Appendix D-3: Sedflume Data

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-01-1*
Analyst: KB
Particle Technology Labs *PTL ID: 44309*

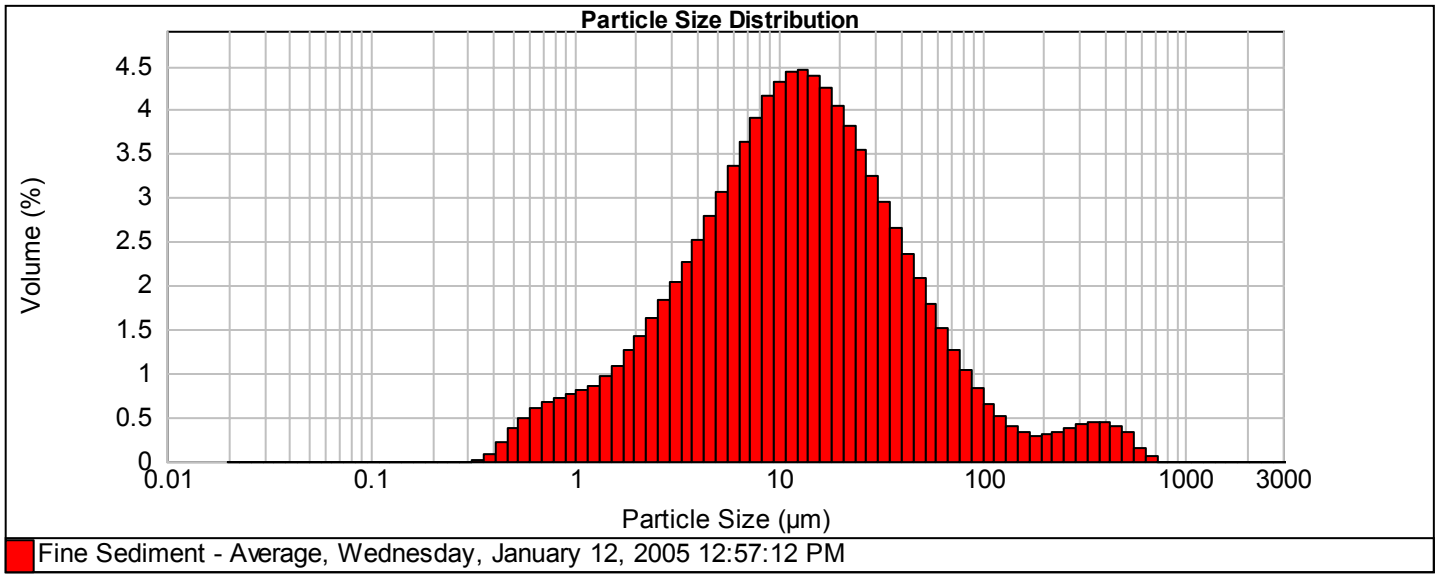
SOP Name: Sea Engineering - Fine Sediment
Result Source: Averaged
Number of this Measurement: 1

Measured: Wednesday, January 12, 2005 12:57:12 PM
Analyzed: Wednesday, January 12, 2005 12:57:13 PM
Number of Measurements: 4

Particle Name: Default	**Accessory Name:** Hydro 2000S (A)	**Pump Speed:** 2000	**Analysis model:** General purpose	**Sensitivity:** Normal
Particle RI: 1.520	**Absorption:** 0.1		**Size range:** 0.020 to 2000.000 um	**Obscuration:** 14.39 %
Dispersant Name: Water	**Dispersant RI:** 1.330		**Weighted Residual:** 1.136 %	**Result Emulation:** Off

Concentration: 0.0121 %Vol	**Span :** 4.736	**Uniformity:** 2.13	**Result units:** Volume
Specific Surface Area: 1.15 m²/g	**Surface Weighted Mean D[3,2]:** 5.236 um	**Vol. Weighted Mean D[4,3]:** 31.807 um	

d(0.1): 2.194 um **d(0.5): 12.298 um** **d(0.9): 60.437 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	7.62	16.125	59.14	150.082	96.11	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	8.87	18.386	63.39	171.127	96.44	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	10.30	20.964	67.44	195.123	96.73	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	11.93	23.904	71.25	222.484	97.03	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	13.76	27.256	74.79	253.681	97.36	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	15.81	31.078	78.04	289.253	97.74	2692.173	100.00
0.044	0.00	0.409	0.08	3.807	18.08	35.436	81.00	329.813	98.16	3069.677	100.00
0.050	0.00	0.466	0.30	4.341	20.61	40.405	83.66	376.060	98.61	3500.116	100.00
0.057	0.00	0.532	0.68	4.950	23.39	46.070	86.02	428.793	99.07	3990.912	100.00
0.065	0.00	0.606	1.17	5.644	26.46	52.531	88.09	488.919	99.47	4550.528	100.00
0.074	0.00	0.691	1.77	6.435	29.81	59.897	89.89	557.477	99.80	5188.616	100.00
0.085	0.00	0.788	2.43	7.338	33.46	68.295	91.41	635.647	99.95	5916.178	100.00
0.097	0.00	0.899	3.14	8.367	37.37	77.872	92.68	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	3.90	9.540	41.53	88.791	93.73	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	4.70	10.878	45.86	101.242	94.56	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	5.56	12.403	50.29	115.438	95.22	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	6.52	14.142	54.74	131.625	95.72	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-01-2*
Analyst: KB
Particle Technology Labs *PTL ID: 44310*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Wednesday, January 12, 2005 2:00:12 PM

Result Source:
Averaged

Analyzed:
Wednesday, January 12, 2005 2:00:13 PM

Number of this Measurement:
1

Number of Measurements:
4

Particle Name:
Default

Accessory Name:
Hydro 2000S (A)

Pump Speed:
2000

Analysis model:
General purpose

Sensitivity:
Normal

Particle RI:
1.520

Absorption:
0.1

Size range:
0.020 to 2000.000 um

Obscuration:
14.10 %

Dispersant Name:
Water

Dispersant RI:
1.330

Weighted Residual:
1.229 %

Result Emulation:
Off

Concentration:
0.0103 %Vol

Span :
3.691

Uniformity:
1.39

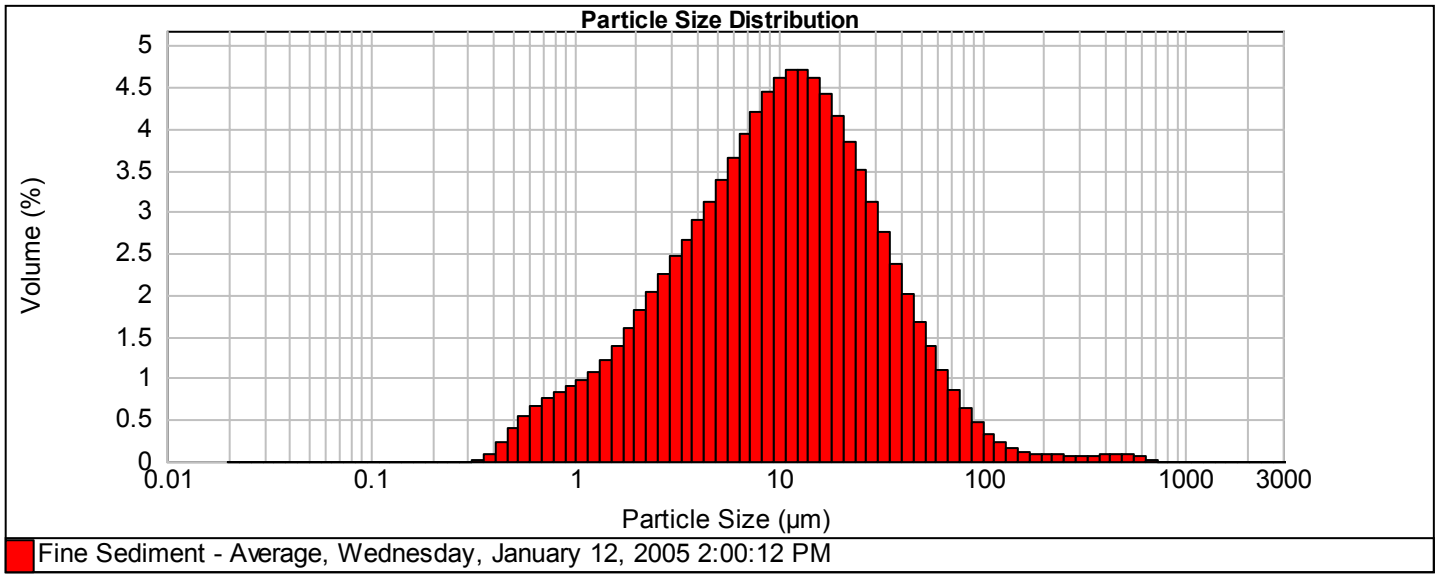
Result units:
Volume

Specific Surface Area:
1.31 m²/g

Surface Weighted Mean D[3,2]:
4.584 um

Vol. Weighted Mean D[4,3]:
18.931 um

d(0.1): 1.873 um **d(0.5):** 10.244 um **d(0.9):** 39.680 um



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	9.08	16.125	66.14	150.082	99.15	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	10.68	18.386	70.56	171.127	99.26	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	12.49	20.964	74.72	195.123	99.35	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	14.53	23.904	78.56	222.484	99.43	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	16.77	27.256	82.06	253.681	99.50	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	19.23	31.078	85.18	289.253	99.57	2692.173	100.00
0.044	0.00	0.409	0.08	3.807	21.90	35.436	87.93	329.813	99.62	3069.677	100.00
0.050	0.00	0.466	0.30	4.341	24.79	40.405	90.31	376.060	99.69	3500.116	100.00
0.057	0.00	0.532	0.71	4.950	27.92	46.070	92.33	428.793	99.76	3990.912	100.00
0.065	0.00	0.606	1.25	5.644	31.30	52.531	94.01	488.919	99.84	4550.528	100.00
0.074	0.00	0.691	1.92	6.435	34.95	59.897	95.39	557.477	99.92	5188.616	100.00
0.085	0.00	0.788	2.68	7.338	38.88	68.295	96.48	635.647	99.98	5916.178	100.00
0.097	0.00	0.899	3.51	8.367	43.08	77.872	97.33	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	4.42	9.540	47.52	88.791	97.97	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	5.39	10.878	52.12	101.242	98.44	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	6.47	12.403	56.83	115.438	98.77	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	7.69	14.142	61.53	131.625	99.00	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-01-3*
Analyst: KB
Particle Technology Labs *PTL ID: 44311*

SOP Name:
Sea Engineering - Fine Sediment

Result Source:
Averaged

Number of this Measurement:
1

Measured:
Wednesday, January 12, 2005 2:12:23 PM

Analyzed:
Wednesday, January 12, 2005 2:12:25 PM

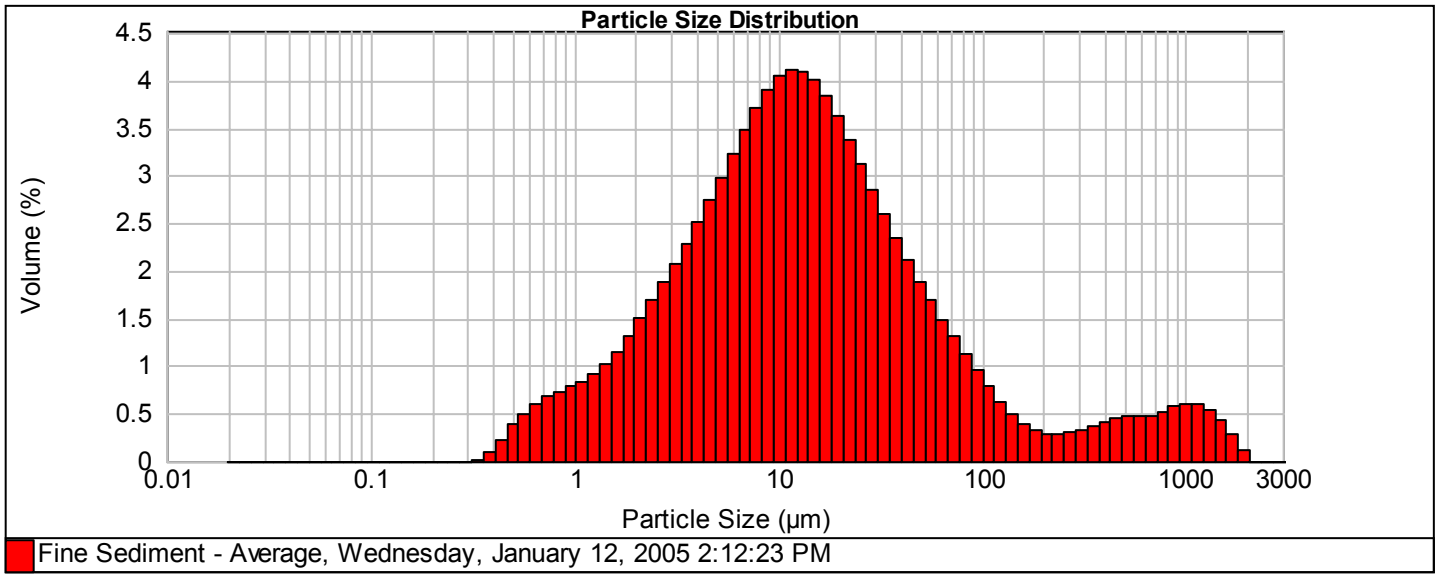
Number of Measurements:
4

Particle Name:	Accessory Name:	Pump Speed:	Analysis model:	Sensitivity:
Default	Hydro 2000S (A)	2000	General purpose	Normal
Particle RI:	**Absorption:**		**Size range:**	**Obscuration:**
1.520	0.1		0.020 to 2000.000 um	14.73 %
Dispersant Name:	**Dispersant RI:**		**Weighted Residual:**	**Result Emulation:**
Water	1.330		1.121 %	Off

Concentration:	Span :	Uniformity:	Result units:
0.0125 %Vol	8.037	5.78	Volume

Specific Surface Area:	Surface Weighted Mean D[3,2]:	Vol. Weighted Mean D[4,3]:
1.15 m²/g	5.221 um	78.673 um

d(0.1): 2.118 um **d(0.5): 12.637 um** **d(0.9): 103.684 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	7.91	16.125	57.52	150.082	91.75	1396.865	99.17
0.023	0.00	0.212	0.00	1.975	9.23	18.386	61.36	171.127	92.14	1592.737	99.60
0.026	0.00	0.242	0.00	2.252	10.73	20.964	64.99	195.123	92.47	1816.075	99.88
0.030	0.00	0.276	0.00	2.568	12.41	23.904	68.37	222.484	92.77	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	14.29	27.256	71.49	253.681	93.05	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	16.37	31.078	74.34	289.253	93.36	2692.173	100.00
0.044	0.00	0.409	0.09	3.807	18.66	35.436	76.93	329.813	93.69	3069.677	100.00
0.050	0.00	0.466	0.31	4.341	21.17	40.405	79.28	376.060	94.06	3500.116	100.00
0.057	0.00	0.532	0.69	4.950	23.91	46.070	81.39	428.793	94.47	3990.912	100.00
0.065	0.00	0.606	1.19	5.644	26.89	52.531	83.28	488.919	94.91	4550.528	100.00
0.074	0.00	0.691	1.79	6.435	30.13	59.897	84.97	557.477	95.38	5188.616	100.00
0.085	0.00	0.788	2.47	7.338	33.62	68.295	86.46	635.647	95.85	5916.178	100.00
0.097	0.00	0.899	3.21	8.367	37.34	77.872	87.77	724.780	96.33	6745.760	100.00
0.110	0.00	1.025	3.99	9.540	41.25	88.791	88.90	826.410	96.86	7691.669	100.00
0.126	0.00	1.169	4.82	10.878	45.30	101.242	89.85	942.292	97.43	8770.216	100.00
0.143	0.00	1.333	5.74	12.403	49.41	115.438	90.63	1074.423	98.04	10000.000	100.00
0.163	0.00	1.519	6.75	14.142	53.51	131.625	91.25	1225.081	98.63		

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MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-01-4*
Analyst: KB
Particle Technology Labs *PTL ID: 44312*

SOP Name:
Sea Engineering - Fine Sediment

Result Source:
Averaged

Number of this Measurement:
1

Measured:
Wednesday, January 12, 2005 2:26:25 PM

Analyzed:
Wednesday, January 12, 2005 2:26:26 PM

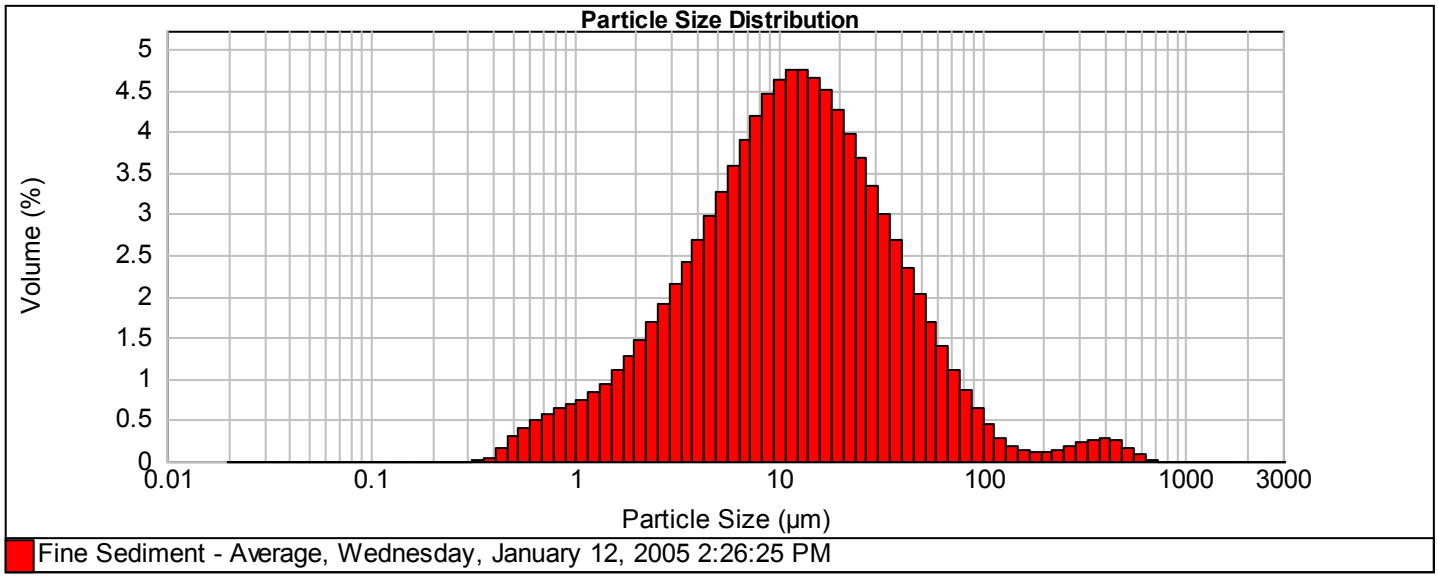
Number of Measurements:
4

Particle Name:	Accessory Name:	Pump Speed:	Analysis model:	Sensitivity:
Default	Hydro 2000S (A)	2000	General purpose	Normal
Particle RI:	**Absorption:**		**Size range:**	**Obscuration:**
1.520	0.1		0.020 to 2000.000 um	14.85 %
Dispersant Name:	**Dispersant RI:**		**Weighted Residual:**	**Result Emulation:**
Water	1.330		1.068 %	Off

Concentration:	Span :	Uniformity:	Result units:
0.0126 %Vol	3.897	1.64	Volume

Specific Surface Area:	Surface Weighted Mean D[3,2]:	Vol. Weighted Mean D[4,3]:
1.12 m²/g	5.369 um	24.560 um

d(0.1): 2.307 um **d(0.5): 11.650 um** **d(0.9): 47.711 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	6.96	16.125	61.67	150.082	98.07	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	8.23	18.386	66.16	171.127	98.19	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	9.71	20.964	70.42	195.123	98.29	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	11.40	23.904	74.39	222.484	98.40	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	13.32	27.256	78.06	253.681	98.55	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	15.47	31.078	81.41	289.253	98.73	2692.173	100.00
0.044	0.00	0.409	0.05	3.807	17.88	35.436	84.42	329.813	98.96	3069.677	100.00
0.050	0.00	0.466	0.21	4.341	20.56	40.405	87.09	376.060	99.23	3500.116	100.00
0.057	0.00	0.532	0.51	4.950	23.52	46.070	89.43	428.793	99.50	3990.912	100.00
0.065	0.00	0.606	0.92	5.644	26.79	52.531	91.44	488.919	99.75	4550.528	100.00
0.074	0.00	0.691	1.43	6.435	30.38	59.897	93.14	557.477	99.92	5188.616	100.00
0.085	0.00	0.788	2.01	7.338	34.27	68.295	94.54	635.647	100.00	5916.178	100.00
0.097	0.00	0.899	2.65	8.367	38.46	77.872	95.65	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	3.34	9.540	42.90	88.791	96.51	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	4.09	10.878	47.53	101.242	97.15	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	4.92	12.403	52.27	115.438	97.59	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	5.87	14.142	57.01	131.625	97.88	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-01-5*
Analyst: KB
Particle Technology Labs *PTL ID: 44313*

SOP Name:
Sea Engineering - Fine Sediment

Result Source:
Averaged

Number of this Measurement:
1

Measured:
Wednesday, January 12, 2005 2:40:10 PM

Analyzed:
Wednesday, January 12, 2005 2:40:11 PM

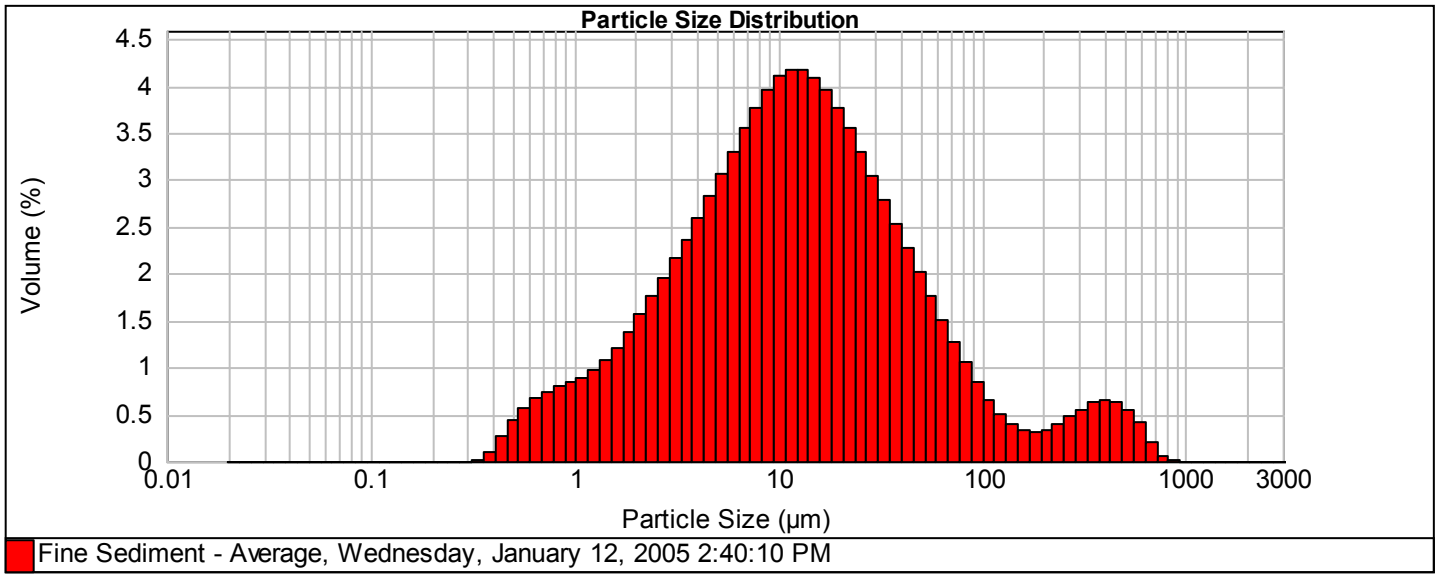
Number of Measurements:
4

Particle Name:	Accessory Name:	Pump Speed:	Analysis model:	Sensitivity:
Default	Hydro 2000S (A)	2000	General purpose	Normal
Particle RI:	**Absorption:**		**Size range:**	**Obscuration:**
1.520	0.1		0.020 to 2000.000 um	14.32 %
Dispersant Name:	**Dispersant RI:**		**Weighted Residual:**	**Result Emulation:**
Water	1.330		1.165 %	Off

Concentration:	Span :	Uniformity:	Result units:
0.0114 %Vol	5.641	2.78	Volume

Specific Surface Area:	Surface Weighted Mean D[3,2]:	Vol. Weighted Mean D[4,3]:
1.22 m²/g	4.921 um	38.661 um

d(0.1): 1.985 um **d(0.5): 12.002 um** **d(0.9): 69.687 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	8.57	16.125	59.31	150.082	94.51	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	9.95	18.386	63.27	171.127	94.83	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	11.51	20.964	67.03	195.123	95.14	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	13.27	23.904	70.58	222.484	95.47	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	15.22	27.256	73.87	253.681	95.86	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	17.38	31.078	76.92	289.253	96.33	2692.173	100.00
0.044	0.00	0.409	0.10	3.807	19.75	35.436	79.70	329.813	96.88	3069.677	100.00
0.050	0.00	0.466	0.36	4.341	22.33	40.405	82.23	376.060	97.50	3500.116	100.00
0.057	0.00	0.532	0.80	4.950	25.15	46.070	84.50	428.793	98.15	3990.912	100.00
0.065	0.00	0.606	1.36	5.644	28.21	52.531	86.51	488.919	98.78	4550.528	100.00
0.074	0.00	0.691	2.03	6.435	31.51	59.897	88.27	557.477	99.33	5188.616	100.00
0.085	0.00	0.788	2.78	7.338	35.05	68.295	89.79	635.647	99.74	5916.178	100.00
0.097	0.00	0.899	3.58	8.367	38.82	77.872	91.06	724.780	99.94	6745.760	100.00
0.110	0.00	1.025	4.42	9.540	42.78	88.791	92.12	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	5.31	10.878	46.88	101.242	92.96	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	6.28	12.403	51.05	115.438	93.62	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	7.35	14.142	55.22	131.625	94.12	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-02-1*
Analyst: KB
Particle Technology Labs *PTL ID: 44314*

SOP Name:
Sea Engineering - Fine Sediment

Result Source:
Averaged

Number of this Measurement:
1

Measured:
Wednesday, January 12, 2005 2:59:16 PM

Analyzed:
Wednesday, January 12, 2005 2:59:17 PM

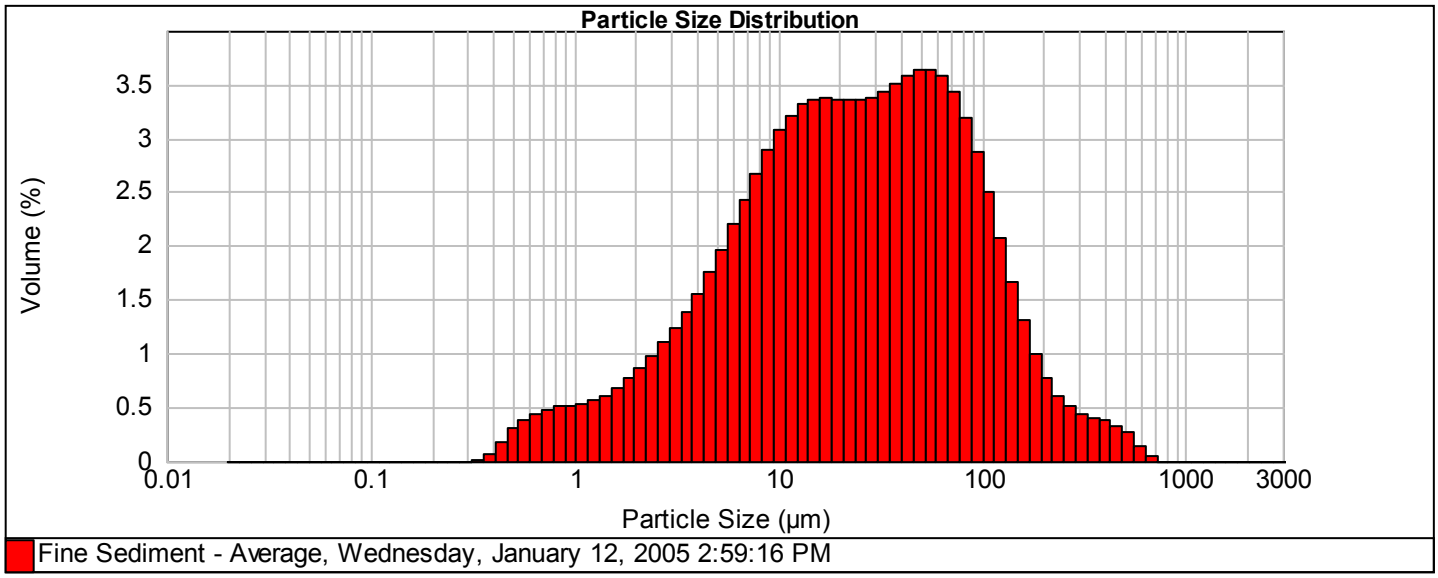
Number of Measurements:
4

Particle Name:	Accessory Name:	Pump Speed:	Analysis model:	Sensitivity:
Default	Hydro 2000S (A)	2000	General purpose	Normal
Particle RI:	**Absorption:**		**Size range:**	**Obscuration:**
1.520	0.1		0.020 to 2000.000 um	14.89 %
Dispersant Name:	**Dispersant RI:**		**Weighted Residual:**	**Result Emulation:**
Water	1.330		0.801 %	Off

Concentration:	Span :	Uniformity:	Result units:
0.0181 %Vol	4.678	1.64	Volume

Specific Surface Area:	Surface Weighted Mean D[3,2]:	Vol. Weighted Mean D[4,3]:
0.81 m²/g	7.411 um	48.891 um

d(0.1): 3.281 um **d(0.5): 23.877 um** **d(0.9): 114.968 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	5.24	16.125	39.95	150.082	93.82	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	6.00	18.386	43.32	171.127	95.12	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	6.86	20.964	46.68	195.123	96.13	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	7.84	23.904	50.03	222.484	96.90	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	8.94	27.256	53.38	253.681	97.50	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	10.17	31.078	56.76	289.253	98.01	2692.173	100.00
0.044	0.00	0.409	0.07	3.807	11.56	35.436	60.20	329.813	98.45	3069.677	100.00
0.050	0.00	0.466	0.24	4.341	13.12	40.405	63.70	376.060	98.86	3500.116	100.00
0.057	0.00	0.532	0.54	4.950	14.87	46.070	67.27	428.793	99.23	3990.912	100.00
0.065	0.00	0.606	0.92	5.644	16.83	52.531	70.90	488.919	99.55	4550.528	100.00
0.074	0.00	0.691	1.36	6.435	19.02	59.897	74.53	557.477	99.82	5188.616	100.00
0.085	0.00	0.788	1.84	7.338	21.45	68.295	78.10	635.647	99.95	5916.178	100.00
0.097	0.00	0.899	2.34	8.367	24.12	77.872	81.52	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	2.86	9.540	27.00	88.791	84.71	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	3.39	10.878	30.07	101.242	87.58	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	3.95	12.403	33.28	115.438	90.07	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	4.56	14.142	36.59	131.625	92.15	1225.081	100.00		

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-02-2*
Analyst: KB
Particle Technology Labs *PTL ID: 44315*

SOP Name:
Sea Engineering - Fine Sediment

Result Source:
Averaged

Number of this Measurement:
1

Measured:
Wednesday, January 12, 2005 3:20:39 PM

Analyzed:
Wednesday, January 12, 2005 3:20:40 PM

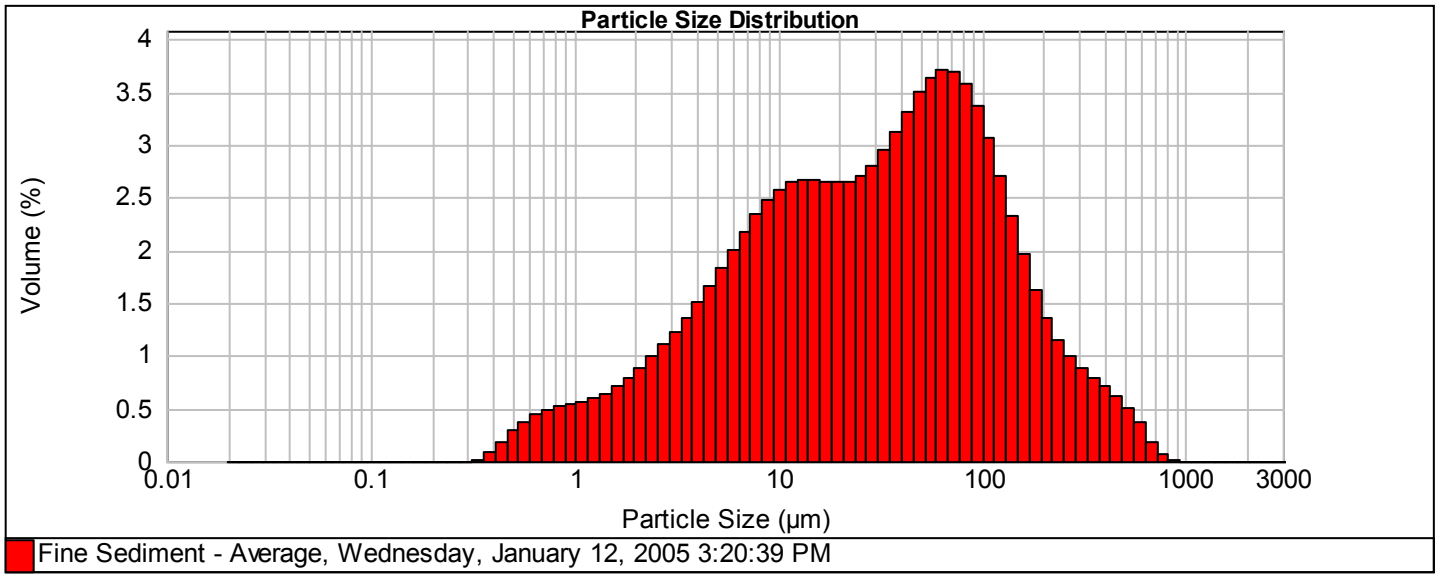
Number of Measurements:
4

Particle Name:	Accessory Name:	Pump Speed:	Analysis model:	Sensitivity:
Default	Hydro 2000S (A)	2000	General purpose	Normal
Particle RI:	**Absorption:**		**Size range:**	**Obscuration:**
1.520	0.1		0.020 to 2000.000 um	14.65 %
Dispersant Name:	**Dispersant RI:**		**Weighted Residual:**	**Result Emulation:**
Water	1.330		0.757 %	Off

Concentration:	Span :	Uniformity:	Result units:
0.0183 %Vol	5.082	1.76	Volume

Specific Surface Area:	Surface Weighted Mean D[3,2]:	Vol. Weighted Mean D[4,3]:
0.792 m²/g	7.579 um	66.199 um

d(0.1): 3.187 um **d(0.5): 31.311 um** **d(0.9): 162.298 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	5.43	16.125	36.38	150.082	88.79	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	6.22	18.386	39.03	171.127	90.75	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	7.12	20.964	41.68	195.123	92.38	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	8.11	23.904	44.33	222.484	93.74	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	9.22	27.256	47.04	253.681	94.88	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	10.45	31.078	49.84	289.253	95.88	2692.173	100.00
0.044	0.00	0.409	0.08	3.807	11.81	35.436	52.78	329.813	96.75	3069.677	100.00
0.050	0.00	0.466	0.26	4.341	13.32	40.405	55.90	376.060	97.54	3500.116	100.00
0.057	0.00	0.532	0.56	4.950	14.99	46.070	59.22	428.793	98.25	3990.912	100.00
0.065	0.00	0.606	0.94	5.644	16.82	52.531	62.72	488.919	98.87	4550.528	100.00
0.074	0.00	0.691	1.39	6.435	18.83	59.897	66.35	557.477	99.37	5188.616	100.00
0.085	0.00	0.788	1.87	7.338	21.00	68.295	70.06	635.647	99.75	5916.178	100.00
0.097	0.00	0.899	2.39	8.367	23.34	77.872	73.76	724.780	99.93	6745.760	100.00
0.110	0.00	1.025	2.93	9.540	25.82	88.791	77.34	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	3.49	10.878	28.39	101.242	80.70	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	4.08	12.403	31.04	115.438	83.77	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	4.72	14.142	33.71	131.625	86.47	1225.081	100.00		

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-02-3*
Analyst: KB
Particle Technology Labs *PTL ID: 44316*

SOP Name: Sea Engineering - Fine Sediment
Result Source: Averaged
Number of this Measurement: 1

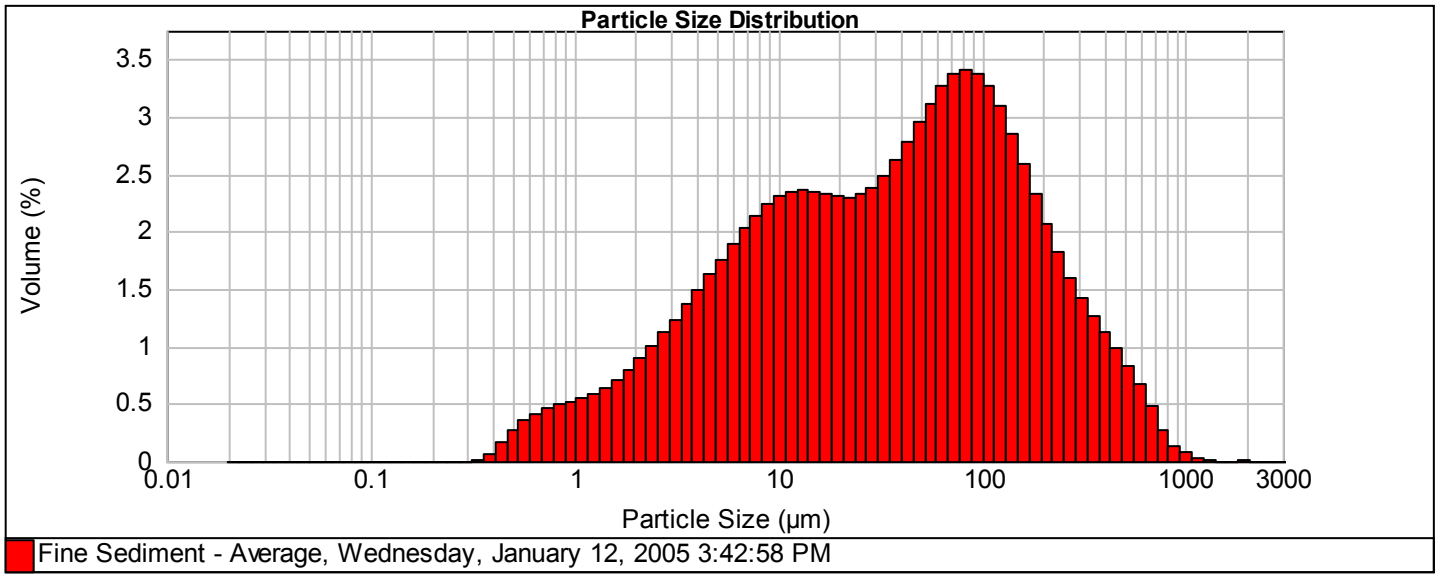
Measured: Wednesday, January 12, 2005 3:42:58 PM
Analyzed: Wednesday, January 12, 2005 3:42:59 PM
Number of Measurements: 4

Particle Name:	Accessory Name:	Pump Speed:	Analysis model:	Sensitivity:
Default	Hydro 2000S (A)	2000	General purpose	Normal
Particle RI:	**Absorption:**		**Size range:**	**Obscuration:**
1.520	0.1		0.020 to 2000.000 um	14.63 %
Dispersant Name:	**Dispersant RI:**		**Weighted Residual:**	**Result Emulation:**
Water	1.330		0.704 %	Off

Concentration:	Span :	Uniformity:	Result units:
0.0191 %Vol	5.944	1.95	Volume

Specific Surface Area:	Surface Weighted Mean D[3,2]:	Vol. Weighted Mean D[4,3]:
0.752 m²/g	7.981 um	88.035 um

d(0.1): 3.247 um **d(0.5): 38.673 um** **d(0.9): 233.116 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	5.21	16.125	34.16	150.082	82.35	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	6.01	18.386	36.48	171.127	84.95	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	6.91	20.964	38.78	195.123	87.27	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	7.92	23.904	41.08	222.484	89.33	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	9.04	27.256	43.40	253.681	91.14	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	10.27	31.078	45.79	289.253	92.74	2692.173	100.00
0.044	0.00	0.409	0.07	3.807	11.63	35.436	48.27	329.813	94.16	3069.677	100.00
0.050	0.00	0.466	0.23	4.341	13.12	40.405	50.89	376.060	95.43	3500.116	100.00
0.057	0.00	0.532	0.51	4.950	14.74	46.070	53.67	428.793	96.55	3990.912	100.00
0.065	0.00	0.606	0.86	5.644	16.50	52.531	56.62	488.919	97.53	4550.528	100.00
0.074	0.00	0.691	1.27	6.435	18.39	59.897	59.74	557.477	98.36	5188.616	100.00
0.085	0.00	0.788	1.73	7.338	20.42	68.295	63.00	635.647	99.03	5916.178	100.00
0.097	0.00	0.899	2.22	8.367	22.56	77.872	66.36	724.780	99.50	6745.760	100.00
0.110	0.00	1.025	2.73	9.540	24.80	88.791	69.77	826.410	99.77	7691.669	100.00
0.126	0.00	1.169	3.28	10.878	27.11	101.242	73.14	942.292	99.90	8770.216	100.00
0.143	0.00	1.333	3.86	12.403	29.45	115.438	76.41	1074.423	99.97	10000.000	100.00
0.163	0.00	1.519	4.49	14.142	31.81	131.625	79.50	1225.081	100.00		

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-02-4*
Analyst: KB
Particle Technology Labs *PTL ID: 44317*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Wednesday, January 12, 2005 4:04:12 PM

Result Source:
Averaged

Analyzed:
Wednesday, January 12, 2005 4:04:13 PM

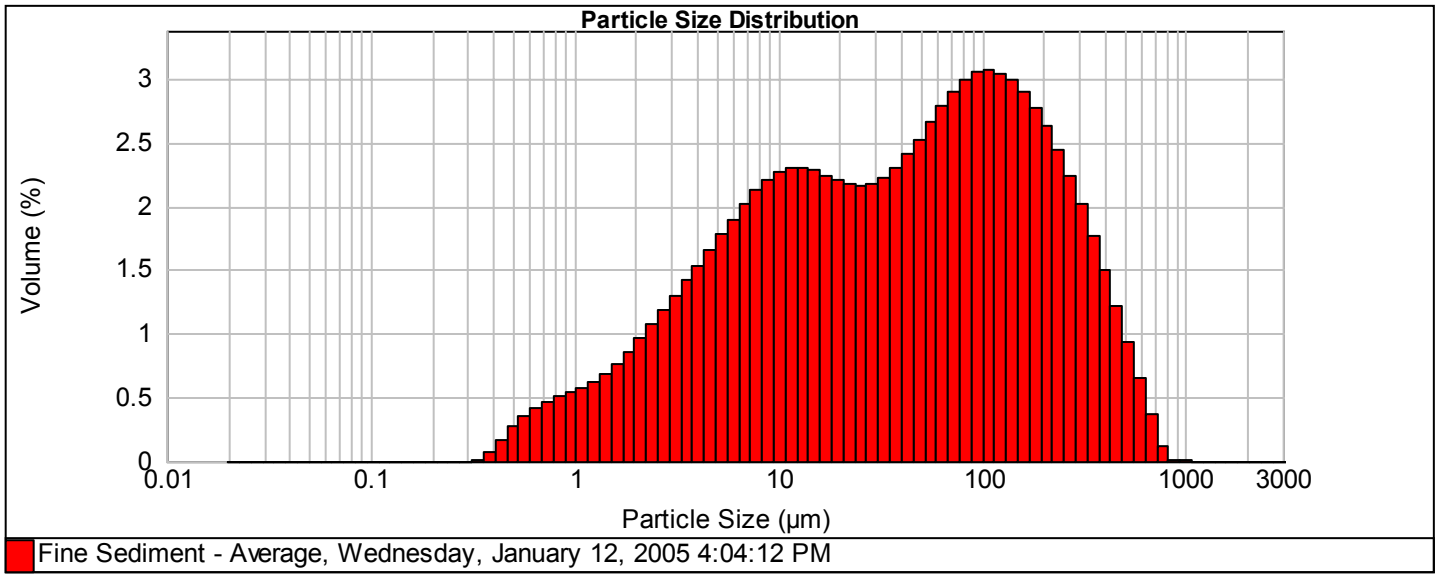
Number of this Measurement:
1

Number of Measurements:
4

Particle Name: Default	**Accessory Name:** Hydro 2000S (A)	**Pump Speed:** 2000	**Analysis model:** General purpose	**Sensitivity:** Normal
Particle RI: 1.520	**Absorption:** 0.1		**Size range:** 0.020 to 2000.000 um	**Obscuration:** 13.98 %
Dispersant Name: Water	**Dispersant RI:** 1.330		**Weighted Residual:** 0.816 %	**Result Emulation:** Off

Concentration: 0.0178 %Vol	**Span :** 6.520	**Uniformity:** 2.02	**Result units:** Volume
Specific Surface Area: 0.766 m²/g	**Surface Weighted Mean D[3,2]:** 7.834 um	**Vol. Weighted Mean D[4,3]:** 93.978 um	

d(0.1): 3.084 um **d(0.5): 40.274 um** **d(0.9): 265.669 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	5.41	16.125	34.57	150.082	78.46	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	6.27	18.386	36.81	171.127	81.35	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	7.24	20.964	39.02	195.123	84.12	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	8.31	23.904	41.19	222.484	86.74	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	9.50	27.256	43.35	253.681	89.19	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	10.80	31.078	45.53	289.253	91.43	2692.173	100.00
0.044	0.00	0.409	0.06	3.807	12.21	35.436	47.76	329.813	93.44	3069.677	100.00
0.050	0.00	0.466	0.23	4.341	13.74	40.405	50.06	376.060	95.20	3500.116	100.00
0.057	0.00	0.532	0.50	4.950	15.39	46.070	52.46	428.793	96.69	3990.912	100.00
0.065	0.00	0.606	0.85	5.644	17.16	52.531	54.98	488.919	97.92	4550.528	100.00
0.074	0.00	0.691	1.28	6.435	19.06	59.897	57.64	557.477	98.85	5188.616	100.00
0.085	0.00	0.788	1.75	7.338	21.08	68.295	60.42	635.647	99.50	5916.178	100.00
0.097	0.00	0.899	2.25	8.367	23.20	77.872	63.32	724.780	99.87	6745.760	100.00
0.110	0.00	1.025	2.79	9.540	25.41	88.791	66.31	826.410	99.99	7691.669	100.00
0.126	0.00	1.169	3.36	10.878	27.68	101.242	69.36	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	3.97	12.403	29.98	115.438	72.43	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	4.65	14.142	32.29	131.625	75.47	1225.081	100.00		

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-02-5*
Analyst: KB
Particle Technology Labs *PTL ID: 44318*

SOP Name:
Sea Engineering - Fine Sediment

Result Source:
Averaged

Number of this Measurement:
1

Measured:
Wednesday, January 12, 2005 4:20:37 PM

Analyzed:
Wednesday, January 12, 2005 4:20:38 PM

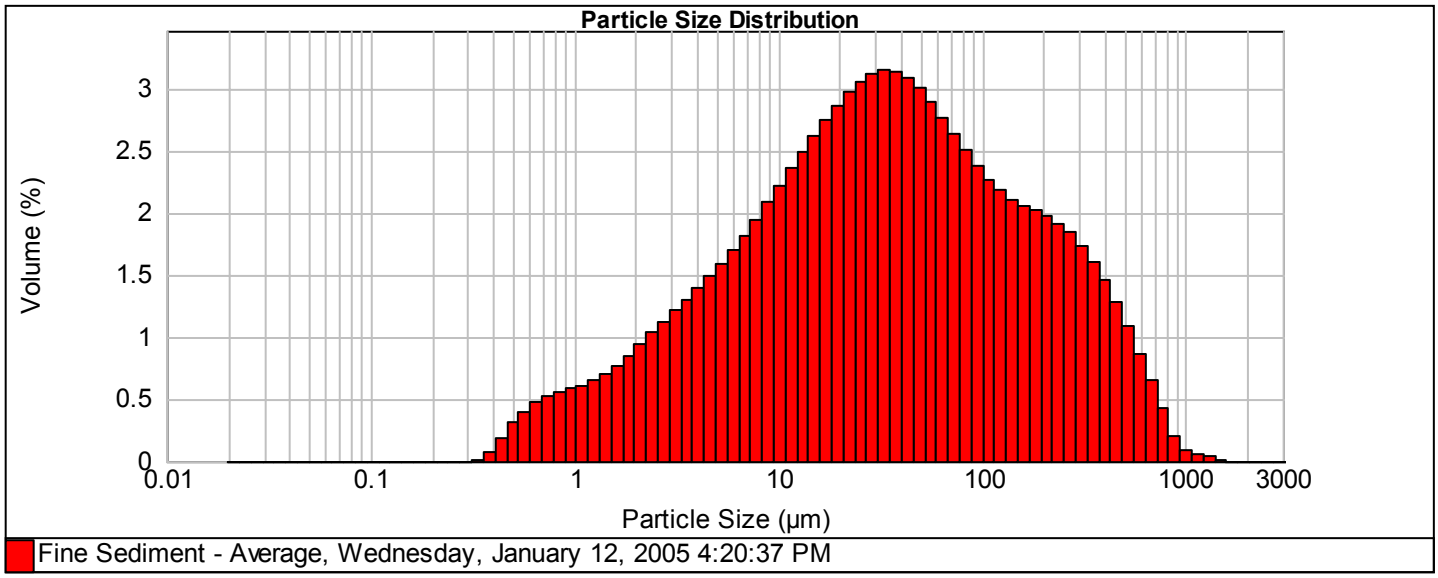
Number of Measurements:
4

Particle Name:	Accessory Name:	Pump Speed:	Analysis model:	Sensitivity:
Default	Hydro 2000S (A)	2000	General purpose	Normal
Particle RI:	**Absorption:**		**Size range:**	**Obscuration:**
1.520	0.1		0.020 to 2000.000 um	14.18 %
Dispersant Name:	**Dispersant RI:**		**Weighted Residual:**	**Result Emulation:**
Water	1.330		0.791 %	Off

Concentration:	Span :	Uniformity:	Result units:
0.0177 %Vol	8.384	2.49	Volume

Specific Surface Area:	Surface Weighted Mean D[3,2]:	Vol. Weighted Mean D[4,3]:
0.796 m²/g	7.535 um	94.013 um

d(0.1): 3.000 um **d(0.5): 32.848 um** **d(0.9): 278.382 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	5.84	16.125	33.95	150.082	80.75	1396.865	99.99
0.023	0.00	0.212	0.00	1.975	6.69	18.386	36.69	171.127	82.80	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	7.63	20.964	39.54	195.123	84.81	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	8.66	23.904	42.51	222.484	86.78	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	9.78	27.256	45.56	253.681	88.69	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	10.99	31.078	48.67	289.253	90.53	2692.173	100.00
0.044	0.00	0.409	0.08	3.807	12.29	35.436	51.82	329.813	92.26	3069.677	100.00
0.050	0.00	0.466	0.27	4.341	13.67	40.405	54.96	376.060	93.87	3500.116	100.00
0.057	0.00	0.532	0.59	4.950	15.15	46.070	58.04	428.793	95.32	3990.912	100.00
0.065	0.00	0.606	0.99	5.644	16.73	52.531	61.05	488.919	96.59	4550.528	100.00
0.074	0.00	0.691	1.46	6.435	18.43	59.897	63.94	557.477	97.67	5188.616	100.00
0.085	0.00	0.788	1.98	7.338	20.25	68.295	66.70	635.647	98.54	5916.178	100.00
0.097	0.00	0.899	2.54	8.367	22.19	77.872	69.33	724.780	99.19	6745.760	100.00
0.110	0.00	1.025	3.12	9.540	24.27	88.791	71.82	826.410	99.61	7691.669	100.00
0.126	0.00	1.169	3.73	10.878	26.49	101.242	74.20	942.292	99.81	8770.216	100.00
0.143	0.00	1.333	4.37	12.403	28.85	115.438	76.46	1074.423	99.90	10000.000	100.00
0.163	0.00	1.519	5.07	14.142	31.33	131.625	78.64	1225.081	99.96		

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-03-1*
Analyst: KB
Particle Technology Labs *PTL ID: 44319*

SOP Name:
Sea Engineering - Fine Sediment

Result Source:
Averaged

Number of this Measurement:
1

Measured:
Wednesday, January 12, 2005 4:39:53 PM

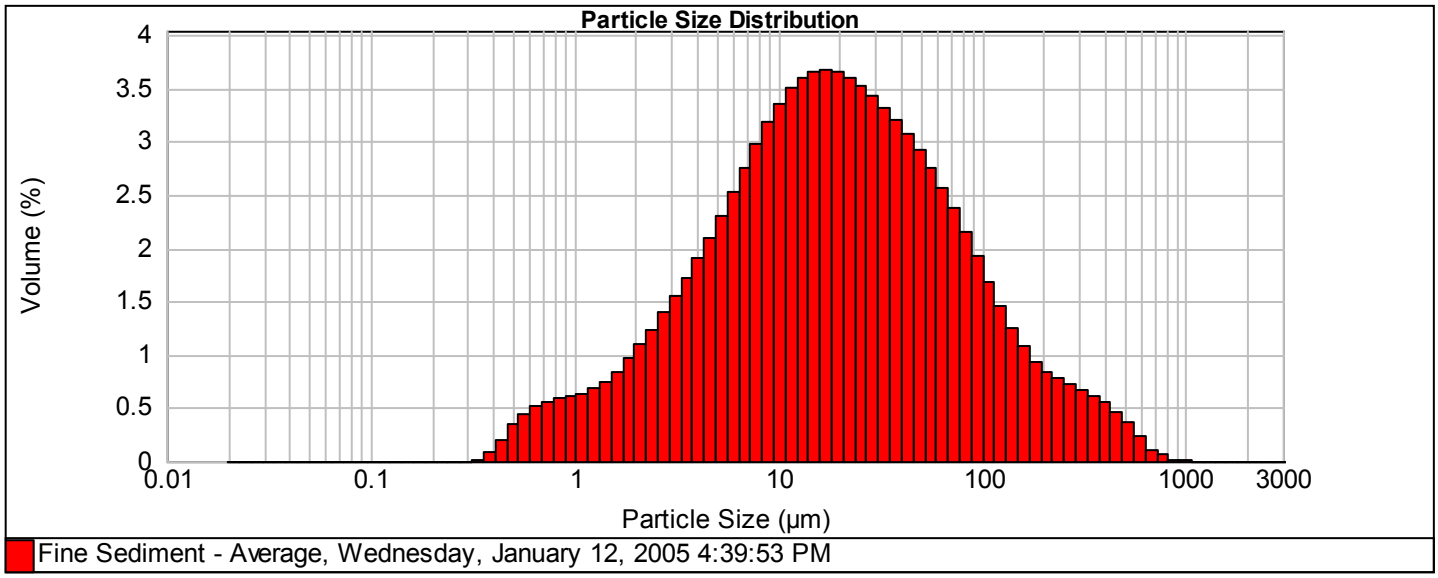
Analyzed:
Wednesday, January 12, 2005 4:39:54 PM

Number of Measurements:
4

Particle Name: Default	**Accessory Name:** Hydro 2000S (A)	**Pump Speed:** 2000	**Analysis model:** General purpose	**Sensitivity:** Normal
Particle RI: 1.520	**Absorption:** 0.1		**Size range:** 0.020 to 2000.000 um	**Obscuration:** 15.22 %
Dispersant Name: Water	**Dispersant RI:** 1.330		**Weighted Residual:** 0.914 %	**Result Emulation:** Off

Concentration: 0.0159 %Vol	**Span :** 6.140	**Uniformity:** 2.19	**Result units:** Volume
Specific Surface Area: 0.938 m²/g	**Surface Weighted Mean D[3,2]:** 6.397 um	**Vol. Weighted Mean D[4,3]:** 48.447 um	

d(0.1): 2.693 um **d(0.5): 18.574 um** **d(0.9): 116.741 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	6.22	16.125	46.04	150.082	92.57	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	7.18	18.386	49.72	171.127	93.65	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	8.28	20.964	53.36	195.123	94.58	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	9.52	23.904	56.95	222.484	95.43	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	10.91	27.256	60.47	253.681	96.20	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	12.46	31.078	63.90	289.253	96.92	2692.173	100.00
0.044	0.00	0.409	0.08	3.807	14.18	35.436	67.21	329.813	97.59	3069.677	100.00
0.050	0.00	0.466	0.28	4.341	16.08	40.405	70.41	376.060	98.21	3500.116	100.00
0.057	0.00	0.532	0.63	4.950	18.18	46.070	73.47	428.793	98.76	3990.912	100.00
0.065	0.00	0.606	1.06	5.644	20.49	52.531	76.39	488.919	99.22	4550.528	100.00
0.074	0.00	0.691	1.57	6.435	23.01	59.897	79.14	557.477	99.58	5188.616	100.00
0.085	0.00	0.788	2.13	7.338	25.76	68.295	81.72	635.647	99.81	5916.178	100.00
0.097	0.00	0.899	2.72	8.367	28.73	77.872	84.09	724.780	99.92	6745.760	100.00
0.110	0.00	1.025	3.33	9.540	31.91	88.791	86.25	826.410	99.98	7691.669	100.00
0.126	0.00	1.169	3.96	10.878	35.27	101.242	88.18	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	4.64	12.403	38.78	115.438	89.87	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	5.38	14.142	42.38	131.625	91.32	1225.081	100.00		

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-03-2*
Analyst: KB
Particle Technology Labs *PTL ID: 44320*

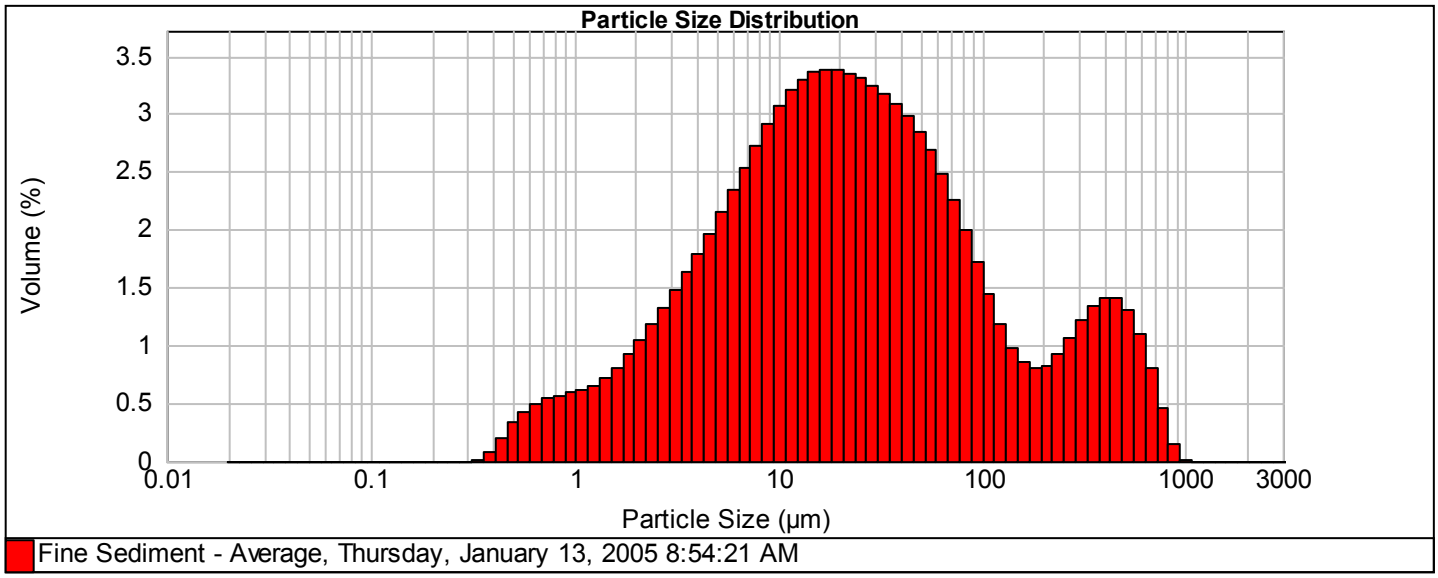
SOP Name: Sea Engineering - Fine Sediment
Result Source: Averaged
Number of this Measurement: 1

Measured: Thursday, January 13, 2005 8:54:21 AM
Analyzed: Thursday, January 13, 2005 8:54:22 AM
Number of Measurements: 4

Particle Name: Default	**Accessory Name:** Hydro 2000S (A)	**Pump Speed:** 2000	**Analysis model:** General purpose	**Sensitivity:** Normal
Particle RI: 1.520	**Absorption:** 0.1		**Size range:** 0.020 to 2000.000 um	**Obscuration:** 14.56 %
Dispersant Name: Water	**Dispersant RI:** 1.330		**Weighted Residual:** 0.900 %	**Result Emulation:** Off

Concentration: 0.0160 %Vol	**Span :** 12.174	**Uniformity:** 3.26	**Result units:** Volume
Specific Surface Area: 0.892 m²/g	**Surface Weighted Mean D[3,2]:** 6.728 um	**Vol. Weighted Mean D[4,3]:** 77.866 um	

d(0.1): 2.798 um **d(0.5): 21.269 um** **d(0.9): 261.723 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	6.01	16.125	42.88	150.082	86.36	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	6.93	18.386	46.26	171.127	87.21	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	7.97	20.964	49.63	195.123	88.01	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	9.15	23.904	52.98	222.484	88.83	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	10.48	27.256	56.29	253.681	89.76	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	11.95	31.078	59.54	289.253	90.83	2692.173	100.00
0.044	0.00	0.409	0.08	3.807	13.57	35.436	62.71	329.813	92.04	3069.677	100.00
0.050	0.00	0.466	0.28	4.341	15.36	40.405	65.80	376.060	93.39	3500.116	100.00
0.057	0.00	0.532	0.61	4.950	17.32	46.070	68.78	428.793	94.80	3990.912	100.00
0.065	0.00	0.606	1.03	5.644	19.47	52.531	71.63	488.919	96.21	4550.528	100.00
0.074	0.00	0.691	1.52	6.435	21.81	59.897	74.31	557.477	97.50	5188.616	100.00
0.085	0.00	0.788	2.06	7.338	24.34	68.295	76.79	635.647	98.59	5916.178	100.00
0.097	0.00	0.899	2.63	8.367	27.06	77.872	79.05	724.780	99.39	6745.760	100.00
0.110	0.00	1.025	3.22	9.540	29.96	88.791	81.04	826.410	99.85	7691.669	100.00
0.126	0.00	1.169	3.83	10.878	33.03	101.242	82.76	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	4.49	12.403	36.23	115.438	84.19	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	5.20	14.142	39.52	131.625	85.38	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-03-3*
Analyst: KB
Particle Technology Labs *PTL ID: 44321*

SOP Name:
Sea Engineering - Fine Sediment

Result Source:
Averaged

Number of this Measurement:
1

Measured:
Thursday, January 13, 2005 9:11:44 AM

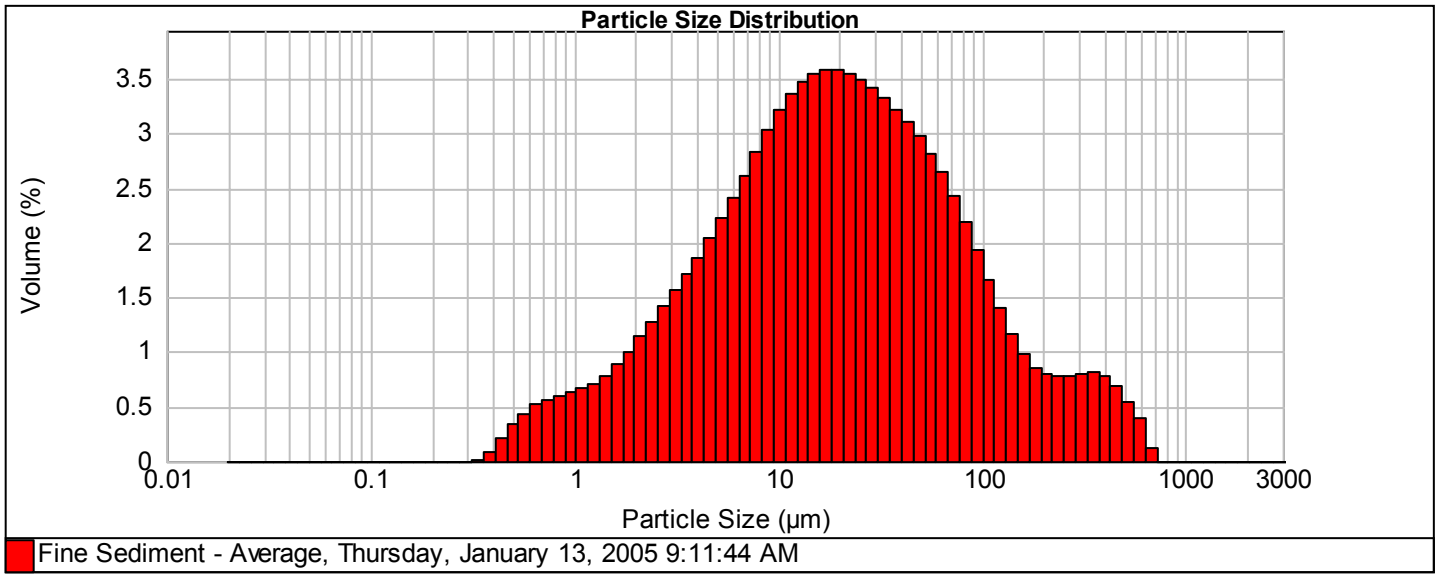
Analyzed:
Thursday, January 13, 2005 9:11:45 AM

Number of Measurements:
4

Particle Name:	Accessory Name:	Pump Speed:	Analysis model:	Sensitivity:
Default	Hydro 2000S (A)	2000	General purpose	Normal
Particle RI:	**Absorption:**		**Size range:**	**Obscuration:**
1.520	0.1		0.020 to 2000.000 um	15.42 %
Dispersant Name:	**Dispersant RI:**		**Weighted Residual:**	**Result Emulation:**
Water	1.330		0.903 %	Off

Concentration:	Span :	Uniformity:	Result units:
0.0161 %Vol	6.354	2.31	Volume
Specific Surface Area:	**Surface Weighted Mean D[3,2]:**	**Vol. Weighted Mean D[4,3]:**	
0.944 m²/g	6.357 um	52.412 um	

d(0.1): 2.605 um **d(0.5): 19.256 um** **d(0.9): 124.948 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	6.43	16.125	45.15	150.082	91.69	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	7.44	18.386	48.74	171.127	92.67	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	8.58	20.964	52.32	195.123	93.52	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	9.85	23.904	55.87	222.484	94.31	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	11.27	27.256	59.36	253.681	95.09	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	12.83	31.078	62.78	289.253	95.88	2692.173	100.00
0.044	0.00	0.409	0.08	3.807	14.54	35.436	66.11	329.813	96.68	3069.677	100.00
0.050	0.00	0.466	0.29	4.341	16.41	40.405	69.34	376.060	97.49	3500.116	100.00
0.057	0.00	0.532	0.63	4.950	18.45	46.070	72.45	428.793	98.26	3990.912	100.00
0.065	0.00	0.606	1.07	5.644	20.67	52.531	75.42	488.919	98.95	4550.528	100.00
0.074	0.00	0.691	1.58	6.435	23.08	59.897	78.24	557.477	99.49	5188.616	100.00
0.085	0.00	0.788	2.15	7.338	25.70	68.295	80.88	635.647	99.89	5916.178	100.00
0.097	0.00	0.899	2.75	8.367	28.53	77.872	83.32	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	3.38	9.540	31.55	88.791	85.52	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	4.05	10.878	34.76	101.242	87.46	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	4.76	12.403	38.13	115.438	89.12	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	5.54	14.142	41.60	131.625	90.53	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-03-4*
Analyst: KB
Particle Technology Labs *PTL ID: 44322*

SOP Name:
Sea Engineering - Fine Sediment

Result Source:
Averaged

Number of this Measurement:
1

Measured:
Thursday, January 13, 2005 9:25:02 AM

Analyzed:
Thursday, January 13, 2005 9:25:03 AM

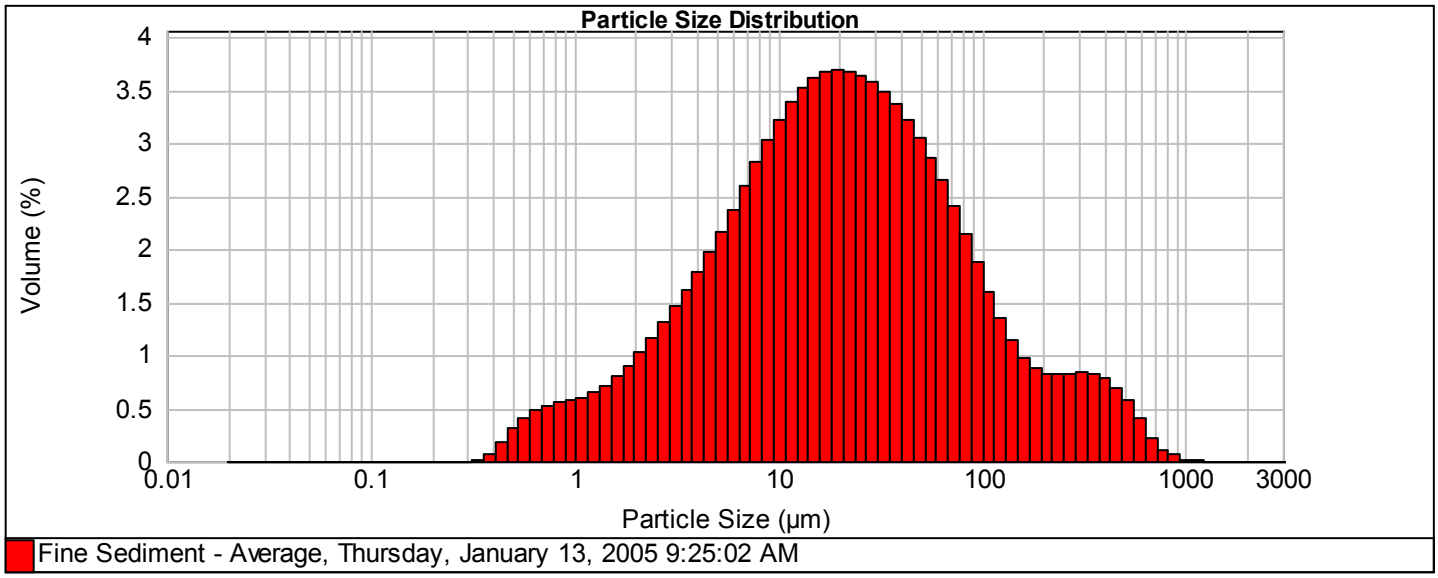
Number of Measurements:
4

Particle Name:	Accessory Name:	Pump Speed:	Analysis model:	Sensitivity:
Default	Hydro 2000S (A)	2000	General purpose	Normal
Particle RI:	**Absorption:**		**Size range:**	**Obscuration:**
1.520	0.1		0.020 to 2000.000 um	14.16 %
Dispersant Name:	**Dispersant RI:**		**Weighted Residual:**	**Result Emulation:**
Water	1.330		0.867 %	Off

Concentration:	Span :	Uniformity:	Result units:
0.0155 %Vol	6.373	2.34	Volume

Specific Surface Area:	Surface Weighted Mean D[3,2]:	Vol. Weighted Mean D[4,3]:
0.888 m²/g	6.754 um	55.422 um

d(0.1): 2.857 um **d(0.5): 20.112 um** **d(0.9): 131.038 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	5.85	16.125	43.81	150.082	91.18	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	6.76	18.386	47.48	171.127	92.15	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	7.79	20.964	51.17	195.123	93.02	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	8.95	23.904	54.84	222.484	93.85	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	10.26	27.256	58.48	253.681	94.66	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	11.71	31.078	62.05	289.253	95.49	2692.173	100.00
0.044	0.00	0.409	0.07	3.807	13.32	35.436	65.52	329.813	96.32	3069.677	100.00
0.050	0.00	0.466	0.25	4.341	15.10	40.405	68.89	376.060	97.15	3500.116	100.00
0.057	0.00	0.532	0.57	4.950	17.07	46.070	72.11	428.793	97.93	3990.912	100.00
0.065	0.00	0.606	0.97	5.644	19.23	52.531	75.16	488.919	98.62	4550.528	100.00
0.074	0.00	0.691	1.44	6.435	21.60	59.897	78.02	557.477	99.19	5188.616	100.00
0.085	0.00	0.788	1.97	7.338	24.19	68.295	80.67	635.647	99.59	5916.178	100.00
0.097	0.00	0.899	2.52	8.367	27.01	77.872	83.07	724.780	99.81	6745.760	100.00
0.110	0.00	1.025	3.10	9.540	30.04	88.791	85.22	826.410	99.92	7691.669	100.00
0.126	0.00	1.169	3.71	10.878	33.27	101.242	87.09	942.292	99.98	8770.216	100.00
0.143	0.00	1.333	4.35	12.403	36.66	115.438	88.69	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	5.06	14.142	40.19	131.625	90.04	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-03-5*
Analyst: KB
Particle Technology Labs *PTL ID: 44323*

SOP Name:
Sea Engineering - Fine Sediment

Result Source:
Averaged

Number of this Measurement:
1

Measured:
Thursday, January 13, 2005 9:44:43 AM

Analyzed:
Thursday, January 13, 2005 9:44:44 AM

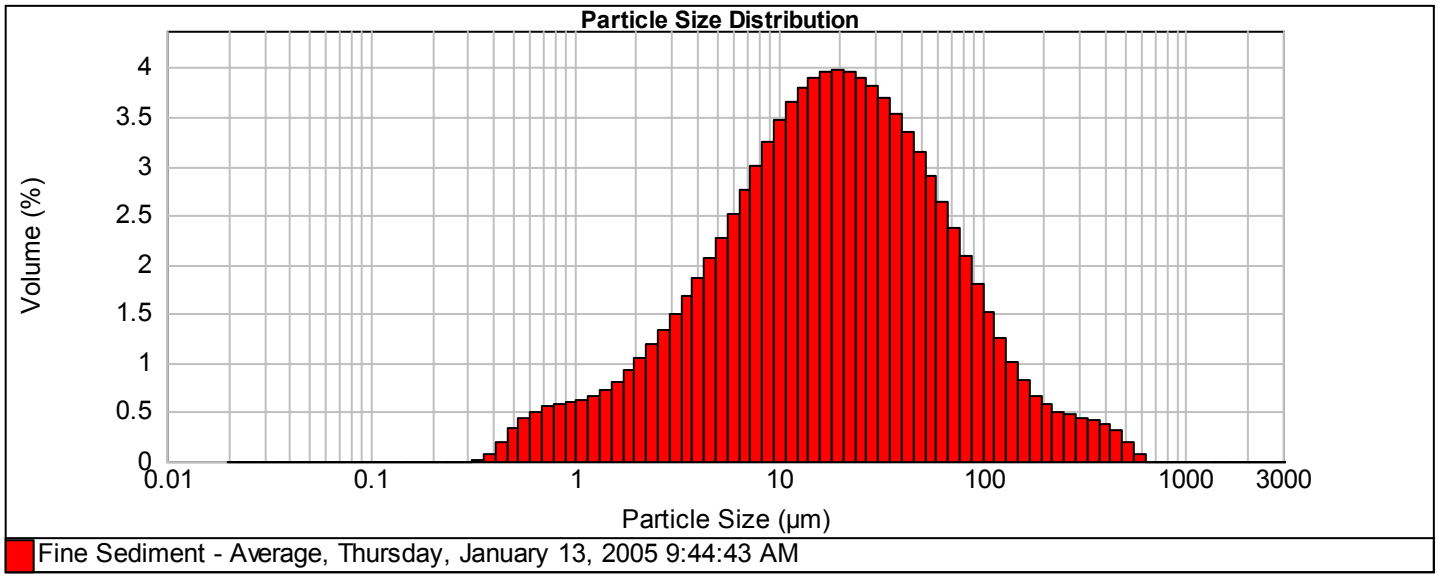
Number of Measurements:
4

Particle Name:	Accessory Name:	Pump Speed:	Analysis model:	Sensitivity:
Default	Hydro 2000S (A)	2000	General purpose	Normal
Particle RI:	**Absorption:**		**Size range:**	**Obscuration:**
1.520	0.1		0.020 to 2000.000 um	14.88 %
Dispersant Name:	**Dispersant RI:**		**Weighted Residual:**	**Result Emulation:**
Water	1.330		0.922 %	Off

Concentration:	Span :	Uniformity:	Result units:
0.0157 %Vol	4.857	1.75	Volume

Specific Surface Area:	Surface Weighted Mean D[3,2]:	Vol. Weighted Mean D[4,3]:
0.93 m²/g	6.451 um	39.701 um

d(0.1): 2.769 um **d(0.5): 18.234 um** **d(0.9): 91.324 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	6.09	16.125	46.29	150.082	95.17	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	7.01	18.386	50.25	171.127	95.99	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	8.06	20.964	54.23	195.123	96.66	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	9.25	23.904	58.19	222.484	97.23	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	10.59	27.256	62.08	253.681	97.74	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	12.09	31.078	65.89	289.253	98.21	2692.173	100.00
0.044	0.00	0.409	0.07	3.807	13.77	35.436	69.58	329.813	98.65	3069.677	100.00
0.050	0.00	0.466	0.27	4.341	15.62	40.405	73.11	376.060	99.07	3500.116	100.00
0.057	0.00	0.532	0.61	4.950	17.68	46.070	76.45	428.793	99.43	3990.912	100.00
0.065	0.00	0.606	1.03	5.644	19.96	52.531	79.59	488.919	99.74	4550.528	100.00
0.074	0.00	0.691	1.54	6.435	22.47	59.897	82.49	557.477	99.94	5188.616	100.00
0.085	0.00	0.788	2.09	7.338	25.23	68.295	85.13	635.647	100.00	5916.178	100.00
0.097	0.00	0.899	2.67	8.367	28.23	77.872	87.50	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	3.27	9.540	31.48	88.791	89.59	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	3.89	10.878	34.94	101.242	91.39	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	4.55	12.403	38.59	115.438	92.91	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	5.28	14.142	42.39	131.625	94.16	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-04-1*
Analyst: KB
Particle Technology Labs *PTL ID: 44324*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Thursday, January 13, 2005 10:03:52 AM

Result Source:
Averaged

Analyzed:
Thursday, January 13, 2005 10:03:53 AM

Number of this Measurement:
1

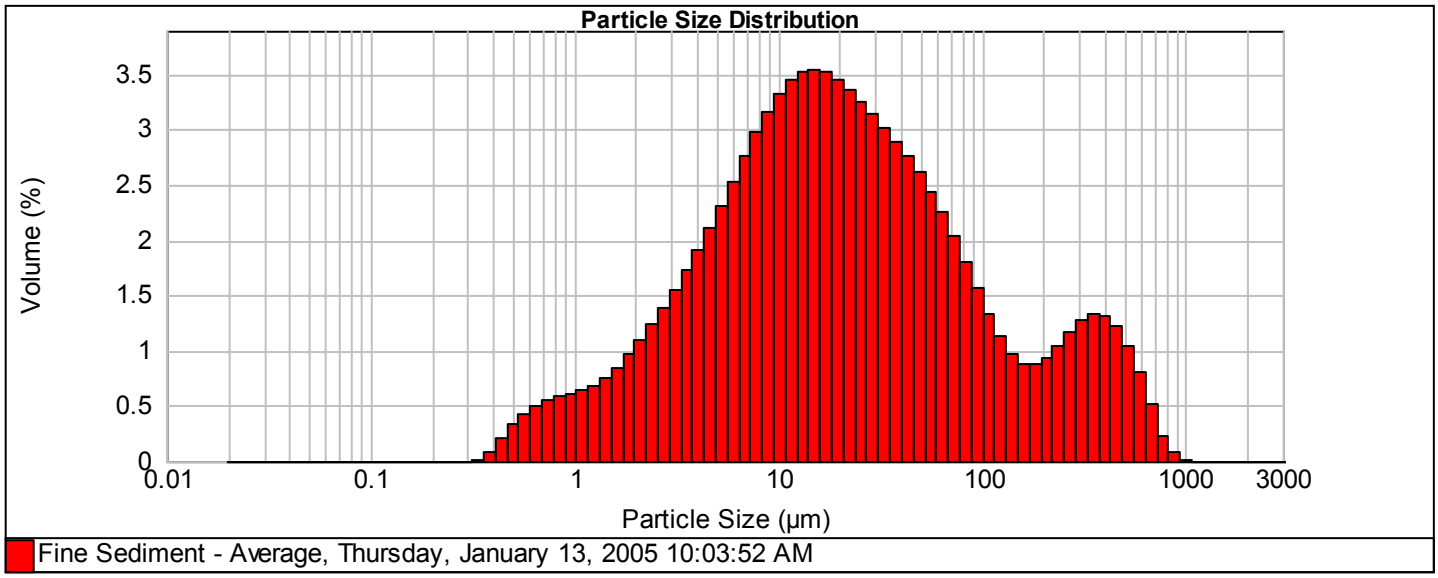
Number of Measurements:
4

Particle Name:	Accessory Name:	Pump Speed:	Analysis model:	Sensitivity:
Default	Hydro 2000S (A)	2000	General purpose	Normal
Particle RI:	**Absorption:**		**Size range:**	**Obscuration:**
1.520	0.1		0.020 to 2000.000 um	15.32 %
Dispersant Name:	**Dispersant RI:**		**Weighted Residual:**	**Result Emulation:**
Water	1.330		0.923 %	Off

Concentration:	Span :	Uniformity:	Result units:
0.0162 %Vol	11.664	3.25	Volume

Specific Surface Area:	Surface Weighted Mean D[3,2]:	Vol. Weighted Mean D[4,3]:
0.929 m²/g	6.455 um	69.306 um

d(0.1): 2.693 um **d(0.5): 18.904 um** **d(0.9): 223.199 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	6.23	16.125	45.75	150.082	87.29	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	7.19	18.386	49.26	171.127	88.17	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	8.28	20.964	52.71	195.123	89.04	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	9.52	23.904	56.08	222.484	89.98	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	10.91	27.256	59.33	253.681	91.02	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	12.46	31.078	62.48	289.253	92.18	2692.173	100.00
0.044	0.00	0.409	0.08	3.807	14.18	35.436	65.50	329.813	93.45	3069.677	100.00
0.050	0.00	0.466	0.28	4.341	16.08	40.405	68.39	376.060	94.78	3500.116	100.00
0.057	0.00	0.532	0.62	4.950	18.19	46.070	71.15	428.793	96.10	3990.912	100.00
0.065	0.00	0.606	1.05	5.644	20.50	52.531	73.76	488.919	97.32	4550.528	100.00
0.074	0.00	0.691	1.55	6.435	23.03	59.897	76.20	557.477	98.37	5188.616	100.00
0.085	0.00	0.788	2.11	7.338	25.78	68.295	78.45	635.647	99.18	5916.178	100.00
0.097	0.00	0.899	2.70	8.367	28.75	77.872	80.49	724.780	99.70	6745.760	100.00
0.110	0.00	1.025	3.31	9.540	31.92	88.791	82.30	826.410	99.93	7691.669	100.00
0.126	0.00	1.169	3.95	10.878	35.25	101.242	83.86	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	4.63	12.403	38.70	115.438	85.20	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	5.38	14.142	42.21	131.625	86.32	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-04-2*
Analyst: KB
Particle Technology Labs *PTL ID: 44325*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Thursday, January 13, 2005 10:17:07 AM

Result Source:
Averaged

Analyzed:
Thursday, January 13, 2005 10:17:08 AM

Number of this Measurement:
1

Number of Measurements:
4

Particle Name:
Default

Accessory Name:
Hydro 2000S (A)

Pump Speed:
2000

Analysis model:
General purpose

Sensitivity:
Normal

Particle RI:
1.520

Absorption:
0.1

Size range:
0.020 to 2000.000 um

Obscuration:
14.57 %

Dispersant Name:
Water

Dispersant RI:
1.330

Weighted Residual:
0.842 %

Result Emulation:
Off

Concentration:
0.0160 %Vol

Span :
18.561

Uniformity:
4.79

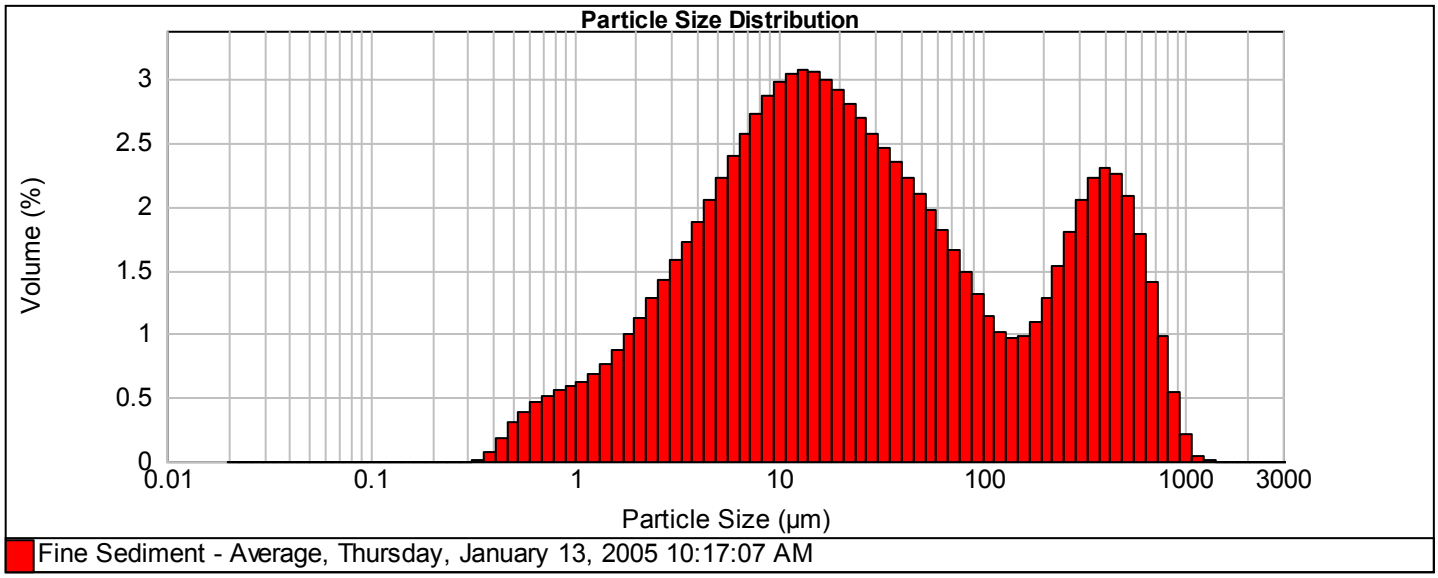
Result units:
Volume

Specific Surface Area:
0.882 m²/g

Surface Weighted Mean D[3,2]:
6.799 um

Vol. Weighted Mean D[4,3]:
114.326 um

d(0.1): 2.721 um **d(0.5): 22.102 um** **d(0.9): 412.962 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	6.00	16.125	42.95	150.082	77.40	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	6.99	18.386	45.94	171.127	78.39	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	8.12	20.964	48.86	195.123	79.48	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	9.39	23.904	51.66	222.484	80.76	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	10.81	27.256	54.36	253.681	82.29	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	12.39	31.078	56.93	289.253	84.08	2692.173	100.00
0.044	0.00	0.409	0.08	3.807	14.11	35.436	59.39	329.813	86.13	3069.677	100.00
0.050	0.00	0.466	0.26	4.341	16.00	40.405	61.73	376.060	88.36	3500.116	100.00
0.057	0.00	0.532	0.56	4.950	18.05	46.070	63.96	428.793	90.66	3990.912	100.00
0.065	0.00	0.606	0.95	5.644	20.27	52.531	66.06	488.919	92.92	4550.528	100.00
0.074	0.00	0.691	1.41	6.435	22.66	59.897	68.02	557.477	95.01	5188.616	100.00
0.085	0.00	0.788	1.92	7.338	25.22	68.295	69.84	635.647	96.79	5916.178	100.00
0.097	0.00	0.899	2.47	8.367	27.94	77.872	71.49	724.780	98.21	6745.760	100.00
0.110	0.00	1.025	3.06	9.540	30.80	88.791	72.97	826.410	99.19	7691.669	100.00
0.126	0.00	1.169	3.68	10.878	33.78	101.242	74.28	942.292	99.73	8770.216	100.00
0.143	0.00	1.333	4.37	12.403	36.82	115.438	75.42	1074.423	99.95	10000.000	100.00
0.163	0.00	1.519	5.13	14.142	39.89	131.625	76.44	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-04-3*
Analyst: KB
Particle Technology Labs *PTL ID: 44326*

SOP Name:
Sea Engineering - Fine Sediment

Result Source:
Averaged

Number of this Measurement:
1

Measured:
Thursday, January 13, 2005 10:31:17 AM

Analyzed:
Thursday, January 13, 2005 10:31:18 AM

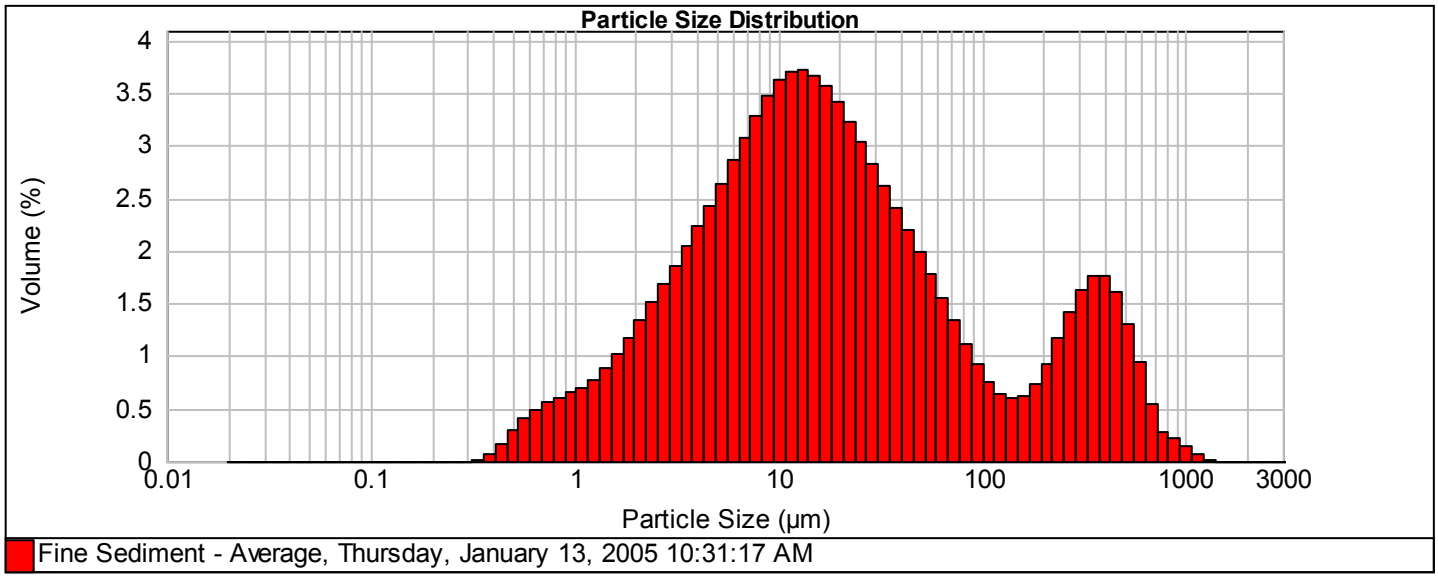
Number of Measurements:
4

Particle Name:	Accessory Name:	Pump Speed:	Analysis model:	Sensitivity:
Default	Hydro 2000S (A)	2000	General purpose	Normal
Particle RI:	**Absorption:**		**Size range:**	**Obscuration:**
1.520	0.1		0.020 to 2000.000 um	16.47 %
Dispersant Name:	**Dispersant RI:**		**Weighted Residual:**	**Result Emulation:**
Water	1.330		1.064 %	Off

Concentration:	Span :	Uniformity:	Result units:
0.0160 %Vol	18.774	4.5	Volume

Specific Surface Area:	Surface Weighted Mean D[3,2]:	Vol. Weighted Mean D[4,3]:
0.994 m²/g	6.035 um	76.857 um

d(0.1): 2.441 um **d(0.5): 15.589 um** **d(0.9): 295.105 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	6.59	16.125	50.94	150.082	84.91	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	7.76	18.386	54.50	171.127	85.53	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	9.10	20.964	57.92	195.123	86.26	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	10.61	23.904	61.14	222.484	87.18	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	12.29	27.256	64.17	253.681	88.34	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	14.16	31.078	67.00	289.253	89.76	2692.173	100.00
0.044	0.00	0.409	0.06	3.807	16.20	35.436	69.61	329.813	91.40	3069.677	100.00
0.050	0.00	0.466	0.23	4.341	18.44	40.405	72.02	376.060	93.15	3500.116	100.00
0.057	0.00	0.532	0.53	4.950	20.87	46.070	74.22	428.793	94.91	3990.912	100.00
0.065	0.00	0.606	0.93	5.644	23.51	52.531	76.21	488.919	96.51	4550.528	100.00
0.074	0.00	0.691	1.42	6.435	26.37	59.897	77.98	557.477	97.82	5188.616	100.00
0.085	0.00	0.788	1.97	7.338	29.45	68.295	79.54	635.647	98.75	5916.178	100.00
0.097	0.00	0.899	2.58	8.367	32.75	77.872	80.87	724.780	99.29	6745.760	100.00
0.110	0.00	1.025	3.23	9.540	36.22	88.791	81.99	826.410	99.57	7691.669	100.00
0.126	0.00	1.169	3.93	10.878	39.84	101.242	82.92	942.292	99.79	8770.216	100.00
0.143	0.00	1.333	4.70	12.403	43.55	115.438	83.68	1074.423	99.93	10000.000	100.00
0.163	0.00	1.519	5.58	14.142	47.27	131.625	84.32	1225.081	99.99		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-04-4*
Analyst: KB
Particle Technology Labs *PTL ID: 44327*

SOP Name:
Sea Engineering - Fine Sediment

Result Source:
Averaged

Number of this Measurement:
1

Measured:
Thursday, January 13, 2005 10:44:19 AM

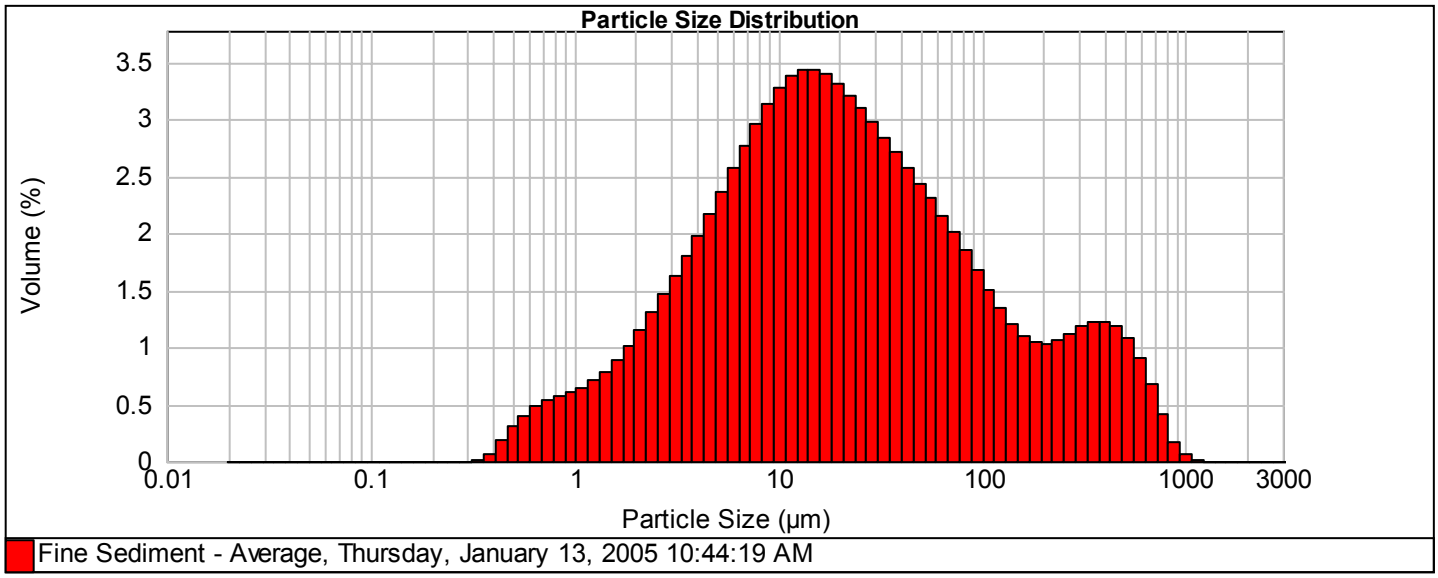
Analyzed:
Thursday, January 13, 2005 10:44:20 AM

Number of Measurements:
4

Particle Name:	Accessory Name:	Pump Speed:	Analysis model:	Sensitivity:
Default	Hydro 2000S (A)	2000	General purpose	Normal
Particle RI:	**Absorption:**		**Size range:**	**Obscuration:**
1.520	0.1		0.020 to 2000.000 um	14.76 %
Dispersant Name:	**Dispersant RI:**		**Weighted Residual:**	**Result Emulation:**
Water	1.330		0.827 %	Off

Concentration:	Span :	Uniformity:	Result units:
0.0155 %Vol	12.079	3.51	Volume
Specific Surface Area:	**Surface Weighted Mean D[3,2]:**	**Vol. Weighted Mean D[4,3]:**	
0.925 m²/g	6.487 um	73.714 um	

d(0.1): 2.654 um **d(0.5): 18.825 um** **d(0.9): 230.030 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	6.17	16.125	46.01	150.082	86.55	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	7.18	18.386	49.40	171.127	87.65	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	8.34	20.964	52.71	195.123	88.70	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	9.65	23.904	55.92	222.484	89.73	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	11.12	27.256	59.01	253.681	90.80	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	12.75	31.078	61.98	289.253	91.91	2692.173	100.00
0.044	0.00	0.409	0.07	3.807	14.55	35.436	64.82	329.813	93.09	3069.677	100.00
0.050	0.00	0.466	0.24	4.341	16.52	40.405	67.52	376.060	94.31	3500.116	100.00
0.057	0.00	0.532	0.56	4.950	18.69	46.070	70.10	428.793	95.54	3990.912	100.00
0.065	0.00	0.606	0.96	5.644	21.06	52.531	72.54	488.919	96.72	4550.528	100.00
0.074	0.00	0.691	1.43	6.435	23.63	59.897	74.84	557.477	97.79	5188.616	100.00
0.085	0.00	0.788	1.97	7.338	26.40	68.295	76.99	635.647	98.68	5916.178	100.00
0.097	0.00	0.899	2.54	8.367	29.36	77.872	78.99	724.780	99.35	6745.760	100.00
0.110	0.00	1.025	3.15	9.540	32.50	88.791	80.83	826.410	99.77	7691.669	100.00
0.126	0.00	1.169	3.79	10.878	35.78	101.242	82.51	942.292	99.94	8770.216	100.00
0.143	0.00	1.333	4.49	12.403	39.16	115.438	84.01	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	5.28	14.142	42.58	131.625	85.35	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-04-5*
Analyst: KB
Particle Technology Labs *PTL ID: 44328*

SOP Name:
Sea Engineering - Fine Sediment

Result Source:
Averaged

Number of this Measurement:
1

Measured:
Thursday, January 13, 2005 10:59:04 AM

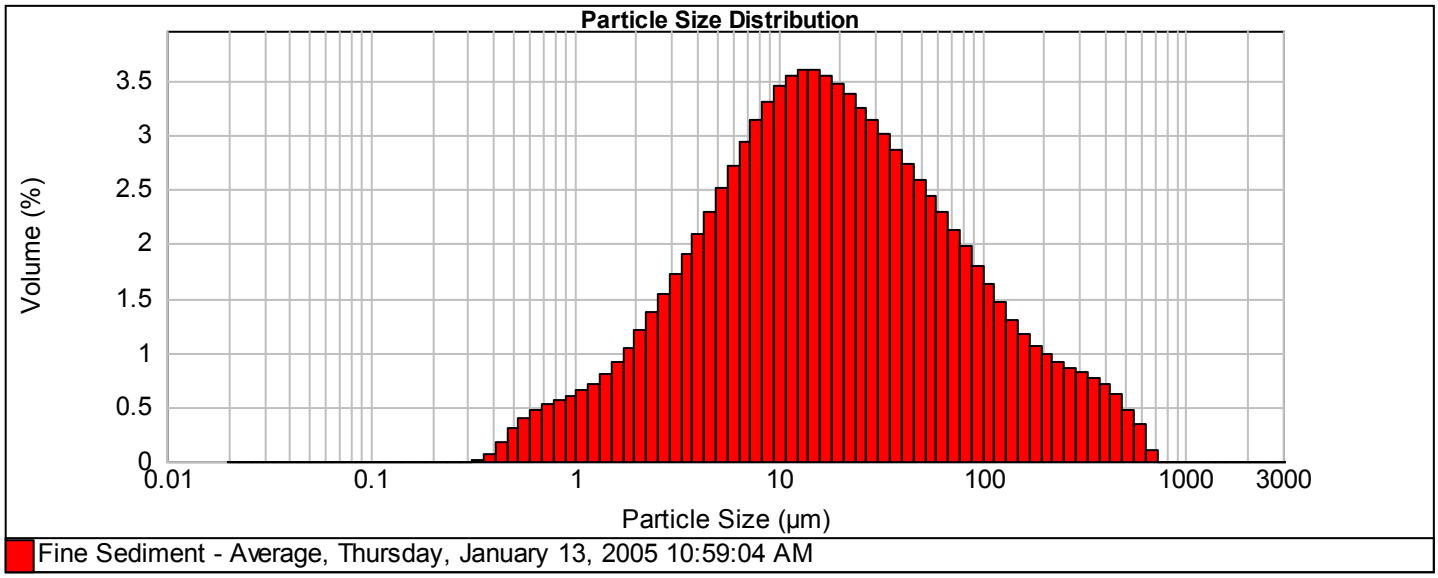
Analyzed:
Thursday, January 13, 2005 10:59:05 AM

Number of Measurements:
4

Particle Name:	Accessory Name:	Pump Speed:	Analysis model:	Sensitivity:
Default	Hydro 2000S (A)	2000	General purpose	Normal
Particle RI:	**Absorption:**		**Size range:**	**Obscuration:**
1.520	0.1		0.020 to 2000.000 um	14.37 %
Dispersant Name:	**Dispersant RI:**		**Weighted Residual:**	**Result Emulation:**
Water	1.330		0.807 %	Off

Concentration:	Span :	Uniformity:	Result units:
0.0145 %Vol	7.558	2.55	Volume
Specific Surface Area:	**Surface Weighted Mean D[3,2]:**	**Vol. Weighted Mean D[4,3]:**	
0.951 m²/g	6.307 um	51.168 um	

d(0.1): 2.611 um **d(0.5): 17.245 um** **d(0.9): 132.947 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	6.20	16.125	48.17	150.082	91.20	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	7.25	18.386	51.73	171.127	92.37	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	8.45	20.964	55.20	195.123	93.44	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	9.82	23.904	58.57	222.484	94.42	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	11.35	27.256	61.83	253.681	95.33	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	13.07	31.078	64.96	289.253	96.19	2692.173	100.00
0.044	0.00	0.409	0.07	3.807	14.97	35.436	67.97	329.813	97.01	3069.677	100.00
0.050	0.00	0.466	0.25	4.341	17.07	40.405	70.83	376.060	97.78	3500.116	100.00
0.057	0.00	0.532	0.55	4.950	19.37	46.070	73.57	428.793	98.48	3990.912	100.00
0.065	0.00	0.606	0.95	5.644	21.88	52.531	76.16	488.919	99.09	4550.528	100.00
0.074	0.00	0.691	1.42	6.435	24.60	59.897	78.60	557.477	99.56	5188.616	100.00
0.085	0.00	0.788	1.95	7.338	27.53	68.295	80.89	635.647	99.90	5916.178	100.00
0.097	0.00	0.899	2.52	8.367	30.66	77.872	83.03	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	3.13	9.540	33.97	88.791	85.00	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	3.78	10.878	37.43	101.242	86.80	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	4.49	12.403	40.98	115.438	88.43	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	5.29	14.142	44.58	131.625	89.90	1225.081	100.00		

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-05-1*
Analyst: KB
Particle Technology Labs *PTL ID: 44329*

SOP Name:
Sea Engineering - Fine Sediment

Result Source:
Averaged

Number of this Measurement:
1

Measured:
Wednesday, January 19, 2005 3:54:53 PM

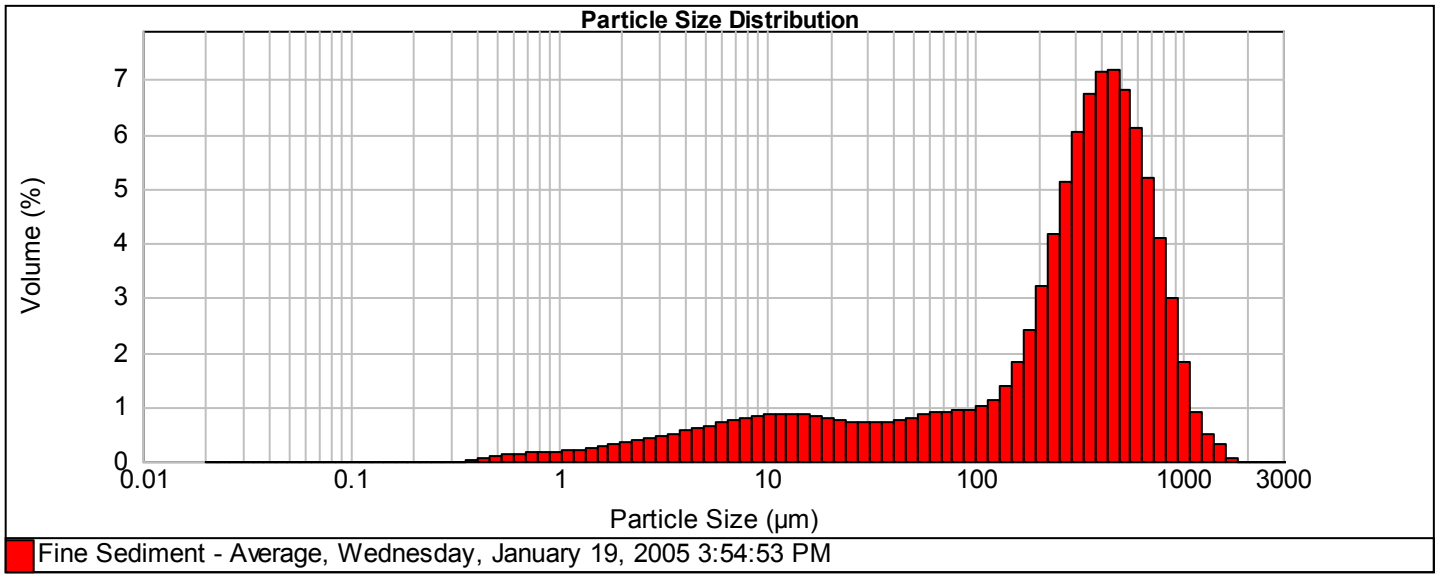
Analyzed:
Wednesday, January 19, 2005 3:54:55 PM

Number of Measurements:
4

Particle Name: Default	**Accessory Name:** Hydro 2000S (A)	**Pump Speed:** 2000	**Analysis model:** General purpose	**Sensitivity:** Normal
Particle RI: 1.520	**Absorption:** 0.1		**Size range:** 0.020 to 2000.000 um	**Obscuration:** 14.71 %
Dispersant Name: Water	**Dispersant RI:** 1.330		**Weighted Residual:** 1.224 %	**Result Emulation:** Off

Concentration: 0.0518 %Vol	**Span :** 2.214	**Uniformity:** 0.685	**Result units:** Volume
Specific Surface Area: 0.276 m²/g	**Surface Weighted Mean D[3,2]:** 21.708 um	**Vol. Weighted Mean D[4,3]:** 358.269 um	

d(0.1): 10.824 um **d(0.5): 328.752 um** **d(0.9): 738.704 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	1.83	16.125	12.63	150.082	27.42	1396.865	99.64
0.023	0.00	0.212	0.00	1.975	2.13	18.386	13.46	171.127	29.22	1592.737	99.94
0.026	0.00	0.242	0.00	2.252	2.48	20.964	14.24	195.123	31.63	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	2.86	23.904	14.98	222.484	34.84	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	3.29	27.256	15.70	253.681	38.99	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	3.76	31.078	16.40	289.253	44.12	2692.173	100.00
0.044	0.00	0.409	0.00	3.807	4.27	35.436	17.10	329.813	50.16	3069.677	100.00
0.050	0.00	0.466	0.06	4.341	4.83	40.405	17.82	376.060	56.90	3500.116	100.00
0.057	0.00	0.532	0.15	4.950	5.43	46.070	18.58	428.793	64.05	3990.912	100.00
0.065	0.00	0.606	0.28	5.644	6.08	52.531	19.38	488.919	71.23	4550.528	100.00
0.074	0.00	0.691	0.43	6.435	6.78	59.897	20.23	557.477	78.04	5188.616	100.00
0.085	0.00	0.788	0.59	7.338	7.54	68.295	21.12	635.647	84.16	5916.178	100.00
0.097	0.00	0.899	0.76	8.367	8.33	77.872	22.04	724.780	89.34	6745.760	100.00
0.110	0.00	1.025	0.94	9.540	9.17	88.791	22.97	826.410	93.44	7691.669	100.00
0.126	0.00	1.169	1.13	10.878	10.03	101.242	23.91	942.292	96.42	8770.216	100.00
0.143	0.00	1.333	1.34	12.403	10.91	115.438	24.91	1074.423	98.25	10000.000	100.00
0.163	0.00	1.519	1.57	14.142	11.78	131.625	26.03	1225.081	99.15		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-05-2*
Analyst: KB
Particle Technology Labs *PTL ID: 44330*

SOP Name:
Sea Engineering - Fine Sediment

Result Source:
Averaged

Number of this Measurement:
1

Measured:
Wednesday, January 19, 2005 4:13:37 PM

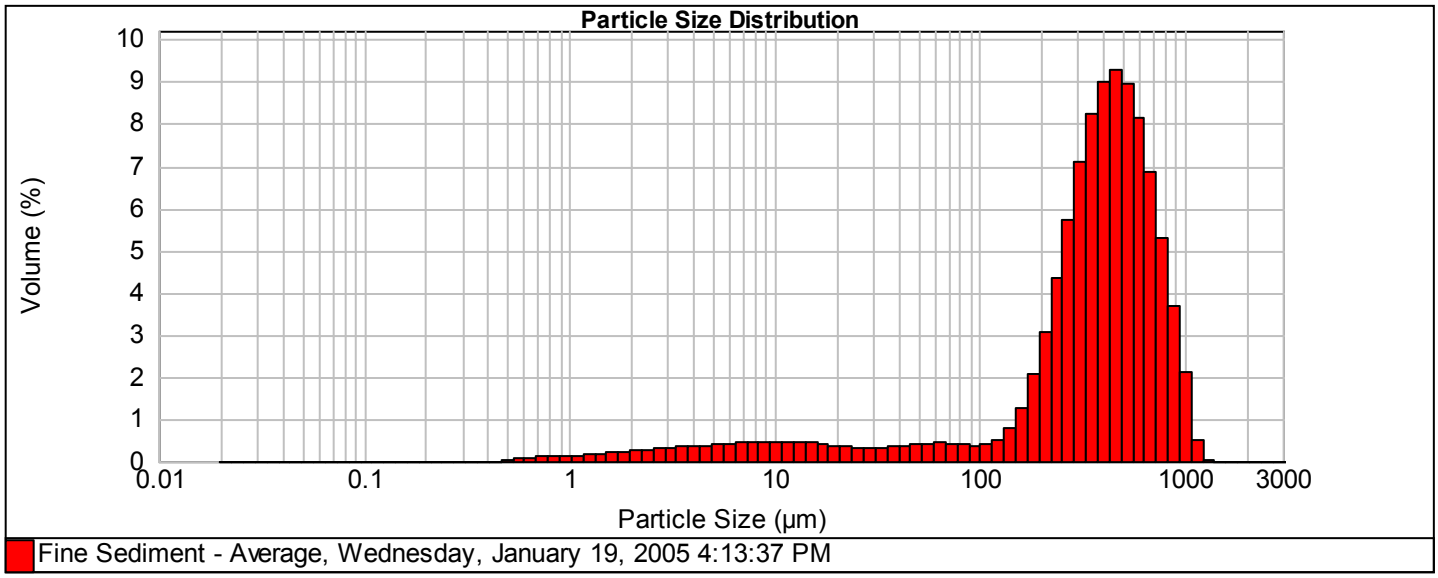
Analyzed:
Wednesday, January 19, 2005 4:13:38 PM

Number of Measurements:
4

Particle Name:	Accessory Name:	Pump Speed:	Analysis model:	Sensitivity:
Default	Hydro 2000S (A)	2000	General purpose	Normal
Particle RI:	**Absorption:**		**Size range:**	**Obscuration:**
1.520	0.1		0.020 to 2000.000 um	12.56 %
Dispersant Name:	**Dispersant RI:**		**Weighted Residual:**	**Result Emulation:**
Water	1.330		2.255 %	Off

Concentration:	Span :	Uniformity:	Result units:
0.0673 %Vol	1.783	0.494	Volume
Specific Surface Area:	**Surface Weighted Mean D[3,2]:**	**Vol. Weighted Mean D[4,3]:**	
0.173 m²/g	34.603 um	414.433 um	

d(0.1): 41.040 um **d(0.5): 397.713 um** **d(0.9): 749.994 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	1.19	16.125	7.55	150.082	14.41	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	1.41	18.386	7.96	171.127	15.69	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	1.66	20.964	8.33	195.123	17.73	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	1.93	23.904	8.68	222.484	20.81	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	2.22	27.256	9.00	253.681	25.16	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	2.54	31.078	9.31	289.253	30.89	2692.173	100.00
0.044	0.00	0.409	0.00	3.807	2.88	35.436	9.63	329.813	37.98	3069.677	100.00
0.050	0.00	0.466	0.00	4.341	3.24	40.405	9.96	376.060	46.22	3500.116	100.00
0.057	0.00	0.532	0.04	4.950	3.61	46.070	10.32	428.793	55.24	3990.912	100.00
0.065	0.00	0.606	0.11	5.644	4.01	52.531	10.71	488.919	64.52	4550.528	100.00
0.074	0.00	0.691	0.20	6.435	4.42	59.897	11.13	557.477	73.49	5188.616	100.00
0.085	0.00	0.788	0.31	7.338	4.85	68.295	11.56	635.647	81.61	5916.178	100.00
0.097	0.00	0.899	0.42	8.367	5.29	77.872	11.97	724.780	88.46	6745.760	100.00
0.110	0.00	1.025	0.54	9.540	5.75	88.791	12.36	826.410	93.76	7691.669	100.00
0.126	0.00	1.169	0.68	10.878	6.21	101.242	12.73	942.292	97.43	8770.216	100.00
0.143	0.00	1.333	0.83	12.403	6.67	115.438	13.12	1074.423	99.52	10000.000	100.00
0.163	0.00	1.519	1.00	14.142	7.12	131.625	13.62	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-05-3*
Analyst: KB
Particle Technology Labs *PTL ID: 44331*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Wednesday, January 19, 2005 4:30:11 PM

Result Source:
Averaged

Analyzed:
Wednesday, January 19, 2005 4:30:12 PM

Number of this Measurement:
1

Number of Measurements:
4

Particle Name:
Default

Accessory Name:
Hydro 2000S (A)

Pump Speed:
2000

Analysis model:
General purpose

Sensitivity:
Normal

Particle RI:
1.520

Absorption:
0.1

Size range:
0.020 to 2000.000 um

Obscuration:
14.43 %

Dispersant Name:
Water

Dispersant RI:
1.330

Weighted Residual:
1.374 %

Result Emulation:
Off

Concentration:
0.0539 %Vol

Span :
1.928

Uniformity:
0.55

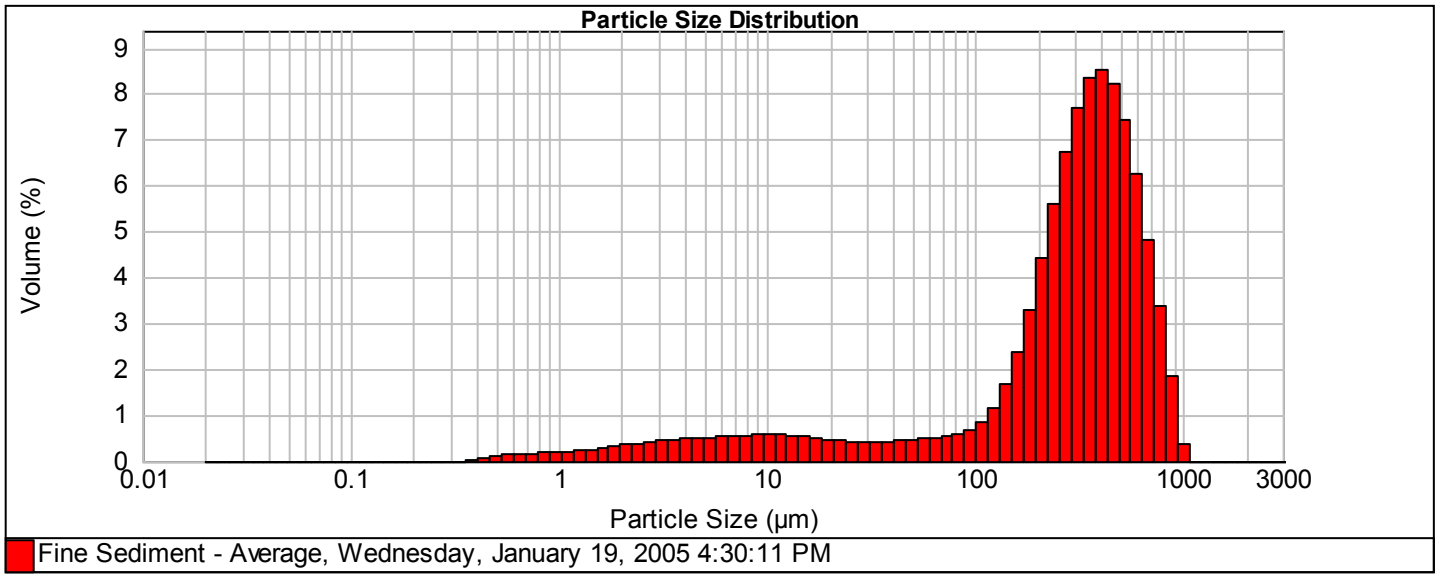
Result units:
Volume

Specific Surface Area:
0.264 m²/g

Surface Weighted Mean D[3,2]:
22.748 um

Vol. Weighted Mean D[4,3]:
338.695 um

d(0.1): 14.919 um **d(0.5): 325.055 um** **d(0.9): 641.482 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	1.98	16.125	10.31	150.082	20.76	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	2.29	18.386	10.82	171.127	23.14	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	2.64	20.964	11.29	195.123	26.45	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	3.02	23.904	11.74	222.484	30.86	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	3.44	27.256	12.16	253.681	36.45	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	3.88	31.078	12.58	289.253	43.19	2692.173	100.00
0.044	0.00	0.409	0.00	3.807	4.34	35.436	13.00	329.813	50.89	3069.677	100.00
0.050	0.00	0.466	0.07	4.341	4.82	40.405	13.42	376.060	59.23	3500.116	100.00
0.057	0.00	0.532	0.18	4.950	5.32	46.070	13.87	428.793	67.75	3990.912	100.00
0.065	0.00	0.606	0.31	5.644	5.84	52.531	14.34	488.919	75.95	4550.528	100.00
0.074	0.00	0.691	0.47	6.435	6.37	59.897	14.83	557.477	83.37	5188.616	100.00
0.085	0.00	0.788	0.64	7.338	6.92	68.295	15.33	635.647	89.61	5916.178	100.00
0.097	0.00	0.899	0.82	8.367	7.49	77.872	15.86	724.780	94.44	6745.760	100.00
0.110	0.00	1.025	1.02	9.540	8.07	88.791	16.42	826.410	97.80	7691.669	100.00
0.126	0.00	1.169	1.23	10.878	8.65	101.242	17.08	942.292	99.65	8770.216	100.00
0.143	0.00	1.333	1.45	12.403	9.22	115.438	17.92	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	1.70	14.142	9.78	131.625	19.09	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-05-4*
Analyst: KB
Particle Technology Labs *PTL ID: 44332*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Wednesday, January 19, 2005 4:50:22 PM

Result Source:
Averaged

Analyzed:
Wednesday, January 19, 2005 4:50:23 PM

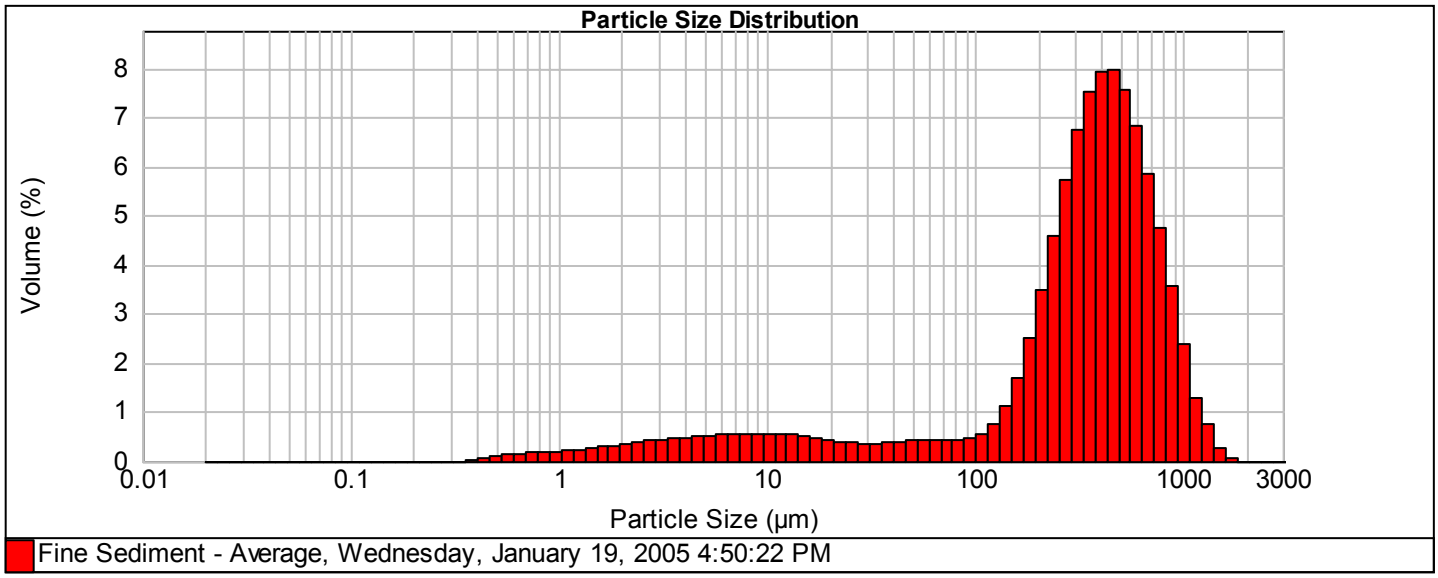
Number of this Measurement:
1

Number of Measurements:
4

Particle Name: Default	**Accessory Name:** Hydro 2000S (A)	**Pump Speed:** 2000	**Analysis model:** General purpose	**Sensitivity:** Normal
Particle RI: 1.520	**Absorption:** 0.1		**Size range:** 0.020 to 2000.000 um	**Obscuration:** 14.49 %
Dispersant Name: Water	**Dispersant RI:** 1.330		**Weighted Residual:** 1.520 %	**Result Emulation:** Off

Concentration: 0.0546 %Vol	**Span :** 2.075	**Uniformity:** 0.596	**Result units:** Volume
Specific Surface Area: 0.26 m²/g	**Surface Weighted Mean D[3,2]:** 23.036 um	**Vol. Weighted Mean D[4,3]:** 405.458 um	

d(0.1): 14.917 um **d(0.5): 371.706 um** **d(0.9): 786.357 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	1.99	16.125	10.29	150.082	18.45	1396.865	99.66
0.023	0.00	0.212	0.00	1.975	2.31	18.386	10.76	171.127	20.15	1592.737	99.93
0.026	0.00	0.242	0.00	2.252	2.67	20.964	11.18	195.123	22.64	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	3.06	23.904	11.57	222.484	26.12	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	3.48	27.256	11.94	253.681	30.70	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	3.92	31.078	12.30	289.253	36.42	2692.173	100.00
0.044	0.00	0.409	0.00	3.807	4.39	35.436	12.66	329.813	43.17	3069.677	100.00
0.050	0.00	0.466	0.06	4.341	4.88	40.405	13.03	376.060	50.69	3500.116	100.00
0.057	0.00	0.532	0.16	4.950	5.39	46.070	13.42	428.793	58.65	3990.912	100.00
0.065	0.00	0.606	0.29	5.644	5.91	52.531	13.84	488.919	66.63	4550.528	100.00
0.074	0.00	0.691	0.45	6.435	6.45	59.897	14.27	557.477	74.21	5188.616	100.00
0.085	0.00	0.788	0.62	7.338	7.01	68.295	14.70	635.647	81.06	5916.178	100.00
0.097	0.00	0.899	0.80	8.367	7.57	77.872	15.13	724.780	86.92	6745.760	100.00
0.110	0.00	1.025	1.00	9.540	8.14	88.791	15.55	826.410	91.66	7691.669	100.00
0.126	0.00	1.169	1.21	10.878	8.71	101.242	16.01	942.292	95.22	8770.216	100.00
0.143	0.00	1.333	1.45	12.403	9.26	115.438	16.56	1074.423	97.59	10000.000	100.00
0.163	0.00	1.519	1.70	14.142	9.79	131.625	17.32	1225.081	98.90		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-05-5*
Analyst: KB
Particle Technology Labs *PTL ID: 44333*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Thursday, January 20, 2005 10:53:56 AM

Result Source:
Averaged

Analyzed:
Thursday, January 20, 2005 10:53:57 AM

Number of this Measurement:
1

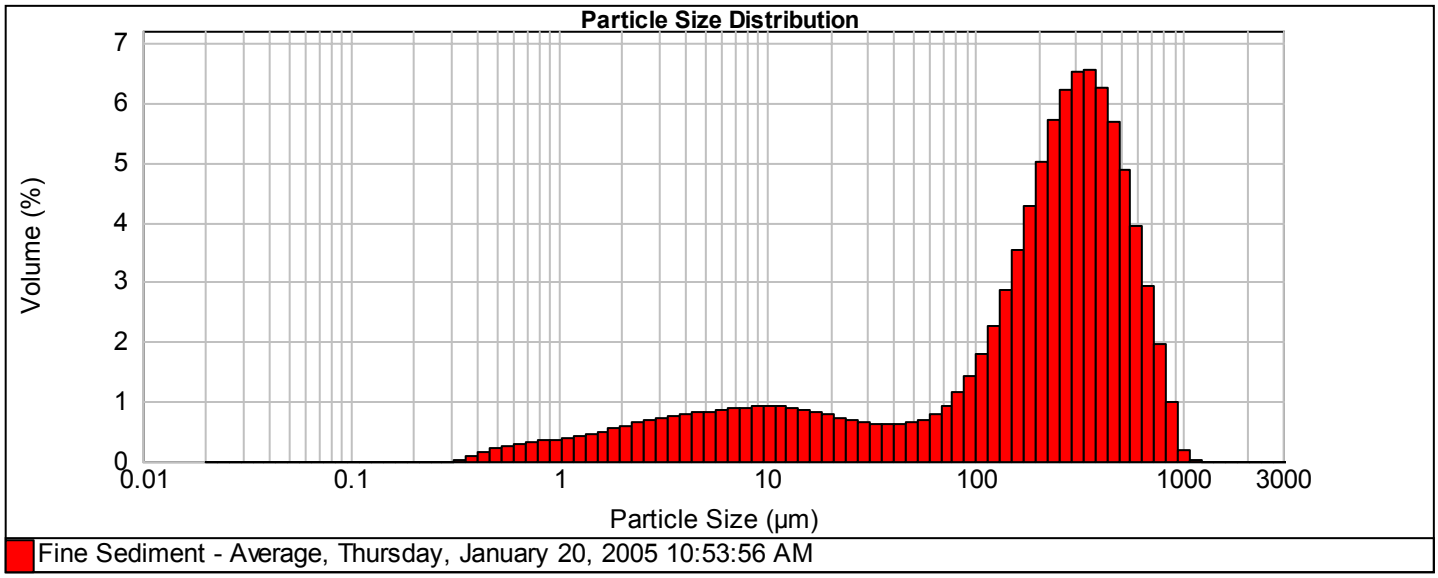
Number of Measurements:
4

Particle Name:	Accessory Name:	Pump Speed:	Analysis model:	Sensitivity:
Default	Hydro 2000S (A)	2000	General purpose	Normal
Particle RI:	**Absorption:**		**Size range:**	**Obscuration:**
1.520	0.1		0.020 to 2000.000 um	15.52 %
Dispersant Name:	**Dispersant RI:**		**Weighted Residual:**	**Result Emulation:**
Water	1.330		0.959 %	Off

Concentration:	Span :	Uniformity:	Result units:
0.0342 %Vol	2.375	0.739	Volume

Specific Surface Area:	Surface Weighted Mean D[3,2]:	Vol. Weighted Mean D[4,3]:
0.464 m²/g	12.935 um	258.673 um

d(0.1): 5.549 um **d(0.5): 232.306 um** **d(0.9): 557.277 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	3.70	16.125	17.25	150.082	35.37	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	4.25	18.386	18.07	171.127	38.91	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	4.85	20.964	18.85	195.123	43.18	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	5.50	23.904	19.59	222.484	48.19	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	6.19	27.256	20.28	253.681	53.89	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	6.92	31.078	20.94	289.253	60.12	2692.173	100.00
0.044	0.00	0.409	0.08	3.807	7.67	35.436	21.56	329.813	66.65	3069.677	100.00
0.050	0.00	0.466	0.22	4.341	8.46	40.405	22.18	376.060	73.20	3500.116	100.00
0.057	0.00	0.532	0.42	4.950	9.27	46.070	22.80	428.793	79.46	3990.912	100.00
0.065	0.00	0.606	0.67	5.644	10.11	52.531	23.44	488.919	85.14	4550.528	100.00
0.074	0.00	0.691	0.96	6.435	10.97	59.897	24.14	557.477	90.01	5188.616	100.00
0.085	0.00	0.788	1.27	7.338	11.85	68.295	24.93	635.647	93.94	5916.178	100.00
0.097	0.00	0.899	1.61	8.367	12.75	77.872	25.87	724.780	96.87	6745.760	100.00
0.110	0.00	1.025	1.97	9.540	13.66	88.791	27.01	826.410	98.83	7691.669	100.00
0.126	0.00	1.169	2.35	10.878	14.58	101.242	28.44	942.292	99.81	8770.216	100.00
0.143	0.00	1.333	2.76	12.403	15.49	115.438	30.23	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	3.21	14.142	16.38	131.625	32.51	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF06-R1-1*
Analyst: KB
Particle Technology Labs *PTL ID: 44334*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Thursday, January 20, 2005 11:07:57 AM

Result Source:
Averaged

Analyzed:
Thursday, January 20, 2005 11:07:59 AM

Number of this Measurement:
1

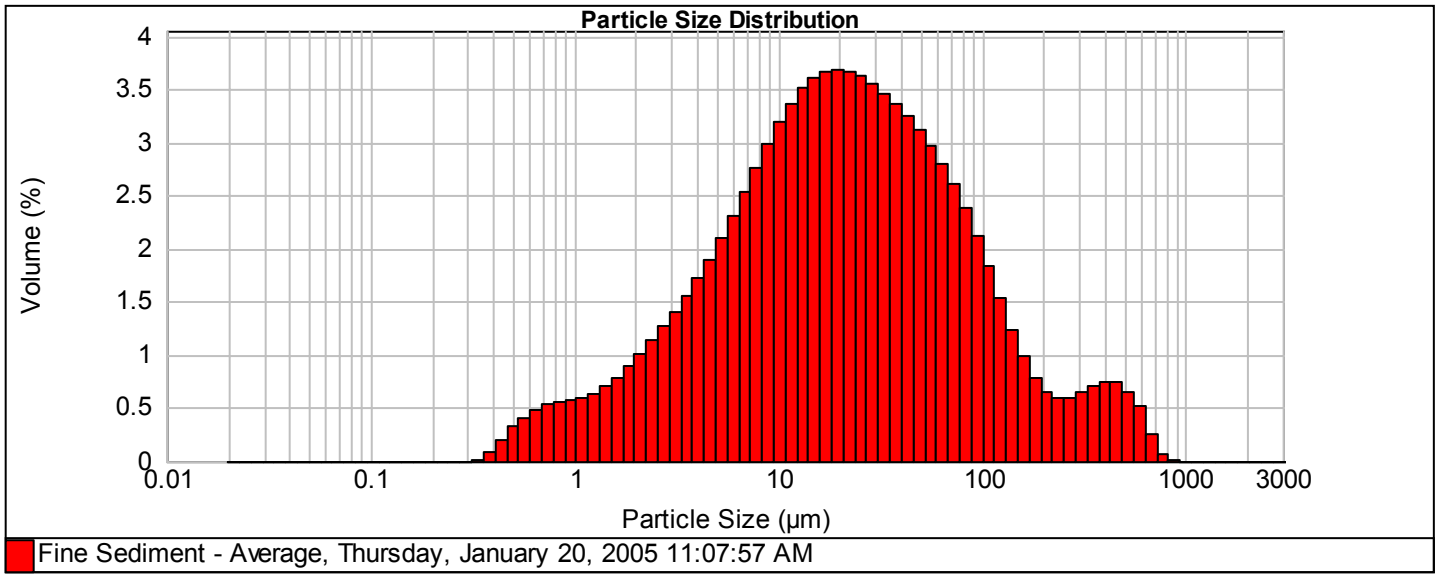
Number of Measurements:
4

Particle Name:	Accessory Name:	Pump Speed:	Analysis model:	Sensitivity:
Default	Hydro 2000S (A)	2000	General purpose	Normal
Particle RI:	**Absorption:**		**Size range:**	**Obscuration:**
1.520	0.1		0.020 to 2000.000 um	14.20 %
Dispersant Name:	**Dispersant RI:**		**Weighted Residual:**	**Result Emulation:**
Water	1.330		0.889 %	Off

Concentration:	Span :	Uniformity:	Result units:
0.0157 %Vol	5.800	2.23	Volume

Specific Surface Area:	Surface Weighted Mean D[3,2]:	Vol. Weighted Mean D[4,3]:
0.887 m²/g	6.764 um	54.544 um

d(0.1): 2.872 um **d(0.5): 20.588 um** **d(0.9): 122.282 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	5.90	16.125	43.15	150.082	92.07	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	6.79	18.386	46.82	171.127	93.05	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	7.80	20.964	50.51	195.123	93.83	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	8.93	23.904	54.18	222.484	94.48	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	10.20	27.256	57.80	253.681	95.07	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	11.61	31.078	61.36	289.253	95.66	2692.173	100.00
0.044	0.00	0.409	0.08	3.807	13.16	35.436	64.82	329.813	96.31	3069.677	100.00
0.050	0.00	0.466	0.28	4.341	14.88	40.405	68.19	376.060	97.01	3500.116	100.00
0.057	0.00	0.532	0.60	4.950	16.78	46.070	71.43	428.793	97.76	3990.912	100.00
0.065	0.00	0.606	1.02	5.644	18.88	52.531	74.55	488.919	98.50	4550.528	100.00
0.074	0.00	0.691	1.50	6.435	21.18	59.897	77.52	557.477	99.16	5188.616	100.00
0.085	0.00	0.788	2.03	7.338	23.72	68.295	80.32	635.647	99.68	5916.178	100.00
0.097	0.00	0.899	2.59	8.367	26.48	77.872	82.93	724.780	99.93	6745.760	100.00
0.110	0.00	1.025	3.17	9.540	29.46	88.791	85.32	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	3.77	10.878	32.66	101.242	87.45	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	4.41	12.403	36.03	115.438	89.29	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	5.11	14.142	39.54	131.625	90.82	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-06-R1-2*
Analyst: KB
Particle Technology Labs *PTL ID: 44335*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Thursday, January 20, 2005 11:23:35 AM

Result Source:
Averaged

Analyzed:
Thursday, January 20, 2005 11:23:37 AM

Number of this Measurement:
1

Number of Measurements:
4

Particle Name:
Default

Accessory Name:
Hydro 2000S (A)

Pump Speed:
2000

Analysis model:
General purpose

Sensitivity:
Normal

Particle RI:
1.520

Absorption:
0.1

Size range:
0.020 to 2000.000 um

Obscuration:
17.01 %

Dispersant Name:
Water

Dispersant RI:
1.330

Weighted Residual:
0.716 %

Result Emulation:
Off

Concentration:
0.0240 %Vol

Span :
6.069

Uniformity:
2.09

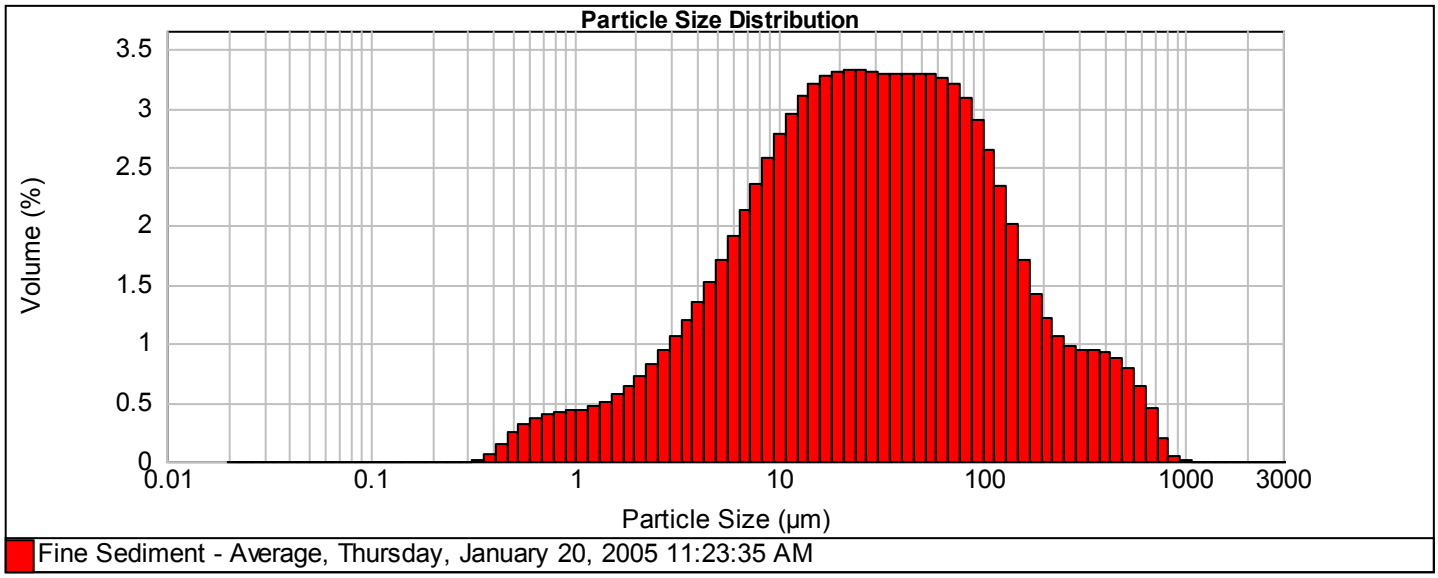
Result units:
Volume

Specific Surface Area:
0.705 m²/g

Surface Weighted Mean D[3,2]:
8.511 um

Vol. Weighted Mean D[4,3]:
71.901 um

d(0.1): 3.893 um **d(0.5): 28.819 um** **d(0.9): 178.804 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	4.38	16.125	35.36	150.082	87.79	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	5.02	18.386	38.64	171.127	89.49	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	5.75	20.964	41.95	195.123	90.92	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	6.58	23.904	45.27	222.484	92.13	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	7.53	27.256	48.59	253.681	93.20	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	8.59	31.078	51.90	289.253	94.18	2692.173	100.00
0.044	0.00	0.409	0.06	3.807	9.78	35.436	55.19	329.813	95.13	3069.677	100.00
0.050	0.00	0.466	0.21	4.341	11.13	40.405	58.48	376.060	96.06	3500.116	100.00
0.057	0.00	0.532	0.46	4.950	12.65	46.070	61.77	428.793	96.99	3990.912	100.00
0.065	0.00	0.606	0.78	5.644	14.35	52.531	65.06	488.919	97.87	4550.528	100.00
0.074	0.00	0.691	1.16	6.435	16.26	59.897	68.35	557.477	98.66	5188.616	100.00
0.085	0.00	0.788	1.56	7.338	18.39	68.295	71.61	635.647	99.30	5916.178	100.00
0.097	0.00	0.899	1.98	8.367	20.74	77.872	74.81	724.780	99.75	6745.760	100.00
0.110	0.00	1.025	2.41	9.540	23.32	88.791	77.89	826.410	99.96	7691.669	100.00
0.126	0.00	1.169	2.85	10.878	26.10	101.242	80.79	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	3.32	12.403	29.05	115.438	83.44	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	3.82	14.142	32.15	131.625	85.78	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-06-R1-3*
Analyst: KB
Particle Technology Labs *PTL ID: 44336*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Thursday, January 20, 2005 11:37:23 AM

Result Source:
Averaged

Analyzed:
Thursday, January 20, 2005 11:37:24 AM

Number of this Measurement:
1

Number of Measurements:
4

Particle Name:
Default

Accessory Name:
Hydro 2000S (A)

Pump Speed:
2000

Analysis model:
General purpose

Sensitivity:
Normal

Particle RI:
1.520

Absorption:
0.1

Size range:
0.020 to 2000.000 um

Obscuration:
16.89 %

Dispersant Name:
Water

Dispersant RI:
1.330

Weighted Residual:
0.770 %

Result Emulation:
Off

Concentration:
0.0218 %Vol

Span :
4.642

Uniformity:
1.62

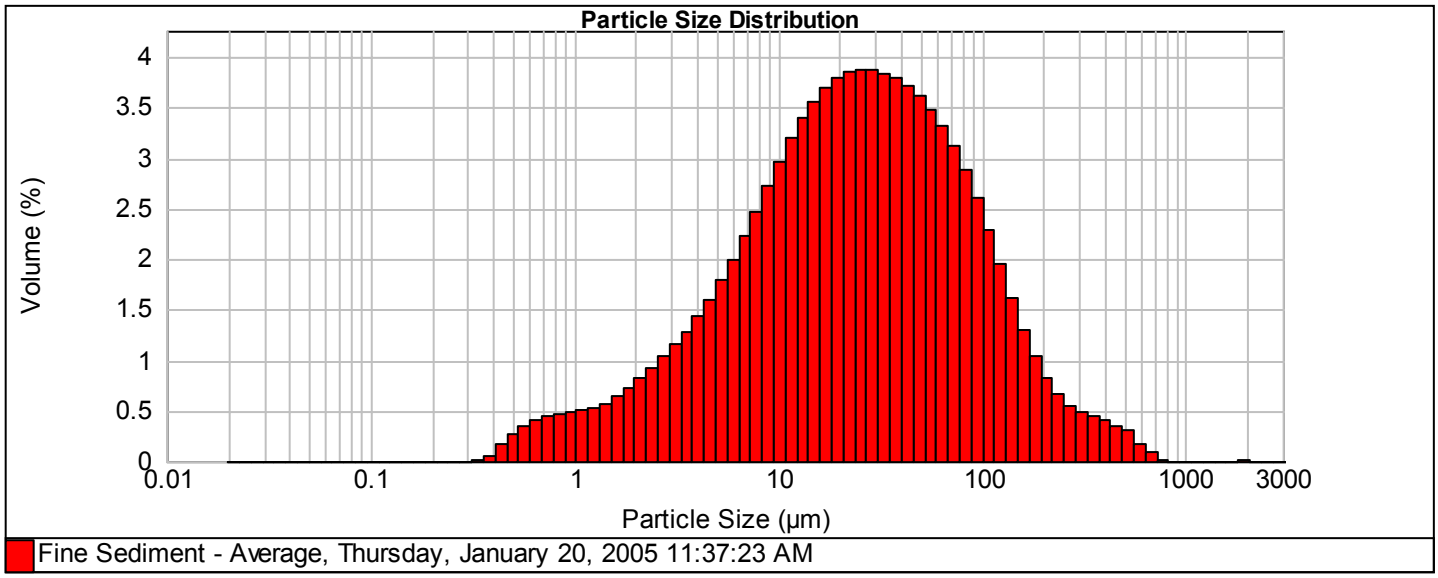
Result units:
Volume

Specific Surface Area:
0.769 m²/g

Surface Weighted Mean D[3,2]:
7.800 um

Vol. Weighted Mean D[4,3]:
49.892 um

d(0.1): 3.510 um **d(0.5): 24.363 um** **d(0.9): 116.598 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	4.88	16.125	38.12	150.082	93.39	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	5.60	18.386	41.81	171.127	94.69	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	6.42	20.964	45.60	195.123	95.72	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	7.34	23.904	49.44	222.484	96.54	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	8.38	27.256	53.31	253.681	97.19	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	9.53	31.078	57.18	289.253	97.75	2692.173	100.00
0.044	0.00	0.409	0.06	3.807	10.81	35.436	61.02	329.813	98.23	3069.677	100.00
0.050	0.00	0.466	0.22	4.341	12.24	40.405	64.81	376.060	98.67	3500.116	100.00
0.057	0.00	0.532	0.50	4.950	13.84	46.070	68.52	428.793	99.07	3990.912	100.00
0.065	0.00	0.606	0.84	5.644	15.62	52.531	72.13	488.919	99.43	4550.528	100.00
0.074	0.00	0.691	1.26	6.435	17.61	59.897	75.61	557.477	99.73	5188.616	100.00
0.085	0.00	0.788	1.70	7.338	19.84	68.295	78.94	635.647	99.90	5916.178	100.00
0.097	0.00	0.899	2.17	8.367	22.30	77.872	82.07	724.780	99.99	6745.760	100.00
0.110	0.00	1.025	2.65	9.540	25.02	88.791	84.95	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	3.15	10.878	27.98	101.242	87.56	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	3.67	12.403	31.17	115.438	89.84	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	4.24	14.142	34.56	131.625	91.78	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-06-R1-4*
Analyst: KB
Particle Technology Labs *PTL ID: 44337*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Thursday, January 20, 2005 12:01:35 PM

Result Source:
Averaged

Analyzed:
Thursday, January 20, 2005 12:01:36 PM

Number of this Measurement:
1

Number of Measurements:
4

Particle Name:
Default

Accessory Name:
Hydro 2000S (A)

Pump Speed:
2000

Analysis model:
General purpose

Sensitivity:
Normal

Particle RI:
1.520

Absorption:
0.1

Size range:
0.020 to 2000.000 um

Obscuration:
14.29 %

Dispersant Name:
Water

Dispersant RI:
1.330

Weighted Residual:
0.745 %

Result Emulation:
Off

Concentration:
0.0190 %Vol

Span :
4.607

Uniformity:
1.68

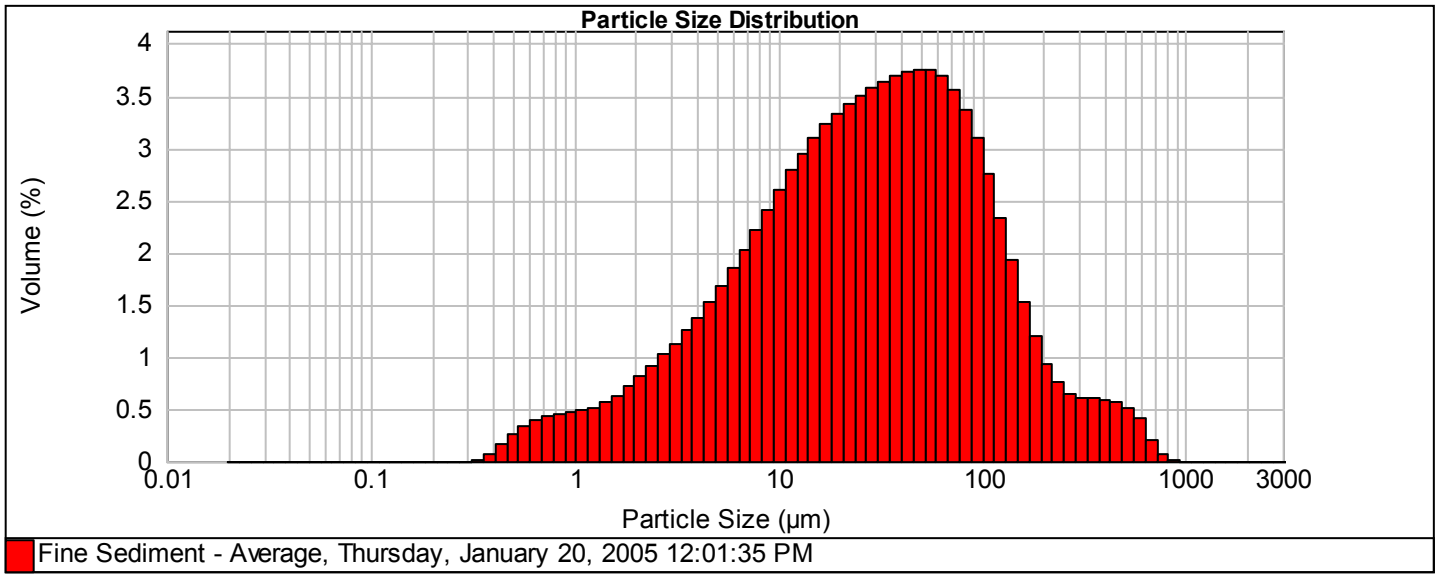
Result units:
Volume

Specific Surface Area:
0.737 m²/g

Surface Weighted Mean D[3,2]:
8.146 um

Vol. Weighted Mean D[4,3]:
59.779 um

d(0.1): 3.586 um **d(0.5): 28.727 um** **d(0.9): 135.943 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	4.76	16.125	35.10	150.082	91.41	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	5.47	18.386	38.32	171.127	92.94	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	6.28	20.964	41.65	195.123	94.13	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	7.19	23.904	45.08	222.484	95.06	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	8.21	27.256	48.58	253.681	95.82	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	9.34	31.078	52.15	289.253	96.46	2692.173	100.00
0.044	0.00	0.409	0.06	3.807	10.59	35.436	55.78	329.813	97.07	3069.677	100.00
0.050	0.00	0.466	0.22	4.341	11.96	40.405	59.47	376.060	97.67	3500.116	100.00
0.057	0.00	0.532	0.49	4.950	13.48	46.070	63.19	428.793	98.26	3990.912	100.00
0.065	0.00	0.606	0.82	5.644	15.15	52.531	66.94	488.919	98.83	4550.528	100.00
0.074	0.00	0.691	1.22	6.435	16.99	59.897	70.68	557.477	99.33	5188.616	100.00
0.085	0.00	0.788	1.65	7.338	19.02	68.295	74.37	635.647	99.74	5916.178	100.00
0.097	0.00	0.899	2.10	8.367	21.24	77.872	77.94	724.780	99.94	6745.760	100.00
0.110	0.00	1.025	2.57	9.540	23.65	88.791	81.31	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	3.06	10.878	26.26	101.242	84.41	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	3.57	12.403	29.05	115.438	87.15	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	4.13	14.142	32.00	131.625	89.49	1225.081	100.00		

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-06-R1-5*
Analyst: KB
Particle Technology Labs *PTL ID: 44338*

SOP Name: Sea Engineering - Fine Sediment
Result Source: Averaged
Number of this Measurement: 1

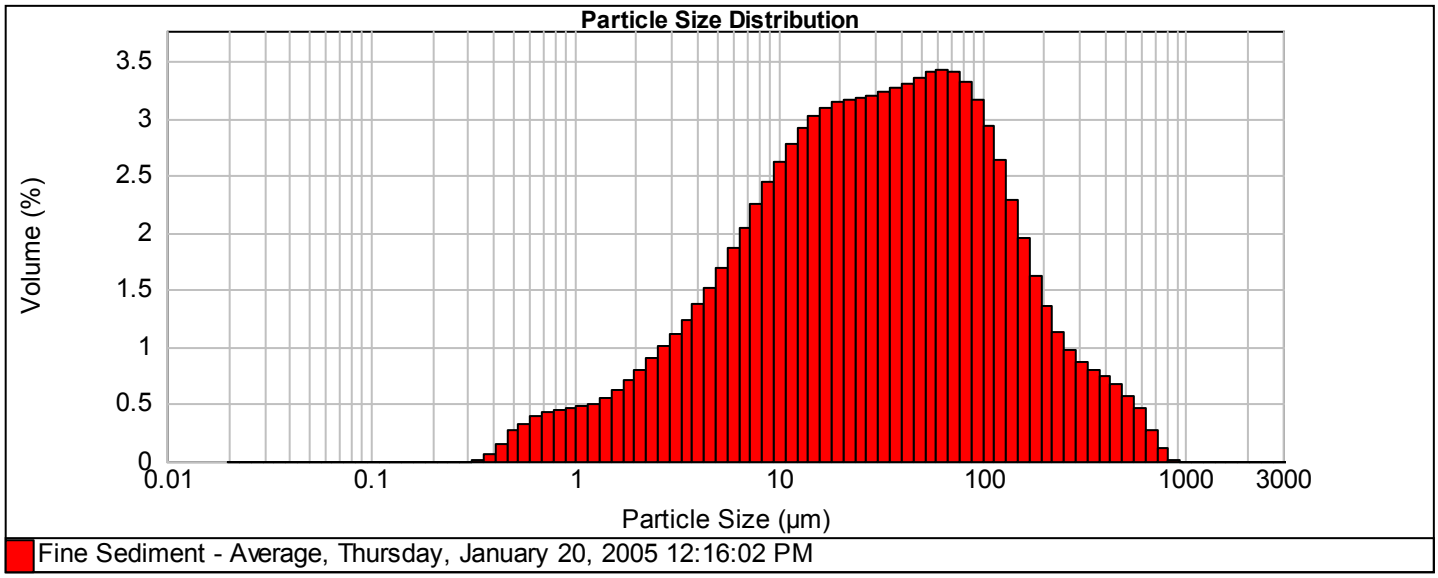
Measured: Thursday, January 20, 2005 12:16:02 PM
Analyzed: Thursday, January 20, 2005 12:16:03 PM
Number of Measurements: 4

Particle Name:	Accessory Name:	Pump Speed:	Analysis model:	Sensitivity:
Default	Hydro 2000S (A)	2000	General purpose	Normal
Particle RI:	**Absorption:**		**Size range:**	**Obscuration:**
1.520	0.1		0.020 to 2000.000 um	16.83 %
Dispersant Name:	**Dispersant RI:**		**Weighted Residual:**	**Result Emulation:**
Water	1.330		0.719 %	Off

Concentration:	Span :	Uniformity:	Result units:
0.0230 %Vol	5.384	1.85	Volume

Specific Surface Area:	Surface Weighted Mean D[3,2]:	Vol. Weighted Mean D[4,3]:
0.725 m²/g	8.279 um	67.659 um

d(0.1): 3.640 um **d(0.5): 30.135 um** **d(0.9): 165.898 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	4.68	16.125	34.96	150.082	88.48	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	5.38	18.386	38.05	171.127	90.43	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	6.17	20.964	41.19	195.123	92.06	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	7.07	23.904	44.36	222.484	93.40	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	8.08	27.256	47.55	253.681	94.54	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	9.20	31.078	50.75	289.253	95.51	2692.173	100.00
0.044	0.00	0.409	0.06	3.807	10.44	35.436	53.98	329.813	96.38	3069.677	100.00
0.050	0.00	0.466	0.22	4.341	11.81	40.405	57.24	376.060	97.18	3500.116	100.00
0.057	0.00	0.532	0.48	4.950	13.33	46.070	60.54	428.793	97.91	3990.912	100.00
0.065	0.00	0.606	0.81	5.644	15.02	52.531	63.90	488.919	98.58	4550.528	100.00
0.074	0.00	0.691	1.20	6.435	16.88	59.897	67.30	557.477	99.16	5188.616	100.00
0.085	0.00	0.788	1.62	7.338	18.93	68.295	70.72	635.647	99.62	5916.178	100.00
0.097	0.00	0.899	2.07	8.367	21.17	77.872	74.13	724.780	99.88	6745.760	100.00
0.110	0.00	1.025	2.53	9.540	23.61	88.791	77.46	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	3.00	10.878	26.24	101.242	80.62	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	3.51	12.403	29.02	115.438	83.56	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	4.06	14.142	31.94	131.625	86.19	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-06-R2-1*
Analyst: KB
Particle Technology Labs *PTL ID: 44339*

SOP Name:
Sea Engineering - Fine Sediment

Result Source:
Averaged

Number of this Measurement:
1

Measured:
Thursday, January 20, 2005 12:40:43 PM

Analyzed:
Thursday, January 20, 2005 12:40:44 PM

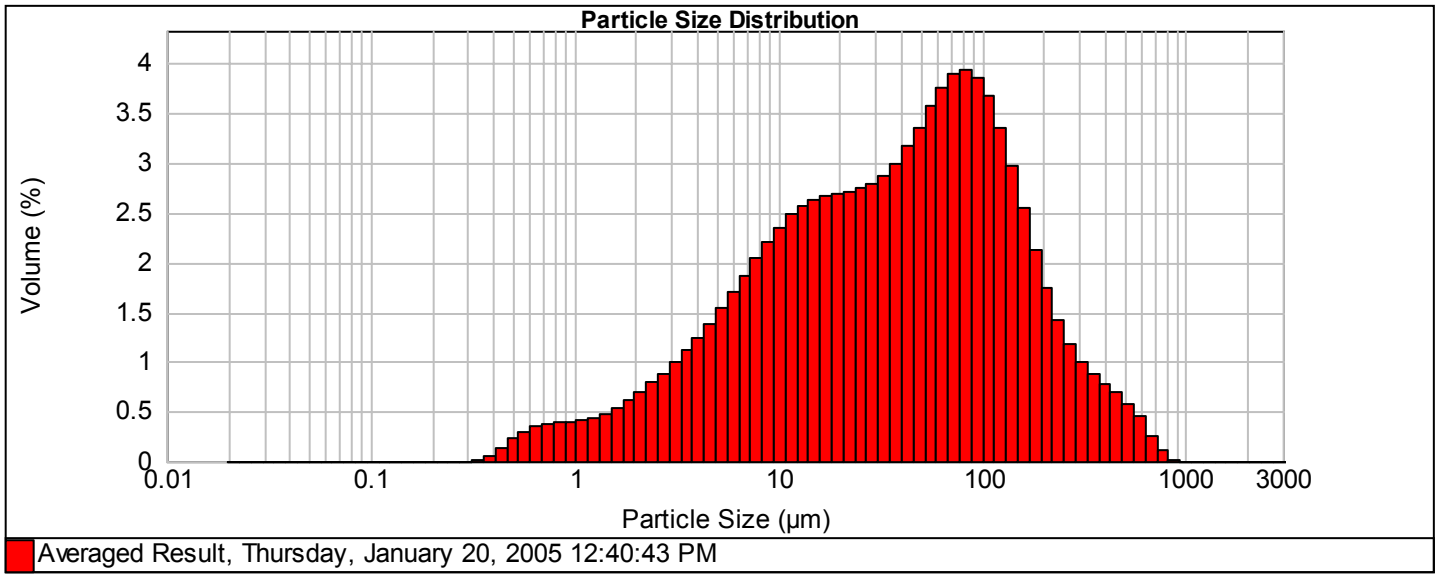
Number of Measurements:
4

Particle Name:	Accessory Name:	Pump Speed:	Analysis model:	Sensitivity:
Default	Hydro 2000S (A)	2000	General purpose	Normal
Particle RI:	**Absorption:**		**Size range:**	**Obscuration:**
1.520	0.1		0.020 to 2000.000 um	15.33 %
Dispersant Name:	**Dispersant RI:**		**Weighted Residual:**	**Result Emulation:**
Water	1.330		0.665 %	Off

Concentration:	Span :	Uniformity:	Result units:
0.0233 %Vol	4.579	1.57	Volume

Specific Surface Area:	Surface Weighted Mean D[3,2]:	Vol. Weighted Mean D[4,3]:
0.648 m²/g	9.263 um	75.863 um

d(0.1): 4.163 um **d(0.5): 39.215 um** **d(0.9): 183.734 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	4.09	16.125	31.19	150.082	86.26	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	4.70	18.386	33.86	171.127	88.80	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	5.39	20.964	36.56	195.123	90.92	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	6.18	23.904	39.28	222.484	92.65	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	7.07	27.256	42.03	253.681	94.07	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	8.06	31.078	44.82	289.253	95.24	2692.173	100.00
0.044	0.00	0.409	0.05	3.807	9.17	35.436	47.70	329.813	96.24	3069.677	100.00
0.050	0.00	0.466	0.19	4.341	10.41	40.405	50.70	376.060	97.12	3500.116	100.00
0.057	0.00	0.532	0.43	4.950	11.79	46.070	53.87	428.793	97.90	3990.912	100.00
0.065	0.00	0.606	0.72	5.644	13.32	52.531	57.23	488.919	98.60	4550.528	100.00
0.074	0.00	0.691	1.06	6.435	15.02	59.897	60.80	557.477	99.17	5188.616	100.00
0.085	0.00	0.788	1.44	7.338	16.89	68.295	64.56	635.647	99.63	5916.178	100.00
0.097	0.00	0.899	1.83	8.367	18.93	77.872	68.46	724.780	99.89	6745.760	100.00
0.110	0.00	1.025	2.23	9.540	21.14	88.791	72.40	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	2.65	10.878	23.49	101.242	76.26	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	3.08	12.403	25.97	115.438	79.93	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	3.56	14.142	28.55	131.625	83.29	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-06-R2-2*
Analyst: KB
Particle Technology Labs *PTL ID: 44340*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Thursday, January 20, 2005 12:55:46 PM

Result Source:
Averaged

Analyzed:
Thursday, January 20, 2005 12:55:47 PM

Number of this Measurement:
1

Number of Measurements:
4

Particle Name:
Default

Accessory Name:
Hydro 2000S (A)

Pump Speed:
2000

Analysis model:
General purpose

Sensitivity:
Normal

Particle RI:
1.520

Absorption:
0.1

Size range:
0.020 to 2000.000 um

Obscuration:
14.17 %

Dispersant Name:
Water

Dispersant RI:
1.330

Weighted Residual:
0.800 %

Result Emulation:
Off

Concentration:
0.0175 %Vol

Span :
7.112

Uniformity:
2.37

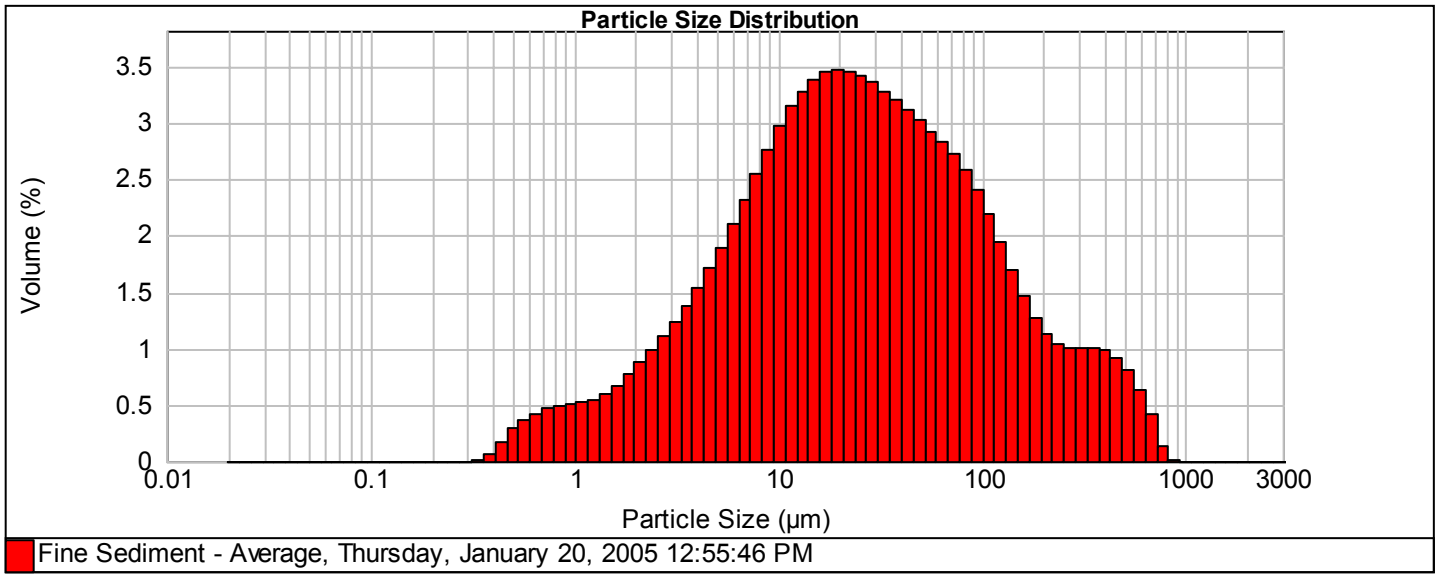
Result units:
Volume

Specific Surface Area:
0.791 m²/g

Surface Weighted Mean D[3,2]:
7.589 um

Vol. Weighted Mean D[4,3]:
67.585 um

d(0.1): 3.313 um **d(0.5): 24.342 um** **d(0.9): 176.435 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	5.10	16.125	39.14	150.082	88.23	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	5.87	18.386	42.59	171.127	89.69	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	6.74	20.964	46.06	195.123	90.96	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	7.73	23.904	49.52	222.484	92.08	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	8.84	27.256	52.95	253.681	93.12	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	10.08	31.078	56.31	289.253	94.12	2692.173	100.00
0.044	0.00	0.409	0.06	3.807	11.46	35.436	59.60	329.813	95.11	3069.677	100.00
0.050	0.00	0.466	0.23	4.341	13.00	40.405	62.80	376.060	96.12	3500.116	100.00
0.057	0.00	0.532	0.52	4.950	14.71	46.070	65.91	428.793	97.10	3990.912	100.00
0.065	0.00	0.606	0.88	5.644	16.61	52.531	68.93	488.919	98.02	4550.528	100.00
0.074	0.00	0.691	1.31	6.435	18.71	59.897	71.86	557.477	98.83	5188.616	100.00
0.085	0.00	0.788	1.77	7.338	21.03	68.295	74.70	635.647	99.45	5916.178	100.00
0.097	0.00	0.899	2.26	8.367	23.58	77.872	77.42	724.780	99.87	6745.760	100.00
0.110	0.00	1.025	2.76	9.540	26.35	88.791	80.00	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	3.28	10.878	29.31	101.242	82.40	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	3.83	12.403	32.46	115.438	84.59	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	4.43	14.142	35.75	131.625	86.53	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-06-R2-3*
Analyst: KB
Particle Technology Labs *PTL ID: 44341*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Thursday, January 20, 2005 1:10:42 PM

Result Source:
Averaged

Analyzed:
Thursday, January 20, 2005 1:10:43 PM

Number of this Measurement:
1

Number of Measurements:
4

Particle Name:
Default

Accessory Name:
Hydro 2000S (A)

Pump Speed:
2000

Analysis model:
General purpose

Sensitivity:
Normal

Particle RI:
1.520

Absorption:
0.1

Size range:
0.020 to 2000.000 um

Obscuration:
16.34 %

Dispersant Name:
Water

Dispersant RI:
1.330

Weighted Residual:
0.970 %

Result Emulation:
Off

Concentration:
0.0168 %Vol

Span :
4.359

Uniformity:
1.66

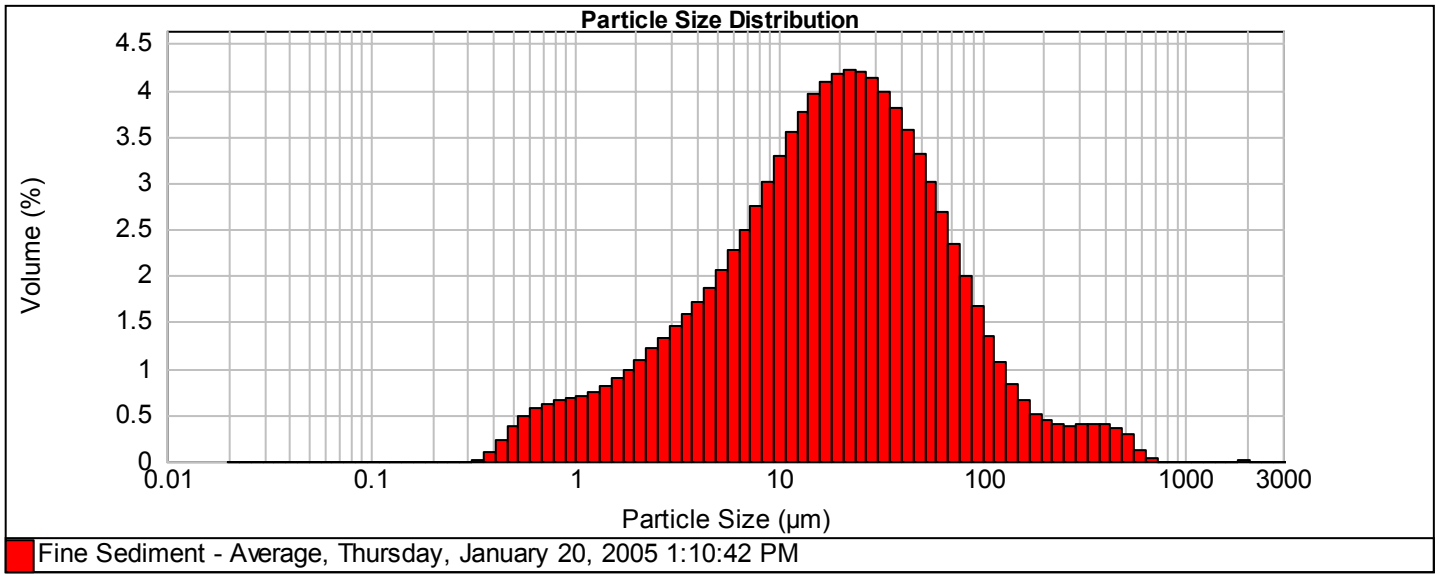
Result units:
Volume

Specific Surface Area:
0.975 m²/g

Surface Weighted Mean D[3,2]:
6.155 um

Vol. Weighted Mean D[4,3]:
39.130 um

d(0.1): 2.528 um **d(0.5): 18.785 um** **d(0.9): 84.420 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	6.85	16.125	45.23	150.082	95.67	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	7.84	18.386	49.32	171.127	96.32	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	8.94	20.964	53.50	195.123	96.83	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	10.15	23.904	57.72	222.484	97.27	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	11.48	27.256	61.91	253.681	97.66	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	12.93	31.078	66.03	289.253	98.05	2692.173	100.00
0.044	0.00	0.409	0.10	3.807	14.51	35.436	70.02	329.813	98.44	3069.677	100.00
0.050	0.00	0.466	0.33	4.341	16.23	40.405	73.83	376.060	98.84	3500.116	100.00
0.057	0.00	0.532	0.71	4.950	18.10	46.070	77.41	428.793	99.23	3990.912	100.00
0.065	0.00	0.606	1.19	5.644	20.16	52.531	80.71	488.919	99.58	4550.528	100.00
0.074	0.00	0.691	1.76	6.435	22.43	59.897	83.71	557.477	99.87	5188.616	100.00
0.085	0.00	0.788	2.38	7.338	24.92	68.295	86.39	635.647	99.98	5916.178	100.00
0.097	0.00	0.899	3.03	8.367	27.68	77.872	88.73	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	3.71	9.540	30.70	88.791	90.73	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	4.42	10.878	33.98	101.242	92.40	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	5.16	12.403	37.52	115.438	93.76	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	5.96	14.142	41.28	131.625	94.83	1225.081	100.00		

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-06-R2-4*
Analyst: KB
Particle Technology Labs *PTL ID: 44342*

SOP Name: Sea Engineering - Fine Sediment
Result Source: Averaged
Number of this Measurement: 1

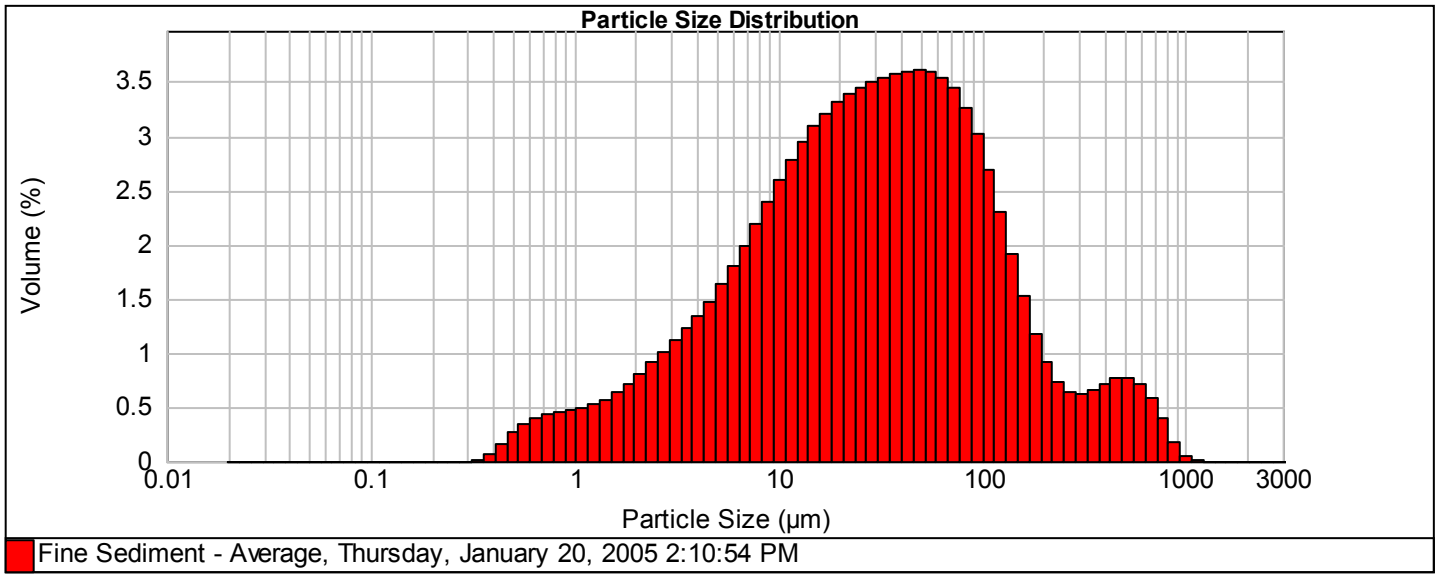
Measured: Thursday, January 20, 2005 2:10:54 PM
Analyzed: Thursday, January 20, 2005 2:10:55 PM
Number of Measurements: 4

Particle Name:	Accessory Name:	Pump Speed:	Analysis model:	Sensitivity:
Default	Hydro 2000S (A)	2000	General purpose	Normal
Particle RI:	**Absorption:**		**Size range:**	**Obscuration:**
1.520	0.1		0.020 to 2000.000 um	15.71 %
Dispersant Name:	**Dispersant RI:**		**Weighted Residual:**	**Result Emulation:**
Water	1.330		0.695 %	Off

Concentration:	Span :	Uniformity:	Result units:
0.0212 %Vol	5.158	2.01	Volume

Specific Surface Area:	Surface Weighted Mean D[3,2]:	Vol. Weighted Mean D[4,3]:
0.73 m²/g	8.222 um	70.855 um

d(0.1): 3.602 um **d(0.5): 29.338 um** **d(0.9): 154.937 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	4.77	16.125	34.70	150.082	89.60	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	5.48	18.386	37.91	171.127	91.11	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	6.29	20.964	41.22	195.123	92.29	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	7.20	23.904	44.60	222.484	93.19	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	8.20	27.256	48.05	253.681	93.92	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	9.31	31.078	51.54	289.253	94.55	2692.173	100.00
0.044	0.00	0.409	0.06	3.807	10.53	35.436	55.08	329.813	95.17	3069.677	100.00
0.050	0.00	0.466	0.22	4.341	11.87	40.405	58.65	376.060	95.82	3500.116	100.00
0.057	0.00	0.532	0.48	4.950	13.34	46.070	62.24	428.793	96.54	3990.912	100.00
0.065	0.00	0.606	0.81	5.644	14.97	52.531	65.85	488.919	97.31	4550.528	100.00
0.074	0.00	0.691	1.20	6.435	16.76	59.897	69.45	557.477	98.08	5188.616	100.00
0.085	0.00	0.788	1.63	7.338	18.74	68.295	72.99	635.647	98.79	5916.178	100.00
0.097	0.00	0.899	2.09	8.367	20.92	77.872	76.43	724.780	99.38	6745.760	100.00
0.110	0.00	1.025	2.56	9.540	23.31	88.791	79.69	826.410	99.78	7691.669	100.00
0.126	0.00	1.169	3.05	10.878	25.89	101.242	82.70	942.292	99.95	8770.216	100.00
0.143	0.00	1.333	3.56	12.403	28.67	115.438	85.39	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	4.13	14.142	31.61	131.625	87.70	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-06-R2-5*
Analyst: KB
Particle Technology Labs *PTL ID: 44343*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Thursday, January 20, 2005 2:37:42 PM

Result Source:
Averaged

Analyzed:
Thursday, January 20, 2005 2:37:43 PM

Number of this Measurement:
1

Number of Measurements:
4

Particle Name:
Default

Accessory Name:
Hydro 2000S (A)

Pump Speed:
2000

Analysis model:
General purpose

Sensitivity:
Normal

Particle RI:
1.520

Absorption:
0.1

Size range:
0.020 to 2000.000 um

Obscuration:
16.98 %

Dispersant Name:
Water

Dispersant RI:
1.330

Weighted Residual:
1.091 %

Result Emulation:
Off

Concentration:
0.0157 %Vol

Span :
4.503

Uniformity:
1.69

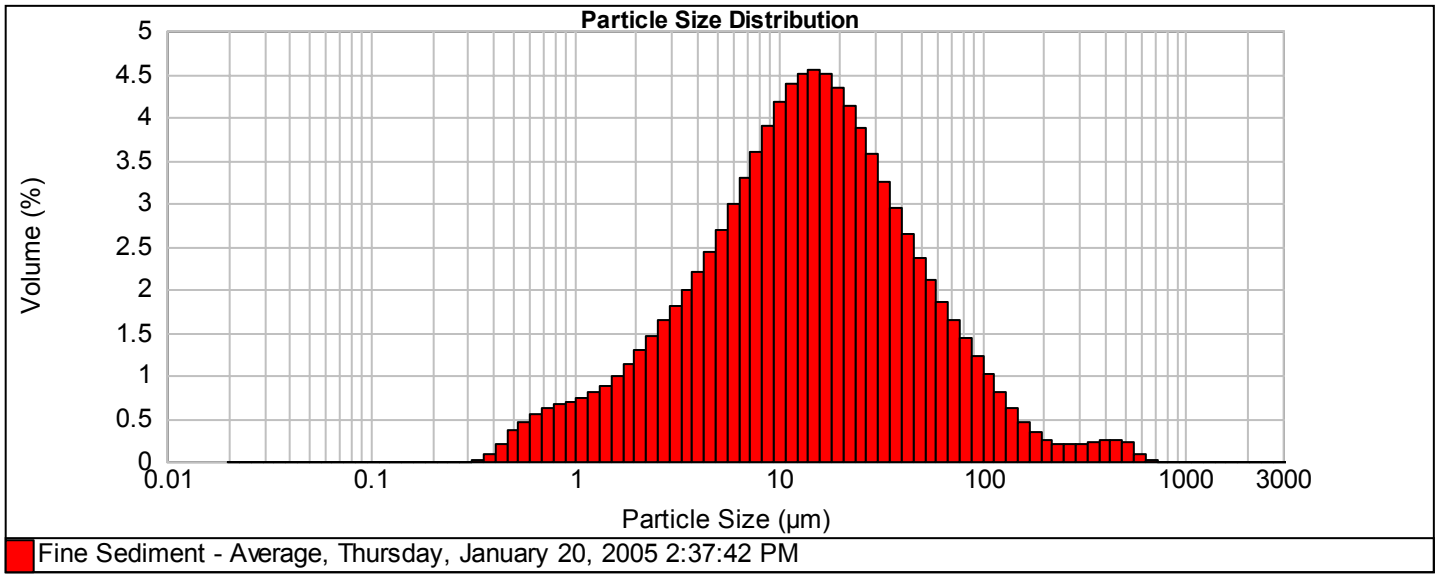
Result units:
Volume

Specific Surface Area:
1.07 m²/g

Surface Weighted Mean D[3,2]:
5.633 um

Vol. Weighted Mean D[4,3]:
29.884 um

d(0.1): 2.368 um **d(0.5): 13.916 um** **d(0.9): 65.026 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	7.03	16.125	55.11	150.082	97.36	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	8.17	18.386	59.60	171.127	97.81	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	9.46	20.964	63.95	195.123	98.13	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	10.92	23.904	68.09	222.484	98.38	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	12.55	27.256	71.96	253.681	98.58	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	14.36	31.078	75.53	289.253	98.77	2692.173	100.00
0.044	0.00	0.409	0.07	3.807	16.37	35.436	78.78	329.813	98.97	3069.677	100.00
0.050	0.00	0.466	0.27	4.341	18.57	40.405	81.72	376.060	99.20	3500.116	100.00
0.057	0.00	0.532	0.63	4.950	21.01	46.070	84.36	428.793	99.45	3990.912	100.00
0.065	0.00	0.606	1.09	5.644	23.71	52.531	86.71	488.919	99.68	4550.528	100.00
0.074	0.00	0.691	1.65	6.435	26.70	59.897	88.81	557.477	99.90	5188.616	100.00
0.085	0.00	0.788	2.26	7.338	29.99	68.295	90.67	635.647	99.98	5916.178	100.00
0.097	0.00	0.899	2.93	8.367	33.59	77.872	92.31	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	3.62	9.540	37.49	88.791	93.73	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	4.36	10.878	41.67	101.242	94.95	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	5.15	12.403	46.05	115.438	95.95	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	6.03	14.142	50.56	131.625	96.75	1225.081	100.00		

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-07-1*
Analyst: KB
Particle Technology Labs *PTL ID: 44344*

SOP Name: Sea Engineering - Fine Sediment
Result Source: Averaged
Number of this Measurement: 1

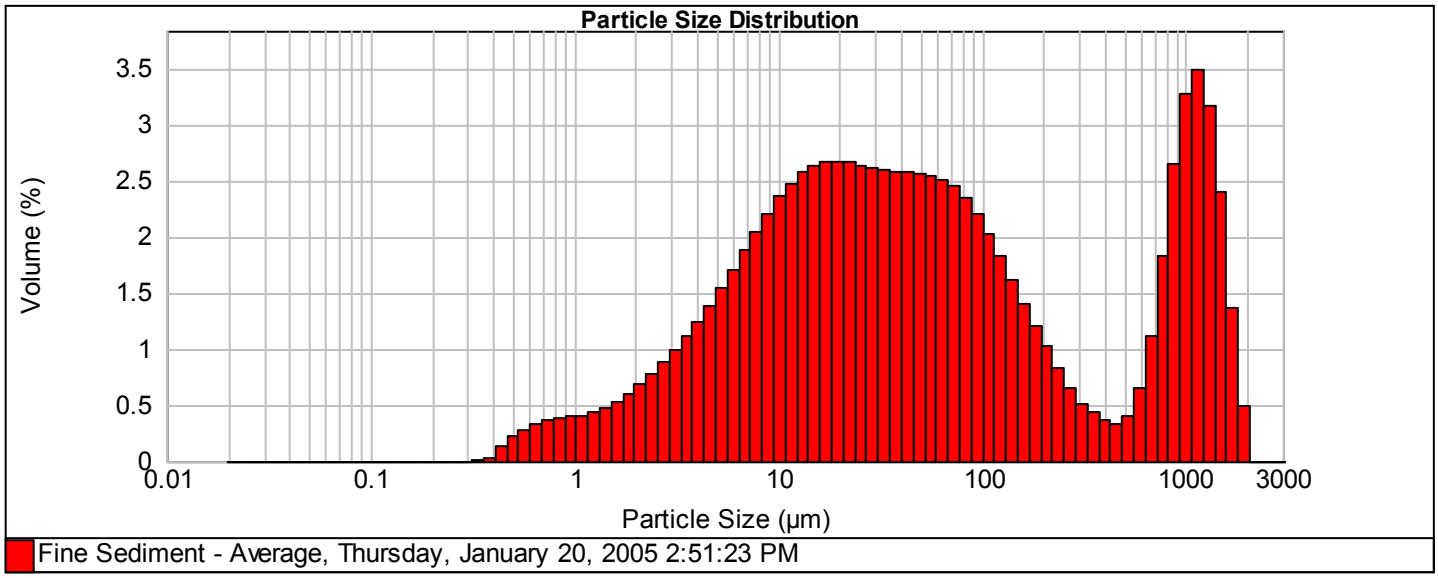
Measured: Thursday, January 20, 2005 2:51:23 PM
Analyzed: Thursday, January 20, 2005 2:51:24 PM
Number of Measurements: 4

Particle Name:	Accessory Name:	Pump Speed:	Analysis model:	Sensitivity:
Default	Hydro 2000S (A)	2000	General purpose	Normal
Particle RI:	**Absorption:**		**Size range:**	**Obscuration:**
1.520	0.1		0.020 to 2000.000 um	14.71 %
Dispersant Name:	**Dispersant RI:**		**Weighted Residual:**	**Result Emulation:**
Water	1.330		1.398 %	Off

Concentration:	Span :	Uniformity:	Result units:
0.0246 %Vol	26.933	6.35	Volume

Specific Surface Area:	Surface Weighted Mean D[3,2]:	Vol. Weighted Mean D[4,3]:
0.627 m²/g	9.562 um	275.584 um

d(0.1): 4.196 um **d(0.5): 41.134 um** **d(0.9): 1112.045 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	4.01	16.125	31.18	150.082	72.36	1396.865	95.74
0.023	0.00	0.212	0.00	1.975	4.62	18.386	33.85	171.127	73.77	1592.737	98.15
0.026	0.00	0.242	0.00	2.252	5.31	20.964	36.52	195.123	74.98	1816.075	99.52
0.030	0.00	0.276	0.00	2.568	6.09	23.904	39.18	222.484	76.00	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	6.98	27.256	41.83	253.681	76.84	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	7.98	31.078	44.45	289.253	77.50	2692.173	100.00
0.044	0.00	0.409	0.03	3.807	9.09	35.436	47.06	329.813	78.02	3069.677	100.00
0.050	0.00	0.466	0.16	4.341	10.34	40.405	49.65	376.060	78.45	3500.116	100.00
0.057	0.00	0.532	0.39	4.950	11.72	46.070	52.23	428.793	78.82	3990.912	100.00
0.065	0.00	0.606	0.68	5.644	13.27	52.531	54.79	488.919	79.16	4550.528	100.00
0.074	0.00	0.691	1.01	6.435	14.98	59.897	57.34	557.477	79.56	5188.616	100.00
0.085	0.00	0.788	1.38	7.338	16.86	68.295	59.86	635.647	80.21	5916.178	100.00
0.097	0.00	0.899	1.76	8.367	18.91	77.872	62.31	724.780	81.33	6745.760	100.00
0.110	0.00	1.025	2.16	9.540	21.13	88.791	64.66	826.410	83.16	7691.669	100.00
0.126	0.00	1.169	2.57	10.878	23.49	101.242	66.87	942.292	85.80	8770.216	100.00
0.143	0.00	1.333	3.00	12.403	25.97	115.438	68.91	1074.423	89.08	10000.000	100.00
0.163	0.00	1.519	3.47	14.142	28.55	131.625	70.74	1225.081	92.58		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-07-1*
Analyst: KB
Particle Technology Labs *PTL ID: 44344*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Thursday, January 20, 2005 3:05:16 PM

Result Source:
Averaged

Analyzed:
Thursday, January 20, 2005 3:05:18 PM

Number of this Measurement:
1

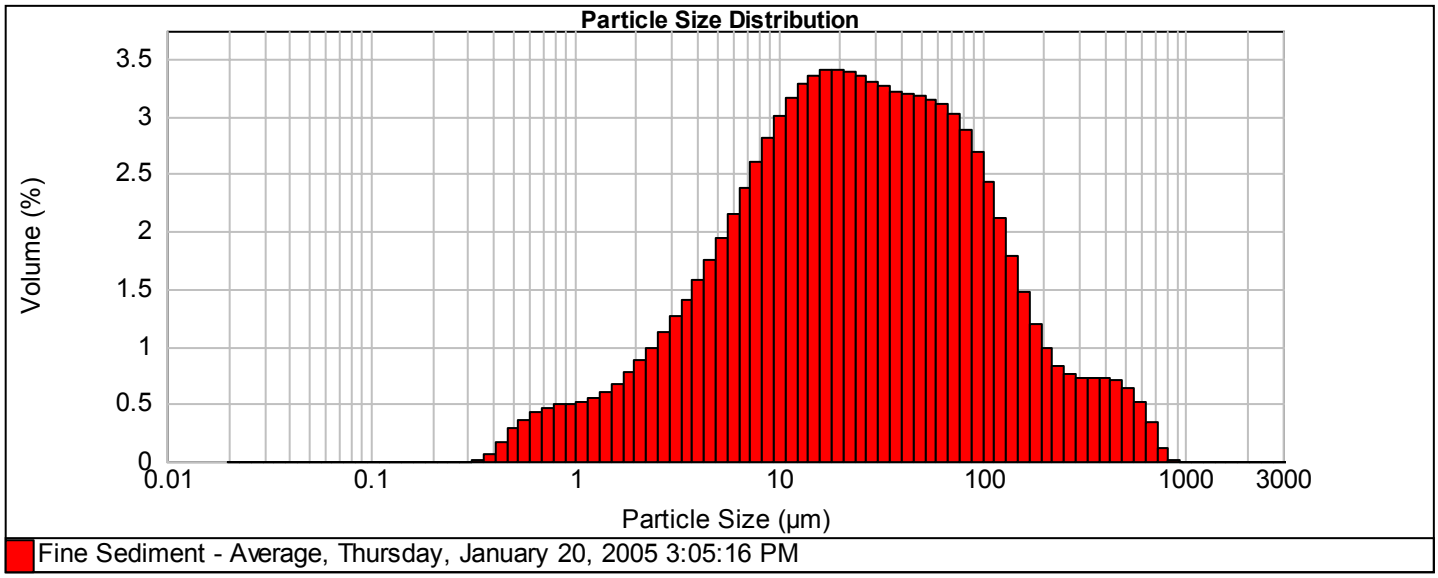
Number of Measurements:
4

Particle Name:	Accessory Name:	Pump Speed:	Analysis model:	Sensitivity:
Default	Hydro 2000S (A)	2000	General purpose	Normal
Particle RI:	**Absorption:**		**Size range:**	**Obscuration:**
1.520	0.1		0.020 to 2000.000 um	15.14 %
Dispersant Name:	**Dispersant RI:**		**Weighted Residual:**	**Result Emulation:**
Water	1.330		0.788 %	Off

Concentration:	Span :	Uniformity:	Result units:
0.0187 %Vol	5.917	2.14	Volume

Specific Surface Area:	Surface Weighted Mean D[3,2]:	Vol. Weighted Mean D[4,3]:
0.796 m²/g	7.536 um	61.609 um

d(0.1): 3.303 um **d(0.5): 24.228 um** **d(0.9): 146.669 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	5.12	16.125	39.48	150.082	90.29	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	5.88	18.386	42.87	171.127	91.76	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	6.75	20.964	46.28	195.123	92.96	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	7.74	23.904	49.66	222.484	93.94	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	8.86	27.256	53.00	253.681	94.77	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	10.11	31.078	56.30	289.253	95.52	2692.173	100.00
0.044	0.00	0.409	0.07	3.807	11.51	35.436	59.55	329.813	96.24	3069.677	100.00
0.050	0.00	0.466	0.24	4.341	13.08	40.405	62.77	376.060	96.97	3500.116	100.00
0.057	0.00	0.532	0.53	4.950	14.83	46.070	65.96	428.793	97.70	3990.912	100.00
0.065	0.00	0.606	0.89	5.644	16.77	52.531	69.13	488.919	98.40	4550.528	100.00
0.074	0.00	0.691	1.32	6.435	18.92	59.897	72.27	557.477	99.04	5188.616	100.00
0.085	0.00	0.788	1.78	7.338	21.30	68.295	75.37	635.647	99.55	5916.178	100.00
0.097	0.00	0.899	2.27	8.367	23.89	77.872	78.39	724.780	99.89	6745.760	100.00
0.110	0.00	1.025	2.77	9.540	26.70	88.791	81.27	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	3.29	10.878	29.69	101.242	83.96	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	3.84	12.403	32.85	115.438	86.38	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	4.44	14.142	36.12	131.625	88.50	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-07-2*
Analyst: KB
Particle Technology Labs *PTL ID: 44345*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Thursday, January 20, 2005 3:22:00 PM

Result Source:
Averaged

Analyzed:
Thursday, January 20, 2005 3:22:01 PM

Number of this Measurement:
1

Number of Measurements:
4

Particle Name:
Default

Accessory Name:
Hydro 2000S (A)

Pump Speed:
2000

Analysis model:
General purpose

Sensitivity:
Normal

Particle RI:
1.520

Absorption:
0.1

Size range:
0.020 to 2000.000 um

Obscuration:
13.51 %

Dispersant Name:
Water

Dispersant RI:
1.330

Weighted Residual:
0.800 %

Result Emulation:
Off

Concentration:
0.0165 %Vol

Span :
4.773

Uniformity:
1.66

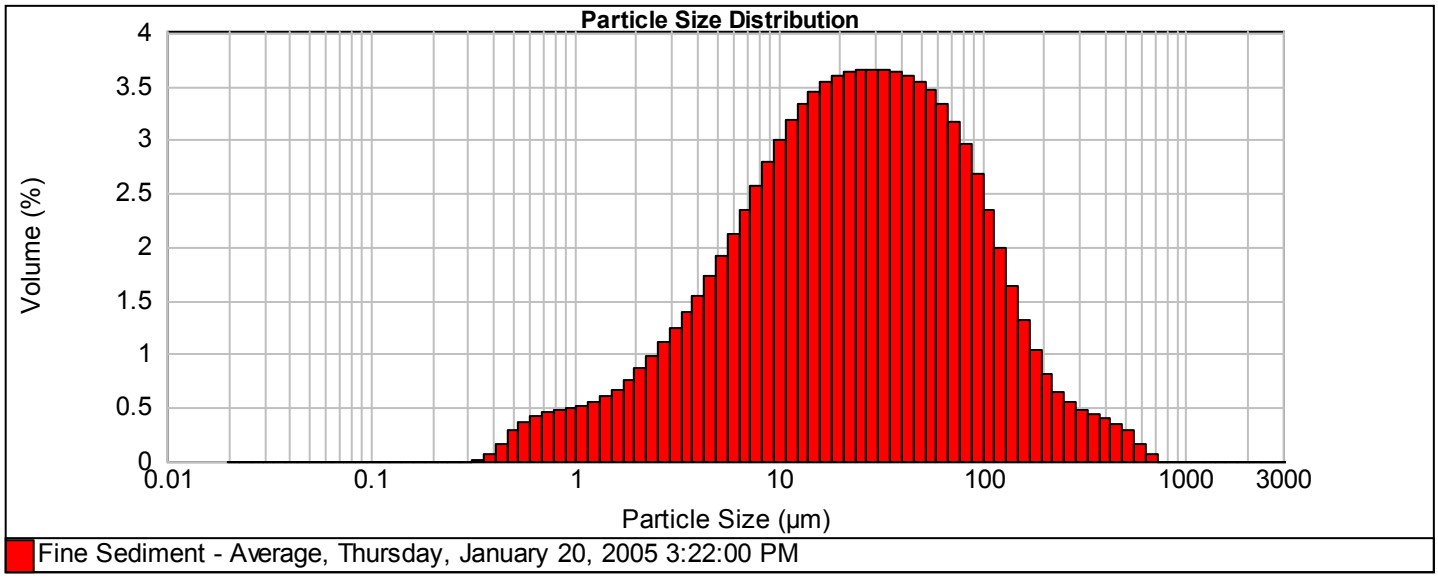
Result units:
Volume

Specific Surface Area:
0.795 m²/g

Surface Weighted Mean D[3,2]:
7.544 um

Vol. Weighted Mean D[4,3]:
49.391 um

d(0.1): 3.326 um **d(0.5): 23.761 um** **d(0.9): 116.748 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	5.07	16.125	39.41	150.082	93.46	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	5.83	18.386	42.95	171.127	94.77	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	6.70	20.964	46.54	195.123	95.80	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	7.69	23.904	50.17	222.484	96.61	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	8.80	27.256	53.81	253.681	97.26	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	10.04	31.078	57.46	289.253	97.81	2692.173	100.00
0.044	0.00	0.409	0.06	3.807	11.43	35.436	61.11	329.813	98.29	3069.677	100.00
0.050	0.00	0.466	0.23	4.341	12.98	40.405	64.73	376.060	98.74	3500.116	100.00
0.057	0.00	0.532	0.51	4.950	14.70	46.070	68.32	428.793	99.14	3990.912	100.00
0.065	0.00	0.606	0.87	5.644	16.62	52.531	71.86	488.919	99.49	4550.528	100.00
0.074	0.00	0.691	1.29	6.435	18.75	59.897	75.32	557.477	99.78	5188.616	100.00
0.085	0.00	0.788	1.75	7.338	21.10	68.295	78.66	635.647	99.94	5916.178	100.00
0.097	0.00	0.899	2.23	8.367	23.67	77.872	81.83	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	2.73	9.540	26.46	88.791	84.78	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	3.25	10.878	29.46	101.242	87.46	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	3.80	12.403	32.63	115.438	89.82	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	4.39	14.142	35.96	131.625	91.81	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-07-3*
Analyst: KB
Particle Technology Labs *PTL ID: 44346*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Thursday, January 20, 2005 3:56:08 PM

Result Source:
Averaged

Analyzed:
Thursday, January 20, 2005 3:56:09 PM

Number of this Measurement:
1

Number of Measurements:
4

Particle Name:
Default

Accessory Name:
Hydro 2000S (A)

Pump Speed:
2000

Analysis model:
General purpose

Sensitivity:
Normal

Particle RI:
1.520

Absorption:
0.1

Size range:
0.020 to 2000.000 um

Obscuration:
14.72 %

Dispersant Name:
Water

Dispersant RI:
1.330

Weighted Residual:
0.834 %

Result Emulation:
Off

Concentration:
0.0177 %Vol

Span :
4.272

Uniformity:
1.54

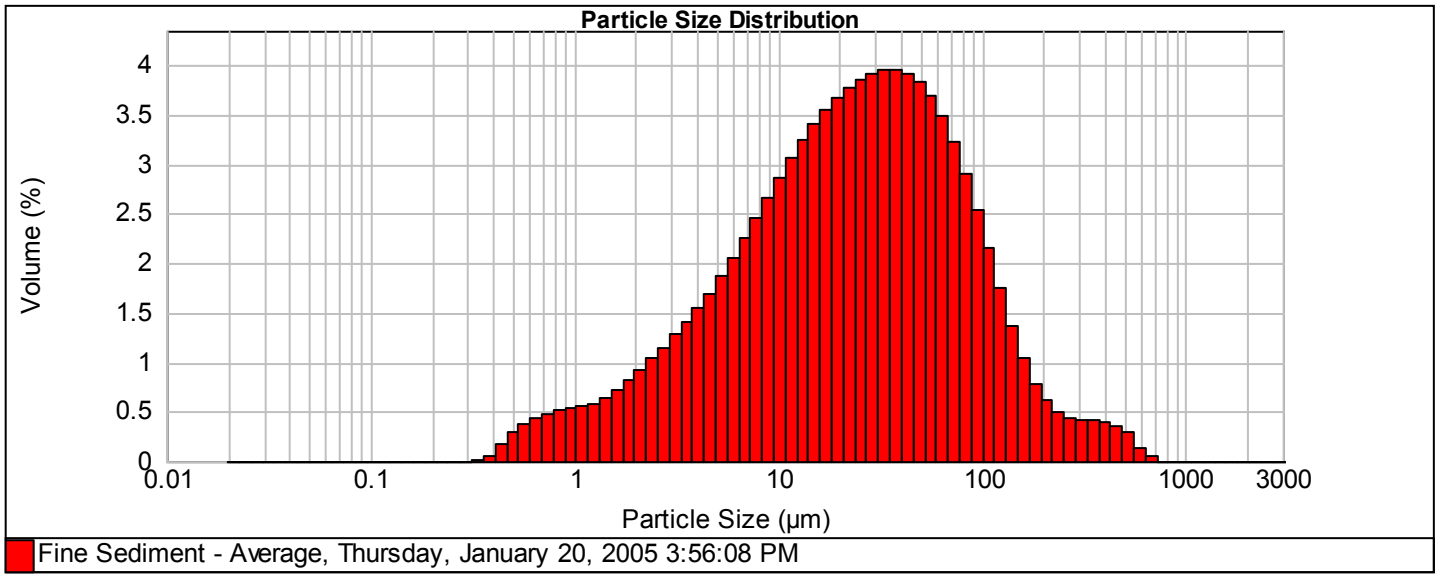
Result units:
Volume

Specific Surface Area:
0.815 m²/g

Surface Weighted Mean D[3,2]:
7.366 um

Vol. Weighted Mean D[4,3]:
46.625 um

d(0.1): 3.167 um **d(0.5): 23.881 um** **d(0.9): 105.188 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	5.33	16.125	39.06	150.082	94.59	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	6.15	18.386	42.60	171.127	95.63	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	7.07	20.964	46.26	195.123	96.41	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	8.10	23.904	50.03	222.484	97.02	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	9.25	27.256	53.88	253.681	97.52	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	10.53	31.078	57.80	289.253	97.96	2692.173	100.00
0.044	0.00	0.409	0.06	3.807	11.94	35.436	61.75	329.813	98.37	3069.677	100.00
0.050	0.00	0.466	0.23	4.341	13.48	40.405	65.70	376.060	98.78	3500.116	100.00
0.057	0.00	0.532	0.52	4.950	15.18	46.070	69.62	428.793	99.18	3990.912	100.00
0.065	0.00	0.606	0.89	5.644	17.05	52.531	73.45	488.919	99.53	4550.528	100.00
0.074	0.00	0.691	1.33	6.435	19.10	59.897	77.15	557.477	99.82	5188.616	100.00
0.085	0.00	0.788	1.81	7.338	21.35	68.295	80.64	635.647	99.96	5916.178	100.00
0.097	0.00	0.899	2.31	8.367	23.80	77.872	83.87	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	2.84	9.540	26.47	88.791	86.79	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	3.39	10.878	29.34	101.242	89.33	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	3.97	12.403	32.41	115.438	91.48	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	4.61	14.142	35.65	131.625	93.22	1225.081	100.00		

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-07-4*
Analyst: KB
Particle Technology Labs *PTL ID: 44347*

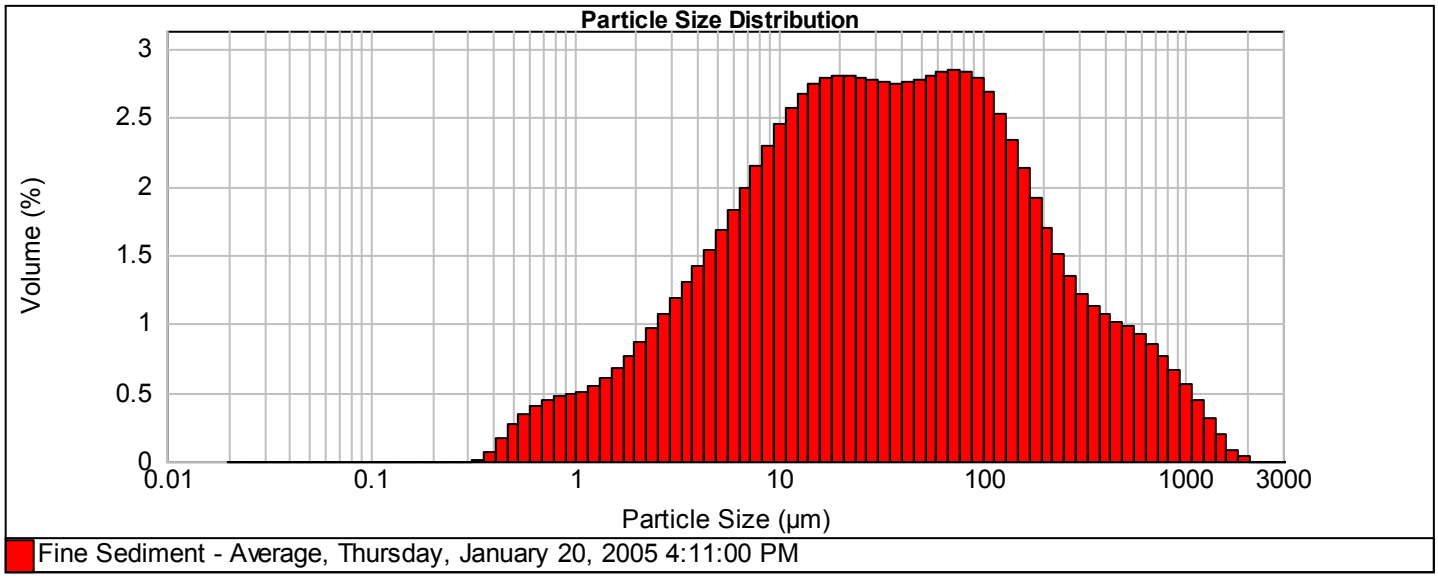
SOP Name: Sea Engineering - Fine Sediment
Result Source: Averaged
Number of this Measurement: 1

Measured: Thursday, January 20, 2005 4:11:00 PM
Analyzed: Thursday, January 20, 2005 4:11:01 PM
Number of Measurements: 4

Particle Name: Default	**Accessory Name:** Hydro 2000S (A)	**Pump Speed:** 2000	**Analysis model:** General purpose	**Sensitivity:** Normal
Particle RI: 1.520	**Absorption:** 0.1		**Size range:** 0.020 to 2000.000 um	**Obscuration:** 14.63 %
Dispersant Name: Water	**Dispersant RI:** 1.330		**Weighted Residual:** 0.764 %	**Result Emulation:** Off

Concentration: 0.0195 %Vol	**Span :** 8.772	**Uniformity:** 2.99	**Result units:** Volume
Specific Surface Area: 0.736 m²/g	**Surface Weighted Mean D[3,2]:** 8.149 um	**Vol. Weighted Mean D[4,3]:** 112.270 um	

d(0.1): 3.402 um **d(0.5): 33.461 um** **d(0.9): 296.916 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	4.97	16.125	34.46	150.082	81.15	1396.865	99.68
0.023	0.00	0.212	0.00	1.975	5.73	18.386	37.25	171.127	83.28	1592.737	99.88
0.026	0.00	0.242	0.00	2.252	6.59	20.964	40.06	195.123	85.19	1816.075	99.96
0.030	0.00	0.276	0.00	2.568	7.56	23.904	42.87	222.484	86.89	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	8.64	27.256	45.67	253.681	88.40	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	9.82	31.078	48.44	289.253	89.75	2692.173	100.00
0.044	0.00	0.409	0.07	3.807	11.12	35.436	51.20	329.813	90.97	3069.677	100.00
0.050	0.00	0.466	0.23	4.341	12.53	40.405	53.96	376.060	92.10	3500.116	100.00
0.057	0.00	0.532	0.50	4.950	14.08	46.070	56.71	428.793	93.16	3990.912	100.00
0.065	0.00	0.606	0.84	5.644	15.76	52.531	59.49	488.919	94.18	4550.528	100.00
0.074	0.00	0.691	1.24	6.435	17.59	59.897	62.29	557.477	95.16	5188.616	100.00
0.085	0.00	0.788	1.68	7.338	19.57	68.295	65.12	635.647	96.09	5916.178	100.00
0.097	0.00	0.899	2.15	8.367	21.72	77.872	67.97	724.780	96.94	6745.760	100.00
0.110	0.00	1.025	2.64	9.540	24.02	88.791	70.80	826.410	97.71	7691.669	100.00
0.126	0.00	1.169	3.15	10.878	26.46	101.242	73.59	942.292	98.37	8770.216	100.00
0.143	0.00	1.333	3.69	12.403	29.04	115.438	76.27	1074.423	98.93	10000.000	100.00
0.163	0.00	1.519	4.29	14.142	31.71	131.625	78.80	1225.081	99.37		

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-07-5*
Analyst: KB
Particle Technology Labs *PTL ID: 44348*

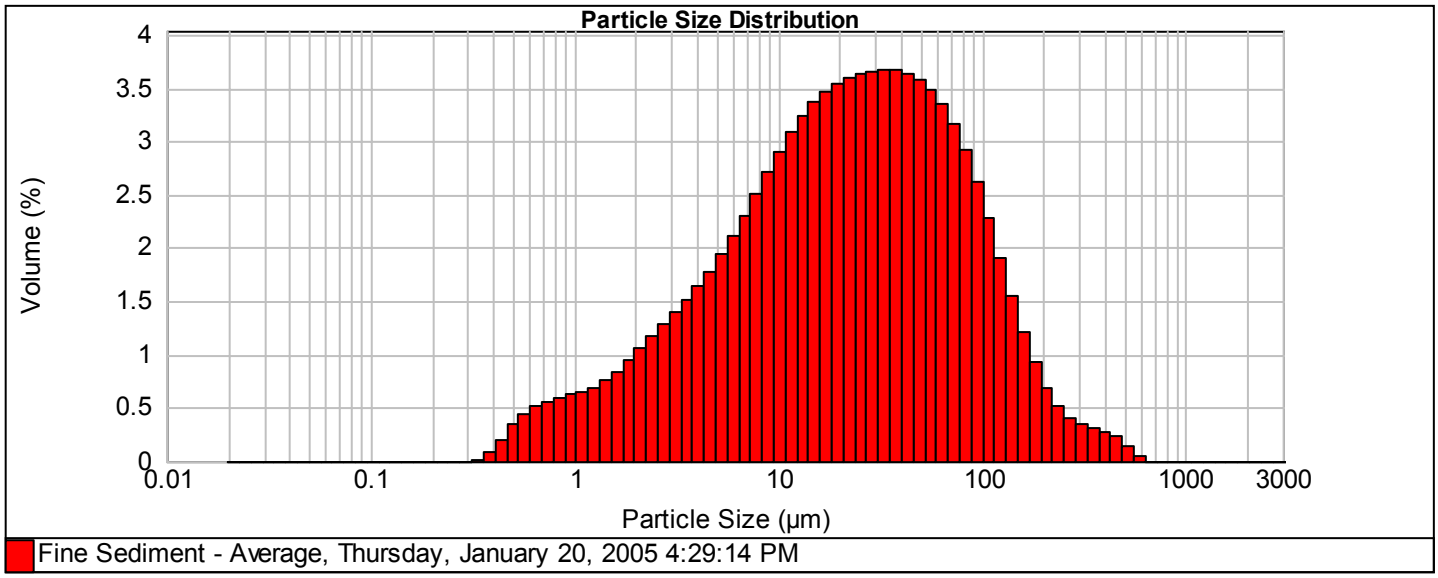
SOP Name: Sea Engineering - Fine Sediment
Result Source: Averaged
Number of this Measurement: 1

Measured: Thursday, January 20, 2005 4:29:14 PM
Analyzed: Thursday, January 20, 2005 4:29:15 PM
Number of Measurements: 4

Particle Name: Default	**Accessory Name:** Hydro 2000S (A)	**Pump Speed:** 2000	**Analysis model:** General purpose	**Sensitivity:** Normal
Particle RI: 1.520	**Absorption:** 0.1		**Size range:** 0.020 to 2000.000 um	**Obscuration:** 13.84 %
Dispersant Name: Water	**Dispersant RI:** 1.330		**Weighted Residual:** 0.898 %	**Result Emulation:** Off

Concentration: 0.0151 %Vol	**Span :** 4.614	**Uniformity:** 1.56	**Result units:** Volume
Specific Surface Area: 0.901 m²/g	**Surface Weighted Mean D[3,2]:** 6.657 um	**Vol. Weighted Mean D[4,3]:** 43.942 um	

d(0.1): 2.719 um **d(0.5): 22.393 um** **d(0.9): 106.033 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	6.30	16.125	41.20	150.082	94.88	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	7.24	18.386	44.66	171.127	96.09	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	8.29	20.964	48.20	195.123	97.01	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	9.46	23.904	51.79	222.484	97.71	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	10.74	27.256	55.43	253.681	98.23	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	12.13	31.078	59.09	289.253	98.64	2692.173	100.00
0.044	0.00	0.409	0.08	3.807	13.65	35.436	62.76	329.813	98.99	3069.677	100.00
0.050	0.00	0.466	0.29	4.341	15.29	40.405	66.42	376.060	99.29	3500.116	100.00
0.057	0.00	0.532	0.63	4.950	17.07	46.070	70.06	428.793	99.57	3990.912	100.00
0.065	0.00	0.606	1.07	5.644	19.00	52.531	73.63	488.919	99.80	4550.528	100.00
0.074	0.00	0.691	1.58	6.435	21.12	59.897	77.12	557.477	99.95	5188.616	100.00
0.085	0.00	0.788	2.14	7.338	23.42	68.295	80.47	635.647	100.00	5916.178	100.00
0.097	0.00	0.899	2.73	8.367	25.92	77.872	83.63	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	3.36	9.540	28.62	88.791	86.54	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	4.01	10.878	31.52	101.242	89.16	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	4.70	12.403	34.60	115.438	91.43	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	5.45	14.142	37.83	131.625	93.34	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-08-1*
Analyst: KB
Particle Technology Labs *PTL ID: 44349*

SOP Name: Sea Engineering - Fine Sediment
Result Source: Averaged
Number of this Measurement: 1

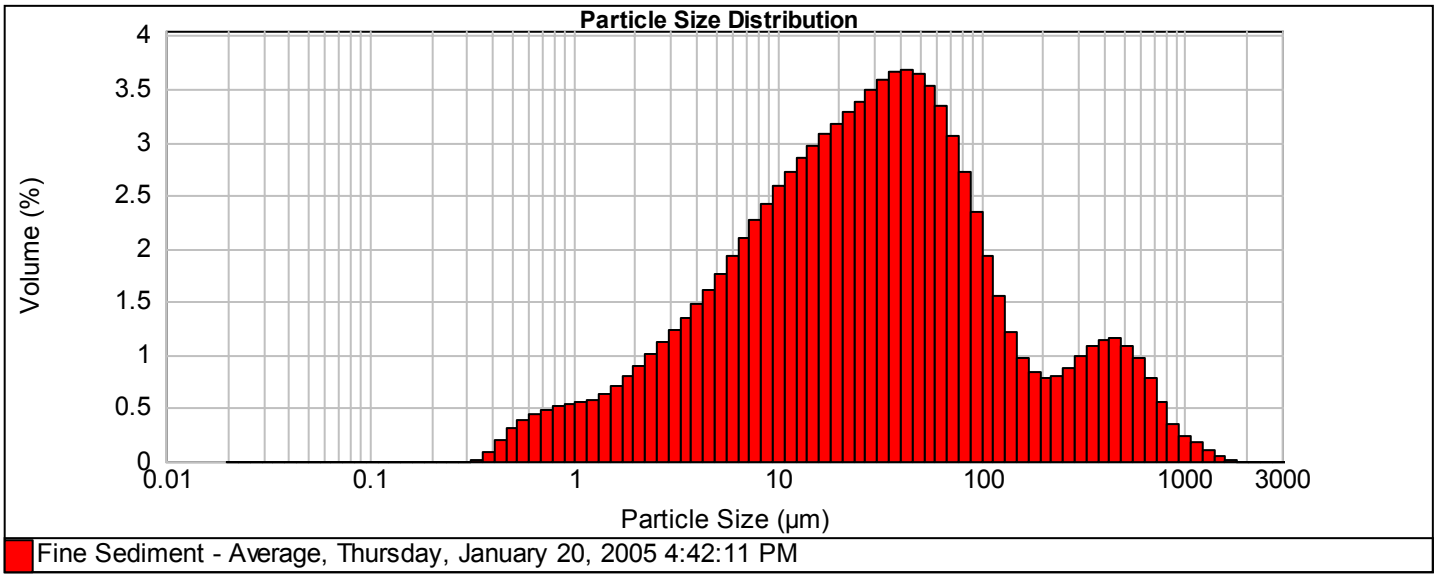
Measured: Thursday, January 20, 2005 4:42:11 PM
Analyzed: Thursday, January 20, 2005 4:42:12 PM
Number of Measurements: 4

Particle Name:	Accessory Name:	Pump Speed:	Analysis model:	Sensitivity:
Default	Hydro 2000S (A)	2000	General purpose	Normal
Particle RI:	**Absorption:**		**Size range:**	**Obscuration:**
1.520	0.1		0.020 to 2000.000 um	14.45 %
Dispersant Name:	**Dispersant RI:**		**Weighted Residual:**	**Result Emulation:**
Water	1.330		0.793 %	Off

Concentration:	Span :	Uniformity:	Result units:
0.0180 %Vol	8.308	2.66	Volume

Specific Surface Area:	Surface Weighted Mean D[3,2]:	Vol. Weighted Mean D[4,3]:
0.796 m²/g	7.540 um	85.080 um

d(0.1): 3.193 um **d(0.5): 27.938 um** **d(0.9): 235.308 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	5.40	16.125	36.45	150.082	87.08	1396.865	99.95
0.023	0.00	0.212	0.00	1.975	6.20	18.386	39.51	171.127	88.05	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	7.09	20.964	42.69	195.123	88.88	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	8.09	23.904	45.96	222.484	89.66	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	9.21	27.256	49.35	253.681	90.47	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	10.43	31.078	52.84	289.253	91.35	2692.173	100.00
0.044	0.00	0.409	0.09	3.807	11.78	35.436	56.43	329.813	92.33	3069.677	100.00
0.050	0.00	0.466	0.28	4.341	13.26	40.405	60.08	376.060	93.41	3500.116	100.00
0.057	0.00	0.532	0.58	4.950	14.87	46.070	63.76	428.793	94.55	3990.912	100.00
0.065	0.00	0.606	0.96	5.644	16.64	52.531	67.40	488.919	95.70	4550.528	100.00
0.074	0.00	0.691	1.41	6.435	18.56	59.897	70.93	557.477	96.79	5188.616	100.00
0.085	0.00	0.788	1.89	7.338	20.65	68.295	74.26	635.647	97.75	5916.178	100.00
0.097	0.00	0.899	2.40	8.367	22.91	77.872	77.32	724.780	98.53	6745.760	100.00
0.110	0.00	1.025	2.93	9.540	25.33	88.791	80.04	826.410	99.07	7691.669	100.00
0.126	0.00	1.169	3.48	10.878	27.91	101.242	82.38	942.292	99.43	8770.216	100.00
0.143	0.00	1.333	4.06	12.403	30.63	115.438	84.31	1074.423	99.66	10000.000	100.00
0.163	0.00	1.519	4.70	14.142	33.48	131.625	85.86	1225.081	99.84		

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-08-2*
Analyst: KB
Particle Technology Labs *PTL ID: 44350*

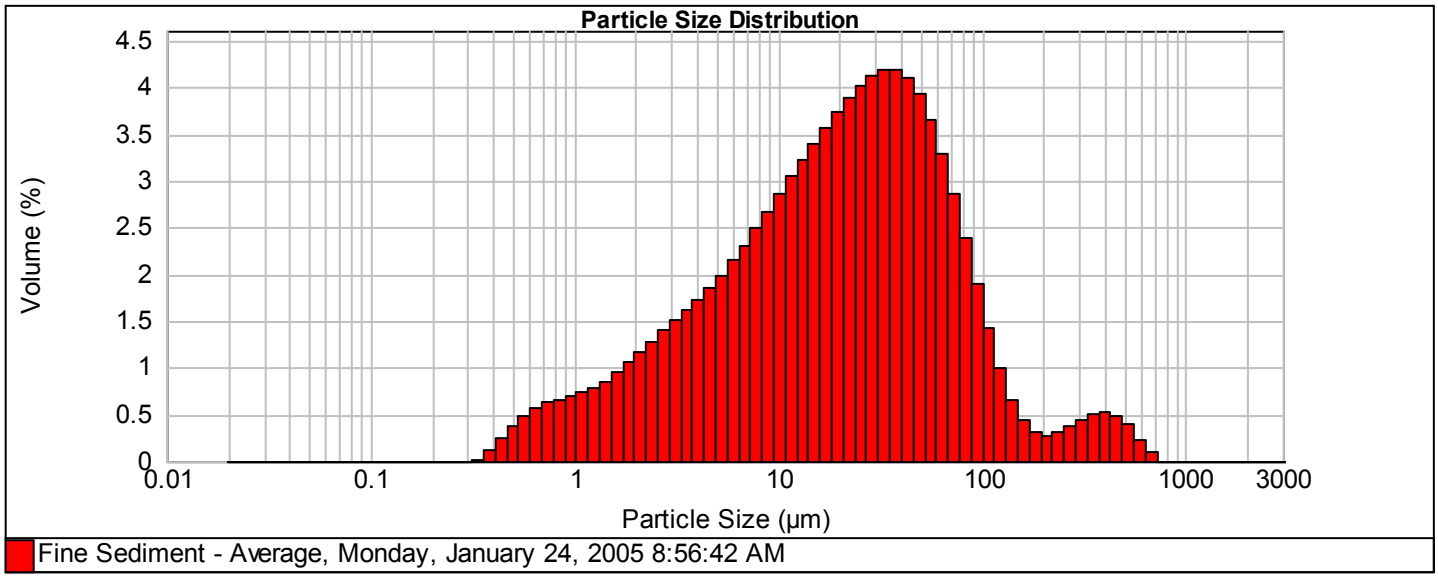
SOP Name: Sea Engineering - Fine Sediment
Result Source: Averaged
Number of this Measurement: 1

Measured: Monday, January 24, 2005 8:56:42 AM
Analyzed: Monday, January 24, 2005 8:56:43 AM
Number of Measurements: 4

Particle Name: Default	**Accessory Name:** Hydro 2000S (A)	**Pump Speed:** 2000	**Analysis model:** General purpose	**Sensitivity:** Normal
Particle RI: 1.520	**Absorption:** 0.1		**Size range:** 0.020 to 2000.000 um	**Obscuration:** 15.13 %
Dispersant Name: Water	**Dispersant RI:** 1.330		**Weighted Residual:** 0.854 %	**Result Emulation:** Off

Concentration: 0.0154 %Vol	**Span :** 3.965	**Uniformity:** 1.64	**Result units:** Volume
Specific Surface Area: 0.979 m²/g	**Surface Weighted Mean D[3,2]:** 6.130 um	**Vol. Weighted Mean D[4,3]:** 42.605 um	

d(0.1): 2.422 um **d(0.5): 20.874 um** **d(0.9): 85.190 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	7.08	16.125	42.83	150.082	95.66	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	8.13	18.386	46.40	171.127	96.09	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	9.30	20.964	50.13	195.123	96.40	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	10.59	23.904	54.01	222.484	96.67	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	11.98	27.256	58.02	253.681	96.98	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	13.49	31.078	62.14	289.253	97.35	2692.173	100.00
0.044	0.00	0.409	0.11	3.807	15.10	35.436	66.33	329.813	97.80	3069.677	100.00
0.050	0.00	0.466	0.35	4.341	16.83	40.405	70.51	376.060	98.30	3500.116	100.00
0.057	0.00	0.532	0.73	4.950	18.69	46.070	74.61	428.793	98.82	3990.912	100.00
0.065	0.00	0.606	1.21	5.644	20.68	52.531	78.53	488.919	99.29	4550.528	100.00
0.074	0.00	0.691	1.78	6.435	22.82	59.897	82.18	557.477	99.69	5188.616	100.00
0.085	0.00	0.788	2.40	7.338	25.13	68.295	85.46	635.647	99.91	5916.178	100.00
0.097	0.00	0.899	3.06	8.367	27.61	77.872	88.32	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	3.76	9.540	30.29	88.791	90.70	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	4.49	10.878	33.15	101.242	92.58	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	5.27	12.403	36.20	115.438	94.00	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	6.13	14.142	39.43	131.625	95.00	1225.081	100.00		

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-08-3*
Analyst: KB
Particle Technology Labs *PTL ID: 44351*

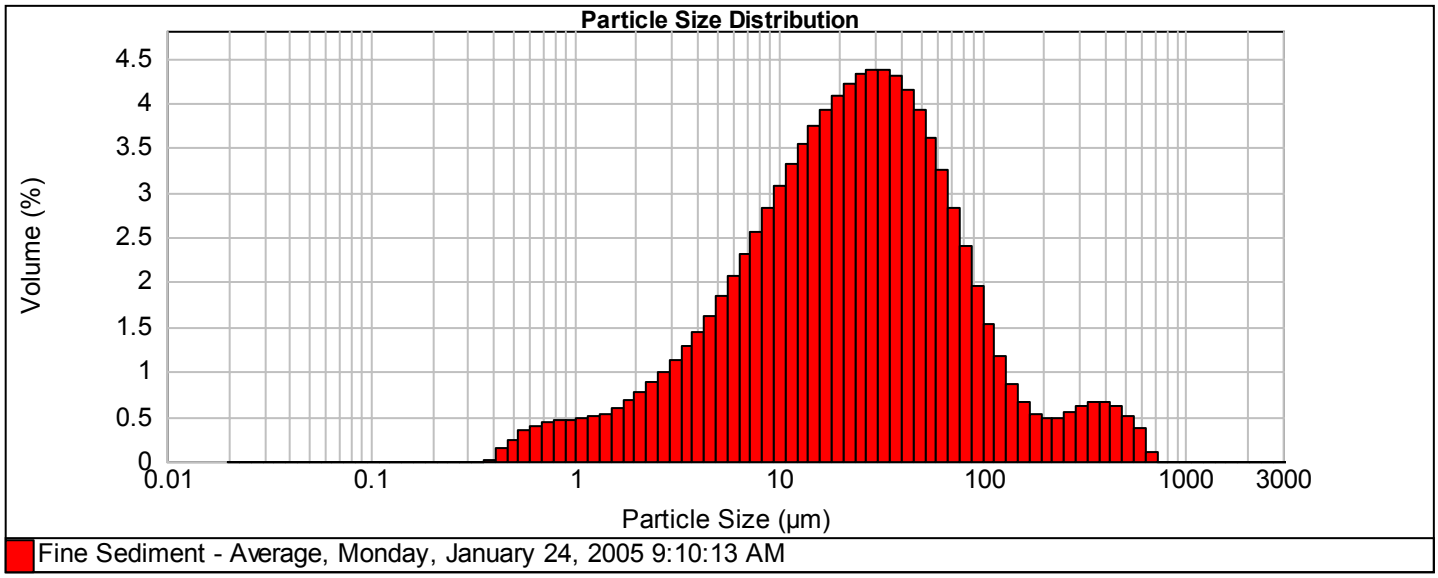
SOP Name: Sea Engineering - Fine Sediment
Result Source: Averaged
Number of this Measurement: 1

Measured: Monday, January 24, 2005 9:10:13 AM
Analyzed: Monday, January 24, 2005 9:10:14 AM
Number of Measurements: 4

Particle Name: Default	**Accessory Name:** Hydro 2000S (A)	**Pump Speed:** 2000	**Analysis model:** General purpose	**Sensitivity:** Normal
Particle RI: 1.520	**Absorption:** 0.1		**Size range:** 0.020 to 2000.000 um	**Obscuration:** 14.72 %
Dispersant Name: Water	**Dispersant RI:** 1.330		**Weighted Residual:** 0.763 %	**Result Emulation:** Off

Concentration: 0.0191 %Vol	**Span :** 4.111	**Uniformity:** 1.69	**Result units:** Volume
Specific Surface Area: 0.745 m²/g	**Surface Weighted Mean D[3,2]:** 8.049 um	**Vol. Weighted Mean D[4,3]:** 49.719 um	

d(0.1): 3.713 um **d(0.5): 23.351 um** **d(0.9): 99.708 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	4.53	16.125	38.55	150.082	93.78	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	5.21	18.386	42.47	171.127	94.43	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	5.98	20.964	46.55	195.123	94.95	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	6.86	23.904	50.76	222.484	95.43	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	7.85	27.256	55.07	253.681	95.92	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	8.98	31.078	59.44	289.253	96.46	2692.173	100.00
0.044	0.00	0.409	0.00	3.807	10.26	35.436	63.80	329.813	97.08	3069.677	100.00
0.050	0.00	0.466	0.14	4.341	11.70	40.405	68.09	376.060	97.74	3500.116	100.00
0.057	0.00	0.532	0.38	4.950	13.32	46.070	72.23	428.793	98.40	3990.912	100.00
0.065	0.00	0.606	0.72	5.644	15.16	52.531	76.15	488.919	99.02	4550.528	100.00
0.074	0.00	0.691	1.11	6.435	17.22	59.897	79.76	557.477	99.53	5188.616	100.00
0.085	0.00	0.788	1.54	7.338	19.53	68.295	83.01	635.647	99.89	5916.178	100.00
0.097	0.00	0.899	1.98	8.367	22.09	77.872	85.85	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	2.44	9.540	24.90	88.791	88.25	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	2.91	10.878	27.97	101.242	90.21	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	3.41	12.403	31.28	115.438	91.75	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	3.94	14.142	34.82	131.625	92.91	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-08-4*
Analyst: KB
Particle Technology Labs *PTL ID: 44352*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Monday, January 24, 2005 9:22:40 AM

Result Source:
Averaged

Analyzed:
Monday, January 24, 2005 9:22:41 AM

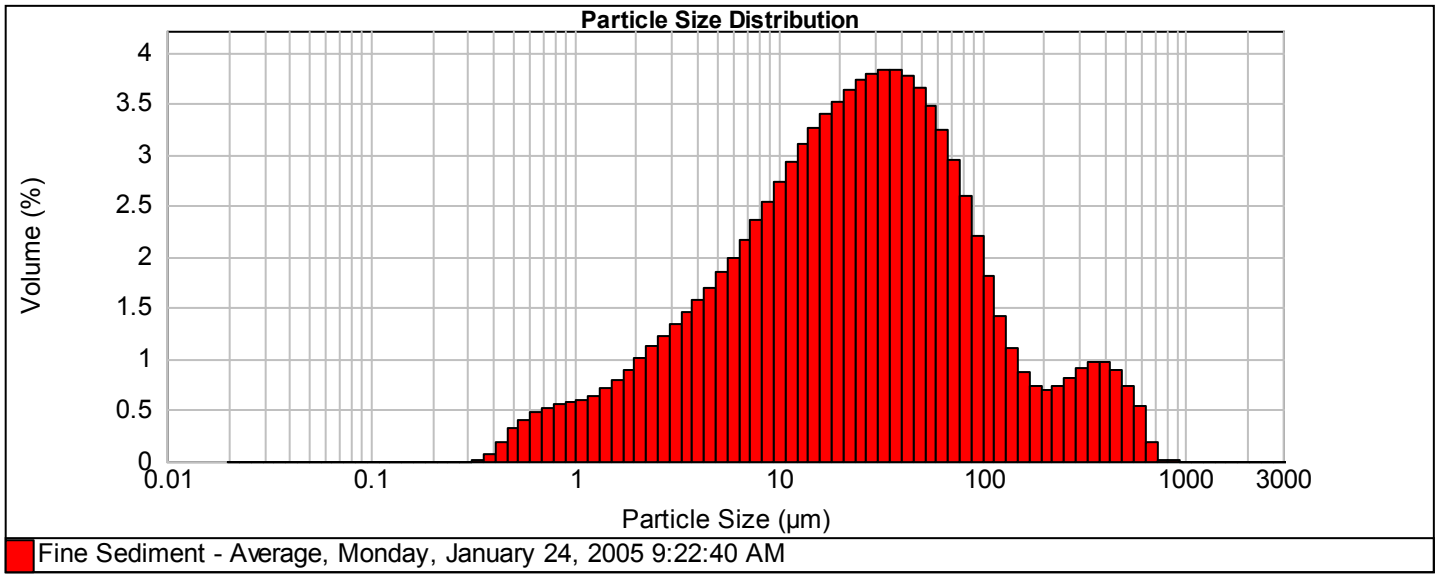
Number of this Measurement:
1

Number of Measurements:
4

Particle Name:	**Accessory Name:**	**Pump Speed:**	**Analysis model:**	**Sensitivity:**
Default	Hydro 2000S (A)	2000	General purpose	Normal
Particle RI:	**Absorption:**		**Size range:**	**Obscuration:**
1.520	0.1		0.020 to 2000.000 um	15.54 %
Dispersant Name:	**Dispersant RI:**		**Weighted Residual:**	**Result Emulation:**
Water	1.330		0.849 %	Off

Concentration:	**Span :**	**Uniformity:**	**Result units:**
0.0180 %Vol	5.381	2.04	Volume
Specific Surface Area:	**Surface Weighted Mean D[3,2]:**	**Vol. Weighted Mean D[4,3]:**	
0.85 m²/g	7.056 um	59.236 um	

d(0.1): 2.904 um **d(0.5): 24.235 um** **d(0.9): 133.321 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	5.84	16.125	39.06	150.082	90.99	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	6.73	18.386	42.46	171.127	91.85	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	7.74	20.964	45.98	195.123	92.59	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	8.85	23.904	49.61	222.484	93.28	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	10.08	27.256	53.34	253.681	94.01	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	11.42	31.078	57.13	289.253	94.82	2692.173	100.00
0.044	0.00	0.409	0.07	3.807	12.88	35.436	60.96	329.813	95.72	3069.677	100.00
0.050	0.00	0.466	0.26	4.341	14.45	40.405	64.78	376.060	96.68	3500.116	100.00
0.057	0.00	0.532	0.58	4.950	16.15	46.070	68.55	428.793	97.65	3990.912	100.00
0.065	0.00	0.606	0.97	5.644	17.99	52.531	72.20	488.919	98.54	4550.528	100.00
0.074	0.00	0.691	1.44	6.435	19.99	59.897	75.68	557.477	99.26	5188.616	100.00
0.085	0.00	0.788	1.96	7.338	22.16	68.295	78.92	635.647	99.79	5916.178	100.00
0.097	0.00	0.899	2.51	8.367	24.51	77.872	81.86	724.780	99.98	6745.760	100.00
0.110	0.00	1.025	3.09	9.540	27.05	88.791	84.45	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	3.69	10.878	29.79	101.242	86.65	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	4.34	12.403	32.71	115.438	88.45	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	5.04	14.142	35.80	131.625	89.88	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-08-5*
Analyst: KB
Particle Technology Labs *PTL ID: 44353*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Monday, January 24, 2005 9:35:02 AM

Result Source:
Averaged

Analyzed:
Monday, January 24, 2005 9:35:03 AM

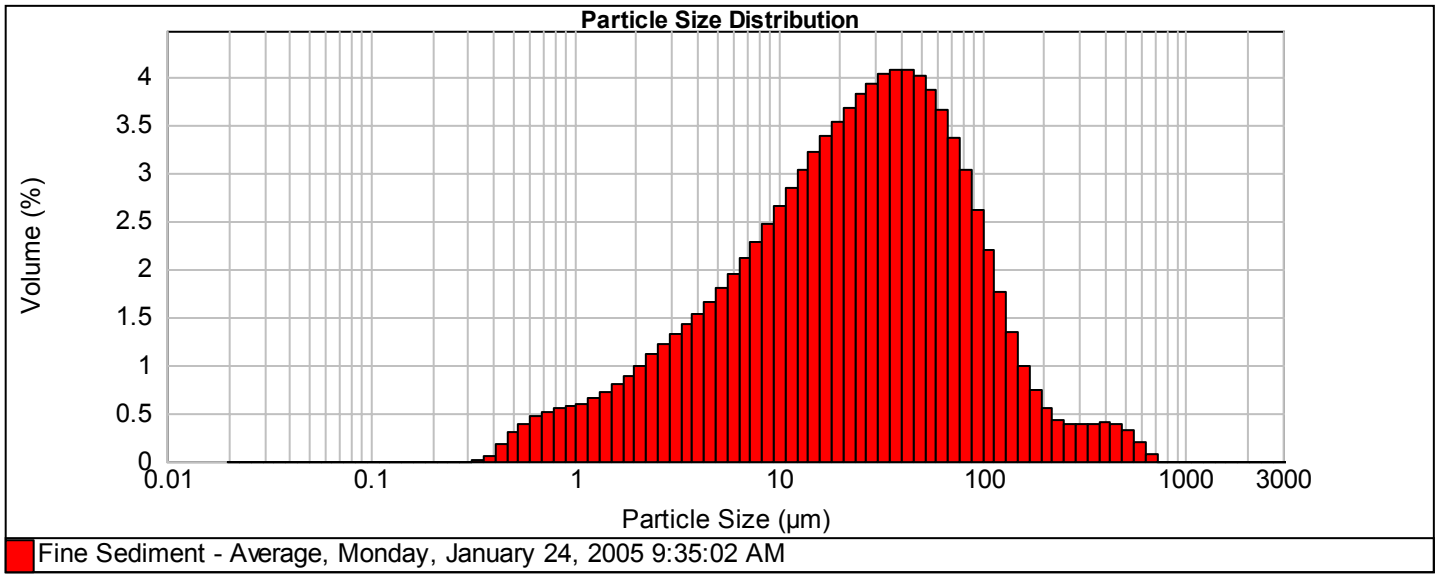
Number of this Measurement:
1

Number of Measurements:
4

Particle Name: Default	**Accessory Name:** Hydro 2000S (A)	**Pump Speed:** 2000	**Analysis model:** General purpose	**Sensitivity:** Normal
Particle RI: 1.520	**Absorption:** 0.1		**Size range:** 0.020 to 2000.000 um	**Obscuration:** 14.02 %
Dispersant Name: Water	**Dispersant RI:** 1.330		**Weighted Residual:** 0.838 %	**Result Emulation:** Off

Concentration: 0.0163 %Vol	**Span :** 4.092	**Uniformity:** 1.51	**Result units:** Volume
Specific Surface Area: 0.839 m²/g	**Surface Weighted Mean D[3,2]:** 7.151 um	**Vol. Weighted Mean D[4,3]:** 47.402 um	

d(0.1): 2.934 um **d(0.5): 24.809 um** **d(0.9): 104.456 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	5.76	16.125	38.33	150.082	94.73	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	6.66	18.386	41.71	171.127	95.73	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	7.66	20.964	45.25	195.123	96.46	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	8.77	23.904	48.93	222.484	97.01	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	9.98	27.256	52.75	253.681	97.44	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	11.30	31.078	56.69	289.253	97.83	2692.173	100.00
0.044	0.00	0.409	0.06	3.807	12.74	35.436	60.72	329.813	98.22	3069.677	100.00
0.050	0.00	0.466	0.23	4.341	14.28	40.405	64.80	376.060	98.61	3500.116	100.00
0.057	0.00	0.532	0.53	4.950	15.94	46.070	68.87	428.793	99.01	3990.912	100.00
0.065	0.00	0.606	0.92	5.644	17.74	52.531	72.88	488.919	99.39	4550.528	100.00
0.074	0.00	0.691	1.38	6.435	19.69	59.897	76.75	557.477	99.72	5188.616	100.00
0.085	0.00	0.788	1.89	7.338	21.80	68.295	80.41	635.647	99.92	5916.178	100.00
0.097	0.00	0.899	2.43	8.367	24.08	77.872	83.78	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	3.01	9.540	26.56	88.791	86.81	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	3.61	10.878	29.22	101.242	89.44	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	4.26	12.403	32.08	115.438	91.63	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	4.97	14.142	35.12	131.625	93.38	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-09-1*
Analyst: KB
Particle Technology Labs *PTL ID: 44354*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Monday, January 24, 2005 9:53:23 AM

Result Source:
Averaged

Analyzed:
Monday, January 24, 2005 9:53:24 AM

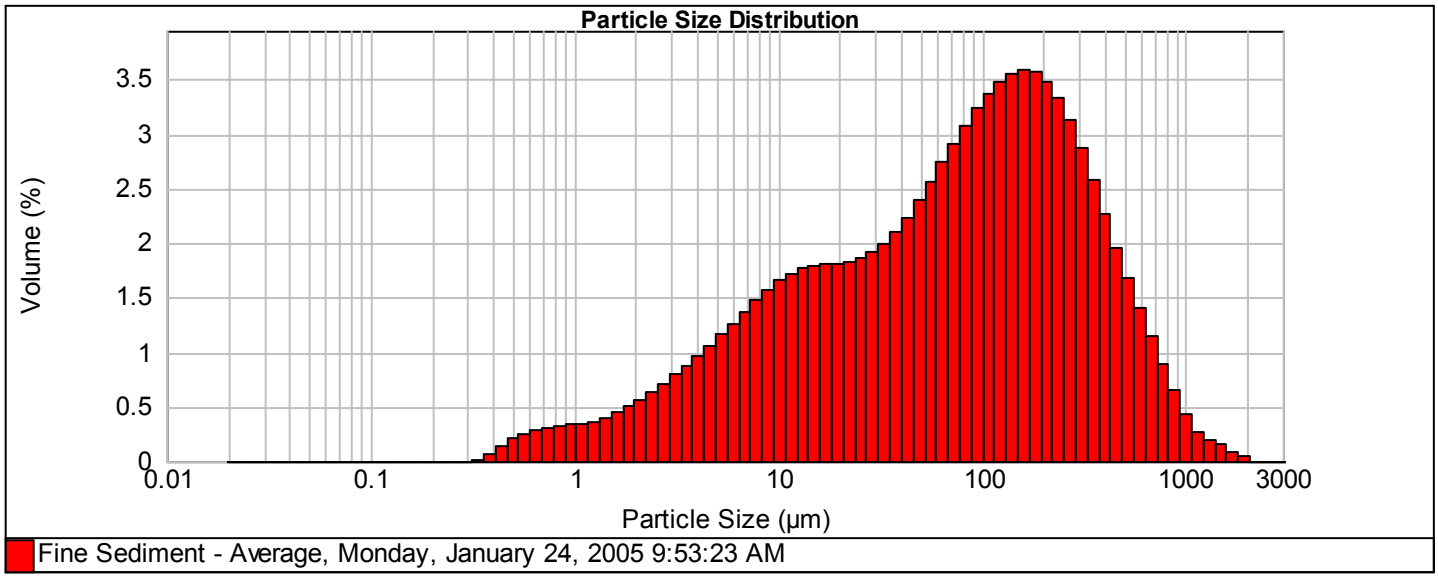
Number of this Measurement:
1

Number of Measurements:
4

Particle Name: Default	**Accessory Name:** Hydro 2000S (A)	**Pump Speed:** 2000	**Analysis model:** General purpose	**Sensitivity:** Normal
Particle RI: 1.520	**Absorption:** 0.1		**Size range:** 0.020 to 2000.000 um	**Obscuration:** 14.50 %
Dispersant Name: Water	**Dispersant RI:** 1.330		**Weighted Residual:** 0.530 %	**Result Emulation:** Off

Concentration: 0.0277 %Vol	**Span :** 4.991	**Uniformity:** 1.63	**Result units:** Volume
Specific Surface Area: 0.525 m²/g	**Surface Weighted Mean D[3,2]:** 11.439 um	**Vol. Weighted Mean D[4,3]:** 155.152 um	

d(0.1): 5.205 um **d(0.5): 79.403 um** **d(0.9): 401.518 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	3.46	16.125	23.37	150.082	66.28	1396.865	99.72
0.023	0.00	0.212	0.00	1.975	3.96	18.386	25.18	171.127	69.86	1592.737	99.87
0.026	0.00	0.242	0.00	2.252	4.53	20.964	26.99	195.123	73.44	1816.075	99.96
0.030	0.00	0.276	0.00	2.568	5.17	23.904	28.82	222.484	76.92	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	5.88	27.256	30.68	253.681	80.26	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	6.67	31.078	32.60	289.253	83.39	2692.173	100.00
0.044	0.00	0.409	0.07	3.807	7.55	35.436	34.60	329.813	86.26	3069.677	100.00
0.050	0.00	0.466	0.21	4.341	8.51	40.405	36.70	376.060	88.83	3500.116	100.00
0.057	0.00	0.532	0.42	4.950	9.57	46.070	38.95	428.793	91.10	3990.912	100.00
0.065	0.00	0.606	0.67	5.644	10.73	52.531	41.34	488.919	93.06	4550.528	100.00
0.074	0.00	0.691	0.96	6.435	11.99	59.897	43.90	557.477	94.74	5188.616	100.00
0.085	0.00	0.788	1.27	7.338	13.37	68.295	46.64	635.647	96.14	5916.178	100.00
0.097	0.00	0.899	1.59	8.367	14.85	77.872	49.55	724.780	97.28	6745.760	100.00
0.110	0.00	1.025	1.93	9.540	16.43	88.791	52.64	826.410	98.18	7691.669	100.00
0.126	0.00	1.169	2.27	10.878	18.09	101.242	55.87	942.292	98.83	8770.216	100.00
0.143	0.00	1.333	2.63	12.403	19.82	115.438	59.24	1074.423	99.26	10000.000	100.00
0.163	0.00	1.519	3.02	14.142	21.58	131.625	62.72	1225.081	99.52		

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-09-2*
Analyst: KB
Particle Technology Labs *PTL ID: 44355*

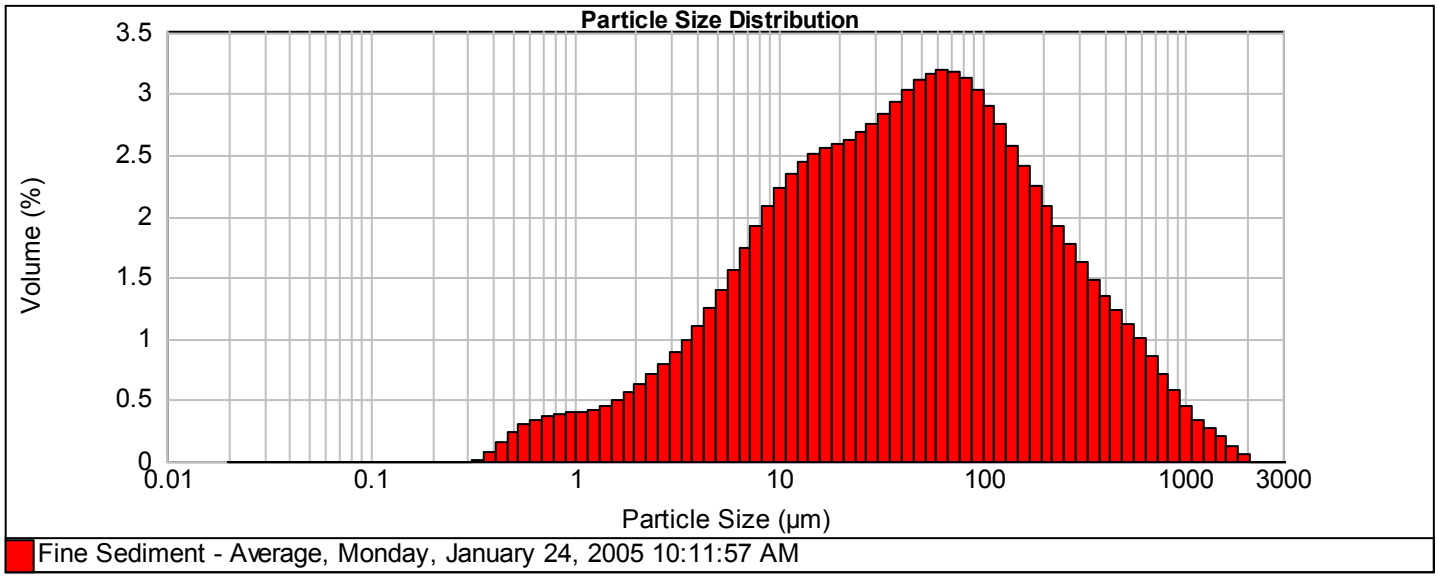
SOP Name: Sea Engineering - Fine Sediment
Result Source: Averaged
Number of this Measurement: 1

Measured: Monday, January 24, 2005 10:11:57 AM
Analyzed: Monday, January 24, 2005 10:11:58 AM
Number of Measurements: 4

Particle Name: Default	**Accessory Name:** Hydro 2000S (A)	**Pump Speed:** 2000	**Analysis model:** General purpose	**Sensitivity:** Normal
Particle RI: 1.520	**Absorption:** 0.1		**Size range:** 0.020 to 2000.000 um	**Obscuration:** 15.72 %
Dispersant Name: Water	**Dispersant RI:** 1.330		**Weighted Residual:** 0.643 %	**Result Emulation:** Off

Concentration: 0.0254 %Vol	**Span :** 7.267	**Uniformity:** 2.39	**Result units:** Volume
Specific Surface Area: 0.619 m²/g	**Surface Weighted Mean D[3,2]:** 9.695 um	**Vol. Weighted Mean D[4,3]:** 120.797 um	

d(0.1): 4.493 um **d(0.5): 43.808 um** **d(0.9): 322.848 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	4.02	16.125	29.18	150.082	78.20	1396.865	99.62
0.023	0.00	0.212	0.00	1.975	4.58	18.386	31.73	171.127	80.61	1592.737	99.83
0.026	0.00	0.242	0.00	2.252	5.21	20.964	34.31	195.123	82.86	1816.075	99.94
0.030	0.00	0.276	0.00	2.568	5.91	23.904	36.94	222.484	84.94	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	6.70	27.256	39.62	253.681	86.86	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	7.59	31.078	42.37	289.253	88.63	2692.173	100.00
0.044	0.00	0.409	0.07	3.807	8.58	35.436	45.21	329.813	90.25	3069.677	100.00
0.050	0.00	0.466	0.22	4.341	9.69	40.405	48.14	376.060	91.74	3500.116	100.00
0.057	0.00	0.532	0.45	4.950	10.93	46.070	51.17	428.793	93.09	3990.912	100.00
0.065	0.00	0.606	0.75	5.644	12.33	52.531	54.28	488.919	94.32	4550.528	100.00
0.074	0.00	0.691	1.09	6.435	13.90	59.897	57.45	557.477	95.44	5188.616	100.00
0.085	0.00	0.788	1.46	7.338	15.64	68.295	60.64	635.647	96.43	5916.178	100.00
0.097	0.00	0.899	1.85	8.367	17.56	77.872	63.82	724.780	97.29	6745.760	100.00
0.110	0.00	1.025	2.24	9.540	19.65	88.791	66.95	826.410	98.00	7691.669	100.00
0.126	0.00	1.169	2.64	10.878	21.88	101.242	69.98	942.292	98.58	8770.216	100.00
0.143	0.00	1.333	3.06	12.403	24.23	115.438	72.88	1074.423	99.02	10000.000	100.00
0.163	0.00	1.519	3.52	14.142	26.67	131.625	75.63	1225.081	99.36		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-09-3*
Analyst: KB
Particle Technology Labs *PTL ID: 44356*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Monday, January 24, 2005 10:27:04 AM

Result Source:
Averaged

Analyzed:
Monday, January 24, 2005 10:27:06 AM

Number of this Measurement:
1

Number of Measurements:
4

Particle Name:
Default

Accessory Name:
Hydro 2000S (A)

Pump Speed:
2000

Analysis model:
General purpose

Sensitivity:
Normal

Particle RI:
1.520

Absorption:
0.1

Size range:
0.020 to 2000.000 um

Obscuration:
15.39 %

Dispersant Name:
Water

Dispersant RI:
1.330

Weighted Residual:
0.661 %

Result Emulation:
Off

Concentration:
0.0230 %Vol

Span :
6.205

Uniformity:
1.89

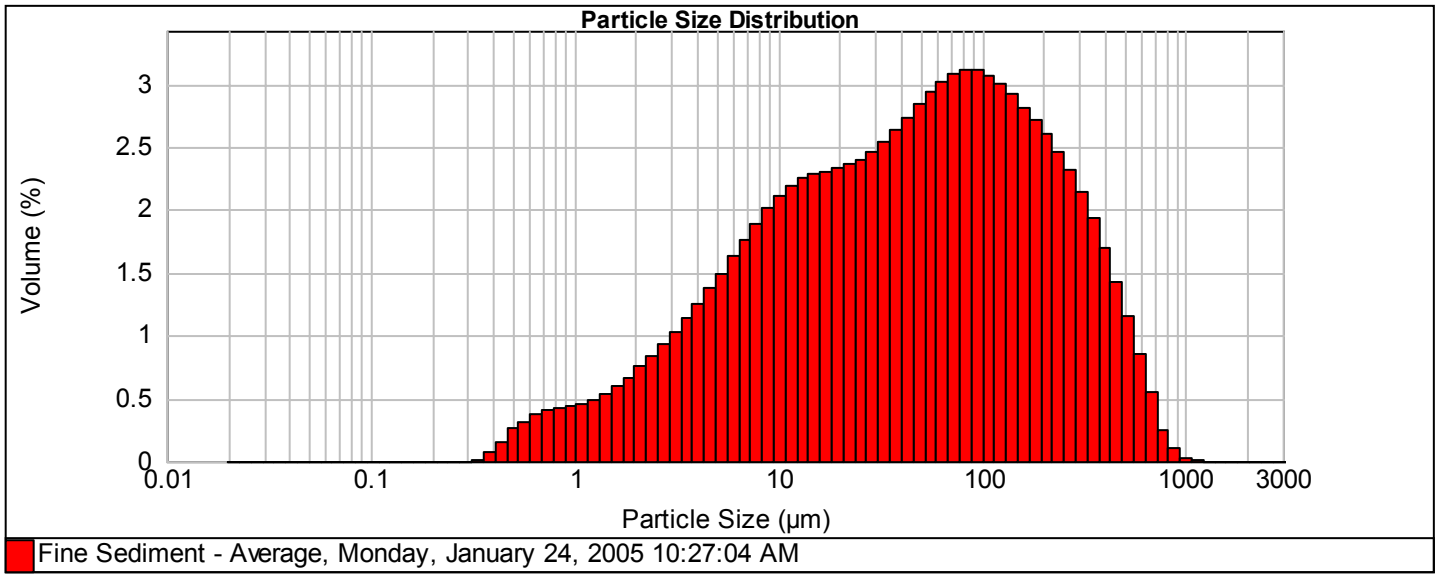
Result units:
Volume

Specific Surface Area:
0.665 m²/g

Surface Weighted Mean D[3,2]:
9.017 um

Vol. Weighted Mean D[4,3]:
103.337 um

d(0.1): 3.855 um **d(0.5): 46.342 um** **d(0.9): 291.430 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	4.52	16.125	30.11	150.082	76.97	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	5.19	18.386	32.42	171.127	79.78	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	5.94	20.964	34.75	195.123	82.50	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	6.78	23.904	37.11	222.484	85.09	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	7.71	27.256	39.51	253.681	87.56	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	8.75	31.078	41.97	289.253	89.87	2692.173	100.00
0.044	0.00	0.409	0.07	3.807	9.89	35.436	44.50	329.813	92.01	3069.677	100.00
0.050	0.00	0.466	0.23	4.341	11.14	40.405	47.14	376.060	93.94	3500.116	100.00
0.057	0.00	0.532	0.48	4.950	12.51	46.070	49.87	428.793	95.64	3990.912	100.00
0.065	0.00	0.606	0.80	5.644	14.00	52.531	52.72	488.919	97.07	4550.528	100.00
0.074	0.00	0.691	1.17	6.435	15.63	59.897	55.66	557.477	98.22	5188.616	100.00
0.085	0.00	0.788	1.58	7.338	17.39	68.295	58.68	635.647	99.08	5916.178	100.00
0.097	0.00	0.899	2.01	8.367	19.28	77.872	61.77	724.780	99.63	6745.760	100.00
0.110	0.00	1.025	2.45	9.540	21.28	88.791	64.88	826.410	99.88	7691.669	100.00
0.126	0.00	1.169	2.91	10.878	23.39	101.242	67.99	942.292	99.97	8770.216	100.00
0.143	0.00	1.333	3.40	12.403	25.58	115.438	71.05	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	3.93	14.142	27.82	131.625	74.05	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-09-4*
Analyst: KB
Particle Technology Labs *PTL ID: 44357*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Monday, January 24, 2005 10:40:59 AM

Result Source:
Averaged

Analyzed:
Monday, January 24, 2005 10:41:00 AM

Number of this Measurement:
1

Number of Measurements:
4

Particle Name:
Default

Accessory Name:
Hydro 2000S (A)

Pump Speed:
2000

Analysis model:
General purpose

Sensitivity:
Normal

Particle RI:
1.520

Absorption:
0.1

Size range:
0.020 to 2000.000 um

Obscuration:
14.11 %

Dispersant Name:
Water

Dispersant RI:
1.330

Weighted Residual:
0.536 %

Result Emulation:
Off

Concentration:
0.0301 %Vol

Span :
4.492

Uniformity:
1.4

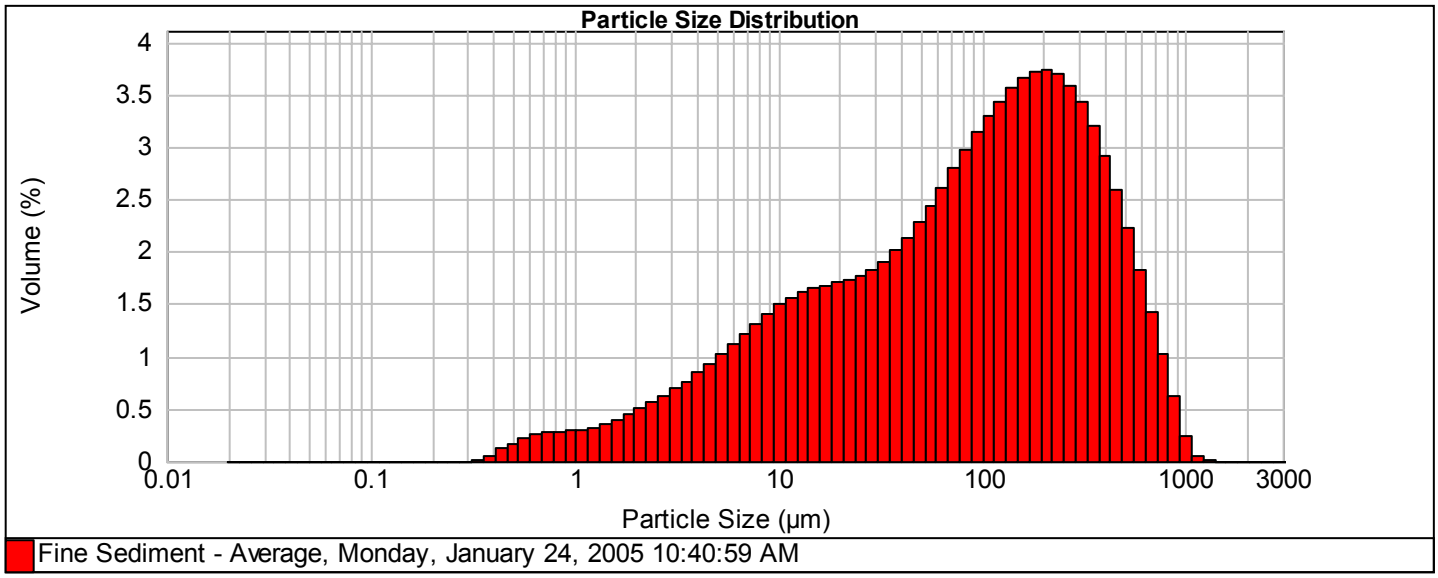
Result units:
Volume

Specific Surface Area:
0.462 m²/g

Surface Weighted Mean D[3,2]:
12.992 um

Vol. Weighted Mean D[4,3]:
163.308 um

d(0.1): 6.085 um **d(0.5): 94.200 um** **d(0.9): 429.200 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	3.00	16.125	20.77	150.082	62.04	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	3.45	18.386	22.45	171.127	65.69	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	3.95	20.964	24.15	195.123	69.41	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	4.51	23.904	25.88	222.484	73.15	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	5.13	27.256	27.64	253.681	76.84	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	5.82	31.078	29.46	289.253	80.43	2692.173	100.00
0.044	0.00	0.409	0.04	3.807	6.59	35.436	31.37	329.813	83.86	3069.677	100.00
0.050	0.00	0.466	0.16	4.341	7.43	40.405	33.37	376.060	87.06	3500.116	100.00
0.057	0.00	0.532	0.33	4.950	8.36	46.070	35.51	428.793	89.98	3990.912	100.00
0.065	0.00	0.606	0.55	5.644	9.37	52.531	37.79	488.919	92.57	4550.528	100.00
0.074	0.00	0.691	0.80	6.435	10.49	59.897	40.23	557.477	94.80	5188.616	100.00
0.085	0.00	0.788	1.07	7.338	11.71	68.295	42.84	635.647	96.63	5916.178	100.00
0.097	0.00	0.899	1.35	8.367	13.02	77.872	45.64	724.780	98.06	6745.760	100.00
0.110	0.00	1.025	1.64	9.540	14.44	88.791	48.61	826.410	99.08	7691.669	100.00
0.126	0.00	1.169	1.95	10.878	15.93	101.242	51.74	942.292	99.71	8770.216	100.00
0.143	0.00	1.333	2.27	12.403	17.50	115.438	55.04	1074.423	99.95	10000.000	100.00
0.163	0.00	1.519	2.61	14.142	19.12	131.625	58.48	1225.081	99.99		

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-09-5*
Analyst: KB
Particle Technology Labs *PTL ID: 44358*

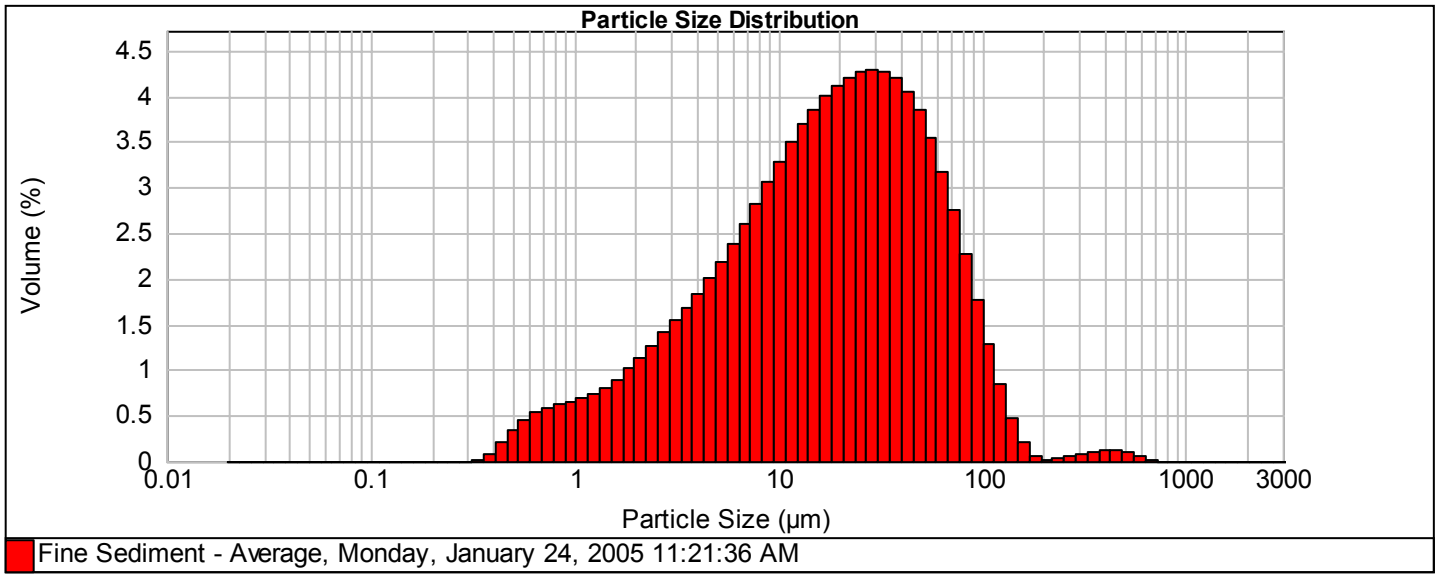
SOP Name: Sea Engineering - Fine Sediment
Result Source: Averaged
Number of this Measurement: 1

Measured: Monday, January 24, 2005 11:21:36 AM
Analyzed: Monday, January 24, 2005 11:21:37 AM
Number of Measurements: 4

Particle Name: Default	**Accessory Name:** Hydro 2000S (A)	**Pump Speed:** 2000	**Analysis model:** General purpose	**Sensitivity:** Normal
Particle RI: 1.520	**Absorption:** 0.1		**Size range:** 0.020 to 2000.000 um	**Obscuration:** 13.91 %
Dispersant Name: Water	**Dispersant RI:** 1.330		**Weighted Residual:** 0.943 %	**Result Emulation:** Off

Concentration: 0.0140 %Vol	**Span :** 3.598	**Uniformity:** 1.22	**Result units:** Volume
Specific Surface Area: 0.964 m²/g	**Surface Weighted Mean D[3,2]:** 6.221 um	**Vol. Weighted Mean D[4,3]:** 30.350 um	

d(0.1): 2.576 um **d(0.5): 18.501 um** **d(0.9): 69.146 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	6.55	16.125	45.82	150.082	99.11	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	7.56	18.386	49.81	171.127	99.31	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	8.70	20.964	53.91	195.123	99.36	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	9.97	23.904	58.11	222.484	99.37	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	11.38	27.256	62.37	253.681	99.40	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	12.92	31.078	66.65	289.253	99.44	2692.173	100.00
0.044	0.00	0.409	0.07	3.807	14.60	35.436	70.92	329.813	99.52	3069.677	100.00
0.050	0.00	0.466	0.27	4.341	16.44	40.405	75.11	376.060	99.61	3500.116	100.00
0.057	0.00	0.532	0.62	4.950	18.45	46.070	79.17	428.793	99.73	3990.912	100.00
0.065	0.00	0.606	1.07	5.644	20.64	52.531	83.00	488.919	99.84	4550.528	100.00
0.074	0.00	0.691	1.60	6.435	23.02	59.897	86.55	557.477	99.93	5188.616	100.00
0.085	0.00	0.788	2.18	7.338	25.62	68.295	89.72	635.647	99.99	5916.178	100.00
0.097	0.00	0.899	2.80	8.367	28.45	77.872	92.47	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	3.45	9.540	31.51	88.791	94.74	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	4.13	10.878	34.79	101.242	96.51	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	4.86	12.403	38.28	115.438	97.80	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	5.66	14.142	41.97	131.625	98.64	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-10-1*
Analyst: KB
Particle Technology Labs *PTL ID: 44359*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Monday, January 24, 2005 2:09:18 PM

Result Source:
Averaged

Analyzed:
Monday, January 24, 2005 2:09:19 PM

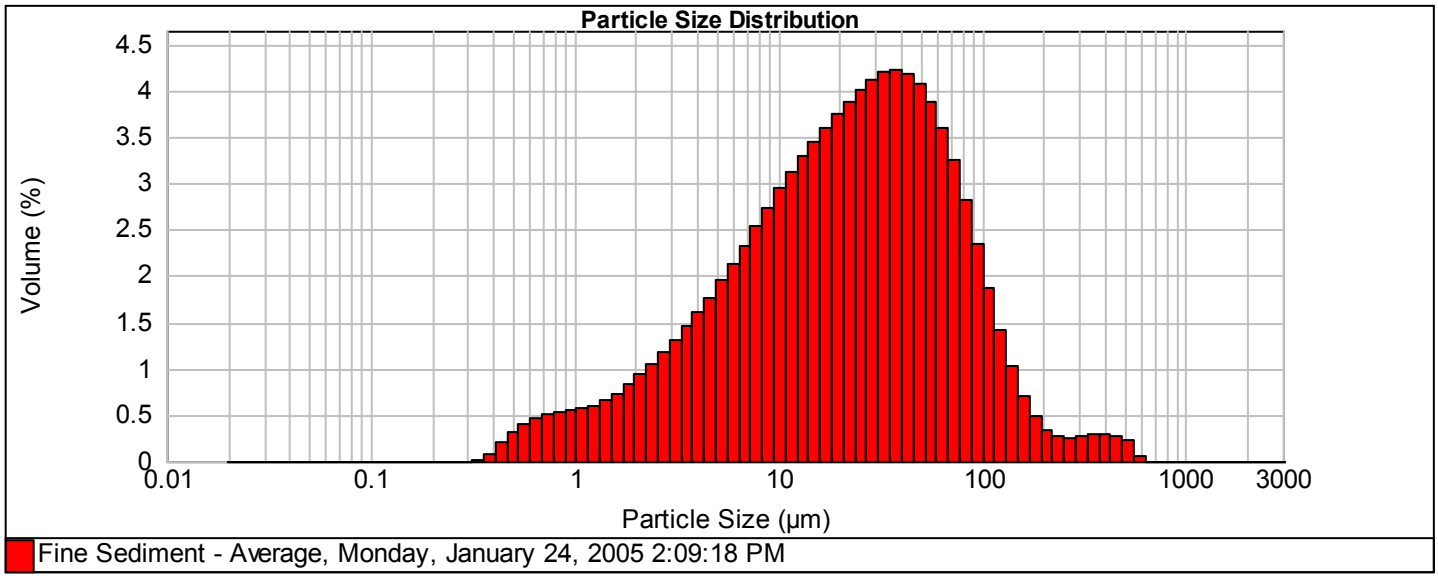
Number of this Measurement:
1

Number of Measurements:
4

Particle Name: Default	**Accessory Name:** Hydro 2000S (A)	**Pump Speed:** 2000	**Analysis model:** General purpose	**Sensitivity:** Normal
Particle RI: 1.520	**Absorption:** 0.1		**Size range:** 0.020 to 2000.000 um	**Obscuration:** 14.81 %
Dispersant Name: Water	**Dispersant RI:** 1.330		**Weighted Residual:** 0.861 %	**Result Emulation:** Off

Concentration: 0.0171 %Vol	**Span :** 3.798	**Uniformity:** 1.37	**Result units:** Volume
Specific Surface Area: 0.853 m²/g	**Surface Weighted Mean D[3,2]:** 7.032 um	**Vol. Weighted Mean D[4,3]:** 40.588 um	

d(0.1): 3.048 um **d(0.5): 22.728 um** **d(0.9): 89.359 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	5.63	16.125	40.27	150.082	96.54	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	6.45	18.386	43.88	171.127	97.25	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	7.38	20.964	47.63	195.123	97.73	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	8.44	23.904	51.51	222.484	98.07	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	9.62	27.256	55.52	253.681	98.34	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	10.93	31.078	59.63	289.253	98.59	2692.173	100.00
0.044	0.00	0.409	0.08	3.807	12.38	35.436	63.83	329.813	98.86	3069.677	100.00
0.050	0.00	0.466	0.28	4.341	13.99	40.405	68.05	376.060	99.14	3500.116	100.00
0.057	0.00	0.532	0.60	4.950	15.76	46.070	72.24	428.793	99.44	3990.912	100.00
0.065	0.00	0.606	1.00	5.644	17.70	52.531	76.32	488.919	99.71	4550.528	100.00
0.074	0.00	0.691	1.47	6.435	19.84	59.897	80.21	557.477	99.95	5188.616	100.00
0.085	0.00	0.788	1.99	7.338	22.17	68.295	83.82	635.647	100.00	5916.178	100.00
0.097	0.00	0.899	2.52	8.367	24.71	77.872	87.06	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	3.07	9.540	27.45	88.791	89.87	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	3.64	10.878	30.39	101.242	92.22	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	4.24	12.403	33.52	115.438	94.10	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	4.90	14.142	36.82	131.625	95.52	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-10-2*
Analyst: KB
Particle Technology Labs *PTL ID: 44360*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Monday, January 24, 2005 2:24:42 PM

Result Source:
Averaged

Analyzed:
Monday, January 24, 2005 2:24:43 PM

Number of this Measurement:
1

Number of Measurements:
4

Particle Name:
Default

Accessory Name:
Hydro 2000S (A)

Pump Speed:
2000

Analysis model:
General purpose

Sensitivity:
Normal

Particle RI:
1.520

Absorption:
0.1

Size range:
0.020 to 2000.000 um

Obscuration:
15.21 %

Dispersant Name:
Water

Dispersant RI:
1.330

Weighted Residual:
0.594 %

Result Emulation:
Off

Concentration:
0.0267 %Vol

Span :
3.633

Uniformity:
1.26

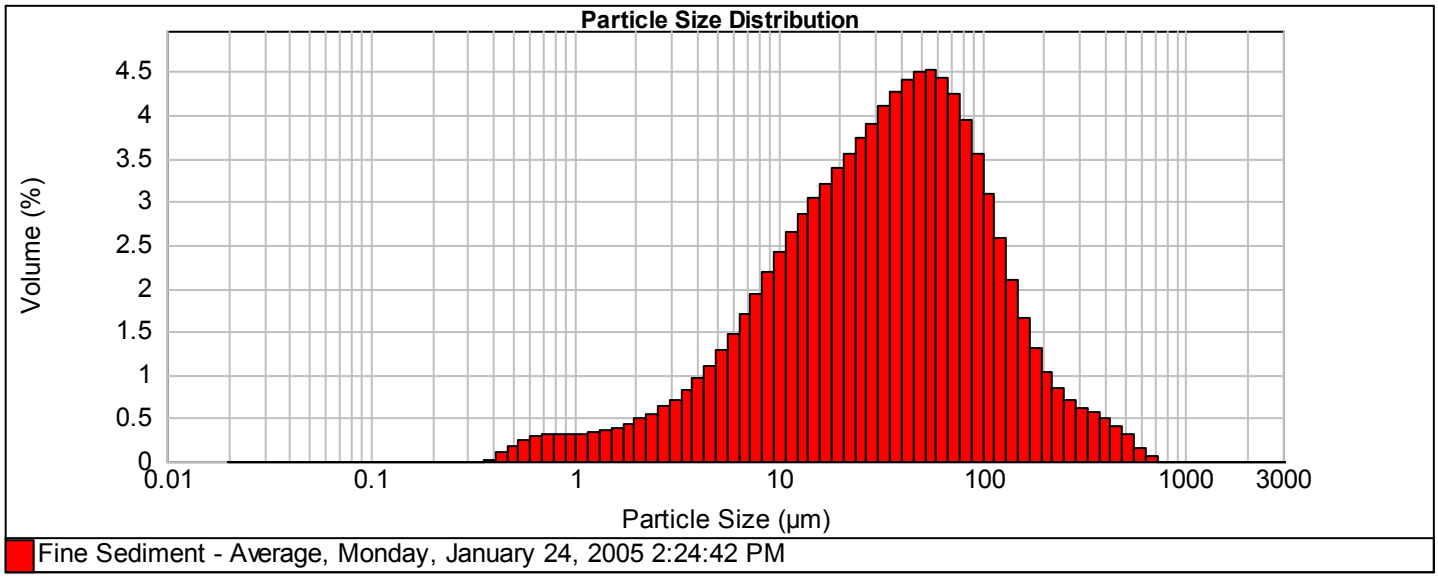
Result units:
Volume

Specific Surface Area:
0.554 m²/g

Surface Weighted Mean D[3,2]:
10.834 um

Vol. Weighted Mean D[4,3]:
59.707 um

d(0.1): 5.585 um **d(0.5): 35.179 um** **d(0.9): 133.402 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	3.15	16.125	28.37	150.082	91.86	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	3.58	18.386	31.58	171.127	93.52	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	4.06	20.964	34.96	195.123	94.83	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	4.62	23.904	38.51	222.484	95.86	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	5.24	27.256	42.23	253.681	96.70	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	5.96	31.078	46.14	289.253	97.40	2692.173	100.00
0.044	0.00	0.409	0.00	3.807	6.78	35.436	50.23	329.813	98.03	3069.677	100.00
0.050	0.00	0.466	0.11	4.341	7.73	40.405	54.50	376.060	98.58	3500.116	100.00
0.057	0.00	0.532	0.29	4.950	8.83	46.070	58.91	428.793	99.07	3990.912	100.00
0.065	0.00	0.606	0.54	5.644	10.11	52.531	63.42	488.919	99.48	4550.528	100.00
0.074	0.00	0.691	0.82	6.435	11.59	59.897	67.94	557.477	99.80	5188.616	100.00
0.085	0.00	0.788	1.13	7.338	13.29	68.295	72.37	635.647	99.95	5916.178	100.00
0.097	0.00	0.899	1.45	8.367	15.23	77.872	76.62	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	1.77	9.540	17.41	88.791	80.56	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	2.09	10.878	19.83	101.242	84.11	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	2.42	12.403	22.48	115.438	87.19	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	2.77	14.142	25.33	131.625	89.77	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-10-3*
Analyst: KB
Particle Technology Labs *PTL ID: 44361*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Monday, January 24, 2005 2:38:56 PM

Result Source:
Averaged

Analyzed:
Monday, January 24, 2005 2:38:58 PM

Number of this Measurement:
1

Number of Measurements:
4

Particle Name:
Default

Accessory Name:
Hydro 2000S (A)

Pump Speed:
2000

Analysis model:
General purpose

Sensitivity:
Normal

Particle RI:
1.520

Absorption:
0.1

Size range:
0.020 to 2000.000 um

Obscuration:
14.36 %

Dispersant Name:
Water

Dispersant RI:
1.330

Weighted Residual:
0.717 %

Result Emulation:
Off

Concentration:
0.0210 %Vol

Span :
3.763

Uniformity:
1.39

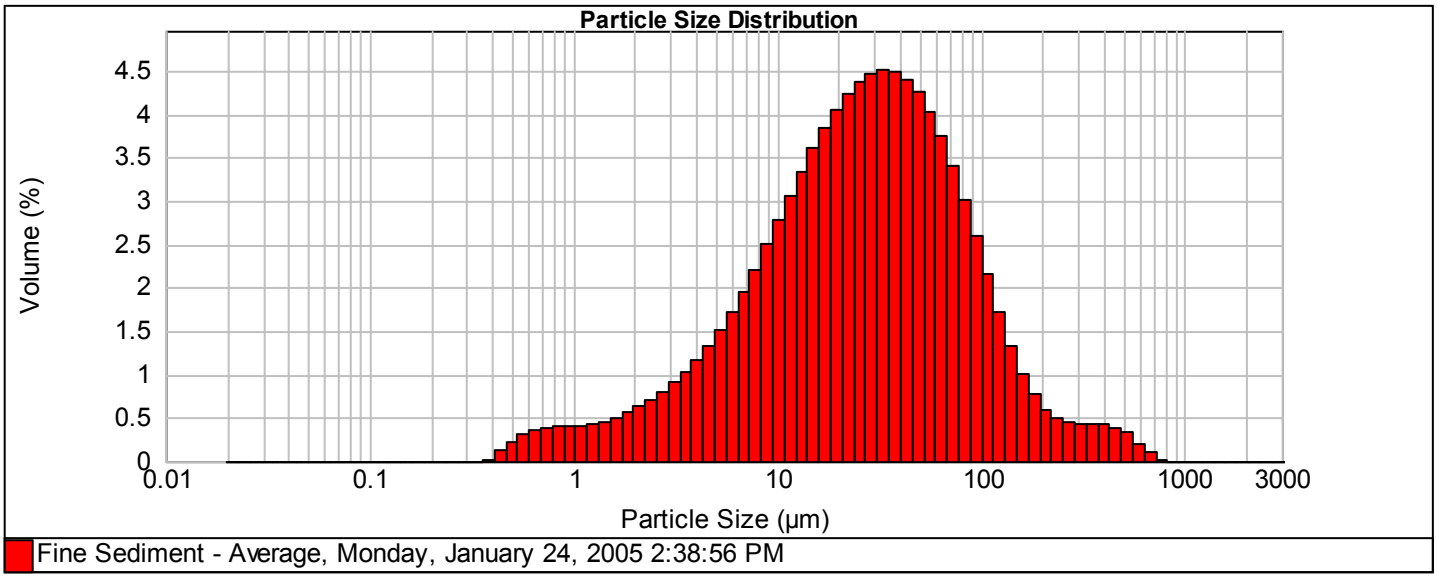
Result units:
Volume

Specific Surface Area:
0.662 m²/g

Surface Weighted Mean D[3,2]:
9.064 um

Vol. Weighted Mean D[4,3]:
49.714 um

d(0.1): 4.454 um **d(0.5): 27.053 um** **d(0.9): 106.260 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	3.97	16.125	33.75	150.082	94.36	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	4.52	18.386	37.59	171.127	95.38	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	5.15	20.964	41.64	195.123	96.14	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	5.86	23.904	45.88	222.484	96.74	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	6.67	27.256	50.25	253.681	97.23	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	7.57	31.078	54.72	289.253	97.68	2692.173	100.00
0.044	0.00	0.409	0.00	3.807	8.60	35.436	59.23	329.813	98.11	3069.677	100.00
0.050	0.00	0.466	0.13	4.341	9.76	40.405	63.73	376.060	98.54	3500.116	100.00
0.057	0.00	0.532	0.35	4.950	11.07	46.070	68.13	428.793	98.97	3990.912	100.00
0.065	0.00	0.606	0.66	5.644	12.58	52.531	72.39	488.919	99.36	4550.528	100.00
0.074	0.00	0.691	1.01	6.435	14.29	59.897	76.42	557.477	99.69	5188.616	100.00
0.085	0.00	0.788	1.39	7.338	16.25	68.295	80.16	635.647	99.89	5916.178	100.00
0.097	0.00	0.899	1.79	8.367	18.47	77.872	83.56	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	2.19	9.540	20.96	88.791	86.57	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	2.60	10.878	23.74	101.242	89.16	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	3.02	12.403	26.80	115.438	91.31	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	3.47	14.142	30.15	131.625	93.03	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-10-4*
Analyst: KB
Particle Technology Labs *PTL ID: 44362*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Monday, January 24, 2005 2:54:27 PM

Result Source:
Averaged

Analyzed:
Monday, January 24, 2005 2:54:28 PM

Number of this Measurement:
1

Number of Measurements:
4

Particle Name:
Default

Accessory Name:
Hydro 2000S (A)

Pump Speed:
2000

Analysis model:
General purpose

Sensitivity:
Normal

Particle RI:
1.520

Absorption:
0.1

Size range:
0.020 to 2000.000 um

Obscuration:
15.34 %

Dispersant Name:
Water

Dispersant RI:
1.330

Weighted Residual:
0.902 %

Result Emulation:
Off

Concentration:
0.0180 %Vol

Span :
4.140

Uniformity:
1.54

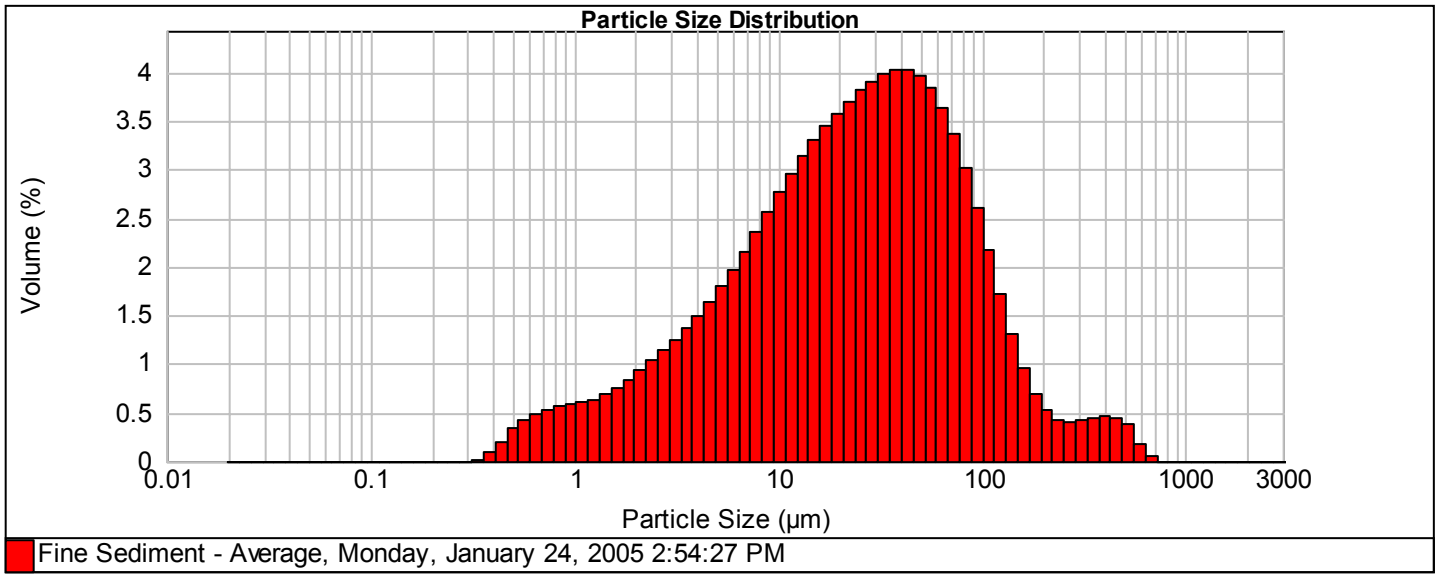
Result units:
Volume

Specific Surface Area:
0.849 m²/g

Surface Weighted Mean D[3,2]:
7.064 um

Vol. Weighted Mean D[4,3]:
47.820 um

d(0.1): 2.984 um **d(0.5): 24.514 um** **d(0.9): 104.460 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	5.87	16.125	38.55	150.082	94.62	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	6.71	18.386	42.00	171.127	95.57	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	7.65	20.964	45.58	195.123	96.26	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	8.69	23.904	49.28	222.484	96.78	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	9.83	27.256	53.09	253.681	97.20	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	11.08	31.078	56.99	289.253	97.61	2692.173	100.00
0.044	0.00	0.409	0.08	3.807	12.44	35.436	60.97	329.813	98.03	3069.677	100.00
0.050	0.00	0.466	0.28	4.341	13.93	40.405	65.00	376.060	98.48	3500.116	100.00
0.057	0.00	0.532	0.62	4.950	15.57	46.070	69.02	428.793	98.95	3990.912	100.00
0.065	0.00	0.606	1.03	5.644	17.36	52.531	72.98	488.919	99.38	4550.528	100.00
0.074	0.00	0.691	1.52	6.435	19.32	59.897	76.82	557.477	99.76	5188.616	100.00
0.085	0.00	0.788	2.05	7.338	21.48	68.295	80.46	635.647	99.94	5916.178	100.00
0.097	0.00	0.899	2.61	8.367	23.83	77.872	83.82	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	3.20	9.540	26.39	88.791	86.84	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	3.80	10.878	29.16	101.242	89.44	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	4.43	12.403	32.12	115.438	91.60	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	5.12	14.142	35.25	131.625	93.32	1225.081	100.00		

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-10-5*
Analyst: KB
Particle Technology Labs *PTL ID: 44363*

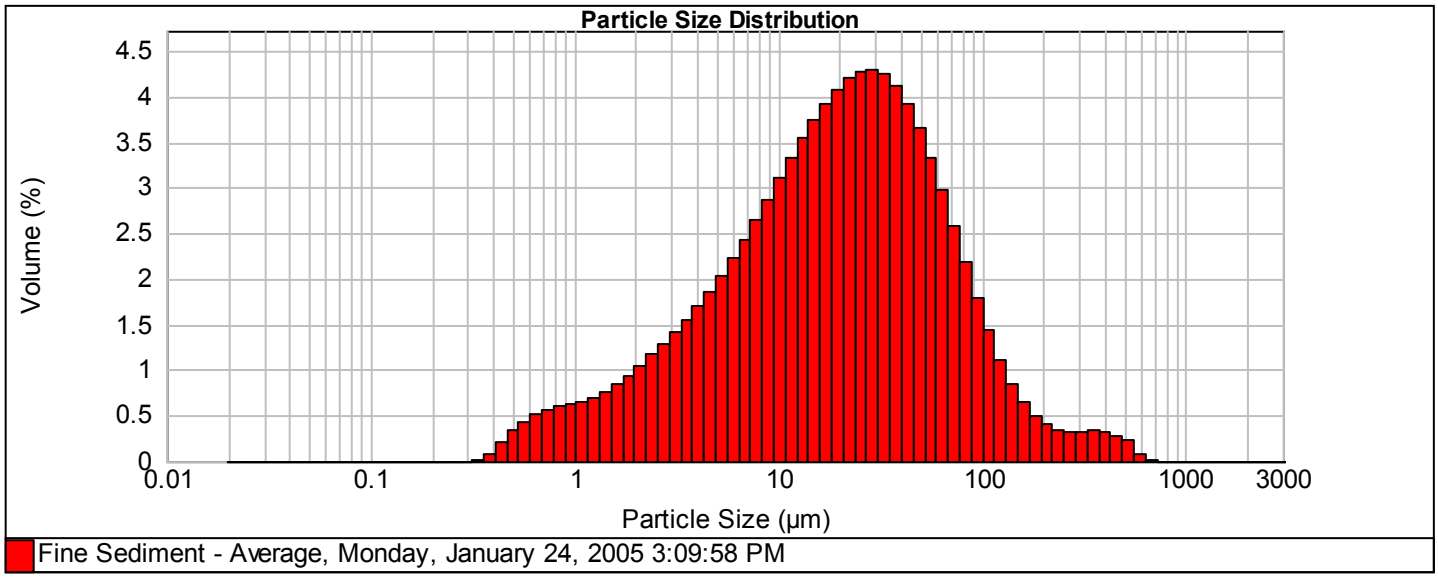
SOP Name: Sea Engineering - Fine Sediment
Result Source: Averaged
Number of this Measurement: 1

Measured: Monday, January 24, 2005 3:09:58 PM
Analyzed: Monday, January 24, 2005 3:09:59 PM
Number of Measurements: 4

Particle Name: Default	**Accessory Name:** Hydro 2000S (A)	**Pump Speed:** 2000	**Analysis model:** General purpose	**Sensitivity:** Normal
Particle RI: 1.520	**Absorption:** 0.1		**Size range:** 0.020 to 2000.000 um	**Obscuration:** 14.47 %
Dispersant Name: Water	**Dispersant RI:** 1.330		**Weighted Residual:** 0.915 %	**Result Emulation:** Off

Concentration: 0.0154 %Vol	**Span :** 3.991	**Uniformity:** 1.48	**Result units:** Volume
Specific Surface Area: 0.921 m²/g	**Surface Weighted Mean D[3,2]:** 6.514 um	**Vol. Weighted Mean D[4,3]:** 38.398 um	

d(0.1): 2.718 um **d(0.5): 20.152 um** **d(0.9): 83.140 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	6.29	16.125	43.23	150.082	96.24	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	7.23	18.386	47.16	171.127	96.88	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	8.28	20.964	51.24	195.123	97.37	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	9.46	23.904	55.44	222.484	97.76	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	10.75	27.256	59.72	253.681	98.11	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	12.17	31.078	64.01	289.253	98.44	2692.173	100.00
0.044	0.00	0.409	0.08	3.807	13.73	35.436	68.26	329.813	98.76	3069.677	100.00
0.050	0.00	0.466	0.28	4.341	15.43	40.405	72.38	376.060	99.09	3500.116	100.00
0.057	0.00	0.532	0.62	4.950	17.28	46.070	76.31	428.793	99.42	3990.912	100.00
0.065	0.00	0.606	1.05	5.644	19.31	52.531	79.97	488.919	99.70	4550.528	100.00
0.074	0.00	0.691	1.57	6.435	21.53	59.897	83.31	557.477	99.93	5188.616	100.00
0.085	0.00	0.788	2.13	7.338	23.96	68.295	86.28	635.647	99.99	5916.178	100.00
0.097	0.00	0.899	2.73	8.367	26.60	77.872	88.86	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	3.36	9.540	29.48	88.791	91.04	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	4.01	10.878	32.59	101.242	92.84	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	4.70	12.403	35.93	115.438	94.27	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	5.46	14.142	39.48	131.625	95.39	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-11-1*
Analyst: KB
Particle Technology Labs *PTL ID: 44364*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Monday, January 24, 2005 3:35:44 PM

Result Source:
Averaged

Analyzed:
Monday, January 24, 2005 3:35:45 PM

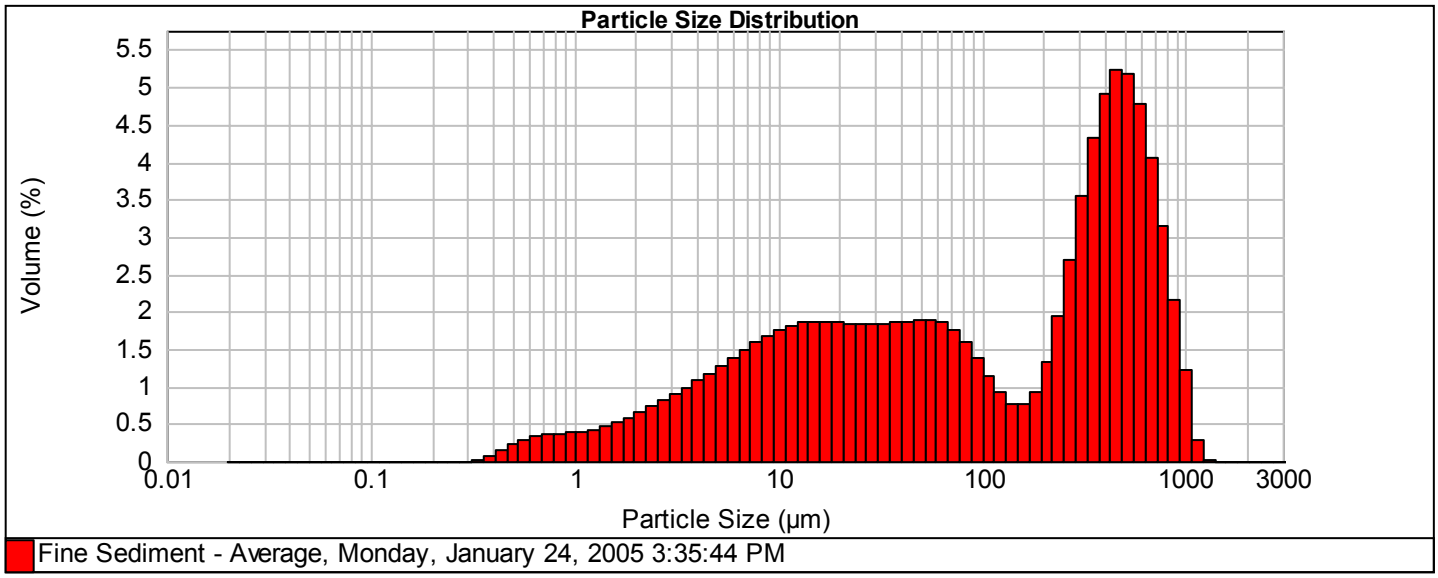
Number of this Measurement:
1

Number of Measurements:
4

Particle Name: Default	**Accessory Name:** Hydro 2000S (A)	**Pump Speed:** 2000	**Analysis model:** General purpose	**Sensitivity:** Normal
Particle RI: 1.520	**Absorption:** 0.1		**Size range:** 0.020 to 2000.000 um	**Obscuration:** 14.74 %
Dispersant Name: Water	**Dispersant RI:** 1.330		**Weighted Residual:** 0.824 %	**Result Emulation:** Off

Concentration: 0.0258 %Vol	**Span :** 6.870	**Uniformity:** 2.35	**Result units:** Volume
Specific Surface Area: 0.569 m²/g	**Surface Weighted Mean D[3,2]:** 10.547 um	**Vol. Weighted Mean D[4,3]:** 245.892 um	

d(0.1): 4.479 um **d(0.5): 94.346 um** **d(0.9): 652.607 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	3.96	16.125	25.60	150.082	53.54	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	4.55	18.386	27.47	171.127	54.30	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	5.21	20.964	29.32	195.123	55.22	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	5.94	23.904	31.16	222.484	56.54	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	6.76	27.256	32.99	253.681	58.47	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	7.66	31.078	34.81	289.253	61.17	2692.173	100.00
0.044	0.00	0.409	0.07	3.807	8.65	35.436	36.64	329.813	64.70	3069.677	100.00
0.050	0.00	0.466	0.22	4.341	9.73	40.405	38.48	376.060	69.02	3500.116	100.00
0.057	0.00	0.532	0.44	4.950	10.90	46.070	40.36	428.793	73.94	3990.912	100.00
0.065	0.00	0.606	0.72	5.644	12.18	52.531	42.25	488.919	79.17	4550.528	100.00
0.074	0.00	0.691	1.04	6.435	13.56	59.897	44.14	557.477	84.35	5188.616	100.00
0.085	0.00	0.788	1.39	7.338	15.05	68.295	45.99	635.647	89.12	5916.178	100.00
0.097	0.00	0.899	1.76	8.367	16.63	77.872	47.74	724.780	93.18	6745.760	100.00
0.110	0.00	1.025	2.15	9.540	18.31	88.791	49.33	826.410	96.33	7691.669	100.00
0.126	0.00	1.169	2.55	10.878	20.06	101.242	50.71	942.292	98.50	8770.216	100.00
0.143	0.00	1.333	2.98	12.403	21.87	115.438	51.86	1074.423	99.71	10000.000	100.00
0.163	0.00	1.519	3.44	14.142	23.73	131.625	52.78	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-11-2*
Analyst: KB
Particle Technology Labs *PTL ID: 44365*

SOP Name: Sea Engineering - Fine Sediment
Result Source: Averaged
Number of this Measurement: 1

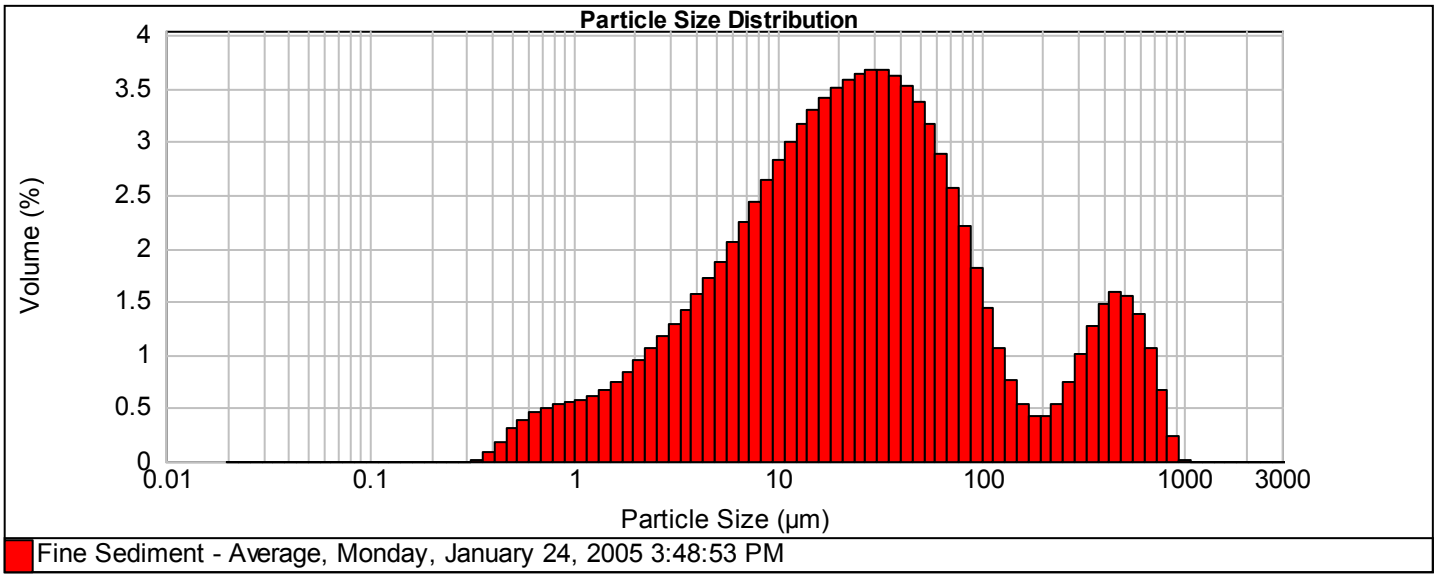
Measured: Monday, January 24, 2005 3:48:53 PM
Analyzed: Monday, January 24, 2005 3:48:54 PM
Number of Measurements: 4

Particle Name:	Accessory Name:	Pump Speed:	Analysis model:	Sensitivity:
Default	Hydro 2000S (A)	2000	General purpose	Normal
Particle RI:	**Absorption:**		**Size range:**	**Obscuration:**
1.520	0.1		0.020 to 2000.000 um	17.04 %
Dispersant Name:	**Dispersant RI:**		**Weighted Residual:**	**Result Emulation:**
Water	1.330		0.772 %	Off

Concentration:	Span :	Uniformity:	Result units:
0.0205 %Vol	12.244	3.02	Volume

Specific Surface Area:	Surface Weighted Mean D[3,2]:	Vol. Weighted Mean D[4,3]:
0.829 m²/g	7.238 um	82.927 um

d(0.1): 3.056 um **d(0.5): 24.194 um** **d(0.9): 299.284 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	5.59	16.125	39.15	150.082	87.08	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	6.43	18.386	42.57	171.127	87.62	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	7.37	20.964	46.08	195.123	88.05	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	8.42	23.904	49.67	222.484	88.47	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	9.60	27.256	53.31	253.681	89.02	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	10.89	31.078	56.99	289.253	89.76	2692.173	100.00
0.044	0.00	0.409	0.08	3.807	12.31	35.436	60.66	329.813	90.77	3069.677	100.00
0.050	0.00	0.466	0.26	4.341	13.87	40.405	64.28	376.060	92.04	3500.116	100.00
0.057	0.00	0.532	0.57	4.950	15.59	46.070	67.81	428.793	93.52	3990.912	100.00
0.065	0.00	0.606	0.96	5.644	17.47	52.531	71.18	488.919	95.11	4550.528	100.00
0.074	0.00	0.691	1.41	6.435	19.53	59.897	74.34	557.477	96.67	5188.616	100.00
0.085	0.00	0.788	1.91	7.338	21.77	68.295	77.23	635.647	98.05	5916.178	100.00
0.097	0.00	0.899	2.44	8.367	24.22	77.872	79.80	724.780	99.11	6745.760	100.00
0.110	0.00	1.025	2.99	9.540	26.86	88.791	82.01	826.410	99.77	7691.669	100.00
0.126	0.00	1.169	3.57	10.878	29.69	101.242	83.83	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	4.18	12.403	32.69	115.438	85.26	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	4.85	14.142	35.85	131.625	86.33	1225.081	100.00		

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-11-3*
Analyst: KB
Particle Technology Labs *PTL ID: 44366*

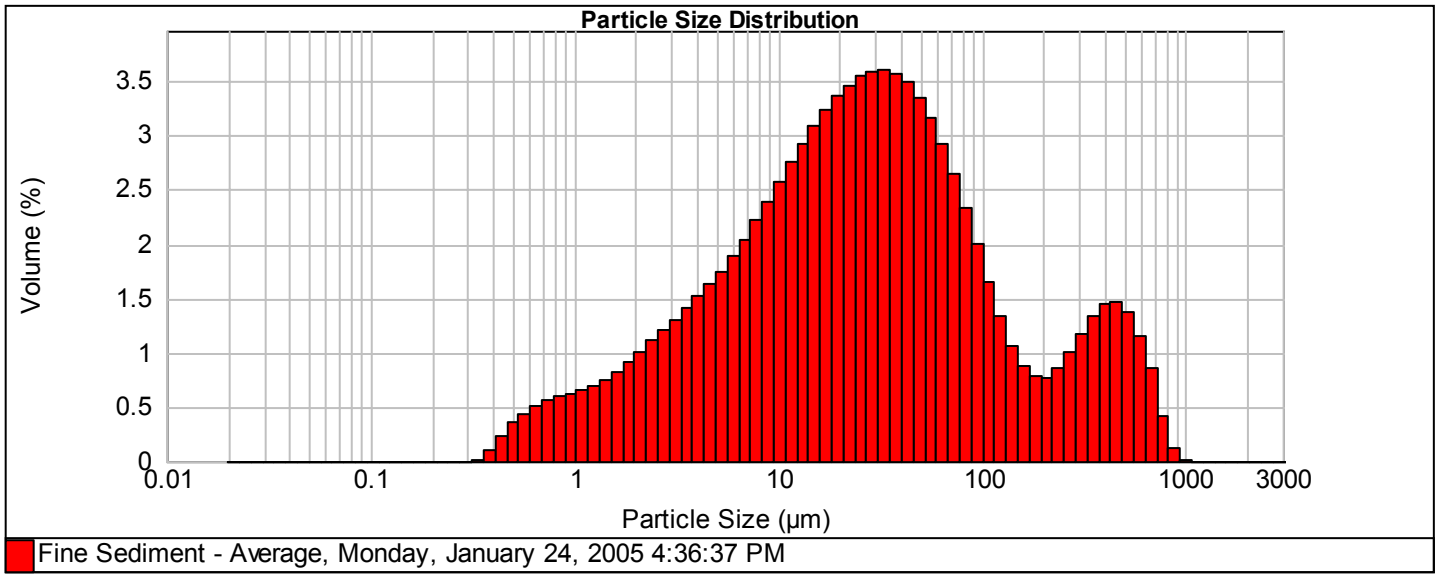
SOP Name: Sea Engineering - Fine Sediment
Result Source: Averaged
Number of this Measurement: 1

Measured: Monday, January 24, 2005 4:36:37 PM
Analyzed: Monday, January 24, 2005 4:36:38 PM
Number of Measurements: 4

Particle Name: Default	**Accessory Name:** Hydro 2000S (A)	**Pump Speed:** 2000	**Analysis model:** General purpose	**Sensitivity:** Normal
Particle RI: 1.520	**Absorption:** 0.1		**Size range:** 0.020 to 2000.000 um	**Obscuration:** 16.84 %
Dispersant Name: Water	**Dispersant RI:** 1.330		**Weighted Residual:** 0.825 %	**Result Emulation:** Off

Concentration: 0.0195 %Vol	**Span :** 10.279	**Uniformity:** 2.76	**Result units:** Volume
Specific Surface Area: 0.875 m²/g	**Surface Weighted Mean D[3,2]:** 6.860 um	**Vol. Weighted Mean D[4,3]:** 80.709 um	

d(0.1): 2.763 um **d(0.5): 25.647 um** **d(0.9): 266.379 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	6.31	16.125	38.05	150.082	86.37	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	7.22	18.386	41.28	171.127	87.25	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	8.23	20.964	44.64	195.123	88.02	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	9.34	23.904	48.11	222.484	88.79	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	10.55	27.256	51.65	253.681	89.65	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	11.85	31.078	55.25	289.253	90.65	2692.173	100.00
0.044	0.00	0.409	0.11	3.807	13.26	35.436	58.85	329.813	91.82	3069.677	100.00
0.050	0.00	0.466	0.34	4.341	14.77	40.405	62.42	376.060	93.16	3500.116	100.00
0.057	0.00	0.532	0.69	4.950	16.40	46.070	65.91	428.793	94.62	3990.912	100.00
0.065	0.00	0.606	1.13	5.644	18.15	52.531	69.26	488.919	96.09	4550.528	100.00
0.074	0.00	0.691	1.65	6.435	20.04	59.897	72.42	557.477	97.46	5188.616	100.00
0.085	0.00	0.788	2.21	7.338	22.08	68.295	75.35	635.647	98.61	5916.178	100.00
0.097	0.00	0.899	2.81	8.367	24.30	77.872	78.00	724.780	99.46	6745.760	100.00
0.110	0.00	1.025	3.43	9.540	26.69	88.791	80.32	826.410	99.88	7691.669	100.00
0.126	0.00	1.169	4.08	10.878	29.27	101.242	82.32	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	4.76	12.403	32.03	115.438	83.97	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	5.50	14.142	34.96	131.625	85.30	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-11-4*
Analyst: KB
Particle Technology Labs *PTL ID: 44367*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Tuesday, January 25, 2005 1:59:45 PM

Result Source:
Averaged

Analyzed:
Tuesday, January 25, 2005 1:59:46 PM

Number of this Measurement:
1

Number of Measurements:
4

Particle Name:
Default

Accessory Name:
Hydro 2000S (A)

Pump Speed:
2000

Analysis model:
General purpose

Sensitivity:
Normal

Particle RI:
1.520

Absorption:
0.1

Size range:
0.020 to 2000.000 um

Obscuration:
15.92 %

Dispersant Name:
Water

Dispersant RI:
1.330

Weighted Residual:
0.933 %

Result Emulation:
Off

Concentration:
0.0183 %Vol

Span :
9.393

Uniformity:
2.62

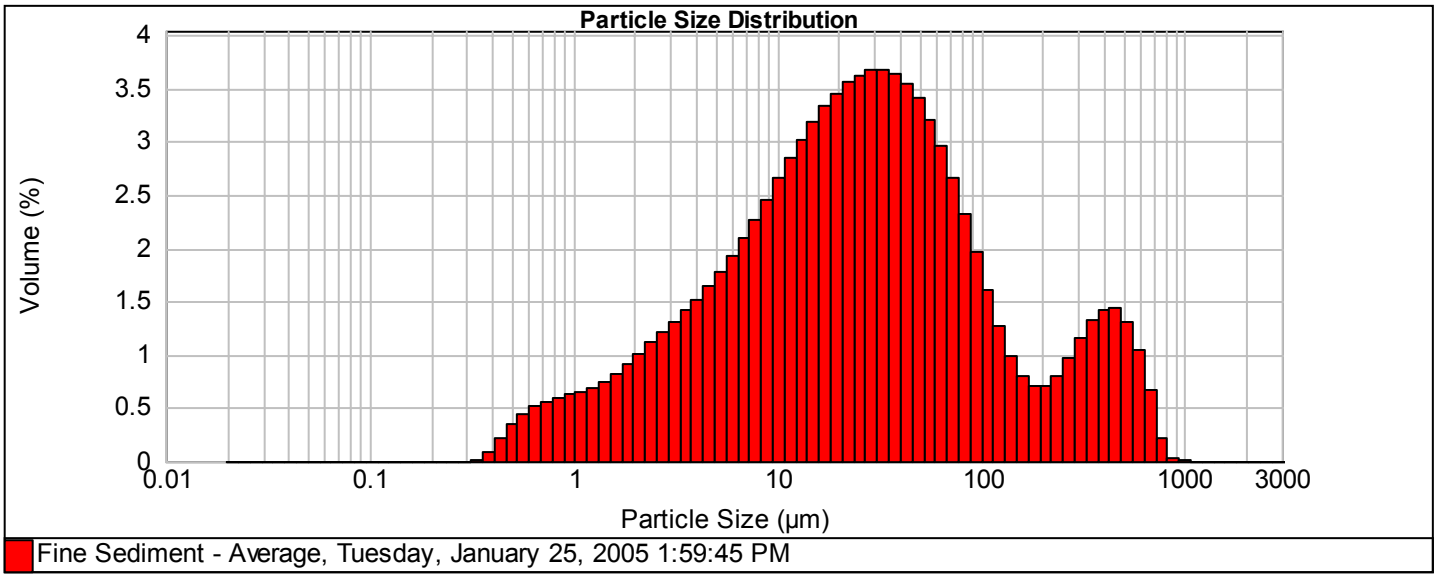
Result units:
Volume

Specific Surface Area:
0.874 m²/g

Surface Weighted Mean D[3,2]:
6.868 um

Vol. Weighted Mean D[4,3]:
74.996 um

d(0.1): 2.770 um **d(0.5): 24.821 um** **d(0.9): 235.925 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	6.28	16.125	38.63	150.082	87.47	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	7.19	18.386	41.96	171.127	88.26	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	8.20	20.964	45.41	195.123	88.96	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	9.31	23.904	48.97	222.484	89.66	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	10.53	27.256	52.59	253.681	90.46	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	11.84	31.078	56.26	289.253	91.42	2692.173	100.00
0.044	0.00	0.409	0.09	3.807	13.25	35.436	59.93	329.813	92.56	3069.677	100.00
0.050	0.00	0.466	0.30	4.341	14.77	40.405	63.57	376.060	93.88	3500.116	100.00
0.057	0.00	0.532	0.65	4.950	16.41	46.070	67.11	428.793	95.31	3990.912	100.00
0.065	0.00	0.606	1.08	5.644	18.18	52.531	70.52	488.919	96.74	4550.528	100.00
0.074	0.00	0.691	1.59	6.435	20.10	59.897	73.72	557.477	98.05	5188.616	100.00
0.085	0.00	0.788	2.15	7.338	22.19	68.295	76.68	635.647	99.09	5916.178	100.00
0.097	0.00	0.899	2.75	8.367	24.46	77.872	79.33	724.780	99.75	6745.760	100.00
0.110	0.00	1.025	3.37	9.540	26.92	88.791	81.65	826.410	99.98	7691.669	100.00
0.126	0.00	1.169	4.02	10.878	29.58	101.242	83.61	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	4.71	12.403	32.42	115.438	85.21	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	5.46	14.142	35.45	131.625	86.48	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-11-5*
Analyst: KB
Particle Technology Labs *PTL ID: 44368*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Tuesday, January 25, 2005 2:13:09 PM

Result Source:
Averaged

Analyzed:
Tuesday, January 25, 2005 2:13:11 PM

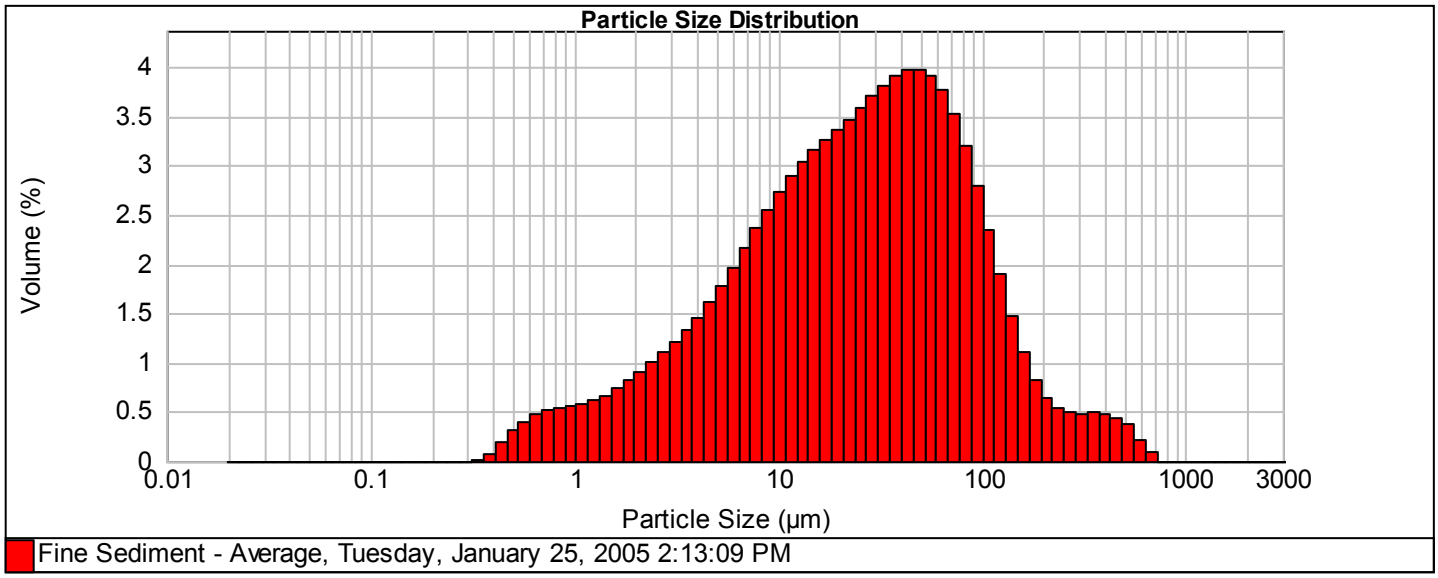
Number of this Measurement:
1

Number of Measurements:
4

Particle Name: Default	**Accessory Name:** Hydro 2000S (A)	**Pump Speed:** 2000	**Analysis model:** General purpose	**Sensitivity:** Normal
Particle RI: 1.520	**Absorption:** 0.1		**Size range:** 0.020 to 2000.000 um	**Obscuration:** 14.37 %
Dispersant Name: Water	**Dispersant RI:** 1.330		**Weighted Residual:** 0.811 %	**Result Emulation:** Off

Concentration: 0.0172 %Vol	**Span :** 4.241	**Uniformity:** 1.57	**Result units:** Volume
Specific Surface Area: 0.826 m²/g	**Surface Weighted Mean D[3,2]:** 7.262 um	**Vol. Weighted Mean D[4,3]:** 50.783 um	

d(0.1): 3.086 um **d(0.5): 25.791 um** **d(0.9): 112.464 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	5.69	16.125	37.82	150.082	93.80	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	6.50	18.386	41.09	171.127	94.91	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	7.41	20.964	44.46	195.123	95.74	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	8.42	23.904	47.94	222.484	96.39	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	9.53	27.256	51.52	253.681	96.92	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	10.74	31.078	55.22	289.253	97.41	2692.173	100.00
0.044	0.00	0.409	0.08	3.807	12.07	35.436	59.04	329.813	97.90	3069.677	100.00
0.050	0.00	0.466	0.27	4.341	13.54	40.405	62.94	376.060	98.39	3500.116	100.00
0.057	0.00	0.532	0.58	4.950	15.15	46.070	66.91	428.793	98.87	3990.912	100.00
0.065	0.00	0.606	0.98	5.644	16.93	52.531	70.88	488.919	99.32	4550.528	100.00
0.074	0.00	0.691	1.45	6.435	18.89	59.897	74.79	557.477	99.69	5188.616	100.00
0.085	0.00	0.788	1.97	7.338	21.05	68.295	78.55	635.647	99.91	5916.178	100.00
0.097	0.00	0.899	2.51	8.367	23.41	77.872	82.08	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	3.08	9.540	25.97	88.791	85.28	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	3.66	10.878	28.71	101.242	88.08	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	4.28	12.403	31.62	115.438	90.43	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	4.95	14.142	34.66	131.625	92.33	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-12-1*
Analyst: KB
Particle Technology Labs *PTL ID: 44369*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Tuesday, January 25, 2005 2:26:09 PM

Result Source:
Averaged

Analyzed:
Tuesday, January 25, 2005 2:26:11 PM

Number of this Measurement:
1

Number of Measurements:
4

Particle Name:
Default

Accessory Name:
Hydro 2000S (A)

Pump Speed:
2000

Analysis model:
General purpose

Sensitivity:
Normal

Particle RI:
1.520

Absorption:
0.1

Size range:
0.020 to 2000.000 um

Obscuration:
15.10 %

Dispersant Name:
Water

Dispersant RI:
1.330

Weighted Residual:
0.747 %

Result Emulation:
Off

Concentration:
0.0196 %Vol

Span :
5.438

Uniformity:
2.28

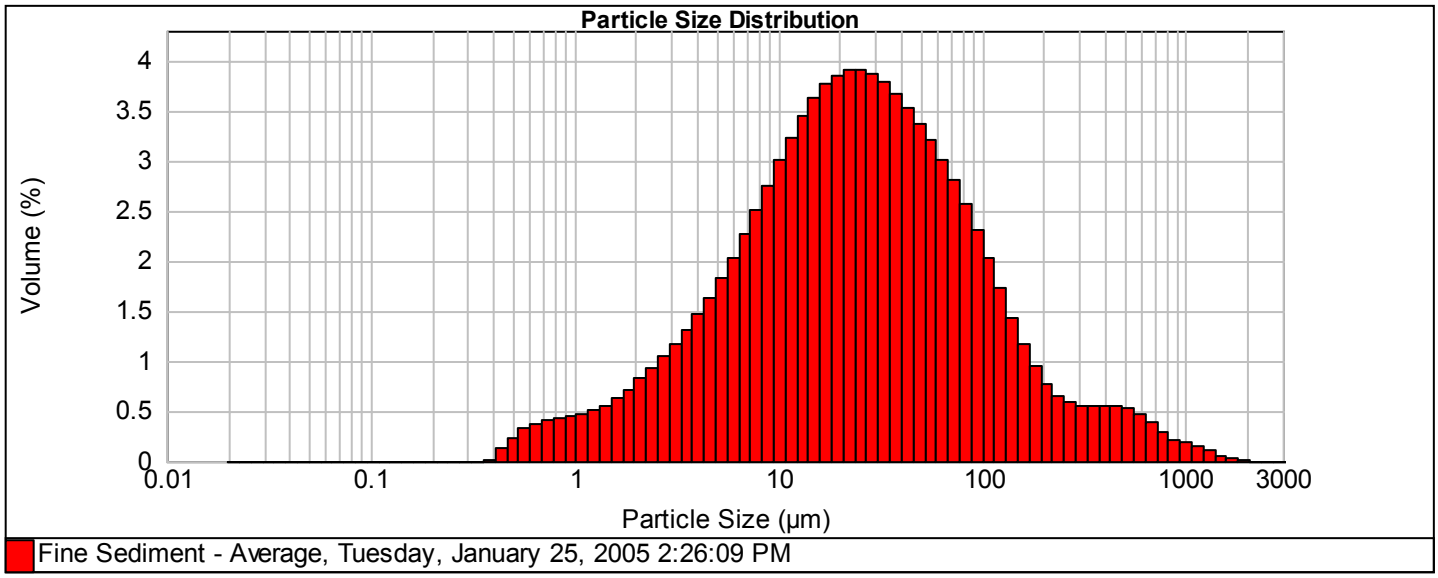
Result units:
Volume

Specific Surface Area:
0.739 m²/g

Surface Weighted Mean D[3,2]:
8.118 um

Vol. Weighted Mean D[4,3]:
64.936 um

d(0.1): 3.612 um **d(0.5): 23.950 um** **d(0.9): 133.850 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	4.53	16.125	38.40	150.082	91.24	1396.865	99.91
0.023	0.00	0.212	0.00	1.975	5.25	18.386	42.17	171.127	92.41	1592.737	99.97
0.026	0.00	0.242	0.00	2.252	6.07	20.964	46.03	195.123	93.36	1816.075	99.99
0.030	0.00	0.276	0.00	2.568	7.00	23.904	49.94	222.484	94.14	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	8.05	27.256	53.86	253.681	94.80	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	9.23	31.078	57.73	289.253	95.39	2692.173	100.00
0.044	0.00	0.409	0.00	3.807	10.55	35.436	61.53	329.813	95.95	3069.677	100.00
0.050	0.00	0.466	0.13	4.341	12.01	40.405	65.20	376.060	96.50	3500.116	100.00
0.057	0.00	0.532	0.36	4.950	13.65	46.070	68.74	428.793	97.05	3990.912	100.00
0.065	0.00	0.606	0.69	5.644	15.48	52.531	72.12	488.919	97.60	4550.528	100.00
0.074	0.00	0.691	1.06	6.435	17.52	59.897	75.33	557.477	98.12	5188.616	100.00
0.085	0.00	0.788	1.47	7.338	19.78	68.295	78.35	635.647	98.59	5916.178	100.00
0.097	0.00	0.899	1.91	8.367	22.30	77.872	81.16	724.780	98.98	6745.760	100.00
0.110	0.00	1.025	2.36	9.540	25.06	88.791	83.73	826.410	99.27	7691.669	100.00
0.126	0.00	1.169	2.84	10.878	28.07	101.242	86.05	942.292	99.48	8770.216	100.00
0.143	0.00	1.333	3.34	12.403	31.32	115.438	88.07	1074.423	99.66	10000.000	100.00
0.163	0.00	1.519	3.90	14.142	34.77	131.625	89.80	1225.081	99.80		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-12-2*
Analyst: KB
Particle Technology Labs *PTL ID: 44370*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Tuesday, January 25, 2005 2:43:28 PM

Result Source:
Averaged

Analyzed:
Tuesday, January 25, 2005 2:43:29 PM

Number of this Measurement:
1

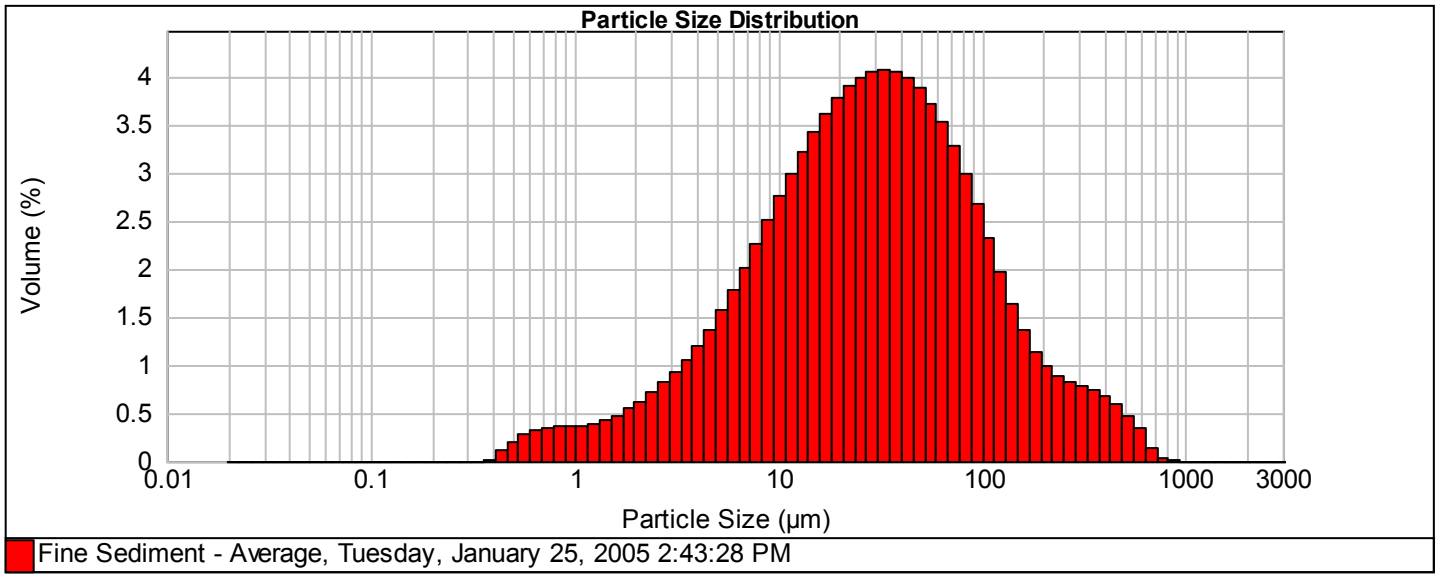
Number of Measurements:
4

Particle Name: Default
Accessory Name: Hydro 2000S (A)
Pump Speed: 2000
Analysis model: General purpose
Sensitivity: Normal
Particle RI: 1.520
Absorption: 0.1
Size range: 0.020 to 2000.000 um
Obscuration: 14.22 %
Dispersant Name: Water
Dispersant RI: 1.330
Weighted Residual: 0.671 %
Result Emulation: Off

Concentration: 0.0214 %Vol
Span : 4.709
Uniformity: 1.66
Result units: Volume

Specific Surface Area: 0.637 m²/g
Surface Weighted Mean D[3,2]: 9.413 um
Vol. Weighted Mean D[4,3]: 59.437 um

d(0.1): 4.530 um **d(0.5): 28.346 um** **d(0.9): 138.015 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	3.67	16.125	33.49	150.082	91.01	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	4.21	18.386	37.11	171.127	92.37	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	4.84	20.964	40.89	195.123	93.51	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	5.55	23.904	44.79	222.484	94.50	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	6.37	27.256	48.79	253.681	95.38	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	7.30	31.078	52.85	289.253	96.20	2692.173	100.00
0.044	0.00	0.409	0.00	3.807	8.36	35.436	56.93	329.813	96.98	3069.677	100.00
0.050	0.00	0.466	0.12	4.341	9.57	40.405	60.98	376.060	97.72	3500.116	100.00
0.057	0.00	0.532	0.32	4.950	10.95	46.070	64.97	428.793	98.41	3990.912	100.00
0.065	0.00	0.606	0.60	5.644	12.51	52.531	68.86	488.919	99.01	4550.528	100.00
0.074	0.00	0.691	0.92	6.435	14.29	59.897	72.59	557.477	99.49	5188.616	100.00
0.085	0.00	0.788	1.27	7.338	16.30	68.295	76.12	635.647	99.84	5916.178	100.00
0.097	0.00	0.899	1.64	8.367	18.56	77.872	79.41	724.780	99.98	6745.760	100.00
0.110	0.00	1.025	2.01	9.540	21.06	88.791	82.41	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	2.38	10.878	23.82	101.242	85.08	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	2.77	12.403	26.82	115.438	87.40	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	3.19	14.142	30.05	131.625	89.37	1225.081	100.00		

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-12-3*
Analyst: KB
Particle Technology Labs *PTL ID: 44371*

SOP Name: Sea Engineering - Fine Sediment
Result Source: Averaged
Number of this Measurement: 1

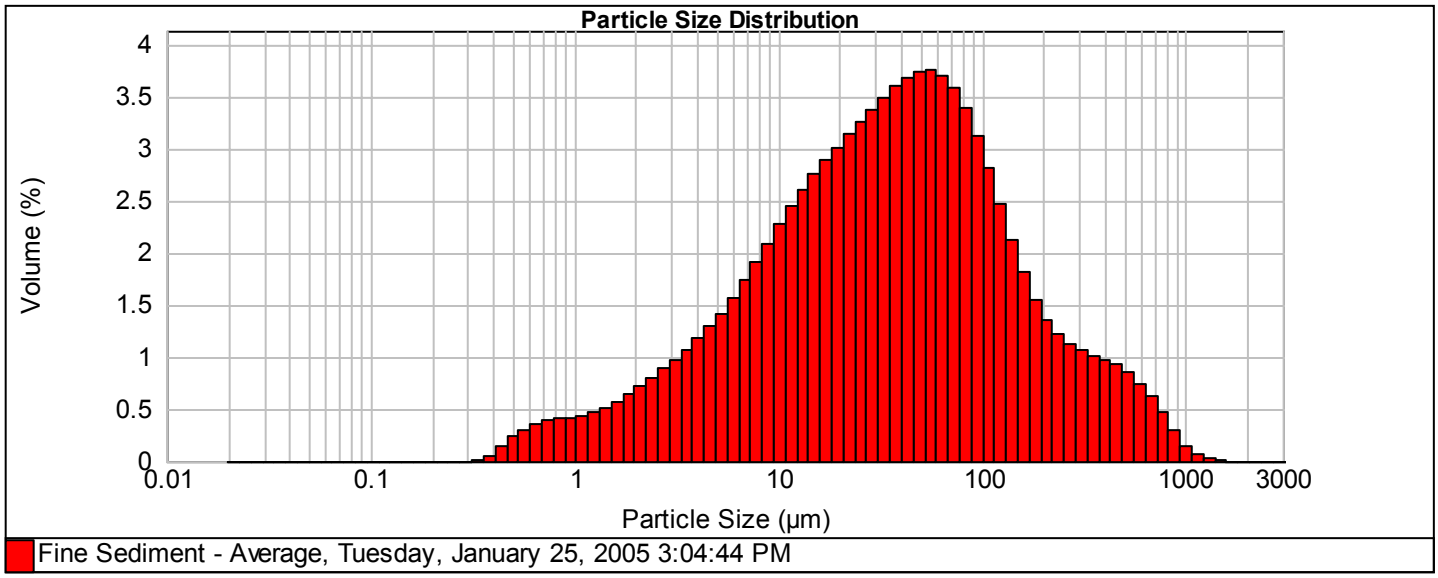
Measured: Tuesday, January 25, 2005 3:04:44 PM
Analyzed: Tuesday, January 25, 2005 3:04:45 PM
Number of Measurements: 4

Particle Name:	Accessory Name:	Pump Speed:	Analysis model:	Sensitivity:
Default	Hydro 2000S (A)	2000	General purpose	Normal
Particle RI:	**Absorption:**		**Size range:**	**Obscuration:**
1.520	0.1		0.020 to 2000.000 um	15.58 %
Dispersant Name:	**Dispersant RI:**		**Weighted Residual:**	**Result Emulation:**
Water	1.330		0.651 %	Off

Concentration:	Span :	Uniformity:	Result units:
0.0234 %Vol	5.826	1.99	Volume

Specific Surface Area:	Surface Weighted Mean D[3,2]:	Vol. Weighted Mean D[4,3]:
0.658 m²/g	9.120 um	85.107 um

d(0.1): 4.098 um **d(0.5): 35.737 um** **d(0.9): 212.287 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	4.27	16.125	30.62	150.082	85.75	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	4.91	18.386	33.51	171.127	87.56	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	5.62	20.964	36.52	195.123	89.11	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	6.43	23.904	39.66	222.484	90.47	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	7.31	27.256	42.91	253.681	91.68	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	8.29	31.078	46.28	289.253	92.80	2692.173	100.00
0.044	0.00	0.409	0.06	3.807	9.36	35.436	49.77	329.813	93.87	3069.677	100.00
0.050	0.00	0.466	0.20	4.341	10.53	40.405	53.37	376.060	94.88	3500.116	100.00
0.057	0.00	0.532	0.44	4.950	11.82	46.070	57.05	428.793	95.86	3990.912	100.00
0.065	0.00	0.606	0.74	5.644	13.24	52.531	60.79	488.919	96.78	4550.528	100.00
0.074	0.00	0.691	1.10	6.435	14.81	59.897	64.55	557.477	97.63	5188.616	100.00
0.085	0.00	0.788	1.48	7.338	16.54	68.295	68.25	635.647	98.38	5916.178	100.00
0.097	0.00	0.899	1.89	8.367	18.45	77.872	71.84	724.780	99.00	6745.760	100.00
0.110	0.00	1.025	2.31	9.540	20.54	88.791	75.23	826.410	99.46	7691.669	100.00
0.126	0.00	1.169	2.74	10.878	22.81	101.242	78.36	942.292	99.76	8770.216	100.00
0.143	0.00	1.333	3.20	12.403	25.26	115.438	81.17	1074.423	99.90	10000.000	100.00
0.163	0.00	1.519	3.71	14.142	27.87	131.625	83.63	1225.081	99.97		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-12-4*
Analyst: KB
Particle Technology Labs *PTL ID: 44372*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Tuesday, January 25, 2005 3:24:02 PM

Result Source:
Averaged

Analyzed:
Tuesday, January 25, 2005 3:24:03 PM

Number of this Measurement:
1

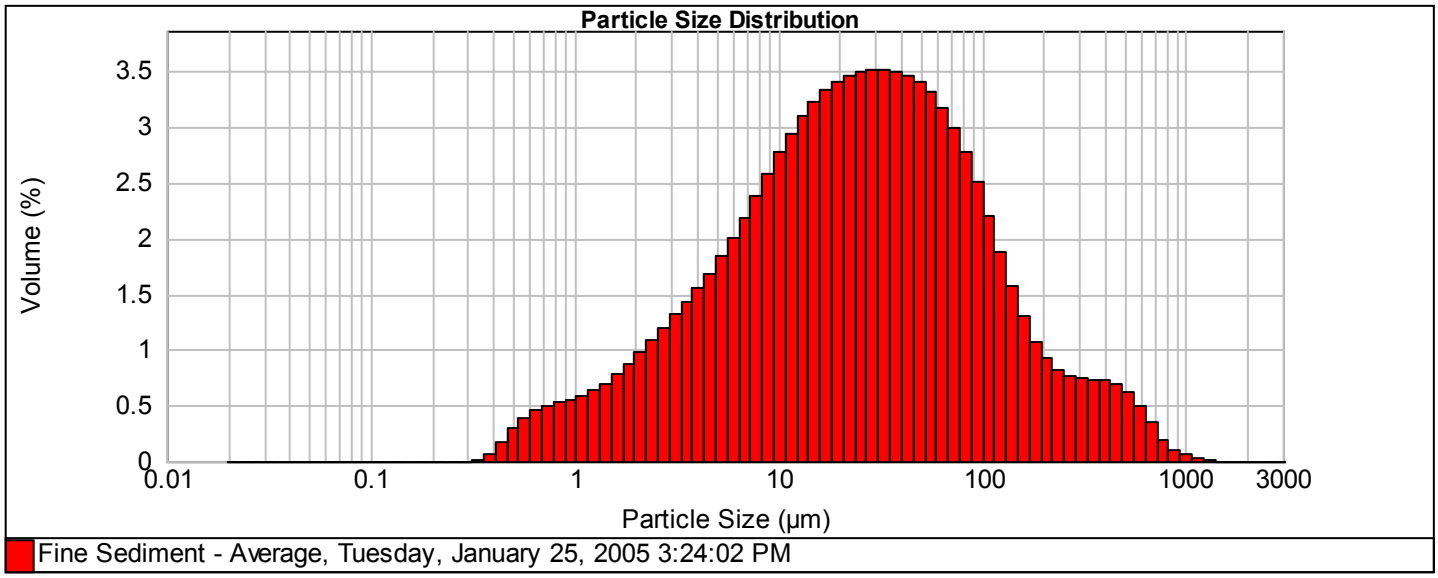
Number of Measurements:
4

Particle Name:	Accessory Name:	Pump Speed:	Analysis model:	Sensitivity:
Default	Hydro 2000S (A)	2000	General purpose	Normal
Particle RI:	**Absorption:**		**Size range:**	**Obscuration:**
1.520	0.1		0.020 to 2000.000 um	15.79 %
Dispersant Name:	**Dispersant RI:**		**Weighted Residual:**	**Result Emulation:**
Water	1.330		0.818 %	Off

Concentration:	Span :	Uniformity:	Result units:
0.0188 %Vol	5.728	2.13	Volume

Specific Surface Area:	Surface Weighted Mean D[3,2]:	Vol. Weighted Mean D[4,3]:
0.83 m²/g	7.227 um	62.711 um

d(0.1): 2.987 um **d(0.5): 24.749 um** **d(0.9): 144.744 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	5.65	16.125	38.87	150.082	90.40	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	6.53	18.386	42.20	171.127	91.70	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	7.51	20.964	45.61	195.123	92.78	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	8.61	23.904	49.08	222.484	93.70	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	9.81	27.256	52.57	253.681	94.52	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	11.13	31.078	56.09	289.253	95.28	2692.173	100.00
0.044	0.00	0.409	0.07	3.807	12.56	35.436	59.61	329.813	96.02	3069.677	100.00
0.050	0.00	0.466	0.24	4.341	14.11	40.405	63.11	376.060	96.76	3500.116	100.00
0.057	0.00	0.532	0.54	4.950	15.80	46.070	66.57	428.793	97.48	3990.912	100.00
0.065	0.00	0.606	0.92	5.644	17.65	52.531	69.97	488.919	98.16	4550.528	100.00
0.074	0.00	0.691	1.38	6.435	19.65	59.897	73.29	557.477	98.77	5188.616	100.00
0.085	0.00	0.788	1.87	7.338	21.84	68.295	76.47	635.647	99.27	5916.178	100.00
0.097	0.00	0.899	2.41	8.367	24.23	77.872	79.47	724.780	99.62	6745.760	100.00
0.110	0.00	1.025	2.96	9.540	26.81	88.791	82.25	826.410	99.80	7691.669	100.00
0.126	0.00	1.169	3.55	10.878	29.58	101.242	84.75	942.292	99.90	8770.216	100.00
0.143	0.00	1.333	4.18	12.403	32.53	115.438	86.96	1074.423	99.97	10000.000	100.00
0.163	0.00	1.519	4.87	14.142	35.63	131.625	88.83	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-12-5*
Analyst: KB
Particle Technology Labs *PTL ID: 44373*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Tuesday, January 25, 2005 3:58:35 PM

Result Source:
Averaged

Analyzed:
Tuesday, January 25, 2005 3:58:36 PM

Number of this Measurement:
1

Number of Measurements:
4

Particle Name:
Default

Accessory Name:
Hydro 2000S (A)

Pump Speed:
2000

Analysis model:
General purpose

Sensitivity:
Normal

Particle RI:
1.520

Absorption:
0.1

Size range:
0.020 to 2000.000 um

Obscuration:
14.35 %

Dispersant Name:
Water

Dispersant RI:
1.330

Weighted Residual:
0.790 %

Result Emulation:
Off

Concentration:
0.0161 %Vol

Span :
5.632

Uniformity:
2.07

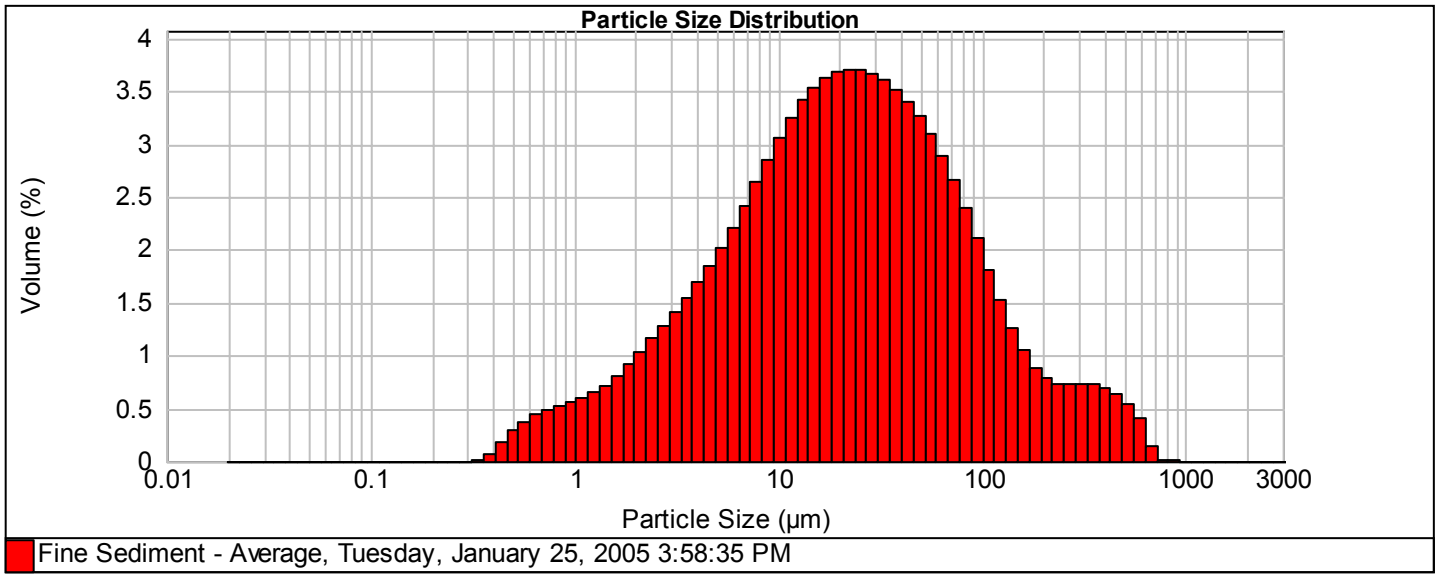
Result units:
Volume

Specific Surface Area:
0.861 m²/g

Surface Weighted Mean D[3,2]:
6.969 um

Vol. Weighted Mean D[4,3]:
53.304 um

d(0.1): 2.902 um **d(0.5):** 21.461 um **d(0.9):** 123.779 um



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	5.69	16.125	42.03	150.082	91.93	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	6.61	18.386	45.66	171.127	92.98	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	7.65	20.964	49.34	195.123	93.87	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	8.81	23.904	53.04	222.484	94.66	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	10.09	27.256	56.74	253.681	95.40	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	11.51	31.078	60.41	289.253	96.12	2692.173	100.00
0.044	0.00	0.409	0.07	3.807	13.06	35.436	64.01	329.813	96.84	3069.677	100.00
0.050	0.00	0.466	0.24	4.341	14.75	40.405	67.53	376.060	97.57	3500.116	100.00
0.057	0.00	0.532	0.53	4.950	16.60	46.070	70.94	428.793	98.27	3990.912	100.00
0.065	0.00	0.606	0.90	5.644	18.63	52.531	74.20	488.919	98.91	4550.528	100.00
0.074	0.00	0.691	1.35	6.435	20.85	59.897	77.30	557.477	99.44	5188.616	100.00
0.085	0.00	0.788	1.84	7.338	23.27	68.295	80.19	635.647	99.84	5916.178	100.00
0.097	0.00	0.899	2.37	8.367	25.91	77.872	82.85	724.780	99.99	6745.760	100.00
0.110	0.00	1.025	2.93	9.540	28.76	88.791	85.24	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	3.52	10.878	31.83	101.242	87.35	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	4.17	12.403	35.08	115.438	89.16	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	4.88	14.142	38.49	131.625	90.68	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-13-1*
Analyst: KB
Particle Technology Labs *PTL ID: 44374*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Wednesday, January 26, 2005 12:42:30 PM

Result Source:
Averaged

Analyzed:
Wednesday, January 26, 2005 12:42:31 PM

Number of this Measurement:
1

Number of Measurements:
4

Particle Name:
Default

Accessory Name:
Hydro 2000S (A)

Pump Speed:
2000

Analysis model:
General purpose

Sensitivity:
Normal

Particle RI:
1.520

Absorption:
0.1

Size range:
0.020 to 2000.000 um

Obscuration:
16.99 %

Dispersant Name:
Water

Dispersant RI:
1.330

Weighted Residual:
0.900 %

Result Emulation:
Off

Concentration:
0.0188 %Vol

Span :
4.502

Uniformity:
1.55

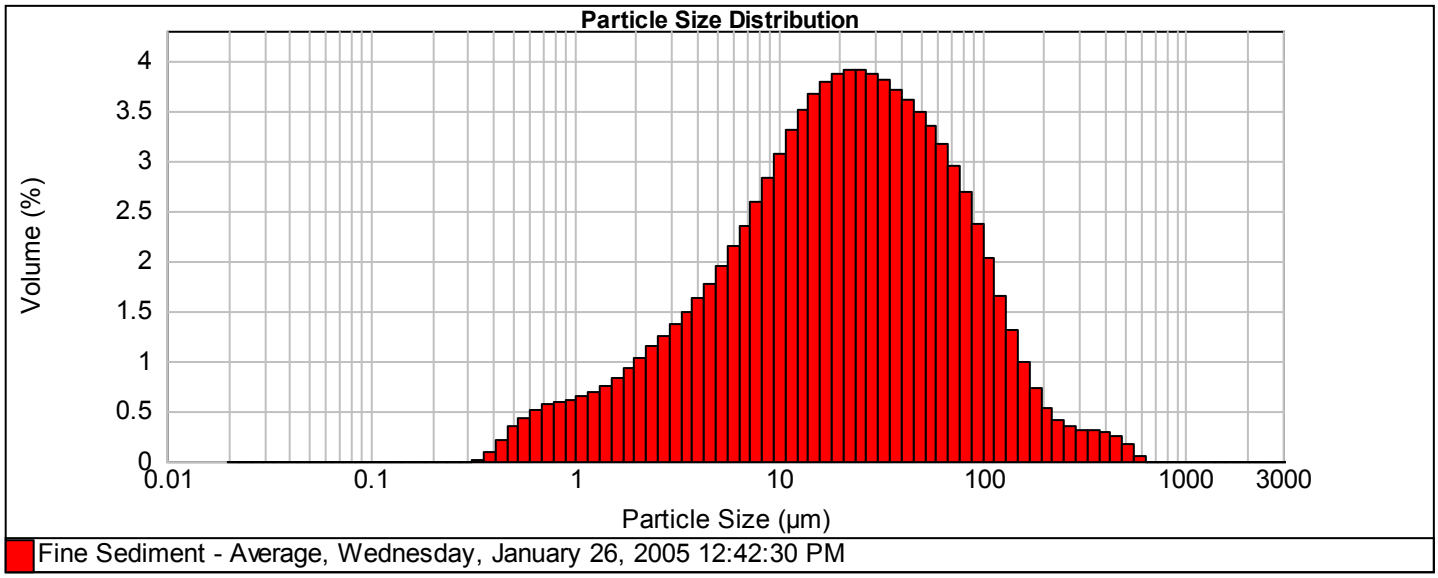
Result units:
Volume

Specific Surface Area:
0.907 m²/g

Surface Weighted Mean D[3,2]:
6.616 um

Vol. Weighted Mean D[4,3]:
41.334 um

d(0.1): 2.756 um **d(0.5):** 21.039 um **d(0.9):** 97.476 um



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	6.25	16.125	42.24	150.082	95.62	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	7.17	18.386	46.03	171.127	96.60	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	8.20	20.964	49.89	195.123	97.33	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	9.34	23.904	53.80	222.484	97.87	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	10.60	27.256	57.69	253.681	98.28	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	11.97	31.078	61.55	289.253	98.62	2692.173	100.00
0.044	0.00	0.409	0.09	3.807	13.46	35.436	65.35	329.813	98.94	3069.677	100.00
0.050	0.00	0.466	0.31	4.341	15.09	40.405	69.06	376.060	99.24	3500.116	100.00
0.057	0.00	0.532	0.65	4.950	16.86	46.070	72.67	428.793	99.53	3990.912	100.00
0.065	0.00	0.606	1.09	5.644	18.81	52.531	76.16	488.919	99.78	4550.528	100.00
0.074	0.00	0.691	1.60	6.435	20.95	59.897	79.49	557.477	99.95	5188.616	100.00
0.085	0.00	0.788	2.16	7.338	23.30	68.295	82.65	635.647	100.00	5916.178	100.00
0.097	0.00	0.899	2.75	8.367	25.88	77.872	85.60	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	3.36	9.540	28.71	88.791	88.28	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	4.00	10.878	31.78	101.242	90.65	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	4.68	12.403	35.08	115.438	92.67	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	5.42	14.142	38.58	131.625	94.32	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-13-2*
Analyst: KB
Particle Technology Labs *PTL ID: 44375*

SOP Name: Sea Engineering - Fine Sediment

Result Source: Averaged

Number of this Measurement: 1

Measured: Wednesday, January 26, 2005 1:37:30 PM

Analyzed: Wednesday, January 26, 2005 1:37:31 PM

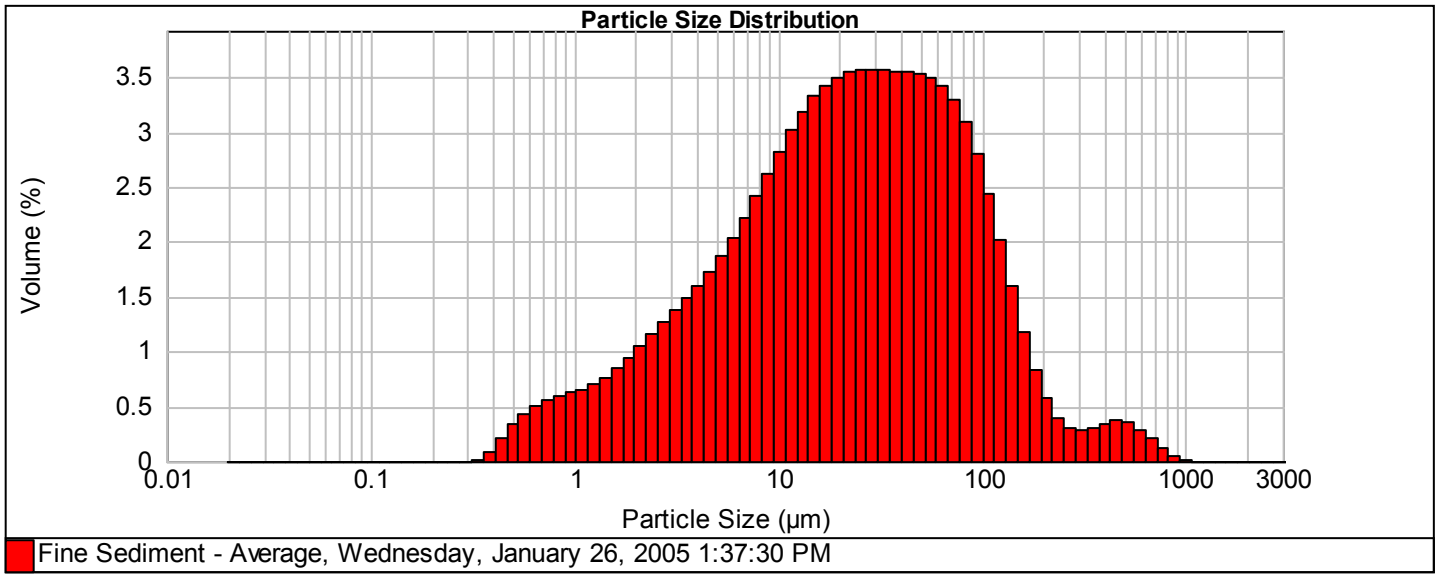
Number of Measurements: 4

Particle Name:	Accessory Name:	Pump Speed:	Analysis model:	Sensitivity:
Default	Hydro 2000S (A)	2000	General purpose	Normal
Particle RI:	**Absorption:**		**Size range:**	**Obscuration:**
1.520	0.1		0.020 to 2000.000 um	14.53 %
Dispersant Name:	**Dispersant RI:**		**Weighted Residual:**	**Result Emulation:**
Water	1.330		0.892 %	Off

Concentration:	Span :	Uniformity:	Result units:
0.0160 %Vol	4.657	1.73	Volume

Specific Surface Area:	Surface Weighted Mean D[3,2]:	Vol. Weighted Mean D[4,3]:
0.895 m²/g	6.704 um	49.279 um

d(0.1): 2.715 um **d(0.5): 23.117 um** **d(0.9): 110.362 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	6.31	16.125	40.43	150.082	94.41	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	7.26	18.386	43.86	171.127	95.60	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	8.31	20.964	47.36	195.123	96.43	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	9.48	23.904	50.91	222.484	97.01	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	10.75	27.256	54.47	253.681	97.40	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	12.12	31.078	58.04	289.253	97.70	2692.173	100.00
0.044	0.00	0.409	0.09	3.807	13.61	35.436	61.60	329.813	97.99	3069.677	100.00
0.050	0.00	0.466	0.30	4.341	15.21	40.405	65.16	376.060	98.29	3500.116	100.00
0.057	0.00	0.532	0.64	4.950	16.94	46.070	68.71	428.793	98.64	3990.912	100.00
0.065	0.00	0.606	1.07	5.644	18.81	52.531	72.24	488.919	99.01	4550.528	100.00
0.074	0.00	0.691	1.58	6.435	20.85	59.897	75.74	557.477	99.37	5188.616	100.00
0.085	0.00	0.788	2.14	7.338	23.06	68.295	79.16	635.647	99.65	5916.178	100.00
0.097	0.00	0.899	2.74	8.367	25.47	77.872	82.45	724.780	99.85	6745.760	100.00
0.110	0.00	1.025	3.36	9.540	28.09	88.791	85.54	826.410	99.96	7691.669	100.00
0.126	0.00	1.169	4.01	10.878	30.91	101.242	88.35	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	4.70	12.403	33.93	115.438	90.79	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	5.46	14.142	37.11	131.625	92.82	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-13-3*
Analyst: KB
Particle Technology Labs *PTL ID: 44376*

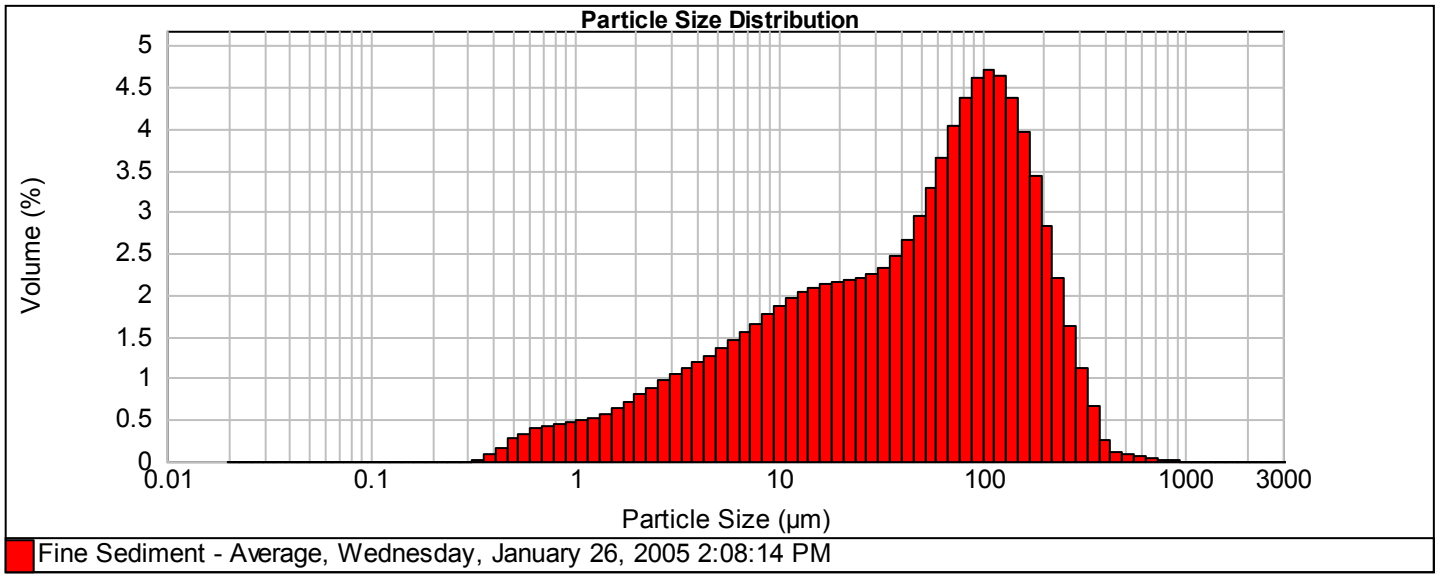
SOP Name: Sea Engineering - Fine Sediment
Result Source: Averaged
Number of this Measurement: 1

Measured: Wednesday, January 26, 2005 2:08:14 PM
Analyzed: Wednesday, January 26, 2005 2:08:15 PM
Number of Measurements: 4

Particle Name: Default	**Accessory Name:** Hydro 2000S (A)	**Pump Speed:** 2000	**Analysis model:** General purpose	**Sensitivity:** Normal
Particle RI: 1.520	**Absorption:** 0.1		**Size range:** 0.020 to 2000.000 um	**Obscuration:** 13.67 %
Dispersant Name: Water	**Dispersant RI:** 1.330		**Weighted Residual:** 0.742 %	**Result Emulation:** Off

Concentration: 0.0200 %Vol	**Span :** 3.482	**Uniformity:** 1.14	**Result units:** Volume
Specific Surface Area: 0.676 m²/g	**Surface Weighted Mean D[3,2]:** 8.870 um	**Vol. Weighted Mean D[4,3]:** 77.480 um	

d(0.1): 3.651 um **d(0.5): 52.839 um** **d(0.9): 187.634 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	4.82	16.125	28.55	150.082	83.56	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	5.54	18.386	30.68	171.127	87.53	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	6.35	20.964	32.83	195.123	90.96	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	7.23	23.904	35.01	222.484	93.80	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	8.20	27.256	37.21	253.681	96.01	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	9.25	31.078	39.46	289.253	97.65	2692.173	100.00
0.044	0.00	0.409	0.08	3.807	10.37	35.436	41.78	329.813	98.78	3069.677	100.00
0.050	0.00	0.466	0.24	4.341	11.56	40.405	44.25	376.060	99.45	3500.116	100.00
0.057	0.00	0.532	0.51	4.950	12.83	46.070	46.92	428.793	99.71	3990.912	100.00
0.065	0.00	0.606	0.84	5.644	14.19	52.531	49.86	488.919	99.82	4550.528	100.00
0.074	0.00	0.691	1.23	6.435	15.63	59.897	53.14	557.477	99.90	5188.616	100.00
0.085	0.00	0.788	1.65	7.338	17.18	68.295	56.80	635.647	99.95	5916.178	100.00
0.097	0.00	0.899	2.10	8.367	18.83	77.872	60.85	724.780	99.99	6745.760	100.00
0.110	0.00	1.025	2.57	9.540	20.59	88.791	65.23	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	3.07	10.878	22.46	101.242	69.84	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	3.59	12.403	24.42	115.438	74.55	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	4.17	14.142	26.45	131.625	79.18	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING
Per Test Method: MM148.01
Analyst: KB
Particle Technology Labs

Fine Sediment
SF-13-4

PTL ID: 44377

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Wednesday, January 26, 2005 2:29:21 PM

Result Source:
Averaged

Analyzed:
Wednesday, January 26, 2005 2:29:22 PM

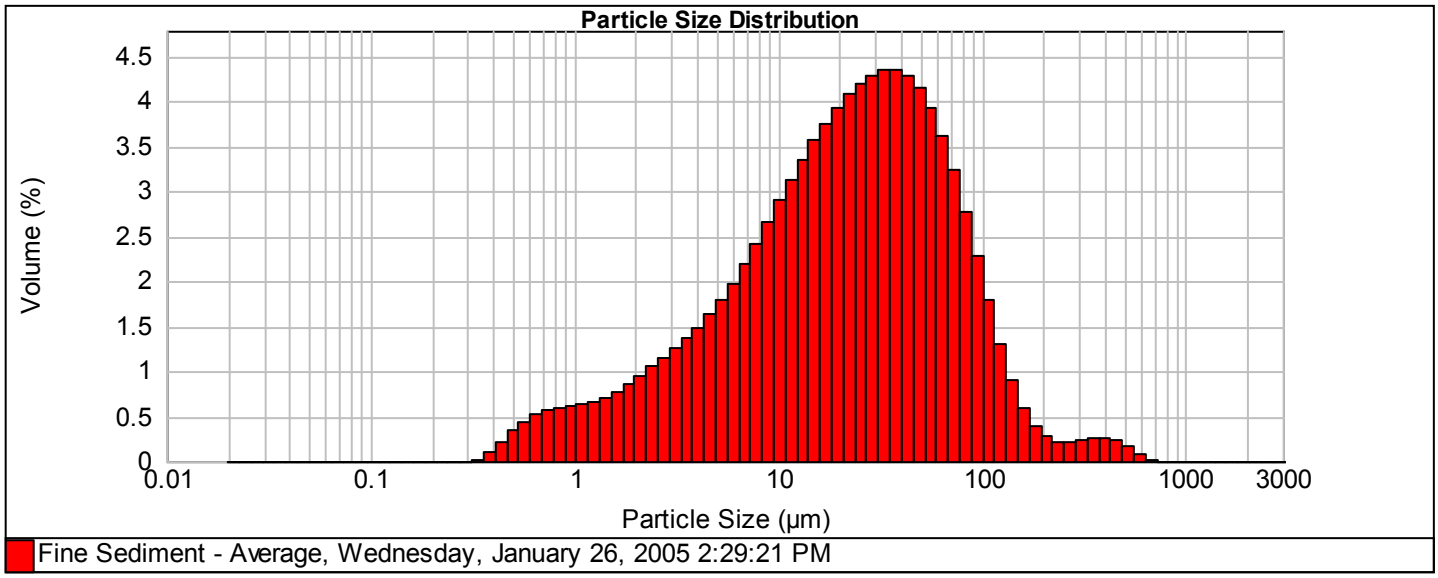
Number of this Measurement:
1

Number of Measurements:
4

Particle Name: Default	**Accessory Name:** Hydro 2000S (A)	**Pump Speed:** 2000	**Analysis model:** General purpose	**Sensitivity:** Normal
Particle RI: 1.520	**Absorption:** 0.1		**Size range:** 0.020 to 2000.000 um	**Obscuration:** 14.31 %
Dispersant Name: Water	**Dispersant RI:** 1.330		**Weighted Residual:** 0.854 %	**Result Emulation:** Off

Concentration: 0.0161 %Vol	**Span :** 3.635	**Uniformity:** 1.3	**Result units:** Volume
Specific Surface Area: 0.886 m²/g	**Surface Weighted Mean D[3,2]:** 6.772 um	**Vol. Weighted Mean D[4,3]:** 39.111 um	

d(0.1): 2.865 um **d(0.5): 22.694 um** **d(0.9): 85.365 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	6.19	16.125	39.89	150.082	97.06	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	7.05	18.386	43.64	171.127	97.66	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	8.00	20.964	47.56	195.123	98.04	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	9.05	23.904	51.63	222.484	98.31	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	10.20	27.256	55.82	253.681	98.53	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	11.45	31.078	60.11	289.253	98.75	2692.173	100.00
0.044	0.00	0.409	0.10	3.807	12.82	35.436	64.45	329.813	98.98	3069.677	100.00
0.050	0.00	0.466	0.32	4.341	14.30	40.405	68.80	376.060	99.24	3500.116	100.00
0.057	0.00	0.532	0.67	4.950	15.94	46.070	73.08	428.793	99.50	3990.912	100.00
0.065	0.00	0.606	1.11	5.644	17.73	52.531	77.23	488.919	99.75	4550.528	100.00
0.074	0.00	0.691	1.63	6.435	19.71	59.897	81.15	557.477	99.92	5188.616	100.00
0.085	0.00	0.788	2.19	7.338	21.89	68.295	84.77	635.647	100.00	5916.178	100.00
0.097	0.00	0.899	2.79	8.367	24.30	77.872	88.00	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	3.40	9.540	26.95	88.791	90.78	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	4.04	10.878	29.84	101.242	93.06	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	4.70	12.403	32.97	115.438	94.85	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	5.41	14.142	36.33	131.625	96.15	1225.081	100.00		

Result Analysis Report

Operator notes:

SEA ENGINEERING
Per Test Method: MM148.01
Analyst: KB
Particle Technology Labs

Fine Sediment
SF-13-5

PTL ID: 44378

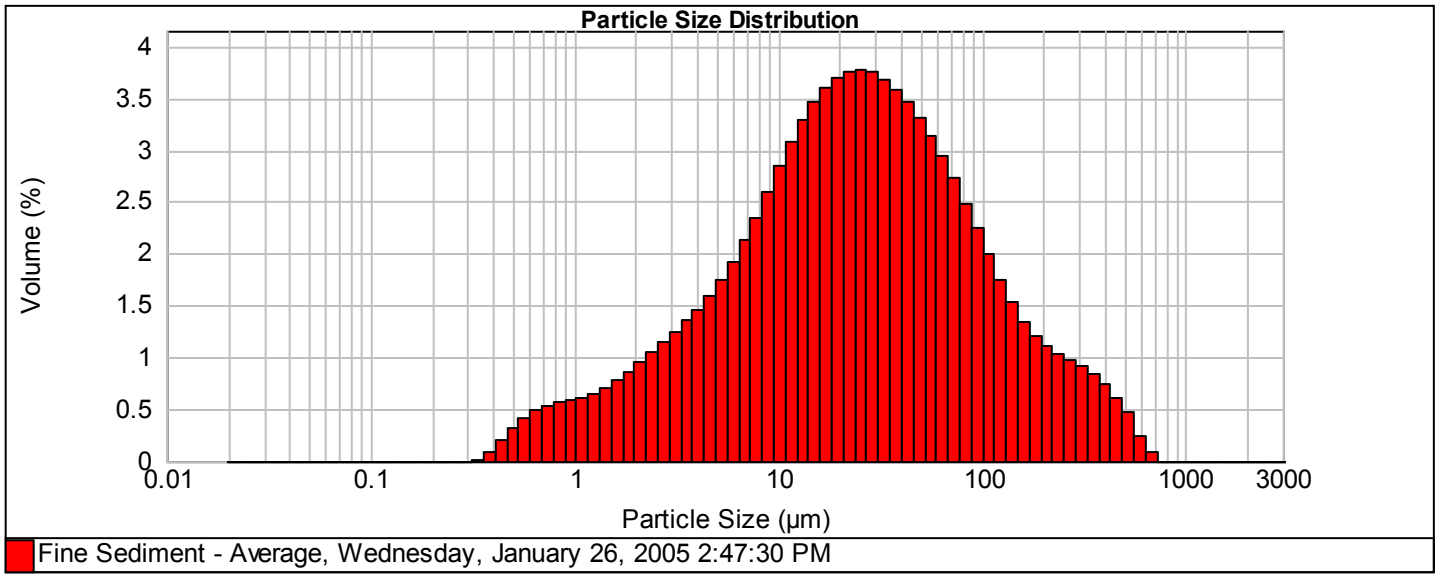
SOP Name: Sea Engineering - Fine Sediment
Result Source: Averaged
Number of this Measurement: 1

Measured: Wednesday, January 26, 2005 2:47:30 PM
Analyzed: Wednesday, January 26, 2005 2:47:31 PM
Number of Measurements: 4

Particle Name: Default	**Accessory Name:** Hydro 2000S (A)	**Pump Speed:** 2000	**Analysis model:** General purpose	**Sensitivity:** Normal
Particle RI: 1.520	**Absorption:** 0.1		**Size range:** 0.020 to 2000.000 um	**Obscuration:** 14.66 %
Dispersant Name: Water	**Dispersant RI:** 1.330		**Weighted Residual:** 0.865 %	**Result Emulation:** Off

Concentration: 0.0171 %Vol	**Span :** 5.944	**Uniformity:** 1.97	**Result units:** Volume
Specific Surface Area: 0.847 m²/g	**Surface Weighted Mean D[3,2]:** 7.083 um	**Vol. Weighted Mean D[4,3]:** 56.781 um	

d(0.1): 2.955 um **d(0.5): 23.863 um** **d(0.9): 144.785 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	5.89	16.125	38.98	150.082	90.40	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	6.75	18.386	42.59	171.127	91.75	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	7.71	20.964	46.29	195.123	92.96	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	8.77	23.904	50.05	222.484	94.08	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	9.92	27.256	53.82	253.681	95.12	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	11.17	31.078	57.57	289.253	96.10	2692.173	100.00
0.044	0.00	0.409	0.08	3.807	12.52	35.436	61.25	329.813	97.02	3069.677	100.00
0.050	0.00	0.466	0.28	4.341	13.98	40.405	64.83	376.060	97.86	3500.116	100.00
0.057	0.00	0.532	0.61	4.950	15.58	46.070	68.30	428.793	98.60	3990.912	100.00
0.065	0.00	0.606	1.02	5.644	17.32	52.531	71.61	488.919	99.21	4550.528	100.00
0.074	0.00	0.691	1.50	6.435	19.25	59.897	74.75	557.477	99.68	5188.616	100.00
0.085	0.00	0.788	2.03	7.338	21.37	68.295	77.69	635.647	99.92	5916.178	100.00
0.097	0.00	0.899	2.59	8.367	23.72	77.872	80.41	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	3.17	9.540	26.32	88.791	82.90	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	3.78	10.878	29.16	101.242	85.14	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	4.42	12.403	32.23	115.438	87.13	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	5.12	14.142	35.52	131.625	88.87	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-14-1*
Analyst: KB
Particle Technology Labs *PTL ID: 44379*

SOP Name: Sea Engineering - Fine Sediment
Result Source: Averaged
Number of this Measurement: 1

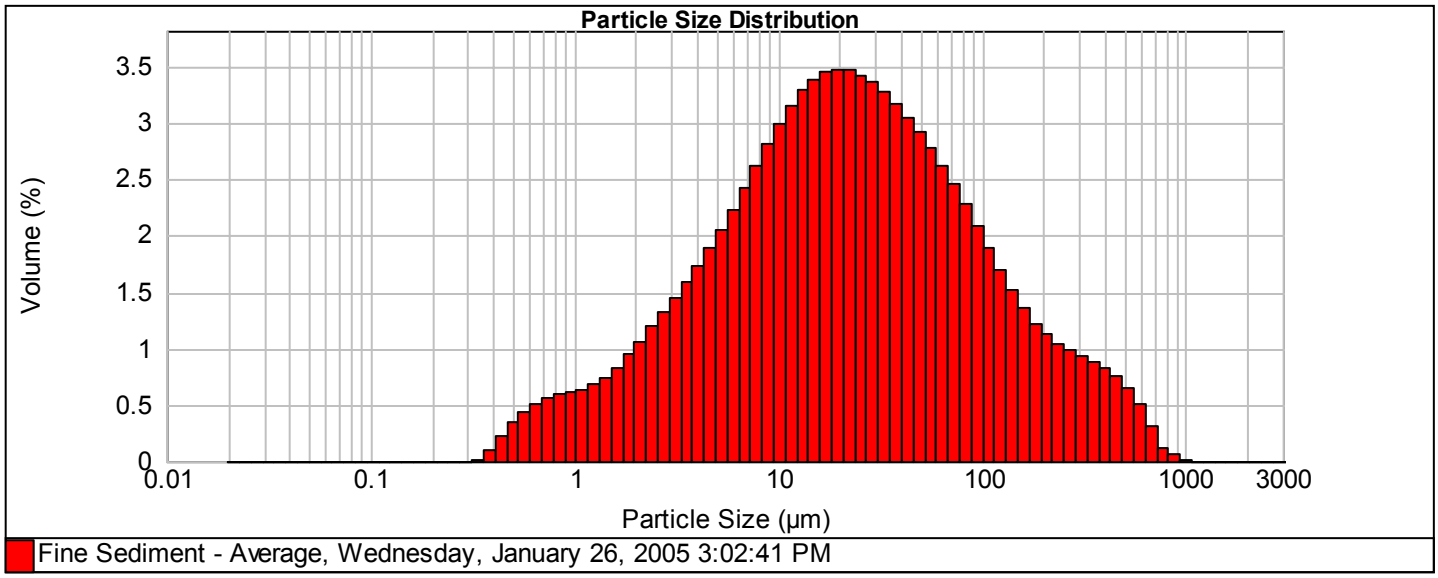
Measured: Wednesday, January 26, 2005 3:02:41 PM
Analyzed: Wednesday, January 26, 2005 3:02:42 PM
Number of Measurements: 4

Particle Name:	Accessory Name:	Pump Speed:	Analysis model:	Sensitivity:
Default	Hydro 2000S (A)	2000	General purpose	Normal
Particle RI:	**Absorption:**		**Size range:**	**Obscuration:**
1.520	0.1		0.020 to 2000.000 um	16.60 %
Dispersant Name:	**Dispersant RI:**		**Weighted Residual:**	**Result Emulation:**
Water	1.330		0.878 %	Off

Concentration:	Span :	Uniformity:	Result units:
0.0183 %Vol	7.347	2.45	Volume

Specific Surface Area:	Surface Weighted Mean D[3,2]:	Vol. Weighted Mean D[4,3]:
0.907 m²/g	6.614 um	61.433 um

d(0.1): 2.718 um **d(0.5): 21.522 um** **d(0.9): 160.846 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	6.25	16.125	42.39	150.082	89.27	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	7.19	18.386	45.84	171.127	90.62	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	8.26	20.964	49.31	195.123	91.85	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	9.45	23.904	52.77	222.484	92.97	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	10.77	27.256	56.19	253.681	94.01	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	12.22	31.078	59.55	289.253	94.99	2692.173	100.00
0.044	0.00	0.409	0.09	3.807	13.81	35.436	62.82	329.813	95.92	3069.677	100.00
0.050	0.00	0.466	0.31	4.341	15.55	40.405	65.99	376.060	96.81	3500.116	100.00
0.057	0.00	0.532	0.65	4.950	17.44	46.070	69.03	428.793	97.63	3990.912	100.00
0.065	0.00	0.606	1.09	5.644	19.50	52.531	71.95	488.919	98.38	4550.528	100.00
0.074	0.00	0.691	1.60	6.435	21.73	59.897	74.72	557.477	99.02	5188.616	100.00
0.085	0.00	0.788	2.15	7.338	24.15	68.295	77.34	635.647	99.52	5916.178	100.00
0.097	0.00	0.899	2.74	8.367	26.77	77.872	79.79	724.780	99.82	6745.760	100.00
0.110	0.00	1.025	3.35	9.540	29.58	88.791	82.07	826.410	99.94	7691.669	100.00
0.126	0.00	1.169	3.99	10.878	32.57	101.242	84.16	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	4.67	12.403	35.72	115.438	86.05	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	5.42	14.142	39.01	131.625	87.75	1225.081	100.00		

Result Analysis Report

Operator notes:

SEA ENGINEERING
Per Test Method: MM148.01
Analyst: KB
Particle Technology Labs

Fine Sediment
SF-14-2

PTL ID: 44380

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Wednesday, January 26, 2005 3:15:51 PM

Result Source:
Averaged

Analyzed:
Wednesday, January 26, 2005 3:15:52 PM

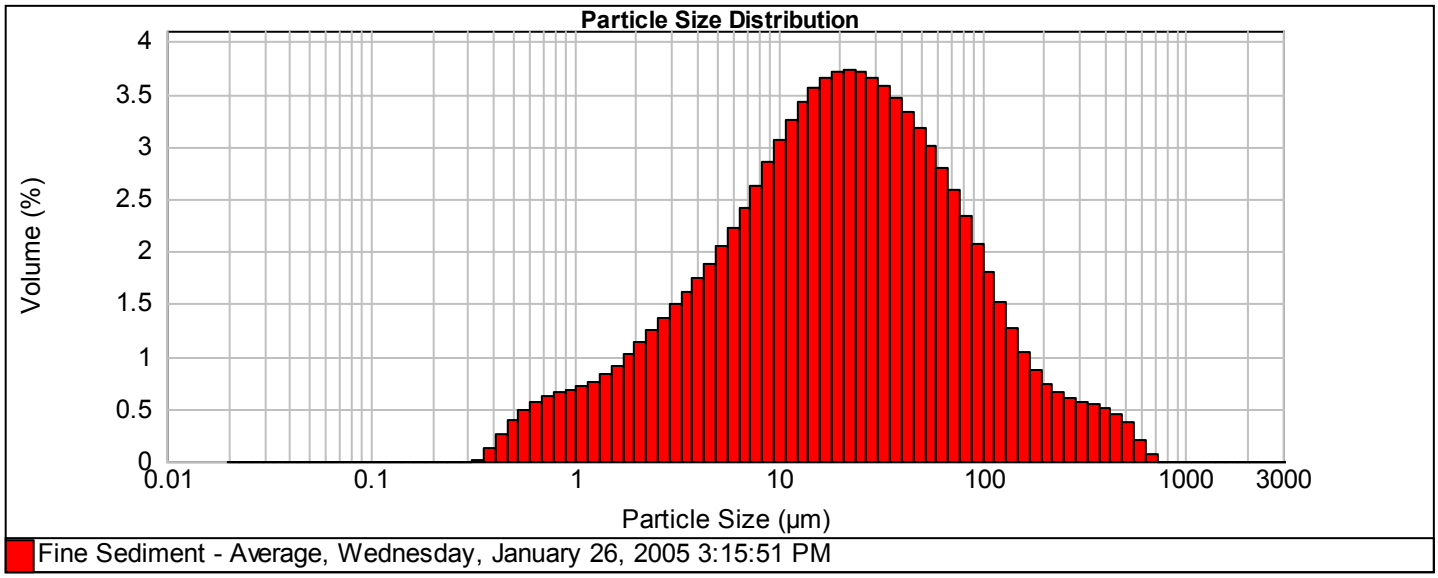
Number of this Measurement:
1

Number of Measurements:
4

Particle Name: Default	**Accessory Name:** Hydro 2000S (A)	**Pump Speed:** 2000	**Analysis model:** General purpose	**Sensitivity:** Normal
Particle RI: 1.520	**Absorption:** 0.1		**Size range:** 0.020 to 2000.000 um	**Obscuration:** 15.28 %
Dispersant Name: Water	**Dispersant RI:** 1.330		**Weighted Residual:** 0.926 %	**Result Emulation:** Off

Concentration: 0.0156 %Vol	**Span :** 5.393	**Uniformity:** 1.94	**Result units:** Volume
Specific Surface Area: 0.979 m²/g	**Surface Weighted Mean D[3,2]:** 6.129 um	**Vol. Weighted Mean D[4,3]:** 46.954 um	

d(0.1): 2.464 um **d(0.5): 20.007 um** **d(0.9): 110.362 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	7.00	16.125	43.96	150.082	93.37	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	8.02	18.386	47.61	171.127	94.42	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	9.16	20.964	51.33	195.123	95.29	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	10.41	23.904	55.06	222.484	96.03	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	11.78	27.256	58.77	253.681	96.68	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	13.27	31.078	62.43	289.253	97.29	2692.173	100.00
0.044	0.00	0.409	0.13	3.807	14.89	35.436	66.01	329.813	97.85	3069.677	100.00
0.050	0.00	0.466	0.38	4.341	16.63	40.405	69.49	376.060	98.40	3500.116	100.00
0.057	0.00	0.532	0.77	4.950	18.51	46.070	72.82	428.793	98.91	3990.912	100.00
0.065	0.00	0.606	1.26	5.644	20.56	52.531	76.00	488.919	99.35	4550.528	100.00
0.074	0.00	0.691	1.83	6.435	22.78	59.897	79.01	557.477	99.72	5188.616	100.00
0.085	0.00	0.788	2.46	7.338	25.19	68.295	81.81	635.647	99.92	5916.178	100.00
0.097	0.00	0.899	3.11	8.367	27.82	77.872	84.38	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	3.80	9.540	30.66	88.791	86.72	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	4.51	10.878	33.72	101.242	88.79	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	5.26	12.403	36.98	115.438	90.58	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	6.09	14.142	40.40	131.625	92.11	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING
Per Test Method: MM148.01
Analyst: KB
Particle Technology Labs

Fine Sediment
SF-14-3

PTL ID: 44381

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Wednesday, January 26, 2005 3:40:27 PM

Result Source:
Averaged

Analyzed:
Wednesday, January 26, 2005 3:40:29 PM

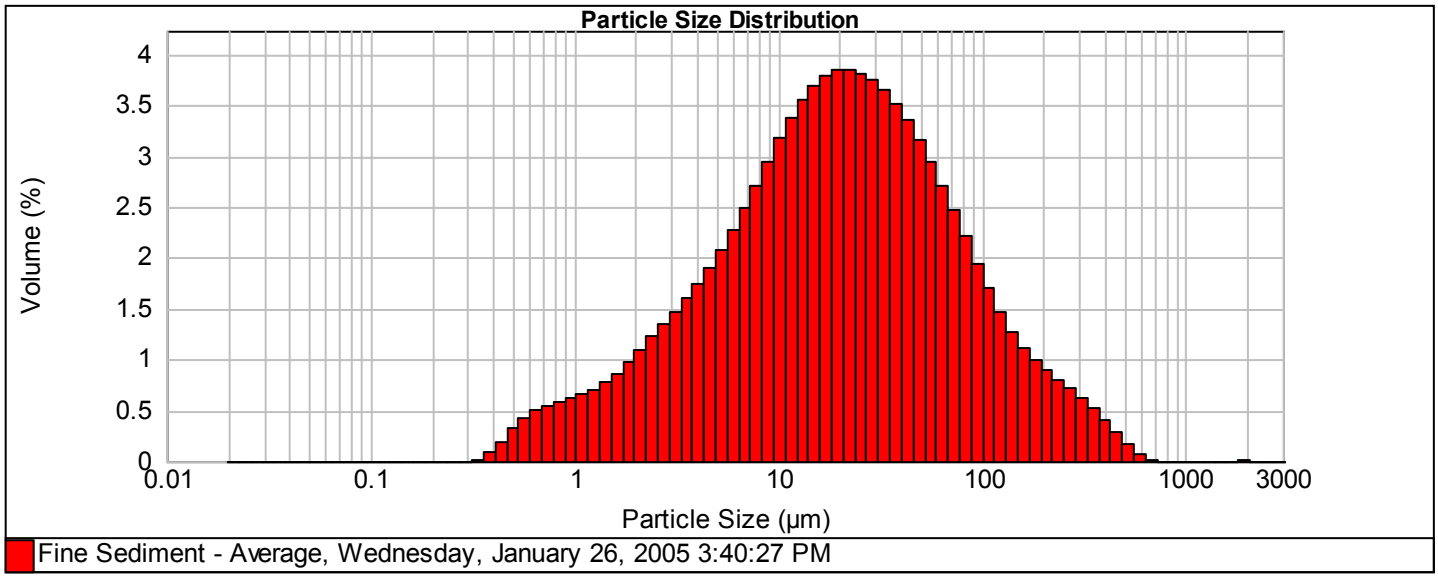
Number of this Measurement:
1

Number of Measurements:
4

Particle Name: Default	**Accessory Name:** Hydro 2000S (A)	**Pump Speed:** 2000	**Analysis model:** General purpose	**Sensitivity:** Normal
Particle RI: 1.520	**Absorption:** 0.1		**Size range:** 0.020 to 2000.000 um	**Obscuration:** 16.65 %
Dispersant Name: Water	**Dispersant RI:** 1.330		**Weighted Residual:** 0.948 %	**Result Emulation:** Off

Concentration: 0.0180 %Vol	**Span :** 5.364	**Uniformity:** 1.82	**Result units:** Volume
Specific Surface Area: 0.919 m²/g	**Surface Weighted Mean D[3,2]:** 6.529 um	**Vol. Weighted Mean D[4,3]:** 44.567 um	

d(0.1): 2.689 um **d(0.5): 19.870 um** **d(0.9): 109.276 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	6.25	16.125	43.94	150.082	93.42	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	7.22	18.386	47.73	171.127	94.53	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	8.32	20.964	51.57	195.123	95.52	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	9.54	23.904	55.42	222.484	96.41	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	10.89	27.256	59.24	253.681	97.21	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	12.37	31.078	63.00	289.253	97.93	2692.173	100.00
0.044	0.00	0.409	0.09	3.807	13.97	35.436	66.65	329.813	98.55	3069.677	100.00
0.050	0.00	0.466	0.28	4.341	15.72	40.405	70.17	376.060	99.06	3500.116	100.00
0.057	0.00	0.532	0.61	4.950	17.62	46.070	73.53	428.793	99.47	3990.912	100.00
0.065	0.00	0.606	1.02	5.644	19.70	52.531	76.69	488.919	99.76	4550.528	100.00
0.074	0.00	0.691	1.52	6.435	21.97	59.897	79.64	557.477	99.92	5188.616	100.00
0.085	0.00	0.788	2.06	7.338	24.45	68.295	82.36	635.647	100.00	5916.178	100.00
0.097	0.00	0.899	2.65	8.367	27.17	77.872	84.83	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	3.27	9.540	30.12	88.791	87.03	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	3.92	10.878	33.29	101.242	88.98	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	4.62	12.403	36.68	115.438	90.68	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	5.39	14.142	40.24	131.625	92.15	1225.081	100.00		

Result Analysis Report

Operator notes:

SEA ENGINEERING
Per Test Method: MM148.01
Analyst: KB
Particle Technology Labs

Fine Sediment
SF-14-4

PTL ID: 44382

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Wednesday, January 26, 2005 3:57:14 PM

Result Source:
Averaged

Analyzed:
Wednesday, January 26, 2005 3:57:15 PM

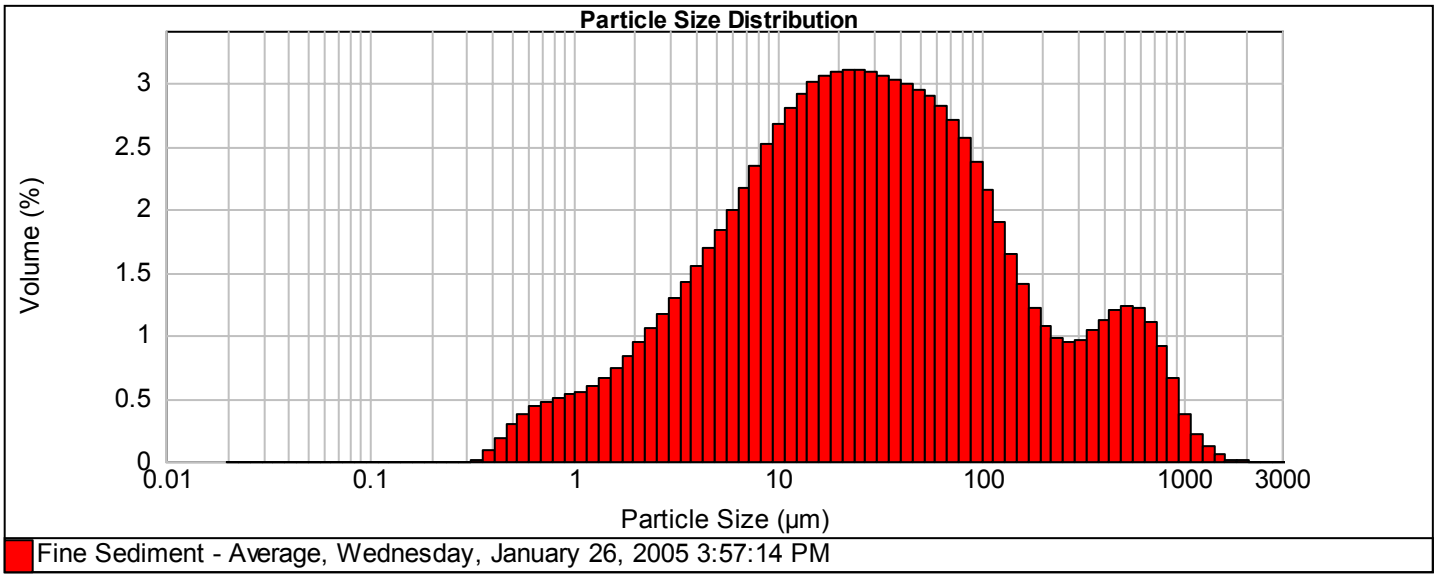
Number of this Measurement:
1

Number of Measurements:
4

Particle Name: Default	**Accessory Name:** Hydro 2000S (A)	**Pump Speed:** 2000	**Analysis model:** General purpose	**Sensitivity:** Normal
Particle RI: 1.520	**Absorption:** 0.1		**Size range:** 0.020 to 2000.000 um	**Obscuration:** 16.73 %
Dispersant Name: Water	**Dispersant RI:** 1.330		**Weighted Residual:** 0.804 %	**Result Emulation:** Off

Concentration: 0.0208 %Vol	**Span :** 10.793	**Uniformity:** 3.24	**Result units:** Volume
Specific Surface Area: 0.798 m²/g	**Surface Weighted Mean D[3,2]:** 7.516 um	**Vol. Weighted Mean D[4,3]:** 98.813 um	

d(0.1): 3.123 um **d(0.5): 27.291 um** **d(0.9): 297.681 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	5.39	16.125	37.60	150.082	84.18	1396.865	99.94
0.023	0.00	0.212	0.00	1.975	6.22	18.386	40.67	171.127	85.59	1592.737	99.99
0.026	0.00	0.242	0.00	2.252	7.16	20.964	43.76	195.123	86.80	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	8.21	23.904	46.87	222.484	87.87	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	9.38	27.256	49.97	253.681	88.85	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	10.67	31.078	53.06	289.253	89.79	2692.173	100.00
0.044	0.00	0.409	0.08	3.807	12.09	35.436	56.12	329.813	90.76	3069.677	100.00
0.050	0.00	0.466	0.26	4.341	13.64	40.405	59.16	376.060	91.79	3500.116	100.00
0.057	0.00	0.532	0.55	4.950	15.33	46.070	62.15	428.793	92.91	3990.912	100.00
0.065	0.00	0.606	0.92	5.644	17.17	52.531	65.11	488.919	94.11	4550.528	100.00
0.074	0.00	0.691	1.35	6.435	19.17	59.897	68.00	557.477	95.34	5188.616	100.00
0.085	0.00	0.788	1.83	7.338	21.33	68.295	70.82	635.647	96.55	5916.178	100.00
0.097	0.00	0.899	2.33	8.367	23.68	77.872	73.53	724.780	97.65	6745.760	100.00
0.110	0.00	1.025	2.85	9.540	26.19	88.791	76.10	826.410	98.56	7691.669	100.00
0.126	0.00	1.169	3.41	10.878	28.86	101.242	78.47	942.292	99.22	8770.216	100.00
0.143	0.00	1.333	4.00	12.403	31.67	115.438	80.63	1074.423	99.60	10000.000	100.00
0.163	0.00	1.519	4.65	14.142	34.60	131.625	82.53	1225.081	99.82		

Result Analysis Report

Operator notes:

SEA ENGINEERING
Per Test Method: MM148.01
Analyst: KB
Particle Technology Labs

Fine Sediment
SF-14-5

PTL ID: 44383

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Wednesday, January 26, 2005 4:17:46 PM

Result Source:
Averaged

Analyzed:
Wednesday, January 26, 2005 4:17:47 PM

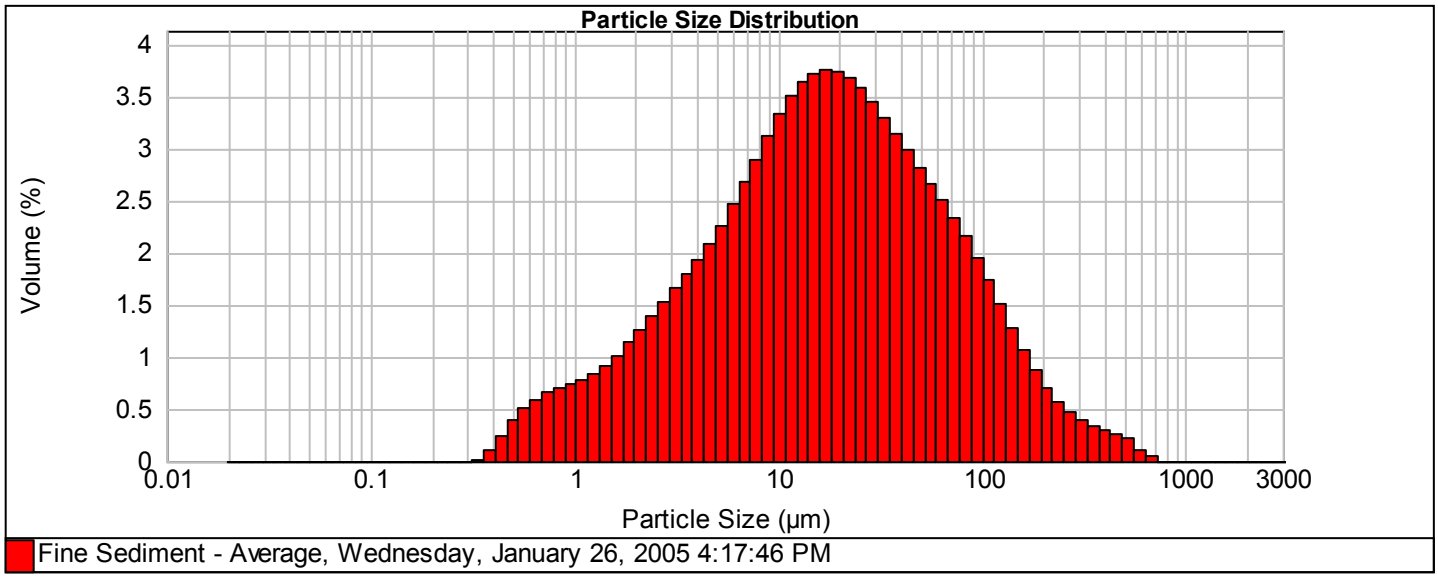
Number of this Measurement:
1

Number of Measurements:
4

Particle Name: Default	**Accessory Name:** Hydro 2000S (A)	**Pump Speed:** 2000	**Analysis model:** General purpose	**Sensitivity:** Normal
Particle RI: 1.520	**Absorption:** 0.1		**Size range:** 0.020 to 2000.000 um	**Obscuration:** 17.07 %
Dispersant Name: Water	**Dispersant RI:** 1.330		**Weighted Residual:** 0.978 %	**Result Emulation:** Off

Concentration: 0.0164 %Vol	**Span :** 5.679	**Uniformity:** 1.94	**Result units:** Volume
Specific Surface Area: 1.04 m²/g	**Surface Weighted Mean D[3,2]:** 5.750 um	**Vol. Weighted Mean D[4,3]:** 40.750 um	

d(0.1): 2.275 um **d(0.5): 17.309 um** **d(0.9): 100.577 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	7.49	16.125	47.97	150.082	94.62	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	8.63	18.386	51.73	171.127	95.68	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	9.90	20.964	55.47	195.123	96.55	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	11.30	23.904	59.15	222.484	97.26	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	12.83	27.256	62.74	253.681	97.83	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	14.49	31.078	66.19	289.253	98.31	2692.173	100.00
0.044	0.00	0.409	0.11	3.807	16.28	35.436	69.50	329.813	98.70	3069.677	100.00
0.050	0.00	0.466	0.36	4.341	18.22	40.405	72.65	376.060	99.05	3500.116	100.00
0.057	0.00	0.532	0.76	4.950	20.32	46.070	75.64	428.793	99.36	3990.912	100.00
0.065	0.00	0.606	1.26	5.644	22.59	52.531	78.47	488.919	99.62	4550.528	100.00
0.074	0.00	0.691	1.86	6.435	25.05	59.897	81.14	557.477	99.85	5188.616	100.00
0.085	0.00	0.788	2.51	7.338	27.73	68.295	83.64	635.647	99.96	5916.178	100.00
0.097	0.00	0.899	3.22	8.367	30.63	77.872	85.98	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	3.96	9.540	33.75	88.791	88.14	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	4.73	10.878	37.09	101.242	90.09	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	5.57	12.403	40.60	115.438	91.83	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	6.48	14.142	44.24	131.625	93.34	1225.081	100.00		

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-15-1*
Analyst: KB
Particle Technology Labs *PTL ID: 44384*

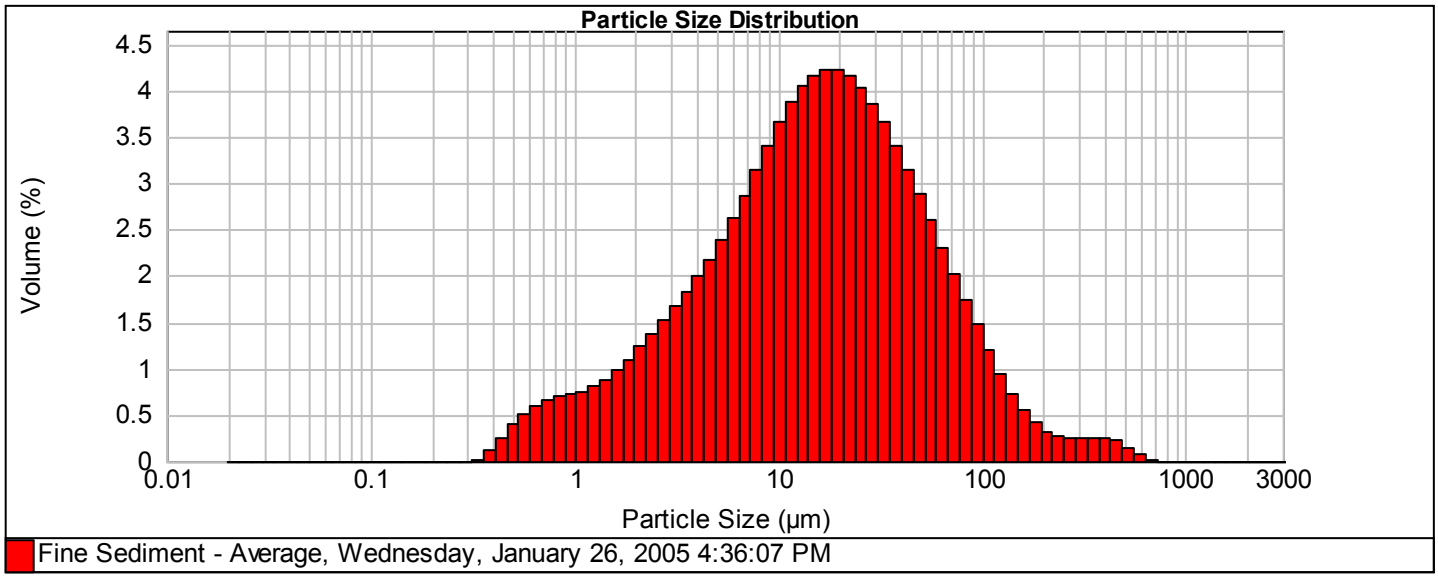
SOP Name: Sea Engineering - Fine Sediment
Result Source: Averaged
Number of this Measurement: 1

Measured: Wednesday, January 26, 2005 4:36:07 PM
Analyzed: Wednesday, January 26, 2005 4:36:08 PM
Number of Measurements: 4

Particle Name: Default	**Accessory Name:** Hydro 2000S (A)	**Pump Speed:** 2000	**Analysis model:** General purpose	**Sensitivity:** Normal
Particle RI: 1.520	**Absorption:** 0.1		**Size range:** 0.020 to 2000.000 um	**Obscuration:** 16.02 %
Dispersant Name: Water	**Dispersant RI:** 1.330		**Weighted Residual:** 1.023 %	**Result Emulation:** Off

Concentration: 0.0151 %Vol	**Span :** 4.449	**Uniformity:** 1.62	**Result units:** Volume
Specific Surface Area: 1.06 m²/g	**Surface Weighted Mean D[3,2]:** 5.661 um	**Vol. Weighted Mean D[4,3]:** 32.652 um	

d(0.1): 2.321 um **d(0.5): 15.915 um** **d(0.9): 73.132 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	7.37	16.125	50.42	150.082	97.03	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	8.46	18.386	54.64	171.127	97.58	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	9.70	20.964	58.86	195.123	97.99	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	11.07	23.904	63.01	222.484	98.31	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	12.59	27.256	67.04	253.681	98.57	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	14.26	31.078	70.90	289.253	98.82	2692.173	100.00
0.044	0.00	0.409	0.12	3.807	16.08	35.436	74.55	329.813	99.06	3069.677	100.00
0.050	0.00	0.466	0.37	4.341	18.07	40.405	77.97	376.060	99.30	3500.116	100.00
0.057	0.00	0.532	0.78	4.950	20.25	46.070	81.12	428.793	99.54	3990.912	100.00
0.065	0.00	0.606	1.29	5.644	22.64	52.531	84.00	488.919	99.77	4550.528	100.00
0.074	0.00	0.691	1.89	6.435	25.26	59.897	86.60	557.477	99.92	5188.616	100.00
0.085	0.00	0.788	2.54	7.338	28.13	68.295	88.91	635.647	99.99	5916.178	100.00
0.097	0.00	0.899	3.24	8.367	31.27	77.872	90.94	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	3.96	9.540	34.67	88.791	92.68	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	4.71	10.878	38.33	101.242	94.15	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	5.51	12.403	42.20	115.438	95.35	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	6.39	14.142	46.25	131.625	96.30	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING
Per Test Method: MM148.01
Analyst: KB
Particle Technology Labs

Fine Sediment
SF-15-2

PTL ID: 44385

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Wednesday, January 26, 2005 4:47:11 PM

Result Source:
Averaged

Analyzed:
Wednesday, January 26, 2005 4:47:12 PM

Number of this Measurement:
1

Number of Measurements:
4

Particle Name:
Default

Accessory Name:
Hydro 2000S (A)

Pump Speed:
2000

Analysis model:
General purpose

Sensitivity:
Normal

Particle RI:
1.520

Absorption:
0.1

Size range:
0.020 to 2000.000 um

Obscuration:
14.78 %

Dispersant Name:
Water

Dispersant RI:
1.330

Weighted Residual:
0.897 %

Result Emulation:
Off

Concentration:
0.0159 %Vol

Span :
5.562

Uniformity:
1.83

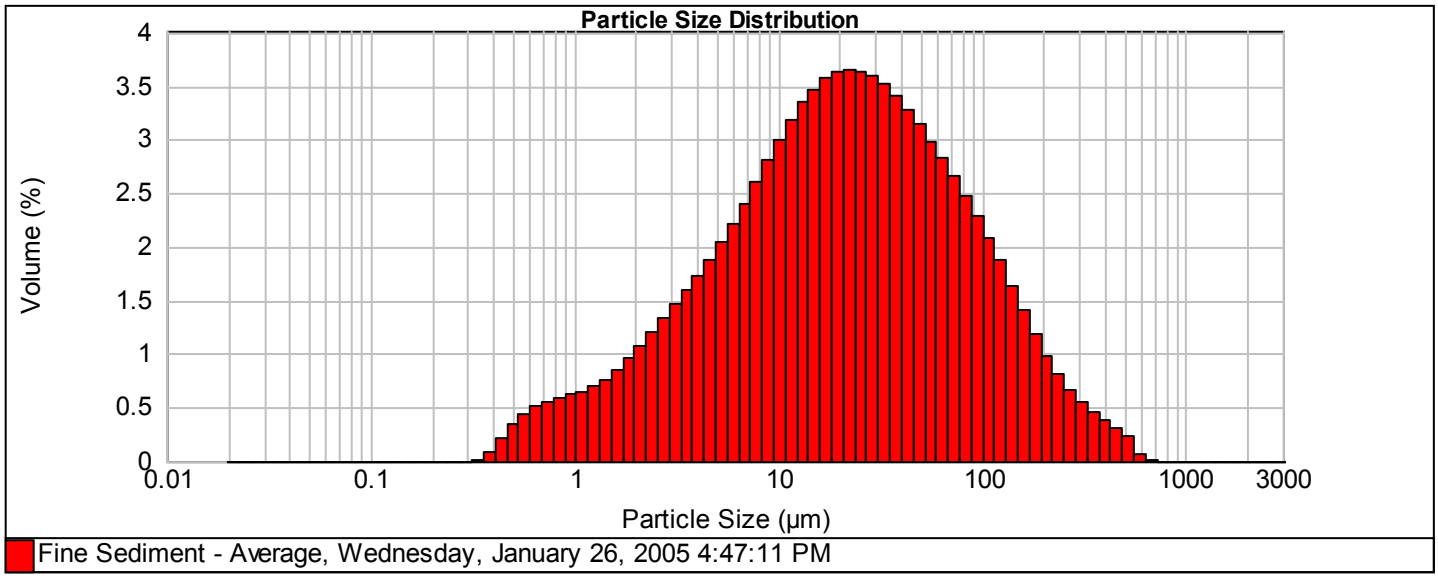
Result units:
Volume

Specific Surface Area:
0.915 m²/g

Surface Weighted Mean D[3,2]:
6.560 um

Vol. Weighted Mean D[4,3]:
47.148 um

d(0.1): 2.692 um **d(0.5): 21.086 um** **d(0.9): 119.983 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	6.30	16.125	42.64	150.082	92.94	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	7.26	18.386	46.21	171.127	94.35	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	8.34	20.964	49.84	195.123	95.54	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	9.54	23.904	53.49	222.484	96.53	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	10.87	27.256	57.13	253.681	97.34	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	12.33	31.078	60.73	289.253	98.00	2692.173	100.00
0.044	0.00	0.409	0.09	3.807	13.92	35.436	64.25	329.813	98.54	3069.677	100.00
0.050	0.00	0.466	0.29	4.341	15.65	40.405	67.66	376.060	99.00	3500.116	100.00
0.057	0.00	0.532	0.64	4.950	17.53	46.070	70.94	428.793	99.38	3990.912	100.00
0.065	0.00	0.606	1.07	5.644	19.58	52.531	74.08	488.919	99.69	4550.528	100.00
0.074	0.00	0.691	1.58	6.435	21.80	59.897	77.07	557.477	99.92	5188.616	100.00
0.085	0.00	0.788	2.14	7.338	24.20	68.295	79.90	635.647	99.99	5916.178	100.00
0.097	0.00	0.899	2.74	8.367	26.81	77.872	82.56	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	3.36	9.540	29.62	88.791	85.04	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	4.01	10.878	32.63	101.242	87.34	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	4.70	12.403	35.82	115.438	89.43	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	5.46	14.142	39.16	131.625	91.30	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-15-3*
Analyst: KB
Particle Technology Labs *PTL ID: 44386*

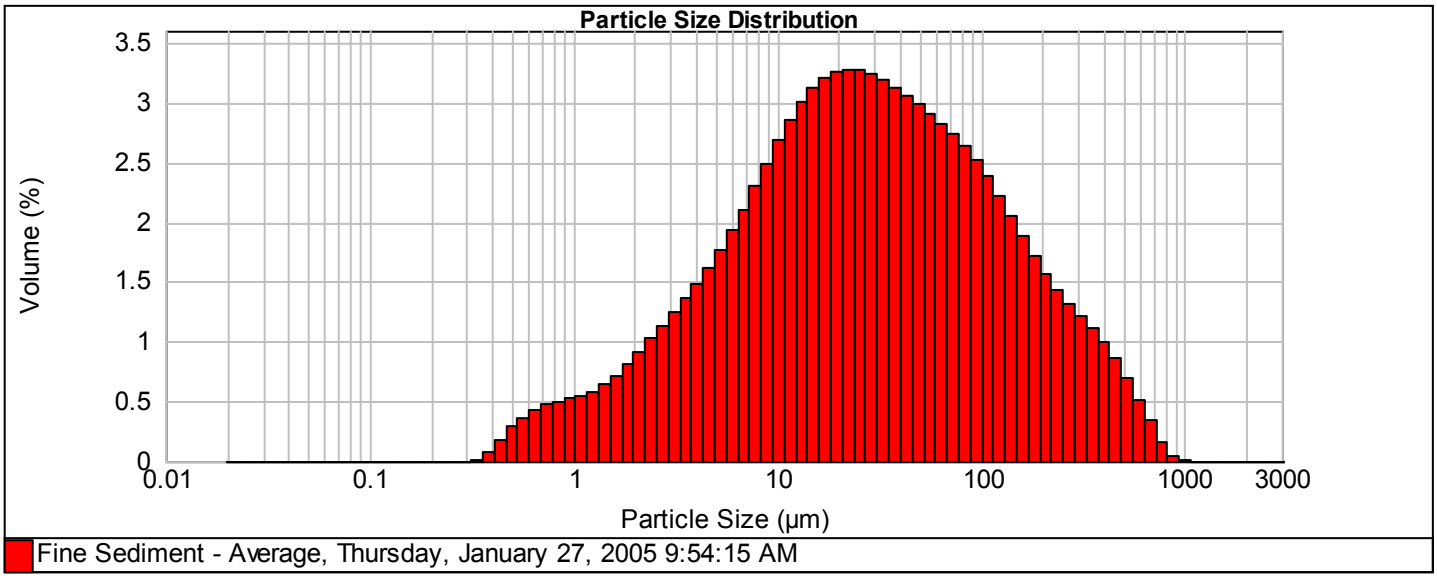
SOP Name: Sea Engineering - Fine Sediment
Result Source: Averaged
Number of this Measurement: 1

Measured: Thursday, January 27, 2005 9:54:15 AM
Analyzed: Thursday, January 27, 2005 9:54:16 AM
Number of Measurements: 4

Particle Name: Default	**Accessory Name:** Hydro 2000S (A)	**Pump Speed:** 2000	**Analysis model:** General purpose	**Sensitivity:** Normal
Particle RI: 1.520	**Absorption:** 0.1		**Size range:** 0.020 to 2000.000 um	**Obscuration:** 15.04 %
Dispersant Name: Water	**Dispersant RI:** 1.330		**Weighted Residual:** 0.807 %	**Result Emulation:** Off

Concentration: 0.0188 %Vol	**Span :** 7.259	**Uniformity:** 2.28	**Result units:** Volume
Specific Surface Area: 0.792 m²/g	**Surface Weighted Mean D[3,2]:** 7.579 um	**Vol. Weighted Mean D[4,3]:** 72.317 um	

d(0.1): 3.181 um **d(0.5): 27.044 um** **d(0.9): 199.502 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	5.33	16.125	37.20	150.082	86.12	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	6.14	18.386	40.40	171.127	88.01	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	7.06	20.964	43.65	195.123	89.73	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	8.09	23.904	46.93	222.484	91.29	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	9.23	27.256	50.19	253.681	92.73	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	10.47	31.078	53.43	289.253	94.04	2692.173	100.00
0.044	0.00	0.409	0.08	3.807	11.84	35.436	56.63	329.813	95.26	3069.677	100.00
0.050	0.00	0.466	0.27	4.341	13.32	40.405	59.76	376.060	96.38	3500.116	100.00
0.057	0.00	0.532	0.56	4.950	14.94	46.070	62.82	428.793	97.38	3990.912	100.00
0.065	0.00	0.606	0.92	5.644	16.71	52.531	65.81	488.919	98.24	4550.528	100.00
0.074	0.00	0.691	1.35	6.435	18.64	59.897	68.72	557.477	98.94	5188.616	100.00
0.085	0.00	0.788	1.82	7.338	20.75	68.295	71.55	635.647	99.44	5916.178	100.00
0.097	0.00	0.899	2.32	8.367	23.05	77.872	74.29	724.780	99.79	6745.760	100.00
0.110	0.00	1.025	2.84	9.540	25.54	88.791	76.93	826.410	99.96	7691.669	100.00
0.126	0.00	1.169	3.38	10.878	28.23	101.242	79.46	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	3.96	12.403	31.08	115.438	81.84	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	4.61	14.142	34.08	131.625	84.07	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING
Per Test Method: MM148.01
Analyst: KB
Particle Technology Labs

Fine Sediment
SF-15-4

PTL ID: 44387

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Thursday, January 27, 2005 10:06:55 AM

Result Source:
Averaged

Analyzed:
Thursday, January 27, 2005 10:06:56 AM

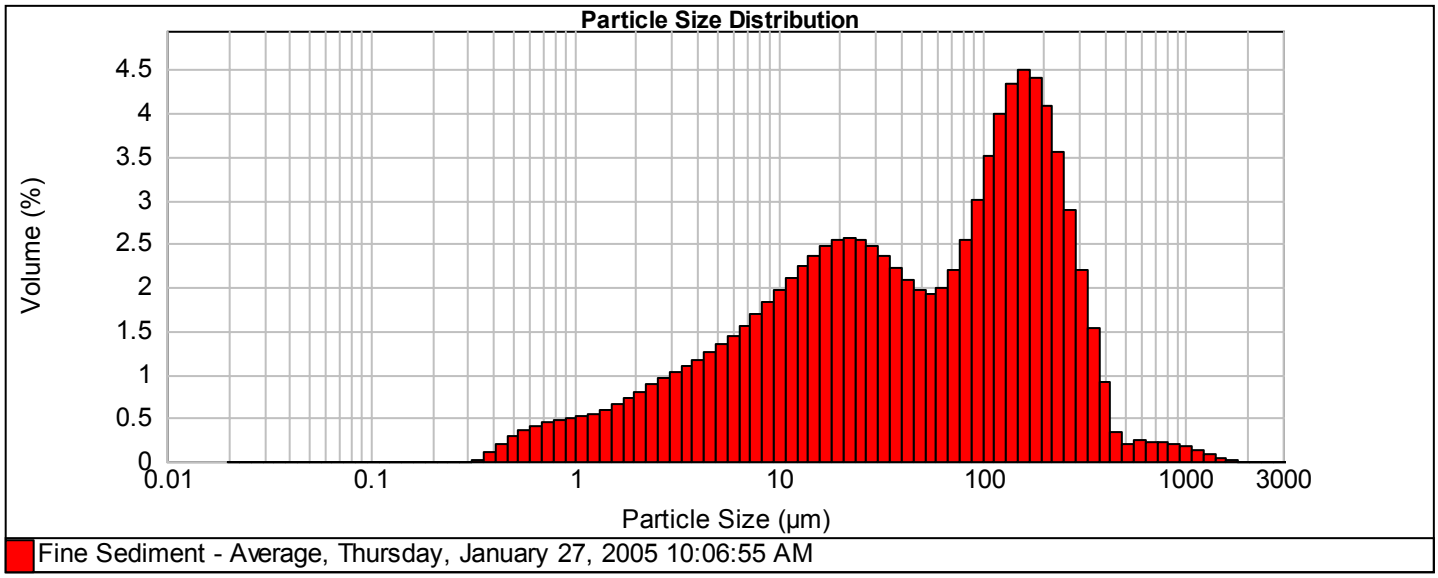
Number of this Measurement:
1

Number of Measurements:
4

Particle Name: Default	**Accessory Name:** Hydro 2000S (A)	**Pump Speed:** 2000	**Analysis model:** General purpose	**Sensitivity:** Normal
Particle RI: 1.520	**Absorption:** 0.1		**Size range:** 0.020 to 2000.000 um	**Obscuration:** 14.04 %
Dispersant Name: Water	**Dispersant RI:** 1.330		**Weighted Residual:** 0.730 %	**Result Emulation:** Off

Concentration: 0.0203 %Vol	**Span :** 4.847	**Uniformity:** 1.7	**Result units:** Volume
Specific Surface Area: 0.696 m²/g	**Surface Weighted Mean D[3,2]:** 8.615 um	**Vol. Weighted Mean D[4,3]:** 101.591 um	

d(0.1): 3.586 um **d(0.5): 50.258 um** **d(0.9): 247.163 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	5.05	16.125	29.46	150.082	74.12	1396.865	99.96
0.023	0.00	0.212	0.00	1.975	5.77	18.386	31.92	171.127	78.61	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	6.57	20.964	34.45	195.123	83.02	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	7.44	23.904	37.02	222.484	87.11	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	8.39	27.256	39.56	253.681	90.65	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	9.41	31.078	42.04	289.253	93.54	2692.173	100.00
0.044	0.00	0.409	0.10	3.807	10.51	35.436	44.40	329.813	95.73	3069.677	100.00
0.050	0.00	0.466	0.29	4.341	11.68	40.405	46.62	376.060	97.26	3500.116	100.00
0.057	0.00	0.532	0.58	4.950	12.93	46.070	48.69	428.793	98.17	3990.912	100.00
0.065	0.00	0.606	0.94	5.644	14.27	52.531	50.65	488.919	98.51	4550.528	100.00
0.074	0.00	0.691	1.35	6.435	15.71	59.897	52.56	557.477	98.70	5188.616	100.00
0.085	0.00	0.788	1.80	7.338	17.27	68.295	54.55	635.647	98.94	5916.178	100.00
0.097	0.00	0.899	2.27	8.367	18.95	77.872	56.75	724.780	99.17	6745.760	100.00
0.110	0.00	1.025	2.76	9.540	20.78	88.791	59.29	826.410	99.39	7691.669	100.00
0.126	0.00	1.169	3.27	10.878	22.74	101.242	62.29	942.292	99.59	8770.216	100.00
0.143	0.00	1.333	3.81	12.403	24.85	115.438	65.80	1074.423	99.76	10000.000	100.00
0.163	0.00	1.519	4.40	14.142	27.10	131.625	69.78	1225.081	99.88		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-15-5*
Analyst: KB
Particle Technology Labs *PTL ID: 44388*

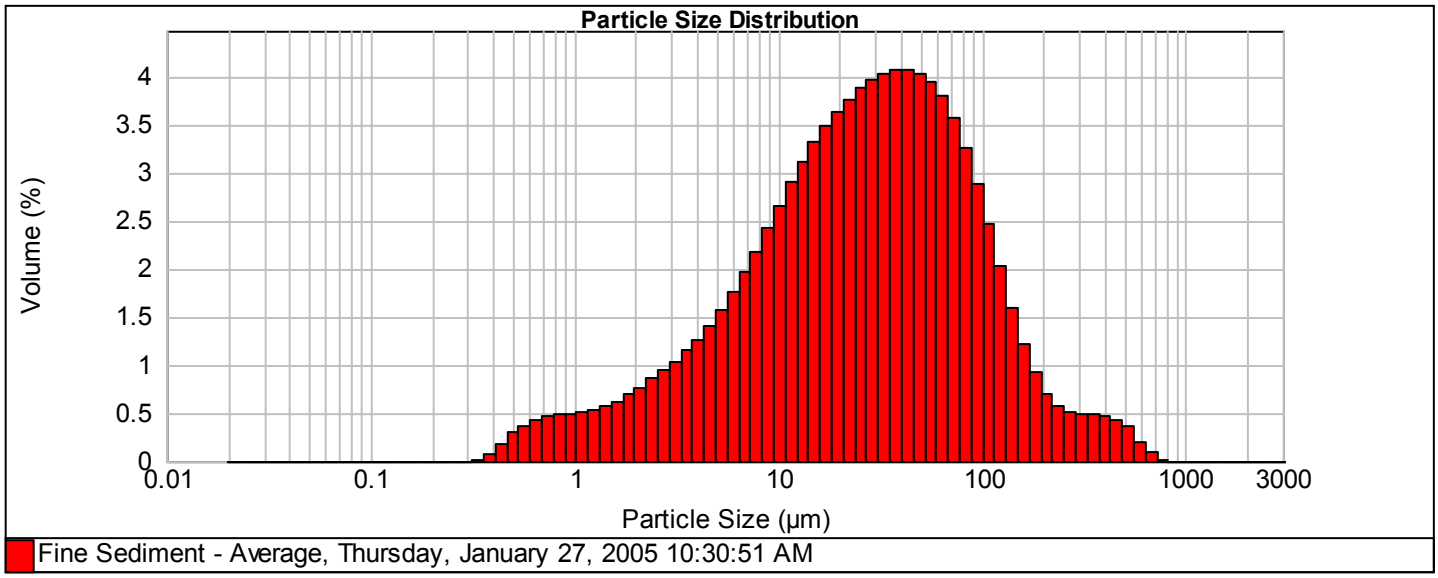
SOP Name: Sea Engineering - Fine Sediment
Result Source: Averaged
Number of this Measurement: 1

Measured: Thursday, January 27, 2005 10:30:51 AM
Analyzed: Thursday, January 27, 2005 10:30:52 AM
Number of Measurements: 4

Particle Name: Default	**Accessory Name:** Hydro 2000S (A)	**Pump Speed:** 2000	**Analysis model:** General purpose	**Sensitivity:** Normal
Particle RI: 1.520	**Absorption:** 0.1		**Size range:** 0.020 to 2000.000 um	**Obscuration:** 15.78 %
Dispersant Name: Water	**Dispersant RI:** 1.330		**Weighted Residual:** 0.760 %	**Result Emulation:** Off

Concentration: 0.0209 %Vol	**Span :** 4.091	**Uniformity:** 1.48	**Result units:** Volume
Specific Surface Area: 0.754 m²/g	**Surface Weighted Mean D[3,2]:** 7.956 um	**Vol. Weighted Mean D[4,3]:** 52.131 um	

d(0.1): 3.619 um **d(0.5): 27.426 um** **d(0.9): 115.807 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	5.01	16.125	35.03	150.082	93.56	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	5.70	18.386	38.52	171.127	94.78	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	6.47	20.964	42.16	195.123	95.70	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	7.32	23.904	45.93	222.484	96.41	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	8.27	27.256	49.81	253.681	96.98	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	9.31	31.078	53.78	289.253	97.49	2692.173	100.00
0.044	0.00	0.409	0.08	3.807	10.46	35.436	57.81	329.813	97.98	3069.677	100.00
0.050	0.00	0.466	0.26	4.341	11.73	40.405	61.88	376.060	98.46	3500.116	100.00
0.057	0.00	0.532	0.55	4.950	13.13	46.070	65.95	428.793	98.93	3990.912	100.00
0.065	0.00	0.606	0.92	5.644	14.71	52.531	69.99	488.919	99.36	4550.528	100.00
0.074	0.00	0.691	1.34	6.435	16.46	59.897	73.94	557.477	99.72	5188.616	100.00
0.085	0.00	0.788	1.81	7.338	18.42	68.295	77.74	635.647	99.91	5916.178	100.00
0.097	0.00	0.899	2.29	8.367	20.61	77.872	81.31	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	2.79	9.540	23.04	88.791	84.58	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	3.30	10.878	25.70	101.242	87.47	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	3.82	12.403	28.60	115.438	89.95	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	4.39	14.142	31.72	131.625	91.97	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-16-R1-1*
Analyst: KB
Particle Technology Labs *PTL ID: 44389*

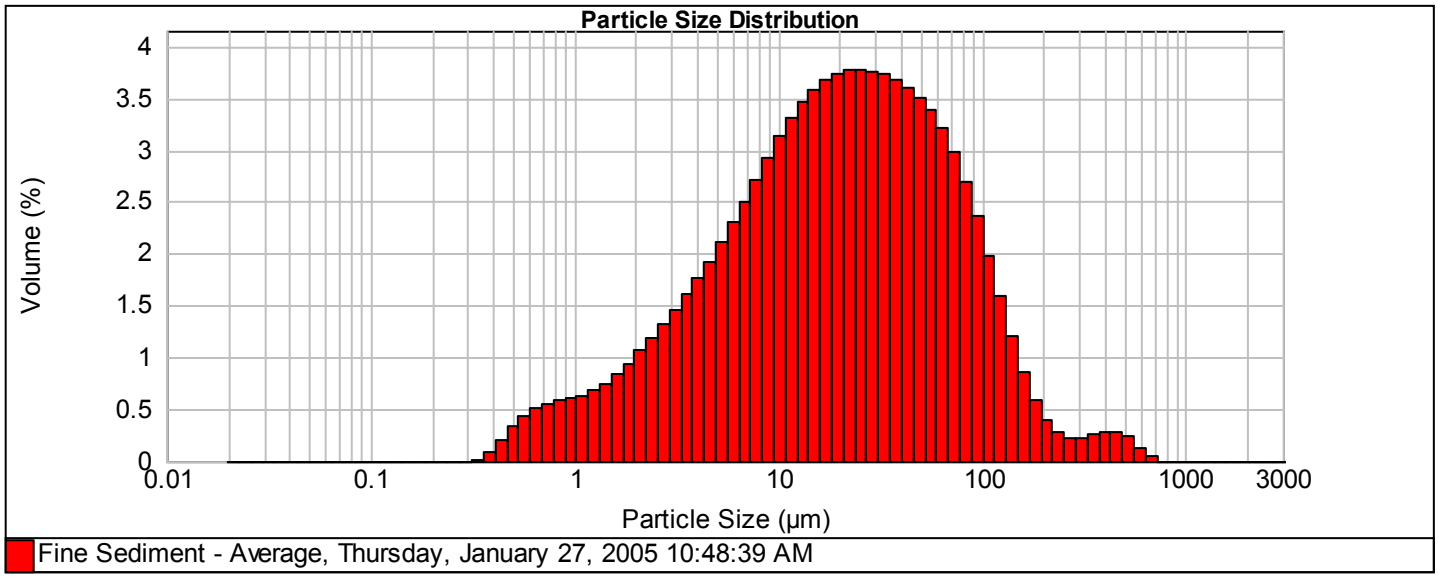
SOP Name: Sea Engineering - Fine Sediment
Result Source: Averaged
Number of this Measurement: 1

Measured: Thursday, January 27, 2005 10:48:39 AM
Analyzed: Thursday, January 27, 2005 10:48:40 AM
Number of Measurements: 4

Particle Name:	Accessory Name:	Pump Speed:	Analysis model:	Sensitivity:
Default	Hydro 2000S (A)	2000	General purpose	Normal
Particle RI:	**Absorption:**		**Size range:**	**Obscuration:**
1.520	0.1		0.020 to 2000.000 um	15.28 %
Dispersant Name:	**Dispersant RI:**		**Weighted Residual:**	**Result Emulation:**
Water	1.330		0.888 %	Off

Concentration:	Span :	Uniformity:	Result units:
0.0164 %Vol	4.471	1.58	Volume
Specific Surface Area:	**Surface Weighted Mean D[3,2]:**	**Vol. Weighted Mean D[4,3]:**	
0.92 m²/g	6.520 um	40.437 um	

d(0.1): 2.725 um **d(0.5): 20.255 um** **d(0.9): 93.294 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	6.21	16.125	43.57	150.082	96.20	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	7.16	18.386	47.25	171.127	97.06	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	8.22	20.964	50.98	195.123	97.65	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	9.42	23.904	54.75	222.484	98.04	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	10.74	27.256	58.52	253.681	98.32	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	12.21	31.078	62.28	289.253	98.55	2692.173	100.00
0.044	0.00	0.409	0.09	3.807	13.81	35.436	66.01	329.813	98.78	3069.677	100.00
0.050	0.00	0.466	0.30	4.341	15.57	40.405	69.68	376.060	99.04	3500.116	100.00
0.057	0.00	0.532	0.64	4.950	17.50	46.070	73.29	428.793	99.32	3990.912	100.00
0.065	0.00	0.606	1.08	5.644	19.60	52.531	76.80	488.919	99.59	4550.528	100.00
0.074	0.00	0.691	1.58	6.435	21.90	59.897	80.18	557.477	99.84	5188.616	100.00
0.085	0.00	0.788	2.14	7.338	24.41	68.295	83.38	635.647	99.96	5916.178	100.00
0.097	0.00	0.899	2.72	8.367	27.13	77.872	86.37	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	3.33	9.540	30.06	88.791	89.07	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	3.96	10.878	33.20	101.242	91.43	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	4.64	12.403	36.51	115.438	93.42	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	5.38	14.142	39.98	131.625	95.00	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-16-R1-2*
Analyst: KB
Particle Technology Labs *PTL ID: 44390*

SOP Name: Sea Engineering - Fine Sediment
Result Source: Averaged
Number of this Measurement: 1

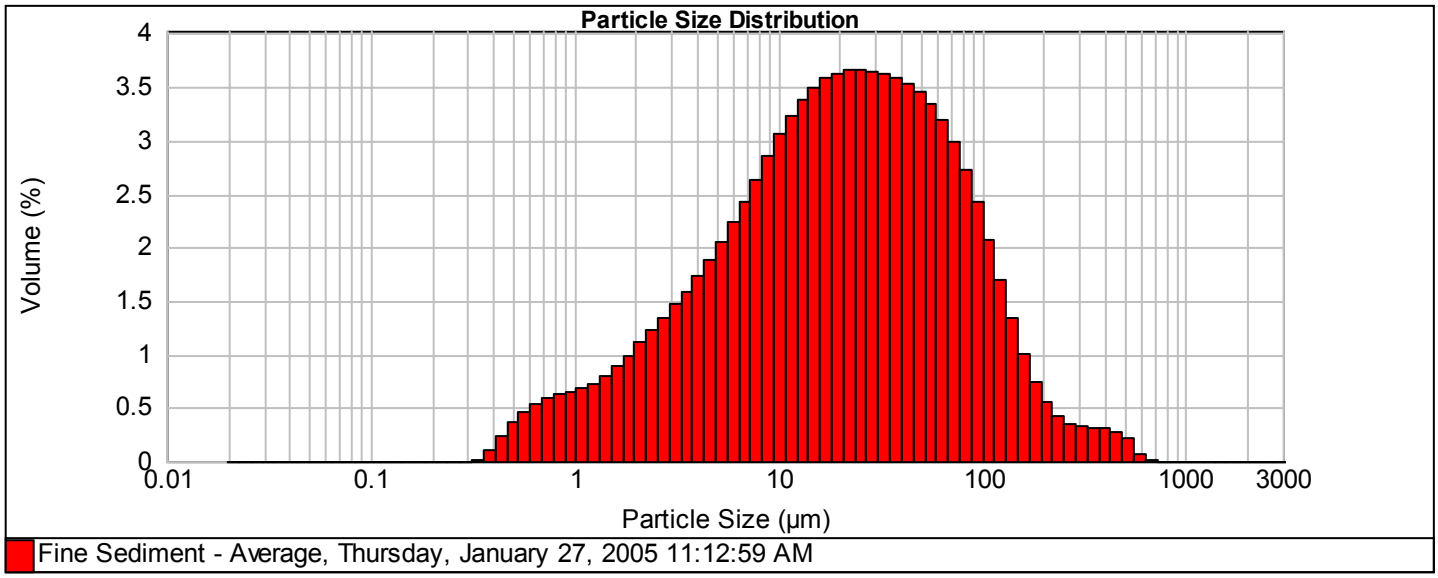
Measured: Thursday, January 27, 2005 11:12:59 AM
Analyzed: Thursday, January 27, 2005 11:13:00 AM
Number of Measurements: 4

Particle Name:	Accessory Name:	Pump Speed:	Analysis model:	Sensitivity:
Default	Hydro 2000S (A)	2000	General purpose	Normal
Particle RI:	**Absorption:**		**Size range:**	**Obscuration:**
1.520	0.1		0.020 to 2000.000 um	14.43 %
Dispersant Name:	**Dispersant RI:**		**Weighted Residual:**	**Result Emulation:**
Water	1.330		0.904 %	Off

Concentration:	Span :	Uniformity:	Result units:
0.0151 %Vol	4.701	1.63	Volume

Specific Surface Area:	Surface Weighted Mean D[3,2]:	Vol. Weighted Mean D[4,3]:
0.947 m²/g	6.337 um	41.886 um

d(0.1): 2.579 um **d(0.5): 20.563 um** **d(0.9): 99.249 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	6.64	16.125	43.32	150.082	95.44	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	7.63	18.386	46.91	171.127	96.44	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	8.73	20.964	50.54	195.123	97.19	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	9.96	23.904	54.19	222.484	97.74	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	11.30	27.256	57.86	253.681	98.16	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	12.77	31.078	61.50	289.253	98.51	2692.173	100.00
0.044	0.00	0.409	0.11	3.807	14.36	35.436	65.12	329.813	98.84	3069.677	100.00
0.050	0.00	0.466	0.33	4.341	16.09	40.405	68.70	376.060	99.15	3500.116	100.00
0.057	0.00	0.532	0.70	4.950	17.96	46.070	72.23	428.793	99.45	3990.912	100.00
0.065	0.00	0.606	1.16	5.644	20.01	52.531	75.67	488.919	99.72	4550.528	100.00
0.074	0.00	0.691	1.70	6.435	22.23	59.897	79.01	557.477	99.93	5188.616	100.00
0.085	0.00	0.788	2.29	7.338	24.66	68.295	82.20	635.647	99.99	5916.178	100.00
0.097	0.00	0.899	2.91	8.367	27.30	77.872	85.19	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	3.56	9.540	30.16	88.791	87.92	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	4.24	10.878	33.21	101.242	90.34	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	4.97	12.403	36.44	115.438	92.41	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	5.76	14.142	39.83	131.625	94.11	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-16-R1-3*
Analyst: KB
Particle Technology Labs *PTL ID: 44391*

SOP Name:
Sea Engineering - Fine Sediment

Result Source:
Averaged

Number of this Measurement:
1

Measured:
Thursday, January 27, 2005 11:34:01 AM

Analyzed:
Thursday, January 27, 2005 11:34:02 AM

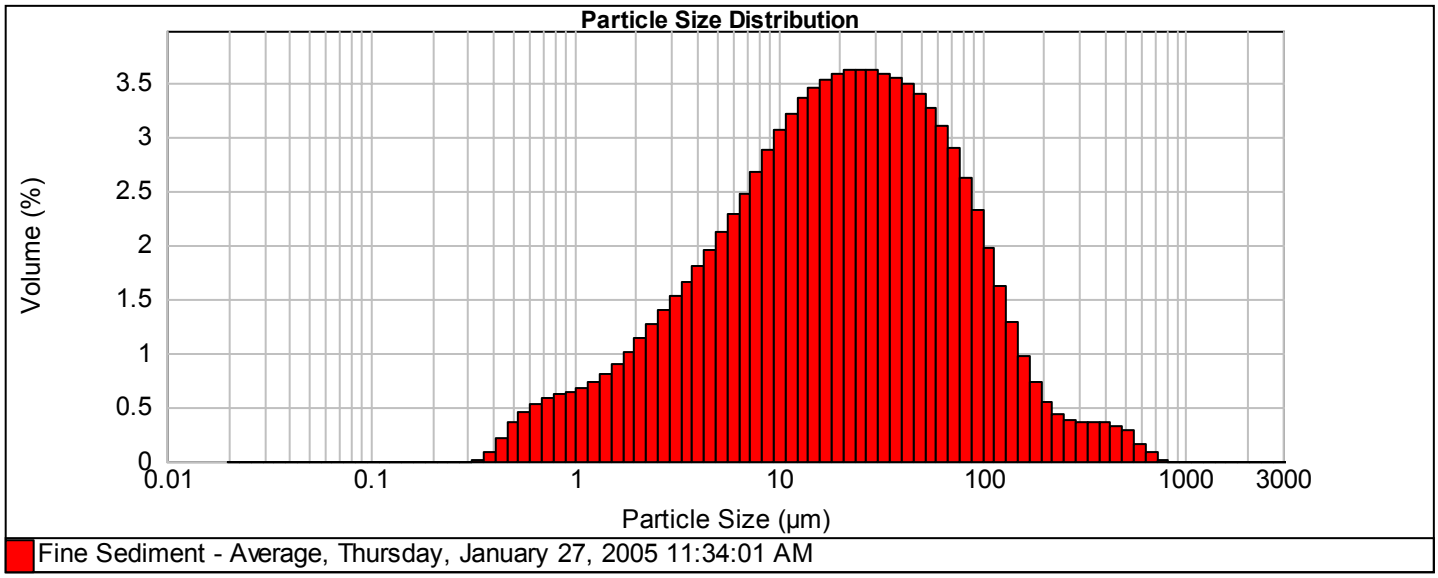
Number of Measurements:
4

Particle Name:	Accessory Name:	Pump Speed:	Analysis model:	Sensitivity:
Default	Hydro 2000S (A)	2000	General purpose	Normal
Particle RI:	**Absorption:**		**Size range:**	**Obscuration:**
1.520	0.1		0.020 to 2000.000 um	13.63 %
Dispersant Name:	**Dispersant RI:**		**Weighted Residual:**	**Result Emulation:**
Water	1.330		0.909 %	Off

Concentration:	Span :	Uniformity:	Result units:
0.0141 %Vol	4.855	1.75	Volume

Specific Surface Area:	Surface Weighted Mean D[3,2]:	Vol. Weighted Mean D[4,3]:
0.949 m²/g	6.323 um	43.630 um

d(0.1): 2.565 um **d(0.5): 20.220 um** **d(0.9): 100.727 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	6.60	16.125	43.87	150.082	94.96	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	7.61	18.386	47.41	171.127	95.94	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	8.75	20.964	50.99	195.123	96.67	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	10.01	23.904	54.60	222.484	97.22	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	11.41	27.256	58.22	253.681	97.66	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	12.94	31.078	61.83	289.253	98.05	2692.173	100.00
0.044	0.00	0.409	0.09	3.807	14.59	35.436	65.42	329.813	98.41	3069.677	100.00
0.050	0.00	0.466	0.31	4.341	16.39	40.405	68.97	376.060	98.77	3500.116	100.00
0.057	0.00	0.532	0.67	4.950	18.34	46.070	72.46	428.793	99.13	3990.912	100.00
0.065	0.00	0.606	1.12	5.644	20.46	52.531	75.86	488.919	99.46	4550.528	100.00
0.074	0.00	0.691	1.65	6.435	22.75	59.897	79.13	557.477	99.75	5188.616	100.00
0.085	0.00	0.788	2.23	7.338	25.23	68.295	82.24	635.647	99.91	5916.178	100.00
0.097	0.00	0.899	2.85	8.367	27.90	77.872	85.13	724.780	99.99	6745.760	100.00
0.110	0.00	1.025	3.49	9.540	30.78	88.791	87.76	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	4.17	10.878	33.83	101.242	90.08	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	4.90	12.403	37.05	115.438	92.06	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	5.70	14.142	40.41	131.625	93.68	1225.081	100.00		

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-16-R1-4*
Analyst: KB
Particle Technology Labs *PTL ID: 44392*

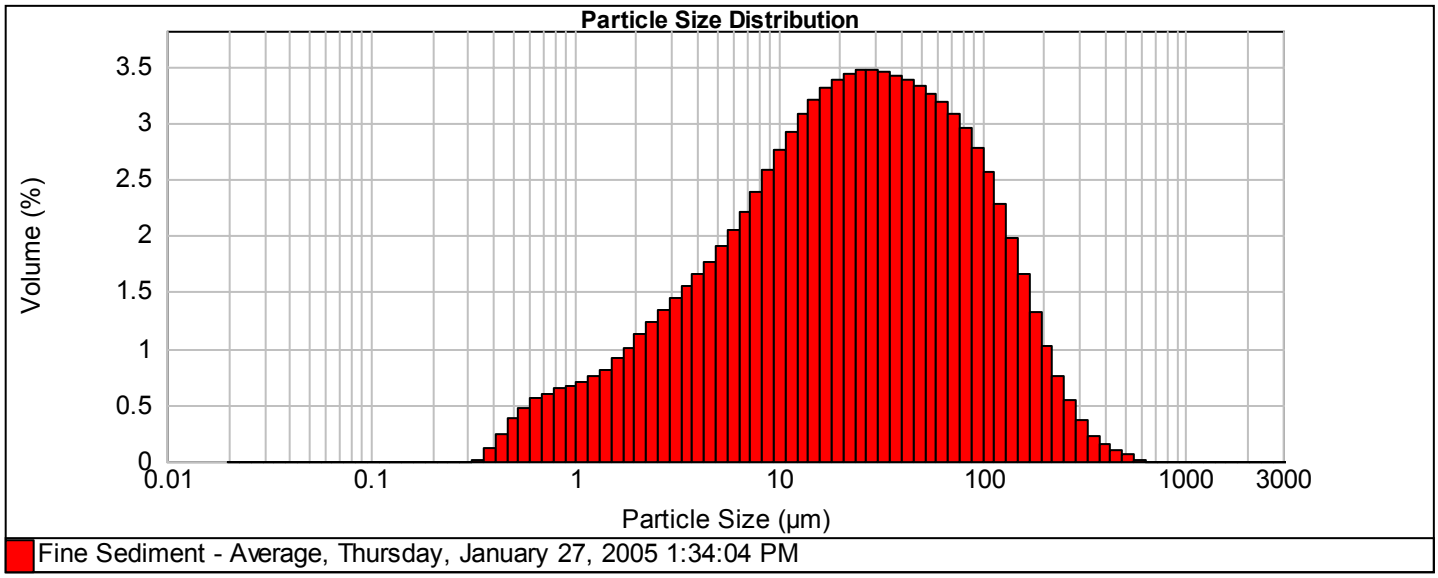
SOP Name: Sea Engineering - Fine Sediment
Result Source: Averaged
Number of this Measurement: 1

Measured: Thursday, January 27, 2005 1:34:04 PM
Analyzed: Thursday, January 27, 2005 1:34:05 PM
Number of Measurements: 4

Particle Name: Default	**Accessory Name:** Hydro 2000S (A)	**Pump Speed:** 2000	**Analysis model:** General purpose	**Sensitivity:** Normal
Particle RI: 1.520	**Absorption:** 0.1		**Size range:** 0.020 to 2000.000 um	**Obscuration:** 18.12 %
Dispersant Name: Water	**Dispersant RI:** 1.330		**Weighted Residual:** 0.860 %	**Result Emulation:** Off

Concentration: 0.0196 %Vol	**Span :** 5.081	**Uniformity:** 1.6	**Result units:** Volume
Specific Surface Area: 0.943 m²/g	**Surface Weighted Mean D[3,2]:** 6.360 um	**Vol. Weighted Mean D[4,3]:** 45.542 um	

d(0.1): 2.513 um **d(0.5): 22.834 um** **d(0.9): 118.523 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	6.85	16.125	41.07	150.082	93.79	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	7.86	18.386	44.38	171.127	95.44	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	8.98	20.964	47.77	195.123	96.78	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	10.21	23.904	51.20	222.484	97.80	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	11.55	27.256	54.67	253.681	98.56	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	13.00	31.078	58.14	289.253	99.10	2692.173	100.00
0.044	0.00	0.409	0.12	3.807	14.54	35.436	61.59	329.813	99.46	3069.677	100.00
0.050	0.00	0.466	0.36	4.341	16.20	40.405	65.02	376.060	99.68	3500.116	100.00
0.057	0.00	0.532	0.74	4.950	17.97	46.070	68.40	428.793	99.83	3990.912	100.00
0.065	0.00	0.606	1.22	5.644	19.87	52.531	71.72	488.919	99.94	4550.528	100.00
0.074	0.00	0.691	1.77	6.435	21.92	59.897	74.98	557.477	99.99	5188.616	100.00
0.085	0.00	0.788	2.37	7.338	24.14	68.295	78.16	635.647	100.00	5916.178	100.00
0.097	0.00	0.899	3.01	8.367	26.53	77.872	81.24	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	3.68	9.540	29.10	88.791	84.19	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	4.38	10.878	31.86	101.242	86.96	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	5.12	12.403	34.79	115.438	89.52	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	5.94	14.142	37.87	131.625	91.80	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING
Per Test Method: MM148.01
Analyst: KB
Particle Technology Labs

Fine Sediment
SF-16-R1-5

PTL ID: 44393

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Thursday, January 27, 2005 1:52:35 PM

Result Source:
Averaged

Analyzed:
Thursday, January 27, 2005 1:52:36 PM

Number of this Measurement:
1

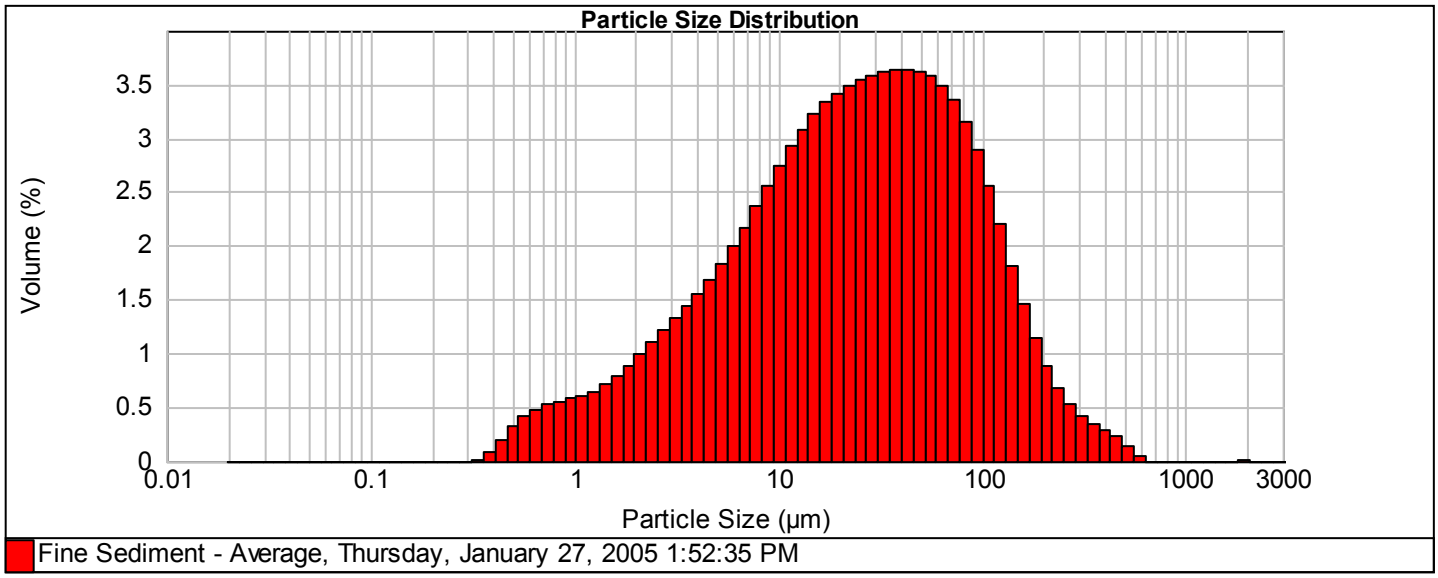
Number of Measurements:
4

Particle Name:	Accessory Name:	Pump Speed:	Analysis model:	Sensitivity:
Default	Hydro 2000S (A)	2000	General purpose	Normal
Particle RI:	**Absorption:**		**Size range:**	**Obscuration:**
1.520	0.1		0.020 to 2000.000 um	18.76 %
Dispersant Name:	**Dispersant RI:**		**Weighted Residual:**	**Result Emulation:**
Water	1.330		0.819 %	Off

Concentration:	Span :	Uniformity:	Result units:
0.0221 %Vol	4.618	1.54	Volume

Specific Surface Area:	Surface Weighted Mean D[3,2]:	Vol. Weighted Mean D[4,3]:
0.858 m²/g	6.991 um	47.516 um

d(0.1): 2.888 um **d(0.5): 24.566 um** **d(0.9): 116.330 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	5.93	16.125	39.04	150.082	93.87	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	6.82	18.386	42.37	171.127	95.34	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	7.81	20.964	45.79	195.123	96.48	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	8.92	23.904	49.27	222.484	97.36	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	10.13	27.256	52.80	253.681	98.03	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	11.46	31.078	56.38	289.253	98.56	2692.173	100.00
0.044	0.00	0.409	0.09	3.807	12.90	35.436	59.98	329.813	98.97	3069.677	100.00
0.050	0.00	0.466	0.29	4.341	14.45	40.405	63.61	376.060	99.32	3500.116	100.00
0.057	0.00	0.532	0.62	4.950	16.14	46.070	67.24	428.793	99.60	3990.912	100.00
0.065	0.00	0.606	1.03	5.644	17.98	52.531	70.86	488.919	99.82	4550.528	100.00
0.074	0.00	0.691	1.51	6.435	19.97	59.897	74.44	557.477	99.96	5188.616	100.00
0.085	0.00	0.788	2.04	7.338	22.15	68.295	77.93	635.647	100.00	5916.178	100.00
0.097	0.00	0.899	2.60	8.367	24.51	77.872	81.28	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	3.18	9.540	27.07	88.791	84.42	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	3.78	10.878	29.82	101.242	87.30	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	4.43	12.403	32.74	115.438	89.86	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	5.14	14.142	35.83	131.625	92.06	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-16-R2-1*
Analyst: KB
Particle Technology Labs *PTL ID: 44394*

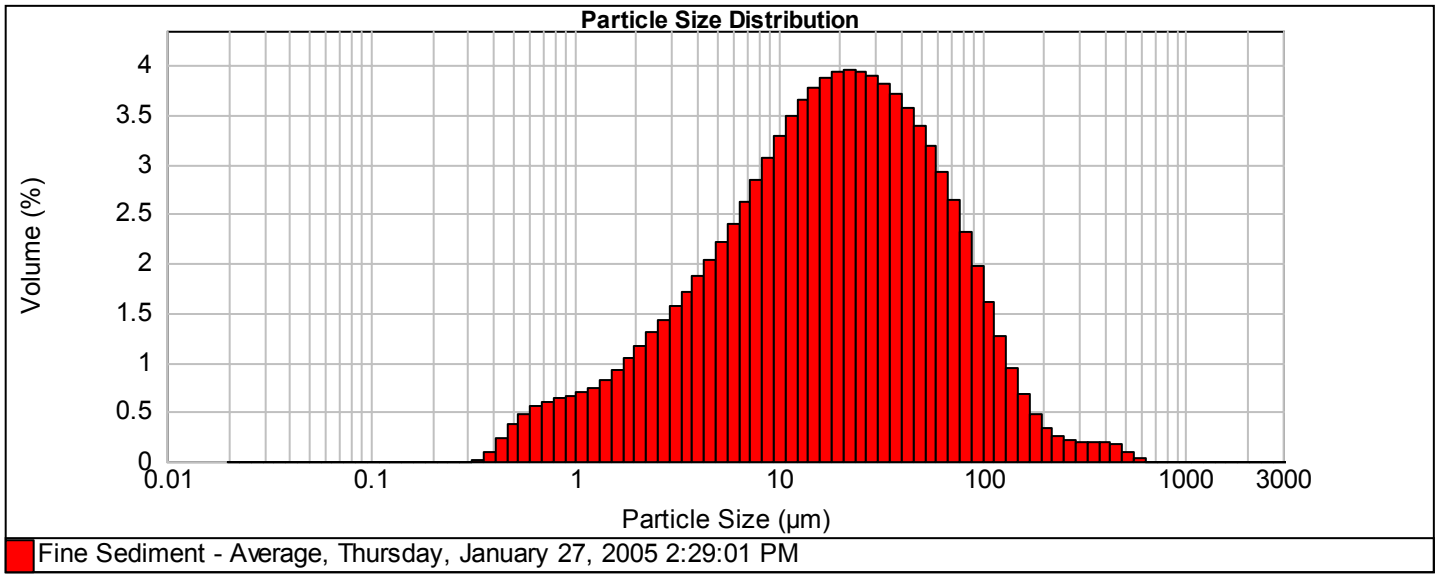
SOP Name: Sea Engineering - Fine Sediment
Result Source: Averaged
Number of this Measurement: 1

Measured: Thursday, January 27, 2005 2:29:01 PM
Analyzed: Thursday, January 27, 2005 2:29:02 PM
Number of Measurements: 4

Particle Name:	Accessory Name:	Pump Speed:	Analysis model:	Sensitivity:
Default	Hydro 2000S (A)	2000	General purpose	Normal
Particle RI:	**Absorption:**		**Size range:**	**Obscuration:**
1.520	0.1		0.020 to 2000.000 um	14.49 %
Dispersant Name:	**Dispersant RI:**		**Weighted Residual:**	**Result Emulation:**
Water	1.330		0.971 %	Off

Concentration:	Span :	Uniformity:	Result units:
0.0145 %Vol	4.327	1.48	Volume
Specific Surface Area:	**Surface Weighted Mean D[3,2]:**	**Vol. Weighted Mean D[4,3]:**	
0.985 m²/g	6.089 um	34.777 um	

d(0.1): 2.494 um **d(0.5): 18.320 um** **d(0.9): 81.770 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	6.80	16.125	46.23	150.082	97.21	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	7.84	18.386	50.11	171.127	97.88	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	9.00	20.964	54.04	195.123	98.35	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	10.30	23.904	57.99	222.484	98.68	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	11.74	27.256	61.93	253.681	98.93	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	13.31	31.078	65.83	289.253	99.14	2692.173	100.00
0.044	0.00	0.409	0.10	3.807	15.02	35.436	69.65	329.813	99.33	3069.677	100.00
0.050	0.00	0.466	0.32	4.341	16.89	40.405	73.37	376.060	99.53	3500.116	100.00
0.057	0.00	0.532	0.69	4.950	18.91	46.070	76.94	428.793	99.72	3990.912	100.00
0.065	0.00	0.606	1.16	5.644	21.12	52.531	80.34	488.919	99.89	4550.528	100.00
0.074	0.00	0.691	1.71	6.435	23.52	59.897	83.52	557.477	99.97	5188.616	100.00
0.085	0.00	0.788	2.31	7.338	26.14	68.295	86.45	635.647	100.00	5916.178	100.00
0.097	0.00	0.899	2.95	8.367	28.98	77.872	89.10	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	3.61	9.540	32.04	88.791	91.42	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	4.31	10.878	35.33	101.242	93.39	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	5.06	12.403	38.81	115.438	95.00	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	5.88	14.142	42.45	131.625	96.27	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-16-R2-2*
Analyst: KB
Particle Technology Labs *PTL ID: 44395*

SOP Name: Sea Engineering - Fine Sediment
Result Source: Averaged
Number of this Measurement: 1

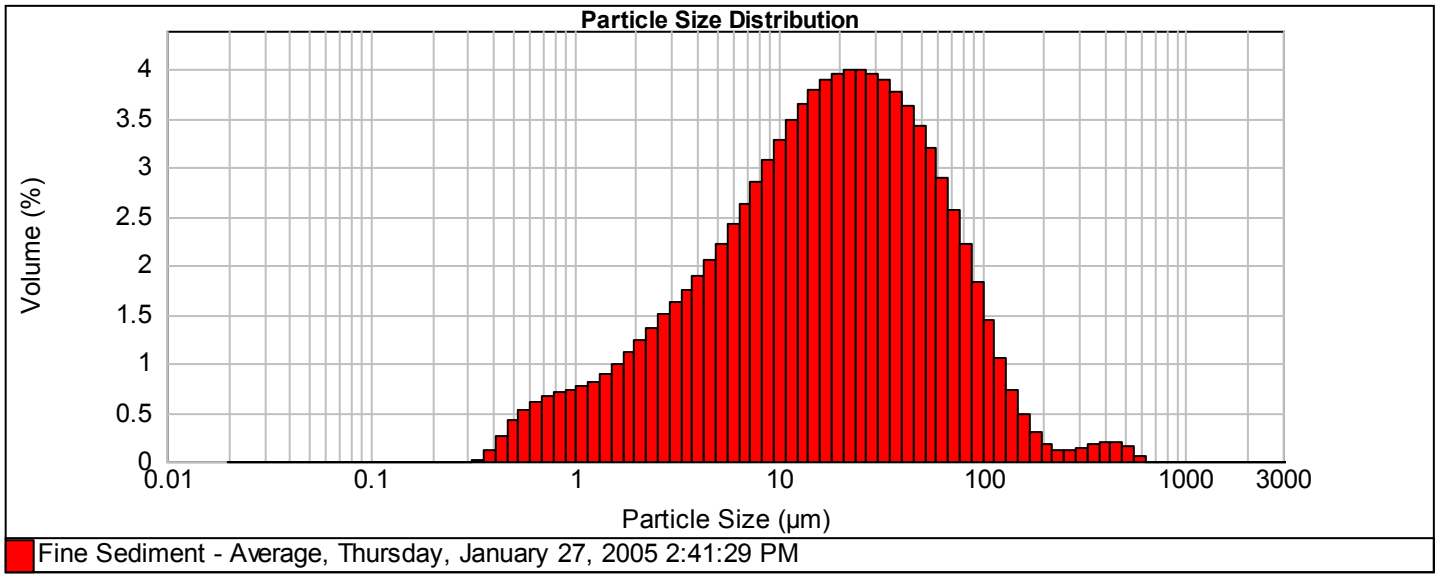
Measured: Thursday, January 27, 2005 2:41:29 PM
Analyzed: Thursday, January 27, 2005 2:41:30 PM
Number of Measurements: 4

Particle Name:	Accessory Name:	Pump Speed:	Analysis model:	Sensitivity:
Default	Hydro 2000S (A)	2000	General purpose	Normal
Particle RI:	**Absorption:**		**Size range:**	**Obscuration:**
1.520	0.1		0.020 to 2000.000 um	16.54 %
Dispersant Name:	**Dispersant RI:**		**Weighted Residual:**	**Result Emulation:**
Water	1.330		0.964 %	Off

Concentration:	Span :	Uniformity:	Result units:
0.0159 %Vol	4.149	1.45	Volume

Specific Surface Area:	Surface Weighted Mean D[3,2]:	Vol. Weighted Mean D[4,3]:
1.05 m²/g	5.737 um	32.849 um

d(0.1): 2.295 um **d(0.5): 17.585 um** **d(0.9): 75.256 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	7.47	16.125	47.43	150.082	97.90	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	8.58	18.386	51.33	171.127	98.37	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	9.81	20.964	55.29	195.123	98.66	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	11.18	23.904	59.29	222.484	98.84	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	12.67	27.256	63.29	253.681	98.96	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	14.29	31.078	67.25	289.253	99.08	2692.173	100.00
0.044	0.00	0.409	0.12	3.807	16.05	35.436	71.14	329.813	99.22	3069.677	100.00
0.050	0.00	0.466	0.38	4.341	17.94	40.405	74.91	376.060	99.39	3500.116	100.00
0.057	0.00	0.532	0.80	4.950	20.00	46.070	78.54	428.793	99.59	3990.912	100.00
0.065	0.00	0.606	1.31	5.644	22.23	52.531	81.97	488.919	99.79	4550.528	100.00
0.074	0.00	0.691	1.91	6.435	24.65	59.897	85.16	557.477	99.95	5188.616	100.00
0.085	0.00	0.788	2.57	7.338	27.28	68.295	88.06	635.647	100.00	5916.178	100.00
0.097	0.00	0.899	3.27	8.367	30.13	77.872	90.63	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	4.00	9.540	33.20	88.791	92.84	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	4.77	10.878	36.50	101.242	94.67	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	5.58	12.403	39.98	115.438	96.10	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	6.48	14.142	43.64	131.625	97.16	1225.081	100.00		

Result Analysis Report

Operator notes:

SEA ENGINEERING
Per Test Method: MM148.01
Analyst: KB
Particle Technology Labs

Fine Sediment
SF-16-R2-3

PTL ID: 44396

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Thursday, January 27, 2005 2:53:55 PM

Result Source:
Averaged

Analyzed:
Thursday, January 27, 2005 2:53:56 PM

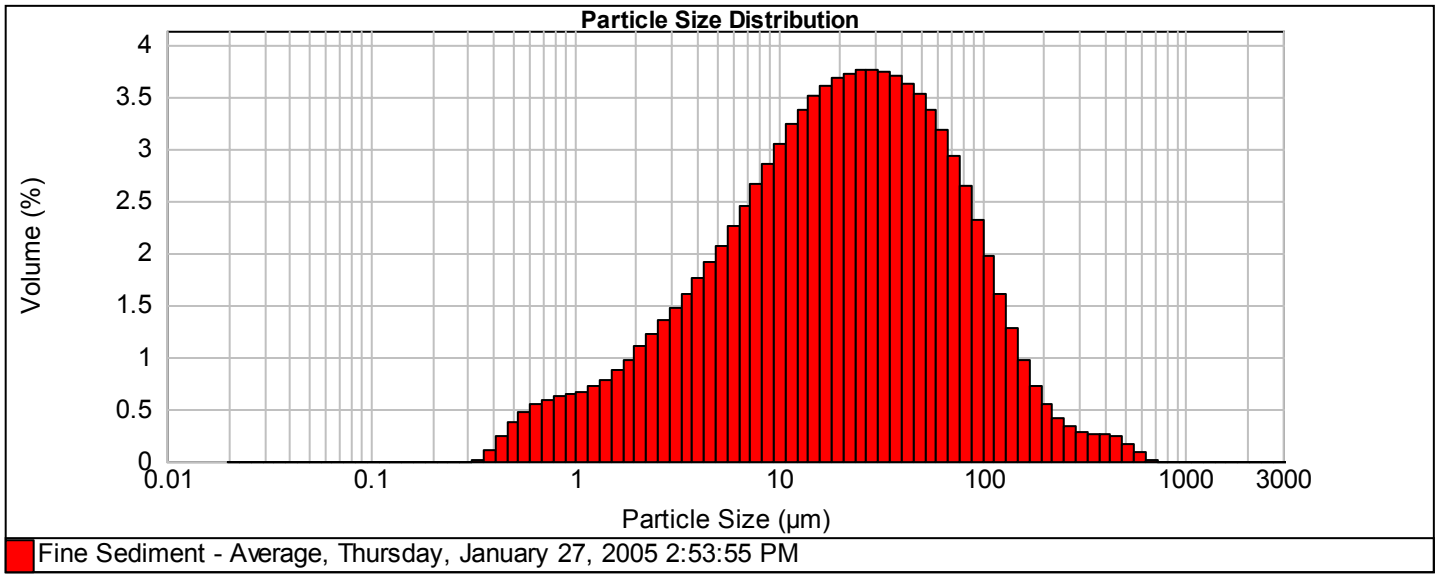
Number of this Measurement:
1

Number of Measurements:
4

Particle Name: Default	**Accessory Name:** Hydro 2000S (A)	**Pump Speed:** 2000	**Analysis model:** General purpose	**Sensitivity:** Normal
Particle RI: 1.520	**Absorption:** 0.1		**Size range:** 0.020 to 2000.000 um	**Obscuration:** 15.51 %
Dispersant Name: Water	**Dispersant RI:** 1.330		**Weighted Residual:** 0.891 %	**Result Emulation:** Off

Concentration: 0.0163 %Vol	**Span :** 4.568	**Uniformity:** 1.58	**Result units:** Volume
Specific Surface Area: 0.948 m²/g	**Surface Weighted Mean D[3,2]:** 6.332 um	**Vol. Weighted Mean D[4,3]:** 40.727 um	

d(0.1): 2.599 um **d(0.5): 20.486 um** **d(0.9): 96.173 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	6.59	16.125	43.39	150.082	95.72	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	7.57	18.386	46.98	171.127	96.69	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	8.66	20.964	50.65	195.123	97.42	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	9.88	23.904	54.36	222.484	97.96	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	11.23	27.256	58.11	253.681	98.37	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	12.70	31.078	61.86	289.253	98.70	2692.173	100.00
0.044	0.00	0.409	0.11	3.807	14.31	35.436	65.59	329.813	98.98	3069.677	100.00
0.050	0.00	0.466	0.34	4.341	16.06	40.405	69.29	376.060	99.25	3500.116	100.00
0.057	0.00	0.532	0.71	4.950	17.96	46.070	72.91	428.793	99.50	3990.912	100.00
0.065	0.00	0.606	1.17	5.644	20.03	52.531	76.43	488.919	99.73	4550.528	100.00
0.074	0.00	0.691	1.71	6.435	22.28	59.897	79.80	557.477	99.91	5188.616	100.00
0.085	0.00	0.788	2.30	7.338	24.73	68.295	82.97	635.647	99.99	5916.178	100.00
0.097	0.00	0.899	2.92	8.367	27.38	77.872	85.90	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	3.56	9.540	30.24	88.791	88.55	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	4.23	10.878	33.28	101.242	90.87	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	4.94	12.403	36.51	115.438	92.84	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	5.72	14.142	39.89	131.625	94.45	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-16-R2-4*
Analyst: KB
Particle Technology Labs *PTL ID: 44397*

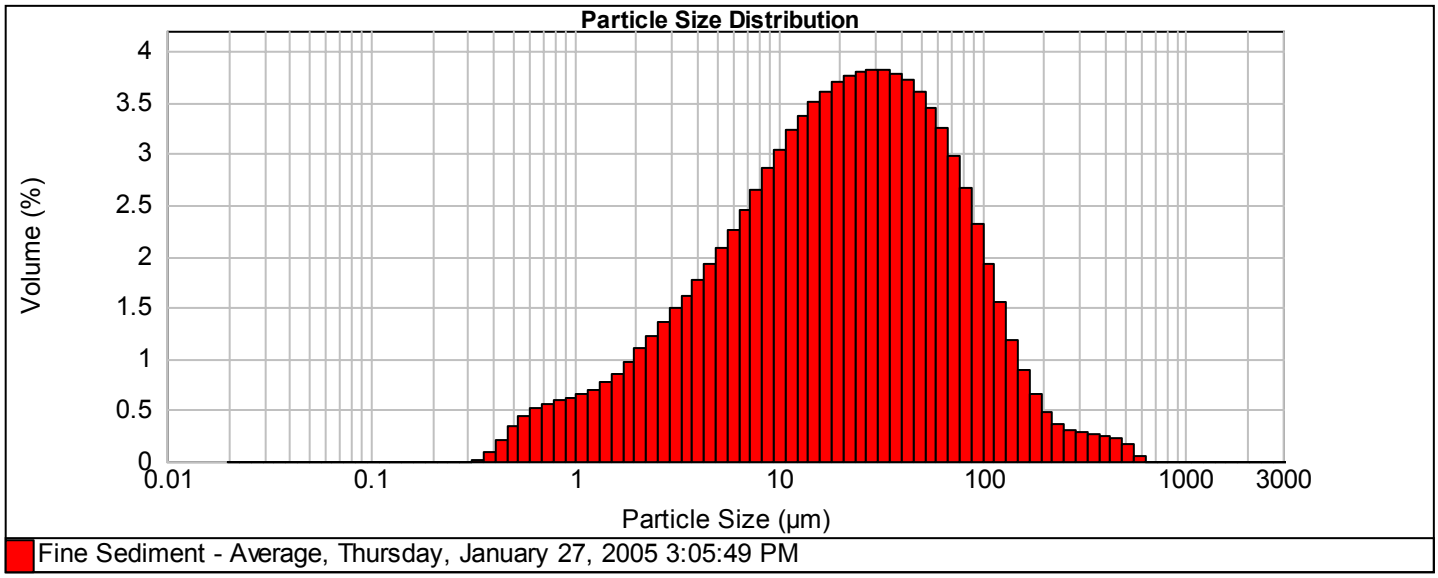
SOP Name: Sea Engineering - Fine Sediment
Result Source: Averaged
Number of this Measurement: 1

Measured: Thursday, January 27, 2005 3:05:49 PM
Analyzed: Thursday, January 27, 2005 3:05:50 PM
Number of Measurements: 4

Particle Name: Default	**Accessory Name:** Hydro 2000S (A)	**Pump Speed:** 2000	**Analysis model:** General purpose	**Sensitivity:** Normal
Particle RI: 1.520	**Absorption:** 0.1		**Size range:** 0.020 to 2000.000 um	**Obscuration:** 14.94 %
Dispersant Name: Water	**Dispersant RI:** 1.330		**Weighted Residual:** 0.889 %	**Result Emulation:** Off

Concentration: 0.0159 %Vol	**Span :** 4.390	**Uniformity:** 1.52	**Result units:** Volume
Specific Surface Area: 0.928 m²/g	**Surface Weighted Mean D[3,2]:** 6.465 um	**Vol. Weighted Mean D[4,3]:** 39.771 um	

d(0.1): 2.663 um **d(0.5): 20.581 um** **d(0.9): 93.007 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	6.35	16.125	43.22	150.082	96.11	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	7.32	18.386	46.83	171.127	97.00	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	8.42	20.964	50.52	195.123	97.64	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	9.64	23.904	54.28	222.484	98.11	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	10.99	27.256	58.07	253.681	98.48	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	12.48	31.078	61.89	289.253	98.78	2692.173	100.00
0.044	0.00	0.409	0.09	3.807	14.10	35.436	65.70	329.813	99.05	3069.677	100.00
0.050	0.00	0.466	0.30	4.341	15.86	40.405	69.48	376.060	99.31	3500.116	100.00
0.057	0.00	0.532	0.65	4.950	17.77	46.070	73.20	428.793	99.56	3990.912	100.00
0.065	0.00	0.606	1.08	5.644	19.85	52.531	76.80	488.919	99.78	4550.528	100.00
0.074	0.00	0.691	1.60	6.435	22.11	59.897	80.25	557.477	99.94	5188.616	100.00
0.085	0.00	0.788	2.16	7.338	24.56	68.295	83.50	635.647	100.00	5916.178	100.00
0.097	0.00	0.899	2.76	8.367	27.22	77.872	86.48	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	3.38	9.540	30.07	88.791	89.14	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	4.03	10.878	33.11	101.242	91.45	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	4.73	12.403	36.34	115.438	93.38	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	5.49	14.142	39.71	131.625	94.92	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-16-R2-5*
Analyst: KB
Particle Technology Labs *PTL ID: 44398*

SOP Name: Sea Engineering - Fine Sediment
Result Source: Averaged
Number of this Measurement: 1

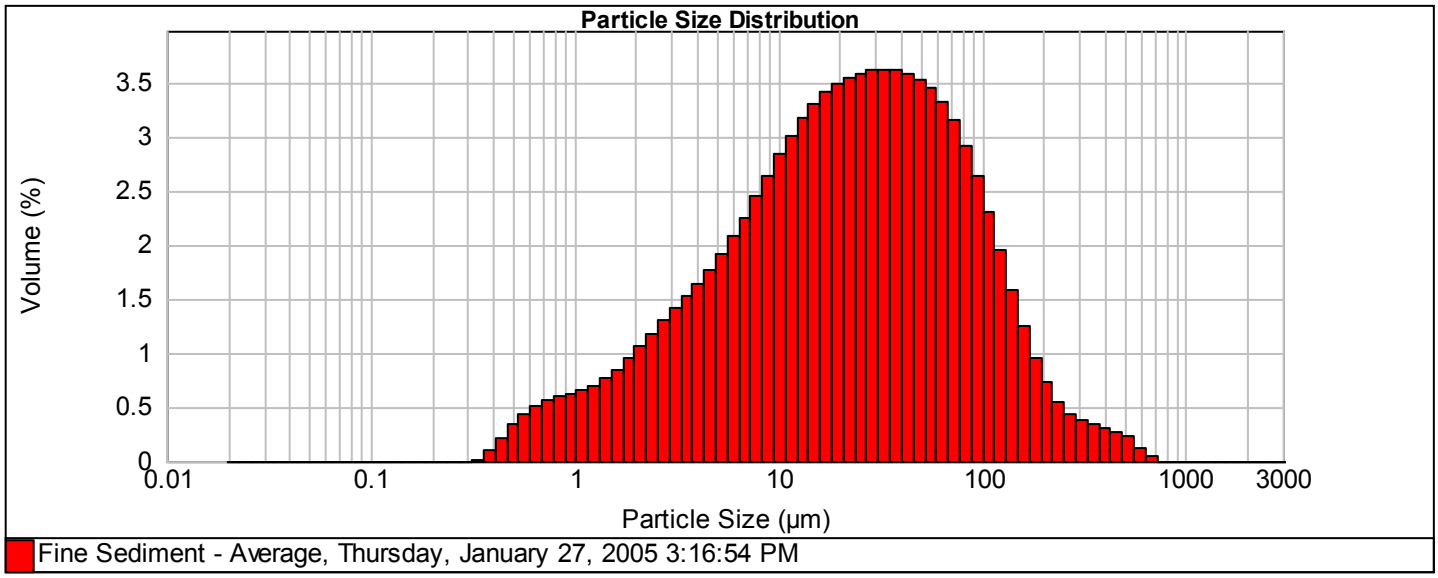
Measured: Thursday, January 27, 2005 3:16:54 PM
Analyzed: Thursday, January 27, 2005 3:16:55 PM
Number of Measurements: 4

Particle Name:	Accessory Name:	Pump Speed:	Analysis model:	Sensitivity:
Default	Hydro 2000S (A)	2000	General purpose	Normal
Particle RI:	**Absorption:**		**Size range:**	**Obscuration:**
1.520	0.1		0.020 to 2000.000 um	16.94 %
Dispersant Name:	**Dispersant RI:**		**Weighted Residual:**	**Result Emulation:**
Water	1.330		0.845 %	Off

Concentration:	Span :	Uniformity:	Result units:
0.0187 %Vol	4.722	1.62	Volume

Specific Surface Area:	Surface Weighted Mean D[3,2]:	Vol. Weighted Mean D[4,3]:
0.905 m²/g	6.627 um	45.967 um

d(0.1): 2.686 um **d(0.5): 22.702 um** **d(0.9): 109.884 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	6.35	16.125	40.94	150.082	94.38	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	7.31	18.386	44.35	171.127	95.63	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	8.38	20.964	47.85	195.123	96.60	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	9.57	23.904	51.40	222.484	97.33	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	10.87	27.256	55.00	253.681	97.88	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	12.28	31.078	58.62	289.253	98.32	2692.173	100.00
0.044	0.00	0.409	0.10	3.807	13.80	35.436	62.24	329.813	98.69	3069.677	100.00
0.050	0.00	0.466	0.31	4.341	15.45	40.405	65.86	376.060	99.03	3500.116	100.00
0.057	0.00	0.532	0.66	4.950	17.22	46.070	69.45	428.793	99.34	3990.912	100.00
0.065	0.00	0.606	1.09	5.644	19.14	52.531	72.99	488.919	99.61	4550.528	100.00
0.074	0.00	0.691	1.60	6.435	21.23	59.897	76.45	557.477	99.85	5188.616	100.00
0.085	0.00	0.788	2.17	7.338	23.49	68.295	79.78	635.647	99.96	5916.178	100.00
0.097	0.00	0.899	2.76	8.367	25.94	77.872	82.94	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	3.38	9.540	28.59	88.791	85.87	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	4.04	10.878	31.43	101.242	88.51	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	4.73	12.403	34.45	115.438	90.83	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	5.50	14.142	37.63	131.625	92.78	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-17-1*
Analyst: KB
Particle Technology Labs *PTL ID: 44399*

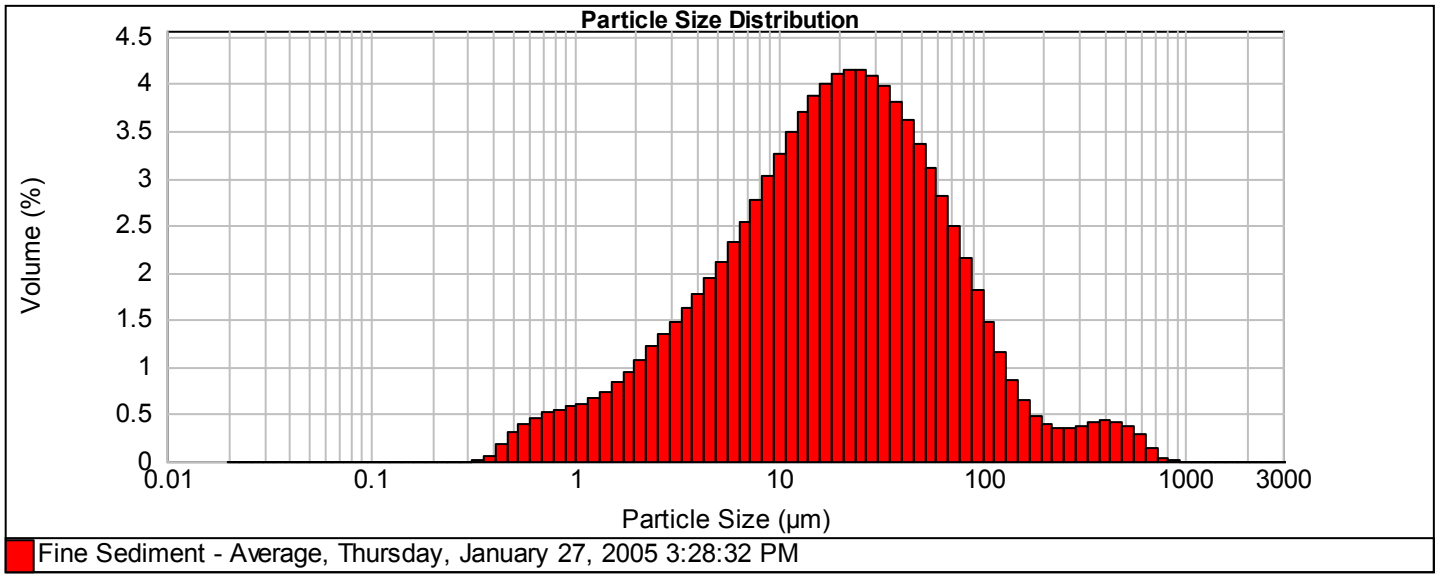
SOP Name: Sea Engineering - Fine Sediment
Result Source: Averaged
Number of this Measurement: 1

Measured: Thursday, January 27, 2005 3:28:32 PM
Analyzed: Thursday, January 27, 2005 3:28:33 PM
Number of Measurements: 4

Particle Name:	Accessory Name:	Pump Speed:	Analysis model:	Sensitivity:
Default	Hydro 2000S (A)	2000	General purpose	Normal
Particle RI:	**Absorption:**		**Size range:**	**Obscuration:**
1.520	0.1		0.020 to 2000.000 um	13.31 %
Dispersant Name:	**Dispersant RI:**		**Weighted Residual:**	**Result Emulation:**
Water	1.330		0.879 %	Off

Concentration:	Span :	Uniformity:	Result units:
0.0143 %Vol	4.411	1.75	Volume
Specific Surface Area:	**Surface Weighted Mean D[3,2]:**	**Vol. Weighted Mean D[4,3]:**	
0.897 m²/g	6.692 um	42.353 um	

d(0.1): 2.808 um **d(0.5): 19.411 um** **d(0.9): 88.440 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	5.87	16.125	44.31	150.082	95.35	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	6.81	18.386	48.31	171.127	95.99	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	7.89	20.964	52.41	195.123	96.47	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	9.10	23.904	56.56	222.484	96.85	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	10.45	27.256	60.70	253.681	97.20	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	11.93	31.078	64.78	289.253	97.55	2692.173	100.00
0.044	0.00	0.409	0.05	3.807	13.55	35.436	68.75	329.813	97.92	3069.677	100.00
0.050	0.00	0.466	0.22	4.341	15.33	40.405	72.56	376.060	98.33	3500.116	100.00
0.057	0.00	0.532	0.53	4.950	17.26	46.070	76.16	428.793	98.76	3990.912	100.00
0.065	0.00	0.606	0.92	5.644	19.38	52.531	79.53	488.919	99.18	4550.528	100.00
0.074	0.00	0.691	1.38	6.435	21.70	59.897	82.63	557.477	99.54	5188.616	100.00
0.085	0.00	0.788	1.90	7.338	24.24	68.295	85.43	635.647	99.83	5916.178	100.00
0.097	0.00	0.899	2.45	8.367	27.01	77.872	87.91	724.780	99.96	6745.760	100.00
0.110	0.00	1.025	3.03	9.540	30.02	88.791	90.06	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	3.64	10.878	33.27	101.242	91.87	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	4.30	12.403	36.76	115.438	93.34	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	5.03	14.142	40.45	131.625	94.48	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-17-2*
Analyst: KB
Particle Technology Labs *PTL ID: 44400*

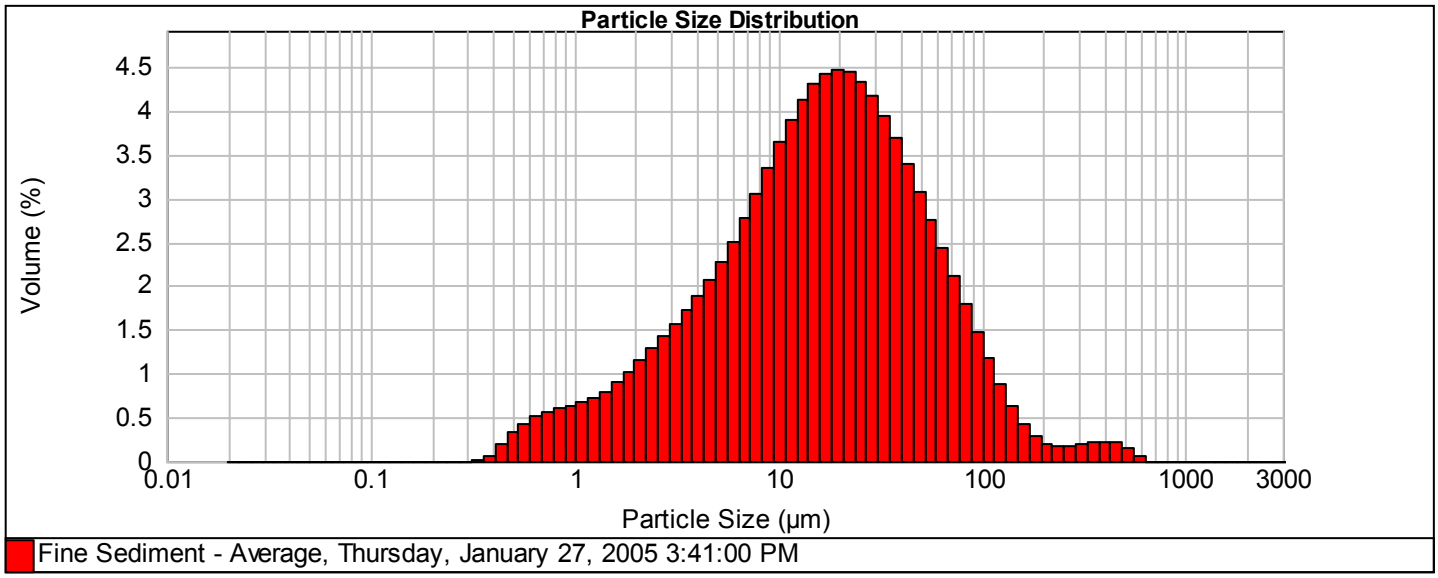
SOP Name: Sea Engineering - Fine Sediment
Result Source: Averaged
Number of this Measurement: 1

Measured: Thursday, January 27, 2005 3:41:00 PM
Analyzed: Thursday, January 27, 2005 3:41:01 PM
Number of Measurements: 4

Particle Name: Default	**Accessory Name:** Hydro 2000S (A)	**Pump Speed:** 2000	**Analysis model:** General purpose	**Sensitivity:** Normal
Particle RI: 1.520	**Absorption:** 0.1		**Size range:** 0.020 to 2000.000 um	**Obscuration:** 13.99 %
Dispersant Name: Water	**Dispersant RI:** 1.330		**Weighted Residual:** 0.957 %	**Result Emulation:** Off

Concentration: 0.0140 %Vol	**Span :** 3.990	**Uniformity:** 1.44	**Result units:** Volume
Specific Surface Area: 0.968 m²/g	**Surface Weighted Mean D[3,2]:** 6.196 um	**Vol. Weighted Mean D[4,3]:** 31.829 um	

d(0.1): 2.601 um **d(0.5): 16.877 um** **d(0.9): 69.946 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	6.41	16.125	48.47	150.082	97.67	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	7.43	18.386	52.90	171.127	98.10	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	8.58	20.964	57.36	195.123	98.39	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	9.87	23.904	61.80	222.484	98.59	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	11.29	27.256	66.13	253.681	98.76	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	12.86	31.078	70.30	289.253	98.93	2692.173	100.00
0.044	0.00	0.409	0.06	3.807	14.58	35.436	74.25	329.813	99.12	3069.677	100.00
0.050	0.00	0.466	0.25	4.341	16.46	40.405	77.93	376.060	99.34	3500.116	100.00
0.057	0.00	0.532	0.58	4.950	18.52	46.070	81.32	428.793	99.57	3990.912	100.00
0.065	0.00	0.606	1.01	5.644	20.79	52.531	84.39	488.919	99.79	4550.528	100.00
0.074	0.00	0.691	1.52	6.435	23.30	59.897	87.15	557.477	99.95	5188.616	100.00
0.085	0.00	0.788	2.09	7.338	26.07	68.295	89.59	635.647	100.00	5916.178	100.00
0.097	0.00	0.899	2.69	8.367	29.13	77.872	91.71	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	3.33	9.540	32.48	88.791	93.50	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	4.00	10.878	36.12	101.242	94.98	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	4.72	12.403	40.02	115.438	96.15	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	5.51	14.142	44.16	131.625	97.04	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING
Per Test Method: MM148.01
Analyst: KB
Particle Technology Labs

Fine Sediment
SF-17-3

PTL ID: 44401

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Thursday, January 27, 2005 3:54:11 PM

Result Source:
Averaged

Analyzed:
Thursday, January 27, 2005 3:54:13 PM

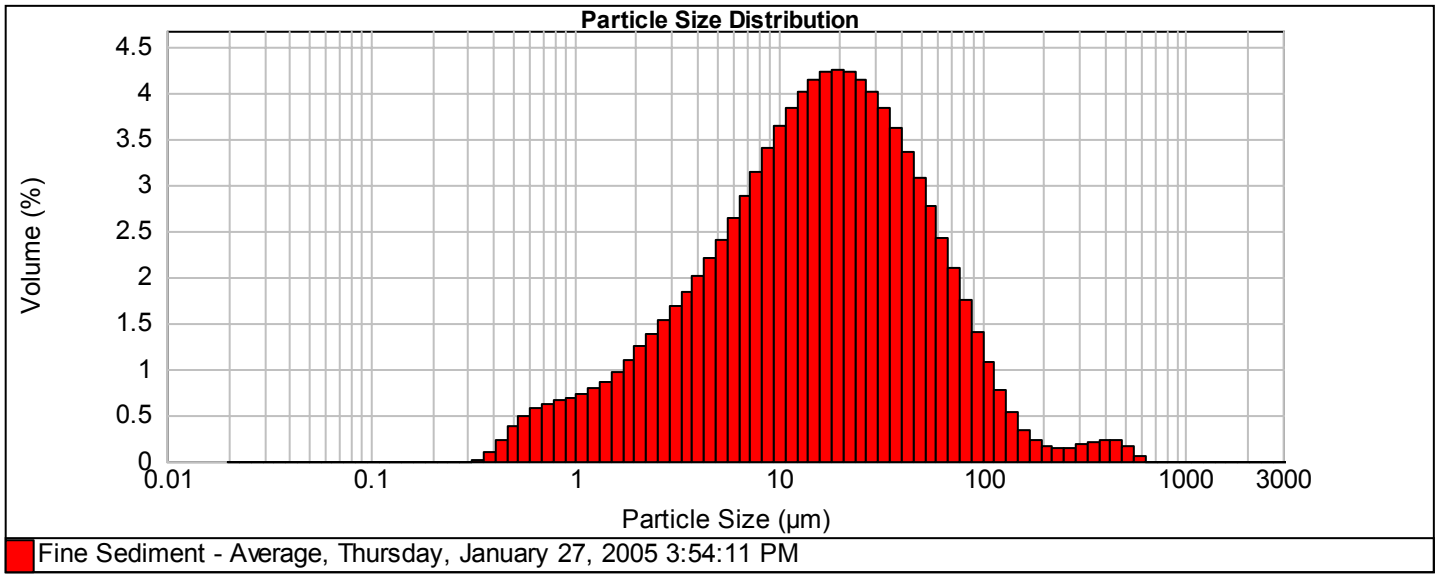
Number of this Measurement:
1

Number of Measurements:
4

Particle Name: Default	**Accessory Name:** Hydro 2000S (A)	**Pump Speed:** 2000	**Analysis model:** General purpose	**Sensitivity:** Normal
Particle RI: 1.520	**Absorption:** 0.1		**Size range:** 0.020 to 2000.000 um	**Obscuration:** 15.01 %
Dispersant Name: Water	**Dispersant RI:** 1.330		**Weighted Residual:** 0.974 %	**Result Emulation:** Off

Concentration: 0.0141 %Vol	**Span :** 4.057	**Uniformity:** 1.49	**Result units:** Volume
Specific Surface Area: 1.04 m²/g	**Surface Weighted Mean D[3,2]:** 5.743 um	**Vol. Weighted Mean D[4,3]:** 30.667 um	

d(0.1): 2.369 um **d(0.5): 15.984 um** **d(0.9): 67.222 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	7.14	16.125	50.28	150.082	97.92	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	8.24	18.386	54.51	171.127	98.26	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	9.49	20.964	58.77	195.123	98.48	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	10.87	23.904	63.00	222.484	98.63	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	12.41	27.256	67.15	253.681	98.77	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	14.09	31.078	71.17	289.253	98.92	2692.173	100.00
0.044	0.00	0.409	0.11	3.807	15.93	35.436	75.01	329.813	99.10	3069.677	100.00
0.050	0.00	0.466	0.34	4.341	17.95	40.405	78.63	376.060	99.32	3500.116	100.00
0.057	0.00	0.532	0.73	4.950	20.15	46.070	82.00	428.793	99.55	3990.912	100.00
0.065	0.00	0.606	1.22	5.644	22.56	52.531	85.07	488.919	99.77	4550.528	100.00
0.074	0.00	0.691	1.79	6.435	25.20	59.897	87.84	557.477	99.94	5188.616	100.00
0.085	0.00	0.788	2.42	7.338	28.09	68.295	90.28	635.647	100.00	5916.178	100.00
0.097	0.00	0.899	3.08	8.367	31.23	77.872	92.37	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	3.78	9.540	34.62	88.791	94.12	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	4.51	10.878	38.26	101.242	95.53	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	5.30	12.403	42.11	115.438	96.61	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	6.17	14.142	46.13	131.625	97.39	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING
Per Test Method: MM148.01
Analyst: KB
Particle Technology Labs

Fine Sediment
SF-17-4

PTL ID: 44402

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Thursday, January 27, 2005 4:05:40 PM

Result Source:
Averaged

Analyzed:
Thursday, January 27, 2005 4:05:42 PM

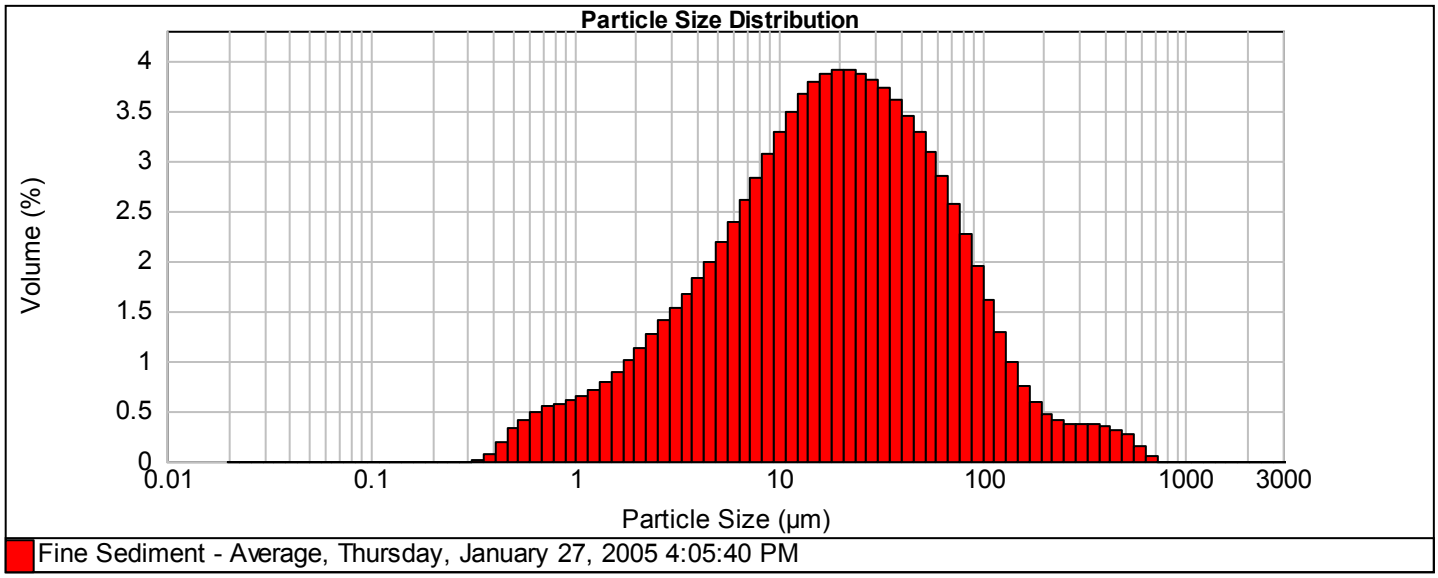
Number of this Measurement:
1

Number of Measurements:
4

Particle Name: Default	**Accessory Name:** Hydro 2000S (A)	**Pump Speed:** 2000	**Analysis model:** General purpose	**Sensitivity:** Normal
Particle RI: 1.520	**Absorption:** 0.1		**Size range:** 0.020 to 2000.000 um	**Obscuration:** 16.02 %
Dispersant Name: Water	**Dispersant RI:** 1.330		**Weighted Residual:** 0.824 %	**Result Emulation:** Off

Concentration: 0.0168 %Vol	**Span :** 4.672	**Uniformity:** 1.73	**Result units:** Volume
Specific Surface Area: 0.935 m²/g	**Surface Weighted Mean D[3,2]:** 6.415 um	**Vol. Weighted Mean D[4,3]:** 40.425 um	

d(0.1): 2.653 um **d(0.5): 18.808 um** **d(0.9): 90.523 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	6.26	16.125	45.46	150.082	95.52	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	7.26	18.386	49.33	171.127	96.28	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	8.40	20.964	53.24	195.123	96.87	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	9.67	23.904	57.15	222.484	97.34	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	11.07	27.256	61.03	253.681	97.74	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	12.61	31.078	64.84	289.253	98.12	2692.173	100.00
0.044	0.00	0.409	0.08	3.807	14.29	35.436	68.57	329.813	98.49	3069.677	100.00
0.050	0.00	0.466	0.28	4.341	16.12	40.405	72.17	376.060	98.85	3500.116	100.00
0.057	0.00	0.532	0.60	4.950	18.12	46.070	75.63	428.793	99.20	3990.912	100.00
0.065	0.00	0.606	1.01	5.644	20.30	52.531	78.92	488.919	99.52	4550.528	100.00
0.074	0.00	0.691	1.50	6.435	22.69	59.897	82.01	557.477	99.79	5188.616	100.00
0.085	0.00	0.788	2.04	7.338	25.30	68.295	84.85	635.647	99.94	5916.178	100.00
0.097	0.00	0.899	2.62	8.367	28.14	77.872	87.42	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	3.23	9.540	31.21	88.791	89.69	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	3.89	10.878	34.51	101.242	91.64	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	4.59	12.403	38.01	115.438	93.24	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	5.37	14.142	41.67	131.625	94.53	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-17-5*
Analyst: KB
Particle Technology Labs *PTL ID: 44403*

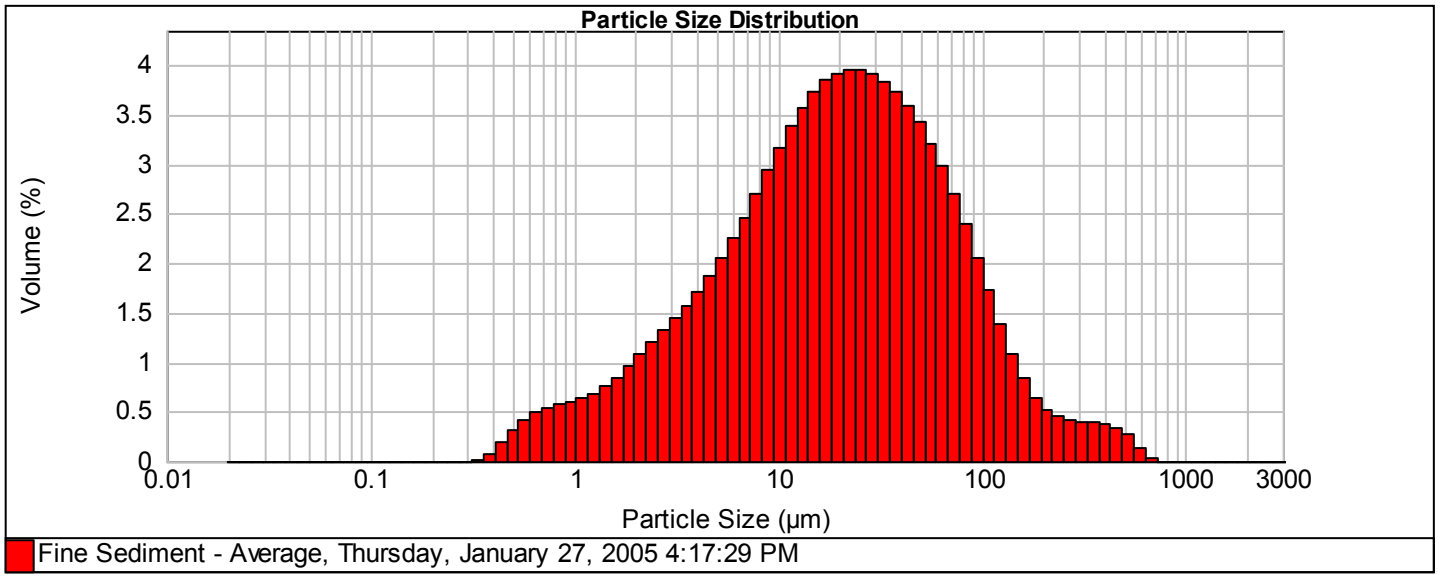
SOP Name: Sea Engineering - Fine Sediment
Result Source: Averaged
Number of this Measurement: 1

Measured: Thursday, January 27, 2005 4:17:29 PM
Analyzed: Thursday, January 27, 2005 4:17:31 PM
Number of Measurements: 4

Particle Name: Default	**Accessory Name:** Hydro 2000S (A)	**Pump Speed:** 2000	**Analysis model:** General purpose	**Sensitivity:** Normal
Particle RI: 1.520	**Absorption:** 0.1		**Size range:** 0.020 to 2000.000 um	**Obscuration:** 14.77 %
Dispersant Name: Water	**Dispersant RI:** 1.330		**Weighted Residual:** 0.885 %	**Result Emulation:** Off

Concentration: 0.0159 %Vol	**Span :** 4.568	**Uniformity:** 1.66	**Result units:** Volume
Specific Surface Area: 0.904 m²/g	**Surface Weighted Mean D[3,2]:** 6.635 um	**Vol. Weighted Mean D[4,3]:** 41.919 um	

d(0.1): 2.754 um **d(0.5): 20.085 um** **d(0.9): 94.508 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	6.09	16.125	43.52	150.082	95.23	1396.865	100.00
0.023	0.00	0.212	0.00	1.975	7.05	18.386	47.36	171.127	96.06	1592.737	100.00
0.026	0.00	0.242	0.00	2.252	8.12	20.964	51.29	195.123	96.71	1816.075	100.00
0.030	0.00	0.276	0.00	2.568	9.31	23.904	55.24	222.484	97.23	2070.731	100.00
0.034	0.00	0.315	0.00	2.928	10.63	27.256	59.19	253.681	97.68	2361.094	100.00
0.039	0.00	0.359	0.00	3.339	12.08	31.078	63.10	289.253	98.09	2692.173	100.00
0.044	0.00	0.409	0.07	3.807	13.65	35.436	66.94	329.813	98.48	3069.677	100.00
0.050	0.00	0.466	0.25	4.341	15.37	40.405	70.67	376.060	98.87	3500.116	100.00
0.057	0.00	0.532	0.57	4.950	17.25	46.070	74.26	428.793	99.24	3990.912	100.00
0.065	0.00	0.606	0.98	5.644	19.30	52.531	77.68	488.919	99.57	4550.528	100.00
0.074	0.00	0.691	1.47	6.435	21.54	59.897	80.90	557.477	99.84	5188.616	100.00
0.085	0.00	0.788	2.00	7.338	24.01	68.295	83.88	635.647	99.96	5916.178	100.00
0.097	0.00	0.899	2.58	8.367	26.70	77.872	86.58	724.780	100.00	6745.760	100.00
0.110	0.00	1.025	3.18	9.540	29.64	88.791	88.98	826.410	100.00	7691.669	100.00
0.126	0.00	1.169	3.82	10.878	32.81	101.242	91.04	942.292	100.00	8770.216	100.00
0.143	0.00	1.333	4.50	12.403	36.20	115.438	92.76	1074.423	100.00	10000.000	100.00
0.163	0.00	1.519	5.25	14.142	39.78	131.625	94.14	1225.081	100.00		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-01-1*
Analyst: KB *Sieve Blend Data*
Particle Technology Labs *PTL ID: 44309*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Wednesday, January 12, 2005 12:59:05 PM

Result Source:
Edited

Analyzed:
Tuesday, February 01, 2005 11:02:21 AM

Number of this Measurement:
2

Number of Measurements:
4

Particle Name:
Default

Accessory Name:
Hydro 2000S (A)

Pump Speed:
2000

Analysis model:
General purpose

Sensitivity:
Normal

Particle RI:
1.520

Absorption:
0.1

Size range:
0.020 to 2000.000 um

Obscuration:
14.42 %

Dispersant Name:
Water

Dispersant RI:
1.330

Weighted Residual:
1.145 %

Result Emulation:
On

Concentration:
0.0118 %Vol

Span :
1.858

Uniformity:
0.749

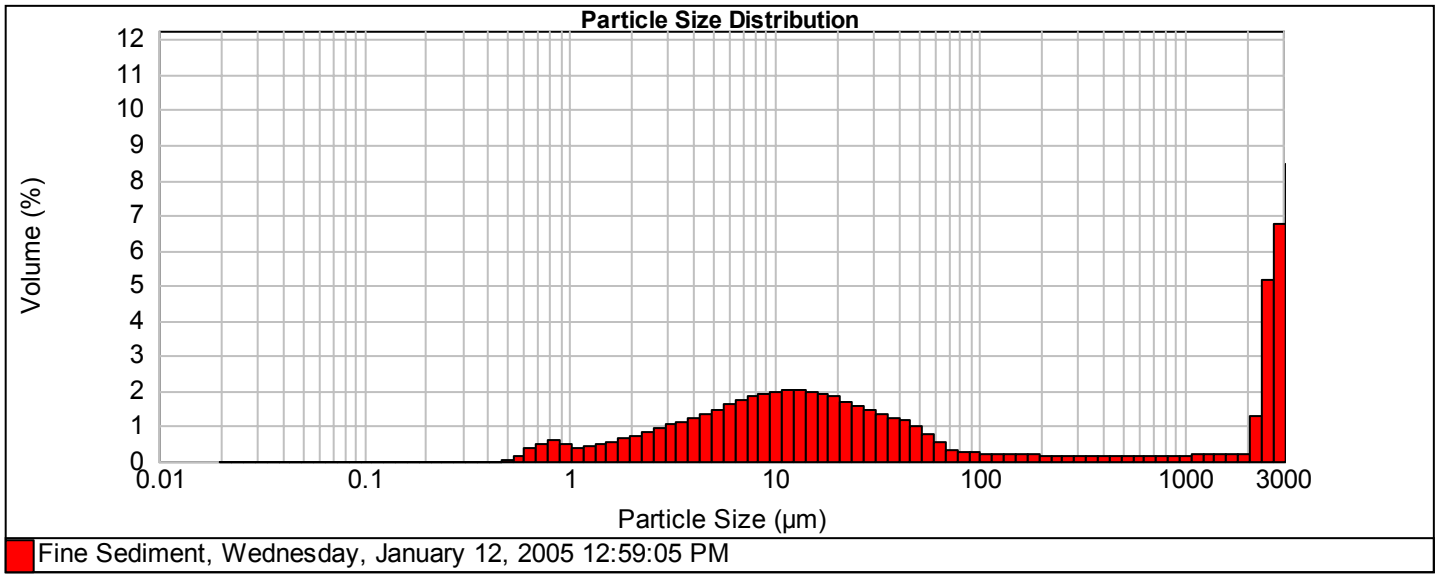
Result units:
Volume

Specific Surface Area:
0.557 m²/g

Surface Weighted Mean D[3,2]:
10.780 um

Vol. Weighted Mean D[4,3]:
1974.304 um

d(0.1): 4.099 um **d(0.5): 2436.328 um** **d(0.9): 4529.670 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	4.05	16.125	28.50	150.082	44.40	1396.865	47.11
0.023	0.00	0.212	0.00	1.975	4.68	18.386	30.43	171.127	44.58	1592.737	47.31
0.026	0.00	0.242	0.00	2.252	5.41	20.964	32.25	195.123	44.75	1816.075	47.53
0.030	0.00	0.276	0.00	2.568	6.24	23.904	33.96	222.484	44.91	2070.731	47.75
0.034	0.00	0.315	0.00	2.928	7.17	27.256	35.52	253.681	45.07	2361.094	49.01
0.039	0.00	0.359	0.00	3.339	8.20	31.078	36.95	289.253	45.23	2692.173	54.14
0.044	0.00	0.409	0.00	3.807	9.32	35.436	38.28	329.813	45.38	3069.677	60.89
0.050	0.00	0.466	0.00	4.341	10.55	40.405	39.53	376.060	45.52	3500.116	69.38
0.057	0.00	0.532	0.04	4.950	11.90	46.070	40.67	428.793	45.67	3990.912	79.27
0.065	0.00	0.606	0.18	5.644	13.38	52.531	41.66	488.919	45.81	4550.528	90.41
0.074	0.00	0.691	0.54	6.435	14.99	59.897	42.45	557.477	45.96	5188.616	99.09
0.085	0.00	0.788	1.03	7.338	16.72	68.295	43.00	635.647	46.11	5916.178	99.35
0.097	0.00	0.899	1.66	8.367	18.56	77.872	43.31	724.780	46.26	6745.760	99.70
0.110	0.00	1.025	2.15	9.540	20.49	88.791	43.55	826.410	46.41	7691.669	99.93
0.126	0.00	1.169	2.54	10.878	22.47	101.242	43.78	942.292	46.58	8770.216	99.99
0.143	0.00	1.333	2.97	12.403	24.49	115.438	44.00	1074.423	46.75	10000.000	100.00
0.163	0.00	1.519	3.48	14.142	26.51	131.625	44.20	1225.081	46.93		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-01-1*
Analyst: KB *Sieve Blend Data*
Particle Technology Labs *PTL ID: 44309*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Wednesday, January 12, 2005 12:59:05 PM

Result Source:
Edited

Analyzed:
Tuesday, February 01, 2005 11:05:55 AM

Number of this Measurement:
2

Number of Measurements:
4

Particle Name:
Default

Accessory Name:
Hydro 2000S (A)

Pump Speed:
2000

Analysis model:
General purpose

Sensitivity:
Normal

Particle RI:
1.520

Absorption:
0.1

Size range:
0.020 to 2000.000 um

Obscuration:
14.42 %

Dispersant Name:
Water

Dispersant RI:
1.330

Weighted Residual:
1.145 %

Result Emulation:
On

Concentration:
0.0118 %Vol

Span :
2.904

Uniformity:
1.06

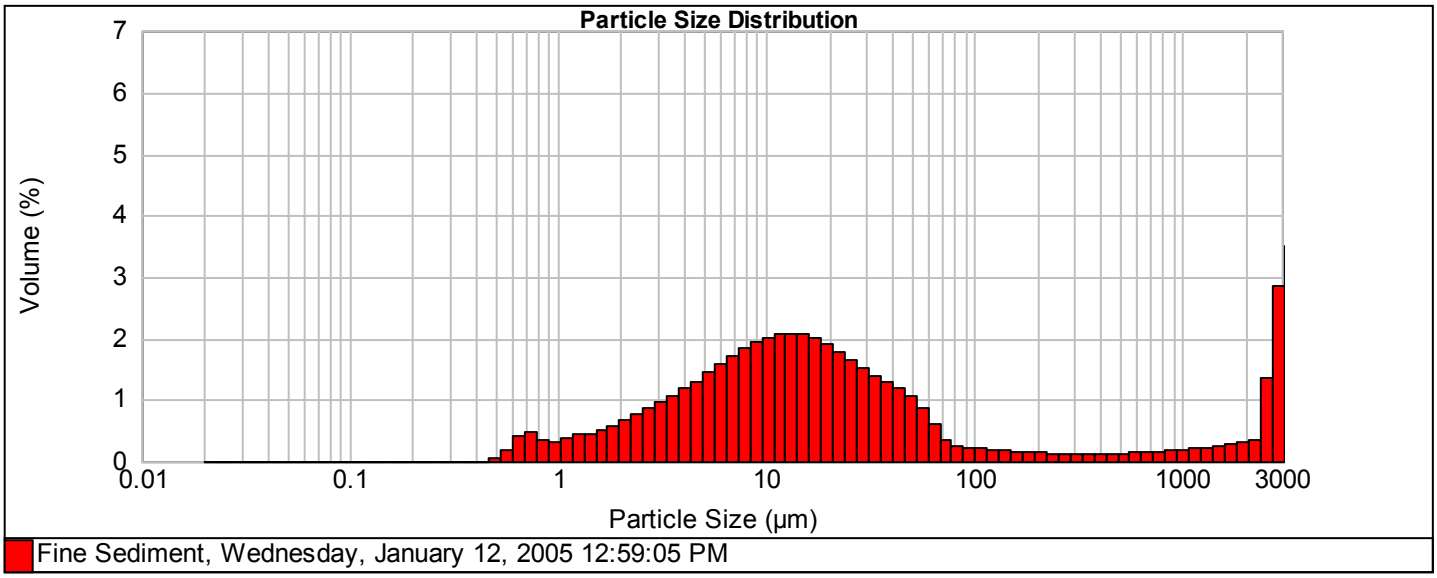
Result units:
Volume

Specific Surface Area:
0.523 m²/g

Surface Weighted Mean D[3,2]:
11.463 um

Vol. Weighted Mean D[4,3]:
3151.968 um

d(0.1): 4.503 um **d(0.5):** 2807.037 um **d(0.9):** 8156.061 um



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	3.58	16.125	27.66	150.082	44.27	1396.865	46.73
0.023	0.00	0.212	0.00	1.975	4.16	18.386	29.66	171.127	44.42	1592.737	46.97
0.026	0.00	0.242	0.00	2.252	4.83	20.964	31.57	195.123	44.56	1816.075	47.24
0.030	0.00	0.276	0.00	2.568	5.59	23.904	33.35	222.484	44.69	2070.731	47.54
0.034	0.00	0.315	0.00	2.928	6.44	27.256	34.99	253.681	44.82	2361.094	47.87
0.039	0.00	0.359	0.00	3.339	7.40	31.078	36.49	289.253	44.93	2692.173	49.22
0.044	0.00	0.409	0.00	3.807	8.47	35.436	37.88	329.813	45.05	3069.677	52.06
0.050	0.00	0.466	0.00	4.341	9.65	40.405	39.18	376.060	45.16	3500.116	55.55
0.057	0.00	0.532	0.06	4.950	10.95	46.070	40.39	428.793	45.28	3990.912	59.58
0.065	0.00	0.606	0.25	5.644	12.39	52.531	41.45	488.919	45.40	4550.528	64.23
0.074	0.00	0.691	0.67	6.435	13.97	59.897	42.31	557.477	45.52	5188.616	69.40
0.085	0.00	0.788	1.15	7.338	15.68	68.295	42.92	635.647	45.65	5916.178	75.02
0.097	0.00	0.899	1.50	8.367	17.52	77.872	43.26	724.780	45.80	6745.760	80.98
0.110	0.00	1.025	1.81	9.540	19.46	88.791	43.50	826.410	45.95	7691.669	87.18
0.126	0.00	1.169	2.19	10.878	21.47	101.242	43.72	942.292	46.12	8770.216	93.55
0.143	0.00	1.333	2.62	12.403	23.53	115.438	43.92	1074.423	46.30	10000.000	99.09
0.163	0.00	1.519	3.07	14.142	25.61	131.625	44.10	1225.081	46.50		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-01-3*
Analyst: KB *Sieve Blend Data*
Particle Technology Labs *PTL ID: 44311*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Wednesday, January 12, 2005 2:13:53 PM

Result Source:
Edited

Analyzed:
Tuesday, February 01, 2005 2:31:22 PM

Number of this Measurement:
2

Number of Measurements:
4

Particle Name:
Default

Accessory Name:
Hydro 2000S (A)

Pump Speed:
2000

Analysis model:
General purpose

Sensitivity:
Normal

Particle RI:
1.520

Absorption:
0.1

Size range:
0.020 to 2000.000 um

Obscuration:
14.73 %

Dispersant Name:
Water

Dispersant RI:
1.330

Weighted Residual:
1.124 %

Result Emulation:
On

Concentration:
0.0122 %Vol

Span :
278.428

Uniformity:
66.6

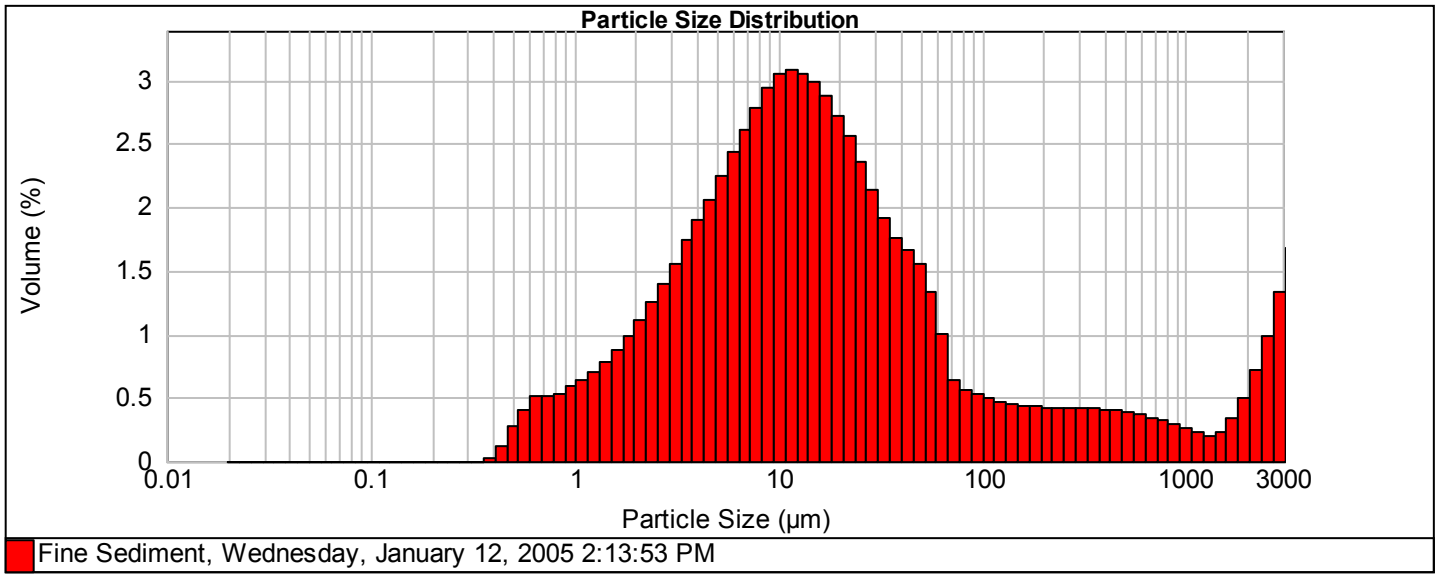
Result units:
Volume

Specific Surface Area:
0.858 m²/g

Surface Weighted Mean D[3,2]:
6.992 um

Vol. Weighted Mean D[4,3]:
1492.129 um

d(0.1): 2.740 um **d(0.5): 22.294 um** **d(0.9): 6209.934 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	5.98	16.125	43.18	150.082	68.19	1396.865	74.35
0.023	0.00	0.212	0.00	1.975	6.96	18.386	46.05	171.127	68.62	1592.737	74.58
0.026	0.00	0.242	0.00	2.252	8.07	20.964	48.78	195.123	69.05	1816.075	74.91
0.030	0.00	0.276	0.00	2.568	9.33	23.904	51.34	222.484	69.47	2070.731	75.40
0.034	0.00	0.315	0.00	2.928	10.73	27.256	53.70	253.681	69.89	2361.094	76.11
0.039	0.00	0.359	0.00	3.339	12.28	31.078	55.84	289.253	70.32	2692.173	77.11
0.044	0.00	0.409	0.03	3.807	14.02	35.436	57.75	329.813	70.74	3069.677	78.44
0.050	0.00	0.466	0.14	4.341	15.92	40.405	59.51	376.060	71.16	3500.116	80.12
0.057	0.00	0.532	0.42	4.950	17.98	46.070	61.18	428.793	71.57	3990.912	82.06
0.065	0.00	0.606	0.83	5.644	20.22	52.531	62.73	488.919	71.96	4550.528	84.21
0.074	0.00	0.691	1.35	6.435	22.66	59.897	64.06	557.477	72.35	5188.616	86.55
0.085	0.00	0.788	1.85	7.338	25.27	68.295	65.06	635.647	72.71	5916.178	89.04
0.097	0.00	0.899	2.38	8.367	28.06	77.872	65.69	724.780	73.06	6745.760	91.67
0.110	0.00	1.025	2.97	9.540	31.01	88.791	66.25	826.410	73.38	7691.669	94.40
0.126	0.00	1.169	3.61	10.878	34.05	101.242	66.77	942.292	73.67	8770.216	97.18
0.143	0.00	1.333	4.32	12.403	37.13	115.438	67.26	1074.423	73.92	10000.000	99.02
0.163	0.00	1.519	5.10	14.142	40.19	131.625	67.73	1225.081	74.14		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-03-3*
Analyst: KB *Sieve Blend Data*
Particle Technology Labs *PTL ID: 44321*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Thursday, January 13, 2005 9:13:13 AM

Result Source:
Edited

Analyzed:
Tuesday, February 01, 2005 2:44:00 PM

Number of this Measurement:
2

Number of Measurements:
4

Particle Name:
Default

Accessory Name:
Hydro 2000S (A)

Pump Speed:
2000

Analysis model:
General purpose

Sensitivity:
Normal

Particle RI:
1.520

Absorption:
0.1

Size range:
0.020 to 2000.000 um

Obscuration:
15.45 %

Dispersant Name:
Water

Dispersant RI:
1.330

Weighted Residual:
0.895 %

Result Emulation:
On

Concentration:
0.0164 %Vol

Span :
10.403

Uniformity:
14

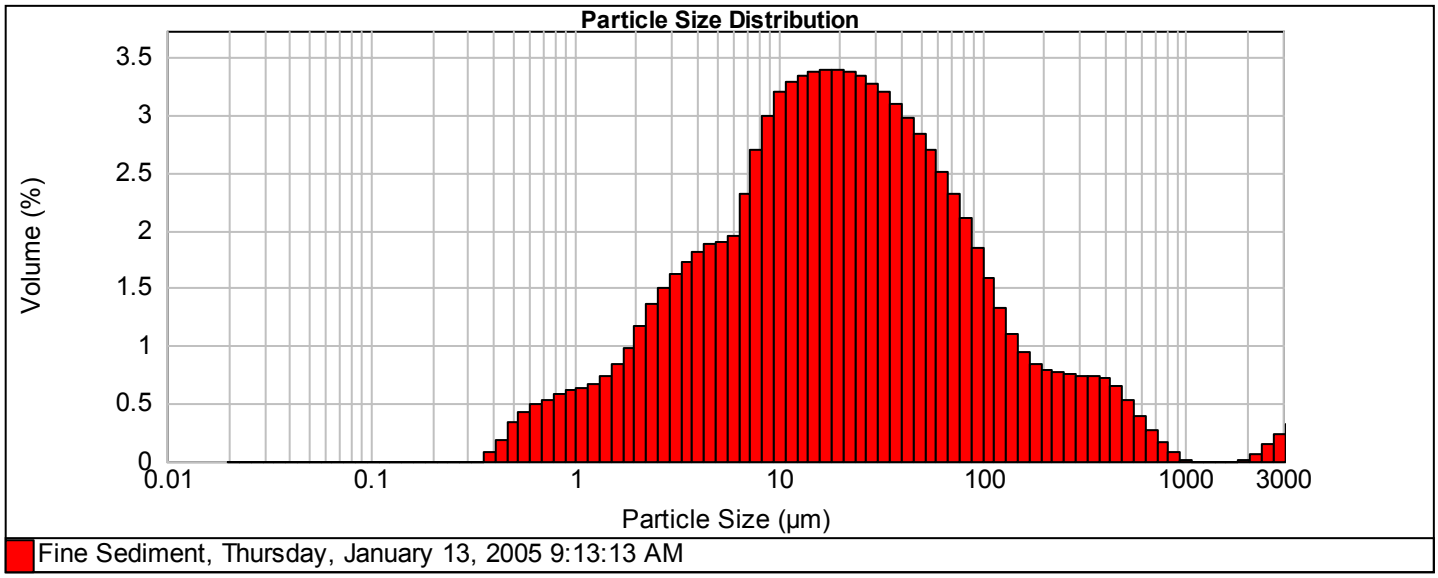
Result units:
Volume

Specific Surface Area:
0.905 m²/g

Surface Weighted Mean D[3,2]:
6.627 um

Vol. Weighted Mean D[4,3]:
303.559 um

d(0.1): 2.658 um **d(0.5): 21.037 um** **d(0.9): 221.504 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	6.11	16.125	43.14	150.082	87.45	1396.865	95.72
0.023	0.00	0.212	0.00	1.975	7.10	18.386	46.53	171.127	88.39	1592.737	95.66
0.026	0.00	0.242	0.00	2.252	8.27	20.964	49.91	195.123	89.23	1816.075	95.62
0.030	0.00	0.276	0.00	2.568	9.62	23.904	53.28	222.484	90.03	2070.731	95.62
0.034	0.00	0.315	0.00	2.928	11.12	27.256	56.61	253.681	90.79	2361.094	95.68
0.039	0.00	0.359	0.00	3.339	12.73	31.078	59.88	289.253	91.54	2692.173	95.83
0.044	0.00	0.409	0.07	3.807	14.46	35.436	63.07	329.813	92.28	3069.677	96.07
0.050	0.00	0.466	0.26	4.341	16.27	40.405	66.17	376.060	93.01	3500.116	96.38
0.057	0.00	0.532	0.59	4.950	18.14	46.070	69.13	428.793	93.72	3990.912	96.76
0.065	0.00	0.606	1.01	5.644	20.04	52.531	71.97	488.919	94.38	4550.528	97.17
0.074	0.00	0.691	1.51	6.435	21.98	59.897	74.66	557.477	94.91	5188.616	97.60
0.085	0.00	0.788	2.04	7.338	24.28	68.295	77.16	635.647	95.30	5916.178	98.04
0.097	0.00	0.899	2.61	8.367	26.97	77.872	79.48	724.780	95.57	6745.760	98.48
0.110	0.00	1.025	3.23	9.540	29.95	88.791	81.58	826.410	95.73	7691.669	99.01
0.126	0.00	1.169	3.86	10.878	33.15	101.242	83.43	942.292	95.80	8770.216	99.60
0.143	0.00	1.333	4.53	12.403	36.44	115.438	85.02	1074.423	95.81	10000.000	99.98
0.163	0.00	1.519	5.27	14.142	39.77	131.625	86.34	1225.081	95.78		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-05-1*
Analyst: KB *Sieve Blend Data*
Particle Technology Labs *PTL ID: 44329*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Wednesday, January 19, 2005 3:56:23 PM

Result Source:
Edited

Analyzed:
Tuesday, February 01, 2005 4:07:18 PM

Number of this Measurement:
2

Number of Measurements:
4

Particle Name:
Default

Accessory Name:
Hydro 2000S (A)

Pump Speed:
2000

Analysis model:
General purpose

Sensitivity:
Normal

Particle RI:
1.520

Absorption:
0.1

Size range:
0.020 to 2000.000 um

Obscuration:
14.69 %

Dispersant Name:
Water

Dispersant RI:
1.330

Weighted Residual:
1.091 %

Result Emulation:
On

Concentration:
0.0473 %Vol

Span :
13.760

Uniformity:
3.55

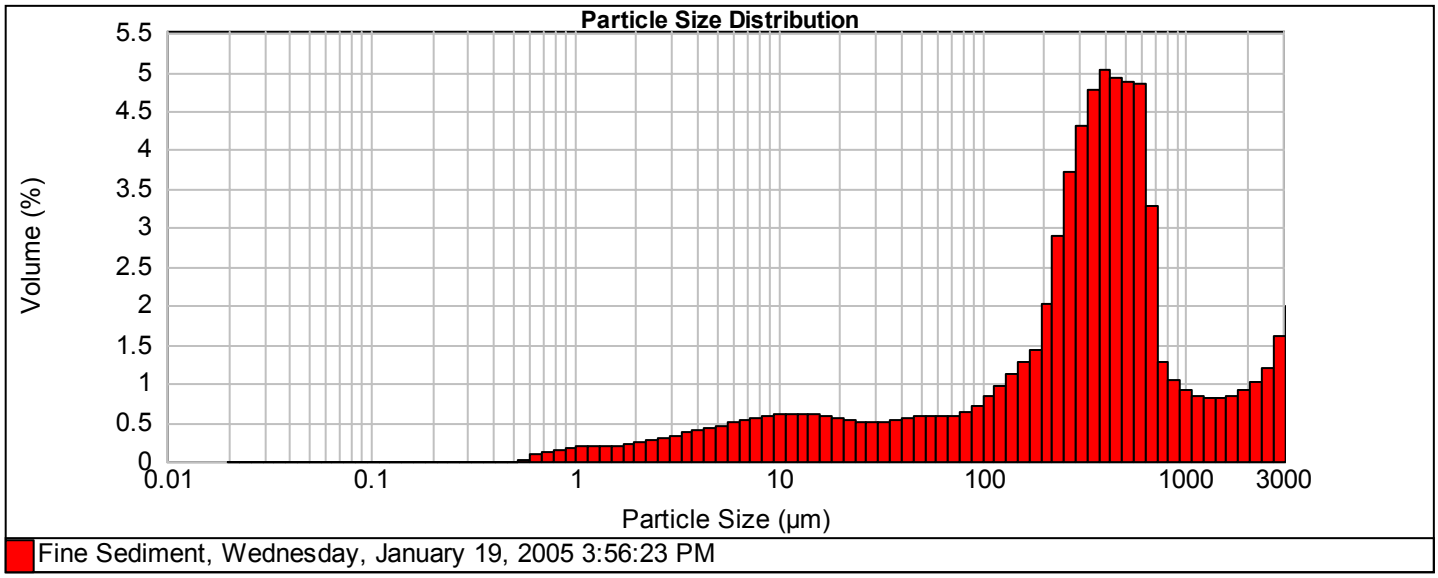
Result units:
Volume

Specific Surface Area:
0.184 m²/g

Surface Weighted Mean D[3,2]:
32.637 um

Vol. Weighted Mean D[4,3]:
1947.528 um

d(0.1): 20.838 um **d(0.5): 488.131 um** **d(0.9): 6737.684 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	1.30	16.125	8.90	150.082	19.68	1396.865	67.94
0.023	0.00	0.212	0.00	1.975	1.51	18.386	9.48	171.127	20.95	1592.737	68.74
0.026	0.00	0.242	0.00	2.252	1.74	20.964	10.02	195.123	22.38	1816.075	69.57
0.030	0.00	0.276	0.00	2.568	2.02	23.904	10.54	222.484	24.40	2070.731	70.47
0.034	0.00	0.315	0.00	2.928	2.32	27.256	11.04	253.681	27.30	2361.094	71.48
0.039	0.00	0.359	0.00	3.339	2.65	31.078	11.54	289.253	31.03	2692.173	72.67
0.044	0.00	0.409	0.00	3.807	3.01	35.436	12.05	329.813	35.34	3069.677	74.28
0.050	0.00	0.466	0.00	4.341	3.40	40.405	12.58	376.060	40.11	3500.116	76.27
0.057	0.00	0.532	0.00	4.950	3.82	46.070	13.14	428.793	45.13	3990.912	78.59
0.065	0.00	0.606	0.02	5.644	4.28	52.531	13.70	488.919	50.06	4550.528	81.18
0.074	0.00	0.691	0.11	6.435	4.78	59.897	14.27	557.477	54.94	5188.616	83.99
0.085	0.00	0.788	0.24	7.338	5.31	68.295	14.84	635.647	59.78	5916.178	86.95
0.097	0.00	0.899	0.38	8.367	5.88	77.872	15.42	724.780	63.06	6745.760	90.03
0.110	0.00	1.025	0.55	9.540	6.46	88.791	16.05	826.410	64.32	7691.669	93.33
0.126	0.00	1.169	0.73	10.878	7.07	101.242	16.76	942.292	65.36	8770.216	96.71
0.143	0.00	1.333	0.93	12.403	7.68	115.438	17.58	1074.423	66.28	10000.000	99.02
0.163	0.00	1.519	1.12	14.142	8.30	131.625	18.55	1225.081	67.13		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-05-2*
Analyst: KB *Sieve Blend Data*
Particle Technology Labs *PTL ID: 44330*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Wednesday, January 19, 2005 4:15:07 PM

Result Source:
Edited

Analyzed:
Tuesday, February 01, 2005 4:15:35 PM

Number of this Measurement:
2

Number of Measurements:
4

Particle Name:
Default

Accessory Name:
Hydro 2000S (A)

Pump Speed:
2000

Analysis model:
General purpose

Sensitivity:
Normal

Particle RI:
1.520

Absorption:
0.1

Size range:
0.020 to 2000.000 um

Obscuration:
12.50 %

Dispersant Name:
Water

Dispersant RI:
1.330

Weighted Residual:
2.093 %

Result Emulation:
On

Concentration:
0.0646 %Vol

Span :
10.809

Uniformity:
2.24

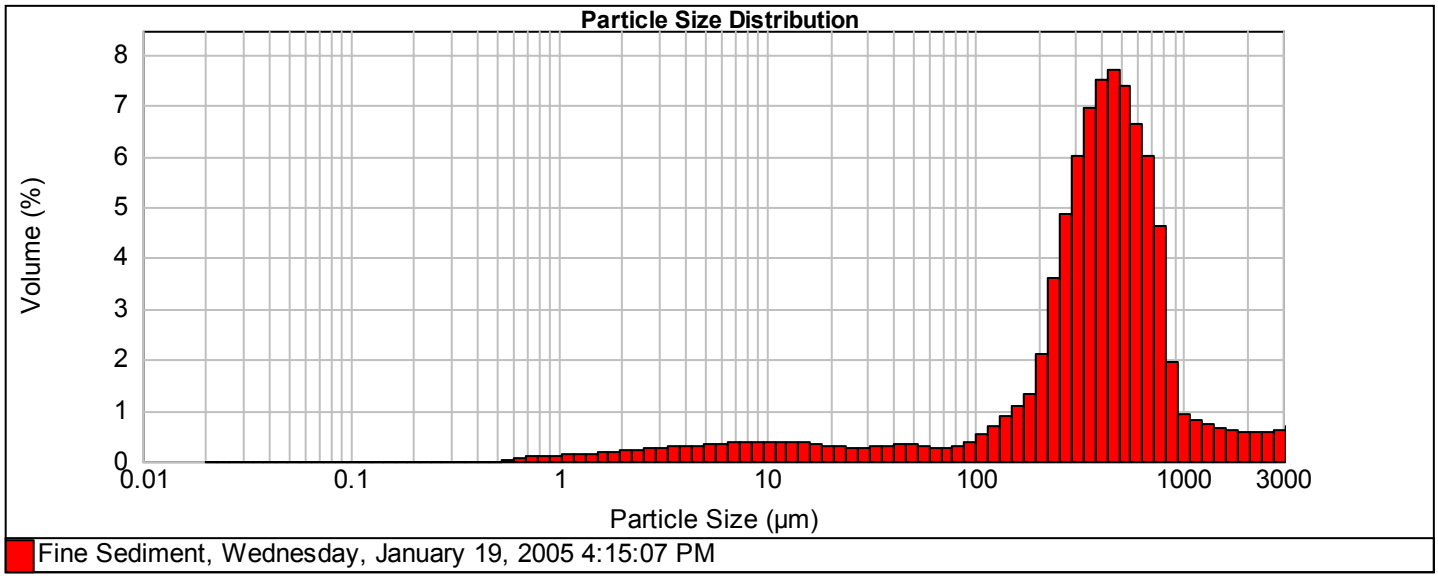
Result units:
Volume

Specific Surface Area:
0.14 m²/g

Surface Weighted Mean D[3,2]:
42.884 um

Vol. Weighted Mean D[4,3]:
1281.868 um

d(0.1): 86.127 um **d(0.5): 459.451 um** **d(0.9): 5052.170 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	0.98	16.125	6.27	150.082	12.52	1396.865	82.70
0.023	0.00	0.212	0.00	1.975	1.17	18.386	6.61	171.127	13.60	1592.737	83.33
0.026	0.00	0.242	0.00	2.252	1.37	20.964	6.91	195.123	14.93	1816.075	83.92
0.030	0.00	0.276	0.00	2.568	1.60	23.904	7.19	222.484	17.05	2070.731	84.49
0.034	0.00	0.315	0.00	2.928	1.85	27.256	7.45	253.681	20.64	2361.094	85.05
0.039	0.00	0.359	0.00	3.339	2.11	31.078	7.71	289.253	25.51	2692.173	85.63
0.044	0.00	0.409	0.00	3.807	2.39	35.436	8.00	329.813	31.53	3069.677	86.25
0.050	0.00	0.466	0.00	4.341	2.69	40.405	8.31	376.060	38.47	3500.116	86.93
0.057	0.00	0.532	0.00	4.950	3.00	46.070	8.64	428.793	45.95	3990.912	87.70
0.065	0.00	0.606	0.02	5.644	3.33	52.531	8.97	488.919	53.65	4550.528	88.76
0.074	0.00	0.691	0.10	6.435	3.67	59.897	9.27	557.477	61.02	5188.616	90.36
0.085	0.00	0.788	0.19	7.338	4.03	68.295	9.54	635.647	67.65	5916.178	92.25
0.097	0.00	0.899	0.29	8.367	4.40	77.872	9.79	724.780	73.66	6745.760	94.18
0.110	0.00	1.025	0.40	9.540	4.78	88.791	10.07	826.410	78.31	7691.669	96.00
0.126	0.00	1.169	0.53	10.878	5.16	101.242	10.44	942.292	80.27	8770.216	98.02
0.143	0.00	1.333	0.67	12.403	5.54	115.438	10.96	1074.423	81.19	10000.000	99.90
0.163	0.00	1.519	0.82	14.142	5.92	131.625	11.65	1225.081	81.99		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-05-3*
Analyst: KB *Sieve Blend Data*
Particle Technology Labs *PTL ID: 44331*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Wednesday, January 19, 2005 4:31:40 PM

Result Source:
Edited

Analyzed:
Tuesday, February 01, 2005 4:32:46 PM

Number of this Measurement:
2

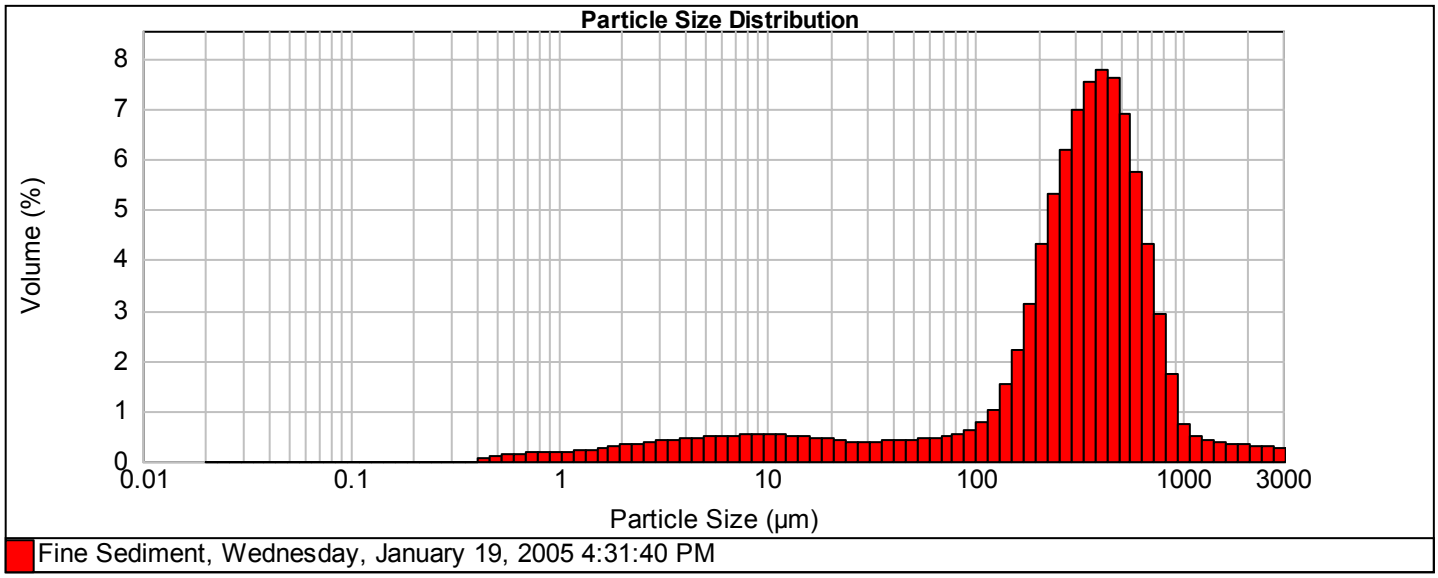
Number of Measurements:
4

Particle Name:	Accessory Name:	Pump Speed:	Analysis model:	Sensitivity:
Default	Hydro 2000S (A)	2000	General purpose	Normal
Particle RI:	**Absorption:**		**Size range:**	**Obscuration:**
1.520	0.1		0.020 to 2000.000 um	14.45 %
Dispersant Name:	**Dispersant RI:**		**Weighted Residual:**	**Result Emulation:**
Water	1.330		1.406 %	On

Concentration:	Span :	Uniformity:	Result units:
0.0550 %Vol	2.333	1.35	Volume

Specific Surface Area:	Surface Weighted Mean D[3,2]:	Vol. Weighted Mean D[4,3]:
0.243 m²/g	24.741 um	641.042 um

d(0.1): 18.371 um **d(0.5): 346.486 um** **d(0.9): 826.856 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	1.84	16.125	9.53	150.082	19.14	1396.865	93.36
0.023	0.00	0.212	0.00	1.975	2.12	18.386	10.00	171.127	21.34	1592.737	93.75
0.026	0.00	0.242	0.00	2.252	2.44	20.964	10.44	195.123	24.46	1816.075	94.11
0.030	0.00	0.276	0.00	2.568	2.80	23.904	10.86	222.484	28.77	2070.731	94.43
0.034	0.00	0.315	0.00	2.928	3.18	27.256	11.25	253.681	34.08	2361.094	94.73
0.039	0.00	0.359	0.00	3.339	3.59	31.078	11.63	289.253	40.25	2692.173	95.01
0.044	0.00	0.409	0.00	3.807	4.01	35.436	12.02	329.813	47.22	3069.677	95.27
0.050	0.00	0.466	0.04	4.341	4.46	40.405	12.42	376.060	54.74	3500.116	95.54
0.057	0.00	0.532	0.14	4.950	4.92	46.070	12.84	428.793	62.51	3990.912	95.80
0.065	0.00	0.606	0.26	5.644	5.40	52.531	13.27	488.919	70.11	4550.528	96.08
0.074	0.00	0.691	0.41	6.435	5.89	59.897	13.72	557.477	77.00	5188.616	96.37
0.085	0.00	0.788	0.58	7.338	6.41	68.295	14.18	635.647	82.73	5916.178	96.73
0.097	0.00	0.899	0.75	8.367	6.93	77.872	14.66	724.780	87.06	6745.760	98.92
0.110	0.00	1.025	0.94	9.540	7.47	88.791	15.20	826.410	89.99	7691.669	99.99
0.126	0.00	1.169	1.14	10.878	8.00	101.242	15.83	942.292	91.71	8770.216	100.00
0.143	0.00	1.333	1.35	12.403	8.52	115.438	16.59	1074.423	92.45	10000.000	100.00
0.163	0.00	1.519	1.58	14.142	9.04	131.625	17.62	1225.081	92.93		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-05-4*
Analyst: KB *Sieve Blend Data*
Particle Technology Labs *PTL ID: 44332*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Wednesday, January 19, 2005 4:51:52 PM

Result Source:
Edited

Analyzed:
Tuesday, February 01, 2005 4:45:46 PM

Number of this Measurement:
2

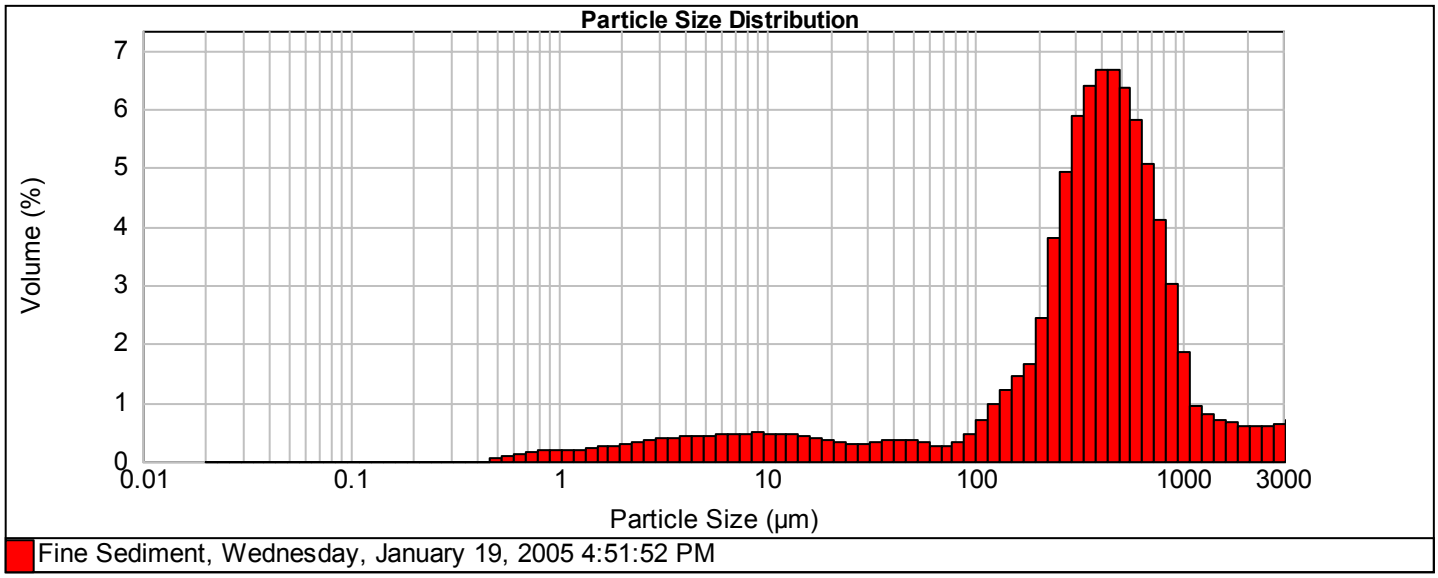
Number of Measurements:
4

Particle Name:	Accessory Name:	Pump Speed:	Analysis model:	Sensitivity:
Default	Hydro 2000S (A)	2000	General purpose	Normal
Particle RI:	**Absorption:**		**Size range:**	**Obscuration:**
1.520	0.1		0.020 to 2000.000 um	14.50 %
Dispersant Name:	**Dispersant RI:**		**Weighted Residual:**	**Result Emulation:**
Water	1.330		1.481 %	On

Concentration:	Span :	Uniformity:	Result units:
0.0526 %Vol	10.047	2.2	Volume

Specific Surface Area:	Surface Weighted Mean D[3,2]:	Vol. Weighted Mean D[4,3]:
0.215 m²/g	27.969 um	1172.210 um

d(0.1): 26.725 um **d(0.5): 433.708 um** **d(0.9): 4383.999 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	1.68	16.125	8.67	150.082	16.20	1396.865	84.05
0.023	0.00	0.212	0.00	1.975	1.95	18.386	9.07	171.127	17.63	1592.737	84.77
0.026	0.00	0.242	0.00	2.252	2.25	20.964	9.42	195.123	19.30	1816.075	85.42
0.030	0.00	0.276	0.00	2.568	2.58	23.904	9.74	222.484	21.75	2070.731	86.03
0.034	0.00	0.315	0.00	2.928	2.93	27.256	10.05	253.681	25.55	2361.094	86.62
0.039	0.00	0.359	0.00	3.339	3.31	31.078	10.35	289.253	30.48	2692.173	87.22
0.044	0.00	0.409	0.00	3.807	3.70	35.436	10.67	329.813	36.37	3069.677	87.85
0.050	0.00	0.466	0.00	4.341	4.11	40.405	11.02	376.060	42.76	3500.116	88.54
0.057	0.00	0.532	0.06	4.950	4.54	46.070	11.38	428.793	49.42	3990.912	89.31
0.065	0.00	0.606	0.16	5.644	4.98	52.531	11.74	488.919	56.08	4550.528	90.35
0.074	0.00	0.691	0.30	6.435	5.44	59.897	12.06	557.477	62.45	5188.616	91.79
0.085	0.00	0.788	0.45	7.338	5.91	68.295	12.32	635.647	68.29	5916.178	93.44
0.097	0.00	0.899	0.63	8.367	6.39	77.872	12.57	724.780	73.35	6745.760	95.05
0.110	0.00	1.025	0.82	9.540	6.87	88.791	12.89	826.410	77.45	7691.669	96.58
0.126	0.00	1.169	1.02	10.878	7.34	101.242	13.34	942.292	80.46	8770.216	98.35
0.143	0.00	1.333	1.23	12.403	7.80	115.438	14.02	1074.423	82.30	10000.000	99.94
0.163	0.00	1.519	1.44	14.142	8.25	131.625	14.99	1225.081	83.25		

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-05-5*
Analyst: KB *Sieve Blend Data*
Particle Technology Labs *PTL ID: 44333*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Thursday, January 20, 2005 10:55:25 AM

Result Source:
Edited

Analyzed:
Wednesday, February 02, 2005 8:47:03 AM

Number of this Measurement:
2

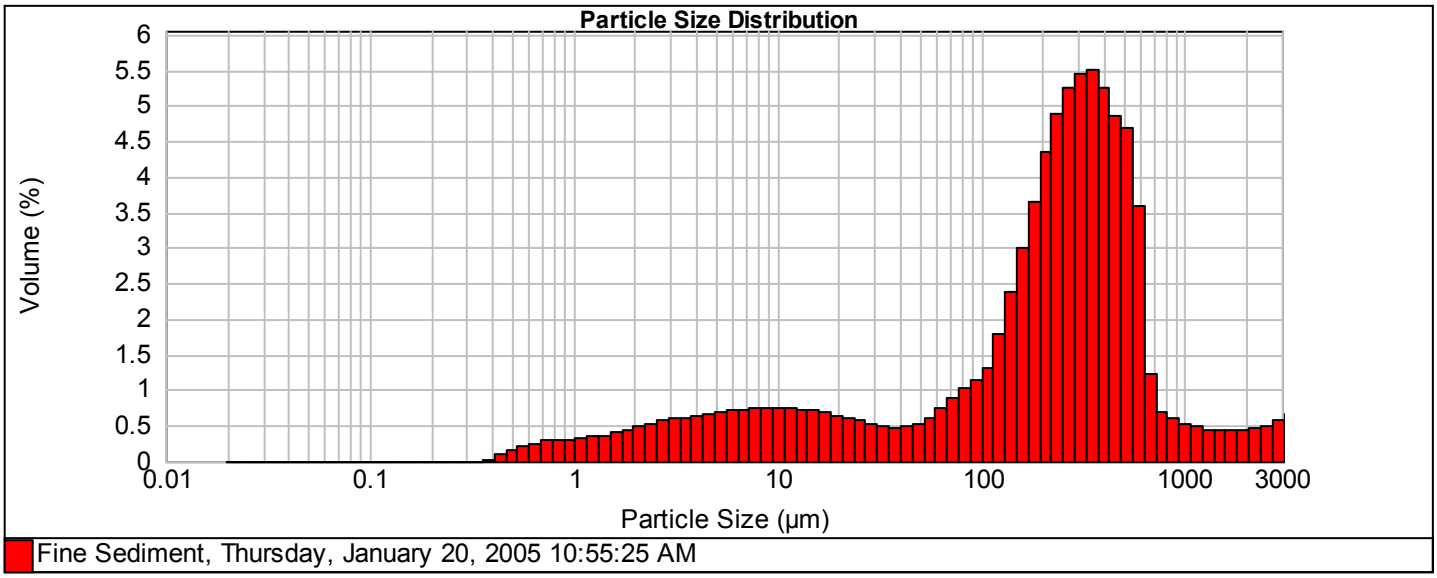
Number of Measurements:
4

Particle Name: Default
Accessory Name: Hydro 2000S (A)
Pump Speed: 2000
Analysis model: General purpose
Sensitivity: Normal
Particle RI: 1.520
Absorption: 0.1
Size range: 0.020 to 2000.000 um
Obscuration: 15.57 %
Dispersant Name: Water
Dispersant RI: 1.330
Weighted Residual: 0.966 %
Result Emulation: On

Concentration: 0.0356 %Vol
Span : 16.558
Uniformity: 3.49
Result units: Volume

Specific Surface Area: 0.373 m²/g
Surface Weighted Mean D[3,2]: 16.065 um
Vol. Weighted Mean D[4,3]: 1126.887 um

d(0.1): 7.800 um **d(0.5): 288.905 um** **d(0.9): 4791.583 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	3.02	16.125	14.05	150.082	28.92	1396.865	83.37
0.023	0.00	0.212	0.00	1.975	3.46	18.386	14.73	171.127	31.92	1592.737	83.80
0.026	0.00	0.242	0.00	2.252	3.94	20.964	15.37	195.123	35.57	1816.075	84.22
0.030	0.00	0.276	0.00	2.568	4.47	23.904	15.98	222.484	39.93	2070.731	84.66
0.034	0.00	0.315	0.00	2.928	5.03	27.256	16.55	253.681	44.81	2361.094	85.12
0.039	0.00	0.359	0.00	3.339	5.63	31.078	17.08	289.253	50.05	2692.173	85.63
0.044	0.00	0.409	0.02	3.807	6.25	35.436	17.58	329.813	55.51	3069.677	86.19
0.050	0.00	0.466	0.11	4.341	6.89	40.405	18.05	376.060	61.01	3500.116	86.85
0.057	0.00	0.532	0.27	4.950	7.55	46.070	18.53	428.793	66.26	3990.912	87.92
0.065	0.00	0.606	0.48	5.644	8.23	52.531	19.06	488.919	71.11	4550.528	89.36
0.074	0.00	0.691	0.73	6.435	8.94	59.897	19.66	557.477	75.80	5188.616	91.03
0.085	0.00	0.788	1.02	7.338	9.66	68.295	20.40	635.647	79.38	5916.178	92.77
0.097	0.00	0.899	1.31	8.367	10.39	77.872	21.28	724.780	80.62	6745.760	94.54
0.110	0.00	1.025	1.60	9.540	11.14	88.791	22.30	826.410	81.30	7691.669	96.41
0.126	0.00	1.169	1.91	10.878	11.88	101.242	23.45	942.292	81.90	8770.216	98.33
0.143	0.00	1.333	2.25	12.403	12.62	115.438	24.75	1074.423	82.44	10000.000	99.81
0.163	0.00	1.519	2.62	14.142	13.34	131.625	26.53	1225.081	82.92		

PTL Particle Technology Labs

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Operator notes:

SEA ENGINEERING *Fine Sediment*
Per Test Method: MM148.01 *SF-04-2*
Analyst: KB *Sieve Blend Data*
Particle Technology Labs *PTL ID: 44325*

SOP Name:
Sea Engineering - Fine Sediment

Measured:
Thursday, January 13, 2005 10:19:33 AM

Result Source:
Edited

Analyzed:
Wednesday, February 02, 2005 10:29:33 AM

Number of this Measurement:
2

Number of Measurements:
4

Particle Name:
Default

Accessory Name:
Hydro 2000S (A)

Pump Speed:
2000

Analysis model:
General purpose

Sensitivity:
Normal

Particle RI:
1.520

Absorption:
0.1

Size range:
0.020 to 2000.000 um

Obscuration:
14.58 %

Dispersant Name:
Water

Dispersant RI:
1.330

Weighted Residual:
0.842 %

Result Emulation:
On

Concentration:
0.0163 %Vol

Span :
30.951

Uniformity:
23.4

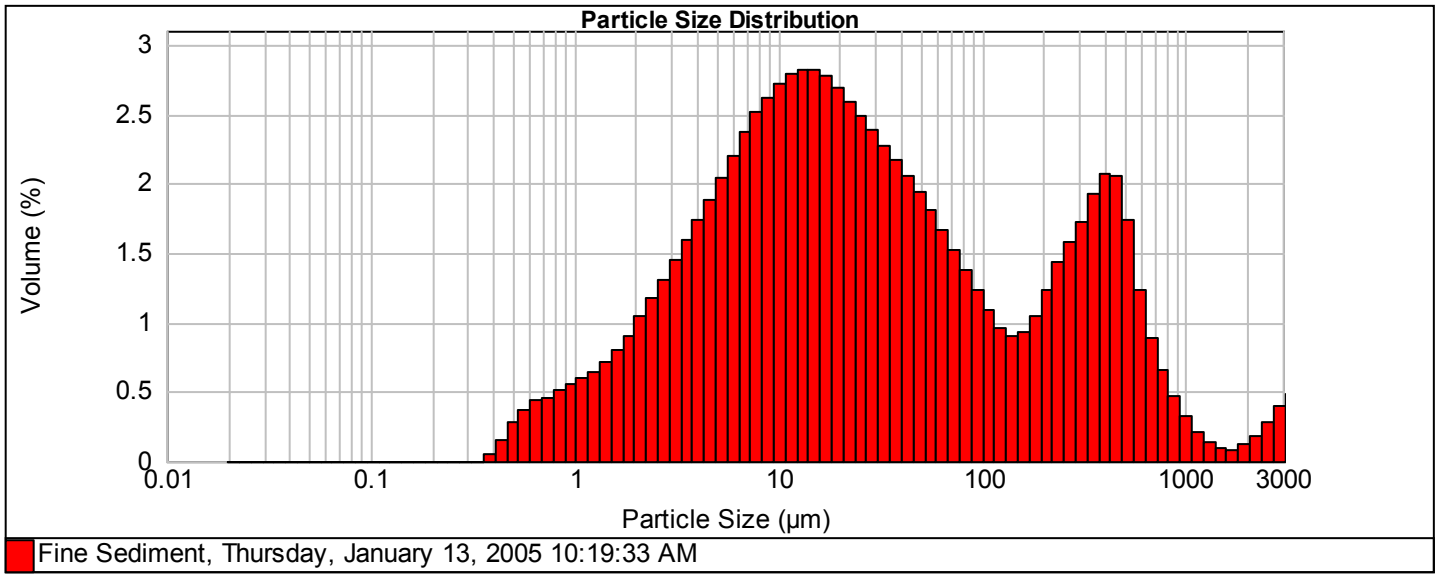
Result units:
Volume

Specific Surface Area:
0.812 m²/g

Surface Weighted Mean D[3,2]:
7.390 um

Vol. Weighted Mean D[4,3]:
644.998 um

d(0.1): 2.935 um **d(0.5): 27.185 um** **d(0.9): 844.325 um**



Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %	Size (µm)	Vol Under %
0.020	0.00	0.186	0.00	1.733	5.55	16.125	39.52	150.082	71.42	1396.865	91.04
0.023	0.00	0.212	0.00	1.975	6.45	18.386	42.29	171.127	72.35	1592.737	91.13
0.026	0.00	0.242	0.00	2.252	7.49	20.964	44.98	195.123	73.40	1816.075	91.22
0.030	0.00	0.276	0.00	2.568	8.66	23.904	47.57	222.484	74.63	2070.731	91.33
0.034	0.00	0.315	0.00	2.928	9.98	27.256	50.05	253.681	76.06	2361.094	91.51
0.039	0.00	0.359	0.00	3.339	11.43	31.078	52.43	289.253	77.64	2692.173	91.79
0.044	0.00	0.409	0.06	3.807	13.01	35.436	54.71	329.813	79.36	3069.677	92.19
0.050	0.00	0.466	0.21	4.341	14.75	40.405	56.87	376.060	81.29	3500.116	92.67
0.057	0.00	0.532	0.49	4.950	16.63	46.070	58.93	428.793	83.36	3990.912	93.22
0.065	0.00	0.606	0.86	5.644	18.68	52.531	60.87	488.919	85.41	4550.528	93.80
0.074	0.00	0.691	1.30	6.435	20.88	59.897	62.68	557.477	87.15	5188.616	94.39
0.085	0.00	0.788	1.76	7.338	23.24	68.295	64.34	635.647	88.38	5916.178	95.07
0.097	0.00	0.899	2.26	8.367	25.76	77.872	65.86	724.780	89.26	6745.760	96.07
0.110	0.00	1.025	2.81	9.540	28.38	88.791	67.24	826.410	89.91	7691.669	97.53
0.126	0.00	1.169	3.40	10.878	31.10	101.242	68.47	942.292	90.38	8770.216	98.75
0.143	0.00	1.333	4.04	12.403	33.89	115.438	69.55	1074.423	90.70	10000.000	99.56
0.163	0.00	1.519	4.75	14.142	36.70	131.625	70.51	1225.081	90.91		

12/20 CS

SEDFLUME LABORATORY DATASHEET

Sample Designation: SF01

Date/Time: 12/14/04 8:00

Core Height: 33 cm

Reference Height for the top of the core: 0 cm

Reference Contact: Israel

Location: Duwamish

Project:

Item Number	Shear Stress (dynes/cm^2)	Starting Height (mm)	Ending Height (mm)	Time (sec)	NOTES
1	1	0	0	10:00	- Floc layer w/ few biotubes. Sample 1 └ shell hash + barnacles present.
2	2	0	0	10:00	
3	4	0	0	10:00	
4	8	0	1	10:00	
5	16	1	11	10:00	
6	32	11	29	1:54	
7	64	29	52	0:32	- Sample #2. Drk gray/black clay. └ Rocks, shells, wood/sticks, small worms at surface.
8	2	52	52	10:00	
9	4	52	52	10:00	
10	8	52	52	10:00	
11	16	52	52	10:00	
12	32	52	61	10:00	
13	64	61	80	1:08	
14	100	80	100	0:26	- Sample #3. Black clay only.
15	4	100	100	10:00	
16	8	100	100	10:00	
17	16	100	105	10:00	
18	32	105	110	10:00	- very stiff black clay.
19	64	110	117	10:00	
20	100	117	136	10:00	- Sample #4. very stiff black clay.
21	8	136	136	10:00	
22	16	136	136	10:00	
23	32	136	136	10:00	
24	64	136	137	10:00	- Sample #5. Very stiff black clay

SEDFLUME LABORATORY DATASHEET

Sample Designation:

Date/Time:

Core Height: cm

Reference Height for the top of the core: cm

Reference Contact:

Location:

Project:

Item Number	Shear Stress (dynes/cm^2)	Starting Height (mm)	Ending Height (mm)	Time (sec)	NOTES
25	2	207	207	10:00	- stiff black clay. Removed 7cm of core.
26	4	213	213	10:00	
27	8	213	213	10:00	
28	16	213	213	10:00	
29	32	213	213	10:00	
30	64	213	225	10:00	-
31	100	223	265	10:00	

Bulk Density Datasheet

Sample Designation: SF01

Date/Time:

Core Height: cm

Location: Dawson

Reference Contact: Israel

Project:

Depth	Wet Wt. (g)	Dry Wt. (g)
1	18.335	9.723
2	16.634	8.568
3	14.602	8.754
4	14.223	7.943
5	16.328	8.584

12/20/05

SEDFLUME LABORATORY DATASHEET

Sample Designation: SF02

Date/Time: 12/16/04 8:00

Core Height: 41 cm

Reference Height for the top of the core: 0 cm

Reference Contact: Israel

Location: Duwamish

Project:

Item Number	Shear Stress (dynes/cm^2)	Starting Height (mm)	Ending Height (mm)	Time (sec)	NOTES
1	1	0	0	10:00	-Sample #1. Fine light brown floc. No critters.
2	2	0	0	10:00	
3	4	0	0	10:00	
4	8	0	5	10:00	-Fine floc eroded
5	16	5	10	10:00	
6	32	10	30	2:18	
7	64	30	50	1:50	-Sample #2
8	2	50	50	10:00	
9	4	50	50	10:00	
10	8	50	51	10:00	
11	16	51	54	10:00	-very stiff gray/black seals.
12	32	52	59	10:00	
13	64	59	79	10:00	
14	100	79	107	1:00	-Sample #3. very stiff black seals w/wood.
15	2	107	107	10:00	
16	4	107	107	10:00	
17	8	107	107	10:00	
18	16	107	107	10:00	
19	32	107	110	10:00	
20	64	110	130	5:00	
21	100	130	150	2:35	-Sample #4. very stiff black seals.
22	4	160	160	10:00	-Sampled & removed debris from 150-160mm.
23	8	160	160	10:00	
24	16	160	160	10:00	
25	32	160	170	4:00	

SEDFLUME LABORATORY DATASHEET

Sample Designation: SF02

Date/Time: 12/14/04

Core Height: _____ cm

Reference Height for the top of the core: _____ cm

Reference Contact: Israel

Location: Dabbousish

Project: _____

Item Number	Shear Stress (dynes/cm^2)	Starting Height (mm)	Ending Height (mm)	Time (sec)
26	64	170	182	2:00
27	100	182	202	1:50
28	4	202	202	10:00
29	8	202	202	10:00
30	16	202	202	10:00
31	32	202	206	5:00
32	64	206	225	0:38
33	100	225	250	1:05

NOTES

- Sample #5. Very stiff black clay.

Bulk Density Datasheet

Sample Designation: SF02

Date/Time:

Core Height: cm

Location:

Reference Contact:

Project:

Depth	Wet Wt. (g)	Dry Wt. (g)
1	20.230	9.6695
2	15.934	10.416
(*) 3	14.569	
4	14.106	9.4375
5	22.136	14.1654

→ *Sample Corrupted - No Measurement Available
Craig Jones

12/20 CO

SEDFLUME LABORATORY DATASHEET

Sample Designation: SF03

Date/Time: 12/16/04 12:30

Core Height: 3.8 cm

Reference Height for the top of the core: 0 cm

Reference Contact: Israel

Location: Dunham's

Project:

Item Number	Shear Stress (dynes/cm^2)	Starting Height (mm)	Ending Height (mm)	Time (sec)	NOTES
1	1	0	0	10:00	Sample #1. Fine sed. Light brown floc.
2	2	0	0	10:00	
3	4	0	4	10:00	- Fine floc erosion.
4	8	4	19	1:36	- Fines eroded
5	16	19	35	1:43	- Gray stiff seeds. Large section eroded.
6	32	35	58	0:20	- Sample #2. Stiff dark gray seeds.
7	2	58	58	10:00	
8	4	58	58	10:00	
9	8	58	62	10:00	
10	16	62	72	0:30	- large clump erosion
11	32	72	100	0:46	- Sample #3. Gray clay.
12	2	100	100	10:00	
13	4	100	100	10:00	
14	8	100	103	10:00	
15	16	103	114	4:04	
16	32	114	123	0:16	
17	64	123	152	0:24	- Sample #4. Gray clay
18	2	152	152	10:00	
19	4	152	152	10:00	
20	8	152	158	10:00	
21	16	158	177	5:00	
22	32	177	200	2:04	- Sample #5. Gray clay
23	2	200	200	10:00	
24	4	200	200	10:00	

SEDFLUME LABORATORY DATASHEET

Sample Designation:

Date/Time:

Core Height: cm

Reference Height for the top of the core: cm

Reference Contact:

Location:

Project:

Item Number	Shear Stress (dynes/cm^2)	Starting Height (mm)	Ending Height (mm)	Time (sec)	NOTES
25	8	200	205	10:00	
26	16	205	215	0:42	
27	32	215	240	1:42	
28	64	240	250	0:17	

Bulk Density Datasheet

Sample Designation: SF03

Date/Time: 12/16/04

Core Height: _____ cm

Location: Dawnish

Reference Contact: Israel

Project: _____

Depth	Wet Wt. (g)	Dry Wt. (g)
1	15.190	7.543
2	19.085	~~10.6145~~
(*) 3	17.898	~~9.868~~ OR 9.400
4	11.797	6.422
5	18.005	9.703

OK

12/20

SEDFLUME LABORATORY DATASHEET

Sample Designation: SF04

Date/Time: 12/13/04 13:00

Core Height: 45.5 cm

Reference Height for the top of the core: cm

Reference Contact:

Location: Duwamish

Project:

Item Number	Shear Stress (dynes/cm^2)	Starting Height (mm)	Ending Height (mm)	Time (sec)	NOTES
1	1	0	0	10:00	* Sample #1 Floc flow eroding.
2	2	0	0	10:00	
3	4	0	3	10:00	
4	8	3	8	10:00	- bio tubes still present -
5	16	8	20	3:35	- bio tubes still present. Gray clay sed's
6	32	20	34	0:39	- tubes gone
7	64	34	63	0:25	- Sample #2. Stiff gray/black sed's.
8	2	63	63	10:00	
9	4	63	63	10:00	
10	8	63	63	10:00	
11	16	63	74	4:53	
12	32	74	86	2:46	
13	64	86	111	1:21	- Sample #3. Stiff gray/black clay
14	4	111	111	10:00	No Data
15	8	111	111	10:00	
16	16	111	111	10:00	* (void w/ rock removed) (111-139cm)
17	32	150	161	10:00	
18	64	161	178	1:13	
19	100	178	196	0:30	- Sample #4 drk black clay w/ wood chips
20	4	196	196	10:00	
21	8	196	196	10:00	
22	16	196	196	10:00	
23	32	196	206	6:00	
24	64	206	217	0:30	- Sample #5 drk black clay w/ wood chips

Bulk Density Datasheet

Sample Designation: SF-04

Date/Time:

Core Height: cm

Location:

Reference Contact:

Project:

Depth	Wet Wt. (g)	Dry Wt. (g)
1	13.854	7.827
2	19.359	12.654
3	18.175	12.031
4	22.013	12.0815
5	16.788	9.517

12/20 G

SEDFLUME LABORATORY DATASHEET

Sample Designation: SF05

Date/Time: 12/17/04 8:00

Core Height: 35 cm

Reference Height for the top of the core: 0 cm

Reference Contact: Israel

Location: Dyewamish

Project:

Item Number	Shear Stress (dynes/cm^2)	Starting Height (mm)	Ending Height (mm)	Time (sec)	NOTES very course core
1	1/2	0	0	10:00	sample #1 No water ~~on~~ top of core. Sand and pebbles on surface
2	1/2	0	0	10:00	
3	4	0	0	10:00	
4	8	0	0	10:00	
5	16	0	11	1:10	
6	~~32~~	~~11~~	~~13~~		- Rocks removed from 11-13
6	32	13	45	1:15	- sed movement - sample #2
7	4	45	46	10:00	
8	8	46	54	10:00	
9	16	54	64	1:05	
10	32	64	100	:45	- sand movement - Sample #3
11	4	100	102	10:00	
12	8	102	114	10:00	
13	16	114	129	1:15	
14	32	129	154	:57	- Sed erosion - sample #4
15	4	154	155	10:00	
16	8	155	166	10:00	
17	16	166	180	1:30	
18	32	180	205	1:01	- Sed erosion - Sample #5
19	4	205	207	10:00	
20	8	207	216	10:00	
21	16	216	226	1:33	
22	32	226	250	0:45	- Sed erosion -

Bulk Density Datasheet

Sample Designation: SFJ5

Date/Time:

Core Height: cm

Location:

Reference Contact:

Project:

Depth	Wet Wt. (g)	Dry Wt. (g)
1	20.968	15.919
2	22.620	17.020
3	20.871	16.0465
4	22.925	17.752
5	20.942	16.206

12/20/05

SEDFLUME LABORATORY DATASHEET

Sample Designation: SF-06-R1

Date/Time: 12/9/04 8:30am

Core Height: 36 cm

Reference Height for the top of the core: 0 cm

Reference Contact: Jones

Location: Duwamish

Project:

Item Number	Shear Stress (dynes/cm^2)	Starting Height (mm)	Ending Height (mm)	Time (sec)
1	1	0	0	10:00
2	2	0	0	10:00
3	4	0	1	10:00
4	8	0	9	10:00
5	16	9	19	1:30
6	32	19	42	0:45
7	2	46	46	10:00
8	4	46	46	10:00
9	8	46	47	10:00
10	16	47	56	10:00
11	32	56	70	1:00
12	64	70	105	0:45
13	4	105	105	10:00
14	8	105	105	10:00
15	16	105	107	10:00
16	32	107	129	10:00
17	64	129	148	1:00
18	8	148	148	10:00
19	16	148	153	10:00
20	32	153	170	10:00
21	64	170	188	2:00
22	100	188	220	1:00

NOTES

* 2-3 cm one layer over gray/black seds and deep 15cm worm tubes.
* Fine flocs moving on surface * Sample 1
* Amphipod most present
* Floc layer eroding
* Bio material slowly pulling away - gray/er material exposed beneath
* gray clay mixed with brown silt and abundant worm tubes. * Sample 2
* Gray/black clay * sample 3
* Gray/black clay * sample 4
* Gray/black clay * One worm Tube * Sample 5

SEDFLUME LABORATORY DATASHEET

Sample Designation: SF-06-R1

Date/Time:

Core Height: cm

Reference Height for the top of the core: cm

Reference Contact:

Location:

Project:

Item Number	Shear Stress (dynes/cm^2)	Starting Height (mm)	Ending Height (mm)	Time (sec)
23	8	228	228	10:00
24	16	228	231	10:00
25	32	231	246	10:00
26	64	246	258	2:00
27	100	258	285	1:30

NOTES

* Stiff gray/black clay

End of Core
* Short Core

Bulk Density Datasheet

Sample Designation: SF-06-R1

Date/Time:

Core Height: cm

Location:

Reference Contact:

Project:

Depth	Wet Wt. (g)	Dry Wt. (g)
1	14.879	6.985
2	17.478	
3	19.931	
4	10.160	5.5345
5	13.096	7.7695

8.537

9.985

* Correct Dry weights for 1st 3 samples
  - ① 6.9855 g
  - ② 8.537 g
  - ③ 9.985 g

* These values were initially mis recorded on a blank lab sheet and then transfered here

Craig Jones

D/20 CS

SEDFLUME LABORATORY DATASHEET

Sample Designation: SF-06-R2

Date/Time: 12/9/04 1pm

Core Height: 44 cm

Reference Height for the top of the core: 0 cm

Reference Contact: Jones

Location: Duwamish

Project:

Item Number	Shear Stress (dynes/cm^2)	Starting Height (mm)	Ending Height (mm)	Time (sec)
1	1	0	0	10:00
2	2	0	0	10:00
3	4	0	3	10:00
4	8	3	12	10:00
5	16	12	23	1:15
6	32	23	48	1:00
7	2	50	50	10:00
8	4	50	50	10:00
9	8	50	52	10:00
10	16	52	63	10:00
11	32	63	79	1:15
12	64	79	102	0:40
13	4	106	106	10:00
14	8	106	106	10:00
15	16	106	108	10:00
16	32	108	122	10:00
17	64	122	154	2:00
18	8	154	154	10:00
19	16	154	154	10:00
20	32	154	166	10:00
21	64	166	197	2:00
22	100	197	227	1:00

NOTES

* 2-3 cm deep oxic layer over gray/black clay. Worms to Amphipods at surface

* fine floc movement on surface * Sample 1
* Amphipod mat at surface flagging in the flow.
* Amphipod mat & Floc layer pulling away exposing stiff material below
* Gray Clay w/ worms & organic material) a few sticks and leaves * Sample 2

* Gray/Black clay - 2 ~ 5mm worm tubes * Sample 3

* Gray/Black clay a few (3) sticks. * Sample 4

* Large clump erosion
* stiff gray/black clay * Sample 5

SEDFLUME LABORATORY DATASHEET

Sample Designation: SF-06-R2

Date/Time:

Core Height: cm

Reference Height for the top of the core: cm

Reference Contact:

Location:

Project:

Item Number	Shear Stress (dynes/cm^2)	Starting Height (mm)	Ending Height (mm)	Time (sec)	NOTES
23	16	228	229	10:00	* Large clumps pulling away
24	32	229	255	10:00	* Black clay
25	64	259	268	1:00	
26	100	268	300	0:45	

Bulk Density Datasheet

Sample Designation: SF-06-R2

Date/Time:

Core Height: cm

Location:

Reference Contact:

Project:

Depth	Wet Wt. (g)	Dry Wt. (g)
1	10.168	4.7960
2	14.302	6.702
3	8.994	5.362
4	13.885	7.8295
5	10.689	6.029

12/21 JR

SEDFLUME LABORATORY DATASHEET

Sample Designation: SF-07

Date/Time: 12/11/04 12:30

Core Height: 36 cm

Reference Height for the top of the core: 0 cm

Reference Contact: Jones

Location: Denmark

Project:

Item Number	Shear Stress (dynes/cm^2)	Starting Height (mm)	Ending Height (mm)	Time (sec)	NOTES
1	1	0	0	10:00	* 3~ cm of oxic layer with multiple deeper worm tubes. Gray clay below.
2	2	0	1	10:00	* Fine flow layer eroding <1mm * Sample 1
3	4	1	4	10:00	* Biological mix starting to move
4	8	4	10	10:00	
5	16	10	30	7:45	* Hit stiff sediment layer
6	32	30	38	1:30	
7	64	38	50	0:30	* Stiff gray sods * Sample 2
8	2	51	51	10:00	
9	4	51	51	10:00	
10	8	51	54	10:00	
11	16	54	61	10:00	
12	32	61	75	2:45	
13	64	75	83	1:05	* stiff g-gy sods * sample #3
14	2	87	87	10:00	
15	4	87	87	10:00	
16	8	87	89	10:00	
17	16	89	96	10:00	
18	32	96	121	1:30	
19	64	121	143	0:35	* stiff gray sods * sample #4
20	2	143	143	10:00	
21	4	143	143	10:00	
22	8	143	144	10:00	
23	16	144	155	10:00	
24	32	155	162	2:10	
25	64	162	175	0:38	* stiff gray sods * sample #5

JR

SEDFLUME LABORATORY DATASHEET

Sample Designation: SF-07

Date/Time: 12/11/04

Core Height: cm

Reference Height for the top of the core: cm

Reference Contact: Jones/ISrael

Location: Duwamish

Project:

Item Number	Shear Stress (dynes/cm^2)	Starting Height (mm)	Ending Height (mm)	Time (sec)	NOTES
26	2	175	175	10:00	
27	4	175	175	10:00	
28	8	175	175	10:00	
29	16	175	178	10:00	
30	32	178	196	1:40	
31	64	196	205	:35	
					* Black/gray clay
32	8	205	305	10:00	
33	16	205	206	10:00	
34	32	206	222	10:00	
35	64	222	241	1:00	
36	100	241	265	0:20	

JR

Bulk Density Datasheet

Sample Designation: SE-07

Date/Time:

Core Height: cm

Location:

Reference Contact:

Project:

Depth	Wet Wt. (g)	Dry Wt. (g)
1	13.599	6.811
2	11.860	6.1446
3	14.473	7.6575
4	17.304	10.6585
5	13.549	7.8595

12/20 CJ

SEDFLUME LABORATORY DATASHEET

Sample Designation: SF 08

Date/Time: 12/13/08 17:00

Core Height: 38 cm

Reference Height for the top of the core: 0 cm

Reference Contact: Ismael

Location: Dynamis2

Project:

Item Number	Shear Stress (dynes/cm^2)	Starting Height (mm)	Ending Height (mm)	Time (sec)	NOTES
1	1	0	0	10:00	Sample #1. Fine floc material.
2	2	0	2	10:00	
3	4	2	5	10:00	Floc layer eroding down to stiff gray sands.
4	8	5	11	10:00	
5	16	11	21	10:00	-stiff gray sands.
6	32	21	33	1:25	
7	64	33	53	0:30	-stiff gray/black clay ~~sands~~. Sample #2
8	2	57	57	10:00	
9	4	57	57	10:00	
10	8	57	59	10:00	
11	16	59	71	10:00	
12	32	71	90	2:05	
13	64	90	111	1:04	-stiff gray/black clay. Sample #3
14	4	113	113	10:00	
15	8	113	113	10:00	
16	16	113	128	10:00	
17	32	128	140	1:35	
18	64	140	161	0:43	-stiff gray/black clay. Sample #4
19	4	161	161	10:00	
20	8	161	161	10:00	
21	16	161	161	10:00	
22	32	161	164	10:00	
23	64	164	168	5:00	
24	100	168	187	1:31	-stiff gray/black clay, Sample #5

SEDFLUME LABORATORY DATASHEET

Sample Designation: SF01

Date/Time:

Core Height: 38 cm

Reference Height for the top of the core: cm

Reference Contact: Israel

Location:

Project:

Item Number	Shear Stress (dynes/cm^2)	Starting Height (mm)	Ending Height (mm)	Time (sec)	NOTES
25	16	187	187	10:00	
26	32	187	190	10:00	
27	64	190	222	10:00	
28	100	222	253	1630	-stiff gray/black clay

Bulk Density Datasheet

Sample Designation: SF08

Date/Time:

Core Height: cm

Location:

Reference Contact:

Project:

Depth	Wet Wt. (g)	Dry Wt. (g)
1	24.739	12.323
2	25.495	13.9995
3	17.631	10.6975
4	26.336	18.768
5	25.757	16.129

JR

12/20/ CJ

SEDFLUME LABORATORY DATASHEET

Sample Designation: SF-09

Date/Time: 12/8 8:15 am → 12/8/04

Core Height: 49 cm

Reference Height for the top of the core: 49 cm → 0

Reference Contact: Jones

Location: Dunmish

Project:

Item Number	Shear Stress (dynes/cm^2)	Starting Height (mm)	Ending Height (mm)	Time (sec)
1	1	0	0	10:00
2	2	0	1	10:00
3	4	1	5	7:00
4	8	5	9	4:00
5	16	9	16	3:30
6	32	16	19	2:00
7	2	23	23	10:00
8	4	23	23	10:00
9	8	23	23	10:00
10	16	23	25	10:00
11	32	25	30	5:00
12	64	30	40	1:30
13	100	40	53	0:45
14	8	53	53	10:00
15	16	53	53	10:00
16	32	53	54	10:00
17	64	54	59	5:00
~~18~~	~~100~~	~~59~~	~~85~~	?
19	16	88	88	10:00
20	32	88	91	10:00
21	64	91	108	5:00
22	100	130	150	2:00

NOTES

* Firm silt clay over darker clay
* 2cm oxic layer
* Sample 1
* 10-20 small worms
* Fine flocculated material moving
* Steady erosion of fine sand & silt
* Worm tubes holding some clumps together
* Worm tubes scouring away slowly
* Gray sediments being exposed
* worm tubes breaking away in clumps
* Sample 2
* Stiff gray clay
* Stiff gray clay w/ some sand.
* Sample 3
* Stiff gray/black clay.
* Very stiff clay
* Sample 4
* Dark clay w/ some small (<1cm) pebbles
* Rock Removal

5

*Cycle was Dropped due to timer malfunction 12/8/04 Craig Jones

SEDFLUME LABORATORY DATASHEET

Sample Designation: SF09

Date/Time:

Core Height: cm

Reference Height for the top of the core: cm

Reference Contact:

Location:

Project:

Item Number	Shear Stress (dynes/cm^2)	Starting Height (mm)	Ending Height (mm)	Time (sec)	NOTES
23	16	150	150	10:00	
24	32	150	150	10:00	
25	64	150	153	10:00	
26	100	153	176	5:00	* Sample 5 * Stiff dark clay
27	32	184	185	10:00	
28	64	185	191	10:00	
29	100	191	229	5:00	* Stiff dark clay
30	32	229	229	10:00	
31	64	231	234	10:00	
32	100	234	258	5:00	

Bulk Density Datasheet

Sample Designation: SF-09

Date/Time:

Core Height: cm

Location:

Reference Contact:

Project:

Depth	Wet Wt. (g)	Dry Wt. (g)
1	8.766	5.1668
2	11.379	6.750
3	16.893	11.2215
4	17.005	11.4675
5	10.674	6.1122

12/20 CJ

SEDFLUME LABORATORY DATASHEET

Sample Designation: SF-10

Date/Time: 12/10/04 8:10 est

Core Height: 39 cm

Reference Height for the top of the core: 0 cm

Reference Contact: Jones

Location: Duwamish

Project:

Item Number	Shear Stress (dynes/cm^2)	Starting Height (mm)	Ending Height (mm)	Time (sec)	NOTES
1	1	0	0	10:00	* Thin oxic layer over black clay * ~6+ worm tubes. * Fine floc material moving * Sample 1 at surface.
2	2	0	2	10:00	* Floc layer pulling away exposing dark sediments underneath
3	4	2	6	10:00	* Stiff seds under oxic layer
4	8	6	11	10:00	* Stiff gray clay
5	16	11	21	10:00	
6	32	21	35	1:30	
7	64	35	55	0:30	* Stiff gray/black clay * Sample 2
8	2	59	59	10:00	
9	4	59	59	10:00	
10	8	59	61	10:00	
11	16	67	73	10:00	
12	32	73	93	2:00	* Stiff gray/black clay * Sample 3
13	64	93	115	1:00	
14	4	117	117	10:00	
15	8	117	120	10:00	
16	16	120	132	10:00	* Large clump erosion
17	32	132	144	1:30	
18	64	144	164	0:45	* Stiff gray/black clay * Sample 4
19	4	164	164	10:00	
20	8	164	164	10:00	
21	16	165	165	10:00	
22	32	165	167	10:00	
23	64	167	171	5:00	
24	100	171	185	1:30	* Stiff gray/black clay * Sample 5

SEDFLUME LABORATORY DATASHEET

Sample Designation: SF-10

Date/Time: 12/11/04

Core Height: cm

Reference Height for the top of the core: cm

Reference Contact: Jones

Location: Duwamish

Project:

Item Number	Shear Stress (dynes/cm^2)	Starting Height (mm)	Ending Height (mm)	Time (sec)	NOTES
25	16	190	190	10:00	* Stiff gray/black clay
26	32	190	193	10:00	
27	64	193	226	10:00	
28	100	226	267	1:30	* Stiff gray/black clay

Bulk Density Datasheet

Sample Designation: SF-1D

Date/Time:

Core Height: cm

Location:

Reference Contact:

Project:

Depth	Wet Wt. (g)	Dry Wt. (g)
1	12.130	5.460
2	15.076	8.128
3	7.565	4.3455
4	17.374	9.3815
5	14.401	7.738

12/21 JF

SEDFLUME LABORATORY DATASHEET

Sample Designation: SF-11

Date/Time: 12/12/04 13:00

Core Height: 39.5 cm

Reference Height for the top of the core: 0 cm

Reference Contact: James Israel

Location: Duwamish

Project:

Item Number	Shear Stress (dynes/cm^2)	Starting Height (mm)	Ending Height (mm)	Time (sec)	NOTES
1	1	0	1	10:00	*sandy layer approx top 2cm with bioturbation sample #1, Floc layer eroded.
2	2	1	1	10:00	
3	4	1	4	10:00	
4	8	4	9	10:00	-dense biotube mats all on surface.
5	16	9	14	10:00	-biotube mats eroded away,
6	32	14	28	2:50	
7	64	28	57	0:29	-all bio eroded down to gray clay.
8	2	57	57	10:00	stiff gray/black clay sample #2
9	4	57	57	10:00	small rocks, and pebbles on surface (4cm dia)
10	8	57	59	10:00	
11	16	61	64	10:00	
12	32	64	80	0:49	
13	64	80	106	0:22	stiff gray/black clay sample #3
					small round sand paches (1cm dia) and approx 10-15 across on surface of sediment. wood fibers and small sticks.
14	2	106	106	10:00	
15	4	106	107	10:00	
16	8	107	112	5:00	
17	16	112	119	1:00	-sand particle movement
18	32	119	133	0:18	
19	64	133	153	0:25	
20	4	153	153	10:00	stiff gray/black clay sample #4
21	8	153	158	10:00	sand paches still present
22	16	160	164	10:00	-erosion has slowed.
23	32	164	178	4:45	
24	64	178	208	3:53	-stiff gray/black clay only sample #5

SEDFLUME LABORATORY DATASHEET

Sample Designation: SF11

Date/Time: 12/12/04

Core Height: _____ cm

Reference Height for the top of the core: _____ cm

Reference Contact: _____

Location: _____

Project: _____

Item Number	Shear Stress (dynes/cm^2)	Starting Height (mm)	Ending Height (mm)	Time (sec)	NOTES
25	16	208	208	10:00	
26	32	208	210	10:00	
27	64	210	240	10:00	
28	100	240	274	5:00	

Bulk Density Datasheet

Sample Designation: SF 11

Date/Time:

Core Height: cm

Location:

Reference Contact:

Project:

Depth	Wet Wt. (g)	Dry Wt. (g)
1	12.859	8.846
2	15.586	9.320
3	13.098	8.309
4	20.771	12.128
5	16.425	9.592

12/21 JK

SEDFLUME LABORATORY DATASHEET

Sample Designation: SF-12

Date/Time: 6pm Dec 8

Core Height: 51 cm

Reference Height for the top of the core: 0 cm

Reference Contact: Jones

Location: Duwamish

Project:

Item Number	Shear Stress (dynes/cm^2)	Starting Height (mm)	Ending Height (mm)	Time (sec)
1	1	0	0	10:00
2	2	0	0	10:00
3	4	0	0	10:00
4	8	0	2	10:00
5	16	2	10	5:00
6	32	10	52	1:00
~~7~~	~~64~~	~~52~~		
~~8~~ 7	2	52	52	10:00
~~9~~ 8	4	52	52	10:00
~~10~~ 9	8	52	54.5	10:00
~~11~~ 10	16	54.5	65	5:00
~~12~~ 11	32	65	95	1:43
~~13~~ 12	4	103	103	10:00
~~14~~ 13	8	103	105	10:00
~~15~~ 14	16	105	122	5:00
~~16~~ 15	32	127	162	1:00
~~17~~ 16	4	165	165	10:00
~~18~~ 17	8	165	167	10:00
~~19~~ 18	16	167	177	4:00
~~20~~ 19	32	177	198	1:00
~~21~~ 20	4	205	205	10:00
~~22~~ 21	8	206	208	10:00
~~23~~ 22	16	209	224	5:00
~~24~~ 23	32	224	255	1:30

NOTES * 10 cm Brown Layer over Black Seds w/ gas

- ~~*Sample 1~~ * Fine floc motion * ~6 worms
- * Leafy material exposed - Only a small amount
- *Sample 2
- * Stiffer gray clay w/ some sand
- * Erosion in large chunks
- *Sample 3 * No worms or organic material
- * Black sediments - 2 large rocks 2-3 cm
- *Sample 4
- * Leaves and organic material present
- ~~*Sample~~ 5 * Mixture of sand and clay
- * Gas Bubbles present

JK

SEDFLUME LABORATORY DATASHEET

Sample Designation: SF-12

Date/Time:

Core Height: cm

Reference Height for the top of the core: cm

Reference Contact:

Location:

Project:

Item Number	Shear Stress (dynes/cm^2)	Starting Height (mm)	Ending Height (mm)	Time (sec)	NOTES

Bulk Density Datasheet

Sample Designation: SF-13

Date/Time:

Core Height: cm

Location:

Reference Contact:

Project:

Depth	Wet Wt. (g)	Dry Wt. (g)
1	9.036	3.506
2	9.745	4.104
3	19.639	8.960
4	10.319	4.551
5	8.690	4.6065

12/21 JK

SEDFLUME LABORATORY DATASHEET

Sample Designation: SF-13

Date/Time: 12/12/04 8:30

Core Height: 42 cm

Reference Height for the top of the core: 0 cm

Reference Contact: Jones

Location: Duwamish

Project:

Item Number	Shear Stress (dynes/cm^2)	Starting Height (mm)	Ending Height (mm)	Time (sec)	NOTES
					* 2-3 cm Oxic layer over gray/black clay * 10+ worm tubes w/mm diameter
1	1	0	1	10:00	* Floc layer eroding
2	2	1	5	10:00	* Floc layer eroding to stiff material * sample 1
3	4	5	7	10:00	* Hit stiff layer of gray sed.
4	8	7	11	10:00	* Stiff gray sediment
5	16	11	19	5:00	
6	32	19	30	5:00	* Very stiff gray/black sediment
7	64	30	51	3:00	
					*Black sediments with some gray * sample 2
8	2	60	60	10:00	
9	4	60	60	10:00	
10	8	61	61	10:00	
11	16	61	63	10:00	
12	32	63	71	10:00	
13	64	71	87	1:00	
14	100	87	105	0:35	* Stiff gray/black sediments * sample 3
15	4	108	108	10:00	
16	8	108	108	10:00	
17	16	108	109	10:00	
18	32	109	130	5:00	
19	64	130	154	2:00	* Stiff gray/black clay * sample 4
					* Hard to resurface core
20	8	164	164	10:00	
21	16	164	164	10:00	
22	32	166	171	10:00	
23	64	171	192	5:00	
24	100	192	211	0:30	* Stiff gray/black clay * Sample 5

SEDFLUME LABORATORY DATASHEET

Sample Designation: SF-13

Date/Time:

Core Height: cm

Reference Height for the top of the core: cm

Reference Contact:

Location:

Project:

Item Number	Shear Stress (dynes/cm^2)	Starting Height (mm)	Ending Height (mm)	Time (sec)	NOTES
25	16	214	214	10:00	
26	32	214	216	10:00	
27	64	216	237	10:00	
28	100	237	270	5:00	

Bulk Density Datasheet

Sample Designation: SF-13

Date/Time:

Core Height: cm

Location:

Reference Contact:

Project:

Depth	Wet Wt. (g)	Dry Wt. (g)
1	13.564	5.786
2	9.664	5.107
3	7.662	4.969
4	13.227	6.189
5	13.761	8.369

SEDFLUME LABORATORY DATASHEET

Sample Designation: SF14

Date/Time: 12/16/04 17:00

Core Height: 34 cm

Reference Height for the top of the core: 0 cm

Reference Contact: Israel

Location: Delaware Bay

Project:

Item Number	Shear Stress (dynes/cm^2)	Starting Height (mm)	Ending Height (mm)	Time (sec)	NOTES
1	1	0	0	10:00	Sample #1, Light brown floc.
2	2	0	0	10:00	
3	4	0	7	10:00	-Floc eroded
4	8	7	25	10:00	-Floc. gone. Gray sand w/clay.
5	16	25	55	1:39	-Sample #2.
6	2	55	55	10:00	
7	4	55	56	10:00	
8	8	56	59	10:00	
9	16	59	67	10:00	
10	32	67	80	5:16	
11	64	80	100	2:15	Sample #3.
12	2	100	100	10:00	
13	4	100	100	10:00	
14	8	100	100	10:00	
15	16	100	100	10:00	
16	32	100	125	5:37	
17	64	125	145	1:01	Sample #4. Dark black clay - very stiff.
18	4	145	145	10:00	
19	8	145	145	10:00	
20	16	145	145	10:00	
21	32	145	155	10:00	
22	64	155	185	4:00	
23	100	185	200	1:24	-Sample #5. Dark black clay - very stiff.
24	4	200	200	10:00	

SEDFLUME LABORATORY DATASHEET

Sample Designation: SF 14

Date/Time: 12/16/04

Core Height: cm

Reference Height for the top of the core: cm

Reference Contact:

Location:

Project:

Item Number	Shear Stress (dynes/cm^2)	Starting Height (mm)	Ending Height (mm)	Time (sec)	NOTES
25	4	200	200	10:00	
26	8	200	200	10:00	
27	16	200	200	10:00	
28	32	200	213	10:00	
29	64	213	235	5:00	
30	100	235	251	1:31	

Bulk Density Datasheet

Sample Designation: SF 14

Date/Time:

Core Height: cm

Location:

Reference Contact:

Project:

Depth	Wet Wt. (g)	Dry Wt. (g)
1	21.371	11.329
2	17.931	10.026
3	13.873	7.806
4	14.010	8.236
5	14.623	9.2425

12/20 CS

SEDFLUME LABORATORY DATASHEET

Sample Designation: SF15

Date/Time: 12/15/04 8:00

Core Height: 50.5 cm

Reference Height for the top of the core: cm

Reference Contact: Israel

Location: Duwamish

Project:

Item Number	Shear Stress (dynes/cm^2)	Starting Height (mm)	Ending Height (mm)	Time (sec)	NOTES
1	1	0	0	10:00	Sample #1, Fine floc. Light brown sed.
2	2	0	0	10:00	
3	4	0	2	10:00	
4	8	2	4	10:00	
5	16	4	12	10:00	
6	32	12	34	2:41	
7	64	34	54	1:30	Sample #2, stiff gray/black seeds, w/ small sticks
8	2	55	55	10:00	
9	4	55	55	10:00	
10	8	55	57	10:00	
11	16	57	65	10:00	
12	32	65	75	0:38	
13	64	75	105	1:08	-Sample #3, stiff gray/black seeds w/ small sticks (LOTS)
14	2	129	129	10:00	-Removed approx 24mm of wood from surface.
15	4	129	129	10:00	
16	8	129	129	10:00	
17	16	129	132	10:00	
18	32	132	150	1:37	
19	64	150	178	1:32	-Sample #4, Hit sand lens.
					-Removed approx 17mm of wood from sandy surface.
20	4	195	195	10:00	
21	8	195	205	1:15	
22	16	205	215	0:20	
23	32	215	240	2:27	-through sand, back into stiff seeds.
24	64	240	257	5:00	-Sample #5, stiff gray/black seeds

12/20 CJ

SEDFLUME LABORATORY DATASHEET

Sample Designation: SF15

Date/Time: 12/15/04 8:00

Core Height: 50.5 cm

Reference Height for the top of the core: cm

Reference Contact: Israel

Location: Duwamish

Project:

Item Number	Shear Stress (dynes/cm^2)	Starting Height (mm)	Ending Height (mm)	Time (sec)	NOTES
1	1	0	0	10:00	Sample #1, Fine floc. Light brown sed.
2	2	0	0	10:00	
3	4	0	2	10:00	
4	8	2	4	10:00	
5	16	4	12	10:00	
6	32	12	34	2:41	
7	64	34	54	1:30	Sample #2, stiff gray/black seeds, w/ small sticks
8	2	55	55	10:00	
9	4	55	55	10:00	
10	8	55	57	10:00	
11	16	57	65	10:00	
12	32	65	75	0:38	
13	64	75	105	1:08	-Sample #3, stiff gray/black seeds w/ small sticks (LOTS)
14	2	129	129	10:00	-Removed approx 24mm of wood from surface.
15	4	129	129	10:00	
16	8	129	129	10:00	
17	16	129	132	10:00	
18	32	132	150	1:37	
19	64	150	178	1:32	-Sample #4, Hit sand lens.
					-Removed approx 17mm of wood from sandy surface.
20	4	195	195	10:00	
21	8	195	205	1:15	
22	16	205	215	0:20	
23	32	215	240	2:27	-through sand, back into stiff seeds.
24	64	240	257	5:00	-Sample #5, stiff gray/black seeds>

SEDFLUME LABORATORY DATASHEET

Sample Designation: SF15

Date/Time: 12/15/04

Core Height: cm

Reference Height for the top of the core: cm

Reference Contact: Israel

Location: Duwamish

Project:

Item Number	Shear Stress (dynes/cm^2)	Starting Height (mm)	Ending Height (mm)	Time (sec)	NOTES
25	4	100	100	10:00	-Adjusted Ht. 257=100
26	8	100	100	10:00	
27	16	100	107	10:00	
28	32	107	125	3:50	
29	64	125	153	1:00	-Black clay

JR

Revised/adjusted values:

#	Start	End
25	257	257
26	257	257
27	257	264
28	264	282
29	282	310

* This is the adjustment of height values due to standard movement of depth scale. Part of SOP but usually not recorded on lab datasheet.

Craig Jones

Bulk Density Datasheet

Sample Designation: SFLS

Date/Time: 12/15/04

Core Height: _____ cm

Location: _____

Reference Contact: _____

Project: _____

Depth	Wet Wt. (g)	Dry Wt. (g)
1	18.481	8.6295
2	17.018	9.625
3	17.840	9.634
4	20.033	12.353
5	18.699	11.6465

12/21 JK

SEDFLUME LABORATORY DATASHEET

Sample Designation: SF-16-R1

Date/Time: Dec. 9 8am

Core Height: 44 cm

Reference Height for the top of the core: 0 cm

Reference Contact: Tony

Location: Denmark

Project:

Item Number	Shear Stress (dynes/cm^2)	Starting Height (mm)	Ending Height (mm)	Time (sec)
1	1	0	0	10:00
2	2	0	0.5	10:00
3	4	0.5	3	10:00
4	8	3	8.5	10:00
5	16	8.5	22	2:00
6	32	22	51	0:15
7	2	51	51	10:00
8	4	51	51	10:00
9	8	51	52	10:00
10	16	52	56	6:00
11	32	56	72	2:00
12	64	72	107	1:00
13	4	107	107	10:00
14	8	107	107	10:00
15	16	107	108	10:00
16	32	108	112	10:00
17	64	112	128	4:00
18	100	128	162	2:00
19	8	187	187	10:00
20	16	187	187	10:00
21	32	187	191	10:00
22	64	191	211	5:00
23	100	211	235	3:00

NOTES * Gray & Black silt/clay *5-6 worm Tubes

* Large clam on surface * Sample 1
* Fine Floc movement 1mm
* Fine sand moving in bedload.
* Hitting stiff material under 3-5mm

* Gray & Black clay/silt * Sample 2
2 worms

* Stiff gray/black clay * Sample 3

* Stiff gray/black clay * Sample 4

* Stiff gray/black clay * Sample 5

SEDFLUME LABORATORY DATASHEET

Sample Designation: SF-16-R1

Date/Time:

Core Height: cm

Reference Height for the top of the core: cm

Reference Contact:

Location:

Project:

Item Number	Shear Stress (dynes/cm^2)	Starting Height (mm)	Ending Height (mm)	Time (sec)	NOTES
24	8	252	252	10:00	* Stiff gray/black clay
25	16	252	252	10:00	
26	32	252	252	10:00	
27	64	252	256	5:00	
28	100	256	275	4:00	

Bulk Density Datasheet

Sample Designation: SE-16 -R1

Date/Time:

Core Height: cm

Location:

Reference Contact:

Project:

Depth	Wet Wt. (g)	Dry Wt. (g)
1	11.575	5.177
2	11.339	5.875
3	15.657	7.7255
4	10.485	5.935
5	15.567	8.423

12121 JR

SEDFLUME LABORATORY DATASHEET

Sample Designation: SF-16-R2

Date/Time: Dec. 9 1:30pm

Core Height: 40 cm

Reference Height for the top of the core: 0 cm

Reference Contact: Jones

Location: Duwamish

Project:

Item Number	Shear Stress (dynes/cm^2)	Starting Height (mm)	Ending Height (mm)	Time (sec)
1	1	0	0	10:00
2	2	0	0	10:00
3	4	0	2	10:00
4	8	2	10	10:00
5	16	10	21	2:30
6	32	21	45	0:30
7	2	53	53	10:00
8	4	53	53	10:00
9	8	53	55	10:00
10	16	55	61	10:00
11	32	61	78	1:30
12	64	71	97	0:45
13	8	98	98	10:00
14	16	98	98	10:00
15	32	98	101	10:00
16	64	101	132	5:00
17	100	132	155	1:30
18	8	157	157	10:00
19	16	157	157	10:00
20	32	157	163	10:00
21	64	163	178	5:00
22	100	178	211	5:00

NOTES

* Gray + Black silty clay * No worms
* Thin floc layer on surface
* fine floc movement * sample 1
* stiff gray material under floc layer,
* 23 worms visible
* stiffer gray sediments * sample 2
* stiff gray clay with some black * sample 3
*
* stiff gray clay w/ 23 old worm tubes no worms * sample 4
* stiff gray clay w/ a few leaves + sticks * sample 5

SEDFLUME LABORATORY DATASHEET

Sample Designation: SF-16-R2

Date/Time:

Core Height: cm

Reference Height for the top of the core: cm

Reference Contact:

Location:

Project:

Item Number	Shear Stress (dynes/cm^2)	Starting Height (mm)	Ending Height (mm)	Time (sec)	NOTES
23	8	216	216	10:00	* Black clay.
24	16	216	216	10:00	* Not enough core for another cycle.
25	32	216	217	10:00	
26	64	217	226	5:00	
27	100	226	250	2:30	

Bulk Density Datasheet

Sample Designation: SF-16-R2

Date/Time:

Core Height: cm

Location:

Reference Contact:

Project:

Depth	Wet Wt. (g)	Dry Wt. (g)
1	13.829	6.070
2	17.898	8.8895
3	10.323	5.1609
4	5.734	3.2435
5	10.628	5.1582

12/21 JC

SEDFLUME LABORATORY DATASHEET

JC

Sample Designation:	SF-017
Date/Time:	2pm 1/8/04
Core Height:	45 cm
Reference Height for the top of the core:	45 0 cm
Reference Contact:	Jonas
Location:	Duwamish
Project:	

Item Number	Shear Stress (dynes/cm^2)	Starting Height (mm)	Ending Height (mm)	Time (sec)
1	1	0	0	10:00
2	2	0	0	10:00
3	4	0	1	10:00
4	8	1	7	5:00
5	16	7	17	1:30
6	32	17	44	0:50
~~8~~ 7	2	47	47	10:00
~~9~~ 8	4	47	47.5	10:00
~~10~~ 9	8	47.5	52	10:00
~~11~~ 10	16	52	67	3:00
~~12~~ 11	32	57	110	1:45
~~13~~ 12	4	134	135	10:00
~~14~~ 13	8	135	139	10:00
~~15~~ 14	16	139	155	4:30
~~16~~ 15	32	156	177	0:50
~~17~~ 16	4	178.5	178.5	10:00
~~18~~ 17	8	178.5	180	10:00
~~19~~ 18	16	180	187	5:00
~~20~~ 19	32	190	205	1:00
~~21~~ 20	8	210	211	10:00
~~22~~ 21	16	211	216	10:00
~~23~~ 22	32	216		

NOTES

*Only a Few worms 2-3
* fine brown silt over black beds
* Sample 1 * Fine Floc layer at surface erodes immediately clumps
*Additional Floc material eroding
*Steady erosion
* Lots of organic material - small sticks & leaves.
*Sample 2
* Clump erosion - Still fine silt w/ some clumps of clay
*Large clumps eroding
*Sample 3 * Hard resurface
* Darker clay
* Large clump erosion
*Sample 4
*Black clay - A few 1-2 longer worms
*Sample 5 *LARGE BLOWOUT
Core Unable to be run further

SEDFLUME LABORATORY DATASHEET

Sample Designation: SF-17

Date/Time:

Core Height: cm

Reference Height for the top of the core: cm

Reference Contact:

Location: Durham

Project:

Item Number	Shear Stress (dynes/cm^2)	Starting Height (mm)	Ending Height (mm)	Time (sec)	NOTES

Bulk Density Datasheet

Sample Designation: SF - 17

Date/Time:

Core Height: cm

Location: Dwamish

Reference Contact:

Project:

Depth	Wet Wt. (g)	Dry Wt. (g)
1	12.243	4.230
2	8.968	3.546
3	13.383	5.3405
4	10.810	4.723
5	15.807	6.3745