DATA APPENDIX

AMTEST

PSDDA CHEMICALS OF CONCERN

AM TEST ID	98-A011964
CLIENT ID	MW-C
DATE SAMPLED	8/25/98

	RESULT	Q	S.L.	M.L.
ORGANICS (UG/KG DRY WEIGHT)				
LPAH				
Acenaphthylene	< 19		560	1,300
Acenaphthene	< 19		500	2,000
Anthracene	< 19		960	13,000
Fluorene	< 19		540	3,600
Naphthalene	< 19		2,100	2,400
Phenanthrene	61		1,500	21,000
2-Methylnaphthalene	< 19		670	1,900
HPAH				
Benzo(a)anthracene	67		1,300	5,100
Benzo(a)pyrene	62		1,600	3,600
Benzo(b)fluoranthene	54		3,200	9,900
Benzo(k)fluoranthene	49			
Benzo(ghi)perylene	33		670	3,200
Chrysene	87		1,400	21,000
Dibenzo(a,h)anthracene	< 19		230	1,900
Fluoranthene	110		1,700	30,000
Indeno(1,2,3-cd)pyrene	41		600	4,400
Pyrene	120		2,600	16,000
SURROGATES (% RECOVERY)				
2-Fluorophenol	39.			
D-6-Phenol	56.			
D-5-Nitrobenzene	52.			
2-Fluorobiphenyl	65.			
2,4,6-Tribromophenol	98.			
D14-Terphenyl	95.			

AMTEST

Parametrix
5808 Lake Washington Blvd. N.E.
Kirkland, WA 98033
Attention: Deb Lester

Date Received: 8/26/98
Date Reported: 9/18/98

Project Name: Middle Waterway
Project #: 55-1616-09(02)

PSDDA CHEMICALS OF CONCERN

AM TEST ID	98-A011969
CLIENT ID	GS#8
DATE SAMPLED	8/25/98

	RESULT	Q	S.L.	M.L.
CONVENTIONALS (DRY WEIGHT)				
Total Solids (%)	83.2			

GRAIN SIZE DISTRIBUTION

PHI	OPENING (MM)	% RETENTION
	4.75	1.20
-2,	4.00	0.40
-1,	2.00	1.70
0,	1.00	3.80
+1,	0.50	23.9
+2,	0.25	29.3
+3,	0.125	17.2
+4,	0.063	8.30
+5,	0.032	4.70
+6,	0.016	1.10
+7,	0.008	1.90
+8,	0.004	1.00
+9,	0.002	0.50
+10,	0.001	0.30
>+10,	<0.001	4.70

AMTEST

Parametrix
5808 Lake Washington Blvd. N.E.
Kirkland, WA 98033
Attention: Deb Lester

Date Received: 8/26/98
Date Reported: 9/18/98

Project Name: Middle Waterway
Project #: 55-1616-09(02)

PSDDA CHEMICALS OF CONCERN

AM TEST ID	98-A011970
CLIENT ID	GS#10
DATE SAMPLED	8/25/98

	RESULT	Q	S.L.	M.L.
CONVENTIONALS (DRY WEIGHT)				
Total Solids (%)	69.0			

GRAIN SIZE DISTRIBUTION

PHI	OPENING (MM)	% RETENTION
	4.75	3.60
-2,	4.00	< 0.1
-1,	2.00	1.40
0,	1.00	2.80
+1,	0.50	12.6
+2,	0.25	23.3
+3,	0.125	12.7
+4,	0.063	9.10
+5,	0.032	19.8
+6,	0.016	2.90
+7,	0.008	2.80
+8,	0.004	3.40
+9,	0.002	1.00
+10,	0.001	0.30
>+10,	<0.001	4.20

