.46	2.28

TABLE B-27. (Continued)

Station/ Replicate	Grain-Size Major Mode (phi units)	Boundary Roughness (cm)	Apparent RPD Depth (cm)
BBT16/A	≥4	1.53	2.69
BBT5/A	≥4	0.69	2.08
BBP11/A	≥4	0.76	2.74
BBP12/A	≥4	0.92	2.86
BBP13/B	≥4	0.15	2.54
BBP4/A	≥4	0.46	2.2
BBT7/A	≥4	0.69	2.41
BBT17/A	≥4	0.38	3.18
BBT8/A	≥4	0.76	2.61
BBT18/A	≥4	0.54	2.39
BBT9/A	≥4	0.61	2.64
BBP14/B	≥4	0.92	3.37
BBPT15/A	≥4	0.54	2.16
BBP16/A	≥4	0.77	1.71
BBS14/A	≥4	1.84	2.98
BBS15/A	≥4	0.61	2.49
BBS16/A	≥4	0.92	2.93
BBS1/A	≥4	1.38	2.63
BBS2/A	≥4	0.61	2.33
BBS3/A	≥4	0.99	2.45
BBS4/A	≥4	0.99	1.97
BBS5/A	≥4	1.15	2.75
BBS13/A	≥4	0.69	3.93
BBS12/A	≥4	0.99	3.36
BBS11/A	≥4	0.23	2.52
BBS10/A	≥4	0.84	3.39
BBS9/A	≥4	2.07	1.88
BBS8/A	≥4	0.23	0.65
BBS7/A	≥4	0.38	3.5
BBS6/A	≥4	0.46	2.18

TABLE B-28. PSDDA PHASE II SL AND ML VALUES

Group PSDDA-89

08/26/89

Test types listed are:
PML PSDDA Maximum Level.
PSL PSDDA Screening Level.

== Group PSDDA-89 ==

Value type: Original values, no modification or transformation.

Chemical		PML	PSL
1,2-DICHLOROBENZENE	DRY	350.00	19.00
1,2,4-TRICHLOROBENZENE	DRY	64.00	6.40
1,3-DICHLOROBENZENE	DRY		170.00
1,4-DICHLOROBENZENE	DRY	260.00	26.00
2-METHYLNAPHTHALENE	DRY	670.00	67.00
2-METHYLPHENOL	DRY	72.00	10.00
2,4-DIMETHYL PHENOL	DRY	50.00	10.00
DIBENZO(A,H)ANTHRACENE	DRY	1200.00	120.00
DI-N-OCTYL PHTHALATE	DRY		6200.00
TRICHLOROETHENE	DRY	1600.00	160.00
4-METHYL PHENOL	DRY	1200.00	120.00
TETRACHLOROETHYLENE	DRY	210.00	14.00
PENTACHLOROPHENOL	DRY	690.00	69.00
HEXACHLOROCYCLOHEXANE-GAMMA (LINDANE)	DRY		10.00
HEXACHLOROBENZENE	DRY	230.00	23.00
HEXACHLOROBUTADIENE	DRY	290.00	29.00
HEXACHLOROETHANE	DRY	14000.00	1400.00
ACENAPHTHENE	DRY	630.00	63.00
ACENAPHTHYLENE	DRY	640.00	64.00
ALDRIN (PESTICIDE)	DRY		10.00
ANTHRACENE	DRY	1300.00	130.00
ANTIMONY (SB)	DRY	200.00	20.00
ARSENIC	DRY	700.00	57.00
BIS(2-ETHYLHEXYL)PHTHALATE	DRY		3100.00
BENZO(A)ANTHRACENE	DRY	4500.00	450.00
BENZO(A)PYRENE	DRY	6800.00	680.00
BENZOIC ACID	DRY	690.00	216.00
BENZYL ALCOHOL	DRY	73.00	10.00
BENZO(G,H,I)PERYLENE	DRY	5400.00	540.00
BUTYL BENZYL PHTHALATE	DRY		470.00
CADMIUM	DRY	9.60	0.96
CHLORDANE	DRY		10.00
CHRYSENE	DRY	6700.00	670.00
COPPER	DRY	810.00	81.00
SUM OF P,P'-DDT AND O,P'-DDT	DRY	69.00	6.90
DIETHYL PHTHALATE	DRY		97.00
DIBENZOFURAN	DRY	540.00	54.00

TABLE B-28. (Continued)

DIELDRIN (PESTICIDE)	DRY		10.00
DI-N-BUTYL PHTHALATE	DRY		1400.00
DIMETHYL PHTHALATE	DRY		160.00
ETHYLBENZENE	DRY	50.00	10.00
FLUORANTHENE	DRY	6300.00	630.00
FLUORENE	DRY	640.00	64.00
HEPTACHLOR (PESTICIDE)	DRY		10.00
POLYCYCLIC AROMATIC HYDROCARBON-HEAVY	DRY	51000.00	1800.00
INDENO(1,2,3-CD)PYRENE	DRY	5250.00	69.00
LEAD	DRY	660.00	66.00
POLYCYCLIC AROMATIC HYDROCARBON-LIGHT	DRY	6100.00	610.00
MERCURY	DRY	2.10	0.21
NAPHTHALENE	DRY	2100.00	210.00
NICKEL	DRY		140.00
N-NITROSO DIPHENYLAMINE	DRY	220.00	22.00
POLYCHLORINATED BIPHENYLS	DRY	2500.00	130.00
PHENANTHRENE	DRY	3200.00	320.00
PHENOL	DRY	1200.00	120.00
PYRENE	DRY	7300.00	430.00
SILVER	DRY	6.10	1.20
TOTAL BENZOFLUORANTHENES (B + K)	DRY	8000.00	800.00
TOTAL XYLENE	DRY	160.00	12.00
ZINC	DRY	1600.00	160.00