

**Dakota Creek Industries
Shipyard Facility**

Sediment Sampling Data Report

**Appendix B
Surface Sediment Sample Collection
Forms**

FINAL

SURFACE SEDIMENT SAMPLE COLLECTION FORM

Date/Time Collected: 11/17/06 1351

Weather: 40% cool, slightly overcast

Field Personnel: JSM & Res. Supp. Services (RSS) Eric

Sample Type:

1. Surface Sample (0-10 cm)
 2. Next Surface Sample (10- 20 cm)

Sample ID/Design. DC106-1A collection time 1351

Sample Method (Van Veen Surface Grab/Diver Core-Cookie Cutter) -7"

Datum (Horizontal/Vertical) NAD 83 State Plane WA N 1 MLLW

Sample Types 1, 2, 3, 4, 5:

Diver Gauge
 Leading Water Dept: 43' (A)

*If sample type 4, were reference samples collected? Yes No

Predicted Tide Elevation _____ (B)

Mudline Elevation -25.3 (B-A)

Actual Tide Elevation 7.7'

Run # or Composite Pt	Time	Latitude (Northing)	Longitude (Easting)	Sample Criteria (Surface Grab Only)					Accept Sample Y/N	Comments (Include depth of sample)
				1	2	3	4	5		
<u>N/A</u>		<u>560275</u>	<u>1209237</u>						<u>Y</u>	

Acceptance criteria: 1 Overlying water is present, 2 Water has low turbidity, 3 Sampler is not over filled, 4 Sample surface is flat, 5 Desired sample depth is reached

Decon Procedure (Alconox Wash DI water rinse, other): _____

Sediment Sample Description

Sediment Sample Description (density, moisture, color, minor constituents, major constituents, other observations - *see field ref cards):

Drk gray, gravelly sand w/ 80% shells & shell fragments. Soft. < 1" rounded gravel. Small sheen in bed. ~ < 1" wide

Sample containers filled (number and type):

1-8oz Dixie 1-4oz TDC/TS
1-16oz GS

Laboratory analysis:

Diver Comments etc:

Sed. surface cobbles, gravel, shells - Not able to penetrate w/ 14" corer, use 7" (no 10-20cm sample). Diver had to remove cobbles to collect samples.

SURFACE SEDIMENT SAMPLE COLLECTION FORM

Date/Time Collected: 11/17/06
 Weather: cool, slightly overcast
 Field Personnel: LSU & Eric-RSS

Sample Type:

- 1. Surface Sample (0-10 cm)
- 2. Next Surface Sample (10- 20 cm)

Sample ID/Design. DC106-2D (dup) collection time 1311
DC106-2A collection time 1301

Sample Method (Van Veen Surface Grab/Diver Core-Cookie Cutter) 7"

Datum (Horizontal/Vertical) NAD 83 State Plan W A N / MLLW

Sample Types 1, 2, 3, 4, 5: Diver
 *If sample type 4, were reference samples collected? Yes No
 Leadline Water Dept: 40' (A)
 Predicted Tide Elevation _____ (B)
 Mudline Elevation -32.4' (B-A)
 Actual Tide Elevation 7.6'

Run # or Composite Pt	Time	Latitude (Northing)	Longitude (Easting)	Sample Criteria (Surface Grab Only)					Accept Sample Y/N	Comments (Include depth of sample)
				1	2	3	4	5		
<u>N/A</u>		<u>560230</u>	<u>1209652</u>							

Acceptance criteria: 1 Overlying water is present, 2 Water has low turbidity, 3 Sampler is not over filled, 4 Sample surface is flat, 5 Desired sample depth is reached

Decon Procedure (Alconox Wash, DI water rinse, other): _____

Sediment Sample Description

DC106-2A Sediment Sample Description (density, moisture, color, minor constituents, major constituents, other observations - *see field ref cards):

Hand Olive gray, sandy gravel w/ abundant shell fragments, rounded gravel. Gray gravel rocks ~ 3" w/ barnacles and algae.

Sample containers filled (number and type):
DC106-2A → 1-803 Dioxin, 1-16oz GS, 1-403 TOC/TS
DC106-2D → Same

DC106-2D Laboratory analysis: sample description:
Hand Dark gray/olive, gravelly sand w/ abundant shell fragments, large 3" clam, 2" rounded gravel & angular. Better recovery than 2A.

