

ATTACHMENT A Field Data Records

Penobscot River Mercury Study - Phase III Engineering Evaluation INTERTIDAL SEDIMENT SAMPLE COLLECTION wheel Project Name: USDC Penobscot River Location ID: W-104-INTA WO: 4A-030 Wetland Project Number: 3616166052 Core Collection Core Recovery Sleeve Length in Decimal Feet: Core Collection Team: KB, LT 2.0 2.0 2.0 Core Collection Date: 07/14/2017 Collection Method: Push Corer Depth Cored in Decimal Feet: 1.5 1.5 1.5 Core Collection Time: 13:19 Liner Type: 3" D x 24" L Plastic **Recovered Core Length in Decimal Feet:** 0.85 1.3 1.2 Instant Freeze (Y/N): Yes Est. Volume: 47 oz/ft % Recovery (Recovered Core/Depth Cored): 57% 87% 80% Core Log MA JOH- HATAS Woody Debris (Y/N): No Core Logger: FKM - main 7 19 17 Salinity of Water at Mudline: 5 PSU (o/00) R. 0.85 Description Interval color, grain size, odor, debris, roots, organisms, etc. 101 dark gray (7.5YR 4/1) CLAY with some silt (<10%), black mottling (0-0.4), no living organisms observed, 0-0.85 medium plasticity, soft, no odor, no wood chips or organic matter observed water depth 4', no lutoclines on any cores Notes Sample Collection Sample Collection Date: 7/25/17 and 7/26/17 Sample Collection Team: JP LT BW FM Sample Interval (ft.) Sample ID Sample Time **Requested Analyses Additional Volumes Collected** Container Homoginization NA No Lutocline Sample NA NA NA NA Lab Homogenize W-104-INTA 072517 SED 00-01 0.0 - 0.1 0945 MeHg, Hg, TOC, OC MS/MSD 1 x 16 oz Plastic and Subsample W-104-INTA _ 072517 _SED_01-03 0.1 - 0.3 0946 MeHg, Hg, TOC, OC 2 x 16 oz Plastic None 0.3 - 0.5 W-104-INTA 072617 SED 03-05 1018 Hg. TOC. OC Triple Replicate 3 x 8 oz Plastic Field Lab Iomogenize and 0.5 - 1.0 W-104-INTA 072617 SED_05-10 1020 Hg, TOC, OC 3 x 8 oz Plastic Subsample None Sample Analysis Information Notes: Analyte Method Preservative Lab Sediment Core sampling was conducted according to the following SOPs included in the QAPP: SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, SOP-S-17 Decon 1630 EFGS Methyl Mercury (MeHg) Freeze Interval 0.0 = Determined by light disappearance test Mercury (Hg) 1631 4 C EFGS Samples were processed/ sectioned in the Winterport field office Total Organic Carbon (TOC) Llovd-Kahn 4 C Alpha Geographic coordinates provided on Core/Grab log. D2974 Mod(550 C) Organic Content (OC) Ambient Amec FW

Technician Name: Julie Pallozzi

QA/QC by: Lauren Tierney

Penobscot River Mercury Study - Phase III Engineering Evaluation INTERTIDAL SEDIMENT SAMPLE COLLECTION wheel Location ID: W-104-INTB Project Name: USDC Penobscot River WO: 4A-030 Wetland Project Number: 3616166052 Core Collection Core Recovery Core Collection Team: KB, JP, LT, FM, BW Sleeve Length in Decimal Feet: 2.0 2.0 2.0 Core Collection Date: 07/27/2017 Collection Method: Push Corer Depth Cored in Decimal Feet: 1.5 1.5 1.5 Core Collection Time: 15:17 Liner Type: 3" D x 24" L Plastic **Recovered Core Length in Decimal Feet:** 0.9 1.1 1.0 Instant Freeze (Y/N): Yes Est. Volume: 47 oz/ft % Recovery (Recovered Core/Depth Cored): 60% 73% 67% Core Log Woody Debris (Y/N): No Core Logger: FKM 1-17-17 Salinity of Water at Mudline: 5 PSU (o/00) me cane parts Rosmary. 145 Description Interval color, grain size, odor, debris, roots, organisms, etc. Dark brown (7.5YR 3/4), SILT with some clay (< 15%), black (7.5YR 2.5/1) mottling from 0-0.45', no roots, 0 - 1.1 100 decomposed vegetation (leaves), super saturated, low plasticity, soft, no odor, no wood chips observed Water depth 11.5', falling tide, surface salinity - 0 PSU Notes Sample Collection Sample Collection Team: LT BW KB Sample Collection Date: 8/1/2017 and 8/3/2017 Sample Homoginization Interval (ft.) Sample ID Sample Time **Requested Analyses** Additional Volumes Collected Container NA No Lutocline Sample NA NA NA NA Lab Homogenize W-104-INTB 080117 SED 00-01 0.0 - 0.1 1420 1 x 16 oz Plastic MeHg, Hg, TOC, OC None and Subsample 0.1 - 0.3 W-104-INTB 080117 SED 01-03 1422 MeHg, Hg, TOC, OC 2 x 16 oz Plastic None 1 x 8 oz Plastic 0.3 - 0.5 W-104-INTB 080317 SED 03-05 1514 Hg. TOC. OC None Field Lab 2 x 8 oz Amber Glass Homogenize and 1 x 8 oz Plastic 0.5 - 1.0 W-104-INTB 080317 SED_05-10 1516 Hg, TOC, OC Subsample None 2 x 8 oz Amber Glass Sample Analysis Information Notes: Analyte Method Preservative Lab Sediment Core sampling was conducted according to the following SOPs included in the QAPP: SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, SOP-S-17 Decon 1630 EFGS Methyl Mercury (MeHg) Freeze Interval 0.0 = Determined by light disappearance test Mercury (Hg) 1631 4 C EFGS Samples were processed/ sectioned in the Winterport field office Total Organic Carbon (TOC) Llovd-Kahn 4 C Alpha Geographic coordinates provided on Core/Grab log. D2974 Mod(550 C) Organic Content (OC) Ambient Amec FW

Technician Name: Lauren Tierney

Technician Signature:

QA/QC by: Julie Pallozzi

amec Asster Wheeler				iver Mercury Study - F TERTIDAL SEDIMENT	0	C C			
	oject Name: USDC Penobs ect Number: 3616166052	cot River	_		Location ID:	W-105-A 4A-030 Wetland			
PTOJ	ect Number. <u>5010100052</u>		-		wo.	4A-050 Wettallu			
Core Collectio	on							Core Recovery	1
	ollection Team: FM, JP, LT,					Sleeve Length in Decimal Feet:	2.0	2.0	2.0
	Collection Date: 07/20/2013	7 <u>C</u> CC	ollection Method:			Depth Cored in Decimal Feet:	1.5	1.5	1.5
	Collection Time: 08:28 nt Freeze (Y/N): Yes					covered Core Length in Decimal Feet: overy (Recovered Core/Depth Cored):	1.13 75%	1.07 71%	1.03 69%
Core Log	it Freeze (1/14). Tes		LSt. Volume.	47 02/11	/6 REU	(Recovered Core/Deptil Cored).	1378	/1/0	0376
COTE LOg	Core Logger: FKM	Wo	ody Debris (Y/N):	No					
			Vater at Mudline:		PSU (o/00)				
		Doco	ription						
Interval			•	s, etc.					
0-1.1	black (10YR 2/1) CLAY with some silt (<5%), lots of vegetation and root matter near the surface (0-0.4 ft) vegetation matter scattered in rest of core during sample collection as core tube was pushed int				ushed into	N	o Photo Taken		
Notes	Surface salinity 12 PSU; w	vater denth 2.8'							
Sample Colleg	1								
•	ollection Team: LT JP BW FI	M	Sa	mple Collection Date:	7/24/2017 a	and 7/25/17			
Sample				•					
Interval (ft.)	Sam	ple ID	Sample Time	Requested Ana	alyses	Additional Volumes Collected	Cont	tainer	Homoginization
NA	No Lutocl	line Sample	NA	NA		NA	٦	NA	
0.0 - 0.1	W-105-A _ 072417 _	_SED_00-01	1537	MeHg, Hg, TO	C, OC	None	1 x 16 c	oz Plastic	Lab Homogenize and Subsample
0.1 - 0.3	W-105-A _ 072417 _	_SED_01-03	1538	MeHg, Hg, TO	C, OC	None		oz Plastic	
0.3 - 0.5	W-105-A _ 072517 _	_SED_03-05	1444	Hg, TOC, O	C	None		z Plastic mber Glass	Field Lab Homogenize and
0.5 - 1.0	W-105-A _ 072517 _	_SED_05-10	1446	Hg, TOC, O	C	None		z Plastic mber Glass	Subsample
Sample Analy	sis Information				Notes:				
	Analyte	Method	Preservative	Lab		e sampling was conducted according to the fo iment Sampling, SOP-S-7 Soil Descriptions, SO	-	uded in the QAPP:	
Methyl Mercu		1630	Freeze	EFGS		Determined by light disappearance test	-J-17 DECOIL		
Mercury (Hg)		1631	4 C	EFGS	Samples were processed/ sectioned in the Winterport field office				
	Carbon (TOC)	Lloyd-Kahn	4 C	Alpha	Geographic co	oordinates provided on Core/Grab log.			
Organic Conte		D2974 Mod(550 C)	Ambient	Amec FW					

QA/QC by: Lauren Tierney

Technician Signature:

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QA/QC Date: 2/1/2018

			Penobscot Riv	ver Mercury Study - F	Phase III Engin	eering Evaluation		
Hoster Wheeler			w	ETLAND SEDIMENT S	AMPLE COLLE	CTION		
	oject Name: USDC Penob	scot River			Location ID:	W-14-A		
Proje	ect Number: 3616166052		-		WO: 4	4A-030 Wetland	-	
Core Collectio	on						Core R	ecovery
Core Co	ollection Team: FM, KB, L	Г				Sleeve Length in Decimal Feet	2.0	2.0
	collection Date: 07/17/20	<u>17</u> Co	ollection Method: S		_	Depth Cored in Decimal Feet		1.5
	ollection Time: 13:47			" D x 24" L Plastic	-	overed Core Length in Decimal Feet		1.4
	t Freeze (Y/N): Yes		Est. Volume: 4	7 oz/tt	% Reco	very (Recovered Core/Depth Cored):	93%	93%
Test Pit Log						A A A A A A A A A A A A A A A A A A A		
	Test Pit Logger: FM		ody Debris (Y/N): <u>N</u>		_		A CALL	The My
	igging Method: Shooter S		Vegetation Type:		-		WI W-A	52/~
Test P	Pit Dimensions: 6" x 6" x 1		prox. # Stems/ft ² : 1	.400			C-rates a	
Interval		Desc color, grain size, odor, de	r iption ebris, roots, organisms	, etc.		1 to		
0.0-0.55	Dark gray (7.5Yr 4/1), sa hair sized to 0.04'	turated, SILT with some cla	ıy (20%), no plasticit	ty, high density root r	mass from			-
		turated, SILT with some cla	v (>45%), low plasti	city, dead organic ma	atter, low		ALC TO A ALC THE	
0.55-1.1	density hair sized roots.		/ //					
	Water in hole bgs 0.4'					actor and	A CONTRACTOR	
						and the second	ALCON ALCON	Vitte
						FILLONS	a start and the	
						A CARE A	Louis Contractor	AL STORY
Sample Collec	tion							
	ollection Team: JP LT BW	FM	Sar	mple Collection Date:	: 7/25/2017			
Sample								
Interval (ft.)	Sar	nple ID	Sample Time	Requested Ana	alyses	Additional Volumes Collected	Container	Homoginization
0.0 - 0.1	W-14-A _ 072517	_SED_00-01	0849	MeHg, Hg, TO	C, OC	Triple Replicate	1 x 16 oz Plastic	Lab Homogenize and
0.1 - 0.3	W-14-A _ 072517	_SED_01-03	0850	MeHg, Hg, TO	C, OC	None	2 x 16 oz Plastic	Subsample
0.3 - 0.5	W-14-A _ 072517	_SED_03-05	1726	Hg, TOC, O	DC	None	1 x 8 oz Plastic 2 x 8 oz Amber Glass	Field Lab Homogenize
0.5 - 1.0	W-14-A _ 072517	_SED_05-10	1728	Hg, TOC, O	DC	None	1 x 8 oz Plastic 2 x 8 oz Amber Glass	and Subsample
Sample Analy	sis Information				Notes:			
	Analyte	Method	Preservative	Lab		sampling was conducted according to the	-	e QAPP:
Methyl Mercu	ıry (MeHg)	1630	Freeze	EFGS	SOP-S-6a Sedir 0.0 = Scalp	nent Sampling, SOP-S-7 Soil Descriptions,	SOP-S-17 Decon	
Mercury (Hg)		1631	4 C	EFGS		processed/sectioned in the Winterport fie	eld office	
Total Organic		Lloyd-Kahn	4 C	Alpha				
Organic Conte	ent (OC)	D2974 Mod(550 C)	Ambient	Amec FW				
Organic Conte		D2974 Mod(550 C)	-		– Geographic co	ORDINATES PROVIDED ON CORE/GRAD LOG.	Lauren Tierney	

Technician Signature: _____

Penobscot River Mercury Study - Phase III Engineering Evaluation foste WETLAND SEDIMENT SAMPLE COLLECTION wheeler Project Name: USDC Penobscot River Location ID: W-14-B Project Number: 3616166052 WO: 4A-030 Wetland **Core Collection** Core Recovery Core Collection Team: FM, KB, LT Sleeve Length in Decimal Feet: 2.0 2.0 Core Collection Date: 07/17/2017 1.5 1.5 Collection Method: Slide Hammer Depth Cored in Decimal Feet: Core Collection Time: 14:40 Liner Type: 3" D x 24" L Plastic 1.32 **Recovered Core Length in Decimal Feet:** 1.35 Instant Freeze (Y/N): Yes Est. Volume: 47 oz/ft % Recovery (Recovered Core/Depth Cored): 88% 90% Test Pit Log Test Pit Logger: FM Woody Debris (Y/N): No Digging Method: Shooter Shovel Vegetation Type: Typha Test Pit Dimensions: 6" x 6" x 18" Approx. # Stems/ft²: 1440 Description Interval color, grain size, odor, debris, roots, organisms, etc. No Photo Taken Very dark brown (7.5YR 2.5/3), moist, CLAY with some silt (<15%), low plasticity, soft, medium density 0.0-0.9 roots, mostly hair like, occasional large roots 0.05'. Dark brown (7.5 YR 3/4), (Observed during core processing) 0.9-1.3 No water in hole Sample Collection Sample Collection Team: JP LT BW FM Sample Collection Date: 7/25/2017 Sample Interval (ft.) Sample ID Sample Time **Requested Analyses** Additional Volumes Collected Container Homoginization 0.0 - 0.1 W-14-B 072517 SED 00-01 0915 MeHg, Hg, TOC, OC 1 x 16 oz Plastic None Lab Homogenize and Subsample 0.1 - 0.3 W-14-B 072517 SED 01-03 0917 MeHg, Hg, TOC, OC None 2 x 16 oz Plastic 1 x 8 oz Plastic 0.3 - 0.5 W-14-B 072517 SED_03-05 1736 Hg, TOC, OC None 2 x 8 oz Amber Glass Field Lab Homogenize 1 x 8 oz Plastic and Subsample 0.5 - 1.0 W-14-B 072517 SED 05-10 1738 Hg, TOC, OC **Triple Replicate** 2 x 8 oz Amber Glass Sample Analysis Information Notes: Sediment Core sampling was conducted according to the following SOPs included in the QAPP: Analyte Method Preservative Lab SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, SOP-S-17 Decon 1630 EFGS Methyl Mercury (MeHg) Freeze 0.0 = ScalpMercury (Hg) 1631 4 C EFGS Samples were processed/sectioned in the Winterport field office. Total Organic Carbon (TOC) 4 C Alpha Lloyd-Kahn Geographic coordinates provided on Core/Grab Log. Organic Content (OC) D2974 Mod(550 C) Ambient Amec FW

Technician Name: Julie Pallozzi

Technician Signature: 0.5^{-2} .

QA/QC by: Lauren Tierney

QA/QC Date: 2/1/2018

Penobscot River Mercury Study - Phase III Engineering Evaluation foste WETLAND SEDIMENT SAMPLE COLLECTION wheele Project Name: USDC Penobscot River Location ID: W-14-C Project Number: 3616166052 WO: 4A-030 Wetland Core Collection Core Recovery Core Collection Team: FM, LT, KB Sleeve Length in Decimal Feet: 2.0 2.0 Core Collection Date: 07/17/2017 1.5 1.5 Collection Method: Slide Hammer Depth Cored in Decimal Feet: Core Collection Time: 15:07 Liner Type: 3" D x 24" L Plastic Recovered Core Length in Decimal Feet: 1.45 1.4 Instant Freeze (Y/N): Yes Est. Volume: 47 oz/ft 97% 93% % Recovery (Recovered Core/Depth Cored): Test Pit Log Test Pit Logger: FM Woody Debris (Y/N): Yes Digging Method: Shooter Shovel Vegetation Type: Typha (20%) carex (80%) Test Pit Dimensions: 6" x 6" x 18" Approx. # Stems/ft²: 2000 Description Interval color, grain size, odor, debris, roots, organisms, etc. Dark gravish brown (10YR 4/2), wet, organic, hydrogen sulfide odor, CLAY with some silt(25% silt), low 0.0-1.35 plasticity, soft, high density root mass and dead organic matter. Water in hole bgs 0.34 Wood chips observed in both cores from 1.35' bgs to unknown depth Notes Sample Collection Sample Collection Team: LT JP BW FM Sample Collection Date: 7/24/2017 and 7/25/17 Sample Interval (ft.) Sample ID Sample Time **Requested Analyses** Additional Volumes Collected Container Homoginization 0.0 - 0.1 W-14-C 072417 SED 00-01 1332 MeHg, Hg, TOC, OC None 1 x 16 oz Plastic Lab Homogenize and Subsample 0.1 - 0.3 W-14-C 072417 SED 01-03 1335 MeHg, Hg, TOC, OC **Triple Replicate** 2 x 16 oz Plastic 1 x 8 oz Plastic 0.3 - 0.5 W-14-C _ 072517 _SED_03-05 1620 Hg, TOC, OC None 2 x 8 oz Amber Glass Field Lab Homogenize 1 x 8 oz Plastic and Subsample 0.5 - 1.0 W-14-C 072517 SED 05-10 1622 Hg, TOC, OC None 2 x 8 oz Amber Glass Sample Analysis Information Notes: Sediment Core sampling was conducted according to the following SOPs included in the QAPP: Analyte Method Preservative Lab SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, SOP-S-17 Decon 1630 EFGS Methyl Mercury (MeHg) Freeze 0.0 = ScalpMercury (Hg) 1631 4 C EFGS Samples were processed/sectioned in the Winterport field office. Total Organic Carbon (TOC) 4 C Alpha Lloyd-Kahn Geographic coordinates provided on Core/Grab Log. Organic Content (OC) D2974 Mod(550 C) Ambient Amec FW

Technician Name: Julie Pallozzi

QA/QC by:

Lauren Tierney

Technician Signature: ____

QA/QC Date:

ames foster whitelor				ver Mercury Study - ETLAND SEDIMENT	-	-			
	bject Name: USDC Penobsco ect Number: 3616166052	t River	-		Location ID WO	W-27-A 4A-030 Wetland			
Core Collectio	n						Core R	ecovery	
Core Co	llection Team: JP,BW					Sleeve Length in Decimal Feet:	2.0	2.0	
	ollection Date: 07/20/2017	Ca	ollection Method: S		_	Depth Cored in Decimal Feet:	1.5	1.5 0.9	
	ollection Time: 08:52			rpe: 3" D x 24" L Plastic Recovered Core Length in Decimal Feet: 0.82					
	t Freeze (Y/N): Yes		Est. Volume: 4	7 oz/ft	% Rec	covery (Recovered Core/Depth Cored):	55%	60%	
	est Pit Logger: <u>BW</u> gging Method: Shooter Shov		ody Debris (Y/N): <u>N</u> Vegetation Type: S		_	y	7.		
Test P	it Dimensions: 6" x 6" x 18"	App	prox. # Stems/ft ² : 1	440		Tet		A STATES	
Interval		color, grain size, odor, de					A PIN		
0-0.65	Very dark gray (10YR3/1), 8 diameter, plasticity NA due			isty roots of hair like	e to 0.02'				
0.65-1.4	Very dark grayish brown (1 roots of hair like to 0.01' di			grain sandy SILT, me	edium density			Sale and	
	Water depth 0.45' bgs								
Sample Collec Sample Co	tion llection Team: LT JP BW FM		Sar	nple Collection Date	:: 7/25/17 an	d 7/26/17			
Sample Interval (ft.)	Sampl	e ID	Sample Time	Requested An	alyses	Additional Volumes Collected	Container	Homoginization	
0.0 - 0.1	W-27-A _ 072517 _S	ED_00-01	1239	MeHg, Hg, TC	ос, ос	Triple Replicate	1 x 16 oz Plastic	Lab Homogenize and	
0.1 - 0.3	W-27-A _ 072517 _S	ED_01-03	1240	MeHg, Hg, TC	DC, OC	None	2 x 16 oz Plastic	Subsample	
0.3 - 0.5	W-27-A _ 072617 _S	ED_03-05	0833	Hg, TOC, (00	None	1 x 8 oz Plastic 2 x 8 oz Amber Glass	Field Lab Homogenize	
0.5 - 1.0	W-27-A _ 072617 _S	ED_05-10	0835	Hg, TOC, (MS/MSD	1 x 8 oz Plastic 2 x 8 oz Amber Glass	and Subsample	
Sample Analys	sis Information				Notes:				
Methyl Mercu	Analyte ry (MeHg)	Method 1630	Preservative Freeze	Lab EFGS	SOP-S-6a Sec	re sampling was conducted according to the diment Sampling, SOP-S-7 Soil Descriptions, S		e QAPP:	
Mercury (Hg)		1631	4 C	EFGS	0.0 = Scalp	e processed/sectioned in the Winterport fiel	d offico		
Total Organic	Carbon (TOC)	Lloyd-Kahn	4 C	Alpha		coordinates provided on Core/Grab Log.	u onice.		
Organic Conte	nt (OC)	D2974 Mod(550 C)	Ambient	Amec FW	Geographic (containates provided on core/orab Log.			
Techn	ician Name: Julie Pallozzi					QA/QC by: L	auren Tierney		

Technician Signature: $\underbrace{() \quad (\sum a \ \mathcal{O} \ (2 \ c) \ r_{2} \ r_{3})}_{-}$

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Penobscot River Mercury Study - Phase III Engineering Evaluation

WETLAND SEDIMENT SAMPLE COLLECTION

wheeler							
	roject Name: USDC Penobso ect Number: 3616166052	cot River	_		Location ID: W-100-A WO: 4A-030 Wetland		
Proje	ect Number: 3010100052		-		WO: 4A-030 Wetland		
Core Collectio	on					Core R	ecovery
Core Co	ollection Team: BW, LT				Sleeve Length in Decimal Feet:	2.0	2.0
Core C	Collection Date: 07/31/2017	7 Co	ollection Method: Slide Hammer		Depth Cored in Decimal Feet:	1.5	1.5
	Collection Time: 16:40			" D x 24" L Plastic	Recovered Core Length in Decimal Feet:	1.1	1.1
Instan	nt Freeze (Y/N): Yes		Est. Volume: 4	7 oz/ft	% Recovery (Recovered Core/Depth Cored):	73%	73%
Test Pit Log					And	NI- 100-P	
	Test Pit Logger: BW		ody Debris (Y/N): <u>N</u>			- phulip	Res -
	igging Method: Shooter Sho		Vegetation Type: N			ala la	A STATE OF THE OWNER
Test F	Pit Dimensions: 6" x 6" x 18		prox. # Stems/ft ² : 2	.000		92	·
			ription			and the second s	A
Interval		color, grain size, odor, de	-		MARK I	Contraction of the local	
0.0-0.5	Dark gray (10 YR 4/1), v	vet, strong biological odor, high density root ma			/ NA due to	The local division of	A REAL PROPERTY.
	Versiderli grevi (10)/F	, , , , , , , , , , , , , , , , , , ,			ad) laur		
0.5-1.1	Very dark gray (10)P	3/1), saturated, strong bi plasticity, medium der			nd), iow		See Nille Line
	Water in hole bgs 0.8'	plasticity, medium dei	isity fian like sizeu i	0015	TAX DO NOT DE CAL		A MADAN
	Water In hole bgs 0.8				and the second s		
Sample Collec	rtion						
•	ollection Team: LT BW		Sar	mple Collection Date	8/1/2017 and 8/3/2017		
Sample							
nterval (ft.)	Sam	ple ID	Sample Time	Requested An	alyses Additional Volumes Collected	Container	Homoginization
0.0 - 0.1	W-100-A _ 080117 _	SED_00-01	1504	MeHg, Hg, TO	C, OC None	1 x 16 oz Plastic	Lab Homogenize and
							Subsample
0.1 - 0.3	W-100-A _ 080117 _	SED_01-03	1506	MeHg, Hg, TO	C, OC None	2 x 16 oz Plastic	Subsumple
			1000			1 x 8 oz Plastic	
0.3 - 0.5	W-100-A _ 080317 _	_SED_03-05	1320	Hg, TOC, C	None	1 x 8 oz Plastic 2 x 8 oz Amber Glass	Field Lab Homogeniz
		_					Field Lab Homogeniz and Subsample
0.3 - 0.5 0.5 - 1.0	W-100-A _ 080317 _ W-100-A _ 080317 _	_	1320 1322	Hg, TOC, C		2 x 8 oz Amber Glass	Field Lab Homogeniz and Subsample
0.5 - 1.0	W-100-A _ 080317 _	SED_05-10	1322	Hg, TOC, C	None None	2 x 8 oz Amber Glass 1 x 8 oz Plastic 2 x 8 oz Amber Glass	and Subsample
0.5 - 1.0 Sample Analy	W-100-A 080317 visis Information Analyte	SED_05-10 Method		Hg, TOC, C	C None Notes: Sediment Core sampling was conducted according to the	2 x 8 oz Amber Glass 1 x 8 oz Plastic 2 x 8 oz Amber Glass following SOPs included in the	and Subsample
0.5 - 1.0 Sample Analy Methyl Mercu	W-100-A 080317 visis Information Analyte	SED_05-10 Method 1630	1322 Preservative Freeze	Hg, TOC, C Lab EFGS	C None Notes: Sediment Core sampling was conducted according to the SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, S	2 x 8 oz Amber Glass 1 x 8 oz Plastic 2 x 8 oz Amber Glass following SOPs included in the	and Subsample
0.5 - 1.0 Sample Analy Methyl Mercu Mercury (Hg)	W-100-A 080317 rsis Information Analyte ury (MeHg)	SED_05-10 Method 1630 1631	1322 Preservative Freeze 4 C	Hg, TOC, C Lab EFGS EFGS	C None Notes: Sediment Core sampling was conducted according to the SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, S 0.0 = Scalp	2 x 8 oz Amber Glass 1 x 8 oz Plastic 2 x 8 oz Amber Glass following SOPs included in the OP-S-17 Decon	and Subsample
0.5 - 1.0 Sample Analy Methyl Mercu Mercury (Hg)	W-100-A 080317 visis Information Analyte ury (MeHg) Carbon (TOC)	SED_05-10 Method 1630	1322 Preservative Freeze	Hg, TOC, C Lab EFGS	C None Notes: Sediment Core sampling was conducted according to the SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, S	2 x 8 oz Amber Glass 1 x 8 oz Plastic 2 x 8 oz Amber Glass following SOPs included in the OP-S-17 Decon	and Subsample

Technician Name: Lauren Tierney

QA/QC by:

Julie Pallozzi

- -Technician Signature:

QA/QC Date:

ames foster wheelor					Phase III Engineering Evaluation SAMPLE COLLECTION		
Pro	oject Name: USDC Penobscot	River	_		Location ID: W-101-A		
Proje	ect Number: <u>3616166052</u>		-		WO: 4A-030 Wetland		
Core Collectio	on					Core F	Recovery
Core Co	ollection Team: KB, LT				Sleeve Length in Decimal Feet:	2.0	2.0
Core C	Collection Date: 08/02/2017	C	ollection Method: S		Depth Cored in Decimal Feet:	1.5	1.5
	Core Collection Time: 17:17 Liner Type: 3" D x 24" L Plas				Recovered Core Length in Decimal Feet:	0.85	1.05
Instan	stant Freeze (Y/N): Yes Est. Volume: 47 oz/ft				% Recovery (Recovered Core/Depth Cored):	57%	70%
Fest Pit Log						A STATE STATE	THE REAL
ז	Test Pit Logger: BW		ody Debris (Y/N): N			91001	and the second
Di	igging Method: Shooter Shov		Vegetation Type: <u>N</u>				1
Test P	Pit Dimensions: 6" x 6" x 18"		prox. # Stems/ft ² : 1	.00		128	
			ription				
Interval		color, grain size, odor, de	ebris, roots, organisms	s, etc.		the second s	and a state of the
0.0-0.1	Very dark gray (10YR 3/1), v	wet, SILT with trace san	d (5% fine sand) low	v plasticity, high dense	sity fine roots	A Destaura	at the second
0.1-0.8	Dark gray (10 YR 4/1), satu		SILT with sand (10%	sand), no plasticity,			× 1/2
0.8-1.3	Very dark grayish brown	(10 YR 3/2), saturated, I	11.1	with sand (15% sand	d), medium		
	Water in hole bgs 1.3'						
Sample Collec	tion						
Sample Co	ollection Team: KCB, BPW		Sar	nple Collection Date	: 8/15/17 and 8/17/17		
Sample							
nterval (ft.)	Sample	e ID	Sample Time	Requested An	alyses Additional Volumes Collected	Container	Homoginization
0.0 - 0.1	W-101-A _ 081517 _SE	ED_00-01	1445	MeHg, Hg, TC	DC, OC None	2 x 8 oz Plastic	Lab Homogenize and
0.1 - 0.3	W-101-A _ 081517 _SI	D 01-03	1447	MeHg, Hg, TC	OC. OC None	2 x 16 oz Plastic	Subsample
		-		- 0/ 0/ -	None None		
0.3 - 0.5	W-101-A _ 081717 _Sf		1807	Hg, TOC, (3 x 4 oz Plastic	Field Lab Homogenize
0.3 - 0.5 0.5 - 1.0		ED_03-05	1807 1810		DC None	3 x 4 oz Plastic 3 x 4 oz Plastic	Field Lab Homogenize and Subsample
0.5 - 1.0	W-101-A _ 081717 _Sf	ED_03-05		Hg, TOC, (DC None None None None	3 x 4 oz Plastic	and Subsample
0.5 - 1.0 Sample Analy	W-101-A 081717 Si W-101-A 081717 Si W-101-A 081717 Si sis Information Analyte	ED_03-05		Hg, TOC, (DC None DC None Notes: Sediment Core sampling was conducted according to the	3 x 4 oz Plastic	and Subsample
0.5 - 1.0 Gample Analy	W-101-A 081717 Si W-101-A 081717 Si W-101-A 081717 Si sis Information Analyte	ED_03-05 ED_05-10	1810	Hg, TOC, (Hg, TOC, (Lab EFGS	None None Notes: Sediment Core sampling was conducted according to the SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, S	3 x 4 oz Plastic	and Subsample
0.5 - 1.0	W-101-A 081717 Si W-101-A 081717 Si W-101-A 081717 Si sis Information Analyte	ED_03-05 ED_05-10 Method	1810 Preservative	Hg, TOC, (Hg, TOC, (Lab	None None None Notes: Sediment Core sampling was conducted according to the SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, S 0.0 = Scalp	3 x 4 oz Plastic following SOPs included in tl OP-S-17 Decon	and Subsample
0.5 - 1.0 Gample Analy Methyl Mercu Mercury (Hg)	W-101-A 081717 Si W-101-A 081717 Si W-101-A 081717 Si sis Information Analyte	ED_03-05 ED_05-10 Method 1630	1810 Preservative Freeze	Hg, TOC, (Hg, TOC, (Lab EFGS	None None Notes: Sediment Core sampling was conducted according to the SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, S	3 x 4 oz Plastic following SOPs included in tl OP-S-17 Decon	and Subsample

Technician Name: Lauren Tierney

QA/QC by: Julie Pallozzi

Technician Signature:

amec Hoster Whiteolor				liver Mercury Study - P VETLAND SEDIMENT S	Phase III Engineering Evaluation AMPLE COLLECTION			
	oject Name: USDC Penobsco ect Number: 3616166052	t River	-		Location ID: W-101-B WO: 4A-030 Wetland	-		
PTOJE	set Number. 3010100032		-					
Core Collectio	n						Recovery	
	llection Team: KB, LT				Sleeve Length in Decimal Feet:	2.0	2.0	
	ollection Date: 08/02/2017	Co	llection Method:		Depth Cored in Decimal Feet:	1.5	1.5	
	bllection Time: 17:11 t Freeze (Y/N): Yes		Liner Type: <u>3" D x 24" L Plastic</u> Est. Volume: <u>47 oz/ft</u>		Recovered Core Length in Decimal Feet: % Recovery (Recovered Core/Depth Cored):	1.05 70%	0.9 60%	
Test Pit Log	111222 (1/14). 165		LSt. Volume.	47 02/10	% Recovered Core/Deptil Cored).	7078		
-	est Pit Logger: LT	Wo	ody Debris (Y/N):	No	Stand Standing	tion .		
Di	gging Method: Shooter Shov		Vegetation Type:			rlei ·	100 - CAN	
Test P	it Dimensions: 6" x 6" x 18"	Арр	orox. # Stems/ft ² :	50			TEST DETROIT	
			ription					
Interval	Black (10YR 2/1), saturated	color, grain size, odor, de			the NA due	Commences of the second		
0.0-0.05	to moisture, no roots		organic Sier with	sanu (<5% siit), plastici				
	Dark gray (10YR 4/1), biolo	gical black mottling,satu	rated, strong biolo	ogical odor, SILT with tr	race sand	And all a lite		
0.05-1.0	(5% fine sand), plasticity N/							
	Water in hole 0.65' bgs					the the	and the	
					RUPE	- A	4	
Sample Collec Sample Co	tion llection Team: KCB,BPW		Sa	ample Collection Date:	: 8/15/17 and 8/17/17			
Sample Interval (ft.)	Sampl	e ID	Sample Time	Requested Ana	alyses Additional Volumes Collected	Container	Homoginization	
0.0 - 0.1	W-101-B _ 081517 _S	ED_00-01	1518	MeHg, Hg, TO	C, OC None	2 x 8 oz Plastic	Lab Homogenize and	
0.1 - 0.3	W-101-B _ 081517 _S	ED_01-03	1520	MeHg, Hg, TO	C, OC None	2 x 16 oz Plastic	Subsample	
0.3 - 0.5	W-101-B _ 081717 _S	ED_03-05	1825	Hg, TOC, O	C None	3 x 4 oz Plastic	Field Lab Homogenize	
0.5 - 1.0	W-101-B _ 081717 _S	ED_05-10	1828	Hg, TOC, O	C Triple Replicate	3 x 4 oz Plastic	and Subsample	
Sample Analys	sis Information				Notes:			
	Analyte	Method	Preservative	Lab	Sediment Core sampling was conducted according to the SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions,	-	ne QAPP:	
Methyl Mercu	ry (MeHg)	1630	Freeze	EFGS	0.0 = Scalp	DOR-3-11 DECOIL		
Mercury (Hg)	Carbon (TOC)	1631	4 C 4 C	EFGS	Samples were processed/sectioned in the Winterport fie	ld office with windows closed	l.	
Total Organic Organic Conte		Lloyd-Kahn D2974 Mod(550 C)	4 C Ambient	Alpha Amec FW	Geographic coordinates provided on Core/Grab Log.			
organic conte		D2974 WO0(550 C)	Ampient	Amecev				

Technician Name: Lauren Tierney

Technician Signature:

QA/QC by: Julie Pallozzi

amer		Penobscot R	River Mercury Study - I	Phase III Engineering Evaluation		
Hoster whiteler		v	WETLAND SEDIMENT S	SAMPLE COLLECTION		
	ject Name: USDC Penobscot River			Location ID: W-103-A		
Proje	ct Number: 3616166052			WO: 4A-030 Wetland	-	
Core Collectio	n				Core R	ecovery
Core Co	llection Team: FM, KB, LT			Sleeve Length in Decimal Feet		2.0
	ollection Date: 07/17/2017	Collection Method:		Depth Cored in Decimal Feet		1.5
	ollection Time: 11:56		3" D x 24" L Plastic	Recovered Core Length in Decimal Feet		1.0
	t Freeze (Y/N): Yes	Est. Volume:	47 oz/ft	% Recovery (Recovered Core/Depth Cored)	: 60%	67%
Test Pit Log			Ne		A - THAT A	
	est Pit Logger: FM	Woody Debris (Y/N):			their	
	gging Method: Shooter Shovel it Dimensions: 6" x 6" x 18"	Vegetation Type: Approx. # Stems/ft ² :			The Construction of the State	
Test P		Description	1400			
Interval	color, gr	ain size, odor, debris, roots, organisn	ns, etc.		The second se	the test
0.0-1.1	Brown (7.5YR 4/2), moist, SILT (20-40	0%), heavy root mass from hair si	ize to 0.05', non plastic	c	A WAY A SHE	
					THE REPORT OF THE PARTY OF THE	A REAL PROPERTY.
	Water hole bgs 0.6'					RAR
Sample Collec	tion		ample Collection Date	• 7/24/2017 and 7/25/17		
Sample Co		Sa	ample Collection Date	: 7/24/2017 and 7/25/17		
•	tion	Sample Time	ample Collection Date Requested Ana		Container	Homoginization
Sample Co Sample	tion llection Team: LT JP BW FM	Sample Time		alyses Additional Volumes Collected	Container 1 x 16 oz Plastic	Homoginization Lab Homogenize and
Sample Co Sample Interval (ft.)	tion llection Team: LT JP BW FM Sample ID	Sample Time	Requested Ana	alyses Additional Volumes Collected		
Sample Co Sample Interval (ft.) 0.0 - 0.1	tion Ilection Team: LT JP BW FM Sample ID W-103-A _ 072417 _SED_00-01	Sample Time 1518 1519	Requested Ana MeHg, Hg, TO	alyses Additional Volumes Collected IC, OC None IC, OC None	1 x 16 oz Plastic	Lab Homogenize and
Sample Co Sample Interval (ft.) 0.0 - 0.1 0.1 - 0.3	LT JP BW FM Ltion LT JP BW FM Sample ID W-103-A _ 072417 _SED_00-01 W-103-A _ 072417 _SED_01-03	Sample Time 1518 1519 1440	Requested An MeHg, Hg, TO MeHg, Hg, TO	alyses Additional Volumes Collected IC, OC None IC, OC None IC, OC None	1 x 16 oz Plastic 2 x 16 oz Plastic 1 x 8 oz Plastic	Lab Homogenize and Subsample
Sample Co Sample Interval (ft.) 0.0 - 0.1 0.1 - 0.3 0.3 - 0.5 0.5 - 1.0	Lion Ilection Team: LT JP BW FM Sample ID W-103-A _ 072417 _SED_00-01 W-103-A _ 072417 _SED_01-03 W-103-A _ 072517 _SED_03-05	Sample Time 1518 1519 1440	Requested An MeHg, Hg, TO MeHg, Hg, TO Hg, TOC, C	Additional Volumes Collected hC, OC None	1 x 16 oz Plastic 2 x 16 oz Plastic 1 x 8 oz Plastic 2 x 8 oz Amber Glass 1 x 8 oz Plastic 2 x 8 oz Amber Glass	Lab Homogenize and Subsample Field Lab Homogenize and Subsample
Sample Co Sample Interval (ft.) 0.0 - 0.1 0.1 - 0.3 0.3 - 0.5 0.5 - 1.0	LT JP BW FM Lion Lection Team: LT JP BW FM Sample ID W-103-A _ 072417 _SED_00-01 W-103-A _ 072417 _SED_01-03 W-103-A _ 072517 _SED_03-05 W-103-A _ 072517 _SED_05-10 Sis Information	Sample Time 1518 1519 1440	Requested An MeHg, Hg, TO MeHg, Hg, TO Hg, TOC, C	Additional Volumes Collected IC, OC None IC Triple Replicate Notes: Sediment Core sampling was conducted according to th	1 x 16 oz Plastic 2 x 16 oz Plastic 1 x 8 oz Plastic 2 x 8 oz Amber Glass 1 x 8 oz Plastic 2 x 8 oz Amber Glass e following SOPs included in th	Lab Homogenize and Subsample Field Lab Homogenize and Subsample
Sample Co Sample Interval (ft.) 0.0 - 0.1 0.1 - 0.3 0.3 - 0.5 0.5 - 1.0 Sample Analys Methyl Mercu	Sample ID W-103-A 072417 SED_00-01 W-103-A 072417 SED_01-03 W-103-A 072517 SED_03-05 W-103-A 072517 SED_03-05 W-103-A 072517 SED_05-10 Sis Information Analyte N Yry (MeHg) N N	Sample Time 1518 1519 1440 1442 1630	Requested An MeHg, Hg, TO MeHg, Hg, TO Hg, TOC, C Hg, TOC, C Lab EFGS	Additional Volumes Collected IC, OC None IC Triple Replicate Notes: Sediment Core sampling was conducted according to the SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions,	1 x 16 oz Plastic 2 x 16 oz Plastic 1 x 8 oz Plastic 2 x 8 oz Amber Glass 1 x 8 oz Plastic 2 x 8 oz Amber Glass e following SOPs included in th	Lab Homogenize and Subsample Field Lab Homogenize and Subsample
Sample Co Sample Interval (ft.) 0.0 - 0.1 0.1 - 0.3 0.3 - 0.5 0.5 - 1.0 Sample Analys Methyl Mercu Mercury (Hg)	Sample ID W-103-A 072417 SED_00-01 W-103-A 072417 SED_01-03 W-103-A 072517 SED_03-05 W-103-A 072517 SED_03-05 W-103-A 072517 SED_05-10 Sis Information Analyte N Yry (MeHg) N N	Sample Time 1518 1519 1440 1442 1630 Freeze 1631	Requested Ana MeHg, Hg, TO MeHg, Hg, TO Hg, TOC, C Hg, TOC, C Lab EFGS EFGS	alyses Additional Volumes Collected IC, OC None IC Triple Replicate Notes: Sediment Core sampling was conducted according to th SOP-5-6a Sediment Sampling, SOP-5-7 Soil Descriptions, IO, IC, IC, IC, IC, IC, IC, IC, IC, IC, IC	1 x 16 oz Plastic 2 x 16 oz Plastic 1 x 8 oz Plastic 2 x 8 oz Amber Glass 1 x 8 oz Plastic 2 x 8 oz Amber Glass e following SOPs included in th SOP-S-17 Decon	Lab Homogenize and Subsample Field Lab Homogenize and Subsample
Sample Co Sample Interval (ft.) 0.0 - 0.1 0.1 - 0.3 0.3 - 0.5 0.5 - 1.0 Sample Analys Methyl Mercu	Sample ID W-103-A 072417 SED_00-01 W-103-A 072417 SED_01-03 W-103-A 072517 SED_03-05 W-103-A 072517 SED_05-10 Sis Information Analyte N Analyte N N Carbon (TOC) Llo Llo	Sample Time 1518 1519 1440 1442 1630	Requested An MeHg, Hg, TO MeHg, Hg, TO Hg, TOC, C Hg, TOC, C Lab EFGS	Additional Volumes Collected IC, OC None IC Triple Replicate Notes: Sediment Core sampling was conducted according to the SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions,	1 x 16 oz Plastic 2 x 16 oz Plastic 1 x 8 oz Plastic 2 x 8 oz Amber Glass 1 x 8 oz Plastic 2 x 8 oz Amber Glass e following SOPs included in th SOP-S-17 Decon	Lab Homogenize and Subsample Field Lab Homogenize and Subsample

QA/QC by: Lauren Tierney

Technician Signature:

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ames Foster Mitecler		w	ETLAND SEDIMENT S	SAMPLE COLLECTION		
Pr	oject Name: USDC Penobscot River			Location ID: W-104-A	_	
Proje	ect Number: <u>3616166052</u>			WO: 4A-030 Wetland	_	
ore Collectio	on				Core R	ecovery
Core Co	ollection Team: <u>KB, LT</u>			Sleeve Length in Decimal Feet	2.0	2.0
	Collection Date: 07/14/2017	Collection Method:		Depth Cored in Decimal Feet		1.5
	collection Time: 13:58		3" D x 24" L Plastic	Recovered Core Length in Decimal Feet		0.85
	nt Freeze (Y/N): Yes	Est. Volume: 4	17 oz/ft	% Recovery (Recovered Core/Depth Cored)	: 67%	57%
D	Test Pit Logger: KB igging Method: Shooter Shovel Pit Dimensions: 6" x 6" x 18"	Woody Debris (Y/N): 1 Vegetation Type: 6 Approx. # Stems/ft ² : 3	Bull rushes		4 1/P	XI
Interval	color, gra	Description in size, odor, debris, roots, organism	s. etc.	a a second	w 7***	A.4.
0.0-1.0	(5YR 4/4) mottling (2-5%) around very	y fine roots, dry, CLAY with trace		11 III	5 ARC	
ample Collec	(5YR 4/4) mottling (2-5%) around ver low plasticity, very stiff, low density fi No water in hole	y fine roots, dry, CLAY with trace ine roots (0.01' diameter) until 0.	fine sand (<5% fine s 4', no organism	and), very		
ample Collec Sample Co	(5YR 4/4) mottling (2-5%) around ver low plasticity, very stiff, low density fi No water in hole	y fine roots, dry, CLAY with trace ine roots (0.01' diameter) until 0.	fine sand (<5% fine s 4', no organism	11 III		
ample Collec	(5YR 4/4) mottling (2-5%) around ver low plasticity, very stiff, low density fi No water in hole	y fine roots, dry, CLAY with trace ine roots (0.01' diameter) until 0.	fine sand (<5% fine s 4', no organism	and), very	Container	Homoginization
mple Collec Sample Co	(5YR 4/4) mottling (2-5%) around ver low plasticity, very stiff, low density fi No water in hole ction ollection Team: BW, JP	y fine roots, dry, CLAY with trace ine roots (0.01' diameter) until 0.	fine sand (<5% fine s 4', no organism mple Collection Date	and), very : 7/18/17 and 7/19/17 alyses Additional Volumes Collected	Container 1 x 16 oz Plastic	Lab Homogenize an
mple Colleo Sample Co mple terval (ft.)	(5YR 4/4) mottling (2-5%) around ver low plasticity, very stiff, low density fi No water in hole ction Dilection Team: BW, JP Sample ID	y fine roots, dry, CLAY with trace ine roots (0.01' diameter) until 0. San Sample Time	fine sand (<5% fine si 4', no organism mple Collection Date Requested Ana	and), very : 7/18/17 and 7/19/17 alyses Additional Volumes Collected C, OC None	1 x 16 oz Plastic 2 x 16 oz Plastic	
imple Collec Sample Co imple terval (ft.) 0.0 - 0.1	(5YR 4/4) mottling (2-5%) around veri low plasticity, very stiff, low density find No water in hole ction ollection Team: BW, JP Sample ID W-104-A _ 071817 _SED_00-01	y fine roots, dry, CLAY with trace ine roots (0.01' diameter) until 0. San Sample Time 14:35	fine sand (<5% fine si 4', no organism mple Collection Date Requested Ana MeHg, Hg, TO	and), very : 7/18/17 and 7/19/17 alyses Additional Volumes Collected C, OC None C, OC None	1 x 16 oz Plastic	Lab Homogenize an Subsample
mple Collec Sample Co mple terval (ft.) 0.0 - 0.1 0.1 - 0.3	(5YR 4/4) mottling (2-5%) around veri low plasticity, very stiff, low density find No water in hole ttion ollection Team: BW, JP Sample ID W-104-A _ 071817 _SED_00-01 W-104-A _ 071817 _SED_01-03	y fine roots, dry, CLAY with trace ine roots (0.01' diameter) until 0. San Sample Time 14:35 14:36	fine sand (<5% fine si 4', no organism mple Collection Date Requested An MeHg, Hg, TO MeHg, Hg, TO	and), very : 7/18/17 and 7/19/17 alyses Additional Volumes Collected C, OC None C, OC C, OC	1 x 16 oz Plastic 2 x 16 oz Plastic 1 x 8 oz Plastic	Lab Homogenize an Subsample
ample Collec Sample Co ample terval (ft.) 0.0 - 0.1 0.1 - 0.3 0.3 - 0.5 0.5 - 1.0	(5YR 4/4) mottling (2-5%) around veri low plasticity, very stiff, low density find No water in hole Sample ID W-104-A _ 071817 _SED_00-01 W-104-A _ 071817 _SED_01-03 W-104-A _ 071917 _SED_03-05 W-104-A _ 071917 _SED_05-10 rsis Information	y fine roots, dry, CLAY with trace ine roots (0.01' diameter) until 0. Sample Time 14:35 14:36 13:02 13:05	fine sand (<5% fine si 4', no organism mple Collection Date Requested Ania MeHg, Hg, TO MeHg, Hg, TO Hg, TOC, C Hg, TOC, C	and), very and), very T/18/17 and 7/19/17 Alyses Additional Volumes Collected C, OC None C, OC None C, OC None C N	1 x 16 oz Plastic 2 x 16 oz Plastic 1 x 8 oz Plastic 2 x 8 oz Amber Glass 1 x 8 oz Plastic 2 x 8 oz Amber Glass	Lab Homogenize an Subsample Field Lab Homogeniz and Subsample
mple Collec Sample Co mple terval (ft.) 0.0 - 0.1 0.1 - 0.3 0.3 - 0.5 0.5 - 1.0 mple Analy	(5YR 4/4) mottling (2-5%) around veri low plasticity, very stiff, low density fit No water in hole Sample ID W-104-A _ 071817 _SED_00-01 W-104-A _ 071817 _SED_01-03 W-104-A _ 071917 _SED_03-05 W-104-A _ 071917 _SED_05-10 rsis Information Analyte M	y fine roots, dry, CLAY with trace ine roots (0.01' diameter) until 0. Sample Time 14:35 14:36 13:02 13:05 ethod Preservative	fine sand (<5% fine si 4', no organism mple Collection Date Requested Ana MeHg, Hg, TO MeHg, Hg, TO Hg, TOC, C Hg, TOC, C Lab	and), very and), very Triand 7/19/17	1 x 16 oz Plastic 2 x 16 oz Plastic 1 x 8 oz Plastic 2 x 8 oz Amber Glass 1 x 8 oz Plastic 2 x 8 oz Amber Glass 1 x 8 oz Amber Glass 2 x 8 oz Amber Glass e following SOPs included in th	Lab Homogenize an Subsample Field Lab Homogeni and Subsample
mple Collec Sample Co mple terval (ft.) 0.0 - 0.1 0.1 - 0.3 0.3 - 0.5 0.5 - 1.0 mple Analy ethyl Mercu	(5YR 4/4) mottling (2-5%) around verilow plasticity, very stiff, low density fill No water in hole Sample ID W-104-A 071817 SED_00-01 W-104-A 071817 SED_01-03 W-104-A 071917 SED_03-05 W-104-A 071917 SED_05-10 vsis Information Analyte M	y fine roots, dry, CLAY with trace ine roots (0.01' diameter) until 0. Sample Time 14:35 14:36 13:02 13:05 ethod Preservative 1630 Freeze	fine sand (<5% fine si 4', no organism mple Collection Date Requested Ania MeHg, Hg, TO MeHg, Hg, TO Hg, TOC, C Hg, TOC, C Lab EFGS	and), very and), very T/18/17 and 7/19/17 Alyses Additional Volumes Collected C, OC None C, OC None C, OC None C N	1 x 16 oz Plastic 2 x 16 oz Plastic 1 x 8 oz Plastic 2 x 8 oz Amber Glass 1 x 8 oz Plastic 2 x 8 oz Amber Glass 1 x 8 oz Amber Glass 2 x 8 oz Amber Glass e following SOPs included in th	Lab Homogenize ar Subsample Field Lab Homogeni and Subsample
ample Collect Sample Collect mple terval (ft.) 0.0 - 0.1 0.1 - 0.3 0.3 - 0.5 0.5 - 1.0 mple Analy ethyl Mercu ercury (Hg)	(5YR 4/4) mottling (2-5%) around verilow plasticity, very stiff, low density fill No water in hole Sample ID W-104-A 071817 SED_01-03 W-104-A 071917 SED_03-05 W-104-A 071917 SED_05-10 rsis Information Analyte M	y fine roots, dry, CLAY with trace ine roots (0.01' diameter) until 0. Sample Time 14:35 14:36 13:02 13:05 ethod Preservative	fine sand (<5% fine si 4', no organism mple Collection Date Requested Ana MeHg, Hg, TO MeHg, Hg, TO Hg, TOC, C Hg, TOC, C Lab	and), very and), very Trianal Content of the second	1 x 16 oz Plastic 2 x 16 oz Plastic 1 x 8 oz Plastic 2 x 8 oz Amber Glass 1 x 8 oz Plastic 2 x 8 oz Amber Glass e following SOPs included in th SOP-S-17 Decon	Lab Homogenize an Subsample Field Lab Homogeni and Subsample

QA/QC by: Lauren Tierney

Technician Signature:

		Penobscot Riv	ver Mercury Study -	Phase III Eng	ineering Evaluation		
amec ster Hoster wheeler		w	ETLAND SEDIMENT	SAMPLE COL	LECTION		
	oject Name: USDC Penobscot River			Location ID	: W-104-B		
	ect Number: 3616166052			wo	: 4A-030 Wetland		
Core Collectio							ecovery
	ollection Team: KB JP				Sleeve Length in Decimal Feet:	2.0	2.0
	Collection Date: 07/26/2017	Collection Method: S			Depth Cored in Decimal Feet:	1.5	1.5
	tollection Time: 10:48	Liner Type: <u>3" D x 24" L Plastic</u> Est. Volume: <u>47 oz/ft</u>			ecovered Core Length in Decimal Feet: covery (Recovered Core/Depth Cored):	1.0 67%	1.5 100%
Test Pit Log	it Freeze (f/N): fes	Est. volume: 4	7 02/11	% Ke	covery (Recovered Core/Depth Cored):		100%
-	Fost Dit Logger, KD	Woody Debris (Y/N): N				the R. Doorston & Low and Municipality	
	Test Pit Logger: KB igging Method: Shooter Shovel	Vegetation Type: B		_	Chamme har 2 1	a.re	
		Approx. # Stems/ft ² : 4		_		92	
Test		Approx. # Stems/It : 4	-32			52.	
Interval		or, debris, roots, organisms	. etc.		1-2-1-		and the state
		-		(4.00())		the state	
0.4.25	Very dark gray (10YR3/1) some black (10YR2/1)	· ·				man and the second of the	
0-1.25	plasticity, competent, medium density roots of			rrace,			A DESCRIPTION OF THE OWNER
	saturated, firm, some dead leaf litter on surfac	e, no organisms observe	eu		and the second se		Sallant-
	Water in hole 0.6' bgs					Same	alle the
					The second second second		Che the
					The second state of the se		A CALENT
Sample Collec	ction						
	ollection Team: LT BW	Sar	nple Collection Date	e: 8/1/2017 a	nd 8/3/2017		
Sample							
Interval (ft.)	Sample ID	Sample Time	Requested Ar	nalyses	Additional Volumes Collected	Container	Homoginization
0.0 - 0.1	W-104-B _ 080117 _SED_00-01	1514	MeHg, Hg, TC	DC, OC	None	1 x 16 oz Plastic	Lab Homogenize and
0.1 - 0.3	W-104-B _ 080117 _SED_01-03	1516	MeHg, Hg, TC	DC, OC	None	2 x 16 oz Plastic	Subsample
0.3 - 0.5	W-104-B _ 080317 _SED_03-05	1420	Hg, TOC,	ос	Triple Replicate	1 x 8 oz Plastic 2 x 8 oz Amber Glass	Field Lab Homogenize
						1 x 8 oz Plastic	and Subsample
0.5 - 1.0	W-104-B 080317 SED_05-10	1422	Hg, TOC, (00	MS/MSD	2 x 8 oz Amber Glass	und Subsumple
Sample Analy	rsis Information			Notes:			
	Analyte Method	Preservative	Lab		pre sampling was conducted according to the		e QAPP:
Methyl Mercu		Freeze	EFGS	SOP-S-6a Sec 0.0 = Scalp	diment Sampling, SOP-S-7 Soil Descriptions, S	DUP-3-17 Decon	
Mercury (Hg)		4 C	EFGS		re processed/sectioned in the Winterport field	ld office	
Total Organic		4 C	Alpha		coordinates provided on Core/Grab Log.		
Organic Conte	ent (OC) D2974 Mod(550	C) Ambient	Amec FW		-		
Techn	nician Name: Julie Pallozzi				QA/QC by:	auren Tierney	

Technician Signature:

OGRADMAN

QA/QC Date:

ames Hoster Whiteler				iver Mercury Study - F VETLAND SEDIMENT S	-					
	ject Name: USDC Penobso	ot River			Location ID	ocation ID: W-106-A				
Proje	ct Number: 3616166052		-		wo	: 4A-030 Wetland				
Core Collection							Coro P	ecovery		
	llection Team: BW, LT					Sleeve Length in Decimal Feet:	2.0	2.0		
	ollection Date: 07/31/2017	(n	llection Method:	Slide Hammer		Depth Cored in Decimal Feet:	1.5	1.5		
	ellection Time: 15:54			3" D x 24" L Plastic	- R	ecovered Core Length in Decimal Feet:	1.25	0.95		
	Freeze (Y/N): Yes		Est. Volume:			covery (Recovered Core/Depth Cored):	83%	63%		
Test Pit Log	•••					ALL AND ALL &	and	State State		
Т	est Pit Logger: BW	Woo	ody Debris (Y/N):	No		- alle	W-IDG-A	1.27.03 30.765		
Dig	gging Method: Shooter Sho	ovel	Vegetation Type:	Marsh sedges and gra	sses		dialm.	MILLE PERSON		
Test Pi	t Dimensions: 6" x 6" x 18	"Арр	orox. # Stems/ft ² :	1400	-	Sa HARD		A RED BUILDER		
		Desc	ription					hast of		
Interval		color, grain size, odor, de	bris, roots, organism	ns, etc.		NAL BUSENED	Vie Contractor			
0.0-0.8	Very dark grayish brown (plasticity NA due to moist	10YR 3/2), saturated, stro cure and medium density i			fine sand),	120	M. A. MAR			
0.8-1.2		10YR 3/2), saturated, stro t mass, hair like sized root		r, sandy SILT (20% fine	sand), low	1 A Landa		2 APPE		
	Water in hole 0.7'	,				KI A SECOND		CROCK OF ST		
	ion llection Team: LT BW		Sa	ample Collection Date:	: 8/1/2017 a	and 8/3/2017				
Sample Interval (ft.)	Samj	ble ID	Sample Time	Requested Ana	alyses	Additional Volumes Collected	Container	Homoginization		
0.0 - 0.1	W-106-A _ 080117 _	SED_00-01	1250	MeHg, Hg, TO	C, OC	None	1 x 16 oz Plastic	Lab Homogenize and		
0.1 - 0.3	W-106-A _ 080117 _	SED_01-03	1255	MeHg, Hg, TO	C, OC	None	2 x 16 oz Plastic	Subsample		
0.3 - 0.5	W-106-A _ 080317 _	SED_03-05	1336	Hg, TOC, O	C	None	1 x 8 oz Plastic 2 x 8 oz Amber Glass	Field Lab Homogenize		
0.5 - 1.0	W-106-A _ 080317 _	SED_05-10	1338	Hg, TOC, O	C	None	1 x 8 oz Plastic 2 x 8 oz Amber Glass	and Subsample		
Sample Analys	is Information				Notes:					
	Analyte	Method	Preservative	Lab		bre sampling was conducted according to the	-	e QAPP:		
Methyl Mercu	ry (MeHg)	1630	Freeze	EFGS	SOP-S-6a Se 0.0 = Scalp	diment Sampling, SOP-S-7 Soil Descriptions, S	OP-S-17 Decon			
Mercury (Hg)		1631	4 C	EFGS		re processed/sectioned in the Winterport fiel	d office			
Total Organic (Lloyd-Kahn	4 C	Alpha		coordinates provided on Core/Grab Log.				
Organic Conter	nt (OC)	D2974 Mod(550 C)	Ambient	Amec FW						

Technician Name: Lauren Tierney

Technician Signature: ______

QA/QC by:

Julie Pallozzi

QA/QC Date: 10/6/2017

Page 1 of 1

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Penobscot River Mercury Study - Phase III Engineering Evaluation

WETLAND SEDIMENT SAMPLE COLLECTION

Wheeler-							
	oject Name: USDC Penob		_		Location ID: W-107-A	_	
Proje	ect Number: <u>3616166052</u>		_		WO: 4A-030 Wetland	-	
Core Collectio	on					Core R	ecovery
Core Co	ollection Team: KB, DL				Sleeve Length in Decimal Feet	: 2.0	2.0
Core C	Collection Date: 07/31/203	17 C	ollection Method: S	ection Method: Slide Hammer Depth Cored in Decimal			1.5
	Collection Time: 17:13			" D x 24" L Plastic	Recovered Core Length in Decimal Feet		0.82
Instan	nt Freeze (Y/N): Yes		Est. Volume: 4	7 oz/ft	% Recovery (Recovered Core/Depth Cored)	: 52%	55%
Test Pit Log					Number of	A - Form II Providence Provide	
	Test Pit Logger: BW		ody Debris (Y/N): N		- Consideration of the second s	W-107-A 2/w/17	Aller Aller
	igging Method: Shooter S Pit Dimensions: 6" x 6" x 1		Vegetation Type:		- Carrier Carrier	2 Jul 17	1
Test F			prox. # Stems/ft ² : 1	.00	Contraction of the Institution	and the second s	5-1-3-1
Interval		color, grain size, odor, d	cription	etc	State and an and		14 10 100
interval					and the second s		
0.0-0.8		(R 4/2), saturated, SILT with	sand (5% fine sand), low plasticity, high	density root		T BERGEROUND
	mass, root size 0.02'				and the second sec	Contraction and a	
	No water in hole, test pi	it and push cores to refusal			A Designed by the second second		
					The adapted at	All Street Lines	1. 11. 2. 19 18
					and the second	A CONTRACTOR	
Sample Collec	tion				1 ME CLOSED		
•	ollection Team: LT BW		Sai	mple Collection Date	: 8/1/2017 and 8/3/2017		
Sample							
Interval (ft.)	Sar	nple ID	Sample Time	Requested An	alyses Additional Volumes Collected	Container	Homoginization
0.0 - 0.1	W-107-A _ 080117	_SED_00-01	1605	MeHg, Hg, TO	C, OC None	1 x 16 oz Plastic	Lab Homogenize and
							Subsample
0.1 - 0.3	W-107-A _ 080117	_SED_01-03	1607	MeHg, Hg, TO	C, OC None	2 x 16 oz Plastic	Subsample
						1 x 8 oz Plastic	
0.3 - 0.5	W-107-A _ 080317	_SED_03-05	1312	Hg, TOC, C	OC None	2 x 8 oz Amber Glass	Field Lab Homogenize
						1 x 8 oz Plastic	and Subsample
0.5 - 1.0	W-107-A _ 080317	_SED_05-10	1314	Hg, TOC, C	DC None	2 x 8 oz Amber Glass	
Sample Analy	sis Information				Notes:		
	Analyte	Method	Preservative	Lab	Sediment Core sampling was conducted according to the	-	e QAPP:
Methyl Mercu	ıry (MeHg)	1630	Freeze	EFGS	SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions,	SOP-S-17 Decon	
Mercury (Hg)		1631	4 C	EFGS	0.0 = Scalp Samples were processed/sectioned in the Winterport fi	eld office	
Total Organic	Carbon (TOC)	Lloyd-Kahn	4 C	Alpha	Samples were processed/sectioned in the Winterport field office Geographic coordinates provided on Core/Grab Log.		
Organic Conte	ent (OC)	D2974 Mod(550 C)	Ambient	Amec FW			

Technician Name: Lauren Tierney

Technician Signature:

QA/QC by: Julie Pallozzi

Penobscot River Mercury Study - Phase III Engineering Evaluation WETLAND SEDIMENT SAMPLE COLLECTION whee Location ID: W-109-A Project Name: USDC Penobscot River Project Number: 3616166052 WO: 4A-030 Wetland Core Collection Core Recovery 2.0 2.0 Core Collection Team: FM JP Sleeve Length in Decimal Feet: Collection Method: Slide Hammer Core Collection Date: 07/27/2017 Depth Cored in Decimal Feet: 1.5 1.5 Core Collection Time: 11:01 Liner Type: 3" D x 24" L Plastic **Recovered Core Length in Decimal Feet:** 1.1 1.45 Instant Freeze (Y/N): Yes Est. Volume: 47 oz/ft % Recovery (Recovered Core/Depth Cored): 73% 97% Test Pit Log Test Pit Logger: FM Woody Debris (Y/N): No Digging Method: Shooter Shovel Vegetation Type: Marsh grasses Test Pit Dimensions: 6" x 6" x 18" Approx. # Stems/ft²: 1440 Description Interval color, grain size, odor, debris, roots, organisms, etc. Reddish black (2.5YR2.5/1), SILT with clay (< 5%), moist, no odor, nonplastic, low density roots of hair like 0-0.2 to 0.1' diameter, no living organisms observed Light red (2.5YR6/8), Decomposed wood/tree trunk (not woodchips) with silt (< 10%), moist, no odor, 0.2-0.55 nonplastic, no roots, no living organisms observed Gray (10YR5/1), CLAY with some silt (30%), layer of gravel and pebbles at 0.75' with size ranging from fine 0.55-1.2 to coarse more angular to rounded in shape, very moist, no odor, low plasticity, soft, no roots, no living organisms observed Water depth 0.9' bgs Sample Collection Sample Collection Team: LT BW KB Sample Collection Date: 8/1/2017 and 8/3/2017 Sample Interval (ft.) Sample ID Sample Time **Requested Analyses** Additional Volumes Collected Container Homoginization 0.0 - 0.1 W-109-A 080117 SED 00-01 1530 MeHg, Hg, TOC, OC 1 x 16 oz Plastic None Lab Homogenize and Subsample W-109-A _ 080117 _SED_01-03 0.1 - 0.3 1531 MeHg, Hg, TOC, OC None 2 x 16 oz Plastic 1 x 8 oz Plastic 0.3 - 0.5 W-109-A 080317 SED 03-05 1356 Hg, TOC, OC None 2 x 8 oz Amber Glass Field Lab Homogenize 1 x 8 oz Plastic and Subsample 0.5 - 1.0 W-109-A 080317 SED 05-10 1358 Hg, TOC, OC **Triple Replicate** 2 x 8 oz Amber Glass Sample Analysis Information Notes: Sediment Core sampling was conducted according to the following SOPs included in the QAPP: Method Preservative Analyte Lab SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, SOP-S-17 Decon 1630 EFGS Methyl Mercury (MeHg) Freeze 0.0 = Scalp EFGS Mercury (Hg) 1631 4 C Samples were processed/sectioned in the Winterport field office Total Organic Carbon (TOC) Lloyd-Kahn 4 C Alpha Geographic coordinates provided on Core/Grab Log. D2974 Mod(550 C) Amec FW Organic Content (OC) Ambient Technician Name: Julie Pallozzi QA/QC by: Lauren Tierney

Technician Signature:

() Receiver on

QA/QC Date:

Penobscot River Mercury Study - Phase III Engineering Evaluation foster WETLAND SEDIMENT SAMPLE COLLECTION wheela Project Name: USDC Penobscot River Location ID: W-110-A Project Number: 3616166052 WO: 4A-030 Wetland Core Collection Core Recovery Core Collection Team: BW, LT Sleeve Length in Decimal Feet: 2.0 2.0 Core Collection Date: 07/27/2017 **Collection Method: Slide Hammer** Depth Cored in Decimal Feet: 1.5 1.5 Core Collection Time: 10:59 Liner Type: 3" D x 24" L Plastic 1.3 1.25 **Recovered Core Length in Decimal Feet:** Instant Freeze (Y/N): Yes Est. Volume: 47 oz/ft % Recovery (Recovered Core/Depth Cored): 87% 83% Test Pit Log Test Pit Logger: BW Woody Debris (Y/N): No **Digging Method: Shooter Shovel** Vegetation Type: Marsh grass With its Test Pit Dimensions: 6" x 6" x 18" Approx. # Stems/ft²: 2000 Description Interval color, grain size, odor, debris, roots, organisms, etc. Very dark grayish brown (10YR 3/2), saturated, sandy SILT (20% fine sand), plasticity NA due to 0.0-0.3 saturation and high density root mass, 0.01' root diameter, Dark brown (10YR 3/3), saturated, biologic odor, SILT wth sand (10% fine sand), low plasticity, high 0.3-0.7 density roots, 0.01' root diameter Dark grayish brown (10YR 4/2), saturated, biological odor, SILT with sand (10% poorly graded sand), 0.7-0.95 nedium plasticity, low density hair like roots Dark gray (10YR 4/1), saturated, biological odor, CLAY with sand (10% poorly graded sand), high 0.95-1.2 plasticity, stiff, competent, very low density hair like roots Water at surface Sample Collection Sample Collection Team: LT BW KB Sample Collection Date: 8/1/2017 and 8/3/2017 Sample Interval (ft.) Sample ID Sample Time **Requested Analyses Additional Volumes Collected** Container Homoginization 0.0 - 0.1 W-110-A 080117 SED 00-01 1543 MeHg, Hg, TOC, OC **Triple Replicate** 1 x 16 oz Plastic Lab Homogenize and Subsample 0.1 - 0.3 1545 W-110-A _ 080117 _SED_01-03 MeHg, Hg, TOC, OC 2 x 16 oz Plastic None 1 x 8 oz Plastic 0.3 - 0.5 W-110-A 080317 SED 03-05 1342 Hg, TOC, OC None 2 x 8 oz Amber Glass Field Lab Homogenize 1 x 8 oz Plastic and Subsample W-110-A _ 080317 _SED_05-10 1344 0.5 - 1.0 Hg, TOC, OC None 2 x 8 oz Amber Glass Sample Analysis Information Notes: Sediment Core sampling was conducted according to the following SOPs included in the QAPP: Analyte Method Preservative Lab SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, SOP-S-17 Decon Methyl Mercury (MeHg) 1630 Freeze EFGS 0.0 = ScalpEFGS Mercury (Hg) 1631 4 C Samples were processed/sectioned in the Winterport field office Total Organic Carbon (TOC) Lloyd-Kahn 4 C Alpha Geographic coordinates provided on Core/Grab Log. Organic Content (OC) D2974 Mod(550 C) Ambient Amec FW

Technician Name: Lauren Tierney

Technician Signature:

QA/QC by:

Julie Pallozzi

Frence James 5

QA/QC Date:

amec

Penobscot River Mercury Study - Phase III Engineering Evaluation

WETLAND SEDIMENT SAMPLE COLLECTION

wheeler								
	Project Name: USDC Penobsc	cot River	_		Location ID: W-MM-01			
Pr	roject Number: <u>3616166052</u>		_		WO: 4A-030 Wetland			
Core Collection	n						Core B	ecovery
	Collection Team: FM, LT				Sleeve Length in I	Decimal Feet:	2.0	2.0
	e Collection Date: 07/18/2017	7 Co	ollection Method:	lide Hammer	Depth Cored in I		1.5	1.5
	e Collection Time: 10:04			B" D x 24" L Plastic	Recovered Core Length in I		1.05	1.1
Inst	tant Freeze (Y/N): Yes		Est. Volume: 4		% Recovery (Recovered Core/D		70%	73%
Test Pit Log					A NEW PROPERTY		a - Total ID, Descention, Son, page 1	and the second s
	Test Pit Logger: FM	Wo	ody Debris (Y/N): \	'es			WUMW OI	
	Digging Method: Shooter Sho	ovel	Vegetation Type:	Carex		(and the lot	+1011-	
Tes	st Pit Dimensions: 6" x 6" x 18	" Ap	prox. # Stems/ft ² : 1	1500		there is a	- FC 538	
		Descr	iption			N. 1. 1. 1.		
Interval		color, grain size, odor, det				15.2		
	Brown (7.5YR 4/4) from 0.0-0.9, 0.9-1.3 Gray						and the second s	
0.0-1.3	wet, hydrogen sulfide odor,	CLAY with some silt (25%	silt), non plastic, hig	h density root mass,	rom hair like	Contraction of the		1
	to 0.01' diameter							
	Water in hole bgs 0.5'				and a state of the	New York	and the state of the state	A DIA
						AND A	YAX S	
						E DAT		ent-se and
Sample Collect	tion							
· · · ·	Collection Team: LT JP BW FN	N	Sa	mple Collection Date	7/25/17 and 7/26/17			
Sample								
Interval (ft.)	Sampl	le ID	Sample Time	Requested An	Additional Volumes	Collected	Container	Homoginization
0.0 - 0.1	W-MM-01 _ 072517 _	_SED_00-01	1047	MeHg, Hg, TO	C, OC None		1 x 16 oz Plastic	Lab Homogenize and
0.1 - 0.3	W-MM-01 _ 072517 _	SED 01 02	1048		C, OC Triple Replica	to	2 x 16 oz Plastic	Subsample
0.1 - 0.5	W-WW-	_3ED_01-03	1048	MeHg, Hg, TO		le	2 X 10 02 Plastic	
0.3 - 0.5	W-MM-01 _ 072617 _	SED_03-05	1008	Hg, TOC, C	C None		3 x 8 oz Plastic	Field Lab Homogenize
0.5 - 1.0	W-MM-01 _ 072617 _	_SED_05-10	1010	Hg, TOC, C	C None		3 x 8 oz Plastic	and Subsample
Sample Analys	sis Information		1 1		Notes:			1
	Analyte	Method	Preservative	Lab	Sediment Core sampling was conducted a	-	-	e QAPP:
Methyl Mercu	ıry (MeHg)	1630	Freeze	EFGS	SOP-S-6a Sediment Sampling, SOP-S-7 Soi	Descriptions, SOI	P-S-17 Decon	
Mercury (Hg)		1631	4 C	EFGS	0.0 = Scalp	Minter and F. 11	- ff :	
Total Organic (Carbon (TOC)	Lloyd-Kahn	4 C	Alpha	Samples were processed/sectioned in the Winterport field office			
Organic Conte	ganic Content (OC) D2974 M				Geographic coordinates provided on Core/Grab Log.			

Technician Name: Lauren Tierney

Carp Friday Technician Signature:

QA/QC by:

QA/QC Date: 10/6/2017

Lauren Tierney

amec foster

Penobscot River Mercury Study - Phase III Engineering Evaluation

WETLAND SEDIMENT SAMPLE COLLECTION

wheeler									
	Project Name: USDC Penobsc	ot River	_		Location ID:				
Pro	oject Number: <u>3616166052</u>		-		WO:	4A-030 Wetland			
Core Collectio	on						Core R	Recovery	
Core	Collection Team: LT, KB, FM					Sleeve Length in Decimal Feet:	2.0	2.0	
Core	Collection Date: 07/18/2017	C	ollection Method: S	lide Hammer		Depth Cored in Decimal Feet:	1.5	1.5	
Core Collection Time: 17:18				" D x 24" L Plastic	Re	covered Core Length in Decimal Feet:	1.19	1.14	
Insta	ant Freeze (Y/N): Yes		Est. Volume: 4	7 oz/ft	% Reco	overy (Recovered Core/Depth Cored):	79%	76%	
Test Pit Log							STREET, STREET		
	Test Pit Logger: FM		ody Debris (Y/N): <u>N</u>		_	A State of the second s	OH NUE 1		
	Digging Method: Shooter Sho		Vegetation Type: P		ass (10%)		100.07 C	A GILLY CONVERNM	
Test Pit Dimensions: 6" x 6" x 18"		- Ab	prox. # Stems/ft ² : 2	000		and the second s		1111年1月1日日日	
			ription			Ter .		A CHARLEN	
Interval		color, grain size, odor, de	debris, roots, organisms, etc.			NON	No. of Concession, name	A REAL PROPERTY OF	
0.0-1.3	Strong brown (7.5 YR 4/6), v like to over 0.01' up to 0.9',				ot mass, hair				
	Water entering hole at 0.90	l' høs				Section of the local division of the local d	The standard		
	Water entering hole at 0.50	563				a state of the sta	Warden and	WARD BEESEN	
						and the second	ALL ALL AND AND A		
Sample Collec	ction						A COMPANY AND A COMPANY		
•	Collection Team: LT JP BW FN	Λ	San	nple Collection Date	e: 7/25/17 and	7/26/17			
Sample Interval (ft.)	Samp	le ID	Sample Time	Requested An	alyses	Additional Volumes Collected	Container	Homoginization	
0.0 - 0.1	W-MM-02 072517	SED 00-01	1009	MeHg, Hg, TO		None	1 x 16 oz Plastic		
0.0 - 0.1	W-WW-02 _ 072317 _	3LD_00-01	1005	Weng, ng, ro	,00	None	1 × 10 02 Plastic	Lab Homogenize and	
0.1 - 0.3	W-MM-02 _ 072517 _	SED_01-03	1010	MeHg, Hg, TO	DC, OC	None	2 x 16 oz Plastic	Subsample	
0.3 - 0.5	W-MM-02 _ 072617 _	SED_03-05	1030	Hg, TOC, C	C	None	3 x 8 oz Plastic	Field Lab Homogenize	
0.5 - 1.0	W-MM-02 _ 072617 _	SED_05-10	1032	Hg, TOC, C	C	None	3 x 8 oz Plastic	and Subsample	
Sample Analy	sis Information		· · · ·		Notes:				
	Analyte	Method	Preservative	Lab	Sediment Core sampling was conducted according to the following SOPs included in the QAPP:				
Methyl Mercu	ury (MeHg)	1630	Freeze	EFGS	SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, SOP-S-17 Decon				
Mercury (Hg)		1631	4 C	EFGS	0.0 = Scalp	processed/sectioned in the Winterport field	l offico		
Total Organic	Carbon (TOC)	Lloyd-Kahn	4 C	Alpha		processed/sectioned in the winterport field ordinates provided on Core/Grab Log.	i onice		
Organic Content (OC) D2974 Mo			0 C) Ambient Amec FW						

Technician Name: Lauren Tierney

Technician Signature:

QA/QC by:

QA/QC Date:

10/6/2017

Julie Pallozzi

Penobscot River Mercury Study - Phase III Engineering Evaluation footo WETLAND SEDIMENT SAMPLE COLLECTION wheeld Location ID: W-MM-03 Project Name: USDC Penobscot River Project Number: 3616166052 WO: 4A-030 Wetland Core Recovery Core Collection 2.0 2.0 Core Collection Team: JP, LT, BW, KB, FM Sleeve Length in Decimal Feet: Core Collection Date: 07/11/2017 **Collection Method:** Slide Hammer Depth Cored in Decimal Feet: 1.5 1.5 Core Collection Time: 11:18 Liner Type: 3" D x 24" L Plastic **Recovered Core Length in Decimal Feet:** 0.95 0.75 Instant Freeze (Y/N): Yes Est. Volume: 47 oz/ft 63% 50% % Recovery (Recovered Core/Depth Cored): Test Pit Log Test Pit Logger: BW, FM Woody Debris (Y/N): Yes MM-03 Digging Method: Shooter Shovel Vegetation Type: Sedge and grass Test Pit Dimensions: 6" x 6" x 18" Approx. # Stems/ft²: 1440 Description Interval color, grain size, odor, debris, roots, organisms, etc. 0-0.05 Black, heavy roots, ground surface covered in thin layer of water 0.05-0.35 Brown [10YR4/3], SILT with sand, 90% silt, 10% fine sands, organic odor, predominantly roots Very dark gray [10YR3/1], SILT with sand, less root material, increasing silt, no living organisms, wood chips 0.35-0.9 at 0.8 0.9-1.25 Dark brown [10YR3/3], SILT with sand, less root material, increasing silt, low plasticity, wood chips at 1.1 Notes 3rd attempt had zero recovery, align stratification for sampling Sample Collection Sample Collection Team: BW, JP Sample Collection Date: 7/17/17 and 7/18/17 Sample **Additional Volumes Collected** Interval (ft.) Sample ID Sample Time **Requested Analyses** Container Homoginization 0.0 - 0.1 W-MM-03 071717 SED 00-01 17:26 MeHg, Hg, TOC, OC None 1 x 16 oz Plastic Lab Homogenize and Subsample 0.1 - 0.3 W-MM-03 071717 SED 01-03 17:28 MeHg, Hg, TOC, OC None 2 x 16 oz Plastic 1 x 8 oz Plastic 0.3 - 0.5 W-MM-03 _ 071817 _SED_03-05 9:40 Hg, TOC, OC None 2 x 8 oz Amber Glass Field Lab Homogenize 1 x 8 oz Plastic and Subsample 0.5 - 1.0 W-MM-03 _ 071817 _SED_05-10 9:48 Hg, TOC, OC None 2 x 8 oz Amber Glass Sample Analysis Information Notes: Sediment Core sampling was conducted according to the following SOPs included in the QAPP: Analyte Method Preservative Lab SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, SOP-S-17 Decon Methyl Mercury (MeHg) 1630 Freeze EFGS 0.0 = Scalp1631 Mercury (Hg) 4 C EFGS Samples were processed/sectioned in the Winterport field office Total Organic Carbon (TOC) Lloyd-Kahn 4 C Alpha Geographic coordinates provided on Core/Grab Log. Organic Content (OC) D2974 Mod(550 C) Ambient Amec FW

Technician Name: Julie Pallozzi

QA/QC by: Lauren Tierney

Technician Signature:

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QA/QC Date: 1

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Penobscot River Mercury Study - Phase III Engineering Evaluation

WETLAND SEDIMENT SAMPLE COLLECTION

wheeler			VVE	ILAND SEDIMENT SA	IMPLE COLLECTION			
	Project Name: USDC Penobsco	ot River	_		_			
Pro	oject Number: <u>3616166052</u>		-		WO: 4A-030 Wetland	_		
Core Collectio	n					Core R	ecovery	
Core	Collection Team: BW KB LT FM	1 JP			Sleeve Length in Decimal Fee	et: 2.0	2.0	
Core	Core Collection Date: 07/11/2017		ollection Method: S		Depth Cored in Decimal Fee	et: 1.5	1.5	
	Core Collection Time: 09:51			" D x 24" L Plastic	Recovered Core Length in Decimal Fee		1.4	
Inst	ant Freeze (Y/N): Yes		Est. Volume: 4	7 oz/ft	% Recovery (Recovered Core/Depth Cored	l): 60%	93%	
Test Pit Log	Test Pit Logger: <u>BW FM</u>		ody Debris (Y/N): <u>N</u>			W-MARKEY	Stall 1	
	Digging Method: Shooter Show		Vegetation Type: s			#/n/i#	1 2 2 3 1	
Tes	t Pit Dimensions: 6" x 6" x 18"		prox. # Stems/ft ² : 1	.440	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		100	
Interval		color, grain size, odor, del				-	The second secon	
0-0.6	dark grayish brown [10YR4/2 nonplastic	15% fine grain sand,	uniform in color, hea	vy roots,				
0.6-1.2	Roots decreasing, high in org	slight plasticity incr	easing with depth					
Sample Collec	tion Collection Team: BW, JP		5-1	mple Collection Date	7/17/17 and 7/18/17			
Sample				inple collection bates				
Interval (ft.)	Sample	e ID	Sample Time	Requested Ana	alyses Additional Volumes Collected	Container	Homoginization	
0.0 - 0.1	W-MM-04 _ 071717 _S	ED_00-01	17:06	MeHg, Hg, TO	C, OC None	1 x 16 oz Plastic	Lab Homogenize and	
0.1 - 0.3	W-MM-04 _ 071717 _S	ED_01-03	17:07	MeHg, Hg, TO	C, OC None	2 x 16 oz Plastic	Subsample	
0.3 - 0.5	W-MM-04 _ 071817 _S	ED_03-05	9:58	Hg, TOC, O	C MS/MSD	1 x 8 oz Plastic 2 x 8 oz Amber Glass	Field Lab Homogenize	
0.5 - 1.0	W-MM-04 _ 071817 _S	ED_05-10	10:02	Hg, TOC, O	C None	1 x 8 oz Plastic 2 x 8 oz Amber Glass	and Subsample	
Sample Analy	sis Information				Notes:			
	Analyte	Method	Preservative	Lab	Sediment Core sampling was conducted according to the following SOPs included in the QAPP:			
Methyl Mercu	ry (MeHg)	1630	Freeze	EFGS	SOP-S-6a Sediment Sampling, SOP-S-7 Soil Description	s, SOP-S-17 Decon		
Mercury (Hg)		1631	4 C	EFGS	0.0 = Scalp Samples were processed/sectioned in the Winterport	field office		
Total Organic	Carbon (TOC)	Lloyd-Kahn	4 C	Alpha	Geographic coordinates provided on Core/Grab Log.			
Organic Conte	ent (OC)	D2974 Mod(550 C)	Ambient	Amec FW				

Technician Name: Julie Pallozzi

QA/QC by: Lauren Tierney

Technician Signature:

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Penobscot River Mercury Study - Phase III Engineering Evaluation WETLAND SEDIMENT SAMPLE COLLECTION wheek Location ID: W-MM-06 Project Name: USDC Penobscot River Project Number: 3616166052 WO: 4A-030 Wetland Core Collection Core Recovery Sleeve Length in Decimal Feet: Core Collection Team: BW, JP, LT 2.0 2.0 Core Collection Date: 07/13/2017 **Collection Method: Slide Hammer** Depth Cored in Decimal Feet: 1.5 1.5 Core Collection Time: 16:52 Liner Type: 3" D x 24" L Plastic **Recovered Core Length in Decimal Feet:** 1.4 1.5 Instant Freeze (Y/N): Yes Est. Volume: 47 oz/ft % Recovery (Recovered Core/Depth Cored): 93% 100% 100 5 Test Pit Log Test Pit Logger: BW Woody Debris (Y/N): No 1. 19.18 . IL Digging Method: Shooter Shovel Vegetation Type: "A" type grass, p grass rife)/+ Test Pit Dimensions: 6" x 6" x 18" Approx. # Stems/ft²: 1872 Description Interval color, grain size, odor, debris, roots, organisms, etc. Very dark gray (10YR 3/1), saturated, SILT with fine samd (85% SILT 15% fine sand), plasticity NA due to 0.0-0.3 high root density, 0.015' diameter roots dark gray (10YR 4/1), saturated, SILT with fine sand (95% SILT 5% fine sand), medium plasticity, medium 0.3-0.7 to high root density, hair like to 0.01' diameter dark grayish brown (10YR 4/2), saturated, SILT with fine sand (95% SILT 5% fine sand), medium plasticity, 0.7-1.2 medium root density but hair like sized, non component roots Water in hole bgs 1.3' Sample Collection Sample Collection Team: LT JP BW FM Sample Collection Date: 7/24/2017 and 7/25/17 Sample Interval (ft.) Sample ID Sample Time **Requested Analyses** Additional Volumes Collected Container Homoginization 0.0 - 0.1 W-MM-06 072417 SED 00-01 1555 MeHg, Hg, TOC, OC None 1 x 16 oz Plastic Lab Homogenize and Subsample 0.1 - 0.3 W-MM-06 _ 072417 _SED_01-03 1556 MeHg, Hg, TOC, OC None 2 x 16 oz Plastic 1 x 8 oz Plastic 0.3 - 0.5 W-MM-06 072517 SED_03-05 1700 Hg, TOC, OC **Triple Replicate** 2 x 8 oz Amber Glass Field Lab Homogenize 1 x 8 oz Plastic and Subsample 0.5 - 1.0 W-MM-06 072517 SED 05-10 1702 Hg, TOC, OC None 2 x 8 oz Amber Glass Sample Analysis Information Notes: Sediment Core sampling was conducted according to the following SOPs included in the QAPP: Analyte Method Preservative Lab SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, SOP-S-17 Decon Methyl Mercury (MeHg) 1630 Freeze EFGS 0.0 = ScalpMercury (Hg) 1631 4 C EFGS Samples were processed/sectioned in the Winterport field office Total Organic Carbon (TOC) 4 C Lloyd-Kahn Alpha Geographic coordinates provided on Core/Grab Log. D2974 Mod(550 C) Organic Content (OC) Ambient Amec FW

Technician Name: Julie Pallozzi

QA/QC by: Lauren Tierney

Technician Signature:

C) (FARROWS)

QA/QC Date:

Penobscot River Mercury Study - Phase III Engineering Evaluation WETLAND SEDIMENT SAMPLE COLLECTION footo wheeld Location ID: W-MM-07 Project Name: USDC Penobscot River Project Number: 3616166052 WO: 4A-030 Wetland Core Collection Core Recovery 2.0 2.0 Core Collection Team: BW, JP, LT Sleeve Length in Decimal Feet: Core Collection Date: 07/13/2017 Collection Method: Slide Hammer Depth Cored in Decimal Feet: 1.5 1.5 Core Collection Time: 16:10 Liner Type: 3" D x 24" L Plastic **Recovered Core Length in Decimal Feet:** 1.35 1.5 Instant Freeze (Y/N): Yes Est. Volume: 47 oz/ft % Recovery (Recovered Core/Depth Cored) 90% 100% Test Pit Log Test Pit Logger: BW Woody Debris (Y/N): No MI - M91-8-8 **Digging Method: Shooter Shovel** Vegetation Type: P grass, a grass shala Test Pit Dimensions: 6" x 6" x 18" Approx. # Stems/ft²: 1296 Description Interval color, grain size, odor, debris, roots, organisms, etc. Very dark grayish brown (10YR3/2), saturated, no odor, SILT with sand 90% SILT 10% sand, plasticity NA 0-0.4 due to roots, high density roots, 0.01 ft diameter roots Dark brown (10YR3/3), saturated, no odor, SILT with sand, 80%SILT 20% sand, plasticity NA due to roots, 0.4-1 hair like roots high density Dark gray (10YR4/1), saturated, organic odor, SILT with sand 85%SILT 15% sand, medium plasticity, low to 1-1.3 medium density hair like roots Water in hole 0.85 ft bgs Sample Collection Sample Collection Team: LT JP BW FM Sample Collection Date: 7/25/17 and 7/26/17 Sample Interval (ft.) Sample ID Sample Time **Requested Analyses** Additional Volumes Collected Container Homoginization 0.0 - 0.1 W-MM-07 072517 SED 00-01 0839 MeHg, Hg, TOC, OC 1 x 16 oz Plastic None Lab Homogenize and Subsample 0.1 - 0.3 W-MM-07 _ 072517 _SED_01-03 0840 **Triple Replicate** 2 x 16 oz Plastic MeHg, Hg, TOC, OC 1 x 8 oz Plastic 0.3 - 0.5 W-MM-07 072617 SED 03-05 0847 Hg, TOC, OC None 2 x 8 oz Amber Glass Field Lab Homogenize 1 x 8 oz Plastic and Subsample 0.5 - 1.0 W-MM-07 072617 SED 05-10 0849 Hg, TOC, OC None 2 x 8 oz Amber Glass Sample Analysis Information Notes: Sediment Core sampling was conducted according to the following SOPs included in the QAPP: Analyte Method Preservative Lab SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, SOP-S-17 Decon 1630 EFGS Methyl Mercury (MeHg) Freeze 0.0 = ScalpEFGS Mercury (Hg) 1631 4 C Samples were processed/sectioned in the Winterport field office Total Organic Carbon (TOC) Lloyd-Kahn 4 C Alpha Geographic coordinates provided on Core/Grab Log. D2974 Mod(550 C) Organic Content (OC) Ambient Amec FW

Technician Name: Julie Pallozzi

QA/QC by: Lauren Tierney

Technician Signature:

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QA/QC Date:

amec			iver Mercury Study - I	-	-		
wheeler		W	ETLAND SEDIMENT S	SAMPLE COLLEC	TION		
	Project Name: USDC Penobscot River pject Number: 3616166052			Location ID: V	V-MM-08 A-030 Wetland		
FIC				wo. <u>4</u>	A-050 Wetidilu		
Core Collectio	on					Core R	ecovery
	Collection Team: BW, JP, LT	-			Sleeve Length in Decimal Feet:	2.0	2.0
	Collection Date: 07/13/2017	Collection Method:			Depth Cored in Decimal Feet:	1.5	1.5
	Collection Time: 11:01 ant Freeze (Y/N): Yes	Est. Volume:	3" D x 24" L Plastic		vered Core Length in Decimal Feet: ery (Recovered Core/Depth Cored):	1.15 77%	1.5 100%
Test Pit Log		Est. volume.	47 02/11	% Recov	ery (Recovered Core/Depth Cored):		
Test Fit Log	Test Pit Logger: BW	Woody Debris (Y/N):	No	11			No. Martinest
	Digging Method: Shooter Shovel		Marsh grasses, morn	ing glories	CARACTER DE TOTO	and the state of the	入,加州学、美
	t Pit Dimensions: 6" x 6" x 18"	Approx. # Stems/ft ² :		Biories			
		Description			A COMPANY OF A COM	1. A	Market Sol
Interval	color, grain siz	e, odor, debris, roots, organism	s, etc.		102 4211	1.1	11X Sales
0.0-0.1	black (10YR 2/1), wet, organic odor, SILT w dense roots present, 0.02 diameter	sand), low plasticity,	medium			C. IR WE LOO	
0.1-0.6	Very dark gray (10YR 3/1), wet, sandy SILT present, 0.02 diameter	ow plasticity, medium	dense roots	Tex 10. 5			
0.6-1.2	Dark gray (10YR 4/1), wet, SILT with sand (sized roots	edium plasticity, low c	density hair	· ·		XL	
1.2-1.5	Dark gray (10YR 4/1), wet, SILT with sand (roots	85% SILT 15% fine sand), lov	w plasticity, low densi	ity fine hair		Lund Day	NS I
	Depth to water bgs 1.4'					1.2	7 ALI
Sample Collec	ction						
Sample	Collection Team: BW, JP	Sa	ample Collection Date	e: 7/18/17 and 7	7/19/17		
Sample Interval (ft.)	Sample ID	Sample Time	Requested Ar	nalyses	Additional Volumes Collected	Container	Homoginization
0.0 - 0.1	W-MM-08 _ 071817 _SED_00-01	15:23	MeHg, Hg, TOC, OC		None	1 x 16 oz Plastic	Lab Homogenize and
0.1 - 0.3	W-MM-08 _ 071817 _SED_01-03	15:26	MeHg, Hg, TC	OC, OC	None	2 x 16 oz Plastic	Subsample
0.3 - 0.5	W-MM-08 _ 071917 _SED_03-05	9:15	Hg, TOC,	ос	None	1 x 8 oz Plastic 2 x 8 oz Amber Glass	Field Lab Homogenize
0.5 - 1.0	W-MM-08 _ 071917 _SED_05-10	9:25	Hg, TOC,	ос	None	1 x 8 oz Plastic 2 x 8 oz Amber Glass	and Subsample
Sample Analy	sis Information			Notes:			
	Analyte Meth		Lab		sampling was conducted according to the	-	e QAPP:
Methyl Mercu			EFGS	0.0 = Scalp	ent Sampling, SOP-S-7 Soil Descriptions, S	OF-2-11 Decon	
Mercury (Hg)			EFGS		rocessed/sectioned in the Winterport fiel	d office	
Total Organic Organic Conte	Carbon (TOC) Lloyd-K ent (OC) D2974 Mod		Alpha Amec FW	Geographic coo	rdinates provided on Core/Grab Log.		
Organic Conte	Ent (OC) D2974 MIO		AMELEVV				
Tecl	hnician Name: Julie Pallozzi				QA/QC by: L	auren Tierney	

Technician Signature:

amed foster

Penobscot River Mercury Study - Phase III Engineering Evaluation

WETLAND SEDIMENT SAMPLE COLLECTION

Wheeler-									
	Project Name: USDC Penobso roject Number: 3616166052	cot River	-		Location ID: V	V-MM-09 A-030 Wetland	-		
PI	oject Number: <u>5010100052</u>		_		WO: <u>4</u>	A-050 Wetland	-		
Core Collectio	on						Core R	ecovery	
	Collection Team: FM JP					Sleeve Length in Decimal Feet:		2.0	
Core	e Collection Date: 07/27/2017	7 Co	ollection Method: S	ilide Hammer		Depth Cored in Decimal Feet:	1.5	1.5	
				overed Core Length in Decimal Feet:	1.37	1.5			
Inst	tant Freeze (Y/N): Yes		Est. Volume: 4	7 oz/ft	% Recov	very (Recovered Core/Depth Cored):	91%	100%	
Test Pit Log					8	A THICK IN THE PARTY OF	ALL AND		
	Test Pit Logger: FM		ody Debris (Y/N): <u>N</u>		_	N-M	M-CT	and the second second	
	Digging Method: Shooter Sho		Vegetation Type: <u>N</u>		-		151	NO PROPERTY	
Tes	st Pit Dimensions: 6" x 6" x 18	- Ab	prox. # Stems/ft ² : 1	.440		A DESCRIPTION OF THE PARTY OF T		1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
			ription			Top		EP RE/	
Interval		color, grain size, odor, de							
0.1.2	Reddish brown (5YR4/3) w		• • • • •	1 N N N N		And the state of t	Contraction of the	11 and	
0-1.3	odor, nonplastic, high dens organisms observed, decor	'	eter to 0.9° then med	alum density to 1.3°, I	no living		Area Commission		
	-	nposed vegetation			-	The second distance of the second	A REAL PROPERTY.		
	Water in hole 0.15' bags					The state of the state of the	A 1/1		
							White Aleca		
					19		DATE AL		
Sample Colle Sample	ection Collection Team: LT BW KB		Sar	mple Collection Date	: 8/1/2017 and	8/3/2017			
Sample				•					
Interval (ft.)	Samp	le ID	Sample Time	Requested An	alyses	Additional Volumes Collected	Container	Homoginization	
0.0 - 0.1	W-MM-09 080117	SED_00-01	1316	MeHg, Hg, TO	C, OC	None	1 x 16 oz Plastic		
								Lab Homogenize and Subsample	
0.1 - 0.3	W-MM-09 _ 080117 _	SED_01-03	1318	MeHg, Hg, TO	C, OC	MS/MSD	2 x 16 oz Plastic	Subsample	
							1 x 8 oz Plastic		
0.3 - 0.5	W-MM-09 _ 080317 _	W-MM-09 _ 080317 _SED_03-05		1404 Hg, TOC, O		None	2 x 8 oz Amber Glass	Field Lab Homogenize	
							1 x 8 oz Plastic	and Subsample	
0.5 - 1.0	W-MM-09 _ 080317 _	_SED_05-10	1406	Hg, TOC, C	DC	None	2 x 8 oz Amber Glass		
Sample Analy	ysis Information				Notes:				
	Analyte	Method	Preservative	Lab	Sediment Core sampling was conducted according to the following SOPs included in the QAPP:				
Methyl Merc	ury (MeHg)	1630	Freeze	EFGS	SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, SOP-S-17 Decon				
Mercury (Hg))	1631	4 C	EFGS	0.0 = Scalp Samples were n	processed/sectioned in the Winterport fie	ld office		
	c Carbon (TOC)	Lloyd-Kahn	4 C	Alpha		rdinates provided on Core/Grab Log.			
Organic Content (OC)		D2974 Mod(550 C)	C) Ambient Amec FW			S ,			

Technician Name: Julie Pallozzi

QA/QC by:

Lauren Tierney

Technician Signature: () C2.00ar+527

200			Penobscot Rive	r Mercury Study - I	Phase III Engin	eering Evaluation			
Poster			WET	LAND SEDIMENT S	SAMPLE COLLE	CTION			
	Project Name: USDC Penobsco oject Number: 3616166052	ot River	-		Location ID: WO:	W-MM-10 4A-030 Wetland			
Core Collectio	n						Core R	ecovery	
	Collection Team: BW, LT					Sleeve Length in Decimal Feet:	2.0	2.0	
	Collection Date: 07/27/2017 Collection Time: 09:34	Co	llection Method: S			Depth Cored in Decimal Feet:	<u>1.5</u> 0.85	1.5 0.65	
	ant Freeze (Y/N): Yes		Est. Volume: 4	" D x 24" L Plastic 7 oz/ft		covered Core Length in Decimal Feet: very (Recovered Core/Depth Cored):	57%	43%	
Test Pit Log	Test Pit Logger: <u>BW</u> Digging Method: <u>Shooter Sho</u> t Pit Dimensions: 6" x 6" x 18"	vel	Dody Debris (Y/N): N Vegetation Type: T Drox. # Stems/ft ² : 1	o ypha			N) - Marcia and a second s North a		
		Descri					the real one week	KARMUSS	
Interval		color, grain size, odor, deb					I	SN MARTE	
0.0-0.2	Very dark brown (10YR 2/2), the high root density, 0.05' ro		d (10% fine sand), p	lasticity and stiffne	ess NA due to			AN CO	
0.2-0.5	Dark brown (10 YR 3/3) some fine sand), plasticity and stiff	-			h sand (5%	TIM	and and		
0.5-0.7	Very dark gray (10YR 3/1),black biological mottling (0.05' diameter), saturated, SILT with sand (10% fine sand), low plasticity, medium density root mass, hair like roots							15.	
0.7-1.0	Very dark grayish brown (10YR 3/2), saturated, biological odor, SILT with fine sand (15% fine sa plasticity, medium density hair like roots				e sand), low	VER RE			
1.0-1.3	mass, hair like roots	ad (15% fine sand), no plasticity, low density root			XIMAN		MAKA.		
	Water at surface, low core re	ecovery due to high dens	ity root mass						
Sample Collec	tion Collection Team: LT BW KB		(and	ple Collection Dat	- 0/1/2017 or	4 9 /2 /2017			
Sample			San	iple collection Dat	e: 8/1/2017 af	la 8/3/2017			
Interval (ft.)	Sample	lD	Sample Time	Requested A	nalyses	Additional Volumes Collected	Container	Homoginization	
0.0 - 0.1	W-MM-10 _ 080117 _S	ED_00-01	1615	MeHg, Hg, T	MeHg, Hg, TOC, OC None 1		1 x 16 oz Plastic	Lab Homogenize and	
0.1 - 0.3	W-MM-10 _ 080117 _S	ED_01-03	1617	MeHg, Hg, T	OC, OC	None	2 x 16 oz Plastic	Subsample	
0.3 - 0.5	W-MM-10 _ 080317 _S	ED_03-05	1304	Hg, TOC,	lg, TOC, OC None		1 x 8 oz Plastic 2 x 8 oz Amber Glass	Field Lab Homogenize	
0.5 - 1.0	W-MM-10 _ 080317 _S	GED_05-10	1306	Hg, TOC,	OC	None	1 x 8 oz Plastic 2 x 8 oz Amber Glass	and Subsample	
Sample Analy	sis Information				Notes:		(
	Analyte	Method 1630	Preservative	Lab EFGS		e sampling was conducted according to the iment Sampling, SOP-S-7 Soil Descriptions, S	-	E QAPP:	
Methyl Mercu Mercury (Hg)	ii y (ivierig)	1630	Freeze 4 C	EFGS	0.0 = Scalp				
		1031	40			Samples were processed/sectioned in the Winterport field office			
Total Organic	Carbon (TOC)	Lloyd-Kahn	4 C	Alpha		processed/sectioned in the winterport field pordinates provided on Core/Grab Log.	a once		

Technician Name: Lauren Tierney

Technician Signature: ______

QA/QC by: Julie Pallozzi

Penobscot River Mercury Study - Phase III Engineering Evaluation WETLAND SEDIMENT SAMPLE COLLECTION wheel Location ID: W-MM-11 Project Name: USDC Penobscot River Project Number: 3616166052 WO: 4A-030 Wetland Core Collection Core Recovery Sleeve Length in Decimal Feet: Core Collection Team: FM, JP 2.0 2.0 Core Collection Date: 07/12/2017 Collection Method: Slide Hammer Depth Cored in Decimal Feet: 1.5 1.5 Core Collection Time: 12:30 Liner Type: 3" D x 24" L Plastic **Recovered Core Length in Decimal Feet:** 1.0 0.95 Instant Freeze (Y/N): Yes Est. Volume: 47 oz/ft % Recovery (Recovered Core/Depth Cored): 67% 63% Test Pit Log Woody Debris (Y/N): No Test Pit Logger: FM W-MM-II **Digging Method: Shooter Shovel** Vegetation Type: Grasses mita/er Test Pit Dimensions: 6" x 6" x 18" Approx. # Stems/ft²: 1440 Description Interval color, grain size, odor, debris, roots, organisms, etc. Very dark brown [7.5YR2.5/3], saturated, SILT < 20%, dense root mass, hair like thickness to 0.1ft, 0-0.2 nonplastic, soft, no organisms observed Strong brown [7.5YR4/6] and strong brown to brown [7.5YR4/2], saturated, SILT < 20%, dense root mass, 0.2-0.4 hair like thickness to 0.1ft, nonplastic, soft, no organisms observed Brown [7.5YR4/4], saturated, increasing SILT with clay 20%, dense root mass, hair like thickness to 0.1ft, 0.4-1.1 nonplastic, soft, no organisms observed Water depth 0.55 ft bgs Sample Collection Sample Collection Team: BW, JP Sample Collection Date: 7/18/17 and 7/19/17 Sample Interval (ft.) Sample ID Sample Time **Requested Analyses** Additional Volumes Collected Container Homoginization 0.0 - 0.1 W-MM-11 071817 SED 00-01 11:14 MeHg, Hg, TOC, OC None 1 x 16 oz Plastic Lab Homogenize and Subsample 0.1 - 0.3 W-MM-11 071817 SED 01-03 11:17 MeHg, Hg, TOC, OC None 2 x 16 oz Plastic 1 x 8 oz Plastic 0.3 - 0.5 W-MM-11 071917 SED 03-05 9:55 Hg, TOC, OC None 2 x 8 oz Amber Glass Field Lab Homogenize 1 x 8 oz Plastic and Subsample W-MM-11 _ 071917 _SED_05-10 0.5 - 1.0 10:00 Hg, TOC, OC None 2 x 8 oz Amber Glass Sample Analysis Information Notes: Sediment Core sampling was conducted according to the following SOPs included in the QAPP: Analyte Method Preservative Lab SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, SOP-S-17 Decon EFGS Methyl Mercury (MeHg) 1630 Freeze 0.0 = Scalp1631 4 C EFGS Mercury (Hg) Samples were processed/sectioned in the Winterport field office Total Organic Carbon (TOC) Lloyd-Kahn 4 C Alpha Geographic coordinates provided on Core/Grab Log. D2974 Mod(550 C) Organic Content (OC) Ambient Amec FW

Technician Name: Julie Pallozzi

QA/QC by: Lauren Tierney

Technician Signature: $\bigcirc \sqrt[n]{\sqrt{2\pi}} e^{-g} e_{e^{ig}} e^{-g}$

QA/QC Date:

Penobscot River Mercury Study - Phase III Engineering Evaluation oste WETLAND SEDIMENT SAMPLE COLLECTION wheele Project Name: USDC Penobscot River Location ID: W-MM-12 Project Number: 3616166052 WO: 4A-030 Wetland Core Collection Core Recovery Core Collection Team: FM, JP Sleeve Length in Decimal Feet: 2.0 2.0 Core Collection Date: 07/12/2017 Collection Method: Slide Hammer Depth Cored in Decimal Feet: 1.5 1.5 Core Collection Time: 14:31 Liner Type: 3" D x 24" L Plastic 1.25 1.25 **Recovered Core Length in Decimal Feet:** Instant Freeze (Y/N): Yes Est. Volume: 47 oz/ft % Recovery (Recovered Core/Depth Cored): 83% 83% Test Pit Log Test Pit Logger: FM Woody Debris (Y/N): Yes W-MM-12 **Digging Method: Shooter Shovel** Vegetation Type: Grasses 7/12/17 Test Pit Dimensions: 6" x 6" x 18" Approx. # Stems/ft²: 1440 Description Interval color, grain size, odor, debris, roots, organisms, etc. TOP Very dark gray [7.5YR3/1], moist, dense root mass with varying thickness from hair size to 0.01 ft, SILT 0-0.15 <25%, nonplastic, stiffness NA, no odor, no observed organisms Brown [7.5YR4/3], very moist, no odor, SILT increases with depth, predominantly decomposed root mass 0.15-1 and organic matter with SILT < 35%, nonplastic, no organisms observed, 0.3-0.5' single 0.075' woodchip observed Brown [7.5YR4/2], very moist, no odor, more SILT content < 45%, decomposed organic matter, nonplastic 1-1.3 soft, hair like roots, no organisms observed No water observed in test pit Sample Collection Sample Collection Team: BW JP Sample Collection Date: 7/18/17 and 7/19/17 Sample Interval (ft.) Sample ID Sample Time **Requested Analyses Additional Volumes Collected** Container Homoginization 0.0 - 0.1 W-MM-12 071817 SED_00-01 17:33 MeHg, Hg, TOC, OC None 1 x 16 oz Plastic Lab Homogenize and Subsample 0.1 - 0.3 W-MM-12 071817 SED 01-03 17:35 MeHg, Hg, TOC, OC None 2 x 16 oz Plastic 1 x 8 oz Plastic 0.3 - 0.5 W-MM-12 _ 071917 _SED_03-05 11:19 Hg, TOC, OC None 2 x 8 oz Amber Glass Field Lab Homogenize 1 x 8 oz Plastic and Subsample 0.5 - 1.0 W-MM-12 _ 071917 _SED_05-10 11:23 Hg, TOC, OC None 2 x 8 oz Amber Glass Sample Analysis Information Notes: Sediment Core sampling was conducted according to the following SOPs included in the QAPP: Analyte Method Preservative Lab SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, SOP-S-17 Decon 1630 Methyl Mercury (MeHg) EFGS Freeze 0.0 = ScalpMercury (Hg) 1631 4 C EFGS Samples were processed/sectioned in the Winterport field office Total Organic Carbon (TOC) Lloyd-Kahn 4 C Alpha Geographic coordinates provided on Core/Grab Log. Organic Content (OC) D2974 Mod(550 C) Ambient Amec FW Technician Name: Julie Pallozzi QA/QC by: Lauren Tierney C) CS PLOODARS 1

Technician Signature:

QA/QC Date:

Penobscot River Mercury Study - Phase III Engineering Evaluation WETLAND SEDIMENT SAMPLE COLLECTION footo wheeld Location ID: W-MM-13 Project Name: USDC Penobscot River Project Number: 3616166052 WO: 4A-030 Wetland Core Collection Core Recovery 2.0 2.0 Core Collection Team: FM, JP Sleeve Length in Decimal Feet: Core Collection Date: 07/12/2017 **Collection Method:** Slide Hammer Depth Cored in Decimal Feet: 1.5 1.5 Core Collection Time: 16:12 Liner Type: 3" D x 24" L Plastic **Recovered Core Length in Decimal Feet:** 1.2 1.1 Instant Freeze (Y/N): Yes Est. Volume: 47 oz/ft 80% 73% % Recovery (Recovered Core/Depth Cored): Test Pit Log Test Pit Logger: FM Woody Debris (Y/N): Yes W-MM-13 **Digging Method:** Shooter Shovel Vegetation Type: Cat tails 7/12/17 Test Pit Dimensions: 6" x 6" x 18" Approx. # Stems/ft²: 432 Description Interval color, grain size, odor, debris, roots, organisms, etc. Dark reddish brown [5YR3/4], decomposed cat tails and organic matter with CLAY < 10%, saturated, 0-0.6 odorless, nonplastic, stiffness NA, roots abundant from hair like to 0.03 ft thickness, no organisms observed, 0.3-0.5' wood chips up to 0.01' in length Dark gray [5YR4/1], decomposed organic matter with CLAY < 15%, no odor, nonplastic, stiffness NA, same 0.6-0.7 roots throughout, no organisms observed 0.7-1.3 Dark reddish brown [5YR3/4], same as first interval with increasing CLAY content 30 % Water depth 0.4 ft bgs Sample Collection Sample Collection Team: BW, JP Sample Collection Date: 7/18/17 and 7/19/17 Sample Interval (ft.) Sample ID Sample Time **Requested Analyses** Additional Volumes Collected Container Homoginization 0.0 - 0.1 W-MM-13 071817 SED 00-01 10:33 MeHg, Hg, TOC, OC None 1 x 16 oz Plastic Lab Homogenize and Subsample W-MM-13 _ 071817 _SED_01-03 0.1 - 0.3 10:35 MeHg, Hg, TOC, OC 2 x 16 oz Plastic None 1 x 8 oz Plastic 0.3 - 0.5 W-MM-13 071917 SED 03-05 10:43 Hg, TOC, OC None 2 x 8 oz Amber Glass Field Lab Homogenize 1 x 8 oz Plastic and Subsample W-MM-13 _ 071917 _SED_05-10 0.5 - 1.0 10:46 Hg, TOC, OC MS/MSD 2 x 8 oz Amber Glass Sample Analysis Information Notes: Sediment Core sampling was conducted according to the following SOPs included in the QAPP: Analyte Method Preservative Lab SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, SOP-S-17 Decon 1630 EFGS Methyl Mercury (MeHg) Freeze 0.0 = Scalp1631 4 C EFGS Mercury (Hg) Samples were processed/sectioned in the Winterport field office Total Organic Carbon (TOC) 4 C Lloyd-Kahn Alpha Geographic coordinates provided on Core/Grab Log. D2974 Mod(550 C) Organic Content (OC) Ambient Amec FW

Technician Name: Julie Pallozzi

QA/QC by: Lauren Tierney

Technician Signature:

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QA/QC Date:

Penobscot River Mercury Study - Phase III Engineering Evaluation oste WETLAND SEDIMENT SAMPLE COLLECTION wheeld Project Name: USDC Penobscot River Location ID: W-MM-14 Project Number: 3616166052 WO: 4A-030 Wetland Core Collection Core Recovery Core Collection Team: LT, BW Sleeve Length in Decimal Feet: 2.0 2.0 Core Collection Date: 07/12/2017 1.5 1.5 Collection Method: Slide Hammer Depth Cored in Decimal Feet: Core Collection Time: 10:06 Liner Type: 3" D x 24" L Plastic 1.2 **Recovered Core Length in Decimal Feet:** 1.1 Instant Freeze (Y/N): Yes Est. Volume: 47 oz/ft 80% 73% % Recovery (Recovered Core/Depth Cored): Test Pit Log Test Pit Logger: BW Woody Debris (Y/N): No Digging Method: Shooter Shovel Vegetation Type: Marsh grasses, p grass Test Pit Dimensions: 6" x 6" x 18" Approx. # Stems/ft²: 1440 stems/sq ft Description Interval color, grain size, odor, debris, roots, organisms, etc. Very dark grayish brown (10 YR 3/2), saturated, SILT with sand, (85% SILT, 15% fine sand) plasticity NA 0.0-0.7 due to heavy root mat structure, fine roots, Very dark gray(10 YR 3/1), saturated, sandy SILT, (75% SILT 25% fine grained sand), decreasing roots. 0.7-1.2 finer roots, low plasticity Water depth bgs 0.8' Sample Collection Sample Collection Team: BW JP Sample Collection Date: 7/18/17 and 7/19/17 Sample Interval (ft.) Sample ID Sample Time **Requested Analyses** Additional Volumes Collected Container Homoginization 0.0 - 0.1 W-MM-14 071817 SED 00-01 17:59 MeHg, Hg, TOC, OC None 1 x 16 oz Plastic Lab Homogenize and Subsample 0.1 - 0.3 W-MM-14 071817 SED 01-03 18:00 MeHg, Hg, TOC, OC None 2 x 16 oz Plastic 1 x 8 oz Plastic 0.3 - 0.5 W-MM-14 071917 SED 03-05 12:40 Hg, TOC, OC None Field Lab Homogenize 2 x 8 oz Amber Glass 1 x 8 oz Plastic and Subsample 0.5 - 1.0 W-MM-14 _ 071917 _SED_05-10 12:43 Hg, TOC, OC None 2 x 8 oz Amber Glass Sample Analysis Information Notes: Analyte Method Preservative Lab Sediment Core sampling was conducted according to the following SOPs included in the QAPP: SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, SOP-S-17 Decon Methyl Mercury (MeHg) 1630 Freeze EFGS 0.0 = Scalp1631 EFGS Mercury (Hg) 4 C Samples were processed/sectioned in the Winterport field office Total Organic Carbon (TOC) Lloyd-Kahn 4 C Alpha Geographic coordinates provided on Core/Grab Log. Organic Content (OC) D2974 Mod(550 C) Ambient Amec FW

Technician Name: Julie Pallozzi

QA/QC by: Lauren Tierney

Technician Signature:

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QA/QC Date: 10/

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Penobscot River Mercury Study - Phase III Engineering Evaluation

WETLAND SEDIMENT SAMPLE COLLECTION

Project Name: USCC Penolssoc Newr Project Name:: USCC Penolssoc Newr Core Collection We: Core Collection Core Collection Team:: Core Collection Core Collection Dispersive Core Collection Core Collection Test PR Loger: Wordy Pubris (Y/N): Yes Vegetation Type: Trypha 20%, marsh grasses 80% Approx. If Stem //F : Dool, grain ste. dor, stot, oraning, etc. 0.0.0.3 Brown (LDYR 4/2), saturated, biological odor, SLT with sand (10% files and), plasticity, No due to High density root areas; roots 0.03 in dameret, on align 0.45 yie col woody densis 0.0.1 Brown (LDYR 4/2), saturated, biological odor, SLT with sand (10% files and), medium plasticity, medium density 0.0.2 Brown (LDYR 4/2), saturated, biological odor, SLT with sand (10% files and), plasticity, Medium density 0.0.3.1 Brown (LDYR 4/2), saturated, biological odor, SLT with sand (10% files and), medium plasticity, medium density 0.0.4.1 Sample Collection Team: LT RW 4/3 Sample Collection Team: LT RW 4/3 Sample Time <td< th=""><th>wheeler</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></td<>	wheeler									
Core Collection Core Explore Core Solution Team: BW, IT, DL Core Collection Team: BW, IT, DL Core Collection Method: Side Hammer Sieve Length in Decimal Feet: 1.5 1.5 Core Collection Time: 10:01.3 Line Trye: 3' D x 24''. Plastic Est Volume: 47 o/It Sieve Length in Decimal Feet: 1.07 0.8 Test Pit Logg: Test Pit Logg:: BW Woody Debris (V/N): Yes Woody Debris (V/N): Yes 53% Test Pit Logg:: BW Woody Debris (V/N): Yes Woody Debris (V/N): Yes 53% Test Pit Logg:: BW Woody Debris (V/N): Yes Signer Signe			cot River	_						
Core Collection Team: BV, LT, DL Collection Method: Slide Hammer Sieve Length in Decimal Feet: 2.0 2.0 Liner Type: 3" D x 24" L Plastic District Team 1.5 1.5 1.5 Liner Type: 3" D x 24" L Plastic Ext. Volume: 77 07/ft Recovered Core Length in Decimal Feet: 1.07 0.8 Test Pit Logger: BW Woody Debris (Y/N): Yes Vesteration Type: Typha 20%, march grasses 80% Xecovery (Recovered Core/Depth Cored): 71% 53% Design Method: Shooter Shooter Description Description Description Secovery (Recovered Core/Depth Cored): 71% 53% 0.0.0.8 Brown (10YR 4/2), saturated, biological odor, SLT with sand (10% fine sand), plasticity NA due to High density root mass, roots 0.03' in diameter, one large 0.45' place of woody debris 0.41.3 Dark gray (10 4/1), saturated, biological odor, SLT with sand (10% fine sand), plasticity, NA due to High density root mass, roots 0.03' in diameter, one large 0.45' place of woody debris Additional Volumes Collected Lab Homogenize and Subarple 0.4.1.3 Dark gray (10 4/1), saturated, biological odor, SLT with sand (10% fine sand), plasticity, NA due to High density root mass, roots 0.03' in diameter, one large 0.45' place of woody debris Additional Volumes Collected Lab Homogenize and Subarple 0.4.1.3 Dark	Pro	oject Number: <u>3616166052</u>		_		WO: 4	A-030 Wetland			
Core Collection Team: BV, LT, DL Collection Method: Slide Hammer Sieve Length in Decimal Feet: 2.0 2.0 Liner Type: 3" D x 24" L Plastic District Team 1.5 1.5 1.5 Liner Type: 3" D x 24" L Plastic Ext. Volume: 77 07/ft Recovered Core Length in Decimal Feet: 1.07 0.8 Test Pit Logger: BW Woody Debris (Y/N): Yes Vesteration Type: Typha 20%, march grasses 80% Xecovery (Recovered Core/Depth Cored): 71% 53% Design Method: Shooter Shooter Description Description Description Secovery (Recovered Core/Depth Cored): 71% 53% 0.0.0.8 Brown (10YR 4/2), saturated, biological odor, SLT with sand (10% fine sand), plasticity NA due to High density root mass, roots 0.03' in diameter, one large 0.45' place of woody debris 0.41.3 Dark gray (10 4/1), saturated, biological odor, SLT with sand (10% fine sand), plasticity, NA due to High density root mass, roots 0.03' in diameter, one large 0.45' place of woody debris Additional Volumes Collected Lab Homogenize and Subarple 0.4.1.3 Dark gray (10 4/1), saturated, biological odor, SLT with sand (10% fine sand), plasticity, NA due to High density root mass, roots 0.03' in diameter, one large 0.45' place of woody debris Additional Volumes Collected Lab Homogenize and Subarple 0.4.1.3 Dark										
Core Collection Date: 05/01/2017 Core Collection Time: 10:13 Collection Mathod: Stde Hammer Liner Type: 37 Dx 24' L Plastic Depth Core (in Decimal Feet: 1.5 1.5 Test Pit Loger: Instant Freeze (Y/N): Yes Est. Volume: 47 a/It Recovered Core Length in Decimal Feet: 1.07 0.8 Test Pit Loger: Test Pit Loger: Test Pit Loger: BW Woody Debris (Y/N): Yes Woody Debris (Y/N): Yes Sample Collection Type: Typha 20%, marsh grasses 80%. Approx. 8 Stems/R ² , 1000 Sample Collection Type: Typha 20%, marsh grasses 80%. Approx. 8 Stems/R ² , 1000 Sample Collection Type: Typha 20%, marsh grasses 80%. Approx. 8 Stems/R ² , 1000 Sample Collection Type: Typha 20%, marsh grasses 80%. Approx. 8 Stems/R ² , 1000 Sample Collection Type: Typha 20%, marsh grasses 80%. Approx. 8 Stems/R ² , 1000 Sample Collection Type: Typha 20%, marsh grasses 80%. Approx. 8 Stems/R ² , 1000 Sample Collection Type: Typha 20%, marsh grasses 80%. Approx. 8 Stems/R ² , 1000 Sample Collection Type: Typha 20%, marsh grasses 80%. Approx. 8 Stems/R ² , 1000 Sample Collection Type: Typha 20%, marsh grasses 80%. Approx. 8 Stems/R ² , 1000 Sample Collection Type: Typha 20%, marsh grasses 80%. Approx. 8 Stems/R ² , 1000 Sample Collection Type: Typha 20%, marsh grasses 80%. Approx. 8 Stems/R ² , 1000 Sample Collection Type: Typha 20%, marsh grasses 80%. Approx. 8 Coll Coll Coll Coll Coll Coll Coll Co									· · ·	
Core Collection Time: 1.0.7 0.8 Instant Freeze (Y/N): Yes Est. Volume: 47 ar/ft % Recoverd Core Length in Decimal Feet: 1.07 0.8 Test Pit Logg: BW Woody Debris (Y/N): Yes Yes 53% Digging Method: Shooter Shovel Vegetation Tryp: Trypha 20%, marsh grasses 80% 71% 53% Approx. # Stems/ft*: 1000 Vegetation Trype: Trypha 20%, marsh grasses 80% Approx. # Stems/ft*: 1000 Interval Color, grain size, odor, debris, roots, organisms, etc. 0.0.0.8 Brown (10/PR 4/2), saturated, biological odor, SILT with sand (10% fine sand), plasticity NA due to High density root mass, roots 0.03 in diameter, one large 0.45 piece of woody debris Vegetation Trype 10% 0.8.1.3 Dark gray (10.4/1), saturated, biological odor, SILT with sand (10% fine sand), plasticity NA due to High density root mass, roots 0.03 in diameter, one large 0.45 piece of woody debris Additional Volumes Collected Container Homoginization 0.4.1.3 Dark gray (10.4/1), saturated, biological odor, SILT with sand (10% fine sand), gray field for the size of woody debris Additional Volumes Collected Container Homoginization 0.4.1.3 Dark gray (10.4/1), saturated, biological odor, SILT with sand (10% fine sand), gray field for the size of woody debris Additional Volumes Collected Container Homoginization 0.4.1.3 Dark gray (10.4/1), saturated, biological odo							5			
Instant Freeze (Y/M): Yes Est. Volume: 47 oz/ft % Recovery (Recovered Core/Depth Cored): 71% 53% Test Pit Logger: BW Woody Debris (Y/M): Yes Vegetation Type: Typha 20%, marsh grasses 80% Yes Pit Logger: BW							-			
Test Pit Logger: BW Woody Debris (Y/N): Yes Digging Method: Shooter Shovel Yegetation Type: Typha 20%; marsh grasses 80% Approx. # Stems/ft ² : 1000 Description Interval color, grain size, odro, debris, roots, organisme, etc. 0.00.8 Brown (10YR 4/2), saturated, biological odor, SILT with sand (10% fine sand), plasticity, NA due to High density root mass, roots 0.03' in diameter, one large 0.45' plece of woody debris 0.8-1.3 Dark gray (10 4/1), saturated, biological odor, SILT with sand (5% sand), medium plasticity, medium density hair like sized roots Sample Collection Team: LT 8W K8 Sample Collection Date: 8/1/2017 and 8/3/2017 Sample Collection Team: LT 8W K8 Sample Collection Team: LT 8W K8 Sample Collection Team: LT 8W K8 Sample Collection Team: LT 8W K8 Sample Collection Team: LT 8W K8 Sample Collection Team: LT 8W K8 Sample Collection Team: LT 8W K8 Sample Collection Team: LT 8W K8 Sample Collection Team: LT 8W K8 Sample Collection Team: LT 8W K8 Sample Collection Team: LT 8W K8 Sample Collection Team: LT 8W K8 Sample Collection Team: LT 8W K8 Sample Collection Team: LT 8W K8 Sample Collection Team: LT 8W K8 Sample Collection Team: LT 8W K8 Sample Collection Team: LT 8W K8 Sample Collection Team: LT 8W K8 <						_	•			
Test Pit Logger: BW Woody Debris (Y/N): Yes: Vegetation Type: Typha 20%, marsh grasses 80% Digging Method: Shooter Shovel Vegetation Type: Typha 20%, marsh grasses 80% Description Interval Color, grain size, odor, debris, roganisms, etc. 0.0-0.8 Brown (10'R 4/2), saturated, biological odor, SLT with sand (10% fine sand), plasticity NA due to High density root mass, roots 0.03'in diameter, one large 0.45' place of woody debris Output to the sand fine density root mass, roots 0.03'in diameter, one large 0.45' place of woody debris 0.8-1.3 Dark gray (10 4/1), saturated, biological odor, SLT with sand (15% sand), medium plasticity, medium density hair like sized roots Sample Collection Sample Collection Team: LT BW KB Sample Collection Date: 8/1/2017 and 8/3/2017 Sample Collection Sample ID Sample Time Requested Analyzes Additional Volumes Collected Container Homogenization 0.1 - 0.3 W-HM-15 _ 080317 _SED_0-0.1 1640 Methg, Hg, TOC, OC None 1 x 8 oz Plastic Subsample 0.3 - 0.5 W-HM-15 _ 080317 _SED_0-0.3 1642 Methg, Hg, TOC, OC None 1 x 8 oz Plastic Field Lab Homogenize and Subsample 0.5 - 1.0 W-HM-15 _ 080317 _SED_0-1.0 1256 Hg, TOC, OC <		ant Freeze (Y/N): Yes		Est. volume: 4	17 02/1L	% Recov	very (Recovered Core/Depth Cored):	/1%	53%	
Digging Method: Shoulder Shoulder Vegetation Type: Typha 20%, marsh grasses 80% Approx. # Stems/ft*: 1000 Interval Color, grain size, odor, debris, roots, organisms, etc. 0.0-0.8 Brown (10YR 4/2), saturated, biological odor, SLT with sand (10% fine sand), plasticity NA due to High density root mass, roots 003' in diameter, one large 0.45' piece of woody debris 0.8-1.3 Dark gray (10 4/1), saturated, biological odor, SLT with sand (15% sand), medium plasticity, NA due to High density root mass, roots 0.03' in diameter, one large 0.45' piece of woody debris 0.8-1.3 Dark gray (10 4/1), saturated, biological odor, SLT with sand (15% sand), medium plasticity, Ma due to High density roots Sample Collection Sample Collection Team: LT BW K8 Sample Collection Sample Collection Date: 8/1/2017 and 8/3/2017	Test Pit Log	Test Dit Lessen Dit	14/-	- du Dahaia (V(Al))			一下 和月秋日		a Makers	
Test Pit Dimensions: 6" × 6" x 18" Approx. # Stems/ft ² : 1000 Interval Description 0.0-0.8 Brown (10YR 4/2), saturated, biological odor, SILT with sand (10% fine sand), plasticity NA due to High density root mass, roots 0.03' in diameter, one large 0.45' place of woody debris Image: Comparison of the sand (10% fine sand), plasticity NA due to High density root mass, roots 0.03' in diameter, one large 0.45' place of woody debris 0.8-1.3 Dark gray (10 4/1), saturated, biological odor, SILT with sand (5% sand), medium plasticity, medium density hair like sized roots Image: Comparison of the sand (10% fine sand) 0.8-1.3 Dark gray (10 4/1), saturated, biological odor, SILT with sand (5% sand), medium plasticity, medium density hair like sized roots Image: Comparison of the sand (10% fine sand) 0.8-1.3 Dark gray (10 4/1), saturated, biological odor, SILT with sand (5% sand), medium plasticity, medium density hair like sized roots Image: Comparison of the sand (10% fine sand) 0.8-1.3 Dark gray (10 4/1), saturated, biological odor, SILT with sand (5% sand), medium plasticity, medium density hair like sized roots Image: Comparison of the sand (10% fine sand) 0.8-1.3 Dark gray (10 4/1), saturated, biological odor, SILT with sand (10% fine sand) Sample Collection Date: 8/1/2017 and 8/3/2017 Sample Collection Sample Collection Date: 8/1/2017 and 8/3/2017 Sample Collection Date: 8/1/2017 and 8/3/2017 0.0-0.1 W-MM-15 _ 080117 _SED_00-01						-		10-10	Same Same	
Description Interval Description 0.0-0.8 Brown (10YR 4/2), saturated, biological odor, SILT with sand (10% fine sand), plasticity NA due to High density root mass, roots 0.03 in diameter, one large 0.45° piece of woody debris Image: Control of the sand the sa						isses 80%		12AC	11 Contraction	
Interval color, grain size, odor, debris, roots, organisms, etc. 0.0.0.8 Brown (10YR 4/2), saturated, biological odor, SLT with sand (10% fine sand), plasticity NA due to High density root mass, roots 0.03' in diameter, one large 0.45' piece of woody debris hair like sized roots Image: Collection start of the sized roots of the sized root	Test				.000					
0.0-0.8 Brown (10YR 4/2), saturated, biological odor, SLT with sand (10% fine sand), plasticity NA due to High density root mass, roots 0.03' in diameter, one large 0.45' piece of woody debris Image: Collection Col	Interval			•	etc		ASI SI STORE	O THE		
Bit (Entry 1, Substance) Substance (Construction of the state o	interval		color, grain 3120, 0001, 00	.6113, 100t3, 01ga113113	, etc.				1/2 / 2 / 2 / 2 / 2 / 2 / 2 / 2 / 2 / 2	
Bit (Entry 1, Submitted) Preservative (Analyte Mercury (Mellg) Sample Collection (Submit (Construction)) Sample Collection (Submit (Construction)) 0.8-1.3 Dark gray (10 4/1), saturated, biological odor, SUT with sand (5% sand), medium plasticity, medium density hair like sized roots Sample Collection Sample Collection Sample Collection Team: LT BW KB Sample Collection Date: 8/1/2017 and 8/3/2017 Sample Collection Sample Collection Team: LT BW KB Sample Time Requested Analyses Additional Volumes Collected Container Homogenization 0.1 - 0.3 W-MM-15 _ 080117 _SED_00-01 1640 MeHg, Hg, TOC, OC None 1 x 8 oz Plastic Lab Homogenize and Subsample 0.3 - 0.5 W-MM-15 _ 080317 _SED_01-03 1642 MeHg, Hg, TOC, OC None 1 x 8 oz Plastic Field Lab Homogenize and Subsample 0.5 - 1.0 W-MM-15 _ 080317 _SED_03-05 1256 Hg, TOC, OC None 1 x 8 oz Plastic z x 8 oz Amber Glass Field Lab Homogenize and Subsample Sample Analysis Information Analyte Method Freeze FCGS Sediment Core Sampling was conducted according to the following SOPs included in the QAPP: Sediment Core Sampling was conducted according to the following SOPs included in the QAPP: Somple were processed/sectioned in the Winterport field office Georgraphic coordinates provided on Core/Grab Log: <	0.0-0.8	Brown $(10 \text{VR} 4/2)$ satur	ated biological odor SILT	with sand (10% fine	sand) plasticity NA (due to High	A CONTRACTOR	The production of the second		
0.8-1.3 Dark gray (10 4/1), saturated, biological odor, SLT with sand (5% sand), medium plasticity, medium density hair like sized roots Water in hole bgs 0.6' Sample Collection Sample Collection Team: LT BW KB Sample Collection Date: 8/1/2017 and 8/3/2017 Sample Interval (ft.) Sample 1D Sample Time Requested Analyses Additional Volumes Collected Container Homoginization 0.0-0.1 W-MM-15 _ 080117 _SED_00-01 1640 MeHg, Hg, TOC, OC None 1 x 16 oz Plastic Lab Homogenize and Subsample 0.1-0.3 W-MM-15 _ 080117 _SED_01-03 1642 MeHg, Hg, TOC, OC None 1 x 8 oz Plastic Subsample 0.3 - 0.5 W-MM-15 _ 080317 _SED_03-05 1256 Hg, TOC, OC None 1 x 8 oz Plastic subsample 0.5 - 1.0 W-MM-15 _ 080317 _SED_05-10 1258 Hg, TOC, OC None 1 x 8 oz Plastic and Subsample Sample Analysis Information Analyte Method Preservative Lab Sediment Core sampling was conducted according to the following SOPs included in the QAPP: Social Scial Sci			· · · · · · · · · · · · · · · · · · ·				A CALL STREET, SALES			
O.0-1.3 Hair like sized roots Water in hole bgs 0.6' Sample Collection Sample Collection Team: LT BW KB Sample Collection Date: 8/1/2017 and 8/3/2017 Sample Interval (ft.) Sample ID Sample Time Requested Analyses Additional Volumes Collected Container Homoginization 0.0 - 0.1 W-MM-15 _ 080117 _ SED_00-01 1640 MeHg, Hg, TOC, OC None 1 x 16 oz Plastic Lab Homogenize and Subsample 0.1 - 0.3 W-MM-15 _ 080117 _ SED_01-03 1642 MeHg, Hg, TOC, OC None 1 x 8 oz Plastic Subsample 0.3 - 0.5 W-MM-15 _ 080317 _ SED_03-05 1256 Hg, TOC, OC None 1 x 8 oz Plastic Field Lab Homogenize and Subsample 0.5 - 1.0 W-MM-15 _ 080317 _ SED_05-10 1258 Hg, TOC, OC None 1 x 8 oz Plastic Field Lab Homogenize and Subsample Sample Analysis Information Method Preservative Lab Sediment Core sampling was conducted according to the following SOPs included in the QAPP: SOP-5-6 a Sediment Sampling, SOP-5-7 Soil Descriptions, SOP-5-17 Decon 0.0 = Scalp Sample Mercury (MeHg) 1630 Freeze EFGS Sediment Core sampling was conducted according to the following SOPs included in the QAPP: SOP-5-6 a Sediment Sam						1	and the second second	A SAN AND A	A CONTRACT	
Water in hole bgs 0.6' Sample Collection Sample Collection Team: LT BW KB Sample Collection Date: 8/1/2017 and 8/3/2017 Sample Interval (Rt.) Sample ID Sample Collection Date: 8/1/2017 and 8/3/2017 Sample Interval (Rt.) Sample Time Requested Analyses Additional Volumes Collected Container Homogenization 0.0 - 0.1 W-MM-15 _ 080117 _SED_00-01 1640 MeHg, Hg, TOC, OC None 1 x 16 oz Plastic Lab Homogenize and Subsample 0.1 - 0.3 W-MM-15 _ 080117 _SED_01-03 1642 MeHg, Hg, TOC, OC None 1 x 8 oz Plastic 2 x 8 oz Amber Glass Field Lab Homogenize and Subsample 0.3 - 0.5 W-MM-15 _ 080317 _SED_03-05 1256 Hg, TOC, OC None 1 x 8 oz Plastic z x 8 oz Amber Glass Field Lab Homogenize and Subsample 0.5 - 1.0 W-MM-15 _ 080317 _SED_05-10 1258 Hg, TOC, OC None 1 x 8 oz Plastic z x 8 oz Amber Glass and Subsample Sample Analysis Information Notes: Methyl Mercury (MeHg) 1630 Freeze EFGS SoP-5-63 Sedi	0.8-1.3						A State of the sta			
Sample Collection Team: LT BW KB Sample Collection Date: 8/1/2017 and 8/3/2017 Sample Interval (ft.) Sample ID Sample Time Requested Analyses Additional Volumes Collected Container Homoginization 0.0 - 0.1 W-MM-15 _ 080117 _SED_00-01 1640 MeHg, Hg, TOC, OC None 1 x 16 oz Plastic Lab Homogenize and Subsample 0.1 - 0.3 W-MM-15 _ 080117 _SED_01-03 1642 MeHg, Hg, TOC, OC None 2 x 16 oz Plastic Lab Homogenize and Subsample 0.3 - 0.5 W-MM-15 _ 080317 _SED_03-05 1256 Hg, TOC, OC None 2 x 8 oz Amber Glass 2 x 8 oz Amber Glass Field Lab Homogenize and Subsample 0.5 - 1.0 W-MM-15 _ 080317 _SED_05-10 1258 Hg, TOC, OC None 2 x 8 oz Amber Glass Field Lab Homogenize and Subsample Sample Analysis Information Methyl Mercury (MeHg) 1630 Preservative Freeze EFGS Notes: Sediment Core sampling was conducted according to the following SOPs included in the OAPP: SoP-S-54 Sediment Sampling. SOP-S-17 Decon 0.0 = Scalp SOP-S-54 Sediment Sampling. SOP-S-17 Decon 0.0 = Scalp SoP-S-54 Sediment Sampling. SOP-S-17 Decon 0.0 = Scalp SoP-S-54 Sediment Sampling was conducted according to the following SOPs included in the OAPP: SoP-S-54 Sediment Sampling. SoP-S-17 Decon Otad Organic Carbon (TOC) Lloyd-Kahn		Water in hole bgs 0.6'	Hun Hite	51200 10005)	
Sample Collection Team: LT BW KB Sample Collection Date: 8/1/2017 and 8/3/2017 Sample Interval (ft.) Sample ID Sample Time Requested Analyses Additional Volumes Collected Container Homoginization 0.0 - 0.1 W-MM-15 _ 080117 _SED_00-01 1640 MeHg, Hg, TOC, OC None 1 x 16 oz Plastic Lab Homogenize and Subsample 0.1 - 0.3 W-MM-15 _ 080117 _SED_01-03 1642 MeHg, Hg, TOC, OC None 2 x 16 oz Plastic Lab Homogenize and Subsample 0.3 - 0.5 W-MM-15 _ 080317 _SED_03-05 1256 Hg, TOC, OC None 2 x 8 oz Amber Glass 2 x 8 oz Amber Glass Field Lab Homogenize and Subsample 0.5 - 1.0 W-MM-15 _ 080317 _SED_05-10 1258 Hg, TOC, OC None 2 x 8 oz Amber Glass Field Lab Homogenize and Subsample Sample Analysis Information Methyl Mercury (MeHg) 1630 Preservative Freeze EFGS Notes: Sediment Core sampling was conducted according to the following SOPs included in the OAPP: SoP-S-54 Sediment Sampling. SOP-S-17 Decon 0.0 = Scalp SOP-S-54 Sediment Sampling. SOP-S-17 Decon 0.0 = Scalp SoP-S-54 Sediment Sampling. SOP-S-17 Decon 0.0 = Scalp SoP-S-54 Sediment Sampling was conducted according to the following SOPs included in the OAPP: SoP-S-54 Sediment Sampling. SoP-S-17 Decon Otad Organic Carbon (TOC) Lloyd-Kahn	Sample Collec	tion								
Sample Sample ID Sample Time Requested Analyses Additional Volumes Collected Container Homoginization 0.0 - 0.1 W-MM-15 _ 080117 _SED_00-01 1640 MeHg, Hg, TOC, OC None 1 x 16 oz Plastic Lab Homogenize and Subsample 0.1 - 0.3 W-MM-15 _ 080117 _SED_01-03 1642 MeHg, Hg, TOC, OC None 2 x 16 oz Plastic Lab Homogenize and Subsample 0.3 - 0.5 W-MM-15 _ 080317 _SED_03-05 1256 Hg, TOC, OC None 1 x 8 oz Plastic Field Lab Homogenize and Subsample 0.5 - 1.0 W-MM-15 _ 080317 _SED_05-10 1258 Hg, TOC, OC None 1 x 8 oz Plastic 2 x 8 oz Amber Glass Field Lab Homogenize and Subsample Sample Analysis Information Method Preservative Lab Hg, TOC, OC None 1 x 8 oz Plastic 2 x 8 oz Amber Glass and Subsample Methyl Mercury (MeHg) 1630 Freeze EFGS Sediment Core sampling was conducted according to the following SOP-S-17 Decon 0.0 = Scalp Methyl Mercury (Hg) 1631 4 C EFGS Sample were processed/sectioned in the Winterport field office Gegraphic coordinates provided on Core/Grab Log.				Sai	mple Collection Date	: 8/1/2017 and	8/3/2017			
0.0 - 0.1 W-MM-15 080117 SED_00-01 1640 MeHg, Hg, TOC, OC None 1 x 16 oz Plastic Lab Homogenize and Subsample 0.1 - 0.3 W-MM-15 080117 SED_01-03 1642 MeHg, Hg, TOC, OC None 2 x 16 oz Plastic Lab Homogenize and Subsample 0.3 - 0.5 W-MM-15 080317 SED_03-05 1256 Hg, TOC, OC None 1 x 8 oz Plastic Field Lab Homogenize and Subsample 0.5 - 1.0 W-MM-15 080317 SED_05-10 1258 Hg, TOC, OC None 2 x 8 oz Amber Glass Field Lab Homogenize and Subsample Sample Analysis Information Analyte Method Preservative Lab Sediment Core sampling was conducted according to the following SOPs included in the QAPP: Methyl Mercury (MeHg) 1631 4 C EFGS Sediment Core sampling was conducted according to the following SOPs included in the QAPP: 0.0 = Scalp Samples were processed/sectioned in the Winterport field office Geographic coordinates provided on Core/Grab Log. Samples were processed/sectioned in the Winterport field office Geographic coordinates provided on Core/Grab Log.	Sample									
Image: Constraint of the following SOPs included in the QAPP: Method Preservative Lab Note: Sediment Core sampling was conducted according to the following SOPs included in the QAPP: Notes: Sample Analysis Information 1631 4 C EFGS Freeze EFGS Sample were processed/sectioned in the Winterport field office Geographic coordinates provided on Core/Grab Log. Sample were processed/sectioned in the Winterport field office Geographic coordinates provided on Core/Grab Log. Sample were processed/sectioned in the Winterport field office Geographic coordinates provided on Core/Grab Log. Sample were processed/sectioned in the Winterport field office Geographic coordinates provided on Core/Grab Log. Sample were processed/sectioned in the Winterport field office Geographic coordinates provided on Core/Grab Log. Sample were processed/sectioned in the Winterport field office Geographic coordinates provided on Core/Grab Log. Sample were processed/sectioned in the Winterport field office Geographic coordinates provided on Core/Grab Log.	Interval (ft.)	Samp	le ID	Sample Time	Requested An	alyses	Additional Volumes Collected	Container	Homoginization	
Image: Constraint of the following SOPs included in the QAPP: Method Preservative Lab Note: Sediment Core sampling was conducted according to the following SOPs included in the QAPP: Notes: Sample Analysis Information 1631 4 C EFGS Freeze EFGS Sample were processed/sectioned in the Winterport field office Geographic coordinates provided on Core/Grab Log. Sample were processed/sectioned in the Winterport field office Geographic coordinates provided on Core/Grab Log. Sample were processed/sectioned in the Winterport field office Geographic coordinates provided on Core/Grab Log. Sample were processed/sectioned in the Winterport field office Geographic coordinates provided on Core/Grab Log. Sample were processed/sectioned in the Winterport field office Geographic coordinates provided on Core/Grab Log. Sample were processed/sectioned in the Winterport field office Geographic coordinates provided on Core/Grab Log. Sample were processed/sectioned in the Winterport field office Geographic coordinates provided on Core/Grab Log.	0.0 - 0.1	W-MM-15 080117	SED 00-01	1640	MeHg. Hg. TC	OC. OC	None	1 x 16 oz Plastic		
0.1 - 0.3 W-MM-15 _ 080117 _SED_01-03 1642 MeHg, Hg, TOC, OC None 2 x 16 oz Plastic 0.3 - 0.5 W-MM-15 _ 080317 _SED_03-05 1256 Hg, TOC, OC None 1 x 8 oz Plastic Field Lab Homogenize 0.5 - 1.0 W-MM-15 _ 080317 _SED_05-10 1258 Hg, TOC, OC None 1 x 8 oz Plastic and Subsample Sample Analysis Information Analyte Method Preservative Lab Sediment Core sampling was conducted according to the following SOPs included in the QAPP: SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, SOP-S-17 Decon 0.0 = Scalp Methol Organic Carbon (TOC) Lloyd-Kahn 4 C Alpha Samples were processed/sectioned in the Winterport field office Geographic coordinates provided on Core/Grab Log. Samples were processed/sectioned in the Winterport field office					- 0, 0, -	-,			•	
0.3 - 0.5 W-MM-15 _ 080317 _SED_03-05 1256 Hg, TOC, OC None 2 x 8 oz Amber Glass Field Lab Homogenize and Subsample 0.5 - 1.0 W-MM-15 _ 080317 _SED_05-10 1258 Hg, TOC, OC None 2 x 8 oz Amber Glass Field Lab Homogenize and Subsample Sample Analysis Information Analyte Method Preservative Lab Sediment Core sampling was conducted according to the following SOPs included in the QAPP: SOP-5-6a Sediment Sampling, SOP-5-7 Soil Descriptions, SOP-5-17 Decon 0.0 = Scalp Methyl Mercury (Hg) 1631 4 C EFGS Samples were processed/sectioned in the Winterport field office Geographic coordinates provided on Core/Grab Log. Sop-5-17 Decon 0.0 = Scalp	0.1 - 0.3	W-MM-15 _ 080117 _	SED_01-03	1642	MeHg, Hg, TC	OC, OC	None	2 x 16 oz Plastic	Subsample	
0.3 - 0.5 W-MM-15 _ 080317 _SED_03-05 1256 Hg, TOC, OC None 2 x 8 oz Amber Glass Field Lab Homogenize and Subsample 0.5 - 1.0 W-MM-15 _ 080317 _SED_05-10 1258 Hg, TOC, OC None 2 x 8 oz Amber Glass Field Lab Homogenize and Subsample Sample Analysis Information Analyte Method Preservative Lab Sediment Core sampling was conducted according to the following SOPs included in the QAPP: SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, SOP-S-17 Decon 0.0 = Scalp Methyl Mercury (Hg) 1631 4 C EFGS Samples were processed/sectioned in the Winterport field office 0.0 = Scalp Total Organic Carbon (TOC) Lloyd-Kahn 4 C Alpha Geographic coordinates provided on Core/Grab Log. Geographic coordinates provided on Core/Grab Log. Field Lab Homogenize and Subsample								1 x 9 oz Blactic		
0.5 - 1.0 W-MM-15 _ 080317 _SED_05-10 1258 Hg, TOC, OC None 1 x 8 oz Plastic 2 x 8 oz Amber Glass and Subsample Sample Analysis Information Analyte Method Preservative Freeze Lab Sediment Core sampling was conducted according to the following SOPs included in the QAPP: SOP-5-6a Sediment Sampling, SOP-5-7 Soil Descriptions, SOP-5-17 Decon O.0 = Scalp Mercury (Hg) 1631 4 C EFGS Samples were processed/sectioned in the Winterport field office Geographic coordinates provided on Core/Grab Log. Sop-6-17 Decon	0.3 - 0.5	W-MM-15 _ 080317 _	SED_03-05	1256	Hg, TOC, (C	None		Field Lab Homogonizo	
0.5 - 1.0 W-MM-15 _ 080317 _SED_05-10 1258 Hg, TOC, OC None 2 x 8 oz Amber Glass Sample Analysis Information Analyte Method Preservative Lab Sediment Core sampling was conducted according to the following SOPs included in the QAPP: SOP-5-6a Sediment Sampling, SOP-S-7 Soil Descriptions, SOP-S-17 Decon Methyl Mercury (Hg) 1631 4 C EFGS Somples were processed/sectioned in the Winterport field office Geographic coordinates provided on Core/Grab Log.									0	
AnalyteMethodPreservativeLabSediment Core sampling was conducted according to the following SOPs included in the QAPP:Methyl Mercury (MeHg)1630FreezeEFGSSOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, SOP-S-17 DeconMercury (Hg)16314 CEFGS0.0 = ScalpTotal Organic Carbon (TOC)Lloyd-Kahn4 CAlphaGeographic coordinates provided on Core/Grab Log.	0.5 - 1.0	W-MM-15 _ 080317 _	SED_05-10	1258	Hg, TOC, C	C	None		and babbampie	
Methyl Mercury (MeHg)1630FreezeEFGSSOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, SOP-S-17 DeconMercury (Hg)16314 CEFGS0.0 = ScalpTotal Organic Carbon (TOC)Lloyd-Kahn4 CAlphaGeographic coordinates provided on Core/Grab Log.	Sample Analy	sis Information				Notes:				
Mercury (Hg) 1631 4 C EFGS Total Organic Carbon (TOC) Lloyd-Kahn 4 C Alpha		Analyte	Method	Preservative	Lab					
Mercury (Hg) 1631 4 C EFGS Samples were processed/sectioned in the Winterport field office Total Organic Carbon (TOC) Lloyd-Kahn 4 C Alpha Geographic coordinates provided on Core/Grab Log.	Methyl Mercu	ıry (MeHg)	1630	Freeze	EFGS					
Total Organic Carbon (TOC) Lloyd-Kahn 4 C Alpha Geographic coordinates provided on Core/Grab Log.	Mercury (Hg)		1631	4 C	EFGS		recorded (sectioned in the Minternet field	office		
	Total Organic	Carbon (TOC)	Lloyd-Kahn	4 C	Alpha			onice		
	Organic Conte	ent (OC)	D2974 Mod(550 C)	Ambient	Amec FW					

Technician Name: Lauren Tierney

QA/QC by:

Julie Pallozzi

Technician Signature:

QA/QC Date:

Penobscot River Mercury Study - Phase III Engineering Evaluation amed foste WETLAND SEDIMENT SAMPLE COLLECTION wheeld Project Name: USDC Penobscot River Location ID: W-MM-16 Project Number: 3616166052 WO: 4A-030 Wetland Core Collection Core Recovery Core Collection Team: DL, LT, BW Sleeve Length in Decimal Feet: 2.0 2.0 Core Collection Date: 08/01/2017 Collection Method: Slide Hammer Depth Cored in Decimal Feet: 1.5 1.5 Core Collection Time: 09:34 Liner Type: 3" D x 24" L Plastic **Recovered Core Length in Decimal Feet:** 0.9 1.13 Instant Freeze (Y/N): Yes Est. Volume: 47 oz/ft % Recovery (Recovered Core/Depth Cored): 60% 75% Test Pit Log Woody Debris (Y/N): No Test Pit Logger: BW **Digging Method:** Shooter Shovel Vegetation Type: Marsh grasses Test Pit Dimensions: 6" x 6" x 18" Approx. # Stems/ft²: 2000 Description color, grain size, odor, debris, roots, organisms, etc. Interval Dark gravish brown (10 YR 4/2), saturated, SILT with sand (5% fine sand), plasticity NA due to high density 0.0-0.6 roots. root size 0.002' Dark gray (10 YR 4/1), saturated, strong biological odor, SILT with sand (10% fine sand), medium density 0.6-1.2 hair like sized roots Water in hole bgs 0.35' Sample Collection Sample Collection Team: LT BW KB Sample Collection Date: 8/1/2017 and 8/3/2017 Sample Interval (ft.) Sample ID Sample Time **Requested Analyses Additional Volumes Collected** Container Homoginization 0.0 - 0.1 W-MM-16 080117 SED 00-01 1627 MeHg, Hg, TOC, OC None 1 x 16 oz Plastic Lab Homogenize and Subsample 0.1 - 0.3 W-MM-16 080117 SED_01-03 1629 2 x 16 oz Plastic MeHg, Hg, TOC, OC None 1 x 8 oz Plastic W-MM-16 _ 080317 _SED_03-05 0.3 - 0.5 1524 Hg, TOC, OC None 2 x 8 oz Amber Glass Field Lab Homogenize 1 x 8 oz Plastic and Subsample W-MM-16 080317 SED 05-10 0.5 - 1.0 1526 Hg, TOC, OC None 2 x 8 oz Amber Glass Sample Analysis Information Notes: Sediment Core sampling was conducted according to the following SOPs included in the QAPP: Analyte Method Lab Preservative SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, SOP-S-17 Decon Methyl Mercury (MeHg) 1630 EFGS Freeze 0.0 = ScalpEFGS Mercury (Hg) 1631 4 C Samples were processed/sectioned in the Winterport field office Total Organic Carbon (TOC) Lloyd-Kahn 4 C Alpha Geographic coordinates provided on Core/Grab Log. Organic Content (OC) D2974 Mod(550 C) Ambient Amec FW

Technician Name: Lauren Tierney

Technician Signature:

QA/QC by: Julie Pallozzi

QA/QC Date: ____ 10/6/2017

Page 1 of 1

amec foster

Penobscot River Mercury Study - Phase III Engineering Evaluation

WETLAND SEDIMENT SAMPLE COLLECTION

wheeler									
	Project Name: USDC Penobsco	ot River	_		: W-MM-17				
F	Project Number: <u>3616166052</u>		-		wo	: 4A-030 Wetland			
Core Collectio	on						Core	Recovery	
Cor	re Collection Team: FM, JP					Sleeve Length in Decimal Feet:	2.0	2.0	
Co	re Collection Date: 07/19/2017	Ca	ollection Method: S	lide Hammer		Depth Cored in Decimal Feet:	1.5	1.5	
	re Collection Time: 12:27		·· · _	" D x 24" L Plastic	R	ecovered Core Length in Decimal Feet:	1.05	1.2	
Ins	stant Freeze (Y/N): Yes		Est. Volume: 4	7 oz/ft	% Re	covery (Recovered Core/Depth Cored):	rered Core/Depth Cored): 70% 80%		
Test Pit Log Test Pit Logger: FM Digging Method: Shooter Shovel		vel	Woody Debris (Y/N): No Vegetation Type: Marsh grass, cat tails						
16	est Pit Dimensions: 6" x 6" x 18"	Ap Descri	prox. # Stems/ft ² : 1	440			// /	SAL EX	
Interval		color, grain size, odor, deb	-	atc					
interval						C. C. W. d			
0-1.2	Strong brown (7.5YR4/6), wet, slight organic odor, SILT with clay < 10%, no plastic, high density roots (0-0.4' about 15% soil 85% roots), roots range from hair like to 0.01' diameter, no organisms observed								
	Water depth 0.45' bgs					State of the second sec	and the second		
							2	A A STOR	
						1 All marchines		Strade in	
Sample Colle	ction								
•	le Collection Team: LT JP BW FM	I	San	nple Collection Date	: 7/25/17 an	d 7/26/17			
Sample				-					
Interval (ft.)	Sample	ID	Sample Time	Requested An	alyses	Additional Volumes Collected	Container	Homoginization	
0.0 - 0.1	W-MM-17 _ 072517 _	SED_00-01	1025	MeHg, Hg, TC	OC, OC	MS/MSD	1 x 16 oz Plastic	Lab Homogenize and	
0.1 - 0.3	W-MM-17 _ 072517 _	SED_01-03	1026	MeHg, Hg, TOC, OC		None	2 x 16 oz Plastic	Subsample	
0.3 - 0.5	W-MM-17 _ 072617 _	SED_03-05	1023	Hg, TOC, (C	MS/MSD, Triple Replicate	3 x 8 oz Plastic	Field Lab Homogenize	
0.5 - 1.0	W-MM-17 _ 072617 _	GED_05-10	1025	Hg, TOC, (C	None	3 x 8 oz Plastic	and Subsample	
	and a loof a man attain				Notes:				
Sample Analy	ysis information			vative Lab					
Sample Analy	Analyte	Method	Preservative	Lab	Sediment Co	ore sampling was conducted according to the fo		he QAPP:	
	, Analyte	Method 1630	Preservative Freeze	Lab EFGS	Sediment Co SOP-S-6a See	ore sampling was conducted according to the fo diment Sampling, SOP-S-7 Soil Descriptions, SO		he QAPP:	
	Analyte ury (MeHg)				Sediment Co SOP-S-6a Sec 0.0 = Scalp	diment Sampling, SOP-S-7 Soil Descriptions, SO	P-S-17 Decon	he QAPP:	
	Analyte ury (MeHg)	1630	Freeze	EFGS	Sediment Co SOP-S-6a Sec 0.0 = Scalp Samples wer		P-S-17 Decon	he QAPP:	

Technician Name: Julie Pallozzi

QA/QC by: Lauren Tierney

Technician Signature:

Penobscot River Mercury Study - Phase III Engineering Evaluation toste WETLAND SEDIMENT SAMPLE COLLECTION wheeld Project Name: USDC Penobscot River Location ID: W-MM-18 Project Number: 3616166052 WO: 4A-030 Wetland Core Collection Core Recovery Core Collection Team: FM, JP Sleeve Length in Decimal Feet: 2.0 2.0 Core Collection Date: 07/19/2017 1.5 1.5 Collection Method: Slide Hammer Depth Cored in Decimal Feet: Core Collection Time: 13:38 Liner Type: 3" D x 24" L Plastic 1.25 **Recovered Core Length in Decimal Feet** 1.4 Est. Volume: 47 oz/ft Instant Freeze (Y/N): Yes 93% 83% % Recovery (Recovered Core/Depth Cored): Test Pit Log Test Pit Logger: FM Woody Debris (Y/N): No W MM-18 Digging Method: Shooter Shovel Vegetation Type: Marsh grass -11-11-1 Test Pit Dimensions: 6" x 6" x 18" Approx. # Stems/ft²: 1440 Description Interval color, grain size, odor, debris, roots, organisms, etc. Strong brown (7.5YR5/8), wet, no odor, SILT 10-15%, high density root ,ass 90%, fine hair roots, 0-0.3 nonplastic, no organisms observed 0.3-1.1 Gray (7.5YR5/1) to dark brown (7.5YR3/3), wet, no odor, CLAY with silt 25%), low plasticity, medium density roots of hair like diameter, no organisms observed, heavy dead organic matter Water depth 0.7' bgs Sample Collection Sample Collection Team: LT JP BW FM Sample Collection Date: 7/25/2017 Sample Interval (ft.) Sample ID Sample Time **Requested Analyses Additional Volumes Collected** Container Homoginization 0.0 - 0.1 W-MM-18 _ 072517 _SED_00-01 0829 MeHg, Hg, TOC, OC None 1 x 16 oz Plastic Lab Homogenize and Subsample 0.1 - 0.3 W-MM-18 _ 072517 _SED_01-03 0830 MeHg, Hg, TOC, OC None 2 x 16 oz Plastic 1 x 8 oz Plastic 0.3 - 0.5 W-MM-18 072517 SED 03-05 1744 Hg, TOC, OC **Triple Replicate** 2 x 8 oz Amber Glass Field Lab Homogenize 1 x 8 oz Plastic and Subsample 0.5 - 1.0 W-MM-18 _ 072517 _SED_05-10 1746 Hg, TOC, OC None 2 x 8 oz Amber Glass Sample Analysis Information Notes: Method Sediment Core sampling was conducted according to the following SOPs included in the QAPP: Analyte Preservative Lab SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, SOP-S-17 Decon 1630 EFGS Methyl Mercury (MeHg) Freeze 0.0 = Scalp4 C EFGS Mercury (Hg) 1631 Samples were processed/sectioned in the Winterport field office Total Organic Carbon (TOC) Lloyd-Kahn 4 C Alpha Geographic coordinates provided on Core/Grab Log. Organic Content (OC) D2974 Mod(550 C) Ambient Amec FW Technician Name: Julie Pallozzi QA/QC by: Lauren Tierney

Technician Signature:

Q. Q.F. (5 Course)

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QA/QC Date:

Penobscot River Mercury Study - Phase III Engineering Evaluation oste WETLAND SEDIMENT SAMPLE COLLECTION wheele Project Name: USDC Penobscot River Location ID: W-MM-19 Project Number: 3616166052 WO: 4A-030 Wetland Core Collection Core Recovery 2.0 Core Collection Team: FM, JP Sleeve Length in Decimal Feet: 2.0 1.5 Core Collection Date: 07/19/2017 1.5 **Collection Method: Slide Hammer** Depth Cored in Decimal Feet: Core Collection Time: 16:50 Liner Type: 3" D x 24" L Plastic 1.5 **Recovered Core Length in Decimal Feet:** 1.2 Instant Freeze (Y/N): Yes Est. Volume: 47 oz/ft 80% 100% % Recovery (Recovered Core/Depth Cored): Test Pit Log Test Pit Logger: FM Woody Debris (Y/N): No W-MM-19 Digging Method: Shooter Shovel Vegetation Type: See photo 7/19/17 Test Pit Dimensions: 6" x 6" x 18" Approx. # Stems/ft²: 1440 Description Interval color, grain size, odor, debris, roots, organisms, etc. TO Dark brown (7.5YR3/2), moist, no odor, SILT with clay 30%, no plastic, high density roots of hair like 0-0.45 diameter, no observed organisms Strong brown (7.5YR5/6), moist, no odor, CLAY with silt < 10%, low plasticity, medium to high density 0.45-1.2 roots of hair like diameter, no organisms observed No water in hole Sample Collection Sample Collection Team: LT JP BW FM Sample Collection Date: 7/24/2017 and 7/25/17 Sample Interval (ft.) Sample ID Sample Time **Requested Analyses Additional Volumes Collected** Container Homoginization 0.0 - 0.1 W-MM-19 072417 SED 00-01 1817 MeHg, Hg, TOC, OC None 1 x 16 oz Plastic Lab Homogenize and Subsample 0.1 - 0.3 W-MM-19 _ 072417 _SED_01-03 1818 MeHg, Hg, TOC, OC None 2 x 16 oz Plastic 1 x 8 oz Plastic 0.3 - 0.5 W-MM-19 072517 SED 03-05 1650 Hg, TOC, OC None 2 x 8 oz Amber Glass Field Lab Homogenize 1 x 8 oz Plastic and Subsample 0.5 - 1.0 W-MM-19 072517 SED_05-10 Hg, TOC, OC 1652 **Triple Replicate** 2 x 8 oz Amber Glass Sample Analysis Information Notes: Method Sediment Core sampling was conducted according to the following SOPs included in the QAPP: Analyte Preservative Lab SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, SOP-S-17 Decon 1630 EFGS Methyl Mercury (MeHg) Freeze 0.0 = Scalp 4 C EFGS Mercury (Hg) 1631 Samples were processed/sectioned in the Winterport field office Total Organic Carbon (TOC) Lloyd-Kahn 4 C Alpha Geographic coordinates provided on Core/Grab Log. Organic Content (OC) D2974 Mod(550 C) Ambient Amec FW

Technician Name: Julie Pallozzi

QA/QC by:

Technician Signature:

QA/QC Date:

10/6/2017

Lauren Tierney

amed foster

Penobscot River Mercury Study - Phase III Engineering Evaluation

WETLAND SEDIMENT SAMPLE COLLECTION

wheeler							
	Project Name: USDC Penobso	cot River	_		Location ID: W-MM-20		
Pro	oject Number: <u>3616166052</u>		-		WO: 4A-030 Wetland, 4A-050 Biota Co-Loo	cated	
Core Collectio	on					Core R	ecovery
Core	Collection Team: FM JP				Sleeve Length in Decimal Feet	: 2.0	2.0
Core	Collection Date: 07/27/201	7 Co	ollection Method: S		Depth Cored in Decimal Feet	: 1.5	1.5
	Collection Time: 12:45			" D x 24" L Plastic	Recovered Core Length in Decimal Feet		1.1
Insta	ant Freeze (Y/N): Yes		Est. Volume: 4	7 oz/ft	% Recovery (Recovered Core/Depth Cored)	: 67%	73%
Test Pit Log						CONTRACTOR OF CONTRACT	
	Test Pit Logger: FM		ody Debris (Y/N): N			W-MM-20	
	Digging Method: Shooter Sho		Vegetation Type: S			- 7/22/17	
Test	t Pit Dimensions: 6" x 6" x 18	γ μ	prox. # Stems/ft ² : 3	.144		15 STR RECEMENT BERGER BARD	Thins Contraction
			ription		TAZE AND A		
Interval	Dark gray (10YR4/1), CLAY	color, grain size, odor, de			of heir like	* -++ a	
0-1.25	diameter to 0.65' then shar		and the second			NAME OF A DECK	A CONTRACTOR
0-1.25	observed	ip decrease to low density	, decomposed veget	ation, no inving organ		ALC: NO.	
	00301700				the second se	Carlos and the second	CARD ALC AN
	Water depth 0.4' bgs				ALC: ANTING ANTING	ALL REAL PROPERTY AND A RE	
	Water depth 0.4 bgs				ALCONTRACT OF ALCONTRACT	ALC: ANNI	
Sample Collec	ation						
•	Collection Team: LT BW KB		Sar	nple Collection Date	8/1/2017 8/3/2017		
Sample							
Interval (ft.)	Samp	ole ID	Sample Time	Requested An	alyses Additional Volumes Collected	Container	Homoginization
0.0 - 0.1	W-MM-20 _ 080117 _	_SED_00-01	1555	MeHg, Hg, TO	C, OC None	1 x 16 oz Plastic	Lab Homogenize and
0.1 - 0.3	W-MM-20 _ 080117 _	_SED_01-03	1557	MeHg, Hg, TO	C, OC None	2 x 16 oz Plastic	Subsample
0.3 - 0.5	W-MM-20 080317	SED 03-05	1326	Hg, TOC, C	DC MS/MSD	1 x 8 oz Plastic	
				<u>,</u>		2 x 8 oz Amber Glass	Field Lab Homogenize
0.5 - 1.0	W-MM-20 _ 080317 _	_SED_05-10	1328	Hg, TOC, C	OC None	1 x 8 oz Plastic 2 x 8 oz Amber Glass	and Subsample
Sample Analy	sis Information				Notes:		
	Analyte	Method	Preservative	Lab	Sediment Core sampling was conducted according to th	•	e QAPP:
Methyl Mercu		1630	Freeze	EFGS	SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, 0.0 = Scalp	SUP-S-17 Decon	
Mercury (Hg)		1631	4 C	EFGS	Samples were processed/sectioned in the Winterport fi	eld office	
-	Carbon (TOC)	Lloyd-Kahn	4 C	Alpha	Geographic coordinates provided on Core/Grab Log.	-	
Organia Canta	anic Content (OC) D2974 Mod		Ambient	Amec FW			

Technician Name: Julie Pallozzi

QA/QC by: Lauren Tierney

Technician Signature: $\bigcirc \widehat{Gr}_{\mathbf{k}} \mathcal{Q} \mathcal{Q} \mathcal{P}_{\mathcal{U}} \mathcal{R}^{*}$

QA/QC Date: 10/6/2017

Penobscot River Mercury Study - Phase III Engineering Evaluation ioste WETLAND SEDIMENT SAMPLE COLLECTION whitele Project Name: USDC Penobscot River Location ID: W-MM-21 Project Number: 3616166052 WO: 4A-030 Wetland Core Collection Core Recovery Core Collection Team: LT, BW Sleeve Length in Decimal Feet: 2.0 2.0 Core Collection Date: 07/27/2017 1.5 1.5 Collection Method: Slide Hammer Depth Cored in Decimal Feet: Core Collection Time: 12:25 Liner Type: 3" D x 24" L Plastic **Recovered Core Length in Decimal Feet:** 1.4 1.5 Est. Volume: 47 oz/ft Instant Freeze (Y/N): Yes 93% 100% % Recovery (Recovered Core/Depth Cored): Test Pit Log Test Pit Logger: BW Woody Debris (Y/N): No Vegetation Type: 90% Typha, 10% marsh grasses Digging Method: Shooter Shovel Test Pit Dimensions: 6" x 6" x 18" Approx. # Stems/ft²: 500 Description Interval color, grain size, odor, debris, roots, organisms, etc. Very dark brown (10 YR 3/2), saturated, SILT with sand (5% fine sand), plasticity NA due to high density 0.0-0.2 root mass, 0.05' typha roots and hairlike marsh grass roots 0.2-0.8 Dark gravish brown (10YR 4/2), black biological mottling, saturated, SILT with sand (10% fine sand), low plasticity, high density root mass, 0.05' typha roots and hairlike marsh grass roots Dark gray (10YR 4/1), saturated, biological odor, SILT with sand (15% fine sand), medium plasticity, high 0.8-1.3 density root mass, hair like sized roots Water in hole bgs 0.6' Sample Collection Sample Collection Team: LT BW KB Sample Collection Date: 8/1/2017 and 8/3/2017 Sample Sample ID **Requested Analyses** Additional Volumes Collected Container Homoginization Interval (ft.) Sample Time 0.0 - 0.1 W-MM-21 080117 SED_00-01 1354 MeHg, Hg, TOC, OC None 1 x 16 oz Plastic Lab Homogenize and Subsample 0.1 - 0.3 W-MM-21 080117 SED 01-03 1356 MeHg, Hg, TOC, OC None 2 x 16 oz Plastic 1 x 8 oz Plastic 0.3 - 0.5 W-MM-21 _ 080317 _SED_03-05 1442 Hg, TOC, OC None 2 x 8 oz Amber Glass Field Lab Homogenize 1 x 8 oz Plastic and Subsample 0.5 - 1.0 W-MM-21 080317 SED 05-10 1444 Hg, TOC, OC None 2 x 8 oz Amber Glass Sample Analysis Information Notes: Sediment Core sampling was conducted according to the following SOPs included in the QAPP: Analyte Method Preservative Lab SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, SOP-S-17 Decon Methyl Mercury (MeHg) 1630 Freeze EFGS 0.0 = Scalp 4 C EFGS Mercury (Hg) 1631 Samples were processed/sectioned in the Winterport field office Total Organic Carbon (TOC) Lloyd-Kahn 4 C Alpha Geographic coordinates provided on Core/Grab Log. Organic Content (OC) D2974 Mod(550 C) Ambient Amec FW

Technician Name: Lauren Tierney

Findlescharry Technician Signature:

QA/QC by:

QA/QC Date:

Julie Pallozzi

Penobscot River Mercury Study - Phase III Engineering Evaluation

WETLAND SEDIMENT SAMPLE COLLECTION

wheeler				EARD SEDIMENTS				
	Project Name: USDC Penobsco	ot River	_		Location ID: W-		_	
P	roject Number: <u>3616166052</u>		_		WO: 4A	-030 Wetland	-	
Core Collectio	on						Core R	ecovery
Core	e Collection Team: FM, JP					Sleeve Length in Decimal Feet:		2.0
Cor	re Collection Date: 07/19/2017	C	Collection Method: Slide Hammer			Depth Cored in Decimal Feet:	1.5	1.5
Cor	re Collection Time: 09:53		Liner Type: 3	" D x 24" L Plastic	Recov	vered Core Length in Decimal Feet:	1.25	1.4
Inst	stant Freeze (Y/N): Yes		Est. Volume: 4	7 oz/ft	% Recove	ry (Recovered Core/Depth Cored):	83%	93%
Test Pit Log					2 C	William and the second	Survey Longer Stretcher	JAKA STAN
	Test Pit Logger: FM	Wo	ody Debris (Y/N): N	lo	婚	WINN-	The second se	15 846
	Digging Method: Shooter Sho	vel	Vegetation Type: S	ee photo	2.0	2/10/13		IZ MARSA
Te	st Pit Dimensions: 6" x 6" x 18"		Approx. # Stems/ft ² : 1440			Version Annual Contraction		Contraction of the second
			iption			NE DAR		All MA TREES
Interval		color, grain size, odor, del				House and the second	Contraction of the state of the	State States
0-1.1	Strong brown (7.5YR4/6), we to 0.04' root diameter, no org		< 25%, low plasticity	/, high density root	mass, hair like			Carl Karl
	Water depth 0.6' bgs						1 - Cartha	ASTRONOM BALL
					*	Shi an	COLUMN STREET,	THE REAL PROPERTY OF
					-	A STATE AND A STATE OF	TO MAN A	TATION - Son
						CANING MAR	anna an	
Sample Colleg	ction						PERSONAL PROPERTY PERSONNAL PROPERTY AND	
Sample	e Collection Team: LT JP BW FM	1	Sar	nple Collection Date	e: 7/24/2017 and	7/25/17		
Sample								
Interval (ft.)	Sample	e ID	Sample Time	Requested A	nalyses	Additional Volumes Collected	Container	Homoginization
0.0 - 0.1	W-MM-22 _ 072417 _S	SED_00-01	1739	MeHg, Hg, T(DC, OC	None	1 x 16 oz Plastic	Lab Homogenize and
0.1 - 0.3	W-MM-22 _ 072417 _5	SED_01-03	1741	MeHg, Hg, T(DC, OC	None	2 x 16 oz Plastic	Subsample
0.3 - 0.5	W-MM-22 _ 072517 _5	GED_03-05	1437	Hg, TOC,	ос	None	1 x 8 oz Plastic 2 x 8 oz Amber Glass	Field Lab Homogenize
0.5 - 1.0	W-MM-22 _ 072517 _S	SED_05-10	1439	Hg, TOC,	ос	Triple Replicate	1 x 8 oz Plastic 2 x 8 oz Amber Glass	and Subsample
Sample Analy	ysis Information		· · · · · · · · · · · · · · · · · · ·		Notes:			
	Analyte	Method	Preservative	Lab		mpling was conducted according to the	-	e QAPP:
Methyl Mercu	ury (MeHg)	1630	Freeze	EFGS		nt Sampling, SOP-S-7 Soil Descriptions,	SOP-S-17 Decon	
Mercury (Hg)		1631	4 C	EFGS	0.0 = Scalp	ocessed/sectioned in the Winterport fie	ld office	
Total Organic	c Carbon (TOC)	Lloyd-Kahn	4 C	Alpha		linates provided on Core/Grab Log.		
1	al Organic Carbon (TOC) Lloyd-K anic Content (OC) D2974 Moc		Ge					

Technician Name: Julie Pallozzi

c) CA Watter

QA/QC by:

Lauren Tierney

Technician Signature:

QA/QC Date: 10/6/2017

amed foster

Penobscot River Mercury Study - Phase III Engineering Evaluation

WETLAND SEDIMENT SAMPLE COLLECTION

wheeler							
	Project Name: USDC Penobscot	River	_		Location ID: W-MM-23		
Pro	roject Number: <u>3616166052</u>		-		WO: 4A-030 Wetland		
Core Collectio	on					Core R	ecovery
Core	Collection Team: FM, JP				Sleeve Length in Decimal Feet:	2.0	2.0
Core	e Collection Date: 07/19/2017	C	ollection Method: S	lide Hammer	Depth Cored in Decimal Feet:	1.5	1.5
	e Collection Time: 09:01			" D x 24" L Plastic	Recovered Core Length in Decimal Feet:	1.45	1.5
Inst	tant Freeze (Y/N): Yes		Est. Volume: 4	7 oz/ft	% Recovery (Recovered Core/Depth Cored):	97%	100%
Test Pit Log						N 10 I I I I I I I I I I I I I I I I I I	
	Test Pit Logger: FM		ody Debris (Y/N): Y		- MI-M	M-23	WHO I
	Digging Method: Shooter Shove		Vegetation Type: S			117	
Tes	st Pit Dimensions: 6" x 6" x 18"		prox. # Stems/ft ² : 1	440			ALL OLAN
			ription		PLS OF SSER	X-A-A	
Interval		color, grain size, odor, de	bris, roots, organisms,	etc.	ALC: ALC: ALC: ALC: ALC: ALC: ALC: ALC:	and a state of the	Contraction of the second
0-1.35	Dark gray (7.5YR4/1), moist, n 0.85' diameter range from hai brown (7.5YR5/3) mottling fro	ry to 0.01', low density	fine roots down to b	10 C			Contraction of the second
	No water in hole				Contraction of the	Child and	
Sample Colleg	ction						
Sample	Collection Team: LT JP BW FM		Sar	nple Collection Date	7/24/2017 and 7/25/17		
Sample Interval (ft.)	Sample	ID	Sample Time	Requested An	alyses Additional Volumes Collected	Container	Homoginization
0.0 - 0.1	W-MM-23 _ 072417 _SE	D_00-01	1303	MeHg, Hg, TO	C, OC Triple Replicate	1 x 16 oz Plastic	
0.1 - 0.3	W-MM-23 _ 072417 _SE						Lab Homogenize and
		D_01-03	1305	MeHg, Hg, TO	C, OC None	2 x 16 oz Plastic	Lab Homogenize and Subsample
0.3 - 0.5	W-MM-23 _ 072517 _SE		1305 1522	MeHg, Hg, TO Hg, TOC, C	· · · · · · · · · · · · · · · · · · ·	2 x 16 oz Plastic 1 x 8 oz Plastic 2 x 8 oz Amber Glass	•
0.3 - 0.5		D_03-05		0. 0.	None	1 x 8 oz Plastic	Subsample
0.5 - 1.0	W-MM-23 _ 072517 _SE	D_03-05	1522	Hg, TOC, C	None None None Notes:	1 x 8 oz Plastic 2 x 8 oz Amber Glass 1 x 8 oz Plastic 2 x 8 oz Amber Glass	Subsample Field Lab Homogenize and Subsample
0.5 - 1.0	W-MM-23 072517 SE W-MM-23 072517 SE	D_03-05	1522	Hg, TOC, C	C None C None Notes: Sediment Core sampling was conducted according to the	1 x 8 oz Plastic 2 x 8 oz Amber Glass 1 x 8 oz Plastic 2 x 8 oz Amber Glass following SOPs included in the	Subsample Field Lab Homogenize and Subsample
0.5 - 1.0	W-MM-23 072517 _SE W-MM-23 072517 _SE w-MM-23 072517 _SE ysis Information Analyte	D_03-05	1522 1524	Hg, TOC, C	C None C None Notes: Sediment Core sampling was conducted according to the SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, S	1 x 8 oz Plastic 2 x 8 oz Amber Glass 1 x 8 oz Plastic 2 x 8 oz Amber Glass following SOPs included in the	Subsample Field Lab Homogenize and Subsample
0.5 - 1.0 Sample Analy	W-MM-23 072517 _SE W-MM-23 072517 _SE work 072517 _SE ysis Information Analyte ury (MeHg)	D_03-05 D_05-10 Method	1522 1524 Preservative	Hg, TOC, C Hg, TOC, C Lab	C None C None Notes: Sediment Core sampling was conducted according to the SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, S 0.0 = Scalp	1 x 8 oz Plastic 2 x 8 oz Amber Glass 1 x 8 oz Plastic 2 x 8 oz Amber Glass following SOPs included in the OP-S-17 Decon	Subsample Field Lab Homogenize and Subsample
0.5 - 1.0 Sample Analy Methyl Mercu Mercury (Hg)	W-MM-23 072517 _SE W-MM-23 072517 _SE work 072517 _SE ysis Information Analyte ury (MeHg)	D_03-05 D_05-10 Method 1630	1522 1524 Preservative Freeze	Hg, TOC, C Hg, TOC, C Lab EFGS	C None C None Notes: Sediment Core sampling was conducted according to the SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, S	1 x 8 oz Plastic 2 x 8 oz Amber Glass 1 x 8 oz Plastic 2 x 8 oz Amber Glass following SOPs included in the OP-S-17 Decon	Subsample Field Lab Homogenize and Subsample

Technician Name: Julie Pallozzi

QA/QC by: Lauren Tierney

Technician Signature: _____ $\overset{\bigcirc}{\smile} \overset{\bigtriangledown}{\bigtriangledown} \overset{\bigtriangledown}{\sim} \overset{\bigcirc}{\sim} \overset{\bigcirc}{\sim} \overset{\bigcirc}{\sim} \overset{\bigcirc}{\sim} \overset{\frown}{\sim} \overset{\bullet}{\sim} \overset{\circ}{\sim} \overset{\circ}{\sim}$

QA/QC Date: 10/6/2017

Penobscot River Mercury Study - Phase III Engineering Evaluation amec foster WETLAND SEDIMENT SAMPLE COLLECTION wheeld Project Name: USDC Penobscot River Location ID: W-MM-24 Project Number: 3616166052 WO: 4A-030 Wetland Core Collection Core Recovery Core Collection Team: FM, JP Sleeve Length in Decimal Feet: 2.0 2.0 Core Collection Date: 07/19/2017 **Collection Method: Slide Hammer** Depth Cored in Decimal Feet: 1.5 1.5 Core Collection Time: 07:49 Liner Type: 3" D x 24" L Plastic **Recovered Core Length in Decimal Feet:** 1.4 1.35 Instant Freeze (Y/N): Yes Est. Volume: 47 oz/ft 93% 90% % Recovery (Recovered Core/Depth Cored): Test Pit Log W-MAA-24 Woody Debris (Y/N): No Test Pit Logger: FM -11-11-2 Vegetation Type: See picture Digging Method: Shooter Shovel Test Pit Dimensions: 6" x 6" x 18" Approx. # Stems/ft²: 1440 Description Interval color, grain size, odor, debris, roots, organisms, etc. Dark grayish brown (10YR4/2), moist, no odor, CLAY with <10% silt, medium plasticity, medium density roots 0-1.45 from 0-0.8, very low density roots to end, no organisms observed, some decomposed organic matter No water in hole Sample Collection Sample Collection Team: LT JP BW FM Sample Collection Date: 7/24/2017 and 7/25/17 Sample Sample Time **Requested Analyses Additional Volumes Collected** Container Homoginization Interval (ft.) Sample ID 0.0 - 0.1 W-MM-24 072417 SED 00-01 1805 MeHg, Hg, TOC, OC None 1 x 16 oz Plastic Lab Homogenize and Subsample 0.1 - 0.3 W-MM-24 _ 072417 _SED_01-03 1806 MeHg, Hg, TOC, OC **Triple Replicate** 2 x 16 oz Plastic 1 x 8 oz Plastic 0.3 - 0.5 W-MM-24 072517 SED 03-05 1636 Hg, TOC, OC None 2 x 8 oz Amber Glass Field Lab Homogenize 1 x 8 oz Plastic and Subsample 0.5 - 1.0 W-MM-24 072517 SED 05-10 1638 Hg, TOC, OC None 2 x 8 oz Amber Glass Sample Analysis Information Notes: Sediment Core sampling was conducted according to the following SOPs included in the QAPP: Analyte Method Preservative Lab SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, SOP-S-17 Decon Methyl Mercury (MeHg) 1630 Freeze EFGS 0.0 = Scalp 1631 4 C EFGS Mercury (Hg) Samples were processed/sectioned in the Winterport field office Total Organic Carbon (TOC) 4 C Llovd-Kahn Alpha Geographic coordinates provided on Core/Grab Log. Organic Content (OC) D2974 Mod(550 C) Ambient Amec FW

Technician Name: Julie Pallozzi

QA/QC by:

Technician Signature:

S. Berceconner

QA/QC Date:

10/6/2017

Lauren Tierney

Penobscot River Mercury Study - Phase III Engineering Evaluation INTERTIDAL SEDIMENT SAMPLE COLLECTION wheek Project Name: USDC Penobscot River Location ID: W-14-INTA Project Number: 3616166052 WO: 4A-030 Wetland Core Collection Core Recovery Core Collection Team: KB, FM, LT Sleeve Length in Decimal Feet: 2.0 2.0 2.0 Core Collection Date: 07/17/2017 Collection Method: Push Corer Depth Cored in Decimal Feet: 1.5 1.5 1.5 Core Collection Time: 12:57 Liner Type: 3" D x 24" L Plastic **Recovered Core Length in Decimal Feet:** 0.61 0.85 0.49 Instant Freeze (Y/N): Yes Est. Volume: 47 oz/ft % Recovery (Recovered Core/Depth Cored): 41% 57% 33% Core Log Core Logger: FKM Woody Debris (Y/N): Yes Salinity of Water at Mudline: 0 PSU (o/00) ATMI-M- W atma utaint 2-17-17 Description Interval color, grain size, odor, debris, roots, organisms, etc. dark gray SILT with medium to coarse sand (<25%) near the surface (0-0.1), interlayered with thin seams of 0-0.4 fine wood chips between 0.1 and 0.4 ft depth interval, no odor, no plasticity, medium soft, no living organisms observed Distances in Contrast like salinity at surface 0 PSU, 0.0-0.3 competent, then break, no ludocline on cores Notes Sample Collection Sample Collection Team: JP LT FM BW Sample Collection Date: 7/25/17 and 7/26/17 Sample **Additional Volumes Collected** Homoginization Interval (ft.) Sample ID Sample Time **Requested Analyses** Container NA No lutocline sample NA NA NA NA Lab Homogenize W-14-INTA 072517 SED_00-01 0.0 - 0.1 1250 MeHg, Hg, TOC, OC None 1 x 16 oz Plastic and Subsample 0.1 - 0.3 W-14-INTA _ 072517 _SED_01-03 1251 MS/MSD 2 x 16 oz Plastic MeHg, Hg, TOC, OC 1 x 8 oz Plastic 0.3 - 0.5 W-14-INTA 072617 SED_03-05 0838 Hg, TOC, OC **Triple Replicate** Field Lab 2 x 8 oz Amber Glass Homogenize and 1 x 8 oz Plastic W-14-INTA _ 072617 _SED_05-10 0.5 - 1.0 0840 Hg, TOC, OC MS/MSD Subsample 2 x 8 oz Amber Glass Sample Analysis Information Notes: Sediment Core sampling was conducted according to the following SOPs included in the QAPP: Analyte Method Preservative Lab SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, SOP-S-17 Decon 1630 EFGS Methyl Mercury (MeHg) Freeze Interval 0.0 = Determined by light disappearance test Mercury (Hg) 1631 4 C EFGS Samples were processed/ sectioned in the Winterport field office. Total Organic Carbon (TOC) Lloyd-Kahn 4 C Alpha Geographic coordinates provided on Core/Grab log. Core collected for logging was only .4 ft. Core collected for sample was 1 ft. D2974 Mod(550 C) Organic Content (OC) Ambient Amec FW

Technician Name: Julie Pallozzi

QA/QC by: Lauren Tierney

Technician Signature: _____ $\partial^+ \sigma^{**}$

QA/QC Date: 10

Penobscot River Mercury Study - Phase III Engineering Evaluation INTERTIDAL SEDIMENT SAMPLE COLLECTION wheels Project Name: USDC Penobscot River Location ID: W-27-INTA Project Number: 3616166052 WO: 4A-030 Wetland Core Collection Core Recovery 2.0 Core Collection Team: FM, LT, KB Sleeve Length in Decimal Feet: 2.0 2.0 Core Collection Date: 07/20/2017 Collection Method: Push Corer Depth Cored in Decimal Feet: 1.5 1.5 1.5 Core Collection Time: 08:51 Liner Type: 3" D x 24" L Plastic **Recovered Core Length in Decimal Feet:** 0.77 0.98 1.13 Instant Freeze (Y/N): Yes Est. Volume: 47 oz/ft % Recovery (Recovered Core/Depth Cored): 51% 65% 75% Core Log Core Logger: FKM Woody Debris (Y/N): No W-ZP-INTA Salinity of Water at Mudline: 20 PSU (o/00) 7-20-17 Description Interval color, grain size, odor, debris, roots, organisms, etc. very dark brown (7.5YR 2.5/2) CLAY with some silt (10%) with a shade of black at 0-0.7 0.1 to 0.25 ft. depth interval. 3 small clams observed, slight odor, low plasticity, soft, no wood chips observed Surface salinity = 10 PSU, water depth of 5.5', just passed high tide, falling Notes Sample Collection Sample Collection Team: LT JP BW FM Sample Collection Date: 7/24/2017 and 7/25/17 Sample Additional Volumes Collected Homoginization Interval (ft.) Sample ID Sample Time **Requested Analyses** Container NA No Lutocline Sample NA NA NA NA Lab Homogenize W-27-INTA 072417 SED_00-01 0.0 - 0.1 1619 MeHg, Hg, TOC, OC MS/MSD 1 x 16 oz Plastic and Subsample W-27-INTA 072417 _SED_01-03 0.1 - 0.3 MeHg, Hg, TOC, OC 2 x 16 oz Plastic 1620 None 1 x 8 oz Plastic 0.3 - 0.5 W-27-INTA 072517 SED_03-05 1423 Hg, TOC, OC Field Lab None 2 x 8 oz Amber Glass Homogenize and 1 x 8 oz Plastic W-27-INTA _ 072517 _SED_05-10 0.5 - 1.0 1426 Hg, TOC, OC None Subsample 2 x 8 oz Amber Glass Sample Analysis Information Notes: Sediment Core sampling was conducted according to the following SOPs included in the QAPP: Analyte Method Preservative Lab SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, SOP-S-17 Decon 1630 EFGS Methyl Mercury (MeHg) Freeze Interval 0.0 = Determined by light disappearance test Mercury (Hg) 1631 4 C EFGS Samples were processed/ sectioned in the Winterport field office. Total Organic Carbon (TOC) Lloyd-Kahn 4 C Alpha Geographic coordinates provided on Core/Grab log. Core collected for logging was only .7 ft. Core collected for sample was 1 ft. D2974 Mod(550 C) Ambient Amec FW Organic Content (OC)

Technician Name: Lauren Tierney

- The second second of Technician Signature:

Julie Pallozzi QA/QC by:

QA/QC Date:

ames Hoster Whiteolor				ver Mercury Study - P /ETLAND SEDIMENT S/	Phase III Engineering Evaluation AMPLE COLLECTION		
	oject Name: USDC Penobsco ect Number: 3616166052	t River	-		Location ID: W-102-A WO: 4A-030 Wetland		
Proje	S010100032		-		4A-050 Wetland		
Core Collectio					-		ecovery
	ollection Team: DL, LT				Sleeve Length in Decimal Feet:	2.0	2.0
	ollection Date: 08/03/2017 ollection Time: 10:17	Co	liner Type:	Blide Hammer 3" D x 24" L Plastic	Depth Cored in Decimal Feet: Recovered Core Length in Decimal Feet:	<u>1.5</u> 0.97	1.5 0.87
	t Freeze (Y/N): Yes		Est. Volume: 4		% Recovery (Recovered Core/Depth Cored):	65%	58%
Test Pit Log						A DECOLORY	N. DAR TREAS
-	Test Pit Logger: LT	Wo	ody Debris (Y/N): \	/es	Contraction of the American Street	2 parents (Mana Constra
Di	gging Method: Shooter Show			Typha and marsh grass	ses 144-10	7-14	NNS 235
Test P	Pit Dimensions: 6" x 6" x 18"		prox. # Stems/ft ² : 1	1500		e	HMA 国际空
Internel			ription		7dr		- MUX-BAR
Interval	Dark brown (10 YR 3/3), sa	color, grain size, odor, de turated, SILT with sand (root mass,	•	
0.0-1.3	roots sized 0.01' until 0.55'	, then hair sized. Alterna	ating layers of 90%	woodchips, bands fro	m 0.85-0.9',	in the second second	- ANTONE
	0.95-1.5'					1000	SHARE MADE
	Water in hole bgs 0.4'				A STATE OF	Walter Walt	一个国际保护
							ALL
							and a state of the
Sample Collect	tion						A CONTRACTOR OF THE OWNER OWNER OF THE OWNER
Sample Co	ollection Team: KCB, BPW		Sai	mple Collection Date:	8/15/15 and 8/17/17		
Sample						a	
Interval (ft.)	Sampl	eID	Sample Time	Requested Ana	Ilyses Additional Volumes Collected	Container	Homoginization
0.0 - 0.1	W-102-A _ 081517 _S	ED_00-01	1435	MeHg, Hg, TOO	C, OC None	2 x 8 oz Plastic	Lab Homogenize and
01.03	W 102 A 081517 C	ED 01 02	1427		C.O.C. None	2 x 16 oz Plastic	Subsample
0.1 - 0.3	W-102-A _ 081517 _S	ED_01-03	1437	MeHg, Hg, TOO	C, OC None	2 x 16 oz Plastic	
0.3 - 0.5	W-102-A _ 081717 _S	ED_03-05	1757	Hg, TOC, O	C None	3 x 4 oz Plastic	Field Lab Homogenize
0.5 - 1.0	W-102-A _ 081717 _S	ED_05-10	1800	Hg, TOC, O	C None	3 x 4 oz Plastic	and Subsample
Sample Analys	sis Information		1		Notes:		1
	Analyte	Method	Preservative	Lab	Sediment Core sampling was conducted according to the		ne QAPP:
Methyl Mercu	ıry (MeHg)	1630	Freeze	EFGS	SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, S	OP-S-17 Decon	
Mercury (Hg)		1631	4 C	EFGS	0.0 = Scalp Samples were processed/sectioned in the Winterport field	loffice	
Total Organic		Lloyd-Kahn	4 C	Alpha	Geographic coordinates provided on Core/Grab Log.		
Organic Conte	ent (OC)	D2974 Mod(550 C)	Ambient	Amec FW			

Technician Signature: ______

QA/QC Date:

QA/QC by:

10/6/2017

Julie Pallozzi

amec foster wheeler				liver Mercury Study - F NETLAND SEDIMENT S	-	-		
	oject Name: USDC Penobs	cot River	-		Location ID:			
Proje	ect Number: 3616166052				wo	4A-030 Wetland		
Core Collectio	n						Core R	ecovery
	llection Team: DL, LT					Sleeve Length in Decimal Feet:	2.0	2.0
	ollection Date: 08/03/201	7 Co	llection Method:		_	Depth Cored in Decimal Feet:	1.5	1.5
	ollection Time: 09:45			3" D x 24" L Plastic	-	ecovered Core Length in Decimal Feet:	1.1	0.9
	t Freeze (Y/N): Yes		Est. Volume:	47 oz/ft	% Rec	covery (Recovered Core/Depth Cored):	73%	60%
Test Pit Log						Burner Said - Real X and	HALFTY Emerter Tenantes	
	est Pit Logger: LT		ody Debris (Y/N):		-	W-102-	P.	
	gging Method: Shooter Sh			Marsh grasses and 209	<u>%</u> typha	the Olaha	- 1. S. S. P.	IN IN
Test P	it Dimensions: 6" x 6" x 18		rox. # Stems/ft ² :	2000		a/Lina		IN NORTH
Internel			ription			THE THE		
Interval	Dark brown (10YB 3/3) s	color, grain size, odor, de aturated, SILT with sand (1	0% fine sand) pla	is, etc. sticity NA due to high	density root		and a	CHARACTER .
0.0-0.35	mass (0.01' sized) and wo			strong in radie to mgin		and the second	The second of the	The second second
		(10YR 3/2), saturated, SILT	with sand (5% fin	e sand), plasticity NA c	due to high		ALL PROPERTY.	(国际)合适合 日息
0.35-0.65	density root mass (0.01' to hair like) and woodchips, large wood piece, 0.3' long at 0.6', ler					- del	1 A 1	
0.65-1.2	Dark gray (10YR 4/1), sat	urated, SILT with sand (5%	fine sand), non pl	astic, low density root	mass, hair	And a state of the		
0.05-1.2	like roots, lenses of 90%	woodchips at 0.7', 0.9', 1'				- 10 M 10 M	1 2 2 2	CALL STOR
						All and a second second		a la martin
								E A third
						A DECEMBER OF A	TO POL IN CONTRACTO	THE R. LANS
Sample Collect	tion							
Sample Co	llection Team: KCB,BPW		Sa	mple Collection Date:	8/15/17 an	d 8/17/17		
Sample								
Interval (ft.)	Sam	ple ID	Sample Time	Requested Ana	alyses	Additional Volumes Collected	Container	Homoginization
0.0 - 0.1	W-102-B _ 081517 _	_SED_00-01	1423	MeHg, Hg, TO	C, OC	None	2 x 8 oz Plastic	Lab Homogenize and
0.1 - 0.3	W-102-B _ 081517 _	_SED_01-03	1425	MeHg, Hg, TO	C, OC	None	2 x 16 oz Plastic	Subsample
0.3 - 0.5	W-102-B _ 081717 _	_SED_03-05	1744	Hg, TOC, O	C	None	3 x 4 oz Plastic	Field Lab Homogenize
0.5 - 1.0	W-102-B _ 081717 _	_SED_05-10	1747	Hg, TOC, O	C	None	3 x 4 oz Plastic	and Subsample
Sample Analys	sis Information				Notes:			
	Analyte	Method	Preservative	Lab		re sampling was conducted according to the f		QAPP:
Methyl Mercu	ry (MeHg)	1630	Freeze	EFGS	SOP-S-6a Sed 0.0 = Scalp	liment Sampling, SOP-S-7 Soil Descriptions, SC	PP-S-17 Decon	
Mercury (Hg)		1631	4 C	EFGS		e processed/sectioned in the Winterport field	office.	
Total Organic		Lloyd-Kahn	4 C	Alpha	Samples were processed/sectioned in the winterport field office. Geographic coordinates provided on Core/Grab Log.			
Organic Conte	nt (OC)	D2974 Mod(550 C)	Ambient	Amec FW				

Technician Signature:

QA/QC by: _____ Julie Pallozzi

QA/QC Date: 10/6/2017

amec			Penobscot Ri	iver Mercury Study - P	hase III Engineering Evaluation		
foster wheeler			v	VETLAND SEDIMENT S	AMPLE COLLECTION		
Pro	oject Name: USDC Penobsco	ot River	_		Location ID: W-102-C		
Proje	ect Number: 3616166052		-		WO: 4A-030 Wetland		
Core Collectio					Clasure Loweth in Desired Foot		Recovery
	ollection Team: DL, LT collection Date: 08/03/2017		llection Method:	Slide Hammer	Sleeve Length in Decimal Feet: Depth Cored in Decimal Feet:	2.0	2.0
	ollection Time: 09:24	0	-	3" D x 24" L Plastic	Recovered Core Length in Decimal Feet:	1.25	0.6
	t Freeze (Y/N): Yes		Est. Volume:		% Recovery (Recovered Core/Depth Cored):	83%	40%
Test Pit Log						Presidence - Balalager a.	100000000000000000000000000000000000000
-	Fest Pit Logger: LT	Wo	ody Debris (Y/N):	Yes		Acra 14	
	igging Method: Shooter Shov		Vegetation Type:		- 8/3/17		
Test P	Pit Dimensions: 6" x 6" x 18"	Apr	prox. # Stems/ft ² :	1000	all and		Stall 1
		Desc	ription		And Make	A	
Interval		color, grain size, odor, de				A Constant	ALL /
0.0-0.65	Dark grayish brown (10YR		0,	ILT with sand (10% fine	e sand),	SER AL	A - All
	plasticity NA due to high de Dark yellowish brown (10 Y			fine sand (90% woodc	hins 10%	ACCENT OF A STREET	Mass Art
0.65-1.2	silt and fine sand), no plast						A DESCRIPTION
	Water in hole bgs 0.6'	, , , , , , , , , , , , , , , , , , ,			and the second se	ALC: NOT REAL	
						Star & La	
					A CONTRACTOR OF THE OWNER	COLUMN TWO IS NOT	ALC IN
						De la compañía de la comp	
Sample Collec	tion						
· · · · · · · · · · · · · · · · · · ·	ollection Team: KCB,BPW		Sa	mple Collection Date:	8/15/15 and 8/17/17		-
Sample							
Interval (ft.)	Sampl	le ID	Sample Time	Requested Ana	lyses Additional Volumes Collected	Container	Homoginization
0.0 - 0.1	W-102-C _ 081517 _S	ED_00-01	1535	MeHg, Hg, TO	C, OC MS/MSD	2 x 8 oz Plastic	Lab Homogenize and
0.1 - 0.3	W-102-C _ 081517 _S	ED_01-03	1537	MeHg, Hg, TO	C, OC MS/MSD	2 x 16 oz Plastic	Subsample
0.3 - 0.5	W-102-C _ 081717 _S	ED_03-05	1830	Hg, TOC, O	C MS/MSD	3 x 4 oz Plastic	Field Lab Homogenize
0.5 - 1.0	W-102-C _ 081717 _S	ED_05-10	1832	Hg, TOC, O	C MS/MSD	3 x 4 oz Plastic	and Subsample
Sample Analy	sis Information		·		Notes:		•
	Analyte	Method	Preservative	Lab	Sediment Core sampling was conducted according to the	-	ne QAPP:
Methyl Mercu	ıry (MeHg)	1630	Freeze	EFGS	SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, S	OP-S-17 Decon	
Mercury (Hg)		1631	4 C	EFGS	0.0 = Scalp Samples were processed/sectioned in the Winterport field	d office.	
Total Organic		Lloyd-Kahn	4 C	Alpha	Geographic coordinates provided on Core/Grab Log.		
Organic Conte	ent (OC)	D2974 Mod(550 C)	Ambient	Amec FW			

Technician Signature:

QA/QC by:

QA/QC Date:

Julie Pallozzi

10/6/2017

Page 1 of 1

Penobscot River Mercury Study - Phase III Engineering Evaluation foste WETLAND SEDIMENT SAMPLE COLLECTION wheeler Project Name: USDC Penobscot River Location ID: W-103-B Project Number: 3616166052 WO: 4A-030 Wetland Core Collection Core Recovery Core Collection Team: KB, FM, LT Sleeve Length in Decimal Feet: 2.0 2.0 Core Collection Date: 07/17/2017 1.5 1.5 Collection Method: Slide Hammer Depth Cored in Decimal Feet: Core Collection Time: 11:20 Liner Type: 3" D x 24" L Plastic 1.25 1.35 **Recovered Core Length in Decimal Feet:** Instant Freeze (Y/N): Yes Est. Volume: 47 oz/ft 83% 90% % Recovery (Recovered Core/Depth Cored): Test Pit Log Test Pit Logger: FM Woody Debris (Y/N): No Vegetation Type: Typha (10%), anglafolia, carex sp. (Digging Method: Shooter Shovel 10-102.10 Test Pit Dimensions: 6" x 6" x 18" Approx. # Stems/ft²: 1500 a lister Description Interval color, grain size, odor, debris, roots, organisms, etc. Dark reddish brown (5YR 3/4), very moist, SILT, dead organic matter with low to high density roots 0.0-0.6 (>40%), from high size to 0.01' diameter, non plastic Dark gray (7.5YR 4/1), very moist, SILT with clay (20% clay), very low plasticity, low density roots, from 0.6-1.35 high size to 0.01' diameter No water in hole Sample Collection Sample Collection Date: 7/24/2017 and 7/25/17 Sample Collection Team: LT JP BW FM Sample Interval (ft.) Sample ID Sample Time **Requested Analyses** Additional Volumes Collected Container Homoginization 0.0 - 0.1 W-103-B 072417 SED 00-01 1247 MeHg, Hg, TOC, OC **Triple Replicate** 1 x 16 oz Plastic Lab Homogenize and Subsample 0.1 - 0.3 W-103-B 072417 SED_01-03 1250 MeHg, Hg, TOC, OC None 2 x 16 oz Plastic 1 x 8 oz Plastic 0.3 - 0.5 W-103-B 072517 SED 03-05 1536 Hg, TOC, OC None Field Lab Homogenize 2 x 8 oz Amber Glass 1 x 8 oz Plastic and Subsample 0.5 - 1.0 W-103-B _ 072517 _SED_05-10 1538 Hg, TOC, OC None 2 x 8 oz Amber Glass Sample Analysis Information Notes: Analyte Method Preservative Lab Sediment Core sampling was conducted according to the following SOPs included in the QAPP: SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, SOP-S-17 Decon Methyl Mercury (MeHg) 1630 Freeze EFGS 0.0 = Scalp 1631 Mercury (Hg) 4 C EFGS Samples were processed/sectioned in the Winterport field office Total Organic Carbon (TOC) Lloyd-Kahn 4 C Alpha Geographic coordinates provided on Core/Grab Log. Organic Content (OC) D2974 Mod(550 C) Ambient Amec FW

Technician Name: Julie Pallozzi

QA/QC by: Lauren Tierney

Technician Signature: $\partial^{-\zeta^{2} \epsilon_{s} \nu^{s} \zeta^{\prime} \nu^{s} \sigma \sigma \sigma^{s}}$

QA/QC Date:

amec foster wheeler				iver Mercury Study - P /ETLAND SEDIMENT S.			
	roject Name: USDC Penobs ect Number: 3616166052	cot River	-		Location ID: W-108-A WO: 4A-030 Wetland	_	
1105	<u></u>		_		WO. <u>44 050 Wetland</u>	_	
Core Collectio							ecovery
	ollection Team: BW, LT				Sleeve Length in Decimal Feet		2.0
	Collection Date: 08/02/201	7 Co	ollection Method:		Depth Cored in Decimal Feet		1.5
	Collection Time: 15:18 nt Freeze (Y/N): Yes		Est. Volume: 4	3" D x 24" L Plastic	Recovered Core Length in Decimal Feet % Recovery (Recovered Core/Depth Cored		1.45 97%
Test Pit Log	it fleeze (f/N). Tes		Est. volume. 2	+7 02/10	% Recovery (Recovered Core/Depth Cored)	. 90%	97%
-	Test Pit Logger: BW	Wo	ody Debris (Y/N): 1	No		1.	A Contraction
	igging Method: Shooter Sh		Vegetation Type:			108-A	1 Al S
	Pit Dimensions: 6" x 6" x 18		prox. # Stems/ft ² : 2	· · ·		3/2/1	
			ription		A CONTRACTOR OF A CONTRACTOR		
Interval		color, grain size, odor, de	ebris, roots, organisms	s, etc.	TITZ- ALCONING		The state
0.0-0.35	Very dark grayish brown root mass, root size 0.03	(10YR 3/2),wet, SILT with sa	and (5% fine sand), I	medium plasticity, hig	n density		Cave S
0.35-0.8	Dark gray (10YR 4/1), we 0.02'	t, sandy SILT (25% fine sand), low plasticity, hig	h density root mass, ro	pot size		
0.8-1.1	Very dark grayish brown root mass, root size 0.02	(10YR 3/2), wet, sandy SILT	(30% poorly graded	sand), low plasticity,	high density		
						-	
Sample Collec							
	ollection Team: KCB,BPW		Sa	mple Collection Date:	8/15/17 and 8/17/17		
Sample Interval (ft.)	Sam	nple ID	Sample Time	Requested Ana	lyses Additional Volumes Collected	Container	Homoginization
0.0 - 0.1	W-108-A _ 81517	_SED_00-01	1350	MeHg, Hg, TO	C, OC None	2 x 8 oz Plastic	Lab Homogenize and
0.1 - 0.3	W-108-A _ 81517	_SED_01-03	1351	MeHg, Hg, TO	C, OC None	2 x 16 oz Plastic	Subsample
0.3 - 0.5	W-108-A _ 81717	_SED_03-05	1735	Hg, TOC, O	C None	3 x 4 oz Plastic	Field Lab Homogenize
0.5 - 1.0	W-108-A _ 81717	_SED_05-10	1738	Hg, TOC, O	C None	3 x 4 oz Plastic	and Subsample
Sample Analys	sis Information				Notes:		
	Analyte	Method	Preservative	Lab	Sediment Core sampling was conducted according to the	-	QAPP:
Methyl Mercu	ry (MeHg)	1630	Freeze	EFGS	SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, 0.0 = Scalp	SOP-S-17 Decon	
Mercury (Hg)		1631	4 C	EFGS	Samples were processed/sectioned in the Winterport fie	ld office with windows closed.	
Total Organic		Lloyd-Kahn	4 C	Alpha	Geographic coordinates provided on Core/Grab Log.		
Organic Conte	ent (OC)	D2974 Mod(550 C)	Ambient	Amec FW	-		

QA/QC by:

Technician Signature:

QA/QC Date:

10/6/2017

Julie Pallozzi

amec

Switz

Penobscot River Mercury Study - Phase III Engineering Evaluation

WETLAND SEDIMENT SAMPLE COLLECTION

wheeler			VVE	TLAND SEDIMENT 3/					
	Project Name: USDC Penobsco	ot River	_		Location ID: W-MM-05				
Pr	oject Number: 3616166052		_		WO: 4A-030 Wetland				
Core Collectio	n					Core B	ecovery		
	Collection Team: KCB FKM				Sleeve Length in Decimal Feet:	2.0	2.0		
Core	Collection Date: 07/13/2017	Co	ollection Method: S	ilide Hammer	Depth Cored in Decimal Feet:	1.5	1.5		
Core	Collection Time: 16:58	<u> </u>	Liner Type: 3" D x 24" L Plastic		Recovered Core Length in Decimal Feet:	1.45	1.1		
Inst	ant Freeze (Y/N): Yes		Est. Volume: 4	17 oz/ft	% Recovery (Recovered Core/Depth Cored):	97%	73%		
Test Pit Log					and all a second and a second		and the second		
	Test Pit Logger: FKM	Wo	ody Debris (Y/N): N	No			TO A MARKED		
	Digging Method: Shooter Sho	vel	Vegetation Type: T	Typha angustafolia			WA PARA		
Tes	t Pit Dimensions: 6" x 6" x 18"	Ар	prox. # Stems/ft ² : 1	15			All and the second		
			ription			and the state			
Interval		color, grain size, odor, de	bris, roots, organisms,	etc.	CS NILL STREET	- The State of the State	Aller and		
0.00-0.15			v plasticity, soft		No the second se	- Fairly Districts	And Brown		
0.15-1.2	10YR4/1 dark grey. Clay with organic matter fine ha		y roots. Soft mediun	n plasticity	AND	the state of the state	1 Million and		
						Local Providence of the	1 . N. 18		
					·····································	the The second			
					and the second s	二十 八 四	and the second		
					and the second second	A Property in the	10 -10 -10		
Sample Collec	ction								
· · · · ·	Collection Team: BW, JP		Sai	mple Collection Date	7/18/17 and 7/19/17				
Sample									
Interval (ft.)	Sampl	e ID	Sample Time	Requested Ana	alyses Additional Volumes Collected	Container	Homoginization		
0.0 - 0.1	W-MM-05 _ 071817 _	SED_00-01	15:47	MeHg, Hg, TO	C, OC None	1 x 16 oz Plastic	Lab Homogenize and		
							Subsample		
0.1 - 0.3	W-MM-05 _ 071817 _	SED_01-03	15:48	MeHg, Hg, TO	C, OC None	2 x 16 oz Plastic			
0.3 - 0.5	W-MM-05 071917		12:18	Hg, TOC, C	OC None	1 x 8 oz Plastic			
0.3 - 0.5		3LD_03-03	12.10	ng, 100, 0	None	2 x 8 oz Amber Glass	Field Lab Homogenize		
0.5 - 1.0	W-MM-05 071917	SED 05-10	12:22	Hg, TOC, C	DC None	1 x 8 oz Plastic	and Subsample		
		JED_03 10	12.22	ng, 100, 0	None	2 x 8 oz Amber Glass			
Sample Analy	sis Information				Notes:				
	Analyte	Method	Preservative	Lab	Sediment Core sampling was conducted according to the	-	e QAPP:		
Methyl Mercu	ıry (MeHg)	1630	Freeze	EFGS	SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, S 0.0 = Scalp	SUP-S-17 Decon			
Mercury (Hg)		1631	4 C	EFGS	Samples were processed/sectioned in the Winterport fie	ld office			
Total Organic	, ,	Lloyd-Kahn	4 C	Alpha	Geographic coordinates provided on Core/Grab Log.				
Organic Conte	ent (OC)	D2974 Mod(550 C)	Ambient	Amec FW					

Technician Name: Julie Pallozzi

QA/QC by:

Lauren Tierney

Technician Signature:

C) Gladenser

QA/QC Date:

amec foster wheeler				ver Mercury Study - F FERTIDAL SEDIMENT	-	-		
	oject Name: USDC Penobsc ect Number: 3616166052	ot River	-		Location ID: WO:	OR-01-01 4A-030 Wetland		
Core C Core C	on ollection Team: FM, KB, BW collection Date: 07/20/2017 ollection Time: 07:32 of Freeze (Y/N): Yes		llection Method: Liner Type: 3 Est. Volume: 4	3" D x 24" L Plastic	-	Sleeve Length in Decimal Feet: Depth Cored in Decimal Feet: covered Core Length in Decimal Feet: overy (Recovered Core/Depth Cored):	Core Recover 2.0 2.0 1.5 1.5 0.86 0.85 57% 57%	y 2.0 1.5 1.4 93%
Core Log	Core Logger: <u>FKM</u>	Salinity of W	ody Debris (Y/N):		PSU (o/00)		1	
Interval		Desc color, grain size, odor, de	ription ebris, roots, organism:	s, etc.		1.35'	A PARTY AND	
0-1.35	very dark brown (7.5YR 2. interval, fine wood chips o observed, strong odor, m	dispersed between 0.4 an				TOP		
Notes Sample Collec	Salinity at surface 7 PSU, 1	Water depth 5'					ana an in	
	ollection Team: LT JP BW FN	Λ	Sai	mple Collection Date:	7/24/2017 a	and 7/25/17		
Sample Interval (ft.)	Samp	ole ID	Sample Time	Requested Ana	alyses	Additional Volumes Collected	Container	Homoginization
NA	No Lutocli	ne Sample	NA	NA		NA	NA	
0.0 - 0.1	OR-01-01 _ 072417 _	SED_00-01	1752	MeHg, Hg, TO	C, OC	MS/MSD, Triple Replicate	1 x 16 oz Plastic	Lab Homogenize and Subsample
0.1 - 0.3	OR-01-01 _ 072417 _	SED_01-03	1753	MeHg, Hg, TO	C, OC	Triple Replicate	2 x 16 oz Plastic	
0.3 - 0.5	OR-01-01 _ 072517 _	SED_03-05	1504	Hg, TOC, O	C	None	1 x 8 oz Plastic 2 x 8 oz Amber Glass	Field Lab Homogenize and
0.5 - 1.0	OR-01-01 _ 072517 _	SED_05-10	1506	Hg, TOC, C	C	None	1 x 8 oz Plastic 2 x 8 oz Amber Glass	Subsample
Methyl Mercu Mercury (Hg)	Carbon (TOC)	Method 1630 1631 Lloyd-Kahn D2974 Mod(550 C)	Preservative Freeze 4 C 4 C Ambient	Lab EFGS EFGS Alpha Amec FW	SOP-S-6a Sed Interval 0.0 = Samples were	e sampling was conducted according to the f iment Sampling, SOP-S-7 Soil Descriptions, SO Determined by light disappearance test e processed/ sectioned in the Winterport fiel oordinates provided on Core/Grab log.	DP-S-17 Decon	

Technician Name: Julie Pallozzi

QA/QC by: Lauren Tierney

Technician Signature:

c) (Preacostra

QA/QC Date: 10/6/2017

amer		Penobscot Riv	ver Mercury Study -	- Phase III Engin	eering Evaluation		
foster wheeler		INT	ERTIDAL SEDIMENT	T SAMPLE COLLI	ECTION		
Pro	oject Name: USDC Penobscot River			Location ID:			
Proje	ect Number: <u>3616166052</u>			WO: <u>4</u>	4A-030 Wetland		
Core Collection	n					Core Recov	ery
	ellection Team: FM, LT, BW, KB, JP				Sleeve Length in Decimal Feet:	2.0 2.0	2.0
	ollection Date: 07/20/2017	Collection Method: P			Depth Cored in Decimal Feet:	1.5 1.5	1.5
	ollection Time: 08:04		" D x 24" L Plastic		covered Core Length in Decimal Feet:	1.08 1.08 72% 72%	1.09
	t Freeze (Y/N): Yes	Est. Volume: 4	/ 02/10	% Reco	very (Recovered Core/Depth Cored):	12% 12%	/3%
Core Log		Maadu Dahria (V/NI), N			Special State Court & Section	ALL at a passion	1
	Core Logger: FKM	Woody Debris (Y/N): <u>N</u> ity of Water at Mudline: 2		DCU (= (00)	gaute and the		
	Salli		0	PSU (o/00)	Latinthe OR-01-02		1
		Description			105-100 DR-01-02 (minimum 7-20-17	1	
Interval	color, grain size.	odor, debris, roots, organisms,	. etc.		-s. R. 0.95	100 N 100	
		, , , , , , , ,			an rearies		W
						Vert L Park I	
0-0.95	dark brown (10YR 3/3) SILT with some clay (-		70 P	A STATE OF THE STA	
	between 0.4 and 0.55 ft. depth interval, soft	, no living organisms obser	ved, no wood chips	sobserved		A. DE S. Bullet	
					An other states and states		1. C
							and the second se
Notes	Salinity at surface 5 PSU; water depth 5'						
Notes Sample Collect							
Sample Collect		San	nple Collection Date	e: 7/24/2017 ar	nd 7/25/17		
Sample Collect	tion	San	nple Collection Date	e: 7/24/2017 an	nd 7/25/17		
Sample Collect Sample Co	tion	San Sample Time	nple Collection Date Requested An		nd 7/25/17 Additional Volumes Collected	Container	Homoginization
Sample Collect Sample Co Sample Interval (ft.)	tion Illection Team: LT JP BW FM Sample ID	Sample Time	Requested A		Additional Volumes Collected		Homoginization
Sample Collect Sample Co Sample	tion Illection Team: LT JP BW FM					Container NA	
Sample Collect Sample Co Sample Interval (ft.)	tion Illection Team: LT JP BW FM Sample ID	Sample Time	Requested A	nalyses	Additional Volumes Collected		Lab Homogenize
Sample Collect Sample Co Sample Interval (ft.) NA	tion Illection Team: LT JP BW FM Sample ID No Lutocline Sample	Sample Time NA	Requested An	nalyses	Additional Volumes Collected	NA	
Sample Collect Sample Co Sample Interval (ft.) NA	tion Illection Team: LT JP BW FM Sample ID No Lutocline Sample	Sample Time NA	Requested An	nalyses OC, OC	Additional Volumes Collected	NA	Lab Homogenize
Sample Collect Sample Co Sample Interval (ft.) NA 0.0 - 0.1	Illection Team: LT JP BW FM Sample ID No Lutocline Sample OR-01-02 _ 072417 _SED_00-01	Sample Time NA 1235	Requested An NA MeHg, Hg, T(nalyses OC, OC	Additional Volumes Collected NA None	NA 1 x 16 oz Plastic 2 x 16 oz Plastic	Lab Homogenize
Sample Collect Sample Co Sample Interval (ft.) NA 0.0 - 0.1	Illection Team: LT JP BW FM Sample ID No Lutocline Sample OR-01-02 _ 072417 _SED_00-01	Sample Time NA 1235	Requested An NA MeHg, Hg, T(nalyses OC, OC OC, OC	Additional Volumes Collected NA None	NA 1 x 16 oz Plastic 2 x 16 oz Plastic 1 x 8 oz Plastic	Lab Homogenize
Sample Collect Sample Co Sample Interval (ft.) NA 0.0 - 0.1 0.1 - 0.3 0.3 - 0.5	tion Illection Team: LT JP BW FM Sample ID No Lutocline Sample OR-01-02 _ 072417 _SED_00-01 OR-01-02 _ 072417 _SED_01-03 OR-01-02 _ 072517 _SED_03-05	Sample Time NA 1235 1237 1542	Requested An NA MeHg, Hg, T(MeHg, Hg, T(Hg, TOC,	nalyses OC, OC OC, OC OC	Additional Volumes Collected NA None None None None	NA 1 x 16 oz Plastic 2 x 16 oz Plastic 1 x 8 oz Plastic 2 x 8 oz Amber Glass	Lab Homogenize and Subsample Field Lab Homogenize and
Sample Collect Sample Co Sample Interval (ft.) NA 0.0 - 0.1 0.1 - 0.3	tion Illection Team: LT JP BW FM Sample ID No Lutocline Sample OR-01-02 _ 072417 _SED_00-01 OR-01-02 _ 072417 _SED_01-03	Sample Time NA 1235 1237	Requested An NA MeHg, Hg, T(MeHg, Hg, T(nalyses OC, OC OC, OC OC	Additional Volumes Collected NA None None	NA 1 x 16 oz Plastic 2 x 16 oz Plastic 1 x 8 oz Plastic 2 x 8 oz Amber Glass 1 x 8 oz Plastic	Lab Homogenize and Subsample Field Lab
Sample Collect Sample Co Sample Interval (ft.) NA 0.0 - 0.1 0.1 - 0.3 0.3 - 0.5 0.5 - 1.0	Sample ID Sample ID No Lutocline Sample OR-01-02 072417 _SED_00-01 OR-01-02 072417 _SED_01-03 OR-01-02 072517 _SED_03-05 OR-01-02 072517 _SED_05-10	Sample Time NA 1235 1237 1542	Requested An NA MeHg, Hg, T(MeHg, Hg, T(Hg, TOC,	nalyses OC, OC OC, OC OC	Additional Volumes Collected NA None None None None	NA 1 x 16 oz Plastic 2 x 16 oz Plastic 1 x 8 oz Plastic 2 x 8 oz Amber Glass	Lab Homogenize and Subsample Field Lab Homogenize and
Sample Collect Sample Co Sample Interval (ft.) NA 0.0 - 0.1 0.1 - 0.3 0.3 - 0.5 0.5 - 1.0	tion Illection Team: LT JP BW FM Sample ID No Lutocline Sample OR-01-02 _ 072417 _SED_00-01 OR-01-02 _ 072417 _SED_01-03 OR-01-02 _ 072517 _SED_03-05	Sample Time NA 1235 1237 1542	Requested An NA MeHg, Hg, T(MeHg, Hg, T(Hg, TOC,	nalyses OC, OC OC, OC OC OC Notes:	Additional Volumes Collected NA None None None None	NA 1 x 16 oz Plastic 2 x 16 oz Plastic 1 x 8 oz Plastic 2 x 8 oz Amber Glass 1 x 8 oz Plastic 2 x 8 oz Amber Glass	Lab Homogenize and Subsample Field Lab Homogenize and Subsample
Sample Collect Sample Co Sample Interval (ft.) NA 0.0 - 0.1 0.1 - 0.3 0.3 - 0.5 0.5 - 1.0	Sample ID Sample ID No Lutocline Sample OR-01-02 072417 _SED_00-01 OR-01-02 072417 _SED_01-03 OR-01-02 072517 _SED_03-05 OR-01-02 072517 _SED_05-10 sis Information Method	Sample Time NA 1235 1237 1542 1544	Requested An NA MeHg, Hg, T(MeHg, Hg, TC, Hg, TOC, Hg, TOC,	nalyses OC, OC OC, OC OC OC Notes: Sediment Core SOP-S-6a Sedin	Additional Volumes Collected NA None None None Sampling was conducted according to the fol nent Sampling, SOP-S-7 Soil Descriptions, SOF	NA 1 x 16 oz Plastic 2 x 16 oz Plastic 1 x 8 oz Plastic 2 x 8 oz Amber Glass 1 x 8 oz Plastic 2 x 8 oz Amber Glass lowing SOPs included in the QAP	Lab Homogenize and Subsample Field Lab Homogenize and Subsample
Sample Collect Sample Co Sample Interval (ft.) NA 0.0 - 0.1 0.1 - 0.3 0.3 - 0.5 0.5 - 1.0 Sample Analys	Sample ID Sample ID No Lutocline Sample OR-01-02 072417 _SED_00-01 OR-01-02 072417 _SED_01-03 OR-01-02 072517 _SED_03-05 OR-01-02 072517 _SED_05-10 sis Information Method	Sample Time NA 1235 1237 1542 1544 Preservative	Requested An NA MeHg, Hg, TG MeHg, Hg, TOC, Hg, TOC, Hg, TOC, Lab	nalyses OC, OC OC, OC OC OC Notes: Sediment Core SOP-S-6a Sedim Interval 0.0 = D	Additional Volumes Collected NA None None None None Sampling was conducted according to the fol nent Sampling, SOP-S-7 Soil Descriptions, SOF Determined by light disappearance test	NA 1 x 16 oz Plastic 2 x 16 oz Plastic 1 x 8 oz Plastic 2 x 8 oz Amber Glass 1 x 8 oz Plastic 2 x 8 oz Amber Glass 1 x 8 oz Amber Glass lowing SOPs included in the QAP -S-17 Decon	Lab Homogenize and Subsample Field Lab Homogenize and Subsample
Sample Collect Sample Co Sample Interval (ft.) NA 0.0 - 0.1 0.1 - 0.3 0.3 - 0.5 0.5 - 1.0 Sample Analys Methyl Mercur	tion illection Team: LT JP BW FM Sample ID No Lutocline Sample OR-01-02 _ 072417 _SED_00-01 OR-01-02 _ 072417 _SED_01-03 OR-01-02 _ 072517 _SED_03-05 OR-01-02 _ 072517 _SED_03-05 OR-01-02 _ 072517 _SED_05-10 sis Information Analyte Method ry (MeHg) 1630 1631	Sample Time NA 1235 1237 1542 1544 Preservative Freeze 4 C	Requested Av NA MeHg, Hg, TC MeHg, Hg, TC, Hg, TOC, Hg, TOC, Lab EFGS	nalyses OC, OC OC, OC OC OC Notes: Sediment Core SOP-S-6a Sedin Interval 0.0 = D Samples were	Additional Volumes Collected NA None None None Sampling was conducted according to the fol nent Sampling, SOP-S-7 Soil Descriptions, SOF	NA 1 x 16 oz Plastic 2 x 16 oz Plastic 1 x 8 oz Plastic 2 x 8 oz Amber Glass 1 x 8 oz Plastic 2 x 8 oz Amber Glass 1 x 8 oz Amber Glass lowing SOPs included in the QAP -S-17 Decon	Lab Homogenize and Subsample Field Lab Homogenize and Subsample

Technician Signature:

0-6-200 Corporation

QA/QC by: Lauren Tierney

QA/QC Date:

Penobscot River Mercury Study - Phase III Engineering Evaluation INTERTIDAL SEDIMENT SAMPLE COLLECTION whee Location ID: OR-01-03 Project Name: USDC Penobscot River Project Number: 3616166052 WO: 4A-030 Wetland Core Collection Core Recovery Sleeve Length in Decimal Feet: Core Collection Team: LT, JP, KB, FM, BW 2.0 2.0 2.0 Core Collection Date: 07/20/2017 Collection Method: Push Corer Depth Cored in Decimal Feet: 1.5 1.5 1.5 Core Collection Time: 09:42 Liner Type: 3" D x 24" L Plastic **Recovered Core Length in Decimal Feet:** 1.25 1.33 1.25 Instant Freeze (Y/N): Yes Est. Volume: 47 oz/ft % Recovery (Recovered Core/Depth Cored): 83% 89% 83% Core Log Woody Debris (Y/N): Yes Core Logger: FKM valuative OR-01-03 Salinity of Water at Mudline: 22 PSU (o/00) Description Interval color, grain size, odor, debris, roots, organisms, etc. black (10YR 2/1) CLAY with some silt (<10%), soft, very fine wood chips throughout the depth interval, 0 - 0.4 strong odor, no living organisms observed dark brown, (10YR 3/3) CLAY with some silt (<10%), soft, very fine wood chips dispersed throughout the 0.4 - 1.15 depth interval, strong odor, no living organisms observed A CONTRACTOR OF Notes Surface water salinity 15 PSU; water depth 3.7' Sample Collection Sample Collection Team: LT JP BW FM Sample Collection Date: 7/24/2017 and 7/25/17 Sample Additional Volumes Collected Interval (ft.) Sample ID Sample Time **Requested Analyses** Container Homoginization NA NA NA NA NA No Lutocline Sample Lab Homogenize 0.0 - 0.1 OR-01-03 072417 SED 00-01 1715 MeHg. Hg. TOC. OC None 1 x 16 oz Plastic and Subsample 0.1 - 0.3 OR-01-03 072417 SED 01-03 1716 MeHg, Hg, TOC, OC None 2 x 16 oz Plastic 1 x 8 oz Plastic 0.3 - 0.5 OR-01-03 072517 SED 03-05 1624 Field Lab Hg, TOC, OC None 2 x 8 oz Amber Glass Homogenize and 1 x 8 oz Plastic 0.5 - 1.0 OR-01-03 072517 SED 05-10 1626 Hg, TOC, OC **Triple Replicate** Subsample 2 x 8 oz Amber Glass Sample Analysis Information Notes: Sediment Core sampling was conducted according to the following SOPs included in the QAPP: Analyte Method Preservative Lab SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, SOP-S-17 Decon Methyl Mercury (MeHg) 1630 Freeze EFGS Interval 0.0 = Determined by light disappearance test 1631 4 C EFGS Mercury (Hg) Samples were processed/ sectioned in the Winterport field office. Total Organic Carbon (TOC) Lloyd-Kahn 4 C Alpha Geographic coordinates provided on Core/Grab log. Organic Content (OC) D2974 Mod(550 C) Ambient Amec FW

Technician Name: Julie Pallozzi

Lauren Tierney QA/QC by:

QA/QC Date: 10/6/2017

amer foster wheeler				iver Mercury Study - TERTIDAL SEDIMENT	-	-		
	oject Name: USDC Penob ect Number: 3616166052		-		Location ID: WO:	OR-01-04 4A-030 Wetland		
Core C Core C	on ollection Team: <u>FM, KB, B</u> ollection Date: <u>07/20/20</u> ollection Time: <u>10:07</u> t Freeze (Y/N): Yes		bllection Method: Liner Type: Est. Volume:	3" D x 24" L Plastic	-	Sleeve Length in Decimal Feet: Depth Cored in Decimal Feet: covered Core Length in Decimal Feet: overy (Recovered Core/Depth Cored):	Core Recover 2.0 2.0 1.5 1.5 1.16 1.15 77% 77%	y 2.0 1.5 1.3 87%
Core Log	Core Logger: <u>FKM</u>	Salinity of V	ody Debris (Y/N): Vater at Mudline:		PSU (o/00)		to ver opposite	
Interval 0-0.4		color, grain size, odor, d with some clay (<15%), a fe			od chips	1		
0.4-1.2		ving organisms SILT with some clay (<10%) organisms observed, some	· · · · · · · · · · · · · · · · · · ·		hout the			Y
Notes	Surface water salinity 1	9 PSU, water depth 3'						
Sample Collec	ction blection Team: JP LT FM		50	mple Collection Date	. 7/25/2017			
Sample Interval (ft.)		nple ID	Sample Time	Requested An		Additional Volumes Collected	Container	Homoginization
NA	No Luto	cline Sample	NA	NA		NA	NA	
0.0 - 0.1	OR-01-04 _ 072517	_SED_00-01	0900	MeHg, Hg, TO	IC, OC	Triple Replicate	1 x 16 oz Plastic	Lab Homogenize and Subsample
0.1 - 0.3	OR-01-04 _ 072517	_SED_01-03	0901	MeHg, Hg, TO	C, OC	None	2 x 16 oz Plastic	
0.3 - 0.5	OR-01-04 _ 072517	_SED_03-05	1716	Hg, TOC, C	DC	None	1 x 8 oz Plastic 2 x 8 oz Amber Glass	Field Lab Homogenize and
0.5 - 1.0	OR-01-04 _ 072517	_SED_05-10	1718	Hg, TOC, C	DC	MS/MSD	1 x 8 oz Plastic 2 x 8 oz Amber Glass	Subsample
Sample Analy Methyl Mercu Mercury (Hg) Total Organic Organic Conte	Carbon (TOC)	Method 1630 1631 Lloyd-Kahn D2974 Mod(550 C)	Preservative Freeze 4 C 4 C Ambient	Lab EFGS EFGS Alpha Amec FW	SOP-S-6a Sec Interval 0.0 = Samples wer	re sampling was conducted according to the for diment Sampling, SOP-S-7 Soil Descriptions, SC Determined by light disappearance test e processed/ sectioned in the Winterport field coordinates provided on Core/Grab log.	DP-S-17 Decon	

Technician Name: Julie Palłozzi

QA/QC by: Lauren Tierney

Technician Signature:

1-67-2018-00-10-1

QA/QC Date: 10/6/2017

amec foster wheeler				iver Mercury Study - I ITERTIDAL SEDIMENT	-	-		
	bject Name: USDC Penobsc ect Number: 3616166052	ot River	-		Location ID: WO:	OR-01-05 4A-030 Wetland		
			_					
Core Collection						_		ecovery
	llection Team: FM, BW, LT,					Sleeve Length in Decimal Feet:		0 2.0
	ollection Date: 07/20/2017 ollection Time: 10:24		liner Type	3" D x 24" L Plastic		Depth Cored in Decimal Feet:	1.5 1 1.07 1.	
	t Freeze (Y/N): Yes		Est. Volume:		_	ecovered Core Length in Decimal Feet: overy (Recovered Core/Depth Cored):	71% 91	
Core Log	(1/N). 165		L3t. Volume.	47 02/10	/6 REU	overy (Recovered Core/Depth Cored).	/1/8	70/0
	Core Logger: <u>FKM</u>		ody Debris (Y/N): /ater at Mudline:		PSU (o/00)	Harris UR-01-43	na han ta Pananta T	
Interval		Desc color, grain size, odor, de	ription ebris, roots, organism	is, etc.		10-00 UR-01-45 10-00 UR-01-45 10-00 UR-01-45 10-00 UR-01-45		
0-1.25	very dark brown (7.5YR 2. (between 0.1 and 0.2 ft.), chips throughout the core	2 small clams and a few w				12°		
Notes	Surface salinity 20 PSU; w	ater depth 4.4'						
Sample Collec Sample Co		·	Sa	mple Collection Date	7/24/2017 a	and 7/25/17		
Sample Interval (ft.)	Samp		Sample Time	Requested Ana	alveas	Additional Volumes Collected	Container	Homoginization
				•	aryses			Tiomogimization
NA	No Lutocli	ne sample	NA	NA		NA	NA	
0.0 - 0.1	OR-01-05 _ 072417 _	SED_00-01	1727	MeHg, Hg, TO	C, OC	Triple Replicate	1 x 16 oz Plastic	Lab Homogenize and Subsample
0.1 - 0.3	OR-01-05 _ 072417 _	SED_01-03	1729	MeHg, Hg, TO	C, OC	None	2 x 16 oz Plastic	
0.3 - 0.5	OR-01-05 _ 072517 _	SED_03-05	1508	Hg, TOC, C	C	None	1 x 8 oz Plastic 2 x 8 oz Amber Glas	Field Lab
0.5 - 1.0	OR-01-05 _ 072517 _	SED_05-10	1510	Hg, TOC, C	C	None	1 x 8 oz Plastic 2 x 8 oz Amber Glas	Homogenize and Subsample
Sample Analys	is Information				Notes:			
1	Analyte	Method	Preservative	Lab		re sampling was conducted according to the fo	-	QAPP:
Methyl Mercu	ry (MeHg)	1630	Freeze	EFGS		iment Sampling, SOP-S-7 Soil Descriptions, SOF Determined by light disappearance test	-S-17 Decon	
Mercury (Hg)		1631	4 C	EFGS		e processed/ sectioned in the Winterport field	office.	
Total Organic		Lloyd-Kahn	4 C	Alpha		oordinates provided on Core/Grab log.		
Organic Conte	nt (OC)	D2974 Mod(550 C)	Ambient	Amec FW				

Technician Name: Julie Pallozzi

QA/QC by: Lauren Tierney

Technician Signature:

OG + Records

QA/QC Date:

amec foster wheeler				iver Mercury Study - P ITERTIDAL SEDIMENT S	•	-			
	oject Name: USDC Penobsc ect Number: 3616166052	ot River	- -		Location ID: WO:	OR-02-01 4A-030 Wetland			
Core Collectio	on							Core Recovery	,
Core Co	ollection Team: FM, LT, BW	, КВ, ЈР				Sleeve Length in Decimal Feet:	2.0	2.0	2.0
	Collection Date: 07/20/2017	Co	llection Method:		_	Depth Cored in Decimal Feet:	1.5	1.5	1.5
	ollection Time: 07:48		··· -	3" D x 24" L Plastic	-	covered Core Length in Decimal Feet:	1.0	1.2	1.25
	t Freeze (Y/N): Yes		Est. Volume:	47 oz/ft	% Reco	overy (Recovered Core/Depth Cored):	67%	80%	83%
Core Log	Core Logger: FKM		ody Debris (Y/N): /ater at Mudline:		PSU (o/00)				
Interval		Desc color, grain size, odor, de	r iption bris, roots, organism	ıs, etc.					
0-1.2	dark brown (7.5YR 3/2) Cl plasticity, soft, no living o	AY with some silt (<10%),	a black interlayer		ft., low	N	o Photo Taken		
Notes Sample Collec	Salinity at surface 8 PSU;	water depth 5'							
	ollection Team: LT JP FM BV	V	Sa	mple Collection Date:	7/24/17 and	1 7/25/17			
Sample Interval (ft.)	Samp	ble ID	Sample Time	Requested Ana	alyses	Additional Volumes Collected	Con	tainer	Homoginization
NA	No Lutocli	ne Sample	NA	NA		NA	I	NA	
0.0 - 0.1	OR-02-01 _ 072417 _	SED_00-01	1210	MeHg, Hg, TO	С, ОС	None	1 x 16	oz Plastic	Lab Homogenize and Subsample
0.1 - 0.3	OR-02-01 _ 072417 _	SED_01-03	1210	MeHg, Hg, TO	C, OC	Triple Replicate	-	oz Plastic	
0.3 - 0.5	OR-02-01 _ 072517 _	SED_03-05	1516	Hg, TOC, O	С	None	2 x 8 oz A	z Plastic mber Glass	Field Lab Homogenize and
0.5 - 1.0	OR-02-01 _ 072517 _	SED_05-10	1518	Hg, TOC, O	С	None		z Plastic mber Glass	Subsample
Sample Analy	sis Information				Notes:				
	Analyte	Method	Preservative	Lab		e sampling was conducted according to the fo iment Sampling, SOP-S-7 Soil Descriptions, SO		uded in the QAPP:	
Methyl Mercu	ıry (MeHg)	1630	Freeze	EFGS		Determined by light disappearance test	J-1/ DCCOII		
Mercury (Hg)	Carbon (TOC)	1631	4 C	EFGS		e processed/ sectioned in the Winterport field	office.		
Total Organic Organic Conte		Lloyd-Kahn D2974 Mod(550 C)	4 C Ambient	Alpha Amec FW	Geographic co	pordinates provided on Core/Grab log.			
organic conte		02374 WOU(330 C)	Amplent	Ametrv					

Technician Name: Julie Pallozzi

C.J. - (C. Solar a construction of

QA/QC by: Lauren Tierney

Technician Signature:

QA/QC Date:

2/1/2018

Penobscot River Mercury Study - Phase III Engineering Evaluation foste INTERTIDAL SEDIMENT SAMPLE COLLECTION wheeler Project Name: USDC Penobscot River Location ID: OR-02-02 Project Number: 3616166052 WO: 4A-030 Wetland Core Collection Core Recovery Core Collection Team: LT, FM Sleeve Length in Decimal Feet: 2.0 2.0 2.0 Core Collection Date: 07/20/2017 1.5 1.5 1.5 Collection Method: Push Corer Depth Cored in Decimal Feet: Core Collection Time: 09:32 Liner Type: 3" D x 24" L Plastic 0.99 1.32 Recovered Core Length in Decimal Feet: 1.29 Instant Freeze (Y/N): Yes Est. Volume: 47 oz/ft % Recovery (Recovered Core/Depth Cored): 66% 86% 88% Core Log Core Logger: FKM Woody Debris (Y/N): Yes Salinity of Water at Mudline: 10 PSU (o/00) Description Interval color, grain size, odor, debris, roots, organisms, etc. No Photo Taken very dark grayish brown (10YR 3/2) CLAY with some silt (*<10%), with a shade of very dark brown (10YR 0-0.95 2/2) between 0.1 and 0.4 ft depth interval, slight odor, very fine wood chips , soft, low-medium plasticity, some clam shells observed, no living organisms observed Water depth = 12.9', falling tide, surface salinity = 0.99 PSU Notes Sample Collection Sample Collection Team: LT JP BW FM Sample Collection Date: 7/24/2017 and 7/25/17 Sample Interval (ft.) Sample ID Sample Time **Requested Analyses** Additional Volumes Collected Container Homoginization NA No Lutocline Sample NA NA NA NA Lab Homogenize 0.0 - 0.1 OR-02-02 072417 SED 00-01 1700 MeHg, Hg, TOC, OC MS/MSD 1 x 16 oz Plastic and Subsample 0.1 - 0.3 OR-02-02 072417 SED 01-03 1701 MeHg, Hg, TOC, OC None 2 x 16 oz Plastic 1 x 8 oz Plastic 0.3 - 0.5 OR-02-02 _ 072517 _SED_03-05 1448 Hg, TOC, OC **Triple Replicate** Field Lab 2 x 8 oz Amber Glass Homogenize and 1 x 8 oz Plastic 0.5 - 1.0 OR-02-02 072517 SED 05-10 1450 Hg, TOC, OC None Subsample 2 x 8 oz Amber Glass Sample Analysis Information Notes: Sediment Core sampling was conducted according to the following SOPs included in the QAPP: Analyte Method Preservative Lab SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, SOP-S-17 Decon 1630 Methyl Mercury (MeHg) Freeze EFGS Interval 0.0 = Determined by light disappearance test Mercury (Hg) 1631 4 C EFGS Samples were processed/ sectioned in the Winterport field office. Total Organic Carbon (TOC) Lloyd-Kahn 4 C Alpha Geographic coordinates provided on Core/Grab log. Organic Content (OC) D2974 Mod(550 C) Ambient Amec FW

Technician Name: Lauren Tierney

- Burne Governory

QA/QC by: Julie Pallozzi

QA/QC Date: 2/1/2018

Page 1 of 1

Technician Signature:

aner		Penobscot Ri	iver Mercury Study - F	Phase III Engin	neering Evaluation		
foster white.er		IN	TERTIDAL SEDIMENT	SAMPLE COLI	LECTION		
	oject Name: USDC Penobscot River			Location ID:	OR-02-03		
Proje	ect Number: 3616166052			wo:	4A-030 Wetland		
Core Collectio	on					Core Recove	rv
	ollection Team: KB, LT				Sleeve Length in Decimal Feet:	2.0 2.0	2.0
	ollection Date: 07/31/2017	Collection Method:		_	Depth Cored in Decimal Feet:	1.5 1.5	1.5
	ollection Time: 15:11		3" D x 24" L Plastic	-	covered Core Length in Decimal Feet:	1.1 1.05	1.07
	t Freeze (Y/N): Yes	Est. Volume: 4	47 oz/ft	% Reco	very (Recovered Core/Depth Cored):	73% 70%	71%
Core Log	Core Logger: BPW	Woody Debris (Y/N):	N		Tannet P.	02-03	
		Salinity of Water at Mudline:		PSU (o/00)	and some of the		
		summer at maamer.	23	-150 (0/00)	73	A(17	
		Description			Contraction of F13		1.0
Interval		n size, odor, debris, roots, organism			and the second	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
0.0-0.05	10yr 4/2 dark grayish brown, Silt with s plasticity, no roots, small clam .03 diam		and, saturated, biologi	ical odor, no	3447	1	
0.05-0.8	10yr 3/2 very dark gray, Silt with sand 9 plasticity, no roots.	95% silt, 5% fine grained sand, s	saturated, biological o	dor, low	e Tố	P	
0.8-1.1	10yr 3/2 very dark grayish brown, Silt v odor, medium plasticity, no roots.	with sand, 95% silt, 5% fine grain	ned sand, saturated, b	piological	Reality Property and		
	Water depth 4', rising tide, surface salir	nity - 23 PSIL wood chins obser	wed during core collec	tion on			Fi
Notes	exterior of core in sediment 0.5' down				And Strongeneration		-
Sample Collec				0/4/2047	10/0/2017		
Sample Co Sample	ollection Team: LT BW	Sai	mple Collection Date:	8/1/2017 an	d 8/3/2017		
Interval (ft.)	Sample ID	Sample Time	Requested Ana	alyses	Additional Volumes Collected	Container	Homoginization
NA	No Lutocline Sample	NA	NA		NA	NA	
0.0 - 0.1	OR-02-03 _ 080117 _SED_00-01	1447	MeHg, Hg, TO	C, OC	MS/MSD, Triple Replicate	1 x 16 oz Plastic	Lab Homogenize and Subsample
0.1 - 0.3	OR-02-03 _ 080117 _SED_01-03	1449	MeHg, Hg, TO	C, OC	None	2 x 16 oz Plastic	
0.3 - 0.5	OR-02-03 _ 080317 _SED_03-05	1500	Hg, TOC, O	C	None	1 x 8 oz Plastic 2 x 8 oz Amber Glass	Field Lab Homogenize and
0.5 - 1.0	OR-02-03 _ 080317 _SED_05-10	1502	Hg, TOC, O	C	None	1 x 8 oz Plastic 2 x 8 oz Amber Glass	Subsample
Sample Analy	sis Information			Notes:			
		thod Preservative	Lab		e sampling was conducted according to the t iment Sampling, SOP-S-7 Soil Descriptions, So	-	PP:
Methyl Mercu	11 - 01	530 Freeze	EFGS		Determined by light disappearance test	Jr-J-1/ Decon	
Mercury (Hg)		531 4 C d-Kahn 4 C	EFGS		processed/ sectioned in the Winterport fiel	d office	
Total Organic Organic Conte		d-Kahn 4 C lod(550 C) Ambient	Alpha Amec FW	Geographic co	oordinates provided on Core/Grab log.		
	D2974 W	iou(550 C) Ambient	AIIICUTW				
Techr	nician Name: Lauren Tierney				QA/QC by: Julie F	Pallozzi	

QA/QC by:

Technician Signature:

QA/QC Date: 10/6/2017

amet foster				r Mercury Study - Pha RTIDAL SEDIMENT SAN	•	-		
wheeler	Project Name: USDC Penobsc Project Number: 3616166052	ot River	-		ocation ID:	W-101-INTA 4A-030 Wetland		
C					-		Come Doctor	
Core Collectio	e Collection Team: KB, LT, BW,	וח				Sleeve Length in Decimal Feet:	2.0 Core Recove	2.0
	re Collection Date: 07/31/2017		llection Method: P	Push Corer		Depth Cored in Decimal Feet:	1.5 1.5	1.5
Cor	re Collection Time: 17:38		Liner Type: 3	" D x 24" L Plastic	Rec	overed Core Length in Decimal Feet:	1.19 1.18	1.25
	stant Freeze (Y/N): Yes		Est. Volume: 4	7 oz/ft	% Recov	very (Recovered Core/Depth Cored):	79% 79%	83%
Core Log	Core Logger: BPW		ody Debris (Y/N): <u>N</u> Vater at Mudline: <u>2</u>		PSU (o/00)		W-101-3104	
Interval		Descri color, grain size, odor, deb	•	etc.			A. (4) - 4	
0.0-0.1	10yr 4/1 dark gray, Silt with san no roots.	and, 99% silt, 15% fine gra	ained sand, saturate	ed, biological odor, no p	olasticity,	-	255	
0.1-0.7	10yr 3/1 very dark gray with t saturated, biological odor, me	edium plasticity, no roots.				A THE MENT	1	
0.7-1.2	10yr 3/2 very dark grayish bro medium plasticity, no roots.	own, silt with sand, 90% s	ilt, 10% fine grained	I sand, saturated, biolo	gical odor,			
Notes	Water depth - 4', surface salir	nity - 20 PSU					and the second	san#
Sample Collec	ction e Collection Team: LT BW		Sam	nple Collection Date:	2/1/2017 and	d 8/3/2017		
Sample				inple concertoir bute.	<i>5,1,2017</i> uni	0,5,2017		
Interval (ft.)	Sample	e ID	Sample Time	Requested Anal	yses	Additional Volumes Collected	Container	Homoginization
NA	No Lutocline	Sample	NA	NA		NA	NA	
0.0 - 0.1	W-101-INTA _ 080117 _	SED_00-01	1303	MeHg, Hg, TOC,	OC	None	1 x 16 oz Plastic	Lab Homogenize and Subsample
0.1 - 0.3	W-101-INTA _ 080117 _	SED_01-03	1305	MeHg, Hg, TOC,	OC	Triple Replicate	2 x 16 oz Plastic	
0.3 - 0.5	W-101-INTA _ 080317 _	SED_03-05	1428	Hg, TOC, OC		None	1 x 8 oz Plastic 2 x 8 oz Amber Glass	Field Lab Homogenize and
0.5 - 1.0	W-101-INTA _ 080317 _	SED_05-10	1430	Hg, TOC, OC		None	1 x 8 oz Plastic 2 x 8 oz Amber Glass	Subsample
Sample Analy	rsis Information	Method	Preservative		Notes:	e sampling was conducted according to the	following SOPs included in the O/	DD.
Methyl Mercu	Analyte urv (MeHg)	1630	Freeze			ment Sampling, SOP-S-7 Soil Descriptions, S		
Mercury (Hg)		1631	4 C	FEGS		Determined by light disappearance test		
Total Organic	Carbon (TOC)	Lloyd-Kahn	4 C	Alnha	-	processed/ sectioned in the Winterport fie	ld office	
Organic Conte		D2974 Mod(550 C)	Ambient	Amec FW	eographic co	ordinates provided on Core/Grab log.		
Te	echnician Name: Lauren Tieri	ney				QA/QC by: Julie	Pallozzi	

QA/QC by:

Technician Signature:

QA/QC Date: 10/6/2017

Penobscot River Mercury Study - Phase III Engineering Evaluation INTERTIDAL SEDIMENT SAMPLE COLLECTION wheel Location ID: W-102-INTA Project Name: USDC Penobscot River WO: 4A-030 Wetland Project Number: 3616166052 Core Collection Core Recovery Sleeve Length in Decimal Feet: Core Collection Team: KB, LT, FM 2.0 2.0 2.0 Core Collection Date: 07/17/2017 Collection Method: Push Corer Depth Cored in Decimal Feet: 1.5 1.5 1.5 Core Collection Time: 17:01 Liner Type: 3" D x 24" L Plastic **Recovered Core Length in Decimal Feet:** 1.2 1.25 1.2 Instant Freeze (Y/N): Yes Est. Volume: 47 oz/ft % Recovery (Recovered Core/Depth Cored): 80% 83% 80% Core Log いいし アクション Woody Debris (Y/N): Yes Core Logger: FKM Jac 1 7 10 1 17 Salinity of Water at Mudline: 15 PSU (o/00) Description Interval color, grain size, odor, debris, roots, organisms, etc. dark gray (2.5 Y 4/1) CLAY, medium plasticity, soft, no living organism observed, fine wood chips dispersed 0-1.35 throughout the core, stinking -hydrogen sulfide odor? Notes Surface water salinity 10 PSU, very fine wood chips observed at surface, no lutocline in any cores Sample Collection Sample Collection Team: JP LT BW FM Sample Collection Date: 7/25/17 and 7/26/17 Sample Interval (ft.) Sample ID Sample Time **Requested Analyses** Additional Volumes Collected Container Homoginization NA No Lutocline Sample NA NA NA NA Lab Homogenize W-102-INTA 072517 SED 00-01 0.0 - 0.1 0929 MeHg, Hg, TOC, OC 1 x 16 oz Plastic None and Subsample W-102-INTA _ 072517 _SED_01-03 0.1 - 0.3 0930 MeHg, Hg, TOC, OC 2 x 16 oz Plastic None 0.3 - 0.5 W-102-INTA 072617 SED 03-05 1042 Hg, TOC, OC None 3 x 8 oz Plastic Field Lab Homogenize and 0.5 - 1.0 W-102-INTA _ 072617 _SED_05-10 1044 Hg, TOC, OC **Triple Replicate** 3 x 8 oz Plastic Subsample Sample Analysis Information Notes: Analyte Method Preservative Lab Sediment Core sampling was conducted according to the following SOPs included in the QAPP: SOP-S-6a Sediment Sampling, SOP-S-7 Soil Descriptions, SOP-S-17 Decon 1630 EFGS Methyl Mercury (MeHg) Freeze Interval 0.0 = Determined by light disappearance test Mercury (Hg) 1631 4 C EFGS Samples were processed/ sectioned in the Winterport field office. Total Organic Carbon (TOC) Llovd-Kahn 4 C Alpha Geographic coordinates provided on Core/Grab log. Organic Content (OC) D2974 Mod(550 C) Ambient Amec FW

Technician Name: Julie Pallozzi

QA/QC by: Lauren Tierney

Technician Signature:

QA/QC Date: 10/6/2017

amec Aostor wheeler				r Mercury Study - Ph RTIDAL SEDIMENT SA	•	-			
	Project Name: USDC Penobsco Project Number: 3616166052	ot River	-		Location ID: WO:	W-103-INTA 4A-030 Wetland			
Core Collection	1						(Core Recovery	/
	re Collection Team: FM, KB, LT					Sleeve Length in Decimal Feet:	2.0	2.0	2.0
	ore Collection Date: 07/17/2017	Co	ollection Method: P		_	Depth Cored in Decimal Feet:	1.5	1.5	1.5
	re Collection Time: 15:54 stant Freeze (Y/N): Yes		Est. Volume: 4	D x 24" L Plastic		covered Core Length in Decimal Feet: overy (Recovered Core/Depth Cored):	1.01 67%	1.05	1.0 67%
Core Log	Core Logger: FKM		ody Debris (Y/N): Y Vater at Mudline: 5	es	PSU (o/00)	Tarian Inte 7-17-	-INT		
Interval		Descrip color, grain size, odor, debr				Nors	1	a a	11
0-1.3 Notes	dark gray (2.5 Y 4/1) CLAY, medi layer of decomposed leaves bet No lutoclines on any cores, fine Water surface salinity 0 PSU	ween 0.6 and 0.7 ft. inte	rval, stinking -hydro		wood chips, a				
Sample Collect Sampl			San	nple Collection Date	e: 7/25/17 and	17/26/17			
Sample Interval (ft.)	Sample I	D	Sample Time	Requested An	nalyses	Additional Volumes Collected	Contain	er	Homoginization
NA	No Lutocline S	Sample	NA	NA		NA	NA		
0.0 - 0.1	W-103-INTA _ 072517 _S	ED_00-01	1148	MeHg, Hg, TC	DC, OC	None	1 x 16 oz P	lastic	Lab Homogenize and Subsample
0.1 - 0.3	W-103-INTA _ 072517 _S	ED_01-03	1149	MeHg, Hg, TC	DC, OC	Triple Replicate	2 x 16 oz P		
0.3 - 0.5	W-103-INTA _ 072617 _S	ED_03-05	0947	Hg, TOC, (ос	None	1 x 8 oz Pl 2 x 8 oz Ambe	er Glass	Field Lab Homogenize and
0.5 - 1.0	W-103-INTA _ 072617 _S	ED_05-10	0949	Hg, TOC, (ос	None	1 x 8 oz Pl 2 x 8 oz Ambe		Subsample
Sample Analys		Ndath - J	Breeze attac		Notes:	e sampling was conducted according to the	following SOPs includes		
Methyl Mercur	Analyte	Method 1630	Preservative Freeze	Lab EFGS		ment Sampling, SOP-S-7 Soil Descriptions, Si	-	u in the QAPP:	
Mercury (Hg)	y (IVICIIS)	1630	4 C	EFGS		Determined by light disappearance test			
Total Organic C	Carbon (TOC)	Lloyd-Kahn	4 C	Alpha	-	processed/ sectioned in the Winterport fiel	d office		
Organic Conter		D2974 Mod(550 C)	Ambient	Amec FW	Geographic co	pordinates provided on Core/Grab log.			
Te	echnician Name: Julie Pallozzi					QA/QC by: Laure	n Tierney		

Technician Signature:

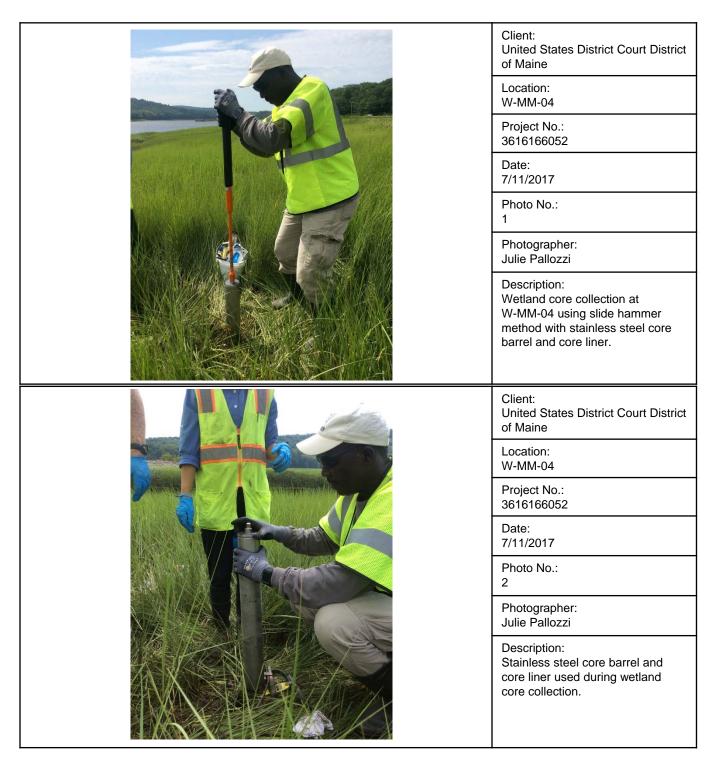
0 152

QA/QC Date:

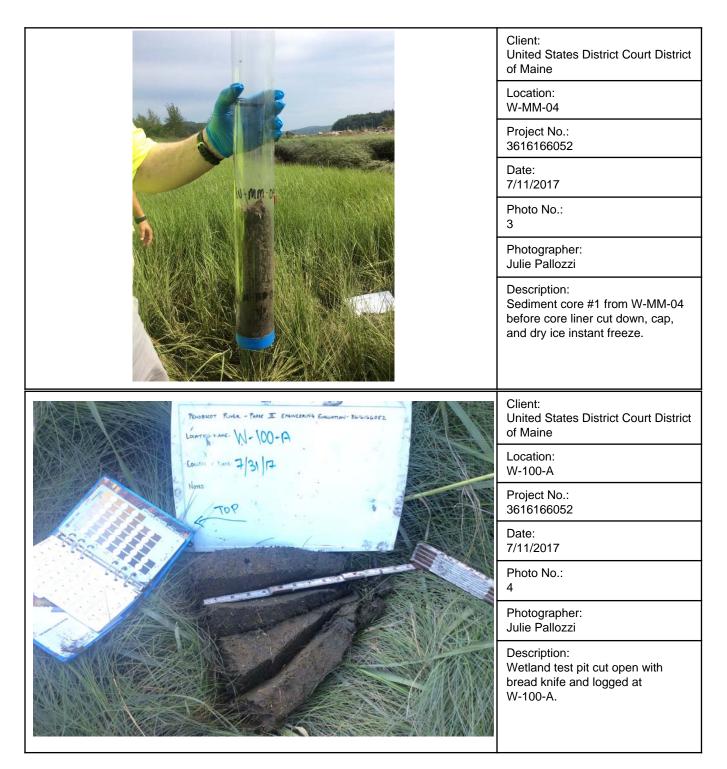


ATTACHMENT B Photographs of Field Sampling Activities

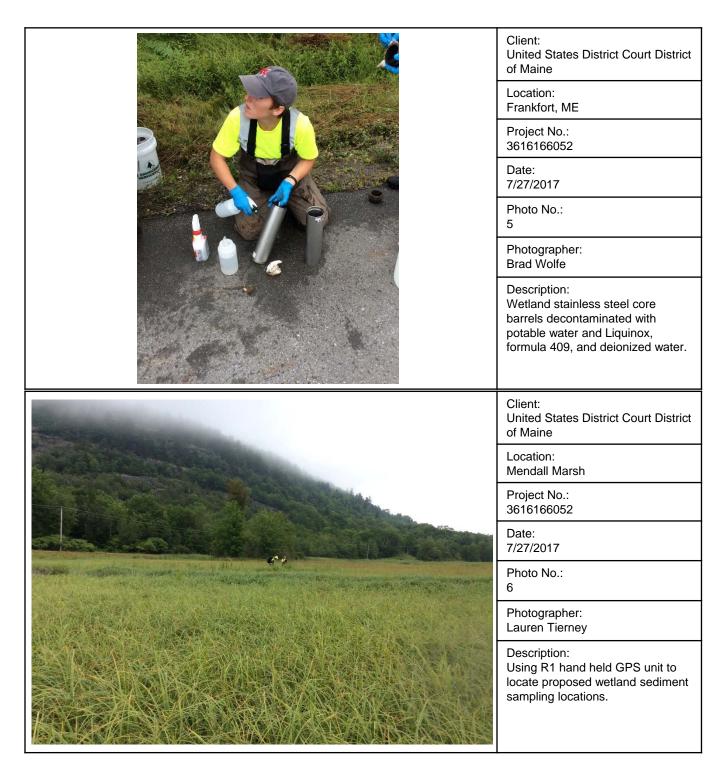




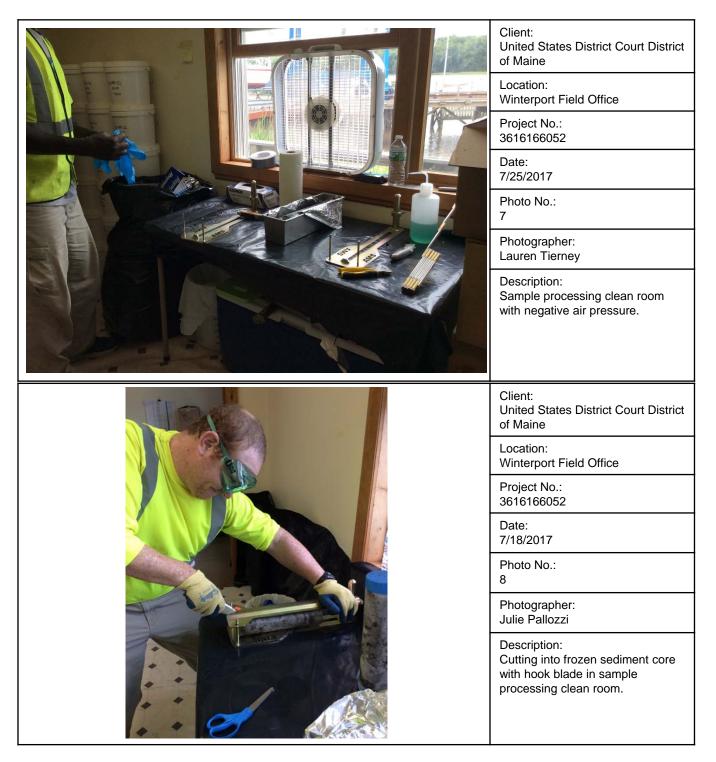












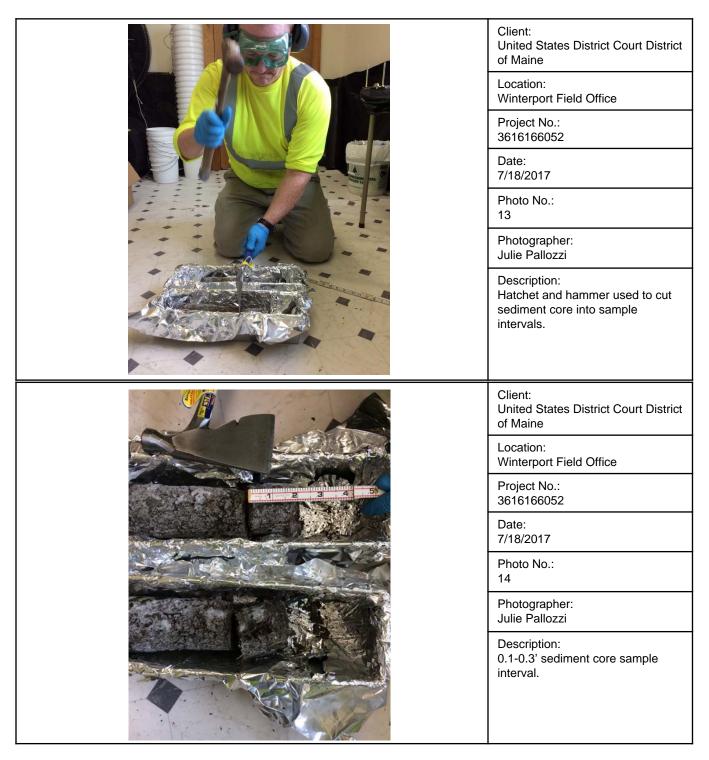


Client: United States District Court District of Maine
Location: Winterport Field Office
Project No.: 3616166052
Date: 7/18/2017
Photo No.: 9
Photographer: Julie Pallozzi
Description: Transferring frozen sediment core from core liner to aluminum foil lined cutting tray.
Client: United States District Court District of Maine
Location: Winterport Field Office
Project No.: 3616166052
Date: 7/24/2017
Ph10oto No.:
Photographer: Lauren Tierney
Description: Example of frozen water at top end of frozen intertidal sediment core. Frozen water removed,

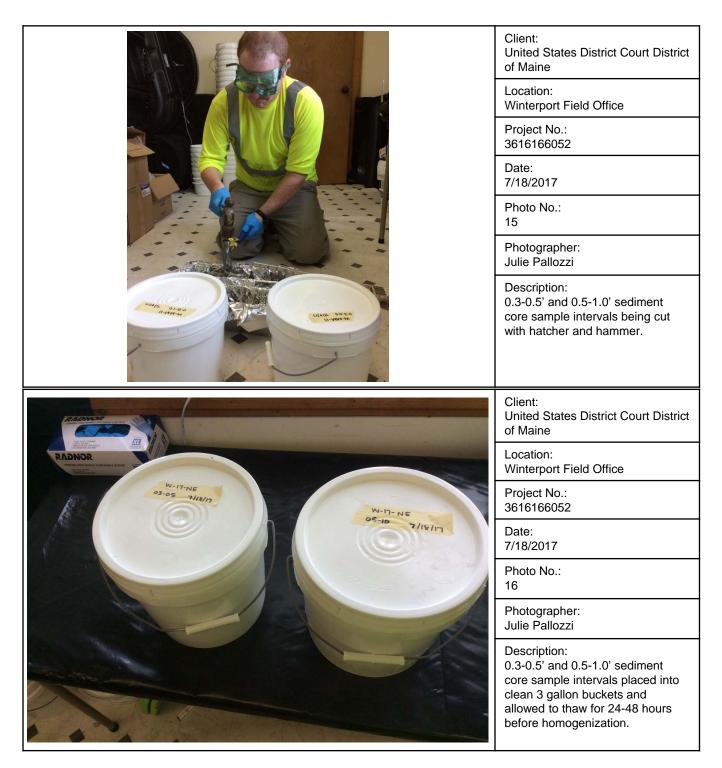


Client: United States District Court District of Maine
Location: Winterport Field Office
Project No.: 3616166052
Date: 7/24/2017
Photo No.: 11
Photographer: Lauren Tierney
Description: Example of frozen water at top end of frozen intertidal sediment core. Frozen water removed, depth measurements begin from top of sediment.
Client: United States District Court District of Maine
United States District Court District
United States District Court District of Maine Location:
United States District Court District of Maine Location: Winterport Field Office Project No.:
United States District Court District of Maine Location: Winterport Field Office Project No.: 3616166052 Date:
United States District Court District of Maine Location: Winterport Field Office Project No.: 3616166052 Date: 7/18/2017 Photo No.:











	Client: United States District Court District of Maine
	Location: Winterport Field Office
	Project No.: 3616166052
	Date: 7/26/2017
and the second s	Photo No.: 17
VI-MM-07 DE 05 725A1	Photographer: Lauren Tierney
	Description: Interval 0.3-0.5' of W-MM-07 sediment core being homogenized by hand in 3 gallon bucket and placed into sample jars.
	Client: United States District Court District of Maine
	United States District Court District
	United States District Court District of Maine Location:
	United States District Court District of Maine Location: Winterport Field Office Project No.:
	United States District Court District of Maine Location: Winterport Field Office Project No.: 3616166052 Date:
	United States District Court District of Maine Location: Winterport Field Office Project No.: 3616166052 Date: 7/19/2017 Photo No.:







