S. Pierce

2/6/06 LDW subsurface sediment sampling event: Day 1

0730 Angie + Shannon to pick up Rental ~~Tr~~ Truck and storage tanks drums

0900 - Meet at T-117
crew: Joanna Flaer.]→ WW
Angelita Rodriguez]→ WW
Shannon Pierce
Anne Fitzpatrick]→ RETEC
Nick Bacher]→ RETEC
Rob Gilmour → MCS

Weather - cool, sunny, dry.

0905 - Begin moving + core processing set up, including core cutting area, decon area, and sample jar filling area. Review

1145 - Anne (ReTech) left. Will return in an hour.

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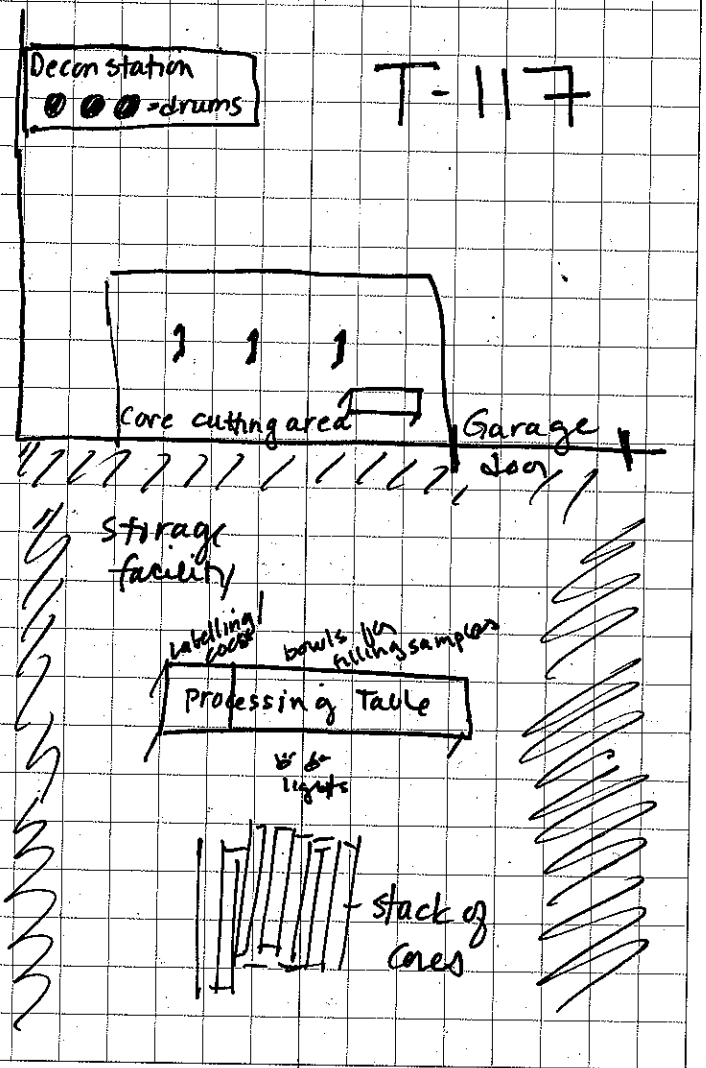
Rough sketch of processing set up



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Develop "alternate" coring criteria

1210 Talk w/ Tim Hammermeister
Proposed alternate criteria:
① 10' penetration + 60% recovery
② 8' penetration + 75% recovery
③ take 2 cores adjacent + recovery 50%

0 Spoke w/ Boat crew to talk about realistic criteria + came up w/ the above criteria.

1215 - Talk to Berit Bertquist about getting direction on core LDW-SC55. Three cores were collected, none met the criteria of the QAPP (10 ft penetration + 75% recovery). She said she will get back to the field crew on whether or not to process any of all of the cores collected. She said she didn't think it likely that we would move the station. We will wait to hear from her on what to do.

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1220 - Boat crew back out to sample at center of channel (trying to see "best case" location to estimate what recovery to expect.)

1220 - Field processing crew - continue to prep. Rob (RCS) doing bore logs. We will likely be processing the first core w/ the highest recovery (65%) at 8' penetration. If insufficient volume is avail, we will likely collect addl sediment frm another core.

1250 - Berit arrived @ T117; decision made to process 1st core w/ best recovery.

1310 - Review Health + Safety Plan w/ Processing crew

1313 - Begin cutting LDW-SC55 (1st core collected)

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1315 Core LDW-SC55R1 SP
sampling time = 0902
penetration depth = 11.25 ft
recovery = 6.2 % (6.95 ft) on deck

1320 Calibration on PID = 131 for isobutylin

1325 - Sampling begins
LDW-SC55, Nick takes observations for core logging + sediment characterization

1345 - Photographs - download on computer.

1350 - Discuss how to break up interval layers as follows (communication b/w Berit + Kathy W/Agency as per agreement
0-1
1-2 } Chemistry analysis
2-3
3-4
4-6 } archive
6-6.2

1400 - No PID hits MSA SP

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1400 - LDW-SC55-0-1 (chemistry)
Atterbergs sampled at the following intervals
0-1 - sampled at 0.9 ft
1-2 - sampled at 1.8
2-3 - sampled at 2.2
~~4-6 - sampled at 4.7~~ SP

1405 - LDW-SC55-1-2 (chemistry)

1410 - LDW-SC55-2-3 (chemistry SP, only 1 ft interval b/c Δ in stratographic layer

1415 - LDW-SS55-3-4 (archive) } as per agreement w/ Agency - EPA (Allison Hiltner

1420 - LDW-SS55-4-6 (archive)

~~1425 - LDW-SS55-6 (archive)~~ SP

Recovery length = 6.2 ft;
Sampling ended @ 6 ft, but we did not sample 6-6.2 ft interval (Stratographic layer was the same).

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0430 - Observations during homogenization prior to filling jar

0-1: moderate H_2S odor
plant debris
1-2: nothing notable
2-3: "
3-4: "
retained wood chunk in sample in "show-&-tell" cooler
4-6: nothing notable

1515 - Finish processing LDW-SC55. Picked up ~~samples~~ SP 2 add'l cores fm. boat crew from LDW-SC49 + LDW-SC48.

0550 - Boat crew reported sampling LDW-SC54.

1600 - PID hit @ 10.6ft
>500 ppm

1620 - LDW-SC49
Sampling time = 12:44
penetration depth = ~~14.0ft~~ SP 14ft
recovery =
recovery (measured) = 11.4ft

1620 - LDW-SC49-0-1 (chemistry)
1625 - LDW-SC49-1-2 (chemistry)
1630 - LDW-SC49-2-4 (chemistry)
1635 - LDW-SC49-4-6 (archive)
1640 - LDW-SC49-6-8 (archive)
1645 - LDW-SC49-8-10 (archive)

1630 - Atterbergs sampled @ the following intervals (2" diameter)
0-1 * Sampled @ 0.9ft
1-2: sampled @ 1.9ft
2-4: Sampled @ 3.4ft

1645 - Observations during homogenization prior to filling jar (picnic)
0-1: woody debris, ribbon/flatworm
1-2: woody debris
2-4: slight petroleum odor

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2/6/06 S. Pierce

Homogenization ~~of~~ SP observations con't

4-6: slight petroleum odor, wood debris

6-8: moderate petroleum odor

8-10: moderate petroleum odor.

10-11: strong odor, PID hit > 500 ppm collected 1602 for archive

1715 Begin demobilization of field equipment & decontamination of all processing equipment

1800 Lock up & leave T-117 site. End of field day

Angelita Rodriguez 2/6/06

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2/7/06 A. Rodriguez

0745 Drop Thai off at South Park Marina to start with boat crew

0750 Arrive at T-117 with core processing team:

Angelita Rodriguez (Windward)
Joanna Florer (Windward)
Suzanne Replinger (Windward)
Anne Fitzpatrick (RETEC)
Nick Bacher (RETEC)
Rob Gilmour (NMFS)

All intervals measured in feet unless noted otherwise.

Weather: Cool, dry

Calibrate PID instrument reading 102 ppm

0841 Health & Safety Meeting

0850 Communication w/ Brent about the coordinates at station #53, core taken on 2/6/06

0850 Begin processing LDW-SC-53

No PID hits, Photos Taken

~~0-2~~ LDW-SC-53-0-2 (Chemistry)

0855 LDW-SC-53-2-4 (Chemistry)

0900 LDW-SC-53-4-6 (~~Chem~~ Archive)

0905 LDW-SC-53-6-8 (Archive)

0910 LDW-SC-53-8-10 (Archive)

12

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John Nakayama with SAIC arrived ~ 9 AM to conduct oversight

Observations of LDW-SC-53 during homogenization
0-2: nothing notable
2-4: Slight H_2S
4-6: nothing notable
6-8: " " , Fibers ~ 6.3ft
8-10: " "

GeoTech samples @ 1ft (6-2) & @ 3ft (2-4)

1000 Begin processing 2nd half of LDW-SC-53

CHEMISTRY ARCHIVE

0-.4
1005 .4-1
*1010 1-2
1013 2-2.5
1016 2.5-3.0
1019 3-3.5
1022 3.5-4
1025 4-4.5
1028 4.5-5.0
1031 5-5.5
1034 5.5-6

13

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* NOTE: Interval 1-2 due to a ~~miss~~ miscommunication was taken instead of 1-1.5 & 1.5-2 (ft) intervals and 2-16 oz. jars were collected for Chemistry archive. Labeled
LDW-SC-53-1-2A
LDW-SC-53-1-2B
As agreed upon w/ Berit

Method B was used to process LDW-SC-53 and was the core was cut horizontally in order to collect the appropriate intervals of sediment. Photos taken

1115 Lunch break

1145 Kathy & Berit arrive to observe processing of LDW-SC-56 using Method B

1200 Begin processing LDW-SC-56 (R3)

1230 LDW-SC-56-0-2 Chemistry, GeoTech @ 1.25ft

1235 LDW-SC56-2-4 Chemistry, GeoTech (A2)

1240 LDW-SC56-4-5.6 ~~Chemistry~~ (A2) Archive

~~1245 LDW-SC56-6-8~~

~~1250 LDW-SC56-8-10~~

2/7/06 A. Rodriguez

LDW-SC-56
Experienced loss of sediment at the bottom of core tube due to core catcher not closing initially ~ 5.6 ft Recovery
Penetration ~ 8.5 ft below mudline
* NOTE: There will not be a 6 - 10ft interval for collecting Archive samples
No PID hits, Photos taken
Observations during homogenization of LDW-SC56
0-2: Nothing notable
2-4: Small wood fragment
4-5.6: Nothing notable

* Begin processing 2nd half of LDW-SC56

1245	0-.5	Chemistry Archive
1248	.5-1	
1251	~~1.5-2~~ 1-1.5	
1254	~~2-2.5~~ 1.5-2	
1257	~~2.5-3~~ 2-2.5	
1300	~~3-3.5~~ 2.5-3	
1303	~~3.5-4~~ 3-3.5	
1306	~~4-5.6~~ 3.5-4	

2/7/06 LDW-SC56 CNT'D A. Rodriguez

1309	4-4.5	Chemistry Archive
1312	4.5-5	
1315	5-5.6	

* NOTE: All sediment collection for Chemistry archive sample was spooned & partially homogenized directly into 16-oz. glass jars as agreed upon by Anne, Nicle, John (oversight) Kathy's Berit. In addition, the COC's contained written further instruction that all .5 ft interval chemistry archive samples "Must be homogenized" in the comments section.

1330 Complete processing LDW-SC56 (R3)

1410 Cut open LDW-SC54 (R1) & (R2)
Very sandy with in-situ water on top which results in the washing out of the sandy sediment at the bottom.
Photos taken

2/7/06 A. Rodriguez

Begin processing LDW-SC54

1520 LDW-SC54-0-2 Chemistry

1525 LDW-SC54-2-3.6 Chemistry

1530 * LDW-SC54-4-6 Archive

* NOTE: RETEC is not certain where sand layer begins. Communication b/w Anne, Berit & Kathy concerning processing LDW-SC54 & the issues with the core catcher. Decide to try a station downstream of RM 2.5, a different environment & substrate to test Mud Mole results. Decide to process R1 core & discard R2 & continue processing 4-6 interval pending 3rd core C54.

LDW-SC54 2nd half

1545	0-.5	Chemistry Archive
1548	.5-1	
1551	1-1.5	
1554	1.5-2	
1557	2-2.5	
1600	2.5-3	
1605	3-3.6	

2/7/06 A. Rodriguez

Observation during homogenization of LDW-SC54:

0-2: slight H_2S

2-3.6: nothing notable

4-6: "

*NOTE: 3.6-5 ft Void space due to washout of sediment

GeoTech e

1.8 ft

2.8 ft

No PID hits

1628 Complete processing LDW-SC54 but still pending 3rd Core.

1700 Meeting with boat crew to discuss field forms, core catcher issues and field forms

1815 Leave T-117 site, end of day

Angela Rodriguez 2/7/06

2/8/06 Day 3 Subsurface Sediment LDW S. Pierce

0730 – Prop off Thai @ S. Park Marina

0735 – Arrive @ T117 w/ core processing team; begin mobing

0815 – all of processing team arrived
Joanna Florer (WW)
Suzanne Replinger (WW)
Shannon Pierce (WW)
Nick Bacher (Retec)
Rob Gilmour (MCS)
John Nakayama (SAIC – oversight)
Weather: cool, light rain (some puddles fm rain last night)

0830 – Brief Health + Safety mtng
Finish mobing / MCS setup.

0830 – Temperature in warehouse room = 9.6°C

0840 – Cores fm LDW-SC-52
3 cores collected – R1, R2, R3
R2 + R3 will be cut open

2.8.06 S. Pierce

to determine which has better recovery.
Begin processing LDW-SC-52
R3 ~ 5.8 ft recovery (57% recovery)
R2 ~3.5 ft recovery

0910 – Communication b/w John Nakayama + Tim (SAIC) regarding processing R3. There is space void b/w silt + sand layer (From 2.2 – 3.2')
As agreed to by ReTec + SAIC (oversight) we will sample the 2–4' interval excluding the ~~void~~ 1' void so 2' of sediment are collected.
Void was likely caused by the sediment slipping out bottom. Core was 3rd attempt + 10 ft penetration

0920 – Left msg. for Berit regarding the decision made in the field

2.8.06 S. Pierci

Intervals to take ~~LWD~~ LDW-SC-52 (R3):

0930 0-1 (chemistry)
0935 1-2 (chemistry)
0940 2-4 (chemistry)
0945 4-4.9 (archive)

* NO PID hits @ LDW-SC-52 *

geotech Shelby tubs:
1-2' (sampled @ 1.2)
2-4' (sampled @ 3.75)

0940 observations made during homogenization of intervals
0-1: strong H_2S odor
1-2: slight H_2S odor
2-4: nothing notable
4-4.9: nothing notable

0940 Commication b/w S. Pierci + Berit regarding our process plan - To sample the R3 core excluding void (.: total recovery = 4.9') b/c was 3rd attempt + best recovery core.

2.8.06 S. Pierci

1000 - Finish ~~LWD~~ LDW-SC-52.

1010 - Communication w/ Thai DO - meet @ S. Park Marina @ 10:25 for two additional cores.

1040 - Cores brought to T117
LDW-SC-48
LDW-SC-42

1050 - Took rinsate sample for the week (LDW-SC-RB-1)

1105 - Begin processing LDW-SC-42 (R2) + logging
Intervals taken @ LDW-SC-42
1130 0-1 (chemistry)
1135 1-2 (chemistry)
1140 2-4 (chemistry)
1145 4-6 (archive)
1150 6-8 (archive)
1155 8-10 (archive)
1200 10-12 (archive + b/c plastic debris found @ this depth; Retec recommended. b/c not native sediment.

2.8.06 S.Pierce

questionable
PID hits - samples put in bag to get more accurate reading (windy outdoors)

Physical / Shelby tubes:
0-1': sampled @ 0.9 ft
2-4: sampled @ 2.2 ft

Observations during homogenization
01: slight H_2S odor
1-2: nothing notable
2-4: slight H_2S odor
4-6: slight H_2S odor
6-8: nothing notable
8-10: slight ~~H_2S odor~~ SP petroleum odor
10-12: nothing notable

1225 - Finish processing LDW-SC-42
* No Hits for PID on LDW-SC-42 @ various intervals
1245 - Lunch Break

1245 - Communication (left msg) for Berit regarding archiving 10-12 ft & 90 recovery @ LDW-SC42

2.8.06 S.Pierce

1255 - Communication w/ Angie Rodriguez - No power in office

1320 - Begin processing LDW-SC-48 (R2)

Intervals to take @ LDW-SC-48

1330	0-1'	(chemistry)
1335	1-2	(chemistry)
1340	2-4	(chemistry)
1345	4-5.6	(archive)

Geotech samples @ ~~intervals~~ SP
other core (bent core)
We will sample geotech fm. other core (CR1) that bent while sampling

1400 Processing of Bent core LDW-SC-48 (R1) that was collected on 2/6/06 + was bent. Note - sampling IDs of geotech cores (CR1) will match sampling chemistry/archives fm R2 core.
* No PID hits on LDW-SC-48

2.8.06 S. Pierce

1400 - Communication w/ Thai - Boat has completed LDW-SC-1 and has moved to LDW-SC-4. At LDW-SC-1 two cores taken:
R1 - recovery = 5.5' / 89%
R2 - recovery = 6' / 94%

1409 - Communication w/ Sue Dunnihoo @ ARI - requested that ARI return Shelby tubes once they are done back to us.

Geotech cores
0-1: sampled @ 0.4'
1-2: sampled @ 2'

1425 - communication w/ Benit. Ok to dump sediment from LDW-SC-42, 55 dout to keep LDW-SC-52

1430 Opened + dumped sediment frm. rejected cores. Changed drums (full drum stacked against wall of warehouse

1450 - Communication w/ Thai Do. Boat team will collect an additional core @ LDW-SC-4 (1st one not acceptable). And then they will finish sampling + bring back cores for processing.

1525 - Decide to clean up processing b/c haven't heard that boat crew has finished sampling.

1610 - Pick up cores frm boat (stations LDW-SC-1 + LDW-SC-4 Cmultiple cores taken)

1625 - Finish cleaning up processing area. Leave T-917

1700 - Returned to WW. Finish day

02.08.06 Shawn Pierce

2.9.06 A. Rodriguez

0730 Drop off Thai @ South Park Marina

0735 Arrive @ T-117 site w/ core processing team:
Angelita Rodriguez (Windward)
Joanna Florer (Windward)
Suzanne Replinger (Windward)
Nick Bacher (RETEC)
Rob Gilmour ~~(RETEC)~~ (MCS)
John Nakayama (SAIC, oversight)
Begin mobilizing
Weather: Cold, clear, sunny

0800 MCS is calculating the core log info for stations 1 & 4.

0820 Health & Safety Meeting
Temperature in warehouse 7.9°C
PID calibrated w/ Isobutylene gas = 102 ppm

0825 Rob opens up LDW-SC1, core R2 w/ 92% Recovery & ~~process~~ decide to process
Total of 2 cores collected

* NOTE: New criteria discussed on 2/8/06 per John which is still pending for acceptable cores:
~~10 ft Penetration~~ (HB)
(1) Penetration = 10' & > 60% Recovery acceptable for analysis in 1st attempt

2.9.06 A. Rodriguez

Cont'd

* NOTE: (2) Penetration = 7' & > 75% Recovery acceptable for analysis in 1st attempt
(3) If 1 or 2 criteria not met then 3 core attempts are necessary.

Using Method B to process
Begin processing LDW-SC1 (R2)

0840 0-2 Chemistry + TTBT
0845 2-4 Chemistry + TBT
0850 4-6 Archive

Observations during homogenization:
0-2 Moderate H_2S
2-4 Nothing notable
4-6 Nothing notable

NO PID hits

Geo Tech @ 1.6 ft
Geo Tech @ 3.1 ft

2.9.06 A. Rodriguez

LDW-SC1 2nd half of core processing:

0900	0-.5
0903	.5-1
0906	1-1.5
0909	1.5-2
0912	2-2.5
0915	2.5-3
0918	3-3.5
0921	3.5-4
0924	4-4.5
0927	4.5-5
0930	5-5.5
0933	5.5-6

Chemistry Archive

Complete processing LDW-SC1, dump waste sediment

R1: Penetration=6.25' NOT PROCESSED
Recovery = 5.45'
% Recovery = 87

R2: Penetration = 6.55' PROCESSED
Recovery = 6.05'
% Recovery = 92

2.9.06 A. Rodriguez

0934 Cut open LDW-SC4 (R2)
Penetration = 9'
Recovery = 7.9'
% Recovery = 88

2 cores collected total

Begin processing LDW-SC4 (R2)
Method A:

0950	0-1	Chemistry + TBT
0955	1-2	Chemistry + TBT
1000	2-4	Archive
1005	4-6	Archive
1010	6-7.7	Archive

No PID hits

Observations during homogenization
0-1 Nothing notable
1-2
2-4
4-6
6-7.7

2.9.06 A. Rodriguez

LDW-SC 4 (R2)
Geotech @ 0.4'
Geotech @ 1.9'

1015 Complete processing LDW-SC4 (R2)
NOT PROCESSED
R1: Penetration = 7.35'
Recovery = 5.65'
% Recovery = 77

1019 Communication w/ Kathy regarding updated criteria for acceptable: ~~since~~
Field crew will take 1 core only at each station regardless of penetration as long as they are meeting refusal or hitting sand layer at end of attempt.
Field crew will take >1 core if: they compromise the core in the field (i.e. using hammering to retrieve) or hit substantial debris which results in a poor recovery.

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Processing crew will also require at least 5 ft recovery in order to process. Otherwise, field crew will need to take an additional core.

1130 Also, discarded all sediment from LDW-SC1 (R1) & LDW-SC4 (R1) as agreed upon with Kathy.

1132 Rob & Nick go pick up cores for station LDW-SC2 & LDW-SC3 at South Park Marina

*NOTE: John Nakayama left ~1030 while on the phone w/ Kathy. John informed the crew Tim Hammermeister will be coming out later in the afternoon.

1154 Rob & Nick return with the cores. Anne Fitzpatrick arrives.

2.9.06 A. Rodriguez

Cut open LDW-SC2 (R1)
Penetration = 13.05'
Recovery = 12.85'
% Recovery = 98

Begin processing LDW-SC2

1245	0-2	Chemistry + Organo Pesticides
1250	2-4	
1255	4-6	Chemistry Archive
1300	6-8	
1305	8-10	
*1310	10-10.7	
1315	10.7-12	
1320	12-13	

*NOTE: Communication w/ Kathy & Anne regarding 10-13' interval which is sectioned accordingly (10-10.7', 10.7-12', 12-13') due to a major difference in stratigraphic units observed. Therefore, [redacted] 16 oz. glass jars collected for chemistry archive & grain size archive for each analysis.

2.9.06 A. Rodriguez

LDW-SC2 (R1) 2nd half

1325	0-.5	Chemistry Archive
1328	.5-1	
1331	1-1.5	
1334	1.5-2	
1337	2-2.5	
1340	2.5-3	
1343	3-3.5	
1346	3.5-4	
1349	4-4.5	
1352	4.5-5	
1355	5-5.5	
1358	5.5-6	

Observations during homogenization of 2 ft intervals:

0-2 Nothing notable
2-4 Strong petroleum odor
4-6 Nothing notable
6-8 Cement-like material
8-10 "
10-10.7 Cement-like material, gray
10.7-12 Dark brown-black sand
12-13 "

2.9.06 A. Rodriguez

LDW-SC2 (R1)
Geo Tech @ 2.9ft
Geo Tech @ 4.7ft
No PID hits
Complete processing LDW-SC2 (R1)

1445 Cut open LDW-SC3 (R1)
Penetration = 10.15'
Recovery = 8.65'
% Recovery = 85
Only 1 Core collected
Begin processing LDW-SC3 (R1)

1505	0-2	Chemistry
1510	2-4	Chemistry
1515	4-6	Archive
1520	6-8	Archive

LDW-SC3 2nd half Chemistry Archive

1525	0-.5	1540	2.5-3
1528	.5-1	1543	3-3.5
1531	1-1.5	1547	3.5-4
1534	1.5-2	1550	4-4.5
1537	2-2.5	1553	4.5-5

2.9.06 A. Rodriguez

~~1540~~ LDW-SC3 (R1) 2nd half cont'd
~~1545~~ 5-5.5 @ 1556
~~1550~~ 5.5-6 @ 1559
~~1558~~
~~1548~~

Nothing notable during homogenization

No PID hits

* Geo Tech @ 0.7' + 4oz jar
Geo Tech @ 2.0' + 4oz jar

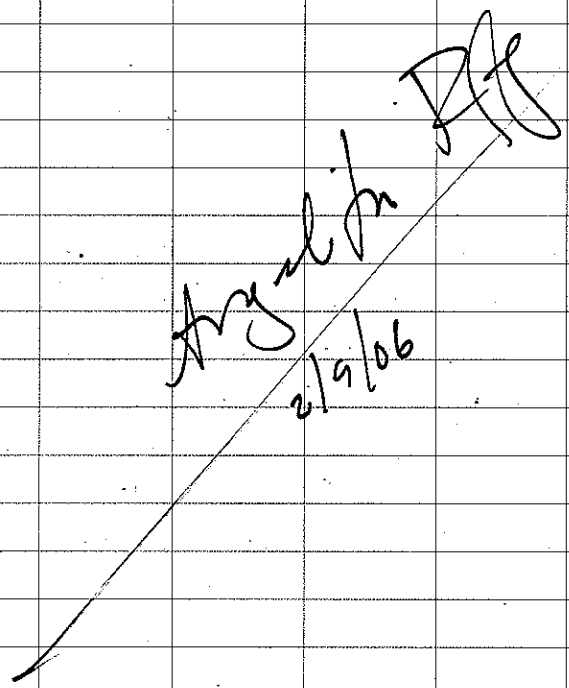
* NOTE: Communication w/ Sue @ ARI an additional 4oz glass jar of sediments needs to be collected w/ the Shelby Tube sample & submitted to the lab. At LDW-SC3 additional sed was collected in 8 oz glass jars, but 4 oz. jars will be used starting 2/10/06 to collect sufficient sed volume for Geo Tech analysis.

1510 Thai Do joins processing crew to help finish.
1600 Tim Hammermeister leaves
1610 Complete processing LDW-SC3

2/9/06 A. Rodriguez

1615 Begin demobing of field equipment & clean up

1800 Leave T-117 site
End of field day



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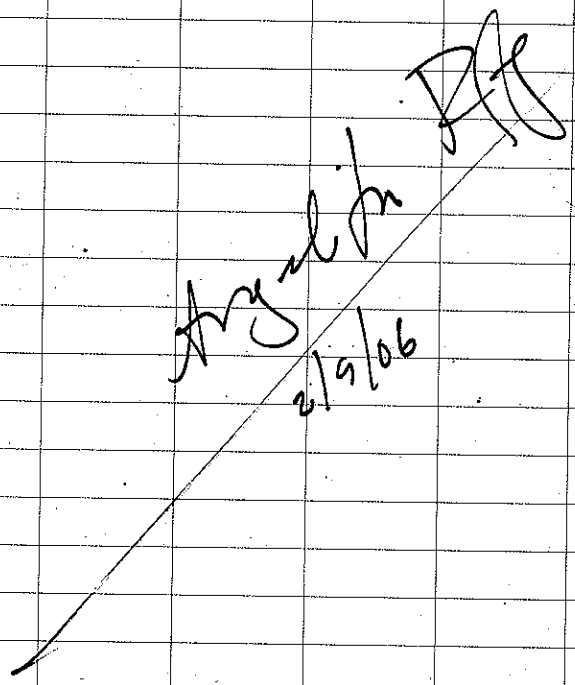
2/9/06 A. Rodriguez

1615 Begin demobing of field equipment & clean up

1800 Leave T-117 site
End of field day



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2.10.06 S. Pierce

0730- Drop off Thai @ S. Park Marine.

0735- Arrive @ T117 processing site
Temperature in warehouse-
1.9°C
Weather: cold, clear, sunny, dry
Processing team:
Suzanne Koplinger (Windward)
Joanna Floer (Windward)
Shannen Pierce (Windward)
Nick Bacher (Ratec)
Anne Fitzpatrick (Ratec)
Rob Gilmour (MCS)
John Nakayama (SSRC-oversight)
Begin setup mobilization

0825- Health + Safety meeting; reviewed
- slips, trips + falls
- cool weather
- torpedo heater outside
- emergency meeting location (fence entrance to T117)

2.10.06 S.Pierce

0830 – Decide to open cores from LDW-SC-5 and LOW-SC-6. Both are from T105 and Retec will determine which should be analyzed for method B based on whether core is similar to previously sampled (historical) core.
Two cores (R1, R2) collected fm. LDW-SC-5 and one core collected fm LDW-SC-6 (R1)

0845 opened LOW-SC-5 R1 - *no PID hits* Decide NOT to process b/c piling was hit while sampling ~~collected sample~~ SP ~~Archive sample~~ SP + insufficient volume (sediment fell out while pulling up sample on boat.)

0855 opened LDW-SC-5 (R2). *no PID hits*

0905 - opened LDW-SC-6 (R1) drilled hole at top of core to drain water *no PID hits*

Intervals taken @ LOW-SC-6

1000 0-2 (chemistry) Method B
1005 2-4.5 (chemistry)
1010 4.5-6 (archive)
~~Interval SD~~
1015 6-8 (archive)
1020 8-8.5 (archive)

intervals changed to 2-4.5 & 4.5-6 b/c of stratographic layer (Retec decision for interval) 8-8.5 layer suggested by Anne (Retec) b/c layer is mixed sand/silt. We will archive only 1 16oz (chemistry) archive @ the 8-8.5 layer (all we have volume for).

Archive intervals (for LDW-SC-6)

1025	0-0.5	1049	4.0-4.5
1028	0.5-1.0	1052	4.5-5.0
1031	1.0-1.5	1055	5.0-5.5
1034	1.5-2.0	1058	5.5-6.0
1037	2.0-2.5		
1040	2.5-3.0		
1043	~~3.5-4~~ 3.0-3.5		
1046	3.5-4.0		

40 2.10.06 S.Perez

geotech samples @ LDW-SC-6
0-2 (sampled @ 1.1')
2-4.5 (sampled @ 3.1')
both geotech samples w/
2" shelby tube + 40z jar.

Communication b/w Anne F (Retec)
+ John N (SAIC-oversight).
John agreed LDW-SC-6 was
the ~~maxim~~ core for which
method B was appropriate.
LDW-SC-5 will be analyzed
for method A

Summary of discussions b/w
Anne + EPA oversight for week
of 2/6-2/10:

SMP.

2.10.06 S.Perez 41

1100 Begin processing LDW-SC-5.
(Method A)

Intervals sampled @ LDW-SC-5
1120 0-1 (chemistry)
1125 1-2.2 (chemistry)
1130 2.2-4 (chemistry)
1135 4-6 (archive)
Interval based on stratographic layer

1130 Communication w/ Thai - We
will pick up 3 cores fm
boat.

geotech cores (3" diameter)
0-1 (sampled @ 0.6')
2.2-4 (sampled @ 3.1')

LDW-SC-5
Observations while homogeniz.
0-1: moderate / slight H_2S
1-2.2: strong H_2O
2.2-4: moderate H_2S
4-6: strong H_2S odor
1200 Finish processing LDW-SC-5

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2.10.06 — S. Peirce

1200 - Truck returns w/ three cores fm stations LDW-SC-7, LDW-SC-8, and LDW-SC-10
Lunch Break

1240 - Start processing LDW-SC-8.
Intervals taken @ LDW-SC-8
1300 - 0-1 (chemistry)
1305 - 1-2 (chemistry)
1310 - 2-4 (chemistry)
1315 - 4-6 (archive)
1320 6-8 (archive) moderate Petroleum odor
1325 8-10 (archive) " "
* No PID hits on LDW-SC-8 *
geotechs @: (3" shelby tubes)
0-1 (sampled @ 0.9')
2-4 (sampled @ 3.0')

1330 - Communication w/ Thai. station LDW-SC-34 will not have a field replicate core. we will take a replicate @ LDW-SC-33 and change the other assigned replicates @ end of day.

02.10.06 — S. Peirce

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1340 - Finish processing LDW-SC-8.
1345 - start processing LDW-SC-7
1410 0-1 (chemistry)
1415 1-1.7 (chemistry) slight/moderate petroleum odor
1420 1.7-4 (chemistry)
1425 4-6.5 (archive)
1430 6.5-8 (archive)
1435 8-8.7 (archive)
Interval 1-1.7' based on stratographic layer (same w/ 4-6.5')

geotech samples (3" shelby tubes)
0-1' (sampled @ 0.9')
1.7-4' (sampled @ 2.6')

* No PID hits on LDW-SC-7. *

Communication w/ Berit - mtng time tomorrow @ 8:45 @ T117.

Begin processing LDW-SC-10.

02.10.06 S. Pleni

Intervals sampled @ LDW-SC-10

1525 0-1 : (chemistry) slight H_2S odor

1530 1-2 : (chemistry) slight petroleum odor

1535 2-4 : (chemistry)

1540 4-5 : (archive)

1545 5-6 (archive)

1550 6-8 (archive)

4-5 interval layer archived separate to capture clay layer (Retec/SAIC-oversight) decision

geotech samples (3" shelby)

0-1' (sampled @ 0.9')

2-4' (sampled @ 2.9')

1528 communication w/ Thai. They are finished sampling for day. We'll have the truck meet them @ S. Park @ 4pm

*No PID hits @ LDW-SC-10

1630 - Finish processing for day

SMP 02.10.04

02.10.06 S.Pierce

Intervals sampled @ LDW-SC-10

1525 0-1 : (chemistry) slight H_2S odor
1530 1-2 : (chemistry) slight petroleum odor
1535 2-4 : (chemistry)
1540 4-6 : (archive)
1545 5-6 (archive)
1550 6-8 (archive)

4-5 interval layer archived separate to capture clay layer (Retec/SAIC-oversight) decision

geotech samples (3" shelby)
0-1' (sampled @ 0.9')
2-4' (sampled @ 2.9')

1528 communication w/ Thai. They are finished sampling for day. We'll have the truck meet them @ S. Park @ 4pm

*No PID hits @ LDW-SC-10

1630 - Finish processing for day

SMP 02.10.06

02.11.06 S.Pierce

0845 - Meet @ T-117; gate is locked - call to get key fm. second use.

0915 - Get key fm 2nd Use to start processing, set up.

Crew:
Emily Duffield (Windward)
Berit Bertquist (Windward)
Shannon Pierce (Windward)
Nick Bachen (Retec)
Anne Fitzpatrick (Retec)
Rob Gilmour (MCS)

Weather: cool, sunny, dry
temp in warehouse

0900 Health + Safety meeting
- slips + falls
- noise protection + other PPE
- exclusion zone
- emergency meeting place

2.11.06 S.Pierce

1015 – Begin processing LDW-SC-33 + LDW-SC-201 (field replicate of LDW-SC-33)

Intervals taken @ LDW-SC-33 (Method B)

1100	0-2	(chemistry)
1105	2-4	(chemistry)
1110	4-6	(archive)
1115	6-8	(archive)
1120	8-10	(archive)

*no PID hits @ LDW-SC-33

Archive intervals (0.5')

1125	0-0.5	1143	3-3.5
1128	0.5-1	1146	3.5-4
1131	1-1.5	1149	4-4.5
1134	1.5-2	1152	4.5-5
1137	2-2.5	1155	5-5.5
1140	2.5-3	1158	5.5-6

geotech samples (2" Shelby @ 4oz jars)
0-2' (sampled @ 1.0')
2-4' (sampled @ 3.0')

Archive 0.5' intervals

02.11.06 S.Pierce

Add'l archive sample taken @ LDW-SC-33

1200 9.5-10 (archive) interval taken to ensure archive depth covered clean sediment

1210 – Finish processing LDW-SC-33. Begin processing LDW-SC-201.

Intervals taken @ LDW-SC-201 (Method B)

1245	0-1.5	(chemistry)
1250	1.5-4	(chemistry)
1255	4-6	(archive)
1300	6-8	(archive)
1305	8-10	(archive)
1308	10-11.8	(archive)

Archive 0.5' intervals

1310	0-0.5	1328	3-3.5
1313	0.5-1	1331	3.5-4
1316	1-1.5	1334	4-4.5
1319	1.5-2	1337	4.5-5
1322	2-2.5	1340	5-5.5
1325	2.5-3	1343	5.5-6

Interval 10-11.8' taken b/c to ensure depth for archive covered clean sediment

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*No PID hits @ LOW-SC-201.

1345 - Finish logging LOW-SC-201

Begin processing LOW-SC-32
Intervals to be sampled:

1510 0-1 (chemistry)
1515 1-2 (chemistry)
1520 2-4 (chemistry)
1525 4-5.2 (archive)
1530 5.2-8 (archive)
1535 8-10 (archive)
1540 10-11 (archive only)

Major contact at 5.2. Looks impacted from 0-5.2. Sheen present.

Geotech intervals (3" Shelby tubes)
1-2' (sampled @ 1.2)
2-4' (sampled @ 3.2) BB

1515 - Shannon returns fm. ARI dropped off samples fm. LOW-SC-33 and LOW-SC-201.

02.11.06 S. Pierce

LDW subsurface sampling
2/11/06 con't:

No PID hits @ LDW-SC-32.

1615 – Finish Processing for day – cleaned up + leave T-117.

SMP 02.11.06

02.11.06 S. Pierce

LDW subsurface sampling
2/11/06 con't:

No PID hits @ LDW-SC-32.

1615 – Finish Processing for day – cleaned up + leave T-117.

SMP 02.11.06

2.13.06 A. Rodriguez

1130 Arrive at T-117 site
Processing Crew:
Angelita Rodriguez (Windward)
Joanna Florer (Windward)
Suzanne Replinger (Windward)
Nick Bacher (RETEC)
Rob Gilmour (MCS)

Set-up for core processing
Weather: Cloudy, cool
Warehouse temperature: 8.3°C
Big puddles of water inside warehouse due to rain. Sweep out all the water & turn heaters to assist the drying of the floor.

1150 Rob & Nick leave to pick-up the cores at 1st Ave Boat Ramp

1210 Kym, oversight arrives } CoE
Emile Pitre, oversight arrives }

1215 Calibrate PID w/ Isobutylene gas 150 ppm

2.13.06 A. Rodriguez

1220 Nick & Rob return w/ cores & Angelita drives back to 1st Ave Boat Ramp to retrieve MCS Mud Mole Bore Logs

1238 Angelita returns w/ forms

1240 Health & Safety Meeting:
- Slippery floors due to the rain that created puddles inside warehouse.
- Trips/Falls potentially in the core zone area outside
- Ear protection for anyone cutting open cores or near the area

1257 Anne Fitzpatrick arrives & ARI will be adding porosity as analysis for GeoTech analysis for no add'l charge. Also, she would like for processing crew to observe odor, color, silt/sand composition during homogenization & note.

2.13.06 A. Rodriguez

#	Begin processing LDW-SC14
1300	0-1.4, Chemistry + Organo Pest + TBT
1305	1.4-2, Chemistry + Organo Pest + TBT
1310	2-4.1, Chemistry + Organo Pest + TBT
1315	4.1-6 } Archive
1320	6-8.7 } Archive
1325	8.7-10 } Archive
1330	10-11 } Archive

* NOTE: RETEC sectioned the core into the intervals noted above because a major difference in the stratigraphic units.

Observations during homogenization:
10-11 (ft): dark grey brown, no odor, fine sand
1.4-2: dark grey, slight petro odor, silt
2-4.1: dark grey, silt, moderate petroleum odor
4.1-6: black, silt w/ trace fine sand, slight petro odor
6-8.7: grey, silt, slight petroleum odor
8.7-10: grey, no odor, silt w/ fine sand
0-1.4: dark grey, moderate petroleum odor, silt

2.13.06 A. Rodriguez

LDW-SC14 Cont'd
GeoTech @ 1': 3" Shelby
GeoTech @ 3': 3" Shelby

No PID hits

LDW-SC14 (CR1), Method A
Penetration Depth = 12.65'
On-deck recovery = 11.55'
% Recovery = 91

1356 Complete processing LDW-SC14

1410 Cut open LDW-SC11 (CR1)

Begin processing LDW-SC11 (CR1)

1440	0-.8	Chemistry
1445	.8-2	Chemistry
1450	2-3.4	Chemistry
1455	3.4-4.1	Chemistry - No archive b/c not enough
1500	4.1-5	Archive

*NOTE: Major contacts b/w intervals therefore sectioned by RETEC as noted above

2.13.06 A. Rodriguez

LDW-SC11 (CR1)
Lab recovery = 5ft, after consultation w/ RETEC & Kym (oversight) will keep b/c it represents all stratigraphic units & the sampling location has already been moved from target coordinates to successful retrieve a core. Also, 1 GeoTech sample collected because the stratigraphic unit is the same (a sandy compacted layer).

No PID hits

Observations during homogenization
0-.8:
Red chip @ .7' kept as show-n-tell sample
.8-2: dark gray/brown, slight H_2S, fine sand

2-3.4: dark gray/brown, fine sand w/silt, no odor
3.4-4.1: gray, shell/rock debris, silt w/fine sand, no odor

2.13.06 A. Rodriguez

LDW-SC11 (R1)
4.1-5: gray (light), odor, dry clay

Penetration Depth = 5.95'
On deck Recovery = 4.95'
% Recovery = 83

1511 Complete processing LDW-SC11 (R1)
Method A
1524 Cut open LDW-SC13

Begin processing LDW-SC13
1545 0-2, Chemistry
1550 2-4, Chemistry
~~1600~~ 1555 4-6, Archive
1605 6-8, Archive
~~1610~~ 1605 8-9.5, Archive

Observations during homogenization:
0-2: dark grey, strong H_2S, silt w/ fine sand, wood debris
2-4: grey, no odor, silt w/ fine sand, abund. wood debris
4-6: grey, moderate H_2S, silt w/ fine sand, wood debris
6-8: grey, no odor, silt w/ fine sand
8-9.5: grey, no odor, fine sand

2/13/06 A. Rodriguez

LDW-SC13 cont'd
No PID hits
Method B
Processing 2nd half of LDW-SC13

1610	0-.5
1613	.5-1
1616	1-1.5
1619	1.5-2
1622	2-2.5
1625	2.5-3
1628	3-3.5
1631	3.5-4
1634	4-4.5
1637	4.5-5
1640	5-5.5
1643	5.5-6

Chemistry
Archive

* GeoTech C 2.1' w/ 2" Shelby + 16 oz.
GeoTech C .9' w/ 2" Shelby + 16 oz.
* Note: Anne used 16oz. b/c of the abundant wood debris she wants to ensure the Lab will have sufficient sed volume to conduct GeoTech analysis.

2.13.06 A. Rodriguez

1630 LDW-SC13 (R1)
Penetration Depth = 12.45'
On Deck Recovery = 9.85'
% Recovery = 79
Complete processing

1650 Cut open LDW-SC9
Begin processing, Method A
1710 0-1, Chemistry + Organo Pest
1715 1-2.6, Chemistry + Organo Pest
1720 AR ~~2-4~~ 2.6-4, Chemistry + Organo Pest
1725 4-6.4, Archive
1730 AR ~~6-8~~ 6.4-8.4, Archive

Observations during homogenization:
0-1: black/dark gray, slight H_2S & slight petroleum odor, silt and fine-med sand
1-2.6: dark grey/black, strong petroleum odor, silt w/some fine sand
2.6-4; Dark greenish brown, some wood debris (~10%), slight petroleum odor
4-6.4: Grey/brown, fine sand w/wood debris, slight H_2S
6.4-8.4: Grey, no odor, stiff clay

2.13.06 A. Rodriguez

LDW-SC9 Cont'd

No PID hits

Geo Tech @ .9' 3" Shelby Tube
Geo Tech @ 2.5' 3" Shelby Tube

LDW-SC9 (R1)
Penetration Depth: 12.85'
On deck recovery: 8.35'
% Recovery: 65

1810 Complete processing

1815 Leave T-117 site
End 2 field day

Angelo

2.14.06 S. Pierce

0730 - Prof off Thai' @ S. Park Manna'

0730 - Arrive @ TTI for processing
processing team:
Kathleen Hurley (WW)
Suzanne Replinger (WW)
Shannon Pierce (WW)
Nick Bacher (Retec)
Leslie McKee (Retec)
Rob Gilmour ~~(Retec)~~ (MCS)

weather: cool, overcast
Temperature in warehouse - 2.6°C
begin set up for core processing

0800 - Health + Safety briefing

Cores collected fm yesterday:
SC-16, SC-17, SC-22.
Will begin processing SC-22
(Method A)

0815 - called Berit Berquist regarding
SC-17. At this station ~~only~~ →

navigation was difficult. Penetration was 3.3' and only 2.3' recovery. Two cores were ~~taken~~ attempted - R2 was given to processing crew. Left msg. for Berit on what direction we should take ~~with~~ for processing this core.

Health + Safety overview
- Slips, trips, falls
- PPE - tyvek, ear protection
- heater hazards
- meeting place for emergencies
- exclusion zone

Begin processing LDW-SC-22
core w/ creosote @ top layer
(creosote odor is apparent)
Intervals to be taken @ LDW-SC-22:

0850	0-1.1	(to capture (chemistry) creosote layer)
0855	1.1-2	(chemistry)
0900	2-4	(chemistry)
0905	4-6	(archive)
0910	6-7.7	(archive)

02.14.06 S. Pierce

geotech cores (2" diameter + 4oz jar)
0-1.1' (sampled @ 0.7)
1.1-2' (sampled @ 1.9)

Observations during homogenization:
0-1.1: drk grey, mod petroleum odor (fin-med sand, wood debris)
1.1-2' drk grey, ~~mod~~ slight petroleum odor (fin-med sand, wood debris)
2-4: drk grey, fin-med sand
4-6 - slight H_2S, med sand, drk grey
6.7-7 - drk grey, med-sand

No PID hits @ LDW-SC-22

0910 - Emil Petri (oversight, Port) arrives @ T117

Communication w/ Berit regarding SC-17. She will get back to us on direction on ~~wether~~ whether to process SC-17 or have the boat crew resample.

Finish sampling LDW-SC-22
Begin processing LDW-SC-16.

02.14.06 S. Pierce

0930 - Communication w/ Angie. We need to pick up 6 drums by 4 pm today.

0940 - Communication w/ Thai. Will attempt LDW-SC-36 or LDW-SC-39 as a replicate station today.

Intervals to be sampled @ LDW-SC-16 (Method B)

1010 - 0-2 (chemistry)
1015 - 2-4 (chemistry)
1020 - 4-6 (archive)
1025 - 6-8 (archive)
1030 - 8-10 (archive)
1035 - 10.-10.8 (archive)
0.5 ft intervals (archive) →

1040	0-0.5	1058	3-3.5
1043	0.5-1	1101	3.5-4
1046	1-1.5	1104	4-4.5
1049	1.5-2	1107	4.5-5
1052	2.0-2.5	1110	5-5.5
1055	2.5-3	1113	5.5-6

02.14.06 S.Pierce

LDW-SC-16
geotech cores (2" shelby + 4oz)
0-2 (sampled @ 0.8')
2-4 (sampled @ 2.5')
No PID hits @ LDW-SC-16.
Observations while homogenizing
0-2: drk grey; silt; mod. petroleum
2-4: drk grey silt; mod sulfur, slight petroleum odor. trace gravel
4-6: drk grey blk; silt; mod. petroleum odor
6-8: drk grey, silt w/ fine sand, mod. petroleum odor; wood debris
8-10: drk grey, silt w/ fine sand, wood debris
10-10.8: dk grey ~~SP~~, silt w/ fine sand

Finish processing LDW-SC-16.

Emil (oversight) says we should process LDW-SC-17 but place on hold until Alison (EPA) returns.

Begin processing LDW-SC-17.
intervals @ LDW-SC-17
1125 0-1 (chemistry)
1130 1-2.1 (chemistry)

02.14.06 S.Pierce

geotech cores (2" tubes + 4oz jars)
0-1 (sampled @ 0.8 ft.)
1-2.1 (sampled @ 1.4 ft.)
No PID hits for LDW-SC-17
Observations while homogenizing:
0-1: drk grey w/ rock + wood debris; silt w/ fine sand no odor
~~1-2.1~~: Rock may be asphalt chunks.
1-2.1: drk grey w/ rock + woody debris; silt w/ fine sand; light petroleum odor
1145 Shannon and Rob go to pick up cores and additional drums.

1212 Emil (oversight) spoke to Kym Takasaki USACE to hold SC-17 and SC-28; but process what is recovered.
• Send email to Kym for explaining location of sample: if off target, and proposed new location, if we decide to go back.

1220 Shannon + Rob return fm. picking up cores + drums.

1230 Communication w/ Thui about Agency requests on SC-17 + SC-28.

02.14.06 S. Pierce

Begin processing LDW-SC-27.
(Method B)
intervals to be sampled @ SC-27:

1300	0-2	(chemistry)
1305	2-4.5	~~based on stra~~ (chemistry)
1310	4.5-6	(archive)
1315	6-7.8	(archive)
1320	7.8-9.5	(archive)

changes in intervals based on stratographic layers determined by Retec (Nick)

archive 0.5 intervals

1325	0-0.5	1343	3-3.5
1328	0.5-1	1346	3.5-4
1331	1-1.5	1349	4-4.5
1334	1.5-2	1352	4.5-5
1337	2-2.5	1355	5-5.5
1340	2.5-3	1358	5.5-6

No Pid Hits @ LDW-SC-27

geotech cores:
0-2 (sampled @ 0.9')
2-4.5 (sampled @ 2.5')

02.14.06 S. Pierce

Observations while homogenizing
0-2: dk grey, strong H_2S, silt w/ fine sand
2-4.5: grey, strong H_2S, silt w/ trace fine sand
4.5-6: fine-med sand w/ trace silt, grey
6-7.8: med-fine sand, wood debris, trace gravel
7.8-9.5: grey, fin→med sand

1330 - Rinsate blank taken
LDW-SC-RB-2

1415 - finish processing LDW-SC-27.
Begin processing LDW-SC-30
R1 + R2. Open both cores to determine which to process.
R2 better recovery + penetration.

1450	0-2.5	(chemistry)	based on stratographic layer determined by Retec
1455	2.5-4	(chemistry)	
1500	4-5.9	(archive)	

1505	0-0.5	1523	3-3.5
1508	0.5-1	1526	3.5-4
1511	1-1.5	1529	4-4.5
1514	1.5-2	1532	4.5-5
1517	2-2.5	1535	5-5.5
1520	2.5-3	1538	5.5-5.9

No PID hits @ LDW-SC-30

geotech intervals
0-2.5 (sampled @ 1.4')
~~2-4.5~~ SP 2.5-4 (sampled @ 3.4')

observations while homogenizing
0-2.5: fin-med sand, brown/grey
2.5-4: grey-brown, fin-med sand
4-5.9: grey-brown, fin-med sand

1500 Nick Bacher left T-117 for day

1535 Finish processing LDW-SC-30. Decide to sample LDW-SC-28 and finish processing for day.

1535 Boat crew communication - they are heading back to S. Park marina.

1545 Begin processing LDW-SC-28 (method A). Intervals to be collected @ SC-28
1620 0-1
1625 1-2 (chemistry)
1630 2-2.9

geotech analysis
0-1 (sampled @ 0.9') 16oz jar - see note
1-2 (sampled @ 1.9') 2" core + 4oz
No PID hit for LDW-SC-28
Observations while homogenizing
0-1: olive green, petroleum sheen, silt, soupy
1-2: dk grey, fine sand w/ silt
2-2.9: dk grey, med sand

Because of limited sediment no archive sample was collected @ 0-1' and 1-2'.

1640 Shelby tube sampling fm 0-1' interval was difficult (sediment was too soupy to keep sample intact.) A 16-oz was taken for physical (geotech) analysis excluding bulk sediment.

1500 Clean up - demob processing.
1510 Leave T117. End processing.

S. Pierce
02.14.06

22

2.15.06 A. Rodriguez

0730 Drop off Thai @ South Park Marina

0735 Arrive @ T-117 site begin set-up
Processing Crew:
Angelita Rodriguez (Windward)
Kathleen Hurley (Windward)
Emily Duffield (Windward)
Anne Fitzpatrick (RETEC)
Leslie McKee (RETEC)
Rob Gilmour (CMCS)

Weather: clear, sunny, cold
Temperature in warehouse: 1.8°C

0830 Health & Safety meeting
- Exposure to H_2S - Chip Brackett is bringing out H_2S detector to check levels for today
- Minimize contact w/sediment
- Wash hands b/f eating
- Cold / ice stay warm
- Wear gloves, goggles, & rain gear or TyVek when inside the exclusion zone

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2.15.06 A. Rodriguez

Cut open LDW-SC17 (CR3)
Collected on 2/14/06
MS/MSD & Triplicate Grain Size to be collected on (CR3)
Method A
Penetration Depth = 7.45'
On-Deck-Recovery = 4.75'
% Recovery = 64

Begin processing LDW-SC17 CR3
0920 ~~0-2~~ 0-1: Chemistry
0925 ~~2-4~~ 1-2: Chemistry
0930 ~~4-6~~ 2-4: Chemistry + ~~MS/MSD~~ (AR) ~~Triplicate Grain Size~~
0935 4-4.8: Archive

No PID hits
Observations during homogenization:
0-1: dark gray, fine sand w/silt & some gravel, woody debris, moderate petroleum (H_2S) odor
1-2: dark gray, fine sand with silt & some gravel, woody debris, moderate petroleum (H_2S) odor
2-4: dark gray, gravel w/med sand, woody debris, moderate H_2S odor
4-4.8: dark gray, large gravel w/woody debris moderate petroleum (H_2S) odor, trace sand

2.15.06 A. Rodriguez

*NOTE: Did not collect MS/MSD or Triplicate grainsize samples for LDW-SC17 (R3) b/c there is too much organic material & gravel present.

GeoTech ~~2~~ (ARC) samples collected on 2/14/06 ~~GeoTech 2~~ (ARC) & after consultation W/RETEC the LDW-SC17 (R2) GeoTech samples will be submitted to the lab for analysis, b/c LDW-SC17 (R3) had insufficient sed volume. But all other chemistry & archive samples for R3 will be submitted.

0940 Complete processing LDW-SC17 CR3)

0950 Cut open LDW-SC21 (R1)
Penetration Depth = 12.65
On Deck Recovery = 11.05
% Recovery = 87
Method A

2.15.06 A. Rodriguez

LDW-SC21 (R1)
Begin processing:

1025	0-1: Chemistry
1030	1-2: Chemistry
1035	2-4: Chemistry + MS/MSD + Triplicate Grainsize
1040	4-6.2: Archive
1045	6.2-8: Archive
1050	8-10: Archive
1055	10-11.3 - Archive

NO PID Hits

1030 Joanna Florer drops off field supplies

Observations during homogenization:
0-1: dark gray, slight H_2S & petroleum, silt w/ fine sand & trace med sand, (chironomid (red worm))
1-2: dark gray / black, no odor, silt w/ fine sand
2-4: silt w/ fine sand, slight H_2S, dark gray
4-6.2: dark gray, silt w/ fine sand, moderate H_2S
6.2-8: gray, med sand w/ silt, no odor
8-10: brown/gray, some org matter, med sand w/ trace silt, no odor

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2.15.06 A. Rodriguez

1050 John Nakayama oversight (SAIC) arrives
LDW-SC21 Cont'd
10-11.3: grag/brown, med sand, some woody debris, no odor
Geo Tech @ 1.1' w/3" Shelby Tube
Geo Tech @ 2.2' w/3" Shelby Tube

1110 Complete processing LDW-SC21 (R1)
1115 DRCC arrives to take pictures & ask questions
1134 Cut open LDW-SC35 (R2)
Penetration Depth = 10.15
On Deck Recovery = 8.25
% Recovery = 81
Method B

1136 Communication w/ Berit and ~~Rick~~ Rick Huey, Ecology PM may be showing up later this afternoon. Also, a reporter may show up & crew should refer the reporter to Kathy Godtfredsen, PM for any & all questions. Berit will be in LDWG meeting until 1500.
1140 Chip Brackett (RETEC) arrives to replace Anne Fitzpatrick

27

2.15.06 A. Rodriguez

1155 Health & Safety Meeting w/ Chip Brackett (RETEC)
- Slips/Trips/Falls, esp. working in exclusion zone
- Cold, use heater to warm up
- Ear protection / Eye Protection for working in exclusion zone
- Tyvek & gloves to ~~min~~ minimize sed exposure

DRCC leaves
1200 Thai calls for us to pick up cores at ~~South Park~~ 1st Ave Bridge Boat Ramp in 10 minutes.

* Begin processing LDW-SC35 (R2)
1220 0-2: Chemistry
1225 2-4.9: Chemistry
1230 4.9-~~4~~ 4.9: Archive
1235 ~~4~~ 4.9-8: Archive
~~1240 8~~ (NR)
1240 6-8: Archive
* NOTE: 4-4.9 interval due to major difference in Stratographic units

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2.15.06 A. Rodriguez

LDW-SC35 (CR2) Cont'd

NO PID HITS

1225 Rob arrives with 3 cores & stations: 20, 29 & 36

Observations during homogenization LDW-SC35 (CR2):

0-2: dark gray, no odor, sandy silt

2-4: dark gray, silt w/fine sand, slight H_2S odor

4-4.9: dark gray, med sand w/trace fine sand & trace org matter, slight H_2S odor

*4.9-6: gray/brown, med sand, trace silt, no odor, rock fragments

6-8: dark gray/brown, med sand, no odor

1230 John (oversight) leaves & Tim Hammermeister will be out later this afternoon

GeoTech @ .9' w/2" Shelby + 4oz. jar

GeoTech @ 2.9' w/2" Shelby + 4oz. jar

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2.15.06 A. Rodriguez

LDW-SC35 (CR2) 2nd half

1245	0-.5
1248	.5-1
1251	1-1.5
1254	1.5-2
1257	2-2.5
1300	2.5-3
1303	3-3.5
1306	3.5-4
1309	4-4.5
1312	4.5-5
1315	5-5.5
1318	5.5-6

Chemistry Archive

*NOTE: 5.3-5.65' Interval a large piece of concrete kept for show-n-tell

LDW-SC35 (CR1) NOT PROCESSED

Penetration Depth: 3.05'

On Deck Recovery: 1.95'

% Recovery: 64

1930 Complete processing LDW-SC35(CR1)

30

2.15.06 A. Rodriguez

1410 Cut open LDW-SC20 (R1)
Penetration Depth = 12.55'
On deck recovery = 9.85'
% Recovery = 78
Method B

Begin processing LDW-SC20 (R1)
1435 * 0-2: Chemistry + TBT + Dioxin + Triplicate Grain size
1440 * 2-4: Chemistry + TBT + Dioxin + MS/MSD
1445 4-6: Archive
1450 6-8: Archive
1455 8-10: Archive
*NOTE: No Archive samples collected for 0-2 & 2-4 intervals
No PID hits
Observations during homogenization:
0-2: dark gray, slight petroleum odor, rounded gravel, wood debris, silt w/trace fine sand
2-4: dark gray, slight H_2S odor, silt w/some fine sand, trace organic matter
4-6: dark gray, some woody debris, moderate H_2S odor, silt w/trace fine sand
6-8: dark gray, silt w/fine sand, slight H_2S odor
8-10: dark gray/black, few shell fragments, silt w/trace fine sand, no odor

31

2.15.06 A. Rodriguez

LDW-SC20 (R1) Cont'd
GeoTech @ 0.9' w/2" Shelby + 4 oz
GeoTech @ 2.9' w/2" Shelby + 4 oz.

LDW-SC20 (R1) 2nd half
1510 0-.5
1513 .5-1
1516 1-1.5
1519 1.5-2
1522 2-2.5
1525 2.5-3
1528 3-3.5
1531 3.5-4
1534 4-4.5
1537 4.5-5
1540 5-5.5
1543 5.5-6

Chemistry
Archive

1550 Complete processing LDW-SC20 (R1)
1555 Open LDW-SC35 (R1), observe, discard
1600 Tim Hammermeister, oversight arrives to discuss stations that were processed

32

2.15.06 A. Rodriguez

1607 Thai calls to request core pickup at South Park Marina in ~ 10 minutes

1617 Tim leaves

1630 Demobilization of field equipment

1700 Leave T-117 site
End of field day

Angela R
2.15.06

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FIELD

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No. 351

Subsurface Sampling
LDW
Feb 11, 2006 -
Book 2 of

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2.15.06 A. Rodriguez

1607	Thai calls to request core pickup at South Park Marina in ~ 10 minutes
1617	Tim Leaves
1630	Demobilization of field equipment
1700	Leave T-117 site End of field day

Angelita R
2.15.06

33

2.16.06 A. Rodriguez

0730	Drop off Thai at South Park Marina
0735	Arrive at T-117 site & begin set up Processing Crew: Angelita Rodriguez (Windward) Kathleen Hurley (Windward) Emily Duffield (Windward) Anne Fitzpatrick (RETEC) Leslie McKee (RETEC) Rob Gilmour (MCS)
	Weather: clear, sunny, cold Temperature inside warehouse: 15°C
0830	Health & Safety Meeting • Cold - mornings & days are getting colder use heater & hand warmers to keep warm • Secondary containment for decon area to catch any surface water which is not an issue right now • Buddy system - Watch out for each other for fatigue & cold • Take a break to increase productivity

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2.16.06 A. Rodriguez

8 40 Discussion w/Anne & Berit regarding LDW-SC40 (R1) & (R2) b/c of low recovery of sediment ~ 2 ft @ each. Agreed Berit will discuss moving the station further into the channel w. Kym Takasaki. Therefore, core processing will be on HOLD until further notice. It may also be a better location for Bill to attempt b/c of all the riprap, pilings & med sand present.

Also, field crew will be tracking the # of core tubes remaining at the end of each day.

Berit also informed crew that all samples for LDW-SC17 (R3) are on HOLD @ ARI until further notice.

35

2.16.06 A. Rodriguez

0910 Cut open LDW-SC36 (R1) & field replicate LDW-SC202

Use Method A to process LDW-SC36 (R1)

Penetration Depth = ~~10.15~~ (AR) 12.3'

On Deck Recovery = ~~8.85~~ (AR) 10.1'

% Recovery = 82

Begin processing LDW-SC36 (R1)

0940 0-1: Chemistry + TBT

0945 1-2: Chemistry + TBT

0950 2-4: Chemistry + TBT

0955 4-6: Archive

1000 6-8: Archive

1005 8-10: Archive

Observations during homogenization:

0-1: dark grey, silt w/ fine sand, no odor

1-2: dark grey, silt w/ fine sand, no odor, ~~trace~~ (AR) woody debris

2-4: dark grey, no odor, fine & med sand

4-6: fine & med sand, dark grey/brown, ~~no odor~~ (AR) odor, trace rootlets

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2.16.06 A. Rodriguez

LDW-SC36 (CR1) Cont'd
Observations during homogenization
6-8: dark grey, no odor, fine & med sand, trace small rootlets
8-10: med sand w/ woody debris, no odor, grey
No PID hits
GeoTech @ 2.1' & only 1 sample
(AR) ~~GeoTech @~~ taken by RETEC b/c the sediment composition is the same for the 0-1, 1-2, 2-4 intervals.

1006 Complete processing LDW-SC36 (CR1)
1015 Anne Fitzpatrick leaves for the day
Begin processing LDW-SC202 (CR1)
Penetration Depth = 12.5'
On deck recovery = 10.1'
% Recovery = 81
1030 0-1: Chemistry + TBT
1035 1-2: Chemistry + TBT
1040 2-4: Chemistry + TBT
1045 4-6: Archive
1050 6-8: Archive
1055 8-10.1: Archive

37

2.16.06 A. Rodriguez

LDW-SC202 (CR1) Cont'd
Observations during homogenization:
0-1: Silt w/ fine sand, dark grey, no odor
1-2: dark grey, no odor, silt w/ fine sand, trace organic rootlets
2-4: dark grey, no odor, silt w/ fine sand & trace med sand, small amt. of woody debris
4-6: dark grey, silt w/ fine sand, no odor
6-8: grey, silt w/ fine sand, no odor

8-10.1: dark grey w/ white grains of sand, med & course sand, no odor, woody debris
No PID hits, GeoTech @ 2.1'
1100 Complete processing LDW-SC202 (CR1)
Discussion w/ Shannon Pierce regarding internal LDW meeting:
1) Tad Deshler & Susie McGroddy will be field contacts next week (2/20-2/24) while Kathy & Berit on vacation.
2) Deborah Willingston w/ King County may be stopping by w/i the week.

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2.16.06 A. Rodriguez

Discussion w/ Shannon Pierce Cont'd

3) A reporter/photographer will stop by w/i the week & field crew should refer them to Allison Hiltner, EPA PM for any questions. Also, inform them of the public LDWG website.

4) Field crew may need to relocate empty dirty used core tubes into warehouse. Currently, all tubes are ~~laying~~ (ARE) on top of plastic sheeting with Visqueen wrapped over them & cable ties to minimize any sediment losses on the T-117 property.

5) Kathy, & Berit & Shannon will discuss the best method to clean the empty core tubes before recycling them. Then inform field crew.

1115 Weather: Wind is picking up & temperatures are colder. Call Thai to check if the boat & water conditions are good & safe. He assures that they are.

39

2.16.06 A. Rodriguez

1127 Cut open LDW-SC39(RI)
Penetration Depth = 12.35'
On deck recovery = 9.15'
% Recovery = 74
Method A

Begin processing LDW-SC39(RI)

1145 0 – 1: Chemistry + Organo + TBT + Dioxin
1150 1 – 2: Chemistry + Organo + TBT + Dioxin
1155 2 – 4: Chemistry + Organo + TBT + Dioxin
1200 4 – 6: Archive
1205 *6 – 8.5: Archive
1210 *8.5-9.2: Archive

* NOTE: Intervals sectioned above by RETEC b/c of major difference in stratographic units

No PID hits

Observations during homogenization:

0-1: dark grey, silt w/ coarse sand, sub-angular gravel (≤ 1"), no odor

1-2: med sand w/ subangular gravel, trace woody debris, no odor, grey

2-4: dark grey, no odor, fine w/ silt, some med sand, shell fragments, pebbles, organic matter

2.16.06 A. Rodriguez

LDW-SC39 (R1) Cont'd

Observations during homogenization

4-6: dark gray, woody debris, rootlets, silt w/trace fine sand, moderate H_2S odor

6-8.5: dark grey, silt w/fine sand, no odor

8.5-9.2: dark grey, med sand & silt, no odor

GeoTech @ 2' w/2" Shelby + 4oz jar

Unable to collect Geotech samples at the 0-1 interval b/c of large rounded gravel which made collecting sufficient sed volume difficult.

GeoTech @ 4' w/2" Shelby + 4oz jar

1215 Complete processing LDW-SC39(R1)

Rob leaves for 1st Ave Boat ramp to plu cores

1230 Discussion w/ Berit to open both cores (R1 & R2) at location LDW-SC40 & process the best core. Then send samples to ARI & place on hold. Also, hold off processing LDW-SC29 which has ~3ft of on deck recovery until further notice.

2.16.06 A. Rodriguez

1240 Rick Huey, Dept. of Ecology PM arrives to view the field activities. However, we're taking a lunch break while waiting for the next round of cores to arrive. Rick may stop by again next week and informed fieldcrew Allison Hiltner, EPA PM is back from vacation. Allison may stop by later in the week.

1300 Rob arrives with 4 good cores & informs crew that MCS has been

1340 using incorrect tide info for all field forms.

1340 Cut open LDW-SC40 (R1 & R2)

R1: Penetration Depth = 5.4'

On Deck Recovery = 2.7'

% Recovery = 50

R2: Penetration Depth: 5.95'

On Deck Recovery: 2.05'

% Recovery = 34

A. Rodriguez

cores display low recovery
to winnowing, which
non-uniform sediment
in core tube due to loss
diment. Photos taken.
ores are disturbed & poor quality.

discussion w/ Kathy. RZ
TEC it's decided to try
a 3rd core w/ Bath
a core next week to
more recovery & sed volume
analysis. Both R1 & R2
w-sc40 will be discarded
t processed.

en LDW-SC12 (R1)
tration Depth = 9.55'
eck Recovery = 8.65'
Recovery = 91
hod B

2.16.06 A. Rodriguez

Begin processing LDW-SC12 (R1)
1450 0-2: Chemistry + TBT
1455 2-4: Chemistry + TBT
1500 * 4-6.7: Archive
1505 * 6.7-8.7: Archive
No PID hits
* NOTE: RETEC sectioned intervals accordingly due to major difference in stratographic units.
GeoTech @ 9' & GeoTech @ 29' + 40z jars
1505 John Nakayama, SAIC oversight arrives and discuss the trouble stations 40 & 29. He agrees with the decisions to not process these cores & try more attempts to improve the recovery.

Observations during homogenizing
0-2: dark grey/black, silt w/ fine sand, woody debris, strong H_2S
2-4: dark grey, silt w/fine sand, strong H_2S, trace org matter, wood debris
4-6.7: dark grey, silt w/ fine sand, trace org matter, moderate H_2S

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2.16.06 A. Rodriguez

LDW-SC12(R1) Cont'd

Observations during homogenizing 6.7–8.7: dark grey, med sand w/ fine sand, trace org matter no odor.

LDW-SC12 (R1) 2nd half

1515	0–.5	Chemistry
1518	.5–1	
1521	1–1.5	
1524	1.5–2	
1527	2–2.5	
1530	~~2~~ 2.5–3	Archive
1533	3–3.5	
1536	3.5–4	
1539	4–4.5	
1542	4.5–5	
1545	5–5.5	
1548	5.5–6	

1530 Thai calls for core pickup @ South Park Marina in ~5 minutes

1535 Rob leaves to pickup cores

45

2.16.06 A. Rodriguez

1555 Rob returns with cores from stations 47 & 31
Complete processing LDW-SC12(R1)

1600 Discussion w/ Shannon & Jeffery regarding used dirty empty core tubes. Field crew directed to move all core tubes inside the warehouse. Also, Thai & Angelita will send email to ~~Rob~~ Jeffery & Kathy of all visitors for the coring project thus far.

1605 Field crew moves all cores (used) inside & all outdoor field equipment inside as well.

1630 John & field crew get locked in @ T-117 property. Warren Hanson is coming to unlock the gate let the crew out.

1715 Leave T-117
End of field day. RR
Angelita

2-17-06 S. Pierce

0730 - Drop Thai off @ S. Park Manna.

0735 - Meet @ T117. Set up processing area. Processing crew:
Kathleen Hurley (Windward)
Joanna Floner (Windward)
Shannon Pierce (Windward)
Leslie McKee (Retec)
Rob Gilmour (MCS)

weather: cool, clear
temp. in warehouse: 1.4°C

0815 - Health + Safety mtng
- New Boot wash cleaning exclusion zone
- cold weather - use heat sources take breaks

0830 - Finishing processing set up. Begin processing LDW-SC-23. (Method B)
John Beal (LDWG) stopped by & observed from outside the gate (Dallas Ave).

2-17-06 S. Pierce

Intervals to be taken @ LDW-SC23:

0850	0-2	~~Lab~~ SP (chemistry)
0855	2-4	(chemistry)
0900	4-6	(archive)
0905	6-8	(archive)
0910	8-10.2	(archive)

active (0.5 ft) intervals

0915	0-0.5	0933	3-3.5
0918	0.5-1	0936	3.5-4
0921	1-1.5	0939	4-4.5
0924	1.5-2	0942	4.5-5
0927	2-2.5	0945	5-5.5
0930	2.5-3	0948	5.5-6

geotechs @ w/ 2" core + 4 oz jars
0-2 (sampled @ 0.9')
2-4 (sampled @ 2.9') [when no odor, none noted]

observations while homogenizing:
0-2 slight petroleum odor, very dk grey silt w/ fine sands
2-4: mod-strong H_2S black silt w/ wood debris
4-6: dk grey, slight H_2S odor silt w/ trace clay, wood debris
6-8: dk grey → black, silt w/ fine sand, wood debris
8-10.2: dk grey, silt w/ trace clay, wood debris,

02.17.06 S. Pierce

No PID hits @ LDW-SC23

change to boot washing station leaving exclusion zone H_2O is frozen in tubs - we will wipe boots on the mats when leaving the exclusion zone to watch that no sediment is tracked out.

1000 - Begin processing LDW-SC15 (Method A)
intervals taken @ LDW-SC15:

1025	0-1	(chemistry)
1030	1-2	(chemistry)
1035	2-4	(chemistry)
1040	4-6	(archive)
1045	6-8	(archive)
1050	8-10	(archive)

1007 - Emil (oversight) arrives.
geotubes (3" shelby)
0-1 (0.9')
2-4 (2.9')

02-17.06 S. Perri

LDW-SC15 cont

observations made during homogenization

0-1: dk grey, silt + / fine sand, warm, no odor

1-2: black, silt + trace fine sand, no odor

2-4: dark grey, silt w/ trace fine sand, no odor

4-6: dark grey, silt w/ trace fine sand, slight H_2S odor, ~~no~~ SP

6-8: greenish grey, fine sand w/ trace silt

8-10: greenish grey, fine-med sands

No PID hits @ LDW-SC15

1100 Finish processing LDW-SC15. Began processing LDW-SC18 (Method A) Intervals to be taken @ LDW-SC18

1115 - Communication w/ Berit (WW).

- Regarding LDW-SC29 (low recovery) we will not process this (R1) core. boat crew will resample
- LDW-SC47 w/ low recovery (4.5') should be processed @ end of day (may or may not be resampled) ~~but likely not~~. Berit will know for sure after 1pm conference call today

- regarding LDW-SC38, core will be retaken using the vibracorer
- LDW-SC40 will be resampled using the vibracorer
- LDW-SC54 will be resampled to collect VOCs @ depth.
- other samples on HOLD will be given a decision on whether to resample following 1pm conference call. Berit will keep the field crew updated.

1130 Communication w/ Anne Fitzpatrick. We will notify her of core mixing time tomorrow.

1135 Communication w/ Angel Rodriguez. She will bring a heating electric teapot on decon water to the field team.

2-17.06 S. Pierce

Samples collected @ LDW-SC18:

1145 0-1 (chemistry)
1150 1-2 (chemistry)
1155 2-4 (chemistry)
1200 4-6 (archive)
1205 6-8 (archive)
1210 8-10.7 (archive)

geotech sampled (3" shelby)
1-2 (sampled @ 1.2')
2-4 (sampled @ 3.2')

observations while homogenizing
0-1: drk grey, some woody debris, med sand w silt + gravel (med), no odor
1-2: drk grey; silt w/ trace fine sands, no odor
2-4: med sand w/ trace silt, no odor, wood debris
4-6: drk grey, silt w/ trace fine sands, no odor
6-8: fine sand w/ silt, gray brown, no odor
8-10: drk grey, fine sand w/ silt, no odor
8-10.7

* No PID hits @ LDW-SC18

1215 Finish sampling LDW-SC18.

Lunch Break.

02.17.06 S. Pierce 5

1240 - Angie comes by processing area - drops off supplies. Goes to ARI to pickup coolers + jars.

1300 - Begin processing LDW-SC31

1325 0-1 (chemistry)
1330 1-2.8 (chemistry)
1335 2.8-4 (chemistry)
1340 4-5.9 (archive)

geotechs (3" shelby @ tubes)
0-1 (sampled @ 0.8')
1-2.8 (sampled @ 2.7')

Observations while homogenizing:
0-1: silt w/ fine sands, very drk grey, no odor
1-2.8: black, silt w/ trace fine sand, no odor.
2.8-4: drk grey brown, med-fine sand, no odor.
4-5.9: med / fine sand, grey-brown, no odor w/ silt + clay chunks

MS/MSD sample taken @ 2.8-4'
grain size triplicate @ 1-2.8'

02.17.06 S. Pierce

No PID hits @ LDW-SC31.

1345 - Rob Gilmour went to meet boat crew + pick up cores. Waiting for his return to continue processing.

1400 - Begin processing LDW-SC24

1400 - Thai + Angie leave T117 to run errands

Intervals sampled @ LDW-SC24 (Method A):

1440	0-1	(chemistry)
1445	1-2	(chemistry)
1450	2-4	(chemistry)
1455	4-6	(archive)
1500	6-8	(archive)
1505	8-10	(archive)

geotechs sampled (3" shelby)
0-1 (sampled @ 0.9')
2-4 (sampled @ 2.8')

observations while homogenizing
0-1: dk grey, worm, plant debris, silt w/ fine sand, slight H_2S odor
1-2: fine+ med sand w/ silt, no odor, grey, trace gravel
2-4: fine+ med sand w/ silt, grey, no odor
4-6: med sand, grey, no odor
6-8: moderate H_2S odor, grey, fine med sand w/ silt
8-10: dk grey, fin-med sand w/ trace silt, no odor, wood debris

No PID hits @ LDW-SC24

1515 - end processing for day. Clean up + decon.

1600 - leave T-117. End of sampling day.

S Pierce 02.17.06

2.18.06 A. Rodriguez

0800 Arrive @ T-117 site
Processing Crew:
Angelita Rodriguez (Windward)
Thai Do (Windward)
Suzanne Replinger (Windward)
Anne Fitzpatrick (RETEC)
Rob Gilmour (~~RETEC~~) (mcs)

Set up processing station
Temperature in warehouse: -7°C

0845 Calibrate PID meter w/ Isobutylene = 100ppm

0900 Health & Safety, Chip Brackett (RETEC) arrives
- H_2S Exposure: Irritation of eyes & throat
- Cold: Use heat, stand in sun, eat snacks, drink hot drinks
- Boot Wash Setup: Reduce cross contamination
- Sharp edges: Wear gloves to minimize cuts when handling core tubes

0915 Cut open LDW-SC47 (LRI)
Penetration Depth = 7.25'
On deck recovery = 4.55'
% Recovery = 63

2.18.06 A. Rodriguez

0920 H_2S Meter
MSA Orion 4-Gas Multimeter
from Safety & Supply & calibrated
by Safety & Supply 2/1/2006
Calibration is in question
b/c oxygen 14.3% ~~ppm~~ O_2 should
be reading 22%

0940 Begin processing LDW-SC47 (LRI)
* 0 - 1.2 Chemistry
1.2 - 2: Chemistry
2 - 2.9: Chemistry
*NOTE: Refer to ~~PID~~ pp. 13-14 *
0945 The temperatures overnight was below freezing, therefore, the core is frozen & needs to be covered w/ foil & placed in direct sunlight to thaw before the crew can begin processing it.

Due to the low recovery all samples collected will be placed on HOLD (LRI)

2.18.06 A. Rodriguez

1010 Cut open LDW-34 (RZ) & the field replicate LDW-203

Method A

LDW-SC34 (RZ)

Penetration Depth = 12.15'

On deck recovery = 9.25'

% Recovery = 76

LDW-SC203 (RZ)

Penetration Depth = 12.05'

On deck recovery = 8.85'

% Recovery = 73

Begin processing LDW-SC34 (RZ)

1040 0-1: Chemistry + Organo Pest

1045 1-2: Chemistry + Organo Pest

1050 2-4: Chemistry + Organo Pest

1055 4-6: Archive

1100 6-8: Archive

1105 8-9.4: Archive

No PID hits

No Geo Tech samples taken

2.18.06 A. Rodriguez

LDW-SC34 (RZ) Cont'd

Observations during homogenizing:

0-1: dark gray w/green, abundant wood debris, moderate H_2S & petroleum odor, silt w/fine sand

1-2: dark gray, abundant wood debris, clay and silt, strong petroleum odor

2-4: dark gray, abundant wood debris, couple pieces gravel, fine-med sand w/silt, moderate petro

4-6: dark gray, shell fragments, sand w/silt, no odor, wood debris

6-8: black, sand w/silt, no odor

8-9.4: sandy w/gravel (subangular ~1"), no odor, black w/red & white sand, appears moist

Orion Multigas Detector is experiencing technical difficulties and will be taken back to Safety & Supply to be serviced.

2.18.06 A Rodriguez

Begin processing LDW-SC203

1115 0-1: Chemistry + Organo Pest
1120 1-2: Chemistry + Organo Pest
1125 2-4: Chemistry + Organo Pest
1130 4-6: Archive
1135 6-8: Archive
1140 8-8.8: Archive

ND PID hits
Observations during homogenizing:
0-1: dark gray, abund. wood debris, silt w/ fine sand, moderate petroleum
1-2: dark gray, silt w/ fine sand, wood debris, shell fragments, piece of film
2-4: moderate H_2S, dark gray, sand w/ silt, woody plant debris, shell fragments, gravel
4-6: dark gray, silt w/ sand, wood debris, slight petroleum odor
6-8: fine to med sand, dark gray, slight petroleum, gravel
8-8.8: med sand w/ trace fine sand, dark gray, slight petroleum odor, wood debris, gravel

2.18.06 A. Rodriguez

LDW-SC203 (R1) Cont'd
GeoTech @ 1.1' w/ 3" Shelby Tube
GeoTech @ 3.1' w/ 3" Shelby Tube

1200 Complete processing LDW-SC203 (R1)

1220 Lunch break

LDW-SC47 (R1) Begin processing
1325 0-1.2: Chemistry
1330 1.2-2: Chemistry
1335 2-2.9: Chemistry
~~1340~~ 2.9-4.8 Winnowed 50%
*1340 4.8 Grab archive sample collected from below core catcher b/c of low sed recovery *
GeoTech @ 7' w/ 3"
GeoTech @ 1.7' w/ 3"
ND PID hits
Observations during homogenizing:
0-1.2: silt w/ fine sand, gray, some wood debris, concrete, slight H_2S odor
1.2-2: grey/brown, no odor, med sand

2-2.9: grey/brown, no odor, med sand
~ silt

2.18.06 A. Rodriguez

LDW-SC47 (R1) Cont'd

Observations during homogenizing:

4-8: med sand, grey/brown, no odor

Contact ARI and arrange for a pick up of samples @ T-117 b/w 1430 - 1500. All samples will be on HOLD until further notice.

1350 Complete processing LDW-SC47(R1)

1355 Cut open LDW-SC25(R2)
Penetration Depth = 10.3'
On deck recovery = 8.9'
% recovery = 86
Method A
Begin processing LDW-SC25(R2)

1420 0-1: Chemistry + TBT

1425 1-2: Chemistry + TBT

1430 2-4: Chemistry + TBT

1435 4-6: Archive

1440 6-8: Archive

1445 8-9.1: Archive

2.18.06 A. Rodriguez

LDW-SC25(R2) Cont'd

No PID hits

Observations during homogenizing:

0-1: silt w/fine sand, wood debris, dark grey, slight H_2S

1-2: silt w/fine sand, wood debris, dark grey, moderate H_2S

2-4: silt w/fine sand, grey, moderate petroleum odor, wood debris

4-6: silt w/fine sand, grey, wood debris, slight petroleum odor

6-8: dark grey, med sand w/silt, wood debris, no odor

8-9.1: dark grey, med sand, no odor

GeoTech @ 1.4' w/3" Shelby + 4_{03}.

GeoTech @ 3.2' w/2" Shelby (2) ~~+ 4_{03}~~ (NA)

1500 Complete processing LDW-SC25(R2)
Begin decon & demob
Await for ARI pick up

2.18.06 A. Rodriguez

~~LDW-SC47 (RH)~~

AR ~~Observ~~

~~4.8: med sand, gray/brown, no odor~~

1520 Brian w/ AEI arrives to pick up samples.

1545 End of field day. Leave T-117

Angel Rodriguez 2.18.06

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~~LDW-SC47 (RI)~~

~~Observ~~

~~4.8: med sand, gray/brown, no odor~~

1520 Brian w/ AEI arrives to pick up samples.

1545 End of field day. Leave T-117

2.18.06

17

2.21.06 A. Rodriguez

0730 Drop off Thai @ South Park Marina

0735 Arrive @ T-117

Processing Crew:
Angelita Rodriguez (Windward)
Suzanne Replinger (Windward)
Kathleen Hurley (Windward)
Leslie McKee (CRETEC)
Rob Gilmour (CRETEC nmcs)

Set up processing stations
Warehouse Temperature = 3.4°C

0800 Calibrate PID meter w/ Isobutylene gas = 100 ppm

0820 Discussion w/ Shannon Pierce regarding Bill Jaworski mobilization of field equipment to T-117 site tomorrow 2/22/06

0825 Contacted Ted Graham, LaFarge & Steve Roundtree, Duwamish Shipyard to discuss access issues due to barges which are blocking access to sample locations. Barges at both locations will be there

18

2,21.06 A. Rodriguez

thru the week. However, Ted & Steve will contact if the barges move before then.

0850 Cut open LDW-SC43(R2)
Penetration Depth = 11.65'
On deck recovery = 6.25'
% Recovery = 54
Method B

0915 Begin processing LDW-SC43(R2)
0-2: Chemistry
0920 2-4: Chemistry
0925 * 4-6: Archive
(AR)6

* NOTE: ~5.7' The tip of core catcher is observed in the sample & the sed @ bottom is soupy & washed out. The core also is winnowed.

Discussion w/ Susie McGroddy to process station 45 but discard & NOT process station 38 which has low sed recovery. Reporter is coming today.

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2.21.06 A. Rodriguez

LDW-SC43 (R2)
Observations during homogenizing:
0-2: gray, med sand w/ silt, no odor
2-4: dark gray, med sand w/ silt, no odor
4-6: med gray, silt w/ fine sand no odor

No PID hits
GeoTech @ .6' w/ 2" Shelby + 4 oz.
GeoTech @ 2.6' w/ 2" Shelby + 4 oz.

LDW-SC43 (R2) Second half

0930	0-.5	1000 5-5.5	Chemistry
0933	.5-1	1003 5.5-6	Archive
0936	1-1.5		
0939	1.5-2		
0943	2-2.5		
0945	2.5-3		
0948	3-3.5		
0951	3.5-4		
0954	4-4.5		
0957	4.5-5		

Chemistry
Archive

20

2.21.06 A. Rodriguez

1015 Cut open LDW-SC 41 (RI)
Penetration depth = 11.6'
On deck recovery = 7.7'
% Recovery = 66
Method A

1020 Emil, COE oversight arrives

Begin processing LDW-SC 41 (RI)
1030 0-1: Chemistry + Dioxin
1035 1-2: Chemistry + Dioxin
1040 2-4: Chemistry + Dioxin
1045 4-6: Archive
1050 6-7.9: Archive

NO PID hits

Observations during homogenizing:
0-1: dark gray, silt, some wood debris, very slight petroleum odor
1-2: dark gray, some wood debris, slight petroleum odor
2-4: dark gray, silt, slight petroleum odor

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2.21.06 A. Rodriguez

LDW-SC 41 (RI) Cont'd
4-6: dark gray, silt, some wood debris, no odor
6-7.9: blue-gray sand mixed w/ silty sand, no odor, small rootlets
GeoTech @ 1.2' w/ 3" Shelby
GeoTech @ 3.2' w/ 3" Shelby

1115 Complete core processing LDW-SC41

1125 Cut open LDW-45 (RI)
Penetration Depth = 9.45'
On deck recovery = 6.75'
% Recovery = 71
Begin processing LDW-SC 45 (RI)
Method A

1140 Rob left to pick up cores @ South Park Marina
3rd core from station 45 collected & will be opened & compared to LDW-SC 45 (RI)
1200 Lunch break
1215 Allison Hiltner stops by b/f meeting Thai @ South Park Marina

22

2.21.06 A. Rodriguez

1230 Cut open LDW-SC45 (R3)
Penetration Depth = 7.7'
On deck recovery = 6.5
% Recovery = 84
Method A

1235 Emil (COE) oversight departs from T-117 & he will return 2/22/06 ~ 9 AM

Begin processing LDW-SC45 (R3)

1245 0-1: Chemistry
1250 1-2: Chemistry + Triplicate Grain Size
1255 2-4: Chemistry + MS/MSD
1300 * 4-5: Archive
1305 * 5-6: Archive

*NOTE: RETEC sectioned the intervals accordingly b/c a major difference in stratigraphic units, b/w sand & silt layers

Discussion w/ Susie to process LDW-SC38 (R1) as agreed upon with EPA & Ecology even though it doesn't not meet the QAPP or secondary criteria.

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2.21.06 A. Rodriguez

Also per discussion w/ Susie all samples for stations: LDW-SC43, LDW-SC45 & LDW-SC41 will be placed on HOLD @ ARI.

Observations during homogenizing:
0-1: dark gray, silt w/ fine sand, slight petroleum odor
1-2 dark gray, silt w/ fine sand, slight petroleum odor, piece subangular gravel, rootlets
2-4: dark gray, silt w/ fine sand, trace wood debris, slight petroleum odor
4-5 dark gray, silt w/ medium sand, slight petroleum odor
5-6: med sand w/ silt, brown/gray, no odor

GeoTech @ 1.1' & 3.8' w/ 3" Shelby tubes
NO PID hits

1310 Anne Fitzpatrick arrives @ T-117 (RETEC)
Collect a discreet sed sample from LDW-SC45 (R1) at 5' depth b/c the sed appears impacted w/ an oily sheen & ~~moderate~~ strong petroleum odor.
16 oz Archive Chemistry & 16 oz Grain Size

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2.21.06 A. Rodriguez

This discrete sample from LDW-SC45(R1) will be placed on HOLD @ ARI until further notice. This decision was agreed upon w/Susie & RETEC.
Sample id: LDW-SC45-5 (R1)

1345 Complete processing LDW-SC45 (R3)

1400 Allison Hiltner & Debra Williston (EPA) (King County) arrive & Health safety Meeting

Susie calls to provide direction for core processing of sample LDW-SC49 (R2):
1) Open core
2) Collect VOA's @ every 1' interval for the entire core, no homogenizing.
3) RETEC logs core for stratigraphy

25

2.21.06 A. Rodriguez

1430 Cut open LDW-SC44 (R2)
Penetration Depth = 11.7'
On Deck Recovery = 5.8'
% Recovery = 50

Begin processing LDW-SC44 (R2)
1500 0-2: Chemistry
1505 (AD) rm2-#3.2: Chemistry *
1510 3.2-4: Chemistry *
1515 4-5.8: Archive *
*NOTE: RETEC sectioned core accordingly due to a major difference in stratigraphic units - b/w sand/silt & gravel layers.

Observations during homogenizing:
0-2: dark gray, silt w/ fine sand, no odor, small shell fragments
2-3.2: dark gray, silt w/ fine sand, glass frags, small twigs, no odor
3.2-4: med sand w/ gravel, gray/brown, no odor
4-5.8: med to coarse sand, brown/gray, no odor

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2.21.06 A. Rodriguez

LDW-SC44 (R2) Cont'd

GeoTech @ .9' w/2" Shelby + 4oz

GeoTech @ 2.9' w/2" Shelby + 4oz

LDW-SC44 (R2) 2nd half ; Chemistry Archive

1520	0-.5	1538	3-3.5
1523	.5-1	1541	3.5-4
1526	1-1.5	1544	4-4.5
1529	1.5-2	1547	4.5-5
1532	2-2.5	1550	5-5.5
1535	2.5-3	1553	5.5-6

All samples will be placed on HOLD @ ARI as agreed upon w/ Windward, RETEC, Debra & Allison. Thai will resample station LDW-SC44 for better recovery w/ Vibracore. Also, want Thai to resample LDW SC29 ~ 30's of target location.

1540 Complete processing LDW-SC44(R2)

LDW-SC29 (R2) cut open @ same time as LDW-SC44 (R2)

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2.21.06 A. Rodriguez

LDW-SC29 (R2)

Penetration Depth = 6.05'

One deck recovery = 3.65'

No Recovery = 0.6

Allison, Debra & Anne discuss collecting a 3rd core located more in the middle of the Glacier Triangle area w/i the 30' radius or beyond.

Begin processing LDW-SC29(R2)

1555 0-1: Chemistry + Dioxin

1600 1-2: Chemistry + Dioxin

1605 2-3.6: Chemistry + Dioxin

Observations during homogenizing:

0-1: dark gray, silt w/ med sand, no odor, large woody debris

1-2: dark gray, silt w/ coarse sand, no odor, some shell fragments

2-3.6: med/coarse sand, no odor, gray/brown

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2.21.06 A. Rodriguez

LDW-SC29 (R2) cont'd
GeoTech @ .8' w/ (2) 2" Shelby

NOTE: Allison leaves T-117
Leslie Mckee leaves
Complete processing LDW-SC29(R2)
Samples will be placed on
1to LD @ ARI.

1633 Cut open LDW-SC38 (R1) & (R2)
R1: Penetration Depth = 4.5'
On deck recovery = 3.1
% Recovery = 69
Method A
Begin processing LDW-SC38 (R1)
which has been approved by
Ecology & EPA.

1650 Begin processing LDW-SC38 (R1)
1650 0-1: Chemistry
1655 1-2: Chemistry
1700 2-3: Chemistry

1705 3-3.3: Discrete sample chemistry
(R2) LDW-SC38 collected to display
vertical extent & sed characterization.

29

2.21.06 A. Rodriguez

LDW-SC38 (R1) cont'd
GeoTech @ .3' w/ 3" Shelby tube

Observations during homogenizing:
0-1: dark gray, silt w/ med & fine sand,
petroleum odor (slight), woody debris
1-2: ~~gravel~~ dark gray, slight petroleum odor, silt
w/ fine sand, small wood debris
2-3: dark gray, fine sand w/ some
med sand, wood debris, moderate
petroleum odor, oily sheen

3-3.3: LDW-SC38 (R2)
gray/brown, med to fine sand,
some wood debris, no odor
no archive jar b/c of low
sed volume

1715 Complete processing
Sample LDW-SC38 (R1) & (R2)
1730 Demob & decon equipment
1800 Leave T-117
1812 Drop off samples @ ARI
End of field day
Angelita RK

30

2.22.06 S. Pierce

0730 Drop off Thai @ ~~Kelly~~ S. Park Marina

0735 Head to T117 to begin core processing

crew: Joanna Floren (Windward)
Kathleen Hurley (Windward)
Shannon Pierce (Windward)
Leslie McKee (Retec)
Rob Gilman (MCS)
Scott Emmons (Kotec)

begin set up/mob for processing

0830 - Begin processing LDW-SC50. R1 + R2 were collected. R2 had better recovery; decide to process R2. There is a void @ end of R2 @ 4.5' but sand layer is apparent below 4.5' and after void (indicates presence of native sand)

0840 Health + Safety review

31

02.22.06 S. Pierce

Intervals collected @ LDW-SC-50: (R2)
0845 - 0-1 (chemistry)
0850 - 1-2 (chemistry)
0855 - 2-4 (archive chemistry)
0900 - 4-4.5 (archiving)

geotubes (3" shelby) @:
0-1 (sampled @ 0.9')
2-4 (sampled @ 3.0')

*No PID hits @ LDW-SC-50 *

Salinity samples taken @ [redacted] SP
0-2 (0848), 2-4 (0855)

Observations while homogenizing
0-1: black, silt w/ trace fine sands.
1-2: black, silt w/ trace fine sands
2-4: slight H_2S, dk gray, fine sand w/ silt
4-4.5: dk grey, fine-med sand, wood debris

0845 Emil Pitre (oversight) arrives

0850 - Health + Safety mtng w/ ~~Scott~~ Scott Emmons

32 02.22.06 S.Pierce

(summary of am conversations)
Communication w/ Susie McGroddy:
the following stations have addl cores in the van but other cores have already been processed + submitted to ARI:

- ~~34~~ 34 (R1) - OK to discard
- 25 (R1) - OK to discard
- 29 (R1) - ~~one~~ other core from ~~other~~ location on HOLD
- 45 (R2) - other core from location on HOLD
- 41 (R2) - other core fm location on HOLD
- 43 (R1) - other core fm location on HOLD.

For stations 29, 45, 41, and 43, extra cores will be kept in van until samples on HOLD have been given the to OK for analysis. Extra cores from 25 + 34 will be discarded.

02.22.06 S.Pierce 33

Communication w/ Susie cont:
gave update on LDW-SC-50. We processed R2, + observed a void + sand layer (see previous notes).

0940 - open up LDW-SC-34 (R1) and LDW-SC-25 (R1) to discard.

0915 - communication w/ Thai - still working @ LDW-SC-51 for cores.

0950 ~~Communication~~ communication w/ Angie - LDW-SC-45 no longer on HOLD so OK to discard.

1000 open up LDW-SC-45 (R2) to discard

communication w/ Rick Huey @ Ecology. He will be out

34 02.22.06 S. Pierce

tomorrow w/ reporter to take pictures. They will come to T117 after going to Trotsky around 10-12 tomorrow.

1030 Begin cleaning the cores. ~ create an area w/ a clean tarp. Brush off cores w/ scrub brushes (dry) into bucket w/ plastic sheeting underneath to collect dust. Kathleen leaves to buy dust ~~masks~~ masks (PPE) for protection against sediment dust

1055 Communication w/ Thai - boat is ready for pick-up. @ DW-SC-49(R2) for VOC & salinity analysis. 2 cores (R1 & R2) were collected @ LDW-SC-51

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1120 open LDW-SC-49 (R2) for VOC + salinity analysis @ intervals

1130	0-1	1148	6-7
1133	1-2	1151	7-8
1136	2-3	1154	8-9
1139	3-4	1157	9-10
1142	4-5	1200	10-11
1145	5-6	1203	11-12

VOC intervals

salinity intervals

1205	0-2 :	~~1205~~
1207	2-4	~~1207~~
1209	4-6	~~1209~~
1211	6-8	~~1211~~
1213	8-10	~~1213~~
1215	10-12	~~1215~~

* PID hit range 200-500 ppm. 10-12'

No PID hits @ all other intervals.

36 02.22.06 S. Pierce

LOW-SC-49

Observations while homogenizing

0-2: mod H_2S, silt w/ trace fine sands, dark grey

2-4: mod/strong H_2S, silt w/ trace fine sand, dark grey

4-6: fine sands w/ silt w/ leaf debris, dk grey, wooden.

6-8: silt/clay, dk grey, slight petroleum wooden

8-10: silt/clay, dk grey, mod petroleum, leaf debris

10-12: silt/trace clay, dk grey, slight mod petroleum

1230 Finish processing LOW-SC-49. Allison Hiltner arrives. Discuss our current plan to process the best core (using best prof. judgement) from each location and then present a summary table of what we submitted to ARI (on HCRD) and a recommendation.

1235 Begin processing LOW-SC-51 (B) Two cores were collected - R1 + R2. Both will be opened + the best core (closest to meeting criteria) will be processed.

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Intervals taken @ LOW-SC-51:

Decide to process R1 - better recovery, silt and sand layers some sheen visible; (only sand layers in R2)

1310	0-2	+ chemistry + geotech @ 1'
1315	2-3.8	+ chemistry + geotech @ 2.5'
1320	3.8-5.8	archive

*interval based on stratographic layer (Retec)

archive 0.5 ft intervals:

1325	0-0.5	1343	3-3.5
1328	0.5-1	1346	3.5-3.8
1331	1-1.5	1349	3.8-4.5
1334	1.5-2	1352	4.5-5
1337	2-2.5	1355	5-5.5
1340	2.5-3	1358	5.5-5.8

No PID hits @ LOW-SC-51

Observations while homogenizing

0-2: black, fine sand w/ silt w/ trace gravel, slight petrol

2-3.8: black, fine sand w/ some silt, trace gravel, slight petroleum

3.8-5.8: slight H_2S, med-fine sand, dk grey

Salinity taken @ 0-2; 2-3.8; 3.8-5.8 intervals

38 02.22.06 S.Pierce

Rob + Katheen return fm picking up cores - LDW-SC-26(R1) and LDW-SC-37(R1).

Finish processing LDW-SC-51.

Begin processing LDW-SC-37.
Intervals taken @ SC-37:

1445	0-1	(chemistry)
1450	1-2	(chemistry)
1455	2-4	(chemistry)
1500	4-5.3	(archive)] interval based on stratographic layer (Retec)
1505	5.3-6.9	(archive)]

geotechs (3" shelby) @
0-1 (sampled @ 0.9')
2-4 (sampled @ 2.2')

observations while homogenizing
SP [redacted] 0-1: drk grey, silt w/ fine sand
SP [redacted] 1-2: drk grey, silt w/ med sand, root debris
2-4: mod strong petroleum, black, silt w/ med/fine sand, some gravel
4-5.3: drk grey med sand w/ clay/silt, trace gravel moderate petroleum odor
5.3-6.9: med sand, grey-brown

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@ LDW-SC-37:
MS/MSD taken @ 1-2' interval
grain size triplicate @ 2-4' interval
No PID hits @ LDW-SC-37.

Beginning to process LDW-SC-26.
Intervals to be taken:

1600	0-1	(chemistry)
1605	1-2	(chemistry)
1610	2-4	~~(archive)~~ SP (chemistry)
1615	4-6	(archive)
1620	6-8	(archive)
1625	8-11.1	(archive)
	SP [redacted]	(archive - interval based on where sand layer begins
1630	11.1-12.1	(archive - sand layer)

geotechs @ intervals (3" shelby)
1-2 (sampled @ 1.5')
2-4 (sampled @ 3.9')

* No PID hits @ LDW-SC-26.

40 02.22.06 S. Pierce

LDW-SC-26.

Observations while homogenizing:

0-1: olive grey, silt, no odor, sm. wood debris

1-2: drk grey, silt w/ fine sand, no odor

2-4: drk grey, silt w/ fine sand, no odor

4-6: drk grey, med sand/silt, wood debris, no odor

8-11.1 ~~#~~: drk grey, silt w/ leaf debris fine sand, slight petroleum

6-8 ~~#~~: silt w/ fine sand, trace gravel, slight petroleum

11.1-12.1: medium sand; brown/grey
mod H_2S odor

Finish sampling LDW-SC-~~#~~26.

1700 Took rinsate
LDW-SC-RIB-3

Summary of samples ~~#~~ put on HOLD at ARI:
LDW-SC-50
LDW-SC-51

1730 Finish processing. Leave T-117

2.22.06
S. Pierce

41

40

02.22.06 S. Perri

LDW-SC-26

Observations while homogenizing:

0-1: olive grey, silt, no odor, sm. wood debris

1-2: dark grey, silt w/ fine sand, no odor

2-4: dark grey, silt w/ fine sand, no odor

4-6: dark grey, med sand/silt, wood debris, no odor

8-11.1 ~~8~~: dark grey, silt w/ leaf debris fine sands, slight petroleum

6-8 ~~SP #1~~: silt w/ fine sand, trace gravel, slight petroleum

11.1-12.1: medium sand; brown/grey mod H_2S odor

Finish sampling LDW-SC-~~33~~26.

1700 Took rinsate
LDW-SC-RIB-3

Summary of samples ~~of~~ put on HOLD at ARI:
LDW-SC-50
LDW-SC-51

1730 Finish processing. Leave T-117

2.22.06
S. Perri

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02.23.06 A. Rodriguez

0730 Arrive @ South Park Marina to meet w/ Vibracore crew: Bill, Dale & Darryl

0740 Arrive @ T-117 & unload Vibracore equipment, complete subcontract w/ Bill Jaworski & begin setup of processing station.

Processing crew:
Angelita Rodriguez (Windward)
Suzanne Replinger (Windward)
Emily Duffield (Windward)
Leslie McKee (CRETEC)
Rob Gilmour (MES)

Weather: Cloudy, light drizzle, windy
Warehouse Temperature: 46.0°F

0840 Discussion b/w processing crew & Susie McGroddy to process stations 43 & 44 first.

0845 Thai called to inform that the Vibracore boat may have access problems @ station 29.

PID meter calibrated w/ Isobutylene = 100 ppm

2.23.06 A. Rodriguez

0850 Cut open LDW-SC43(R3) to be processed & LDW-SC43(R1) to be discarded.

R3: Penetration Depth = 15.85'
On deck recovery = 9.85'
% Recovery = 62
Method B

R1: penetration Depth = 11.25' } OPENED & DISCARDED
On deck recovery = 4.75'
% recovery = 42

Begin processing LDW-SC43(R3)

0910 0-2: Chemistry
0915 2-4: Chemistry
0920 4-6: Archive
0925 * 6-9: Archive
0930 * 9-9.8: Archive

* NOTE: RETEC sectioned intervals accordingly due to a major difference in stratigraphic units from silt to sand

Enni (COE) oversight arrives ~0915

Observations during homogenizing:

0-2: dark grey, no odor, fine sand & silt, org. matter, no odor

2.23.06 A. Rodriguez

LDW-SC43 (R3)

2-4: dark grey, silt w/some fine sand, med sand, trace wood, slight petroleum odor

4-6: dark grey, no odor, fine sand w/ silt & trace med sand, org. matter

6-9: Med sand w/some fine sand & silt, dark grey, no odor

9-9.8: dark grey, med sand w/trace fine sand, no odor

No PID hits

LDW-SC43(R3) 2nd half Chemistry Archive

0935	0-.5	0956	3.5-4
0938	.5-1	0959	4-4.5
0941	1-1.5	1002	4.5-5
0944	1.5-2	1005	5-5.5
0947	2-2.5	1008	5.5-6
0950	2.5-3		
0953	3/3.5		

GeoTech @ .9' w/2" Shelby + 4oz
GeoTech @ 3.1' w/2" Shelby + 4oz

1016 Complete processing LDW-SC43(R3)
Thai transfers LDW-SC54 (R3) to processing team, Nick Bacher arrives

2.23.06 A. Rodriguez

1020 Cut open & discard LDW-SC 41 (CR2) & LDW-SC29 (CR1)

1030 Cut open LDW-SC 44 (CR3) LDW-SC 47 (CR3) and wrapped both w/ foil to process later. Rob leaves for the day, set up for Vibracore processing & training

1100 Rick Huey, Ecology PM
Rob Sumner, Freelance Photographer w/Oregonian
Kayla Webley, Reporter w/Oregonian
Arrive @ T-117
Chip Bruckett (RETEC) arrives
Conduct a Health & Safety meeting

1130 Cut open LDW-SC54 (CR3)
Penetration depth = 13'
On deck recovery = 10.75'
% recovery = 82.7
Method B

1145 Experience difficulties cutting the core b/c of the blade in circular saw. Bill will come

2.23.06 A. Rodriguez

assist RETEC trouble shoot the equipment. Also, Thai Calls for a pickup of cores from South Park Marina. Suzanne & Emily leave to pick up cores.
Rick, Kayla & Rob (Sumner) leave for lunch & will return ~1230.

1210 Cut open LDW-SC54 (CR3)
Vibracore location
Begin processing LDW-SC54 (CR3)

1240 0-2: Chemistry + Organo Pest
1245 2-4: Chemistry + Organo Pest
1250 * 4-5.5: Archive
1255 * 5.5-8: Archive
1300 8-10: Archive

* NOTE: Transitional zone @ 5.5' confirmed by RETEC sand layer begins

NO PID hits
GeoTech @ 1.2' w/ 2" Shelby + 4 oz
GeoTech @ 2.8' w/ 2" Shelby + 4 oz
low sed volume collected

2.23.06 A. Rodriguez

LDW-SC54 (CR3) CONT'D

Observations during homogenizing:

0-2: dark grey, slight H_2S odor, small rootlets, trace org debris, silt w/fine sand

2-4: dark grey, slight H_2S odor, small rootlets, woody debris, fine sand w/silt

4-5.5: dark grey, mild H_2S odor, trace org matter, fine sand w/silt

5.5-8: dark grey, no odor, med sand w/coarse sand

8-10: dark grey, no odor, med sand w/coarse sand

2nd half LDW-SC54 (CR3) Chemistry Archive

1305	0-.5	1326	3.5-4
1308	.5-1	1329	4-4.5
1311	1-1.5	1332	4.5-5
1314	1.5-2	1335	5-5.5
1317	2-2.5	1338	5.5-6
1320	2.5-3		
1323	3-3.5		

1345 Complete processing LDW-SC54 (CR3)

2.23.06 A. Rodriguez

1420 Cut open LDW-SC47 (CR3)
Penetration Depth = 13'
On Deck Recovery = 10.3'
% Recovery = 79.2
3 Vibra Core
Compare to LDW-SC47 (CR2)
Mud Mole
Penetration Depth = 8.85'
On Deck Recovery = ~~55~~ 4.85'
%Recovery = 55

1425 Sue calls from AR1 & the lab is out of power for an indefinite amount of time. AR1 can not receive phone calls due to the power outage. Processing crew will still drop samples off ~1700 @ AR1.

1430 After a comparison of the Mud Mole & Vibracore samples w/ oversight, ReTec & Windward it's decided to process LDW-SC47 (CR3), the Vibracore sample. It has the best recovery & core quality overall.

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Begin processing sample, method A

1445	0-1: Chemistry
1450	1-2: Chemistry
1455 *	2-3: Chemistry
1500 *	3-4: Chemistry
1505	4-6: Archive
1510	6-8: Archive
1515	8-10: Archive

* NOTE: RETEC sectioned intervals accordingly b/c of the transitional zone b/w silty sand to sand @ 2-3' & 3-4'.

No PID hits

Observations during homogenizing:

0-1: grey/brown, no odor, med/fine sand and silt

1-2: grey/brown, silt w/fine sand, strong H_2S

2-3: grey/brown, silt w/fine sand & some med sand, no odor

3-4: grey, med & coarse sand, no odor

4-6: brown/grey, no odor, med & coarse sand

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LDW-SC47(R3) Cont'd

6-8: brown/grey, no odor, med ≠ coarse sand

8-10: Coarse sand ~~some silt~~ AR dark brown, no odor, trace wood debris

GeoTech @ 1.4' w/3" Shelby
GeoTech @ 2.8' w/3" Shelby

1520 Complete processing LDW-SC47(R3)

1545 Joanna arrives to clean tubes

Begin processing LDW-SC44(R3)
Penetration Depth = 10.55'
On deck recovery = 6.45'
% Recovery = 61
Method B

(AD) ~~1600~~ 1602 — Discussion b/w Susie & Leslie regarding the quality of 44(R3) & make decision not to process it b/c 44(R2) processed 2/21/06 was determined to be better recovery w/ less winnowing & bottom sed in 4-6' interval was confirmed

2.23.06 A. Rodriguez

to be the same composition in R2 & R3, which is sand. Therefore, R3 was not processed and R2 samples will be submitted for analyses @ ARI. R3 will be discarded.

1605 Begin decon & demob of field equipment.

1610 Thai calls for core p/u @ South Park Marina in ten minutes.

1620 Suzanne & Emily leave to p/u cores. Emil leaves for the day.

1645 Suzanne & Emily return w/cores for stations: 17 & 28.

1715 Leave T-117 site
End of field day

Rec'd in RF
2.23.06

2.24.06 A. Rodriguez

0730 Arrive @ T-117
Thai walks over to South Park Marina.
Processing Crew:
Angelita Rodriguez (Windward)
Suzanne Replinger (Windward)
Emily Duffield (Windward)
Leslie McKee (RETEC)
Chip Brackett (RETEC)

0740 Set up processing station

0745 Contact Ted Graham, LaFarge regarding access issues & he confirmed the barge that is blocking access to the sampling location LDW-19 will be moved ~1200 today. Ted has also informed Thai.

0755 Contact Doug Stevens, White Center Rentals to inform him that the generator will be returned Saturday 2.25.06 or possibly Monday 2.27.06.

2.24.06 A. Rodriguez

0800 Weather: Clear, sunny, cold
Warehouse Temperature = 31°F
Extremely icy & slick conditions in the work areas. Everyone is cautioned to walk slowly & be aware of the ice.

0805 PID meter is calibrated w/ Isobutylene gas = 100 ppm

0830 Emil (Coe) oversight phones & he will be arriving within the next 10 minutes

0845 Cut open LDW-SC40 (CR3)
Penetration Depth = 13'
One Deck Recovery = 10'
% Recovery = 76.9
Method A
Begin processing LDW-SC40

0915	0-1.3	0930	4-6
0920	1.3-2	0940	6-8
0925	2-4	0945	8-10
~~0930~~	~~4-6~~		

2.24.06 A. Rodriguez

0905 Emil (CoE) oversight arrives

LDW-SC40 (R3) Cont'd)

* 0-1.3 : Chemistry + Dioxins + Organo Pest
* 1.3-2 : Chemistry + Dioxins + Organo Pest
2-4 : Chemistry + Dioxins + Organo + MS/MSD Triplicate
4-6 : Archive
6-8 : Archive
8-10 : Archive

No PID hits
GeoTech @ 1.2' w/ 3" Shelby
GeoTech @ 2.5' w/ 3" Shelby

* NOTE: RETEC observed a major difference in stratographic units b/w silt & sand

Observations during homogenizing:
0-1.3 : dark grey, slight H_2S, med to fine sand w/ silt; ~~NO ARCHIVE~~
1.3-2 : brown, med sand w/ trace gravel, no odor; NO ARCHIVE
2-4 : red/brown, med sand, no odor

4-6 : dark grey, slight H_2S, med sand & some fine sand

2.24.06 A. Rodriguez

LDW-SC40 (R3) Cont'd
6-8 : dark grey, med & coarse sand slight H_2S
8-10 : dark grey, med & coarse sand, no odor

1000 Complete processing LDW-SC40 (R3)
Emil has a conference call that he will be on for ~ 45 minutes. But, he will be in his truck on site.

Cut open LDW-SC17 (R5)
Penetration depth = 13'
On deck recovery = 8.6'
% recovery = 66
Method A, Collected 2/23/06
Begin processing LDW-SC17 (R5)
1025 0-1 : Chemistry
1030 1-2 : Chemistry
1035 2-4 : Chemistry
1040 4-6 : Archive
1045 6-8.6 : Archive

2.24.06 A. Rodriguez

1030 Kathleen Hurley arrives w/ field supplies
LDW-SC17 (R5)
Observations during homogenizing:
0-1: dark brown/green, wet sandy silt, trace wood frags, trace subrounded gravel, no odor
1-2: dark grey, silt, moderate H_2S & petroleum, shell frags, gravel, round. wood debris
2-4: dark grey/black, fine sand w/silt, some wood moderate petroleum odor, trace small gravel debris + roots
4-6: dark grey, silt w/fine sand, moderate petroleum odor, some wood debris
6-8.6: dark grey, silt w/fine sand, moderate slight petroleum odor, some wood debris & rootlets

1110 Susie McGroddy phones to discuss LDW-SC28 & notify processing crew ~~to~~ if a gravel cap layer is observed in the core to call her ASAP. The gravel cap layer indicates the dredged area for that sampling location.

2.24.06 ARodriguez

LDW-SC17 (R5)
GeoTech @ 1.2' w/3" Shelby
GeoTech @ 2.3' w/3" Shelby

1125 Complete processing LDW-SC17 (R5)

1145 Cut open LDW-SC28 (R4)
Penetration Depth=
On deck recovery=
% Recovery=
Method A

1200 Observe ~2 ft. gravel cap layer @ top of core, which indicates the dredged area. Call Susie but leave message w/Shannon Pierce to inform Susie of the findings & to contact processing crew & Thai regarding further direction to take w/ LDW-SC28 (R4).

1215 Shannon states the QAPP confirms LDW-SC28 (R4) is unacceptable ble it contains the gravel cap layer. Therefore, R4 will be discarded & Thai will try for core another core @ LDW-SC28.

2.24.06 A. Rodriguez

1220 Cut open LDW-SC50
Penetration Depth=13'
On deck recovery = 8.75'
% Recovery = 67.3%
Method A

Begin processing LDW-SC50
1240 0-1: Chemistry
1245 1-2: Chemistry
1250 * 2-2.8: Chemistry
1255 * 2.8-4: Chemistry
1300 4-6: Archive
1305 6-8: Archive
1310 8-9.8: Archive
*NOTE: RETEC observes a sharp contact due to a major difference in stratigraphy

Observations during homogenizing:
0-1: grey/brown, silt w/fine sand, slight petroleum odor, some gravel, No ARCHIVE
1-2: dark grey, no odor, some org. material, trace small pebbles, fine sand w/silt
2-2.8: silt w/med sand, some gravel, grey brown, no odor, No archive

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LDW-SC50 (R3)
2.8-4: grey/brown, med & coarse sand, no odor
4-6: grey/brown, med & coarse sand, no odor
6-8: grey/brown, med & coarse sand, no odor, small pebbles (trace)
8-9.8: grey/brown, med & coarse sand, no odor,
No PID hits
GeoTech @ 1.2' w/3" Shelby
GeoTech @ 2.5' w/3" Shelby

Also, collected salinity samples @ every 2' intervals:
2.8-4
4-6
6-8
8-9.8
} Placed on HOLD @ AR1
Per Leslie's notes 0-2.8' from SC-5(R2) salinity samples are on HOLD @ AR1
Call Susie to inform Boeing of these samples & decide which salinity they want to analyze. Windward does

2.24.06 A. Rodriguez

not have any direction or text provided in QAPP to make a decision. The collection for salinity samples was directed by Anne Fitzpatrick, RETEC 2/21/06.

1330 Complete processing LDW-SC50 (R3)

1350 Contact Thai to discuss boat progress at station 19. They have made several attempts (>4) & have ~ 3ft on deck recovery. Also, have good core from station 28. He will call for core plus @ 1st Ave Boat ramp after completing one more attempt @ station 19.

1400 Processing crew cleans core tubes & organize equipment.

1420 Thai calls for plu, Emily & Kathleen leave.
Suzanne leaves for the day.

1450 Kathleen & Emily return w/ cores for station 19 & 46

2.24.06 A. Rodriguez

1500 Cut open LDW-SC19 (R5)
Penetration Depth = 13'
On deck Recovery = 12.1'
% Recovery = 93
Method A

Begin processing sample LDW-SC19 (R5)

1515 0-1: Chem +Dioxin 1545 * 9-11.9; Archive
1520 1-2: Chem + Dioxin
1525 2-4: Chem + Dioxin
1530 * ~~4-6~~ 4-6: Archive
1535 * ~~7-9~~ 6-7: Archive
1540 * ~~9-11.9~~ 7-9: Archive

* NOTE: RETEC sectioned accordingly due to major difference in stratigraphic units

No PID hits
Observations during homogenizing
0-1: silt w/ fine sand, dark grey, no odor - NO ARCHIVE
1-2: dark grey, no odor, silt w/ trace fine sand, some rootlets

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LDW-SC19 (CR5)

2-4 dark grey, no odor, silt w/med sand,

4-6: dark grey, fine sand w/silt, mild ~~slight~~ H_2S,

6-8 ~~6-7~~: dark grey/black, fine sand/w silt, ~~no odor~~ AR mild H_2S

7-9: grey/brown, fine & med sand, trace woody debris, mild H_2S

9-11.9: grey/brown, coarse sand w/ trace fine sand, no odor, trace rootlets

GeoTech @ 2.2' w/3" Shelby
GeoTech @ 3.2' w/3" Shelby

1545 Complete processing LDW-SC19 (CR5)
R1 - R3 cores were discarded on site from boat & R4 needs to be opened & discarded.
R5 ~ 56' from target location & Then followed direction from Allison Hiltner given 2.21.06

2.24.06 A. Rodriguez

1615 Cut open LDW-SC46 (R1)
Penetration depth = 13'
On deck recovery = 11.2'
% recovery = 86.2
Method A

Begin processing LDW-SC46 (R1)

1620 0-1: Chemistry
1625 1-2: Chemistry
1630 2-4: Chemistry
1635 *4-6.8': Archive
1640 *6.8-8': Archive
1648 5 8-10': Archive
1650 10-11.2': Archive

NOTE: RETEC confirms sand layer begins
NO PID hits
Observations during homogenizing:
0-1: dark grey, silt w/fine sand, small woody debris, no odor — NO ARCHIVE
1-2: dark grey, silt w/gravel, no odor, small woody debris
2-4: dark grey, med sand, some woody debris, no odor
4-6.8: dark grey, no odor, fine sand w/silt

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LDW-SC46 (R1)

6.8-8: dark grey, no odor, coarse & med sand w/some fine sand

8-10: dark grey, no odor, med w/ some fine sand

10-11.2: dark grey, no odor, med w/ some fine sand

GeoTech @ 1.1' w/ 3" Shelby

GeoTech @ 2.2' w/ 3" Shelby

1710 Complete processing LDW-SC46

Decon & demob equipment

Discussion w/ Leslie about duplicate GeoTech samples @ ~~17~~ LDW-SC17 & she would like the lab to discard the previous GeoTech samples submitted. then have AR1 analyze the GeoTech samples LDW-17 (R5).

1745 End of field day

AR

2.24.06

2.24.06 A. Rodriguez

LDW-SC46 (R2)

6.8-8: dark grey, no odor, coarse & med sand w/some fine sand

8-10: dark grey, no odor, med w/ some fine sand

10-11.2: dark grey, no odor, med w/ some fine sand

GeoTech @ 1.1' w/ 3" Shelby

GeoTech @ 2.2' w/ 3" Shelby

1710 Complete processing LDW-SC46
Decon & demob equipment

Discussion w/ Leslie about duplicate GeoTech samples @ ~~17~~ LDW-SC17 & she would like the lab to discard the previous GeoTech samples submitted. then have ARI analyze the GeoTech samples LDW-17 (R5).

1745 End of field day

Ingalls 2.24.06

2.25.06 S. Perri

0850 - Meet @ T-117 for final lab processing

crew: Thai Do (Windward)
Kathleen Hurley (Windward)
Shannon Perri (Windward)
Leslie McKee (Retec)

0900 Begin set-up for core cutting.
Two cores left:
LDW-SC-28 (R5)
LDW-SC19

0930 Begin cutting LDW-SC-28 (R5)
intervals to be taken @ LDW-SC28

1000	0-1	(chemistry)
1005	1-2	(chemistry)
1010	2-4	(chemistry)
1015	4-5.5	(archive)
1020	5.5-7.5	(archive)
1025	7.5-9.1	(archive)
1030	9.1-12	(archive)
1035	12-12.6	(archive)

* intervals based on stratographic layer

12-12.6 sampled ~~as~~ esp to tag ~~native~~ "native sand" (Retec - Leslie decision)

02.25sp.05 S. Pierce

LOW-SC-28 (R5)

Observations during homogenization:

0-1: grey, silt, med-fine sand, wood debris, slight H_2O,

1-2: drk grey, silt w/ fine sands, no odor

2-4: drk grey, silt w/ fine sand, wood debris, slight petroleum odor, clam (removed)

4-5.5: drk gray, silt + fine sands, wood debris, no odor

5.5-7.5: no odor, drk grey, shell frag, silt + med sand, poss. paint chips, wood debris

7.5-9.1: no odor, drk grey, med sand w/ silt, olive grey silt-clay clump

9.1-12: trace gravel, med sand, w/ silt, drk grey, mod petroleum odor

12-12.3: silt/clay w/ trace fine sands, no odor, grey.

Insufficient volume @ 0-1. only (16oz) able to fill jars for PCBs, SVOCs, TBT, etc. and for dioxin furans (8oz).
Grain size (16oz) filled approx 1/2 full w/ add'l sediment scraped fm. core tube. There were some dk flecks in grain size sample - noted on COC.
No archive filled @ 0-1 (LOW-SC-28)

At 1-2, all jars were filled, however archive jar was filled approx 1/8 full (16oz) due to less volume of sediment

02.25sp.05 S. Pierce

geotechs @ sampled (2" shelby + 40z jars)
1-2 / sampled @ 2.0)
2-4 (sampled @ 3.9)

No PID hits @ LOW-SC-28 (R5)

Note: sandblast grit observed throughout core. (refer to core log fm. Retec)

Finish LOW-SC28.

Begin processing LOW-SC-19 (R4)
Decide to process + HOLD jars.
Yesterday R5 was collected + processed. R4 was collected in w direction fm. target (~approx 45 ft fm target) as directed by EPA. This core was not processed on 2/24/05 because of low recovery (3.5'). R5 was approx 60 ft fm target but not in the direction specified by EPA. Due to the fact that
↳ + processed

no oversight or LDW project mngr was around to verify sampling + analysis of R4 was ok - we decided to process R5 today + put on HOLD at ARI until we can verify which core should be analyzed. Sample LDW-SC-19 (R4) processed yesterday will be put on HOLD at ARI following processing today.

Intervals taken @ LDW-SC-19 (R5) Method A

Note: Core was stored upright for 3hrs prior to processing which may have caused soft sediment to shift, it is likely all fm the same interval (silt)

1135	0-1	(chemistry)
1140	1-2	(chemistry)
1145	2-3.5	(chemistry)

NO PID hits @ LDW-SC-19

Observations while homogenizing
0-1: grey, silt w/ fine sands, no odor, warm, florets of sheen
1-2: grey, silt w/ fine sand, no odor
2-3.5: grey, fine sand w/ silt, no odor

geotechs @ (2" Shelby + 40z)
1-2 (sampled @ 1.1)
2-3.5 (sampled @ 2.1)

1200 finish sampling LDW-SC-19 (R5)
Both LDW-SC-28 + LDW-SC-19 will be put on HOLD @ ARI until Monday 2/27.

1200 - Begin cleaning up / shop off equip @ Retec + Ecology

1300 - Leslie + Shannon leave T-117. Kathleen + Thai waiting for pick-up @ T117 by ARI

1430 - Thai + Kathleen leave ARI. Finish sampling for day. Clean up will occur next week.

02.25.06 S.Pure