

Weekly Summary Report

Project Name:	Gasco Sediments Site ISS Field Pilot Study		
Project No:	000029-02.85	Report Date:	October 3, 2023
Week of:	September 25, 2023	Report No:	3

Weekly Summary			
ltem	Approximate Production This Week	Approximate Total Cumulative Production	Approximate Task Percent Completion
Mobilization activities	NA	NA	100%
Dolphin pile removal	0	0	100%
Debris removal	0	0	100%
ISS auguring	15 columns	16 columns	55%
Swell material removal	0	0	0%

Work Performed This Period

Monday (09/25/2023)

Performed in situ stabilization and solidification (ISS) auguring and ISS quality assurance/quality control (QA/QC) sample collection at columns 1-2, 1-3, and 1-5. The auger bit was advanced a short distance below mudline at column 1-4 and refusal was encountered, so this column was abandoned for the day.

Tuesday (09/26/2023)

Conducted bathymetric progress survey. Removed debris (composed of timber and large boulders) from around column 1-4. Performed ISS auguring and ISS QA/QC sample collection at column 1-4.

Wednesday (09/27/2023)

Performed ISS auguring and ISS QA/QC sample collection at columns 1-6, 1-7, and 1-9. Refusal was encountered at column 1-8, so this column was abandoned.

Thursday (09/28/2023)

Performed debris removal activities near south area of column rows 2 and 3. Performed ISS auguring and ISS QA/QC sample collection at columns 2-1, 2-2, and 2-3.

Friday (09/29/2023)

Performed ISS auguring at columns 2-6, 2-7, 3-0, 3-6, and 3-7 and ISS QA/QC sample collection at columns 2-6, 2-7, 3-0, and 3-6. A ISS QA/QC sample was not collected from column 3-7 due to sample material "setting up" before the sample crew could process the sample.

Saturday (09/30/2023)

No work was performed.

Water Quality Monitoring

Monday (09/25/2023)

Performed visual inspection of river outside the outer containment barriers during ISS auguring, and no turbidity plumes, sheens, or odors were observed. Two rounds of ebb tide and two rounds of flood tide water quality monitoring were performed during ISS auguring activities, with field and chemical parameters collected at background stations NWN-BG1N and NWN-BG1S and compliance stations NWN-CS1N and NWN-CS1S. Performed visual inspection of river inside the containment booms and identified sheen that was generated from a known ebullition area that is not associated with construction activities.

Tuesday (09/26/2023)

Performed visual inspection of river outside the outer containment barriers during ISS auguring, and no turbidity plumes, sheens, or odors were observed. One round of water quality monitoring was performed during ebb tide during debris removal activities, with field and chemical parameters collected at background station NWN-BG1S and compliance station NWN-CS2N. One round of water quality monitoring was performed during ebb tide during lSS auguring activities with field parameters collected. Performed visual inspection of river inside the containment booms and identified sheen that was generated from a known ebullition area that is not associated with construction activities.

Wednesday (09/27/2023)

Performed visual inspection of river outside the outer containment barriers during ISS auguring, and no turbidity plumes, sheens, or odors were observed. Two rounds of ebb tide and one round of flood tide water quality monitoring were performed during ISS auguring activities, with field and chemical parameters collected at background stations NWN-BG1N and NWN-BG1S and compliance stations NWN-CS1N, NWN-CS2N, and NWN-CS1S. Performed visual inspection of river inside the containment booms and identified sheen that was generated from a known ebullition area that is not associated with construction activities.

Thursday (09/28/2023)

Performed visual inspection of river outside the outer containment barriers during debris removal activities and ISS auguring, and no turbidity plumes, sheens, or odors were observed. One round of water quality monitoring was performed during ebb tide during debris removal activities, with field and chemical parameters collected at background station NWN-BG1S and compliance station NWN-CS2N. One round of water quality monitoring was performed during was performed during debris removal and ISS auguring activities (one ebb tide and one flood tide) with field parameters collected. Performed visual inspection of river inside the containment booms and identified sheen that was generated from a known ebullition area that is not associated with construction activities.

Friday (09/29/2023)

Performed visual inspection of river outside the outer containment barriers during ISS auguring, and no turbidity plumes, sheens, or odors were observed. Three rounds of ebb tide water quality monitoring were performed during ISS auguring activities, with field and chemical parameters collected at background stations NWN-BG1S and compliance stations NWN-CS1N and NWN-CS2N. Performed visual inspection of river inside the containment booms and identified sheen that was generated from a known ebullition area that is not associated with construction activities.

Saturday (09/30/2023)

No work was performed.

Findings:

There were no exceedances of the acute chemical criteria, but there was a single result at the compliance location that was slightly above the chronic chemical criterion for benzo(a)pyrene. This sample was collected during debris removal activities on Thursday, September 28, 2023. This sample was collected from the bottom depth, and no elevated results were identified in the middle and top sampling depths. Two other rounds of monitoring were performed on the same day, and the results were all well below the chronic criterion, so the duration of the elevated concentration was short. Because this is the first day a result has been above the chronic chemical criterion, the 4-day average is not above the chronic chemical criterion. A compilation of water quality daily field forms from the week (Attachments 1 through 4), tabulated field parameter data (Attachment 5), and received water quality chemical results during this weekly reporting period (Attachment 6) are attached.

For Informational Purposes Only

In accordance with the U.S. Environmental Protection Agency's (EPA's) comments on the EPA-approved *Final Revised In Situ Stabilization and Solidification Field Pilot Study Work Plan*,¹ for informational purposes only, pH and temperature samples were collected from the moon pool prior to initiation of ISS auguring and following completion of ISS auguring and prior to raising the moon pool curtain. These informational moon pool sampling results are included in Attachment 7.

Scheduled Construction Work This Week (Next Reporting Week)

Continue ISS auguring operations, ISS QA/QC sample collection, and swell material surveying, removal (if applicable), and tracking.

¹ Anchor QEA, LLC, 2023. *Final Revised In Situ Stabilization and Solidification Field Pilot Study Work Plan*. Gasco Sediments Project Area. Prepared for U.S. Environmental Protection Agency, Region 10. September 12, 2023.

Problems Encountered and Contingency Actions Implemented

Due to the presence of encountered subsurface debris during auguring at column 1-4 following focused debris removal on Tuesday, September 26, 2023, ISS treatment was extended to 26.5 feet below mudline, 3.5 feet short of the target 30-foot depth of contamination (DOC). Subsurface debris was similarly encountered at columns 1-5 and 1-9, and ISS treatment was extended to 20 and 25.2 feet below mudline, respectively (10 and 9.8 feet short of the target 30-foot DOC, respectively). Due to the presence of this previously unidentified debris, coupled with lower than anticipated river elevations, NW Natural submitted Field Change Request Form (FCR) #1 on Thursday, September 28, 2023, to slightly reconfigure the field pilot study footprint, and EPA approved FCR #1 on Friday, September 29, 2023.

The ISS QA/QC sample set up prior to processing on Friday, September 29, 2023, so no strength or permeability testing can be performed on this column. This sample volume was stored in sample containers for a longer period than at other column locations due to the sampling sequencing. Based on this lesson learned, the sample collection sequencing will be modified to minimize the time between collection and processing.

Prepared by:	Kendra Skellenger	Contact Information:	503-752-4218 kskellenger@anchorqea.com
сс:	Bob Wyatt, Patty Dost, Mike Crystal, Tim Donegan, Taylor Crystal, Gary Rose, Joe Burke, Rob Ede, Jen Mott, Ryan Barth, Tim Stone, Ben Uhl, Billie-Jo Gauley, Joe Smith, Ross Pickering, Louisa Orr, Elizabeth Greene		, Taylor Crystal, Gary Rose, ne, Ben Uhl, Billie-Jo Gauley, eene
Attachments:	Attachment 1DailAttachment 2WatAttachment 3WatAttachment 4WatAttachment 5WatAttachment 6WatAttachment 7Mod	 Daily Monitoring Logs Water Quality Monitoring Calibration Log Water Quality Monitoring Forms – Field Parameters Water Quality Sampling Forms – Chemical Parameters Water Quality Field Parameter Measurements Water Quality Monitoring Chemical Results Moonpool Informational Measurements 	

Photographs





Channelward oil absorbent boom installed and connected to the anchored downriver and upriver oil containment booms and swell removal barge. This additional boom results provides oil containment surrounding the entire perimeter of the larger work area and will be maintained for the remainder of the field pilot study (09/25/2023).





View of ISS drill rig barge from water quality monitoring station EW-1S (09/27/2023).





Swell material removal barge being relocated for debris removal (09/28/2023).

Attachment 1 Daily Monitoring Logs

	Daily Monitoring Log		
Gasco Sediment Site ISS Pilot Study			
V AN QE	Anchor QEA, LLC Phone 503.670.1108 6720 S Macadam Ave., Suite 300 Portland, OR 97219		
	DATE: 9-25-23		
	PERSONNEL: SIMION DINDENNOEFE		
\V	N NE E SE S SW NW NONE LIGHT MEDIUM HEAVY SUNNY CLOUDY RAIN Temperature: ° F . ° C [Circle appropriate units] [Circle appropriate units] [Circle appropriate units]		
TIME	COMMENTS		
0605	Arrive C Gasco trailer - calibrate YSI probles		
064	To moon pool/dach to load wan glar		
0 110	Start 155 trilling - MXT INW FIR (21051 (US65)		
0745	In pho fife - Circuit 2 start (* BG+15		
0787	B B (2-15 CODE LANDED 3001 horan dist will ranke Finder Flag		
	diffection will where were such and use more River		
	Gauge . Confirmed Garmin death wi lead line		
@810	Start war circuit 2		
0823	CEW-IN, confirmed 100' Boom dist. w/ range Finder		
0837	@CS-IN, confirmed 150' boom " "		
0854	CCS-2N "		
0856	Decon, Von Dorn Sampler		
0910	(allected NWW-CSIN-2309250910 and field dup. NWN-CSIOIN-		
0900	2309250910 (2, C3-IN JUL to highest NTU @ Lelp Lepth.		
07.25	Recon Von Dom Simple		
1010	BROWN BG13-2304250430 MSDBD Sample (x5 vol.)		
1015	BEGTIN WUM CIICUT 2 - STIT COB HOL - TO BG-13		
1030	REWIN CONFICTING 100' N		
1047	@ CS-IN CONFIDMENTSO!		
10 55	@ CS-2N \\ []		
1105	Pecon, von dorn		
1115	1 COILLER NWN-CSIN-2309251115@38.8'		
1120	Decan Van Dorn		
1130	Collected NWN-BG15-2309251130 @ 33'		
1140	OH WATER		
1205	On water - Start Circuit #3 Figet Froe)		
	-> +1000, VISIDLE OBSERVATIONS + USGM MOMISON		
	gampe next the high tite @ 324pm		
Signature:			

GASCO0054109

Daily Monitoring Log			
Gasco Sediment Site ISS Pilot Study			
Anchor QEA, LLC Phone 503.670.1108 Anchor QEA, LLC Phone 503.670.1108 Portland, OR 97219			
	DATE: 9-25-23		
v	Vind from: N NE E SE S SW W NW NONE LIGHT MEDIUM HEAVY SUNNY CLOUDY RAIN Temperature: F.C2. °C [Circle appropriate units]		
TIME	COMMENTS		
1218	CBG-IN, confirmed boom dist. (300') wirange finter		
1236	CEW-15, CONFIRMED 100' boom dist will range finder		
1205			
1303	PCS-LS (Clark Char The Court Dame of Dame		
	CC375 to collect (WINISTY Sample, 12000, VOVI POIT)		
1320	Collict NWN- (515-2309251320 @ 3551		
1325	Decan van Dorn		
1335	Collected NWN-BGIN-2309251335@ 39'		
1350	Of water		
400	On water -> mobilize far circuit #4		
1410	Start Circuit #4 - Still flood tite -> BG-IN		
1425	CBG-IN, confirmed 300' Boom dist w/ range finder		
1740	(0 EW - 1 s) $(0 C)$ $(1 c)$ $(1 c)$		
1507			
1991	DALOO MAA DOO R CONTS FOR MALA CANO A DALO LA		
NU LI	highlight HARbridge		
1525	COLLCTES NWN-CS13-2399231525 @ 40'		
535	Decon Van Dorn- @ BG-IN For Chin sample		
1540	Collected NWN-BGIN-2309251540 @ 12'		
545	Finish Circuit #4 - back to Dock		
1550	off water		
	4		
	· · · · · · · · · · · · · · · · · · ·		
9			
Signature:	\square		

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Daily Monitoring Log				
Gasco Sediment Site ISS Pilot Study				
Anchor QEA, LLC Phone 503.670.1108 Portland, OR 97219				
	DATE: 9-26-23			
v	N N			
TIME	COMMENTS			
0720	Arrive @ Gasco Trailer - Calibrate YSI			
0910	HIS meeting w/ Cody+Ben prior to WQM event #2			
0935	start sediment disturbance Debris removal-startwam@1015			
	Un water - boat prep			
030	CBG-15-E66 tite, confirmed visually, w/ velocimeter, and			
	Will. Kiver Morrison Gauge data (USGS), river Flowing out.			
	Continued Garmin tepth w/ lad line			
035	Sharl wind 300' Boom dist. W/ ronge finder			
047	STWF WOM (Debros removal) Circuit #1			
100	Q (S-IN) (ONTIMES 100 DOOM DIST. WI EMSE FINDER			
104	Massive (cutse size and he appending same			
112	CS:2N COSEMPTISO' hoor dat i render fiel o			
1115	Deron Van Dern Samolar - tolaine wis a cs-and			
190	Collect NWN-(5) N -73 0926 1130 @ (5-2N @ 42 8'			
140	Decon Von Doco			
145	COLLECT NWN-BG15-2309261145 @ RG-15 @ 33.2'			
150	Complete circuit #1 - no excludences reported			
	OFF WATER - BUILD WORK to mave barans			
1426	@Dock-prep for trilling 1-4. US65 Will River loans			
~	indicates next fibe is high @ 1600 - currently in Flood			
50	tibl - Visually confirmed.			
500 1510	Start ISS Prilling - Boring 1-4 - Begin Wan C#2 @ 1610			
605	VO WATER -> VTO BG-15 (ebb tite)			
62S	("BG-13, confirmed 300' boom dist. W/ range finder			
630	(2 EW-IN" 100'"			
644	C_{1}			
101	CC5-2N "150"			
1120	OF WATER			
Signature:	8			

		-
	Daily Monitoring Log	
	Gasco Sediment Site ISS Pilot Study	
V AN QE	CHOR Anchor QEA, LLC Phone 503.670.1108 6720 S Macadam Ave., Suite 300 Portland, OR 97219	
	DATE: 9-27-23 PERSONNEL: Simon Dudenhoefer	
	Wind from: N NE E SE SW NW NONE LIGHT MEDIUM HEAVY SUNNY CLOUDY RAIN Temperature: CF/34. ° C [Girčle appropriate units] [Girčle appropriate units] C C	
TIME	COMMENTS	
0605	Arrive C Gasco Trailer - print Harris - YSI Calibration	
0745	Start ISS Dr. 1119 COlumn 1-6 - Start WQM CHI @ 0845	
	Boat crew safety meeting: entering lexiting boat, sharp objects	
	wear PFPS safety gear locations, emergency procedures	
0840	Meet IOW HILE @ 1208 (USGS) - WOLM C#2 EDO FIJE Prations	£ 9.839
	L'entitudes Garmin deptin reliding w/ read line, river tion	an water
	CODECIMIN VISUALING + USOS MORTISON DAUGE GATA, MIS	
0847	Peroptanioate Van Dorn Sampler	
0903	C. EW-IN confirm 100' dist from boom w/ SMLE finder	
0916	@ CS-IN \\ "150"	
0934	CCS-2N "150' "	
4955	Collect NWN-CSIN-2309270955 @ CS-IN @ 39.21	
9957	Decan Van Dorn Sampler	
1010	Collect NWN-BG15-2309271010 @ BG-15 @ 35'	
1 20	Finish WRM CH1 -> start (#2@ 1045 (Still Ebb Hite)	
10.211	OH WARD	
1040	Chart with CHO & BL-15 (tat (2001) and study to 1000000	
1057	FIGTING CHALLON ALLON AL	
1113	QCS all N USO NO OBEM UIST WI TANJE + mde	
1130	P(4-7N)	
1140	Deren Van Dorn	
1145	Collected NWN-(SIN-2309271145 @ CS-IN @ 38.5'	
1199	Plan Von Dorn	
1200	Collected NWN-BG15-2309271200 @ BG-15 @ 34/	
	FINISH WOM CITCUIT #2 -> TO DOCK	
1210	OFFWATER	
1240	ON WATER - Start WQM Circuit #3@ 1295	
Signature:	STA /	

Daily Monitoring Log Gasco Sediment Site ISS Pilot Study NCHOR Anchor QEA, LLC Phone 503:570:1108 6720 5 Macadam Ave., Suite 300 Portland, OR 97215 DATE: 9 - 27 - 23 PERSONNEL: S: MOO DATE: 9 - 27 - 23 PERSONNEL: S: MOO Mart Bill SW W NW NONE Wind from: NE E SE S SW W NW NONE WINT CLOUDY RAIN Temperature: 1* - *c COMMENTS Stact WQM CH 3 - Next High P. 40:36 (USC5) La Turning to flood Hill, confirmal W/ VSL Swins + USC5 Mor crissin R: WL Guaga -> To BC - I N @ EW-IS, '' * IGO' '' '' (CS - 15 ''' ''' 150' '''''''''''''''''''''''	
Daily monitoring Log Gasco Sediment Site ISS Pilot Study NCHOR Anchor QEA, LIC Phone 503.670.1108 6720 S Macadam Ave, Suite 300 Portland, OR 97219 DATE: 9-27-23 PERSONNEL: Site Man Dud Un Molet II Site Site Site Window None Light Medulum HEAVY Sunny cloudy Rain Temperature: 1* F COMMENTS Start WQ M CH 3 → Next High Ingh P. 1636 (USCs) Is Turning to flood H.H., Confrond W/ VSL Swing + USCS Marrison River Gauge → To B C - I N COMMENTS Start WQ M CH 3 → Next High Ingh P. 1636 (USCs) Is Turning to flood H.H., Confrond W/ VSL Swing + USCS Marrison River Gauge → To B C - I N COMMENTS Start WQ M CH 3 → Next High Ingh P. 162: Start W/ COV/ Finder @ Ewils, '' # 100''' '' QC Start W/ S	Daily Monitoring Log
Gasco Sediment Site ISS Pilot Study Anchor QEA, LIC Phone 503.670.1108 6720 SMacdam Ave, Suite 300 Portland, OR 97219 DATE: $9-27-23$ PERSONNEL: Si Man Dud UMD2Eff Wind from: N NE E SE S SW W NW NONE LIGHT MEDIUM HEAVY. SUNNY CLOUDY RAIN COMMENTS Start WQ M CH 3 \rightarrow Next Hid: high Q.16:36 (USC5) Is Turping to flood Hith, confrme2 w/ YST. Swing + USC5 Marrison River Gauge \rightarrow To B G-1 N COMMENTS Start WQ M CH 3 \rightarrow Next Hid: high Q.16:36 (USC5) Is Turping to flood Hith, confrme2 w/ YST. Swing + USC5 Marrison River Gauge \rightarrow To B G-1 N PERSONNEL: Si Nort Grand Act W/ WW/ Finder @ CS-15 " " 150" " @ CS-15 " " 150" " @ CS-15 W " 150" " @ CS-25 " % D1 con UM Dorn	Daily Monitoring Log
Anchor QEA, LLC Phone 503.670.1108 6720 5 Macadam Ave, Suite 300 Portland, QR 97219 DATE: $9-27-23$ PERSONNEL: Si Man Dud UANDERTS Wind from: N NE E SE SW W NW NONE LIGHT MEDIUM HEAVY SUNNY CLOUPY RAIN Temperature: 1*F . *C COMMENTS 5 tart WQ M CH 3 → Next High high Q. 6:36 (USGS) Is Turning to flood Hill, CONFINAL W/ VSI Swing + USGS Marrison RIVE GAUGE → TO BG-INI @ BG-IN, confirmed 300' board dist W/ rWK finder @ EW-IS, W * 100' W ' @ CS-15 W '' IS9' W '' @ CS-25 W '' DL con UM Dom Colluct MS/MSD Sompli NWN-CSIS-2809271355 @ CS-15 @ 37' DL con UM Dom Colluct NS/MSD Sompli NWN-CSIS-2809271355 @ CS-15 @ 37' DL con UM Dom Colluct NS/MSD Sompli NWN-CSIS-2809271355 @ CS-15 @ 37' DL con UM Dom Colluct NS/MSD Sompli NWN-CSIS-2809271355 @ CS-15 @ 37' DL con UM Dom Colluct NS/MSD Sompli NWN-CSIS-2809271355 @ CS-15 @ 37' DL con UM Dom Colluct NS/MSD Sompli NWN-CSIS-2809271355 @ CS-15 @ 37' DL con UM Dom Colluct NS/MSD Sompli NWN-CSIS-2809271355 @ CS-15 @ 37' DL con UM Dom Colluct NS/MSD Sompli NWN-CSIS-2809271355 @ CS-15 @ 37' DL con UM Dom Colluct NS/MSD Sompli NWN-CSIS-2809271355 @ CS-15 @ 37' DL con UM Dom Colluct NS/MSD Sompli NWN-CSIS-2809271355 @ CS-15 @ 37' DL con UM Dom Colluct NS/MSD Sompli NWN-CSIS-2809271355 @ CS-15 @ 37' DL con UM Dom Colluct NS/MSD Sompli NWN-CSIS-2809271355 @ CS-15 @ 37' DL con UM Dom Colluct NS/MSD Sompli NWN-CSIS-2809271355 @ CS-15 @ 37' DL con UM Dom Colluct NS/MSD Sompli NWN-CSIS-2809271355 @ CS-15 @ 37' DL con UM Dom Colluct NS/MSD Sompli NWN-CSIS-2809271355 @ CS-15 @ 37' DL con UM Dom Colluct NS/MSD Sompli NWN-CSIS-2809271355 @ CS-15 @ 37' DL con UM Dom Colluct NS/MSD Sompli NWN-CSIS-2809271355 @ CS-15 @ 37' DL con UM DOM COLL NS/MSD SOM COLL NO CSIS-2809271355 @ CS-15 @ 37' DL con UM DOM COLL NO CSIS-28007 @ 2007 @	Gasco Sediment Site ISS Pilot Study
DATE: 9-27-23 PERSONNEL: Si Man Dud UNDEFT Wind from: N NE E SE S SW W NW NONE LIGHT MEDIUM HEAVY SUNNY CLOUDY RAIN TEmperature: 1* - *C ICCER REPORTED WITH COMMENTS Start WQM CH3 - Next High Nigh 0.06:36 (USGS) La Turning to flood Hill, confirmed w/ YSI Swing + USGS Marcroon RINGE Gauge -> TO BG-IN @ DG-IN, confirmed 300' boom d Bt W/ ranke Hinder @ EW-IS, ** * 100'** ** @ CS-25 ** ** DL con UM Dorn Collect MG/MSD Sample NWN-CSIS-2809271355 @ CS-15 @ 37' DL con UM Dorn Collect MG/MSD Sample NWN-CSIS-2809271355 @ CS-15 @ 37' DL con UM Dorn Collect MG/MSD Sample NWN-CSIS-2809271355 @ CS-15 @ 37' DL con UM Dorn Collect MG/MSD Sample NWN-CSIS-2809271355 @ CS-15 @ 37' DL con UM Dorn Collect MG/MSD Sample NWN-CSIS-2809271355 @ CS-15 @ 37' DL con UM Dorn Collect MG/MSD Sample NWN-CSIS-2809271355 @ CS-15 @ 37' DL con UM Dorn Collect MG/MSD Sample NWN-CSIS-2809271355 @ CS-15 @ 37' DL con UM Dorn Collect MG/MSD Sample NWN-CSIS-2809271355 @ CS-15 @ 37' DL con UM Dorn Collect MG/MSD Sample NWN-CSIS-2809271355 @ CS-15 @ 37' DL con UM Dorn Collect MG/MSD Sample NWN-CSIS-2809271355 @ CS-15 @ 37' DL con UM Dorn Collect MG/MSD Sample NWN-CSIS-2809271355 @ CS-15 @ 37' DL con UM Dorn Collect MG/MSD Sample NWN-CSIS-2809271355 @ CS-15 @ 37' DL con UM Dorn Collect MG/MSD Sample NWN-CSIS-2809271355 @ CS-15 @ 37' DL con UM Dorn Collect MG/MSD Sample NWN-CSIS-2809271355 @ CS-15 @ 37' DL con UM Dorn Collect MG/MSD Sample NWN-CSIS-2809271355 @ CS-15 @ 37' DL con UM DORN Collect MG/MSD Sample NWN-CSIS-2809271355 @ CS-15 @ 37' DL con UM DORN Collect MG/MSD Sample NWN-CSIS-2809271355 @ CS-15 @ 37' DL con UM DORN Collect MG/MSD Sample NWN-CSIS-2809271420 @ BG-IN @ 41' Fin AL W CM CACUMT #2 - NO SEL disturbing WORL COLLECT NSN WCM	Anchor QEA, LLC Phone 503.670.1108 6720 S Macadam Ave., Suite 300 Portland, OR 97219
Wind from: N NE E SE S SW W NW NONE LIGHT MEDIUM HEAVY SUNNY CLOUDY RAIN TEmperature: "F . "C COMMENTS Start WCQM CH3 ~ Next tide, high 0.16:36 (USCS) La Turning to Flood tide, confirmed w/ VSI swing + USCS MARTISON RIVE GUIDE - TO BG-IN @ BC-IN, confirmed 300' boom drst W/ FONK finder @ EW-IS, " " 100'" @ CS-25 " // DL con Um Dorn Collect MS/MSD sample NWN-CS15-2809271355 @ CS-15 @ 371 Decon Um Dorn Collect MS/MSD sample NWN-CS15-2809271355 @ CS-15 @ 371 Decon Um Dorn Collect MS/MSD sample NWN-CS15-2809271355 @ CS-15 @ 371 Decon Um Dorn Collect MS/MSD sample NWN-CS15-2809271355 @ CS-15 @ 371 Decon Um Dorn Collect MS/MSD sample NWN-CS15-2809271355 @ CS-15 @ 371 Decon Um Dorn Collect MS/MSD sample NWN-CS15-2809271355 @ CS-15 @ 371 Decon Um Dorn Collect MS/MSD sample NWN-CS15-2809271355 @ CS-15 @ 371 Decon Um Dorn Collect MS/MSD sample NWN-CS15-2809271355 @ CS-15 @ 371 Decon Um Dorn Collect MS/MSD sample NWN-CS15-2809271355 @ CS-15 @ 371 Decon Um Dorn Collect MS/MSD sample NWN-CS15-2809271355 @ CS-15 @ 371 Decon Um Dorn Collect MS/MSD sample NWN-CS15-2809271355 @ CS-15 @ 371 Decon Um Dorn Collect MS/MSD sample NWN-CS15-2809271355 @ CS-15 @ 371 Decon Um Dorn Collect MS/MSD sample NWN-CS15-2809271355 @ CS-15 @ 371 Decon Um Dorn Collect MS/MSD Sample NWN-CS15-2809271355 @ CS-15 @ 371 Decon Um Dorn Collect MS/MSD Sample NWN-CS15-2809271355 @ CS-15 @ 371 Decon Um Dorn Collect MS/MSD SAMPLE NWN-CS15-2809271355 @ CS-15 @ 371 Decon Um Dorn Collect MS/MSD SAMPLE NWN-CS15-2809271355 @ CS-15 @ 371 Decon Um Dorn Collect MS/MSD SAMPLE NWN-CS15-2809271355 @ CS-15 @ 371 Decon Um Dorn Collect MS/MSD SAMPLE NWN-CS15-2809271355 @ CS-15 @ 371 Decon Um Dorn Collect MS/MSD SAMPLE NWN-CS15-2809271355 @ CS-15 @ 371 Decon Um Dorn Collect MS/MSD SAMPLE NWN-CS15-2809271355 @ CS-15 @ 371 Decon Um Dorn Collect MS/MSD SAMPLE NWN-CS15-2809271355 @ CS-15 @ 371 Decon Um Dorn Collect MS/MSD SAMPLE NWN-CS15-2809271355 @ CS-15 @ 371 COMMENTERS COMMENTERS COMMENTERS COMMENTERS COMMENTERS C	DATE: 9-27-23 PERSONNEL: Simon Dudunplifis
COMMENTS Start WQM CH3 - Next tide high Q. 16:36 (USG3) In Turning to flood tide, confirmed w/ YSI swing + USGS Morrison River Guise - To BG-IN @ BG-IN, confirmed 300'600m dist w/ rank finder @ EW-IS, " * 100'" @ CS-25 " Def con Um Dorn Collect MS/MSD sample NWN-CSIS-2809271355 @ CS-15 @ 37' Def con Um Dorn Collect MSN-BGIN-2309271420 and field dup Sample NWN-BGION-2309271420 @ BG-IN @ 41' Finsh WQM exaut #3 - No sed. disturbing Work OCCUrring Off Wate - Finish WRM 	Wind from: N NE E SE S SW NW NONE LIGHT MEDIUM HEAVY SUNNY CLOUDY RAIN Temperature: ° F . ° C [Circle appropriate units] [Circle appropriate units] [Circle appropriate units]
Start WQM CH3 → Next tile, high@18:36 (USG5) h Turning to flood till, confirmed w/ VSI swing + USGS Marrison River Gauge → To BG-IN @ BG-IN, confirmed 300' boom dist w/ rave finder @ EW-IS, " * 100'" "" @ CS-25 " Duron Um Dorn Collect MS/MSD sample NWN-CSIS-2809271355 @ CS+15 @ 371 Decon Um Dorn Collect NWN-BGIN-2309271420 and field dup Sample NWN-BGIOIN-2309271420.@ BG-IN@ 41' Fiash WQM circuit #3 - No sed. disturbing Work OCCUrring Off Wate - Fiaish WQM 	TIME COMMENTS
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	L45 Start WQM CH3 → Next tite high @18:36 (USGS)
$\begin{array}{c} 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 $	La lurning to thood title, continued will YSI swing t
e:	300 Q BALIN LOGGE & ZOOLLE TO BG-IN
@ CS-15 " " " @ CS-25 " " " Decon Um Dom " " " (allet MS/MSD sample NWN-CS15-2809271355 @ CS-15 @ 37" " " Decon Um Dom " " " (allet MS/MSD sample NWN-CS15-2809271355 @ CS-15 @ 37" " " Decon Um Dom Collect NWN-BGIN-2309271420 @ and field dup Sample " NWN-BGIOIN-2309271420 @ BG-IN @ 41" " " Finsh WQM exerchit #3 - ho sed. disturbing work. " " OCCUrrigg " " " OFF Wate - Finish WQM " " " " " " " " " " " OFF Wate - Finish WQM " " " " " " " " " " " " " " " " " " " " " " " " " " " " " <	313 0 EW-15 " " 100'"
C CS-25 " // Dicon Um Dom Callect MS/MSD sample NWN-CS15-2809271355 C CS-15 C 37/ Decon Um Dorg Collect NWN-BGIN-2309271420 and field dup Sample NWN-BGIOIN-2309271420 C BG-IN @ 41' Fia3h WQM exercit #3 - No sed disturbing Work OCCURRING OFF Wate - Finish WQM	322 (25-15" "150""
Dicon Vin Dom (allet MS/MSD sample NWN-CSIS-2809271355 @ CS-15 @ 371 Dean Vin Dorg Collect NWN-BGIN-2309271420 and field dup Sample NWN-BGIOIN-2309271420 @ BG-IN @ 411 Finish WQM exercit #3 - ho sed. disturbing Work OCCURRING OFF WAte - Finish WQM	335 @ C5-25 "
Collect MS/MSD sample NWN-CS15-2809271355 @ CS-15 @ 371 Decon Van Dorg Collect NWN-BGIN-2309271420 and Field dup Sample NWN-BGIOIN-2309271420 @ BG-IN @ 41 Fia3h WQM carcuit #3 - ho sed. disturbing work occurring Off Wate - Fiarsh WRM	350 Dicon VM Dom
Plan Van Dorg Collect NWN-BGIN-2309271420 and field dup Sample NWN-BGIOIN-2309271420. @ BG-IN @ 41' Finish WQM exercit #3 - No sed. disturbing work OCCURRING OFF Wate Finish WQM 	355 (ollect MS/MSD sample NWN-CS15-2809271355 @ CS-15 @ 37'
E Wet NWN-BGIN-2309271420 and field dup Sample NWN-BGIOIN-2309271420 @ BG-IN @ 41' Finish WQM exercit #3 - no sed. disturbing work Occurring Off wate - Finish WQM 	400 Dean Van Dorg
PWN-b613110-22504211420.@ b6-1N @ 41 Finish WQM crauit #3 - ho sed. disturbing work Occurring Off wate - Finish WQM	420 Collect NWN-BGIN-2309271420 and field dup Somply
PF water - Finish wQM	420 Fizzz WOM avenuit #2 - ho cal distribute word
PF wate - Finish wQM	QCONTING
	143 OFF Water FLOISH WORM
	8
	Signature:

	Daily Monitoring Log
	Gasco Sediment Site ISS Pilot Study
V AN QE	CHOR Anchor QEA, LLC Phone 503.670.1108 6720 S Macadam Ave., Suite 300 Portland OR 97219
	DATE: 9-28-23
	PERSONNEL: Simon Dudenhoefer
,	Nind from: N NE E SE S SW NW NONE CIGHT MEDIUM HEAVY SUNNY CLOUDY RAIN Temperature: \$58. \$58.
TIME	[Circle appropriate unit
0610	ACCINE Q COOCE TENIOC - COLLEGIO MCTC
0010	H/S method entropologication for the area DED and the line of
0800	Stact Sadiment distuction of Debag Debag
	Start WRM RECEIPT H 1 20902
0810	On whater - Fuller for uns do not inner (Ebb tide) - configured
	INTUSGS WillamiteRiver Morrison Bridge Games + U.S. Hilly
0900	Minune @ BG-15 Start WOM Circuit H1
	Confirmed Gormin depths reading w/ lead line and
	3001 boom distance wi range finder
0931	@EW-IN, confirmed 100' dist. from boom wi sume finder
0946	CCS-IN " " 150' 1
9955	@CS-2N "
1010	COLLCT NWN-CS2N-2309281010 @ 42.4' @ CS-2N
1005	Rucon VAN Porn Samplir
1015	Droo van Dom Sampler
1020	(916CT NWN-BGIS-2309281020@ 31' C BG-15
1025	Finish WQM #2, ng excedences
10 30	OFF WATER -> STAFT WOM (#2 (Drilling Iss Column 2-1)
1045	ON WATER -S TO BG-15
1100	COG-15, COOLIFM DOO' boom dist. W/ large tinde
1120	
1157	
1202	Earsh WRM CH2 - NOIS and Maria - Start CH2 A In-
1910	OFF WATER
1260	ON WATER - TO BGIN MAXT Mighted & 1712-119/51
	La visually confirmed flow direction (Upriver) - TSE Double
1300	@B(2-1N - CODEIENLY 3001 LOOM det un CARLE EN LIC
	@ Elula 15 - 11 / 1001
1326	

GASCO0054114

Daily Monitoring Log			
Gasco Sediment Site ISS Pilot Study			
V QE	Anchor QEA, LLC Phone 503.670.1108 Anchor QEA, LLC Phone 503.670.1108 6720 S Macadam Ave., Suite 300 Portland, OR 97219		
	DATE: 9-28-23 PERSONNEL: Simon Dudenhoefer		
v	N NE E SE S SW NW NONE LIGH MEDIUM HEAVY SUNNY CLOUDY RAIN Temperature: Image: Cloudy of the second secon		
TIME	COMMENTS		
1358	CCS-2N-confirmed 150' boom dist we cance finder		
1410	Finish WQM CH3 -no exceedences -> start CH4@1500		
1113	OFFWATER - FINISH WAM FOR HUGAY ->		
-	no mare sediment disturbunce		
Signature:			

2 of 2

Daily Monitoring Log			
Gasco Sediment Site ISS Pilot Study			
Anchor QEA, LLC Phone 503.670.1108 Anchor QEA, LLC Phone 503.670.1108 6720 S Macadam Ave., Suite 300 Portland, OR 97219			
	DATE: 9-29-23		
	PERSONNEL. SIMION DUODNOCOD		
w	Vind from: N NE E SE S SW NW NONE LIGHT MEDIUM HEAVY SUNNY CLOUDY RAIN Temperature: 05/52. °C [Circle appropriate units] [Circle appropriate units] [Circle appropriate units]		
TIME	COMMENTS		
0735	Arrive @ Gasco trailer -> calibrate YSI # 6970		
0154	ISS Drilling start time -> Start WQM circuit # @ 0854		
0000	H+S meeting : PEDS, safely collecting chunistry sandes over the give of the		
	DOAT, OWNERED MAZANTS NEW WORTH barges Slips, trips, falls on barges,		
0830	ON MODIFER Dat, THE UNIL collecting samplest WQM		
0400	Cho what I E R - next tide LOW @ 1312, [0565], aurrently		
0854	PBG-15 CONFIRMED DISUATION I USING VETOCIMETED		
	Confirmed booth disp 300 m tage tinder		
0910	QEW-IN COSTICIMENT 100, boom distance internet finder		
0928	CCS-IN " " 150'" "		
~	VERY CHOPPY today hard to keep boat on location due		
	to wind and waves maving up river		
0940	@CS-2N confirmed 150' boom dizi w/ range finder		
0945	Decan Van Dorn samplu		
0959	Callect NWN-C52N-2309290950 C C5-2N @ 42.5'		
0955	Decon Van Dorn sampler		
1005	COLUCT NWN-BGB-2309291005 @ BG-13 @ 34.6'		
	Completed WQM Lircuit #L + collected chemistry samples		
1015	DE WATER EXCREDICES - to OOCK = next Wand 1054		
1045	ONLINATER - TO BG-15 (ALILIELL) to she training offer		
1094	CBG-15 confirmed 300' hop in distant will range finder		
1108	Q FW-IN 1 100' "		
1120	CCS-IN, " " 1501 "		
1132	@C5-2N "		
1140	Decan Van Dorn sampler		
1145	CONLIT NWN-CSIN-2309291145 @ CS-IN @ 40.61		
1150	pecon von Dorn somples		
1200	Called NWN-BGIS-2309291200 @BG-15 @39.2'		
Signaturé			
Signature			

GASCO0054116

lof2

	Daily Monitoring Log	
Gasco Sediment Site ISS Pilot Study		
Anchor QEA, LLC Phone 503.670.1108 Anchor QEA, LLC Phone 503.670.1108 6720 S Macadam Ave., Suite 300 Portland, OR 97219		
	PERSONNEL: 9-29-23	
Wind	I from: N NE E SE S SW W NW NONE LIGHT MEDIUM HEAVER SUNNY CLOUDY RAIN Temperature: FB. °C	
TIME	COMMENTS	
1205 F 1215 C 1245 C 1245 C 1254 C 1308 C 1327 C 1327 C 1327 C 1308 C 1400 F 1415 C 1420 F 1425 C	inish WQM circuit #2, collected chmistry samples → 10 EX Led AARS 2FF WATER → MQM C #3 Still F-66 Tite BG-15, confirmed 300' boom dist w/ range finder EW-IN, " "100' " " CS-1N" " 150' " CS-2N " 2LICM UAN DORN SILLCT NWN-CSIN-2309291415 @ CS-1N @ 38.5' 2LICM UAN DORN SILLCT NWN-BG15-2309291415 @ CS-1N @ 38.5'	
1430 F	PFWATER	
Signature:		

Attachment 2 Water Quality Monitoring Calibration Log

6720 S Macadam Ave., Suite 300 Portland, OR 98219

2

Water Quality Monitoring - Calibration Log Form Gasco Sediment Site ISS Pilot Study

1

Date: 9-25-23 Probe S/N: 21E103678 Calibrated By: Simon Dudenhoefer Meter(5) Model: YSI ProDSS # 5006

Parameter	Calibration Standard	Standard Lot No.	Expiration Date	Initial Caibration	Final Calibration	Temperature	Comments
pH 7.00 (Standard Units)	7.00	3660021	07/25	7.01	7.00	14.4	
pH 4.00 (Standard Units)	4.00	36F1085	06/25	4.01	4.00	14.5	
Dissolved Oxygen (DO) ¹	99.4	NA	NA	101.0	99.4	17.1	
Turbidity (NTU) ¹	0	NA	NA	80.0	0.00	14.9	DI WATER
Turbidity (NTU) ¹	124	23F24003426	06/24	125.12	124.00	14.9	

Date:

Probe S/N:

Calibrated By:

Meter(s) Model:

Parameter	Calibration Standard	Standard Lot No.	Expiration Date	Initial Caibration	Final Calibration	Temperature	Comments
pH 7.00 (Standard Units)	7.00	3660021	07/25	7.95	6.99	19.7	
pH 4.00 (Standard Units)	4.00	36A085	06/23	4.03	4.00	15.0	
Dissolved Oxygen (DO) ¹	99.4	NA	NA	99.1	99.4	0.51	
Turbidity (NTU) ¹	0	NA	NA	-0.04	0.09	19.9	DIWATER
Turbidity (NTU) ¹	124	23F2400342	06/24	122.38	123.84	14.9	

Notes:

Water Quality Monitoring - Calibration Log Form **Gasco Sediment Site ISS Pilot Study**

Date: 9 - 26 - 23 Probe S/N: 21E103678

Calibrated By: Simon Dudenhoefer Meter(s) Model: YSI Pro DSS #6970

Parameter	Calibration Standard	Standard Lot No.	Expiration Date	Initial Caibration	Final Calibration	Temperature	Comments
pH 7.00 (Standard Units)	7.00	3660021	07/25	7.00	7.00	12,9	
pH 4.00 (Standard Units)	4.00	36F1085	06/25	4.02	4.00	13.0	and a second second second second a second
Dissolved Oxygen (DO) ¹	100.0	NA	NA	99.6	100.0	16.9	4 No. 10 P. Martin M. Martin, A. 1999 Martin Statistical Academic Statistics, and the Article Science and Article Science Sci Science Science Scien
Turbidity (NTU) ¹	9	NA	NA	-0.02	0.00	13.4	DIWATER
Turbidity (NTU) ¹	124	23F24003426	06124	116.85	123.86	13.4	

Date: 9-26-23 Probe S/N: 22G102376

Calibrated By: Simon Dytenhoefer Meter(s) Model: YSI Pmpss # 5006

Parameter	Calibration Standard	Standard Lot No.	Expiration Date	Initial Caibration	Final Calibration	Temperature	Comments
pH 7.00 (Standard Units)	7.00	3660021	07/25	6.97	7.00	13.3	
pH 4.00 (Standard Units)	4.00	36F1085	06/25	4.08	4.00	13.6	arten – et för samar som ande som beste stå bårar for kannansen som av en de som av som at som som at som
Dissolved Oxygen (DO) ¹	100.1	NĄ	NA	100.3	100.1	15.9	and a - Cy of a second
Turbidity (NTU) ¹	0	NA	NA	0.74	0.00	13,9	DI WATER
Turbidity (NTU) ¹	124	23F2400 3426	06/24	121.66	124.00	13.9	1997

Notes:

Water Quality Monitoring - Calibration Log Form Gasco Sediment Site ISS Pilot Study

Date: 9-27-23

Probe S/N: 21E103678

Calibrated By: Simon Dudenhoefer Meter(s) Model: YSI ProDSS #6970

Parameter	Calibration Standard	Standard Lot No.	Expiration Date	Initial Caibration	Final Calibration	Temperature	Comments
pH 7.00 (Standard Units)	7.00	3660021	07/25	7.03	7.00	14.0	
pH 4.00 (Standard Units)	4.00	36FID25	06/25	4.00	4.00	13.6	
Dissolved Oxygen (DO) ¹	99.8	NA	NA	100.2	99.8	18.9	
Turbidity (NTU) ¹	0	NA	NA	-0.02	0.00	13.5	DIWATER
Turbidity (NTU) ¹	124	23F24003426	06/24	130.11	123.91	13.5	

Date:		
Probe S	5/N:	

Calibrated By:

Meter(s) Model:

Parameter	Calibration Standard	Standard Lot No.	Expiration Date	Initial Caibration	Final Calibration	Temperature	Comments
pH 7.00 (Standard Units)	7.00						
pH 4.00 (Standard Units)	4.00						
Dissolved Oxygen (DO) ¹							
Turbidity (NTU) ¹							
Turbidity (NTU) ¹							

Notes:

Water Quality Monitoring - Calibration Log Form Gasco Sediment Site ISS Pilot Study

Date: 9-28-23

Probe S/N: 21E103678

calibrated By: Simon Dudenhoefer

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Meter(s) Model: YSI Pro DSS #6970

Parameter	Calibration Standard	Standard Lot No.	Expiration Date	Initial Caibration	Final Calibration	Temperature	Comments
pH 7.00 (Standard Units)	7.06	3660021	07/25	6.96	7.05	12.6	A standard for temp
pH 4.00 (Standard Units)	4.00	36F1085	06/25	4.00	4.00	12.7	
Dissolved Oxygen (DO) ¹	100.4	NA	NA	100.6	100.4	17.1	NIR
Turbidity (NTU) ¹	0	NA	NA	0.00	0.00	13.2	DIWATER
Turbidity (NTU) ¹	124	23F24003426	06/24	124.65	123.94	13.2	

Date:

Probe S/N:

Calibrated By:

Meter(s) Model

Parameter	Calibration Standard	Standard Lot No.	Expiration Date	Initial Caibration	Final Calibration	Temperature	Comments
pH 7.00 (Standard Units)	7.00						
pH 4.00 (Standard Units)	4.00						na na sana ana ang manana na kana na sana na s N
Dissolved Oxygen (DO) ¹			The second s				· · · · · · · · · · · · · · · · · · ·
Turbidity (NTU) ¹		DID NOT U	SE BAU	LUP YS	I		a ana panana manana manana ana ang kalana na na panana manana na kalana na ma
Turbidity (NTU) ¹			We want to be a set of the set of	· ····································			

Notes:

	Water	Quality Monit	oring - C nts Site	alibration	n Log For Study	m				
Date: 9-29-2 Probe S/N: 21E 103	Date: 9-29-23 Probe S/N: 21E 103678 Calibrated By: SIMON DUJENHOEFEr Meter(s) Model: YSI ProD55 #6970									
Parameter	Calibration Standard	Standard Lot No.	Expiration Date	Initial Caibration	Final Calibration	Temperature	Comments			
pH 7.00 (Standard Units)	7.06	3660021	07/25	7.09	7.06	12.7	a standard for temp			
pH 4.00 (Standard Units)	4.00	36F1085	06/25	3.95	4.00	12.7				
Dissolved Oxygen (DO) ¹	99.7	NA	NA	99,2	99.7	13.4	AIR			
Turbidity (NTU) ¹	0	NA	NA	0.18	0.00	13.0	DI WATER			
Turbidity (NTU) ¹	124	23F2+003+26	06/24	125.01	124.00	13.0				

Date:	Calibrated By:
Probe S/N:	Meter(s) Model:

1.4-899.9 P

Parameter	Calibration Standard	Standard Lot No.	Expiration Date	Initial Caibration	Final Calibration	Temperature	Comments
	7.00						
pH 7.00 (Standard Units)	1.00						
pH 4.00 (Standard Units)	4.00						
Dissolved Oxygen (DO) ¹					SP	2	
Turbidity (NTU) ¹		SECOND YSI	NOT USE	P			
Turbidity (NTU) ¹							

Notes:

1: Calibration standards are entered by hand depending on the monitoring instrument being used.

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Attachment 3 Water Quality Monitoring Forms – Field Parameters ANCHOR OEA

Y51	- Prolsst	t5006	Probe +	121E19:	3678
Wat	er Quality	Monitori	ng Form - F	ield Parm	neters
Data: Q	Gascos	Sediment	Site ISS Pi	lot Study	
	25-25		Circuit Numb	er: 1	
Station:	BG EW (CS-1 CS-2	N (S)	Time: OB	10
Flood / Ebb Up River / Down River Avg. Velocity: 0.168			0.168		
Lat/Northing:	5,57869	Long/Easting:)	22.75404	Total Water De	epth: 32.5
	Water Depth	Turbidity	рН	D.O.	Temp.
	[feet]	[NTU]	[-]	[mg/L]	[deg-C]
Surface	1	2.19	7.10	8.82	19.1
Middle	16.25	2.51	7.19	8.79	19.1
Deep	29.5	3.18	7.17	8.77	19.1
m (Construction Ac	aterial ob	serve)	1-2)		
Station: B	G EW C	S-1 CS-2	∭ S	Time: 082	S
Flood	KEbb	Up River A	Down River	Avg. Velocity:	0.145
Lat/Northing: 44	5.58005	Long/Easting:)	22.75682	Total Water Dep	oth: 42.5
	Water Depth	Turbidity	pH	D.O.	Temp.
	[feet]	[NTU]	[-]	[mg/L]	[deg-C]
Surface	1	2.16	7.14	8,82	19.1
Middle	21.25	2.57	7.12	8.79	19.1
Deep	39,5	2.88	7.19	8.76	19.1
Comments ^[1] : •	No shen brials obsi	odors, dis	coloration,	or susper	ded
Construction Acti	ivity: LSS D	cilling (1-2)		
Recorded by:	Simon Dr	ndenhoef	er		

R ANCHOR

6720 S Macadam Ave., Suite 300 Portland, OR 98219

and a	YST Pro	D55 450	or D	1. + 215	Portland, O
Wat	ter Quality	Monitori		Field Parn	10 56 ¥
	Gasco	Sediment	Site ISS P	ilot Study	lielers
Date: 9-2	-5-23		Circuit Num	ber: 1	
Station:	BG EW (CS-1) CS-2	2 (N) S	Time: 083	39
Floo	d /Ebb	Up River	/Qown River	Avg. Velocity:	0.264
Lat/Northing: 4	5. 58032	Long/Easting:	122.75744	Total Water De	epth: 42.2
	Water Depth	Turbidity	рН	D.O.	Temp.
Surface	[feet]			[mg/L]	[deg-C]
Middlo		2.48	1.14	8,81	19.1
	21.1	2.53	1.15	8.19	19.1
Deep	37.2	4.35	7.27	8.74	19.1
Comments",	"No sheer,	0 dors, di	scoloration,	or suspend	ed
· Collection	1WS@CS-11	N Leep Lep	th (highest +	whitit)	
	4 Regular	+ duplicat	k sample		<i>t</i>
Construction Ac	ctivity: ISS D	rilling (1-	2)		
Station: E	G EW C	S-1 CS-2	v N s	Time: Q & S	S
Flood	i/€bb	Up River ∠	Down River	Avg. Velocity: C	0.331
Lat/Northing: 4	5.58024	Long/Easting: (7	22.75674	Total Water Dep	oth: 44.5
	Water Depth [feet]	Turbidity INTUI	pH [_]	D.O.	Temp.
Surface	1	2.29	713	8 87	
Middle	22.25	2 62	7.17	879	191
Deep	41.5	075	7 90	8 77	101
Comments ^[1] :	Ale class	2.15	1.20	0,11	17.1
ma-	terial obs.	Daved	scoloration	or suspe	Ned
	Tran				
Construction Act	ivity: 155 pr	11101 (1-1	۷)		
Recorded by: S	imon D	udenhoe	Fer		

[1] Include observations of floating/suspended material, sheens, discoloration, and odors.

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	VGT POD-	A 11 COO/			Portland, (
Wat	tor Quality	s # 9906	Probe #2	IE103678	
	Gasco S	Monitori	ng Form - F	ield Parm	neters
Date: 9-0	25-22	Jeannent	Circuit Numb	lot Study	
Station:	G EW (CS-1 CS (1
Floo	d / Ebb				6
Lat/Northing:	15.578-1		Down River	Avg. Velocity:	0.255
	Water Depth		122.75405	Total Water De	epth: 33
	[feet]	[NTU]	рн [-]	D.O.	Temp.
Surface	1	2.49	7.16	885	[deg-c]
Middle	16.5	2.72	7.17	8.80	191
Deep	30	2.86	7.20	8.78	191
Comments ^[1] : c	No shen	odors. di	Scoloration	C & LOOP	A Lel
Construction Ac	tivity: TSS D	riling 1	-3		
Flood		5-1 CS-2	(N) S	Time: 1032	2
Lat/Northing: 4	EDD	Up River >	Down River	Avg. Velocity: 🤇	2.169
Laurioruning. 4	Vator Donth	Long/Easting:	12.75693	Total Water Dep	oth: 42'
	[feet]	[NTU]	рН [-]	D.O.	Temp.
Surface	l	2.94	7.14	8 83	
Middle	21	3.74	7.19	8.79	191
Deep	39	6.6S	7.25	8.75	19:1
Comments ^[1] :	NO SWA	odors,	discoloration	00.055	(sold)
	material	s'observ	vet		NSPORTA
Construction Acti	vity: ISS Dr	illing 1-3			
Recorded by:	piman D	userhop	fer	,	
1 Include observe	tions of flasting (10		

6720 S Macadam Ave., Suite 300 Portland, OR 98219



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YSI ProDSS #5006	Probe #21E183678
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Wat	er Quality	Monitori	a Form	lald Dam	- 4
	Gasco S	Sediment	Site ISS Pi	lot Study	ieters
Date: 1-2	-5-23		Circuit Numb	per: 2	
Station: E	G EW (CS-1 CS-2	2 N S	Time: 1044	
Floor	I/Ebb	Up River	/ Down River	Avg. Velocity:	0.191
Lat/Northing: 4	5.58032	Long/Easting:	22.73746	Total Water De	epth: 4
	Water Depth	Turbidity	рН	D.O.	Temp.
	[feet]	[NTU]	[-]	[mg/L]	[deg-C]
Surface	l	2.49	7.13	8.85	19.1
Middle	20.5	2.78	7.16	8.80	19.1
Deep	38	5.20	7.27	8.74	19,1
Comments ¹¹ :	·No odore Matoria	is obse	discoloration	on, or s	usperted
e Caru	ting wy w	reC 38'(highlstt	Arbidity)	
Construction Ac	tivity: ISS D	cilling 1-	3		
Station: B	G EW C	S-1 CS-2	N S	Time: 105	6
Flood	Ebb	Up River≮	Down River	Avg. Velocity:	0.175
Lat/Northing: 49	. 58026	Long/Easting:)2	2.75674	Total Water Dep	oth: 43.7
	Water Depth	Turbidity	рН	D.O.	Temp.
	[feet]	[NTU]	[-]	[mg/L]	[deg-C]
Surface	1	2,24	7,13	8.85	19,1
Middle	21,85	2.75	7.16	8.81	19,1
Deep	40.7	3.55	* 200	8.76	19.1
Comments ^[1] :	ve sheen	00000	13 colorat	00 00	1 1 2 1
	susperted	mater	ial observ	ed	
Construction Activ	vity: ISS D	rilling 1-	*7.	40	
Recorded by:	Simon 1) nderha	refer		

V ANCHOR OEA

	YSI Pro	DSS #5006	Probal #	21E10367	8
Wat	ter Quality	Monitori	ng Form - F	ield Parm	eters
Date: 9 - 0	15-13	Jeument	Circuit Numh	lot Study	
Station:	G FW (CS-1 CS-2			
Floo	dy Epp	1 1 5:-2		11me: 122	0
l at/Northing:	5 6000	Up River	Down River	Avg. Velocity:	0.377
Laurtoruning.	Water Depth	Long/Easting:	22.75788	Total Water De	pth: 40.6
	[feet]	IUrbidity	pH	D.O.	Temp.
Surface	1	2.28	7.18	[mg/L]	[deg-C]
Middle	20.3	301	7 22	8 77	191
Deep	37.6	5.79	725	870	1 1 • 1
Comments ^[1] :	· No odors	Sheen d	1.LJ	0.10	
Construction Ac	tivity: ISS D	rilling (i-	3 sampling)	
Station: B	GEWC	S-1 CS-2	N (Š	Time: 123	8
Flood	/ Ebb	@p River/	Down River	Avg. Velocity: Ç	0.663
Lat/Northing: 4	5.57914	Long/Easting:	2,75500	Total Water Dep	oth: 41
	(feet]	Turbidity [NTU]	pH [-]	D.O.	Temp.
Surface	1	2.25	7.14	8 84	
Middle	20.5	3.27	7.15	877	191
Deep	38	4.16	7.18	8.72	191
Comments ^[1] :	· No odors	s. Shins.	dis coloca	tion 00	SUCDIALA)
	materials	observ	ed		uzzoneo
Construction Act	ivity: ISS P	rilling (1-	3 sampling)		
Recorded by:	Simon Du	denhoefer			

OEA

	YSI #	5006	Drobe #7	1F103678	Portland, C
Wa	ter Quality	Monitori	na Form - F	ield Parm	eters
	Gasco	Sediment	Site ISS Pi	lot Study	101013
Date: 9-2	25-23		Circuit Numb	er: 3	
Station:	BG EW	-8-1 ⁻² CS-2	N S	Time: 30	5
Floo	d/Ebb	Up Rive	/ Down River	Avg. Velocity: (2.951
Lat/Northing: 4	45.57941	Long/Easting:	22,75504	Total Water De	pth: 44
	Water Depth [feet]	Turbidity [NTU]	рН [-]	D.O. [mg/L]	Temp.
Surface	1	2.64	7.13	8.82	19.1
Middle	22	3.33	7.14	8.77	19.1
Deep	41	3.96	7.14	8.76	191
Construction Action Station: E	ctivity: ISS D	<u>S-1)</u> CS-2	3) N (S)	Time: 1953	3
Floor	Ebb	Up River 7	Down River	Avg. Velocity:	0.666
Lat/Northing: 4	5.57891	Long/Easting:	22.75456	Total Water Dep	oth: 38
	Water Depth	Turbidity	рН	D.O.	Temp.
Surface	[leet]	2 47		[mg/L]	[deg-C]
Middle	19	2 55	7 17	871	
Deep	35	4 25	7 01	8.70	19,1
Comments ^[1] : o	No shun, o	dors, diz	coloration,	C. IJ	19.1 Let
	material	observed		1	
c	Collecting W	s C Lu	p (35') due	to highest	-turbidity
Construction Act	ivity: ISS D	rilling (1-	.3)		
Recorded by:	Dimon Du	derhalf	er		
1 Include observa	tions of floating/sus	ponded meterial	ahaa 11 taan		

6720 S Macadam Ave., Suite 300 Portland, OR 98219

ANCHOR			6720 S Macada
MA	YST D. DEC HEADE	D.	PO
	17 L 40055 TEG(101	Vaho	H11102/76

l wat	er Quality	Monitori	an Form		
	Gasco	Sediment	Site ISS Pi	leid Parn	neters
Date: 9-2	5-23		Circuit Numb	per: 4	
Station:	G EW	CS-1 CS-2	2 N S	Time: 142	5
Floor	d/Ebb	Up River	/ Down River	Avg. Velocity:	0.593
Lat/Northing: 4	5,58047	Long/Easting:	22.75806	Total Water De	epth: 14,2
	Water Depth [feet]	Turbidity [NTU]	рН [-]	D.O.	Temp.
Surface	1	2.05	7.16	8 80	
Middle	22.1	2.82	7,17	8 77	19 1
Deep	41.2	3.50	7.18	8.74	191
Comments ^[1] :	No sheers	odors, d	iscoloration	ns or fus	pendet
1					
Construction Ac	tivity: ISS I	Drilling (1-4)		
Construction Ac Station: B	G EW C	S-1 CS-2	N (S)	Time: 4 4 ()
Construction Ac Station: B Flood	etivity: ISS I G EW C	S-1 CS-2	N S Down River	Time: 1440 Avg. Velocity: ()),438
Construction Ac Station: B Flood Lat/Northing: 44	etivity: ISS I G EW C J/Ebb 5,S792S Water Depth	S-1 CS-2	N (S) Down River 22.75495	Time: 1440 Avg. Velocity: (Total Water Dep)),438 pth: 45,5
Construction Ac Station: B Flood Lat/Northing: 44	etivity: ISS I G EW C D/Ebb S,S792S Water Depth [feet]	S-1 CS-2 DRiver Long/Easting: // Turbidity [NTU]	N S Down River 22.75495 pH [-]	Time: 1440 Avg. Velocity: (Total Water Dep D.O. [mg/L])), 438)), 43, 5)), 45, 5) Temp. [deg-C]
Construction Ac Station: B Flood Lat/Northing: 44 Surface	etivity: ISS I G EW C D/Ebb S.S792S Water Depth [feet]	S-1 CS-2 DPRiver Long/Easting: // Turbidity [NTU] 3.24	N S Down River 22.75495 pH [-] 7.15	Time: 4 4 (Avg. Velocity: (Total Water Dep D.O. [mg/L] 8,83)),438 oth:45,5 Temp. [deg-C]
Construction Ac Station: B Flood Lat/Northing: 4 Surface Middle	tivity: $I \le S$ G (EW) C O / Ebb S, S = 0.5 Water Depth [feet] 1 22.5	S-1 CS-2 Dep River Long/Easting: // Turbidity [NTU] 3.24 2.4	N S Down River 22.75495 pH [-] 7.15 7.14	Time: 4 4 (Avg. Velocity: (Total Water Dep D.O. [mg/L] 8, 83 8, 77) 0.438 oth: 45.5 Temp. [deg-C] 19.1 19.1
Construction Ac Station: B Flood Lat/Northing: 44 Surface Middle Deep	etivity: $\mathbb{I} \le S$ G EW C 0 / Ebb 5, \$792S Water Depth [feet] 1 22.75 42.5	2.4 2.4 2.4 3.9 2.9 2.9 3.9 3.9 3.9 3.9 3.9 3.9 3.9 3	N S Down River 22.75495 pH [-] 7.15 7.14 7.16	Time: [4 4 (Avg. Velocity: (Total Water Dep D.O. [mg/L] 8,83 8,77 8,75)).438))th:45.5 Temp. [deg-C]]9.1]9.1]9.1
Construction Ac Station: B Flood Lat/Northing: 4 Surface Middle Deep Comments ^[1] :	etivity: ISS G EW C P/Ebb 5,S792S Water Depth [feet] 1 22.75 42.5 No Sheets	$\frac{2 \cdot 111 \cdot 0.9}{\text{CS-2}}$	N S Down River 22.75495 pH [-] 7.15 7.14 7.16 Jis colorati	Time: [4 4 (Avg. Velocity: (Total Water Dep D.O. [mg/L] 8,83 8,77 8,75)).438))th:45.5 Temp. [deg-C] 19.1 19.1 19.1
Construction Ac Station: B Flood Lat/Northing: 4 Surface Middle Deep Comments ^[1] :	etivity: ISS I G EW C D/Ebb 5.S792S Water Depth [feet] 1 22.75 42.5 No Shelas No Shelas	2.4 2.4 3.91 o Jors, o b served	N S Down River 22.75995 pH [-] 7.15 7.14 7.16 dis colorati	Time: [4 4 (Avg. Velocity: (Total Water Dep D.O. [mg/L] 8,83 8,77 8,75)).438)).438))).438) Temp. [deg-C]]]]]]]]]]]]]]]]]]]
Construction Action: B Flood Lat/Northing: 4 Surface Middle Deep Comments ^[1] :	ivity: ISS I G EW C D/Ebb 5.5792S Water Depth [feet] 1 22.75 42.5 No Shelas No Shelas	S-1 CS-2 DRIVED Long/Easting: M Turbidity [NTU] 3.24 2.41 3.91 ,020,0 b served illing (1-	N S Down River 22.75995 pH [-] 7.15 7.14 7.16 dis coloration 4)	Time: [4 4 (Avg. Velocity: (Total Water Dep D.O. [mg/L] 8,83 8,77 8,75)).438 oth: 45.5 Temp. [deg-C] 19.1 19.1 19.1 uspended

6720 S Macadam Ave., Suite 300 Portland, OR 98219

ANCHOR OEA				6720 S	Macadam Ave.,
	YSI Prof	X55 #5∞6	Probe	#21E1036	Portland,
Wa	ter Quality	Monitori	ng Form - I	Field Parm	neters
Detro Q /	Gasco	Sediment	Site ISS Pi	lot Study	
Date: 9-1	15-23	~	Circuit Numl	per: 4	
Station:	BG EW (CS-1) CS-2	N (S)	Time: 145	55
Floc	od/Ebb	Up River	Down River	Avg. Velocity:	0.145
Lat/Northing:	5.57893	Long/Easting:	122.75465	Total Water De	epth: 40
	Water Depth	Turbidity	pН	D.O.	Temp.
Surface	1			[mg/L]	[deg-C]
Middle	20	7.01	1.21	0.82	19.1
Deep	20	3.03	1011	8.78	19.1
Comments ^[1] .	31	4.63	1.21	8.75	19.1
	· No shens	, odors, a	drscolorat	ion, or su	spended
	material	observe	d		
Construction A	Collecting Ch	unistry samp	pla here @ 3	7' (highest	turbidity)
Station: F		<u>11110) (1-4</u>	<u>)</u>		
Floor		,3-1 CS-2	N (S)	Time: 508	3
Lat/Northing: A	G SACAR	Up River/	Down River	Avg. Velocity:	.164
Labrioruning. 4	Vater Depth	Long/Easting:	22.75501	Total Water Dep	oth: 46.4
	[feet]	[NTU]	рн [-]	D.O. [ma/L]	Temp. Idea-Cl
Surface	1	2.03	7.16	8.83	191
Middle	23.2	3.10	7.20	876	19.1
Deep	43.4	4.01	7.23	873	19.1
Comments ^[1] :	No sheers	odors, d	3coloration	or suse	rended
	Material o	bserved			
Construction Ac	tivity: ISS Ø	prilling (1-	+)		
Recorded by:	Simon Di	denhae f	er		
1 Include observa	ations of floating/sur	spended material			

ANCHOR OEA

ANCHOR OEA

Probe #21E10	3678	YSPro DSS	#6970
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Wat	er Quality	Monitorin	na Form - F	ield Parm	eters
	Gasco S	Sediment	Site ISS Pi	lot Study	
Date: 9 - 2	-6-23		Circuit Numb	er: 1	
Station:	G EW (CS-1 CS-2	N (S)	Time: 103	S
Flood	Ebb	Up River /	Qown River	Avg. Velocity:	0.403
Lat/Northing: 44	5.57875	Long/Easting:	22.75404	Total Water De	pth: 36.6
	Water Depth	Turbidity	pН	D.O.	Temp.
	[feet]	[NTU]	[-]	[mg/L]	[deg-C]
Surface	١	2.04	7.11	8.94	18.7
Middle	18.3	2.86	7.17	8.85	18.7
Deep	33.6	4.08	7.13	8.84	18.7
Comments ^[1] : 。	No Sheen	otors di	Scolaration	DC SUSMA	ded
100	ALACIAL	1	1		
Construct	Tion Activi	Serves	5 CRMOURI		
Construct Station: B	G (EW) C	Serves Hy: Pebri S-1 CS-2	S removal	Time: 104-	7
Construct Station: B Flood	G EW C	SERVES Ty: Debri S-1 CS-2 Up River(S removal N S Down River	Time: 04-	7 0.237
Construct Station: B Flood Lat/Northing: 44	<u>G</u> EW C G. EBD 5.58015	Serves <u>Hy: Debri</u> S-1 CS-2 Up River Long/Easting: 10	5 removal N S Down River 22.75679	Time: 04 Avg. Velocity: 0 Total Water Dep	7 0.237 oth: 44.8
Construct Station: B Flood Lat/Northing: 44	G EW C G EW C 5.58015 Water Depth	Serves Hy: Debri S-1 CS-2 Up River (Long/Easting: 10 Turbidity	5 removal N S Down River 22.75679 pH	Time: 04 Avg. Velocity: 0 Total Water Dep D.O.	7 0.237 oth: 44.8 Temp.
Construct Station: B Flood Lat/Northing: 44	G EW C G EW C G EW C G EB G S S 80 S Water Depth [feet]	Serves Harris Debri S-1 CS-2 Up River (Long/Easting: Turbidity [NTU]	5 <i>Ce moval</i> N S Down River 22.75679 pH [-]	Time: 04 Avg. Velocity: 0 Total Water Dep D.O. [mg/L]	7 0.237 oth: 44.8 Temp. [deg-C]
Construct Station: B Flood Lat/Northing: 4- Surface	G EW C G EW C 5.58015 Water Depth [feet]	Serves <u>H</u> : <u>P</u> Cbri S-1 CS-2 Up River(Long/Easting: Turbidity [NTU] 2,13	5 removal N S Down River 22.75679 pH [-] 7.15	Time: 047 Avg. Velocity: 0 Total Water Dep D.O. [mg/L] & .93	7 0.237 oth: 44.8 Temp. [deg-C] 18.7
Construct Station: B Flood Lat/Northing: 44 Surface Middle	G EW C G EW C 5.58015 Water Depth [feet] 1 22.4	Serves <u>H</u> : <u>P</u> Cbri S-1 CS-2 Up River (Long/Easting: 10 Turbidity [NTU] 2.13 2.92	<u>5</u> <u>removal</u> N S Down River 22.75679 pH [-] 7.15 7.15	Time: 1047 Avg. Velocity: (Total Water Dep D.O. [mg/L] & .93 & .85	7 0.237 oth: 44.8 Temp. [deg-C] 18.7 18.7
Construct Station: B Flood Lat/Northing: 44 Surface Middle Deep	G EW C G EW C 5.58015 Water Depth [feet] 1 22.4 41.8	Serves <u>H</u> : <u>P</u> Cbri S-1 CS-2 Up River(Long/Easting: Turbidity [NTU] 2.13 2.92 7.74	<u>S</u> <u>removal</u> N S Down River 22.75679 pH [-] 7.15 7.15 7.15 7.17	Time: 1047 Avg. Velocity: (Total Water Dep D.O. [mg/L] 8.93 8.93 8.85 8.79	7 0.237 oth: 44.8 Temp. [deg-C] 18.7 18.7 18.7
Construct Station: B Flood Lat/Northing: 4-4 Surface Middle Deep Comments ^[1] :	G EW C G EW C 5.58015 Water Depth [feet] 1 22.4 41.8 No shell 9	Serves <u>Hy: Debri</u> S-1 CS-2 Up River(Long/Easting: 10 Turbidity [NTU] 2.13 2.92 7.74 Jorg. Jisc	<u>s</u> removal N S Down River 22.75679 pH [-] 7.15 7.15 7.15 7.17 oloration	Time: 1047 Avg. Velocity: (Total Water Dep D.O. [mg/L] 8.93 8.93 8.85 8.79	7 0.237 oth: 44.8 Temp. [deg-C] 18.7 18.7 18.7
Construct Station: B Flood Lat/Northing: 4 Surface Middle Deep Comments ^[1] : Materia	G EW C G EW C S.58015 Water Depth [feet] 1 22.4 41.8 No shell, 9 al observe	Serves <u>Hy: Debri</u> S-1 CS-2 Up River(Long/Easting: 10 Turbidity [NTU] 2.13 2.92 7.74 Jorg, Jisc J related	<u>s</u> removal N S Down River 22.75679 pH [-] 7.15 7.15 7.15 7.17 coloration, to construct	Time: 1047 Avg. Velocity: (Total Water Dep D.O. [mg/L] 8.93 8.93 8.93 8.93 8.93 8.79 or sugpend ction action	7 0.237 oth: 44.8 Temp. [deg-C] 18.7 18.7 18.7 18.7
Construct Station: B Flood Lat/Northing: 44 Surface Middle Deep Comments ^[1] : o Materia	G EW C G EW C S.S801S Water Depth [feet] 1 22.4 41.8 No shell, 9 al observe	Serves <u>Hy: Debri</u> S-1 CS-2 Up River(Long/Easting: 10 Turbidity [NTU] 2.13 2.92 7.74 Jorg, Jisc J related : Debris	S removal N S Down River 22.75679 pH [-] 7.15 7.15 7.15 7.15 7.17 coloration, to construct 5 removal	Time: 1047 Avg. Velocity: (Total Water Dep D.O. [mg/L] 8.93 8.93 8.93 8.93 8.79 OF Sugpend	7 0.237 oth: 44.8 Temp. [deg-C] 18.7 18.7 18.7 18.7

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Pro	068 #21E	103678	YSI P	DSS # 6	970	
Wat	ter Quality	Monitori	ng Form - I	ield Parm	eters	
	Gasco S	Sediment	Site ISS Pi	lot Study		
Date: 9-2	26-23		Circuit Num	oer: 1		
Station: E	BG EW	CS-1 CS-2	2 🔊 s	Time: 1100		
Floo	d (Ebb	Up River	Down River	Avg. Velocity: (2.127	
Lat/Northing:4	5. S80 33 Long/Easting:\		22.75755	Total Water Depth: 41 7		
	Water Depth	Turbidity	pН	D.O.	Temp	
	[feet]	[NTU]	[-]	[mg/L]	[deg-0	
Surface		2.31	7.18	8.92	18.	
Middle	20.6	3.55	7.12	8.85	18.	
Deen	20 1	700	- 0			
Comments ^[1] :	No shen, a naterial a	1.38 odors, dis observed	T.13	8.77 Pr Susper	18.7 ntej	
Comments ^[1] :	No shen, a naterial a	1.38 odors, dis observed	bris RMD	8.77 pr susper	18.7 ntej	
Comments ^[1] : W Construct	No shen, a naterial a tion Actin BG EW C	1.38 odors, dis observed uity: De S-1 CS-2	bris RWD	8.77 pr Susper Ual Time: 1114	18.7 ntej	
Comments ^[1] : W Construc Station: B Flood	No shen, a naterial a tion Action BG EW C	1.38 odors, dis observed vity: De S-1 CS-2 Up River/	Down River	8.77 Dr Susper Ua Time: 1114 Avg. Velocity: Q	18.7 ntej	
Comments ^[1] : M Construc Station: B Flood Lat/Northing: T	No shen, a naterial a tim Action G EW C S. 58027	1.38 odors, dis observed vity: De S-1 CS-2 Up River / Long/Easting: 19	Dris RIND Down River	8.77 Dr Susper UA Time: 1114 Avg. Velocity: Q Total Water Dep	18.7 ntej 0.376 pth: 45.3	
Comments ^[1] : M Construc Station: B Flood Lat/Northing: 4	No Shin, a naterial a tion Action G EW C S. 58027 Water Depth	1.38 odors, dis observed vity: De S-1 CS-2 Up River/ Long/Easting: 19 Turbidity	7.13 scoloration, s bris RIMO N S Qown River 22,75659 pH	8.77 Dr Susper UA Time: 1114 Avg. Velocity: Q Total Water Dep D.O.	18.7 n eJ 0.376 pth: 45.2 Temp.	
Comments ^[1] : M Construc Station: B Flood Lat/Northing: 4	No Shin naterial tim Action SG EW C S. 58027 Water Depth [feet]	1.38 odors, dis observed vity: De S-1 CS-2 Up River / Long/Easting: 19 Turbidity [NTU]	7.13 coloration, bris RMD N S Qown River 22.75659 pH [-]	8.77 Susper UA Time: 1114 Avg. Velocity: C Total Water Dep D.O. [mg/L]	18.7 176J 0.376 oth: 45.2 Temp. [deg-C	
Comments ^[1] : M Construction: B Station: B Flood Lat/Northing: 4 Surface	No Shin naterial tion Activ BG EW C S. 58027 Water Depth [feet]	1.38 odors, dis observed vity: De CS-1 CS-2 Up River/ Long/Easting: 19 Turbidity [NTU] 2.0	7.13 coloration, bris RMD N S Qown River 22.75659 pH [-] 7.16	8.77 SUSPER UR Time: 1114 Avg. Velocity: C Total Water Dep D.O. [mg/L] 8,93	18.7 nJeJ 0.376 oth: 45.2 Temp. [deg-C 18.7	
Comments ^[1] : M Construction: B Station: B Flood Lat/Northing: A Surface Middle	No Shin naterial tim Action SG EW C S. 58027 Water Depth [feet] 1 22.9	1.38 odors, dis observed vity: De CS-1 CS-2 Up River/ Long/Easting: 19 Turbidity [NTU] 2.0	7.13 coloration, bris RMD N S Qown River 22.75659 pH [-] 7.16 7.19	8.77 CA Time: 1114 Avg. Velocity: (Total Water Dep D.O. [mg/L] 8,93 8.87	18.7 nJeJ 0.376 oth: 45.8 Temp. [deg-C 18.7 18.7	
Comments ^[1] : M Construction: B Station: B Flood Lat/Northing: A Surface Middle Deep	No shen naterial tion Activ G EV S. 58027 Water Depth [feet] 1 22.9 42.8	1.38 odors, dis observed vity: De S-1 CS-2 Up River / Long/Easting: 19 Turbidity [NTU] 2.0 2.0 7.56	7.13 coloration, 9 bris RMD N S Qown Rived 22.75659 pH [-] 7.16 7.19 7.20	8.77 SUSPER UA Time: 1114 Avg. Velocity: (Total Water Dep D.O. [mg/L] 8,93 8,83	18.7 176 0.376 0th: 45.2 Temp. [deg-C 18.7 18.7	
Comments ^[1] : M Carry for C Station: B Flood Lat/Northing: for Surface Middle Deep Comments ^[1] : o	No Shell No Shell No Shell No Shell No Shell No Shell No Shell	1.38 odors, dis observed vity: De S-1 CS-2 Up River / Long/Easting: 19 Turbidity [NTU] 2.0] 2.26 7.56 Odors, drs	7.13 coloration, bris RMD N S Qown Rived 22.75659 pH [-] 7.16 7.19 7.20 coloration, C	8.77 Cal Time: 1114 Avg. Velocity: (Total Water Dep D.O. [mg/L] 8,93 8,93 8,83 8,83 0,543pend	18.7 17eJ 2.376 2.376 2.376 2.376 2.376 2.376 2.376 2.376 2.377 2.376 2.3776 2.37777 2.37777 2.377777 2.377777777777	
Comments ^[1] : M Construct Station: B Flood Lat/Northing: A Surface Middle Deep Comments ^[1] : o M o (ollecting	No shen A terial o A terial o A terial o A terial o 1 22.9 42.8 No shen aterial o chinistry	1.38 odors, dis observed vity: De CS-1 CS-2 Up River/ Long/Easting: 1° Turbidity [NTU] 2.0] 2.26 7.56 Odors, drs bserved som ple Ws	7.13 coloration, s bris RMD N S Qown River 22.75659 pH [-] 7.16 7.19 7.20 coloration, s e @ 42.8' (8.77 Dr Susper UA Time: 1114 Avg. Velocity: Q Total Water Dep D.O. [mg/L] 8,93 8,93 8,83 05 5 USPEND highest NTU	18.7 176 0.376 oth: 45.8 Temp. [deg-C 18.7 18.7 18.7	
Comments ^[1] : M Construct Station: B Flood Lat/Northing: A Surface Middle Deep Comments ^[1] : o M o (ollecting Constructs	No shen A terial o Him Action BG EW C S. 58027 Water Depth [feet] 1 22.9 42.8 No shen, aterial o chunistry on Activity	1.38 odors, dis observed vity: De CS-1 CS-2 Up River/ Long/Easting: 1° Turbidity [NTU] 2.0] 2.0] 2.26 7.56 Odors, drs bserved som ple his 1.20	7.13 coloration, o bris RMO N S Qown River 22,75659 pH [-] 7.16 7.19 7.20 coloration, o coloration, o coloration, o	8.77 Dr Susper UA Time: 1114 Avg. Velocity: Q Total Water Dep D.O. [mg/L] 8,93 8,83 8,83 05 SUSPEND highest NTU	18.7 nJeJ 0.376 oth: 45.8 Temp. [deg-C] 18.7 18.7 18.7	
Water Quality Monitoring Form - Field Parmeters						
--	--	--	---	---	--	--
Date: 9-26-23 Circuit Number: 0						
Station:	G EW (CS-1 CS-2	N (S)	Time: 162	5	
Floor	d /Ebb	Up River	Down River	Avg. Velocity: (2.049	
Lat/Northing: 4	5.57874	Long/Easting:	22.75399	Total Water De	pth: 40.2	
	Water Depth [feet]	Turbidity [NTU]	рН [-]	D.O. [mg/L]	Temp.	
Surface	1	2.02	7.28	8,93	18.8	
		0.00	700	0.00	10 0	
Middle	20.1	2.85	1.29	8.85	18.8	
Middle Deep Comments ^[1] : Ma	20.1 37.2 No shen trial obse	2.85 3.33 ,02015, 215 erved	7.32 coloration, o	8.85 8.78 or susper	18.8 18.8 ded	
Middle Deep Comments ^[1] : Mat <u>Constructio</u> Station: B	20.1 37.2 • No shen erial obse	2.85 3.33 odors, dis erved Debris r	7.32 coloration, o	8.85 8.78 or Susper 5 Drilling	18.8 18.8 18.6 (1-4)	
Middle Deep Comments ^[1] : Mat <u>Construction</u> Station: E Flood	20.1 37.2 No shen trial obse on Activity G EW C	2.85 3.33 odors, dis erved Debris r S-1 CS-2 Up River	7.32 coloration, c <u>emoval, IS</u> NS Down River	8.85 8.78 or Susper 5 Drilling Time: [638 Avg. Velocity: (18.8 18.8 (1-4) 3 0 992	
Middle Deep Comments ^[1] : Mat <u>Construction</u> Station: E Flood Lat/Northing: 4-4	20.1 37.2 No shen trial obse on Activity G EW C	2,85 3.33 odors, dis erved Debris r S-1 CS-2 Up River / Long/Easting:	7.32 coloration, c <u>emoval</u> , IS <u>N</u> S <u>Down River</u> 22.75693	8.85 8.78 Dr Susper 5 Drilling Time: [638 Avg. Velocity: (Total Water Dep	18.8 18.8 (1-4) 3) -092 oth: 46.2	
Middle Deep Comments ^[1] : Mat <u>Construction</u> Station: E Flood Lat/Northing: 4-4	20.1 37.2 No shin trial obse G EW C SG EW C S. S& Q13 Water Depth Ifeet1	2,85 3.33 odors, drs erved Debris r S-1 CS-2 Up River / Long/Easting:	7.32 coloration, c <u>emoval</u> , IS <u>N</u> S <u>Down River</u> 22.75693 <u>pH</u>	8.85 8.78 or SUSPER 5 Doilling Time: 1638 Avg. Velocity: (Total Water Dep D.O.	18.8 18.8 (Jed) -092 oth: 46.3 Temp.	
Middle Deep Comments ^[1] : Mat <u>Construction</u> Station: E Flood Lat/Northing: 4-4 Surface	20.1 37.2 No shin trial obse on Activity G EW C S. S& Q13 Water Depth [feet]	2.85 3.33 odors, drs erved Debris r S-1 CS-2 Up River / Long/Easting: Turbidity [NTU] 2,35	7.32 coloration, c <u>emoval</u> , IS <u>Down River</u> 22.75693 <u>pH</u> [-] 7.32	8.85 8.78 Dr Susper 5 Drilling Time: [638 Avg. Velocity: (Total Water Dep D.O. [mg/L] 8.94	18.8 18.8 18.8 18.8 (1-4) (1-4) 3) -092 oth: 46.3 Temp. [deg-C] 18.8	
Middle Deep Comments ^[1] : Mat <u>Construction</u> Station: E Flood Lat/Northing: 4-4 Surface Middle	20.1 37.2 No shin trial obse on Activity G EW C 5.58013 Water Depth [feet] 1 23.15	2,85 3.33 odors, dis erved Debris r S-1 CS-2 Up River / Long/Easting: [NTU] 2,35 2,68	7.32 coloration, c <u>emoval, IS</u> <u>N</u> S <u>Down River</u> 22.75693 <u>pH</u> <u>[-]</u> 7.32 7.29	8.85 8.78 5.05 5.05 Time: 1638 Avg. Velocity: (Total Water Dep D.O. [mg/L] 8.94 8.88	18.8 18.8 18.8 18.8 18.8 1.092 oth: 46.3 Temp. [deg-C] 18.8 18.8	
Middle Deep Comments ^[1] : Mat <u>Construction</u> Station: E Flood Lat/Northing: 4 Surface Middle Deep	20.1 37.2 No shin trial obse on Activity G EW C 5.58013 Water Depth [feet] 1 23.15 43.3	2,85 3.33 ,02015, 215 erved 2 Debris 1 2 Debris 1 2,35 2,68 4,31	7.32 coloration, o <u>emoval, Is</u> N S <u>Down River</u> 22.75693 <u>pH</u> [-] 7.32 7.29 7.32	8.85 8.78 5 Doill; 19 5 Doill; 19 Time: [638 Avg. Velocity: (Total Water Dep D.O. [mg/L] 8.94 8.88 8.84	18.8 18.8 18.8 18.8 (1-4) 3 0 -0 92 oth: 46.3 Temp. [deg-C] 18.8 18.8 18.8 18.8 18.8	

ANCHOR				6720 S	Macadam Ave.,		
Pro	06 #21E	103678	YSIP	roDSS #6	Portland, 5970		
Wat	er Quality	Monitori	ng Form - F	ield Parm	neters		
Date: 9 - 2 6 - 2 3 Circuit Number: 7							
Station: E	G EW (CS-1) CS-2	N S	Time: 164	9		
Floor	d / EDB	Up River	Down River	Avg. Velocity: (0.224		
Lat/Northing: 4	+5. 58035	Long/Easting: I	22.75750	Total Water De	pth: 45.7		
	Water Depth	Turbidity	рН	D.O.	Temp.		
Surface	[feet]		[-]		[deg-C]		
Middle	10.80	2014	1.20	0.90	18.8		
Middle	22.05	2.01	1.26	8.91	10.4		
Deep	42.01	3.26	7.32	8.04	14.8		
Constructio	in activity:	Debris re	MOVAL, ZSS	Drilling (1-	+)		
Station: B	G EW C	S-1 C5-2	N S	Time: 170	1		
Flood	I/Ebb	Up River (Down River	Avg. Velocity: (0.394		
Lat/Northing: 4	5.58024	Long/Easting: [22.75679	Total Water Dep	oth: 47, 4		
	Water Depth	Turbidity	pH [-]	D.O.	Temp.		
Surface		1,95	7.25	9.02	18.8		
Middle	23.7	2.07	7.23	8.93	18.8		
Deep	44.4	6.17	7.47	8.77	18 8		
Comments ^[1] :	No shell, Material	o dors, dis	coloration,	or suspe	rted		
Recorded by:	Simon D	Debris rei udenhoe	moval, ISS Fer	Drilling (1	-4)		

ANCHOR OF A

6720 S Macadam Ave., Suite 300 Portland, OR 98219

Probe # 21E103678 YSI Pro DSS #6970								
Water Quality Monitoring Form - Field Parmeters								
Gasco Sediment Site ISS Pilot Study								
Date: 9 - 27 - 23 Circuit Number: 1								
Station: B	G EW C	CS-1 CS-2	N (S	Time: 084	S			
Flood	Ebb	Up River	Down River	Avg. Velocity: (0.244			
Lat/Northing: 4	5,57873	Long/Easting:	22.75405	Total Water De	pth: 37.5			
	Water Depth	Turbidity	рН	D.O.	Temp.			
	[feet]	[NTU]	[-]	[mg/L]	[deg-C]			
Surface	1	2.24	7.10	8.98	18.3			
Middle	18.75	2.31	7.08	8.93	18.3			
Deep	34.5	2.06	7.15	8.91	18.3			
Construction Act	tivity: ISS D	rilling (1-6	,)					
Station: B	G EW C	S-1 CS-2	N S		C			
Flood	Ebb	Up River/	Down River	Avg. Velocity: (0.345			
Lat/Northing: 45	. 58008	Long/Easting: 17	2.75692	Total Water Dep	oth: 44			
	Water Depth	Turbidity	рН	D.O.	Temp.			
	[feet]	[NTU]	[-]	[mg/L]	[deg-C]			
Surface		2.06	7.15	8.97	18.3			
Middle	22	2.+2	7.17	8.91	18.4			
Deep	41	3.63	8.29	8.83	18.3			
comments ". No sween, odor, or orscoloration or suspended								
mat	erial obs	uvet.						
Construction Activ	vity: ISS Do	illion (1-6)					
Recorded by: <	in D		1					

[1] Include observations of floating/suspended material, sheens, discoloration, and odors.

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Probe # 21E103678 YSI ProDSS #6970 Water Quality Monitoring Form - Field Parmeters Gasco Sediment Site ISS Pilot Study Date: 9 - 27 - 23 Circuit Number: 1 Station: BG EW CS-1) CS-2 (\mathbf{N}) Time: 0970 S Flood (Ebb) Avg. Velocity: 0.382 Up River (Down River) Lat/Northing: 45, 50030 Long/Easting: 122_75751 Total Water Depth: 42.5 Water Depth Turbidity pH D.O. Temp. [feet] [NTU] [-] [mg/L][deg-C] Surface 94 8.99 18.3 7.12 21.25 Middle 2.13 7.09 8.92 8.3 39.5 Deep 2.75 8.90 7.28 8.3 Comments^[1]: · No swen, odor, or discoloration, suspended material Observed · Collecting chanistry sample here @ 39.5' (hishest turbidits) Construction Activity: DS Drilling (1-6) Station: BG CS-2 (N) EW CS-1 Time: 0935 S Flood (Ebb) Up River / Down River Avg. Velocity: Lat/Northing: 45, 58020 Long/Easting: 122.75676 Total Water Depth: 44,5 Water Depth Turbidity pH D.O. Temp. [feet] [NTU] [-] [mg/L][deg-C] Surface 1.86 7.08 9.02 18,3 22,25 Middle 7.15 2.07 8.3 8.94 41.5 2.36 Deep 8.89 7.20 8.3 Comments^[1]: · No sheen, odor, discoloration, or suspended material observed Construction Activity: 155 Drilling (1-6 Recorded by: SiMON denhoptor

C ANCHOR

Probe #21E103678 YSI ProD55#6970								
Water Quality Monitoring Form - Field Parmeters								
Gasco Sediment Site ISS Pilot Study								
Date: 9 - 7	21-23		Circuit Numb	er: 2				
Station: 🖳	G EW (CS-1 CS-2	N S	Time: 04	5			
Flood	LEbb	Up River	Down River	Avg. Velocity:	0.175			
Lat/Northing: 4	5.57875	Long/Easting:	22.75405	Total Water De	pth: 41.5			
	Water Depth	Turbidity	рН	D.O.	Temp.			
	[feet]	[NTU]	[-]	[mg/L]	[deg-C]			
Surface	l	1.61	7.16	9.07	18.3			
Middle	20.75	2.06	7.20	8.97	18.3			
Deep	38.5	2.24	רו.ד	8.93	18.2			
Construction Ac	tivity: ISS D	rilling (1-	-7)					
Station: B	GEWC	S-1 CS-2	(N) S	Time: 100)			
Flood	(Ebb)	Up River /	Down River	Avg. Velocity:).139			
Lat/Northing: 4	5.50013	Long/Easting:]	22.75890	Total Water Dep	th: 43 <			
	Water Depth	Turbidity	рН	D.O.	Temp.			
	[feet]	[NTU]	[-]	[mg/L]	[deg-C]			
Surface		1.90	7.14	9.02	18.3			
Middle	21.75	2.01	7.14	8.96	18.3			
Deep	Deep 40.5 *2.20 7.43 8.90 18.3							
comments ⁽¹⁾ : No shun, o dor, discoloration ^{pr} suspended materials observed								
Construction Activ	vity: ISS Dr	illing (1-	1)					
Recorded by:	Simon Du	denhoef	er					
] Include observat	ions of floating/eue	pended material	abaana di la					

ANCHOR OFA

DEA LEE					Portland, O			
Probe #21E103678 YSI ProDSS #6970								
Wat	Water Quality Monitoring Form - Field Parmeters							
Date: 9 -	27-73	Jeannent	Circuit Numb					
Station:	BG EW A	S-1 CS-2		Time: 111	\leq			
Floo	d (Ebb)				$\overline{)}$			
Lat/Northing: 4	6 68 020		Down River	Avg. velocity:	0.248			
	Water Depth	Turbidite	22.13138	I otal Water De	epth: 41 ~ X			
	[feet]	[NTU]	рн [-]	D.O.	Temp.			
Surface	Ì	1.83	7.12	9.04	18.3			
Middle	20.9	2.34	7.21	8.98	18.3			
Deep	38.8	3.93	7.96	8.90	18.3			
• Basse +	tug logat p ctivity: ISS Dr	passed loca	tion vIII),	Collecting of here @ 38.	Nen sande 8' (hishestwir)			
Station: E	BG EW C	S-1 CS-2	S 🔊	Time: 1130				
Floor	KEDD	Up River (Down River	Avg. Velocity: Ç	0.408			
Lat/Northing: 4	5.58032	Long/Easting: 122 . 75685		Total Water Depth: 45 . 5				
	Water Depth [feet]	Turbidity [NTU]	рН [-]	D.O.	Temp.			
Surface	1	1.62	7.09	9.08	[deg-C]			
Middle	22.75	2.24	7.11	8.98	18.3			
Deep	42.5	2.57	7.12	8.93	18.3			
Comments ^[1] :	comments ^[1] : Beat passing dwing wan							
oNo :	shell, odor,	discolor	ration, or Si	nsperted n	naterial			
obs	erwed							
Construction Act	ivity: ISS De	rilling (1-7)					
Recorded by:	Simon Dud	achante						

6720 S Macadam Ave., Suite 300 Portland, OR 98219

ANCHOR				6720 S	Macadam Ave. Portland,	
Pro	be #21E1	103678	YSI	Pro PSS #	6970	
Water Quality Monitoring Form - Field Parmeters Gasco Sediment Site ISS Pilot Study						
Date: 9 - 27 - 23 Circuit Number: 3						
Station:	EW EW	CS-1 CS-2	2 (N) S	Time: 130	0	
Floor	/ Ebb	Up River	Down River	Avg. Velocity:	0.013	
Lat/Northing: 4	5-58053	Long/Easting:	122,75821	Total Water De	pth: 43	
	Water Depth [feet]	Turbidity [NTU]	рН [-]	D.O. [mg/L]	Temp. [deg-C]	
Surface	1	1.87	7.28	9.14	18.3	
Middle	21.5	2.17	7.23	9.02	18.3	
Deep	40	3.16	7.22	9.00	187	
Comments ^[1] : MA	•No sheer erial obse	n, odor, d	rs coloration	n, or susp	ende j	
Comments ^[1] : MA Construction Ac Station: B	• No sive • No sive • nal obse • tivity: ISS Po G (EW) (n, odor, d rved S-1 CS-2	rs coloration	Time: 131	sended	
Comments ^[1] : MA Construction Ac Station: B Flood	• No sive •	S-1 CS-2	N S Down River	Time: 31	S 0.034	
Comments ^[1] : MA Construction Ac Station: B Flood at/Northing: 4	•No sive •No sive •rial obse •tivity: ISS Po G (EW) (C DEbb 5. 579 17	S-1 CS-2	N S Down River	Time: 31 Avg. Velocity: C Total Water Dep	5 0.034 0.034	
Comments ^[1] : MA Construction Ac Station: B Flood at/Northing: 4	• No sive crial obse divity: ISS Do G EW C DEbb S. S79 17 Water Depth [feet]	Up River Long/Easting: M [NTU]	N Down River 22,75505 pH [-]	Time: 345 Avg. Velocity: Total Water Dep D.O. [mg/L]	5 0.034 Temp. [deg-C]	
Comments ^[1] : MA Construction Ac Station: B Flood Lat/Northing: 4 Surface	• No sive crial obse divity: ISS Do G EW C DEbb S. S79 17 Water Depth [feet] I	Up River Long/Easting: M [NTU]	N S 2 Down River 22,75505 pH [-] 7.22	Time: 345 Avg. Velocity: C Total Water Dep D.O. [mg/L] 9,18	5 0.034 th: 42 Temp. [deg-C]	
Comments ^[1] : MA Construction Ac Station: B Flood at/Northing: 4 Surface Middle	• No sive crial obse crial obse G EW C DEbb S. S79 17 Water Depth [feet] 1 2.1	Long/Easting: M Turbidity [NTU] 2.44	N S 2 Down River 22,75505 pH [-] 7.22 7.15	Time: 345 Avg. Velocity: C Total Water Dep D.O. [mg/L] 9,18 9,02	5 2.034 oth: 42 Temp. [deg-C] 18.3 18.2	
Comments ^[1] : MA Construction Ac Station: B Flood at/Northing: 4 Surface Middle Deep	• No sive $rial obsecond G \in W CG \in W CEbbS : S79 t7Water Depth[feet]12.139$	1.00 2.0 2.0 2.0 2.0 2.0 2.0 2.0	N Down River 22,75505 pH [-] 7.22 7.15 7.20	Time: 345 Avg. Velocity: C Total Water Dep D.O. [mg/L] 9,18 9,02 8,98	5 2.034 th: 42 Temp. [deg-C] 18.3 18.2 18.2	
Comments ^[1] : MA Construction Ac Station: B Flood Lat/Northing: 4 Surface Middle Deep comments ^[1] :	• No sive crial obse crial obse G EW C DEbb S. S ⁷ 9 17 Water Depth [feet] 1 2.1 39 No sheep Mater al wity: Iss Drive	1110 (1-9) 1110 (1-9) 1110 (1-9)	N S Down River 22,75505 pH [-] 7.22 7.15 7.20 S color ation	Time: 345	5 2.034 oth: 42 Temp. [deg-C] 18.3 18.2 18.2 18.2 18.2	

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ANCHOR				6720 S	Macadam Ave.,		
DEA CEE	robe #2	1E10 367	8 YS	I PropSS	Portland, 0 \# 6970		
Wat	Water Quality Monitoring Form - Field Parmeters Gasco Sediment Site ISS Pilot Study						
Date: 9 - 0	27-23		Circuit Num	ber: 3			
Station:	BG EW 🤇	CS-1) CS-2	2 N S	Time: 132	25		
Floo	d)/ Ebb	Up River	/ Down River	Avg. Velocity:	0.036		
Lat/Northing: 4	5.57896	Long/Easting:	122.75467	Total Water De	epth: 39		
	Water Depth [feet]	Turbidity [NTU]	рН [-]	D.O. [mg/L]	Temp. [deg-C]		
Surface	1	1.61	7.19	9.14	18.3		
Middle	19.5	1.91	7.20	9.03	18.2		
Deep	36	2.68	7.20	8.98	18.2		
Construction Ac	ctivity: Iss V	Drilling (1-9) N (S)	Time: 10 0			
Floor	/ Ebb	Up River	Down River	Avg Velocity:			
_at/Northing: 4	5.57966	Long/Easting:	29 754x9	Total Water Der	0 V 10		
	Water Depth [feet]	Turbidity [NTU]	pH [-]	D.O.	Temp.		
Surface	1	1.44	7.22	9.18	18 3		
Middle	23.3	2.04	7.21	9.81	18.2		
Deep	43.3	2.45	7.20	8.99	18.2		
omments ^[1] : No Sheer, odor, discoloration, or suspended Material observed							
onstruction Acti	vity: ISS D	rillmy (1-	9)				

[1] Include observations of floating/suspended material, sheens, discoloration, and odors.

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Probe #21E103678 YSI Pro D55 #6970								
Wat	Water Quality Monitoring Form - Field Parmeters							
Date: 9 -	18-23	Jeannent	Circuit Numb	per: 1				
Station:	BG FW (CS-1 CS-2						
Floo	d (Ebb)				0 102			
Lat/Northing: /				Avg. velocity.	0.193			
Laurioruning. 4	Water Depth	Long/Easting:	122.15406	l otal Water De	epth: 34 XS			
	[feet]	[NTU]	[-]	[mg/L]	I emp.			
Surface	1	1.69	7.2.8	9,10	17.9			
Middle	Man 17	1.91	7.24	9.03	17.9			
Deep	31	2.60	7.21	9.06	17.9			
Construction A	ctivity: Debris 3G (EW) C	removal S-1 CS-2	N s					
Floor	Ebb	Up River (Down River)	Ava. Velocity:	7 168			
Lat/Northing: 4	5.58D15	Long/Easting:]	22 75682	Total Water Der	oth: 47			
	Water Depth [feet]	Turbidity [NTU]	рН [-]	D.O. [mg/L]	Temp.			
Surface		2.16	7.25	9.17	17.9			
Middle	23.5	2.61	7.26	9.09	17.9			
Deep	44	5.83	7.21	9.03	17.9			
Comments ^[1] : MATER Construction Act	No sheen, al observe	odors, di <u>removal</u>	scoloration	, or suspe	nzed			
_	JUNON UV	idennoete						

[1] Include observations of floating/suspended material, sheens, discoloration, and odors.

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OEA CCC Portland C							
Probe #21E103678 YSI Pro DSS #6970							
Water Quality Monitoring Form - Field Parmeters							
	Gasco	Sediment	Site ISS Pi	lot Study			
Date: 9 -	28-23		Circuit Numb	er: <u>1</u>			
Station:	BG EW 🤇	CS-1 CS-2	N S	Time: 094	+6		
Flo	od (Ebb)	Up River	(Down River)	Avg. Velocity:	0.253		
Lat/Northing:	45.50031	Long/Easting:	22.75752	Total Water De	epth: 43.6		
	Water Depth	Turbidity	рН	D.O.	Temp.		
	[feet]	[NTU]	[-]	[mg/L]	[deg-C]		
Surface	1	2.35	7.22	9.11	17.9		
Middle	21.8	2.52	7.24	9.06	17.9		
Deep	40.6	2.77	7.24	9.03	17.9		
Construction .	Activity: Debris	removal					
Flor		JI- D:	N S	Time: Q9S	5		
l at/Northing:		Up River/	Down River	Avg. Velocity: C	1.328		
Launonining: 4	+5.58921	Long/Easting:	22.75076	Total Water Dep	th: 45.4		
	[feet]	[NTU]	рН [-]	D.O. [mg/L]	Temp.		
Surface	1	1.98	7.26	9,12	17.9		
Middle	22.7	2.24	7.24	9.07	17.9		
Deep	42.4	3.33	7.22	9.07	17.9		
Comments ^[1] :	· Large boat	ipassing (2 1000 (2,3	not effects	UTV)		
·No shed	1 oger great	oration, or :	suspended m	aterial ob	servet		
· Collection	y chumistry ?	sample here	@42.4' (hij	hest cs n	TU)		
Construction A	ctivity: Debris	removal					
Recorded by:	Simon Di	Idenhoef	er				

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X.	OEA	u

	Water Quality Monitoring Form - Field Parameters Gasco Sediments Site ISS Pilot Study							
Date: 9 - 2	8-23		Circuit Numb	er: 2				
Station: (B	G EW C	CS-1 CS-2	n s)			
Flood	I/€bb	Up River &	Down River	Avg. Velocity: (0.484			
Lat/Northing: 45, S7875 Long/Easting: 122, 75405 Total Water Depth: 37					pth: 37.7			
	Water Depth	Turbidity	рН	D.O.	Temp.			
	[feet]	[NTU]	[-]	[mg/L]	[deg-C]			
Surface	١	1.32	7.30	9.28	18.0			
Middle	18.85	2.03	7.27	9.13	17.8			
Deep	34.7	2.45	7.27	9.11	17.8			
Construction Ac	tivity: Debris	removal,	ISS Drillin	g (2 -1)				
Station: B	Station: BG (EW) CS-1 CS-2 (N) S Time: 112 ()							
Elood (Ebb) Un River (Down River) Avg. Velocity: 0.545								
Flood	i g (EW) (I (Ebb)	CS-1 CS-2	N S Down River	Time: 1120 Avg. Velocity: (, D. 545			
Flood	G (EW) (1 (Ebb) 5.58020	CS-1 CS-2 Up River & Long/Easting: \{	N S Down River	Time: 1120 Avg. Velocity: (Total Water Dep	0.545 oth: 45.8			
Flood	G EW C I (Ebb) S. S 8 o 2 O Water Depth	CS-1 CS-2 Up River & Long/Easting: \? Turbidity	N S Down River 2,75692 pH	Time: 1120 Avg. Velocity: (Total Water Dep D.O.	0.545 oth: 45.8 Temp.			
Flood Lat/Northing: 44	G EW C (Ebb) 5.58020 Water Depth [feet]	CS-1 CS-2 Up River & Long/Easting: \{ Turbidity [NTU]	N S Down River 2,75692 pH [-]	Time: 1120 Avg. Velocity: (Total Water Dep D.O. [mg/L]	0.545 oth: 45.8 Temp. [deg-C]			
Flood Lat/Northing: 44 Surface	G EW C (Ebb) 5.58020 Water Depth [feet]	CS-1 CS-2 Up River & Long/Easting: \? Turbidity [NTU]	N S Down River 2,75692 pH [-] 7.30	Time: 1120 Avg. Velocity: (Total Water Dep D.O. [mg/L] 9.26	0.545 oth: 45.8 Temp. [deg-C] [8.0			
Flood Lat/Northing: 44 Surface Middle	G EW C (Ebb) 5.58020 Water Depth [feet]] 22.9	2S-1 CS-2 Up River & Long/Easting: \{2 Turbidity [NTU] 1.2.1 1.75	N S Down River 2,75692 pH [-] 7.30 7.23	Time: 1120 Avg. Velocity: (Total Water Dep D.O. [mg/L] 9.26 9.14	0.545 oth: 45.8 Temp. [deg-C] [8.0 [7.9]			
Flood Lat/Northing: 44 Surface Middle Deep	G EW C (Ebb) 5.58020 Water Depth [feet] 1 22.9 42.8	2S-1 CS-2 Up River & Long/Easting: \? Turbidity [NTU] 1.21 1.75 3.31	N S Down River 2,75692 pH [-] 7.30 7.23 7.25	Time: 1120 Avg. Velocity: (Total Water Dep D.O. [mg/L] 9.26 9.14 9.08	0.545 oth: 45.8 Temp. [deg-C] [8.0 [7.9] [7.8]			
Flood Lat/Northing: 4 Surface Middle Deep Comments ^[1] :	G EW C (Ebb) 5.58020 Water Depth [feet] 1 22.9 42.8 No sheen aterial o	S-1 CS-2 Up River & Long/Easting: 17 Turbidity [NTU] 1.21 1.75 3.31 3.31	N S Down River 2,75692 pH [-] 7.30 7.23 7.25 55 coloratio	Time: 1120 Avg. Velocity: (Total Water Dep D.O. [mg/L] 9.26 9.14 9.08	D. S45 oth: 45.8 Temp. [deg-C] [8.0 17.9 17.8 i7.8			
Flood Lat/Northing: 4 Surface Middle Deep Comments ^[1] :	G EW C (Ebb) 5.58020 Water Depth [feet] 1 22.9 42.8 No sheer aterial o	S-1 CS-2 Up River & Long/Easting: 1/2 Turbidity [NTU] 1.21 1.75 3.31 1.75 3.31 0.0 dor, d bserved	N S Down River 2,75692 pH F-1 7.30 7.23 7.25 Scoloratio	Time: 1120 Avg. Velocity: (Total Water Dep D.O. [mg/L] 9.26 9.14 9.08 7,05 545	D. S45 oth: 45.8 Temp. [deg-C] 18.0 17.9 17.8 i7.8			

DEA EEE				6720 S I	Macadam Ave Portland
Wate	r Quality I	Monitoring	g Form - Fi Site ISS Pi	eld Paran	neters
Date: 9 - 0	28-23	euimento	Circuit Numb	er: 2	
Station: B	G EW (S-1) CS-2	<u>(N)</u> S	Time: 113-)
Flood	I/Ebb	Up River /	Down River	Avg. Velocity:	2.385
Lat/Northing: 4	5.58030	Long/Easting:	22.75748	Total Water De	pth: 42_C
	Water Depth	Turbidity	pH	D.O.	Temp.
	[feet]	[NTU]	[-]	[mg/L]	[deg-C]
Surface	1	1.47	7.30	9.22	17.9
Middle	21.45	2.11	7.22	9.12	17.8
Deep	39.9	3.15	7.29	9.10	17.8
Mater 1	al obser	s removo	U. ISS D	cilling (2.	-1)
Station: B	G EW (CS-1 CS-2	N S	Time: 1154	ł
Flood	kębb	Up River &	Down River	Avg. Velocity: 🕻	0.639
Lat/Northing: 4	5.	Long/Easting: V	22.	Total Water De	oth: 46.4
	Water Depth	Turbidity	рН	D.O.	Temp.
	[feet]	[NTU]	[-]	[mg/L]	[deg-C]
Surface	1	1.39	7.27	9.26	18.0
Middle	23.2	2.15	7.18	9.11	17.8
Deep	43.4	2.59	7.18	9.11	17.7
Comments ^[1] : Mat	No sher	r, odor, die	scoloration	or suspe	nded

Construction Activity: Debris removal, ZSS Drilling (2-1) Simon Dudenhoefer [1] Include observations of floating/suspended material, sheens, discoloration, and odors.