VEGETATION PLOT FIELD SURVEY DATA

HERBACEOUS VEGETATION COVER DATA
MIDDLE WATERWAY SHORE RESTORATION
WETLAND MITIGATION MONITORING

Date: 9/09/1998 **Transect:** 5 **Observers:** L. Tear, D. Lester

Macrophyte Bed: Low salt marsh, planted, not enclosed **Starting Point:** North

Plot #	Distance (m)			Species	% Cover	Remarks
1	0.87	W	1.62	*Vaucheria* sp.	90	
2	3.00	W	1.81	*Vaucheria* sp.	75	
3	6.24	W	0.05	*Vaucheria* sp.	100	
4	9.53	W	0.433	*Vaucheria* sp.	100	
5	14.09	W	2.56	*Vaucheria* sp.	50	
6	16.42	E	2.02	*Vaucheria* sp. *Eleocharis parvula* Diatoms	5 15 100	
7	19.09	W	1.09	*Vaucheria* sp.	100	
8	24.02	E	1.5	*Vaucheria* sp. Diatoms	20 85	
9	25.1	E	3.68	Bare	0	
10	30.90	E	2.85	*Vaucheria* sp.	75	

HERBACEOUS VEGETATION COVER DATA
MIDDLE WATERWAY SHORE RESTORATION
WETLAND MITIGATION MONITORING

Date: 9/09/1998 **Transect:** 12 **Observer:** L. Tear, D. Lester

Macrophyte Bed: Mud, unplanted, undressed, south end **Starting Point:** West @ GS-4

Plot #	Distance (m)			Species	% Cover	Remarks
1	1.1	S	0.61	*Vaucheria* sp. *Rhizochlonium* sp.	40 65	
2	5.07	N	2.61	Diatoms	50	Thin coverage Mud
3	8.93	N	1.10	*Vaucheria* sp.	3	Mud
4	13.22	S	2.48	*Rhizochlonium* sp.	4	

HERBACEOUS VEGETATION COVER DATA
MIDDLE WATERWAY SHORE RESTORATION
WETLAND MITIGATION MONITORING

Date: 9/09/98 **Transect:** 13 **Observer:** L. Tear, D. Lester

Macrophyte Bed: Mud, unplanted, dressed **Starting Point:** North

Plot #	Distance (m)			Species	% Cover	Remarks
1	5.69	E	2.94	*Rhizochlonium* sp. *Vaucheria* sp.	100 1	
2	16.15	E	2.95	*Eleocharis parvula* Diatoms	75 100	
3	24.29	E	1.63	*Eleocharis parvula* Diatoms	45 100	

HERBACEOUS VEGETATION COVER DATA
MIDDLE WATERWAY SHORE RESTORATION
WETLAND MITIGATION MONITORING

Date: 9/09/1998 **Transect:** 11 **Observer:** L. Tear, D. Lester

Macrophyte Bed: Mud, unplanted, undressed **Starting Point:** South

Plot #	Distance (m)			Species	% Cover	Remarks
1	0.16	E	3.78	*Vaucheria* sp.	100	Thick
2	1.94	W	1.55	*Vaucheria* sp.	100	
3	7.09	E	4.78	*Vaucheria* sp.	75	
4	10.75	W	0.89	*Rhizochlonium* sp.	100	
5	16.46	E	3.78	*Vaucheria* sp. *Rhizochlonium* sp.	20 80	
6	22.27	W	0.21	*Vaucheria* sp.	100	

HERBACEOUS VEGETATION COVER DATA
MIDDLE WATERWAY SHORE RESTORATION
WETLAND MITIGATION MONITORING

Date: 9/09/1998 **Transect:** 9 **Observer:** L. Tear, D. Lester

Macrophyte Bed: Low salt marsh control, unplanted, unenclosed **Starting Point:** South

Plot #	Distance (m)			Species	% Cover	Remarks
1	0.4	E	4.3	Bare	0	
2	3.9	E	2.7	Bare	0	
3	10.6	W	0.19	*Vaucheria* sp.	20	Thin coverage
4	16.7	E	3.2	*Vaucheria* sp.	10	Thin coverage
5	23.2	W	4.2	Bare	0	

HERBACEOUS VEGETATION COVER DATA
MIDDLE WATERWAY SHORE RESTORATION
WETLAND MITIGATION MONITORING

Date: 9/09/1998 **Transect:** 4 **Observer:** L. Tear, D. Lester

Macrophyte Bed: High salt marsh, unplanted, with enclosure **Starting Point:** North

Plot #	Distance (m)			Species	% Cover	Remarks
1	3.1	W	1.7	Bare	0	Sandy
2	10.4	W	2.4	Bare	0	Sandy
3	20.2	W	0.0	Bare	0	Sandy
4	30.6	W	2.2	Bare	0	Sandy
5	34.6	W	0.3	Bare	0	Sandy

HERBACEOUS VEGETATION COVER DATA
MIDDLE WATERWAY SHORE RESTORATION
WETLAND MITIGATION MONITORING

Date: 9/09/1998 **Transect:** 8 **Observer:** L. Tear, D. Lester

Macrophyte Bed: Low salt marsh control, unplanted, mud base **Starting Point:** North

Plot #	Distance (m)			Species	% Cover	Remarks
1	0.2	E	3.5	*Vaucheria* sp. *Eleocharis parvula*	25 Trace	
2	7.3	W	8.6	Bare	0	
3	14.2	E	3.7	*Vaucheria* sp.	50	
4	17.3	E	0.7	*Vaucheria* sp.	50	
5	23.5	E	1.4	Bare	0	

HERBACEOUS VEGETATION COVER DATA
MIDDLE WATERWAY SHORE RESTORATION
WETLAND MITIGATION MONITORING

Date: 9/09/1998 **Transect:** 6 **Observer:** L. Tear, D. Lester

Macrophyte Bed: Low salt marsh, planted, enclosure **Starting Point:** South

Plot #	Distance (m)			Species	% Cover	Remarks
1	1.8	E	2.2	*Vaucheria* sp.	Trace	
2	4.4	E	0.1	Bare	0	
3	11.1	W	2.0	Bare	0	

HERBACEOUS VEGETATION COVER DATA
MIDDLE WATERWAY SHORE RESTORATION
WETLAND MITIGATION MONITORING

Date: 9/09/1998 **Transect:** 1 **Observer:** L. Tear, D. Lester

Macrophyte Bed: High salt marsh, planted, enclosure **Starting Point:** North

Plot #	Distance (m)			Species	% Cover	Remarks
1	0.8	E	1.0	Bare	0	
2	2.9	W	3.9	*Atriplex patula*	7	Spindly plant, not robust
3	8.1	E	0.0	Bare	0	Silty/sand-substrate throughout transect
4	11.3	E	4.7	Bare	0	
5	16.3	E	2.2	Bare	0	
6	22.4	W	4.8	Bare	0	@ 27.4 m, 29.6 m 2 small patches of *Atriplex patula*
7	29.1	W	3.0	Bare	0	
8	33.6	E	4.5	Bare	0	
9	41.6	W	3.0	*Distichlis spicata*	2	Strips of sod remaining perpendicular to transect
10	46.7	E	1.4	Bare	0	

HERBACEOUS VEGETATION COVER DATA
MIDDLE WATERWAY SHORE RESTORATION
WETLAND MITIGATION MONITORING

Date: 9/09/1998 **Transect:** 7 **Observer:** L. Tear, D. Lester

Macrophyte Bed: Low salt marsh, planted, enclosure **Starting Point:** North

Plot #	Distance (m)			Species	% Cover	Remarks
1	0.7	W	0.2	Bare	0	Sand
2	4.7	W	0.9	Bare	0	Sand
3	17.4	W	0.6	Bare	0	Sand
4	21.7	W	0.25	*Distichlis spicata*	Trace	Sand
5	25.8	W	0.7	*Atriplex patula* *Distichlis spicata*	25 Trace	Sand
6	31.9	W	0.15	*Distichlis spicata (dead)*	Trace	Sand
7	42.8	W	0.55	*Distichlis spicata*	12	Sand

Notes: Random patches of *Atriplex patula* along transect from 20 m to end of transect, sods of dying *Distichlis spicata* here and there.

HERBACEOUS VEGETATION COVER DATA
MIDDLE WATERWAY SHORE RESTORATION
WETLAND MITIGATION MONITORING

Date: 9/09/1998 **Transect:** 2 **Observer:** L. Tear, D. Lester

Macrophyte Bed: High salt marsh, planted, enclosure **Starting Point:** North

Plot #	Distance (m)			Species	% Cover	Remarks
1	10.5	W	1.2	*Atriplex patula* *Deschampsia* caespitosa	25 Trace	
2	19.7	W	0.5	*Deschampsia caespitosa*	Trace	
3	23.5	W	0.4	*Deschampsia caespitosa*	3	
4	33.8	W	0.3	Bare	0	
5	49.0	W	1.3	*Distichlis spicata* *Atriplex patula*	5 Trace	
6	64.9	W	1.5	*Distichlis spicata*	Trace	
7	79.7	W	1.9	*Deschampsia* caespitosa	15	

HERBACEOUS VEGETATION COVER DATA
MIDDLE WATERWAY SHORE RESTORATION
WETLAND MITIGATION MONITORING

Date: 9/09/1998 **Transect:** 3 **Observer:** L. Tear, D. Lester

Macrophyte Bed: High salt marsh, not planted, not enclosed **Starting Point:** North

Plot #	Distance (m)			Species	% Cover	Remarks
1	1.0	W	5.7	Bare	0	Sand
2	2.7	W	2.5	Bare	0	Sand
3	4.5	E	7.3	Bare	0	Sand
4	11.8	E	1.3	Bare	0	Sand
5	15.6	W	0.4	Bare	0	Sand
6	21.8	W	1.8	Bare	0	Sand
7	23.7	E	5.5	Bare	0	Sand

HERBACEOUS VEGETATION COVER DATA
MIDDLE WATERWAY SHORE RESTORATION
WETLAND MITIGATION MONITORING

Date: 9/09/1998 **Transect:** 10 **Observer:** L. Tear, D. Lester

Macrophyte Bed: High salt marsh, planted, enclosed **Starting Point:** West

Plot #	Distance (m)			Species	% Cover	Remarks
1	11.5	N	0.6	*Deschampsia* caespitosa	55	
				Distichlis spicata	15	
				Fragaria chiloensis	4	
2	19.0	N	0.5	*Deschampsia caespitosa*	45	
				Fragaria chiloensis	1	
				Atriplex patula	Trace	
				Scotch Broom	Trace	
3	28.5	N	0.5	*Deschampsia* caespitosa	65	
				Grass A (lawn grass)	50	
				Agrostis sp.	10	
				Bromus sp.	10	
				Atriplex	1	

HERBACEOUS VEGETATION COVER DATA
MIDDLE WATERWAY SHORE RESTORATION
WETLAND MITIGATION MONITORING

Date: 9/09/1998 **Transect:** 14 **Observer:** L. Tear, D. Lester

Macrophyte Bed: High to low salt marsh, topdressed **Starting Point:** East

Plot #	Distance (m)			Species	% Cover	Remarks
1	9.4	N	0.8	Bare	0	Sand & Silt
2	12.7	N	0.6	Bare	0	Silty
3	16.7	S	1.4	Bare	0	Silty
4	19.9	S	0.6	*Rhizochlonium* sp.	10	
5	22.0	N	2.2	*Vaucheria* sp.	90	Thin coverage
6	23.7	N	0.3	*Vaucheria* sp.	80	Thin coverage
7	27.8	S	1.7	*Vaucheria* sp. *Rhizochlonium* sp. *Enteromorpha*	95 1 Trace	Thin coverage

ANALYTICAL LABORATORY DATA REPORT

AMTEST
LABORATORIES

AmTest Inc.

14603 N.E. 87th St.
Redmond, WA
98052

Tel: 425 885 1664

Fax: 425 883 3495

September 18, 1998

Parametrix
5808 Lake Washington Blvd.
Kirkland, WA 98033
Attn. Deb Lester

Dear Deb,

On the 26th of August 1998, Am Test received a total of sixteen (16) sediment samples from the Middle Waterway Restoration project (project #55-1616-09(02)). Six (6) of the samples were analyzed for the following PSDDA parameters:

LPAH and HPAH	EPA 3550/8270
Mercury	EPA 7471
Total Solids	PSEP p17
Total Volatile Solids	PSEP p20
Total Organic Carbon	SM 5310B
Acid Volatile Sulfides	DiToro, 1990
Grain Size	PSEP p9

The remaining ten samples were analyzed for Grain Size only.

