E T S

Environmental Technical Services

975 Transport Way, Suite 2
Petaluma, CA 94954
(707) 778-9605/FAX 778-9612
e-mail: *entech@pacbell.net*

-Soil, Water & Air Testing & Monitoring
-Analytical Labs
-Technical Support

Serving people and the environment so that both benefit.

COMPANY:	Exact Scientific Services, Inc., 1355 Pacific Place, Suite 101, Ferndale, WA 98248				ANALYST(S)	SUPERVISOR
ATTN:	Angela Roche & Keely Pedigo	DATE	DATE	DATE	S. Santos	S. Godinez
JOB:	24-09453 (20240603-)	COLLECTED	RECEIVED	COMPLETED	L. Quijano	LAB DIRECTOR
SITE:	Old Fairhaven Parkway, Bellingham, Washington	6/3/2024	6/5/2024	6/13/2024		G. Conrad,PhD

PARTICLE SIZE DISTRIBUTION (PSD) ANALYSIS & REPORT – 5 PART

LAB SAMPLE NUMBER	SAMPLE ID	SOURCE of WATER	SUSPENDED SOLIDS mg/l @ ≥500 µ	SUSPENDED SOLIDS mg/l @ 250 µ	SUSPENDED SOLIDS mg/l @ 125 µ	SUSPENDED SOLIDS mg/l @ 63 µ	SUSPENDED SOLIDS mg/l @ 5 µ	SUSPENDED SOLIDS mg/l @ 1 µ	SUSPENDED SEDIMENT CONC TSS mg/l
09701-1	AS-IN/BW	32665		**1.0**	**2.0**	**4.0**	**11.0**	**19.8**	**35.5**
	20240603-1133		0.0%	2.6%	5.3%	10.6%	29.1%	52.4%	
						Total SSC by Summation →		**37.8**	
09701-2	AS-OUT/BW	32666		**0.3**	**0.6**	**0.8**	**5.4**	**3.2**	**8.0**
	20240603-1140		0.0%	2.9%	5.8%	7.8%	52.4%	31.1%	
						Total SSC by Summation →		**10.3**	
09701-2	AS-IN-QA/BW	32667		**1.0**	**2.5**	**4.5**	**12.1**	**17.6**	**34.5**
	20240603-1140		0.0%	2.7%	6.6%	11.9%	32.1%	46.7%	
						Total SSC by Summation →		**37.7**	
			#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
						Total SSC by Summation →		**0.0**	

LAB SAMPLE NUMBER	SAMPLE ID	SOURCE of WATER	Water pH -log[H+]	ECw [Spec Cond] µS/cm	COLOR, TRUE PtCo Units	COLOR APPARENT PtCo Units	TOTAL IRON Fe (diss.) mg/l	TOTAL VOLATILE SUSPENDED SOLIDS (TVSS) mg/l

COMMENTS

This water has a very low concentrations of TSS particles amounting to roughly 8-38 ppm in the submitted samples. The mode is strongly at the 1-5 µ fraction in the IN sample, but it shifts over to the 5-63 µ fraction in the OUT sample this time. The fraction next most abundant shifts accordingly. As a result, these two finest fractions comprise the great majority of the particulate matter (@ >78%-82%). There is a huge decline in abundance in the three coarser fractions being essentially in the 0.3%-12% range. Thus, the majority of the particles are in either the clay or silt size ranges with the noted shifting; and sand sized particles are least in abundance accounting for <3%-12% of the total particulate mass. The particulate distributions suggest a rapidly declining flow regime. This time declines are as follows: 70.0%; 70.0%; 80.0%; 50.9%; & 83.8%. The overall average reduction going from IN to OUT samples is just over 75% in this case. There is reasonably good agreement between the IN and IN-QA samples. There is good to excellent agreement among the TSS by summation and TSS by standard analytical method as is exhibited by the RPDs which are as follows: @ ±3.1%; @ ±12.6%; & @ ±4.4%

\\\ NOTES: Tests were done according to methodology as per Association of Testing Materials (ASTM): Suspended Sediment Concentration – Modified ASTM D3977 (Practice for Determining Suspended-Sediment Concentration in Water Samples). Standard Methods is followed for the other tests: Color - 2120 C; Spec Cond. (ECw) - 2510 B; Iron - 3500-Fe B; pH - 4500-H+ B; TRPH - 5520 C.