Diver Comments etc:
Diver noted gravel, cobbles, not able to penetrate to 14" to collect 10-20 cm sample.

SURFACE SEDIMENT SAMPLE COLLECTION FORM

Date/Time Collected: 11/17/06

Weather: _____

Field Personnel: JSM & ERIC

Sample Type:

- 1. Surface Sample (0-10 cm)
- 2. Next Surface Sample (10- 20 cm)

Sample ID/Design. DC106-3A collection time 1610

Sample Method (Van Veen Surface Grab Diver Core-Cookie Cutter)

Datum (Horizontal/Vertical) NAD83 State Plan WA N 1 MLLW

Sample Types 1, 2, 3, 4, 5:

Leadline Water Dept: 32' (A)

*If sample type 4, were reference samples collected? Yes No

Predicted Tide Elevation _____ (B)

Mudline Elevation -26 (B-A)

Actual Tide Elevation 6'

Run # or Composite Pt	Time	Latitude (Northing)	Longitude (Easting)	Sample Criteria (Surface Grab Only)					Accept Sample Y/N	Comments (Include depth of sample)
				1	2	3	4	5		
		<u>560142</u>	<u>1209727</u>							<u>35' under L Dock West (coordinate where boat could take it along Dock)</u>

Acceptance criteria: 1 Overlying water is present, 2 Water has low turbidity, 3 Sampler is not over filled, 4 Sample surface is flat, 5 Desired sample depth is reached

Decon Procedure (Alconox Wash, DI water rinse, other): _____

Sediment Sample Description

Sediment Sample Description (density, moisture, color, minor constituents, major constituents, other observations - *see field ref cards):

Greenish gray coarse gravelly sand w/ shell fragments; rounded gray. Surface has stiff greenish clay, several small polychaete worms.

Sample containers filled (number and type): No H₂S odor.

- 1-8oz dioxin 1-4oz TOC/TS

1-16oz GS

Laboratory analysis:

Diver Comments etc:

Rocky, lots of debris, cobbles/gravel - using 7" corer (0-10cm) Not collecting 10-20 cm.

SURFACE SEDIMENT SAMPLE COLLECTION FORM

Date/Time Collected: 11/17/06

Weather: _____

Field Personnel: JSU - Eric

Sample Type:

- 1. Surface Sample (0-10 cm)
- 2. Next Surface Sample (10- 20 cm)

Sample ID/Design. DC106-4B "sample" 1430
DC106-4A "collection time" 1439

Sample Method (Van Veen Surface Grab/Diver Core-Cookie Cutter)

Datum (Horizontal/Vertical) NAD 83 State Plan WA N / MLLW

Sample Types 1, 2, 3, 4, 5: _____ Leadline Water Dept: 17' (A)
 *If sample type 4, were reference Predicted Tide Elevation _____ (B)
 samples collected? Yes No Mudline Elevation -9.5' (B-A)
 Actual Tide Elevation 7.5'

Run # or Composite Pt	Time	Latitude (Northing)	Longitude (Easting)	Sample Criteria (Surface Grab Only)					Accept Sample Y/N	Comments (Include depth of sample)
				1	2	3	4	5		
		<u>559989</u>	<u>1209750</u>							<u>(Sample collected 35' W. under L Dock, this coordinate of Dock w/ boat)</u>

Acceptance criteria: 1 Overlying water is present, 2 Water has low turbidity, 3 Sampler is not over filled, 4 Sample surface is flat, 5 Desired sample depth is reached

Decon Procedure (Alconox Wash, DI water rinse, other): _____

Sediment Sample Description

Sediment Sample Description (density, moisture, color, minor constituents, major constituents, other observations - *see field ref cards):

DC106-4B Sandy clayey silt w/ ~10% sand. Soft. Olive/drk gray. wood debris ~4" some shell fragments, angular rock ~3" wide. small rounded gravel

Sample containers filled (number and type):

1- 8oz dixon 1- 4oz TACTS
1- 16oz GS

DC106-4A Laboratory analysis: sed. description clayey silt ~5% sand. Drk Olive/gray to black w/ 5% gravel angular. Trace shells, no wood debris

Diver Comments etc:

Diver only able to go 30 to 35' west under pier & synchro lift
Surface chop off @ synchro lift w/ 0 visibility.