At the time of receipt, the samples were logged-in, stored, and handled in accordance with the protocols of the USEPA. There were a total of four containers submitted for each of the samples.

In order to achieve the lowest possible detection limits for the PAHs, two separate 35 gram subsamples were extracted, combined and analyzed (1 ml final extract volume). All of the samples were subjected to GPC clean up, prior to the analysis by GC/MS.

There were no major problems with any of the analyses.

Following the analytical data, you will find the Quality Control (QC) Summary. Information in this section includes dates of analyses, sample weights, and the results for the quality control samples (i.e. Matrix Spikes, Standard Reference Materials, Triplicates).

AMTEST

All of the QC results for the Quality Control Samples were within the limits of the laboratory as well as those of the analytical methods. The appropriate raw data has been included in the data package.

Please feel free to contact me if you have any questions pertaining to the data package.

Sincerely,

Mark A. Fugiel
General Manager
Am Test Inc.

98-A11963-11978

AMTEST

Parametrix
5808 Lake Washington Blvd. N.E.
Kirkland, WA 98033
Attention: Deb Lester

Date Received: 8/26/98
Date Reported: 9/17/98

Project Name: Middle Waterway
Project #: 55-1616-09(02)

PSDDA CHEMICALS OF CONCERN

AM TEST ID	98-A011963
CLIENT ID	MW-A
DATE SAMPLED	8/25/98

	RESULT	Q	S.L.	M.L.
CONVENTIONALS (DRY WEIGHT)				
Total Solids (%)	57.7			
Total Volatile Solids (%)	6.7			
Total Organic Carbon (%)	5.0			
Acid Volatile Sulfides(mg/kg)	210			

GRAIN SIZE DISTRIBUTION

PHI	OPENING (MM)	% RETENTION
	4.75	2.40
-2,	4.00	0.30
-1,	2.00	0.70
0,	1.00	2.40
+1,	0.50	15.8
+2,	0.25	19.1
+3,	0.125	13.9
+4,	0.063	3.50
+5,	0.032	7.70
+6,	0.016	13.6
+7,	0.008	6.50
+8,	0.004	4.80
+9,	0.002	1.80
+10,	0.001	0.90
>+10,	<0.001	6.60

METALS (MG/KG DRY WEIGHT)				
Mercury	0.260		0.41	2.3

AMTEST

PSDDA CHEMICALS OF CONCERN

AM TEST ID	98-A011963
CLIENT ID	MW-A
DATE SAMPLED	8/25/98

	RESULT	Q	S.L.	M.L.
ORGANICS (UG/KG DRY WEIGHT)				
LPAH				
Acenaphthylene	< 23		560	1,300
Acenaphthene	< 23		500	2,000
Anthracene	70		960	13,000
Fluorene	< 23		540	3,600
Naphthalene	< 23		2,100	2,400
Phenanthrene	240		1,500	21,000
2-Methylnaphthalene	< 23		670	1,900
HPAH				
Benzo(a)anthracene	460		1,300	5,100
Benzo(a)pyrene	460		1,600	3,600
Benzo(b)fluoranthene	600		3,200	9,900
Benzo(k)fluoranthene	470			
Benzo(ghi)perylene	260		670	3,200
Chrysene	730		1,400	21,000
Dibenzo(a,h)anthracene	75		230	1,900
Fluoranthene	650		1,700	30,000
Indeno(1,2,3-cd)pyrene	340		600	4,400
Pyrene	670		2,600	16,000
SURROGATES (% RECOVERY)				
2-Fluorophenol	46.			
D-6-Phenol	61.			
D-5-Nitrobenzene	50.			
2-Fluorobiphenyl	56.			
2,4,6-Tribromophenol	87.			
D14-Terphenyl	86.			

AMTEST

Parametrix
5808 Lake Washington Blvd. N.E.
Kirkland, WA 98033
Attention: Deb Lester

Date Received: 8/26/98
Date Reported: 9/17/98

Project Name: Middle Waterway
Project #: 55-1616-09(02)

PSDDA CHEMICALS OF CONCERN

AM TEST ID	98-A011964
CLIENT ID	MW-C
DATE SAMPLED	8/25/98

	RESULT	Q	S.L.	M.L.
CONVENTIONALS (DRY WEIGHT)				
Total Solids (%)	75.7			
Total Volatile Solids (%)	2.8			
Total Organic Carbon (%)	0.60			
Acid Volatile Sulfides(mg/kg)	210			

GRAIN SIZE DISTRIBUTION

PHI	OPENING (MM)	% RETENTION
	4.75	1.20
-2,	4.00	0.30
-1,	2.00	0.30
0,	1.00	1.60
+1,	0.50	26.4
+2,	0.25	37.1
+3,	0.125	17.2
+4,	0.063	6.30
+5,	0.032	0.90
+6,	0.016	1.30
+7,	0.008	1.60
+8,	0.004	1.60
+9,	0.002	0.20
+10,	0.001	< 0.1
>+10,	<0.001	4.00

METALS (MG/KG DRY WEIGHT)				
Mercury	0.076		0.41	2.3

AMTEST

PSDDA CHEMICALS OF CONCERN

AM TEST ID	98-A011968
CLIENT ID	MW-F
DATE SAMPLED	8/25/98

	RESULT	Q	S.L.	M.L.
ORGANICS (UG/KG DRY WEIGHT)				
LPAH				
Acenaphthylene	22		560	1,300
Acenaphthene	< 21		500	2,000
Anthracene	58		960	13,000
Fluorene	< 21		540	3,600
Naphthalene	21		2,100	2,400
Phenanthrene	250		1,500	21,000
2-Methylnaphthalene	< 21		670	1,900
HPAH				
Benzo(a)anthracene	320		1,300	5,100
Benzo(a)pyrene	370		1,600	3,600
Benzo(b)fluoranthene	380		3,200	9,900
Benzo(k)fluoranthene	240			
Benzo(ghi)perylene	220		670	3,200
Chrysene	430		1,400	21,000
Dibenzo(a,h)anthracene	77		230	1,900
Fluoranthene	480		1,700	30,000
Indeno(1,2,3-cd)pyrene	280		600	4,400
Pyrene	540		2,600	16,000
SURROGATES (% RECOVERY)				
2-Fluorophenol	46.			
D-6-Phenol	61.			
D-5-Nitrobenzene	63.			
2-Fluorobiphenyl	75.			
2,4,6-Tribromophenol	88.			
D14-Terphenyl	94.			

AMTEST

Parametrix
5808 Lake Washington Blvd. N.E.
Kirkland, WA 98033
Attention: Deb Lester

Date Received: 8/26/98
Date Reported: 9/17/98

Project Name: Middle Waterway
Project #: 55-1616-09(02)

PSDDA CHEMICALS OF CONCERN

AM TEST ID	98-A011968
CLIENT ID	MW-F
DATE SAMPLED	8/25/98

	RESULT	Q	S.L.	M.L.
CONVENTIONALS (DRY WEIGHT)				
Total Solids (%)	70.0			
Total Volatile Solids (%)	6.2			
Total Organic Carbon (%)	3.3			
Acid Volatile Sulfides(mg/kg)	< 12			

GRAIN SIZE DISTRIBUTION

PHI	OPENING (MM)	% RETENTION
	4.75	1.30
-2,	4.00	0.30
-1,	2.00	1.60
0,	1.00	2.90
+1,	0.50	15.7
+2,	0.25	24.6
+3,	0.125	11.7
+4,	0.063	19.9
+5,	0.032	9.70
+6,	0.016	1.50
+7,	0.008	2.90
+8,	0.004	2.10
+9,	0.002	0.20
+10,	0.001	< 0.1
>+10,	<0.001	5.70

METALS (MG/KG DRY WEIGHT)				
Mercury	0.160		0.41	2.3

AMTEST

PSDDA CHEMICALS OF CONCERN

AM TEST ID	98-A011967
CLIENT ID	MW-1
DATE SAMPLED	8/25/98

	RESULT	Q	S.L.	M.L.
ORGANICS (UG/KG DRY WEIGHT)				
LPAH				
Acenaphthylene	< 20		560	1,300
Acenaphthene	< 20		500	2,000
Anthracene	< 20		960	13,000
Fluorene	< 20		540	3,600
Naphthalene	< 20		2,100	2,400
Phenanthrene	46		1,500	21,000
2-Methylnaphthalene	< 20		670	1,900
HPAH				
Benzo(a)anthracene	51		1,300	5,100
Benzo(a)pyrene	63		1,600	3,600
Benzo(b)fluoranthene	66		3,200	9,900
Benzo(k)fluoranthene	47			
Benzo(ghi)perylene	32		670	3,200
Chrysene	73		1,400	21,000
Dibenzo(a,h)anthracene	< 20		230	1,900
Fluoranthene	100		1,700	30,000
Indeno(1,2,3-cd)pyrene	49		600	4,400
Pyrene	100		2,600	16,000
SURROGATES (% RECOVERY)				
2-Fluorophenol	46.			
D-6-Phenol	58.			
D-5-Nitrobenzene	61.			
2-Fluorobiphenyl	71.			
2,4,6-Tribromophenol	93.			
D14-Terphenyl	100			

AMTEST

Parametrix
5808 Lake Washington Blvd. N.E.
Kirkland, WA 98033
Attention: Deb Lester

Date Received: 8/26/98
Date Reported: 9/17/98

Project Name: Middle Waterway
Project #: 55-1616-09(02)

PSDDA CHEMICALS OF CONCERN

AM TEST ID	98-A011967
CLIENT ID	MW 1
DATE SAMPLED	8/25/98

	RESULT	Q	S.L.	M.L.
CONVENTIONALS (DRY WEIGHT)				
Total Solids (%)	67.4			
Total Volatile Solids (%)	3.3			
Total Organic Carbon (%)	2.2			
Acid Volatile Sulfides(mg/kg)	81.			

GRAIN SIZE DISTRIBUTION

PHI	OPENING (MM)	% RETENTION
	4.75	2.20
-2,	4.00	0.90
-1,	2.00	1.90
0,	1.00	4.20
+1,	0.50	21.1
+2,	0.25	24.9
+3,	0.125	20.6
+4,	0.063	11.6
+5,	0.032	0.90
+6,	0.016	2.80
+7,	0.008	0.90
+8,	0.004	3.10
+9,	0.002	0.50
+10,	0.001	< 0.1
>+10,	<0.001	4.50

METALS (MG/KG DRY WEIGHT)				
Mercury	0.417	*	0.41	2.3

AMTEST

PSDDA CHEMICALS OF CONCERN

AM TEST ID	98-A011966
CLIENT ID	MW-1 Duplicate
DATE SAMPLED	8/25/98

	RESULT	Q	S.L.	M.L.
ORGANICS (UG/KG DRY WEIGHT)				
LPAH				
Acenaphthylene	< 20		560	1,300
Acenaphthene	< 20		500	2,000
Anthracene	< 20		960	13,000
Fluorene	< 20		540	3,600
Naphthalene	< 20		2,100	2,400
Phenanthrene	55		1,500	21,000
2-Methylnaphthalene	< 20		670	1,900
HPAH				
Benzo(a)anthracene	75		1,300	5,100
Benzo(a)pyrene	95		1,600	3,600
Benzo(b)fluoranthene	98		3,200	9,900
Benzo(k)fluoranthene	69			
Benzo(ghi)perylene	58		670	3,200
Chrysene	120		1,400	21,000
Dibenzo(a,h)anthracene	< 20		230	1,900
Fluoranthene	130		1,700	30,000
Indeno(1,2,3-cd)pyrene	71		600	4,400
Pyrene	140		2,600	16,000
SURROGATES (% RECOVERY)				
2-Fluorophenol	57.			
D-6-Phenol	73.			
D-5-Nitrobenzene	70.			
2-Fluorobiphenyl	73.			
2,4,6-Tribromophenol	93.			
D14-Terphenyl	100			

AMTEST

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Attention: Deb Lester

Date Received: 8/26/98
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Project Name: Middle Waterway
Project #: 55-1616-09(02)

PSDDA CHEMICALS OF CONCERN

AM TEST ID	98-A011966
CLIENT ID	MW-1 Duplicate
DATE SAMPLED	8/25/98

	RESULT	Q	S.L.	M.L.
CONVENTIONALS (DRY WEIGHT)				
Total Solids (%)	72.0			
Total Volatile Solids (%)	2.7			
Total Organic Carbon (%)	3.5			
Acid Volatile Sulfides(mg/kg)	290			

GRAIN SIZE DISTRIBUTION

PHI	OPENING (MM)	% RETENTION
	4.75	2.20
-2,	4.00	0.60
-1,	2.00	1.70
0,	1.00	3.60
+1,	0.50	15.8
+2,	0.25	29.0
+3,	0.125	18.9
+4,	0.063	10.1
+5,	0.032	7.60
+6,	0.016	0.50
+7,	0.008	2.40
+8,	0.004	2.30
+9,	0.002	0.30
+10,	0.001	< 0.1
>+10,	<0.001	4.90

METALS (MG/KG DRY WEIGHT)				
Mercury	0.207		0.41	2.3

AMTEST

PSDDA CHEMICALS OF CONCERN

AM TEST ID	98-A011965
CLIENT ID	MC-1
DATE SAMPLED	8/25/98

	RESULT	Q	S.L.	M.L.
ORGANICS (UG/KG DRY WEIGHT)				
LPAH				
Acenaphthylene	44		560	1,300
Acenaphthene	45		500	2,000
Anthracene	240		960	13,000
Fluorene	52		540	3,600
Naphthalene	36		2,100	2,400
Phenanthrene	540		1,500	21,000
2-Methylnaphthalene	< 33		670	1,900
HPAH				
Benzo(a)anthracene	620		1,300	5,100
Benzo(a)pyrene	630		1,600	3,600
Benzo(b)fluoranthene	640		3,200	9,900
Benzo(k)fluoranthene	450			
Benzo(ghi)perylene	390		670	3,200
Chrysene	960		1,400	21,000
Dibenzo(a,h)anthracene	130		230	1,900
Fluoranthene	1000		1,700	30,000
Indeno(1,2,3-cd)pyrene	440		600	4,400
Pyrene	1000		2,600	16,000
SURROGATES (% RECOVERY)				
2-Fluorophenol	43.			
D-6-Phenol	62.			
D-5-Nitrobenzene	56.			
2-Fluorobiphenyl	67.			
2,4,6-Tribromophenol	99.			
D14-Terphenyl	99.			

AMTEST

Parametrix
5808 Lake Washington Blvd. N.E.
Kirkland, WA 98033
Attention: Deb Lester

Date Received: 8/26/98
Date Reported: 9/17/98

Project Name: Middle Waterway
Project #: 55-1616-09(02)

PSDDA CHEMICALS OF CONCERN

AM TEST ID	98-A011965
CLIENT ID	MC-1
DATE SAMPLED	8/25/98

	RESULT	Q	S.L.	M.L.
CONVENTIONALS (DRY WEIGHT)				
Total Solids (%)	43.5			
Total Volatile Solids (%)	14.			
Total Organic Carbon (%)	5.4			
Acid Volatile Sulfides(mg/kg)	290			

GRAIN SIZE DISTRIBUTION

PHI	OPENING (MM)	% RETENTION
	4.75	2.80
-2,	4.00	0.50
-1,	2.00	1.40
0,	1.00	2.10
+1,	0.50	3.90
+2,	0.25	6.70
+3,	0.125	6.70
+4,	0.063	6.90
+5,	0.032	29.9
+6,	0.016	12.0
+7,	0.008	7.90
+8,	0.004	6.80
+9,	0.002	1.20
+10,	0.001	< 0.1
>+10,	<0.001	11.5

METALS (MG/KG DRY WEIGHT)				
Mercury	0.359		0.41	2.3