# APPENDIX G-1: SURFACE SEDIMENT CHARACTERISTICS

Table G-1. LDW surface sediment characteristics-Round 2

SAMPLE ID	RPD (cm)	PENETRATION DEPTH (cm)	Characteristics
LDW-SS2-010	2	13	gray with brown surface layer, silt, wood debris, shell fragments, fine sand with silt, organic matter, and worms present. No odor.
LDW-SS3-010	none visible	grey, gravel, shell fragments, coarse sand, medium sand, fine sand, organic matter. No odor.	
LDW-SS6-010	1	black w/ brown surface layer, gravel, silt, wood do shell fragments, medium sand, fine sand. Strong odor	
LDW-SS7-010	1	13	grey w/ brown surface layer, silt, fine sand, shell fragments. Slight petroleum odor
LDW-SS8-010	1.5	17	grey w/ brown surface layer, silt, wood debris, fine sand, organic matter. No odor
LDW-SS9-010	none visible	10	brown w/ brown surface layer, gravel, silt, coarse sand, medium sand, organic matter, glass, plant debris. No odor
LDW-SS11-010	3	11	gray with brown surface layer, clay, wood debris, shell fragments, medium sand, fine sand with silt, organic matter, and worms present. No odor.
LDW-SS16-010	1.5	13	grey w/ brown surface layer, gravel, silt, wood debris, medium sand, fine sand, organic matter and worms. No odor.
LDW-SS19-010	2	15	grey w/ brown surface layer, gravel, silt, wood debris, medium sand, fine sand, organic matter and worms. No odor.
LDW-SS21-010	2	14	grey w/ brown surface layer, silt, wood debris, shell fragment, medium sand, fine sand, organic matter, worms. No odor.
LDW-SS24-010	2	10	gray w/ brown surface layer, gravel, silt, wood debris, fine sand, organic matter, brick, bottles, shell. No odor.
LDW-SS25-010	nv	14	grey with brown surface layer, silt, fine sand, organic matter. No odor.
LDW-SS29-010	1	16	grey with brown surface layer, silt, fine sand, organic matter. No odor.
LDW-SS30-010	2	15	black with brown surface layer, silt, lots of wood debris, fine sand, organic matter. No odor
LDW-SS34-010	nv	9	brown w/ wood debris, shell fragments, coarse sand, medium sand, fine sand, organic matter, worms. No odor.
LDW-SS35-010	nv - surface sheen	14	black with cobble, gravel, silt, wood debris, medium sand, fine sand, organic matter. Strong petroleum odor.
LDW-SS39-010	nv - oil sheen	13	grey with brown surface layer, lots of wood debris, shell fragments, medium sand, fine sand, organic matter. Slight H2S and Petroleum odors.

SAMPLE ID	RPD (cm)	PENETRATION DEPTH (cm)	CHARACTERISTICS	
LDW-SS41-010	2.5	11	grey w/ brown surface layer, gravel, silt, medium sand, fine sand, organic matter, worms. No odor.	
LDW-SS45-010	5	15	grey with brown surface layer, silt, wood debris, medium sand, fine sand, organic matter, worms. No odor	
LDW-SS46-010	1	13	black w/ brown surface layer, wood debris, shell fragments, coarse sand, medium sand, fine sand, organic matter, worms. No odor.	
LDW-SS47-010	nv	14	brown w/ cobble, gravel, silt, wood debris, shell fragments, coarse sand, medium sand, fine sand, organic matter and plant material. No odor.	
LDW-SS53-010	1	16	drab olive, grey w/ brown surface layer, silt, wood debris, shell fragments, fine sand, organic matter, worms. No odor.	
LDW-SS59-010	2	20	drab olive, grey w/ brown surface layer, gravel, silt, wood debris, shell fragments, medium sand, fine sand, organic matter, worms and plant material. Moderate H2S odor.	
LDW-SS61-010	none noted	14	grey, gravel, silt, wood debris, shell fragments, coarse sand, medium sand, fine sand, organic matter, worms, plants. No odor.	
LDW-SS62-010	none noted	17	grey with brown surface layer, silt, medium sand, fine sand, organic matter and plant material. Slight H2S odor.	
LDW-SS65-010	1	13	grey, gravel, silt, wood debris, shell fragments, medium sand, fine sand, organic matter, worms. No odor.	
LDW-SS66-010	pockets of sheen	16	grey, silt, medium sand, fine sand, organic matter, plant material. Slight H2S odor.	
LDW-SS68-010	1	17	drab olive with brown surface layer, silt, fine sand, organic material, lots of worms. No odor.	
LDW-SS69b-010	1	15	grey with brown surface layer, gravel, silt, wood debris, shell fragments, medium sand, fine sand, organic material, plant material, worms. Slight H2S odor.	
LDW-SS71-010	1	12	grey, brown surface layer, silt, wood debris, shell fragments, medium sand, fine sand, organic material, worms, plant material. Strong unknown odor.	
LDW-SS73-010	1	13	grey with brown surface layer, gravel, silt, wood debris, shell fragments, medium sand, fine sand, clams. No odor.	
LDW-SS74-010	none visible	13	brown w/ brown surface layer, gravel, silt, wood debris, shell fragments, medium sand, fine sand, organic matter, worms. No odor.	
LDW-SS77-010	1	12	black w/ brown surface layer, silt, wood debris, fine sand, organic mater, worms, Pepsi can. Strong H2S odor.	
LDW-SS78-010	1	12	grey with brown surface layer, silt, wood debris, fine sand, organic material, No odor.	

SAMPLE ID	RPD (cm)	PENETRATION DEPTH (cm)	Characteristics	
LDW-SS81-010	1	14	black, gravel, silt, clay, wood debris, shell fragments, fine sand, organic material, worms. No odor.	
LDW-SS82-010	1	grey w/ brown surface layer, silt, wood debris, shell fragments, fine sand, organic matter worms. No odor.		
LDW-SS85-010	not visible, oil sheen.	brown, gravel, silt, wood debris, shell fragments, medium sand, fine sand, organic material. No odor.		
LDW-SS86-010	nv	13	grey, brown, wood debris, shell fragments, coarse sand, medium sand. No odor.	
LDW-SS90-010	nv	brown, brown surface layer, gravel, silt, coarse samedium sand. No odor.		
LDW-SS91-010	nv, oil sheen	12	brown surface layer, gravel, silt, wood debris, medium sand, fine sand, organic material, brick. No odor.	
LDW-SS93-010	nv - surface sheen	10	grey, silt, wood debris, shell fragment, fine sand, organic matter. No odor.	
LDW-SS95-010	1, pockets of oil sheen	12	grey, brown surface layer, gravel, silt, wood debris, shell fragments, fine sand, organic material, worm. Slight Petroleum odor.	
LDW-SS98-010	2.5	16	black with brown surface layer, silt, fine sand. N odor.	
LDW-SS100-010	not visible	10	brown, gravel, wood debris, shell fragments, coarse sand, medium sand, fine sand, organic matter. No or	
LDW-SS103-010	2	11	drab olive with brown surface layer, gravel, silt, wood debris, shell fragments, medium sand, fine sand, organic matter. No odor.	
LDW-SS105-010	2.5, extended surface sheen on water while sampling, colorful sheen and strong petroleum odor	14	grey w/ brown surface layer, gravel, silt, clay, wood debris, medium sand, fine sand, organic matter. No sediment odor, but strong petroleum odor from surface water.	
LDW-SS106-010	nv	12	grey w/ brown surface layer, gravel, silt, wood debris, medium sand, fine sand, organic matter. No odor.	
LDW-SS107-010	3	12	grey w/ brown surface layer, silt, medium sand, fine sand. No odor	
LDW-SS108-010	1	17	drab olive w/ brown surface layer, silt, wood debris, fine sand, organic matter, plant material. No odor.	
LDW-SS122-010	2, airborne petroleum odor at site	14	grey w/ brown surface layer, cobble, gravel, silt, wood debris, medium sand, fine sand, organic matter, worms. No odor.	
LDW-SS124-010	nv	10	brown, gravel, silt, coarse sand, medium sand, organic matter, plant, worm. No odor.	
LDW-SS131-010	3, pockets of sheen	17	grey w/ brown surface layer, silt, wood debris, fine sand, organic matter, worm. No odor.	
LDW-SS132-010	1.5, pockets of sheen	17	grey, brown surface layer, silt, fine sand, organic matter, plants, worms, tubes. Slight H <sub>2</sub> S odor.	

SAMPLE ID	RPD (cm)	PENETRATION DEPTH (cm)	Characteristics	
LDW-SS133-010	1.5	17	black w/ brown surface layer, silt, fine sand, organic matter, plant material. Moderate H <sub>2</sub> S odor.	
LDW-SS135-010	1	10	grey w/ brown surface layer, silt, coarse sand, medium sand, organic material, worms. Sand layer 2 cm down Slight $H_2S$ odor.	
LDW-SS136-010	1	10	grey w/ brown surface layer, silt, clay, wood debris, medium sand, organic matter, worms. No odor.	
LDW-SS137-010	1.5	17	black w/ brown surface layer, silt, fine sand, organic matter, plant material, worms, tubes. Slight H <sub>2</sub> S odor.	
LDW-SS138-010	3	12	grey w/ brown surface layer, silt, fine sand, organic material, plants, worms. Slight H <sub>2</sub> S odor.	
LDW-SS139-010	3	13	grey w/ brown surface layer, silt, medium sand, fine sand, organic material, plants, worm tubes. Slight H₂S odor.	
LDW-SS140-010	nv, pockets of surface sheen	11	grey w/ brown surface layer, silt, wood debris, medium sand, fine sand, organic material, worms. No odor.	
LDW-SS141-010	3	14	black w/ brown surface layer, silt, fine sand. No odor.	
LDW-SS144-010	4	10	black w/ brown surface layer, silt, fine sand, slight unknown odor.	
LDW-SS145-010	nv	15	brown, shell fragments, coarse sand, medium sand, organic matter. No odor.	
LDW-SS146-010	1	13	grey w/ brown surface layer, silt, wood debris, fine sand, organic matter. No odor	
LDW-SS147-010	1.5	17	grey, silt, medium sand, fine sand, organic matter, no odor.	
LDW-SS148-010	5	14	brown w/ brown surface layer, gravel, silt, wood debri medium sand, fine sand, organic matter, (orange colo sediment at surface, grey at deeper depth). No odor.	
LDW-SS149-010	1	12	grey w/ brown surface layer, silt, clay, wood debris, coarse sand, medium sand, fine sand, organic matter, plant material. Slight petroleum odor.	
LDW-SS150-010	not clearly visible, mostly sandy.	14	brown, silt, wood debris, medium sand, organic matter, plant material, grass, worm. No odor	
LDW-SS151-010	nv	10	grey/brown, gravel, coarse sand, medium sand. NO odor.	
LDW-SS152-010	nv	15.5	grey/brown, coarse sand, medium sand, no odor	
LDW-SS153-010	8.5	10	black w/ brown surface layer, silt, fine sand. No odor	
LDW-SS154-010	2.5	10	black w/ brown surface layer, somewhat red/iron colored, clay, fine sand. Slight unknown odor.	
LDW-SS155-010	4.5	10	grey/brown w/ brown surface layer, clay, medium sand, fine sand. Layers of grey, brown and red coloring in sediment. No odor.	
LDW-SS156-010	nv	15	brown, coarse sand, medium sand. No odor.	

SAMPLE ID	RPD (cm)	PENETRATION DEPTH (cm)	Characteristics
LDW-SS157-010	nv	10	brown, gravel, silt, wood debris, coarse sand, medium sand. No odor
LDW-SS158-010	2	14	grey w/ brown surface layer, silt, wood debris, shell fragments, medium sand, organic matter, worms. No odor.
LDW-SS159-010	2	10	grey, silt, wood debris, medium sand, fine sand, organic matter. No odor.
LDW-SSB2b-010	1	15	black w/ brown surface layer, gravel, wood debris, shell fragments, medium sand, fine sand, organic matter, worms. No odor.
LDW-SSB4a-010	2	11	drab olive w/ brown surface layer, silt, wood debris, shell fragments, medium sand, fine sand, organic matter, worms, plant material. No odor.
LDW-SSB5b-010	1	12	grey w/ brown surface layer, silt, wood debris, shell fragments, medium sand, fine sand, organic matter, plant debris. Moderate H <sub>2</sub> S odor.
LDW-SSB6a-010	1	10	grey w/ brown surface layer, silt, wood debris, shell fragments, coarse sand, medium sand, fine sand, organic matter, clams, worms. Slight H <sub>2</sub> S odor.
LDW-SSB7a-010	1	7	grey w/ brown surface layer, gravel, silt, fine sand, organic matter. Slight $H_2S$ odor.
LDW-SSB9a-010	3.5	11	black w/ brown surface layer, coarse sand, medium sand. No odor.
LDW-SSC1-010	nv	10	grey, silt, clay, wood debris, shell fragments, medium sand, fine sand, organic material, clams, worms. Slight H <sub>2</sub> S odor

RPD - redox potential depth

nv - not visible; no differentiable RPD was present

Table G-2. Surface sediment characteristics –greater Seattle area samples analyzed for dioxins and furans

SAMPLE ID	RPD (cm)	PENETRATION DEPTH (cm)	Characteristics
SC-SS1a-010	nv	15	drab olive, brown, sheen, silt, wood debris, coarse sand, medium sand, fine sand organic matter. Outfall did not appear to be flowing. Moderate petroleum odor.
SC-SS1b-010	1.5	16	grey w/ brown surface layer, silt, wood debris, fine sand, organic matter, plant material, worm. Pockets of oil sheen, outfall did not appear to be flowing. Moderate petroleum odor.
EB-SS2a-010	nv	13	black, gravel, silt, shell fragments, medium sand, fine sand, organic matter. Outfall did not appear to be flowing. Moderate H <sub>2</sub> S odor.
EB-SS2b-010	pockets of oily sheen	14	black, gravel, silt, medium sand, fine sand, organic matter, plant debris. Moderate $H_2\mathrm{S}$ odor.
LW-SS3-010	nv, pockets of oily sheen	18	drab olive, brown, silt, clay, wood debris, fine sand, organic matter. Slight $H_2S$ odor.
LW-SS4-010	nv	16	drab olive, silt, wood debris. Fine sand, organic mater, amphipod, roots, gravel <5%. Slight H <sub>2</sub> S odor.
LW-SS5a-010	nv, pockets of oily sheen	15	grey, silt, wood debris, medium sand, fine sand, organic material. Slight H <sub>2</sub> S odor and moderate unknown odor. Outfall slowly flowing, plume observed through clear surface water to extend ~10 ft in front of the outfall mouth and ~25 ft on either side.
LW-SS5b-010	nv, pockets of oily sheen	13	drab olive, silt, wood debris, medium sand, fine sand, organic matter, plant material. Slight H <sub>2</sub> S odor. Outfall slowly flowing, plume observed through clear surface water to extend ~10 ft in front of the outfall mouth and ~25 ft on either side.
SB-SS6-010	1.5	10	grey w/ brown surface layer, gravel, silt, wood debris, coarse sand, medium sand, fine sand, organic material, plant debris and worm. No odor.
DRD-SS7-010	nv	13	brown, silt, medium sand, fine sand, organic matter. No odor.
UB-SS8-010	nv	10	black, silt, wood debris, fine sand, lots of organic material, roots, weeds, plants, worm. Moderate H₂S odor. Outfall was not flowing.
LU-SS9a-010	nv	13	grey, gravel, wood debris, shell fragments, coarse sand, organic matter, clams, glass. No odor. Outfall did not appear to be flowing.
LU-SS9b-010	nv	16	drab olive, silt, clay, wood debris, fine sand, organic matter, clams, worms. Pockets of oily sheen. Outfall did not appear to be flowing. Slight H₂S odor.

RPD - redox potential depth

nv – not visible; no differentiable RPD was present

# APPENDIX G-2: SURFACE SEDIMENT COLLECTION FORMS



	Date: 3-16-05	Sediment Chemistry/Toxicity	Project no. 04-08-0 Station: LDW-S	ss- <u>2</u> -010
Start/Stop	time: 1/20		Crew: RAC	-, SP, AR
Sampling M	ethod Double 0.1-m² v	an Veen grab sampler		•
	ircle): Other:		Weather: Cloud	udy, windy & rain
	<u> </u>			<del>-),                                    </del>
GRAB INI	FORMATION BOTTOM DEPTH (M)			
314323252762363333344	14 ft	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/	200
1117	10 01		<u> </u>	Washout 47°34.152 122°20.927
1130	19 ++	12	<del></del>	49 34.150 122 20.929
uso	19 77		<del>'</del> <del>'</del> <del>'</del> <del>'</del> <del>'</del>	47°34.150 122°20.929
<del></del>				unable to get target station
				Clots of rip rap pm outpall, moved ont to where sampli
		:		more antownere sample
			·	was possible.
		· .		
SAMPLE I	NFORMATION			
Sample ID:	LDW-SS 2 -010	Analyses needed before	re homogenization (circle	e): Sulfides VOC AVS/SEM Other:
Sediment typ	e:	Sediment color:	Sedime	ent odor:
`abbla	Sandi C M/F)			, in

Sample ID: LDW-SS 2 -010 Analyses needed before homogenizat		ion (circle): Sulfides V	OC AVS/SEM Other:
Sediment type:	Sediment color:	Sediment odor:	
Cobble Sand: C M	Brown surface Gray	None	H₂S
Gravel Silt Clay	Brown Black	Slight	Petroleum
Organic matter Wood debris	Drab olive Other:	Moderate	Other:
Shell fragments Other: Worms		Strong	
Comments: RPD @ Z cm			
			•



Project Name: LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date: 03.09.05	Station:	LDW-SS-3 -010
Start/Stop time: 11-13/(1:58	Crew:	TOO, RAG LM, C.E., TP
Sampling Method Deuble 0:1 m² van Veen grab eampler		
(circle): Vother: Young grab	Weather:	overast.

GRAB TIME	Воттом рертн (м)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
11.13	12.2		M	wood caught in izes
11:20	12.2		N	rocks larand in izeus
11:24	12.1		Ν	chain hung up rock, washout; switch to Your
11:27	12-1		N	rock, washdowt; switch to your
11:36	12.2	17.	4	
11:46	12.2		N	washed out
11:58	12.3	12	4	
		-		
		,		

Sample ID: LD	W-SS 2 -010	Analyses needed before homogenization (circle): Sulfides VOC AVS/SEM Other:			
Sediment type:		Sediment color:	Sediment odor:		
Cobble	Sand:	Brown surface Gray	None	H <sub>2</sub> S	
Graver	Silt / Clay	Brown Black	Slight	Petroleum	
Organic matter	Wood debris	Drab olive Other:	Moderate	Other:	
Shell fragments	Other: worn kulas		Strong		



Project Name: LDW Rt-Surface Sediment Chemistry/Toxicity	Project no. 04-08-06-24
Date: _ 3.10.09	Station: LDW-SS 6010
Start/Stop time:	Crew: SMP, STS, TDo, CE, TP
Sampling Method Double 0.1-m² van Veen grab sampler	
(circle): Other:	Weather: low clouds, sun

#### **GRAB INFORMATION**

GRAB TIME	ORMATION BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
			ACCEPTABLE GHAD (1/N)	Parameter Comments and Comments
1258	9.3	14	\ \ <b>\</b>	
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		***************************************		
., <u>.                                 </u>				L

Sample ID: LDV	W-SS 6 -010	Analyses needed	l before homogenizati	on (circle): Sulfides	VOC AVS/SEM	Other:
Sediment type:		Sediment color:		Sediment odor:		
Cobble	Sand: CME	Brown surface	Gray	None	(H <sub>2</sub> S	
Gráve	(Sill) Clay	Brown	Black	Slight	Petroleum	
Organic matter	Wood debrie	Drab olive	Other:	Moderate	Other:	
Shell fragments	Other:			(Strong)	·	
Comments: RPD	@cm		EPA splits	ample		
			,	•		
			•		-	
						•



Project Na	me: LDW RI-Surface Se	diment Chemistry/Toxici	y Project	no. 04-08-06-2	4		
D	ate: 03.09.05			ion: LDW-SS-			
Start/Stop ti	me: 1047/104	7	Cr	ew: RAC,L	-M,TDO, CI	E,TP.	
Sampling Met	hod ∕Double 0.1-m² va	n Veen grab sampler	9				
(cire	cle): Other:		Weat	her: Meuro	zst		
GRAB INFO				• • • • • • • • • • • • • • • • • • • •	ula terrena en	Comments	
10:47		PENETRATION DEPTH	(CM) ACCEPTABL	E GRAB? (Y/N) /		COMMENTS	John Strame Committee Comm
10.47	10.8	19	· · · · · · · · · · · · · · · · · · ·	•	· ·		
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SAMPLE IN	FORMATION						
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	DW-SS 7 -010	1	l before homogeni			AVS/SEM Other	r:
Sediment type		Sediment color:		Sediment	odor:		
Cobble	Sand: C M	Brown surface	(Gray)	None		H₂S	
Gravel	(Silt) Clay	Brown	Black			Petroleum	
Organic matter		Drab olive	Other:	Moderate		Other:	
Shell fragments	_			Strong			
Comments: R	PD @cm		puncis of	- v- v:			
			pockets of Rinsate	blank t	allu		
			Missing	ב-מותו	557-RB		
				<del></del>	•		



Project N	ame: LDW RI-Surface S	ediment Chemistry/Toxicity	Project no.	04-08-06-24	<b>~</b> /	
I	Date: 3.7.05		Station:	LDW-SS-	-010	
Start/Stop	time: 15:46		Crew:	To, Smp	, STS	CE Boat
Sampling Me	ethod _Double 0.1-m² va	an Veen grab sampler	· <u> </u>			
(ci	rcle): Other:		Weather:	Overcos	stlemny	
THE STATE OF THE S	ORMATION			1		
GRAB TIME	Воттом реетн (м)	PENETRATION DEPTH (CM)	ACCEPTABLE G	RAB? (Y/N)	COMMEN	ITS
1546	14.6	17	Y			
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0.44401.5.11	NEODIA LEIGNI				4	
SAMPLE	NFORMATION			_		
Sample ID:	LDW-SS 8 -010	Analyses needed befo	re homogenizati	on (circle): Su	ulfides VOC AVS/SE	M Other:
Sediment typ		Sediment color:		Sediment odd	or:	
Cobble	Sand: C M F	Brown surface ( Gray	7	None	H₂S	
Gravel	Silty Clay	Brown Blac		Slight	Petro	leum
Organic matte		Drab olive Othe	1	Moderate	Other	•
Shell fragmen	ノヘーノー			Strong		
	RPD@ <u>  ~ 2</u> .cm	······································				
				•		
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## SURFACE SEDIMENT COLLECTION FORM

Project Name: LDW RI-Surface Sediment Chemistry/Toxicity Project no. 04-08-06-24

Date:	3.14.05		Station:	LDW-SS-	-010
Start/Stop time:	1600		Crew:	AR, RA	<u>.</u>
Sampling Method	Double 0.1-m <sup>2</sup> van	Veen grab sampler		, 	
(circle):	Other: By hand	with stainless	Weather:	Sunny	clear & warm
	Steel spoon			7,	
GRAB INFORM					
	TTOM DEPTH (M) F	ENETRATION DEPTH (CM)	ACCEPTABLE GE	IAB? (Y/N)	COMMENTS
1600		10	У		coordinates on station
					122°21.015 47°34.039
					47-34.03
			·, .		
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-					
		·			
		<u> </u>			
SAMPLE INFO	RMATION		•		
Sample ID: LDW	/-SS 9 -010	Analyses needed befo	re homogenization	on (circle): 🤄	Sulfides VOC AVS/SEM Other:
Sediment type:	· 	Sediment color:		Sediment oc	
Cobble	Sand: 👌 🕅 F	Brown surface Gray	, d	None	H <sub>2</sub> S
Gravel	Silty Clay	Brown Blac	k	Slight	Petroleum
Organic matter	Wood debris	Drab olive Othe	er:	Moderate	Other:
Shell fragments	Other: Glass			Strong	
Comments: RPD		No noticeable RP	D	·	
Plant debris	•	grandra (*)	<u>-</u> r		
1 mont over 112			•		
					•



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date:	03.08.05	Station:	LDW-SS- <u>//</u> -010
Start/Stop time:	1107 - 1127	Crew:	T.Do, S. Stillman, S. Pierce
Sampling Method	Oouble 0.1-m² van Veen grab sampler		C. Eaton, T. Patman Putnam
(circle):	Other:	Weather:	partly sunny, light wind

#### **GRAB INFORMATION**

	ORMATION			
GRAB TIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
1107	16.3	under - 9cm	N	sandy-Ion penetration.
1113	16.2	11	4	
			1	
			1.	
			*	
		. :		
		; ,		

Sample ID: LD\	W-SS // -010	Analyses needed	before homogenizat	ion (circle): Sulfides VOC	AVS/SEM Other:
Sediment type:		Sediment color:		Sediment odor:	
Cobble	Sand CO P	Brown surface	Gray	None	H₂S
Gravel	(M) (A)	Brown	Black	Slight	Petroleum
Organic matter	Wood debris	Drab olive	Other:	Moderate	Other:
Shell fragments	Other worms			Strong	
omments: RPD	@ <b>3</b> cm			•	
•			•		
				*	•



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date:	03.08.05	Station:	LDW-SS- <i>16</i> 010
Start/Stop time:	1053 - 1105	Crew:	T. Do, S. Shilman, S. Pierce
Sampling Method	Double 0.1-m² van Veen grab sampler		C. Eaton T. Putnam
(circle):		Weather:	overast, light wind
			1 ° 11

#### **GRAB INFORMATION**

	ORMATION	Province and a second second	A	
GRAB TIME	Воттом рертн (м)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
1053	13.0	/3	<b>Y</b>	
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e 1				
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Sample ID: LDW-SS 16-010	Analyses needed before homogeniza	ation (circle) Sulfides VOC AVS/SEM Other:
Sediment type:	Sediment color:	Sediment odor:
Cobble Sand CMF	Brown surface Gray	None H <sub>2</sub> S
Gravel Silf/ Clay	Brown Black	Slight Petroleum
Organic matter Wood debris	Drab olive Other:	Moderate Other:
Shell fragments Other www		Strong
Comments: RPD @ 1-2 cm		



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date:	03.08.05		LDW-SS- <u>19</u> 010
Start/Stop time:	0954-1022	Crew:	S. Stillman, T. Do, S. Pierce
Sampling Method	Oouble 0.1-m² van Veen grab sampler		C. Euton, T. Putnam
(circle):		Weather:	sunny, legat wind

#### GRAB INFORMATION

GRAB INFORMATION						
GRAB TIME	Воттом рертн (м)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS		
0954	12.4		N .	raight-wash ont		
0957	12.3		N	rag caught in laws - wash out		
1001	12.4	14	У	raight - wash on t rag caught in jaws - wash on t kept 1/2 grab		
1014	12.2	/5	Υ			
			:			
				,		
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	·			·		
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#### **SAMPLE INFORMATION**

Sample ID: LD	W-SS <u>/9</u> -010	Analyses neede	d before homog	genization (circle): Sulfides	VOC AVS/SEM Other:
Sediment type:		Sediment color:		Sediment odor:	
Cobble	Sand CMOP	Brown surfaces	(Gray)	None	H₂S
Gravel,	Silt Clay	Brown*	Black	Slight	Petroleum
Organic matter	Wood debris	Drab olive	Other:	Moderate	Other:
Shell fragments	Other: Works			Strong	
Comments: RPD					

duplicate - LOW \$205-010



Project i	Name: LDW RI-Surface Se		· -	04-08-06-24		
	Date: 03.08.05		-	LDW-SS- <b>2/</b> -01		
Start/Stop	time: 0940 -0	950	Crew:	T. Do, 5. St	Ilman, S. Plerce	
Sampling M	ethod Double 0.1-m² va	n Veen grab sampler	-	C. Eaton,	Ilman, S. Pierce` T. Putnam	
(0	circle): Other:			sunny		
			•	/		
	FORMATION					
GRAB TIME			CCEPTABLE GI	RAB? (Y/N)	COMMENTS	
0940	12.1	14				
<del></del>			<del></del>			
					AN	
			-			
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<del></del>						
			:			
				·		
SAMPLE	INFORMATION				•	
Sample ID:	LDW-SS 2/ -010	Analyses needed before h	omogenizati	on (circle): Sulfides	VOC AVS/SEM Other:	
Sediment ty	pe:	Sediment color:		Sediment odor:	• .	
Cobble	(Sand) C (M) (D)	Brown surface Gray		None	H₂S	
Gravel	(Silt) Clay	Brown Black		Slight	Petroleum	
Organic matter & Wood debris		Drab olive Other:		Moderate	Other:	
Shell fragments Other www.			Strong			
Comments:						
				•		



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date:	03.14.05	Station:	LDW-SS-24 -010
Start/Stop time:	1435	Crew:	AR, RAC, Kym Takasaki
Sampling Method	Double 0.1-m² van Veen grab sampler		
(circle):(	Other Byhand w 55 Spoon	Weather:	Sunny, clear + Warm

GRAB TIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	Comments
1435		10	Y	
				47° 33.656 122° 21.019
			1	
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			· · · · · · · · · · · · · · · · · · ·	MA Abytha groups
	V	, ,		

Sample ID: LDW-SS_24 -010	Analyses needed b	pefore homogenizati	ion (circle) Sulfides \	/OC AVS/SEM Other:
Sediment type:	Sediment color:		Sediment odor:	,
Cobble Sand: C M 🕞	Brown surface	Gray	None	H₂S
Gravel Sill)/ Clay	Brown	Black	Slight	Petroleum
Organic matter Wood debris	Drab olive (	Other:	Moderate	Other:
Shell fragments Other:			Strong	
Comments: RPD @ 2 cm				
Brick, boffles, shell				
				'
	v.			



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date:	3.10.05	Station:	LDW-SS-25010
Start/Stop time:	1730/1751	Crew:	STS, SMP, TDO, CE, TP
Sampling Method	Bouble 0.1-m² van Veen grab-sampler-		
(circle):	Other: young grab	Weather:	Sumy

#### GRAB INFORMATION

GRAB INFORMATION					
GRAB TIME	Воттом дертн (м)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS	
1738	2.8	13	Y	19m. N of target loc.	
1751	2.2	14	Y	19m. N of target loc.	
			-		
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Sample ID: LD\	N-SS_25-010	Analyses needed before homog	enization (circle): ¿ulfide	S VOC AVS/SEM Other:
Sediment type:		Sediment color:	Sediment odor:	
Cobble	Sand: C M	Brown surface Gray	None	H <sub>2</sub> S
Gravel	Silt Clay	Brown Black	Slight	Petroleum
Organic matter	Wood debris	Drab olive Other:	Moderate	Other:
Shell fragments	Other:		Strong	
Comments: RPD	@ <u>not</u> cm	EPA split	sample	
		1738 - 470 33.3	6439 1	751 - 47° 33.6437 172° 20.6811
		1220 20.6	an h	1700 20. 10611



Project Nan	ne: LDW RI-Surfaçe Se		city	Project no.	04-08-06-24			
Da	te: 03/14/0	<u> </u>		Station:	LDW-SS	<u> 29  </u> -010	•	
Start/Stop tim	ne: <u>08:36</u> -	0848				man, Si	Pierce,	
Sampling Meth	od Double 0.1-m² va	an Veen grab sample	er			uins		
(circl	e): Other 5 Ingl	e O. Imz V	an Veen	Weather:	sunn	y, dear		
					•	1.		
GRAB INFO								
The second secon	Воттом рертн (м)	PENETRATION DEPT	reconstruction of the control for	CEPTABLE GE	RAB? (Y/N)		COMMENTS	The second of th
08:36	6'(A)	16 app		Y		47°33		1
						122°2	20.967	
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-								
SAMPLE IN	FORMATION						200	
Sample ID: Li	ow-ss 29 -010	Analyses neede	ed before ho	moαenizatio	on (circle):(	Sulfides VOC	AVS/SEM Other:	
Sediment type:		Sediment color			Sediment of			
Cobble	(Sand; CM(F)	Brown surface	(Gray)		None		H <sub>2</sub> S	
Gravel	Sillar/ Clay	Brown	Black		Slight		Petroleum	
	_	1		ļ				•
Organic matter	Wood debris Other: No. 1	Drab olive	Other:	.	Moderate	•	Other:	
Shell fragments	1,			I	Strong			
Comments: RP	D @cm	-						
•								
					•			
,								



Project N	ame: LDW RI-Surface Se		Project no.		_		
Date: 63.08.05			Station: LDW-SS-30010				
Start/Stop	time: 0923 - 0	937	Crew:	Crew: T.Do, S. Shilman, S. Purce			
Sampling Me	thod Double 0.1-m² var	n Veen grab sampler	·	C. Eat	nn, T. Pa	tnam	
(ci	rcle): Other:		Weather:	suni	14'		
					i		
	ORMATION						
GRAB TIME	V-9	PENETRATION DEPTH (CM)	ACCEPTABLE G	RAB? (Y/N)		Comments	
0923	8.9	14-18	У				
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		**;				,, , , , , , , , , , , , , , , , , , , ,	
SAMPLE II	NFORMATION	•	1 -				
Sample ID:	LDW-SS 30 -010	Analyses needed be	fore tramagenizati	ion (circle): C	Sulfides VOC	AVS/SEM Other:	
Sediment typ		Sediment color:	iore nomogenizati	Sediment of		AVOICEM COLOR	
Cobble	(Sand) C M (D)	Brown surface Gr	21/	None		H₂S	
Gravel	Silt Clay					Petroleum	
			ack	Slight		6	
Organic matte	1013	Drab olive Ot	her:	Moderate		Other:	
Shell fragmen		<u>.</u>		Strong	<u> </u>		
Comments: F	RPD @ <b>Z</b> cm		ar r				
***			•				
			•				
						•	



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date:	03.8614.05	Station:	LDW-SS- <u>34</u> -010
Start/Stop time:	6911-0940	Crew:	5. Shilman 5. Pierce
Sampling Method	Double 0.1-m² van Veen grab sampler		b. mullin's
(circle):	Other:	Weather:	sunny
			<i>I</i>

#### GRAB INFORMATION

GRAB TIME	Воттом рертн (м)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
0911	12181)	5	Ν	4.5 th sporting by distance makes are managed as a substitute of the CAS (ASS 2) (ASS
0913	13(4)	8	iV.	
0917	6 13(FF)		N	Work in jams Hoksample although penetra was only glom-
0924	/3\g'\	*9	Υ	Hok sample although penetra
0933	13 (A)	9	Y	was only 90cm -
·		•		would be unable to penel > 9 cm deep.
				> 9 cm deep.
				•
	,	·		47°33.360
				122°20.748
				·

Sample ID: LDW-SS_34	-010 Analyses needed before	homogenization (circle): Sulfides	VOC AVS/SEM Other:
Sediment type:	Sediment color:	Sediment odor:	
Cobble Sand C	Brown surface Gray	None	H₂S.
Gravel Silt / Clay	/ Brown Black	Slight	Petroleum
Organic matter Wood de	bris Drab olive Other:	Moderate	Other:
Shell fragments Other: V	nms	Strong	
Comments: RPD @	- no defined f	LPD	
			•
¥		•	



Project Name: LDW RI-Surface Sediment Chemistry/Toxicity	Project no. 04-08-06-24
Date: 03.08.05	<b>Station:</b> LDW-SS- <u>35</u> -010
Start/Stop time: 1142 - 1200	Crew: S. Stillman, T. Do, S. Pierce
Sampling Method Double 0.1-m² van Veen grab sampler	C. Eaton T. Putnam
(circle): Other:	Weather: partly Sunny

#### CRAR INFORMATION

GRAB TIME	ORMATION			
· · · · · · · · · · · · · · · · · · ·	Воттом рертн (м)	PENETRATION DEPTH (CM)	Acceptable grab? (Y/N)	COMMENTS
1142	8.9	16	4	12 OK to keep
1149	8.2		<b>√</b>	Yz OK to keep wash ont-rock
1153	8.8	12	У	Haria
				-
				,
	-			
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		1		

Sample ID: LDW-SS 35 -010	Analyses needed before homogen	zation (circle): Culfides	VOC AVS/SEM Other:
Sediment type:	Sediment color:	Sediment odor:	
edada como	Brown surface Gray	None	H₂S
Grave Silv Clay	Brown Black	Slight	Petroleum
Organic matter Wood debrie	Drab olive Other:	Moderate	Other:
Shell fragments Other:		Strong	
Comments: RPD @cm  RPO nut V	risible Surjace Shea	n	
		•	



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date:	03.11.05	Station:	LDW-SS- <u>39</u> -010
Start/Stop time:	1835- 0905	Crew:	S. Shilman, T. Do, S. Pierce,
Sampling Method	Double 0.1-m² van Veen grab sampler		C.Eatm, T. Putnam
(circle):	Other: Young Brat sampler - weigh	1 Meather:	joggy, cool, calm

Control of the Contro	ORMATION			
GRAB TIME	Воттом дертн (м)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
0835	2.8		N	Jul not brigger
0839	3.0		<b>N</b>	Jul not Krigger Wash outrebar
0842	2.8	# 11	# Y	incomenant water in lots of wood
0851	2.8	_	N	laws shal not close
0854	2.6	15	У	luts of wood delivo
		<u> </u>		
	*			
		·:		
,				

Sample ID: LDW-SS	37 -010	Analyses neede	d before homogenizati	on (circle): Sulfides VOC	AVS/SEM Other:
Sediment type:		Sediment color:		Sediment odor:	
Cobble	ற <i>்டூடு</i>	Brown surface	Gay	None	H <sub>2</sub> S
Gravel Silt	/ Clay	Brown	Black	Stign	Petroleum
Organic matte Woo	od debos.	Drab olive	Other:	Moderate	Other:
Shell fragments Other	er:			Strong	
Comments: RPD @ _	cm				
	1	oil sheen			



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date:	03.08.05	Station:	LDW-SS- <u>41</u> -010
Start/Stop time:	0905 - 0920	Crew:	S. Stillman T. Do, S. Pierce
Sampling Method	Double 0.1-m² van Veen grab sampler		C. Eaton, T. Putnam
(circle):	Other:	Weather:	Bunny
			0

#### **GRAB INFORMATION**

GRAB TIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
0905	10.0	/1	7	2002 2 200 F F C S S S S S S S S S S S S S S S S S
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		-		
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Sample ID: LDV	v-ss 4 -010	Analyses needed	before homo	genizati	on (circle): Gulfide	S VOC AVS/SEM Other:
Sediment type:		Sediment color:			Sediment odor:	
Cobble	Sand OP	Brown surface (	Gray	. (	None	H₂S
Gravel	Silt Clay	Brown	Black		Slight	Petroleum
Organic matter	> Wood debris	Drab olive	Other:		Moderate	Other:
Shell fragments	Other: WMYMS				Strong	
Comments: RPD	@ <u>2-3</u> cm					
		•		•		
,						



	ame: LDW RI-Surface Se Date: 3.10.05			. 04-08-06-24 : LDW-SS	ss- <b>45</b> 010		
Start/Stop	time: 103Z/103	2	Crew	SMP,	STS, T.DO, CE, TF	>	
Sampling Me	thod Double 0.1-m² va	n Veen grab sampler	inveighted)	ted Ken	Takasaki		
(ci	rcle): Other:		Weather	· fooly,	Takasaki low clouds, soon		
				( )37			
GRAB TIME	ORMATION BOTTOM DEPTH (M)	PENETRATION DEPTH (	CM) ACCEPTABLE	SDAD2 (V/KI)	Сомме	RITS	
1032	10.5	15	CM) ACCEPTABLE	anab E (1711)	6.4m. exst of ta	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
1000	10.5				6.2001 04 120	y, no weights	
	-						
						•	
<i></i>							
				<u></u>			
		***************************************			-		
SAMPLE I	NFORMATION						
Sample ID:	LDW-SS 45 -010	Analyses needed	before homogeniza	tion (circle):	Sulfides VOC AVS/SE	EM Other:	
Sediment typ	ne;	Sediment color:		Sediment	odor:		
Cobble	Sand: CMF	Brown surface	Gray	None	H <sub>2</sub> S	•	
Gravel	Silt Clay	Brown	Black	Slight	Petr	oleum	
Organic matte	Vood debris	Drab olive	Other:	Moderate	Othe	er:	
Shell fragmen	ts Other: warms			Strong			
Comments: i	RPD @cm						



Project Name: LDW RI-Surface Sediment Chemistry/Toxicity	Project no. 04-08-06-24
Date: 3.10.05	Station: LDW-SS-Alo010
Start/Stop time: 1121/1143	Crew: SMP, ST3, TD0, CE, TP
Sampling Methody Double 0.1 m² van Voon grab sampler	
(circle): Other: Young grab	Weather: low clouds, sun

#### GRAB INFORMATION

GRAB TIME	FORMATION BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
1121	3.8		2	low recovery; switch to young apply
1130	3.0	W 14	Y	low recovery; switch to young grad- harf overpendented
1138	3.		7	overproducted
u43	3.2	12	Υ	
		·		
		,		
	1			
4				
				<u>:</u>
		п		
	*			

Sediment typ	۵۰	Sediment color		enization (circle): (Sulfides) Sediment odor:	
Cobble	Sand: OME				u e
Jobbie	Sand: Court	Prown surface	Gray	None	H₂S
Gravel	Silt / Clay	Brown	Black	Slight	Petroleum
rganic matte	Wood debbs	Drab olive	Other:	Moderate	Other:
hell fragmen	ts Other: Work	•		Strong	
Comments: F	IPD @ / cm	<i>ت</i>	HIPE AT	52.44 No	
_		ا	TA PLOT	and the same	•



Project Name: LDW RI-Surface Sediment Chemistry/Toxicity Project no. 04-08-06-24 Station: LDW-SS-47 -010 Crew: SNP, STS, TDO, CE, TP Sampling Method Double Weather: Sunny

RAB TIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
1344	3.3	8-9	N	low recovery
1349	3.[	<b>48</b>	N	washed out; switch to Young
1356	3.3		N	wasted out; rocks in jacos
1400	3.8		N	washed out; rocks in jaws
1403	4.3	**************************************	N	izers caught, not triggered
1404	4.2		N	izus did not trigger
1406	4.2		N	washed out; added move weig
1409	4.0	13-H	Y	3m. east of target
1417	4.0	14	Y	11 0
	****	*		

Sample ID: LDW	Analyses neede	s needed before homogenization (circle): Sulfides VOC AVS/SEM Other:			
Sediment type:		Sediment color:		Sediment odor:	
Copple	Sand CMF	Brown surface	Gray	None	H <sub>2</sub> S
Gravel	Sill / Clay	Brown	Black	Slight	Petroleum
Organic matter	Wood debris	Drab olive	Other:	Moderate	Other:
Shell fragments	Other: plant			Strong	



Start/Stop ampling Me	thod Double 0.1-m² va			Crew: S. Shilman, S. Pierce  D. Mulling  Weather: Sunny, clear		
	cle): Other:		Weather	Sunr	ry, clear	
RAR INF	ORMATION					
AB TIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (C	:m) ACCEPTABLE (	inab? (Y/N)	COMMENTS	
53	24 ht	16	У		47°33.002	
			. ,		122°20.471	
		make in the second				
		· ·				
				İ		
		ALL				
MPLE II	FORMATION					
ple ID:	LDW-SS_53010	Analyses needed l	pefore homogenizat	ion (circle): (	Sulfides) VOC AVS/SEM Other:	
ment typ		Sediment color:		Sediment o		
ole	Sand C M	Brown surface	Gray	None	H₂S	
/el	Sin/Clay	Brown	Black	Slight	Petroleum	
nic matte		<b></b>	Other:	Moderate	Other:	
fragment		<u> </u>		Strong		
ıments: F	PD @cm					



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date:	03.14.05	Station:	LDW-SS- <b>59</b> 010
Start/Stop time:		Crew:	Stillman, S. Pierce
Sampling Method	Single Deuble 0.1-m² van Veen grab sampler		D. mulins
(circle):		Weather:	sunny, clear

#### CDAR INFORMATION

GRAB INFORMATION					
GRAB TIME	Воттом рертн (м)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS	
1058	6 FF	10	4	1/2 x volume noeded	
11/1	6 H		N	1/2 prolume needed	
1113	6 H		N	mishred	
1115	6 A	14	Y	enough volume	
				47°32-901	
				122°20.432	
		*			
				•	
	· · · · · · · · · · · · · · · · · · ·			· ·	

Sample ID: Li	DW-SS <u>59</u> -010	Analyses needed	d before nomogeniza	tion (circle): Sulfid	es VOC	AVS/SEM Other:	
Sediment type:		Sediment color:		Sediment odor:			
Cobble	(Sand) COM (T)	Brown surface	Gray	None		H₂S	
Gravel	Silty Clay	Brown	Black	Slight		Petroleum	
Organic matter	Wood debris	Drab olive	Other:	Moderate		Other:	
Shell fragments	Other WWMS			Strong	*	1	
Comments: RP	D@ 2 101 am	r					
							-



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date:	3.10.05	Station:	LDW-SS- <u>61</u> -010
Start/Stop time:	1628/1642	Crew:	STS, SMP, TDO, CE, TP
Sampling Method	Double 0.1-m² van Voon grab sampler -	,	
(circle):	Nother: Young grab	Weather:	SUNNY

GRAB TIME	Воттом рертн (м)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
1628	4.8	. and an area principles and a second	N	aid not thip
1630	5.4	<u> </u>	2	did not two
1634	6.8	13	Y	
1642	le. B	15	Y	9.6 m. W. of target loc. 9.6 m W. of target loc.
				, ,
	44		· ·	
•				
	· ·			
	·			

Sample ID: LDW-SS 6 -010	Analyses needed before homogenizati	ion (circle): Sulfides VOC A	VS/SEM Other:		
Sediment type:	Sediment color:	Sediment odor:			
Cobble Sand:	Brown surface Gray	None	H <sub>2</sub> S		
Grave) Sill / Clay	Brown Black	Slight	Petroleum		
Organic matte) Wood debris	Drab olive Other:	Moderate	Other:		
Shell fragments Other: wows pla	wts .	Strong			
Comments: RPD @ mot cm					
· · · · · · · · · · · · · · · · · · ·			•		



Project Name: LDW RI-Surface Sediment Chemistry/Toxicity  Date: 3 9.05  Start/Stop time: LOOZ/1807  Sampling Method Double 0.1-m² van Veen grab sampler			Station:	Project no. 04-08-06-24  Station: LDW-SS- <u>b2</u> -010  Crew: <u>PAC</u> , TD, LN, CE, TP.  Weather: www.at			
(ci	rcle): Other:		Weather:	bus	ast		
GRAB INFORMATION							
GRAB TIME	Воттом дертн (м)	PENETRATION DEPTH (CM)	ACCEPTABLE GI	RAB? (Y/N)	COMMENTS		
18:02	12.8	***************************************	N		overpenetrated		
10:07	12.9	17	ΥΥ		ł		
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	***************************************						
					,		
		3,000 4944					
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	7						
	V						
SAMPLE INFORMATION							
Sample ID:	LDW-SS 62-010	Analyses needed befo	re homogenizati	on (circle)	Sulfides VOC AVS/SEM Other:		
Sediment type:		Sediment color:		Sediment odor:			
Cobble	Sand: CME	Brown surface Gray	D	None	H <sub>2</sub> S		
Gravel	Silt)/ Clay	Brown Blac	k	Slight —	Petroleum		
Ørganic matte	Wood debris	Drab olive Othe	er:	Moderate	Other:		
Shell fragments Other:				Strong			
Comments: F	γ	(none noted)					



	Date: 63.0	8.05	Station:	LDW-SS- 6	<b>S</b> -010		
Start/Stop time: 0844 - 6900				Station: LDW-SS-65-010  Crew: T. Do, S. Shilman, S. Pierce  C. Eatm, J. Putnam			
Sampling Method Double 0.1-m² van Veen grab sampler  (circle): Other:				C. Fatm	T. Pu	tram	
				Weather: Shny			
,	381011			6,00,00	<del>]</del>		
AB INF	ORMATION					-	
AB TIME	Summary to exact exert and amount of the first of the first every and	PENETRATION DEPTH (CM)	ACCEPTABLE GF	RAB? (Y/N)		COMMENTS	
44	5.2	13	Y				
		:					
	-		<del> </del>				
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				···	pt.		
						·	•
	NFORMATION  LDW-SS_65 -010	Analyses needed before	homogenizatio	on (circle)	Suffides VOC	O AVS/SEM Other:	
iment typ		Sediment color:		Sediment oc			
ble	Sand: CM (	Brown surface Gray		None		H₂S	
vel	Silty Clay	Brown Black	9	Slight		Petroleum	
anic matte		Drab olive Other:		Moderate		Other:	
I fragmen				Strong		onor.	
nments: F			<u></u>	20019			
						e.	
		and the second of the second of					



Project Name: LDW R4-Surface Scilment Chemistry/Toxicity Date: 63.04.05 Start/Stop time: 1745/1745 Sampling Method Double 0.1-m² van Veen grab sampler (circle): Other: Weather: Weather: Comments  GRAB INFORMATION  GRAB TIME BOTTOM DEPTH (M) PENETRATION DEPTH (CM) ACCEPTABLE GRAB? (V/N) COMMENTS  17-45 12-5 140  The start of the			
Start/Stop time: 1745/1445 Crew: RAL, TDo, LM, CE, TP Sampling Method Double 0.1-m² van Veen grab sampler (circle): Other: Weather: Weather: GRAB INFORMATION GRAB TIME BOTTOM DEPTH (M) PENETRATION DEPTH (CM) ACCEPTABLE GRAB? (Y/N) COMMENTS			
Sampling Method Double 0.1-m² van Veen grab sampler  (circle): Other: Weather: Weather: GRAB INFORMATION  GRAB TIME BOTTOM DEPTH (M): PENETRATION DEPTH (CM) ACCEPTABLE GRAB? (Y/N) COMMENTS:			
(circle): Other: Weather: Weather: GRAB INFORMATION  GRAB TIME   BOTTOM DEPTH (M)   PENETRATION DEPTH (CM)   ACCEPTABLE GRAB? (Y/N)   COMMENTS	RAC, TOO, LM, CE, IP		
GRAB INFORMATION  GRAB TIME BOTTOM DEPTH (M) PENETRATION DEPTH (CM) ACCEPTABLE GRAB? (Y/N) COMMENTS			
GRAB TIME   BOTTOM DEPTH (M)   PENETRATION DEPTH (CM)   ACCEPTABLE GRAB? (Y/N)   COMMENTS			
GRAB TIME   BOTTOM DEPTH (M)   PENETRATION DEPTH (CM)   ACCEPTABLE GRAB? (Y/N)   COMMENTS			
	<del></del>		
SAMPLE INFORMATION			
ample ID: LDW-SS 66 -010 Analyses needed before homogenization (circle): Sulfides VOC AVS/SEM	Other:		
ediment type: Sediment color: Sediment odor:	Othor.		
Cobble Sand: CMF Brown surface Gray None			
Gravel Silt / Clay Brown Black Slight Petroleur	m		
reganic matter Wood debris Drab olive Other: Moderate Other: hell fragments Other: Strong			
comments: RPD@cm (not woted) pockets of sheen			



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24	
Date:	3.7.05	Station:	LDW-SS-68010	
Start/Stop time:	14:26-14:32	Crew:	STS, SMP, TDO.	CEBoat
Sampling Method	Double 0.1-m² van Veen grab sampler		, , ,	
(circle):	Other:	Weather:	6 ver cast	

#### CRAR INFORMATION

GRAB INFORMATION						
GRAB TIME	Воттом дертн (м)	DEPTH (M) PENETRATION DEPTH (CM) ACCEPTABLE GRAD		3? (Y/N) COMMENTS		
14:26	29		2	Overpenetrated		
14:32	2.8	17	Υ			
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Sample ID: LDW-SS 68 -010	Analyses needed before homogenizat	ion (circle): Sulfides VOC	AVS/SEM Other:			
Sediment type:	Sediment color:	Sediment oder				
Cobble Sand: C M F	Brown surface Gray	None	H <sub>2</sub> S			
Gravel Silt Clay	Brown Black	Slight	Petroleum			
Organic matter Wood debris	Drab olive Other:	Moderate	Other:			
Shell fragments Other:		Strong				
Comments: RPD @cm						
LOTS of WORMS						
		•				
	•					
, ,	•					



Grave

Organic matte

Shell fragments

Comments: RPD @

Plant material

(Silt)/Clay

Other: Worms

Brown

Drab olive

Black

Other:

Project Name: \_LDW RI-Surface Sediment Chemistry/Toxicity

## SURFACE SEDIMENT COLLECTION FORM

Project N	ame: LDW RI-Surface S	Sediment Chemistry/Toxicity	_ Project no. 04-08-06-2	24	•
ı	Date: _3.16.05	- · · · ·	Station: LDW-SS	- 6 96-010	
Start/Stop	time: 1226		Crew: RAC,		
Sampling Me	Single	an Veen grab sampler	•		
		an veen grab sampier			
(CII	rde): Other:		Weather: <u>Cloud</u>	ly, windy i rai	h
CDAP INC	ORMATION				÷
GRAB TIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)			<b>UENTS</b>
			CCEPTABLE GHAB ( 1/N)		
1226	16 ft	15	<b>— Y</b>	47 32.640	12220.164
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<del>,,,,</del> ,			-	ŧ	
SAMPLE IN	IFORMATION			•	
····					
Sample ID:	LDW-SS 696010	Analyses needed before h	omogenization (circle):	Sumdes VOC AVS/S	SEM Other:
Sediment type	);	Sediment color:	Sediment	t odor:	
Cobble	Sand: CMF	Brown surface Gray	None	CH <sub>2</sub> S	<u> </u>

Slight

Strong

Moderate

Petroleum

Other:



	i e			
Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24	
Date:	03.14.05	Station:	LDW-SS- <u>7</u> -010	
Start/Stop time:	1210 - 1230	Crew:	S. Stilman S. Pierce, K. Takasa	Łί
Sampling Method	Double 0.1-m² van Veen grab sampler	•	Kertana ravasable D. Mullin	
(circle):	Other:	Weather:	sunny, clear	

### GRAB INFORMATION

**************************************	ORMATION			
GRAB TIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	Acceptable grab? (Y/N)	COMMENTS
1215	5 A		<i>N</i>	wood plant debisin jaw.
1220	ξÁ	11	У	1/2 volume needed
125	s A	# -	wood plant delas	heed to leave str. tide is going
1229	5 A	10	Y	woodf 1/2 volume needed
				-47°32.600
				(122°20.101
	V			Lothese coordinates plutted
				on land ~coordinate
				error recorded in field.
,	-			replaced actual coordina
				W/ target coordinates buse
				on held notes aerial photo
				and oversight direction
	• .			given while sampling
				•

Sample ID: LDW-SS 71 -01	O Analyses needed before homoge	enization (circle): Sulfides	VOC AVS/SEM Other:_
Sediment type:	Sediment color:	Sediment odor:	
Cobble Sand C(M)	Brown surface Gray	None	H <sub>2</sub> S
Gravel Silly/ Clay	Brown Black	Slight	Petroleum
Organic matter Wood debrie	Drab olive Other:	Moderate	Other:
Shell fragments Other: Way	ms/placts	Strong	
Comments: RPD @	cm .	Runsalt 61 LDW-55=	'ank taken 71-RB



Project Name: LDW RI-Surface Sediment Chemistry/Toxicity

## SURFACE SEDIMENT COLLECTION FORM

Project no. 04-08-06-24

Date: 3/15/05 Start/Stop time: 10:02				Station: LDW-SS-71010  Crew: AR HA BB			
Sampling M	ethod Single 0.1-m² va	ın Veen grab sampler					
	ircle): Other:		Weather:	dand	lin		
					)		
	ORMATION						
GRAB TIME	Воттом рертн (м)	PENETRATION DEPTH (CM)	Acceptable G	RAB? (Y/N)		COMMENTS	Pada yang mahang maga 14 mga 1
10:07	10 ft.	14	ΥΥ		47 32.542	177 70	0.804
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	ľ		<del></del>				
SAMPLE I	NFORMATION						
Sample ID:	LDW-SS <b>71</b> -010	Analyses needed befo	re homogenizat	ion (circle):	Sulfides VOC	AVS/SEM Oth	er:
Sediment ty		Sediment color:		Sediment			
Cobble	(Sand) C M(F)	Brown surface Thin Gray		None		H₂S	
Gravel	(Silt )Clay	Brown Black		Slight		Petroleum	
Organic matte	$\sim$	Drab olive Othe		Moderate		Other:	
Shell fragmer	4	DIAD ONVE OTHE	1.		other		
Comments:	•			Guran	011		
			·				
<u> </u>				<u></u>			



Project N	ame: LDW RI-Surface S	ediment Chemistry/Toxicity	Project no.	04-08-06-24		
	Date: 3.7.05		Station:	LDW-SS	73 -010	
Start/Stop	time: 09:42		Crew:	SMP	5T5, TD0	CE Boat
Sampling Me	thod Double 0.1-m² va	an Veen grab sampler				
(ci	rcle): Other:		Weather:	Vev (	cast	
					·	
mir. 022-m. (AVAUS 10AW 16W 27E-WO V. 20-1	ORMATION					
GRAB TIME	Воттом рертн (м)	PENETRATION DEPTH (CM)	ACCEPTABLE GR	RAB? (Y/N)	ili pipas propinci de C	OMMENTS
09:42	4.6	13	<u> </u>			
<del></del>						
<u> </u>						
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			•			
, te (4a						
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		******				
			· 			
SAMPLE I	NFORMATION					
Sample ID:	LDW-SS_73 -010	Analyses needed before	e homogenizatio	on (circle):	Sulfides VOC A	VS/SEM Other:
Sediment typ	e:	Sediment color:		Sediment	odor:	
Cobble	Sand: CMF	Brown surface (Gray	) (	None		H₂S
Gravel)	Silt Clay	Brown Black		Slight		Petroleum
Organic matte	r Wood debris	Drab olive Other	:	Moderate		Other:
Shell fragmen	ts Other:	-		Strong		
Comments: F	RPD @ <u>1</u> _cm	clams			·	
			•			
						·



Date Start/Stop time	3.7-05 : 11:25	ediment Chemistry/Toxicity	Crew:	STS,	<u> 79</u> 010 - SMP, -	TDo	CE Boa
		n Veen grab sampler	·		errast		
(circle)	: Other:	· · · · · · · · · · · · · · · · · · ·	Weather:	- Du	crost	•	
RAB INFOF					6 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		
	Annual Commence of the State of State o	PENETRATION DEPTH (CM)	ACCEPTABLE GI	AB? (Y/N)		COMMENT	
11 25	4.6	12-13	Y				
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			<u>:</u>		_		
		,					
							···
MPLE INF	ORMATION		· ·	•			
ple ID: LD\	W-SS010	Analyses needed before	e homogenizati	on (circle):	Sulfides V	OC AVS/SEM	Other:
ment type:		Sediment color:		Sediment	odor:		
ole	Sand: OMF	Brown surface Gray		None		H₂S	
e)	Silt Clay	Brown Black		Slight		Petrole	um
inic matter	Wood debris	Drab olive Other:	:	Moderate		Other:	
I fragments	Other: Warms			Strong			
ments: RPD	@ cm		<del></del>				
<del>-</del>	NOT VISI	RLF					
	IJU J VISTI						



Project Name: LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date:03. ) 4.05	Station:	LDW-SS- <u>77</u> -010
Start/Stop time: 1247 - 1315	Crew:	S. Shilman S. Pierce, K. Takasaki
Sampling Method 201-m² van Veen grab sampler		Managaran D. Mulins
(circle): Other:	Weather:	

	ORMATION			tinga ang ang ang ang ang ang ang ang ang
GRAB TIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
1247	5 A		<i>N</i>	wash aut
1252	5 A		<b>N</b>	wash ant
1257	5 <del>f</del>	11	7	1/2 volume needed
1303	5 A	13	4	enough volume
				0.
·				-47°32.543
				122° 20.805
			•	Cothese coordinates plotted
				on land - coordinate inter
				Am. sampling under the
				pier; replaced actual
				coordingles w/ target
				1000 dinates based on
				field notes aerial photos
			. 5	+ oversignt directinging
				field notes aerial photos forersignt directinging while sampling
	-			

Sample ID:	LDW-SS 37 -010	Analyses need	ed before homog	enization (circle): Sulfides	VOC AVS/SEM Other:
Sediment typ	e:	Sediment color		Sediment odor:	
Cobble	Sand C M A	Brown surface	Gray	None	H <sub>2</sub> S
Gravel	STILY Clay	Brown	Black	Slight	Petroleum
Organic matte	Wood debris	Drab olive	Other:	Moderate	Other:
Shell fragmen	ts Other: wwws			Strong	
Comments:	RPD @cm		· · · · · · · · · · · · · · · · · · ·		
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	pops	i can		-	
	1 1				



Project I	Name: LDW RI-Surface Se	ediment Chemistry/Toxicity	Project no. 04-08-06-24	4 78 010	
Start/Stor	time: 10.01		Crew: ST.S	78-010 SMP, TOO Cast	CFBO
	lethod Double 0.1-m² va	ın Veen grah sampler		011.11	
	circle): Other:	ar veen grab sampler	Weather: 0\00	Tast	
,-	Julian .				
GRAB IN	FORMATION				
GRAB TIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	Сомме	NTS
10:01	7.6	12	2		
<u> </u>		-			
		: .			
		<u> </u>			
		· · · · · · · · · · · · · · · · · · ·			
					·
SAMPLE	INFORMATION				
Sample ID:	LDW-SS 78 -010	Analyses needed befo	re homogenization (circle):	Sulfides VOC AVS/SE	M Other:
Sediment ty	pe:	Sediment color:	Sediment	odor:	
Cobble	Sand: C M(F)	Brown surface Gray	None	H₂S	
Gravel	Silt / Clay	Brown Blac	k Slight	Petr	oleum
Organic matt	ter Wood debris	Drab olive Othe	er: Moderate	Othe	∍r:
Shell fragme	nts Other:		Strong		
Comments:	RPD @cm				
	·				
			e e		
	•				



		Sediment Chemistry/Toxicity	Project no. 04-08-06-24	4
I	Date: <u>03.08</u> -0	)5	Station: LDW-SS	<u>81</u> -010
Start/Stop	time: 0749 -	0759	Crew:	, S. Shilman, S. Pierce
Sampling Me	ethod TARAPARATVAN	MANAGNAMANANA		aton, T. Putnam
(ci	ircle): Other: Youn	g Grat (weighted)		ny calm
		J	<b>,</b>	J
ng saturation / San	ORMATION			
GRAB TIME	Воттом рертн (м)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
0749	6.6	overpenetrated	<i>N</i>	removed partially-weights removed all weights
0755	6.5	overpenetrated	<i>N</i>	removed all weights
759	6.5	14	<u>y</u>	
				·
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		1		

Sample ID: LDW-SS 8 -010	Analyses needed before homogenization (circle): Culfides VOC AVS/SEM Other:				
Sediment type:	Sediment color:	Sediment odor:			
Cobble (Sand) C M (D	Brown surface Gray	None	H₂S		
Gravel Silt Clay	Brown Black	Slight	Petroleum		
Organic matter Wood debris	Drab ofive Other:	Moderate	Other		
Shell fragments Other: WWW 5		Strong			
Comments: RPD @cm					
			· ·		



Project N	ame: LDW RI-Surface S	ediment Chemistry/Toxicity	Project no.	04-08-06-24		
ĺ	Date: 3-7-	oS	Station:	LDW-SS-82	-010	
Start/Stop	time: 10:23		Crew:	SMP, ST	S, TDo	CE Boat
Sampling Me	ethod Double 0.1-m² va	an Veen grab sampler		•		
(ci	rcle): Other:		Weather:	Overras	+	
CDAR INC	ORMATION					
GRAB TIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE G	BAB? (Y/N)	COMMEN	TS
10:23	4.5	17	¥	•		
10101	-1.5	V [				
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		V.,				-
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SAMPLE I	NFORMATION					
Sample ID:	LDW-SS 2 -010	Analyses needed befo	re homogenizat	ion (circle): Sulf	ides VOC AVS/SEI	M Other:
Sediment typ	e:	Sediment color:		Sediment odor	;	
Cobble	Sand: C M F	Brown surface Gray		None	H₂S	
Gravel	(Silt) Clay	Brown Blac	k	Slight	Petrol	eum
Organic matte	Wood debris	Drab olive Othe	r;	Moderate	Other	:
Shell fragmen	$\sim$ $\sim$			Strong		
Comments:	RPD @cm		1	seld du	dicate taken	^
	Worms			LDu	plicate taken )-55 <b>82</b> 204	-010
				•		
•						



LDW RI-Surface Sediment Chemistry/Toxicity

Project Name:

## SURFACE SEDIMENT COLLECTION FORM

Project no. 04-08-06-24

Date: Start/Stop time	3.7.05	n8: 61	Station: LDW-SS 85  Crew: TD., SMP, STS  Weather: OVErcast		CE Boa	
•	nod: 0.1-m² van Veer		Weather: OVEVC	ast		
GRAB INF	ORMATION					
GRAB TIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	Acceptable grab? (Y/N)		COMMENTS	
08:40		ゼ ー	N	Rock		
08:45	4		N:	Rock	4.44	
08:50	2.4	12-13	Y	oK		
08:35			N	Rock		
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Sample ID: LDW-SS 85 -010	Analyses needed before homogenizat	ion (circle): Sulfides VOC A	VS/SEM Other:
Sediment type:	Sediment color:	Sediment odor:	<u>,</u>
Cobble Sand: C M F	Brown surface Gray	None	H <sub>2</sub> S
Gravel Silt Clay	Brown Black	Slight	Petroleum
Organic matter Wood debris	Drab olive Other:	Moderate	Other:
Shell fragments Other:		Strong	· · · · · · · · · · · · · · · · · · ·
Comments: RPD @cm	GUISHABLE	OIL SHEEN	<b>)</b>
		· · · · · · · · · · · · · · · · · · ·	



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
	03.10.05	Station:	LDW-SS- <b>_66</b> 010
Start/Stop time:	1529/1529	Crew:	SUP, STB, TDO, CE, TP
Sampling Method	Double 0.1-m² van Veen grab sampler		
(circle):	Other:	Weather:	SUMY

### GRAB INFORMATION

GRAD IN	ORMATION		1	
GRAB TIME	Воттом рертн (м)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
1529	2.2	[3	Y	COMMENTS  20.7un off target location
	-			
	×			

Sediment type:	Sediment color:	Sediment odor:	
Cobble Sand	Brown surface (Gray)	None (None)	H₂S
Gravel Silt / Clay	Brown Black	Slight	Petroleum
Organic matter Wood debris	Drab olive Other:	Moderate	Other:
Shell fragments Other:		Strong	



Project Name:					
Date:	03.14.05	5	Station: LDW - S	590-010	
-Start/Stop time	: 1230		Crew: AR, RA	, clear & warm	
Sampling Met	hod Single 0.1-m² va	an Veen grab sampler	Weather:		
(circle):	0.02 m² Ekman	grab-sampler, By hand	with Sunny	. clear & warm	
• •	stainless s	<del>grab sampler</del> , By hand teel Spoon	7	,,	
GRAB INF	ORMATION				Strian•rai
GRAB TIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS	5397
1230	~	10	У	47° 32.1532358	
				1220 19.5837266	
:					
			*****		
			·		
				•	

Sample ID: LD	W-5590-010	Analyses needed	l before homogenizati	on (circle): Sulfides VOC	AVS/SEM Other:
Sediment type:		Sediment color:		Sediment odor:	
Cobble	Sand: 🕢 🕅 F	Brown surface	Gray	None	H₂S
Gravel	Sill)/ Clay	Brown	Black	Slight	Petroleum
Organic matter	Wood debris	Drab olive	Other:	Moderate	Other:
Shell fragments	Other:		2.118	Strong	
Comments: RPD	@cm				
No notice	able RPD				
	0.0 101 15				-
*				•	
			ode 15		



	ame: LDW RI-Surface Sed	iment Chemistry/Toxicity		04-08-06-24		
	Date: 3.7.05		Station:	LDW-SS-	-010	
Start/Stop	time: 09:27 - 1	1:53	Crew:	SMP TO	o, STS	CE BOAT
Sampling Me	ethod Double 0.1-m² van	Veen grab sampler				
(ci	ircle): Other:	· · · · · · · · · · · · · · · · · · ·	Weather:	Overca	<u>s</u> +	
			•	•		
	ORMATION					
GRAB TIME	Воттом рертн (м)	PENETRATION DEPTH (CM)	ACCEPTABLE GE	RAB? (Y/N)		AMENTS Electronic de la company
0927	2 1		N	-	loo Shallow.	
11051	9.1	1-2	$\hat{N}$		47 cmx	etrieved.
[153	3.0	12	<u> </u>			
		·			, .	
			<del></del>			
-						
		· · · · · · · · · · · · · · · · · · ·			-	·
						, , , , , , , , , , , , , , , , , , ,
		· · · · · · · · · · · · · · · · · · ·				
	·	<u>·</u>	<u> </u>			
SAMPLE I	NFORMATION					'n
	LBW 00 91	<u> </u>		(-!!->	(F) VOO AV(	NOTA Other
	LDW-SS -010	Analyses needed before	nomogenizati			S/SEM Other:
Sediment typ	<u>~~~</u>	Sediment color:		Sediment od		
Cobble	Sand: C(M) F	Brown surface Gray	· (	None		l₂S
Grave	Silt /Clay	Brown Black		Slight		Petroleum
Organic matte		Drab olive Other:		Moderate	C	Other:
Shell fragmen		00:1		Strong		
Comments: I		- WHICK				
	MONEVISI	BRICK OIL SI	Heen			
		OIL 0	CICOIN			



Project Name: LDW RI-Surface Sediment Chemistry/To	oxicity Project no.	04-08-06-24	
Date: 03.15.05	Station:	LDW-SS- <u>93</u> -010	
Start/Stop time: ///5	Crew:	B. Completa	
Sampling Method _ Double 0.1-m² van Veen grab samp	oler	S. Pierce	
(circle): Other: Eleman grab	Weather:	overcast, cool	

## **GRAB INFORMATION**

GRAB TIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
1115		7	V ·	
		7	7	47°32.093 grav/
1119		7	Y	122° 19.504 greb 2
1121		10	У	grav 3
1124		10	<u>Y</u>	gret 4
1128		10	y	grav 5
11 30		Į (	Y	grav 6
			•	<u>O</u>
		,		
7				
, ,				·
	<u></u>	* 1111		<del> </del>
	<u> </u>	· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·
	· .			<u> </u>

Sample ID: LDW-SS 93 -010	Analyses needed before homogeniz	ation (circle): Gulfides VOC	AVS/SEM Other:
Sediment type:	Sediment color:	Sediment odor:	•••
Cobble 6and C M	Brown surface Gray	None	H₂S
Gravel Silt/Clay	Brown Black	Slight	Petroleum
Organic matter Wood debris	Drab olive Other:	Moderate	Other:
Shell fragments Other:		Strong	
Comments: RPD @cm	• · · · · ·		
RPD Not	VISI De	Gean	
	curpace -		



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date:	03.09.05	Station:	LDW-SS- <u>45</u> -010
Start/Stop time:	12:54/12:34	Crew:	RAC, TOO, LM, CE, TP.
	Double 0.1-m² van Veen grab sampler		Kyun Takasaki (oversylet)
	Yother: Young grab		oxiens4

GRAB TIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
12:54	4.0	8/10	2	
12:58	4.1	LB	2	too low recover, switch to younge
13:10	4.6	7	2	too low recovery, switch to Youngge
13:15	<i>A.</i> 6	12	¥	
13:23	4.5		Ñ	aid not deploy jaws did not close over partiated
13:27	4.8	<del></del>	2	jaws did not close
13:29	4.7		7	our generated
13:34	4.8	12	<b>Y</b>	1
			<del></del>	

Sample ID: LDW-SS95 -010	Analyses needed before homogenizati	on (circle): Sulfides VOC A	VS/SEM Other:
Sediment type:	Sediment color:	Sediment odor:	
Cobble Sand: C M F	Brown surface Gray	None	H₂S
Grave) Gill / Clay	Brown Black	Alight	Petroleum
Organic matter Wood debris	Drab olive Other:	Moderate	Other:
Shell fragments Other:		Strong	
Comments: RPD @cm	podats of oil sh	ien	
•	(		
•			
		·	



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date:	3/15/05	Station:	LDW-SS- <u>98</u> 010
Start/Stop time:	802	Crew:	AR BB, HA
Sampling Method	<del>Doubl</del> e 0.1-m² van Veen grab sampler		
(circle):	Other: Su	Weather:	cloudy
			0

GRAB TIME	Воттом дертн (м)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
8:02	12 94	12 A.16	Y	47 31.972 122 19.295
			•	
				able to get at target location
· 				worker afternative location
				not needed
	:			·
\				

Sample ID: LDW-SS 9B -010	Analyses needed b	efore homogenizati	on (circle): Sulfides VOC	AVS/SEM Other:
Sediment type:	Sediment color:		Sediment odor:	
Cobble Sand C M F	11 / /	Gray (	None	H₂S
Gravel Silt)/ Clay	Brown (E	Black bottom	Slight	Petroleum
Organic matter Wood debris	Drab olive	Other:	Moderate	Other:
Shell fragments Other:			Strong	
Comments: RPD @ 2-3 cm				
			,	



ampling Met	me: 1213 - hod Double 0.1-m² va cle): Other: Stum	4 1				mgh, T.Do, S. Purce
RAB INF	ORMATION					
213	BOTTOM DEPTH (M)	PENETRATION DEPTH	(CM) ACC	EPTABLE GI	XAB ( ( T/IN)	COMMENTS  43-81-803
40	OL SHOPE)	70		у		
						122 14,186
						122°19.191 47°31.905
			,			Cappiox 10 ft. for target
		,				
				· · · · · · · · · · · · · · · · · · ·		
		·				
		<u> </u>				·
		V				
					•	
VIPLE IN	FORMATION			÷	1	
ple ID:	DW-SS/06 -010	Analyses needed	d before hon	nogenizatio	on (circle): S	Sulfides VOC AVS/SEM Other:
ment type	: <b>Z</b>	Sediment color:			Sediment od	lor:
ole	Sand: CM 6	Brown surface	Gray	ķ	None	H₂S
el)	Silt / Clay	Brown	Black		Slight	Petroleum
nic matter	Wood debris	Drab olive	Other:		Moderate	Other:
fragments	Other:				Strong	



	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date:	3.7.05	Station:	LDW-SS-103-010
Start/Stop time:	12:57 - 13:10	Crew:	The same of the sa
Sampling Method	Double 0.1-m² van Veen grab sampler		· · · · · · · · · · · · · · · · · · ·
(circle):	Other:	Weather:	overcast

### GRAB INFORMATION

GRAB INF	ORMATION			
GRAB TIME	Воттом дертн (м)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
12:57			N	Chain lock
la:59	2.9	ll on one sid	e 112 Y	Used half of cample
13:10	3.0	1 11 ""		Chain lock Used half of sample Used one side of sample
				·
	***			·
<u>_</u>				

Sample ID: LDW-SS 107 -010	Analyses needed	i before homogeni	zation (circle) Su	fides VOC AVS/SEM Other:
Sediment type:	Sediment color:		Sediment odo	r:
Cobble Sand: CMF	Brown surface	Gray	None	H <sub>2</sub> S
Grave) Silty Clay	Brown	Black	Slight	Petroleum
Organic matter Wood debris	Prab olive	Other:	Moderate	Other:
Shell fragments Other:			Strong	
Comments: RPD @cm		Rinsate	blank t	alen
	•	<b>(</b> -	blank to	103-KB
				@ 12:59



Project Name: \_LDW RI-Surface Sediment Chemistry/Toxicity Project no. 04-08-06-24 03.08.05 Station: LDW-SS- 105 -010 Crew: S. Stillman, T. Do, S. Pierce C. Eatm, T. Putnam 1310 Start/Stop time: Sampling Method MANA AN AN Set Mai Annible A (circle): Other: Young Grab (weighted) Weather: sunny

CONTRACTOR CONTRACTOR	ORMATION			
GRAB TIME	Воттом дертн (м)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
1310	2.1		~	washout-rock
1317	2.2		N	wash out-rock wash out
1320	2.5		N	wash aut
1325	3.7		N	wash out-rock wash out-bake tire in jaws
1327	3.8	_	N	washout-blke tire in Jaws
1330	<u>₩3.8</u>	14	y	9.1 an Am target
		•		0 0
				•.
	,			
		-		<u> </u>
			1	·

Graver Silt Clay Brown Black Slight Petroleum Organic matter Wood debris Drab olive Other: Moderate Other: Shell fragments Other: Strong  Comments: RPD @ 2-3 cm	ample ID: LDW-SS 105 -010	Analyses needed before homo	genization (circle): (Sulfides	OC AVS/SEM Other:
Brown Black Slight Petroleum Organic matter Wood debrts Drab olive Other: Moderate Other: Shell fragments Other: Strong  Comments: RPD @ 2-3 cm	ediment type:	Sediment color:	Sediment odor:	
Organic matter Wood debits Drab olive Other: Moderate Other:  Shell fragments Other: Strong  Comments: RPD @ 2-3 cm	obble Sand CMP	Brown surface Gray	None	H₂S
Shell fragments Other: Strong  Comments: RPD @ 2-3 cm	ave Silt Clay	Brown Black	Slight	Petroleum
Comments: RPD @cm	ganic matter Wood debris	Drab olive Other:	Moderate	Other:
	ell fragments Other:		Strong	
e surjace scheen on water while sampling - colonjul sheen +				



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date:	03.08.05	Station:	LDW-SS- <b>/0@</b> -010
Start/Stop time:	1350 - 1415	Crew:	s. Shilman T. Do, S. Pierce
	Double 0.1-m² van Veen grab sampler		C. Euton, T. Putnam
(circle):	Other: Young grab (weighted)	Weather:	partly sunny, light wind

### GRAB INFORMATION

A4766441A76444A764A764A764A76	FORMATION			
GRAB TIME	Воттом рертн (и)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
1350	2.0		<u> </u>	wash out concrete block
1353	2.5	9 mark   3	#4 Y	wash who kack 1/2 is ok
1401	2.5		N	washout stick in jaws acceptable on 1/2
1403	2.5	11	4	acceptable on 1/2
	<u> </u>			
· ·				
		<u> </u>		
				·
		1	:	
•				· · · · · · · · · · · · · · · · · · ·
			-	

Sample ID: LDW-SS 106 -010	Analyses needed before ho	mogenization (circle): Sulfide	S VOC AVS/SEM Other:
Sediment type:	Sediment color:	Sediment odor:	
Cobble Sand CM 6	Brown surface Gray	Mone	H₂S
Gravel Silty Clay	Brown Black	Slight	Petroleum
Organic matter Wood debris	Drab olive Other:	Moderate	Other:
Shell fragments Other:		Strong	
Comments: RPD @cm			
Not visi	ble		



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date:	63.14.05	Station:	LDW-SS-107-010 .
Start/Stop time:	1534-1550	Crew:	5. Shilman, S. Plevce
Sampling Method	Deuble 0.1-m² van Veen grab sampler		P. mullin's
(circle):	Other:	Weather:	sunny, clear

A COURT OF THE RESIDENCE OF THE STREET, STREET	ORMATION			
GRAB TIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
1534	3 ht	UP~5	N	under penetration
1538	3 H	13	Y	1/2 volume needed
1540			N	did not gre
1545	3 <del>[]</del>	11	У	enaigh volume
				0
				47°31.724
				122°18.844
				8
-				
1.			<u> </u>	· · ·

Sample ID: LD	w-ss 167-010	Analyses needed before homog	enization (circle): Sulfides V	OC AVS/SEM Other:
Sediment type:		Sediment color:	Sediment odor:	
Cobble	Sand CM (5	Brown surface (Gray)	None	H₂S
Gravel	Gilt Clay	Brown Black	Slight	Petroleum
Organic matter	Wood debris	Drab olive Other:	Moderate	Other:
Shell fragments	Other:		Strong	
Comments: RPE	o@ <b>3</b> cm	•		
		· .		
	•			i
			•	
	•			



	time: 1446/14 hthod Souble 0.1-m² v	· ·		<u></u>	STS, TDO, CE, TP
	rcle): Other:	ar voor grab sampler	 Weather:	SUMMY	
(0.					
~ 6 4 v 4 06 to take promp (v 1 mm	ORMATION				
TIME	Воттом реетн (м)	PENETRATION DEPTH (CM)	ACCEPTABLE G	RAB? (Y/N)	COMMENTS
46	39		N		overpenetrated
53	3.9	17			1
-					
~					
			÷		
					,
		· · · · · · · · · · · · · · · · · · ·	***************************************		
				:	
					A A A A A A A A A A A A A A A A A A A
			•		
MPLE II	NFORMATION		,		
ple ID:	LDW-SS 108 -010	Analyses needed befor	e homogenizati	on (circle): (	Sulfides VOC AVS/SEM Other
liment typ	ie:	Sediment color:		Sediment o	odor:
ble	Sand: C M 🗗	Brown surface Gray		one	H₂S
vel	Silt Clay	Brown Black		Slight	Petroleum
	wood debris	Drab olive Other	:	Moderate	Other:
inic maite					



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date:	63.08.05	Station:	LDW-SS- <u>/22</u> -010
Start/Stop time:	1421-1430	Crew:	S. Stillman, T. Do, S. Aera
Sampling Method	Double 0.1-m² van Veen grab sampler		C. Eaton, T. Putnam
(circle):	Other Young grave (weighted	Weather:	SUNNY

GRAB TIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
1421	2.4	5	<b>N</b>	sand/gravel; low penetral
1425	2.4	14	Y	, , , , , , , , , , , , , , , , , , , ,
		-	:	
				18 Addition to the second seco
				·
			. ,	
		-		· ·
				*****

Sample ID: LDW-SS 122	010 Analyses needed before homo	Analyses needed before homogenization (circle): Sulfides VOC AVS/SEM Other:			
Sediment type:	Sediment color:	Sediment odor:			
Cobbie Sand C M	Brown surface Gray	None	H <sub>2</sub> S		
Gravel Silt Clay	Brown Black	Slight	Petroleum		
organie matter Wood debri	Drab olive Other:	Moderate	Other:		
Shell fragments Other W	NWB	Strong			
Comments: RPD @	cm				
petroleum oden at site (airborne)					
perroleum c	own at site Law	borte			
• •	· ·				



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date:	1315 03.15.06	Station:	LDW-SS-174 -010
Start/Stop time:	1215 - 1235	Crew:	B. Completa
Sampling Method	Double 0.1-m² van Veen grab sampler		S.Pierce
(circle): (	Offer: Stainless steel spoon	yWeather:	overcust, cool
	hand	′	,

## **GRAB INFORMATION**

GRABTIME BOTTOM DEPTH (M) PENETRATION DEPTH (CM) ACCEPTABLE GRAB? (Y/N) COMPANY SILVENT SILVEN	
122°18.	OMMENTS
122°18.	50
	508
ga target In rock Location Sampling	
in rock  Location  Sampling	loca treis was
Location Sampling	ailes amus d
Sampling	piles -maveg
Sampling	5 M where
	was possible
	A Carlotte de carrolle
	. ***

Sample ID: LD	ow-ss_124010	Analyses neede	d before homoger	nization (circle): Sylfides	VOC AVS/SEM Other:
Sediment type:		Sediment color:	-	Sediment odor:	
Cobble	Sang CM F	Brown surface	Gray	None	H₂S
Gravel	Clay	Brown	Black	Slight	Petroleum
Organic matter	Wood debris	Drab olive	Other:	Moderate	Other:
Shell fragments	Other plant, u	em		Strong	
Comments: RPE	D@cm		-		••••
	no vi	sible RPD			
		•	to the second second		· · · · · · · · · · · · · · · · · · ·
-					



Date: 03.08.  Start/Stop time: /45    Sampling Method   Double 0.1-m²			ion: LDW-SS- ew: <u>S.Shl</u>	131-010 Iman, T. Do, S. Pierce Son, T. Putnam y sunny, by
(circle): Other:	-	Weatt	ner: <u>parHu</u>	y sunny, by wind
GRAB INFORMATION				
GRAB TIME BOTTOM DEPTH (M)	PENETRATION DEPT	і (СМ) АССЕРТАВІ	E GRAB? (Y/N)	COMMENTS
415-1450 4.0	17		/	
			<u>.</u>	
				. '
1				
		<u> </u>	<del></del>	
		·		·
		-	*****	
			·	
AMPLE INFORMATION				
mple ID: LDW-SS 131 -010	Analyses neede	d before homogeni	zation (circle)	Sulfides VOC AVS/SEM Other:
ediment type:	Sediment color:		Sediment	odor:
obble Sand C M F	Brown surface	Gray	None	H₂S
ravel Silt Clay	Brown	Black	Slight	Petroleum
ganic matter Wood debris	Drab olive	Other:	Moderate	Other:
nell fragments Other work	n		Strong	
omments: RPD @3cr	n			
dianimate s	-10/	inte oh	Cl. ann	



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date:	3.9.05	Station:	LDW-SS- <u>137</u> -010
Start/Stop time:	1702/1715	Crew:	RAC, TOO, LM, CE, T.P.
Sampling Method	Double 0.1-m² van Veen grab sampler		
(circle):	Other:	Weather:	overest
,			

### **GRAB INFORMATION**

	GRAD INFORMATION								
GRABTIME	Воттом рертн (м)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS					
1702	5.8 5.5	17	7						
1215	46	• • • • • • • • • • • • • • • • • • • •	7						
1710	<b>7</b> (3)	17	<i></i>						
·									
· .									
		<u> </u>							
			•						
L				I					

Sample ID: LD	w-ss <u>132</u> -010	Analyses neede	d before homogenizat	on (circle): Sulfides	VOC AVS/SEM Other:
Sediment type:		Sediment color:		Sediment odor:	
Cobble	Sand: C M F	Prown surface	Gray	None	H <sub>2</sub> S
Gravel	Silt) Clay	Brown	Black	S(ight)	Petroleum
Organic matter	Wood debris	Drab olive	Other:	Moderate	Other:
Shell fragments	Other: plant, wa	s,tukes		Strong	
Comments: RPE	@_ <u>1-2</u> _cm			pockets a	f shan
				,	
·					



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date:	3.9.05	Station:	LDW-SS-[33_010
Start/Stop time:	14:37/14:54	Crew:	TDO, RAC, LM, CE, TP.
Sampling Method v	Double 0.1-m² van Veen grab sampler		
(circle):	Other. Vous grad	Weather:	overat

GRAB TIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
14:37	3.9		N	
14'44	4.0		7	overpenetrated will take officery
14:54	4.0	F	4	
		,		
		-		
		<u></u>		
			·	

Sample ID: LDW-SS 133 -010	Analyses needed before homogenizat	on (circle): Sulfides VOC A	VS/SEM Other:
Sediment type:	Sediment color:	Sediment odor:	
Cobble Sand: C M	Brown surface Gray	None	H <sub>2</sub> S
Gravel Silt Clay	Brown Black	Slight_	Petroleum
Organic matter Wood debris	Drab olive Other:	Moderate	Other:
Shell fragments Other:		Strong	
Comments: RPD @ 1-2 cm			
			•
	· · · · · · · · · · · · · · · · · · ·		



	LDW RI-Surface Se		iisii yi TOXI	ALY		04-08-06-24	26
	1245	<u> </u>				LDW-SS- <u>/</u>	
sampling Method Double 0.1-m² van Veen grab sampler		Crew:	15.60	mplita Berce			
	•						
(GIIGE).	Otter State	سومي		• .	Weather:	over	cast, conf
RAB INFOR	MATION		by h	and			
RABTIME BO	TTOM DEPTH (M)	PENETRATIO	ON DEPTH	(CM) Acc	EPTABLE G	RAB? (Y/N)	Comments
245		1	0	· .	7		pordinates on station
							(target
							122°18.407
					1		47°31.013
			<u>:</u> _				
			<del>, .</del>				
		***					
<u>  · _</u> _		<del></del>					
			·				
		<del></del>					
	·						
MPLE INFO	RMATION						
nple ID: LDW-	SS 135 -010	Analyses	needed	before hom	ogenizatio	n (circle): (	ulfides VOC AVS/SEM Other:
liment type:		Sedimen				Sediment of	
oble 💪	Sand OM F	Brown su	rface	(Gray)		None	(H <sub>2</sub> S)
vel 🧐	illy Clay	Brown		Black		Slight)	Petroleum
	Vood debris	Drab olive	1	Other:		Moderate	Other:
	offier outly my	onve	•	Julei.			Other:
nments: RPD @		****				Strong	



Project Name:		Sediment Chemistry/Toxicity	Project no.	04-08-06-24		
Date:	03.15.0	5	Station:	LDW-SS-1	<u>-010</u>	
Start/Stop time:	1315- /	340	Crew:	B.Com	plita	
Sampling Method	Double 0.1-m <sup>2</sup> v	an Veen grab sampler		S. Piera		
(circle):	other stan	nus steel s	poon Weather:	Overa	iast coul	
	1.	oy hand				
GRAB INFOR	MAIION					
***************************************	TTOM DEPTH (M)	PENETRATION DEPTH (CM)		RAB? (Y/N)	COMMENTS	
1315		[0]	<del>                                     </del>		47°30. 984	
					122°18.397	-
		7.	-			·
				•		
		<u> </u>				
		<del></del>	<u> </u>			
		······································	<del></del>		· ·	
		77	-			
					<del>-</del>	
		S. S. S. S. S. S. S. S. S. S. S. S. S. S				
						<del></del>
					·	<del></del>
AMPLE INFO	RMATION					
ample ID: LDW-	-SS 136 -010	Analyses needed befo	ore homogenizati	on (circle): (S	ulfides VOC AVS/SEM Other:	
ediment type:		Sediment color:		Sediment od		
obble	Sand: C(M)F	Brown surface Gra		None	H₂S	
ravei /	Silt / Clay	Brown Blac	·	Slight	Petroleum	
	Wood debris	Drab olive Othe		Moderate	Other:	
	Other WOLMS	January Comments		Strong	Onior.	
omments: RPD @				20019	A CAME CONTROL OF THE	



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date:	39.05	Station:	LDW-SS- <u>137</u> -010
Start/Stop time:	1534/1641	Crew:	RAC, TDO, LM, CE, TP.
Sampling Method	vDouble 0.1-m² van Veen grab sampler		
(circle):	Other:	Weather:	overest

	FORMATION			
GRAB TIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
153k	3.2		7	overgandrated
154	3.2		s.J	overpenetrated will return up wer overpenetrated on I Vanuar, kept of
1629	3.9	(7/0P	<b>ス/り</b>	Overpendented on I Vanvern, kept of
1641	3.7	17	Ý	
		•		
	- ::		<u> </u>	
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			-	
			. '	
		- 1,0 1,11, 1 - 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,		

Sample ID: LD\	w-ss <u>137</u> -010	Analyses neede	ed before homogenizati	ion (circle): Sulfides VOC	AVS/SEM Other:
Sediment type:		Sediment color	:	Sediment odor:	
Cobble	Sand: C MF	Brown surface	Gray	None *	H₂S
Gravel	<b>Clay</b>	Brown	Black	Sligh	Petroleum
organic matter	Wood debris	Drab olive	Other:	Moderate	Other:
Shell fragments	Other: plant, were	n fabes		Strong	
Comments: RPD	@ <u>1-2</u> cm	•			



Project Name	: LDW RI-Surface S	ediment Chemistry/Toxicity		04-08-06-24			
	3.9.05		Station:	LDW-SS- <u>I</u>	<u>38</u> -010	· · ·	
Start/Stop time	: 1516/151	Ь	Crew:	TDO F	CAC LM	CE TP	
		an Veen grab sampler					
(circle)	: Other:		Weather:	overezo	-A		
AB INFOF			1.0000000000000000000000000000000000000				
	OTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE G	RAB? (Y/N)		COMMENTS	er en en en en en en en en en en en en en
16	2.6	12	ΥΥ				
		•					
						•	
						····	
	İ					***************************************	
MPLE INF	ORMATION	•					
<del>.</del>	170			·		.,,,,	
	w-ss <u> 138</u> -010	Analyses needed befo	re homogenizati			AVS/SEM Other:	
ment type:	0 + 0 11 (5)	Sediment color:		Sediment	odor:		
ble	Sand: C M (F)	Brown surface Gray		None		H <sub>2</sub> S)	
/el	(Silp) / Clay	Brown Black		Slight) —	<del></del>	Petroleum	
inic matter	Wood debris	Drab olive Othe	er:	Moderate		Other:	
fragments	Other: plant, wo	No.		Strong			
ments: RPD	@. <u> </u>						



Project Name: LDW RI-Surface Sediment Chemistry/Toxicity

## SURFACE SEDIMENT COLLECTION FORM

Project no. 04-08-06-24

Date: 3.9.05			Station:	Station: LDW-SS- <u>[34</u> -010				
Start/Stop	time: 1556/15	56	Crew:	Crew: RAC, TDO, LM, CE, TP				
Sampling Method Double 0.1-m² van Veen grab sampler				•	, , , , , ,			
	rcle): Other:		Weather:	OVEVEZ	d-			
`	,			0 40002				
GRAB INF	ORMATION							
GRAB TIME	Воттом рертн (м)	PENETRATION DEPTH (CM)	ACCEPTABLE G	нав? (Y/N)	ille de de de disente la	COMMENTS		
1556	3.0	13	Y					
					-			
SAMPLE II	NFORMATION	**						
Sample ID:	LDW-SS 134-010	Analyses needed before	re homogenizati	on (circle):	Sulfides VOC	AVS/SEM Other:	_	
Sediment typ	e:	Sediment color:	•	Sediment of	odor:			
Cobble	Sand: CME	Brown surface Gray	)	None		H <sub>2</sub> S		
Gravel	Silt Clay	Brown Black		(Slight)		Petroleum		
Organic matte	_	Drab olive Othe		Moderate		Other:		
Shell fragmen		l.		Strong				
Comments: F	· · · · · · · · · · · · · · · · · · ·							



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date:	03.08.05	Station:	LDW-SS- 140 -010
Start/Stop time:	1508-1520	Crew:	S. Shilman T.Do, S Pierce;
Sampling Method	Rouble 0.1-m² van Veen grab sampler		C. Eatm. T. Putnam
(circle):	Other:	Weather:	sunny right breeze

GRAB TIME	FORMATION BOTTON DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
'508	5.00	11	7	
	<u> </u>	. ,	. /	
				·
				·
				·
·				

Sample ID:	LDW-SS /40 -010	Analyses need	ed before hom	ogenization (circle) Sulfides	VOC AVS/SEM Other:
Sediment typ	e:	Sediment colo	**	Sediment odor:	
Cobble	Sand C MT	Brown surface	Gray	None	H₂S
Gravel	SD/ Clay	Brown	Black	Slight	Petroleum
Organic matte	Wood debris	Drab olive	Other:	Moderate	Other:
Shell fragmen	ts Other NOM	ζ		Strong	
Comments: F	RPD@ <u>×</u> cm No visible f	PD			
	7	ockuts	3 8	urface Shee	n



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date:	3/15/05	Station:	LDW-SS- <u>/41</u> 010
Start/Stop time:	8:44	Crew:	AR, BB, HA
Sampling Method(	Bouple 0.1-m² van Veen grab sampler		
(circle):	Other:	Weather:	doudy
•			Ü

### CDAD INCODMATION

	ORMATION	Times and the second se		
GRAB TIME	Воттом дертн (м)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
8:44	6 ft.	14 cm	Y	47 30.788 122 18.343
8:56	69	14.5 cm	Y	17-30.788 12218.343
			•	
	·			
			·	
	;			
		74		
			·	

Sample ID: LD\	N-SS <u>[4 </u> -010	Analyses needed	l before homogenizati	on (circle): Sulfides VOC	AVS/SEM Other:
Sediment type:		Sediment color:		Sediment odor:	·
Cobble	Sand C M F	Brown surface	Gray	None	H <sub>2</sub> S
Gravel	Silt Clay	Brown	Black bottom	Slight	Petroleum
Organic matter	Wood debris	Drab olive	Other:	Moderate	Other:
Shell fragments	Other:	`		Strong	
Comments: RPD	@ <u>3</u> _cm		· ·		
	•				* *
	N.				



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date:	3/15/05	Station:	LDW-SS- <u>144</u> -010
Start/Stop time:	15:00	Crew:	AR, HA, BB
Sampling Method	Double 0.1-m² van Veen grab sampler		, , , , , = -
(circle):	one on foot with stainless	Weather:	mostly sunny/hazy
	Steel spoon		J 3000 9/ 10 J

GRAB TIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
5:00		10	7	17 30,743 122 17.895
				location moved slightly
				off target ble target
				location was on
				moved location to edge of sand cap on
				shore side
				SIGITESIGN

Sample ID: LDW-SS 44 -010		Analyses needed before homogenization (circle): Sulfides VOC AVS/SEM Other:				
Sediment type:		Sediment color:		Sediment odor:		
Cobble Sa	and CMF	Brown surface	Gray bettom.	None	H₂S	
Gravel Sil	lt/ Clay	Brown	Black	Slight Chemical	Petroleum	
Organic matter W	ood debris	Drab olive	Other:	Moderate	Other:	
Shell fragments Ot	ther:			Strong		
Comments: RPD @	스cm					
	-					



Project Name:	LDW Rt-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date:	03.14.05	Station:	LDW-SS- <u>145</u> -010
Start/Stop time:	1505 -1510	Crew:	S.Shilman, S. Pierce
Sampling Method	Singile	•	D.Mulling
(circle):	Other:	Weather:	Sunny, clear

### **GRAB INFORMATION**

GRAB TIME	Воттом дертн (м)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
1505	40		N	did not live
1508	47	15	7	Led not give 47°30.717 122°17.763
				122017.763
				·
	·			
				·
		·		

Sample ID: LDW-SS_145-010		Analyses needed before homogenization (circle): Sulfides VOC AVS/SEM Other:				
Sediment type:		Sediment color:		Sediment odor:		
Cobble	Sand CM F	Brown surface ~	Gray	None	H <sub>2</sub> S	
Gravel	Silt / Clay	Brown	Black	Slight	Petroleum	
Organic matter	Wood debris	Drab clive	Other:	Moderate	Other:	
Shell fragments	Other:			Strong		
Comments: RPI	oecm					٠.
•						



Project Name:  Date:  Start/Stop time:  Sampling Method  Circle):  LDW RI-Surface Sediment Chemistry/Toxicity  93.08.05 03.09.05  1305 -1348  Single 0.1-m² van Veen grab sampler  0.02-m² Ekman grab sampler			Project no. 04-08-06-24  Station: UDW-146  Crew: F. McNair, S. Pierce, E. Parker  Weather:  partly clandy, cool				
Commence of the Science Assess	ORMATION			<b>*</b>			
GRAB TIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS			
1305	2.6 (ft)	11	<u> </u>	122°18.651			
1321	2.6 (4)	14	7	47.30.714			
		,					
			1.00 H 1100M				
<del></del>							
<u> </u>							
<u> </u>							
				· ·			

Analyses needed	l before homogenizati	on (circle): Sulfides VOC A	VS/SEM Other:
Sediment color:		Sediment odor:	
Brown surface	Gray dr/L	None	H₂S
Brown	Black	Slight	Petroleum
Drab olive	Other:	Moderate	Other:
·	<u> </u>	Strong	
			1
		coordinates	on target
	-		
	Sediment color:  Brown surface  Brown	Sediment color:  Brown surface Gray Black	Sediment color:  Brown surface Gray L None  Brown Black Slight  Drab olive Other: Moderate



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity		
Date:	03.05.05 03.09.05	Station:	CPWG-147
Start/Stop time:	1350 - 1415	Crew:	S. Pierce, F. McNair, E. Parker
Sampling Method			light rain (i)
Sampling weared (	0.02 m² Ekman grah sampler	TTCGGTC1.	right raint (C)

#### GRAB INFORMATION

GRAB TIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
13 50	3.9 A	17	7	122018.274
				47.30.703
<u></u>				
	: .			
<u></u>				

Sample ID: 10WG-147	Analyses neede	d before homogenizati	on (circle): Sulfides VOC	O AVS/SEM Other:
Sediment type:	Sediment color:	· ·	Sediment odor:	
Cobble Sand: C M F	Brown surface	GAVANK (	None	H₂S
Gravel Silt / Clay	Brown	Black	Slight	Petroleum
Organic matter Wood debris	Drab olive	Other:	Moderate .	Other:
Shell fragments Other:		J	Strong	
Comments: RPD @ 477 Cm				/
1-2			;	t i
			coord	inatio on target
			•	•
				•



Project Name: LDW RI-Surface Sediment Chemistry/Toxicity Project no. 04-08-06-24 03.09.05 Station: LDWG-148 Date: Crow: S. Pierce, F. Me Nair, K. Takasaki Start/Stop time: Weather. E. Parker Single 0.1-m2 van Veen grab sampler Sampling Method overcast cor 0.02-m<sup>2</sup> Ekman grab sampler (circle):

	ORMATION	No. 2005. And American St. St. St. Co. 2 April 1991. Manual		
GRAB TIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
1438	47.34	14	У	122°18.097
1452	7.4 A	13	<b>'</b> \	47°30.682
	• 1,		,	
			valido en esta composição do como en esta co	
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			. 3,004	-
				- AND AND AND AND AND AND AND AND AND AND
				A A A A A A A A A A A A A A A A A A A

Sample ID: UOW G - 148	Analyses needed	d before homogeniz	ation (circle): Sulfid	es VOC AVS/SEM Other.
Sediment type:	Sediment color:		Sediment odor:	
Cobble Sand CMG	Brown surface	Gray	None	H₂S
Gravel fine Sit Clay	Brown	Black	Slight	Petroleum
Organic matter Wood debris	Drab olive	Other:	Moderate	Other:
Shell fragments Other:			Strong	
comments: RPD @ 5 cm  orange ~ colos C  gray	surpee at Leep	er depth		coordinates on target



LDW RI-Surface Sediment Chemistry/Toxicity

## SURFACE SEDIMENT COLLECTION FORM

Project no. 04-08-06-24



			<del></del>	•				
Date:	£3.00.0	23.00.05 63.09.05		150-149				
Start/Stop time: 1008 - 1621 Sampling Method Single 0.1-m² van Veen grab sampler		- 1621	crow: F. McNair, S. Pierce, G. Paulcen					
		an Veen grab sampler	Weather:					
(circle):	0.02-m² Ekman	grab sampler	over	ast light breeze.				
•								
A Service and the Australia of Service and	FORMATION							
GRABTIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS				
1608	4.7	12	7	122.18.200				
1621	4.8		, in the second	47°30.675				
V - (								
			:					
				·				
			,					
·								

149			
Sample ID: WW Llow-150	Analyses needed before homogenizati	on (circle): Suffides VOC	AVS/SEM Other:
Sediment type:	Sediment color:	Sediment odor:	
Cobble Sand M F	Brown surface Gray	None	H₂S
Gravel Silt Clay	Brown Black	Slight	Petroleum
Organic matter Vood debris	Drab olive Other:	Moderate	Other:
Shell fragments Other of aut		Strong	
Comments: RPD @cm	( surface)		
	V	· F	
		,	
·			column to a
		700	rdinates in target
	•		in rarget



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity		
Date:	13.08.05 03.09.05	Station:	LOWG-44 150
Start/Stop time:	1534 - 1555		F. McNair, S. Pierce, E. Parker
Sampling Method	Single 0.1-m² van Veen grab sampler	Weather:	
(circle):	0.02-m² Ekman grab sampler		uvercast, cool

GRAB TIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
1534	5.48	11	Y	hde-10.2ft
1544	5.0 G	17	, Y	122°18.127
				47°30.640

150				
Sample ID: WWG - IN	Analyses needed b	oefore homogenizati	on (circle): Sulfides	YOC AVS/SEM Other:
Sediment type:	Sediment color:		Sediment odor:	
Cobble Sand CM F	Brown surface (	Gray <b>(</b>	None	H₂S
Gravel Silt Clay	Brown E	Black	Slight	Petroleum
Organic matter) Wood debris	Drab olive	Other:	Moderate	Other:
Shell-fragments Other Dlant	164		Strong	
Comments: RPD @cm 7	Yass, wom	`		
LARAD not c	learly visi	ible	· ,	
<b>W</b>	ostly sand	4		coordinates on target



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date:	3/15/05	Station:	LDW-SS- <u>151</u> -010
Start/Stop time:	14:25	Crew:	AR, HA, BB
Sampling Method	Double 0.1-m² van Veen grab sampler		
(circle):	Other:	Weather:	party dondy
GRAB INFORM	MATION		40 3 00 0

	ORMATION		•	
GRAB TIME	Воттом дертн (м)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
13:25	5H		N	sampler didn't dose
14:29			2	wash out
14.30	59	10	7	Sampler didn't close wash ont 47 30.649 122 17.729
	· · · · ·	,	·	
			<del></del>	
	- 2		÷ .	·
		· · · · · · · · · · · · · · · · · · ·		·
				· · · · · · · · · · · · · · · · · · ·
				I

Sample ID: LDW	/-SS_/ <i>5)</i> 010	Analyses neede	d before homogenizat	ion (circle): Sulfides VOC	AVS/SEM Other:
Sediment type:		Sediment color:		Sediment odor:	,
Cobble	Sand (C-M) F	Brown surface	Gray (	None	H <sub>2</sub> S
Gravel	Silt / Clay	Brown	Black	Slight	Petroleum
Organic matter	Wood debris	Drab olive	Other:	Moderate	Other:
Shell fragments	Other:			Strong	
Comments: RPD	@cm	hone		•	
		÷	* - 4		•
-					



Project Name: LDW RI-Surface Sediment Chemistry/Toxicity

## SURFACE SEDIMENT COLLECTION FORM

Project no. 04-08-06-24

i	Date: 3/15/05			LDW-SS- <u>/5</u>			
Start/Stop	time: 14:07		Crew:	AR, HA	, BB		
Sampling Me	ethod Double 0.1-m² va	n Veen grab sampler					
(ci	rcle): Other: Trigw		Weather:	cloudy			
					)		
CHARLES WAS AND A SECOND SECON	ORMATION		in the same area and a same area.				
GRAB TIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GR	281711174KC 27511711117127 C 1777		COMMENTS	
14:07	99	15.5	Y		17 30.606	122 17,619	
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		•					
	***					<del></del> .	
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	•						
						·	
SAMPLE I	NFORMATION						
Sample ID:	LDW-SS 152 -010	Analyses needed befo	re homogenizatio	n (circle). S	ulfides VOC	AVS/SEM Other:	
Sediment typ	e:	Sediment color:		Sediment od	lor:		
Cobble	(Sangl: (C-M) F	Brown surface Gray	フ * d	None		H₂S	
Gravel	Silt / Clay	Brown Blac	k	Slight		Petroleum	
Organic matte		Drab olive Othe	* }	Moderate		Other:	
Shell fragmen				Strong			
Comments: F		hone					
-	-	1 (0 )	\$ - \$				



			·
Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date:	3/15/05	Station:	LDW-SS- <u>153</u> -010
Start/Stop time:	1345	Crew:	AR, HA, BB
Sampling Method	Double 0.1-m <sup>2</sup> van Veen grab sampler	•	•
(circle):	Other on food w/ strainless Steel spoon	Weather:	clardy
	Steel Spoon		
GRAB INFORM			

GRAB TIME	Воттом дертн (м)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
13:45		10		47 30.524 122 17.566
	-			
	······································			
· · · · · · · · · · · · · · · · · · ·				

			W.W.
Sample ID: LDW-SS_/53010	Analyses needed before homogenizat	ion (circle): Sulfides VOC	AVS/SEM Other:
Sediment type:	Sediment color:	Sediment odor:	
Cobble (Sand:) C M(F)	Brown surface Gray below (	None	H₂S
Gravel Silt Clay	Brown Black redox depth	Slight	Petroleum
Organic matter Wood debris	Drab olive Other:	Moderate	Other:
Shell fragments Other:		Strong	
Comments: RPD @ 8-9 cm	pockets of iron	I red deposits	
: 			·



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date:	3/15/05	Station:	LDW-SS- <u>154</u> -010
Start/Stop time:	13:11	Crew:	AR, HA, BB
Sampling Method	Double 0.1-m² van Veen grab sampler	, .	
(circle):	other: by hand with stainless steel spoon	Weather:	cloudy
	steel spoon		

CDAR INFORMATION

GRAB TIME	ORMATION  BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
(3:0)			<u> </u>	
13:15		10	Υ ,	empty grab - Van Veen 47 30.327 122 17,717
			byh	1
		•		
				·
				,
			-	
	•			,
				·
				-

Sample ID: LDW-SS 154 -010	Analyses needed before homogenizat	tion (circle): Sulfides VOC AVS/SEM Other:
Sediment type:	Sediment color:	Sediment odor:
Cobble Sand C M F	Brown surface Gray bottom	(NGA) H₂S
Gravel Silt Clay mostly	Brown Black	Slight organic Petroleum
Organic matter Wood debris	Drab olive Other:	Moderate Other:
Shell fragments Other:		Strong
<b>Comments:</b> RPD @cm	A bit of red liro	~
		•
	· ·	•



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date:	3/15/05	Station:	LDW-SS- <u>155</u> -010
Start/Stop time:	12:35	Crew:	AR HA BB
Sampling Method	Double 0.1-m² van Veen grab sampler		
(circle):	other: by hand with stainless	Weather:	cloudy
	Stell spoon		, <b>u</b>
RAB INFORM	MATION		

	-QRMATION			
GRAB TIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
12:35		TU	<b>*</b>	47 30.242 122 17.769
100 00		70		
				target coordinates were
				target coordinates were on land; sample was actually taken as close as possible to target while still on beach
				acheally tokan as close
				actually taken as those
				as possible 1) Target while
				Still on seach
			.'	
			•	
		· · · · · · · · · · · · · · · · · · ·		
•				
;				
		·	•	

Sample ID: LDW-SS 155 -010	Analyses needed before homogenizati	on (circle): Sulfides VOC A	AVS/SEM Other:
Sediment type:	Sediment color:	Sediment odor:	
Cobble Sand OM -F	Brown surface Gray	None	H₂S
Gravel Silt (Clay layers		Slight	Petroleum
Organic matter Wood debris	Drab olive Other:	Moderate	Other:
Shell fragments Other:		Strong	
Comments: RPD @ 4-5 cm			
			•



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date:	3/15/05	Station:	LDW-SS- <u>156</u> -010
Start/Stop time:	11:41	Crew:	AR, HA, BB
Sampling Method	Double 0.1-m² van Veen grab sampler		
_	Other: Singu	Weather:	cloudy

GRAB INF	ORMATION			
GRAB TIME	Воттом рертн (м)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
11:41	5 ft	410 cm	N	17 30.143 122 17.824
11:49	5 FY		N	47 30.143 122 17.824
11:51	46		N	47-30.195 122 17.820
11:53	494		N	47 30.145 122 17.820
11:56	3 ft	15 cm	<u> </u>	47 30.144 122 17.820
	٠			
-	·			
	*			
			,	

Sediment type:	Sediment color:	Sediment odor:	
Cobble Sand: C-M F		None	H <sub>2</sub> S
Gravel Silt / Clay	Brown Black	Slight	Petroleum
Organic matter Wood debris	Drab olive Other:	Moderate	Other:
Shell fragments Other:		Strong	
Comments: RPD @	em home	÷	
		•	



Project Nan	ne: LDW RI-Surface Sec	diment Chemistry/Toxicity	Project no.	04-08-06-24		
Da	ite: 3.16.05		Station:	LDW-SS-1	<b>57</b> -010	
	ne: 1500			PAC, S		
Sampling Meth	od _Double 0.1-m² var	n Veen grab sampler		•	•	
	e): offer: By ha	nd with stainless	S Weather:	Partly	cloudy, sunsh	me 3 winda
	Steel Spoon	1		3	3'	• )
GRAB INFO			· OT			
	BOTTOM DEPTH (M)	PENETRATION DERTH (CM)	ACCEPTABLE G	RAB? (Y/N)		MMENTS TO THE STATE OF THE STAT
1500		,0	ΥΥ		47.31.45	4
					122°18.4	64
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SAMPLE INF	ORMATION					
Sample ID: UF	0W-SS <b>157</b> -010	Analyses pooded before		on (oirein). <i>I</i>	SUERIO VOC AVS	SEM Other
Sediment type:		Analyses needed before	e nomogenizatio			S/SEM Other:
Cobble	Sand: CON F	Sediment color:  Brown surface Gray		Sediment or		l₂S
Gravel	(Sil) / Clay	Brown Black				Petroleum
-				Slight		
Organic matter	Wood debris	Drab olive Other:		Moderate		Other:
Shell fragments	Other:			Strong		
Comments: RPI	D @cm	No noticeable	KPD			
Orange f	lacks					
CTATISE T	IECK,					
•		•				
				•		
	· · · · · · · · · · · · · · · · · · ·					



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24	
Date:	3.16.05	Station:	LDW-SS- <u>/58</u> -010	
Start/Stop time:	1341	Crew:	RAC, SP. AR	
Sampling Method	Single Double 0.1-m² van Veen grab sampler			
(circle):	<b>X</b>	Weather:	cloudy, windy & rain	
			· ·	

### GRAB INFORMATION

	ORMATION				<u> </u>
GRAB TIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	Сомм	ENTS
1341	9 ft:	17	\1	47° 31.452 47° 31.452	The state of the s
	9.61	11	- 1	1110 01 11/2	122° 18.483 122° 18.483
(347		16	<u> </u>	77 31.452	122 18.483
		·	<u>,                                    </u>		
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Sample ID: LDW-SS/58 -010	Analyses needed before homogenizati	on (circle): Sulfides VOC	AVS/SEM Other:
Sediment type:	Sediment color:	Sediment odor:	
Cobble Sand CM F	Brown surface Gray	None	H₂S
Gravel Silty Clay	Brown Black	Slight	Petroleum
organic matter Wood debris	Drab olive Other:	Moderate	Other:
Shell fragments Other: Worms		Strong	
Comments: RPD @ 2 cm		· ·	
			•



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date:	3.16.05	Station:	LDW-SS- 1 <i>59</i> -010
Start/Stop time:	1436	Crew:	RAC, SP. AR
Campling Method	Dayle 0.1 m2 von		, ,
(circle):	other By hand with stainless steel	Weather:	Partly cloudy, sunshine & windy
	Spoon		
GRAB INFORI			

GRAB TIME	ORMATION BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
1436	01-	10	У	47°31.440
				122°18.454
			117	
	···			
		, , , , , ,		
				· · · · · · · · · · · · · · · · · · ·
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		·		
	<u> </u>		<u> </u>	

Sample ID: LDW-SS_159010	Analyses needed before homogenizat	ion (circle): (Sulfides) VOC	AVS/SEM Other:
Sediment type:	Sediment color:	Sediment odor:	
Cobble Sand: CMF	Brown surface Gray	None	H₂S
Gravel Silt/ Clay	Brown Black	Slight	Petroleum
Organic matter Wood debris	Drab olive Other:	Moderate	Other:
Shell fragments Other:		Strong	
Comments: RPD @cm			
			·
	•••		



Project Name: LDW RI-Surface Sediment Chemistry	//Toxicity Project no.	04-08-06-24
Date: 03.11.65	Station:	LDW-SS- <u>B2b</u> -010
Start/Stop time: 10:10 - /050	Crew:	S. Shilman, T. Do, S. Reræ,
Sampling Method Double 0.1-m² van Veen grab sa		C. Eaton, T. Putnam
(circle): Other:	Weather:	joggy, cool, calm

### **GRAB INFORMATION**

GRAB TIME	Воттом дертн (м)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
1010	12.3	under nend wahm	N	PHENING TO THE SECURE OF THE S
1025	延12.1	under penetration 8 com (UP) 15	~	
1036	12.2	15	У	switched to Young grat
				<i>J</i> ,
***************************************				
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				·
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	Sample ID: LD\	v-ss <b>B2b</b> -010	Analyses neede	d before homogenizati	on (circle) Sulfides VOC	AVS/SEM Other:
	Sediment type:		Sediment color:		Sediment odor:	
	Cobble	Sánd CODE (	Brown surface	Gray (	None	H <sub>2</sub> S
_	Grave	Clay	Brown	Black	Slight	Petroleum
	Organic matter	Wood debris	Drab olive	Other:	Moderate	Other:
(	Shell fragments	other: Worms		***	Strong	
	Comments: RPD	@cm			•	



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date:	03.14.05	Station:	LDW-\$S- <i>B4A</i> 010
Start/Stop time:	1020 - 1030	Crew:	
Sampling Method	1020 - 1030 Single Deutste 0.1-m² van Veen grab sampler		D-Mulling
(circle):	Other:	Weather:	sunny, clear

#### **GRAB INFORMATION**

GRAB TIME	Воттом рертн (м)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
1020	1/4/1 -01 1/1 101 101 101 101 101 101 101 101 1	9	<b>N</b>	47°32.949
1025	56t 54t	11	У	122°20:497
, <u> </u>	000	,,	,	
•		<u> </u>		~
	. 41.	- mg		
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		,		

Sample ID: LDW-SS#44010	Analyses needed before homogenizati	ion (circle): Sulfides VOC	AVS/SEM Other:
Sediment type:	Sediment color:	Sediment odor:	
Cobble Sand C 1005 (	Brown surface Gray	None	H₂S
Gravel Silt Clay	Brown Black	Slight	Petroleum
Organic matter Wood debris	Drab olive Other:	Moderate	Other:
Shell fragments Other Worms	Dlant	Strong	
Comments: RPD @ cm			<u>.</u>
,			
		*	
	$\Phi_{ij} = \{ (i,j) \in \Phi_{ij} : i \in \mathcal{A}_{ij} \mid i \in \mathcal{A}_{ij} \} $		
		•	



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date:	63.414.05	Station:	LDW-SS- <u>B5b</u> -010
Start/Stop time:	1339 -1350	Crew:	S. Shilman S. Pierce
Sampling Method	Singua Dente 0.1-m² van Veen grab sampler		D. mulling
(circle):	Other:	Weather:	Sunny, clear

#### **GRAB INFORMATION**

GRAB TIME	Воттом дертн (м)			
	DOLION DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	Comments
1339	6 pt	12	7	1/2 volume needed enough volume
1349	SA		У	encrah valueme
				47.32.976
				122°20.328
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			_ <u>, , , , , , , , , , , , , , , , , , , </u>	
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Sample ID: LDW-SS 35b-010	Analyses needed before homogenizati	ion (circle): Sulfides VOC AVS/SEM Other:
Sediment type:	Sediment color:	Sediment odor:
Cobble Sand: C M 6	Brown surface Gray	None H <sub>2</sub> S
Gravel Sili Clay	Brown Black	Slight . Petroleum
Organic matter Wood debris	Drab olive Other:	Moderate Other:
Shell fragments Other plan		Strong
Comments: RPD @ cm		
		•



Project Name	e: LDW RI-Surface Se	diment Chemistry/Toxid	ity Pr	oject no. 04-0	08-06-24		
Date	e: 03.15.65			Station: LDW-SS- <b>Bba</b> -010			
Start/Stop time	e: _1445 -						
Sampling Metho	d Double 0.1-m² va	n Veen grab sample	r		3. Completa 5. Agra overcast, cor		
	): Other Stainle		<i>ου</i> Υ ν	 Veather: <i>د</i>	overcast cor	f	
		1 hand	<del></del>				
GRAB INFOR	RMATION	1	F		NEW TOTAL STREET	**************************************	
Annual American Company of the Compa	IOTTOM DEPTH (M)	PENETRATION DEPT	(CM) ACCEP	TABLE GRAB?	Contraction of the contraction o	COMMENTS	
1445		10	:	У	coord	nates on to cahin .456	rget
					<i></i>	,cahm	0
					47 32	.456	:
· ·					122° 2	10.051	
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SAMPLE INFO	ORMATION						
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Sample ID: LDV	N-SS 864-010	Analyses neede	i before homog	enization (ci	rcle): Sulfides VO	C AVS/SEM Other:	
Sediment type:		Sediment color:		Sedi	ment odor:		
Cobble	Sand CM D	Brown surface	Gray	None	Ð	HLS	
Gravel	Silty Clay	Brown	Black	Sligh	_	Petroleum	
Organic matter	Wood debris	Drab olive	Other:	Mode		Other:	
Shell fragments	Other: Clams, u	į .	<del></del>	Stror			ļ
Comments: RPD	-			,	:4		
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					•		
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			•				
		•					



Project Nam	ne: LDW RI-Surface Se	ediment Chemistry/Toxicity	Project no.	04-08-06-24			
Dat	te: <u>03-418</u> .	05	Station:	LDW-SS- 1374	<b>=</b> 010		
Start/Stop tim	ne:		Crew:	m.luxon			
Sampling Metho	od Double 0.1-m² va	an Veen grab sampler		5. Pierce			
(circle	e): Other Ekma	an prav	Weather:	prercust	light	oree 3C	75
		,			, 0		ê
GRAB INFO							315,315,81
	SOTTOM DEPTH (M)	PENETHATION DEPTH (CM)	ACCEPTABLE GE			MMENTS	<u> </u>
1000		5	<u> </u>		Illwing 5	missires (re Bgrabs hon = 5-11	20165
					took ~:	grabs	
			,		penerra	hyn = 5-10	ocm
				/ !-	000		
			·	I		122 0 18.15 0	
•						122.18.148	
		·		- 4	<i>†31.879</i>	122018.148	
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SAMPLE INF	ORMATION						
							<del></del> ,
Sample ID: LD	W-SS_ <b>B7a</b> 010	Analyses needed before	e homogenizatio	on (circle): (Sulfid	OC AVS	S/SEM Other:	
Sediment type:		Sediment color:		Sediment odor:			
Cobble	Sand: C M P	Brown surface Gray		None	(F	I <sub>2</sub> S)	
Gravel	(Silt)/ Clay	Brown Black		Slight	F	Petroleum	ļ
Organic matter	Wood debris	Drab olive Other:	· ·	Moderate		Other:	
Shell fragments	Other:	30.01	1	Strong			-
Comments: RPD					10-11-14	· · · · · · · · · · · · · · · · · · ·	
<del>-</del>	- <del></del>			Krnsatt &	plank tak U-55B7a	00	
		•	·	LBI	U-SSB $+a$	-KO	Ì
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Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date:	3/15/05	Station:	LDW-SS- <u>89a</u> -010
Start/Stop time:	9:23'	Crew:	AR, HA BB
Sampling Method	Deubte 0.1-m² van Veen grab sampler		
(circle):	Other:	Weather:	<u>cloudy</u>

#### **GRAB INFORMATION**

GRAB TIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	Contract of the Contract of th	OMMENTS
7:73	8 ft.	llan	Y	47 30.835	122 18.229
9:31	884	ll cm	Ý	47 30.835	122 18.229
-					<u>.                                    </u>
·			· · · · · · · · · · · · · · · · · · ·		
	r ·				
·					·

Sample ID: LD\	W-SS <b>B9a</b> -010	Analyses neede	d before homogenizati	on (circle): Sulfides VOC	AVS/SEM Other:
Sediment type:		Sediment color:	· · · · · · · · · · · · · · · · · · ·	Sediment odor:	
Cobble	Sand: C-M	Brown surface	Gray (	None	H₂S
Gravel	Silt / Clay	Brown	Black botton	Slight ·	Petroleum
Organic matter	Wood debris	Drab olive	Other:	Moderate	Other:
Shell fragments	Other:		,	Strong	
Comments: RPD	@ <u>3-4</u> cm				
		×			



Project Name: LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date: 03.15.05	Station:	LDW-SS-[CC] -010
Start/Stop time: 1530 - 1549		B. Complita
Sampling Method Double 0.1-m² van Veen grab sampler		s. Plerci
(circle) Other Stainless Steel spoon	∧ Weather:	sunny
SPAR INFORMATION by hand		/

GRAB INFORMATION				
GRAB TIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
1530		10	Y	coordinates on target -
				47.33.991
				122°21.008
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				- '
			******	

Analyses needed before homogenizat	ion (circle): (Sulfides) VOC	AVS/SEM Other:
Sediment color:	Sediment odor:	
Brown surface Gra	None	(H <sub>2</sub> S)
Brown Black	Slight	Petroleum
Drab olive Other:	Moderate	Other:
im S	Strong	
•		
visible RPD		
	Sediment color:  Brown surface Grav  Brown Black  Drab olive Other:	Brown surface Grav  Brown Black Slight  Drab olive Other: Moderate  Strong

Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date:	2/1/05	Station:	12 1
Start/Stop time:	2:35- 3:42	Crew:	Bob, Deck, Kally Dave M.
Sampling Method	Single 0.1-m² van Veen grab sampler	Weather:	
(circle):	0.02-m² Ekman grab sampler		Cally, Sung

GRAB INF	ORMATION			
GRAB TIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
2:38	1784.	4cm	N	4739.565 12222.252 52-
2:48	17,87	11 cm	4	4779.565 12222.252 al
3:00	12.64	12 cm	9	4739.566 12222.249 92
3:20	2184	15cm	ч	4739.562 12222.252 93
3:25	204	overpunction	-N	4739.587 (2222.25)
3:27	1964	21cm	4	4739.560 1222 250 94
3:30	2014	18cm	- Y	4739.562 12222.255 95
3,34	2054	`3cm	JN	Nex olvin, berge
3:37	2184	14cm	9	4739.563 1222.256 96
				·

Sample ID: 5C-5514-010	Analyses needed before homogenizat	ion (circle): Sulfides VOC AVS/SEM Other:
Sediment type:	Sediment color:	Sediment odor:
Cobble Sand: C M F	Brown surface Gray	None H <sub>2</sub> S
Gravel (Silt Clay	Brown Black	Slight Petroleum
Organic matter   Wood debris	Drab olive Other:	Moderate Other:
Shell fragments Other:	Sheen	Strong
Comments: RPD @cm	•	
		•
No noticed	se RPD.	
Out jull and n	ot appear to be	flaving



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	_ Project no.	
Date:	02.10.05	_ Station:	SC-8816-010
Start/Stop time:	1435-1526	Crew:	STS, SMP, AR
Sampling Method	Single 0.1-m² van Veen grab sampler	Weather.	
(circle):	0.02-m² Ekman grab sampler		Junny clear no wind

#### GRAB INFORMATION

164

165

GRAB TIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
1435			N	overpenetrated
1440	<b>-</b>	-	N	overpenetrated
1449	23f4	17	7	slight petroleum, very sine she
1456	194	17	<b>Y</b>	Slight petroleum, very fine she dark, very fine, sheen
1501	18fj	15	У	n J
1507	229	11	Υ.	te H
1575	204		N	overpenetrated
1577	20A	17	У	wom
1522	18 <del>()</del>		<b>N</b>	overpenetrated
1524	19ft	17	У	no sheen, brown surjuce

Sample ID: SC - SS/h - 0/0	Analyses needed before homo	genization (circle): Sulfides V	OC AVS/SEM Other: None
Sediment type:	Sediment color:	Sediment odor:	
Cobble and C M 🗗	Brown surface Gray	None	H₂S
Gravel Sillay	Brown Black	Slight	Petroleum
Organic matter plant	Drab olive Other:	Moderate	Other:
Shell fragments Other:		Strong	
Comments: RPD @ 1-2 cm	(at surjace)		
WON	· ·		
ontjall did ,	not appear 1	to be flowing	·



2a pg 1 of 2

Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no. 04-08-06-24
Date:	02/02/05	Project no. 04-08-06-24  Station:
Start/Stop time:	1239 - 1405	Crew: RAC, MW, STS, EP, DM
Sampling Method	Single 0.1-m² van Veen glab sampler	Weather:
(circie):	0.02-m² Ekman grab sampler	clear, sunny, no wind

GRAB INFORMATION

	GRAB INF	ORMATION			
2a1	GRABTIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
<del>2</del> 44	12 39	5'	1a cm	<b>1 1 1</b>	Wordy depris 51t, F-M Sand, grav
245	1850	7'		N	All sand. Not retained.
2040	1253	6		N	Sample washed out.
204a		6'	5cm	N	Not enough rediment.
Za4a	1255	6,	5cm	7	Not enough rediment.
242		5.5°	14 cm	Y	Silt, 5-10% Organics, 5% gravel, mod (
2a2 2a3	1305	X 4'	15 cm	MEY	All F-M Sand.
206		4.5'	13 cm	Y '	F-Msands, organics
205	1344	(a <sup>1</sup>		N	Washout.
2a5	1345	6'		N	Wash ost. Rock.
2a5		\$.51		N	Not enough sediment.
245	1351	5'		N	Wash out.
	1352			N	Washout.
(	1353			N	Washout - Wood chip
***	1355	91		N	Not enough sediment.
	1359	5'		2	Not enough sediment.
	1403	4.5'		N	Wash out
	14 05	41		7	wash out.

#### **SAMPLE INFORMATION**

AVS/SEM Other: Sample ID: EB - SS2a Analyses needed before homogenization (circle): Sulfides VOC Sediment odor: Sediment type: Sediment color: H₂S Brown surface Gray None Cobble Sand: C M F Petroleum Slight Silt / Clay Brown Black Gravel Other: Moderate Organic matter Wood debris Drab olive Other:

Comments: RPD @ \_\_\_\_\_cm

Other:

Shell fragments

out jar ded not appear to be planing

010

Strona

Project Name:	LDW RI-Surface S	Sediment Chemistry/Toxicity	Project no. 04-08-06-2	14 - 14 - 19 - 19 - 19 - 19 - 19 - 19 -
Date:	02 02 0	5	Station:	SSZa-EB-010 contd.
Start/Stop time	: <u>1410 - 14</u>	37	Crew: RAC	MW, STS, EP, DM
Sampling Met	hod Single 0.1-m va	an Veer grab sampler	Weather:	
(circle):	0.02-m² Ekman	grab sampler	Clear	Sunny, no Wind.
0045 111	COLLETION			
GRAB INF	ORMATION			
GRABTIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
1410	4'		2	Washout
1412	4'	_	N	Washout - rock.
1413	2'		N	Washout
1421	41		N	Good recovery but 60% grave
1425	4'		N	Washout
1428	41	13cm	Y	Silty, sand black, med Hes, orgs.
1437	3.51	13 cm	Y	Same as 1428.

	<i>D10</i>	(	AVS/SEM Other: NONE
Sample ID: EB- SS 2A	Analyses needed before homogenizati	on (circle): Sulfides VOC	AVS/SEM Other: NONE
Sediment type:	Sediment color:	Sediment odor:	
Cobble Sand: CM F	Brown surface Gray	None	(H <sub>2</sub> S)
Gravel X 51. Silty Clay	Brown Black	Slight	Petroleum
Organic matter Wood debris	Drab olive Other:	Moderate	Other:
Shell fragments Other:		Strong	
Comments: RPD @ NONE cm	•		
		r	
•			
		•	
	not appear to		•



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date:	2 2 05	Station:	EB-MA 5526-010
Start/Stop time:	1459-	Crew:	RAC, MW, STS, EP
Sampling Method	Single 0.1-m² van Veen grab sampler	Weather:	
(circle):	0.02-m² Ekman grab sampler		clear Sunny, no wind

	GRAB INF	ORMATION			
	GRAB TIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
261	1469	4'	15 cm	Y	Sitt sand, plant mat 1, mod Has,
262	1507	3.51	15 cm	Y	Same as 1459. Both # 5%.
	1511	3.5'	13cm	N	DUTI ON CAUCIT OF STREET.
(263"	1517	41	13 cm	Υ	Organics silty sand, woody delaris
264	1520	243	13 cm	Y	Same as 1517
/ '	1527	7'		2	Washed out.
1	\528	3'		2	Not crough sediment.
1	1529	3'.	8cm	7	Not enough sediment.
1	1531	41		N	Washed out.
\265	1532	5'	15cm	Υ	Black, high HZS, black, sitty, lots of
	1543	4'	11 cm	Υ	(Woody deloris, organics.
	1545	Homogeni 2c	a!.		
	1515	0		<b>N</b>	50 % gravel
1. 					0

Sample ID: EB- S & 26-010	Analyses needed before homogenizati	on (circle): Sulfides VOC	AVS/SEM Other:	
Sediment type:	Sediment color:	Sediment odor:		
Cobble Sand CM F	Brown surface Gray	None	H₂S	
Grave <51. Silt Clay	Brown Black	Slight	Petroleum	
Organic matter Wood debris	Drab olive Other:	Moderate	Other:	
Shell fragments Other:		Strong		
comments: RPD @ cm pockets of oily sheen				
ant jau sho	I not appear t	6 be flavin	ð	



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date:	2/1/05	Station:	33 LW-SS3-010
Start/Stop time:	12:00-12:50	Crew:	Bob, Derck, Kathy, Dave
Sampling Method	Single 0.1-m² van Veen grab sampler	Weather:	,
(circle):	0.02-m² Ekman grab sampler		Suny, colm

GRAB INFORMATION

	GRAB INF	ORMATION				
	GRAB TIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS	_
1	12:06	101+	over perchastion	2		Een L
\	12:06	1084	70 cm	4	1. 1	Sec.
1	12:16	1984	70 CM	4	47 48. 374 122 15. 444: 35	KEV V
. ]	13:20	684	orcoperation	7/	next to begge on 5 side the	è
*	17:23	16.84	overentisti	N	Will for Exmon rest	حمة
	12:27	15H	10-11 cm	ч	4745.368 12215.435; 30	.45
دل	12:34	13 ft	20 cm	Jy	4745.365 12215.488; 3dv	læn
<b>"</b>	-12:37	13 FH	oreperetration	N	3e (Van Veen)	
7	17:40	12.54	6cm	N	Ekman @ 3c	
Ò	12:43	1854.	13cm	<u>y</u>	(Fems); 3e; 4745.354 1221541	15
2 2014	12:45	1887	6 cm	N	Ekman-3f-	
S	12:47	18 5+	22 cm	4	4745.354, 12215.466; 3f-154	~~
3	, ,					
·						
			-			

### **SAMPLE INFORMATION**

(\* Duplicate @ location 3)

Sample ID: W-55)-016	Analyses needed before homogeniza	ion (circle): Sulfides VOC	AVS/SEM Other.	
Sediment type:	Sediment color:	Sediment odor:	**************************************	
Cobble Sand: C M(F)	Brown surface Gray	None	H₂S	
Gravel Silt / Clay	Brown Black	Slight 125	Petroleum	
Organic matter Wood debris	Drab olive Other:	Moderate	Other:	
Shell fragments Other:		Strong		
Comments: RPD @cm				
No observable RPD in any Sample. Oily Sheen pockets				



Project no. 04-08-06-24 LDW RI-Surface Sediment Chemistry/Toxicity Project Name: Station: LW-454-010 02.8.05 Date: Crew: RAC, SP, AR 0902/0958 Start/Stop time: Weather Sunny, cool, calm Single 0.1-m² van Veen grab sampler Sampling Method 0.02-m<sup>2</sup> Ekman grab sampler (circle):

GRAB TIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
0902	4 ++	16	У	tots of organic debris, 452 gave
0910	1.5ft	17	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	& pocket of oity sheen
0920	7.044	_	N/	cable caught in grab
0922	5.0ft	17	<u> </u>	brown sediment & woody materix
0928	o ft		N/	over penetration
0936	2 f t	17	7	silty
0945	4 ++		-2	Washout
0947	464	17	· 1	
0949	2ft		Ň	Wood caught in grab & washed Empty
0951	aft		N	Empta
0952	2ft		N	Wood caughtingrab & washout
0958	3 <del>{ 1</del>	13	Y	J 0
		·		
	- M-0 11			

Sample ID: LW - 554 - 0 1 0	Analyses needed before home	ogenization (circle): Sulfides	VOC AVS/SEM Other:
Sediment type:	Sediment color:	Sediment odor:	
Cobble Sand: C M(F)	Brown surface Gray	None	H <sub>2</sub> S
Gravel Silt Clay	Brown Black	Glight	Petroleum
Organic matter Wood debris	Drab olive Other:	Moderate	Other:
Shell fragments Other:		Strong	
Comments: RPD @cm	No distinct RPD		
Amphipod			
Roots	•		
grave 1 4 5%			
<b>V</b>			



Project Name: LDW RI-Surface Sediment Chemistry/Toxicity

Date: 02.8.05

Start/Stop time: 1057/1148

Sampling Method Single 0.1-m² van Veen grab sampler

(circle): 0.02-m² Ekman grab sampler

#### **GRAB INFORMATION**

GIVAD INI	URMATION			
GRAB TIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
1057	3 ft	3	7	Outfall is slowly flowing observe
1104	2.5ft	17	'\	thru the clear water surface ?
1111	6 ft	_	N	the plume extends ~ 10ft directly
1112	6ft.	16	y	in front of the area. The plume
1135	3 <del>6</del> +	\2	1/	extends is 10' out from
411474	um	AM	Re	outful month and & 25'
1139	2 0 t	14	У	on either side.
1147			N	
1148	4 st	15	Y	
	- 0			
		•		
		·		

Sample ID: 1-W-555a-016	Analyses needed before homogenizat	tion (circle): Sulfides VOC AVS/SEM Other:			
Sediment type:	Sediment color:	Sediment odor:			
Cobble Sand: CMF	Brown surface (Gray)	None H <sub>2</sub> S			
Gravel Silt Clay	Brown Black	Slight			
Organic matter Wood debris	Drab olive Other:	Moderate Other: Fecal			
Shell fragments Other:		Strong			
Comments: RPD @cm	None observed				
Pockets of oily Sheen					
see comment	abone				
-	· .				



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no. 04-08-06-24	
Date:	02.8.05	Station: LW-SS5b-010	
Start/Stop time:	1248/1306	Crew: PAC, SP, AR	
Sampling Method	Single 0.1-m² van Veen grab sampler	Weather: Sunny, cool, calm	
(circle):	0.02-m² Ekman grab sampler 30 1294		

#### **GRAB INFORMATION**

GRAB TIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
1248	3 ++	<del></del>	2	Over penetration over penetration Use Ekmangrab
1250	3 ft	_	·N	over penetration
1254	3ft	16	1	Use Ekman grab
1256	3 <del>f</del> +	11	<u> </u>	
1300	34+	12	1	
1302	BFF	12	7	
1304	4ft		\ <u>'</u>	
1306	3 f t	13	<u> </u>	
				Lang.
	.,,			
-			<u> </u>	

Sample ID: 44-5556-010	Analyses neede	d before homogenizati	on (circle): Sulfides VOC	AVS/SEM Other:
Sediment type:	Sediment color:		Sediment odor:	
Cobble Sand: C(M(F)	Brown surface	Gray	None	H <sub>2</sub> S
Gravel (Silt /)Clay	Brown	Black (	Slight	Petroleum
Organic matter Wood debris	Drab olive	Other:	Moderate	Other:
Shell fragments Other:			Strong	
Comments: RPD @cm	None obse	rved		·
Plant material		·		
Pockets of oily sheen				
outjace is slavin	ng blavir	ig (see con	nments on 5	a collection jorn)



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date:	01.31.05	Station:	LDW-55 513-556-016
Start/Stop time:	1415-1500	Crew:	AR, TD, SP
Sampling Method:	Stainless steel spoon/scoop	Weather:	partly sunny, partly cloudy
ADAD 111100			no ppt, light wind

GRAB INF	ORMATION			. 0
GRAB TIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
1415		-10 MM	Y	
1419		10	У	
1425		ال	Y	
1428		10	Y	some gravel ~ 8 cm depth
1431		10	Y	,
1435		10	У	worm
	···		·	
	·			
		***************************************		
		·		
ļ	··			

Sample ID: LDW-SS	Analyses needed before homogenizati	ion (circle): Sulfides VOC	AVS/SEM Other:
Sediment type: SB-SSG-GIO	Sediment color:	Sediment odor:	
Cobble Sand GM 6	Brown surface Gray	None	H <sub>2</sub> S
Grave Clay	Brown Black	Slight	Petroleum
Organic matter Wood debris	Drab olive Other:	Moderate	Other:
Shell fragments Other	·	Strong	
Comments: plantdeb	ris	•	
RPD=01-2 cr	n (average over o	Ul Six location	(in

Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no. 04-08-06-24
Date:	02/02/05	Station: 04-08-06-24 Station: 0RD -SS7-010
Start/Stop time:	0950 - 11:08	Crew: RAC, MW, STS, EP, DM
Sampling Method	Single 0.1-m² van Veen grab sampler	Weather:
(circle):	0.02-m² Ekman grab sampler	Sunny, clear, no wind

**GRAB INFORMATION** 

GRAB IN	FURIMATION			to a construction of the construction and the construction of the
GRAB TIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
A 0958	20'	20 cm	N	good recovery, coarse sand
C 1003	111	17 cm	N	med - parse sand
1012	\5'		N	Washed out. Coarse sediment
1016	5'	11 cm	Y	Brown silt, fine-med sand, cohesiv
1024	5'	-	N	Wasted out - sample held oven by st
1026	7'	11 cm	<b>. . .</b> .	Brown silt, fine-med cand where
1032	13'		N	Sand.
1035	7'		N	Washed out. Wood in caws.
1036	9'		N	Not enough adjunget.
1039	6	11 cm	Y	Like 1016, 1026
1044	17'	н.	N	To little sediment
1046	8'	· ·	N	Rock in jaws - no vew very.
1047	12'		N	Wood in Jaws - no verovery
1049	21'		N	Too much debris - washoot
1051	9!		N	Not enough sed.
1103	5'	15 cm	<u> </u>	like 1016, 1026, 1039
				lots of plant material.
1105	8'	13 cm	Y	Like 1163
1108	10'	16 cm	~	Like 1103,1105 but more coars

umple ID:DRD-SS7 - 010	Analyses neede	ed before homog	enization (circle): Sulfides	VOC AVS/SEM Other: NONE
ediment type:	Sediment color	•	Sediment odor:	
obble Sand: C M F	Brown surface	Gray	None	H₂S
avel Silt Clay	Brown	Black	Slight	Petroleum
ganic matter Wood debris	Drab olive	Other:	Moderate	Other:
nell fragments Other:			Strong	



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	_ Project no.	04-08-06-24
Date:	02.02.05	_ Station:	UB-558-010
Start/Stop time:	1308	Crew:	AR, SP
Sampling Method	S <del>ingle 0.1 m² van Veen grab sampler</del>	Weather.	
(circle):	0.02 m² Ekman grab sampler Singu 0.2	5m2 Var	veen sunny, clear
		nand gra	
<b>GRAB INFOR</b>	MATION	<u></u> _	

GRAB TIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
1224		10	~	To med sands too high
1238	-	10	~	n 0
1251	_	10	N	н
1308		10	У	~ 80 pt m. out jall - 370
1325		10	Y	90 st "
1340	-	J O	7	~100 At "
1347		10	Υ	~110 1+ "
1408	-	10	Υ	~120 /4 "
1415	_	10	Y	~125 1+ "
177				40.40
*****				

Sample ID: UB -558 -010	Analyses needed before homo	genization (circle): Sulfides	VOC AVS/SEM Other:
Sediment type:	Sediment color:	Sediment odor:	to the second se
Cobble Sand: C M (5)	Brown surface Gray	None	H <sub>2</sub> S
Gravel Gilf Clay	Brown Black	Slight	Petroleum
Organic matter OWood debris	Drab olive Other:	Moderate	Other:
Shell fragments Other:		Strong	
No RPD (no dust	inct layer)	worm	plants
		,	•



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no. 04-08-06-24
Date:	1/31/05	Station: 9A
Start/Stop time:	Start 9:08 Stap 12:55	Crew: RAC, MW BAB
Sampling Method	Single 0.1-m² van Veen grab sampler	Weather:
(circle):	0.02-m² Ekman grab sampler	partly donder

GRAB INFORMATION

GRAB TIME	BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	Acceptable grab?	(Y/N)	COMMENTS
9:23	6 fr	12	N	47 39. 217	122 19.354
9:58	9 Fr	17	N	39. 214	19.357
10:05	3 Fr	]4	Y 41	0% 39-21	7 19.350
10:25	2.5 Pr	14	N >5	0% 39.214	3 19.346
11:09	15.5ft	12	Y ~10	90 39.21	
4 11:16	8 Gr	12	Y <10	70 39.21	
11:56	10 ft	12	Y <10	90 39. 21·	
12:16	12 fr	12	Y ~10		
12'24	8 fr	13	N 40		
12-32	29	12	N 40		
12:48	711	13	Y ~1	0% 39.21	b 19.351
9:40	-	_	N	not retain	ned contained woo

Analyses needed before homoger	nization (circle): Sulfides V	OC AVS/SEM Other:				
Sediment color:	Sediment odor:	Sediment odor:				
Brown surface Gray	None	H₂S				
Brown Black	Slight	Petroleum				
Drab olive Other:	Moderate	Other:				
	Strong					
Comments: RPD @ cm no RPD observed in any grabs						
clams, glass						
	•					
ontjan on not appear to be flaving.						
	Sediment color:  Brown surface Gray  Brown Black  Drab olive Other:  ho RPD observed in	Sediment color:  Brown surface Gray  Brown Black  Drab olive Other:  Sediment odor:  None  Slight  Moderate  Strong				



Project Name:	LDW RI-Surface Sediment Chemistry/Toxicity	Project no.	04-08-06-24
Date:	2/1/05	Station:	96
Start/Stop time:	9:15 am - 10:31	Crew:	Bob, Jerok, Kathy, Dave
Sampling Method	Single 0.1-m² van Veen grab sampler	Weather:	
(circle):	0.02-m² Ekman grab sampler	-	Dry, colm

RAB TIME	ORMATION BOTTOM DEPTH (M)	PENETRATION DEPTH (CM)	ACCEPTABLE GRAB? (Y/N)	COMMENTS
ગે <i>∶</i> ઠ8	27 P4	7cm	N	sity sa Joy clans
ነ: ( <	2764	13cm	9	4739.205 12219.349 Silty, ofthe
1:25	2784	5 cm	N	hier lower etc.
7:32	2784.	12 cm	4	961-4727.210 12219.365
7:49	22 ft	~4cm	N	Garel y clams
1:50	29 84	17cm	4	4739.206 12219 343 94
: \$7	2884	19am	9	4739 202 12219.349 95
5:01	28 S4	locon	<u> </u>	fires 954
0:07	2987	23cm	4	4737,206 12219,367 964
0:15	29 84	2 cm	N	fines 10 22 4 011
0:28	2984	11cm	9	4739.205 12219.334 966
			<u></u>	

Sample ID: LU-SS96-010	Analyses needed before homo	genization (circle): Sulfides V	OC AVS/SEM Other:				
Sediment type:	Sediment color:						
Cobble Sand: C M F	Brown surface Gray	None	H <sub>2</sub> S				
Gravel Silt / Clay	Brown Black	Slight H25	Petroleum				
Organic matter Wood debris	Drab olive Other:	Moderate	Other:				
Shell fragments Other: Clans / w	erms	Strong					
Comments: RPD @cm							
- No notrædhe & RPD @ any layer							
- Pockets of oily sincer ont jau hid not appear to be planing							
ontpau ded not appear 10 00000							

## **APPENDIX G-3: FIELD NOTES**

40/10/05	LDW RI Dioxin Bookeyour Sempling 0/31/05 5
Station Time Comments	crew: Bob Complita <
LDWG95 1312 Soundle by bout @ Light tide	Berit Bergrist wind word
4DWG 96 1312 "	Maryan Waksh
LDWO 97 1313 "	Dive Mullins
LDWG 98 1315 Simple by boote bightike	
LDW 6 99 1316 " " "	weather: Potchy closes, Sun, wind 25 mph.
LDWG 101 1317 " " "	
TONC 103 " " "	835 - Station 1a/b, This station is
LDWG 104 1320 " " "	located a bivers Institute of Technology
LBWG 105 " " " " " " " " " " " " " " " " " " "	Overs present until 1500, so moring on
thrule lab Stution plots on lond needs to be	to 9a/b,
moved off Share 20'	908 - Amire 9a/b
LDV6 106 1321 Barges on Station no accoss	outfall Photo 105
LDW6 114 1327 Super wy boot @ high + He	9:23 1 st grab Photo 108 - lots of decaying plant
	naterial on surface of grab; refained; 14
E17 1325 Photo 70+71 Logs (Flooding)	9:40 2 nd grass @ ~ 10 ft out from
Limit access to Station. Possibly move it.	1st grab; contained woody material; not
150 6 87 1338 Photo 72	9:58 3rd gray photos 109, 110
	organic scament, very retained 4A
End of Recon	10:05 photo 11; sandy scament 2A; retained
1415 return to boot house	10:25 3A. >50% arrived, not retained
	212 9.
RAC	11:09 5A photo 112; sandy retained
	11:16 GA shops 113; fine sand oraunics
10/04 01/10/05	retained <10% gravel

6	02/01/05 <sup>7</sup>
11:856 bown 54+64 Photo 116	Cram Bob Complita
Sandy retained < 10% gravel	cram Bob Complita Trathy Godfred Son Windows
12:14 So fine sand 10 Photo 117; retained	Derek Blother
Sandy: retained 10% gravel 12:14 Sto Fine sand 10% gravel 12:14 Storm & A and 6A Photo 118, 119	Dave Mylliss
too coarse ~ 48% gravel; not retained	Worther Clear, Sunny, no via
12-32 Sturn 2A and 3A Photo 120	
4070 gravel; not retained	0800 - not Dove mulios at Bolland Bout
12:48 E- of 2A/5A; Photo 121; Sandy	lounch near Billing fred meyer. On water
12:48 <1090 gravel retained	0810 - Surveyed Site la/lb @ Diving Ishthate
12:55-9a Samples composited and put in jars	of Technology. Photos 124+125+126+127
	1 1 1 Salla Salla Valvas - Unava offe to 3 to 1
1:40 Star ar 9b	take grabs. we are day orther
1:42 B1 - Arst grab - fine sand/silt,	128 - Ekmon geb es strie O. Thing noved sediments @ ~ 30ft ese chings thick muck (not grave by).
low penetration so not retained	1 roped Sediments @ ~ 3011 are
1:46 Bl: 2nd + 3rd grabs over penetration	chine thick much (not grave dry).
Photo 122, Sweral more grass had	Ser Coord: 4739.567 7 [16/15 04/21]
over penetration even with buoys added	101800 10112.2991
no samples retained	wind Caral Bud your denying acess?
2:03 B3 First grab had large woody debris	while Ted to check of COO Ten Newton
and overpenetration	9:00 92/95- vice tale 95 of Ekman
2.05 Bh First grat overpenetration	908 Gab 1 962 Elman gay
End of sampling for day	Photo 129 7 cm - Not setained
	when mix of Ekons Veen
	gils gla had is
	9:15 962 Agant - 13cm acceptance (etoired Photo 130 - 51th, organic (12 genel)

	· · · · · · · · · · · · · · · · · · ·
8	9
9:24 6ps @ 961 - 5 cm - W8+ retained	10:50 bustion & Sweet agrand Sweet seting
fine ul organie netter in away leaves	137 \$ 138 \$ 139 Cecess.
9:32 Apother 9/26 @ 961-	* could not collect samples
Some appearance as 962-	11:52 140,141,142 photos @ location 3
fines of some arganie debis (examine)  9:39 Gray @ 953 - need to redo -	Looked for arfalls -only
9:39 6ray @ 953 - need to red 8 -	observed @ head -v. small.
didn't close	- went to morter our GAPP
9:47 953 252 - 2000 Character Photo 131	SA-D-
>> 50% sovel, dans	(Carol Boot location 12/16.
Didn't retain	Scottre yout senice youl-
9:50 tryin beden 952 d 953	work ( paranoi d blood unaked scot
Photo 132	( ) 120/ Mes
17 cm recavery - retained	(e) 2:00 today
Same appearance as other order cetated	0 Marin Nortan @ Starl Rover.
9:57 Gizhe 965 son eppearace - Finer	10 MScrpyard & Macht service - ok
1 cm - etence - purto (35	386-7598
10:01 6010 754 - Com- vot retained	
10:57 GOU @ 9154 - 23 cm - retained	12:00 Ven Ven @ Location 3a
Same	overpenetre - ) not )
10:15 966-2 cm- Not retained	overpene fret - ) reteined fine sandy/silty muds
10:28 956 - 11cm- retained	12:06 - Van Voen @locati 32 - 20 cm
Som appearance except	penetration - (ctained
51t pockets (photo 135)	penetrat: - (ctaire)
Photo 134 is 91	say, soll - a little coerser
-homogunized of jers filled.	dist below 10 cm

10	location 10/16
12:16 36-20 cm	2:38 al missile
12:16 36-20cm Say, 5ity (chaired	4735 122 22.252 17 A.
12:20 3c- Pusto 147-	4cm - Not retained
averpmetistion	2:48 &1 middle-ver Veen
(near barge)	11-12 an -retained
12:23 3c again-overpensetst.	(0-15% was debris <5% stare )
ogai-wiedy thethan	Fest fix sals
	3:00 a 2 Same seds.
12:27 Elman - 10-11cm - Retained	Janveen- 12cm-retziz
Sithy(sa)y @ 3c	3:05-A3 - mode
	3:18 (many etterpts- hard layer of
12:34 3d. 4 No. Vec	(2) 23 d other debris)
20 cm - retained - fine sady ( selt	3:20 - 15cm - 23 - Vz Veca
12:37 3e W van Veen-	Photo 149- 21,22, \$ 23 - (dzine)
overpendishin	all appeared u. Similar
12:40 Trying Exoner @ 3e - 6 cm - NA retain	3:24- 50 St on 4-44
12:43 Elman #3; 13 cm; (ctà-ed	over peretration - not retained
12.45 of 6cm - photo 148 - 4745.354 12215.46 (rotate)	3:27 a4-21cm- Ver Veen-Some Sady
in carner by barges	naturial naturial
12:47 3f- Ekman-22cm- fire sa Jy, Śilt " 12:48 homo sunited of 1255 67/1-1	3:30 05-malle@ 50 St hose - not retained
	3:32 05 00 00 00 00 00 00 00 00 00 00 00 00
TRAVEL BACK TO la(1)	3:30 As-middle @ SO 81 retained (photo 158)
	Thu some woodn desis/sadn
	3:34 26-Not (41xiz)-3cm

Com. Dob Complite Windmand  Same see by proody.  Sills Homosenize of fill 1258  Enila Pitre COE  Dave Mulling  Weather: Clear sensy, no wind  0830 Arrive Alk. beat lands to  lood over + thend to station 7  Ogos letter colled resserting to solve the station 7  Ogos letter colled resserting to station 7. we should be get sained solve to the two services in the LDW (in Fire arrived to station), station & respectively, station & respectively, station & respectively, station & respectively, station & respectively, station & respectively, station of vertained of get a much station of the st	12						02/02/05
Some stady, croady.  Some stillman  Enila Pitra COE  Dave Mullins  Wenther: Clear Sensy, no wind  0830 Arrive Alk. boat lound to  lond over + Head to Station T  0905 kethy colled re: Session gala  Size at Station T. we Should  target saliants Similar to  what we serve in the Dow (a Fire  arrive marker), station that  was argitarily placed we Should  target three many Material  9:34 On 5th 7a - Savid not retained 20  9:34 On 5th 7a - Savid not retained 20  9:37 At 7t - Caud not retained. (6  9:40 Kathan Savid of days dream to got a  mud Sample.  9:58 TA N Vanvelen. 47 30.269 12 17.806  Good revorm but all coarse sand. 20'	3:37	al -	14am-	retain	حک		Co.: An C. Nit. D
Sus Hamosenize of fill joss  Enile Pitre COE  Dove For the day  Wenther: Clear Sing, no wind  0830 Arrive Alk. boat land to  load over + Had to Station 7  0905 kathy colled re: Sedient gain  Size at Station 7. we should  target sainmis Siniter to  what we saw in the Low (a fire  arrive material), Station & 7  sight on upstream location that  was applicating placed we should  arrive the gaves Material.  9:37 An 7t - Sawd, not retained 20  9:37 An 7t - Sawd, not retained 6  9:40 Nathyn Said go down Arean to got a  mud Sample:  9:58 7A N Vanvien. 47 30.269 112 17.806  Food recovery but all coarse sand. 20'	· 		Al .		27.4%	-	
Done for the day  Wenther: Clear Singy no wind  0830 Arrive Alk: boat land to  load over + Had to Station 7  905 kathy colled re: Sedirent goals  Size at States 7. we should  target Salands Sinilar to  what we saw in the Low (in fine  grain material), States X 7  Sixt on upstream location that  was arbitrarily placed we should  and the grain Material.  9:34 On sta 7a - Sand, not vetained. 20  9:37 Sta 7t - Sand, not vetained. 6  9:40 Kathan Said go down Dream to got a  Mad Sample:  9:50 7A N Vanven. 4730.269 12 17806  Good verorum but all coarse sand. 20'				^		,	
Done for the day  Wenther: Clear sings, no wind  0830 Arrive Alk: boat land to  lond over + Had to Station 7  905 kathy called re: Sedient goals  Size at States 7. we should  target salients Similar to  what we saw in the Low (in fine  grain material), States X 7  Sixt on upstream location that  was arbitrarily placed we should  and the grain Material.  9:34 On sta 7a - Sand, not vetained 20  9:37 Sta 7t - Sand, not vetained 6  9:40 Kathan Said go down Dream to got a  Mud Sample:  9:50 7A M Vanven. 4730.269 12 17806  Good verorem but all coarse sand. 20'	3:45 }	tamose	nice o	1511	255	,	Emile Pitre COE
Done for the day  Wenther: Clear sensy, no wind  0830 Arrive Alk: boot land to  loud over + Head to Station 7  905 Kathy called re: Sedient grain  Size at Station 7. we should  tright we serve in the Dow (ie. Fire  arrived mystream ocation that  was arbitrarily placed we should  taget the grain Material.  9:34 On 5th 7a - Sand not retained 20  9:37 Sth 7t - Sand not retained 20  9:40 Nathun Said go drum Stream to get a  Mid Sample:  9:58 7A N Vanveen. 47 30.269 112 17.806  Good reverem but all coarse sand. 20'		_	_	<b>'</b>	,_,		
load over + Head to Station 7  905 kethy called re: Sedicat galla  5:20 at Station 7. we Should  broat Sedicant Similar to  what we sow in the LOW (ie. Fire  grind naturil), Staten & 7  5 just on upstream location that  was arbitrarily placed we Should  taget the award Material.  9:34 On 5th 7a - Sand, not retained 20  9:37 Stn 7t - Sand, not retained 6  9:40 Nathun Said go down Arean to got a  Mid Sample.  9:58 7h W Vanveen. 47 30.269 12 17.806  Good reverem but all coarse sand. 20'	Du	re for	the de	1	The state of the s		
9:34 On str 7a - Sand, not restained.  9:37 Str 75 - Sand, not restained.  9:37 Str 75 - Sand, not restained.  9:40 Kathy Said go down Stream to got a  mud Sample.  9:58 7A N Vanveen. 47 30.269 112 17.800  Good reveren but all coarse sand. 20'				,			
5:20 at States 7. we Should target Saints Similar to what we saw in the 4DW (ie fire onin material), States & 7  S just on upstream location that was arbitarily placed we Should target the named Material.  9:34 On 5th 7a - Sand, not retained 20  9:37 Str. 7t - Sand, not retained 6  9:40 Nathy said on down Arean to get a mid Sample.  9:58 7A W Vanven. 47:30.269 12 17:800  Good recovery but all coarse sand. 20'							
derect sationals Similar to  what we saw in the LDW (ie: Fire  grains material), Statem & 7  Is just on upstream location that  was arbitrarily placed we should  target the rains Material.  9:34 On Atn 72 - Sand, not retained 20  9:37 An 75 - Sand, not retained. 6  9:40 Kathy Said go down Stream to get a  mud Sample.  9:58 7A W Vanveen. 47 30.269 12 17.806  Good reverse but all coarse sand. 20'							0905 kathy colled re: Sediment gain
what we saw in the 4Dw (ie fire  grind motorid), statem & 7  s just on upstream ocation that  was arbitarily placed we should  taget the - gainst Material.  9:34 On str. 7a - Sand, not vertained 20  9:37 Str. 7t - Sand, not redained. 6  9:40 Kathan Said go down Stream to get a  Mud Sample.  9:58 7A W Vanveen. 47:30.269 112 17:806  Good verovery but all coarse sand. 20'				-			
9:34 On str. 72 - Sand, not retained. 20 9:37 Str. 75 - Sand, not retained. 6 9:40 Nathy Said go down Stream to get a  much Sample.  9:58 7A W Vanven. 4730.269 112 17.806  Good reveren but all coarse sand. 20'		_					torget Sediments Similar to
9:34 On str. 7a - Sand, not retained 20 9:37 Sh 7t - Sand, not retained 20 9:40 Kathy Said go down Stream to get a  mud Sample. 9:58 7A W Vanven. 4730.269 112 17.806  Good recovery but all coarse sand. 20'							what we saw in the LDW (ie fire
9:34 On str. 72 - Sand, not retained 20 9:37 Str. 75 - Sand, not retained 6 9:40 Northy said go down stream to get a  Much Sample. 9:58 7A W Vanveen. 47 30.269 112 17.806 Good recovery but all coarse sand. 20'							anini moterial), Statem & 1
9:34 On str. 72 - Sand not retained 20 9:37 Str. 75 - Sand not redained. 6 9:40 Nathur Said go down Stream to get a mud Sample. 9:58 7A W Vanveen. 47 30.269 112 17.806 Good recovery but all coarse sand. 20'		<u> </u>					
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9:40 Kathy Said go down Stream to got a  mud Sample.  9:58 7A W Vanven. 4730.269 112 17.806  Good recovery but all coarse sand. 20'							toget the gained Naterial.
9:40 Kathy Said go down Stream to get a  mud Sample. 9:58 7A W Vanveen. 4730.269 112 17.806  Good verovern but all coarse sand. 20'				<u> </u>	-1-101//41	· · · · · · · · · · · · · · · · · · ·	4:34 Un str ta - Sand, not retained 20
9:58 7A W Vanveen. 4730.269 112 17.806						-	
9:58 7A W Vanveen. 47 30.269 112 17.800 Good recovery but all coarse sand. 20'			*		~132.		4: 40 Kathy Said go down Stream to get a
Good recovery but all coarse sand. 20'							and sample.
depth, 20 cm penedation.				· · · · · · · · · · · · · · · · · · ·	~		
depth, 20 cm penedation.							took vecercy but all coarse sand. 20
				<i>i</i> .			depth, 20 cm penedration.

14	47 30.257 122 17.777	<u>.</u>	'.		15
1003		1036	47 30.526	122 17.566	9' 15
	Not retained reovery 17 cm		Low recovery	No segment	very.
******	photo 155, 154	1039	47 30. 585 1 515	(22 (7.5	61
	site photo 153 looking upstream.	retain	d 515	562	
· 	11' bottom depth, 17 cm recovery.	,	d 515 photo 159		
1012	Moved down stream 15' depth		identical to	1026 and 10	16. 11cm
	47 30.469 120 17.550			,	p-ene.
	Jaws opened-sample washed out.	1044	47 30.480	122 17.516	17'
	Coarse sediment still Moving			t, most sed was	- î
	down stream more closer-to bank.		# Other side	of Channel:	*
	Sediment prob. due to recent floods: (DM)	1046		122 17.516	8'
10: 10	47. 30.547 122 17.579 5' depth			ws- no recover	M .
retained	photo 156 II cm pene.		On side will.		J.
	Brown silt+ fine med sand, cohesive	1047	47 30. <del>1480</del>	122.17-515	12,
1024	47 30.540 laa 17.573 5' depth		Wood in -479	No recovery.	
	photo 157 Jans held open by stick.	1049	47 30 494	laa 17.513	21'
	Sample washed out.		Way in by sl	ere.	WILLIAM WILLIAM ST.
1026	47 30.540 122. 17.573 71 depth		Too much de by	is-washed out	• .
photo	Steep slope, same location. Il con pens.	w	No repress.	Moving away +	from Lank
-	Brown silt + fine med sand, cohesive.		Ctill on steen	Slove.	
1032	47 30.536 122 17.562	<u> </u>  051	47 30 490	slope: 122 17.515	9'
· •	Off slope. Sand. Not retained.		aboto too N	otenough sad.	-
	photo 158.	1103	47 30.494	122 17.560	<b>5</b> 5'
1035	47 30. 525 122 17.567 7		photo 160	1, 00	
	Wood in the jaws. No sediment.	- 0,000	Like lost loss	, 1039 with lot	7 pene.
			of plant		
			king,		

16	17
	1253 Some location. Sample washed aft.
110\$ 47 30.494 122 17.557 8'	1254 16 aay and aas (split the difference)
retained Like 1103 13 cm Photo 161. Pine.	5 cm retention - Not retained.
photo 161. pine.	1255 Jame location as 1254,1253,1250. 6
1100 7+ 30.495 (22 17.555) 10	5cm retention-not retained
retained photo 162 16 cm pene.	1300 47 37,977 laa 22,753 5.5
Like 1103, 1107 but more coarse.	rotained in middle, out in Front of autfall. 14 cm
	photo 167 Penetr
1112 Got 6 samples. Homogenized!	Silt. lots of organics, black.
1112 Sot 6 samples. Homogenized. + filled jars. photo 163.	2A2 moderate H28 some fine sand,
	5% gravel. less plant than 1239
1226 Arrive Stn 2a	5-10°1. o ant mat1.
outfall: photo 15 164 165, 169	1305 47 37.977 122 22.749 4'
174	retained photo 168 Iscm
1239 47 37.980 laa 28.759 5'	30' to SE Astn.
ZA1 stn 2at lacm	293 All med-fine sand. Not retained.
photo 166	228 5741
Alot of woody debris, silt, fine-med sand	
gravel 5%, 20% woody de bris.	\$ 1338 Sm 2a6 4.5'
taken right off outfall. Retained.	47 37.974 122 22 747 13cm
Sample Influenced by outfall.	Retained, photo 170
2a1 -> 2a3 - onshore, not accessible	m-F sands so
2 a 4 - done.	1344 47 37.975 122 22.759 6'
	Washout
1250 Stn 2a5 47 37, 977 122 22751 7'	1345 Came as 1244.
All sand. Not retained.	Stn 2a5 4737.976 Rock-wash 12a 2a.760 Oct.
	122 22.760 Oct.

18 1247	Same as 1345 Stn 225- 3rd attempt. 5.5'	1427	Sm 2a4 3 cm
	Not enough penetration.	1137	37.975 2a.753 3.5'
1351	Same as 1345, 1347 5'	·	photo 173
	Washout.		Same descript as 1428
352	47 37.976 122 22.756	1439	Homogenized!
	Washout.	. 19	photo 174- great outfall Photo.
1353	47 37975 122 22 757	1459	32 010 20 71 4
	Wood this Keeping They coon - No vet	_1724	37.969 22.764 Stn 261 Stote Front 15cm Retained. Silt, sand, plant materia
1355	47 37975 122 22 758 9'	<del></del>	Potained City SAND Clark and a
	Not enough sediment.		Mad I P <51 agreed
1359	Wood chip keeping jaws open - No vet. 47 37.975 122 22.758 9' Not enough scalinent. 37.974 22.756 5'	1507	Mod H.G <5%. gravel 37.967 20.764 3.5' Stn 262 -photo 178 photo 5 cm
	Not enough rediment		Stn 262 - 200 170 Photo cm
1403	3 <del>7.974</del> 22.758 4.5'		Retained < 5% gravel
}	Wash out		Like 1459. Some manies beethou
1405	37975 22751 4'		Like 1459, Some organics, less that "a" stris.
	Wash out,	1511	37.969 22.768 3.5'
1410	37978 22.752 Washout 4'		8th ab3 13cm
1412	57978 22752 Washout 4' Same location. Rock washout. 4'		Pockets of sheens.
1413	Same location. Rockwashout 2'		50% gravel. Not Retried.
1421	37.980 Z2.759 4.5'	1515	37.968 22.770 41
	Same location as 2 a 1		50% gravel. Not Retained
	Good recovery but 60% gravel	1517	
1425	37.979 37.755 4'	<u> </u>	Stn 263 photo 178 13cm
	Rock wash out	1520	37.966 22.7685 48'
1428	37.976 22,752 black. 4'	,	Str 264 Ohoto 179 13cm
Retaine	d! Str. 2a5 Sity, sand, 13 cm		organics, silty-sand, black, woody debri
, 50 , 50, 1	mod Has smell		and a series of series of series

<sup>20</sup>	37.6	165 aa.	768	y' 77 ' air bubbles	02/02/05 Stn	* Glac	cier NV	V Samp	ing R	M I. 5 21
		shedout		वाम भगवविद्य	<b>S</b> 3	47	33,0051	) (a	a 20.	4719
1528		165 aa.		3'	<b>53</b>	47	32.90	la la	a 20.	4311
	i.	rough n	1			2 19 4 15 16 4			·	
1529		66 22.		3'	3	ofead	n/54n.			
	A .	ough reco		8cm.	Jamele	JDS:				
1531	37.96	6 da =	160	4'	LDV	V- SS-	53-0	10 and	59.	
	37.96 Washed	01								
1532	37967	22,7	70	5'	633	Arrive	Stn 53.			
	Retained.	photo	180	15cm		1 "		امد مد	<b>                   </b>	
	Siltu. Ho	h Hos sm	ell. Islan	ck.				coords		er dock.
	Lots of wo	ady debris	Ovan	nico.				ne on W		
1543	37.967	22.3	774 "	4'	1645		!	nple, so		
	Stn 266			Ilam		Homog	enized	sample	5.461	edians
	Sandier, med	+ fine sau	nd.				-	<u> </u>		<u> </u>
	No Smell. Retained.	5-1011. gr	avel.		1702	47 3	2.901	122.	20.430	8'
	Retained.	Slight	H <sub>2</sub> S		·	Ctv 1	T9		<u> </u>	20 cm
1545	'Homogeni	zed!!				<b>建</b>	illed jo	ws.		
1020					705				P <sup>PP</sup> (1900-17) http://www.comp.com	
Done	with 2a	2b.	· .	1-9	Ros	~ W/\ 0 /	d to,	Auxi		
Moto	ned to All	ki to do	op off i	Emil P.	<b>1</b> VC 1	01 . 40.	, 60	1100		
		<u> </u>			· 					_
1010 f	tead to 6	1	im site	s on			·	STS	<u> </u>	
	LDW RA	1 1.5						010	<b>ا</b>	
									<u> </u>	

22 02/08/05	23
	organic material & more woody material
dioxin background sampling - statum 4, 5a/5b	1909 41 110 7117 110 11 0 71 0 01
- Ju/Um 7, 5a/5b 0	09284d 47°34.705 122°11.308 ~ 0ft
	Boat satting in mud, over penetration
Bob Complita ww	0936 4d 47°34.705 122°11.308 2ft
bob complific C WW	17 cm recovery; silty less organic matter
Shannon Pune J	amphipods
Dave Mullins	amphipods 0945 4e 47°34.699 122°11.312 4ff
	washout
025 - meet@ Mercer Island boat	0947 He same coordinates as above 4ft
launch, weather-calm,	17 cm recovery
sunny, cool	17 cm recovery 0949 4f 47° 34.696 122°11.290 2ft
<u> </u>	wood caught in grab & washout
851 Motor to LW-SS4-010 Sampling location	0951 4f same coordinates 2ft
902 LW-554-010 1st grab 16 cm penetration	Empty grab
Location 46 47° 34.716 1200/11.278 4 ft (depth)	0952 4t same coordinates 2++
lots of organic debris, 45% gravel, pockets of oilg	Wood caught in grab & washout
Sheen	Dave's boat is overheating due to solomerged want + mil foil
Sheen  40 47034.723 12811.285 1.5ff  0910 lot of oraquir debris -590 gravel nackets of	0958 4f 47°34.704#4 AR 12211.299 3ff
0910 lots of organic debris, 45% gravel, pockets of	13cm recovery
oily sheen 17 cm recovery	1005 Dave cleans out his pump that is filled with
0920 4c 47934.710 Den 1.269 7.0ft	wood debris & milfoil
caught cable in grab not an acceptable grab	1009 Motor to LW-855a-010
0922 4c 47° 34.711 122°11 270 5 ft	1023 Arrive to sampling location LW-SS 5a-010
17 cm recovery; brown sodiment with more decomposed	Bob talks to Kathy & Berit about the location of outfall

24	25
1037 gulled Rester airport to telle to	1112 5a3 Redo with same coordinates
Bruce Fisher re: location of outfall.	Silf, fine & medium sand 4 5 20 gravel
" not available, left message	16 cm recovery grab@30ft
with his secretary. He will call back	1120 Bob spoke with Kathy & Berit to verify
hopefully Soon.	we are targeting the correct sampling
1050 Spoke of Bree fither and verified the	1125 5 4 429 30 1138 1228 12 125 0 CL
outful location and informa him	1135 5a4 47° 30.038 122° 13.125 3ft
we would be sampling. He ok'd our	organic material & plant debris
presence in the orea	Pockets of oily sheen; fine & med sand
1056 LW-5559-:010 grab @ 30ft outfall is	Strong feces odor
(protes ) slowly flowing observed thru the clear	1139 5a5 47° 30.038 122° 13 128 2ft
14-18 ) water sarface & the plume extends	14 cm recovery grabe Soft
1 10ft directly in front of the area	organic matter & leafy debris
1057 5a1 47°30,036 122°13.126 3ft	Pockets of sily sheen; fine & mad sand silt
Silt, fine & med Sand, wood debris	Moderate Has & mild teces odor
45% grave	1147 596 washout grab € 50ff
1104 542 478 30.036 12813.128 2.59	1148 5ale 47° 30.037 122° 13.119 4ft
17cm recovery Slight HzS odor	15 cm recovery grabe 50ft
Med & fine says s; It, worms grabe 3 oft	Organic matter à leasy debris
1111 5a3 47° 30.035 122° 13.120 6 ft	Fine & med Sand
1111 5a3 47° 30.035 122° 13.120 6 ft	Pockets of olly sheen
No vecovery due to chain hang	Moderate Has & Mild feces odor

26										2
1248	LW-5556-01	o grab e	, 100ft		31317	Motor	back -	to Merce	r Island	boat
	47°30.	046 123	°13.115	3 <del>61</del>	ram	p En)	of <u>Smpl</u>	- N-4	1	
	overpenetro	tion 2X				•	1	)		
1252	Switch sam			from					1	
	the single o.	-m² van Ve	en grab	to the	in the second					
	0.02 m EKn	ian anab	7 . 0	,	•	***				-
1254	561 same coo	rdinates a	dove	3 f t				2. /		
	16 cm recor									
	Silt & fine	sand organi	c plant deb	vis		-		1:		
1256	562 47° 30	.046 122	13.125	3 f t		NAR				
	11 cm recov					• • •	_	<i>y</i>		
	Silt i fine sa	nd manie	plant dela	ris	*	02/08/0	)5			
		, , ,				ATAM.				,
1306	563 470 32	.043	21,13,139	3 <del>f</del> t		-				
	12 cm rec									
	Silt fine in						/			
1302	564 470	30.047	22 913.11	7 6ft						
	12 cm reco								<u> </u>	
	Silt. Guest w	ad Sand Sa	مارد مارد	ent cloberis	:					
1304	Silt, fine + n 565 47°	30.048	22°13. 16	12 4ft	· ·	/.				
	11 cm recove					/				
	Lots of organi	e alant dal	1 > 1 = 1	,	2					//
	Some fine s	and	71.29.311					J		
1306	566 4°	7° 30.045	1229 1	3.131 3£L						*.
	13 cm read							·		
	7 2000	yery Juny	10.44							

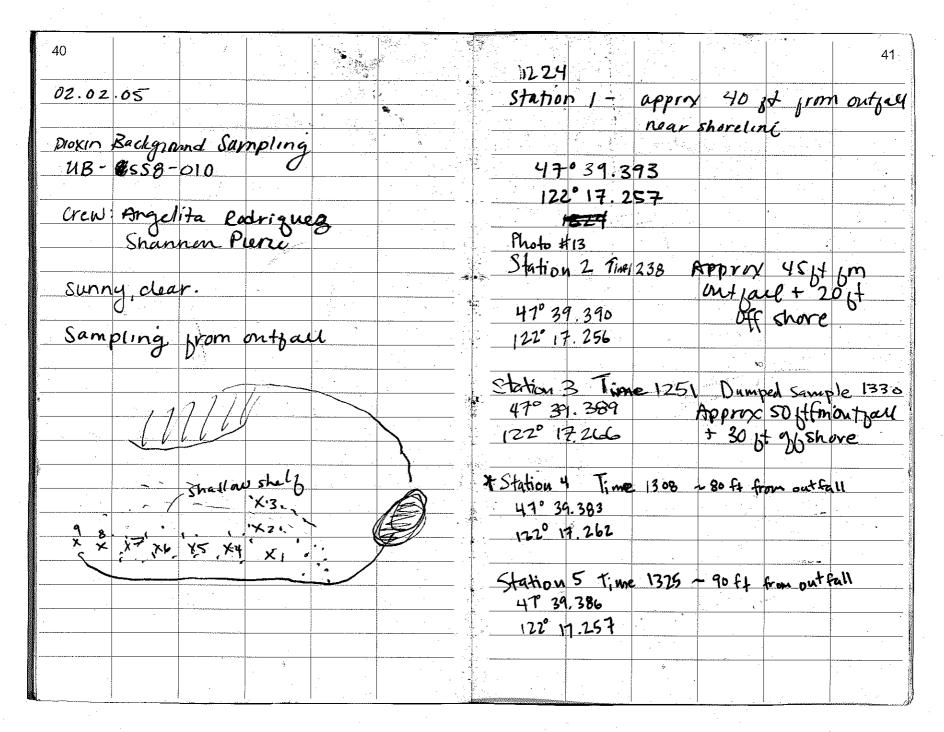
28 .	3/3/05 can't not a reoccupy 29
3/3/05	
Rd 2 surface sediment recon.	LDN/G-29-tide; may need to move out slighty
crev: Bob Complità	LOWG-30-Charlie's boat-OK-hellings
Shannon Puice	LOWG-34 - station on barge - tie up to
	barge + take as close to
meet 0 T-91:0930	station no possible (not reoccupy)
begin recon	LOWG 35- Viking - Manson -
LDNG 3 - OK W/ Charlie	barge is on station ~
LDWG-2 - Davis boat - low water depth	could sample next to barge
station OK-don't need to relocate	N is too jon up jon target
LONG-6 -> OK W/ Chartie	10WG-39-10ts of debris, Charlie at
LDWG-7-	high tide
LOWG-8-OK w/ Charle ruc	LDWG-41 - OK w/ Charle
LDWG-9 - Dave OK * possible Charle	. LOWG 45 - OK W/ Charlie
LOWG-11 - OK n/ Charle	LOWG 44 back behind barge-line LOWG 47 may affect sampling
Montage assaultiported	LOWG 47 may affect sampling
LOWG-16 - Charlie : barge not in way	try w/ charlie first to attempt
LOWG-19 - OK Charlie	Split; 16 not-Bare's boat
LOWG-21 - OK Charlie	LOWG 53 Glaciers up - Dave's boat
Low G-24 - by car @ Inv Ade	LbwG \$97
EPA split - meet @ park	LDWG 53 Alacierslip - Dave's boat LDWG 59 LDWG 61- almy shore - use Dave's boat hangahij
10NG-25 - 1020; depth ~ 10 ft	LOWG 62 - barge not in way - Charlie's
OK w/ Charlie's boat @	boat
high tide - HH area - see ms	LOWG G5 + use Dave's boat -
to a steep to be exposed a law	difficult nangahag
1 de-ok location	

30 3/3/05 con·t	3/3/05 con't 31
LOWG 66 - OK w/ Charle	LOWG 85 - Dave's boat
LOWG 68 OK w/ Charlie	LDWG 86- no access - sunker boat delris
10WG 69- 1051; 7/1 depth	prossible to move slightly
OK-Charle @ high tide	sonth? If ok to move
LOW G 71 - Dave 5 boat - difficult	use Charle's boat
narigation - EPA split ~ pick	LOWG 90 - unable to access - jootbridge
up oversight im 1st Ave boatlaund	necessary to sample? (nghi
LOWG 74 - Charlie OK ~ good @ hightide	next to 91
LOWG 73 - OK-Charlie - preferably high side	LOWG 91 - Charlie at high the
LOWG 77 - barge Sam on Taplak	if not-use Bave
on pier- No access-unable	LOWG 93 - barge in way - no access
to see is targetting under	no access is barge was out
pier is possible	My way - impossible access location
LOWG 78 - no barge in slip - ok to access	LOWG95- THLINGIT barge in way-
+ sample u/ charlie	unable to access - OAPP says
LOWG 80 - Down to broke Whayb	sampling usil occur only is
Charlie @ high hole-if not	accessible during sample event
able use bave @ high hold	LOWG 98- unable to access station see
10wg81- Beautus + 20 - barge sty 11	red to move Sox pootbridge map
on statum	LDWG 100 - sample @ law tide by good car
LOWG 82-Barge on station - not able	LDWG 103 - 1/25 - depth 86+
toucess South East provide	Charlie sampling a high the
if barge moves -use Charle	LOWG 105-1130 depth = 8 st - Charlie a high tide
1) barge stays use bare to	LDWG 106 Charlie high tide -
get behind barge	1005 106 - Charlie high tide -

32 3/3/05 can +	3/3/05 con 4 33
LOWG 107 - Next to coment under bridge -	LDWG-140 - similar to 139; will need to
Charlie @ high tide - 15 hot	move out im riprap; use Charle
hol bave	a high tide
LOWG 108 - Dave's boat unsure of	LOWG-141- Dave's hoat-interpolal area
access b/w boat rows	upna 145.
LOWG 122 - OK W/ Charle @ high hade	+ over podestrian bridge-no Charlie *
LOWG 124 - Dave's boat to access-	LDWG-145- Dave's boat
may have to sample by hand	LDWG-144 - Dave's boat heed oversignt
at law role (Whaler?)	LOWG-147- hast to access
LOWG131 - Charlie OK	LOWG-147- ) boat to access; may
LOWG132 - OK W/ Charle	LOWG-148 - Sample @ In Adobey LOWG-149 - hand (Whater?)
LDWG133 - OK w/ Charlie - duesn +	LOWG-149 - ( hand (Whater?)
100k like intertidal Huse area	LONG-150 Sonaronboak
LOWG 135 - use Dave for sampling to	(LDWB-151 - Dave's boat (mid-channel)
access-may need to sample	unot + upstream of second bridge +
by hand @low the (Whater?)	10W6-1527
LOWG 136 - use Dave for sampling to access	LAVOG 195 I note mad-channel
may need to sample by	be san bull
hand @ low the (Whaler?)	using baves sour
War 137 - Charle @ high Ade - 10ts	LOWG - 156 -
of riprap war shore	01230
MAGILDWG138 - Charlie @ high the	end of recon back to T-91.
LOWG139 - Station on share w/ raprap-	
will need to move out of repray on	8mp 03.03.05
Sampling - Charle @ high tide	

01. z4. 05 contid	1/31/05 - Dioxin Sampling - Background
	Foot sampling of spring brook
SS143 contid	Creek (SB-586-010)
	Crew: Angra Rodriquez, Thai Do.
1139 Degan sampling SS143 (reaccopy)	Shannon preside
Gords: 47 30. 74990	Individual locations of velbrar surface
122 17. 93050	#1 - 47 28.513 dratolive wood/
recovery \$2 4cm = too low	122° 14 455 plant Jelis
	1415 Silt, mostly fine
1144 2nd try: 14cm penetration = good	RPD=not visible sand
1154 2d has: 12 acc so destroy - said	#2 - 47" 28.539 gray, wood/
1154 3d try: 12 cm penetration = good Sufficient volume	#2-47° 28.539 gray, wood/ 12° 14.457 plant delvis
SOFFICIENT VOILUME	1419 5114, mostly sand
1155 Kym called -> will call her	Rp0:1-2cm
back to coordinate her orkine	can see retaining wall I dam
1155 Kym Called -> Will call her back to coordinate her picking the glif for SS143	to N/NW
1240 Head back to FIT Stand	#3 47°28.537 grey, wood/
	122° 14. 4287 plant delris
112/10	1425 SI/t, mostly say
MW 1 20/05	
100	

H-4- 47° 28.5.29 gray, wood  122° 14.426 Seems  1428 Ault, mostlyson tracks on sandpan  1428 Ault, mostlyson tracks on sandpan  1428 Ault, mostlyson tracked by  1428 Ault, mostlyson tracked by  1428 Ault, mostlyson tracked by  1428 Aure path along stream  1430 Aure path along stream  145 47° 28.5.33 brown surjace  122° 14.31 Sand Selt Weather - stightly cloudy  1431 Sand Selt Weather - stightly cloudy  140 47° 28.5.42 gray  140 47° 28.5		<u> </u>		<del></del>	<del></del>	
14 2 14 20 Jet gray wood  122° 14 426 Jetus  1428 sell, mostlysmy teating on sandban  1428 sell, mostlysmy teating of sand area surpounded by facing dirt path along stream  45 47° 28 533 brunnswrjace blackberry blue heren, Canado grese  122° 14 395 wowl feither  143 sand selt wind  144 31 sand self wood feither  144 31 sand self wood feither  142° 14 3182 sand (med coarse) and sampling 1500  14:35 worm wood fepto december than 1 the site and sampling 1500  10 cotion description:  70 ft x 200 ft (approximate) sampled on sandbar accessible by joot ym dirt path 96 of bear or by the sail 1000 blackbar accessible by joot ym dirt path 96 of bake half To N/NW damor	32 01.31.05 cm +					33
14 4 7 4 10 . J. L. gray wood  122° 14 426 Jellis  1428 sell, mosklysmy traspes on sandban  1428 sell, mosklysmy traspes on sandban  1428 sell, mosklysmy traspes on sandban  1420 m gravel ~8cm  1420 gray stream  145 47° 28.533 promiser surjace  122° 14 395 wood letter  122° 14 395 wood letter  1431 Weather - slightly cloudy  1431 Weather - slightly cloudy  140 47° 28.542 gray  14:35 worm wood!  14:35 worm wood!  14:35 worm wood!  14:35 worm wood!  14:35 worm wood!  14:35 worm wood!  14:35 worm wood!  14:35 worm wood!  14:35 worm wood!  1500 ft 1 200 ft 1 5 pproximate!  10 ft 1 200 ft 1 5 pproximate!  10 ft 1 200 ft 1 5 pproximate!  10 ft 1 200 ft 1 5 pproximate!  10 ft 1 200 ft 1 5 pproximate!  10 ft 1 200 ft 1 5 pproximate!  10 ft 1 200 ft 1 5 pproximate!  10 ft 1 200 ft 1 5 pproximate!  10 ft 1 200 ft 1 5 pproximate!  10 ft 1 200 ft 1 5 pproximate!  10 ft 1 200 ft 1 5 pproximate!  10 ft 1 200 ft 1 5 pproximate!  10 ft 1 200 ft 1 5 pproximate!	12 3 4 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	brown Surjace	lankeile	nos Wy	10 cm 50	***
122° 14.42te Selling Med mostlyson tatful area surremoded by facing dirt path along stream alder, salman berry, himalean blackberry alder, salman berry, himalean blackberry blue herby, Canado grese 122° ps 395 wood Politics  121° ps 395 wood Politics  121° ps 395 wood Politics  122° ps 395 wood Politics  122° ps 395 wood ps wood plant for ppt, light wind  #6 47° 28.542 gray  gray  122° 14 382 sand (med coase) and photo Jocumen tation of the site and sampling 1500  10 cation description:  70 ft x 200 ft (approximate) sampled on sandbay accessible by goot pm dirt path of a policy of the site of the sand on the sand on the sampled on sandbay accessible by goot pm dirt path of a policy of the sand to N/NN dam or	44 - 47° 28.529	gray wood				2.4.
1428  RPD = 21 cm  gravel ~8cm  Pacing dirt path along stream  gray  #5 47. 28 533  brown surjuce  122° N 395  Wood/Billio  RPP = 1-2 cm  at despendenth  RPP = 1-2 cm  at despendenth  RPP = 1-2 cm  at despendenth  RPP = 1-2 cm  at despendenth  RPP = 2-3 cm  Pant daling  to cation description:  TO jet 8 200 jy (approximate)  sumpled en sandbar accessible  by joot jm. dirt path aff of part of the survey of	1220 14.426	aurio	SP	2 2 1	. 9	
RPD=21 om gravel ~8cm  pacing dire path along stream  gray  #5 47° 22 533 brown surface  122° H 395 wood/Billio  1431 Sand sett  RPD=12 cm at deepen depth  RPD=12 cm at deepen depth  #6 47° 28.542 gray  14:35 worm wood/  14:35 worm wood/  RPD=2-3 cm plant delay  location description:  70 ft x 200 ft (approximate)  sumpled in sandbay accessible  by joot jm dirt path aff of  bike trail To N/NW damor	1428	self, mosklysay.				
Jacing diet path along stream  gray  #5 47° 28 533 brown surface  122° 14 395 wood/Billio  #6 47° 28 542 gray  gray  He 47° 28 542 brownish  14:35 worm wood/  14:35 worm wood/  ppp=2-3 cm plant deling  to cation description:  30 ft x 200 ft (approximate)  sampled in sandbay accessible  by pot fm diet path of g	RPD= < 1 cm	gravel ~8cm		a surann	ded by	
#5 47° 28 533 promisurface  12° M 395 wood/Ribbis  14° 31 Sand SIH  RPD=12 cm at deepen depth  #6 47° 28.542 gray  14:35 worm wood/  14:35 worm wood/  PPD=2-3 cm plant deling  10 cation description:  70 ft x 200 ft (approximate)  sampled in sandbax accessible by 100 t jm. dirt path of a	pacing dirt path along	sheam				san.
#5 47° 28 533 promosurace blue heren Canado gese  122° 12395 wood/Bathia  14:31 Sand sitt  RPD=12 cm at desperdenth  #6 47° 28.542 gray  122° 14.382 Sand (med coarse) and dampling 1500  14:35 worm wood/  14:35 worm wood/  14:35 plant deling  10 cation description:  70 ft x 200 ft (approximate)  sampled on sandbay accessible by joot jm. Just path off of books Wail To N/NW dam or					1	
14:31 Sand selt  RPP=12 cm at despendenth want of ppt, light wind  H 6 47° 28.542 gray  Jud photo Jocumentation of the site  122° 4.382 Sand (med coarse) and sampling 1500  14:35 worm wood!  RPP=2-3 cm plant deling  to cotion description:  70 ft x 200 ft (approximate) sampled cn sandbar accessible  by joot jm dirt patts of of of bike wait To N/NW damor		proun surface	blue here	h. Canada	gere	
# 6 47° 28.542 gray  H 6 47° 28.542 gray  122° 4 382 Sand (med coarse); and sampling 1500 gray  14:35 worm wood  # PD = 2-3 cm plant deling  Location description:  70 ft x 200 ft (approximate)  sampled on sandbar accessible by joot jm dirt pates of of bike trail To N/NW dam or	122° H 395			· C	7	
# 6 47° 28.542 gray  122° 4 382 Sand (med conse); and sampling 1500  14:35 worm wood/  14:35 worm wood/  14:35 worm wood/  14:35 sampled consenses of a plant delies  wandled consenses of the sample of the second sample of the second sample of the second sample of the second sample of the sample		1	Weather - 51	ightly clinic		
H 6 47° 28.542 gray (med coarse) and sampling 1500 location description:  14:35 worm wood!  15:35 worm wood!  15:35 worm wood!  15:35 worm wood!  15:35 worm wood!  16:35 worm	RPD= 1-2 cm	at despendables.		<i>E E</i>	8 1	
122° 14. 3°82 Sand (med course); and sampling 1500  14:35 worm wood!  1pp = 2-3 cm plant stelling  10 contion description:  30 jt x 200 jt (approximate)  sampled on sandbay accessible  by 100t jm. Jut path of of  bike trail To N/NW damor		brwnish.				
PPD=2-3 cm plant delias  location description:  70 It x 200 Il (approximate)  sampled in sandbar accessible by joot im dirt path of of bike trail To N/NW damor		gray	did photo docum	estation ?	the site	
I po = 2-3 cm plant delling  location description:  70 ft x 200 ft (approximate)  sampled on sandbar accessible  by 100t jm. dut path of of bike trail To N/NW damor			end dample	1500		
Location description:  70 pt x 200 pt (approximate)  sampled on sandbar accessible  by joot im dirt path of of bike trail To N/NW damor		4		V	3 3	- The state of the
weation description:  70 ft x 200 ft (approximate)  sampled on sandbar accessible  by joot jm. dut paths of of bike trail To N/NW damor	1 1 1 2-3 cm	plant delling			A CONTRACTOR OF THE PARTY OF TH	
weation description:  70 ft x 200 ft (approximate)  sampled on sandbar accessible  by joot jm. dut paths of of bike trail To N/NW damor				131/0	3	
sampled en sandbar accessible by joot im dirt paths of of by ke trail to N/NW damor				10		· · · · · · · · · · · · · · · · · · ·
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ble track to N/NW damor	sampled in sandbar	accuable			1.3	
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42 .		***************************************									43
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Station 6	Tim	e 1340	- 100 G	+ 1		Station	8 Ti	me 1409	3 2 126	<del>{+</del>	
41° 39.3	883		7		<u>.</u>	47°	39.380			2.3	
1220 17.2	262					122	17.259				sur.
				-				\$ 1 m			unstave)
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		<i>D.</i> 3	jen.	4	V	<u>.</u>			while them		

10 02.09.05 (cm +)	2-10-05 Sta 1 5 Drown John 13 Sampling no wind.
1221-21st station-stainless	Crew: Angelita Rodriguez
47°29.401 steel spooms coop	Sara Still man
122.16.694 jm beach	Champon Pierce
<407. fines	Dave Milling
Sandy	1430
	8/1330 Arrive 14th Are S boarbamp (Bellard)
1238 -22nd station - stuntess steel	learn + test winch grabs
47029.525 spoon for beach	HE CONTRACTOR OF THE CONTRACTO
122 16.829	4-450 Str 1 61-(100 ft-Radius)
40% sines	1435 47° 39,556 Stations
DR-SSI7-010 1 acceptable grab	122 22.766
	- Passible over penetration - REDO
1235 + called Kathy + Tad abont	8 1440 NJ 30 SEZ
sampling was for the	47 576-33 7
have exhausted sampling area	122 22 - 267
and targeted To fines (>407.)	Overperetration- remove weights
7,0,00	1449 on Van Vean gras.
1255 - unish sampling - back to	8 1549 Sh 161
1255 - unish sampling - back to 1st Are S- bunch	15 23' 47° 39. 557 Pic #1
	1456 Stn 162
	19' 47° 39.552 pic \$2
Sup	
	101 47° 39.552 PC 7
	10 (22.248

14 - Oave Jehan - 7/5/5-	15
Strs 161, 162, 163: all have patches	Composite sample from 6 stris.
of oily sheen, dark, very fine,	85C-5516-010 taken.
slight petroleun order, plant material	
(mot3).	pit 7
	1600
120' vadius stations:	80 1700 Return to 14th Are 5 boatramp.
	88
1507 Stn 164	
8 22' 42°39.558 pet 4	
9515	
1615 Str 165	
80' 4739.551 Dic#5	
122° 22.262	
of SIA Overgenetrated - REDO.	
Hotz - same coords. Ibs	
	$\mathcal{G}(\mathcal{G})$
1522 8/622 - Stn 166	
47°39.549	
18' 122° 22.248	
Overpenetrated-REDO.	
9H5-26 Stn 166	
8/10-16 SM 166 PIC \$6	
1914739.547 PIC 6	
1412.24b	

16	03.07.05
Round 2 Sampling	10:57 Stn 80 Directly under 1st Are S bridge
	So cannot take coords. Moved
03.07.05 - Day 1 Rd 2 Sampling on	21.60m north of loridge.
C. Eaton's boat	11:05 An 80 sampled.
crow: Thai Do . Charlie Eaten	11:05 Sm 80 sampled. 11:24 Sm 74 sampled 4.6m
Sara Shilman Tom Putnam	11:52 Returned to Stn 91 3.0, 12 cm
Shannon Rerce	11-53 Rucessful Sample.
	12:00 LUNCH BREAK!
0700 - meet at Harbor Island marina -	14:20 140 100
unload gear; mobilize sampling	12:57 V sampled 3m - Chainlock
0715 - Charles left to get a new of	12:59 Fm 103 sample 2.9m Half-sample
monitor Courrent monitor not	13:10 An 103-add 1 sample 3 m Other Half.
waking	13:23 Stn 105 - NO GOOD - Chain OCK
0740 - begin decon 0812 - Set sail	13:26 Stn 105 - NO GOOD - ROCK
	13:29 Sm 105 - 29 m depth - EMPTY
0830 - Arrive Stn 82. Can not got under	13:31 Stn 105 - " " - Rock
lines   b   barge + shove. D & DM's boat.	13:34 Stn 105 - 3. In dapth - Rock
0834- Barge is still on In 81.	13:38 Switch to Young Grab
0841 - Stn. 85.	13:46 Str 105 3.6 m - Roch
0851 - Jample taken @ 85.	* We have to move more than 10'
0923- Str 86 inaccessible. Use DM's boat	tron this stn. Use young w weights.
0927 - Str 91 - tried one sample -	14:01 Sm. 106 22 m Rock
unsuccessful. Return at higher fide	14:03 Stn. 106 2.2 m Rock
0942 Stn. 73. Successful sample! 10:01 Stn 78. " depth 7.5	14:06 Stn. 106 2.3 m Rock.
10:01 STN 78. depth 7.5	left Str. 106. Return w young.
10:23 82. Took 204 Dupe. 4.5m	

18 03.67.05	
14:26 Stn. 68 Van Veen. Overpenestated.	03.08.05
19:32 Sm 68 2.8m dept. 17' 20.	05.00.03
14:55 Str 69 2m All gravel.	Rd 2 sediment sampling on Charles
Moved att. 7-2 m from sm.	Eaton's boat
15:04 Stn 69 2.8m All gravel.	
THINM YAQUUS, SO WAY.	crew: Sara Stillman, Thai Do, Shannon Pierce
15:06 Snannon spotted the Beaufort barge.	Charle Eaton, Tom Putnam
15:17 Sh 81- 6.8 M	weather: sunny slightly overcast
Hard sand, Shallow. Need young.	0700 - meet at Harbor Island
15:27 Sm 66 - under the corner of Ruge	begin set-up nobilization
Tongass Provider	0730 - head to stn 81
15:30 Str 66- under 10m off. barge.	0749 - sampling sto 81 - barge is gone
Overpenetration. Return w/o weights 15:46 Stn.8. 14.6 m depth.	
16:15 Return to Harbor Island Maring	str 69 gravel in grat ~
Inload coolers.	moved approx. 10 m. jm target.
	Will keep moving of target
	moved to 12m away - Shill
	predominately gravel-photos 27
3.7.05	0830 - called Kathy + lyt msg ja
	direction on what to do
	@ ctn 19
	0844 - stn. 65 (sampled)
	0850 + Kathy said to move towards
	C-5 po str 69 along share into slip to capture intertial area
	outh 1) continue the lender and

20 03.08.05 cm +	03 08.05 con·t 21
0905 - Stn 41 (sampled)	to access even is barge is gone;
0923 - Stn. 30 (sampled) 0940 - Stn 2/ (sampled)	photos in stn. 35 28, 29, 30, 31
0954 -stn 19 + duplicate stn 205 compled)	can get w/in 19.3 m 7 target
1020 -talked to Berit - see if 90 is	not available - went ahead b
possible by joot sampling	take sample - will decide later
1045 - shrt break - called Fric Parker	1182 took sample - stn. 35
about sampling tomorrow; called	1200 checked possibility of sampling to
a S. Park Marina w/ sampling jais	only get w/in 75m of the
1110 - Chris from www full reset us	way (manson)
1045 - talked to Berit - she wants	1200 - head to S. Park marina to meet Chris, stop for lunch
to know is sta 91 is possible	1300 - resume sampling - head to
boat). We will check out this	str 105 + 106; observed large oil/petroleum shan
station today or later this week	No S. Park Marina Charle
1/35 stn 35 - stransrapen Hargaris	1310 - stn 105 - unable to more sampled)
goner many beath bece	along shore away Im turget
doesn't look like it is possible	m shore away for the tareet in (vry vocky substrate links)

22 031.08-05 cm-+	
22 03.08.03	03.69.05
1350 - stn 106 (sampled)	10:00 Arrived at Harbor Island Marina
1421 - stn 122 (sampled)	Set up supplies for Rd. 2 sampling
1450 - stn 131 + (sampled)	on R/U Kittiwate.
duplicate str LOW-206	crew: Bob Complita Chrarlie Exten
1502 - barge on station@ stn. 133	Linda Nevsh Tom Potnam
gravel for 3rd runway-not	Thai Do
sure how long barge will be	10:20 Began decon. Head to Str. 7
securos occupação side	10:45 Rysak taken UW-957-RB
1508 -stn 140 (sampled)	10:48 Stn 7 (Sampled)
1530 - back to Hurbor Island Manna	11:27 After 4 Attempts @ Sta 3, we are
1545 - stopped at stn 90-may be	switching to young sampler. All 4 prior
able to access using whaler	attempts had not on recovery ble of
at but the lawfide shill may	rolls/wood caught in jans
be trugh to access	11:36 Stn 3 (sampled), need more volume
back & H.l. Marina	11:58 Stn 3 (sampled), Head back to
	South Park Marina 45 pack up
	Kom Takaszki (EPA Oversight).
	+ est lunch
12/05	12:20 p/u kyn and notering to LDWG-95
3005	12:45 Arrive station LDWG-95. Proposed location
NO THE RESERVE TO THE PARTY OF	is under a borne though a space is
Chr	open xx xxp5m nw of the proposed location
	the are aging to take a Sample
	17:54 1st all it at the Ac (42 m from )
	12:54 1st attempt at station 95 (4.2 m from proposed location)

24 03.09.05	25 <b>03.09.05</b>
1258 2nd altempt got < Ben. Switch to	Parker's book to in Shruum & Fina
Young grab, discauded grab	PARKER'S boat, to join Shaunan & Hava.
13:0 3rd autempt got 7 cm. Rejected Discardd	14:54 Stn 133 grab successful; station completed. 15:16 Stn 138 completed
13:15 4th altempt successful, need anone volume.	15:36 1st qual at str 137 averpenetrated.
13:15 Kzetny Czuled to check on status of	15:41 2nd grab overpentiated. Howing on to
Site 77 and 95. 1 told her we	Stn 139. Will come back to stn 129-137
were taking grahs@95 b/c barge	w/o weighted Van Veen.
ic gone. We'll check on 77 after.	15:56 Stn 139 completed. Taking of weights
wands. She said she will call zeguin	before retriening to Str 137 137
13:23-1329 3 more alternates unsuccessful	16:29 1st grab at stu 137, half was good
13:34 Successful goals. Str. 95 completed.	(I van van), other van van
2. But off target for 157 acceptable gras	overpenebated. Need more volume.
Am off target for Ind surptable grass.	16:41 2nd grave successful. Str 137 completed
13:48 Hading to stn 77. Bank on location	17:02 Stn 132 - 1st grab successful, need
(Sam H. Tazdze) west to pier, Crewwan	more volume.
on board sait it will remain there outil	17:15 2nd grab successful, station 132 complete
the end of the month. Drop of K Takasaki	17:45 Str (do completed.
14:37 1st grab @ stn 133 overpenetrated. Taking	18:02 1st grab at str 62 averpenetrated
off weights off of young grab.	18:07 2 why goab at Stn 62 good, stn. 62 complete.
14:44 200 grable stn 133 overpendrædd, switching	10:30 Had back to Harbar Island Harina,
to Vanveen grab (w/weights)	Take samples back to effice. End of
* Note: for str. 77, there is a space blw barge and	sampling day.
pier that may be accessible at lowerfide. Will check out using D. Mullin's boat	
Will check out using D. Mullins boat	030905

26		'
03-10-09		03.10.05
10:00	Arrived at Harbor Island Mariner.	are blocking the area. In sail
	Setup. for RZ sed. Sampling abound	to try to get as close as possible,
7	Set up. for RZ sed. Sampling abound R/V Kithwake	but sample at same depth /distance
	Crew: Shanaon Rever Charles Eaton	of shore as target location. Also
		got analysis instructions for
	Sava Stillman Ton Deforman Thai Do Kym Tabasaki	2 Benthic sites - SMS, SIM, Pest
10:10	Kashy called to make sure we got	13:35 Called Kym Takasak to ask
	instrictions for BII sites.	what she wants us to do with
	Str 45 campleted, voweighted VanVean.	her EPA split samples (ICH missage)
10:40	weights added for next stations.	13:44 1st gras at str. 47 rejected, low recon
11:21	1st grab at str 46 unsucussful, low	13:49 Zod grado rejected; washed out.
	recovery switch by young sampler	13:56 Switched to Young grab sampler.
<u>11:30</u>	2nd glab - half overpenetated	3rd grass rejected: washed nut, rocks in juices
	kept 1/2 that did not need more	14:00 4th grab rejected: washed out rocks in izes
	volume (EPA split sample site)	14:03 6th grap rejected: jaws did not trigger
11:38	30d grab - Everpevetaked-rejected grab.	14:03 6th grab rejected: jaws did not trigger 14:04 6th grab rejected: jaws did not trigger 14:06 7th grab rejected: whashed out; adding
11:43	4th grab - successful; str 46 complete.	14:06 7th grab rejected: whashed out; adding
	Head back to Harbor Island Havina	weights weights
	to drop off Kym Takasak, Took lunch	14:09 8th grass successful; need move vol.
	break.	Lithis was 3m east of target location
12:58	Stn 6 completed. (EPA split sample	14:17 9th grab accepted; stn. 47 completes.
3	5(46)	14:30 Cailed Kotley about decision status of
13:30	Called Kally to ask about Str 34.	Strs 86 e gb. She said 4- collect
· · · · · · · · · · · · · · · · · · ·	Two bages have more in and	and place them on hold for analysis

28 03.10.	n4		23.10.04
	until a decision is made.		location.
1446	1st gras at str. 108 rejected ( overpents)	1605	5th grab rejected Loebin's Jacosote in jaws
1453	2nd grab accepted. Stn 108 completed.	VII.	Sampler decounted.
1515	Teff@ Arel called about sample iow-	1611	6th grab accepted; 52m. N. of target
	5580-010. They've analysed for total.		location
	solids already but will hold the rest	1628	1st goals at sty let sees wasuccesful
	for further instruction for avalysis until		Cizus did not traver
	we decide the sample is okay to keep.	1631	zad grabo at str (el unsuccessful del not
1529			-trigace
	target location ble of sunken boat, and	1634	3rd grab accepted; 9.6m W. of tauget
	footbridge in the way). Sample will be		location; need more volume
<u>, , , , , , , , , , , , , , , , , , , </u>	put on hold for zuzlepes until decisionis	1642	4th grab accepted; 9.6 m W. of target.
	wide, Switched to young grat for next.		Station (1) completed.
	Station (199)	1713	1st grab at str 98 rejected, all rocks,
1550	1st grab at str 69 rejected; now recor. (grove)		need to go deeper. Will come back
1552	2nd grab at stu l'A rejected; long revoi. (coloble)		in smaller boat next week
	32 m. N. of target. Heading north along	1738	1st gray at Stu 25 accepted. 19m.N.
	shoreline		of target location. Need more volume.
1555	3rd grab rejected; cable a iron debois		(EPA split sample site).
1558	4th grato accepted (52m. N. of location); need	1751	2nd grass at Str. 25 accepted, 18.6m N.
	more volume; penetration daylers 10cm		of target location
	but we've Keeping it because many		15t grab coordinates: 470 33.6439
	prior allements produced even less penetration.		122° 20. 6810
	Also adding octua weights to next grab at this		2nd grah coordinates 470 33.6437
			1220 20.6811

30										·	31
03.10.0	5									03.11.09	
1804	stn9-	1 st 9 r	ab reju	ckd. no	ccovery	0800 -	Harbor	sland	Manna	RNZ	
	will com	e back	and s	emple b	hand	:	Sedimen	t sam	olina		
1.					bulstand	crew	- Sara s				
	Marina.	End	Of san	dim di	an		Thai D	o			
	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			rJ	1/	<u> </u>	Shanna	n Rerce	,		
		7.47					Charlie		1		
		444000 7					Tom Put				
			,		<del>/                                    </del>	weather	- Joggy		a Im		
						0830 -	began	head	ina to st	39	772733.4.
				20/		18442	stn.	39 /50	aled)		
<u> </u>			/6	To the second		0910	- talke	d to V	thu al	ort and	lucii
·			1//	Q .			LO beat	hic in	esent con	l rescci	4515
		M	11/6							shicken i	
				į.						T Apparia	
			1				analysis	on he	II Dyes		<del>*</del>
				-		-	BCI - "	ut nor	harion		
						0920	BCI-p	a co	Part all	n nuld.	
						. 0920	ecj ms	9 801 1	erij av	ou)	
				-		1605	regeren	ce sar	Noble	lada ia	
	/-					0925 -	seift n	nsg. pol	paye w	autions	3/.1.
			<u>.</u>			·	abont	sampli	ng on W	ron day	719
·	-					)				7:00 an	1
			<u> </u> .				af H.181				1
						1000	1006	is ben'y	unaus	es, unable Hysif Byat B Wenoug	10
		14,					sample	tway.	STATION	B9a + B	9a
							pecauso	+ hde 1	s not li	wencuy	4

.32	33
	_ 03.14.05
1010 -stn B2b (sampled)	
1050 - binished sampling on Charlies	Surface sed sampling on Dave Mullin's
boat; back to H. Island Marina	_ boat.
1150 - leave H. Island Marina	
	Craw: Sara C+ W
1213 - 122:19.191 - approx 1011 jm. 47:31.905 target	Crew: Sara Stillman
	Shannon Purce
str \$ 100 - access by car	- Dare mulling
sample by hand during low	
the to the transfer of the tra	Weather Sunny, clear coof
12:30 - unable to reach str B7a - tide	
too high, bave 5 Park beach	0700 - met at H. Island Marina
1250 - loave S. park beach	loaded gear.
1300 - shocked out access to str. 93	0745 - computer problems - D. Mullinj
pm. land - of 7th Are.	trying to Lix
trok photos near entiall	1800 - begin sampling
Contrall submerged)	0804 - stn 2 - attempted to sample
photo - 39,40,41	
1313 took photos of stn. 93 - photo 42	5 grabs - rocks ~sloped;
possible of access by lund-	unable to get successful
	grat; will return to station
ask property owner / w ns. Amst.	(no) Pater.
ask property owner a 604 S Riverside (n. 7 5. Amst.	0 836 - stn 29 (sampled)
1330 - back to give	- 074 + 5M 341 Sampled)
	0953 - Stn 53 (sampled)
SMP	1620 - Stn B4a (sumpled)
8	

34	. 35
1658 - stn 59 (sampled)	Will take 1-2 jm. Stn 107 tomorran
1130 - nead to 1st Are Boat launch	mil check coords on str 145
break for lunch wait for	to make sure on location
oversignt at noon	will falke about stn. 2
1200 - meet kym @ 1st Ave Boat Laun &	1615-back to H. Island marina
1208 Trinsate blank sample	
1220 - stn 71 (sampled) + EPA sp//ts	68
need to leave sty bolc tile	
was ebbing'	
1257 - 8tn. 77 (Sampled)	
1320 thopped Kym of at 1st Ave	
Bridge	
1339 - stn 80 B56 (sampled	Jr. 75
1415 tstn 98- wull catch at a hypen	7/0/14/
tide tomerrow (03/15)	
1430 - st 1451 - will aut a high	7
the or low the Chy hand t	
1501 hand held GPS)	
1=== -ston 145 (sampled)	
1530 -5h 107 (sampled)	
- talked to Kathy-there unil	
be 3 additional statums:	
115 reoccupty	
899-reoccupy	
1 add'e station upstream	

36		37
3.15.0		
<u>:</u>	Rd 2 Surface Sed ment Sampling	the sample collected yesterday because
· 	Helle Anderson	The title was higher so a rope was
	Berit Bergguist	in the way of the davit ( n 10 ft off)
	Angelita Rodriguez Dave Mullins	10:15 Motor to Station 149
	Dave Mullins	10:20 Stop @ 1st Are s, boat range to
0606	Loaded up van & metat office	take down davit
		Meet Shannon: Bob to give them GPS
0700	Met Dave Mullins at Harbor	11:04 Stop after ped bridge to
	Island Marina & loaded gear	put up davit (Boeing). Actually,
	on boat	decided not to put up davit yet
		will motor to 156 and put up
0720	Motor to Station 98	dovit there
		11:26 Arrive at 156 and put up davit
0302	Acceptable grab collected	11:41 1st grab at 156 - insufficient danh
		11:49 2nd grab - washout
0627	Motor to Station 141	11:57 3rd grab - Wishard
0844	collected 1st grab-acceptable	11:41 1st grab at 156 - insufficient depth 11:49 2nd grab - washout 11:57 3rd grab - washout 11:53 4rh grab - washout
0856	collected and good - acceptable	11:56 5th grab - successful and
0918		Sample collected
0923	Motor to Station 8900 collected 1st grab - acceptable 9:31 and	12:35 GAS cook motor to 155 and sampled
0937-	motor to Station 71 to collect	by hand because of low tide GPS
	1 L that wasn't collected	Coordinates were on land so sampled
	yestarday	as desse as we could get and still stay
	collect acceptable grab-	on the beach and not in vegetation
. co	rulan't ger in quire as far as	
<u> </u>		

38	211 25	39
	3.16.05	
13:11 1st grab at 154 - empty		Rd 2 Surface Sediment Sampling
13:15 Decided to sample on toot	rew:	BOB COMPLITA
because location is right on water		SHANNON PIERCE
line - Sampled at 13:15	**************************************	ANGELITA RODRIDUEZ
13:40 Arrive onshore at 153 to sample on	V/10.	DAVE MULLINS, BOAT DRIVER
took because of low tide		
13:45 collected sample at 153	1000	Picked up Dave at 1st Ave 5 boat
14:07 collected sample at 152		ramp & drove to Harber Island
14:15 Sample at 151 - 50 Sampler didn't		Marina
elosc		Weather: Cloudy windy + rain
14:29 2nd gras - washout	1030	Bob & Shannon arrived at HI
14:30 3rd grab - acceptable	·	Marina & unloaded gear
15:00 collect sample on foot at 144	1115	Arrive at station 2
photo # 49,50 sample location	/120	Collected 1st grab at station 2
photo # 51 upstream from location		approximately 100 ft from the
photo # 52 looking downstream		aut tall
photo # 52 looking downstream  53 another angle of location	1136	Collected acceptable final grab
54 looking across the over		at station 2
15:50 Amue back or HI marina	1148	Motor to station 696
	1210	Arrived at station 696 that has a barge
		\$ 6 tug obstructing access to the sample location
		Photos teken #55-59 looking downstream
Buron		Photos taken #60-63 looking upstream
		•
		The state of the s

		and former and a second	
40 3 <b>3.16.05</b>		<b>.</b>	41
1220	Chalat Alia Salla I + alit	3.16.05	
3 1220	Collected 1st acceptable grab at station	1502	Photos taken #72-73 at station 157
3 10110	696	1508	motor back to Harbor Island Maring
1242	Motor to station 157		
- /300	Arrived at station 157	· · · · · · · · · · · · · · · · · · ·	
1325	Tad phoned with coordinates for		
13 	station 157: 47°31.462 122°18.463		
- L	station 158: 47°31.463 122°18.483	7 <u></u>	
1329	Bob accessed the shoreline to		
	retrieve Coordinates for the rockpile	•	
:	in front of out fall		
	Coordinates 47° 31.458 122° 18.461		
	Photos taken # 65-68 of sampling grea		
1337	Arrived at station 158 which is approximately		
<u>:</u>	25 ft from station 899 = ~ 120 ft from		100
	outfall		
1341	Collected sample at station 158		
1422	Motor to Station 159		
1430	Collect sample at Station 159	<del></del>	
_	47° 31. 440 N Photos taken # 70-71	<u></u>	
	122°18. 454 W		
	•		
1455	By hand with stainless steel spoon		
	Arrive at station 157		
_(500	Collect sample at station 157		
	47° 31 452 454 (454)		
Variable Var	12218. 5 464		
<u></u>			

		Tentes Variation Control			
42				*	
3.18.0					
	se sediment sampling on POS wholer				
crew:	Matt Luxm				1
	Shannon Pierce				
weather	: partly sunny			<del> </del>	
	cool			<del> </del>	
·					-
0900 -	meet a T-91, head acros,	—	-		-
	Elliot Bay to station B7a (reoccup		<del> </del>		-
1000	Station B7a (sampled using Exman	<b>-</b>			
	47 21 890 89.9	9	+		
· · · · · · · · · · · · · · · · · · ·	122° 18. 150 > courdo #1	_	<del>                                     </del>		
MEGN					<del> </del>
mount (	0 7/00/N 0 H 3			·	
				<u>_</u>	ļ
	47°31. 889 > coords #3	-			
600 / 111	122°18 148				
10-40 -	leave stn; back to T-91	_			
		_			
					-
· ·	SWP 03.18.05				:
	ant of				
	0				
		-			<del></del>

2	03.09.05 cm. t
63.09.05	150
Rd 2 Surjace Sediment sampling	1534 -Strife (sampled)
on Fric Parker's Boat	1608 - Str 1 (sampled)
	197
crew: Fiona McNair	1640 tinishintertidal sampling
Shannon Pierce	back to a 1st Ave Bridge
Bric Parker	Boat launch
weather overcast, cool	
1200 - meet at 1st Are S. boat launch,	
set up + movilize	
230 - head upstream to target intertical	12.05
stations at 148, 149, 150, 146, 147	730
Pick up split jors for stn 148 pm.	09
C. Eatrn's boat at S. Park Marina	.0
will pick up kym w/ jars after	
Some sampling - will call other boat	E 0
1305 stn 146 (sumpled)	
1350 str 147 (sampled)	
1410 - picked up EPA oversight (Kym)	
fm Kittiwake un Split Sampling	
1 1 L Sto 1450	
1430 - Stn 148 (Sampled)+ EPA Spirts (Fym)	
1510 - took Kym buck to S. Park Marina	

03.14.0	<b>&gt;\$</b>				OS	14.05 <sup>5</sup>
Rd. 2	Surface Salineat Sampling on Foot	1600	Collected s	ediment so	muble at	Station 9
		1700	Arrive ART		1 1	_
	Amie Rodriquez & Windwood					
	3					
Weather	: Sunny, cloor, no wind					
	Acrivad Dunmish Waterum Parks	APPENDAGE AND A				-
	set up + mobilize to sample station	<del></del>				
	67a	· 				
1200-	Tide is still too high to Sample by hand.	•		/		~~~~
	we will bond to Startron 90 and					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	come back later in the day.			/		
1230	Collected sample at Station 90	- -	03.11.0°			-
100			3			
1315	Arrived to Duwamish Waterway Park					
100	and collect rinsate LDW 55 B7a-RB		<u> </u>			i i
1330	Collected sample at station 87a		/			
350	Motor to Station 24					
1460	Lunch @ Station 24 (Harring's House)					<i>r</i>
1422	Kym (COE) arrived at Herring's House					
1/12 -	3 prepared jars for collecting the sample					
1430	Called That to clavify the sampling location	· · · · · · · · · · · · · · · · · · ·				
	for station 24		A			
1435	Collected sediment sam ple at station 24				744744	
1595	Arrive Station of		-	A A A A A A A A A A A A A A A A A A A		

6	7
03.15.05	- st Bloa (sampled)
	- Stn C1 (sampled)
	- back to T-91-
on Port's Whaler	will sample remaining stus
crew: Bob Complita	tomorrow on D. Mulling
Shannon Pierce	boat -
1015-meet at T-91 set up	Meeting @ 1030 am
t begin samples heading	at H. Island marina
to duramis & River	
1030 - get GPS pm. Dane Mullins boat.	
1055 - 5th \$ 93 (sampled @ 1115)	
W/ Ekman gral- 6 grabs	
1215 -stn 124 (Sampled @ 1215)	5.03
(00rdinates 47.31.250	(1)(1) 03.15:05
122°18.508	Conto 03.
<u> </u>	
£4.18.407	
1245 - stn 135 (sample 1 @ 1245)	
( oordinates a target location	
1315 - stn 136 (sampled @ 1315)	
coordinates	
47°31.250	
122.18.508	
1400 - Lunch @ S. Park Morrison	

## APPENDIX G-4: PROTOCOL MODIFICATION FORMS

PROTOCOL MODIFICAT	ON FORM	•	
Project Name and Number:	LDN RI-Surveyee Sediment	chemistry/ bivi	A FU
Material to be Sampled:	LOW RI-Surjune sediment of Sediment (grab)		ary .
Measurement Parameter:	- Grand J		<del></del>
			_
			_
Standard Procedure for Field C	ollection & Laboratory Analysis (cite reference):		
	unpling woung a B. Imz van	Veen (Windward	CAPP, 2005
			_
Reason for Change in Field Pro	pedure or Analysis Variation:	n Veen jaws wo	uld not
fully close where be	thom surgace was sloped	and/pa	_
rocky substrate w		, , ,	
Variation from Field or Analytica	Procedure: Switch to a	1004-m2	_
		1000 6 000 1000 00	ir Callor,
LOW-1539 CONC-154	at the following 11 station 1 6, LDW-5547 LDW-5561, LDW-558	Lange con 160	13 LING-55 25
Special Equipment, Materials or	Personnel Required:	1, 1DW -3375, 971	and Lbiv-55/2)
04-m= Youn			- 12/25
	1 1 2 2		***
			_
			<del>-</del> .
Initiator's Name:		D-4-: 2//	_
Project Officer:	The gare	Date: 3/10/05	
OA Officer:	0 10 10	Date: 3/10/65	<del></del>

PROTOCOL MODIFICA	ATION FORM			
Project Name and Number:	LOW RI-Surgace so Sediment (grab)	shment che	enish /ha	chi
Material to be Sampled:	_ sediment (arab)	·	,	
Measurement Parameter:				
Standard Procedure for Field	Collection & Laboratory Analysis (cite ref	erence):		
	sampling using a 0.1-m		CWm Sward	, OAPP, 21
Reason for Change in Field F	Procedure or Analysis Variation:	Rocto	n Whalen	
	oling; cannot be equipp		•	
davit + wench q	$N^{*}$	V- 7 V 22 (	<i>V</i> • • • • • • • • • • • • • • • • • • •	
Variation from Field or Analyt	ical Procedure: \ Switch	hed to 0.02	m²	
Ekman grat Char	ical Procedure:  1 V operated) at two 10	cations: con	1-5593 and	•
100V-154B7a				
Special Equipment, Materials			· · · · · · · · · · · · · · · · · · ·	
0.02-m2 Ek	nan grab			
				•
Initiator's Name:	Manney Preice	Date:	3/19/05	
Project Officer:	X GOOR A	Date:	3/18/05	
QA Officer:	A 10 18	Date:	3.18.05	

I HOTOCOL MIODIFICA	TION FORM			
Project Name and Number:	LOW RI -SUNNER	realiment the	m/ truity	/
Material to be Sampled:	section of (grat)			,
Measurement Parameter:	Jan Jan Jan Jan Jan Jan Jan Jan Jan Jan			
· · · · · · · · · · · · · · · · · · ·				
Standard Procedure for Field	Collection & Laboratory Analysis (cite	reference):		
	locations will not b		iom im	
tavent samplina	luceta (Windward 200	US DUPP)	0	
Reason for Change in Field P	rocedure or Analysis Variation:	Inala.	to obtain a	Sugar Age 1
	arget (as w/in 10 m) b	Deriver of Grama	10 105110 A	our way is
Mada:	iger ros with rome of	raw guere	LA 183 CUL,	a at lile
Caulio or racks in	water preventing van ( cal Procedure:  The	reen jaws Im C	lesing or una	-sediment
Variation from Field or Analyti	cal Procedure: / <u>The</u>	Kollwing	samples w	ero recover
Collected >10m im.	cal Procedure:  The  target laration Vice  LDW 3586, IDW-5591  or Personnel Required:	io samplina a	esseulth:	
LDW-552, LDW-5535	T, LOW 3586, LOW-5591	LPW-5598. L	Su 55194 2	DW-55152/
Special Equipment, Materials	or Personnel Required:	,		ind LDW-sc
0.1-ma van Vee				3,1/2
				-
	11			
Initiator's Name:	Manny Reser	Date:	3/11/05	
Project Officer:	2	Bate:	3/11-10	<del></del>
QA Officer:	7-21/01/1	Date:	3 16 05	

I NOTOCOL WIOD	FICATION FORM	
Project Name and Nun	ber: LOW RI-SNY uce Sediment Chem/ Micchy : sediment (you)	
Material to be Sampled	serliment (mak)	
Measurement Paramet	er:	
Standard Procedure fo	Field Collection & Laboratory Analysis (cite reference):	
tarack Com	and the desired will not be sumpled - 10 m m	
Beason for Change in I	ing locations will not be sampled >10 m jm.  Phny location (Windward 2005 OAPP)  ield Procedure or Analysis Variation:  LDWG and EPA agreed	
thousant for onlinge in	-ield Procedure or Analysis Variation:  LDWG and EPA agreed	
10 move Targe	of locations due to sampling accessability (by han	d
	spece for collection (e.g. interpolal area).	
Variation from Field or		
210 m m. 72.40	pt locations (as specyled in OAPP) ble target locations	
were ignored:	LOW-5524, LOW-5569, LOW-5525, and LOW-55144.	
	terials or Personnel Required:	
O.I-m²yan Ve	en sampler	
	/	
···		
Initiator's Name:	Manna Reice Date: 3/16/15	
Project Officer:		
QA Officer:	Date: 3/16/8/	
WA UNICEL.	Land 66 14 Date: 3.16.05	

04-08-66-24 Rd2

I NOTOCOL MIODIFICA	
Project Name and Number:	LOW RI-SUYUNG sediment Chemishy / Nexus
Material to be Sampled:	seriment (gali)
Measurement Parameter:	
4	
Standard Procedure for Field 0	Collection & Laboratory Analysis (cite reference):
	epth g at least 11 cm is ache aved () induard 2005, RAPP) occedure or Analysis Variation: lur recovery
grav samples (w	inducard 2005 RAPP)
Reason for Change in Field Pr	ocedure or Analysis Variation: Liw received
was encountered	I due to hard naive packed sodiment (e.g. send)
or other olstruste	no legrocks, nood dobres):
Variation from Field or Analytic	al Procedure:
	al Procedure: an average penetration depth
Alanahar i 1000-	to for soument in the following three
Special Equipment, Materials of	S 34 LOW-SSIST, and LOW-SSB7a.
á.	
0.02-m2 Ekm	an grat. 0.1-m² van Veen
,	
	·
	$A \cap A \cap A$
Initiator's Name:	Channon Plece Date: 3/18/05
Project Officer:	Date: 3/18/01
QA Officer:	Fail Le 12 Date: 3.18-05

I ROTOCOL MIODIF	,
Project Name and Numb	er: UN RI-Surjuce setiment chemistry/tructy
Material to be Sampled:	sediment (grav)
Measurement Parameter	·:
Standard Procedure for F	Field Collection & Laboratory Analysis (cite reference):
Sediment will	be collected at LOW-5580 (Windward 2005 QAPP)
Reason for Change in Fie	eld Procedure or Analysis Variation: Target Coordinates
	obtained ble 1st Are Bridge obstruction
interpered w/	
Variation from Field or Ar	nalytical Procedure. Sample was collected ~ 70 it
im target and	Sample was diseased / not submitted for analysis.
(station Inni-1	36a was considered supposent jos avadoharackriza h
Special Equipment, Mate	rials or Personnel Required:
	. ^ ^
Initiator's Name:	Manual Placas Date: 3/15/10
Project Officer:	Date: 3/15/05
QA Officer:	100
GA CHILLET.	True 14 11 Date: 5.75.05

I NOTOGOE INODITION TO ONIN
Project Name and Number: UNW RI - Surface Sed chemistry /toxicity
Project Name and Number:  Material to be Sampled:  Se Siment (grav)  Se Siment (grav)
Measurement Parameter:
Standard Procedure for Field Collection & Laboratory Analysis (cite reference):
Proximifuran Low mil be identified as DR-SS 7 (Appendix E)
Windward 2005 aAPP)
Reason for Change in Field Procedure or Analysis Variation: Location ID
"DR-557" was prenously used in background arsence
Sampling
Variation from Field or Analytical Procedure: diskin funa Sample was identified
+ labeled as "PRD-557"
Special Equipment, Materials or Personnel Required:
Initiator's Name: Date: 1/2/05
2/1
Project Officer:  QA Officer:  Date: 42 65  Date: 2, 2, 05

04-08-06-24 13G-diam/juran

PROTOCOL MODIFIC	CATION FORM
Project Name and Number Material to be Sampled: Measurement Parameter:	
Standard Procedure for Fie	ld Collection & Laboratory Analysis (cite reference):
_ •	gampling using an Exman grat Appendix
E, Windward	2005 (APP)
Reason for Change in Field	Procedure or Analysis Variation: Single D. I mz van Veen was availa
A	ejecient/successful samples) or location
Confort be a	ccessed by boat (reeded a hand grav sampler)
Variation from Field or Anal	12-17-17-13/17/ W. 7 V CENT VO
we wat the you	Monny ten dioxin/juvan locahous: SC-SSIA SC-SSIB,
6B-552a EB-552	b in-553 in-559 1 m-555a DRD-557 14-5599 FLU-557
Special Equipment, Materia	
single oil-maVa	
0.025 m2 Van	Veon Chand bold ) samples
a handheld 0.02	5 m = van Veen hand grav sampler was used at accessible by poot)
UB-SS& Conly a	ccessible by root)
Initiator's Name:	Shannon Pierce Date: 2/2/05
Project Officer:	Date: 2/2/av
QA Officer:	Date: 2 2 05