Recorded by:

NCHOR						
RA TE	4715	102/78	V51	ProDSS	HG970	
F (0 B	Pe H LIE	Monitorin	n Form - Fi	old Param	otors	
wale	Gasco S	odiments	Site ISS Pi	ilot Study	leter 5	
Date: 9-08-23 Circuit Number: 3						
Station: (E	G EW (CS-1 CS-2	(N) S	Time: 130	0	
Floor	Ebb	Up River/	Down River	Avg. Velocity: (2.013	
Lat/Northing: 4	5.58035	Long/Easting:	22.75803	Total Water Dep	pth: 41.2	
	Water Depth	Turbidity	рН	D.O.	Temp.	
	[feet]	[NTU]	[-]	[mg/L]	[deg-C]	
Surface	1	1.60	7.35	9,29	18.0	
Middle	20.6	1.76	7.27	9.16	17.8	
Deep	38.2	7.84	7.27	9.13	17.6	
Comments ^[1] :	No sheen naterial al	odors, d	3 coloration	or susper	rtet	
Comments ^[1] : (Construction A Station: E	No sheen naterial al ctivity: Debros 3G (EW) (, odors, d oserved <u>renoval, I</u> CS-1 CS-2	scoloration	Time: 1328	rlet	
Comments ^[1] : W Construction A Station: E	No sheen naterial al ctivity: Debros 3G EW (renoval, I SS-1 CS-2	NS Down River	Time: 1328 Avg. Velocity: C	2.061	
Comments ^[1] : Construction A Station: E Floor Lat/Northing: 4	No sheen naterial al ctivity: Debros 3G EV (D) Ebb -5.57917	odors, d oserved <u>renoval, I</u> S-1 CS-2 Up River Long/Easting: 1	NS Down River 22.75495	Time: 1328 Avg. Velocity: C Total Water Dep	2.061 oth: 42.2	
Comments ^[1] : W Construction A Station: E Floor Lat/Northing: 4	No sheen naterial al ctivity: Debros 3G EW (D) Ebb -5. S79 17 Water Depth	odors, d oserved S-1 CS-2 Up River Long/Easting: 1 Turbidity	NS Down River 22.75495	Time: 1328 Avg. Velocity: C Total Water Dep D.O.	20061 oth: 42,2 Temp.	
Comments ^[1] : W Construction A Station: E Floor Lat/Northing: 4	No sheen naterial at scivity: Debros 3G EW (D) Ebb -5.S7917 Water Depth [feet] 1	odors, d oserved Served S-1 CS-2 Up River Long/Easting: 1 Turbidity [NTU]	NS Down River 22.75995 PH [-] 7 28	Time: 1328 Avg. Velocity: C Total Water Dep D.O. [mg/L] 9 41	Let 0.061 oth: 42.2 Temp. [deg-C] 18.9	
Comments ^[1] : Construction A Station: E Floor Lat/Northing: 4 Surface Middle	No sheen naterial at scivity: Debros 3G EW (d) Ebb -5.S79 17 Water Depth [feet] 1	odors, d ostrved Strved S-1 CS-2 Up River Long/Easting: 1 Turbidity [NTU] 1.35	5 drilling NS Down River 22.75495 pH [-] 7.38 7.38 7.39	Time: 1328 Avg. Velocity: C Total Water Dep D.O. [mg/L] 9,41	2.061 2.061 2.2 Temp. [deg-C] 18.2 17.6	
Comments ^[1] : Construction A Station: E Floor Lat/Northing: 4 Surface Middle	No sheen naterial at scivity: Debros 3G EW (D) Ebb -5.57917 Water Depth [feet] 1 21.1 21.1	odors, d oserved Served S-1 CS-2 Up River Long/Easting: 1 Turbidity [NTU] 1.35 2.09 9.67	5 drilling NS Down River 22.75495 рн [-] 7.38 7.29 7.29	Time: 1328 Avg. Velocity: C Total Water Dep D.O. [mg/L] 9.20 9.15	120 2.061 oth: 42.2 Temp. [deg-C] 18.2 17.6	
Comments ^[1] : Construction A Station: E Floor Lat/Northing: 4 Surface Middle Deep Comments ^[1] :	No sheen naterial at sivity: Debros 3G EW (D) Ebb -5.S7917 Water Depth [feet] 1 21.1 39.2	odors, d oserved Served S-1 CS-2 Up River Long/Easting: 1 Turbidity [NTU] 1.35 2.09 2.67	5 drilling NS Down River 22.75495 pH [-] 7.38 7.29 7.26	Time: 1328 Avg. Velocity: C Total Water Dep D.O. [mg/L] 9.41 9.20 9.15	120 2.061 2.061 2.061 1.06	
Comments ^[1] : Construction A Station: E Floor Lat/Northing: 4 Surface Middle Deep Comments ^[1] :	No sheen naterial at sivity: Debros 3G EW (D) Ebb -5.S7917 Water Depth [feet] 1 21.1 39.2 No sheen,	odors, d oserved Served S-1 CS-2 Up River Long/Easting: 1 Turbidity [NTU] 1.35 2.09 2.67 odors, d	5 drilling N S Down River 22.75495 pH [-] 7.38 7.29 7.26 5coloratio	Time: 1328 Avg. Velocity: C Total Water Dep D.O. [mg/L] 9.41 9.20 9.15 0,95 SUS	2.061 0.061 oth: 42.2 Temp. [deg.C] 18.2 17.6 17.6 17.6 17.6	
Comments ^[1] : Construction A Station: E Floor Lat/Northing: 4 Surface Middle Deep Comments ^[1] : W	No sheen naterial of aterial of BG EW (D) Ebb 5.57917 Water Depth [feet] 1 21.1 39.2 No sheen, aterial of	odors, d ostrved Strved S-1 CS-2 Up River Long/Easting: 1 Turbidity [NTU] 1.35 2.09 2.67 odors, d odors, d	5 drilling N S Down River 22.75495 PH [-] 7.38 7.29 7.26 Scoloratio	Time: 1328 Avg. Velocity: C Total Water Dep D.O. [mg/L] 9.20 9.15 0,95 SUS	2.061 oth: 42.2 Temp. [deg.C] 18.2 17.6 17.6 17.6	
Comments ^[1] : Construction A Station: E Floor Lat/Northing: 4 Surface Middle Deep Comments ^[1] : M	No sheen naterial of scivity: Debros scivity: Scivity:	remoral, I Served Long/Easting: 1 Turbidity [NTU] 1.35 2.09 2.67 odors, d Served	5 drilling N S Down River 22.75995 pH [-] 7.38 7.29 7.29 7.26 iscoloratio	Time: 1328 Avg. Velocity: C Total Water Dep D.O. [mg/L] 9.20 9.15 0,95 SUS	12.1 2.061 2.061 2.061 2.061 1.06 1.06 1.7.6 1.7.6 1.7.6 2.06 1.7.6 2.06 1.7.6 2.06 1.7.6 2.06 1.7.6 2.06 2	
Comments ^[1] : Construction A Station: E Flood Lat/Northing: 4 Surface Middle Deep Comments ^[1] : M Construction A	No sheen aterial of <u>scivity: Debros</u> <u>scivity: Debros</u> <u>scivity: Debros</u> <u>water Depth</u> <u>[feet]</u> <u>1</u> <u>21.1</u> <u>39.2</u> No sheen, <u>aterial of</u> <u>ctivity: Debros</u>	renoval, I Served Long/Easting: 1 Turbidity [NTU] 1.35 2.09 2.67 odors, d Served renoval,	Down River 22.75995 pH [-] 7.29 7.29 7.26 iscoloration <u>TSS drilling</u>	Time: 1328 Avg. Velocity: C Total Water Dep D.O. [mg/L] 9.20 9.15 0,95 SUS	12.061 0.061 oth: 42.2 Temp. [deg-C] 18.2 17.6 17.6 17.6	

Ž



Frobe # 21 E103670 132 118033 68170						
Water Quality Monitoring Form - Field Parameters						
Date: 9 - 2	18-23	oumonto	Circuit Numb	er: 3		
Station: B	G EW (S-1) CS-2	N (S)	Time: 1340	0	
Floor) / Ebb	Up River/	Down River	Avg. Velocity:	0.010	
Lat/Northing: 4	5.57895	Long/Easting:	22.75477	Total Water Dep	oth: 33.5	
	Water Depth	Turbidity	pН	D.O.	Temp.	
	[feet]	[NTU]	[-]	[mg/L]	[deg-C]	
Surface	Ì	1.51	7.38	9.42	18,1	
Middle	16.75	1.75	7.31	9.17	17.8	
Deep	30.5	2.41	7.29	9.15	17.6	
Construction Ac	ctivity: Debros	renoval,	ZSS Drill	1 1 J		
Station: E			Down Rivor	Avg Velocity:	000	
Floor				Total Water Der	th: 43 4	
Lat/Northing: 4	5.51948	Long/Easting. I	22.15715		Tamp	
	Water Depth [feet]	Turbidity [NTU]	рн [-]	D.O. [mg/L]	[deg-C]	
Surface	1	1.16	7.41	9.62	18.3	
Middle	21.7	1.71	7.32	9.18	17.7	
Deep	40.4	2.15	7.26	9.14	17.0	
Comments ^[1] : No sheen, odors, discoloration, or suspended material observed <u>Construction Activity: Debris removal</u> , ISS Drilling						
Recorded by: Simon Dudenhoeter						

Wate	Water Quality Monitoring Form - Field Parameters					
Date: 9 - 2	9-23	euimentis	Circuit Numb	er: 1		
Station: B	G EW C	S-1 CS-2	N (S)	Time: 085	4	
Flood	Ebb	Up River (Down River	Avg. Velocity: ().384	
Lat/Northing:4	5.57875	Long/Easting:]/	22.75389	Total Water De	oth: 42.2	
	Water Depth	Turbidity	рН	D.O.	Temp.	
	[feet]	[NTU]	[-]	[mg/L]	[deg-C]	
Surface .	L	2.01	7.17	9.32	17.4	
Middle	21.1	2,27	7.22	9.27	17.4	
Deep	39.2	2.18	7.20	9.24	17.4	
06565 Construction Ac	ued tivity: ISS D	cilling				
Station: B	GEWC	CS-1 CS-2	N s		5	
Flood	Ebb	Up River 🗶	Down River 7	Avg. Velocity: C	.203	
Lat/Northing: 4	5.58003	Long/Easting:)	22.75695	Total Water Dep	oth: 43.8	
	Water Depth	Turbidity	рН	D.O.	Temp.	
	[feet]	[NTU]	[-]	[mg/L]	[deg-C]	
Surface	1	1.75	7,23	9.30	17.4	
Middle	21.9	1.98	7.28	9,26	17.5	
Deep	40.8	2.03	7.30	9.23	17.5	
Comments ^[1] :						
• No skeen, odor, discoloration, or suspended material						
UBSEC	Vea					
Construction Ac	tivity: ISS P	cilling				
Recorded by:	Simon D	Indenhoe	fer			

1 %	ANCHOR
X.	OEA SEE

Water Quality Monitoring Form - Field Parameters Gasco Sediments Site ISS Pilot Study						
Date: 9 - 2	9-23		Circuit Numb	er: 1		
Station: B	G EW 🤇	S-1) CS-2	(N) S	Time: 092	8	
Flood	/Ebb	Up River (Down River	Avg. Velocity:).278	
Lat/Northing: 4	5.58014	Long/Easting:	22.75740	Total Water Dep	oth: 42.2	
	Water Depth	Turbidity	рН	D.O.	Temp.	
	[feet]	[NTU]	[-]	[mg/L]	[deg-C]	
Surface	1	1.85	7.28	9.31	17.5	
Middle	21.2	1.90	7,29	9.27	17.5	
Deep	39.2	1.94	7.30	9.23	17.5	
Ma te	tivity: ISS P	cillion		·	-	
Station: B	G EW (CS-1 CS-2	> (N) S	Time: 094 ()	
Flood	Ebb	Up River /	Down River	Avg. Velocity:		
Lat/Northing: 4	5.58013	Long/Easting:)	22.75695	Total Water Dep	oth: 45,5	
	Water Depth	Turbidity	рН	D.O.	Temp.	
	[feet]	[NTU]	[-]	[mg/L]	[deg-C]	
Surface	1	1,93	7.24	9.34	17.4	
Middle	22.75	2.03	7.27	9.28	17.5	
Deep	42.5	4,38	7.58	9,23	17.4	
Comments ^[1] :	No sheen,	ndor, disc	aloration.	ar susper	ded	
materia	material observed					
· Collect	· Collecting chun, sample here @ 42.5' (highest CS NTU)					
Construction Ac	tivity: ISS D	rilling				
Construction Activity: ISG Drilling						

[1] Include observations of floating/suspended material, sheens, discoloration, and odors.

ANCHOR					Dortland (
Probe	# 21F103	678	YSI Pr	· PSS #6		
Water Quality Monitoring Form - Field Parameters						
	Gasco S	ediments	Site ISS Pi	lot Study		
Date: 9 -	29-23		Circuit Numb	er: 2		
Station: BG EW CS-1 CS-2 N S Time: 054						
Flood	Ebb	Up River /	Down River	Avg. Velocity:	0.267	
Lat/Northing: 4	5.57866	Long/Easting:	12,75393	Total Water De	oth: 37	
	Water Depth	Turbidity	pH	D.O.	Temp.	
Surface	Iteetj		720		[deg-0]	
Sunace	1	1.02	1.50	1.TU 9.30	1 7 4	
Middle	18.5	2.14	7.20	1.52	(1.)	
D	34	3.40	1.23	9.20	11.5	
Deep Comments ^[1] : o Obser	No sheen,	odor, discol	oration, or si	uspended m	aterial	
Comments ^[1] : 0 Construction Ac Station: B	No sheen, ived tivity: ISS D	odor, discol rilling 25-1 CS-2	oration, or si	Uspended M	aterial	
Comments ^[1] : o Construction Act Station: B Flood	No sheen, tved tivity: ISS D G EW C	odor, discol rilling S-1 CS-2 Up River &	N S Down River	Time: 110 Avg. Velocity: (aterial	
Deep Comments ^[1] : o ObSet Construction Ac Station: B Flood Lat/Northing: 4	No sheen, tved tivity: ISS D G EW C 1/Ebb	odor, discol rilling CS-1 CS-2 Up River & Long/Easting:	N S Down River 122.75712	Time: 110 Avg. Velocity: (Total Water Dep	aterial 0.224 oth:41	
Deep Comments ^[1] : 0 Obser Construction Ac Station: B Flood Lat/Northing: 4	No shen, tivity: ISS D G EW C 1/Ebb 5.57998 Water Depth [feet]	odor, discol S-1 CS-2 Up River (Long/Easting: Turbidity [NTU]	N S Down River 122.75712 pH [-]	Time: 110 Avg. Velocity: (Total Water Dep D.O. [mg/L]	aterial 0.224 oth:4[Temp. [deg-C]	
Deep Comments ^[1] : 0 Obser Construction Ac Station: B Flood Lat/Northing: 4 Surface	No shen, tved G EW C 7.57998 Water Depth [feet]	odor, discol S-1 CS-2 Up River & Long/Easting: Turbidity [NTU] 2.54	N S Down River 122.75712 pH [-] 7.29	Time: 110 Avg. Velocity: (Total Water Dep D.O. [mg/L] 9.36	aterial 0.224 oth:4[Temp. [deg-C] [7.4	
Deep Comments ^[1] : Construction Ac Station: B Flood Lat/Northing: 4 Surface Middle	No shien, tved G EW C 5.57998 Water Depth [feet] 1 20.5	odor, discol S-1 CS-2 Up River & Long/Easting: Turbidity [NTU] 2.54 2.36	огатіоп, ог si Down River 122.75712 рн [-] 7.29 7.27	Time: []]O Avg. Velocity: (Total Water Dep D.O. [mg/L] 9.36 7.33	aterial 0.224 oth:41 Temp. [deg-C] 17.4 17.4	
Deep Comments ^[1] : o ObSec Construction Ac Station: B Flood Lat/Northing: 4 Surface Middle Deep	No shen, tivity: ISS D G EW C 1/Ebb 5.57998 Water Depth [feet] 1 20.5 38	odor, discol rilling 2S-1 CS-2 Up River & Long/Easting: Turbidity [NTU] 2.54 2.36 5.26	N S Down River 122.75712 PH [-] 7.29 7.29 7.86	Time: 110 Avg. Velocity: (Total Water Dep D.O. [mg/L] 9.36 9.33 9.28	aterial 0.224 oth:41 Temp. [deg-C] 17.4 17.4 17.3	
Deep Comments ^[1] : Construction Act Station: B Flood Lat/Northing: 4 Surface Middle Deep Comments ^[1] : No Od Or , Construction Act	No shen, Tved tivity: ISS D G EW C J J S. S7998 Water Depth [feet] 1 20.5 38 Large bar Sheen, Jist	odor, discol <u>rilling</u> S-1 CS-2 Up River & Long/Easting: <u>Turbidity</u> [NTU] 2.54 2.54 2.36 5.26 Se passed du coloration, o Drilling	N S Down River 122.75712 PH [-] 7.29 7.29 7.29 7.29 7.29 7.29 7.29 7.29	Time: 1110 Avg. Velocity: (Total Water Dep D.O. [mg/L] 9.36 9.33 9.28 er collection Imaterial c	aterial 0.224 oth:41 Temp. [deg-C] 17.4 17.3	

6720 S Macadam Ave., Suite 300 Portland, OR 97219

Pro Water					Deutland	
Water		E102/78	VAT	ProDSS #	6970	
	Ouality	Monitoring	i Form - Fi	eld Param	eters	
Gasco Sediments Site ISS Pilot Study						
Date: 9-99-73 Circuit Number: 9						
Station: BG	EW (S-1 CS-2	N S	Time: 120)	
Flood k	Ebb	Up River1	Down River	Avg. Velocity:	0.230	
Lat/Northing: 4-5	.58011	Long/Easting:	22,75750	Total Water Dep	oth: 40	
	Water Depth	Turbidity	рН	D.O.	Temp.	
	[feet]	[NTU]	[-]	[mg/L]	[deg-C]	
Surface	١	2.09	7.27	9,38	17.4	
Middle	20	2.37	7.26	9.32	17.4	
Deep	37	5.00	7.52	9.27	17.3	
Construction Activity: ISS Drilling						
Station: BG	B EW (CS-1 CS-2	(N) S	Time: 1136		
Station: BG	vity: 155 L EW (CS-1 CS-2	Down River	Time: 1135 Avg. Velocity:		
Station: BG Flood / Lat/Northing: 4-5	VITY: 155 1 6 EW (1(Ebb) 5.58012	Up River	Down River	Time: 1135 Avg. Velocity: Total Water Dep	oth: 44	
Station: BG Flood / Lat/Northing: 45	vity: <u>155</u> EW (/€bb) 5.58012 Water Depth [feet]	CS-1 CS-2 Up River Long/Easting: 1 Turbidity [NTU]	22,75699 pH [-]	Time: 1135 Avg. Velocity: Total Water Dep D.O. [mg/L]	oth: 4 4 Temp. [deg-C]	
Station: BC Flood / Lat/Northing: 45 Surface	vity: <u>155</u> <u>1</u> 6 EW (√€bb) 5.58012 Water Depth [feet]]	CS-1 CS-2 Up River Long/Easting: 1 Turbidity [NTU]	N S Down River 22,75699 pH [-] 7,28	Time: 135 Avg. Velocity: Total Water Dep D.O. [mg/L] 9.43	oth: 4 4 Temp. [deg-C]	
Station: BC Flood / Lat/Northing: 4-5 Surface Middle	vity: 155 1 5 EW (1/Ebb) 5.58012 Water Depth [feet] 1 2.2.	Up River Up River Long/Easting: 1 Turbidity [NTU] 1.94 2.57	Down River 22.75699 pH [-] 7.28 7.20	Time: 1135 Avg. Velocity: Total Water Dep D.O. [mg/L] 9.43 9.32	oth: 4 4 Temp. [deg-C] 17.4 17.3	
Station: BC Flood / Lat/Northing: 4-5 Surface Middle Deep	vity: ⊥55 ⊥ 5 EW (/(€bb) 5.58012 Water Depth [feet] 1 2.2 4.1	CS-1 CS-2 Up River Long/Easting: 1 Turbidity [NTU] 1.94 2.57 3.22	N S Down River 22,75699 рн [-] 7.28 7.28 7.20 7.17	Time: 1135 Avg. Velocity: Total Water Dep D.O. [mg/L] 9.43 9.32 9.32 9.29	oth: 4 4 Temp. [deg-C] 17.4 17.3 17.3	
Station: BC Flood / Lat/Northing: 4-5 Surface Middle Deep Comments ^[1]	$\frac{vity: 155 1}{Ebb}$ 5.58012 Water Depth [feet] 1 2.2 41 No SWIN 2rved	25-1 CS-2 Up River Long/Easting: 1 Turbidity [NTU] 1.94 2.57 3.22 ,0305,350	N S Down River 22.75699 pH [-] 7.28 7.28 7.20 7.10 100 ation, or	Time: 1135 Avg. Velocity: Total Water Dep D.O. [mg/L] 9.43 9.32 9.32 9.29 Suspended	oth: 49 Temp. [deg-C] 17.4 17.3 17.3 17.3	
Station: BC Flood / Lat/Northing: 4-5 Surface Middle Deep Comments ^[1]	vity: 155 1 5 EW (1 5.58012 Water Depth [feet] 1 2.2 41 No SWM 2.Ved vity: ISS 1	Up River Up River Long/Easting: 1 Turbidity [NTU] 1.94 2.57 3.22 0 Jor, Jrso	<u>N</u> s Down River 22.75699 рн [-] 7.28 7.20 7.17	Time: 1135 Avg. Velocity: Total Water Dep D.O. [mg/L] 9.43 9.32 9.32 9.29 Suspended	oth: 49 Temp. [deg-C] 17.4 17.3 17.3 17.3	

ANCHOR OEA

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OEA CEC Portland, OR						
Prob	e #21E1	03678	YSI	ProDSS	#6970	
Water Quality Monitoring Form - Field Parameters						
	Gasco S	ediments	Site ISS Pi	lot Study		
Date: 9 - 2	9-23		Circuit Numb	er: 3		
Station: B	G EW C	CS-1 CS-2	N (S)	Time: 125	4	
Flood (Ebb) Up River Down River Avg. Velocity: 0,45				1.450		
Lat/Northing:44	5.57863	Long/Easting: V	22.75705	Total Water De	pth: 35	
	Water Depth	Turbidity	рН	D.O.	Temp.	
	[feet]	[NTU]	[-]	[mg/L]	[deg-C]	
Surface	1	1.39	7,36	9.67	17.5	
Middle	17.5	2.15	7.26	9.36	17.3	
Deep	32	2.25	7.27	9.34	17.3	
Comments ^[1] :	No sheen	o dor disco	loration or	Surpende	d	
Ma	terial obs	erved		ï		
Construction Ac	tivity: ISS [Prilling.				
Station: B	GEWC	S-1 CS-2	N S	Time: 302	3	
Flood	1/EDD	Up River	Down River	Avg. Velocity: 🦕	0.134	
Lat/Northing:4	5.57994	Long/Easting: \	2275695	Total Water Depth: 42		
	Water Depth	Turbidity	рН	D.O.	Temp.	
	[feet]	[NTU]	[-]	[mg/L]	[deg-C]	
Surface		1.54	7.30	9.60	17.5	
Middle	21	1.94	7.23	9,40	17.3	
Deep	39	5.98	7.62	9.29	17.3	
Comments ^[1] :	No shoon	ador dixi	coloration .	or suspen	fed	
material observed						
Construction Act	ivity: ISS P	Prillin1			•	
Recorded by:	Simon !	Dudenh	oefer			

ANCHOR OEA				6720 S N	Aacadam A Portlai	
Pro	6e #21E	103678	YSIP	-oDSS #	6970	
Wate	er Quality	Monitoring	g Form - F	ield Param	neters	
Date: 0 1	Gasco S	ediments	Site ISS P	ilot Study		
Station: DO TW						
Station: BG EW CS-1 CS-2 N S Time: 1327						
Flood	Ebb	Up River(Down River	Avg. Velocity: (0.169	
Lat/Northing: 4	5.580 13	Long/Easting:	22.75750	Total Water Dep	oth: 40	
	Water Depth	Turbidity	pН	D.O.	Temp	
Surface	[feet]	[NTU]	[-]	[mg/L]	[deg-C	
Sunace		1.55	7.30	9.60	17.5	
Middle	20	1.87	7.27	9.47	17.	
Deep	37	2.97	7.65	9.34	17.	
Station: B	G EW ($\frac{2 - 1 \left(1 - 1 \right)}{CS-1}$	N S	Time:	5 124	
Flood	Ebb	Up River	Down River	Avg. Velocity:	9131	
Lat/Northing:4	5.58024	Long/Easting: ۲	22,75669	Total Water Dep	oth: 46	
	Water Depth	Turbidity	рН	D.O.	Temp	
Curface			[·]	[mg/L]	[deg-C	
Sunace		1.31	1.27	9.63	17.5	
Middle	23	1:71	1.24	9.41	17.3	
Deep	43	2.38	7,31	9,35	17.1	
Comments ^[1] :	·No she	1 ogor	dixcobrator	D. OF SULSI	pended	
	material	lobserv	ed		01000	
Construction Ac	tivity: ISB	Drilling)			
Recorded by: <	Simon	Dudenho	ofer			
		Provela 10	00			

Attachment 4 Water Quality Sampling Forms – Chemical Parameters



Circuit #1



Circuit #2					
Water Qu	uality Sampling F	orm	- Chemical P	arameters	
Paakana ka u	Sasco Sediment	Site	SS Pilot Stud	ly	
Background Station ID:	BG-15				
Lat/Northing: 45.578	376		Long/Easting: 122	.75407	
Total Water Depth: 36			Sample Depth: 33	3	
Sample ID: NWN-B(515-2309251130)	Date: 9-25-23	Time: 1130	
Comments ^[1] : · (aller	d using van Do	rn s	anples		
· Callec-	fel x2 125ml an	nleorg	1055 + ×2 125	ml amber poly	
. NO 51	un, odor, discola	orati	on arsuspl	nted material.	
Compliance Station ID:	CS-IN				
Lat/Northing:45.580;	36		Long/Easting: 22.	75745	
Total Water Depth: 4 .	8		Sample Depth: 38	.8	
Sample ID: NWN - CS	IN-2309251115		Date: 9-25-23	Time: 1115	
Comments ^[1] : • Collect	Hed using Von E)orn .	samples		
· Collec	· Collected *2 125ml onler glass + ×2 125ml poly anders				
· No sheer, odor, discoloration, or suspended materials observed					
Analytical Suite					
Analyte	Bottle		Method	Preservative	
Free Cyanide /	125-mL Amber Poly		ASTM D4282	NaOH	
DALLA	125-mL Amber Poly			None	
	2 AT20-IIIL AMDER GIASS	E	PA 8270D SIM	None	



Circuit #3						
Water Qu	uality Sampling F	orm	- Chemical P	arameters		
Background Station ID:	Background Station ID: BG-LN					
Lat/Northing: 45, 580	031		Long/Easting: 122	2,75778		
Total Water Depth: 42			Sample Depth: 3	7		
Sample ID: NWN - BG	IN-230925133	5	Date: 9-25-2	3 Time: 1335		
 Collected using Van Dorn Sampler Collected x2 125 ml anberglass + x2 125 ml anber polys No swens, odors, discoloration, or suspended materials observed 						
Compliance Station ID:(25-15					
Lat/Northing: 45, 57	890		Long/Easting: 122,	75459		
Total Water Depth: 38.	5		Sample Depth: 35	.5		
Sample ID: NWN - C	515-2309251320	0	Date: 9-25-23	3 Time: 1320		
comments ^[1] : · Collected with Van Dorn Sampler · Collected x2 125ml ander glass + v2 135ml ander pollec						
· No shens, adors, discoloration or suspended materials observed						
Analytical Suite						
Analyte	Bottle		Method	Preservative		
Free Cyanide	125-mL Amber Poly		ASTM D4282	NaOH		
PAHs	2X 125-mL Amber Glass	E	PA 8270D SIM	None		





	Circuit	-#4	,		
Water Quality S	ampling For	m - Chemical Pa	arameters		
Bookers to the P	Sediment Sit	te ISS Pilot Stud	ly		
Background Station ID: BG -	IN				
Lat/Northing: 45, 58050		Long/Easting: 122	.75812		
Total Water Depth: 45		Sample Depth: 42	1		
Sample ID: NWN - BGIN - 23	09251540) Date: 9-25-25	3 Time: 1540		
comments ": . Collected Usin	ni Van Dorn.	Samples			
· Callected ×2 125 m	nt anker glass	5 + ×2 125m/ 0	mker polys		
· No shells, edors,	dis coloratio	on or suspender	1 material		
observed		ı ,			
Compliance Station ID: $CS - VS$	5				
Lat/Northing: 45.57897		Long/Easting: 122 -	75451		
Total Water Depth: 43 ′		Sample Depth: 4Q'			
Sample ID: NWN - (515 - 2309)	251525	Date: 9 - 2 S - 23	Time: 1525		
comments ": · Collected us	in Van Doi	in samplus			
· Collected ×2 125 m/ ander glass and ×2 125m/ omber polys					
· No suppres o dors discoloration, or suspended materials					
observed	,	-			
	Analytical Suite				
Analyte	Sottle	Method	Preservative		
Eros Quanida 125-mL	Amber Poly		NaOH		
125-mL	Amber Poly	ASTM D4282	None		
PAHs 2 X 125-ml	L Amber Glass	EPA 8270D SIM	None		



Circuit #1- Debris Removal

Water Quality Sampling Form - Chemical Parameters Gasco Sediment Site ISS Pilot Study										
Background Station ID:	BG-15									
Lat/Northing: 45, 57874 Long/Easting: 122, 75398										
Total Water Depth: 36	3.2									
Sample ID: NWN - B	615-230926114	5	Date: 9-26-23	Time: 1145						
Comments": " Collected Using Van Dorn sounpler · Collected x2 125ml amber glass containers + x2 125ml amber poly containers · No sweps, odors, discooration, or suspended material observed										
Compliance Station ID:	CS-2N									
Lat/Northing: 45, 580	27		Long/Easting: [22.	75659						
Total Water Depth: 45 .	8		Sample Depth: 42。	8						
Sample ID: NWN - CS	21-230926113	0	Date:9-26-23	Time: 1/30						
Somments ^[1] : •Collected w/ Van Dorn Sampler • Collected × 2 125 ml ander glass bottles t ×2 125 ml amber poly containers • No sweer, odor, discoloration, or suspended material observat										
	Analyti	cal Suit	9							
Analyte	Bottle	<u></u>	Method	Preservative						
Free Cvanide	125-mL Amber Poly		ASTM D4282	NaOH						
	125-mL Amber Poly			None						
(PAHs)	2 X 125-mL Amber Glass	/ E	PA 8270D SIM	None						



6720 S Macadam Ave., Suite 300 Portland, OR 98219

	Circuit #	1 - Ebb Tide -	ISS Drilling (1-6
Water Q	uality Sampling F	orm - Chemical I	Parameters
Paakan La	Basco Seulment	Site 155 Pliot Stu	ldy
Background Station ID:	BG-15		
Lat/Northing:45.578	374	Long/Easting: [22	.75404
Total Water Depth: 38		Sample Depth:	35
Sample ID: NWN -B6	15-2309271010	Date: 9 - 27 - 27	3 Time: 1010
Comments [1]: · Collecte	d using van Dorn s	sompler	
· Collected ×2 12	2.5 ml ambergiass ja	15, + ×2 125ml amb	er poly containers
· No siven, odor	s, discoloration, or	suspended mat	erial observed
Compliance Station ID:	C5-1N		
Lat/Northing: 45,580	30	Long/Easting: j22	.75753
Total Water Depth:	₽ 42.2	Sample Depth:	2 39.2
Sample ID: NWN - CSI	N-2309270955	Date: 9-27-23	3 Time: 0955
Comments [1]: " (allected	Using Von Dorn so	ampler	
· Collected ×2 19	25 ml amberglass c	ontainers+ ×2 125ml	mber poly containers
. No shen, od	oc, discoloration	, or suspended m	uterial observed
	Analytic	cal Suite	
Analyte	Bottle	Method	Preservative
Free Cyanide	125-mL Amber Poly	ASTM D4282	NaOH
	125-mL Amber Poly		None
PAHS	2 X 125-mL Amber Glass) EPA 8270D SIM	None

[1] Observations of floating/suspended material, sheens, discoloration, and /or odors will be recorded in the comments

None

Circuit #7 - Ebb Tide

V DEA		6	720 S Macadam Ave., Suite 30
Circuit #	2 - E66 Tide	- ISS Drilli	r_{1-7}
Water Q	uality Sampling F	Form - Chemical F	Parameters
	Gasco Sediment	Site ISS Pilot Stu	dy
Background Station ID:	BG-15		
Lat/Northing: 45.578	375	Long/Easting: 122	2.75405
Total Water Depth: 3フ		Sample Depth: 34	1
Sample ID: NWN - BC	515-2309271200	Date: 9 - 27 - 2	3 Time: 1200
Comments ^[1] : • Co \UU	ted using Van D	Sorn Sompler	
o Collected x2	125 ml amber glass	and ×2 125ml ander	poly containers
. No sheen odo	r, discoloration,	or suspended ma	iterial abserved
	,		
Compliance Station ID:	CS-IN		
	5110		
Lat/Northing: 45, 560	32	Long/Easting: 122	75756
Total Water Depth: 4)	. 5	Sample Depth: 3	8.5
Sample ID: NWN - CS	IN-2309271145	Date: 9-27-23	Time: 1145
Comments ^[1] : Collecte	d using Van Der	n samples	
· Collected ×2	125 minuter glas	is and x2 125ml	omber poly containers
· No shin a	tors de cabrata	o or gusperatel was	teral abstrand
		in the subjects a man	
	Analyti	cal Suite	
Analyte	Bottle	Method	Preservative
Free Cyanida	125-mL Amber Poly		NaOH
1 roc Oyaniqe	125-mL Amber Poly	ASTM D4282	None
(PAHs)	2 X 125-mL Amber Glass	EPA 8270D SIM	None

ANCHOR			672	0 S Macadam Ave., Suite 30						
OFA LEC				Portland, OR 9821						
Circuit	#3 - Flood	Tite	- ISS Dr.	illing (1-9)						
Water Quality Sampling Form - Chemical Parameters										
Gasco Sediment Site ISS Pilot Study										
Background Station ID:	BG-IN									
Lat/Northing: 45.580	152		Long/Easting: 122,	75815						
Total Water Depth: 44			Sample Depth: 4							
Sample ID: NWN-B(SIN-230927142	0	Date: 9-27-23	Time: 1420						
Comments ^[1] : • Callect	ed w/ Von Dorn	Somo	PIF							
· Collected Fiel G x2 125 ml	· Collected Field duplicate sample here: NWN-BG101N-2309271420 Gx2 125 ml mber glass + x2 DE ml mber poly containers									
· No Sween, od	or, discoloration,	,005	insperted mas	erial observet						
Compliance Station ID: (25-15									
Lat/Northing: 4ら. 57 c	100		Long/Easting: 2, 2,	75459						
Total Water Depth: 40		:	Sample Depth: 37							
Sample ID: NWN - CSI	5-2309271355)	Date: 9 - 27 - 23	Time: 1355						
Comments": • Collect	red w/ Van Dorn s	samp	ler							
· Collecting x3	volume for M	S/M	SD sample							
4×6125	miglass ambers +	+ ×6	125 ml amber	- polys						
· No shen, or	dor, discloration,	,orsu	spin-led materic	als observed						
	Analyti	cal Suite	,							
Analyte	Bottle		Method	Preservative						
Free Cyanide	125-mL Amber Poly		ASTM D4282	NaOH						
PAHs	2 X 125-mL Amber Glass	/		None						
[1] Observations of floating/sus	mended material shaans disc			None						

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VE ANCHOR

Circuit # 1	- ISS Debi	r is l	Removal - E	E66 Tide							
Water Qu	Water Quality Sampling Form - Chemical Parameters Gasco Sediment Site ISS Pilot Study										
Background Station ID:	BG-15										
Lat/Northing: 45, 57875 Long/Easting: 122, 75405											
Total Water Depth: 34			Sample Depth: 3								
Sample ID: NWN - BC	,15-230928109	0	Date: 9-28-23	3 Time: 1020							
· Collected ×2 • No swar, od	· Collected x2 125 ml amber glass and x2 125 ml amber poly containers · No swen, odor, discoloration, or suspended material observed										
Compliance Station ID:	C5-2N										
Lat/Northing: 45.560	21		Long/Easting: 122,	75676							
Total Water Depth: 45 .	4		Sample Depth: 42, 4								
Sample ID: NWN - (S	21-230928101	0	Date: 9 - 28 - 22	Time: ()) ()							
Comments ^[1] : Collected using Van Dorn Sampler • Collected × 2 125ml ander glass and ×2 125ml amber poly containers • No swen, odor, discoloration, or suspended material observed											
	Analyt	ical Suit	9								
Analyte	Bottle		Method	Preservative							
Free Cyanide	125-mL Amber Poly		ASTM D4282	NaOH							

[1] Observations of floating/suspended material, sheens, discoloration, and /or odors will be recorded in the comments

EPA 8270D SIM

125-mL Amber Poly

2 X 125-mL Amber Glass

PAHs

None

None

ANCHOR DEA

6720 S Macadam Ave., Suite 300 Portland, OR 98219

Circuit #	1 - Ebb Tide	-	ISS Drilli	ng						
Water Quality Sampling Form - Chemical Parameters										
Background Station ID:	BG-15	Sile	155 FIIOL SLUC	<u>iy</u>						
Lat/Northing: 45.57	863		Long/Easting: 122	,75394						
Total Water Depth: 37	.6'		Sample Depth: 3	4.6'						
Sample ID: N WN - B(315-2309291005		Date: 9 - 29 - 27	3 Time: 1005						
Comments ^[1] : • Collec	ted using Van Do	n	sampler							
· Collected ×2	125 ml unber glas	s an	1 ×2 125 ml a	nber poly containers						
· No sher ad	. No shen, oder, discoloration, or suspended material observed									
Compliance Station ID:	CS-2N									
Lat/Northing: 45.580	113		Long/Easting: 122	75695						
Total Water Depth: 49 ,	5		Sample Depth: 42.5							
Sample ID: NพN ~ (รว	_N-2309290950		Date: 9-29-27	5 Time: 0950						
Comments ^[1] : • Collect	ed using Van Dor	n	sampler							
· Collected X2	125ml ander glas	5 00	1 ×2 125 ml a	mber poly containers						
· No shear, odor	, discoloration, or	susp	ended material	observed						
	Analytic	al Sui	te							
Analyte	Bottle		Method	Preservative						
Free Cyanide	125-mL Amber Poly		ASTM D4282	NaOH						
	125-mL Amber Poly)		None						
PAHS	2 A 125-mL Amber Glass		EPA 8270D SIM	None						

ANCHOR DEA

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Circuit 4	L - Ebb Tide	- I	SS Drillin	Portland, OR 9821 9						
Water Quality Sampling Form - Chemical Parameters Gasco Sediment Site ISS Pilot Study										
Background Station ID:	BG-15			-						
Lat/Northing: 45. 57を	373		Long/Easting: 122	75405						
Total Water Depth: 42.	. 2		Sample Depth: 3	7.2						
Sample ID: NWN - B(315-230929120	0	Date: 9 - 29 - 23	3 Time: 1200						
Comments[1]: . Collect	ted using Van De	orn s	amples							
· Collected ×2	· Collected ×2 125 ml amber glass and ×2 125 ml amber poly containers									
· No sheer oc	· No sheer odor, discoloration, or suspended material									
Compliance Station ID:	CS-IN									
Lat/Northing: 45.58	028		Long/Easting: 122	,75746						
Total Water Depth: 43	. 6		Sample Depth: 40	.6						
Sample ID: NWN - CS	IN-230929114	-5	Date: 9-29-23	Time: 1145						
	cted using van	Dorn	sampler							
· Collected ×2	125 ml amberglass	and x	2 125ml ambe	r poly containers						
· No swell, odor, d	iscoloration, or su	spend	ed material o	bserved						
	Analyti	cal Suit	9							
Analyte	Bottle		Method	Preservative						
Free Cyanide	125-mL Amber Poly		ASTM D4282	NaOH						
	125-mL Amber Poly			None						
PAHs	2 X 125-mL Amber Glass	E	PA 8270D SIM	None						

[1] Observations of floating/suspended material, sheens, discoloration, and /or odors will be recorded in the comments

1 %	ANCHOR
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6720 S Macadam Ave., Suite 300 Portland, OR 98219

Circuit #	3-ELLT	to	753								
Water Q	uality Sampling	Form	Chemical P	Pring							
	Gasco Sediment Site ISS Pilot Study										
Background Station ID:	BG-15										
Lat/Northing: 45, 57	365		Long/Easting: 122	2.75405							
Total Water Depth: 34	. 5		Sample Depth: 3	1.5							
Sample ID: NWN - BG	15-230929142	.5	Date: 9-29-23	3 Time: 1425							
Comments ^[1] : · Collecte	d using Van Dorn	Sample	15								
· Collected ×2 12	25 ml amberglass	and x2	125ml amber	ply containers							
· No shun, ada	r, discolor ation, c	or sug	spended materi	al observed							
Compliance Station ID:	CS-IN										
Lat/Northing: 45.580	019	L	ong/Easting: 122,	75752							
Total Water Depth: 4	5	5	Sample Depth: 38,5								
Sample ID: NWN - CSI I	N-2309291415	C	Date: 9 - 29 - 23	Time: 1415							
Comments ^[1] : • Collect	ed using van I)orn Sc	mpler								
· Collected x2 1	25ml amber glass	and	×2 125ml and	erpoly containers							
a No Shell jodor	. No sheen jodor, discoloration, or suspended material observed										
	Analyti	cal Suite									
Analyte	Bottle		Method	Preservative							
Free Cyanide	125-mL Amber Poly	А	STM D4282	NaOH							
	125-mL Amber Poly			None							
PAHs	2 X 125-mL Amber Glass	EP	A 8270D SIM	None							

Attachment 5 Water Quality Field Parameter Measurements

Water Quality Field Parameter Measurements Gasco Sediments Site ISS Field Pilot Study

			Flow Direction			Total Water	Monitoring		Measured	Background Corrected				
Circuit	Monitoring		(Upriver/		North/	Denth	Denth	Denth	Turbidity	Turbidity		DO	Temperature	Chemistry
No.	Date	Time	Downriver)	Station	South	(feet)	(feet)	Zone	(NTU)	(NTU) ¹	рH	(ma/L)	(C°)	Sample
			,			(1000)	1	Surface	2.19		7.10	8.82	19.1	
Circuit Monitor		8:10		BG	South	32.5	16.25	Middle	2.51		7.19	8.79	19.1	
							29.5	Deep	3.18		7.17	8.77	19.1	Х
							1	Surface	2.16	-0.03	7.14	8.82	19.1	
		8:25		EW	North	42.5	21.25	Middle	2.57	0.06	7.12	8.79	19.1	
1	0/25/2022		Downriver				39.5	Deep	2.88	-0.3	7.19	8.76	19.1	
1	5/25/2025		Downine				1	Surface	2.48	0.29	7.14	8.81	19.1	
		8:39	CS-1	CS-1	North	42.2	21.1	Middle	2.53	0.02	7.15	8.79	19.1	
						39.2	Deep	4.35	1.17	7.27	8.74	19.1	Х	
		8:55		CS-2	North	44.5	1	Surface	2.29	0.1	7.13	8.82	19.1	
Сігсціі No.							22.25	Middle	2.62	0.11	7.17	8.79	19.1	
							41.5	Deep	2.75	-0.43	7.20	8.77	19.1	
							1	Surface	2.49		7.16	8.85	19.1	
Circuit No. Monitoring Date 1 9/25/2023 2 9/25/2023	10:16		BG	South	33.0	16.5	Middle	2.72		7.17	8.80	19.1		
							30.0	Deep	2.86		7.20	8.78	19.1	Х
							1	Surface	2.94	0.45	7.14	8.83	19.1	
		10:32		EW	North	42.0	21	Middle	3.74	1.02	7.19	8.79	19.1	
2	9/25/2023		Downriver				39	Deep	6.65	3.79	7.25	8.75	19.1	
-	5,25,2025		Dominici				1	Surface	2.49	0	7.13	8.85	19.1	
Сігсціt No.		10:44		CS-1	North	41.0	20.5	Middle	2.78	-0.96	7.16	8.8	19.1	
							38	Deep	5.20	2.34	7.27	8.74	19.1	Х
							1	Surface	2.24	-0.25	7.13	8.85	19.1	
		10:56		CS-2	North	43.7	21.9	Middle	2.75	0.03	7.16	8.81	19.1	
							40.7	Deep	3.55	0.69	7.4	8.76	19.1	

Water Quality Field Parameter Measurements Gasco Sediments Site ISS Field Pilot Study

			Flow Direction			Total Water	Monitoring		Measured	Background Corrected				
Circuit	Monitoring		(Upriver/		North/	Depth	Depth	Depth	Turbidity	Turbidity		DO	Temperature	Chemistry
No.	Date	Time	Downriver)	Station	South	(feet)	(feet)	Zone	(NTU)	(NTU) ¹	Ha	(ma/L)	(C °)	Sample
			/				1	Surface	2.28		7.18	8.84	19.1	
Circuit No.		12:20		BG	North	40.6	20.3	Middle	3.21		7.22	8.77	19.1	
							37.6	Deep	5.79		7.25	8.70	19.1	Х
							1	Surface	2.25	-0.03	7.14	8.84	19.1	
		12:38		EW	South	41.0	20.5	Middle	3.27	0.06	7.15	8.77	19.1	
2	0/25/2022		Uprivor				38.0	Deep	4.16	-1.63	7.18	8.72	19.1	
5	9/23/2023		Opriver				1	Surface	2.47	0.19	7.11	8.82	19.1	
		12:53		CS-1	South	38.0	19.0	Middle	3.55	0.34	7.17	8.76	19.1	
							35.0	Deep	4.35	-1.44	7.21	8.73	19.1	Х
							1	Surface	2.64	0.36	7.13	8.82	19.1	
Circuit No.		13:05		CS-2	South	44.0	22	Middle	3.33	0.12	7.14	8.77	19.1	
							41	Deep	3.96	-1.83	7.14	8.76	19.1	
Circuit No. Monitoring Date 3 9/25/2023 4 9/25/2023						1	Surface	2.05		7.16	8.80	19.1		
		14:25		BG	North	44.2	22.1	Middle	2.82		7.17	8.77	19.1	
							41.2	Deep	3.50		7.18	8.74	19.1	Х
							1	Surface	3.24	1.19	7.15	8.83	19.1	
		14:40		EW	South	45.5	22.75	Middle	2.41	-0.41	7.14	8.77	19.1	
4	9/25/2023		Upriver				42.5	Deep	3.91	0.41	7.16	8.75	19.1	
•	5,25,2025		opinei				1	Surface	4.07	2.02	7.21	8.82	19.1	
Circuit No.		14:55		CS-1	South	40.0	20	Middle	3.03	0.21	7.17	8.78	19.1	
							37	Deep	4.63	1.13	7.21	8.75	19.1	Х
							1	Surface	2.03	-0.02	7.16	8.83	19.1	
		15:08		CS-2	South	46.4	23.2	Middle	3.10	0.28	7.20	8.76	19.1	
							43.4	Deep	4.01	0.51	7.23	8.73	19.1	
a			Flow Direction			Total Water	Monitoring		Measured	Background Corrected		-	-	a
----------	-------------	-------	----------------	----------------	--------	----------------	------------	---------	-----------	-------------------------	------	--------	-------------------	-----------
Circuit	Monitoring		(Upriver/	C 1 1 1	North/	Depth	Depth	Depth	lurbidity			DO	Temperature	Chemistry
NO.	Date	Time	Downriver)	Station	South	(feet)	(feet)	Zone	(NIU)	(NTU)	рн	(mg/L)	(C ²)	Sample
		10.25		D.C.	с	26.6	1	Surface	2.04		7.11	8.94	18.7	
		10:35		BG	South	36.6	18.3	Middle	2.86		7.17	8.85	18.7	
							33.6	Deep	4.08		7.13	8.84	18.7	Х
							1	Surface	2.13	0.09	7.15	8.93	18.7	
		10:47		EW	North	44.8	22.4	Middle	2.92	0.06	7.15	8.85	18.7	
1	9/26/2023		Downriver				41.8	Deep	7.74	3.66	7.17	8.79	18.7	
	3, 20, 2023		200000				1	Surface	2.31	0.27	7.18	8.92	18.7	
		11:00		CS-1	North	41.2	20.6	Middle	3.55	0.69	7.12	8.85	18.7	
							38.2	Deep	7.38	3.30	7.13	8.77	18.7	
							1	Surface	2.01	-0.03	7.16	8.93	18.7	
		11:14		CS-2	North	45.8	22.9	Middle	2.26	-0.60	7.19	8.87	18.7	
							42.8	Deep	7.56	3.48	7.20	8.83	18.7	Х
							1	Surface	2.02		7.28	8.93	18.8	
		16:25		BG	South	40.2	20.1	Middle	2.85		7.29	8.85	18.8	
							37.2	Deep	3.33		7.32	8.78	18.8	Х
							1	Surface	2.35	0.33	7.32	8.94	18.8	
		16:38		EW	North	46.3	23.15	Middle	2.68	-0.17	7.29	8.88	18.8	
2	0/20/2022		Denneitinen				43.3	Deep	4.31	0.98	7.32	8.84	18.8	
2	9/20/2023		Downriver				1	Surface	2.14	0.12	7.28	8.98	18.8	
		16:49		CS-1	North	45.7	22.85	Middle	2.51	-0.34	7.26	8.91	18.8	
							42.7	Deep	3.26	-0.07	7.32	8.84	18.8	
			1				1	Surface	1.95	-0.07	7.25	9.02	18.8	
		17:01		CS-2	North	47.4	23.7	Middle	2.02	-0.83	7.23	8.93	18.8	
							44.4	Deep	6.17	2.84	7.47	8.77	18.8	Х

			Flow Direction			Total Water	Monitoring		Measured	Background Corrected				
Circuit	Monitoring		(Upriver/		North/	Depth	Depth	Depth	Turbidity	Turbidity		DO	Temperature	Chemistry
No.	Date	Time	Downriver)	Station	South	(feet)	(feet)	Zone	(NTU)	(NTU) ¹	рН	(mg/L)	(C°)	Sample
							1	Surface	2.24		7.10	8.98	18.3	
		8:45		BG	South	37.5	18.75	Middle	2.31		7.08	8.93	18.3	
							34.5	Deep	2.06		7.15	8.91	18.3	Х
							1	Surface	2.06	-0.13	7.15	8.97	18.3	
		9:05		EW	North	44	22.0	Middle	2.42	-0.09	7.17	8.91	18.4	
1	9/27/2023		Downriver				41.0	Deep	3.63	0.45	8.29	8.87	18.3	
•	5,21,2025		Downinger				1	Surface	1.94	-0.25	7.12	8.99	18.3	
		9:20		CS-1	North	42.5	21.25	Middle	2.13	-0.38	7.09	8.92	18.3	
							39.5	Deep	2.75	-0.43	7.28	8.90	18.3	Х
							1	Surface	1.86	-0.33	7.08	9.02	18.3	
		9:35		CS-2	North	44.5	22.25	Middle	2.07	-0.44	7.15	8.94	18.3	
							41.5	Deep	2.36	-0.82	7.20	8.89	18.3	
							1	Surface	1.61		7.16	9.07	18.3	
		10:45		BG	South	41.5	20.75	Middle	2.06		7.2	8.97	18.3	
							38.5	Deep	2.24		7.17	8.93	18.2	Х
							1	Surface	1.90	-0.59	7.14	9.02	18.3	
		11:00		EW	North	43.5	21.75	Middle	2.01	-0.05	7.14	8.96	18.3	
2	9/27/2023		Downriver				40.5	Deep	5.61	2.75	7.43	8.90	18.3	
2	5,21,2025		Downinger				1	Surface	1.83	-0.66	7.12	9.04	18.3	
		11:15		CS-1	North	41.8	20.9	Middle	2.34	0.33	7.21	8.98	18.3	
							38.8	Deep	3.93	1.07	7.96	8.90	18.3	Х
							1	Surface	1.62	-0.87	7.09	9.08	18.3	
		11:30		CS-2	North	45.5	22.8	Middle	2.24	0.18	7.11	8.98	18.3	
							42.5	Deep	2.57	-0.29	7.12	8.93	18.3	

			Flow Direction			Total Water	Monitoring		Measured	Background Corrected				
Circuit	Monitoring		(Upriver/		North/	Denth	Denth	Denth	Turbidity	Turbidity		DO	Temperature	Chemistry
No.	Date	Time	Downriver)	Station	South	(feet)	(feet)	Zone	(NTU)	(NTU) ¹	bН	(ma/L)	(C°)	Sample
			,				1	Surface	1.87		7.28	9.14	18.3	
		13:00		BG	North	43.0	21.5	Middle	2.17		7.23	9.02	18.3	
							40.0	Deep	3.16		7.22	9.00	18.2	Х
							1	Surface	1.58	-0.29	7.22	9.18	18.3	
		13:15		EW	South	42.0	21.0	Middle	2.44	0.27	7.15	9.02	18.2	
2	0/27/2022		Uprivor				39.0	Deep	3.03	-0.13	7.20	8.98	18.2	
5	5/21/2025		Opriver				1	Surface	1.61	-0.26	7.19	9.14	18.3	
		13:25		CS-1	South	39.0	19.5	Middle	1.91	-0.26	7.20	9.03	18.2	
							36.0	Deep	2.68	-0.48	7.20	8.98	18.2	Х
							1	Surface	1.44	-0.43	7.22	9.18	18.3	
		13:35		CS-2	South	46.6	23.3	Middle	2.04	-0.13	7.21	9.02	18.2	
							43.3	Deep	2.45	-0.71	7.20	8.99	18.2	
							1	Surface	1.69		7.28	9.10	17.9	
		9:00		BG	South	34.0	17.0	Middle	1.91		7.24	9.03	17.9	
							31.0	Deep	2.60		7.21	9.06	17.9	Х
							1	Surface	2.16	0.47	7.25	9.12	17.9	
		9:31		EW	North	47.0	23.5	Middle	2.61	0.7	7.26	9.09	17.9	
1	9/28/2023		Downriver				44.0	Deep	5.83	3.23	7.21	9.03	17.9	
	5,20,2025		Dominici				1	Surface	2.35	0.66	7.22	9.11	17.9	
		9:46		CS-1	North	43.6	21.8	Middle	2.52	0.61	7.24	9.06	17.9	
							40.6	Deep	2.77	0.17	7.24	9.03	17.9	
							1	Surface	1.98	0.29	7.26	9.12	17.9	
		9:55		CS-2	North	45.4	22.70	Middle	2.24	0.33	7.24	9.07	17.9	
							42.4	Deep	3.33	0.73	7.22	9.07	17.9	Х

			Flow Direction			Total Water	Monitoring		Measured	Background Corrected				
Circuit	Monitoring		(Upriver/		North/	Depth	Depth	Depth	Turbidity	Turbidity		DO	Temperature	Chemistry
No.	Date	Time	Downriver)	Station	South	(feet)	(feet)	Zone	(NTU)	(NTU) ¹	рН	(mg/L)	(C°)	Sample
							1	Surface	1.32		7.30	9.28	18.0	
		11:00		BG	South	37.7	18.85	Middle	2.03		7.27	9.13	17.8	
							34.7	Deep	2.45		7.27	9.11	17.8	
							1	Surface	1.21	-0.11	7.30	9.26	18.0	
		11:20		EW	North	45.8	22.9	Middle	1.75	-0.28	7.23	9.14	17.9	
2	9/28/2023		Downriver				42.8	Deep	3.31	0.86	7.25	9.08	17.8	
-	5,20,2025		Downinger				1	Surface	1.47	0.15	7.30	9.22	17.9	
		11:37		CS-1	North	42.9	21.45	Middle	2.11	0.08	7.22	9.12	17.8	
							39.9	Deep	3.15	0.70	7.29	9.10	17.8	
							1	Surface	1.39	0.07	7.27	9.26	18.0	
		11:54		CS-2	North	46.4	23.2	Middle	2.15	0.12	7.18	9.11	17.8	
							43.4	Deep	2.59	0.14	7.18	9.11	17.7	
							1	Surface	1.60		7.35	9.29	18.0	
		13:00		BG	North	41.2	20.6	Middle	1.76		7.27	9.16	17.8	
							38.2	Deep	2.84		7.27	9.13	17.6	
							1	Surface	1.35	-0.25	7.38	9.41	18.2	
		13:28		EW	South	42.2	21.1	Middle	2.09	0.33	7.29	9.2	17.6	
3	9/28/2023		Upriver				39.2	Deep	2.67	-0.17	7.26	9.15	17.6	
5	5,20,2025		ope.				1	Surface	1.51	-0.09	7.38	9.42	18.1	
		13:40		CS-1	South	33.5	16.8	Middle	1.75	-0.01	7.31	9.17	17.8	
							30.5	Deep	2.41	-0.43	7.29	9.15	17.6	
							1	Surface	1.16	-0.44	7.41	9.62	18.3	
		14:02		CS-2	South	43.4	21.7	Middle	1.71	-0.05	7.32	9.18	17.2	
							40.4	Deep	2.15	-0.69	7.26	9.14	17.6	

			Flow Direction			Total Water	Monitoring		Measured	Background Corrected				
Circuit	Monitoring		(Upriver/		North/	Depth	Depth	Depth	Turbidity	Turbidity		DO	Temperature	Chemistry
No.	Date	Time	Downriver)	Station	South	(feet)	(feet)	Zone	(NTU)	(NTU)'	рН	(mg/L)	(C°)	Sample
							1	Surface	2.01		7.17	9.32	17.4	(
		8:54		BG	South	42.2	21.1	Middle	2.27		7.22	9.27	17.4	
							39.2	Deep	2.18		7.2	9.24	17.4	Х
							1	Surface	1.75	-0.26	7.23	9.3	17.4	
		9:15		EW	North	43.8	21.9	Middle	1.98	-0.29	7.28	9.26	17.5	
1	9/29/2023		Downriver				40.8	Deep	2.03	-0.15	7.30	9.23	17.5	
	5,25,2025		Downiver				1	Surface	1.85	-0.16	7.28	9.31	17.5	
		9:28		CS-1	North	42.2	21.2	Middle	1.90	-0.37	7.29	9.27	17.5	
							39.2	Deep	1.94	-0.24	7.30	9.23	17.5	
							1	Surface	1.93	-0.08	7.24	9.34	17.4	
		9:40		CS-2	North	45.5	22.75	Middle	2.03	-0.24	7.27	9.28	17.5	
							42.5	Deep	4.38	2.20	7.58	9.23	17.4	Х
							1	Surface	1.82		7.30	9.40	17.4	
		10:54		BG	South	37.0	18.5	Middle	2.14		7.29	9.32	17.4	
							34.0	Deep	3.40		7.23	9.28	17.3	Х
							1	Surface	2.54	0.72	7.29	9.36	17.4	
		11:10		EW	North	41.0	20.5	Middle	2.36	0.22	7.27	9.33	17.4	
2	0/20/2022		Dourpriver				38.0	Deep	5.26	1.86	7.86	9.28	17.3	
2	5/25/2025		Downine				1	Surface	2.09	0.27	7.27	9.38	17.4	
		11:20		CS-1	North	40.0	20.0	Middle	2.37	0.23	7.26	9.32	17.4	
							37.0	Deep	5.00	1.60	7.52	9.27	17.3	X
							1	Surface	1.94	0.12	7.28	9.43	17.4	
		11:35		CS-2	North	44.0	22.0	Middle	2.57	0.43	7.20	9.32	17.3	
							41.0	Deep	3.22	-0.18	7.17	9.29	17.3	

Circuit No.	Monitoring Date	Time	Flow Direction (Upriver/ Downriver)	Station	North/ South	Total Water Depth (feet)	Monitoring Depth (feet)	Depth Zone	Measured Turbidity (NTU)	Background Corrected Turbidity (NTU) ¹	рН	DO (mg/L)	Temperature (C°)	Chemistry Sample
							1	Surface	1.39		7.36	9.67	17.5	
		12:54		BG	South	35.0	17.5	Middle	2.15		7.26	9.36	17.3	
							32.0	Deep	2.25		7.27	9.34	17.3	Х
							1	Surface	1.54	0.15	7.3	9.60	17.5	
		13:08		EW	North	42.0	21.0	Middle	1.94	-0.21	7.23	9.40	17.3	
2	0/20/2022		Downriver				39.0	Deep	5.98	3.73	7.62	9.29	17.3	
5	5/25/2025		Downine				1	Surface	1.55	0.16	7.30	9.60	17.5	
		13:27		CS-1	North	40.0	20.0	Middle	1.87	-0.28	7.27	9.47	17.4	
							37.0	Deep	2.97	0.72	7.65	9.34	17.3	Х
							1	Surface	1.39	0	7.27	9.63	17.5	
		13:41		CS-2	North	46.0	23.0	Middle	1.71	-0.44	7.24	9.41	17.3	
							43.0	Deep	2.38	0.13	7.31	9.35	17.1	

Notes:

--: not applicable

1. The background corrected turbidity is calculated by subtracting the measured turbidity at each of the non-background stations (i.e., EW, CS-1, and CS-2) from the background station.

BG: background

DO: dissolved oxygen

CS: compliance station

EW: early warning

mg/L: milligram per liter

NTU: nephelometric turbidity unit

Page 8 of 8

Attachment 6 Water Quality Monitoring Chemical Results

Water Quality Monitoring Chemical Results Gasco Sediments Site ISS Field Pilot Study

						ISS N	lixing				Debris R	emoval
	Sa	mple Date	9/25/2023	9/25/2023	9/25/2023	9/25/2023	9/25/2023	9/25/2023	9/25/2023	9/25/2023	9/26/2023	9/26/202
		Time	9:30	9:10	11:30	11:15	13:35	13:20	15:40	15:25	11:45	11:30
	L	ocation ID	BG-1S	CS-1N	BG-1S	CS-1N	BG-1N	CS-1S	BG-1N	CS-1S	BG-1S	CS-2N
	De	epth (feet)	27.5	38.5	33.0	38.8	39.0	35.5	42.0	40.0	33.2	42.8
	Chronic	Acute										
Analyte	WQC ^{1,2}	WQC ^{1,2}										
Polycyclic Aromatic Hydrocarbons (µg/L)											
Benzo(a)anthracene	2.2	9.2	0.016 U	0.156	0.017 U	0.126	0.051	0.479	0.017 U	0.292	0.018 U	0.495
Benzo(a)pyrene	0.96	4	0.016 U	0.207	0.017 U	0.166	0.059	0.571	0.017 U	0.404	0.018 U	0.237



Page 1 of 3

Water Quality Monitoring Chemical Results Gasco Sediments Site ISS Field Pilot Study

									IS	S Mixing						
	Sa	mple Date	9/27/2023	9/27/2023	9/27/2023	9/27/2023	9/27/2023	9/27/2023	9/28/2023	9/28/2023	9/29/2023	9/29/2023	9/29/2023	9/29/2023	9/29/2023	9/29/2023
		Time	10:10	9:55	12:00	11:45	14:20	13:55	10:20	10:10	10:05	9:50	12:00	11:45	14:25	14:15
	Ŀ	ocation ID	BG-1S	CS-1N	BG-1S	CS-1N	BG-1N	CS-1S	BG-1S	CS-2N	BG-1S	CS-2N	BG-1S	CS-1N	BG-1S	CS-1N
	De	epth (feet)	35.0	39.2	34.0	38.5	41.0	37.0	31.0	42.4	34.6	42.5	39.2	40.6	31.5	38.5
	Chronic	Acute														
Analyte	WQC ^{1,2}	WQC ^{1,2}														
Polycyclic Aromatic Hydrocarbons (µg/L)																
Benzo(a)anthracene	2.2	9.2	0.016 U	0.018 J	0.020 U	0.154	0.032 J	0.087	0.019 U	0.022 U	0.016 U	0.840	0.018 U	0.017 U	0.016 U	0.351
Benzo(a)pyrene	0.96	4	0.016 U	0.019 J	0.020 U	0.205	0.027 J	0.074	0.019 U	0.022 U	0.016 U	1.08	0.018 U	0.017 J	0.016 U	0.454

Page 2 of 3

Water Quality Monitoring Chemical Results Gasco Sediments Site ISS Field Pilot Study

Notes:

1. Acute criteria will be the compliance criteria for water quality monitoring during all Pilot Study activities because such activities are intermittent and ephemeral in nature. Chronic criteria will be used to evaluate the effectiveness of construction BMPs and the potential need for additional or enhanced BMPs but will not be used for compliance purposes.

2. Acute and chronic PAH criteria are from Procedures for Derivation of Equilibrium Partitioning Sediment Benchmarks (ESBs) for the Protection of Benthic Organisms: PAH Mixtures (EPA 2003).

Detected concentration is greater than the chronic water quality criteria

Bold: Detected result

J: Estimated value

U: Compound analyzed but not detected above detection limit

µg/L: micrograms per liter

BMP: best management practice

ISS: in situ stabilization and solidification

WQC: water quality criteria

Reference:

EPA (U.S. Environmental Protection Agency), 2003. Procedures for the Derivation of Equilibrium Partitioning Sediment Benchmarks (ESBs) for the Protection of Benthic Organisms: PAH Mixtures. Office of Research and Development. EPA 600-R-02-013. November 2003. Available at: https://clu-in.org/conf/tio/porewater1/resources/EPA-ESB-Procedures-PAH-mixtures.pdf.

Page 3 of 3

Attachment 7 Moonpool Informational Measurements



Moonpool Informational Measurements

6720 South Macadam Avenue, Suite 300 Portland, OR 97219

Gasco Sediments Site ISS Field Pilot Study

ISS Column Location	Date	Time	Pre-/Post- Measurement	Water Column Thickness (feet)	Measurement Depth (feet below surface)	рН	Temperature (°C)
* (-1	9-23-23	7:34	PRE	13.6	9.6	7.25	19.5
1-2	9-25-23	7:15	PRE	12.	1	7.14	19-1
1-2	1	7:17			6	7.10	19.1
1-2		7:19			8	7.10	19,1
1-2		9:45	POST	12	1	6.93	19.3
1-2		9:47			6	7.23	19.3
1-2		9:49	4		8	7.73	19,2
1-4	9-26-23	14:50	PRE	13	1	7.12	18.8
1-4	1	14:52			6	7.31	18.4
1-4		14:55			10	7.30	18.4
1-4		18:30	Post	1.3		7.16	18.3
1-4		18:32		Ĩ	5	7.54	18.3
1-4	*	18:35			10	7.50	18.2
1-6	9-27-23	06:51	PRE	14	1	7.12	16.9
1-1.	1	06.53			7	7.23	16.2
1-1-		06:55			11	7.44	16.5
1-6	9-27-23	09:38	POST	OUX 13	1	7.11	17.8
1-6	1 2 2	09'40		1	7	7.24	17.5
106		09:42			10	7.25	16.6
2-1	9-28-23	10:38	PRE	13	1	6.95	20.8
2-1		10:41		1	6	7.16	21.

Notes:

*= Parameters collect @ beginning of mixing



Moonpool Informational Measurements

6720 South Macadam Avenue, Suite 300 Portland, OR 97219

.

Gasco Sediments Site ISS Field Pilot Study

ISS Column Location	Date	Time	Pre-/Post- Measurement	Water Column Thickness (feet)	Measurement Depth (feet below surface)	рН	Temperature (°C)
2-1	9-28-23	10:43	PRE	13	10	7.37	21.
2-1	9-28-23	12:00	POST	13	1	7.04	19.8
2-1		12:03			6	7.16	19.9
2-1		12:06			10	7.51	19.5
2-6	9-29-23	07:45	PRE	14	1	7.03	17.
2-6		07:47			7	7.36	16.2
2-6	¥	07:49			11	7.78	16.1
2-6	9-29-23	09:12	POST	14	1	7.20	16.7
2-6		09:20	1	1	7	7.56	17.
2-6		09:25	4		11	7.65	17.
×							
						-	
			-				

Notes: