

**APPENDIX F
CORE PROCESSING LOGS**

FIELD AND DATA REPORT

**DOWNTOWN PORTLAND SEDIMENT
CHARACTERIZATION PHASE II**

WILLAMETTE RIVER
PORTLAND, OREGON

JUNE 2010

FOCUS AREA 12.1E

SEDIMENT CORE



Core Collection Date/Time: 3-2-2010 / 09:59
Core Processing Date/Time: 3-3-2010 / 13:00
Cored By: Subsea Sampling Solutions
Coring Eq: vibracore **Core Type:** CAB 3.5"ID
Process Length: 3.5 ft **Water Depth:** 15.8 ft

Core ID: DPSC-C086

Project: DPSC Phase II
Logged By: Eric Collins
Elevation: NA **Datum:** WGS84
Latitude: 45.504359 **Longitude:** -122.668354

| Elev (ft) | Depth (ft/m) | Sym | Description/Classification of Materials (depth in units of centimeters) | Sample | |
|-----------|--------------|-----|--|-------------------|----------|
| | | | | Sample ID (DPSC-) | Analyses |
| 0.0 | 0 | | Mudline | | |
| | | ● | 0-2 ORGANIC DEBRIS 5Y 3/2 olive gray, wood, leaves, twigs, plastic fragment, petroleum-like odor, slight sheen with application of water | DPSC-C086-A | Archived |
| | | ● | 2-4 SAND 5Y 3/2 olive gray, fines (10%), fine sand (80%), organic debris (10%), petroleum-like odor, slight sheen with application of water | | |
| | | ● | 4-23 SANDY GRAVEL 5Y 3/2 olive gray to 5Y 2/1 olive black, clay (<5%), silt (<5%), fine to medium sand (40%), subangular to subrounded fine to coarse gravel (50-60%), moist, dense, slight petroleum-like odor, no sheen with application of water, black soil possibly soil staining | | |
| | 1 | ● | 23-34 SAND 10YR 5/4 moderate yellowish brown, clay (<5%), silt (5%), fine sand (90-95%), moist, slight petroleum-like odor, no sheen with application of water | | |
| | | ● | 23-48: vertically distributed finger of olive black (5Y 2/1) sediment about 4 cm diameter, extends into gravelly sand layer 33: aluminum fragment | | |
| | | ● | 34-84 GRAVELLY SAND 10YR 5/4 yellowish brown, clay (<5%), silt (5%), subrounded gravel (20%), fine to coarse angular sand (70-75%), moist, dense, slight petroleum-like odor, no sheen with application of water | DPSC-C086-B | Partial |
| | | ● | 34-48: continuation of finger of olive black sediment from sand layer above | | |
| | 2 | ● | 42: decrease in gravel | | |
| | | ● | 52: glass fragment, aluminum fragment | | |
| | | ● | 69-72: lens of silty sand, petroleum-like odor, very slight sheen, 5Y 2/1 olive black | | |
| | | ● | 76: plastic reflector fragment | | |
| | | ● | 72-84: 5Y 2/1 olive black | | |
| | | ● | 81: glass fragment | | |

Notes:

Process Length: length of material in core tube measured at the processing lab; Water Depth: head of river-water above mudline.

WGS84: World Geodetic System 1984. Sym: geologic symbol representing classified unit.

Color descriptions (e.g., 5Y 3/2) based on Munsell Color System.

Analyses: Partial (Total Organic Carbon, Total Solids, Dry Weight, Metals, Total Petroleum Hydrocarbons - Extended Diesel Range (TPH-Dx), Polychlorinated Biphenyl (PCB) Aroclors, Polycyclic Aromatic Hydrocarbons (PAHs) including Alkylates, Pesticides); Butyltins; A (Ammonia); S (Sulfides); D/F (Dioxins/Furans); Grain Size.

SEDIMENT CORE



| | |
|---|---|
| <p>Core Collection Date/Time: <u>3-2-2010 / 09:59</u></p> <p>Core Processing Date/Time: <u>3-3-2010 / 13:00</u></p> <p>Cored By: <u>Subsea Sampling Solutions</u></p> <p>Coring Eq: <u>vibracore</u> Core Type: <u>CAB 3.5"ID</u></p> <p>Process Length: <u>3.5 ft</u> Water Depth: <u>15.8 ft</u></p> | <p>Core ID: DPSC-C086</p> <p>Project: <u>DPSC Phase II</u></p> <p>Logged By: <u>Eric Collins</u></p> <p>Elevation: <u>NA</u> Datum: <u>WGS84</u></p> <p>Latitude: <u>45.504359</u> Longitude: <u>-122.668354</u></p> |
|---|---|

| Elev (ft) | Depth (ft/m) | Sym | Description/Classification of Materials (depth in units of centimeters) | Sample | |
|-----------|--------------|------|--|-------------------|----------|
| | | | | Sample ID (DPSC-) | Analyses |
| | 3 | ●●●● | <p>84-108 SILT 5Y 3/2 olive gray, fine sand (5-10%), clay (5%), silt (80-85%), moist, soft, quick dilitancy, pockets of higher clay content, slight organic and petroleum-like odor, very slight sheen with application of water</p> | DPSC-C086-C | Archived |
| | 4 | | Bottom of Core (excluding drive shoe) | | |
| | 5 | | | | |

Notes:

Process Length: length of material in core tube measured at the processing lab; Water Depth: head of river-water above mudline.

WGS84: World Geodetic System 1984. Sym: geologic symbol representing classified unit.

Color descriptions (e.g., 5Y 3/2) based on Munsell Color System.

Analyses: Partial (Total Organic Carbon, Total Solids, Dry Weight, Metals, Total Petroleum Hydrocarbons - Extended Diesel Range (TPH-Dx), Polychlorinated Biphenyl (PCB) Aroclors, Polycyclic Aromatic Hydrocarbons (PAHs) including Alkylates, Pesticides); Butyltins; A (Ammonia); S (Sulfides); D/F (Dioxins/Furans); Grain Size.

SEDIMENT CORE

Sheet: 1 of 1



Core Collection Date/Time: 3-2-2010 / 11:45
Core Processing Date/Time: 3-3-2010 / 14:15
Cored By: Subsea Sampling Solutions
Coring Eq: vibracore **Core Type:** CAB 3.5"ID
Process Length: 1.0 ft **Water Depth:** 15.0 ft

Core ID: DPSC-C087

Project: DPSC Phase II
Logged By: Eric Collins
Elevation: NA **Datum:** WGS84
Latitude: 45.526958 **Longitude:** -122.666145

| Elev (ft) | Depth (ft/m) | Sym | Description/Classification of Materials (depth in units of centimeters) | Sample | |
|-----------|--------------|-----|---|-------------------|----------|
| | | | | Sample ID (DPSC-) | Analyses |
| 0.0 | 0 | | Mudline | | |
| | | | 0-12 ORGANIC DEBRIS 5Y 3/2 olive gray, leaves, twigs, trash, very loose, moist, organic odor, no sheen with application of water 7-12: sand (40%) | | |
| | | | 12-30 GRAVELLY SAND 5Y 3/2 olive gray to 5Y 2/1 olive black, clay (<5%), silt (5%), subrounded fine to coarse gravel (30%), fine to coarse angular sand (50-55%), trash (10%), moist, dense, well graded, organic odor, no sheen with application of water 28: cobble size subrounded concrete 7 cm long | DPSC-C087-A | Partial |
| | 1 | | Bottom of Core (excluding drive shoe) | | |
| | 2 | | | | |
| | 3 | | | | |

Notes:

Process Length: length of material in core tube measured at the processing lab; Water Depth: head of river-water above mudline.

WGS84: World Geodetic System 1984. Sym: geologic symbol representing classified unit.


Color descriptions (e.g., 5Y 3/2) based on Munsell Color System.

Analyses: Partial (Total Organic Carbon, Total Solids, Dry Weight, Metals, Total Petroleum Hydrocarbons - Extended Diesel Range (TPH-Dx), Polychlorinated Biphenyl (PCB) Aroclors, Polycyclic Aromatic Hydrocarbons (PAHs) including Alkylates, Pesticides); Butyltins; A (Ammonia); S (Sulfides); D/F (Dioxins/Furans); Grain Size.

FOCUS AREA 12.4W

LOG OF SUBSURFACE CORE: DPSC-C041

| | | | |
|------------------|--------------------------------------|---------------------|------------|
| PROJECT NAME | Portland Gas & Coke | STATION I.D. | PGM-13 |
| PROJECT NUMBER | 080029-01 | ATTEMPT | 4 |
| LOCATION | Portland, Oregon | DATE | 8/19/09 |
| CORED BY | AMEC Geomatrix | TIME | 1115 |
| CORING METHOD | Mud Mole | PENETRATION | 2.8' |
| LOGGED BY | M. Wilson | RECOVERY | 2.2' |
| CORE DIAMETER | 4-inch | PERCENT RECOVERY | 79% |
| X COORDINATE | 7646195 | REFUSAL ENCOUNTERED | Yes |
| Y COORDINATE | 683897 | MUDLINE ELEVATION, | -29.6' MSL |
| HORIZONTAL DATUM | Oregon State Plane, NAD 83, Int. ft. | VERTICAL DATUM | NGVD 1929 |

| UNCORRECTED CORE SECTION | CORRECTED CORE SECTION WITH SAMPLE INTERVALS | PID HEADSPACE (ppm) | DEPTH (FT) BELOW MUDLINE | SAMPLE ANALYTES | LITHOLOGIC COLUMN | LITHOLOGIC DESCRIPTION |
|--------------------------|--|---------------------|--------------------------|-----------------|---|---|
| | 0-30(A)* | | 0.0 | Analyte List |  | 0 to 2.2 feet: SANDY GRAVEL (GW) , dark gray, loose, wet, 60 percent well rounded, well graded, fine to cobble-sized gravel, 40 percent coarse sand, no sheen, no odor. @ 1.5 feet: 80 percent gravel, 10 percent sand, 10 percent silt. Bottom of core = 2.2 feet. |
| | 30-90(B)* | | | Analyte List | | |
| | | | 5 | | | |
| | | | 10 | | | |
| | | | 15 | | | |
| | | | 20 | | | |

REMARKS

Analyte list = VOCs, TPH-Gx, TPH-Dx, PAHs, Metals, Total Cyanide, TOC, Total Solids, Total Sulfides, Phenolics, Grain Size.
 * Samples retained by GSI. The A and B intervals are their designation.



FOCUS AREA 12.5E

SEDIMENT CORE



Core Collection Date/Time: 3-2-2010 / 12:21
Core Processing Date/Time: 3-3-2010 / 10:45
Cored By: Subsea Sampling Solutions
Coring Eq: vibracore **Core Type:** CAB 3.5"ID
Process Length: 5.2 ft **Water Depth:** 34.5 ft

Core ID: DPSC-C089

Project: DPSC Phase II
Logged By: Eric Collins
Elevation: NA **Datum:** WGS84
Latitude: 45.526228 **Longitude:** -122.666013

| Elev (ft) | Depth (ft/m) | Sym | Description/Classification of Materials (depth in units of centimeters) | Sample | |
|-----------|--------------|--|---|-------------------|--------------|
| | | | | Sample ID (DPSC-) | Analyses |
| 0.0 | 0 | | Mudline | | |
| | | [Symbol: Olive Gray with Black Dots] | 0-16 WOODY DEBRIS 5Y 3/2 olive gray, black (charred?) wood fragments up to 12 cm long, brown, silt matrix (20%), saturated, slight petroleum-like odor, moderate iridescent ribbony sheen with application of water, decanted 10 cm of olive gray, turbid, core water from top of core tube | DPSC-C089-A | Archived |
| | | [Symbol: Olive Gray with Fine Dots] | 16-54 SANDY SILT GRADING TO SILTY SAND 5Y 3/2 olive gray, fine sand (30%), clay (<5%), silt (65-70%), damp, medium stiffness, slow dilitancy, moderate petroleum-like odor, brown blebs and moderate iridescent ribbony sheen with application of water 16-90: normal gradation to sandy gravel 42: copper wire connector 2 mm long | | |
| | 1 | | | DPSC-C089-B | Partial, D/F |
| | | [Symbol: Olive Gray with Vertical Lines] | 54-68 SILTY SAND 5Y 3/2 olive gray, clay (<5%), silt (30%), fine sand (65-70%), moist, medium stiffness, slight petroleum odor, slight sheen with application of water, part of normal gradational sequence | | |
| | | [Symbol: Olive Gray with Large Dots] | 68-90 SANDY GRAVEL 5Y 3/2 olive gray, clay (<5%), silt (<5%), fine sand (30%), fine to coarse subrounded to rounded gravel (60-70%), moist, dense, slight petroleum-like odor, no sheen with application of water 76: thin clear glass (or plastic) fragment | | |
| | 2 | | | | |
| | | [Symbol: Olive Gray with Horizontal Lines] | 90-105 SILT 5Y 3/2 olive gray, clay (10-15%), silt (85-90%), moist, medium stiffness, slight petroleum-like odor, no sheen with application of water | | |
| | 3 | | | | |

Notes:

Process Length: length of material in core tube measured at the processing lab; Water Depth: head of river-water above mudline.

WGS84: World Geodetic System 1984. Sym: geologic symbol representing classified unit.

Color descriptions (e.g., 5Y 3/2) based on Munsell Color System.

Analyses: Partial (Total Organic Carbon, Total Solids, Dry Weight, Metals, Total Petroleum Hydrocarbons - Extended Diesel Range (TPH-Dx), Polychlorinated Biphenyl (PCB) Aroclors, Polycyclic Aromatic Hydrocarbons (PAHs) including Alkylates, Pesticides); Butyltins; A (Ammonia); S (Sulfides); D/F (Dioxins/Furans); Grain Size.

SEDIMENT CORE



Core Collection Date/Time: 3-2-2010 / 12:21
Core Processing Date/Time: 3-3-2010 / 10:45
Cored By: Subsea Sampling Solutions
Coring Eq: vibracore **Core Type:** CAB 3.5"ID
Process Length: 5.2 ft **Water Depth:** 34.5 ft

Core ID: DPSC-C089

Project: DPSC Phase II
Logged By: Eric Collins
Elevation: NA **Datum:** WGS84
Latitude: 45.526228 **Longitude:** -122.666013

| Elev (ft) | Depth (ft/m) | Sym | Description/Classification of Materials (depth in units of centimeters) | Sample | |
|-----------|--------------|-------|--|-------------------|----------|
| | | | | Sample ID (DPSC-) | Analyses |
| | 4 | ●●●●● | 105-128 SAND 5Y 3/2 olive gray, clay (<5%), silt (10%), fine sand (85-90%), moist, dense, no odor, no sheen with application of water 116-128: normal gradation with increasing medium sand (up to 20%) 118: twig 10 cm long | DPSC-C089-C | Archived |
| | 5 | ●●●●● | 128-160 GRAVELLY SAND 5Y 3/2 olive gray, clay and silt (<5%), fine to coarse subrounded gravel (35%), fine to coarse sand (60-65%), moist, dense, no odor, no sheen with application of water | | |
| | 6 | | Bottom of Core (excluding drive shoe) | | |

Notes:

Process Length: length of material in core tube measured at the processing lab; Water Depth: head of river-water above mudline.

WGS84: World Geodetic System 1984. Sym: geologic symbol representing classified unit.

Color descriptions (e.g., 5Y 3/2) based on Munsell Color System.

Analyses: Partial (Total Organic Carbon, Total Solids, Dry Weight, Metals, Total Petroleum Hydrocarbons - Extended Diesel Range (TPH-Dx), Polychlorinated Biphenyl (PCB) Aroclors, Polycyclic Aromatic Hydrocarbons (PAHs) including Alkylates, Pesticides); Butyltins; A (Ammonia); S (Sulfides); D/F (Dioxins/Furans); Grain Size.

SEDIMENT CORE



Core Collection Date/Time: 3-2-2010 / 13:39
Core Processing Date/Time: 3-3-2010 / 09:00
Cored By: Subsea Sampling Solutions
Coring Eq: vibracore **Core Type:** CAB 3.5"ID
Process Length: 2.3 ft **Water Depth:** 22.0 ft

Core ID: DPSC-C090 (R1)

Project: DPSC Phase II
Logged By: Eric Collins
Elevation: NA **Datum:** WGS84
Latitude: 45.521022 **Longitude:** -122.666600

| Elev (ft) | Depth (ft/m) | Sym | Description/Classification of Materials (depth in units of centimeters) | Sample | |
|-----------|--------------|-----|--|-------------------|--------------|
| | | | | Sample ID (DPSC-) | Analyses |
| 0.0 | 0 | | Mudline | | |
| | | | <p>1-10 SILT 5Y 3/2 olive gray, clay (5%), fine sand (<5%), silt (90-95%), saturated in liquid-state, organic debris (twig, wood chip), moderate petroleum-like odor, brown blebs float to surface with application of water, moderate iridescent ribbon sheen (3 mm wide), PID=13.8 ppm during homogenization of sample DPSC-C090-A, decanted 15 cm of olive gray, turbid, core water from top of core tube</p> <p>4-16: fishing line</p> <p>10-33 GRAVELLY SANDY SILT 5Y 3/2 olive gray, clay (<5%), subangular fine gravel (20%), fine sand (25%), silt (50-55%), saturated, moderate petroleum-like odor, brown blebs float to surface with application of water, moderate iridescent ribbon sheen (4 mm wide), PID=13.8 ppm during homogenization of sample DPSC-C090-A</p> <p>10-16: semi-liquid state</p> <p>16-18: piece of cloth rag</p> <p>24-26: gravel size clasts of black, fissile shale</p> <p>32: corbicula about 3 cm long</p> <p>26-33: coarsening downward</p> <p>33-71 SANDY GRAVEL 5Y 3/2 olive gray matrix, multi-colored gravel, clay (<5%), silt (5%), fine to coarse sand (25%), fine to coarse, rounded to angular, lithic, gravel (65-70%), wet, dense, well graded, moderate petroleum-like odor, slight ribbon sheen with application of water, PID=6.2 ppm during homogenization of sample DPSC-C090-B</p> <p>50, 62-65: small wood fragments</p> | DPSC-C090-A | Partial, D/F |
| | | | <p>Bottom of Core (excluding drive shoe)</p> | DPSC-C090-B | Partial, D/F |

Notes:

Process Length: length of material in core tube measured at the processing lab; Water Depth: head of river-water above mudline.

WGS84: World Geodetic System 1984. Sym: geologic symbol representing classified unit.

Color descriptions (e.g., 5Y 3/2) based on Munsell Color System.

Analyses: Partial (Total Organic Carbon, Total Solids, Dry Weight, Metals, Total Petroleum Hydrocarbons - Extended Diesel Range (TPH-Dx), Polychlorinated Biphenyl (PCB) Aroclors, Polycyclic Aromatic Hydrocarbons (PAHs) including Alkylates, Pesticides); Butyltins; A (Ammonia); S (Sulfides); D/F (Dioxins/Furans); Grain Size.

SEDIMENT CORE



Core Collection Date/Time: 3-2-2010 / 14:35
Core Processing Date/Time: 3-3-2010 / 09:00
Cored By: Subsea Sampling Solutions
Coring Eq: vibracore **Core Type:** CAB 3.5"ID
Process Length: 2.9 ft **Water Depth:** 21.6 ft

Core ID: DPSC-C090 (R2)

Project: DPSC Phase II
Logged By: Eric Collins
Elevation: NA **Datum:** WGS84
Latitude: 45.517881 **Longitude:** -122.667794

| Elev (ft) | Depth (ft/m) | Sym | Description/Classification of Materials (depth in units of centimeters) | Sample | |
|-----------|--------------|-----|--|-------------------|----------|
| | | | | Sample ID (DPSC-) | Analyses |
| 0.0 | 0 | | Mudline | | |
| | | | <p>0-10 SILT 5Y 3/2 olive gray, clay (<5%), fine sand (5%), saturated in liquid state, organic debris, moderate petroleum-like odor, moderate iridescent sheen, blebs, with application of water, decanted 45 cm of olive gray, turbid, core water from top of core tube</p> <p>15-57 GRAVELLY SANDY SILT 5Y 3/2, clay (<5%), fine gravel (20%), sand (25%), silt (50%), petroleum-like odor, moderate iridescent sheen, blebs, with application of water</p> <p>45: sediments coarsening downward</p> | No samples | |
| | | | <p>57-87 SANDY GRAVEL 5Y 3/2 matrix, fines (<5%), sand (25%), gravel (75-80%), moist, dense, slight petroleum-like odor, no sheen with application of water</p> | | |
| | | | Bottom of Core (excluding drive shoe) | | |

Notes:

Process Length: length of material in core tube measured at the processing lab; Water Depth: head of river-water above mudline.

WGS84: World Geodetic System 1984. Sym: geologic symbol representing classified unit.

Color descriptions (e.g., 5Y 3/2) based on Munsell Color System.

Analyses: Partial (Total Organic Carbon, Total Solids, Dry Weight, Metals, Total Petroleum Hydrocarbons - Extended Diesel Range (TPH-Dx), Polychlorinated Biphenyl (PCB) Aroclors, Polycyclic Aromatic Hydrocarbons (PAHs) including Alkylates, Pesticides); Butyltins; A (Ammonia); S (Sulfides); D/F (Dioxins/Furans); Grain Size.

FOCUS AREA 12.9W

SEDIMENT CORE



Core Collection Date/Time: 3-1-2010 / 13:37
Core Processing Date/Time: 3-2-2010 / 10:00
Cored By: Subsea Sampling Solutions
Coring Eq: vibracore **Core Type:** CAB 3.5"ID
Process Length: 0.8 ft **Water Depth:** 11.5 ft

Core ID: DPSC-C095 (R1)

Project: DPSC Phase II
Logged By: Eric Collins
Elevation: NA **Datum:** WGS84
Latitude: 45.517881 **Longitude:** -122.667794

| Elev (ft) | Depth (ft/m) | Sym | Description/Classification of Materials (depth in units of centimeters) | Sample | |
|--------------|-----------------|-----|---|----------------------|----------|
| | | | | Sample ID (DPSC-) | Analyses |
| 0.0 | ft m 0 0 | | Mudline | | |
| | | | 0-23 SANDY GRAVEL 5Y 3/2 olive gray, fine to medium sand (30%), fine to medium subangular to subrounded gravel (60%), plastic debris, twigs, leaves (10%) | No samples | |
| | 1 | | Bottom of Core (excluding drive shoe) Sediments were extruded from core tube because drive shoe was attached to base of core | | |

Notes:

Process Length: length of material in core tube measured at the processing lab; Water Depth: head of river-water above mudline.

WGS84: World Geodetic System 1984. Sym: geologic symbol representing classified unit.

Color descriptions (e.g., 5Y 3/2) based on Munsell Color System.

Analyses: Partial (Total Organic Carbon, Total Solids, Dry Weight, Metals, Total Petroleum Hydrocarbons - Extended Diesel Range (TPH-Dx), Polychlorinated Biphenyl (PCB) Aroclors, Polycyclic Aromatic Hydrocarbons (PAHs) including Alkylates, Pesticides); Butyltins; A (Ammonia); S (Sulfides); D/F (Dioxins/Furans); Grain Size.

SEDIMENT CORE



Core Collection Date/Time: 3-1-2010 / 14:08
Core Processing Date/Time: 3-2-2010 / 16:45
Cored By: Subsea Sampling Solutions
Coring Eq: vibracore **Core Type:** CAB 3.5"ID
Process Length: 2.1 ft **Water Depth:** 11.5 ft

Core ID: DPSC-C095 (R2)

Project: DPSC Phase II
Logged By: Eric Collins
Elevation: NA **Datum:** WGS84
Latitude: 45.513168 **Longitude:** -122.673153

| Elev (ft) | Depth (ft/m) | Sym | Description/Classification of Materials (depth in units of centimeters) | Sample | |
|-----------|--------------|-----|---|-------------------|-------------------------|
| | | | | Sample ID (DPSC-) | Analyses |
| 0.0 | 0 | | Mudline | | |
| | 0 | | 0-40 SANDY GRAVEL 5Y 3/2 olive gray, clay (<5%), silt (5%), fine to medium sand (30%), subangular to subrounded fine to medium gravel (60-65%), loose (probably from core collection vibrations), wet, lithic gravel, organic and petroleum-like odor, slight sheen with application of water (1 mm florets) 10: increase in silt (10-15%) | DPSC-C095-A | Archived |
| | 1 | | 40-63 SILTY GRAVEL 5Y 3/2 olive gray, clay (5%), fine to medium sand (10%), silt (20%), subrounded to subangular fine to medium gravel (65%), loose, wet, organic and petroleum-like odor, moderate iridescent sheen with application of water | DPSC-C095-B | Partial, Butyltins, D/F |
| | 2 | | Bottom of Core (excluding drive shoe) Cobble jammed in drive shoe. Hammer was used in the processing lab to break up and remove cobble from shoe. | | |

Notes:

Process Length: length of material in core tube measured at the processing lab; Water Depth: head of river-water above mudline.

WGS84: World Geodetic System 1984. Sym: geologic symbol representing classified unit.

Color descriptions (e.g., 5Y 3/2) based on Munsell Color System.

Analyses: Partial (Total Organic Carbon, Total Solids, Dry Weight, Metals, Total Petroleum Hydrocarbons - Extended Diesel Range (TPH-Dx), Polychlorinated Biphenyl (PCB) Aroclors, Polycyclic Aromatic Hydrocarbons (PAHs) including Alkylates, Pesticides); Butyltins; A (Ammonia); S (Sulfides); D/F (Dioxins/Furans); Grain Size.

FOCUS AREA 14.1W

SEDIMENT CORE



Core Collection Date/Time: 3-1-2010 / 15:05
Core Processing Date/Time: 3-2-2010 / 09:30
Cored By: Subsea Sampling Solutions
Coring Eq: vibracore **Core Type:** CAB 3.5"ID
Process Length: 3.8 ft **Water Depth:** 17.1 ft

Core ID: DPSC-C112 (R1)

Project: DPSC Phase II
Logged By: Eric Collins
Elevation: NA **Datum:** WGS84
Latitude: 45.496097 **Longitude:** -122.667572

| Elev (ft) | Depth (ft/m) | Sym | Description/Classification of Materials (depth in units of centimeters) | Sample | |
|-----------|--------------|-----|---|-------------------|--------------|
| | | | | Sample ID (DPSC-) | Analyses |
| 0.0 | 0 | | Mudline | | |
| | 0 | | 0-3 SILT 5Y 3/2 olive grey, clay (5%), fine sand (5%), gravel clast (10%), silt (60%), organic debris (20%), saturated, debris consists of twigs, roots, leaves, organic odor, slight ribbonary sheen (1 mm wide) with application of water | DPSC-C112-A | Archived |
| | 1 | | 3-31 SANDY SILT 5Y 3/2 olive gray, clay (5%), fine micaceous sand (25%), silt (70%), damp, soft to firm, slow dilitancy, moderate organic odor, no sheen with application of water | | |
| | 2 | | 31-63 SAND 5Y 3/2 olive gray, silt (5%), fine micaceous sand (95%), moist, medium density, slight organic odor, no sheen with application of water 52-63: lens of fine subangular gravel | DPSC-C112-B | Partial |
| | 3 | | 63-115 GRAVELLY SAND 5Y 3/2 olive gray, fine to medium subrounded gravel (25%), sand (75%), dense, moist, slight organic odor, no sheen with application of water | | |
| | 4 | | Bottom of Core (excluding drive shoe) Plastic sleeve could not be removed from the aluminum core tube on vessel due to heaving sand between sleeve and tube. Sleeve and tube cut in the processing lab. Bottom 15 cm of sediments in contact with aluminum tube. | DPSC-C112-C | Not Analyzed |

Notes:

Process Length: length of material in core tube measured at the processing lab; Water Depth: head of river-water above mudline.

WGS84: World Geodetic System 1984. Sym: geologic symbol representing classified unit.

Color descriptions (e.g., 5Y 3/2) based on Munsell Color System.

Analyses: Partial (Total Organic Carbon, Total Solids, Dry Weight, Metals, Total Petroleum Hydrocarbons - Extended Diesel Range (TPH-Dx), Polychlorinated Biphenyl (PCB) Aroclors, Polycyclic Aromatic Hydrocarbons (PAHs) including Alkylates, Pesticides); Butyltins; A (Ammonia); S (Sulfides); D/F (Dioxins/Furans); Grain Size.

SEDIMENT CORE

Sheet: 1 of 1



Core Collection Date/Time: 3-1-2010 / 16:05
Core Processing Date/Time: 3-2-2010 / 08:55
Cored By: Subsea Sampling Solutions
Coring Eq: vibracore **Core Type:** CAB 3.5"ID
Process Length: 2.6 ft **Water Depth:** 17.0 ft

Core ID: DPSC-C112 (R3)

Project: DPSC Phase II
Logged By: Eric Collins
Elevation: NA **Datum:** WGS84
Latitude: 45.496097 **Longitude:** -122.667572

| Elev (ft) | Depth (ft/m) | Sym | Description/Classification of Materials (depth in units of centimeters) | Sample | |
|-----------|--------------|-----|---|-------------------|----------|
| | | | | Sample ID (DPSC-) | Analyses |
| 0.0 | 0 | | Mudline | | |
| | | | 0-14 SILT 5Y 3/2 olive gray, clay (5%), fine sand (5%), silt (60%), organic debris (30%), saturated with ~10% water, soft to liquid-like, debris consists of twigs up to 1.5 cm diameter, leaves, small pine cone, organic odor, slight sheen (light blue, 1 mm wide ribbons) with application of water | No samples | |
| | | | 14-31 SANDY SILT 5Y 3/2 olive gray, clay (5%), fine sand (25%), silt (70%), wet, soft to medium stiff, slow dilitancy, slight organic odor, slight sheen with application of water 15: corbicula 3 cm long 20: corbicula 1.5 cm long | | |
| | | | 31-63 SAND 5Y 3/2 olive gray, silt (5%), fine micaceous sand (95%), moist, medium dense, slight organic odor, very slight sheen with application of water 55-63: lens with fine subangular gravel | | |
| | | | 63-79 GRAVELLY SAND 5Y 3/2 olive gray, fine to coarse subrounded gravel (30%), sand (70%), moist, dense, organic odor, very slight sheen with application of water | | |
| | | | Bottom of Core (excluding drive shoe) | | |

Notes:

Process Length: length of material in core tube measured at the processing lab; Water Depth: head of river-water above mudline.

WGS84: World Geodetic System 1984. Sym: geologic symbol representing classified unit.

Color descriptions (e.g., 5Y 3/2) based on Munsell Color System.

Analyses: Partial (Total Organic Carbon, Total Solids, Dry Weight, Metals, Total Petroleum Hydrocarbons - Extended Diesel Range (TPH-Dx), Polychlorinated Biphenyl (PCB) Aroclors, Polycyclic Aromatic Hydrocarbons (PAHs) including Alkylates, Pesticides); Butyltins; A (Ammonia); S (Sulfides); D/F (Dioxins/Furans); Grain Size.

TRIMET SUPPLEMENTAL SAMPLING

SEDIMENT CORE



Core Collection Date/Time: 3-1-2010 / 11:36
Core Processing Date/Time: 3-2-2010 / 11:30
Cored By: Subsea Sampling Solutions
Coring Eq: vibracore **Core Type:** CAB 3.5"ID
Process Length: 6.4 ft **Water Depth:** 46.5 ft

Core ID: DPSC-C099

Project: DPSC Phase II
Logged By: Eric Collins
Elevation: NA **Datum:** WGS84
Latitude: 45.513168 **Longitude:** -122.673153

| Elev (ft) | Depth (ft/m) | Sym | Description/Classification of Materials (depth in units of centimeters) | Sample | |
|-----------|--------------|-----|--|-------------------|--------------------------------------|
| | | | | Sample ID (DPSC-) | Analyses |
| 0.0 | 0 | | Mudline | | |
| | 0 | | 0-3 SILT 10YR 5/4 yellowish brown, clay (5%), fine sand (5%), silt (90%), wet, soft, organic odor, 2 mm diameter sheen florets with application of water | DPSC-C099-A | Archived |
| | 1 | | 3-5 WOODY DEBRIS wood up to 4 cm long, some pieces charred | | |
| | 2 | | 5-172 SAND 5Y 3/2 olive gray, clay (<5%), silt (5%), fine sand (90-95%), medium density, moist, slight organic odor 7: 2 mm diameter sheen florets with application of water | DPSC-C099-B | Archived |
| | 3 | | 62-74: sandy gravel lens, fine sand (35%), fine to medium, subangular to subrounded, mostly volcanic gravel (65%), dense, moist 81: 1 cubic cm clump with higher clay content (about 15%) | | |
| | 4 | | 58-74; 99-119: light brown, higher oxidation on sediment surfaces 118-128: higher clay content (about 10%) | DPSC-C099-C | Archived |
| | 5 | | | | |
| | 6 | | 172-195 SAND AND WOODY DEBRIS 5Y 3/2 olive gray, fine sand, leaves, wood chips/bark, moderate organic odor, slight sheen (possibly natural from organic material) | DPSC-C099-D | Partial, Butyltins, A, S, Grain Size |
| | | | Bottom of Core (excluding drive shoe) | | |

Notes:

Process Length: length of material in core tube measured at the processing lab; Water Depth: head of river-water above mudline.

WGS84: World Geodetic System 1984. Sym: geologic symbol representing classified unit.

Color descriptions (e.g., 5Y 3/2) based on Munsell Color System.

Analyses: Partial (Total Organic Carbon, Total Solids, Dry Weight, Metals, Total Petroleum Hydrocarbons - Extended Diesel Range (TPH-Dx), Polychlorinated Biphenyl (PCB) Aroclors, Polycyclic Aromatic Hydrocarbons (PAHs) including Alkylates, Pesticides); Butyltins; A (Ammonia); S (Sulfides); D/F (Dioxins/Furans); Grain Size.

SEDIMENT CORE



Core Collection Date/Time: 3-1-2010 / 09:58
Core Processing Date/Time: 3-2-2010 / 13:30
Cored By: Subsea Sampling Solutions
Coring Eq: vibracore **Core Type:** CAB 3.5"ID
Process Length: 12.1 ft **Water Depth:** 22.5 ft

Core ID: DPSC-C100

Project: DPSC Phase II
Logged By: Eric Collins
Elevation: NA **Datum:** WGS84
Latitude: 45.505597 **Longitude:** -122.666253

| Elev (ft) | Depth (ft/m) | Sym | Description/Classification of Materials (depth in units of centimeters) | Sample | |
|-----------|--------------|-----|--|-------------------|--------------------------------------|
| | | | | Sample ID (DPSC-) | Analyses |
| 0.0 | 0 | | Mudline | | |
| | 0 | | 0-16 SILT GRADING TO SANDY SILT 5Y 3/2 olive gray, clay (5%), fine sand (5%), silt (80%), 10% organic debris (roots, small wood chips <1 cm long), increase in fine sand with depth, saturated, very soft, organic and petroleum-like odor, minor brown blebs with application of water and slight ribbony sheen | DPSC-C100-A | Archived |
| | 1 | | 16-91 SANDY SILT 5Y 3/2 olive gray, clay (5%), fine sand (25%), silt (65-70%), <5% organics (small plant roots), organic and petroleum-like odor, slight ribbony sheen | DPSC-C100-B | Archived |
| | 2 | | 55-71: increase in organic debris | | |
| | 3 | | 53: wood fragment 13 cm long with machine cut end | DPSC-C100-C | Archived |
| | 4 | | 79-91: increase in water content, softer, no sheen with application of water | | |
| | 5 | | 91-370: SILT 5Y 3/2 olive gray, clay (10%), fine sand (5%), silt (85%), moist, firm, interbeds of fine sand and sandy silt, organic odor, slight ribbony sheen in some sand lenses with application of water | DPSC-C100-D | Archived |
| | 6 | | 177-183: increase in fine sand (15-20%) | | |
| | 7 | | 183-204: decrease in water content, dry | | |
| | 8 | | 204-208; 215-217: lenses of fine sand (90%) with subrounded fine gravel (10%), loose, moist | DPSC-C100-E | Archived |
| | 9 | | 216: wood fragment 1 cm long | | |
| | 10 | | 260-275; 301-308; 315-319: lenses of sandy silt, soft, moist, fine sand (25%), silt (75%), small wood fragments | | |
| | 11 | | 352-355: lens of fine sand, no odor, no sheen with application of water | DPSC-C100-F | Partial, Butyltins, A, S, Grain Size |
| | 12 | | Bottom of Core (excluding drive shoe) | | |

Notes:

Process Length: length of material in core tube measured at the processing lab; Water Depth: head of river-water above mudline.

WGS84: World Geodetic System 1984. Sym: geologic symbol representing classified unit.

Color descriptions (e.g., 5Y 3/2) based on Munsell Color System.

Analyses: Partial (Total Organic Carbon, Total Solids, Dry Weight, Metals, Total Petroleum Hydrocarbons - Extended Diesel Range (TPH-Dx), Polychlorinated Biphenyl (PCB) Aroclors, Polycyclic Aromatic Hydrocarbons (PAHs) including Alkylates, Pesticides); Butyltins; A (Ammonia); S (Sulfides); D/F (Dioxins/Furans); Grain Size.