

APPENDIX **B**. FIELD NOTES, FIELD FORMS, AND COCs

Field Logbook

2
5.15.2018 S. Replinger

AOC3 - Clam tissue collection - day 1

0920 Arrive at 1st Ave S boat ramp and prep for clam tissue collection:

Weather: 50s, overcast

Crew: S. Replinger, T. Do, J. Rheuben,
N. Mass, K. McPeak (NW)
Rachel Crawford (Clearways)
Chad Furulie (Granty), Kristen
Herns (USACE)

Low tide: -1.7 at 11:46 am

0940 HRS briefing.

0950 Depart boat ramp & prep for sampling.

1005 Arrive at clamming area 6.

1023 Collect sediment for outfall 2510.
(LDW18-SSOT-2510)

1035. Finish processing sediment.

1037 Conduct clam collection demo.

1040 Start clam collection

1155 Finish clam tissue collection. Record GPS coordinates

1201 Collect CPAH sediment for A11.
(LDW18-SSCL-A11)

1230 General notes regarding C06 area:

- clams ^{very} abundant of all sizes,
- encountered many small clams while digging at shows.

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- area closer to creek very muddy and less accessible to getting stuck.

- clams most abundant under bridge near water.

- sediment generally fine/med. sand w/ silt.

1238 - Finish processing clams and sediment. Load supplies onto boat.

1245 Depart clam area C06. Head to scope out ability to sample outfall 2114.

1255 Arrive at beach to sample outfall 2114. Necessary to walk along shore behind barge.

1303 Collect LDW18-SSOT-2114. Process sample, and wait for boat to return.

1320 Boat arrives; load supplies and head back to boat ramp.

1330 Arrive at boat ramp. Offload supplies. End of on-water day.

1345 Depart boat ramp. End of field day.

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S. Replinger

A003 - clam tissue collection day 2

0945 Arrive at Harbor Island Marina and prep for clam tissue collection in Areas 2 and 3.

Weather: Sex 160s, overcast

Crew: S. Replinger, T. Do, N. Mass, L. McPeak, J. Rhenben (univ)
Rachel Crawford (cleanings)
Chad Furlic (Granty)
Erika Hoffman (EPA)

Low tide: -2.4 ft at 12:27pm

- 1020 Arrive at area 2 to collect clams (Kellogg Island)
- 1025 Walk beach to scout clam abundance and mark CPAH collection area.
- 1045 Conduct clam collection demo and begin clamming. Target is total of 24 clams for clam area A02 and CPAH areas A06 and A04.
- 1205 Finish collecting clams. Start sediment collection and recording of coordinates.
- 1207 Collect sediment at LDW18-SSCL-A06. Clams in this area are CL21, CL03, and CL19.
- Erika departed to join crew at A03, and help them w/ clamming.

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- 1232 Collect sediment as LDW18-SSCL-A04. Clams in this area are CL13, CL24, and CL23.
- 1245 Finish at clamming area 2. Head to clam area #1.
- 1355 Start clamming at area #1 (CO1) ← *1300 Erika joins team at A01
- 1355 Finish clamming at area CO1. Collect 24 clams, including 3 each for areas A01 and A02 (ePAHs).
- 1400 Collect sediment for A02. Includes clams CL08, CL09, CL13
- 1400 Collect sediment for A01. Includes clam CL22, CL05, CL12
- 1414 Finish collecting clams/seed at area 01. Clean supplies and load boat. Note - were joined by other crew around 1350 to help finish area #01.
- 1420 Arrive at Harbor Island Marina.
- 1445 End of ~~1355~~ on-water time.
- ~~1445~~ (SP) Start work on field forms + COCs. End of field day.

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Notes regarding beaches from 5/16/2018.* Area 2 (Kellogg Island):

- Clams relatively abundant throughout area, although no clams present in northern-most area.
- clams generally not all the way down close to low tide water line - likely above 6 ft MLLW
- Substrate where clams found generally fine/medium sand.
- sediment muckier down near low tide line.

* Area 1 (RM 0.1-0.2 W):

- Clams present throughout area; not as abundant in other areas. (e.g. C06, C02)
- most clams found well above low tide water line
- Substrate generally fine/med sand.

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AOC3 - clam tissue collection - day 3

1015 Arrive at South Park Manna and prep for clam tissue collection in Areas 9, 10, 11.

Weather: GS, overcast to partly cloudy

Crew S. Replinger, T. Do, L. McPeck, N. Mazz, J. Rheaben (windward)
Rachel Crawford (clearways)

Erika Hoffman (EPA)

Shawn Hinz (Gravity)

Low tide: - 2.8 ft at 13:11

1045 Gravity boat arrives. Load supplies and prep for sampling.

1100 Depart manna. Head to Area C10.
Motor issues. Work to resolve GS drift downstream.

Drop crew off at C09 (TD, KM, NM, EH)

1200 Arrive at area A10. Begin clamming.
Target of 24 clams, including CPAH areas A19 and A20.

1235 Called Kathy G. to report that due to significant prop wash in CPAH area A20, will be difficult to find clams. Moved area to similar CPAH core area to south of Area A19

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- 1325 Currently have 11 clams after ~1.5 hrs of searching. Mostly collected from middle portion of area.
- 1404 Collect CPAH sediment from A19.
(LDW18-SSCL-A19)
- 1445 Stop collecting clams at C10 due to incoming tide. Total of 19 clams collected, including 3 for CPAH area A19. One of the 19 clams was < 20 mm (19 mm).
- 1450 Boat returns from picking up other crew from C09. Clean up supplies and depart beach. Head to Manra.
- 1503 Arrive at South Park Manra. Offload supplies. Erika + Rachel depart.
- 1515 Nina, Kate, and Jenna depart South Park Manra. End of on-water time.
Start field forms + COCs.
- Note: clams included in A19 CPAH composite are CL15, CL16, CL17.
- 1420 Finish COCs + forms. End of field day.

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Notes regarding Clamming Area 10:

- nearly all clams found in central portion of area 10, near CPAH area A19 and to north.
- southern most area highly impacted by prop scour - large holes present in sediment. numerous burrows present just south of this area.
- large number of seeps in area.
- clams found in less muddy areas. Much of beach, especially to south of A19 is very muddy.
- beach has more gravel + cobble to north.
- no clams / shows observed in the area of the T-117 early action area boundary.

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AOC3 - clam tissue collection day 4

1045 Arrive at 1st Ave S bridge and prep for clam tissue collection. (Start w/ BIRCOB)

Weather: 60s, overcast, sprinkles

Crew: S. Replinger, T. Do, K. McPeak
N. Mass, J. Rouben (NW)
Rachel Crawford (Clearways)
Debra Williston (King County)
Shawn Hinz (Granty)

Low tide: -2.7 ft at 13:59

1055 Health & Safety briefing.

1100 Depart 1st Ave. S boat ramp and head to Area Cli. (Other crew will go to C08).

1125 Arrive at Cli. Prep supplies

1135 Boat departs. Map out CPAH areas A17 (north end) and A18 (center).

1145 Begin searching for clams. Tide at 0 ft MLLW - likely needs to drop a bit more to uncover most of clam shows. Crew is SR, JR, RC, DW.

1336 Collect sediment for A17.

Includes CL10, CL11, CL12

1357 Collect sediment for A18.

Includes clams CL08, CL09, CL15.

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1400 Finish collecting clams in A11.
Record GPS coordinates and pack supplies.

1410 Depart Cli. Head to meet up w/ other crew at C08.

* Note - no clams found in CPAH area A18; shifted area slightly to south where 3 clams were found.

1423 Arrive at C08. Pick up other crew. (TD, KM, NM).

1430 Depart area C08. Head to area C05 to collect clams.

1440 Arrive at C05. Begin clamming.

1525 Finish collecting clams at C05.

1505 Collect sediment at CPAH area A10.

1528 Collect sediment at CPAH area A09.

Clams in A09 include:

CL08, CL11, CL12

Clams in A10 include:

CL20, CL21, CL22

1550 Wrap up processing at area C05.

1600 Arrive at 1st Ave S boat ramp.
Offload supplies.

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1605 End of field day. JR, NM, KM,
DW + RC depart.

1615 Begin field forms + COCs.

1520 Depart 1st Ave S. boat ramp.
End of day.

*Note regarding CPAH areas in C05:
minimal presence / evidence of
clams in both A09 and A10.
Moved locations slightly to areas
where clams were more abundant
and where CPAH interpretation was
unchanged from original target.

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Notes regarding area C11:

- clams fairly abundant throughout; all located at elevation lower than ~ 2 ft. MLLW.
- riprap/rocky substrate higher up on beach, sandy/silty where clams were found.
- some seeps in area w/ water bubbling out of sediment
- clams found in A17; necessary to slightly shift A18 to south to area where clams were present.
- collected clams on both sides of a fall.

Notes regarding area C05:

- slight sheen observed in water, but no sheen on sediment / in sed. samples.
- clams fairly abundant throughout (in patches) - esp. in middle portion of beach.
- was necessary to shift both CPAH areas to where clam could be found.

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1200 Arrive at 1st Ave S boat ramp and prep for sampling in area C04.

Weather: partly sunny, 60s

Crew: S. Replinger } (windward)
T. Do
N. Mazz

Shawn Hinz (Granny)

Tide: -2.3 ft at 2:49 pm

1230 Depart 1st Ave S boat ramp and head down to Area C04.

1233 Conduct H&S briefing.

1240 Arrive at C04. Begin clamming.

1349 Call K. Godfredsen to discuss CPAH areas. Able to collect sufficient clams in A07, but A08 area has no sediment and no clam habitat. Decide to collect CPAH clams in area to north of A07 where clams are more abundant and where interpolation shows moderately high CPAHs.

1435 Collect sediment for A07
Includes CL05, CL19, CL22.

1500 Collect sediment for A08
Includes CL12, CL13, CL14.

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1505 Finish collecting clams in A04. Collect coordinates and clean up supplies.

1520 Depart C04 and head to 1st Ave S boat ramp.

1528 Arrive at 1st Ave S boat ramp. Offload supplies.

1540 Depart 1st Ave S boat ramp. Head back to office to do field forms + COCs. End of field day.

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Notes regarding area C04 (Glacier):

- Clams generally located higher up on beach relative to low tide line.
- most clams found in downstream end of clamming area (northern area).
- southern side of inlet was mostly rocky/rip-rap bank; some clams present in pockets along bank (see loc. of GPS coordinates).
- no mya present in mucky mudflats (did find some bent nose clams).
- substrate where clams found was fine/med. sand w/ some silt.
- sheen observed along waterline

05.15.18 AOC3 Task 4 (Clam TSSU) T.D.D.

0920 Arrive at 1st Ave ramp.

Meet up w/ Gravity (Chad Familie)

Rachel Crawford (CW)

Kristen Kerns (USACE)

Suzanne Replinger

Kate McPeck

Jenna Rhenben

Nina Maas

Ther ID

(WW)

0930 Set up / prep supplies

0940 H/S briefing.

1010 Drop off crew at Clam Area 6.
(SE, NM, RC)

1015 Head to Clam Area 7 (Slip 4)

1025 Arrive at Slip 4.

1030 Begin searching for shows (and digging for clams).

1245 End clam sampling. Collected 3 clams at head of slip ≥ 2 cm. 1 clam at \sim mid-slip ~ 1.6 cm. Not much avail. habitat. Gravel cap in most areas. Shows mostly from polychaetes.

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T.D.D.

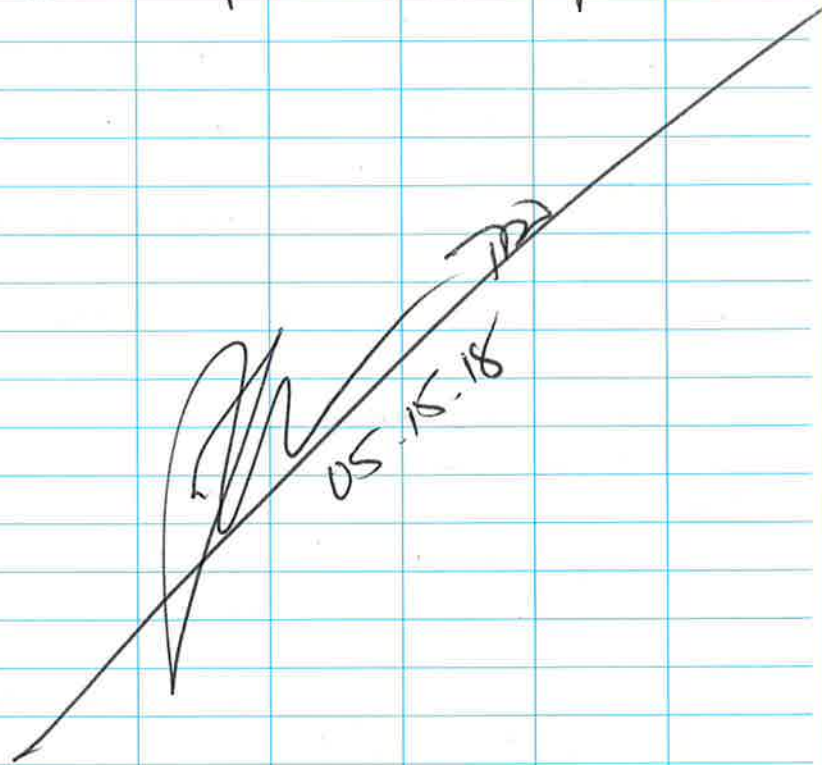
1310 Picked up by Chad.

1320 Pick up other crew

1325 Head back to boat ramp.

1330 Arrive at boat ramp offload samples/supplies. End of on-water time.

1345 Depart boat ramp.



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TDJ

0945 Arrive Harbor Island Marina
 Meet up w/ Chad Funtine (Gravity),
 Rachel Crawford (CW) & Erika
 Hoffman (EPA)
 Suzanne Replinga
 Nina Maas
 Jenna Rhenben
 Kate McPeck
 Thai D

} Windward

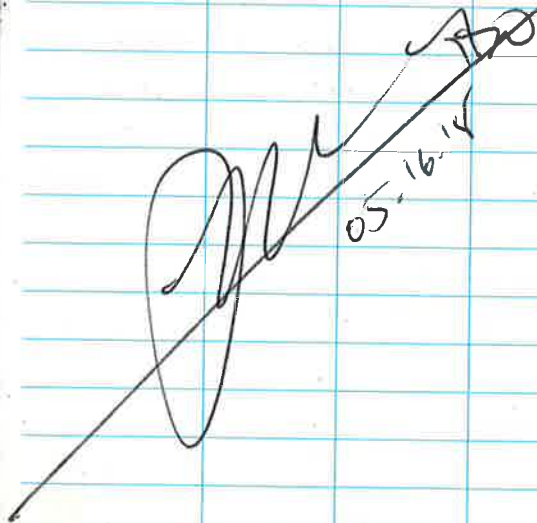
Weather: 60s, overcast.

- 0950 Load and prep supplies.
 1000 H/S briefing and plan for today.
 1010 Depart marina for clam areas
 2 & 3 (Kelsey Island area)
 1025 Drop off SR, JR, RC (CW) & ETT (EPA)
 at clam areas 2.
 1033 Arrive Clam Area 3
 1040 Begin clamming
 1215 Erika Hoffman joins us
 1300 Erika Hoffman departs to rejoin
 other crew at Area 1
 1300 Collected sediment from CPAA area 5
 1320 Collect sediment from CPAA area 3
 Ended clamming Area 3

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TDJ

- 1345 Picked up by boat. Head to
 Clam Area 1 to help other
 crew
 1350 At Clam Area 1 (see other
 logbook)
 1415 Completed at Area 1, Head
 back to marina.
 1420 At marina. Offload supplies and
 samples.
 1445 End of on-water time.



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TDO

1015 Arrive at S. Park Marine.

S. Replinger

K. McPeak

J. Reuben

N. Maas

T. DO

} Woodward.

Meet w/ R. Crawford (CW) and
E. Hoffman (EHA)

1020 Load supplies/capt. Prep.

1035 A/S briefing

1040 Shawn Hinz (Gravity) arrives.

1050 Depart marine. Badley/engine
problems. Troubleshooting.1130 Arrive clam Area 9, begin
sampling. K McPeak, N Maas,
TDO, E Hoffman

1300 Collect CPAT sediment (A13)

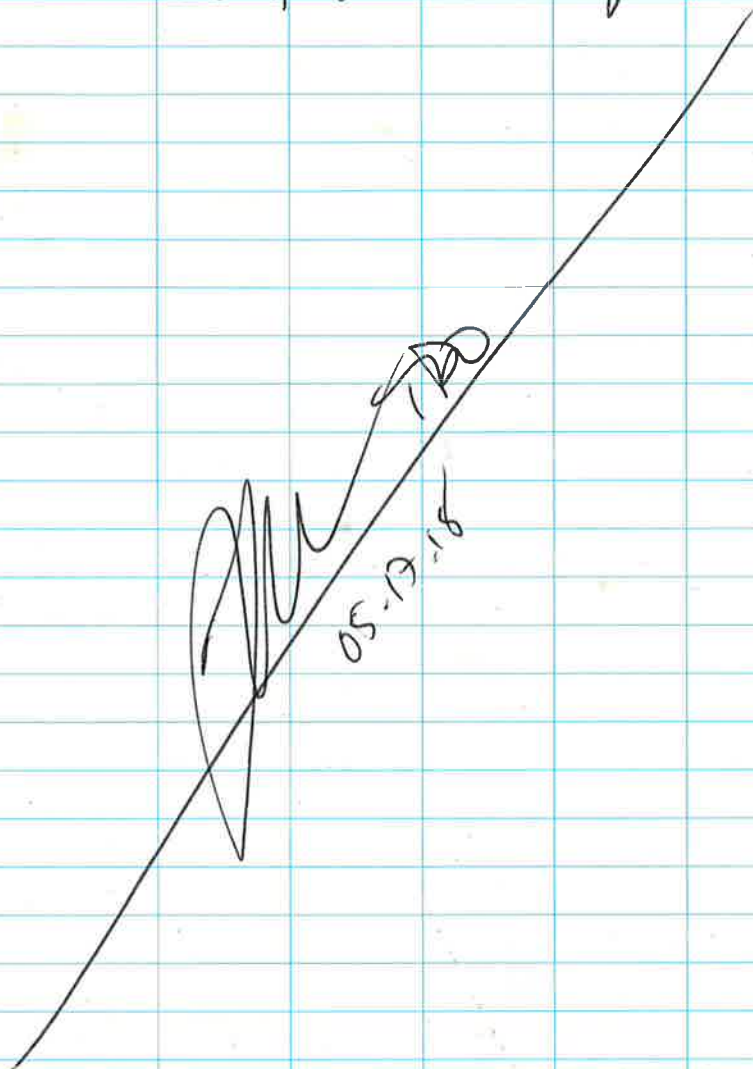
1432 End clamming. Maxed out on
level of effort.1440 Meet up w/ other crew at Area
10. ~~to~~1450 Head back to marina. Tide
coming in too fast to continue.

1503 At marina, offload.

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TDO.

1515 End of on-water day.



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1045

Arrive 1st Ave boat ramp

TDD

S. Replinger

K. McPeak

J. Rhenben

N. Maas

T. DD

w/w.

1050

Meet w/ Debra Willista (CC)

Shawn Hinz - Gravity

Rachel Crawford - Cleanway.

Weather: 100s, overcast.

1055

H/s briefing, head upriver to
Clam area II.

1130

Drop off crew at Clam Area II

S. Replinger, J. Rhenben, R Crawford,

D. Williston

1135

Head to Area B

1145

Arrive and setup

1150

Begin search

1300

End search, 24 clams found.

Keep 21

1330

Collect CPAT sed. sample.

LWS18-SSC1-A12

Clam II, 18, 21

1425

Picked up by boat. Head to COS

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TDD

1440

Arrive at COS. Begin.

See other book for rest
of day.

TDD

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Notes on Clam Tissue Areas

Clam Area 7 (Slip 4)

Dredged and capped in 2012(?)
 Most of the area has been capped with large rounded gravel to beyond 10 cm depth. There were a few isolated areas of sediment deposition, but it was shallow in most places (<10 cm). Clams not found in most places.

A few clams were found near high depositional pocket at head of slip near/below some outfalls, in sandy silt substrate. Lots of polychaetes.

Clam Area 3 (along TROT Park)

Bridles and debris littered throughout intertidal area, esp up higher in more sandy substrate. Only a few clams found in northern section. More sand pocket/stretches as you

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progress up stream (south).
 Only a few clams at southern boundary where is was much siltier. Clams generally found higher up from waterline in sandier substrate. Soft-silty sinking substrate was mostly polychaetes and some Macoma clams.

Clam Area 9

Very few clams found. Not a lot of suitable substrate (sand or sand/silt). Numerous wide areas inundated by seep run-off, and/or fine silt (soft/sinking) or rip rap. Only was able to find a handful of clams at north/downstream end, and a couple of random clams further south/upstream.

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TDD

Clam Area 8

Mostly sandy areas up in higher elevation from wetlands, with a few silty / seep runoff areas. Clams generally found in silt/sand substrate in northern/downstream and middle portions of area. Rip rap and pier at southern/upstream end, clams less abundant. None found at that end (of target size).

TDD
05-19-18

Clam Collection Forms

CLAM COLLECTION FORM

Project Name: Duwamish-AOC3 Task No.: Task 4 (clam tissue)
 Date: 5-15-2018 Start/Stop Time: 1040 / 1155
 Weather: cloudy, 60s Clam Area ID: C06
 Sampling Method: Hand Collection (trowel, shovel) cPAH Area ID(s): All
 Crew: SR, NM, RC

Clam ID	Width (mm)	Composite type				Comment
		cPAH, PCBs, D/F	Inorganic arsenic	cPAH -porewater	Extra	
LDW18-C06-CL01 (1045)	22	✓	✓			
-CL02 (1048)	27	✓	✓			
-CL03 (1100)	20	✓	✓			
-CL04 (1108)	26			✓		CPAH area A11
-CL05 (1123)	27			✓		CPAH area A11
-CL06 (1105)	33	✓	✓			
-CL07 (1118)	24	✓	✓			
-CL08 (1126)	22	✓	✓			
-CL09 (1137)	27	✓	✓			
-CL10 (1149)	25	✓	✓			
-CL11 (1058)	23	✓	✓			
-CL12 (1103)	22	✓	✓			
-CL13 (1112)	24	✓	✓			
-CL14 (1115)	25	✓	✓			
-CL15 (1125)	25	✓	✓			
-CL16 (1155)	23	✓	✓			
-CL17 (1133)	39	✓	✓			
-CL18 (1136)	34	✓	✓			
-CL19 (1140)	25	✓	✓			
-CL20 (1138)	26			✓		CPAH area A11
-CL21 (1148)	24	✓	✓			

CLAM COLLECTION FORM

Project Name: Duwamish-AOC3 Task No.: Task 4 (clam tissue)
 Date: 5-16-2018 Start/Stop Time: 1255 / 1355
 Weather: partly cloudy, 60s. Clam Area ID: CØ1
 Sampling Method: Hand Collection (trowel, shovel) cPAH Area ID(s): AØ1, AØ2
 Crew: SR, JR, RC, EH

Clam ID	Width (mm)	Composite type				Comment
		cPAH, PCBs, D/F	Inorganic arsenic	cPAH -porewater	Extra	
LDW18-CØ1-CLØ1	40	x	x			1312
-CLØ2	31	x	x			1341
-CLØ3	24	x	x			1317
-CLØ4	42	x	x			1332
-CLØ5 *	26			x		1318 (AØ1)
-CLØ6	27	x	x			1327
-CLØ7	26	x	x			1310
-CLØ8 *	20			x		1302 (AØ2)
-CLØ9 *	29			x		1315 (AØ2)
-CL1Ø	27	x	x			1313
-CL11 *	30	x	x			1350
-CL12 *	25			x		1346 (AØ1)
-CL13 *	22			x		1303 (AØ2)
-CL14	24	x	x			1348
-CL15	29	x	x			1323
-CL16	41	x	x			1325
-CL17	33	x	x			1321
-CL18	34	x	x			1320
-CL19	35	x	x			1327

CLAM COLLECTION FORM

Project Name: Duwamish-AOC3 Task No.: Task 4 (clam tissue)
 Date: 5-16-2018 Start/Stop Time: 1045 / 1205
 Weather: partly sunny, 60S Clam Area ID: ~~A02~~ C02
 Sampling Method: Hand Collection (trowel, shovel) cPAH Area ID(s): A04, A06
 Crew: SR, JR, RC, EH

Clam ID	Width (mm)	Composite type				Comment
		cPAH, PCBs, D/F	Inorganic arsenic	cPAH -porewater	Extra	
LDW18-C02-CL01	28	x	x			1101
-CL02	32	x	x			1147
-CL03 *	32			x		1115 (A06)
-CL04	30	x	x			1102
-CL05	34	x	✓			1059
-CL06	25	x	✓			1156
-CL07	32	x	x			1142
-CL08	38	x	x			1130
-CL09	35	x	x			1134
-CL10	30	✓	x			1057
-CL11	26	x	x			1109
-CL12	37	x	x			1202
-CL13 *	33			x		1115 (A04)
-CL14	23	x	x			1103
-CL15	36	x	x			1157
-CL16	26	x	✓			1124
-CL17	32	x	x			1146
-CL18	25	x	x			1110
↓ ↓ -CL19 *	33			x		1139 (A06)

CLAM COLLECTION FORM

Project Name: Duwamish-AOC3 Task No.: Task 4 (clam tissue)
 Date: 5-17-2018 Start/Stop Time: 1200 / 1445 (2.75 hrs)
 Weather: 60s, overcast to partly sunny Clam Area ID: C10
 Sampling Method: Hand Collection (trowel, shovel) cPAH Area ID(s): A19
 Crew: SP, JR, RC

Clam ID	Width (mm)	Composite type				Comment
		cPAH, PCBs, D/F	Inorganic arsenic	cPAH -porewater	Extra	
LDW18-C10-CL01	23					1213
-CL02	19					1331 (<20mm)
-CL03	27					1420
-CL04	35					1339
-CL05	23					1228
-CL06	35					1352
-CL07	36					1259
-CL08	35					1342
-CL09	23					1307
-CL10	30					1346
-CL11	27					1321
-CL12	31					1335
-CL13	33					1339
-CL14	23					1322
-CL15	43					1218
-CL16	30					1213
-CL17	33					1226
-CL18	37					1257
↓ ↓ -CL19	34					1304

A19 cPAH area

CLAM COLLECTION FORM

Project Name: Duwamish-AOC3
 Date: 05.10.18
 Weather: 60's overcast
 Sampling Method: Hand Collection (trowel, shovel)
 Crew: N. MAAS, K. McPHEE, T. D.

Task No.: Task 4 (clam tissue)
 Start/Stop Time: 1150/1300
 Clam Area ID: C08
 cPAH Area ID(s): A12

Clam ID	Width (mm)	Composite type				Comment
		cPAH, PCBs, D/F	Inorganic arsenic	cPAH -porewater	Extra	
LDN18-C08-CL01	32	→			→	1155
CL02	30	→			→	1202
CL03	31	→			→	1301
CL04	22	→			→	1320
CL05	29	→			→	1221
CL06	22	→			→	1223
CL07	23	→			→	1222
CL08	25	→			→	1225
CL09	29	→			→	1229
CL10	3A	→			→	1230
CL11 *	24			x		cPAH 1232
CL12	25	→			→	1254
CL13	28	→			→	1253
CL14	22	→			→	1250
CL15	29	→			→	1252
CL16	28	→			→	1248
CL17	33	→			→	1250
CL18 *	26			x		cPAH 1240
CL19	26	→			→	1250
CL20	26	→			→	1252
CL21 *	31			x		cPAH 1241

CLAM COLLECTION FORM

Project Name: Duwamish-AOC3 Task No.: Task 4 (clam tissue)
 Date: 5-18-2018 Start/Stop Time: 1145 / 1400
 Weather: overcast, 60s Clam Area ID: C11
 Sampling Method: Hand Collection (trowel, shovel) cPAH Area ID(s): A17, A18
 Crew: SR, JR, RC, DW

Clam ID	Width (mm)	Composite type				Comment	
		cPAH, PCBs, D/F	Inorganic arsenic	cPAH - porewater	Extra		
LDW18-C11-C101	26	x	x			1310	
-C102	32	x	x			1233	
-C103	32	x	x			1322	
-C104	32	x	x			1327	
-C105	35	x	x			1252	
-C106	25	x	x			1257	
-C107	35	x	x			1305	
-C108	* 27			x		cPAH - A18 1231	
-C109	* 36			x		cPAH - A18 1239	
-C110	* 35			x		} cPAH Area A17	
-C111	* 31			x			1241
-C112	* 29			x			1256
-C113	30	x	x			1302	
-C114	23	x	x			1323	
-C115	* 28			x		cPAH - A18 1313	
-C116	24	x	x			1340	
-C117	36	x	x			1328	
-C118	27	x	x			1335	
↓ ↓ -C119	32	x	x			1247	

CLAM COLLECTION FORM

Project Name: Duwamish-AOC3
 Date: 5-18-2018
 Weather: overcast, sun breaks, 60s
 Sampling Method: Hand Collection (trowel, shovel)
 Crew: SR, TD, KM, JR, NM, PC, DW

Task No.: Task 4 (clam tissue)
 Start/Stop Time: 1440 / 1525
 Clam Area ID: C05
 cPAH Area ID(s): A09, A10

Clam ID	Width (mm)	Composite type				Comment
		cPAH, PCBs, D/F	Inorganic arsenic	cPAH -porewater	Extra	
LOW18-C05-CL01	26	x	x			1520
-CL02	40	x	x			1441
-CL03	25	x	x			1505
-CL04	29	x	x			1443
-CL05	25	x	x			1530
-CL06	24	x	x			1459
-CL07	27	x	x			1507
-CL08 (*)	25			x	(A09)	1452
-CL09	25	x	x		(A09)	1448
-CL10	33	x	x			1532
-CL11 (*)	22			x	(A09)	1520
-CL12 (*)	35			x	(A09)	1523
-CL13	29	x	x			1505
-CL14	33	x	x			1455
-CL15	23	x	x			1505
-CL16	26	x	x			1500
-CL17	32	x	x			1520
-CL18	25	x	x			1450
-CL19	24	x	x			1450

CLAM COLLECTION FORM

Project Name: Duwamish-AOC3 Task No.: Task 4 (clam tissue)
 Date: 5-19-2018 Start/Stop Time: 1240/1505
 Weather: partly cloudy, 60s Clam Area ID: C04
 Sampling Method: Hand Collection (trowel, shovel) cPAH Area ID(s): A07, A08
 Crew: SPR, TD, NM

Clam ID	Width (mm)	Composite type				Comment
		cPAH, PCBs, D/F	Inorganic arsenic	cPAH - porewater	Extra	
LDW18 - C04 - CL01	23	x	x			1345
-CL02	26	x	x			1445
-CL03	20	x	x			1400
-CL04	23	x	x			1416
-CL05 *	25			x	(A07)	1430
-CL06	21	x	x			1435
-CL07	24	x	x			1424
-CL08	21	x	x			1443
-CL09	28	x	x			1415
-CL10	21	x	x			1400
-CL11	27	x	x			1320
-CL12 *	25			x	(A08)	1315
-CL13 *	26			x	(A08)	1310
-CL14 *	23			x	(A08)	1309
-CL15	25	x	x			1300
-CL16	24	x	x			1250
-CL17	24	x	x			1316
-CL18	25	x	x			1347
-CL19 *	28			x	(A07)	1250

Co-located Sediment Forms

SURFACE SEDIMENT COLLECTION FORM

Project Name: Duwamish-AOC3 Task no.: Task 4 (clam tissue)
 Date: 5-15-2018 Weather: cloudy, 60s
 Sampling Method: Hand Collection Crew: SR, NM, RC

LOCATION		Location ID: <u>A11</u>		
Latitude/Northing(Y): <u>GPS</u>			Longitude/Easting(X): <u>GPS</u>	
Time of sample	Bottom depth (m)	Penetration depth (cm)	Acceptable sample (Y/N)	Comments
<u>1201</u>	<u>—</u>	<u>10 cm</u>	<u>Y</u>	<u>Includes CL04, CL05, CL20</u>
SAMPLE DATA				
Sample ID: <u>LDW18-SSCL-A11</u>				
Sediment type	Sediment color	Sediment odor		Comments:
cobble	brown surface	<u>none</u>	H ₂ S	<u>- Several worms</u> <u>- trace shell frags.</u> <u>- slight orange color.</u>
gravel	drab olive	slight	petroleum	
sand (F M C)	<u>brown</u>	moderate	other:	
<u>silt</u>	<u>gray</u>	strong		
clay	black			

LOCATION		Location ID:		
Latitude/Northing(Y):			Longitude/Easting(X):	
Time of sample	Bottom depth (m)	Penetration depth (cm)	Acceptable sample (Y/N)	Comments
SAMPLE DATA				
Sample ID:				
Sediment type	Sediment color	Sediment odor		Comments:
cobble	brown surface	none	H ₂ S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Project Name: Duwamish-AOC3 Task no.: Task 4 (dam tissue)
 Date: 5.16.2018 Weather: partly cloudy, 60s.
 Sampling Method: Hand Collection Crew: SR, JR, RC, EH

LOCATION		Location ID: <u>A06</u>		
Latitude/Northing(Y): <u>GPS</u>			Longitude/Easting(X): <u>GPS</u>	
Time of sample	Bottom depth (m)	Penetration depth (cm)	Acceptable sample (Y/N)	Comments
<u>1207</u>	<u>-</u>	<u>10 cm</u>	<u>Y</u>	<u>-</u>
SAMPLE DATA		Sample ID: <u>LDN18-SSCL-A06</u>		
Sediment type	Sediment color	Sediment odor		Comments:
cobble	<u>brown surface</u>	<u>none</u>	<u>H₂S</u>	<u>frac shell frags</u> <u>includes CL03, CL19, CL21</u>
gravel	drab olive	<u>slight</u>	petroleum	
sand (F/M/C)	brown	moderate	other:	
silt	<u>gray</u>	strong		
clay	black			

LOCATION		Location ID: <u>A04</u>		
Latitude/Northing(Y): <u>GPS</u>			Longitude/Easting(X): <u>GPS</u>	
Time of sample	Bottom depth (m)	Penetration depth (cm)	Acceptable sample (Y/N)	Comments
<u>5:40-1232</u>	<u>-</u>	<u>10cm</u>	<u>Y</u>	
SAMPLE DATA		Sample ID: <u>LDN18-SGCL-A04</u>		
Sediment type	Sediment color	Sediment odor		Comments:
cobble	brown surface	<u>none</u>	H ₂ S	<u>none</u> <u>includes CL13, CL23, CL24</u>
gravel	drab olive	slight	petroleum	
sand (F/M/C)	<u>brown</u>	moderate	other:	
<u>silt</u>	<u>gray</u>	strong		
<u>clay</u>	black			

SURFACE SEDIMENT COLLECTION FORM

Project Name: Duwanish-AOC3 Task no.: Task 4 (dam tissue)
 Date: 05-16-18 Weather: 60s, sun, pt clouds
 Sampling Method: Hand Collection Crew: N. Maas, F. McPeck, TDD

LOCATION		Location ID: <u>CPAH Area 05</u>		
Latitude/Northing(Y):			Longitude/Easting(X):	
Time of sample	Bottom depth (m)	Penetration depth (cm)	Acceptable sample (Y/N)	Comments
<u>1300</u>	<u>0</u>	<u>10</u>	<u>Y</u>	CL01, CL02, CL03 <u>CL21, CL22, CL23</u>
SAMPLE DATA		Sample ID: <u>LDW18-SSCL-A05</u>		
Sediment type	Sediment color	Sediment odor		Comments:
cobble	<u>brown surface</u>	<u>none</u>	H ₂ S	<u>org. material</u>
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
<u>silt</u>	<u>gray</u>	strong		
clay	black			

LOCATION		Location ID: <u>CPAH Area 03</u>		
Latitude/Northing(Y):			Longitude/Easting(X):	
Time of sample	Bottom depth (m)	Penetration depth (cm)	Acceptable sample (Y/N)	Comments
<u>1320</u>	<u>0</u>	<u>10</u>	<u>Y</u>	CL21, CL22, CL23 <u>CL01, CL02, CL03</u>
SAMPLE DATA		Sample ID: <u>LDW18-SSCL-A03</u>		
Sediment type	Sediment color	Sediment odor		Comments:
cobble	<u>brown surface</u>	<u>none</u>	H ₂ S	<u>wal debris, brick</u> <u>tr. org. material</u>
gravel	drab-olive	slight	petroleum	
sand (F M C)	<u>brown</u>	moderate	other:	
<u>silt</u>	<u>gray</u>	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Project Name: Duwamish-AOC3 Task no.: Task 4 (clam tissue)
 Date: 5/16/2018 Weather: partly sunny, 60S.
 Sampling Method: Hand Collection Crew: JR, PC, NM, KM

LOCATION		Location ID: <u>CPAH area 02</u>		
Latitude/Northing(Y):			Longitude/Easting(X):	
Time of sample	Bottom depth (m)	Penetration depth (cm)	Acceptable sample (Y/N)	Comments
<u>1400</u>	<u>0</u>	<u>10</u>		
SAMPLE DATA				
Sample ID: <u>LDW18-SSCL-A02</u>				
Sediment type	Sediment color	Sediment odor		Comments: <u>CLAMS 8, 9, 13</u> <u>redox features.</u>
cobble	<u>brown surface</u>	<u>none</u>	H ₂ S	
gravel	drab olive	slight	petroleum	
sand (F M C)	<u>brown</u>	moderate	other:	
<u>silt</u> <u>clay</u>	<u>gray</u> black	strong		

LOCATION		Location ID: <u>CPAH area 01</u>		
Latitude/Northing(Y): <u>LDW18-SSCL-A01</u>			Longitude/Easting(X):	
Time of sample	Bottom depth (m)	Penetration depth (cm)	Acceptable sample (Y/N)	Comments
<u>1400</u>	<u>0</u>	<u>10</u>	<u>Y</u>	
SAMPLE DATA				
Sample ID: <u>LDW18-SSCL-A01</u>				
Sediment type	Sediment color	Sediment odor		Comments: <u>CLAMS 5, 12, 22</u> <u>wood debris</u> <u>redox picus</u> <u>+r. shell fragments</u>
cobble	<u>brown surface</u>	<u>none</u>	H ₂ S	
<u>gravel</u>	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
<u>silt</u> <u>clay</u>	<u>gray</u> black	strong		

SURFACE SEDIMENT COLLECTION FORM

Project Name: Duwanish-AOC3 Task no.: Task 4 (clam tissue)
 Date: 05.17.18 Weather: overcast, 60S
 Sampling Method: Hand Collection Crew: N. Maas

LOCATION		Location ID: <u>CPAH Area 13</u>		
Latitude/Northing(Y):				Longitude/Easting(X):
Time of sample	Bottom depth (m)	Penetration depth (cm)	Acceptable sample (Y/N)	Comments
<u>1320</u>	<u>0</u>	<u>10</u>	<u>Y</u>	<u>Clams 14, 15, 11, 02, 03, 04</u>
SAMPLE DATA		Sample ID: <u>LDW18-SSCL-A13</u>		
Sediment type	Sediment color	Sediment odor		Comments: <u>trace weed debris, redox pockets tr. org. debris</u>
cobble	<u>brown surface</u>	<u>none</u>	H ₂ S	
gravel	drab olive	slight	petroleum	
sand (F M C)	<u>brown</u>	moderate	other:	
silt	gray	strong		
clay	black			

LOCATION		Location ID: <u>CPAH Area 14</u>		
Latitude/Northing(Y):				Longitude/Easting(X):
Time of sample	Bottom depth (m)	Penetration depth (cm)	Acceptable sample (Y/N)	Comments
		<u>10</u>		
SAMPLE DATA		Sample ID: <u>LDW18-SSCL-A14</u>		
Sediment type	Sediment color	Sediment odor		Comments:
cobble	brown surface	none	H ₂ S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Project Name: Duwamish-AOC3 Task no.: Task 4 (clam tissue)
 Date: 5.17.2018 Weather: 60s, overcast + partly cloudy
 Sampling Method: Hand Collection Crew: SR, JR, RC

LOCATION		Location ID: <u>A19</u>		
Latitude/Northing(Y): <u>---</u>				Longitude/Easting(X): <u>---</u>
Time of sample	Bottom depth (m)	Penetration depth (cm)	Acceptable sample (Y/N)	Comments
<u>1404</u>	<u>---</u>	<u>10cm</u>	<u>Y</u>	<u>---</u>
SAMPLE DATA		Sample ID: <u>LDW18-SSCL-A19</u>		
Sediment type	Sediment color	Sediment odor		Comments:
cobble	brown surface	<u>none</u>	H ₂ S	<u>Clams included are CL15, CL16, CL17.</u>
<u>gravel</u>	drab olive	slight	petroleum	
sand (F M C)	<u>brown</u>	moderate	other:	
silt	<u>gray</u>	strong		
clay	black			

LOCATION		Location ID: <u>---</u>		
Latitude/Northing(Y): <u>---</u>				Longitude/Easting(X): <u>---</u>
Time of sample	Bottom depth (m)	Penetration depth (cm)	Acceptable sample (Y/N)	Comments
SAMPLE DATA		Sample ID: <u>---</u>		
Sediment type	Sediment color	Sediment odor		Comments:
cobble	brown surface	none	H ₂ S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Project Name: Duwamish-AOC3 Task no.: Task 4 (clam tissue)
 Date: 5-18-2018 Weather: overcast, 60s to partly sunny
 Sampling Method: Hand Collection Crew: SR, JR, PC, DW

LOCATION		Location ID: <u>A17</u>		
Latitude/Northing(Y):				Longitude/Easting(X):
Time of sample	Bottom depth (m)	Penetration depth (cm)	Acceptable sample (Y/N)	Comments
<u>1336</u>	<u>—</u>	<u>10 cm</u>	<u>Y</u>	<u>CL11, CL12, CL10</u>
SAMPLE DATA				
Sample ID: <u>LDW18-SSCL-A17</u>				
Sediment type	Sediment color	Sediment odor		Comments:
cobble	<u>brown surface</u>	none	<u>H₂S</u>	
<u>gravel</u>	drab olive	<u>slight</u>	petroleum	
sand (F/M/C)	brown	moderate	other:	
silt	<u>gray</u>	strong		
<u>clay</u> - trace	black			

LOCATION		Location ID: <u>A18</u>		
Latitude/Northing(Y):				Longitude/Easting(X):
Time of sample	Bottom depth (m)	Penetration depth (cm)	Acceptable sample (Y/N)	Comments
<u>1357</u>	<u>—</u>	<u>10 cm</u>	<u>N</u>	<u>Includes CL08, CL09, CL15</u>
SAMPLE DATA				
Sample ID: <u>LDW18-SSCL-A18</u>				
Sediment type	Sediment color	Sediment odor		Comments:
cobble	<u>brown surface</u>	none	<u>H₂S</u>	<u>layer closest to 10cm was mostly sand.</u>
<u>gravel</u> - trace	drab olive	<u>slight</u>	petroleum	
sand (F/M/C)	brown	moderate	other:	
silt	<u>gray</u>	strong		
clay	<u>black</u>			

SURFACE SEDIMENT COLLECTION FORM

Project Name: Duwamish-AOC3 Task no.: Task 4 (clam tissue)
 Date: 05.18.10 Weather: 60's, overcast
 Sampling Method: Hand Collection Crew: N. Maas, K. McRee, TTD

LOCATION		Location ID: <u>CPAA Area 12</u>		
Latitude/Northing(Y):				Longitude/Easting(X):
Time of sample	Bottom depth (m)	Penetration depth (cm)	Acceptable sample (Y/N)	Comments
<u>1330</u>	<u>0</u>	<u>10</u>	<u>Y</u>	
SAMPLE DATA		Sample ID: <u>LDW18-SSCL-A12</u>		
Sediment type	Sediment color	Sediment odor		Comments:
cobble	<u>brown surface</u>	<u>gone</u>	H ₂ S	<u>redox pockets</u> <u>shell frag (tr.)</u> <u>CLAMS, 11, 18, 21</u>
gravel	<u>drab olive</u>	slight	petroleum	
<u>sand (F M C)</u>	<u>brown</u>	moderate	other:	
<u>silt tr.</u>	gray	strong		
clay	black			

LOCATION		Location ID:		
Latitude/Northing(Y):				Longitude/Easting(X):
Time of sample	Bottom depth (m)	Penetration depth (cm)	Acceptable sample (Y/N)	Comments
SAMPLE DATA		Sample ID:		
Sediment type	Sediment color	Sediment odor		Comments:
cobble	brown surface	none	H ₂ S	
gravel	drab olive	slight	petroleum	
sand (F M C)	brown	moderate	other:	
silt	gray	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Project Name: Duwamish-AOC3
 Date: 5.18.2018
 Sampling Method: Hand Collection

Task no.: Task 4 (clam tissue)
 Weather: partly cloudy, 60s.
 Crew: SR, TD, KM, JR, NM, RC, DW

LOCATION		Location ID: <u>A10</u>		
Latitude/Northing(Y):				Longitude/Easting(X):
Time of sample	Bottom depth (m)	Penetration depth (cm)	Acceptable sample (Y/N)	Comments
<u>1505</u>	<u>-</u>	<u>10cm</u>	<u>Y</u>	<u>Includes CL20, CL21, CL22</u>
SAMPLE DATA				
Sample ID: <u>LDW18-SSCL-A10</u>				
Sediment type	Sediment color	Sediment odor		Comments:
cobble	brown surface	<u>none</u>	H ₂ S	<u>trace organics + wood debris</u>
<u>gravel</u>	drab olive	slight	petroleum	
sand (F)(M)(C)	<u>brown</u>	moderate	other:	
<u>silt</u> - trace	gray	strong		
clay	black			

LOCATION		Location ID: <u>A09</u>		
Latitude/Northing(Y):				Longitude/Easting(X):
Time of sample	Bottom depth (m)	Penetration depth (cm)	Acceptable sample (Y/N)	Comments
<u>1528</u>	<u>-</u>	<u>10cm</u>	<u>Y</u>	<u>Includes CL26, CL27, CL08, CL11, CL12.</u>
SAMPLE DATA				
Sample ID: <u>LDW18-SSCL-A09</u>				
Sediment type	Sediment color	Sediment odor		Comments:
cobble	<u>brown surface</u>	<u>none</u>	H ₂ S	<u>(trace) shell frags</u>
gravel	drab olive	slight	petroleum	
sand (F)(M)(C)	brown	moderate	other:	
silt	<u>gray</u>	strong		
clay	black			

SURFACE SEDIMENT COLLECTION FORM

Project Name: Duwarnish-AOC3 Task no.: Task 4 (clam tissue)
 Date: 5.19.2018 Weather: partly sunny, 60s
 Sampling Method: Hand Collection Crew: SR, NM, TD

LOCATION		Location ID: <u>A07</u>		
Latitude/Northing(Y):				Longitude/Easting(X):
Time of sample	Bottom depth (m)	Penetration depth (cm)	Acceptable sample (Y/N)	Comments
<u>1435</u>	<u>0</u>	<u>10 cm</u>	<u>Y</u>	<u>includes CL05, CL22, CL19</u>
SAMPLE DATA				
Sample ID: <u>LDW18-SSCL-A07</u>				
Sediment type	Sediment color	Sediment odor		Comments:
cobble <u>trace small</u>	<u>brown surface</u>	<u>none</u>	H ₂ S	<u>some organics + wood & shell fragments</u>
<u>gravel</u>	drab olive	slight	petroleum	
sand (F)(M)(C)	brown	moderate	other:	
<u>silt</u>	<u>gray dk.</u>	strong		
clay	black			

LOCATION		Location ID: <u>A08</u>		
Latitude/Northing(Y):				Longitude/Easting(X):
Time of sample	Bottom depth (m)	Penetration depth (cm)	Acceptable sample (Y/N)	Comments
<u>1500</u>	<u>-</u>	<u>10 cm</u>	<u>Y</u>	<u>includes CL12, CL13, CL14</u>
SAMPLE DATA				
Sample ID: <u>LDW18-SSCL-A08</u>				
Sediment type	Sediment color	Sediment odor		Comments:
cobble <u>trace</u>	<u>brown surface</u>	<u>none</u>	H ₂ S	<u>lots of wood debris & some shell fragments</u>
<u>gravel</u>	drab olive	slight	petroleum	
sand (F)(M)(C)	brown	moderate	other:	
silt	<u>gray dk.</u>	strong		
clay	black			

COCs

CHAIN-OF-CUSTODY/TEST REQUEST FORM

3043

Project/Client Name: LDW AOC3
 Project Number: tsk4
 Contact Name: Amara Vandervert
 Sampled By: S. Replinger

Ship to: ARI
 Attn: Sue Dunitzoo
 Shipper: hand-delivered.
 Form filled out by: S. Replinger
 Shipping Date: 5-15-2018
 Airbill Number: ---
 Turnaround requested: Std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required)						Comments / Instructions [Jar tag number(s)]
					TOC/TS (g/g)	CPAHS	black carbon	exsiv CPAH	lipids / percent solids		
5-15-2018	1108	LDW18-C06-CLO4	1	tissue		X			X		} Comp ID: LDW18-A11-CLWR Comp01
	1123	↓ ↓ -CLO5	1	↓		X			X		
	1138	↓ ↓ -CLO	1	↓		X			X		
	1201	LDW18-SSCL-A11-	4	Sediment	X	X	X	X			Hold 32oz jar for CPAH ex situ evaluation.
	1201	LDW18-SSCL-A11-FD	3	Sediment	X	X	X				

Total Number of Containers: _____ Purchase Order / Statement of Work # _____

1) Released by: _____ Print name: <u>Suzanne Replinger</u> Signature: <u>[Signature]</u> Company: <u>Windward Env.</u> Date/Time: <u>5-15-2018 / 1632</u>	1) Rec'd by: <u>[Signature]</u> Company: <u>ARI 310582</u> Date/Time: <u>05/15/18 1632</u>	2) Released by: _____ Print name: _____ Signature: _____ Company: _____ Date/Time: _____	2) Rec'd by: _____ Print name: _____ Signature: _____ Company: _____ Date/Time: _____
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* Distribution: White copies accompany shipment; yellow retained by consignor.



200 West Mercer Street
 Suite 401
 Seattle, WA 98119
 Tel: (206) 378-1364
 Fax: (206) 217-9343

To be completed by Laboratory upon sample receipt:

Date of receipt:	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

CHAIN-OF-CUSTODY/TEST REQUEST FORM

118 3042

Project/Client Name: LDW AOC3
 Project Number: task 4
 Contact Name: Amara Vanderwort
 Sampled By: S. Replinger, T. Do

Ship to: ARI
 Attn: Sue Durnihoo
 Shipper: hand delivered
 Form filled out by: S. Replinger
 Shipping Date: 5-15-2018
 Airbill Number: —
 Turnaround requested: std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required)						Comments / Instructions [Jar tag number(s)]
					Hold frozen (pending composition instructions)						
5-15-2018	1045	LDW18-C07-C101	1	soil	x						
	1050	↓ -C102	1	↓	x						
	1049	↓ -C103	1	↓	x						
	1128	↓ -C104	1	↓	x						
	1045	LDW18-C06-C101	1	↓	x						
	1048	-C102	1	↓	x						
	1100	-C103	1	↓	x						
	1105	-C106	1	↓	x						
	1118	-C107	1	↓	x						
	1126	-C108	1	↓	x						
	1137	-C109	1	↓	x						
	1149	-C110	1	↓	x						
Total Number of Containers			12	Purchase Order / Statement of Work #							

1) Released by: Print name: <u>Suzanne Replinger</u> Signature: <u>[Signature]</u> Company: <u>Windward Env.</u> Date/Time: <u>5/15/2018 1632</u>	1) Rec'd by: <u>Jacob Walter</u> <u>[Signature]</u> Company: <u>ARI 3.1°C/5.8°C</u> Date/Time: <u>05/15/18 1632</u>	2) Released by: Print name: Signature: Company: Date/Time:	2) Rec'd by: Company: Date/Time:
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To be completed by Laboratory upon sample receipt:

Date of receipt:	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

CHAIN-OF-CUSTODY/TEST REQUEST FORM

3044

Project/Client Name: LDW AOC3
 Project Number: task 4
 Contact Name: Amara Vandervort
 Sampled By: S. Replinger, T. Do

Ship to: ARI
 Attn: Sue Durnihoo
 Shipper: hand delivered
 Form filled out by: S. Replinger
 Shipping Date: 5-15-2018
 Airbill Number: ---
 Turnaround requested: Std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required)						Comments / Instructions [Jar tag number(s)]
					Hold frozen (pending compositional instructions)						
5-15-2018	1058	LDW18-C06-CL11	1	tissue	x						
	1103	-CL12	1		x						
	1112	-CL13	1		x						
	1115	-CL14	1		x						
	1125	-CL15	1		x						
	1155	-CL16	1		x						
	1133	-CL17	1		x						
	1136	-CL18	1		x						
	1140	-CL19	1		x						
	1148	-CL21	1		x						
Total Number of Containers			10	Purchase Order / Statement of Work #							

1) Released by:	1) Rec'd by: <u>Jacob Walter</u>	2) Released by:	2) Rec'd by:
Print name: <u>Suzanne Replinger</u>	Print name: <u>[Signature]</u>	Print name:	Print name:
Signature: <u>[Signature]</u>	Company: <u>ARI 31°C58C</u>	Signature:	Company:
Company: <u>Windward Env.</u>	Date/Time: <u>05/15/18 1022</u>	Company:	Date/Time:
Date/Time: <u>5-15-2018 / 1632</u>		Date/Time:	

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Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

1 of 2

CHAIN-OF-CUSTODY/TEST REQUEST FORM

110 3045

Project/Client Name: LDW A03

Ship to: ARI

Project Number: task 4

Attn: Sue Dunniho

Shipping Date: 5-16-2018

Contact Name: Amara Vandermort

Shipper: hand delivered

Airbill Number:

Sampled By: S. Replinger

Form filled out by: S. Replinger

Turnaround requested: Std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required)						Comments / Instructions [Jar tag number(s)]
					TOC / Solids	CPAHS	black carbon	ex situ CPAHS	lipids / % solids		
5-16-2018	1400	LDW18-SSCL-A01	4	sediment	x	x	x	x			} Hold 32 oz jar for CPAH ex situ (Juse)
	1400	-A02	4	sediment	x	x	x	x			
	1320	-A03	4	sediment	x	x	x	x			
	1300	-A05	4	sediment	x	x	x	x			
	1232	-A04	4	sediment	x	x	x	x			
	1207	-A06	4	sediment	x	x	x	x			
	1318	LDW18-C01-CL05	1	tissue		x			x		} Comp ID: LDW18-SSCL-A01-Comp1
	1346	-CL12	1			x			x		
	1338	-CL22	1			x			x		
	1302	LDW18-C01-CL08	1			x			x		} Comp ID: LDW18-SSCL-A02-Comp1
	1315	-CL09	1			x			x		
	1303	-CL13	1			x			x		
Total Number of Containers			30	Purchase Order / Statement of Work #							

1) Released by:	1) Rec'd by: <u>Jacob Water</u>	2) Released by:	2) Rec'd by:
Print name: <u>Suzanne Replinger</u>	<u>[Signature]</u>	Print name:	
Signature: <u>[Signature]</u>	Company: <u>ARI 2.3/4.8</u>	Signature:	Company:
Company: <u>Windward Env.</u>	Date/Time: <u>05/16/18 1625</u>	Company:	Date/Time:
Date/Time: <u>05.16.18/1625</u>		Date/Time:	

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Date of receipt::	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

CHAIN-OF-CUSTODY/TEST REQUEST FORM

Project/Client Name: LOW A003 Sampled By: S. Replinger
 Project Number: Test # Contact Name: Amya Vandervort
 Ship to: AR1 Shipper: Windward Form filled out by: S. Replinger
 Shipping Date: 05.16.18 Atn: Sue Dammico Turnaround requested: BA
 Airbill Number: _____

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	CPAHs Impacts / op solides	Test(s) Requested (check test(s) required)				Comments / Instructions (bar tag number(s))
5.16.2018		LDW18-C02-CL03	1	tissue	X	X				Camp ID:
		1139	1		X	X				Camp ID: LDW18-SSCL-A06-Camp 1
		1129	1		X	X				
		1115	1		X	X				Camp ID: LDW18-SSCL-A04-Camp 1
		1124	1		X	X				
		1120	1		X	X				Camp ID: LDW18-SSCL-A03-Camp 1
		1105	1		X	X				
		1212	1		X	X				Camp ID: LDW18-SSCL-A05-Camp 1
		1245	1		X	X				
		1254	1		X	X				
		1250	1		X	X				
Total Number of Containers			12	Purchase Order / Statement of Work #						

To be completed by Laboratory upon sample receipt:

Date of receipt:	Cooler temperature:	Received by:
Condition upon receipt:		Time of receipt:
Laboratory W.O. #:		

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1 of 5

CHAIN-OF-CUSTODY/TEST REQUEST FORM

110 3047

Project/Client Name: LDW ACC3
 Project Number: task 4
 Contact Name: Amara Vanderhoff
 Sampled By: S. Replinger

Ship to: ARI
 Attn: Sue Dunning Shipping Date: 5-16-2018
 Shipper: hand-delivered Airbill Number: ---
 Form filled out by: S. Replinger Turnaround requested: Std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required)						Comments / Instructions [Jar tag number(s)]
					Hold Growth	Spending	Compositing	Instructions			
5-16-2018	1312	LDW18-C01-C101	1	tissue	x						
	1341	-C102	1		x						
	1317	-C103	1		x						
	1332	-C104	1		x						
	1327	-C106	1		x						
	1310	-C107	1		x						
	1313	-C10	1		x						
	1350	-C111	1		x						
	1348	-C114	1		x						
	1323	-C115	1		x						
	1325	-C116	1		x						
	1321	-C117	1		x						

Total Number of Containers: 12 Purchase Order / Statement of Work #

1) Released by: <u>Suzanne Rodriguez</u>	1) Rec'd by: <u>Jacob Rodriguez</u>	2) Released by:	2) Rec'd by:
Print name: <u>Suzanne Rodriguez</u>	Print name: <u>Jacob Rodriguez</u>	Print name:	Print name:
Signature: <u>[Signature]</u>	Signature: <u>[Signature]</u>	Signature:	Signature:
Company: <u>Windward Env</u>	Company: <u>ARI 2-3/4-18</u>	Company:	Company:
Date/Time: <u>05-16-18 / 1625</u>	Date/Time: <u>05/16/18 1625</u>	Date/Time:	Date/Time:

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To be completed by Laboratory upon sample receipt:

Date of receipt: _____	Laboratory W.O. #: _____
Condition upon receipt: _____	Time of receipt: _____
Cooler temperature: _____	Received by: _____

2 of 5

CHAIN-OF-CUSTODY/TEST REQUEST FORM

119 3048

Project/Client Name: LDW AOC3
 Project Number: TASK 4
 Contact Name: AMARA VANDEBORT
 Sampled By: S. Replinger

Ship to: AR1
 Attn: Sue Annikov Shipping Date: 05.16.18
 Shipper: hand del'd Airbill Number: ---
 Form filled out by: S. Replinger Turnaround requested: std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required)						Comments / Instructions [Jar tag number(s)]
					Hold frozen (pending instructions)						
5.16.2018	1320	LDW18-C01-CL18	1	tissue	x						
	1327	-CL19	1		x						
	1312	-CL20	1		x						
	1333	-CL21	1		x						
	1321	-CL23	1		x						
	1323	↓ ↓ -CL24	1		x						
	1101	LDW18-C02-C101	1		x						
	1147	-C102	1		x						
	1102	-C104	1		x						
	1059	-C105	1		x						
	1156	-C106	1		x						
	1142	↓ ↓ -C107	1		x						
Total Number of Containers			12	Purchase Order / Statement of Work #							

1) Released by: <u>S. Replinger</u>	1) Rec'd by: <u>Jacob Gite</u>	2) Released by:	2) Rec'd by:
Print name: <u>S. Replinger</u>	Print name:	Print name:	Print name:
Signature: <u>[Signature]</u>	Signature: <u>[Signature]</u>	Signature:	Signature:
Company: <u>Windward Env</u>	Company: <u>AR1 2.3/4.8</u>	Company:	Company:
Date/Time: <u>05.16.18/1625</u>	Date/Time: <u>05/16/18 1625</u>	Date/Time:	Date/Time:

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To be completed by Laboratory upon sample receipt:

Date of receipt:	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

3 of 5

CHAIN-OF-CUSTODY/TEST REQUEST FORM

3049

Project/Client Name: LDW ACC3
 Project Number: TASK 4
 Contact Name: AMARA VANDERVOORT
 Sampled By: S. Pedding

Ship to: ARI
 Attn: Sue Dammico
 Shipper: hand del'd
 Form filled out by: S Pedding
 Shipping Date: 05.16.18
 Airbill Number: _____
 Turnaround requested: std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required)					Comments / Instructions [Jar tag number(s)]	
					HOLD FROZEN	PENDING	CONSISTING	INSTRUCTIONS			
5.16.2018	1130	LDW18-C02-CL08	1	tissue	X						
	1131	-CL09	1		X						
	1057	-CL10	1		X						
	1109	-CL11	1		X						
	1202	-CL12	1		X						
	1103	-CL14	1		X						
	1157	-CL15	1		X						
	1124	-CL16	1		X						
	1146	-CL17	1		X						
	1110	-CL18	1		X						
	1131	-CL20	1		X						
	1053	-CL22	1		X						

Total Number of Containers: 12 Purchase Order / Statement of Work # _____

1) Released by: Print name: <u>Suzanne Pedding</u> Signature: <u>[Signature]</u> Company: <u>Windward Env</u> Date/Time: <u>05.16.18/1625</u>	1) Rec'd by: <u>Jacob Walter</u> Company: <u>ARI - 2.3/4.8</u> Date/Time: <u>05/16/18 1625</u>	2) Released by: Print name: _____ Signature: _____ Company: _____ Date/Time: _____	2) Rec'd by: Print name: _____ Signature: _____ Company: _____ Date/Time: _____
---	--	--	---

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To be completed by Laboratory upon sample receipt:

Date of receipt: _____	Laboratory W.O. #: _____
Condition upon receipt: _____	Time of receipt: _____
Cooler temperature: _____	Received by: _____

CHAIN-OF-CUSTODY/TEST REQUEST FORM

No 3050

Project/Client Name: LDW ATC3
 Project Number: TASK 4
 Contact Name: Amara Vandervort
 Sampled By: S. Replinger

Ship to: ARI
 Attn: Sue Donihoo
 Shipper: Windward Env
 Form filled out by: S Replinger
 Shipping Date: 05.16.18
 Airbill Number: _____
 Turnaround requested: STA

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required)						Comments / Instructions [jar tag number(s)]
					HELD FROM FREIGHT	PRELIMINARY CONCENTRATION	INSTRUMENT				
05.16.18	1220	LDW18-C03-CL04	1	TISSUE	X						
	1228	-CL05	1		X						
	1141	-CL06	1		X						
	1143	-CL07	1		X						
	1145	-CL08	1		X						
	1146	-CL09	1		X						
	1150	-CL10	1		X						
	1149	-CL11	1		X						
	1155	-CL12	1		X						
	1200	-CL13	1		X						
	1220	-CL14	1		X						
	1225	-CL15	1		X						
Total Number of Containers			12	Purchase Order / Statement of Work #							

1) Released by: _____ Print name: <u>Suzanne Replinger</u> Signature: <u>[Signature]</u> Company: <u>Windward Env.</u> Date/Time: <u>05.16.18/1625</u>	1) Rec'd by: <u>Jacob White</u> Company: <u>ARI 2.3/4.8</u> Date/Time: <u>05/16/18 1625</u>	2) Released by: _____ Print name: _____ Signature: _____ Company: _____ Date/Time: _____	2) Rec'd by: _____ Company: _____ Date/Time: _____
--	---	--	--

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To be completed by Laboratory upon sample receipt:

Date of receipt: _____	Laboratory W.O. #: _____
Condition upon receipt: _____	Time of receipt: _____
Cooler temperature: _____	Received by: _____

5 of 5

CHAIN-OF-CUSTODY/TEST REQUEST FORM

MR 3-70

Project/Client Name: LDW AOC 3
 Project Number: TASK 4
 Contact Name: Anara Vandewort
 Sampled By: S. Replinger

Ship to: ARI
 Attn: Eve Dannikoo Shipping Date: 05.16.18
 Shipper: hand del'd Airbill Number: _____
 Form filled out by: S. Replinger Turnaround requested: STB

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required)						Comments / Instructions [Jar tag number(s)]
					Hold frozen (pending)	Compositing (instructions)					
05.16.18	1228	LDW18-003-CL16	1	TISSUE	X						
	1232	-CL17	1		X						
	1240	-CL18	1		X						
	1254	-CL19	1		X						
	1158	-CL20	1		X						
	1240	-CL24	1		X						
Total Number of Containers			6	Purchase Order / Statement of Work #							

1) Released by:	1) Rec'd by: <u>Jacob Galt</u>	2) Released by:	2) Rec'd by:
Print name: <u>Suzanne Replinger</u>	Print name: _____	Print name: _____	Print name: _____
Signature: <u>[Signature]</u>	Signature: _____	Signature: _____	Signature: _____
Company: <u>Windward Env.</u>	Company: <u>ARI 2-3/4, X</u>	Company: _____	Company: _____
Date/Time: <u>05.16.18/1625</u>	Date/Time: <u>05/16/18 1625</u>	Date/Time: _____	Date/Time: _____

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To be completed by Laboratory upon sample receipt:

Date of receipt: _____	Laboratory W.O. #: _____
Condition upon receipt: _____	Time of receipt: _____
Cooler temperature: _____	Received by: _____

CHAIN-OF-CUSTODY/TEST REQUEST FORM

No 3096

Project/Client Name: LDW AOC3
 Project Number: TASK 4
 Contact Name: Anneva Vandervort
 Sampled By: S Replinger

Ship to: ARI
 Attn: Sue Tannillo Shipping Date: 05.17.18
 Shipper: Ward del'd Airbill Number: _____
 Form filled out by: S Replinger Turnaround requested: STD

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required)						Comments / Instructions [Jar tag number(s)]
					TOC/%TS	CPAH's	Black Carbon	EX-SITU CPAH	Lipids/% Solids		
05.17.18	1320	LDW18-SSCL-A13	4	SEDIMENT	X	X	X	X			7 Hold 380g jar for SCPAH ex situ eval.
	1404	LDW18-SSCL-A19	4	↓	X	X	X	X			
		LDW18-SSCL-A10	4	SEDIMENT							
	1218	LDW18-C10-CL15	1	TISSUE		X			X		7 Comp ID LDW18-A10-CLWB- Comp 01
	1213	↓ - CL16	1	↓		X			X		
	1226	↓ - CL17	1	↓		X			X		
Total Number of Containers			11	Purchase Order / Statement of Work #							

1) Released by: Print name: <u>SUZANNE REPLINGER</u> Signature: <u>[Signature]</u> Company: <u>WINDWARD ENV.</u> Date/Time: <u>05.17.18 / 1632</u>	1) Rec'd by: <u>Jacob Walte</u> Print name: _____ Signature: _____ Company: <u>ARI 5.40</u> Date/Time: <u>05/17/18 1632</u>	2) Released by: Print name: _____ Signature: _____ Company: _____ Date/Time: _____	2) Rec'd by: Print name: _____ Signature: _____ Company: _____ Date/Time: _____
--	---	--	---

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To be completed by Laboratory upon sample receipt:

Date of receipt:	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

1 of 2

CHAIN-OF-CUSTODY/TEST REQUEST FORM

18 3073

Project/Client Name: LDW AOC3
 Project Number: TASK 4
 Contact Name: AMARA VANDERVORT
 Sampled By: S REPLINGER

Ship to: SUE ARI
 Attn: SUE DENN HOO Shipping Date: 05.17.18
 Shipper: HAUD DEL'D Airbill Number: _____
 Form filled out by: S. REDLINGER Turnaround requested: STD

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required)							Comments / Instructions (Jar tag number(s))	
					HOLD FORMALIN	FORMALIN COMPOSITION	COLIFORMS	ENTERIC	ENTERIC	ENTERIC	ENTERIC		
05.17.18	1213	LDW18-C10-C101	1	TISSUE	X								
	1331	-C102	1		X								
	1420	-C103	1		X								
	1339	-C104	1		X								
	1228	-C105	1		X								
	1352	-C106	1		X								
	1259	-C107	1		X								
	1342	-C108	1		X								
	1307	-C109	1		X								
	1346	-C110	1		X								
	1321	-C111	1		X								
	1335	-C112	1		X								
Total Number of Containers			12	Purchase Order / Statement of Work #									
1) Released by:		1) Rec'd by:			2) Released by:			2) Rec'd by:					
Print name: SUZANNE REPLINGER		Company: ARI 5.4°C			Print name:			Company:					
Signature: [Signature]		Date/Time: 05.17.18 1632			Signature:			Date/Time:					
Company: WINDWARD ENV					Company:			Date/Time:					

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To be completed by Laboratory upon sample receipt:

Date of receipt:	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

CHAIN-OF-CUSTODY/TEST REQUEST FORM

No 3074

Project/Client Name: LDW AOC3
 Project Number: TASK 4
 Contact Name: AMARA VANDERVOORT
 Sampled By: S REPLINGER

Ship to: ARI
 Attn: SE DUMITHOU Shipping Date: 05.17.18
 Shipper: HAND DELD Airbill Number: ---
 Form filled out by: S REPLINGER Turnaround requested: STD

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required)						Comments / Instructions [Jar tag number(s)]
					HOLD (PROBE)	RECYCLING (RECYCLING)	COMPOSTING	LANDFILL	OTHER	OTHER	
05.17.18	1335	LDW18-C10-CL12	1	TISSUE	X						
	1339	-CL13	1		X						
	1322	-CL14	1		X						
	1257	-CL18	1		X						
	1304	-CL19	1		X						
	1230	LDW18-C09-CL01	1		X						
	1220	-CL02	1		X					} CL02, CL03, CL04 are possible CPAH comp } } Claims for AIB. Hold.	
	1209	-CL03	1		X						
	1148	-CL04	1		X						
	1335	-CL05	1		X						
	1200	-CL06	1		X						
	1305	-CL07	1		X						
Total Number of Containers			12	Purchase Order / Statement of Work #							

1) Released by: <u>SUZANNE REPLINGER</u>	1) Rec'd by: <u>Jacob Walter</u>	2) Released by:	2) Rec'd by:
Print name: <u>SUZANNE REPLINGER</u>	Print name:	Signature:	Company:
Signature: <u>[Signature]</u>	Company: <u>ARI 5.40C</u>	Company:	Date/Time:
Company: <u>WINDWARD ENV</u>	Date/Time: <u>05/17/18 1632</u>	Date/Time:	

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To be completed by Laboratory upon sample receipt:

Date of receipt: <u>05/17/18</u>	Laboratory W.O. #: <u>1</u>
Condition upon receipt: <u>Good</u>	Time of receipt: <u>1632</u>
Cooler temperature: <u>5.40C</u>	Received by: <u>[Signature]</u>

CHAIN-OF-CUSTODY/TEST REQUEST FORM

Project/Client Name: LDW 1003
 Project Number: TASK 4
 Contact Name: AMARA VANDERVORT
 Sampled By: S. REPLINGER

Ship to: ARI
 Attn: SOE DUMITRO
 Shipper: WARD DELD
 Form filled out by: S. REPLINGER
 Shipping Date: 05-18-18
 Airbill Number: ---
 Turnaround requested: STD

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required)						Comments / Instructions [Jar tag number(s)]
					TOC/TS %	CPARTS	BLACK CARBON	EX-SITRA CPART	LIPIDS % SOLIDS		
5.18.2018	1330	LDW18-SSCL-A12	4	sediment	X	X	X	X			
	1336	-A17	4		X	X	X	X			
	1357	-A18	4		X	X	X	X			
	1528	-A09	4		X	X	X	X			
	1505	-A10	4		X	X	X	X			
	1232	LDW18-C08-CL11	1	tissue		X			X		} Comp: LDW18-A12-CLWB-Comp1
	1240	-CL18	1			X			X		
	1241	-CL21	1			X			X		
	1452	LDW18-C05-CL08	1			X			X		} Comp: LDW18-A09-CLWB-Comp1
	1520	-CL11	1			X			X		
	1523	-CL12	1			X			X		
	1505	LDW18-C05-CL20	1			X			X		(A10)

Total Number of Containers: 27 Purchase Order / Statement of Work #

1) Released by: Print name: <u>SUZANNE REPLINGER</u> Signature: <u>[Signature]</u> Company: <u>WARD DELD ENV</u> Date/Time: <u>05.18.18 / 1735</u>	1) Rec'd by: <u>Jacob [Signature]</u> Company: <u>ARI</u> Date/Time: <u>05/18/18 1735</u>	2) Released by: Print name: Signature: Company: Date/Time:	2) Rec'd by: Company: Date/Time:
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Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

CHAIN-OF-CUSTODY/TEST REQUEST FORM

10 3099

Project/Client Name: LDW AOC3
 Project Number: TASK 4
 Contact Name: AMARA VALDEPUEBT
 Sampled By: S REPLINGER

Ship to: ARI
 Attn: SUE DUMITRO
 Shipping Date: 05.18.18
 Shipper: HAND DEL
 Airbill Number: ---
 Form filled out by: S. REPLINGER
 Turnaround requested: STD

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required)						Comments / Instructions [Jar tag number(s)]
					CPATIS	LIPIDS / 90 SOLIDS					
5-18-2018	1501	LDW18-C05-CL21	1	tissue	X	X					} Comp: LDW18-A10-CLWB-Comp 1 } Comp: LDW18-A18-CLWB-Comp 1 } Comp: LDW18-A17-CLWB-Comp 1
	1502	↓ ↓ -CL22	1	↓	X	X					
	1231	LDW18-C11-C109	1	↓	X	X					
	1239	↓ ↓ -C109	1	↓	X	X					
	1313	↓ ↓ -CL15	1	↓	X	X					
	1225	LDW18-C11-CL10	1	↓	X	X					
	1241	↓ ↓ -CL11	1	↓	X	X					
	1256	↓ ↓ -CL12	1	↓	X	X					
Total Number of Containers			8	Purchase Order / Statement of Work #							

1) Released by: Print name: <u>SUZANNE REPLINGER</u> Signature: <u>[Signature]</u> Company: <u>WINDWARD ENV</u> Date/Time: <u>05.18.18 / 1735</u>	1) Rec'd by: <u>[Signature]</u> Company: <u>ARI</u> Date/Time: <u>05/18/18 1735</u>	2) Released by: Print name: Signature: Company: Date/Time:	2) Rec'd by: Company: Date/Time:
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Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

1 of 5

CHAIN-OF-CUSTODY/TEST REQUEST FORM

19 3071

Project/Client Name: LDW ADC3
 Project Number: TASK 4
 Contact Name: ANARA VANDERVOORT
 Sampled By: S REPLINGER

Ship to: ARI
 Attn: SUE DUMMHO Shipping Date: 05.18.18
 Shipper: HAND DEL Airbill Number: _____
 Form filled out by: S. REPLINGER Turnaround requested: STD

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required)						Comments / Instructions (Jar tag number(s))
					Hold frozen (pending composite instructions)						
5-18-2018	1155	LDW18-C08-CL01	1	tissue	X						
	1202	-CL02	1		X						
	1301	-CL03	1		X						
	1320	-CL04	1		X						
	1221	-CL05	1		X						
	1223	-CL06	1		X						
	1222	-CL07	1		X						
	1225	-CL08	1		X						
	1229	-CL09	1		X						
	1230	-CL10	1		X						
	1254	-CL12	1		X						
	1253	-CL13	1		X						
Total Number of Containers			12	Purchase Order / Statement of Work #							
1) Released by:		1) Rec'd by: <u>Jaroby g...</u>			2) Released by:		2) Rec'd by:				
Print name: <u>SUE DUMMHO</u>		Company: <u>ARI</u>			Print name:		Company:				
Signature: <u>[Signature]</u>		Date/Time: <u>05/18/18 1735</u>			Signature:		Date/Time:				
Company: <u>WINDWARD ENV</u>					Company:						

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Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

CHAIN-OF-CUSTODY/TEST REQUEST FORM

119 3039

Project/Client Name: LDW AOC3
 Project Number: TASK 4
 Contact Name: AMARA VANDERVOET
 Sampled By: S REPLINGER

Ship to: ARI
 Attn: SUE DUMPHOO Shipping Date: 05.18.18
 Shipper: HAND DELD Airbill Number: ---
 Form filled out by: S REPLINGER Turnaround requested: STD

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required)						Comments / Instructions [Jar tag number(s)]	
					Hold frozen	Spending	compositing	instructions				
5/18/2018	1250	LDW18-C03-CL14	1	tissue	x							
	1252	-CL15	1		x							
	1248	-CL16	1		x							
	1250	-CL17	1		x							
	1250	-CL19	1		x							
	1252	-CL20	1		x							
	1520	LDW18-C05-CLO1	1		x							
	1441	-CLO2	1		x							
	1505	-CLO3	1		x							
	1443	-CLO4	1		x							
	1530	-CLO5	1		x							
	1459	-CLO6	1		x							
Total Number of Containers			12	Purchase Order / Statement of Work #								

1) Released by: Print name: <u>STANKE REPLINGER</u> Signature: <u>[Signature]</u> Company: <u>Windward Environmental</u> Date/Time: <u>05.18.18/1735</u>	1) Rec'd by: <u>[Signature]</u> Company: <u>ARI</u> Date/Time: <u>05/18/18 1735</u>	2) Released by: Print name: Signature: Company: Date/Time:	2) Rec'd by: Company: Date/Time:
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To be completed by Laboratory upon sample receipt:

Date of receipt:	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

3 of 5

CHAIN-OF-CUSTODY/TEST REQUEST FORM

12 3075

Project/Client Name: LDW AOC3
 Project Number: TASK 4
 Contact Name: AMARA VANDERVOORT
 Sampled By: S REPLINGER

Ship to: ARI
 Attn: SUE DUNN HOD
 Shipping Date: 05.18.18
 Shipper: HAZD DELD
 Airbill Number: _____
 Form filled out by: S REPLINGER
 Turnaround requested: STD

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required)						Comments / Instructions (Jar tag number(s))	
					HOLD FROZEN	GREASES	COMPOUNDS	INSTRUMENTS				
05.18.18	1507	LDW18-C05-C107	1	TISSUE	X							
	1448	-C109	1		X							
	1532	-C110	1		X							
	1505	-C113	1		X							
	1455	-C114	1		X							
	1505	-C115	1		X							
	1500	-C116	1		X							
	1520	-C117	1		X							
	1450	-C118	1		X							
	1450	-C119	1		X							
	1530	-C123	1		X							
	1530	-C124	1		X							
Total Number of Containers			12	Purchase Order / Statement of Work #								

1) Released by: Print name: <u>SUZANNE REPLINGER</u> Signature: _____ Company: <u>WINDWARD ENV</u> Date/Time: <u>05.18.18/1735</u>	1) Rec'd by: <u>Jacob [Signature]</u> Company: <u>ARI</u> Date/Time: <u>05/18/18 1735</u>	2) Released by: Print name: Signature: Company: Date/Time:	2) Rec'd by: Company: Date/Time:
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To be completed by Laboratory upon sample receipt:

Date of receipt:	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

5 of 5

CHAIN-OF-CUSTODY/TEST REQUEST FORM

112 3077

Project/Client Name: LDW AOC3
 Project Number: TASK 4
 Contact Name: ANARA VALDEBUELA
 Sampled By: S. REPLINGER

Ship to: ARI
 Attn: SUE DUMPHOOD
 Shipping Date: 05.18.18
 Shipper: HAND DEL'D
 Airbill Number: _____
 Form filled out by: S REPLINGER
 Turnaround requested: STD

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	HOLD FROZEN (RELEASING TO PARTS MFG INSTRUCTIONS)	Test(s) Requested (check test(s) required)						Comments / Instructions [Jar tag number(s)]
05.18.18	1247	LDW18-C01-CL19	1	TISSUE	X							
	1332	-CL20	1		X							
	1337	-CL21	1		X							
	1353	-CL22	1		X							
	1340	-CL23	1		X							
	1353	-CL24	1		X							
Total Number of Containers			6	Purchase Order / Statement of Work #								

1) Released by: Print name: <u>SUZANNE REPLINGER</u> Signature: <u>[Signature]</u> Company: <u>WINDWARD ENV</u> Date/Time: <u>05.18.18/1735</u>	1) Rec'd by: <u>Jacob Walker</u> Signature: <u>[Signature]</u> Company: <u>ARI</u> Date/Time: <u>05/18/18 1735</u>	2) Released by: Print name: Signature: Company: Date/Time:	2) Rec'd by: Print name: Signature: Company: Date/Time:
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To be completed by Laboratory upon sample receipt:

Date of receipt:	Laboratory W.O. #:
Condition upon receipt:	Time of receipt:
Cooler temperature:	Received by:

CHAIN-OF-CUSTODY/TEST REQUEST FORM

No 3101

Project/Client Name: LDW AOC 3
 Project Number: task 4
 Contact Name: Amara Vandervort
 Sampled By: S. Replinger

Ship to: ARI
 Attn: Sue Dunnikoo
 Shipper: hand-delivered
 Form filled out by: S. Replinger
 Shipping Date: 5.21.2018
 Airbill Number: _____
 Turnaround requested: STB

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required)						Comments / Instructions [Jar tag number(s)]
					Toc/TS %	CPATHS	black carbon	ex situ CPATH	lipids %/spdl	SP1105	
5.19.2018	1435	LDW18-SSCL-A07	4	sediment	x	x	x	x			
	1500	↓ ↓ -A08	4	sediment	x	x	x	x			
	1430	LDW18-CO4-CL05	1	tissue		x			x		} Comp: LDW18-A07-CLWB-Comp1
	1250	↓ ↓ -CL19	1			x			x		
	1428	↓ ↓ -CL22	1			x			x		} Comp: LDW18-A08-CLWB-Comp1
	1315	LDW18-CO4-CL12	1			x			x		
	1310	↓ ↓ -CL13	1			x			x		
	1309	↓ ↓ -CL14	1			x			x		
Total Number of Containers			14	Purchase Order / Statement of Work #							

1) Released by: <u>Amara Vandervort</u> Print name: <u>Amara Vandervort</u> Signature: <u>[Signature]</u> Company: <u>Windward</u> Date/Time: <u>5.21.2018 / 1010</u>	1) Rec'd by: <u>Brampton Fick</u> Company: <u>ARI</u> Date/Time: <u>5/21/18 1010</u>	2) Released by: _____ Print name: _____ Signature: _____ Company: _____ Date/Time: _____	2) Rec'd by: _____ Company: _____ Date/Time: _____
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Date of receipt: _____	Laboratory W.O. #: _____
Condition upon receipt: _____	Time of receipt: _____
Cooler temperature: _____	Received by: _____

1 of 2

CHAIN-OF-CUSTODY/TEST REQUEST FORM

MR 3098

Project/Client Name: LDW AOC3
 Project Number: TASK 4
 Contact Name: AMARA VALDERVORT
 Sampled By: S. REPLINGER

Ship to: ARI
 Attn: SUE DOWNHOO
 Shipper: HARD DEL'D
 Form filled out by: S. REPLINGER
 Shipping Date: 05.21.18
 Airbill Number: _____
 Turnaround requested: STD

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required)						Comments / Instructions (Jar tag number(s))
					HOLD FROZEN	GRAVIMETRIC	COXIDATION	INSTRUMENTAL			
5-19-2018	1345	LDW18-CO4-CL01	1	hssve	X						
	1445	-CL02	1		X						
	1400	-CL03	1		X						
	1416	-CL04	1		X						
	1435	-CL06	1		X						
	1424	-CL07	1		X						
	1418	-CL08	1		X						
	1415	-CL09	1		X						
	1400	-CL10	1		X						
	1320	-CL11	1		X						
	1300	-CL15	1		X						
	1250	-CL16	1		X						
Total Number of Containers			12	Purchase Order / Statement of Work #							

1) Released by: Print name: <u>Amara Edinger</u> Signature: <u>[Signature]</u> Company: <u>WINDWARD ENV.</u> Date/Time: <u>05.21.18/1010</u>	1) Rec'd by: <u>[Signature]</u> Print name: <u>BRANDON FICK</u> Company: <u>ARI</u> Date/Time: <u>5/21/18 1010</u>	2) Released by: Print name: _____ Signature: _____ Company: _____ Date/Time: _____	2) Rec'd by: Print name: _____ Signature: _____ Company: _____ Date/Time: _____
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Date of receipt: _____	Laboratory W.O. #: _____
Condition upon receipt: _____	Time of receipt: _____
Cooler temperature: _____	Received by: _____

2 of 2

CHAIN-OF-CUSTODY/TEST REQUEST FORM

3100

Project/Client Name: LDW AOC3
 Project Number: TASK 4
 Contact Name: AMARA VANDERVOET
 Sampled By: S. REPLINGER

Ship to: ARI
 Attn: SUE DUMPHOOD
 Shipper: HAND DEL'D
 Form filled out by: S. REPLINGER
 Shipping Date: 05.21.18
 Airbill Number: _____
 Turnaround requested: STD

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required)						Comments / Instructions [Jar tag number(s)]
					HAD FROZEN	OPENING	COMPOSITION	INSTRUMENTATION			
5-19-2018	1316	LDW18-C04-CL17	1	tissue	X						
	1347	-CL18	1		X						
	1321	-CL20	1		X						
	1354	-CL21	1		X						
	1305	-CL23	1		X						
	1259	-CL24	1		X						
Total Number of Containers			6	Purchase Order / Statement of Work #							

1) Released by: _____ Print name: <u>Amara VanderVoet</u> Signature: _____ Company: <u>Windward Environmental</u> Date/Time: <u>05.21.18/1010</u>	1) Rec'd by: _____ <u>Brunton Fisk</u> Company: <u>ARI</u> Date/Time: <u>5/21/18 1010</u>	2) Released by: _____ Print name: _____ Signature: _____ Company: _____ Date/Time: _____	2) Rec'd by: _____ Print name: _____ Signature: _____ Company: _____ Date/Time: _____
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