↳ Noted lots of water in sample, possible mixing of intervals.

SURFACE SEDIMENT SAMPLE COLLECTION FORM

Date/Time Collected: 11/17/06

Weather: _____

Field Personnel: JSU & Eric

Sample Type:

- 1. Surface Sample (0-10 cm)
- 2. Next Surface Sample (10- 20 cm)

Sample ID/Design. DC1076-5A sample collection time 1126

Sample Method (Van Veen Surface Grab/Diver Core-Cookie Cutter) 14"

Datum (Horizontal/Vertical) NAD 83 State Plan WA N 1 MLW

Sample Types 1, 2, 3, 4, 5: _____ Leadline Water Dept: 28' (A)
 *If sample type 4, were reference Predicted Tide Elevation _____ (B)
 samples collected? Yes No Mudline Elevation -21.4' (B-A)
 Actual Tide Elevation 6.6

Run # or Composite Pt	Time	Latitude (Northing)	Longitude (Easting)	Sample Criteria (Surface Grab Only)					Accept Sample Y/N	Comments (Include depth of sample)
				1	2	3	4	5		
		<u>560097</u>	<u>1209976</u>							

Acceptance criteria: 1 Overlying water is present, 2 Water has low turbidity, 3 Sampler is not over filled, 4 Sample surface is flat, 5 Desired sample depth is reached

Decon Procedure (Alconox Wash, DI water rinse, other): _____

Sediment Sample Description

Sediment Sample Description (density, moisture, color, minor constituents, major constituents, other observations - *see field ref cards):

Soft. Blue gray silty clay w/ black banding (reduced sed.)
increased POW. wood fibers ~40%. H₂S odor. small shell fragments

Sample containers filled (number and type): _____

Laboratory analysis:

1-803 - dioxin 1-403 TOXITS
1-1603 GS

Diver Comments etc:

None -

SURFACE SEDIMENT SAMPLE COLLECTION FORM

Date/Time Collected: 11/17/06

Weather: _____

Field Personnel: JSM = Eric

Sample Type:

1. Surface Sample (0-10 cm)
 2. Next Surface Sample (10- 20 cm)

Sample ID/Design. DC06-5B 1116

Sample Method (Van Veen Surface Grab/~~Diver Core-Cookie Cutter~~) 14"

Datum (Horizontal/Vertical) NAD 83 State Plan WA N / MLLW

Sample Types 1, 2, 3, 4, 5: Diver Leadline Water Dept: 28' (A)
 *If sample type 4, were reference Predicted Tide Elevation _____ (B)
 samples collected? Yes No Mudline Elevation -21.4' (B-A)
 Actual Tide Elevation 6.6'

Run # or Composite Pt	Time	Latitude (Northing)	Longitude (Easting)	Sample Criteria (Surface Grab Only)					Accept Sample Y/N	Comments (Include depth of sample)
				1	2	3	4	5		
		<u>560097</u>	<u>1209976</u>							

Acceptance criteria: 1 Overlying water is present, 2 Water has low turbidity, 3 Sampler is not over filled, 4 Sample surface is flat, 5 Desired sample depth is reached

Decon Procedure (Alenox Wash, DI water rinse, other): _____

Sediment Sample Description

Sediment Sample Description (density, moisture, color, minor constituents, major constituents, other observations - *see field ref cards):

Very soft. Blue gray silty clay, <10% wood fibers-roots. H2S odor. Some black sediment - reduced.

Sample containers filled (number and type):

1- 8oz Dioxin 1- 4oz TCITS
1- 16 oz GS

Laboratory analysis:

Diver Comments etc:

SURFACE SEDIMENT SAMPLE COLLECTION FORM

Date/Time Collected: 11/17/06

Weather: _____

Field Personnel: JSU & Eric RSS

Sample Type:

- 1. Surface Sample (0-10 cm)
- 2. Next Surface Sample (10- 20 cm)

Sample ID/Design. DC106-6A collection time 1538

Sample Method (Van Veen Surface Grab/Diver Core-Cookie Cutter)

Datum (Horizontal/Vertical) NAD 83 State-Plan WA N / MLLW

Sample Types 1, 2, 3, 4, 5: _____ Leadline Water Dept: 11' (A)

*If sample type 4, were reference samples collected? Yes No Predicted Tide Elevation _____ (B)

Mudline Elevation -46' (B-A)

Actual Tide Elevation 6.4'

Run # or Composite Pt	Time	Latitude (Northing)	Longitude (Easting)	Sample Criteria (Surface Grab Only)					Accept Sample Y/N	Comments (Include depth of sample)
				1	2	3	4	5		
		<u>559852</u>	<u>1209738</u>							<u>sample located 30' W of coordinate under L Dock</u>

Acceptance criteria: 1 Overlying water is present, 2 Water has low turbidity, 3 Sampler is not over filled, 4 Sample surface is flat, 5 Desired sample depth is reached

Decon Procedure (Alconox Wash, DI water rinse, other): _____

Sediment Sample Description

Sediment Sample Description (density, moisture, color, minor constituents, major constituents, other observations - *see field ref cards):

soft/med. blk black coarse sand w/ interbedded silty clay
some shell fragments, rounded gravel 1-2", 1 large 5" rock-

Sample containers filled (number and type):

1- 8oz Dioxin 1-4oz TOCITS
1- 16oz GS

Laboratory analysis:

Diver Comments etc:

100% cobbles under L Dock. Requested 7" sorer not 14"
could not sample 10-20cm.

SURFACE SEDIMENT SAMPLE COLLECTION FORM

Date/Time Collected: 11/17/06

Weather: _____

Field Personnel: JSU & Eric

Sample Type:

1. Surface Sample (0-10 cm)
 2. Next Surface Sample (10- 20 cm)

Sample ID/Design. DC106-7A June 1202

Sample Method (Van Veen Surface Grab/~~Diver Core-Cookie Cutter~~) - 14"

Datum (Horizontal/Vertical) NAD 83 State Plan WA N / MLLW

Sample Types 1, 2, 3, 4, 5: _____ Leadline Water Dept: 10' (A)
 *If sample type 4, were reference Predicted Tide Elevation _____ (B)
 samples collected? Yes No Mudline Elevation -2.9' (B-A)
 Actual Tide Elevation 7.1'

Run # or Composite Pt	Time	Latitude (Northing)	Longitude (Easting)	Sample Criteria (Surface Grab Only)					Accept Sample Y/N	Comments (Include depth of sample)
				1	2	3	4	5		
		<u>559899</u>	<u>1209971</u>							

Acceptance criteria: 1 Overlying water is present, 2 Water has low turbidity, 3 Sampler is not over filled, 4 Sample surface is flat, 5 Desired sample-depth is reached

Decon Procedure (Alconox Wash, DI water rinse, other): _____

Sediment Sample Description

Sediment Sample Description (density, moisture, color, minor constituents, major constituents, other observations - *see field ref cards):

Very soft, silty clay, olive/grey/drk green, w/ little shell fragments algae (reddish & green). Light H₂S odor.

Sample containers filled (number and type):

1 - 803 Dioxin 1 - 403 TCHS

1 - 1603 ES

Laboratory analysis:

Diver Comments etc:

- surface - 100% algae cover

SURFACE SEDIMENT SAMPLE COLLECTION FORM

Date/Time Collected: 11/17/06

Weather: _____

Field Personnel: JSU & Eric

Sample Type:

1. Surface Sample (0-10 cm)
 2. Next Surface Sample (10- 20 cm)

Sample ID/Design. DC106-7B time 1150

Sample Method (Van Veen Surface Grab/~~Diver Core-Cookie Cutter~~) - 14"

Datum (Horizontal/Vertical) NAD 83 State Plan WA N / MLLW

Sample Types 1, 2, 3, 4, 5: _____ Leadline Water Dept: 10' (A)

*If sample type 4, were reference samples collected? Yes No Predicted Tide Elevation _____ (B)

Mudline Elevation -2.9' (B-A)

Actual Tide Elevation 7.1'

Run # or Composite Pt	Time	Latitude (Northing)	Longitude (Easting)	Sample Criteria (Surface Grab Only)					Accept Sample Y/N	Comments (Include depth of sample)
				1	2	3	4	5		
		<u>559899</u>	<u>120971</u>							

Acceptance criteria: 1 Overlying water is present, 2 Water has low turbidity, 3 Sampler is not over filled, 4 Sample surface is flat, 5 Desired sample depth is reached

Decon Procedure (Alconox Wash, DI water rinse, other): _____

Sediment Sample Description

Sediment Sample Description (density, moisture, color, minor constituents, major constituents, other observations - *see field ref cards):

Soft, Clayey silt w/ < 10% fine sand, olive green. Light H₂S odor. shell fragments

Sample containers filled (number and type):

1- 8oz dioxin 1- 4oz TOXTS
7- 16oz AS

Laboratory analysis:

Diver Comments etc:

Algae covered bottom

SURFACE SEDIMENT SAMPLE COLLECTION FORM

Date/Time Collected: 11/17/06

Weather: _____

Field Personnel: JSU & Eric

Sample Type:

1. Surface Sample (0-10 cm)
 2. Next Surface Sample (10- 20 cm)

Sample ID/Design. DC106-8A time 1228

Sample Method (Van Veen Surface Grab/Diver Core-Cookie Cutter) - 7"

Datum (Horizontal/Vertical) NAD 83 state plan WA N / MCV

Sample Types 1, 2, 3, 4, 5:

Leadline Water Dept: 5' (A)

*If sample type 4, were reference samples collected? Yes No

Predicted Tide Elevation _____ (B)

Mudline Elevation 2.4 (B-A)

Actual Tide Elevation 7.4'

Run # or Composite Pt	Time	Latitude (Northing)	Longitude (Easting)	Sample Criteria (Surface Grab Only)					Accept Sample Y/N	Comments (Include depth of sample)
				1	2	3	4	5		
		<u>559756</u>	<u>1209962</u>							

Acceptance criteria: 1 Overlying water is present, 2 Water has low turbidity, 3 Sampler is not over filled, 4 Sample surface is flat, 5 Desired sample depth is reached

Decon Procedure (Alconox Wash, DI water rinse, other): _____

Sediment Sample Description

Sediment Sample Description (density, moisture, color, minor constituents, major constituents, other observations - *see field ref cards):

Drk gray, black gravelly coarse sand w/ abundant shell fragments and crushed rock up to 3" diameter. Only marine odor.

Sample containers filled (number and type):

1- 8oz Dioxin , 1- 4oz TOC/TS
1- (6 oz) GS

Laboratory analysis:

Diver Comments etc:

Very coarse gravel @ surface, couldn't collect 10-20cm

SURFACE SEDIMENT SAMPLE COLLECTION FORM

Date/Time Collected: 11/17/06

Weather: _____

Field Personnel: JSM & Eric

Sample Type:

1. Surface Sample (0-10 cm)
 2. Next Surface Sample (10- 20 cm)

Sample ID/Design. DC106-9A time 1641

Sample Method (Van Veen Surface Grab/~~Diver Core-Cookie Cutter~~)

Datum (Horizontal/Vertical) - collected by hand (no coordin.) / collected under bld/dock

Sample Types 1, 2, 3, 4, 5:
 *If sample type 4, were reference samples collected? Yes No

Leadline Water Dept: _____ (A) East of Port Bld. - dry sand
 Predicted Tide Elevation X _____ (B)
 Mudline Elevation _____ (B-A)
 Actual Tide Elevation _____

Run # or Composite Pt	Time	Latitude (Northing)	Longitude (Easting)	Sample Criteria (Surface Grab Only)					Accept Sample Y/N	Comments (Include depth of sample)
				1	2	3	4	5		

Acceptance criteria: 1 Overlying water is present, 2 Water has low turbidity, 3 Sampler is not over filled, 4 Sample surface is flat, 5 Desired sample depth is reached

Decon Procedure (Alconox Wash, DI water rinse, other): _____

Sediment Sample Description

Sediment Sample Description (density, moisture, color, minor constituents, major constituents, other observations - *see field ref cards):

→ Dry sand - surface under bld/dock adjacent to Port Bld parking lot near Basketball hoop. Diver climbed down to dry sand.

Sample containers filled (number and type):

1- 8oz cloxun 1- 4oz TOETS
1- 16 oz GS

Laboratory analysis:

Diver Comments etc: