APPENDIX M

Qualitative Sample Characteristics, Photographs,
and Chain-of-Custody Forms
for Jorgensen Backfill Sampling

QUALITATIVE SAMPLE CHARACTERISTICS

Page ___ of ___

Coordinate Datum	Date (mm/dd/yy)	Project Location	Sample Identification Number
	11-24-14	Boeing PL2	SD-~~PER~~ JOR 01

Coordinates		Water Depth					Time
North	East	Depth	Unit		Rep	Gear	
195629	1275780	22.5	f	t	1	0.2 Grab	1121

Penetration							
Depth	Unit	Initials	Sulfide	VOA	Weather	Fines (%)	
8	c m	DJM			cloudy		

Surficial Wood Estimate:

Contact Points _____ X 5 = _____ %

Surficial sediment characteristics:

Biological: _____ % **Debris:** _____ % **Oil Sheen:** None Trace (<5%) _____ %

Moisture

(Very Wet) Wet Moist Damp Dry

Color (Circle major & underline modifying)

Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent (Circle major & underline modifying)

(Fine) Medium Coarse Gravel Sand (Silt) Clay _____

Minor Constituent with trace

Fine Medium Coarse Gravel Sand Silt Clay _____

Subsurface sediment characteristics:

Density / Consistency

Sand / Gravel - (Very Loose) Loose Medium Dense Dense Very Dense

Silt / Clay - Very Soft Soft Medium Stiff Stiff Very Stiff Hard

Moisture

Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)

Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent (Circle major & underline modifying)

Fine Medium (Coarse) (Gravel) Sand Silt Clay _____

2in minus

Minor Constituent with trace

Fine Medium Coarse Gravel (Sand) Silt Clay _____

Biological: _____ % **Debris:** _____ % **Oil Sheen:** None Trace (<5%) _____ %

Comments:

Surface covered by very wet silt

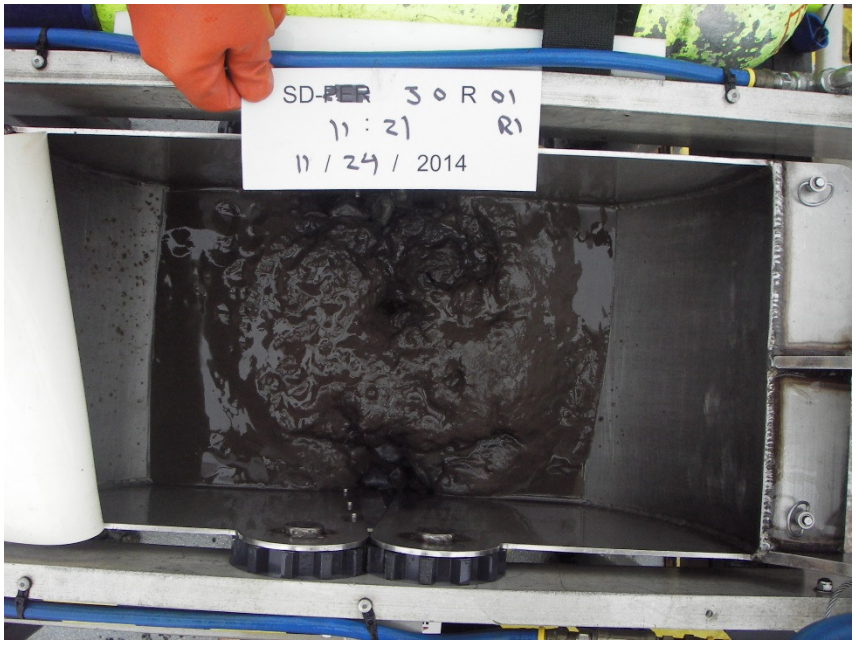
AMEC Proj. BP2/Jorgensen

SD-JOR01

QSC Form

Initials: GJM Date: 11/24/2014

Amin\Field Forms\QSC



Station SD-JOR01 R1

QUALITATIVE SAMPLE CHARACTERISTICS

Page ____ of ____

Coordinate Datum	Date (mm/dd/yy)	Project Location	Sample Identification Number
	11-24-14	Boeing PL2	SD-PER JOR 01

Coordinates		Water Depth				Time
North	East	Depth	Unit	Rep	Gear	
195 634	1275782	21.3	f t	2	0.2 Grab	1146

Penetration Depth	Penetration Unit	Initials	Sulfide	VOA	Weather	Fines (%)
10	c m	GSM			cloudy	

Surficial Wood Estimate:

Contact Points _____ X 5 = _____ %

Surficial sediment characteristics:

Biological: _____ % **Debris:** _____ % **Oil Sheen:** None Trace (<5%) _____ %

Moisture
(Very Wet) Wet Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent (Circle major & underline modifying)
(Fine) Medium Coarse Gravel Sand (Silt) Clay _____

Minor Constituent with trace
Fine Medium Coarse Gravel Sand Silt Clay _____

Subsurface sediment characteristics:

Density / Consistency

Sand / Gravel - (Very Loose) Loose Medium Dense Dense Very Dense

Silt / Clay - Very Soft Soft Medium Stiff Stiff Very Stiff Hard

Moisture
Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent (Circle major & underline modifying)
Fine Medium (Coarse) (Gravel) Sand Silt Clay _____

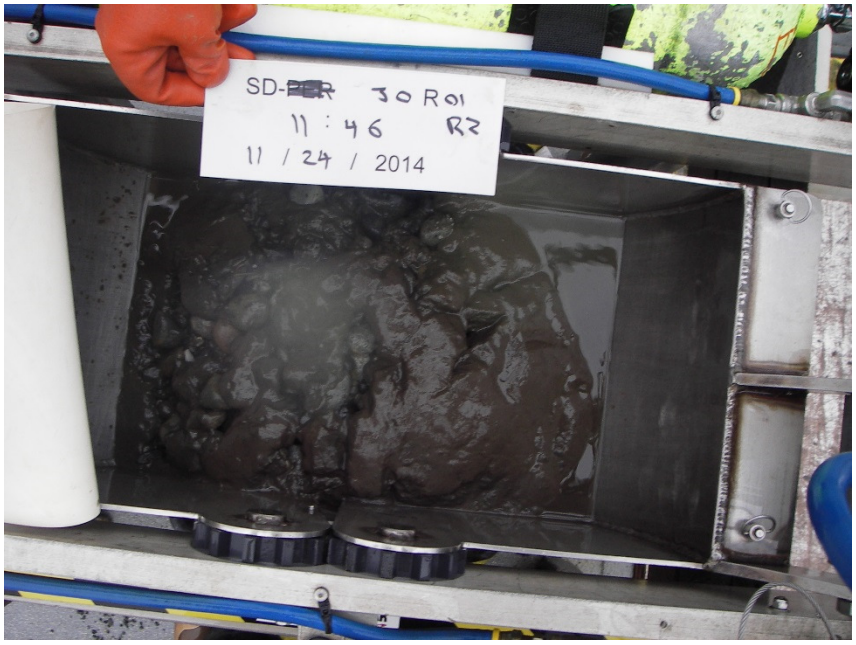
Minor Constituent with trace
Fine Medium (Coarse) Gravel (Sand) Silt Clay _____

Biological: _____ % **Debris:** _____ % **Oil Sheen:** None Trace (<5%) _____ %

Comments:

1" thick silt layer over gravel with few fines.

Amin\Field Forms\OSC



Station SD-JOR01 R2

QUALITATIVE SAMPLE CHARACTERISTICS

Page ___ of ___

Coordinate Datum	Date (mm/dd/yy)	Project Location	Sample Identification Number
	11-24-14	Boeing PL2	SD-~~RER~~ JOR01

Coordinates		Water Depth					Time
North	East	Depth	Unit		Rep	Gear	
195632	1275785	21.2	f	t	3	0.2 Grab	1157

Penetration Depth	Unit		Initials	Sulfide	VOA	Weather	Fines (%)
5	c	m	GSM			cloudy	

Surficial Wood Estimate:

Contact Points _____ X 5 = _____ %

Surficial sediment characteristics:

Biological: _____ % **Debris:** _____ % **Oil Sheen:** None Trace (<5%) _____ %

Moisture
(Very Wet) Wet Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray Brown Black Other _____

Major Constituent (Circle major & underline modifying)
(Fine) Medium Coarse Gravel Sand (Silt) Clay _____

Minor Constituent with trace
Fine Medium Coarse Gravel Sand Silt Clay _____

Subsurface sediment characteristics:

Density / Consistency

Sand / Gravel - (Very Loose) Loose Medium Dense Dense Very Dense

Silt / Clay - Very Soft Soft Medium Stiff Stiff Very Stiff Hard

Moisture
Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent (Circle major & underline modifying)
Fine Medium (Coarse) (Gravel) Sand Silt Clay _____

Minor Constituent with trace
Fine Medium Coarse Gravel Sand Silt Clay _____

Biological: _____ % **Debris:** _____ % **Oil Sheen:** None Trace (<5%) _____ %

Comments:

No sand Gravel / and Silt

No photo taken

Amin\Field Forms\QSC

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QUALITATIVE SAMPLE CHARACTERISTICS

Page ___ of ___

Coordinate Datum	Date (mm/dd/yy)	Project Location	Sample Identification Number
	11-24-14	Boeing PL2	~~SD~~ER JOR 02

Coordinates		Water Depth					Time
North	East	Depth	Unit		Rep	Gear	
195632	1275812	13.8	f	t	1	0.2 Grab	1242

Penetration			Initials	Sulfide	VOA	Weather	Fines (%)
Depth	Unit						
	c	m	GSM			cloudy	

Surficial Wood Estimate:

Contact Points _____ X 5 = _____ %

Surficial sediment characteristics:

Biological: _____ % **Debris:** _____ % **Oil Sheen:** None Trace (<5%) _____ %

Moisture
Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent (Circle major & underline modifying)
(Fine) Medium Coarse Gravel Sand (Silt) Clay _____

Minor Constituent with trace
Fine Medium Coarse Gravel Sand Silt Clay _____

Subsurface sediment characteristics:

Density / Consistency

Sand / Gravel - (Very Loose) Loose Medium Dense Dense Very Dense

Silt / Clay - Very Soft Soft Medium Stiff Stiff Very Stiff Hard

Moisture
Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent (Circle major & underline modifying)
Fine Medium (Coarse) Gravel (Sand) Silt Clay _____

Minor Constituent with trace
Fine Medium (Coarse) (Gravel) Sand Silt Clay _____

Biological: _____ % **Debris:** _____ % **Oil Sheen:** None Trace (<5%) _____ %

Comments:

Fine Silt surface layer 1/2in thick

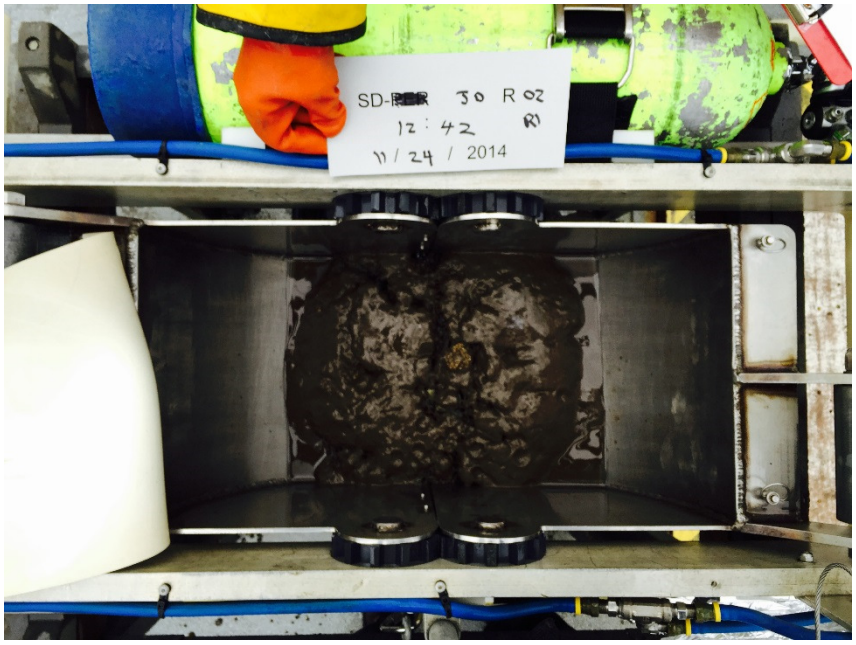
AMEC Proj. BP2/Jorgensen

SD-JOR02

QSC Form

Initials: GSM Date: 11 / 24 /2014

Amin\Field Forms\QSC



Station SD-JOR02 R1

QUALITATIVE SAMPLE CHARACTERISTICS

Page ____ of ____

Coordinate Datum	Date (mm/dd/yy)	Project Location	Sample Identification Number
	11-24-14	Boeing PL2	SD-~~PER~~ JOA 02

Coordinates		Water Depth					Time
North	East	Depth	Unit		Rep	Gear	
195641	1275814	13.8	f	t	2	0.2 Grab	1310

Penetration							
Depth	Unit		Initials	Sulfide	VOA	Weather	Fines (%)
18	c	m	GSM			cloudy	

Surficial Wood Estimate:

Contact Points _____ X 5 = _____ %

Surficial sediment characteristics:

Biological: _____ % **Debris:** _____ % **Oil Sheen:** None Trace (<5%) _____ %

Moisture
Very Wet (Wet) Moist Damp Dry

Color **(Circle major & underline modifying)**
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent **(Circle major & underline modifying)**
Fine Medium (Coarse) (Gravel) Sand Silt Clay _____

Minor Constituent with trace
(Fine) Medium Coarse Gravel Sand (Silt) Clay _____

Subsurface sediment characteristics:

Density / Consistency

Sand / Gravel - (Very Loose) Loose Medium Dense Dense Very Dense

Silt / Clay - Very Soft Soft Medium Stiff Stiff Very Stiff Hard

Moisture
Very Wet (Wet) Moist Damp Dry

Color **(Circle major & underline modifying)**
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent **(Circle major & underline modifying)**
Fine Medium (Coarse) (Gravel) Sand Silt Clay _____

Minor Constituent with trace
Fine Medium (Coarse) Gravel (Sand) Silt Clay _____

Biological: _____ % **Debris:** _____ % **Oil Sheen:** None Trace (<5%) _____ %

Comments:

attempt 1 - poor recovery - reject
hung up on gill net, need to dump river
1310 attempt 2 moved downriver to avoid net
1/2 to 2 in coarse gravel
minor coarse sand
little surface silt washing

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Station SD-JOR02 R2

QUALITATIVE SAMPLE CHARACTERISTICS

Page ____ of ____

Coordinate Datum	Date (mm/dd/yy)	Project Location	Sample Identification Number
	11-24-14	Boeing PL2	SD-BER JOR 02

Coordinates		Water Depth				
North	East	Depth	Unit (f / t)	Rep	Gear	Time
195640	1275815	13.8	f	3	0.2 Grab	1321

Penetration Depth	Unit (c / m)	Initials	Sulfide	VOA	Weather	Fines (%)
10	c	GDM			cloudy	

Surficial Wood Estimate:

Contact Points _____ X 5 = _____ %

Surficial sediment characteristics:

Biological: _____ % **Debris:** _____ % **Oil Sheen:** None Trace (<5%) _____ %

Moisture
Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent (Circle major & underline modifying)
Fine Medium (Coarse) (Gravel) Sand Silt Clay _____

Minor Constituent with trace
(Fine) Medium (Coarse) Gravel Sand Silt Clay _____

Subsurface sediment characteristics:

Density / Consistency

Sand / Gravel - (Very Loose) Loose Medium Dense Dense Very Dense

Silt / Clay - Very Soft Soft Medium Stiff Stiff Very Stiff Hard

Moisture
Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent (Circle major & underline modifying)
Fine Medium (Coarse) (Gravel) Sand Silt Clay _____

Minor Constituent with trace
Fine Medium (Coarse) Gravel (Sand) Silt Clay _____

Biological: _____ % **Debris:** _____ % **Oil Sheen:** None Trace (<5%) _____ %

Comments: Very little silt on surface washing

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Station SD-JOR02 R3

QUALITATIVE SAMPLE CHARACTERISTICS

Page ___ of ___

Coordinate Datum	Date (mm/dd/yy)	Project Location	Sample Identification Number
	11-24-14	Boeing PL2	SD-~~PER~~ JOR 03

Coordinates		Water Depth					Time
North	East	Depth	Unit		Rep	Gear	
195501	1275849	18.2	f	t	1	0.2 Grab	1407

Penetration			Initials	Sulfide	VOA	Weather	Fines (%)
Depth	Unit						
15	c	m	GJ M			cloudy	

Surficial Wood Estimate:

Contact Points _____ X 5 = _____ %

Surficial sediment characteristics:

Biological: _____ % **Debris:** _____ % **Oil Sheen:** None Trace (<5%) _____ %

Moisture
Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent (Circle major & underline modifying)
(Fine) Medium Coarse Gravel Sand (Silt) Clay _____

Minor Constituent with trace
Fine Medium Coarse Gravel Sand Silt Clay _____

Subsurface sediment characteristics:

Density / Consistency

Sand / Gravel - (Very Loose) Loose Medium Dense Dense Very Dense

Silt / Clay - Very Soft Soft Medium Stiff Stiff Very Stiff Hard

Moisture
Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent (Circle major & underline modifying)
Fine Medium (Coarse) Gravel (Sand) Silt Clay _____

Minor Constituent with trace
Fine Medium (Coarse) (Gravel) Sand Silt Clay _____

Biological: _____ % **Debris:** _____ % **Oil Sheen:** None Trace (<5%) _____ %

Comments:

Attempt 1 - 1401 washed out 1 1/2 to 2 in gravel / silt layer Dinca
2 - 1404 " "
3 - 1407 good

Alternate Station

AMEC Proj. BP2/Jorgensen
SD-JOR03
QSC Form
Initials: GJ M Date: 11 / 24 /2014

...old Forms\QSC

Station SD-JOR03 R1

QUALITATIVE SAMPLE CHARACTERISTICS

Page ____ of ____

Coordinate Datum	Date (mm/dd/yy)	Project Location	Sample Identification Number
	11-24-14	Boeing PL2	SD-PER JOA 03

Coordinates		Water Depth					Time
North	East	Depth	Unit		Rep	Gear	
195495	1275845	19.8	f	t	2	0.2 Grab	1417

Penetration			Sulfide	VOA	Weather	Fines (%)
Depth	Unit	Initials				
10	c m	GSA			cloudy	

Surficial Wood Estimate:

Contact Points _____ X 5 = _____ %

Surficial sediment characteristics:

Biological: _____ % **Debris:** _____ % **Oil Sheen:** None Trace (<5%) _____ %

Moisture
Very Wet (Wet) Moist Damp Dry

Color **(Circle major & underline modifying)**
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent **(Circle major & underline modifying)**
(Fine) Medium Coarse Gravel Sand (Silt) Clay _____

Minor Constituent with trace
Fine Medium Coarse Gravel Sand Silt Clay _____

Subsurface sediment characteristics:

Density / Consistency

Sand / Gravel - (Very Loose) Loose Medium Dense Dense Very Dense

Silt / Clay - Very Soft Soft Medium Stiff Stiff Very Stiff Hard

Moisture
Very Wet (Wet) Moist Damp Dry

Color **(Circle major & underline modifying)**
Light (Medium) Dark Olive Gray (Brown) Black Other _____

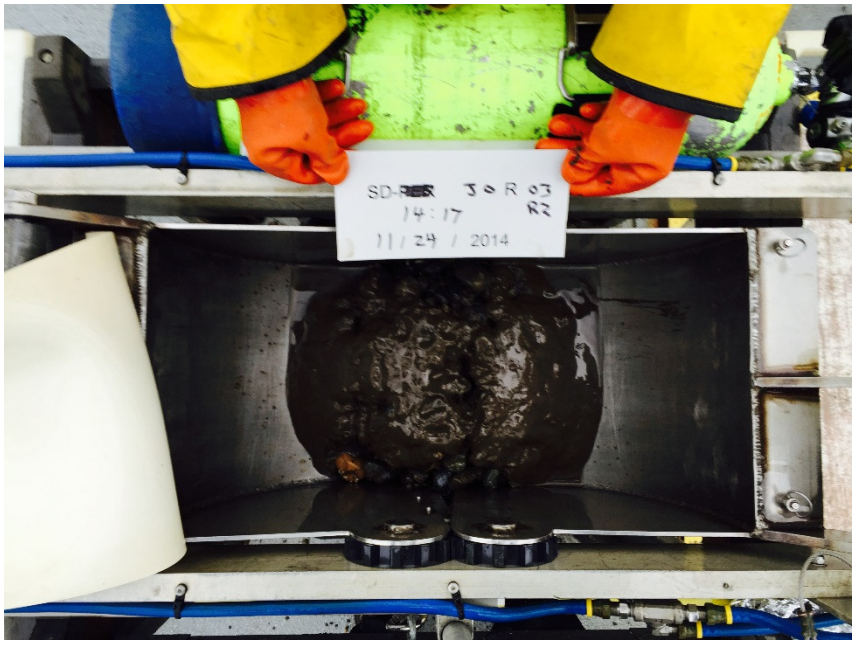
Major Constituent **(Circle major & underline modifying)**
Fine Medium (Coarse) (Gravel) Sand Silt Clay _____

Minor Constituent with trace
(Fine) Medium Coarse Gravel Sand (Silt) Clay _____

Biological: _____ % **Debris:** _____ % **Oil Sheen:** None Trace (<5%) _____ %

Comments: 1/2 to 1 in thick silt layer

Amin\Field Forms\QSC



Station SD-JOR03 R2

QUALITATIVE SAMPLE CHARACTERISTICS

Page ____ of ____

Coordinate Datum	Date (mm/dd/yy)	Project Location	Sample Identification Number
	11-24-14	Boeing PL2	SD-~~PER~~ 30R03

Coordinates		Water Depth				Time
North	East	Depth	Unit	Rep	Gear	
195498	1275846	19.0	f t	3	0.2 Grab	1424

Penetration Depth	Penetration Unit	Initials	Sulfide	VOA	Weather	Fines (%)
12	c m	GSM			cloudy	

Surficial Wood Estimate:

Contact Points _____ X 5 = _____ %

Surficial sediment characteristics:

Biological: _____ % **Debris:** _____ % **Oil Sheen:** None Trace (<5%) _____ %

Moisture
Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent (Circle major & underline modifying)
(Fine) Medium Coarse Gravel Sand (Silt) Clay _____

Minor Constituent with trace
Fine Medium Coarse Gravel Sand Silt Clay _____

Subsurface sediment characteristics:

Density / Consistency

Sand / Gravel - (Very Loose) Loose Medium Dense Dense Very Dense

Silt / Clay - Very Soft Soft Medium Stiff Stiff Very Stiff Hard

Moisture
Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray (Brown) Black Other _____

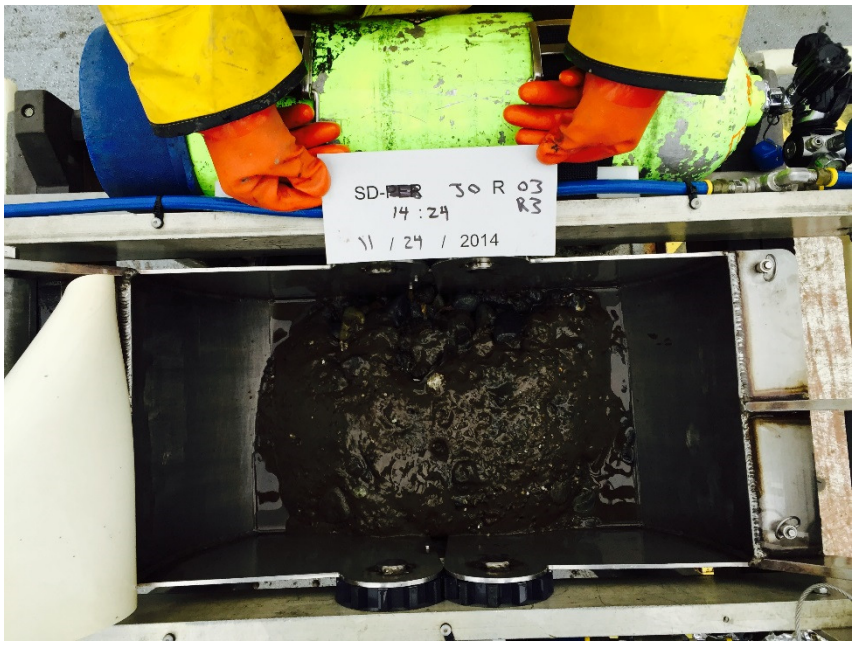
Major Constituent (Circle major & underline modifying)
Fine Medium (Coarse) (Gravel) Sand Silt Clay _____

Minor Constituent with trace
Fine Medium (Coarse) Gravel (Sand) Silt Clay _____

Biological: _____ % **Debris:** _____ % **Oil Sheen:** None Trace (<5%) _____ %

Comments: 1in thick silt layer over coarse sand with gravel

Amin\Field Forms\QSC



Station SD-JOR03 R3

QUALITATIVE SAMPLE CHARACTERISTICS

Page ___ of ___

Coordinate Datum	Date (mm/dd/yy)	Project Location	Sample Identification Number
	11-24-14	Boeing PL2	SD-~~FER~~ JOR 04

Coordinates		Water Depth					Time
North	East	Depth	Unit		Rep	Gear	
195538	1275842	15.3	f	t	1	0.2 Grab	1041

Penetration			Initials	Sulfide	VOA	Weather	Fines (%)
Depth	Unit						
10	c	m	GSM			cloudy	

Surficial Wood Estimate:

Contact Points _____ X 5 = _____ %

Surficial sediment characteristics:

Biological: _____ % **Debris:** _____ % **Oil Sheen:** None Trace (<5%) _____ %

Moisture
Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent (Circle major & underline modifying)
Fine Medium (Coarse) Gravel (Sand) Silt Clay _____

Minor Constituent with trace
(Fine) Medium Coarse Gravel Sand Silt Clay _____
Trace of silt

Subsurface sediment characteristics:

Density / Consistency

Sand / Gravel - (Very Loose) Loose Medium Dense Dense Very Dense

Silt / Clay - Very Soft Soft Medium Stiff Stiff Very Stiff Hard

Moisture
Very Wet (Wet) (Moist) Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent (Circle major & underline modifying)
Fine Medium (Coarse) Gravel (Sand) Silt Clay _____

Minor Constituent with trace
Fine (Medium) Coarse (Gravel) Sand Silt Clay _____

Biological: _____ % **Debris:** _____ % **Oil Sheen:** None Trace (<5%) _____ %

Comments:
Washed
Trace of surface silt
Gravel 1/2 in

AMEC Proj. BP2/Jorgensen
SD-JOR04
QSC Form
Initials: GSM Date: 11 / 14 /2014

Amin\Field Forms\QSC

Station SD-JOR04 R1

QUALITATIVE SAMPLE CHARACTERISTICS

Page ___ of ___

Coordinate Datum	Date (mm/dd/yy)	Project Location	Sample Identification Number
	11-24-14	Boeing PL2	SD-~~PER~~ JOA 04

Coordinates		Water Depth					Time
North	East	Depth	Unit		Rep	Gear	
195539	1275844	15.0	f	t	2	0.2 Grab	1052

Penetration Depth	Unit		Initials	Sulfide	VOA	Weather	Fines (%)
10	c	m	BSM			cloudy	

Surficial Wood Estimate:

Contact Points _____ X 5 = _____ %

Surficial sediment characteristics:

Biological: _____ % **Debris:** _____ % **Oil Sheen:** None Trace (<5%) _____ %

Moisture
Very Wet (Wet) Moist Damp Dry

Color **(Circle major & underline modifying)**
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent **(Circle major & underline modifying)**
Fine Medium (Coarse) Gravel (Sand) Silt Clay _____

Minor Constituent with trace
Fine Medium (Coarse) (Gravel) Sand Silt Clay _____

Trace of surface silt

Subsurface sediment characteristics:

Density / Consistency

Sand / Gravel - (Very Loose) Loose Medium Dense Dense Very Dense

Silt / Clay - Very Soft Soft Medium Stiff Stiff Very Stiff Hard

Moisture
Very Wet (Wet) Moist Damp Dry

Color **(Circle major & underline modifying)**
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent **(Circle major & underline modifying)**
Fine Medium (Coarse) Gravel (Sand) Silt Clay _____

Minor Constituent with trace
Fine Medium (Coarse) (Gravel) Sand Silt Clay _____

Biological: _____ % **Debris:** _____ % **Oil Sheen:** None Trace (<5%) _____ %

Comments: Washing little silt on surface
Gravel 1/2 to 2 in minor.

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Station SD-JOR04 R2

QUALITATIVE SAMPLE CHARACTERISTICS

Page ___ of ___

Coordinate Datum	Date (mm/dd/yy)	Project Location	Sample Identification Number
	11-24-14	Boeing PL2	SD-~~RER~~ JOR 04

Coordinates		Water Depth					Time
North	East	Depth	Unit		Rep	Gear	
195540	1275847	14.5	f	t	3	0.2 Grab	1103

Penetration							
Depth	Unit	Initials	Sulfide	VOA	Weather	Fines (%)	
10	c m	GJM			cloudy		

Surficial Wood Estimate:

Contact Points _____ X 5 = _____ %

Surficial sediment characteristics:

Biological: _____ % **Debris:** _____ % **Oil Sheen:** None Trace (<5%) _____ %

Moisture
Very Wet (Wet) Moist Damp Dry

Color **(Circle major & underline modifying)**
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent **(Circle major & underline modifying)**
Fine Medium (Coarse) Gravel (Sand) Silt Clay _____

Minor Constituent with trace
Fine Medium (Coarse) (Gravel) Sand Silt Clay _____
Trace silt

Subsurface sediment characteristics:

Density / Consistency

Sand / Gravel - (Very Loose) Loose Medium Dense Dense Very Dense

Silt / Clay - Very Soft Soft Medium Stiff Stiff Very Stiff Hard

Moisture
Very Wet (Wet) Moist Damp Dry

Color **(Circle major & underline modifying)**
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent **(Circle major & underline modifying)**
Fine Medium (Coarse) Gravel (Sand) Silt Clay _____

Minor Constituent with trace
Fine Medium (Coarse) (Gravel) Sand Silt Clay _____

Biological: _____ % **Debris:** _____ % **Oil Sheen:** None Trace (<5%) _____ %

Comments:

Trace of silt on surface

Amin\Field Forms\QSC

Station SD-JOR04 R3

QUALITATIVE SAMPLE CHARACTERISTICS

Page ___ of ___

Coordinate Datum	Date (mm/dd/yy)	Project Location	Sample Identification Number
	11-24-14	Boeing PL2	SD-~~PER~~ JOR 05

Coordinates		Water Depth				Time
North	East	Depth	Unit	Rep	Gear	
195196	1275862	23	f t	1	0.2 Grab	842

Penetration							
Depth	Unit	Initials	Sulfide	VOA	Weather	Fines (%)	
15	c m				cloudy		

Surficial Wood Estimate:

Contact Points _____ X 5 = _____ %

Surficial sediment characteristics:

Biological: _____ % **Debris:** _____ % **Oil Sheen:** None Trace (<5%) _____ %

Moisture
Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent (Circle major & underline modifying)
(Fine) Medium Coarse Gravel Sand (Silt) Clay _____

Minor Constituent with trace
Fine Medium Coarse Gravel Sand Silt Clay _____

Subsurface sediment characteristics:

Density / Consistency

Sand / Gravel - (Very Loose) Loose Medium Dense Dense Very Dense

Silt / Clay - Very Soft Soft Medium Stiff Stiff Very Stiff Hard

Moisture
Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray (Brown) Black Other _____

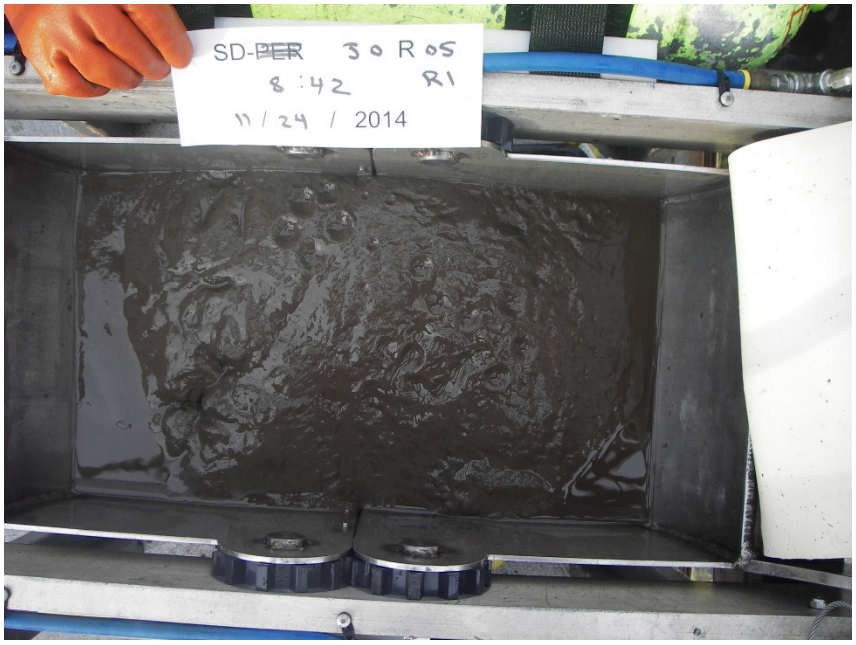
Major Constituent (Circle major & underline modifying)
Fine (Medium) Coarse Gravel (Sand) Silt Clay _____

Minor Constituent with trace
Fine Medium (Coarse) (Gravel) Sand Silt Clay _____

Biological: _____ % **Debris:** _____ % **Oil Sheen:** None Trace (<5%) _____ %

Comments:
Top layer of silt 1in thick
Coarse gravel 1½ min ac under silt then
coarse sand layer with little or no fines

AMEC Proj. BP2/Jorgensen
SD-JOR05
QSC Form
Initials: GSM Date: 11/24/2014



Station SD-JOR05 R1

QUALITATIVE SAMPLE CHARACTERISTICS

Page ___ of ___

Coordinate Datum	Date (mm/dd/yy)	Project Location	Sample Identification Number
	11-24-14	Boeing PL2	SD-~~PER~~ JOR 05

Coordinates		Water Depth					Time
North	East	Depth	Unit	Rep	Gear		
195397	1275864	22.5	f t	2	0.2 Grab		904

Penetration Depth	Penetration Unit	Initials	Sulfide	VOA	Weather	Fines (%)
25	c m	GM			cloudy	

Surficial Wood Estimate:

Contact Points _____ X 5 = _____ %

Surficial sediment characteristics:

Biological: _____ % **Debris:** _____ % **Oil Sheen:** None Trace (<5%) _____ %

Moisture
Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent (Circle major & underline modifying)
(Fine) Medium Coarse Gravel Sand (Silt) Clay _____

Minor Constituent with trace
Fine Medium Coarse Gravel Sand Silt Clay _____

Subsurface sediment characteristics:

Density / Consistency

Sand / Gravel - (Very Loose) Loose Medium Dense Dense Very Dense

Silt / Clay - Very Soft Soft Medium Stiff Stiff Very Stiff Hard

Moisture
Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray (Brown) Black Other _____

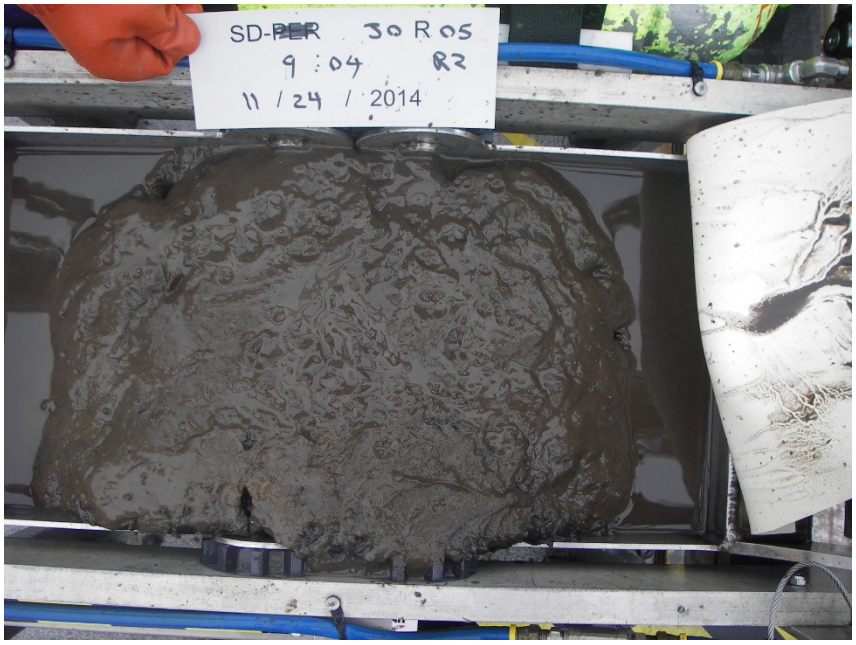
Major Constituent (Circle major & underline modifying)
Fine Medium (Coarse) Gravel (Sand) Silt Clay _____

Minor Constituent with trace
Fine Medium (Coarse) (Gravel) Sand Silt Clay _____

Biological: _____ % **Debris:** lint % **Oil Sheen:** None Trace (<5%) _____ %

Comments:
Slight over penetration
Silt layer approximately 1 in thick
then coarse sand with gravel

Amin\Field Forms\QSC



Station SD-JOR05 R2

QUALITATIVE SAMPLE CHARACTERISTICS

Page ____ of ____

Coordinate Datum	Date (mm/dd/yy)	Project Location	Sample Identification Number
	11-24-14	Boeing PL2	SD-~~PER~~ JOR-05

Coordinates		Water Depth		Rep	Gear	Time
North	East	Depth	Unit			
195397	1275860	23.3	f t	3	0.2 Grab	924

Penetration		Initials	Sulfide	VOA	Weather	Fines (%)
Depth	Unit					
5	c m	GSM			cloudy	

Surficial Wood Estimate:

Contact Points _____ X 5 = _____ %

Surficial sediment characteristics:

Biological: _____ % **Debris:** _____ % **Oil Sheen:** None Trace (<5%) _____ %

Moisture
Very Wet **Wet** Moist Damp Dry

Color **(Circle major & underline modifying)**
Light **Medium** Dark Olive Gray **Brown** Black Other _____

Major Constituent **(Circle major & underline modifying)**
Fine Medium Coarse Gravel Sand **Silt** Clay _____

Minor Constituent with trace
Fine Medium Coarse Gravel Sand Silt Clay _____

Subsurface sediment characteristics:

Density / Consistency

Sand / Gravel - **Very Loose** Loose Medium Dense Dense Very Dense

Silt / Clay - Very Soft Soft Medium Stiff Stiff Very Stiff Hard

Moisture
Very Wet **Wet** Moist Damp Dry

Color **(Circle major & underline modifying)**
Light **Medium** Dark Olive Gray **Brown** Black Other _____

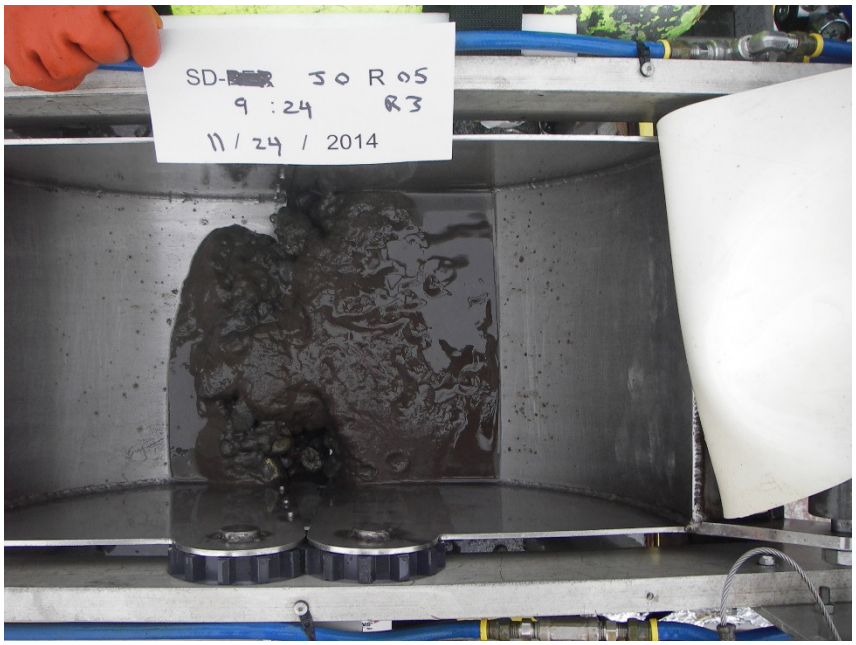
Major Constituent **(Circle major & underline modifying)**
Fine Medium **Coarse** **Gravel** Sand Silt Clay _____

Minor Constituent with trace
Fine Medium Coarse Gravel Sand Silt Clay _____

Biological: _____ % **Debris:** _____ % **Oil Sheen:** None Trace (<5%) _____ %

Comments:
2 in layer of fine silt then
Sand gravel with little fines

Amin\Field Forms\QSC



Station SD-JOR05 R3

QUALITATIVE SAMPLE CHARACTERISTICS

Page ___ of ___

Coordinate Datum	Date (mm/dd/yy)	Project Location	Sample Identification Number
	11-24-14	Boeing PL2	SD-~~PER~~ JOR06

Coordinates		Water Depth				Time
North	1275891 East	Depth	Unit	Rep	Gear	
195395	1275892	17.8	f t	1	0.2 Grab	1902

Penetration Depth	Unit	Initials	Sulfide	VOA	Weather	Fines (%)
10	c m	GSM			cloudy	

Surficial Wood Estimate:

Contact Points _____ X 5 = _____ %

Surficial sediment characteristics:

Biological: _____ % **Debris:** _____ % **Oil Sheen:** None Trace (<5%) _____ %

Moisture
Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent (Circle major & underline modifying)
(Fine) Medium Coarse Gravel Sand (Silt) Clay _____

Minor Constituent with trace
Fine Medium Coarse Gravel Sand Silt Clay _____

Subsurface sediment characteristics:

Density / Consistency

Sand / Gravel - (Very Loose) Loose Medium Dense Dense Very Dense

Silt / Clay - Very Soft Soft Medium Stiff Stiff Very Stiff Hard

Moisture
Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray Brown Black Other _____

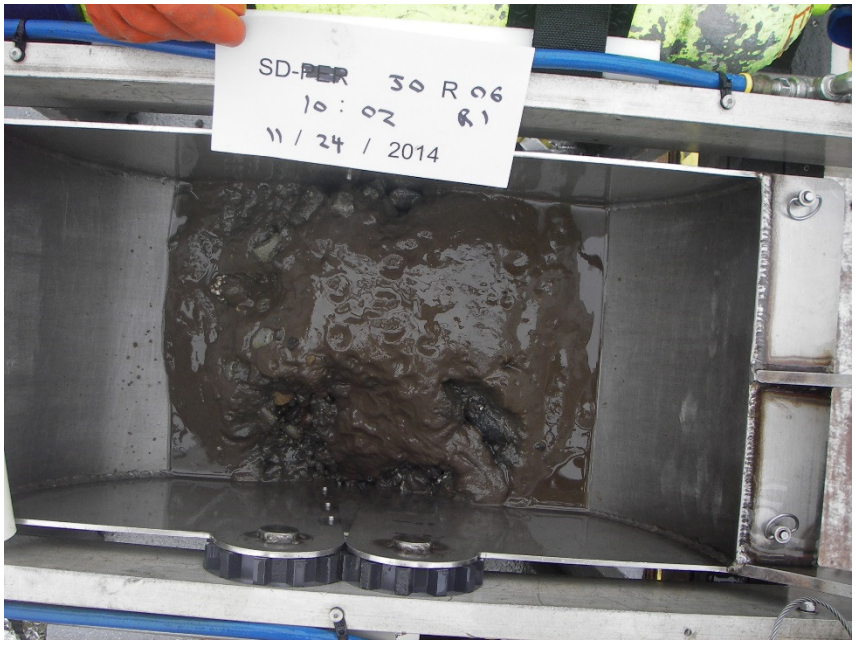
Major Constituent (Circle major & underline modifying)
Fine Medium (Coarse) Gravel (Sand) Silt Clay _____

Minor Constituent with trace
Fine Medium (Coarse) (Gravel) Sand Silt Clay _____

Biological: _____ % **Debris:** _____ % **Oil Sheen:** None Trace (<5%) _____ %

Comments:
955 attempt 1 leakage + poor penetration
Surface layer of silt over sand gravel backfill with little fines

AMEC Proj. BP2/Jorgensen
SD-JOR06
QSC Form
Initials: GSM Date: 11/24/2014



Station SD-JOR06 R1

QUALITATIVE SAMPLE CHARACTERISTICS

Page ____ of ____

Coordinate Datum	Date (mm/dd/yy)	Project Location	Sample Identification Number
	11-24-14	Boeing PL2	SD-~~PER~~ JOB 06

Coordinates		Water Depth					Time
North	East	Depth	Unit	Rep	Gear		
195398	1275891	16.2	f t	2	0.2 Grab		1014

Penetration							
Depth	Unit	Initials	Sulfide	VOA	Weather	Fines (%)	
10	c m	GSM			cloudy		

Surficial Wood Estimate:

Contact Points _____ X 5 = _____ %

Surficial sediment characteristics:

Biological: _____ % **Debris:** _____ % **Oil Sheen:** None Trace (<5%) _____ %

Moisture
(Very Wet) Wet Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent (Circle major & underline modifying)
(Fine) Medium Coarse Gravel Sand (Silt) Clay _____

Minor Constituent with trace
Fine Medium Coarse Gravel Sand Silt Clay _____

Subsurface sediment characteristics:

Density / Consistency

Sand / Gravel - (Very Loose) Loose Medium Dense Dense Very Dense

Silt / Clay - Very Soft Soft Medium Stiff Stiff Very Stiff Hard

Moisture
Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray (Brown) Black Other _____

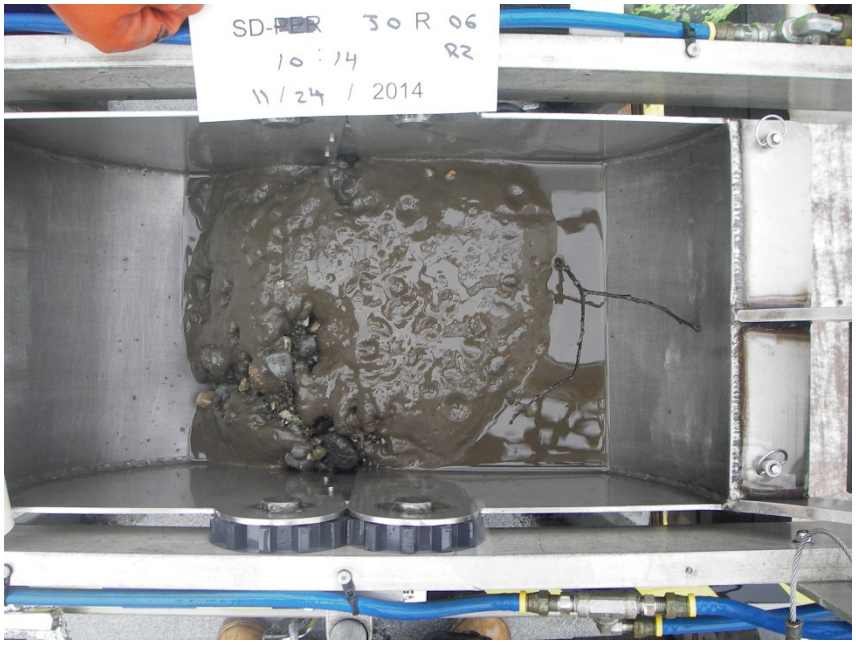
Major Constituent (Circle major & underline modifying)
Fine Medium (Coarse) Gravel (Sand) Silt Clay _____

Minor Constituent with trace
Fine Medium (Coarse) (Gravel) Sand Silt Clay _____
1 1/2 min

Biological: _____ % **Debris:** _____ % **Oil Sheen:** None Trace (<5%) _____ %

Comments:
1011 poor penetration - washed
surface layer of silt approx 1 in thick

Amin\Field Forms\QSC



Station SD-JOR06 R2

QUALITATIVE SAMPLE CHARACTERISTICS

Page ___ of ___

Coordinate Datum	Date (mm/dd/yy)	Project Location	Sample Identification Number
	11-24-14	Boeing PL2	SD-PER JOR 06

Coordinates		Water Depth					Time
North	East	Depth	Unit	Rep	Gear		
195398	1275888	16.3	f t	3	0.2 Grab		1022

Penetration							
Depth	Unit	Initials	Sulfide	VOA	Weather	Fines (%)	
10	c m	GSM			cloudy		

Surficial Wood Estimate:

Contact Points _____ X 5 = _____ %

Surficial sediment characteristics:

Biological: _____ % **Debris:** _____ % **Oil Sheen:** None Trace (<5%) _____ %

Moisture
Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent (Circle major & underline modifying)
(Fine) Medium Coarse Gravel Sand (Silt) Clay _____

Minor Constituent with trace
Fine Medium Coarse Gravel Sand Silt Clay _____

Subsurface sediment characteristics:

Density / Consistency

Sand / Gravel - (Very Loose) Loose Medium Dense Dense Very Dense

Silt / Clay - Very Soft Soft Medium Stiff Stiff Very Stiff Hard

Moisture
Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent (Circle major & underline modifying)
Fine (Medium) (Coarse) Gravel (Sand) Silt Clay _____

Minor Constituent with trace
Fine Medium (Coarse) (Gravel) Sand Silt Clay _____

Biological: _____ % **Debris:** _____ % **Oil Sheen:** None Trace (<5%) _____ %

Comments: Some washing
Surface silt layer 1/2 in or thinner

Amin\Field Forms\QSC

Station SD-JOR06 R3

QUALITATIVE SAMPLE CHARACTERISTICS

Page ____ of ____

Coordinate Datum	Date (mm/dd/yy)	Project Location	Sample Identification Number
WA State Plane, N Zone, NAD 83, Survey Ft	3-6-15	Boeing PL2	SD-JOR 01

Coordinates		Water Depth					Time
North	1275782 East	Depth	Unit		Rep	Gear	
195633	1275783	19.5	f	t	1	0.2 Grab	1443

Penetration Depth	Penetration Unit	Initials	Sulfide	VOA	Weather	Fines (%)
10	c m	GSM			sunny	

Surficial Wood Estimate:

Contact Points _____ X 5 = _____ %

Surficial sediment characteristics:

Biological: 21 % **Debris:** 0 % **Oil Sheen:** (None) Trace (<5%) _____ %

Moisture
Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent (Circle major & underline modifying)
(Fine) Medium Coarse Gravel Sand (Silt) Clay _____

Minor Constituent with trace
Fine (Medium) Coarse Gravel (Sand) Silt Clay _____

Subsurface sediment characteristics:

Density / Consistency

Sand / Gravel - Very Loose (Loose) Medium Dense Dense Very Dense

Silt / Clay - Very Soft (Soft) Medium Stiff Stiff Very Stiff Hard

Moisture
Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray Brown Black Other _____

Major Constituent (Circle major & underline modifying)
(Fine) Medium Coarse Gravel Sand (Silt) Clay _____

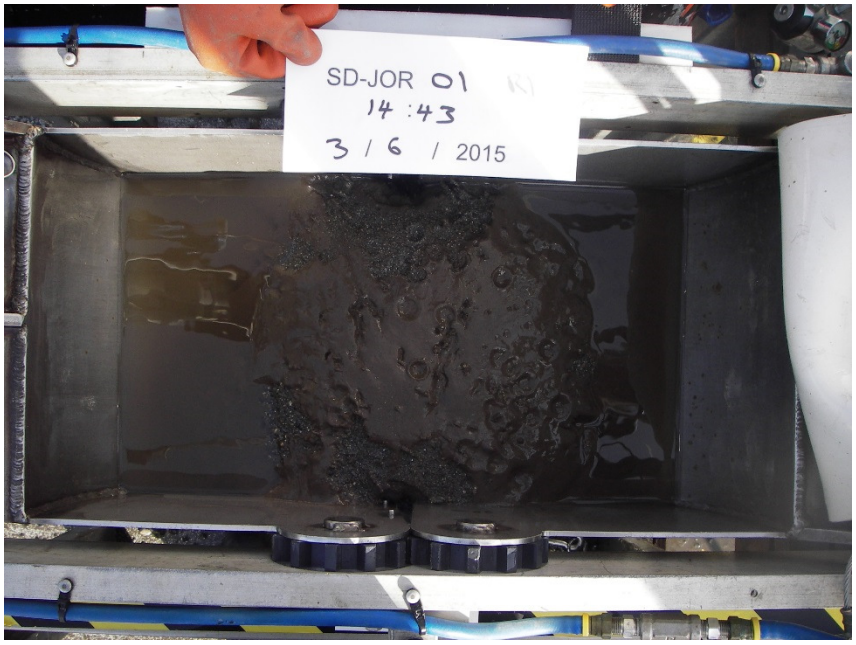
Minor Constituent with trace
Fine (Medium) Coarse Gravel (Sand) Silt Clay _____

Biological: 0 % **Debris:** 0 % **Oil Sheen:** (None) Trace (<5%) _____ %

Comments:
~1/8" silt on top of sand layer
tube worms present

AMEC Proj. BP2/Jorgensen
SD-JOR01
QSC Form
Date: 3 / 6 /15 Time: 1443

Amin\Field Forms\QSC



Station SD-JOR01 R1

QUALITATIVE SAMPLE CHARACTERISTICS

Page ____ of ____

Coordinate Datum	Date (mm/dd/yy)	Project Location	Sample Identification Number
WA State Plane, N Zone, NAD 83, Survey Ft	3-6-15	Boeing PL2	SD-JOR 01

Coordinates		Water Depth				Time
North	East	Depth	Unit	Rep	Gear	
195632	1275779	21.1	f t	2	0.2 Grab	1501

Penetration Depth	Unit	Initials	Sulfide	VOA	Weather	Fines (%)
20	c m	ESM			sunny	

Surficial Wood Estimate:

Contact Points _____ X 5 = _____ %

Surficial sediment characteristics:

Biological: 0 % **Debris:** 0 % **Oil Sheen:** None Trace (<5%) _____ %

Moisture
Very Wet (Wet) Moist Damp Dry

Color **(Circle major & underline modifying)**
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent **(Circle major & underline modifying)**
(Fine) Medium Coarse Gravel Sand (Silt) Clay _____

Minor Constituent with trace
Fine (Medium) Coarse Gravel (Sand) Silt Clay _____

Subsurface sediment characteristics:

Density / Consistency

Sand / Gravel - Very Loose (Loose) Medium Dense Dense Very Dense

Silt / Clay - Very Soft Soft Medium Stiff Stiff Very Stiff Hard

Moisture
Very Wet (Wet) Moist Damp Dry

Color **(Circle major & underline modifying)**
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent **(Circle major & underline modifying)**
Fine (Medium) Coarse Gravel (Sand) Silt Clay _____

Minor Constituent with trace
Fine (Medium) Coarse (Gravel) Sand Silt Clay _____

Biological: _____ % **Debris:** _____ % **Oil Sheen:** None Trace (<5%) _____ %

Comments:
attempt 1 rock in jaw - leakage - reject
attempt 2 success

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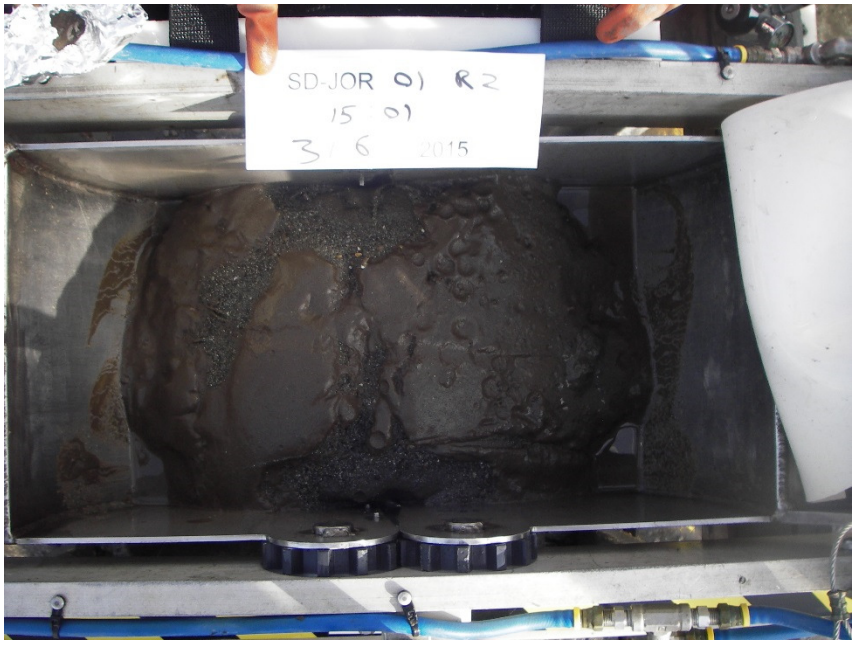

Station SD-JOR01 R2

QUALITATIVE SAMPLE CHARACTERISTICS

Page ____ of ____

Coordinate Datum	Date (mm/dd/yy)	Project Location	Sample Identification Number
WA State Plane, N Zone, NAD 83, Survey Ft	3-6-15	Boeing PL2	SD-JOR 01

Coordinates		Water Depth				Time
North	East	Depth	Unit	Rep	Gear	
195637	1275779	21.3	f t	3	0.2 Grab	1531

Penetration			Sulfide	VOA	Weather	Fines (%)
Depth	Unit	Initials				
15	c m	GSM			sunny	

Surficial Wood Estimate:

Contact Points _____ X 5 = _____ %

Surficial sediment characteristics:

Biological: 0 % **Debris:** 0 % **Oil Sheen:** (None) Trace (<5%) _____ %

Moisture
Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent (Circle major & underline modifying)
Fine Medium (Coarse) Gravel (Sand) Silt Clay _____

Minor Constituent with trace
(Fine) Medium Coarse Gravel Sand (Silt) Clay _____

Subsurface sediment characteristics:

Density / Consistency

Sand / Gravel - Very Loose (Loose) Medium Dense Dense Very Dense

Silt / Clay - Very Soft (Soft) Medium Stiff Stiff Very Stiff Hard

Moisture
Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray Brown (Black) Other _____

Major Constituent (Circle major & underline modifying)
Fine (Medium) Coarse Gravel Sand (Silt) Clay _____

Minor Constituent with trace
Fine Medium (Coarse) (Gravel) Sand Silt Clay _____

Biological: 0 % **Debris:** 0 % **Oil Sheen:** (None) Trace (<5%) _____ %

Comments:

attempt 1 reject rock in jaws - reject
attempt 2 poor penetration - reject
attempt 3 reject - at station
attempt 4 reject poor penetration

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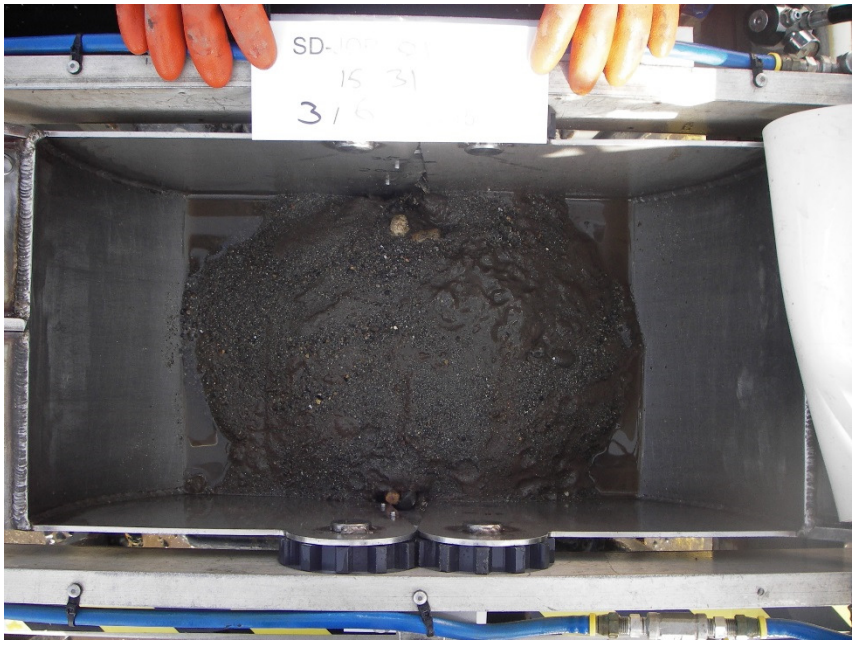


Station SD-JOR 01 R3

QUALITATIVE SAMPLE CHARACTERISTICS

Page ___ of ___

Coordinate Datum	Date (mm/dd/yy)	Project Location	Sample Identification Number
WA State Plane, N Zone, NAD 83, Survey Ft	3-6-15	Boeing PL2	SD-JOR 02

Coordinates		Water Depth				Time
North	East	Depth	Unit	Rep	Gear	
195633	1275808	13.6	f t	1	0.2 Grab	1407

Penetration			Initials	Sulfide	VOA	Weather	Fines (%)
Depth	Unit						
10	c	m	BSM			Sunny	

Surficial Wood Estimate:

Contact Points _____ X 5 = _____ %

Surficial sediment characteristics:

Biological: 0 % **Debris:** 0 % **Oil Sheen:** (None) Trace (<5%) _____ %

Moisture
Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent (Circle major & underline modifying)
(Fine) Medium Coarse Gravel Sand (Silt) Clay _____

Minor Constituent with trace
(Fine) Medium Coarse Gravel (Sand) Silt Clay _____

Subsurface sediment characteristics:

Density / Consistency

Sand / Gravel - Very Loose (Loose) Medium Dense Dense Very Dense

Silt / Clay - (Very Soft) Soft Medium Stiff Stiff Very Stiff Hard

Moisture
Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive (Gray) Brown Black Other _____

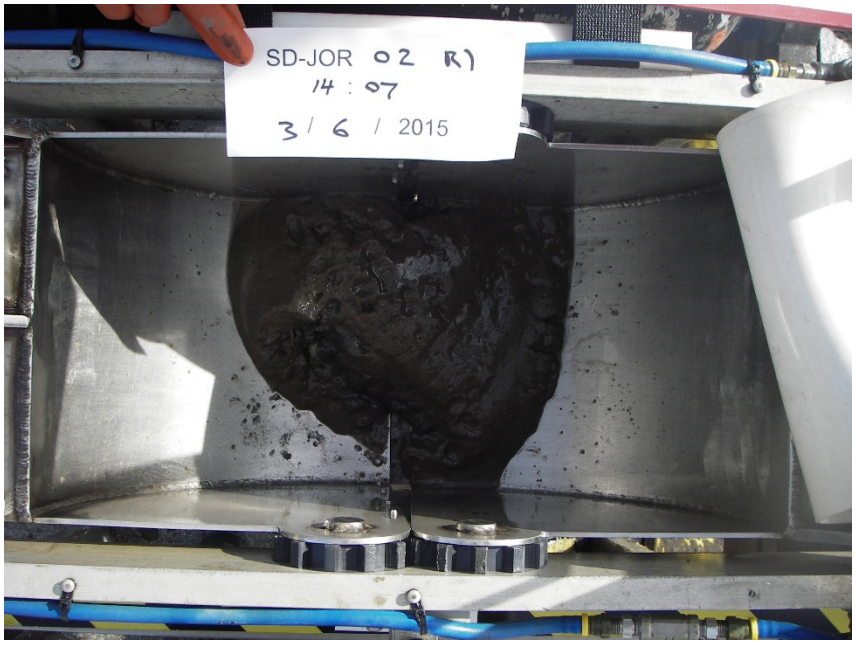
Major Constituent (Circle major & underline modifying)
Fine (Medium) Coarse Gravel Sand (Silt) Clay _____

Minor Constituent with trace
Fine (Medium) Coarse (Gravel) Sand Silt Clay _____

Biological: _____ % **Debris:** _____ % **Oil Sheen:** None Trace (<5%) _____ %

Comments:
attempt 1 rock in jaws - reject
GPS lubed up Rep 2
much of grab was lost, sample is from undisturbed area

AMEC Proj. BP2/Jorgensen
SD-JOR02
QSC Form
Date: 3/6/15 Time: 1407



Station SD-JOR02 R1

QUALITATIVE SAMPLE CHARACTERISTICS

Page ____ of ____

Coordinate Datum	Date (mm/dd/yy)	Project Location	Sample Identification Number
WA State Plane, N Zone, NAD 83, Survey Ft	3-6-15	Boeing PL2	SD-JOR 02

Coordinates		Water Depth				Time
North	East	Depth	Unit (f / t)	Rep	Gear	
195637	1275811	12.9	f	2	0.2 Grab	1417

Penetration Depth	Penetration Unit (c / m)	Initials	Sulfide	VOA	Weather	Fines (%)
15	c	BSM			Sunny	

Surficial Wood Estimate:

Contact Points _____ X 5 = _____ %

Surficial sediment characteristics:

Biological: 0 % **Debris:** 0 % **Oil Sheen:** None Trace (<5%) _____ %

Moisture
Very Wet | Wet | Moist | Damp | Dry

Color (Circle major & underline modifying)
Light | Medium | Dark | Olive | Gray | Brown | Black | Other _____

Major Constituent (Circle major & underline modifying)
Fine | Medium | Coarse | Gravel | Sand | Silt | Clay _____

Minor Constituent with trace
Fine | Medium | Coarse | Gravel | Sand | Silt | Clay _____

Subsurface sediment characteristics:

Density / Consistency

Sand / Gravel - Very Loose | Loose | Medium Dense | Dense | Very Dense

Silt / Clay - Very Soft | Soft | Medium Stiff | Stiff | Very Stiff | Hard

Moisture
Very Wet | Wet | Moist | Damp | Dry

Color (Circle major & underline modifying)
Light | Medium | Dark | Olive | Gray | Brown | Black | Other _____

Major Constituent (Circle major & underline modifying)
Fine | Medium | Coarse | Gravel | Sand | Silt | Clay _____

Minor Constituent with trace
Fine | Medium | Coarse | Gravel | Sand | Silt | Clay _____

Biological: 0 % **Debris:** 0 % **Oil Sheen:** None Trace (<5%) _____ %

Comments:

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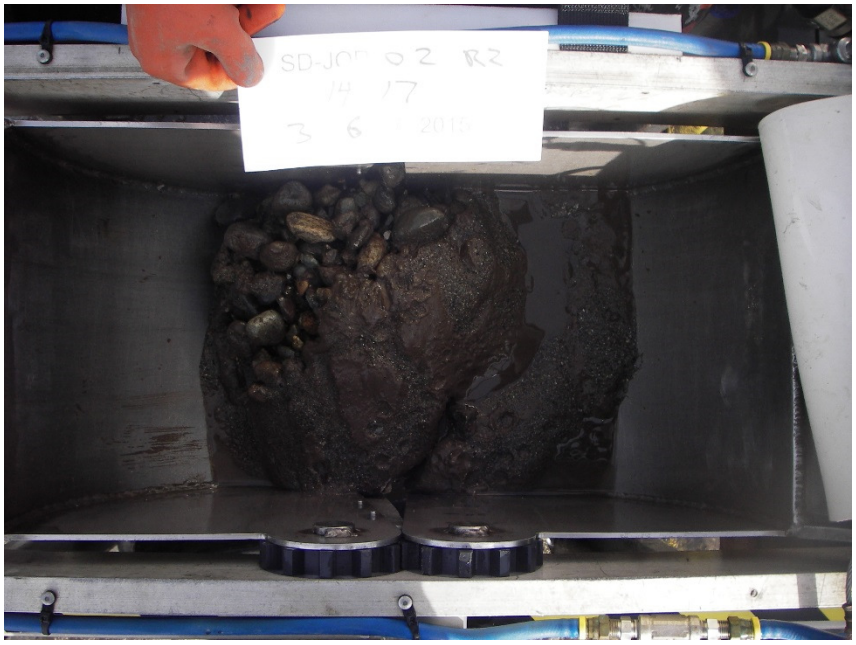


Station SD-JOR02 R2

QUALITATIVE SAMPLE CHARACTERISTICS

Page ____ of ____

Coordinate Datum	Date (mm/dd/yy)	Project Location	Sample Identification Number
WA State Plane, N Zone, NAD 83, Survey Ft	3-6-15	Boeing PL2	SD-JOR 02

Coordinates		Water Depth				Time
North	East	Depth	Unit (f / t)	Rep	Gear	
195631	1275811	13.5	f / t	3	0.2 Grab	1426

Penetration Depth	Penetration Unit (c / m)	Initials	Sulfide	VOA	Weather	Fines (%)
14	c / m	GSM			sunny	

Surficial Wood Estimate:

Contact Points _____ X 5 = _____ %

Surficial sediment characteristics:

Biological: 0 % **Debris:** 0 % **Oil Sheen:** (None) Trace (<5%) _____ %

Moisture
Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray Brown Black Other _____

Major Constituent (Circle major & underline modifying)
Fine (Medium) Coarse Gravel (Sand) Silt Clay _____

Minor Constituent with trace
Fine Medium (Coarse) (Gravel) Sand Silt Clay _____

Subsurface sediment characteristics:

Density / Consistency

Sand / Gravel - Very Loose (Loose) Medium Dense Dense Very Dense

Silt / Clay - Very Soft (Soft) Medium Stiff Stiff Very Stiff Hard

Moisture
Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray (Brown) Black Other _____

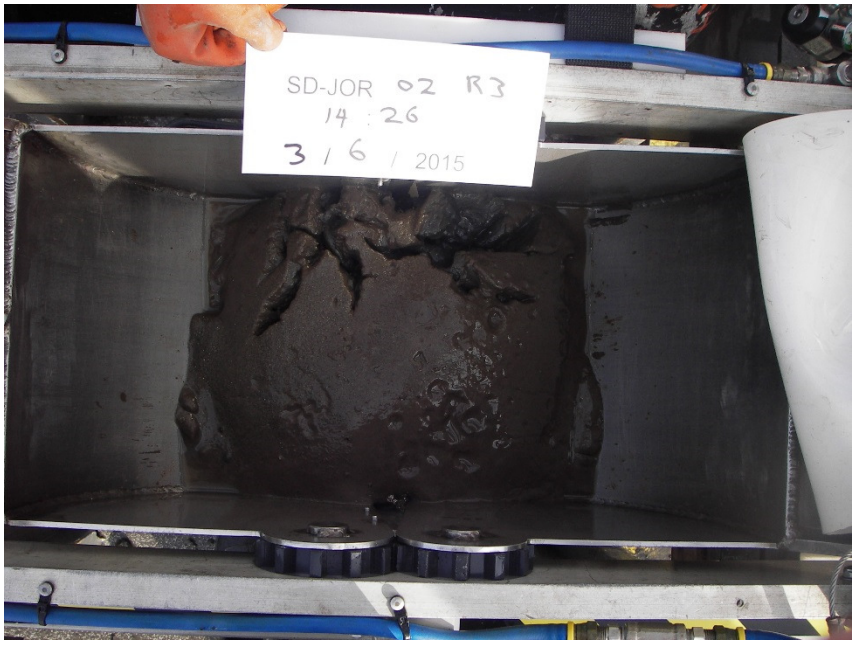
Major Constituent (Circle major & underline modifying)
Fine (Medium) Coarse Gravel (Sand) Silt Clay _____

Minor Constituent with trace
Fine Medium (Coarse) (Gravel) Sand Silt Clay _____

Biological: 0 % **Debris:** 0 % **Oil Sheen:** (None) Trace (<5%) _____ %

Comments:

Amin\Field Forms\QSC



Station SD-JOR02 R3

QUALITATIVE SAMPLE CHARACTERISTICS

Page ____ of ____

Coordinate Datum	Date (mm/dd/yy)	Project Location	Sample Identification Number
WA State Plane, N Zone, NAD 83, Survey Ft	3-6-15	Boeing PL2	SD-JOR 03

Coordinates		Water Depth					Time
North	East	Depth	Unit		Rep	Gear	
195525	1275827	15.6	f	t	1	0.2 Grab	1315

Penetration							
Depth	Unit	Initials	Sulfide	VOA	Weather	Fines (%)	
18	c m	GM			Sunny		

Surficial Wood Estimate:

Contact Points _____ X 5 = _____ %

Surficial sediment characteristics:

Biological: 41 % **Debris:** 0 % **Oil Sheen:** (None) Trace (<5%) _____ %

Moisture
(Very Wet) Wet Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent (Circle major & underline modifying)
(Fine) Medium Coarse Gravel Sand (Silt) Clay _____

Minor Constituent with trace
Fine Medium Coarse Gravel Sand Silt Clay _____

Subsurface sediment characteristics:

Density / Consistency

Sand / Gravel - Very Loose Loose Medium Dense Dense Very Dense

Silt / Clay - Very Soft Soft (Medium Stiff) Stiff Very Stiff Hard

Moisture
Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray Brown (Black) Other _____

Major Constituent (Circle major & underline modifying)
(Fine) Medium Coarse Gravel Sand (Silt) Clay _____

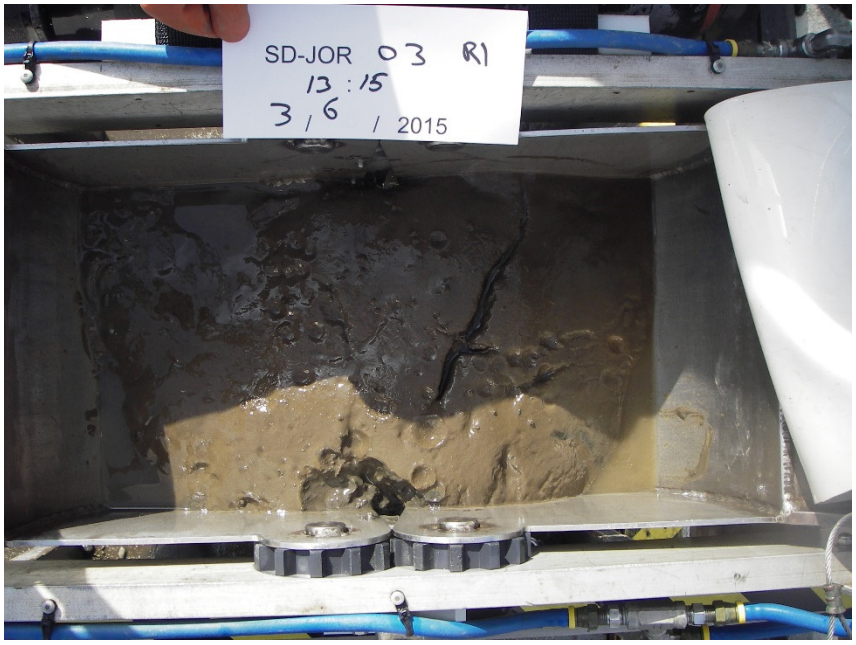
Minor Constituent with trace
Fine Medium Coarse Gravel Sand Silt Clay _____

Biological: _____ % **Debris:** _____ % **Oil Sheen:** None Trace (<5%) _____ %

Comments:
Tube worms present at surface
A few rocks present between grab jaws (buried under ~15-17 cm of silt)
silt to bottom of grab

AMEC Proj. BP2/Jorgensen
SD-JOR03
QSC Form
Date: 3/6/15 Time: 1315

Amin\Field Forms\QSC



Station SD-JOR03 R1

QUALITATIVE SAMPLE CHARACTERISTICS

Page ____ of ____

Coordinate Datum	Date (mm/dd/yy)	Project Location	Sample Identification Number
WA State Plane, N Zone, NAD 83, Survey Ft	3-6-15	Boeing PL2	SD-JOR 03

Coordinates		Water Depth					Time
North	East	Depth	Unit		Rep	Gear	
195539	1275824	17.4	f	t	2	0.2 Grab	1331

Penetration							
Depth	Unit	Initials	Sulfide	VOA	Weather	Fines (%)	
17	c m	CSM			sunny		

Surficial Wood Estimate:

Contact Points _____ X 5 = _____ %

Surficial sediment characteristics:

Biological: 4 % **Debris:** 0 % **Oil Sheen:** (None) Trace (<5%) _____ %

Moisture
(Very Wet) Wet Moist Damp Dry

Color **(Circle major & underline modifying)**
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent **(Circle major & underline modifying)**
(Fine) Medium Coarse Gravel Sand (Silt) Clay _____

Minor Constituent with trace
Fine Medium Coarse Gravel Sand Silt Clay _____

Subsurface sediment characteristics:

Density / Consistency

Sand / Gravel - Very Loose Loose Medium Dense Dense Very Dense

Silt / Clay - Very Soft Soft Medium Stiff Stiff Very Stiff Hard

Moisture
Very Wet (Wet) Moist Damp Dry

Color **(Circle major & underline modifying)**
Light (Medium) Dark Olive (Gray) Brown Black Other _____

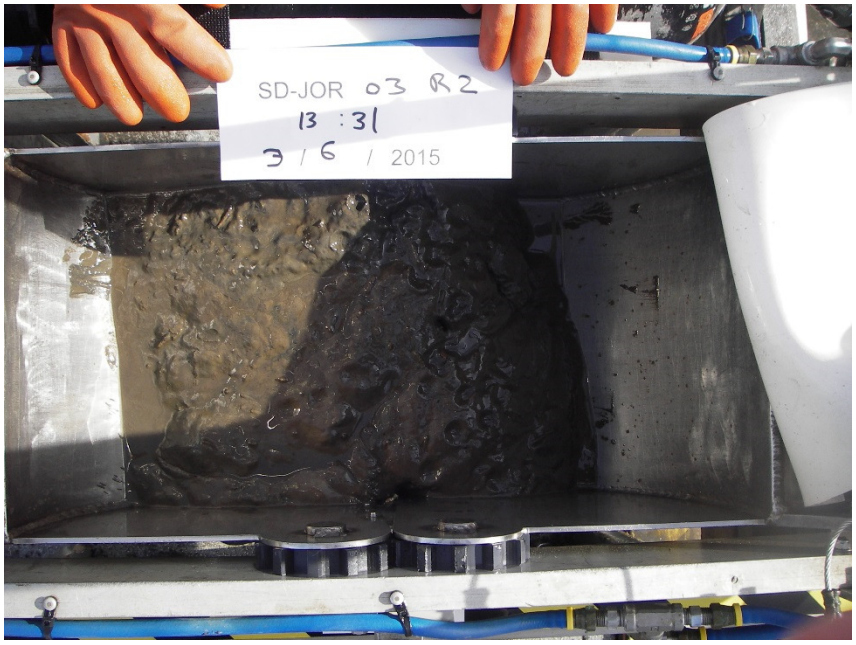
Major Constituent **(Circle major & underline modifying)**
(Fine) Medium Coarse Gravel Sand (Silt) Clay _____

Minor Constituent with trace
Fine (Medium) Coarse (Gravel) Sand Silt Clay _____

Biological: 0 % **Debris:** 0 % **Oil Sheen:** (None) Trace (<5%) _____ %

Comments:
tube worms present at surface
gravel at very bottom of grab

Amin\Field Forms\QSC



Station SD-JOR03 R2

QUALITATIVE SAMPLE CHARACTERISTICS

Page ____ of ____

Coordinate Datum	Date (mm/dd/yy)	Project Location	Sample Identification Number
WA State Plane, N Zone, NAD 83, Survey Ft	3-6-15	Boeing PL2	SD-JOR 03

Coordinates		Water Depth					Time
North	East	Depth	Unit		Rep	Gear	
195533	1275824	18.7	f	t	3	0.2 Grab	1344

Penetration							
Depth	Unit	Initials	Sulfide	VOA	Weather	Fines (%)	
12	c m	GSM			sunny		

Surficial Wood Estimate:

Contact Points _____ X 5 = _____ %

Surficial sediment characteristics:

Biological: 0 % **Debris:** 0 % **Oil Sheen:** None Trace (<5%) _____ %

Moisture
Very Wet Wet Moist Damp Dry

Color (Circle major & underline modifying)
Light Medium Dark Olive Gray Brown Black Other _____

Major Constituent (Circle major & underline modifying)
Fine Medium Coarse Gravel Sand Silt Clay _____

Minor Constituent with trace
Fine Medium Coarse Gravel Sand Silt Clay _____

Subsurface sediment characteristics:

Density / Consistency

Sand / Gravel - Very Loose Loose Medium Dense Dense Very Dense

Silt / Clay - Very Soft Soft Medium Stiff Stiff Very Stiff Hard

Moisture
Very Wet Wet Moist Damp Dry

Color (Circle major & underline modifying)
Light Medium Dark Olive Gray Brown Black Other _____

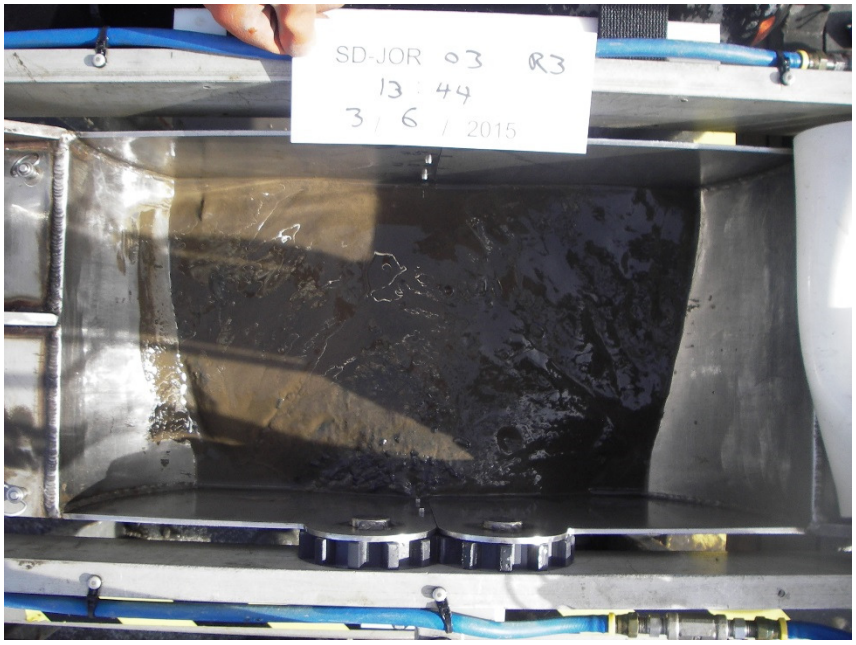
Major Constituent (Circle major & underline modifying)
Fine Medium Coarse Gravel Sand Silt Clay _____

Minor Constituent with trace
Fine Medium Coarse Gravel Sand Silt Clay _____

Biological: 21 % **Debris:** 0 % **Oil Sheen:** None Trace (<5%) _____ %

Comments:
tube worms present
silt entire depth of grab

Amin\Field Forms\QSC



Station SD-JOR03 R3

QUALITATIVE SAMPLE CHARACTERISTICS

Page ____ of ____

Coordinate Datum	Date (mm/dd/yy)	Project Location	Sample Identification Number
WA State Plane, N Zone, NAD 83, Survey Ft	3-17-15	Boeing PL2	SD-JOR 03 R2

Coordinates		Water Depth					Time
North	East	Depth	Unit		Rep	Gear	
127498	1275844	17.0	f	t	A	0.2 Grab	823

Penetration							Fines (%)
Depth	Unit	Initials	Sulfide	VOA	Weather		
17	c m	SJM			cloudy		

Surficial Wood Estimate:

Contact Points _____ X 5 = _____ %

Surficial sediment characteristics:

Biological: <1 (tube worms) % **Debris:** 0 % **Oil Sheen:** (None) Trace (<5%) _____ %

Moisture
Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive (Gray) Brown Black Other _____

Major Constituent (Circle major & underline modifying)
(Fine) Medium Coarse Gravel Sand (Silt) Clay _____

Minor Constituent with trace
Fine Medium Coarse Gravel Sand Silt Clay _____

Subsurface sediment characteristics:

Density / Consistency

Sand / Gravel - Very Loose Loose Medium Dense Dense Very Dense

Silt / Clay - Very Soft (Soft) Medium Stiff Stiff Very Stiff Hard

Moisture
Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light Medium (Dark) Olive (Gray) Brown Black Other _____

Major Constituent (Circle major & underline modifying)
(Fine) Medium Coarse Gravel Sand (Silt) Clay _____

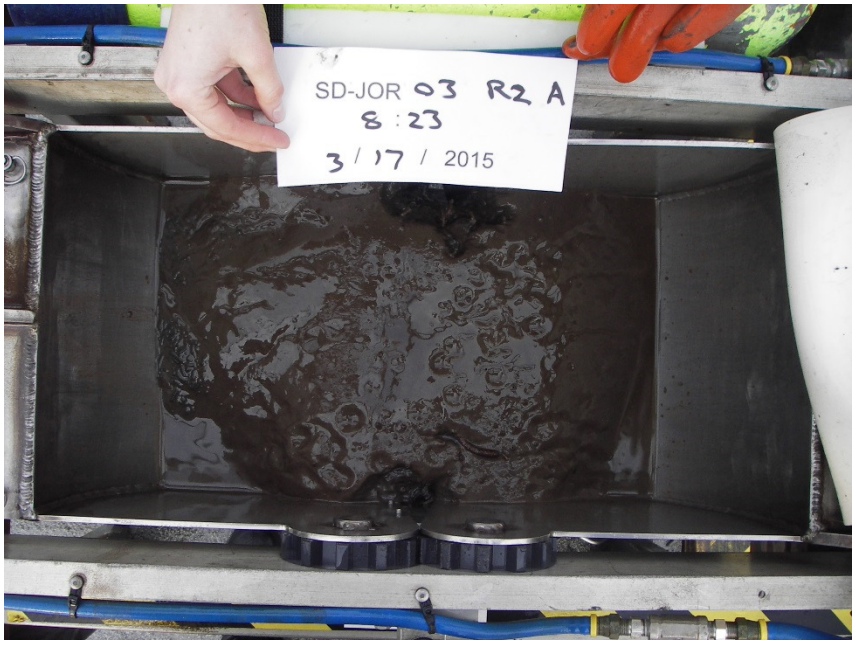
Minor Constituent with trace
Fine Medium (Coarse) (Gravel) Sand Silt Clay _____

Biological: 0 % **Debris:** 0 % **Oil Sheen:** (None) Trace (<5%) _____ %

Comments:
3" layer of silt on top
Subsurface has coarse gravel and silt mixed together

AMEC Proj. BP2/Jorgensen
SD JOR 03 R2
SMS metals, PCBs, TOC
Date: 3/17/15 Time: 823

Amin\Field Forms\QSC



Station SD-JOR03 R2A

QUALITATIVE SAMPLE CHARACTERISTICS

Page ___ of ___

Coordinate Datum	Date (mm/dd/yy)	Project Location	Sample Identification Number
WA State Plane, N Zone, NAD 83, Survey Ft	3-17-15	Boeing PL2	SD-JOR 03 R2

Coordinates		Water Depth				Time
North	East	Depth	Unit (f / t)	Rep	Gear	
195497	1275846	16.9	f / t	B	0.2 Grab	836

Penetration Depth	Penetration Unit (c / m)	Initials	Sulfide	VOA	Weather	Fines (%)
19	c / m	GM			cloudy	

Surficial Wood Estimate:

Contact Points _____ X 5 = _____ %

Surficial sediment characteristics:

Biological: <1 (tube worms) % **Debris:** 0 % **Oil Sheen:** (None) Trace (<5%) _____ %

Moisture
Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent (Circle major & underline modifying)
(Fine) Medium Coarse Gravel Sand (Silt) Clay _____

Minor Constituent with trace
Fine Medium Coarse Gravel Sand Silt Clay _____

Subsurface sediment characteristics:

Density / Consistency

Sand / Gravel - Very Loose Loose Medium Dense Dense Very Dense

Silt / Clay - Very Soft (Soft) Medium Stiff Stiff Very Stiff Hard

Moisture
Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light Medium (Dark) Olive (Gray) Brown Black Other trace orange

Major Constituent (Circle major & underline modifying)
(Fine) Medium Coarse Gravel Sand (Silt) Clay _____

Minor Constituent with trace
Fine Medium (Coarse) (Gravel) Sand Silt Clay _____

Biological: 0 % **Debris:** 0 % **Oil Sheen:** (None) Trace (<5%) _____ %

Comments:
3" layer of silt on top, subsurface has gravel and silt mixed throughout

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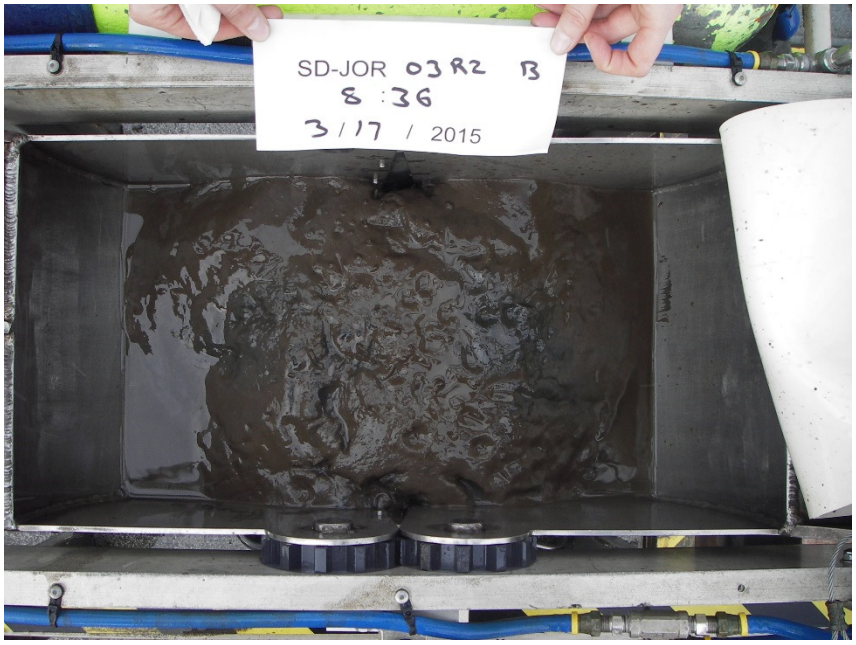

Station SD-JOR03 R2B

QUALITATIVE SAMPLE CHARACTERISTICS

Page ____ of ____

Coordinate Datum	Date (mm/dd/yy)	Project Location	Sample Identification Number
WA State Plane, N Zone, NAD 83, Survey Ft	3-17-15	Boeing PL2	SD-PER JOR 03 R2

Coordinates		Water Depth				Time
North	East	Depth	Unit	Rep	Gear	
195496	1275844	16.3	f t	C	0.2 Grab	848

Penetration Depth	Penetration Unit	Initials	Sulfide	VOA	Weather	Fines (%)
16	c m	CJM			cloudy	

Surficial Wood Estimate:

Contact Points _____ X 5 = _____ %

Surficial sediment characteristics:

Biological: 0 % **Debris:** 0 % **Oil Sheen:** (None) Trace (<5%) _____ %

Moisture
Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent (Circle major & underline modifying)
(Fine) Medium Coarse Gravel Sand (Silt) Clay _____

Minor Constituent with trace
Fine Medium Coarse Gravel Sand Silt Clay _____

Subsurface sediment characteristics:

Density / Consistency

Sand / Gravel - Very Loose Loose Medium Dense Dense Very Dense

Silt / Clay - Very Soft (Soft) Medium Stiff Stiff Very Stiff Hard

Moisture
Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light Medium (Dark) Olive (Gray) Brown Black Other _____

Major Constituent (Circle major & underline modifying)
(Fine) Medium Coarse Gravel Sand (Silt) Clay _____

Minor Constituent with trace
Fine Medium Coarse Gravel Sand Silt Clay _____

Biological: 0 % **Debris:** <1 (leaves) % **Oil Sheen:** (None) Trace (<5%) _____ %

Comments:
845 attempt 1 - rocks in jaw - leakage - reject
attempt 2 success
4" silt on top of gravel.

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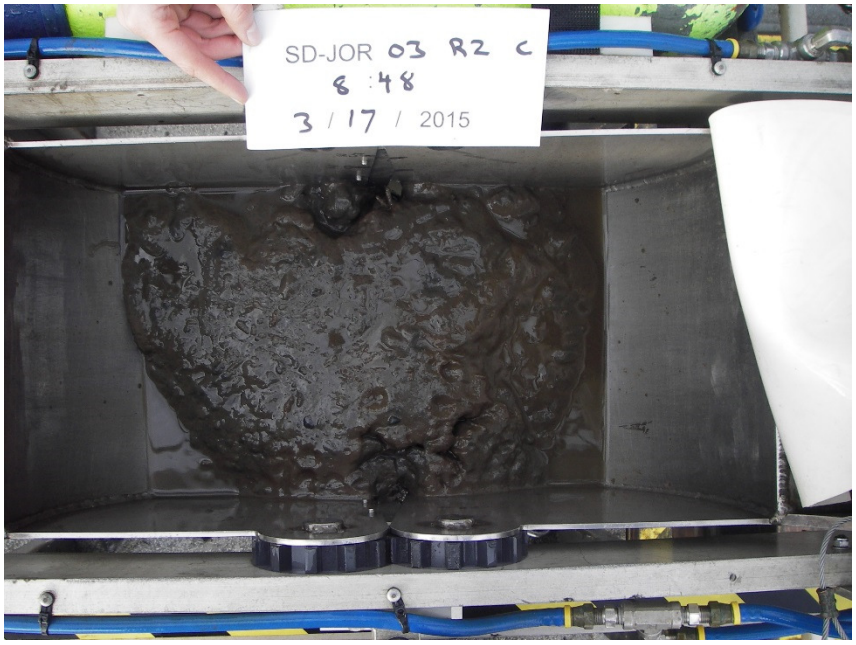

Station SD-JOR03 R2C

QUALITATIVE SAMPLE CHARACTERISTICS

Page ____ of ____

Coordinate Datum	Date (mm/dd/yy)	Project Location	Sample Identification Number
WA State Plane, N Zone, NAD 83, Survey Ft	3-6-15	Boeing PL2	SD-JOR 04

Coordinates		Water Depth				Time
North	East	Depth	Unit (f / t)	Rep	Gear	
195541	1275845	9.4	f	1	0.2 Grab	1113

Penetration Depth	Penetration Unit (c / m)	Initials	Sulfide	VOA	Weather	Fines (%)
15	c	CJM			p cloudy	

Surficial Wood Estimate:

Contact Points _____ X 5 = _____ %

Surficial sediment characteristics:

Biological: 0 % **Debris:** 0 % **Oil Sheen:** (None) Trace (<5%) _____ %

Moisture
Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent (Circle major & underline modifying)
Fine (Medium) Coarse (Gravel) Sand Silt Clay _____

Minor Constituent with trace
(Fine) Medium Coarse Gravel Sand (Silt) Clay _____

Subsurface sediment characteristics:

Density / Consistency

Sand / Gravel - Very Loose (Loose) Medium Dense Dense Very Dense

Silt / Clay - (Very Soft) Soft Medium Stiff Stiff Very Stiff Hard

Moisture
Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent (Circle major & underline modifying)
Fine (Medium) Coarse (Gravel) Sand Silt Clay _____

Minor Constituent with trace
Fine Medium Coarse Gravel Sand Silt Clay _____

Biological: 0 % **Debris:** 0 % **Oil Sheen:** (None) Trace (<5%) _____ %

Comments:
1157 attempt 1 - rock in jaws - lost sediment - reject
2 reject - off station
1/2" silt layer on top of gravel

AMEC Proj. BP2/Jorgensen
SD-JOR04
QSC Form
Date: 3 / 6 /15 Time: 1113

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Station SD-JOR04 R1

QUALITATIVE SAMPLE CHARACTERISTICS

Page ____ of ____

Coordinate Datum	Date (mm/dd/yy)	Project Location	Sample Identification Number
WA State Plane, N Zone, NAD 83, Survey Ft	3-6-15	Boeing PL2	SD-JOR 04

Coordinates		Water Depth				Time
North	East	Depth	Unit	Rep	Gear	
195537	1275845	9.7	f t	2	0.2 Grab	1128

Penetration			Sulfide	VOA	Weather	Fines (%)
Depth	Unit	Initials				
15	c m	GSM			☀ cloudy	

Surficial Wood Estimate:

Contact Points _____ X 5 = _____ %

Surficial sediment characteristics:

Biological: 0 % **Debris:** 0 % **Oil Sheen:** (None) Trace (<5%) _____ %

Moisture
(Very Wet) (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent (Circle major & underline modifying)
(Fine) Medium Coarse Gravel Sand (Silt) Clay _____

Minor Constituent with trace
Fine Medium (Coarse) (Gravel) Sand Silt Clay _____

Subsurface sediment characteristics:

Density / Consistency

Sand / Gravel - Very Loose (Loose) Medium Dense Dense Very Dense

Silt / Clay - Very Soft Soft Medium Stiff Stiff Very Stiff Hard

Moisture
Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray (Brown) Black Other _____

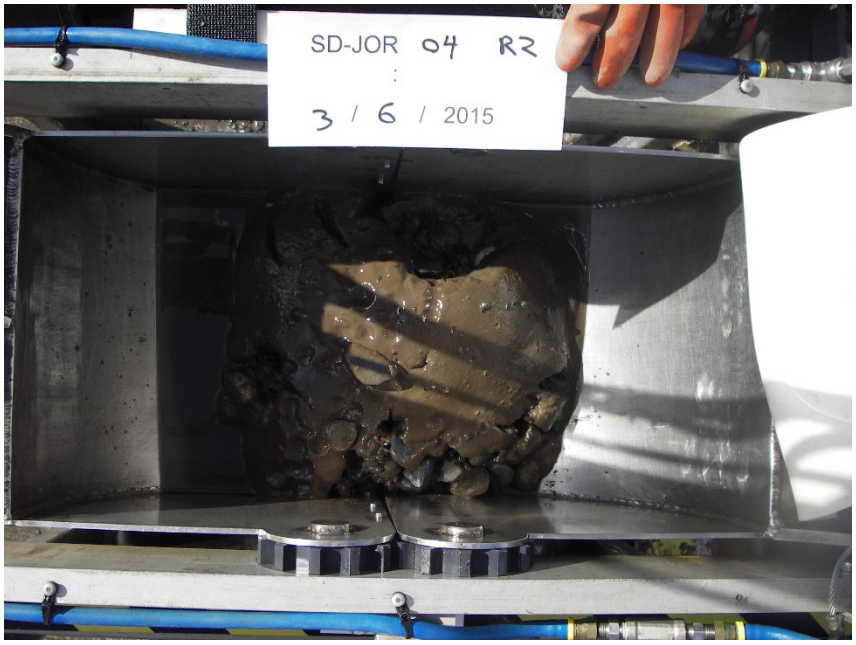
Major Constituent (Circle major & underline modifying)
Fine Medium (Coarse) (Gravel) Sand Silt Clay _____

Minor Constituent with trace
Fine Medium (Coarse) Gravel (Sand) (Silt) Clay _____

Biological: 0 % **Debris:** 0 % **Oil Sheen:** (None) Trace (<5%) _____ %

Comments:
1/2" silt layer on top

Amin\Field Forms\QSC



Station SD-JOR04 R2

QUALITATIVE SAMPLE CHARACTERISTICS

Page ____ of ____

Coordinate Datum	Date (mm/dd/yy)	Project Location	Sample Identification Number
WA State Plane, N Zone, NAD 83, Survey Ft	3-6-15	Boeing PL2	SD-JOR 04

Coordinates		Water Depth					Time
North	East	Depth	Unit		Rep	Gear	
195537	1275843	9.6	f	t	3	0.2 Grab	1140

Penetration Depth	Penetration Unit	Initials	Sulfide	VOA	Weather	Fines (%)
13	c m	GM			p cldy	

Surficial Wood Estimate:

Contact Points _____ X 5 = _____ %

Surficial sediment characteristics:

Biological: 0 % **Debris:** 0 % **Oil Sheen:** (None) Trace (<5%) _____ %

Moisture
Very Wet (Wet) Moist Damp Dry

Color **(Circle major & underline modifying)**
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent **(Circle major & underline modifying)**
(Fine) Medium Coarse Gravel Sand (Silt) Clay _____

Minor Constituent with trace
Fine (Medium) Coarse (Gravel) Sand Silt Clay _____

Subsurface sediment characteristics:

Density / Consistency

Sand / Gravel - Very Loose (Loose) Medium Dense Dense Very Dense

Silt / Clay - Very Soft Soft Medium Stiff Stiff Very Stiff Hard

Moisture
Very Wet (Wet) Moist Damp Dry

Color **(Circle major & underline modifying)**
Light (Medium) Dark Olive Gray (Brown) Black Other _____

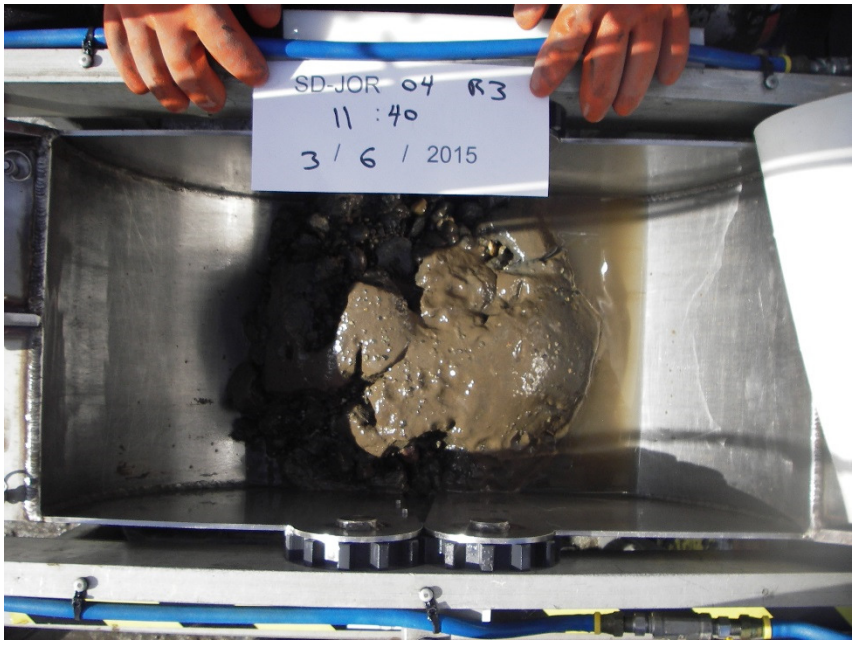
Major Constituent **(Circle major & underline modifying)**
Fine Medium (Coarse) Gravel (Sand) Silt Clay _____

Minor Constituent with trace
Fine (Medium) Coarse (Gravel) Sand Silt Clay _____

Biological: 0 % **Debris:** 0 % **Oil Sheen:** (None) Trace (<5%) _____ %

Comments:
~3/4" silt on top of gravel/sand mixture

Amin\Field Forms\QSC



Station SD-JOR04 R3

QUALITATIVE SAMPLE CHARACTERISTICS

Page ____ of ____

Coordinate Datum	Date (mm/dd/yy)	Project Location	Sample Identification Number
WA State Plane, N Zone, NAD 83, Survey Ft	3-6-15	Boeing PL2	SD-JOR 05

Coordinates		Water Depth					Time
North	East	Depth	Unit		Rep	Gear	
195400	1275863	16.3	f	t	1	0.2 Grab	954

Penetration		Initials	Sulfide	VOA	Weather	Fines (%)
Depth	Unit					
22	c m	GSM			sl cloudy	

Surficial Wood Estimate:

Contact Points _____ X 5 = _____ %

Surficial sediment characteristics:

Biological: 1 % **Debris:** 0 % **Oil Sheen:** (None) Trace (<5%) _____ %

Moisture
Very Wet (Wet) Moist Damp Dry

Color **(Circle major & underline modifying)**
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent **(Circle major & underline modifying)**
Fine (Medium) Coarse (Gravel) Sand Silt Clay _____

Minor Constituent with trace
(Fine) Medium Coarse Gravel Sand (Silt) Clay _____

Subsurface sediment characteristics:

Density / Consistency

Sand / Gravel - Very Loose (Loose) Medium Dense Dense Very Dense

Silt / Clay - Very Soft (Soft) Medium Stiff Stiff Very Stiff Hard

Moisture
Very Wet (Wet) Moist Damp Dry

Color **(Circle major & underline modifying)**
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent **(Circle major & underline modifying)**
Fine Medium (Coarse) Gravel (Sand) Silt Clay _____

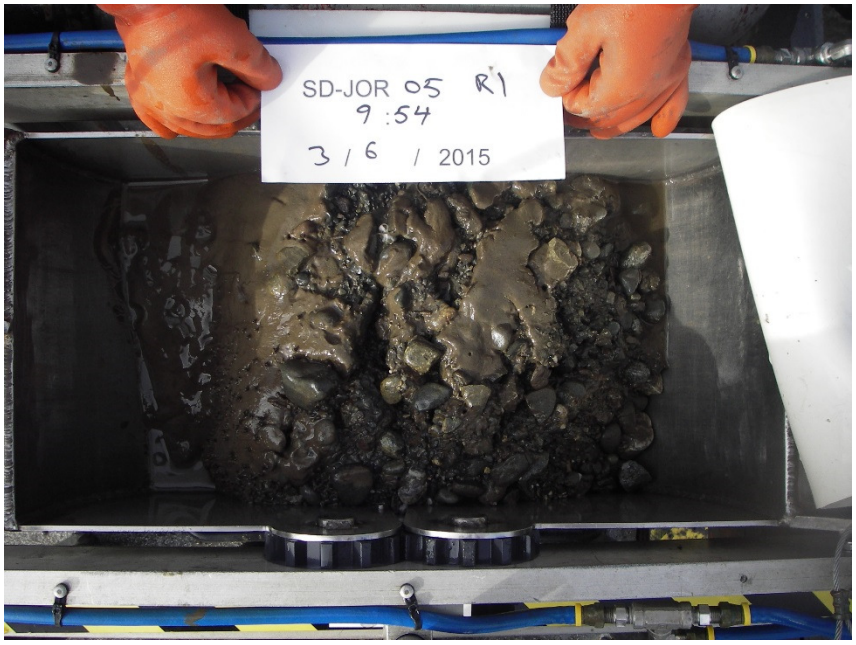
Minor Constituent with trace
Fine (Medium) Coarse (Gravel) Sand Silt Clay _____

Biological: 1 % **Debris:** 0 % **Oil Sheen:** (None) Trace (<5%) _____ %

Comments:
tube worms present in 5164

AMEC Proj. BP2/Jorgensen
SD-JOR05
QSC Form
Date: 3/6/15 Time: 954

Amin\Field Forms\QSC



Station SD-JOR05 R1

QUALITATIVE SAMPLE CHARACTERISTICS

Page ___ of ___

Coordinate Datum	Date (mm/dd/yy)	Project Location	Sample Identification Number
WA State Plane, N Zone, NAD 83, Survey Ft	3-6-15	Boeing PL2	SD-JOR 05

Coordinates		Water Depth					Time
North	East	Depth	Unit		Rep	Gear	
195 399	1275861	16.6	f	t	2	0.2 Grab	1009

Penetration							
Depth	Unit	Initials	Sulfide	VOA	Weather	Fines (%)	
14	c m	GSM			p cloudy		

Surficial Wood Estimate:

Contact Points _____ X 5 = _____ %

Surficial sediment characteristics:

Biological: 0 % **Debris:** 0 % **Oil Sheen:** (None) Trace (<5%) _____ %

Moisture
Very Wet (Wet) Moist Damp Dry

Color **(Circle major & underline modifying)**
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent **(Circle major & underline modifying)**
(Fine) Medium Coarse Gravel Sand (Silt) Clay _____

Minor Constituent with trace
Fine Medium Coarse Gravel Sand Silt Clay _____

Subsurface sediment characteristics:

Density / Consistency

Sand / Gravel - Very Loose (Loose) Medium Dense Dense Very Dense

Silt / Clay - Very Soft (Soft) Medium Stiff Stiff Very Stiff Hard

Moisture
Very Wet (Wet) Moist Damp Dry

Color **(Circle major & underline modifying)**
Light (Medium) Dark Olive Gray Brown (Black) Other _____

Major Constituent **(Circle major & underline modifying)**
Fine Medium (Coarse) (Gravel) Sand Silt Clay _____

Minor Constituent with trace
Fine (Medium) Coarse (Gravel) Sand Silt Clay _____

Biological: 0 % **Debris:** 0 % **Oil Sheen:** (None) Trace (<5%) _____ %

Comments:
center of sample grab 1031 because rocks held the jaw open. Sampled at side of grab.

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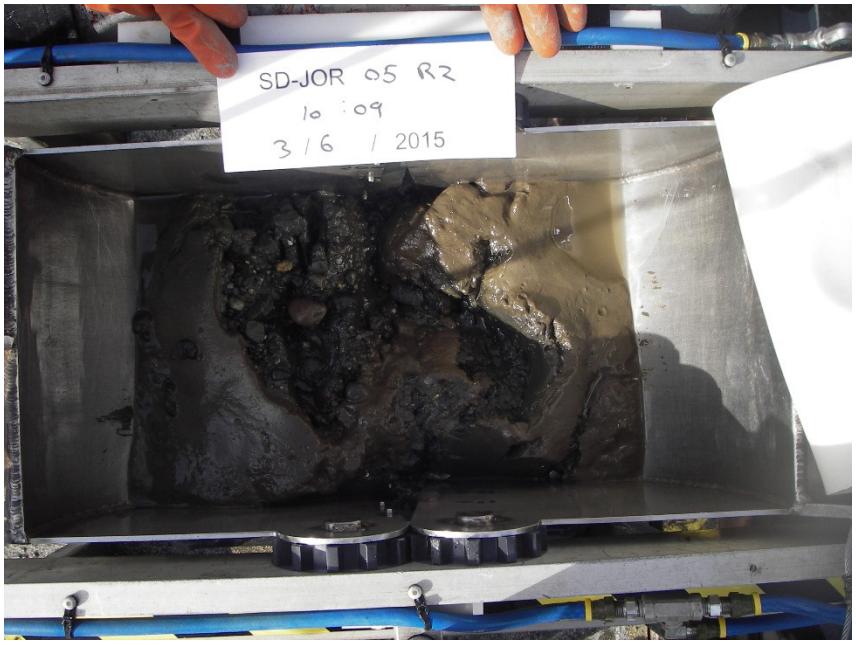


Station SD-JOR05 R2

QUALITATIVE SAMPLE CHARACTERISTICS

Page ____ of ____

Coordinate Datum	Date (mm/dd/yy)	Project Location	Sample Identification Number
WA State Plane, N Zone, NAD 83, Survey Ft	3-6-15	Boeing PL2	SD-JOR 05

Coordinates		Water Depth				Time
North	East	Depth	Unit	Rep	Gear	
195397	1275859	16.3	f t	3	0.2 Grab	1023

Penetration							
Depth	Unit	Initials	Sulfide	VOA	Weather	Fines (%)	
15	c m	GSM			p cloudy		

Surficial Wood Estimate:

Contact Points _____ X 5 = _____ %

Surficial sediment characteristics:

Biological: 0 % **Debris:** 0 % **Oil Sheen:** None Trace (<5%) _____ %

Moisture
Very Wet Wet Moist Damp Dry

Color (Circle major & underline modifying)
Light Medium Dark Olive Gray Brown Black Other _____

Major Constituent (Circle major & underline modifying)
Fine Medium Coarse Gravel Sand Silt Clay _____

Minor Constituent with trace
Fine Medium Coarse Gravel Sand Silt Clay _____

Subsurface sediment characteristics:

Density / Consistency

Sand / Gravel - Very Loose Loose Medium Dense Dense Very Dense

Silt / Clay - Very Soft Soft Medium Stiff Stiff Very Stiff Hard

Moisture
Very Wet Wet Moist Damp Dry

Color (Circle major & underline modifying)
Light Medium Dark Olive Gray Brown Black Other _____

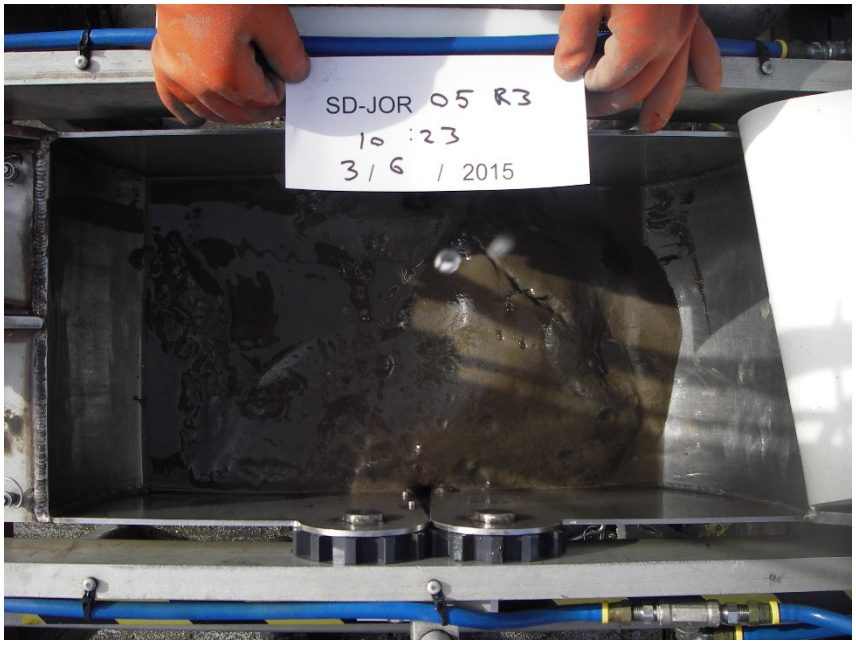
Major Constituent (Circle major & underline modifying)
Fine Medium Coarse Gravel Sand Silt Clay _____

Minor Constituent with trace
Fine Medium Coarse Gravel Sand Silt Clay _____

Biological: _____ % **Debris:** _____ % **Oil Sheen:** None Trace (<5%) _____ %

Comments:
logged as Rep 2 in GPS

Amin\Field Forms\QSC



Station SD-JOR05 R3

QUALITATIVE SAMPLE CHARACTERISTICS

Page ____ of ____

Coordinate Datum	Date (mm/dd/yy)	Project Location	Sample Identification Number
WA State Plane, N Zone, NAD 83, Survey Ft	3-6-15	Boeing PL2	SD-JOR 06

Coordinates		Water Depth				Time
North	East	Depth	Unit	Rep	Gear	
195397	1275893	12.6	f t	1	0.2 Grab	857

Penetration Depth	Penetration Unit	Initials	Sulfide	VOA	Weather	Fines (%)
18	c m	GSM			p cloudy	

Surficial Wood Estimate:

Contact Points _____ X 5 = _____ %

Surficial sediment characteristics:

Biological: <1 (tube worms) % **Debris:** 0 % **Oil Sheen:** (None) Trace (<5%) _____ %

Moisture
Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent (Circle major & underline modifying)
(Fine) Medium Coarse Gravel Sand (Silt) Clay _____

Minor Constituent with trace
Fine Medium Coarse Gravel Sand Silt Clay _____

Subsurface sediment characteristics:

Density / Consistency

Sand / Gravel - Very Loose (Loose) Medium Dense Dense Very Dense

Silt / Clay - Very Soft (Soft) Medium Stiff Stiff Very Stiff Hard

Moisture
Very Wet (Wet) Moist Damp Dry

Color (Circle major & underline modifying)
Light (Medium) Dark Olive Gray (Brown) Black Other _____

Major Constituent (Circle major & underline modifying)
Fine Medium (Coarse) Gravel (Sand) Silt Clay _____

Minor Constituent with trace
Fine (Medium) Coarse (Gravel) Sand Silt Clay _____

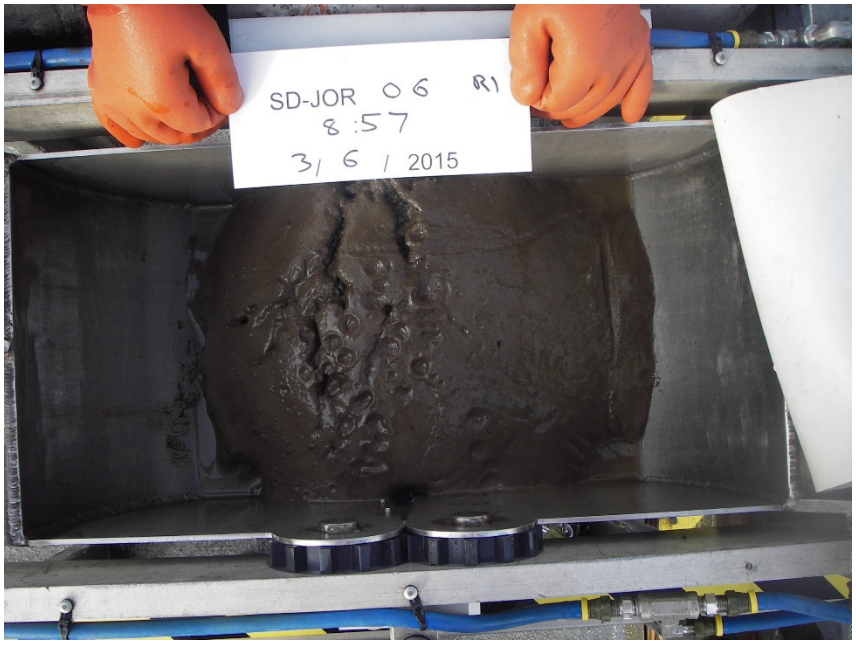
Biological: <1 % **Debris:** 0 % **Oil Sheen:** (None) Trace (<5%) _____ %

Comments:

no GPS label
1/2" layer of silt on top

AMEC Proj. BP2/Jorgensen
SD-JOR06
QSC Form
Date: 3/6/15 Time: 857

Amin\Field Forms\QSC



Station SD-JOR06 R1

QUALITATIVE SAMPLE CHARACTERISTICS

Page ___ of ___

Coordinate Datum	Date (mm/dd/yy)	Project Location	Sample Identification Number
WA State Plane, N Zone, NAD 83, Survey Ft	3-6-15	Boeing PL2	SD-JOR 06

Coordinates		Water Depth				Time
North	East	Depth	Unit (f / t)	Rep	Gear	
195397	1275892	13.3	f	2	0.2 Grab	918

Penetration Depth	Penetration Unit (c / m)	Initials	Sulfide	VOA	Weather	Fines (%)
13	c	GM			p cloudy	

Surficial Wood Estimate:

Contact Points _____ X 5 = _____ %

Surficial sediment characteristics:

Biological: <1 % **Debris:** 0 % **Oil Sheen:** None Trace (<5%) _____ %

Moisture
Very Wet | Wet | Moist | Damp | Dry

Color (Circle major & underline modifying)
Light | Medium | Dark | Olive | Gray | Brown | Black | Other _____

Major Constituent (Circle major & underline modifying)
Fine | Medium | Coarse | Gravel | Sand | Silt | Clay _____

Minor Constituent with trace
Fine | Medium | Coarse | Gravel | Sand | Silt | Clay _____

Subsurface sediment characteristics:

Density / Consistency

Sand / Gravel - Very Loose | Loose | Medium Dense | Dense | Very Dense

Silt / Clay - Very Soft | Soft | Medium Stiff | Stiff | Very Stiff | Hard

Moisture
Very Wet | Wet | Moist | Damp | Dry

Color (Circle major & underline modifying)
Light | Medium | Dark | Olive | Gray | Brown | Black | Other _____

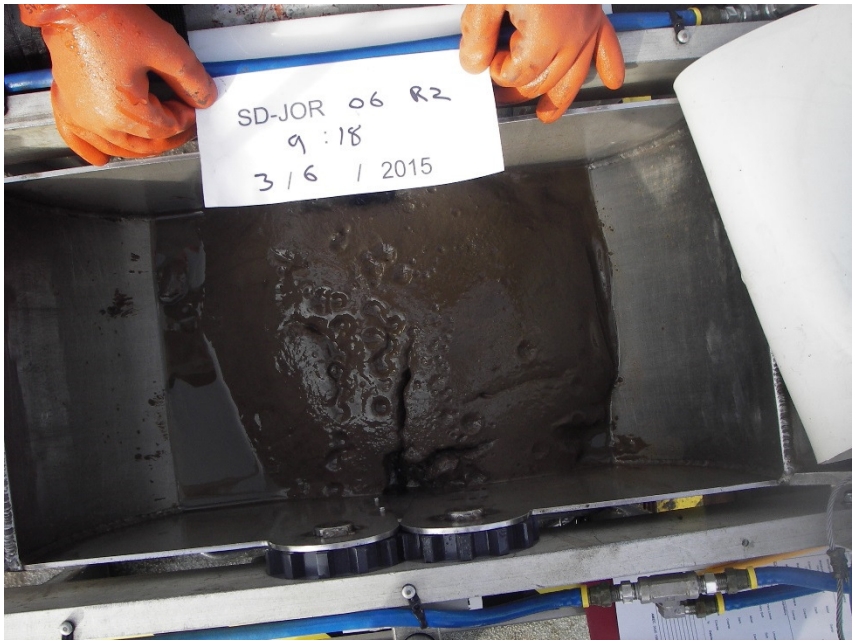
Major Constituent (Circle major & underline modifying)
Fine | Medium | Coarse | Gravel | Sand | Silt | Clay _____

Minor Constituent with trace
Fine | Medium | Coarse | Gravel | Sand | Silt | Clay _____

Biological: <1 % **Debris:** 0 % **Oil Sheen:** None Trace (<5%) _____ %

Comments:
few tube worms
silt layer ~ 1/2" but mixed in to bottom

Amin\Field Forms\QSC



Station SD-JOR06 R2

QUALITATIVE SAMPLE CHARACTERISTICS

Page ____ of ____

Coordinate Datum	Date (mm/dd/yy)	Project Location	Sample Identification Number
WA State Plane, N Zone, NAD 83, Survey Ft	3-6-15	Boeing PL2	SD-JOR 06

Coordinates		Water Depth					Time
North	East	Depth	Unit		Rep	Gear	
195395	1275892	11.8	f	t	3	0.2 Grab	935

Penetration			Sulfide	VOA	Weather	Fines (%)
Depth	Unit	Initials				
15	c m	CSM			P cloudy	

Surficial Wood Estimate:

Contact Points _____ X 5 = _____ %

Surficial sediment characteristics:

Biological: 0 % **Debris:** 0 % **Oil Sheen:** None Trace (<5%) _____ %

Moisture
Very Wet Wet Moist Damp Dry

Color (Circle major & underline modifying)
Light Medium Dark Olive Gray Brown Black Other _____

Major Constituent (Circle major & underline modifying)
Fine Medium Coarse Gravel Sand Silt Clay _____

Minor Constituent with trace
Fine Medium Coarse Gravel Sand Silt Clay _____

Subsurface sediment characteristics:

Density / Consistency

Sand / Gravel - Very Loose Loose Medium Dense Dense Very Dense

Silt / Clay - Very Soft Soft Medium Stiff Stiff Very Stiff Hard

Moisture
Very Wet Wet Moist Damp Dry

Color (Circle major & underline modifying)
Light Medium Dark Olive Gray Brown Black Other _____

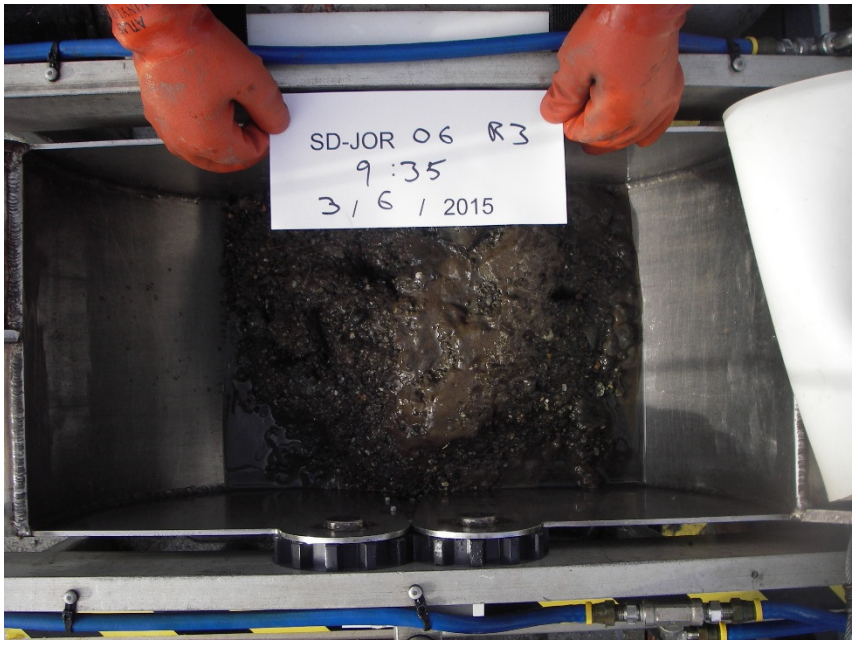
Major Constituent (Circle major & underline modifying)
Fine Medium Coarse Gravel Sand Silt Clay _____

Minor Constituent with trace
Fine Medium Coarse Gravel Sand Silt Clay _____

Biological: 0 % **Debris:** 0 % **Oil Sheen:** None Trace (<5%) _____ %

Comments:
attempt one - rock in jaws - reject - no GPS pt recorded
less silt than first 2 grabs

AMEC, 3500 188th St. SW, Suite 601, Lynnwood, WA 98037, (425) 921-4000



Station SD-JOR06 R3

CHAIN-OF-CUSTODY FORMS

AMEC
3500 188th St. SW, Suite 601
Lynnwood,WA 98037
(425) 921-4000

CHAIN OF CUSTODY

AMEC Proj. BP2 Perimeter
COC Number 080

Recorded by: [illegible]

Checked by: _____

		Analysis Containers			
		SMS Metals (As, Cd, Cr, Cu, Pb, Hg, Ag, Zn) TOC, and PCBs (by Aroclor)	Archive		
AMEC Proj. BP2/Jorgensen SD-JOR05 COC Form Initials:_____ Date: ___/___/2014	Date: Time: 842	1			Number of containers: 1
AMEC Proj. BP2/Jorgensen SD-JOR06 COC Form Initials:_____ Date: ___/___/2014	Date: Time: 1002	1			Number of containers: 1
AMEC Proj. BP2/Jorgensen SD-JOR04 COC Form Initials:_____ Date: ___/___/2014	Date: Time: 1041	1			Number of containers: 1
AMEC Proj. BP2/Jorgensen SD-JOR01 COC Form Initials:_____ Date: ___/___/2014	Date: Time: 1121	1			Number of containers: 1
AMEC Proj. BP2/Jorgensen SD-JOR02 COC Form Initials:_____ Date: ___/___/2014	Date: Time: 1242	1			Number of containers: 1
AMEC Proj. BP2/Jorgensen SD-JOR03 COC Form Initials:_____ Date: ___/___/2014	Date: Time: 1407	1			Number of containers: 1
Place Sample ID Label Here or Write ID Number Here	Date: Time:				Number of containers:

Laboratory Sample Receipt

ARI Project Manager—Kelly Bottem
AMEC Project Manager—Cliff Whitmus (cliff.whitmus@amec.com ph 425-921-4023)
AMEC Laboratory Coordinator—Crystal Neirby (crystal.neirby@amec.com ph. 206-838-8469)

Sediment samples are unhomogenized. Samples must be thoroughly homogenized before analysis.

Relinquished By	Received By
Name: Tyler Hennigan	Name: Tyler Stratton
Date: 11/24/2014	Date: 11-24-14
Time: 15:52	Time: 1552

AMEC
3500 188th St. SW, Suite 601
Lynnwood,WA 98037
(425) 921-4000

CHAIN OF CUSTODY

Place Sample ID Label Here or Write ID Number Here

Recorded by: GSM

Checked by: _____

	Date/Time	Analysis Containers: SMS Metals (As, Cd, Cr, Cu, Pb, Hg, Ag, Zn), TOC, and PCBs (by Aroclor)	Analysis Containers: Archive	Analysis Containers:	Number of containers
AMEC Proj. BP2/Jorgensen SD-JOR06 COC Form Date: 3/6/15 Time: 857	Date: Time:	1			1
AMEC Proj. BP2/Jorgensen SD-JOR05 COC Form Date: 3/6/15 Time: 954	Date: Time:	1			1
AMEC Proj. BP2/Jorgensen SD-JOR04 COC Form Date: 3/6/15 Time: 1113	Date: Time:	1			1
AMEC Proj. BP2/Jorgensen SD-JOR03 COC Form Date: 3/6/15 Time: 1315	Date: Time:	1			1
AMEC Proj. BP2/Jorgensen SD-JOR02 COC Form Date: 3/6/15 Time: 1407	Date: Time:	1			1
AMEC Proj. BP2/Jorgensen SD-JOR01 COC Form Date: 3/6/15 Time: 1443	Date: Time:	1			1
	Date: Time:				

Laboratory Sample Receipt

AR! Project Manager---Kelly Bottem
AMEC Project Manager—Cliff Whitmus (cliff.whitmus@amec.com ph 425-921-4023)
AMEC Laboratory Coordinator—Crystal Neirby (crystal.neirby@amec.com ph. 206-838-8469)

Sediment samples are unhomogenized. Samples must be thoroughly homogenized before analysis.

Relinquished By	Received By
Name: Gary Maxwell	Name: Chris Atwell
Date: 3-6-15	Date: 3-6-15
Time: 1658	Time: 1658

AMEC
3500 188th St. SW, Suite 601
Lynnwood, WA 98037
(425) 921-4000

CHAIN OF CUSTODY

Recorded by: GJM

Checked by: _____

Place Sample ID Label Here or Write ID Number Here	Date / Time	Analysis Containers: SMS Metals (As, Cd, Cr, Cu, Pb, Hg, Ag, Zn) and TOC, and PCBs (by Aroclor)	Analysis Containers: Archive	Analysis Containers:	Number of containers
AMEC Proj. BP2/Jorgensen SD SOR 03 R2 COC Form Date: 3/17/15 Time: 823	Date: Time:	1			1
Place Sample ID Label Here or Write ID Number Here	Date: Time:				Number of containers
Place Sample ID Label Here or Write ID Number Here	Date: Time:				Number of containers
Place Sample ID Label Here or Write ID Number Here	Date: Time:				Number of containers
Place Sample ID Label Here or Write ID Number Here	Date: Time:				Number of containers
Place Sample ID Label Here or Write ID Number Here	Date: Time:				Number of containers
Place Sample ID Label Here or Write ID Number Here	Date: Time:				Number of containers

Laboratory Sample Receipt

ARI Project Manager—Kelly Bottem
AMEC Project Manager—Cliff Whitmus (cliff.whitmus@amec.com ph 425-921-4023)
AMEC Laboratory Coordinator—Crystal Neirby (crystal.neirby@amec.com ph. 206-838-8469)

Sediment samples are unhomogenized. Samples must be thoroughly homogenized before analysis.

Relinquished By	Received By
Name: Kyle Kolbins	Name:
Date: 3/17/15	Date: 3/17/15
Time: 1523	Time: 1523