

SSFL Phase 3 – Field Sample Data Sheet

CDM Smith

FSDS Checked By V. Cortes

Sample ID SL-863-SA5A-SB-4.0-5.0

Date/Time 6-19-13 / 0920

Matrix (circle one)

☒ Soil ☐ Sediment ☐ Water

Start Depth 4.0

End Depth 5.0

Depth Units (circle one)

Inches ☐ Feet ☒

Check if Composite ☐

Collection Method (circle one)

DPT ☐ Slide Hammer ☐ Hand Auger ☐ Slide Hammer ☐ Trenching ☐ Sediment

QC Type (circle one)

☒ N ☐ FD ☐ FB ☐ RB

Parent Sample ID NA

Field Geologist David Rojas

Sampler Vidal Cortes

Analysis

Parameters	Method	Analyze?
Metals	EPA 6010	<input checked="" type="checkbox"/>
	EPA 6020	<input checked="" type="checkbox"/>
	EPA 7471 (Soil)	<input checked="" type="checkbox"/>
	EPA 7470 (Water)	<input type="checkbox"/>
Fluoride	EPA 300.0/9056	<input type="checkbox"/>
SVOCs	EPA 8270	<input type="checkbox"/>
TIC	EPA 8270	<input type="checkbox"/>
PAHs	EPA 8270 SIM	<input checked="" type="checkbox"/>
1,4 Dioxane	EPA 8270 SIM	<input type="checkbox"/>
Dioxins	EPA 1613	<input checked="" type="checkbox"/>
PCBs/PCTs	EPA 8082	<input type="checkbox"/>
Perchlorate	EPA 314.0/331	<input type="checkbox"/>
Perchlorate Confirmation	EPA 6850/6860	<input type="checkbox"/>
pH	EPA 9045 (Soil)	<input checked="" type="checkbox"/>
	EPA 9040 (Water)	<input type="checkbox"/>
Hexavalent Chromium	EPA 7196/7199	<input type="checkbox"/>
Herbicides	EPA 8151	<input type="checkbox"/>
Pesticides	EPA 8081	<input type="checkbox"/>

Parameters	Method	Analyze?
Encores	VOCs	EPA 8260
	1,4 Dioxane	EPA 8260 SIM
	TPH-GRO	EPA 8015
	TPH-EFH	EPA 8015
	Glycols	EPA 8015
	Alcohols	EPA 8015
	Terphenyls	EPA 8015
	Nitrates	EPA 300.0/9056
	Energetics	EPA 8330
	Cyanide	EPA 9012
Sediment	Formaldehyde	EPA 8315
	NDMA	EPA 1625
	Organotin	NOAA Status and Trends, Krone et al.
	Methyl Mercury	EPA 1630

2 16-oz jars & 2 Encores

SSFL Phase 3 – Field Data Sample Sheet (Sample Descriptions)

Soil Classification (circle one)

MAJOR DIVISION			GROUP SYMBOL	LETTER SYMBOL	GROUP NAME
COARSE GRAINED SOILS CONTAINS MORE THAN 50% FINES	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVEL WITH * 5% FINES		GW	Well-graded GRAVEL
				GP	Poorly graded GRAVEL
		GRAVEL WITH BETWEEN 5% AND 15% FINES		GW-GM	Well-graded GRAVEL with silt
				GW-GC	Well-graded GRAVEL with clay
				GP-GM	Poorly graded GRAVEL with silt
				GP-GC	Poorly graded GRAVEL with clay
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	GRAVEL WITH ≥ 10% FINES		GM	Silty GRAVEL
				GC	Clayey GRAVEL
		SAND WITH * 5% FINES		SW	Well-graded SAND
				SP	Poorly graded SAND
		SAND WITH BETWEEN 5% AND 15% FINES		SW-SM	Well-graded SAND with silt
				SW-SC	Well-graded SAND with clay
				SP-SM	Poorly graded SAND with silt
FINE GRAINED SOILS CONTAINS MORE THAN 50% FINES	SILT AND CLAY	LIQUID LIMIT LESS THAN 50		ML	Inorganic SILT with low plasticity
				CL	Lean inorganic CLAY with low plasticity
				OL	Organic SILT with low plasticity
		LIQUID LIMIT GREATER THAN 50		MH	Elastic inorganic SILT with moderate to high plasticity
				CH	Fat inorganic CLAY with moderate to high plasticity
				OH	Organic SILT or CLAY with moderate to high plasticity
HIGHLY ORGANIC SOILS				PT	PEAT soils with high organic contents

Fill Material

- Is Fill Material Present Yes ☒ No ☐
- Percentage Fill (%) None
- Fill Description (circle all that apply)

Asphalt	Metal	Plastic
Concrete	Wood	Glass
Igneous/Metamorphic Gravel	<input checked="" type="radio"/> N/A	
Other _____		

Is Staining Present Yes ☒ No ☐
 Color Strong, brn (7.5YR 4/6)

Odor
 1. Odor Strength (circle one)
☒ None ☐ Slight ☐ Strong

2. Odor Description (circle one)
 Organic ☐ Petroleum ☐ Chemical ☐
☒ N/A Other _____

Moisture Condition (circle one)
☒ Dry ☐ Moist ☐ Wet

PG Signature Mike Hoffman

PG Registration # 7735

Additional Comments Unable to collect sample in slide hammer, collected sample using hand auger

Location ID: DG-864		Subarea: 5A		Date Started: 6-18-13		Date Completed: 6-18-13	
Client: DOE				Project Name/#: SSFL-65265-03976-1208-002-223-02231-SSPHB-MB		Total Depth: 1st HA= 3.8 2nd HA= 4.8	
Company Name: CDM SMITH				Drill Contractor/Driller: Strongarm			
GPS collected: <input checked="" type="checkbox"/> Yes or No				Drill Method: Slidehammer/Auger		Depth Drilled into Bedrock: NA	
Radiological Background: γ=15 dβ=68				Borehole diameter: 2.175 inches			
PID Background: 0.0				Depth to GW: NA		Sampling Method:	
Radiological Equipment Used:				PG Review & No. 7735		Geologist: David Rojas	
<input checked="" type="checkbox"/> MicroR <input checked="" type="checkbox"/> Alpha/Beta <input checked="" type="checkbox"/> Pancake							

Depth (feet)	bgs	Recovery (feet)	PID (ppm)	Radiological (uR/cpm)	Sample Name	Sample Time	USCS	Description of Materials
0.0-0.5	0.5/0.5	0.0	15/90	SL-864	1355	SP	SM	SAND w/ SILT, bwn (7.5YR 4/3) mottled w/ (7.5YR 5/3) F-gm, gmn, pg, sr to sa, quartz, dry, loose to sli compacted, friable, ~10% SILT, to to few ant org (roots)
		0.0	14/60	SAGA-SB				0.0-0.5
1		0.0	14/60					SILTY SAND, bwn (7.5YR 4/2) mottled w/ dk bwn (7.5YR 3/2) F-gm w/ few ant med gmn, pg, sr to sa, quartz med compacted, sli to med friable, ~20% silt, dry, to ant org (roots)
2		0.0	14/78					
3		0.0	14/72				SM	SILTY SAND, AA. except strong bwn (7.5YR 4/6) mottled w/ reddish yel (7.5YR 6/6), to ant coarse grained.
4		0.0	14/84				SP	SAND w/ SILT, strong bwn (7.5YR 4/6) mottled w/ dk bwn (7.5YR 3/4), F-gm w/ to ant med gmn, pg, sr to sa, quartz, dry to sli moist, mod consolidated to consolidated, sli to med friable.
5		0.0	14/102		SL-864 SAGA-SB 4.0-5.0	1410	SP	SAND, brn yel (10YR 6/6) mottled w/ yel bwn (10YR 5/6) and dk yel bwn (10YR 4/4), F-m gmn, pg, sr to sa, quartz, med consolidated, sli to med friable, <5% silt, to ant silty sand blebs, to ant sandstone gravel. Fine sized, hard.
Referrals @ 3.8 & 4.8								

SSFL Phase 3 – Field Sample Data Sheet

CDM Smith

FSDS Checked By V. Cortes

Sample ID SL-864-SA5A-SB-0.0-0.5 Date/Time 6-18-13 / 1355

Matrix (circle one)

☒ Soil ☐ Sediment ☐ Water

Start Depth 0.0

End Depth 0.5

Depth Units (circle one)

Inches ☐ Feet ☒

Check if Composite ☐

DPT

☒ Slide Hammer

Collection Method (circle one)

Hand Auger/Slide Hammer

Trenching

Sediment

QC Type (circle one)

☒ N ☐ FD ☐ FB ☐ RB

Parent Sample ID NA

Field Geologist

DAVID ROJAS

Sampler

VIDAL CORTES

Analysis

Parameters	Method	Analyze?
Metals	EPA 6010	<input checked="" type="checkbox"/>
	EPA 6020	<input checked="" type="checkbox"/>
	EPA 7471 (Soil)	<input checked="" type="checkbox"/>
	EPA 7470 (Water)	
Fluoride	EPA 300.0/9056	
SVOCs	EPA 8270	
TIC	EPA 8270	
PAHs	EPA 8270 SIM	<input checked="" type="checkbox"/>
1,4 Dioxane	EPA 8270 SIM	
Dioxins	EPA 1613	<input checked="" type="checkbox"/>
PCBs/PCTs	EPA 8082	
Perchlorate	EPA 314.0/331	
Perchlorate Confirmation	EPA 6850/6860	
pH	EPA 9045 (Soil)	<input checked="" type="checkbox"/>
	EPA 9040 (Water)	
Hexavalent Chromium	EPA 7196/7199	
Herbicides	EPA 8151	
Pesticides	EPA 8081	

Parameters	Method	Analyze?
Encores	VOCs	EPA 8260
	1,4 Dioxane	EPA 8260 SIM
	TPH-GRO	EPA 8015
	TPH-EFH	EPA 8015 <input checked="" type="checkbox"/>
	Glycols	EPA 8015
	Alcohols	EPA 8015
	Terphenyls	EPA 8015
	Nitrates	EPA 300.0/9056
	Energetics	EPA 8330
	Cyanide	EPA 9012
Sediment	Formaldehyde	EPA 8315
	NDMA	EPA 1625
	Organotin	NOAA Status and Trends, Krone et al.
	Methyl Mercury	EPA 1630

SSFL Phase 3 – Field Data Sample Sheet (Sample Descriptions)

Soil Classification (circle one)

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COARSE GRAINED SOILS CONTAINS MORE THAN 50% FINES	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVEL WITH * 5% FINES		GW	Well-graded GRAVEL
				GP	Poorly graded GRAVEL
		GRAVEL WITH BETWEEN 5% AND 15% FINES		GW-GM	Well-graded GRAVEL with silt
				GW-GC	Well-graded GRAVEL with clay
				GP-GM	Poorly graded GRAVEL with silt
				GP-GC	Poorly graded GRAVEL with clay
		GRAVEL WITH ≥ 10% FINES		GM	Silty GRAVEL
				GC	Clayey GRAVEL
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	SAND WITH * 5% FINES		SW	Well-graded SAND
				SP	Poorly graded SAND
		SAND WITH BETWEEN 5% AND 15% FINES		SW-SM	Well-graded SAND with silt
				SW-SC	Well-graded SAND with clay
				SP-SM	Poorly graded SAND with silt
				SP-SC	Poorly graded SAND with clay
		SAND WITH ≥ 15% FINES		SM	Silty SAND
				SC	Clayey SAND
FINE GRAINED SOILS CONTAINS MORE THAN 50% FINES	SILT AND CLAY	LIQUID LIMIT LESS THAN 50		ML	Inorganic SILT with low plasticity
				CL	Lean inorganic CLAY with low plasticity
				OL	Organic SILT with low plasticity
		LIQUID LIMIT GREATER THAN 50		MH	Elastic inorganic SILT with moderate to high plasticity
				CH	Fat inorganic CLAY with moderate to high plasticity
				OH	Organic SILT or CLAY with moderate to high plasticity
HIGHLY ORGANIC SOILS				PT	PEAT soils with high organic contents

Fill Material

- Is Fill Material Present ☒ Yes ☐ No
- Percentage Fill (%) Trace 1%
- Fill Description (circle all that apply)

<input checked="" type="radio"/> Asphalt	<input checked="" type="radio"/> Metal*	<input type="radio"/> Plastic
<input type="radio"/> Concrete	<input type="radio"/> Wood	<input type="radio"/> Glass
<input type="radio"/> Igneous/Metamorphic Gravel	<input type="radio"/> N/A	
Other <u>* Aluminum</u>		

Is Staining Present Yes ☒ No ☐

Color brown (7.5YR 4/3) mottled w/ (7.5YR 5/3)

Odor

1. Odor Strength (circle one)

☒ None ☐ Slight ☐ Strong

2. Odor Description (circle one)

☐ Organic ☐ Petroleum ☐ Chemical

☒ N/A ☐ Other _____

Moisture Condition (circle one)

☒ Dry ☐ Moist ☐ Wet

PG Signature [Signature]

PG Registration # 7735

Additional Comments NA

SSFL Phase 3 – Field Sample Data Sheet

CDM Smith

FSDS Checked By V. Cortes

Sample ID SL-864-SA5A-SB-4-5.0 Date/Time 6-18-13/1410

Matrix (circle one) Soil Sediment Water	Start Depth <u>4.0</u>	Depth Units (circle one) Inches <u>Feet</u>
	End Depth <u>5.0</u>	

Check if Composite ☐ Collection Method (circle one)
 DPT Slide Hammer Hand Auger Slide Hammer Trenching Sediment

QC Type (circle one)
N FD FB RB Parent Sample ID NA

Field Geologist David Rojas

Sampler Vidal Cortes

Analysis

Parameters	Method	Analyze?
Metals	EPA 6010	<input checked="" type="checkbox"/>
	EPA 6020	<input checked="" type="checkbox"/>
	EPA 7471 (Soil)	<input checked="" type="checkbox"/>
	EPA 7470 (Water)	
Fluoride	EPA 300.0/9056	
SVOCs	EPA 8270	
TIC	EPA 8270	
PAHs	EPA 8270 SIM	<input checked="" type="checkbox"/>
1,4 Dioxane	EPA 8270 SIM	
Dioxins	EPA 1613	<input checked="" type="checkbox"/>
PCBs/PCTs	EPA 8082	
Perchlorate	EPA 314.0/331	
Perchlorate Confirmation	EPA 6850/6860	
pH	EPA 9045 (Soil)	<input checked="" type="checkbox"/>
	EPA 9040 (Water)	
Hexavalent Chromium	EPA 7196/7199	
Herbicides	EPA 8151	
Pesticides	EPA 8081	

Parameters	Method	Analyze?
Encores	VOCs	EPA 8260
	1,4 Dioxane	EPA 8260 SIM
	TPH-GRO	EPA 8015
	TPH-EFH	EPA 8015
Sediment	Glycols	EPA 8015
	Alcohols	EPA 8015
	Terphenyls	EPA 8015
	Nitrates	EPA 300.0/9056
	Energetics	EPA 8330
	Cyanide	EPA 9012
	Formaldehyde	EPA 8315
	NDMA	EPA 1625
	Organotin	NOAA Status and Trends, Krone et al.
	Methyl Mercury	EPA 1630

2 16-oz jars & 2 Encores

SSFL Phase 3 – Field Data Sample Sheet (Sample Descriptions)

Soil Classification (circle one)

MAJOR DIVISION			GROUP SYMBOL	LETTER SYMBOL	GROUP NAME	
COARSE GRAINED SOILS CONTAINS MORE THAN 50% FINES	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVEL WITH * 5% FINES		GW	Well-graded GRAVEL	
				GP	Poorly graded GRAVEL	
		GRAVEL WITH BETWEEN 5% AND 15% FINES		GW-GM	Well-graded GRAVEL with silt	
				GW-GC	Well-graded GRAVEL with clay	
				GP-GM	Poorly graded GRAVEL with silt	
				GP-GC	Poorly graded GRAVEL with clay	
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	GRAVEL WITH ≥ 10% FINES		GM	Silty GRAVEL	
				GC	Clayey GRAVEL	
		SAND WITH * 5% FINES		SW	Well-graded SAND	
				SP	Poorly graded SAND	
			SAND WITH BETWEEN 5% AND 15% FINES		SW-SM	Well-graded SAND with silt
					SW-SC	Well-graded SAND with clay
	SP-SM	Poorly graded SAND with silt				
	SP-SC	Poorly graded SAND with clay				
FINE GRAINED SOILS CONTAINS MORE THAN 50% FINES	SILT AND CLAY	SAND WITH ≥ 15% FINES		SM	Silty SAND	
				SC	Clayey SAND	
		LIQUID LIMIT LESS THAN 50		ML	Inorganic SILT with low plasticity	
				CL	Lean inorganic CLAY with low plasticity	
		LIQUID LIMIT GREATER THAN 50		OL	Organic SILT with low plasticity	
				MH	Elastic inorganic SILT with moderate to high plasticity	
				CH	Fat inorganic CLAY with moderate to high plasticity	
				CH	Organic SILT or CLAY with moderate to high plasticity	
HIGHLY ORGANIC SOILS				PT	PEAT soils with high organic contents	

Fill Material

1. Is Fill Material Present Yes ☒ No ☐

2. Percentage Fill (%) NONE

3. Fill Description (circle all that apply)

Asphalt Metal Plastic

Concrete Wood Glass

Igneous/Metamorphic Gravel ☒ N/A

Other _____

Is Staining Present Yes ☒ No ☐

Color brn/yel (10YR 4/6) mottled w/ yel brn (10YR 5/6)

Odor anal d k yel brn (10YR 4/4)

1. Odor Strength (circle one)

☒ None ☐ Slight ☐ Strong

2. Odor Description (circle one)

Organic Petroleum Chemical

☒ N/A Other _____

Moisture Condition (circle one)

Dry ☒ Moist ☐ Wet

PG Signature [Signature]

PG Registration # 7735

Additional Comments Collected using hand auger because soil could not be retained in slide hammer s/revers.

Location ID: DC-865		Subarea: SA		Date Started: 6-19-13		Date Completed: 6-19-13	
Client: DOE		Project Name/ID: SSFL-55250-03370-1203-002-223-02231-SSPH3				Total Depth: 1st DPT = 9.5 2nd DPT = 9.7 3rd DPT = 9.0	
Company Name: CDM SMITH		Drill Contractor/Driller: Strong arm		Drill Method: DPT		Depth Drilled Into Bedrock: NA	
GPS collected? Yes or No		Borehole diameter: 2.25		Depth to GW: NA		Sampling Method: DPT SS sleeves	
Radiological Background: Y=12 AB=91		Radiological Equipment Used: <input checked="" type="checkbox"/> MicroR <input checked="" type="checkbox"/> Alpha/Beta <input checked="" type="checkbox"/> Pancake		PG Review & No.: Valu 90ffm #7735		Geologist: David Rojas	
PID Background: 0.0							

Depth (feet)	bgs	Recovery (feet)	PID (ppm)	Radiological (uR/cpm)	Sample Name	Sample Time	USCS	Description of Materials
1	0.5	0.5	0.0	12/80	SL-865	1340	SP	SAND w/ SILT, brn (7.5YR 5/4) f. med qz, sr to sa, quartz, ~10% silt dry, sli to mod compacted, friable, to ant org (roots) & ant asphalt & igneous gravel - fine to med sized
		0.5	0.0	10/72	SA5A-SB	0.0-0.5	SM	
2	2.0	3.5	0.0	10/48			SM	SAND w/ SILT, dk yel brn (10YR 4/4) mottled w/ strong brn (7.5YR 4/6) and brn (7.5YR 5/4), f. med qz, sr to sa, quartz, dry, mod compacted, mod friable to friable ~10% silt, to ant igneous gravel (A.A.), to ant mottling w/ sandy silt, v pale brn (10YR 7/4)
3			0.0	10/40			SM	SILTY SAND, brn (7.5YR 5/3) mottled w/ strong brn (7.5YR 7/6) f. med w/ few to some med qz, pg, sr to sa, quartz, dry, ~20% silt compacted, sli friable, sli laminated (3-6mm) at top of unit becoming non laminated w/ depth & only mod compacted and more friable, to some mottling w/ sandy silt A.A.
4			0.0	10/66			SM	SILTY SAND, A.A. except no laminations & only mod compacted & mod friable to friable
5			0.0	10/66	SL-865 SA5A-SB 4.0-5.0	1355	SM	
6	3.0	4.0	0.0	10/54			SM	SILTY SAND, yel brn (10YR 5/4) mottled w/ v pale brn (10YR 7/4) f. med w/ to ant med qz, pg, sr to sa, quartz, sli to mod compacted, friable, dry, ~20% silt, some few blks of sandy silt dk yel brn (10YR 3/4) sli consolidated
7			0.0	10/72			SC	CLAYEY SAND, v pale brn (10YR 7/3) mottled w/ brn (10YR 5/4) f. med, pg, sr to sa, quartz, mod compacted, friable, dry
8			0.0	10/84			SP	Clay is dispersed w/ sd and present as laminations ~90% low plasticity, brittle, blocky
9	1.7	1.7	0.0	10/78	SL-865 SA5A-SB 9.0-10.0	1410	SM	SAND w/ SILT, dk yel (10YR 4/6) mottled w/ yel (10YR 7/6) and yel brn (10YR 6/8) f. med, pg, sr to sa, quartz, dry, mod loose becoming mod compacted w/ depth, dry to sli moist, ~10% silt, few sandstone gravel @ base

SAMPLE
0.0-0.5

~10% silt
0.4

2.0

4.0

6.5

7.8

8.4

9.7

CDM Smith

BORING LOG AND SAMPLING RECORD

Page 1 of 1

ABBREVIATIONS:

amt: amount	gr: grained	pg: poorly graded	t: trace	nr: no recovery
c: coarse	lt: light	rnd: rounded	v: very	
dk: dark	m: medium	sa: subangular	wg: well graded	
ft: fine	mod: moderate	sr: subrounded	φ: diameter	bgs: below ground surface

SSFL Phase 3 – Field Sample Data Sheet

CDM Smith

FSDS Checked By

V. Cruz

Sample ID

SL-865-SA5A-SB-0.0-0.5

Date/Time

6-19-13 / 1340

Matrix (circle one)

Soil

Sediment

Water

Start Depth

0.0

End Depth

0.5

Depth Units (circle one)

Inches

Feet

Check if Composite

☐

Collection Method (circle one)

DPT

Slide Hammer

Hand Auger/Slide Hammer

Trenching

Sediment

QC Type (circle one)

N

FD

FB

RB

Parent Sample ID

NA

Field Geologist

David Rojas

Sampler

Vidal Cortes

Analysis

Parameters	Method	Analyze?
Metals	EPA 6010	X
	EPA 6020	X
	EPA 7471 (Soil)	X
	EPA 7470 (Water)	
Fluoride	EPA 300.0/9056	
SVOCS	EPA 8270	
TIC	EPA 8270	
PAHs	EPA 8270 SIM	X
1,4 Dioxane	EPA 8270 SIM	
Dioxins	EPA 1613	X
PCBs/PCTs	EPA 8082	
Perchlorate	EPA 314.0/331	
Perchlorate Confirmation	EPA 6850/6860	
pH	EPA 9045 (Soil)	X
	EPA 9040 (Water)	
Hexavalent Chromium	EPA 7196/7199	
Herbicides	EPA 8151	
Pesticides	EPA 8081	

Parameters	Method	Analyze?
VOCs	EPA 8260	
1,4 Dioxane	EPA 8260 SIM	
TPH-GRO	EPA 8015	
TPH-EFH	EPA 8015	X
Glycols	EPA 8015	
Alcohols	EPA 8015	
Terphenyls	EPA 8015	
Nitrates	EPA 300.0/9056	
Energetics	EPA 8330	
Cyanide	EPA 9012	
Formaldehyde	EPA 8315	
NDMA	EPA 1625	
Sediment	NOAA Status and Trends, Krone et al.	
	Methyl Mercury	EPA 1630

2 DPT SS Slaves & 1 4-oz jar

SSFL Phase 3 – Field Data Sample Sheet (Sample Descriptions)

Soil Classification (circle one)

MAJOR DIVISION			GROUP SYMBOL	LETTER SYMBOL	GROUP NAME
COARSE GRAINED SOILS CONTAINS MORE THAN 50% FINES	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVEL WITH $\geq 5\%$ FINES		GW	Well-graded GRAVEL
		GRAVEL WITH BETWEEN 5% AND 15% FINES		GP	Poorly graded GRAVEL
				GW-GM	Well-graded GRAVEL with silt
				GW-GC	Well-graded GRAVEL with clay
				GP-GM	Poorly graded GRAVEL with silt
			GP-GC	Poorly graded GRAVEL with clay	
		GRAVEL WITH $\geq 10\%$ FINES		GM	Silty GRAVEL
			GC	Clayey GRAVEL	
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	SAND WITH $\geq 5\%$ FINES		SW	Well-graded SAND
		SAND WITH BETWEEN 5% AND 15% FINES		SP	Poorly graded SAND
				SW-SM	Well-graded SAND with silt
				SW-SC	Well-graded SAND with clay
				SP-SM	Poorly graded SAND with silt
			SP-SC	Poorly graded SAND with clay	
		SAND WITH $\geq 15\%$ FINES		SM	Silty SAND
			SC	Clayey SAND	
FINE GRAINED SOILS CONTAINS MORE THAN 50% FINES	SILT AND CLAY	LIQUID LIMIT LESS THAN 50		ML	Inorganic SILT with low plasticity
				CL	Lean inorganic CLAY with low plasticity
				OL	Organic SILT with low plasticity
		LIQUID LIMIT GREATER THAN 50		MH	Elastic inorganic SILT with moderate to high plasticity
				CH	Fat inorganic CLAY with moderate to high plasticity
				CH	Organic SILT or CLAY with moderate to high plasticity
HIGHLY ORGANIC SOILS				PT	PEAT soils with high organic contents

Fill Material

1. Is Fill Material Present ☒ Yes ☐ No

2. Percentage Fill (%) Trace 17% Small 13

3. Fill Description (circle all that apply)

☒ Asphalt ☐ Metal ☐ Plastic

☐ Concrete ☐ Wood ☐ Glass

☒ Igneous/Metamorphic Gravel ☐ N/A

Other _____

Is Staining Present Yes ☐ No ☒

Color brown (7.5YR 5/4)

Odor

1. Odor Strength (circle one)
☒ None ☐ Slight ☐ Strong

2. Odor Description (circle one)
Organic ☐ Petroleum ☐ Chemical

☒ N/A ☐ Other _____

Moisture Condition (circle one)

☒ Dry ☐ Moist ☐ Wet

PG Signature Mike Hoffman

PG Registration # 7735

Additional Comments NA

SSFL Phase 3 – Field Sample Data Sheet

CDM Smith

FSDS Checked By J. G. T.

Sample ID SL-865-SA5A-SB-4.0-5.0 Date/Time 6-19-13 / 1355

Matrix (circle one)	Start Depth	Depth Units (circle one)
<input checked="" type="radio"/> Soil <input type="radio"/> Sediment <input type="radio"/> Water	<u>4.0</u>	Inches <input checked="" type="radio"/> Feet
	End Depth <u>5.0</u>	

Check if Composite ☐ Collection Method (circle one)

☒ DPT ☐ Slide Hammer ☐ Hand Auger/Slide Hammer ☐ Trenching ☐ Sediment

QC Type (circle one) Parent Sample ID NA

☒ N ☐ FD ☐ FB ☐ RB

Field Geologist David Rojas

Sampler Vidal Cortes

Analysis

	Parameters	Method	Analyze?
	Metals	EPA 6010	<input checked="" type="checkbox"/>
		EPA 6020	<input checked="" type="checkbox"/>
		EPA 7471 (Soil)	<input checked="" type="checkbox"/>
		EPA 7470 (Water)	
	Fluoride	EPA 300.0/9056	
	SVOCs	EPA 8270	
	TIC	EPA 8270	
	PAHs	EPA 8270 SIM	<input checked="" type="checkbox"/>
	1,4 Dioxane	EPA 8270 SIM	
	Dioxins	EPA 1613	<input checked="" type="checkbox"/>
	PCBs/PCTs	EPA 8082	
	Perchlorate	EPA 314.0/331	
	Perchlorate Confirmation	EPA 6850/6860	
	pH	EPA 9045 (Soil)	<input checked="" type="checkbox"/>
		EPA 9040 (Water)	
	Hexavalent Chromium	EPA 7196/7199	
	Herbicides	EPA 8151	
	Pesticides	EPA 8081	

	Parameters	Method	Analyze?
Encores	VOCs	EPA 8260	
	1,4 Dioxane	EPA 8260 SIM	
	TPH-GRO	EPA 8015	<input checked="" type="checkbox"/>
	TPH-EFH	EPA 8015	<input checked="" type="checkbox"/>
	Glycols	EPA 8015	
	Alcohols	EPA 8015	
	Terphenyls	EPA 8015	
	Nitrates	EPA 300.0/9056	
	Energetics	EPA 8330	
	Cyanide	EPA 9012	
	Formaldehyde	EPA 8315	
	NDMA	EPA 1625	
Sediment	NOAA Status and Trends, Krone et al.		
	Organotin		
	Methyl Mercury	EPA 1630	

2 16-oz jars & 2 Encores

SSFL Phase 3 – Field Data Sample Sheet (Sample Descriptions)

Soil Classification (circle one)

MAJOR DIVISION			GROUP SYMBOL	LETTER SYMBOL	GROUP NAME
COARSE GRAINED SOILS CONTAINS MORE THAN 50% FINES	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVEL WITH ≥ 5% FINES		GW	Well-graded GRAVEL
		GRAVEL WITH BETWEEN 5% AND 15% FINES		GP	Poorly graded GRAVEL
				GW-GM	Well-graded GRAVEL with silt
				GW-GC	Well-graded GRAVEL with clay
				GP-GM	Poorly graded GRAVEL with silt
			GP-GC	Poorly graded GRAVEL with clay	
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	GRAVEL WITH ≥ 10% FINES		GM	Silty GRAVEL
			GC	Clayey GRAVEL	
		SAND WITH ≥ 5% FINES		SW	Well-graded SAND
				SP	Poorly graded SAND
		SAND WITH BETWEEN 5% AND 15% FINES		SW-SM	Well-graded SAND with silt
				SW-SC	Well-graded SAND with clay
				SP-SM	Poorly graded SAND with silt
				SP-SC	Poorly graded SAND with clay
FINE GRAINED SOILS CONTAINS MORE THAN 50% FINES	SILT AND CLAY	LIQUID LIMIT LESS THAN 50		ML	Inorganic SILT with low plasticity
				CL	Lean inorganic CLAY with low plasticity
				OL	Organic SILT with low plasticity
		LIQUID LIMIT GREATER THAN 50		MH	Elastic inorganic SILT with moderate to high plasticity
				CH	Fat inorganic CLAY with moderate to high plasticity
				CH	Organic SILT or CLAY with moderate to high plasticity
HIGHLY ORGANIC SOILS				PT	PEAT soils with high organic contents

Fill Material

- Is Fill Material Present Yes ☐ No ☒
- Percentage Fill (%) None
- Fill Description (circle all that apply)

Asphalt

Metal

Plastic

Concrete

Wood

Glass

Igneous/Metamorphic Gravel ☒

Other N/A

Is Staining Present Yes ☐ No ☒

Color brn (7.5YR 5/3) mottled w/ strong brn (7.5YR 5/8)

Odor

1. Odor Strength (circle one)
☒ None ☐ Slight ☐ Strong

2. Odor Description (circle one)
Organic ☐ Petroleum ☐ Chemical ☐
☒ N/A Other _____

Moisture Condition (circle one)

☒ Dry ☐ Moist ☐ Wet

PG Signature Mike Hoffman

PG Registration # 7735

Additional Comments

N/A

SSFL Phase 3 – Field Sample Data Sheet

CDM Smith

FSDS Checked By J. G. E.

Sample ID SL-865-SA5A-SB-9.0-10.0 Date/Time 6-19-13 / 1410

Matrix (circle one)

☒ Soil ☐ Sediment ☐ Water

Start Depth 9.0

End Depth 10.0

Depth Units (circle one)

Inches ☐ Feet ☒

Check if Composite ☐

Collection Method (circle one)

☒ DPT ☐ Slide Hammer ☐ Hand Auger/Slide Hammer ☐ Trenching ☐ Sediment

QC Type (circle one)

☒ N ☐ FD ☐ FB ☐ RB

Parent Sample ID NA

Field Geologist David Rojas

Sampler Vidal Cortes

Analysis

Parameters	Method	Analyze?
Metals	EPA 6010	<input checked="" type="checkbox"/>
	EPA 6020	<input checked="" type="checkbox"/>
	EPA 7471 (Soil)	<input checked="" type="checkbox"/>
	EPA 7470 (Water)	<input type="checkbox"/>
Fluoride	EPA 300.0/9056	<input type="checkbox"/>
SVOCS	EPA 8270	<input type="checkbox"/>
TIC	EPA 8270	<input type="checkbox"/>
PAHs	EPA 8270 SIM	<input checked="" type="checkbox"/>
1,4 Dioxane	EPA 8270 SIM	<input type="checkbox"/>
Dioxins	EPA 1613	<input checked="" type="checkbox"/>
PCBs/PCTs	EPA 8082	<input type="checkbox"/>
Perchlorate	EPA 314.0/331	<input type="checkbox"/>
Perchlorate Confirmation	EPA 6850/6860	<input type="checkbox"/>
pH	EPA 9045 (Soil)	<input checked="" type="checkbox"/>
	EPA 9040 (Water)	<input type="checkbox"/>
Hexavalent Chromium	EPA 7196/7199	<input type="checkbox"/>
Herbicides	EPA 8151	<input type="checkbox"/>
Pesticides	EPA 8081	<input type="checkbox"/>

Parameters	Method	Analyze?
Encores	VOCs	EPA 8260
	1,4 Dioxane	EPA 8260 SIM
	TPH-GRO	EPA 8015
	TPH-EFH	EPA 8015
	Glycols	EPA 8015
	Alcohols	EPA 8015
	Terphenyls	EPA 8015
	Nitrates	EPA 300.0/9056
	Energetics	EPA 8330
	Cyanide	EPA 9012
Sediment	Formaldehyde	EPA 8315
	NDMA	EPA 1625
	Organotin	NOAA Status and Trends, Krone et al.
	Methyl Mercury	EPA 1630

2 16 oz jars & 2 Encores

SSFL Phase 3 – Field Data Sample Sheet (Sample Descriptions)

Soil Classification (circle one)

MAJOR DIVISION			GROUP SYMBOL	LETTER SYMBOL	GROUP NAME
COARSE GRAINED SOILS CONTAINS MORE THAN 50% FINES	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVEL WITH * 5% FINES		GW	Well-graded GRAVEL
				GP	Poorly graded GRAVEL
		GRAVEL WITH BETWEEN 5% AND 15% FINES		GW-GM	Well-graded GRAVEL with silt
				GW-GC	Well-graded GRAVEL with clay
				GP-GM	Poorly graded GRAVEL with silt
				GP-GC	Poorly graded GRAVEL with clay
		GRAVEL WITH ≥ 10% FINES		GM	Silty GRAVEL
				GC	Clayey GRAVEL
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	SAND WITH * 5% FINES		SW	Well-graded SAND
				SP	Poorly graded SAND
		SAND WITH BETWEEN 5% AND 15% FINES		SW-SM	Well-graded SAND with silt
				SW-SC	Well-graded SAND with clay
				SP-SM	Poorly graded SAND with silt
				SP-SC	Poorly graded SAND with clay
		SAND WITH ≥ 15% FINES		SM	Silty SAND
				SC	Clayey SAND
FINE GRAINED SOILS CONTAINS MORE THAN 50% FINES	SILT AND CLAY	LIQUID LIMIT LESS THAN 50		ML	Inorganic SILT with low plasticity
				CL	Lean inorganic CLAY with low plasticity
				OL	Organic SILT with low plasticity
		LIQUID LIMIT GREATER THAN 50		MH	Elastic inorganic SILT with moderate to high plasticity
				CH	Fat inorganic CLAY with moderate to high plasticity
				CH	Organic SILT or CLAY with moderate to high plasticity
			HIGHLY ORGANIC SOILS		

Fill Material

- Is Fill Material Present Yes ☒ No ☒
- Percentage Fill (%) None
- Fill Description (circle all that apply)

Asphalt	Metal	Plastic
Concrete	Wood	Glass
Igneous/Metamorphic Gravel	<input checked="" type="radio"/> N/A	
Other _____		

Is Staining Present

Yes ☒ No ☒

Color brown/yel (10YR 6/6) mottled w/ yel (10YR 7/6) and

Odor yel brown (10YR 6/6)

1. Odor Strength (circle one)

☒ None ☐ Slight ☐ Strong

2. Odor Description (circle one)

Organic ☒ Petroleum ☐ Chemical

☒ N/A Other _____

Moisture Condition (circle one)

☒ Dry ☐ Moist ☐ Wet

PG Signature Muler [Signature]

PG Registration # 7735

Additional Comments N/A

Location ID: DC-866		Subarea: 5A		Date Started: 6-19-13		Date Completed: 6-19-13	
Client: DOE		Project Name/ID: SSFL-05258-00070-1209-002-223-02231-00PH3 MB				Total Depth: 1st 1A = 6.4 2nd 1A = 6.2	
Company Name: CDM SMITH		Drill Contractor/Driller: Strongarm				Depth Drilled into Bedrock: NA	
GPS collected? Yes or No		Drill Method: Slidehammer / Handauger				Sampling Method: Slidehammer	
Radiological Background: Y=13 AB=65		Borehole diameter: 2.75				Geologist: David Rojas	
PID Background: 0.0		Depth to GW: NA					
Radiological Equipment Used:		PG Review & No.:					
<input checked="" type="checkbox"/> MicroR <input checked="" type="checkbox"/> Alpha/Beta <input checked="" type="checkbox"/> Pancake		Miller #7735					

Depth (feet)	bgs	Recovery (feet)	PID (ppm)	Radiological (uR/cpm)	Sample Name	Sample Time	USCS	Description of Materials
SAMPLE 0.0-0.5	1	0.5	0.0	13/116	SL-866	1040	SP	SAND, b/w (7.5 YR 4/6) F-med grw w/some coarse, pg, sr to sa, quartz, dry, sli to med compacted, sli friable to hard, few to some org (roots) ~5% silt
		0.0	13/78	SA5A-SB			SP	SAND w/ SILT, b/w (7.5 YR 4/4) F-gr w/ few ant med grw, pg, sr to sa, quartz, dry, compacted, sli friable to hard, ~10% silt, w/ ant gravel fine sized hard
		0.0	13/78			SM	SILTY SAND, dk yel b/w (10YR 3/6) mottled w/ yel (10YR 7/6) F-m grw, to ant coarse, pg, sr to sa, quartz, dry, compacted, mod friable to hard, ~15% silt	
		0.0	13/78			SM	SILTY SAND, b/w (7.5 YR 4/4) mottled w/ (10YR 7/6) yel (10YR 7/6) F-m grw w/some coarse, pg, sr to sa, quartz, dry, compacted, mod friable; some ant of silty sand nodules, sa to angular, sli cemented mod hard to sli friable, colors are mottling described above plus dk red b/w (5YR 3/4), to ant gravel & siltstone gravel-F-med sized, ~15% silt	
		0.0	13/72			SM	SILTY SAND, dk yel b/w (10YR 4/4) F-grw, pg, sr to sa, quartz, dry, mod loose, mod friable to friable, ~30% silt, tr ant gravel A.A	
		0.0	13/64			SM	SILTY SAND, A.A, w/ few weathered sandstone gravel, b/w yel (10YR 6/4) mottled w/ yel (10YR 8/4), mod well cemented to mod hard, sli friable, dry, some siltstone, F-med sized, mod hard to hard, sli friable, sa to angular ~20% silt	
SAMPLE 5.5-6.5	6	0.0	13/84	SL-866	1115			
		0.0	13/84	SA5A-SB				

Refusals @ 6.4 & 6.2

CDM
Smith

BORING LOG AND SAMPLING RECORD

Page 1 of 1

ABBREVIATIONS:

amt: amount	gr: grained	pg: poorly graded	t: trace	nr: no recovery
c: coarse	lt: light	rnd: rounded	v: very	
dk: dark	m: medium	sa: subangular	wg: well graded	
ft: fine	mod: moderate	sr: subrounded	φ: diameter	bgs: below ground surface

SSFL Phase 3 – Field Sample Data Sheet

CDM Smith

FSDS Checked By V. Gt

Sample ID SL-866-SA5A-SB-0.0-0.5 Date/Time 6-19-13/1040

Matrix (circle one) <u>(Soil)</u> Sediment Water	Start Depth <u>0.0</u>	Depth Units (circle one) Inches <u>(Feet)</u>
	End Depth <u>0.5</u>	

Check if Composite ☐ Collection Method (circle one)
DPT (Slide Hammer) Hand Auger/Slide Hammer Trenching Sediment

QC Type (circle one)
(N) FD FB RB Parent Sample ID NA

Field Geologist David Rojas

Sampler Vidal Cortes

Analysis

Parameters	Method	Analyze?
Metals	EPA 6010	<input checked="" type="checkbox"/>
	EPA 6020	<input checked="" type="checkbox"/>
	EPA 7471 (Soil)	<input checked="" type="checkbox"/>
	EPA 7470 (Water)	
Fluoride	EPA 300.0/9056	
SVOCs	EPA 8270	
TIC	EPA 8270	
PAHs	EPA 8270 SIM	<input checked="" type="checkbox"/>
1,4 Dioxane	EPA 8270 SIM	
Dioxins	EPA 1613	<input checked="" type="checkbox"/>
PCBs/PCTs	EPA 8082	
Perchlorate	EPA 314.0/331	
Perchlorate Confirmation	EPA 6850/6860	
pH	EPA 9045 (Soil)	<input checked="" type="checkbox"/>
	EPA 9040 (Water)	
Hexavalent Chromium	EPA 7196/7199	
Herbicides	EPA 8151	
Pesticides	EPA 8081	

Parameters	Method	Analyze?
Encores	VOCs	EPA 8260
	1,4 Dioxane	EPA 8260 SIM
	TPH-GRO	EPA 8015
	TPH-EFH	EPA 8015 <input checked="" type="checkbox"/>
Sediment	Glycols	EPA 8015
	Alcohols	EPA 8015
	Terphenyls	EPA 8015
	Nitrates	EPA 300.0/9056
	Energetics	EPA 8330
	Cyanide	EPA 9012
	Formaldehyde	EPA 8315
	NDMA	EPA 1625
	Organotin	NOAA Status and Trends, Krone et al.
	Methyl Mercury	EPA 1630

2 slidehammer sleeves 14oz jar

SSFL Phase 3 – Field Data Sample Sheet (Sample Descriptions)

Soil Classification (circle one)

MAJOR DIVISION			GROUP SYMBOL	LETTER SYMBOL	GROUP NAME
COARSE GRAINED SOILS CONTAINS MORE THAN 50% FINES	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVEL WITH * 5% FINES		GW	Well-graded GRAVEL
				GP	Poorly graded GRAVEL
		GRAVEL WITH BETWEEN 5% AND 15% FINES		GW-GM	Well-graded GRAVEL with silt
				GW-GC	Well-graded GRAVEL with clay
				GP-GM	Poorly graded GRAVEL with silt
				GP-GC	Poorly graded GRAVEL with clay
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	GRAVEL WITH ≥ 10% FINES		GM	Silty GRAVEL
				GC	Clayey GRAVEL
		SAND WITH * 5% FINES		SW	Well-graded SAND
				SP	Poorly graded SAND
		SAND WITH BETWEEN 5% AND 15% FINES		SW-SM	Well-graded SAND with silt
				SW-SC	Well-graded SAND with clay
SAND WITH ≥ 15% FINES			SP-SM	Poorly graded SAND with silt	
			SP-SC	Poorly graded SAND with clay	
FINE GRAINED SOILS CONTAINS MORE THAN 50% FINES	SILT AND CLAY	LIQUID LIMIT LESS THAN 50		ML	Inorganic SILT with low plasticity
				CL	Lean inorganic CLAY with low plasticity
				OL	Organic SILT with low plasticity
		LIQUID LIMIT GREATER THAN 50		MH	Elastic inorganic SILT with moderate to high plasticity
			CH	Fat inorganic CLAY with moderate to high plasticity	
			CH	Organic SILT or CLAY with moderate to high plasticity	
	HIGHLY ORGANIC SOILS			PT	PEAT soils with high organic contents

Fill Material

1. Is Fill Material Present

Yes

No

2. Percentage Fill (%)

Trace

1%

3. Fill Description (circle all that apply)

Asphalt

Metal

Plastic

Concrete

Wood

Glass

Igneous/Metamorphic Gravel

N/A

Other

Is Staining Present

Yes

No

Color

Brown (7.5 YR 4/3)

Odor

1. Odor Strength (circle one)

None

Slight

Strong

2. Odor Description (circle one)

Organic

Petroleum

Chemical

N/A

Other

Moisture Condition (circle one)

Dry

Moist

Wet

PG Signature

Mike Hoffman

PG Registration #

7735

Additional Comments

N/A

SSFL Phase 3 – Field Sample Data Sheet

CDM Smith

FSDS Checked By V. CTE

Sample ID SL-866-^{SA5A}~~885~~-SB-5.5-6.5 Date/Time 6-19-13/1115
~~NA~~

Matrix (circle one)
☒ Soil ☐ Sediment ☐ Water

Start Depth 5.5
 End Depth 6.5

Depth Units (circle one)
 Inches ☐ Feet ☒

Check if Composite ☐

DPT

Slide Hammer

Collection Method (circle one)

Hand Auger

Slide Hammer

Trenching

Sediment

QC Type (circle one)

N

FD

FB

RB

Parent Sample ID

NA

Field Geologist

David Rojas

Sampler

Uidal Cortes

Analysis

Parameters	Method	Analyze?
Metals	EPA 6010	<input checked="" type="checkbox"/>
	EPA 6020	<input checked="" type="checkbox"/>
	EPA 7471 (Soil)	<input checked="" type="checkbox"/>
	EPA 7470 (Water)	<input type="checkbox"/>
Fluoride	EPA 300.0/9056	<input type="checkbox"/>
SVOCS	EPA 8270	<input type="checkbox"/>
TIC	EPA 8270	<input type="checkbox"/>
PAHs	EPA 8270 SIM	<input checked="" type="checkbox"/>
1,4 Dioxane	EPA 8270 SIM	<input type="checkbox"/>
Dioxins	EPA 1613	<input checked="" type="checkbox"/>
PCBs/PCTs	EPA 8082	<input type="checkbox"/>
Perchlorate	EPA 314.0/331	<input type="checkbox"/>
Confirmation	EPA 6850/6860	<input type="checkbox"/>
pH	EPA 9045 (Soil)	<input checked="" type="checkbox"/>
	EPA 9040 (Water)	<input type="checkbox"/>
Hexavalent Chromium	EPA 7196/7199	<input type="checkbox"/>
Herbicides	EPA 8151	<input type="checkbox"/>
Pesticides	EPA 8081	<input type="checkbox"/>

Parameters	Method	Analyze?
Encores	VOCs	EPA 8260
	1,4 Dioxane	EPA 8260 SIM
	TPH-GRO	EPA 8015
	TPH-EFH	EPA 8015
Sediment	Glycols	EPA 8015
	Alcohols	EPA 8015
	Terphenyls	EPA 8015
	Nitrates	EPA 300.0/9056
	Energetics	EPA 8330
	Cyanide	EPA 9012
	Formaldehyde	EPA 8315
	NDMA	EPA 1625
	Organotin	NOAA Status and Trends, Krone et al.
	Methyl Mercury	EPA 1630

1 slide hammer, 1-6oz jar, & 2 Encores
Sleeve

SSFL Phase 3 – Field Data Sample Sheet (Sample Descriptions)

Soil Classification (circle one)

MAJOR DIVISION			GROUP SYMBOL	LETTER SYMBOL	GROUP NAME
COARSE GRAINED SOILS CONTAINS MORE THAN 50% FINES	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVEL WITH * 5% FINES		GW	Well-graded GRAVEL
				GP	Poorly graded GRAVEL
		GRAVEL WITH BETWEEN 5% AND 15% FINES		GW-GM	Well-graded GRAVEL with silt
				GW-GC	Well-graded GRAVEL with clay
				GP-GM	Poorly graded GRAVEL with silt
				GP-GC	Poorly graded GRAVEL with clay
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	GRAVEL WITH ≥ 10% FINES		GM	Silty GRAVEL
				GC	Clayey GRAVEL
		SAND WITH * 5% FINES		SW	Well-graded SAND
				SP	Poorly graded SAND
SAND WITH BETWEEN 5% AND 15% FINES			SW-SM	Well-graded SAND with silt	
			SW-SC	Well-graded SAND with clay	
		SP-SM	Poorly graded SAND with silt		
		SP-SC	Poorly graded SAND with clay		
SAND WITH ≥ 15% FINES		SM	Silty SAND		
		SC	Clayey SAND		
FINE GRAINED SOILS CONTAINS MORE THAN 50% FINES	SILT AND CLAY	LIQUID LIMIT LESS THAN 50		ML	Inorganic SILT with low plasticity
				CL	Lean inorganic CLAY with low plasticity
				OL	Organic SILT with low plasticity
		LIQUID LIMIT GREATER THAN 50		MH	Elastic inorganic SILT with moderate to high plasticity
				CH	Fat inorganic CLAY with moderate to high plasticity
				CH	Organic SILT or CLAY with moderate to high plasticity
HIGHLY ORGANIC SOILS				PT	PEAT soils with high organic contents

Fill Material

1. Is Fill Material Present Yes ☒ No

2. Percentage Fill (%) None

3. Fill Description (circle all that apply)

Asphalt Metal Plastic

Concrete Wood Glass

Igneous/Metamorphic Gravel ☒ N/A

Other _____

Is Staining Present Yes ☒ No

Color dk yel brn (10YR 4/4)

Odor

1. Odor Strength (circle one)

☒ None ☐ Slight ☐ Strong

2. Odor Description (circle one)

Organic Petroleum Chemical

☒ N/A Other _____

Moisture Condition (circle one)

☒ Dry ☐ Moist ☐ Wet

PG Signature [Signature]

PG Registration # 7735

Additional Comments NA

Location ID: DG-867		Subarea: 5A		Date Started: 6-20-13		Date Completed: 6-20-13	
Client: DOE		Project Name/#: SSFL-65258-63976-1203.002.223.02231.33PHS ³⁰¹²				Total Depth: 1st HA=4.5 2nd HA=4.5	
Company Name: CDM SMITH				Drill Contractor/Driller: NA		Depth Drilled into Bedrock: NA	
GPS collected? <input checked="" type="checkbox"/> Yes or No				Drill Method: Handauger & Slidehammer		Sampling Method: Slidehammer	
Radiological Background: Y=14 X=84				Borehole diameter: 2.27		Geologist: David Rojas	
PID Background: 0.0				Depth to GW: NA		PG Review & No.: Miller Hoffman #7735	
Radiological Equipment Used: <input checked="" type="checkbox"/> MicroR <input checked="" type="checkbox"/> Alpha/Beta <input checked="" type="checkbox"/> Pancake							

Depth (feet)	bgs	Recovery (feet)	PID (ppm)	Radiological (μR/cpm)	Sample Name	Sample Time	USCS	Description of Materials
0.0-0.5		0.5/0.5	0.0	14/88	SL-867 SA5A-SB 0.0-0.5	0825	SP/SM	SAND w/ SILT, brn (7.5 YR 5/4), f-m grn, pg, sr to sa, quartz, ~10% silt, dry, med compacted, sli to med friable, & ant org (roots)
1		0.0	0.0	13/84			SM	to ant siltstone gravel 14 yel brn (2.5 YR 6/3), tabular, med well cemented, med friable to hard.
2		0.0	0.0	13/84				SILTY SAND, strong brn (7.5 YR 4/6) form w/ to ant med grn pg, sr to sa, quartz, dry, sli to med well compacted, med friable, ~20% silt, & ant org (roots)
3		0.0	0.0	13/86				
4		0.0	0.0	13/78	SL-867 SA5A-SB 3.5-4.5	0850	SM	SILTY SAND, A.A except also has trace amt of fine weathered sandstone gravel - brn yel (10 YR 6/6) mottled w/ yel brn (10 YR 5/6), f-m grn, pg, sr to sa, quartz, poorly cemented, sli friable to med hard, increasingly to fine with depth
		0.0	0.0	13/102				Refusals @ 4.5 & 4.5

**CDM
Smith****BORING LOG AND SAMPLING RECORD**Page 1 of **1****ABBREVIATIONS:**

amt: amount	gr: grained	pg: poorly graded	t: trace	nr: no recovery
c: coarse	lt: light	rnd: rounded	v: very	
dk: dark	m: medium	sa: subangular	wg: well graded	
f: fine	mod: moderate	sr: subrounded	φ: diameter	bgs: below ground surface

SSFL Phase 3 – Field Sample Data Sheet

CDM Smith

FSDS Checked By V. G. T.

Sample ID SL-867-SA5A-SB-0.0-0.5 Date/Time 6-20-13/0825

Matrix (circle one)

☒ Soil ☐ Sediment ☐ Water

Start Depth 0.0

End Depth 0.5

Depth Units (circle one)

Inches ☐ Feet ☒

Check if Composite ☐

Collection Method (circle one)

DPT ☒ Slide Hammer ☐ Hand Auger/Slide Hammer ☐ Trenching ☐ Sediment

QC Type (circle one)

☒ N ☐ FD ☐ FB ☐ RB

Parent Sample ID NA

Field Geologist David Rojas

Sampler Vidal Cortes

Analysis

Parameters	Method	Analyze?
Metals	EPA 6010	<input checked="" type="checkbox"/>
	EPA 6020	<input checked="" type="checkbox"/>
	EPA 7471 (Soil)	<input checked="" type="checkbox"/>
	EPA 7470 (Water)	<input type="checkbox"/>
Fluoride	EPA 300.0/9056	<input type="checkbox"/>
SVOCS	EPA 8270	<input type="checkbox"/>
TIC	EPA 8270	<input type="checkbox"/>
PAHs	EPA 8270 SIM	<input checked="" type="checkbox"/>
1,4 Dioxane	EPA 8270 SIM	<input type="checkbox"/>
Dioxins	EPA 1613	<input checked="" type="checkbox"/>
PCBs/PCTs	EPA 8082	<input type="checkbox"/>
Perchlorate	EPA 314.0/331	<input type="checkbox"/>
Perchlorate Confirmation	EPA 6850/6860	<input type="checkbox"/>
pH	EPA 9045 (Soil)	<input checked="" type="checkbox"/>
	EPA 9040 (Water)	<input type="checkbox"/>
Hexavalent Chromium	EPA 7196/7199	<input type="checkbox"/>
Herbicides	EPA 8151	<input type="checkbox"/>
Pesticides	EPA 8081	<input type="checkbox"/>

Parameters	Method	Analyze?
Encores	VOCs	<input type="checkbox"/>
	1,4 Dioxane	<input type="checkbox"/>
	TPH-GRO	<input type="checkbox"/>
	TPH-EFH	<input checked="" type="checkbox"/>
Sediment	Glycols	<input type="checkbox"/>
	Alcohols	<input type="checkbox"/>
	Terphenyls	<input type="checkbox"/>
	Nitrates	<input type="checkbox"/>
	Energetics	<input type="checkbox"/>
	Cyanide	<input type="checkbox"/>
	Formaldehyde	<input type="checkbox"/>
	NDMA	<input type="checkbox"/>
	Organotin	<input type="checkbox"/>
	Methyl Mercury	<input type="checkbox"/>

2 Slidehammer sleeves & 1 4 oz jar

SSFL Phase 3 – Field Data Sample Sheet (Sample Descriptions)

Soil Classification (circle one)

MAJOR DIVISION			GROUP SYMBOL	LETTER SYMBOL	GROUP NAME
COARSE GRAINED SOILS CONTAINS MORE THAN 50% FINES	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVEL WITH * 5% FINES		GW	Well-graded GRAVEL
				GP	Poorly graded GRAVEL
		GRAVEL WITH BETWEEN 5% AND 15% FINES		GW-GM	Well-graded GRAVEL with silt
				GW-GC	Well-graded GRAVEL with clay
				GP-GM	Poorly graded GRAVEL with silt
				GP-GC	Poorly graded GRAVEL with clay
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	GRAVEL WITH ≥ 10% FINES		GM	Silty GRAVEL
				GC	Clayey GRAVEL
		SAND WITH * 5% FINES		SW	Well-graded SAND
					SP
		SAND WITH BETWEEN 5% AND 15% FINES		SW-SM	Well-graded SAND with silt
				SW-SC	Well-graded SAND with clay
				SP-SM	Poorly graded SAND with silt
				SP-SC	Poorly graded SAND with clay
FINE GRAINED SOILS CONTAINS MORE THAN 50% FINES	SILT AND CLAY	LIQUID LIMIT LESS THAN 50		ML	Inorganic SILT with low plasticity
				CL	Lean inorganic CLAY with low plasticity
				OL	Organic SILT with low plasticity
		LIQUID LIMIT GREATER THAN 50		MH	Elastic inorganic SILT with moderate to high plasticity
				CH	Fat inorganic CLAY with moderate to high plasticity
				OH	Organic SILT or CLAY with moderate to high plasticity
HIGHLY ORGANIC SOILS				PT	PEAT soils with high organic contents

Fill Material

- Is Fill Material Present ☒ Yes ☒ No *small*
- Percentage Fill (%) 1% *None Trace*
- Fill Description (circle all that apply)

Asphalt	Metal	Plastic
Concrete	Wood	Glass
Igneous/Metamorphic Gravel	<input checked="" type="radio"/> N/A	<input checked="" type="radio"/> GR
Other	<u>Siltstone gravel</u>	

Is Staining Present Yes ☒ No ☒

Color brown (7.5YR 5/4)

Odor

1. Odor Strength (circle one)
☒ None ☐ Slight ☐ Strong

2. Odor Description (circle one)
Organic ☐ Petroleum ☐ Chemical ☐
☒ N/A Other _____

Moisture Condition (circle one)

☒ Dry ☐ Moist ☐ Wet

PG Signature *Mike Hoffman*

PG Registration # 7735

Additional Comments NA

SSFL Phase 3 – Field Sample Data Sheet

CDM Smith

FSDS Checked By V. Ortiz

Sample ID

SL-867-SA5A-SB-3.5-4.5

Date/Time

6-20-13 / 0850

Matrix (circle one)

Soil

Sediment

Water

Start Depth

3.5

End Depth

4.5

Depth Units (circle one)

Inches

Feet

Check if Composite ☐

Collection Method (circle one)

DPT

Slide Hammer

Hand Auger/Slide Hammer

Trenching

Sediment

QC Type (circle one)

N

FD

FB

RB

Parent Sample ID

NA

Field Geologist

David Rojas

Sampler

Vidal Cortes

Analysis

Parameters	Method	Analyze?
Metals	EPA 6010	<input checked="" type="checkbox"/>
	EPA 6020	<input checked="" type="checkbox"/>
	EPA 7471 (Soil)	<input checked="" type="checkbox"/>
	EPA 7470 (Water)	
Fluoride	EPA 300.0/9056	
SVOCs	EPA 8270	
TIC	EPA 8270	
PAHs	EPA 8270 SIM	<input checked="" type="checkbox"/>
1,4 Dioxane	EPA 8270 SIM	
Dioxins	EPA 1613	<input checked="" type="checkbox"/>
PCBs/PCTs	EPA 8082	
Perchlorate	EPA 314.0/331	
Confirmation	EPA 6850/6860	
pH	EPA 9045 (Soil)	<input checked="" type="checkbox"/>
	EPA 9040 (Water)	
Hexavalent Chromium	EPA 7196/7199	
Herbicides	EPA 8151	
Pesticides	EPA 8081	

Parameters	Method	Analyze?
Encores	VOCs	EPA 8260
	1,4 Dioxane	EPA 8260 SIM
	TPH-GRO	EPA 8015
	TPH-EFH	EPA 8015
	Glycols	EPA 8015
	Alcohols	EPA 8015
	Terphenyls	EPA 8015
	Nitrates	EPA 300.0/9056
	Energetics	EPA 8330
	Cyanide	EPA 9012
Sediment	Formaldehyde	EPA 8315
	NDMA	EPA 1625
	Organotin	NOAA Status and Trends, Krone et al.
	Methyl Mercury	EPA 1630

2 slidehammer streaks, 1-Hex jar, & 2 Encores

SSFL Phase 3 – Field Data Sample Sheet (Sample Descriptions)

Soil Classification (circle one)

MAJOR DIVISION			GROUP SYMBOL	LETTER SYMBOL	GROUP NAME		
COARSE GRAINED SOILS CONTAINS MORE THAN 50% FINES	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVEL WITH ≤ 5% FINES		GW	Well-graded GRAVEL		
				GP	Poorly graded GRAVEL		
		GRAVEL WITH BETWEEN 5% AND 15% FINES		GW-GM	Well-graded GRAVEL with silt		
				GW-GC	Well-graded GRAVEL with clay		
				GP-GM	Poorly graded GRAVEL with silt		
				GP-GC	Poorly graded GRAVEL with clay		
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	GRAVEL WITH ≥ 15% FINES		GM	Silty GRAVEL		
				GC	Clayey GRAVEL		
		SAND WITH ≤ 5% FINES		SW	Well-graded SAND		
				SP	Poorly graded SAND		
		SAND WITH BETWEEN 5% AND 15% FINES		SW-SM	Well-graded SAND with silt		
				SW-SC	Well-graded SAND with clay		
				SP-SM	Poorly graded SAND with silt		
				SP-SC	Poorly graded SAND with clay		
FINE GRAINED SOILS CONTAINS MORE THAN 50% FINES	SILT AND CLAY	LIQUID LIMIT LESS THAN 50		ML	Inorganic SILT with low plasticity		
				CL	Lean inorganic CLAY with low plasticity		
				OL	Organic SILT with low plasticity		
		LIQUID LIMIT GREATER THAN 50		MH	Elastic inorganic SILT with moderate to high plasticity		
				CH	Fat inorganic CLAY with moderate to high plasticity		
				OH	Organic SILT or CLAY with moderate to high plasticity		
			HIGHLY ORGANIC SOILS				PT

Fill Material

- Is Fill Material Present Yes ☒ No ☐
- Percentage Fill (%) None
- Fill Description (circle all that apply)

Asphalt	Metal	Plastic
Concrete	Wood	Glass
Igneous/Metamorphic Gravel	<input checked="" type="radio"/> N/A	
Other _____		

Is Staining Present Yes ☒ No ☐ harmful
 Color strong brown (7.5YR 4/6) & (10YR 6/6) mottled
 Odor with yellow brown (10YR 5/6)

1. Odor Strength (circle one)
☒ None ☐ Slight ☐ Strong

2. Odor Description (circle one)
 Organic ☐ Petroleum ☐ Chemical ☐
☒ N/A Other _____

Moisture Condition (circle one)
☒ Dry ☐ Moist ☐ Wet

PG Signature [Signature]

PG Registration # 7735

Additional Comments NA

Location ID: DC-868	Subarea: 5A	Date Started: 6-20-13	Date Completed: 6-20-13
Client: DOE		Project Name/ID: SSFL-65268-63376-1203-002-223-02231-SSPHS- SM / ASIA	
Company Name: CDM SMITH	Drill Contractor/Driller: NA		Total Depth: 1st HA = 4.8 2nd HA = 4.9
GPS collected? Yes or No	Drill Method: Slidehammer / Handauger		Depth Drilled into Bedrock: NA
Radiological Background: X=13 A=108	Borehole diameter: 2.75		Sampling Method: Slidehammer / Handauger
PID Background: 0.0	Depth to GW: NA		Geologist: David Rojas
Radiological Equipment Used: <input checked="" type="checkbox"/> MicroR <input checked="" type="checkbox"/> Alpha/Beta <input checked="" type="checkbox"/> Pancake		PG Review & No. Muller #7735	

SAMPLE
0.0-0.5

Depth (feet)	bgs	Recovery (feet)	PID (ppm)	Radiological (uR/cpm)	Sample Name	Sample Time	USCS	Description of Materials
0.0-0.5		0.5	0.0	13/91	SL-868 SA5A-SB 0.0-0.5	0930	SP	SAND with SILT, lt yel brn (10YR 6/4) mottled w/ yel brn (10YR 5/4) fgn w/ few med grn & tr coarse grn pg, sr to sa, quartz, ~10% silt, sli to med compacted med friable to friable, dry, <5% siltstone & sandstone pebbles gravel f to coarse sized, tr to few med org (roots), dry
1			0.0	13/102			SP	SAND with SILT, A.A. except strong brn (7.5YR 5/6) mottled w/ lt brn (7.5YR 6/4). Also contains siltstone & sandstone A.A. & org (roots) - tr
2			0.0	13/92			SM	SILTY SAND strong brn (7.5YR 4/6) mottled w/ reddish yel (7.5YR 6/6), fgn w/ few med grn, pg, sr to sa, quartz, dry, ~20% silt, med compacted to well compacted, sli to med friable, tr med org (roots) & tr med siltstone & sandstone few silty sand nodules becoming more prevalent w/ depth nodules are med well to well compacted, hard to sli friable, slightly clayey w/ low plasticity, stiff
3			0.0	13/108			SM	SILTY SAND, yel brn (10YR 6/4) fgn, pg, sr to sa, quartz, dry, med loose to loose, ~30% silt
4			0.0	13/84	SL-868 SA5A-SB 4.0-5.0	1025	SP	SAND, brn yel (10YR 6/4) mottled w/ v pale brn (10YR 7/4) fgn w/ few med grn & tr coarse grn, pg, sr to sa, quartz, med loose, dry, tr med weathered silty sandstone gravel sr to sa, fine to med sized, med poorly cemented, friable <5% silt
5			0.0	13/108				

0.5

1.6

3.2

4.0

5.0

Refusals @ 4.8 & 4.9

CDM
Smith

BORING LOG AND SAMPLING RECORD

Page 1 of 1

ABBREVIATIONS:

amt: amount	gr: grained	pg: poorly graded	t: trace	nr: no recovery
c: coarse	lt: light	rnd: rounded	v: very	
dk: dark	m: medium	sa: subangular	wg: well graded	
f: fine	mod: moderate	sr: subrounded	φ: diameter	bgs: below ground surface

SSFL Phase 3 – Field Sample Data Sheet

CDM Smith

FSDS Checked By V. Cortes

Sample ID SL-868-SA5A-SB-0.0-0.5 Date/Time 6-20-13 / 0950

Matrix (circle one) <u>Soil</u> Sediment Water	Start Depth <u>0.0</u>	Depth Units (circle one) Inches <u>Feet</u>
	End Depth <u>0.5</u>	

Check if Composite ☐ Collection Method (circle one)
DPT Slide Hammer Hand Auger/Slide Hammer Trenching Sediment

QC Type (circle one)
N FD FB RB Parent Sample ID NA

Field Geologist David Rojas

Sampler Vidal Cortes

Analysis

Parameters	Method	Analyze?
Metals	EPA 6010	X
	EPA 6020	X
	EPA 7471 (Soil)	X
	EPA 7470 (Water)	
Fluoride	EPA 300.0/9056	
SVOCs	EPA 8270	
TIC	EPA 8270	
PAHs	EPA 8270 SIM	X
1,4 Dioxane	EPA 8270 SIM	
Dioxins	EPA 1613	X
PCBs/PCTs	EPA 8082	
Perchlorate	EPA 314.0/331	
Perchlorate Confirmation	EPA 6850/6860	
pH	EPA 9045 (Soil)	X
	EPA 9040 (Water)	
Hexavalent Chromium	EPA 7196/7199	
Herbicides	EPA 8151	
Pesticides	EPA 8081	

Parameters	Method	Analyze?
Encores	VOCs	EPA 8260
	1,4 Dioxane	EPA 8260 SIM
	TPH-GRO	EPA 8015
	TPH-EFH	EPA 8015 X
	Glycols	EPA 8015
	Alcohols	EPA 8015
	Terphenyls	EPA 8015
	Nitrates	EPA 300.0/9056
	Energetics	EPA 8330
	Cyanide	EPA 9012
Sediment	Formaldehyde	EPA 8315
	NDMA	EPA 1625
	Organotin	NOAA Status and Trends, Krone et al.
	Methyl Mercury	EPA 1630

2 slidehammer sleeves * 14oz jar

SSFL Phase 3 – Field Data Sample Sheet (Sample Descriptions)

Soil Classification (circle one)

MAJOR DIVISION			GROUP SYMBOL	LETTER SYMBOL	GROUP NAME
COARSE GRAINED SOILS CONTAINS MORE THAN 50% FINES	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVEL WITH $\leq 5\%$ FINES		GW	Well-graded GRAVEL
		GRAVEL WITH BETWEEN 5% AND 15% FINES		GP	Poorly graded GRAVEL
				GW-GM	Well-graded GRAVEL with silt
				GW-GC	Well-graded GRAVEL with clay
				GP-GM	Poorly graded GRAVEL with silt
			GP-GC	Poorly graded GRAVEL with clay	
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	GRAVEL WITH $\geq 10\%$ FINES		GM	Silty GRAVEL
		SAND WITH $\leq 5\%$ FINES		GC	Clayey GRAVEL
				SW	Well-graded SAND
		SAND WITH BETWEEN 5% AND 15% FINES		SP	Poorly graded SAND
				SW-SM	Well-graded SAND with silt
				SW-SC	Well-graded SAND with clay
	SP-SM		Poorly graded SAND with silt		
SAND WITH $\geq 15\%$ FINES		SP-SC	Poorly graded SAND with clay		
		SM	Silty SAND		
		SC	Clayey SAND		
	FINE GRAINED SOILS CONTAINS MORE THAN 50% FINES	SILT AND CLAY	LIQUID LIMIT LESS THAN 50		ML
				CL	Lean inorganic CLAY with low plasticity
				OL	Organic SILT with low plasticity
LIQUID LIMIT GREATER THAN 50				MH	Elastic inorganic SILT with moderate to high plasticity
				CH	Fat inorganic CLAY with moderate to high plasticity
				CH	Organic SILT or CLAY with moderate to high plasticity
			HIGHLY ORGANIC SOILS		

Fill Material

1. Is Fill Material Present ☒ Yes ☐ No

2. Percentage Fill (%) < 5%

3. Fill Description (circle all that apply)

☒ Asphalt ☐ Metal ☐ Plastic

☐ Concrete ☐ Wood ☐ Glass

☐ Igneous/Metamorphic Gravel ☐ N/A

Other Siltstone & Sandstone gravel

Is Staining Present Yes ☐ No ☒

Color 1/2 yellow (OVR 4/4) 1/2 yellow

Odor (OVR 5/4)

1. Odor Strength (circle one)

☒ None ☐ Slight ☐ Strong

2. Odor Description (circle one)

☐ Organic ☐ Petroleum ☐ Chemical

☒ N/A

Other _____

Moisture Condition (circle one)

☒ Dry ☐ Moist ☐ Wet

PG Signature [Signature]

PG Registration # 7735

Additional Comments NA

SSFL Phase 3 – Field Sample Data Sheet

CDM Smith

FSDS Checked By V. C. T.

Sample ID SL-86B-SA5A-SB-4.0-5.0 Date/Time 6-20-13 / 1025

Matrix (circle one)

☒ Soil ☐ Sediment ☐ Water

Start Depth 4.0

End Depth 5.0

Depth Units (circle one)

Inches ☐ Feet ☒

Check if Composite ☐

Collection Method (circle one)

DPT ☐ Slide Hammer ☐ Hand Auger/Slide Hammer ☐ Trenching ☐ Sediment

QC Type (circle one)

☒ N ☐ FD ☐ FB ☐ RB

Parent Sample ID N/A

Field Geologist David Rojas

Sampler Vidal Cortes

Analysis

Parameters	Method	Analyze?
Metals	EPA 6010	<input checked="" type="checkbox"/>
	EPA 6020	<input checked="" type="checkbox"/>
	EPA 7471 (Soil)	<input checked="" type="checkbox"/>
	EPA 7470 (Water)	<input type="checkbox"/>
Fluoride	EPA 300.0/9056	<input type="checkbox"/>
SVOCs	EPA 8270	<input type="checkbox"/>
TIC	EPA 8270	<input type="checkbox"/>
PAHs	EPA 8270 SIM	<input checked="" type="checkbox"/>
1,4 Dioxane	EPA 8270 SIM	<input type="checkbox"/>
Dioxins	EPA 1613	<input checked="" type="checkbox"/>
PCBs/PCTs	EPA 8082	<input type="checkbox"/>
Perchlorate	EPA 314.0/331	<input type="checkbox"/>
Perchlorate Confirmation	EPA 6850/6860	<input type="checkbox"/>
pH	EPA 9045 (Soil)	<input checked="" type="checkbox"/>
	EPA 9040 (Water)	<input type="checkbox"/>
Hexavalent Chromium	EPA 7196/7199	<input type="checkbox"/>
Herbicides	EPA 8151	<input type="checkbox"/>
Pesticides	EPA 8081	<input type="checkbox"/>

Parameters	Method	Analyze?
Encores	VOCs	EPA 8260
	1,4 Dioxane	EPA 8260 SIM
	TPH-GRO	EPA 8015
	TPH-EFH	EPA 8015
Sediment	Glycols	EPA 8015
	Alcohols	EPA 8015
	Terphenyls	EPA 8015
	Nitrates	EPA 300.0/9056
	Energetics	EPA 8330
	Cyanide	EPA 9012
	Formaldehyde	EPA 8315
	NDMA	EPA 1625
	Organotin	NOAA Status and Trends, Krone et al.
	Methyl Mercury	EPA 1630

2 SS RECOGS, 2 ENCORES,
1 4-oz JAR

SSFL Phase 3 – Field Data Sample Sheet (Sample Descriptions)

Soil Classification (circle one)

MAJOR DIVISION			GROUP SYMBOL	LETTER SYMBOL	GROUP NAME	
COARSE GRAINED SOILS CONTAINS MORE THAN 50% FINES	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVEL WITH $\leq 5\%$ FINES		GW	Well-graded GRAVEL	
				GP	Poorly graded GRAVEL	
		GRAVEL WITH BETWEEN 5% AND 15% FINES		GW-GM	Well-graded GRAVEL with silt	
				GW-GC	Well-graded GRAVEL with clay	
				GP-GM	Poorly graded GRAVEL with silt	
				GP-GC	Poorly graded GRAVEL with clay	
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	GRAVEL WITH $\geq 10\%$ FINES		GM	Silty GRAVEL	
				GC	Clayey GRAVEL	
		SAND WITH $\leq 5\%$ FINES		SW	Well-graded SAND	
				SP	Poorly graded SAND	
SAND WITH BETWEEN 5% AND 15% FINES			SW-SM	Well-graded SAND with silt		
			SW-SC	Well-graded SAND with clay		
		SP-SM	Poorly graded SAND with silt			
		SP-SC	Poorly graded SAND with clay			
SAND WITH $\geq 15\%$ FINES		SM	Silty SAND			
		SC	Clayey SAND			
	FINE GRAINED SOILS CONTAINS MORE THAN 50% FINES	SILT AND CLAY	LIQUID LIMIT LESS THAN 50		ML	Inorganic SILT with low plasticity
					CL	Lean inorganic CLAY with low plasticity
				OL	Organic SILT with low plasticity	
LIQUID LIMIT GREATER THAN 50			MH	Elastic inorganic SILT with moderate to high plasticity		
			CH	Fat inorganic CLAY with moderate to high plasticity		
			OH	Organic SILT or CLAY with moderate to high plasticity		
HIGHLY ORGANIC SOILS				PT	PEAT soils with high organic contents	

Fill Material

1. Is Fill Material Present Yes ☒ No ☐

2. Percentage Fill (%) None

3. Fill Description (circle all that apply)

Asphalt Metal Plastic

Concrete Wood Glass

Igneous/Metamorphic Gravel ☒ N/A

Other _____

Is Staining Present Yes ☒ No ☐

Color tan yel (10YR 6/6) mottled w/ y pale brown (10YR 7/4)

Odor

1. Odor Strength (circle one)

☒ None Slight Strong

2. Odor Description (circle one)

Organic Petroleum Chemical

☒ N/A Other _____

Moisture Condition (circle one)

☒ Dry Moist Wet

PG Signature [Signature]

PG Registration # 7735

Additional Comments NA

Location ID: DC-86R		Subarea: 5A		Date Started: 6-14-13		Date Completed:	
Client: DOE		Project Name/ID: SRP-55268-63376.1203.002.223.02291-66PH3-1B				Total Depth: DPT = 3.2 2nd DPT = 3.4 3rd DPT = 3.2	
Company Name: CDM SMITH		Drill Contractor/Driller: Strongarm				Depth Drilled into Bedrock: NA	
GPS collected? Yes or No		Drill Method: DPT				Sampling Method: DPT Sleeves	
Radiological Background: 8 = 13 μB = 83		Borehole diameter: 2.25				Geologist: David Rojas	
PID Background: 0.0		Depth to GW: NA				PG Review & No: Mike Hoffman 7735	
Radiological Equipment Used:							
<input checked="" type="checkbox"/> MicroR <input checked="" type="checkbox"/> Alpha/Beta <input checked="" type="checkbox"/> Pancake							

Depth (feet)	bgs	Recovery (feet)	PID (ppm)	Radiological (μ R/cpm)	Sample Name	Sample Time	USCS	Description of Materials
SAMPLE 0.0-0.5		0.5/10.5	0.0	13/95	SA-86R SA5A-SB 0.0-0.5	0955	SM	SILTY SAND, brn (7.5YR 5/4), fg, pg, sr to sa, quartz, dry, loose, few to some org (roots), ~30% silt
1			0.0	10/60				
2		2.2/2.9	0.0	10/60			SM	SILTY SAND, brn (7.5YR 4/4) mottled w/ strong brn (7.5YR 4/6), fg, pg, sr to sa, quartz, dry, sli compacted, friable, few to some silty sand nodules med friable to friable, ~20% silt, tw and org (roots)
3			0.0	10/60			SP	SAND, strong brn (7.5YR 5/6) mottled w/ (7.5YR 4/6) brn (7.5YR 4/4), fg, w/ tw and med qtz, pg, sr to sa, quartz, dry, sli to med compacted, med friable, ~5% silt
Refusals @ 3.2, 3.4, & 3.2								

CDM Smith**BORING LOG AND SAMPLING RECORD**Page 1 of **1****ABBREVIATIONS:**

amt: amount	gr: grained	pg: poorly graded	t: trace	nr: no recovery
c: coarse	lt: light	rnd: rounded	v: very	
dk: dark	m: medium	sa: subangular	wg: well graded	
f: fine	mod: moderate	sr: subrounded	ϕ : diameter	bgs: below ground surface

SSFL Phase 3 – Field Sample Data Sheet

CDM Smith

FSDS Checked By John Halseth

Sample ID SL-869-SA5A-SB-0.0-0.5 Date/Time 6-14-13 / 0955

Matrix (circle one)	Start Depth <u>0.0</u>	Depth Units (circle one)
<u>Soil</u> Sediment Water	End Depth <u>0.5</u>	Inches <u>Feet</u>

Check If Composite ☐ Collection Method (circle one)

DPT Slide Hammer Hand Auger/Slide Hammer Trenching Sediment

QC Type (circle one)

N FD FB RB Parent Sample ID NA

Field Geologist David Rojas

Sampler John Halseth

Analysis

Parameters	Method	Analyze?
Metals	EPA 6010	X
	EPA 6020	X
	EPA 7471 (Soil)	X
	EPA 7470 (Water)	
Fluoride	EPA 300.0/9056	
SVOCs	EPA 8270	
TIC	EPA 8270	
PAHs	EPA 8270 SIM	X
1,4 Dioxane	EPA 8270 SIM	
Dioxins	EPA 1613	X
PCBs/PCTs	EPA 8082	
Perchlorate	EPA 314.0/331	
Perchlorate Confirmation	EPA 6850/6860	
pH	EPA 9045 (Soil)	X
	EPA 9040 (Water)	
Hexavalent Chromium	EPA 7196/7199	
Herbicides	EPA 8151	
Pesticides	EPA 8081	

Parameters	Method	Analyze?
Encores	VOCs	EPA 8260
	1,4 Dioxane	EPA 8260 SIM
	TPH-GRO	EPA 8015
	TPH-EFH	EPA 8015
Sediment	Glycols	EPA 8015
	Alcohols	EPA 8015
	Terphenyls	EPA 8015
	Nitrates	EPA 300.0/9056
	Energetics	EPA 8330
	Cyanide	EPA 9012
	Formaldehyde	EPA 8315
	NDMA	EPA 1625
Sediment	Organotin	NOAA Status and Trends, Krone et al.
	Methyl Mercury	EPA 1630

2 DPT SS Sleeves & 1 4-oz jar

SSFL Phase 3 – Field Data Sample Sheet (Sample Descriptions)

Soil Classification (circle one)

MAJOR DIVISION			GROUP SYMBOL	LETTER SYMBOL	GROUP NAME
COARSE GRAINED SOILS CONTAINS MORE THAN 50% FINES	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVEL WITH ≤ 5% FINES		GW	Well-graded GRAVEL
				GP	Poorly graded GRAVEL
		GRAVEL WITH BETWEEN 5% AND 15% FINES		GW-GM	Well-graded GRAVEL with silt
				GW-GC	Well-graded GRAVEL with clay
				GP-GM	Poorly graded GRAVEL with silt
				GP-GC	Poorly graded GRAVEL with clay
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	GRAVEL WITH ≥ 10% FINES		GM	Silty GRAVEL
				GC	Clayey GRAVEL
		SAND WITH ≤ 5% FINES		SW	Well-graded SAND
				SP	Poorly graded SAND
		SAND WITH BETWEEN 5% AND 15% FINES		SW-SM	Well-graded SAND with silt
				SW-SC	Well-graded SAND with clay
				SP-SM	Poorly graded SAND with silt
				SP-SC	Poorly graded SAND with clay
FINE GRAINED SOILS CONTAINS MORE THAN 50% FINES	SILT AND CLAY	LIQUID LIMIT LESS THAN 50		ML	Inorganic SILT with low plasticity
				CL	Lean inorganic CLAY with low plasticity
		LIQUID LIMIT GREATER THAN 50		OL	Organic SILT with low plasticity
				MH	Elastic inorganic SILT with moderate to high plasticity
				CH	Fat inorganic CLAY with moderate to high plasticity
				OH	Organic SILT or CLAY with moderate to high plasticity
	HIGHLY ORGANIC SOILS			PT	PEAT soils with high organic contents

Fill Material

1. Is Fill Material Present Yes ☒ No ☐
2. Percentage Fill (%) None
3. Fill Description (circle all that apply)
- | | | |
|----------------------------|--------------------------------------|---------|
| Asphalt | Metal | Plastic |
| Concrete | Wood | Glass |
| Igneous/Metamorphic Gravel | <input checked="" type="radio"/> N/A | |
| Other _____ | | |

Is Staining Present Yes ☒ No ☐

Color brn (7.5YR 5/4)

Odor

1. Odor Strength (circle one)

☒ None ☐ Slight ☐ Strong

2. Odor Description (circle one)

Organic ☐ Petroleum ☐ Chemical ☐

☒ N/A Other _____

Moisture Condition (circle one)

☒ Dry ☐ Moist ☐ Wet

PG Signature [Signature]

PG Registration # 7735

Additional Comments NA

Location ID: DG-870		Subarea: 5A		Date Started: 6-14-13		Date Completed:	
Client: DOE				Project Name/#: SSFL-65258-63376-1203-002-223-02291-SSPH3 MB		Total Depth: 1st DPT = 3.0 2nd DPT = 3.0 3rd DPT = 2.8	
Company Name: CDM SMITH				Drill Contractor/Driller: Strongarm		Depth Drilled into Bedrock: NA	
GPS collected? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				Drill Method: DPT		Sampling Method: DPT Sleeves	
Radiological Background: Y=13-80				Borehole diameter: 2.25		Geologist: David Rojas	
PID Background: 0.0				Depth to GW: NA			
Radiological Equipment Used:				PG Review & Non			
<input checked="" type="checkbox"/> MicroR <input checked="" type="checkbox"/> Alpha/Beta <input checked="" type="checkbox"/> Pancake				Multistaff #7735			

Depth (feet)	bgs	Recovery (feet)	PID (ppm)	Radiological (uR/cpm)	Sample Name	Sample Time	USCS	Description of Materials
SAMPLE 00-0.5		0.5/0.5	0.0	13/90	SL-870	1040	SM	SILTY SAND, brn (7.5YR 5/4) fgm w/ trace med & coarse gm, pg, sr to sa, quartz, loose to sli compact, friable, dry, ~20% silt, few to some org (roots), to amt of sandstone gravel, med sized, sc, hard, well cemented, few org (roots)
1			0.0	10/54				
2			0.0	10/60			SP/SM	SAND w/ SILT, yel brn (10YR 5/4) mottled w/ dk yel brn (10YR 4/1) fgm, to amt med gm, pg, sr to sa, quartz, dry, med compact, med friable to sli hard, to amt org (roots) dry
3			0.0	10/72			SP/SM	SAND w/ SILT, yel brn (10YR 5/6) mottled w/ dk yel brn (10YR 4/1) fgm w/ to amt med gm, pg, sr to sa, quartz, dry, med to well compact, med friable to friable, sli laminated
Refusals @ 3.0, 3.0, & 2.8								

CDM Smith**BORING LOG AND SAMPLING RECORD**

Page 1 of 1

ABBREVIATIONS:

amt: amount	gr: grained	pg: poorly graded	t: trace	nr: no recovery
c: coarse	lt: light	rnd: rounded	v: very	
dk: dark	m: medium	sa: subangular	wg: well graded	
f: fine	mod: moderate	sr: subrounded	φ: diameter	bgs: below ground surface

SSFL Phase 3 – Field Sample Data Sheet

CDM Smith

FSDS Checked By John Halsey

Sample ID SL-870-SA5A-SB-0.0-0.5

Date/Time 6-14-13 ¹⁶⁴⁰ ~~1035~~ 1100

Matrix (circle one)

☒ Soil ☐ Sediment ☐ Water

Start Depth 0.0

End Depth 0.5

Depth Units (circle one)

Inches ☐ Feet ☒

Check if Composite ☐

Collection Method (circle one)

☒ DPT ☐ Slide Hammer ☐ Hand Auger/Slide Hammer ☐ Trenching ☐ Sediment

QC Type (circle one)

☒ N ☐ FD ☐ FB ☐ RB

Parent Sample ID NA

Field Geologist David Rojas

Sampler John Halsey

Analysis

Parameters	Method	Analyze?
Metals	EPA 6010	<input checked="" type="checkbox"/>
	EPA 6020	<input checked="" type="checkbox"/>
	EPA 7471 (Soil)	<input checked="" type="checkbox"/>
	EPA 7470 (Water)	
Fluoride	EPA 300.0/9056	
SVOCs	EPA 8270	
TIC	EPA 8270	
PAHs	EPA 8270 SIM	<input checked="" type="checkbox"/>
1,4 Dioxane	EPA 8270 SIM	
Dioxins	EPA 1613	<input checked="" type="checkbox"/>
PCBs/PCTs	EPA 8082	
Perchlorate	EPA 314.0/331	
Perchlorate Confirmation	EPA 6850/6860	
pH	EPA 9045 (Soil)	<input checked="" type="checkbox"/>
	EPA 9040 (Water)	
Hexavalent Chromium	EPA 7196/7199	
Herbicides	EPA 8151	
Pesticides	EPA 8081	

Parameters	Method	Analyze?
Encores	VOCs	EPA 8260
	1,4 Dioxane	EPA 8260 SIM
	TPH-GRO	EPA 8015
	TPH-EFH	EPA 8015
	Glycols	EPA 8015
	Alcohols	EPA 8015
	Terphenyls	EPA 8015
	Nitrates	EPA 300.0/9056
	Energetics	EPA 8330
	Cyanide	EPA 9012
	Formaldehyde	EPA 8315
	NDMA	EPA 1625
Sediment	Organotin	NOAA Status and Trends, Krone et al.
	Methyl Mercury	EPA 1630

2 DPT SS Sleeves & 14-oz jar

SSFL Phase 3 – Field Data Sample Sheet (Sample Descriptions)

Soil Classification (circle one)

MAJOR DIVISION			GROUP SYMBOL	LETTER SYMBOL	GROUP NAME
COARSE GRAINED SOILS CONTAINS MORE THAN 50% FINES	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVEL WITH ≤ 5% FINES		GW	Well-graded GRAVEL
				GP	Poorly graded GRAVEL
		GRAVEL WITH BETWEEN 5% AND 15% FINES		GW-GM	Well-graded GRAVEL with silt
				GW-GC	Well-graded GRAVEL with clay
				GP-GM	Poorly graded GRAVEL with silt
				GP-GC	Poorly graded GRAVEL with clay
		GRAVEL WITH ≥ 15% FINES		GM	Silty GRAVEL
				GC	Clayey GRAVEL
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	SAND WITH ≤ 5% FINES		SW	Well-graded SAND
				SP	Poorly graded SAND
		SAND WITH BETWEEN 5% AND 15% FINES		SW-SM	Well-graded SAND with silt
				SW-SC	Well-graded SAND with clay
				SP-SM	Poorly graded SAND with silt
				SP-SC	Poorly graded SAND with clay
		SAND WITH ≥ 15% FINES		SM	Silty SAND
				SC	Clayey SAND
FINE GRAINED SOILS CONTAINS MORE THAN 50% FINES	SILT AND CLAY	LIQUID LIMIT LESS THAN 50		ML	Inorganic SILT with low plasticity
				CL	Lean inorganic CLAY with low plasticity
				OL	Organic SILT with low plasticity
		LIQUID LIMIT GREATER THAN 50		MH	Elastic inorganic SILT with moderate to high plasticity
				CH	Fat inorganic CLAY with moderate to high plasticity
				OH	Organic SILT or CLAY with moderate to high plasticity
HIGHLY ORGANIC SOILS				PT	PEAT soils with high organic contents

Fill Material

1. Is Fill Material Present Yes ☒ No ☐

2. Percentage Fill (%) None

3. Fill Description (circle all that apply)

Asphalt Metal Plastic

Concrete Wood Glass

Igneous/Metamorphic Gravel ☒ N/A

Other _____

Is Staining Present Yes ☒ No ☐

Color brown (7.5YR 5/4)

Odor _____

1. Odor Strength (circle one)

☒ None ☐ Slight ☐ Strong

2. Odor Description (circle one)

Organic Petroleum Chemical

☒ N/A Other _____

Moisture Condition (circle one)

☒ Dry ☐ Moist ☐ Wet

PG Signature [Signature]

PG Registration # 7735

Additional Comments NA

Location ID: DC-871		Subarea: 5A		Date Started: 6-6-13		Date Completed:	
Client: DOE		Project Name/ID: S8PL-65258-63376-1203-002-223-02231-66P413				Total Depth: 1st DPT=5.0 2nd DPT=4.9 3rd DPT=4.9	
Company Name: CDM SMITH		Drill Contractor/Driller: ST				Depth Drilled into Bedrock: NA	
GPS collected? (Yes or No)		Drill Method: DPT				Sampling Method: DPT sleeves	
Radiological Background: 8-14-08=79		Borehole diameter: 2.25				Geologist: David Rojas	
PID Background: 0.0		Depth to GW: NA					
Radiological Equipment Used:		PG Review & No.					
<input checked="" type="checkbox"/> MicroR <input checked="" type="checkbox"/> Alpha/Beta <input checked="" type="checkbox"/> Pancake		Nuke Hoffman, 7735					

Depth (feet)	bgs	Recovery (feet)	PID (ppm)	Radiological (uR/cpm)	Sample Name	Sample Time	USCS	Description of Materials
0.0-0.5		0.5/0.5	0.0	14/96	SL-871 SA5A-SB 0.0-0.5	1030	SP	SAND, strong brn (7.5YR 5/6) mottled w/ brn (7.5YR 4/4), fgr, pg, sr to sa, quartz, dry, tr to few med grn quartz < 5% silt few silty sand nodules, sli consolidated ~0.5 brt friable, tr to few ant org (roots)
1			0.0	14/60	SL-1271 SA5A-SB 0.0-0.5	1045	SM	SILTY SAND, brn (7.5YR 5/4) fgr, pg, sr to sa, quartz, loose, dry, tr to few ant org (roots), tr to few ant silty sand nodules, sli consolidated, but friable ~30% silt
2		2.8/3.5	0.0	14/78				
3			0.0	14/96				SM SILTY SAND, strong brn (7.5YR 5/6) mottled w/ brn (7.5YR 4/4) and tr amounts of red (2.5YR 5/6) fgr pg sr to sa, quartz, dry, some silty sand nodules sli to med well consolidated - sr to sa in shape tr ant med qnsd, ~20% silt
4		1/1	0.0	14/84				
5			0.0	14/72			SP SM	SAND w/ SILT, yel brn (10YR 5/6) mottled w/ yellow (10YR 7/6) and brn (10YR 4/3), fgr, pg, sr to sa quartz dry, loose tr ant silty sand nodules, sli consolidated, sr to sa

Refusals @ 5.0, 4.9, & 4.9'

CDM
Smith

BORING LOG AND SAMPLING RECORD

Page 1 of 1

ABBREVIATIONS:

amt: amount	gr: grained	pg: poorly graded	t: trace	nr: no recovery
c: coarse	lt: light	rnd: rounded	v: very	
dk: dark	m: medium	sa: subangular	wg: well graded	
f: fine	mod: moderate	sr: subrounded	φ: diameter	bgs: below ground surface

Location ID:			Subarea:		Date Started:		Date Completed:	
Project: SSFL					Geologist:		Total Depth:	
Depth (feet) bgs	Recovery (feet)	PID (ppm)	Radiological (μ R/cpm)	Sample Name	Sample Time	USCS	Description of Materials	
Empty table body for data entry								

SSFL Phase 3 – Field Sample Data Sheet

CDM Smith

FSDS Checked By J. C. K.

Sample ID SL-1271-SA5A-SB-0.0-0.5

Date/Time 6-6-13/1045

Matrix (circle one)

☒ Soil ☐ Sediment ☐ Water

Start Depth 0.0

End Depth 0.5

Depth Units (circle one)

Inches ☐ ☒ Feet

Check if Composite ☐

☒ DPT

Slide Hammer

Collection Method (circle one)

Hand Auger/Slide Hammer

Trenching

Sediment

QC Type (circle one)

N ☐ ☒ FD ☐ FB ☐ RB

Parent Sample ID SL-871-SA5A-SB-0.0-0.5 MS

Field Geologist

David Rojas

Sampler

Vidal Cortes

Analysis

Parameters	Method	Analyze?
Metals	EPA 6010	<input checked="" type="checkbox"/>
	EPA 6020	<input checked="" type="checkbox"/>
	EPA 7471 (Soil)	<input checked="" type="checkbox"/>
	EPA 7470 (Water)	
Fluoride	EPA 300.0/9056	
SVOCs	EPA 8270	
TIC	EPA 8270	
PAHs	EPA 8270 SIM	<input checked="" type="checkbox"/>
1,4 Dioxane	EPA 8270 SIM	
Dioxins	EPA 1613	<input checked="" type="checkbox"/>
PCBs/PCTs	EPA 8082	
Perchlorate	EPA 314.0/331	
Perchlorate Confirmation	EPA 6850/6860	
pH	EPA 9045 (Soil)	<input checked="" type="checkbox"/>
	EPA 9040 (Water)	
Hexavalent Chromium	EPA 7196/7199	
Herbicides	EPA 8151	
Pesticides	EPA 8081	

Parameters	Method	Analyze?
Encores	VOCs	EPA 8260
	1,4 Dioxane	EPA 8260 SIM
	TPH-GRO	EPA 8015
	TPH-EFH	EPA 8015 <input checked="" type="checkbox"/>
Sediment	Glycols	EPA 8015
	Alcohols	EPA 8015
	Terphenyls	EPA 8015
	Nitrates	EPA 300.0/9056
	Energetics	EPA 8330
	Cyanide	EPA 9012
	Formaldehyde	EPA 8315
	NDMA	EPA 1625
	Organotin	NOAA Status and Trends, Krone et al.
	Methyl Mercury	EPA 1630

2 DPT SS sleeves & 1 4oz jar

SSFL Phase 3 – Field Data Sample Sheet (Sample Descriptions)

Soil Classification (circle one)

MAJOR DIVISION			GROUP SYMBOL	LETTER SYMBOL	GROUP NAME	
COARSE GRAINED SOILS CONTAINS MORE THAN 50% FINES	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVEL WITH * 5% FINES		GW	Well-graded GRAVEL	
		GRAVEL WITH BETWEEN 5% AND 15% FINES		GP	Poorly graded GRAVEL	
				GW-GM	Well-graded GRAVEL with silt	
				GW-GC	Well-graded GRAVEL with clay	
				GP-GM	Poorly graded GRAVEL with silt	
			GP-GC	Poorly graded GRAVEL with clay		
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	GRAVEL WITH ≥ 10% FINES		GM	Silty GRAVEL	
		SAND WITH * 5% FINES		GC	Clayey GRAVEL	
				SW	Well-graded SAND	
				SP	Poorly graded SAND	
			SAND WITH BETWEEN 5% AND 15% FINES		SW-SM	Well-graded SAND with silt
					SW-SC	Well-graded SAND with clay
					SP-SM	Poorly graded SAND with silt
				SP-SC	Poorly graded SAND with clay	
SAND WITH ≥ 15% FINES		SM	Silty SAND			
		SC	Clayey SAND			
FINE GRAINED SOILS CONTAINS MORE THAN 50% FINES	SILT AND CLAY	LIQUID LIMIT LESS THAN 50		ML	Inorganic SILT with low plasticity	
				CL	Lean inorganic CLAY with low plasticity	
				OL	Organic SILT with low plasticity	
	LIQUID LIMIT GREATER THAN 50		MH	Elastic inorganic SILT with moderate to high plasticity		
			CH	Fat inorganic CLAY with moderate to high plasticity		
			OH	Organic SILT or CLAY with moderate to high plasticity		
		HIGHLY ORGANIC SOILS			PT	PEAT soils with high organic contents

Fill Material

1. Is Fill Material Present Yes ☐ No ☒
2. Percentage Fill (%) None
3. Fill Description (circle all that apply)
- | | | |
|----------------------------|--------------------------------------|---------|
| Asphalt | Metal | Plastic |
| Concrete | Wood | Glass |
| Igneous/Metamorphic Gravel | <input checked="" type="radio"/> N/A | |
| Other _____ | | |

Is Staining Present Yes ☐ No ☒

Color Strong brown (7.5YR 5/6) mottled 1/6 brown (7.5YR 4/4)

- Odor
1. Odor Strength (circle one)
- ☒ None ☐ Slight ☐ Strong
2. Odor Description (circle one)
- Organic ☐ Petroleum ☐ Chemical ☐
- ☒ N/A Other _____

Moisture Condition (circle one)

☒ Dry ☐ Moist ☐ Wet

PG Signature _____ PG Registration # _____

Additional Comments _____

SSFL Phase 3 – Field Sample Data Sheet

CDM Smith

FSDS Checked By V. G. F.

Sample ID SL-871-SA5A-SB-0.0-0.5MS Date/Time 6-6-13/1030

Matrix (circle one)
☒ Soil ☐ Sediment ☐ Water

Start Depth 0.0

End Depth 0.5

Depth Units (circle one)
☐ Inches ☒ Feet

Check if Composite ☐

Collection Method (circle one)
☒ DPT ☐ Slide Hammer ☐ Hand Auger/Slide Hammer ☐ Trenching ☐ Sediment

QC Type (circle one)
☒ N ☐ FD ☐ FB ☐ RB

Parent Sample ID NA

Field Geologist David Rojas

Sampler Vidal Cortes

Analysis

Parameters	Method	Analyze?
Metals	EPA 6010	<input checked="" type="checkbox"/>
	EPA 6020	<input checked="" type="checkbox"/>
	EPA 7471 (Soil)	<input checked="" type="checkbox"/>
	EPA 7470 (Water)	
Fluoride	EPA 300.0/9056	
SVOCs	EPA 8270	
TIC	EPA 8270	
PAHs	EPA 8270 SIM	<input checked="" type="checkbox"/>
1,4 Dioxane	EPA 8270 SIM	
Dioxins	EPA 1613	<input checked="" type="checkbox"/>
PCBs/PCTs	EPA 8082	
Perchlorate	EPA 314.0/331	
Perchlorate Confirmation	EPA 6850/6860	
pH	EPA 9045 (Soil)	<input checked="" type="checkbox"/>
	EPA 9040 (Water)	
Hexavalent Chromium	EPA 7196/7199	
Herbicides	EPA 8151	
Pesticides	EPA 8081	

Parameters	Method	Analyze?
Encores	VOCs	EPA 8260
	1,4 Dioxane	EPA 8260 SIM
	TPH-GRO	EPA 8015
	TPH-EFH	EPA 8015
Sediment	Glycols	EPA 8015
	Alcohols	EPA 8015
	Terphenyls	EPA 8015
	Nitrates	EPA 300.0/9056
	Energetics	EPA 8330
	Cyanide	EPA 9012
	Formaldehyde	EPA 8315
	NDMA	EPA 1625
	Organotin	NOAA Status and Trends, Krone et al.
	Methyl Mercury	EPA 1630

6 DPT SS sleeves & 1 9-oz jar

SSFL Phase 3 – Field Data Sample Sheet (Sample Descriptions)

Soil Classification (circle one)

MAJOR DIVISION			GROUP SYMBOL	LETTER SYMBOL	GROUP NAME
COARSE GRAINED SOILS CONTAINS MORE THAN 50% FINES	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVEL WITH * 5% FINES		GW	Well-graded GRAVEL
				GP	Poorly graded GRAVEL
		GRAVEL WITH BETWEEN 5% AND 15% FINES		GW-GM	Well-graded GRAVEL with silt
				GW-GC	Well-graded GRAVEL with clay
				GP-GM	Poorly graded GRAVEL with silt
				GP-GC	Poorly graded GRAVEL with clay
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	GRAVEL WITH ≥ 10% FINE		GM	Silty GRAVEL
				GC	Clayey GRAVEL
		SAND WITH * 5% FINES		SW	Well-graded SAND
				SP	Poorly graded SAND
		SAND WITH BETWEEN 5% AND 15% FINES		SW-SM	Well-graded SAND with silt
				SW-SC	Well-graded SAND with clay
				SP-SM	Poorly graded SAND with silt
				SP-SC	Poorly graded SAND with clay
		SAND WITH ≥ 15% FINES		SM	Silty SAND
				SC	Clayey SAND
FINE GRAINED SOILS CONTAINS MORE THAN 50% FINES	SILT AND CLAY	LIQUID LIMIT LESS THAN 50		ML	Inorganic SILT with low plasticity
				CL	Lean inorganic CLAY with low plasticity
				OL	Organic SILT with low plasticity
		LIQUID LIMIT GREATER THAN 50		MH	Elastic inorganic SILT with moderate to high plasticity
				CH	Fat inorganic CLAY with moderate to high plasticity
				OH	Organic SILT or CLAY with moderate to high plasticity
			HIGHLY ORGANIC SOILS		

Fill Material

1. Is Fill Material Present Yes ☒ No ☐

2. Percentage Fill (%) None

3. Fill Description (circle all that apply)

Asphalt Metal Plastic

Concrete Wood Glass

Igneous/Metamorphic Gravel ☒ N/A

Other _____

Is Staining Present Yes ☒ No ☐

Color Strong brown (7.5YR 5/6) mottled w/ brown (7.5YR 4/4)

Odor

1. Odor Strength (circle one)

☒ None Slight Strong

2. Odor Description (circle one)

Organic Petroleum Chemical

☒ N/A Other _____

Moisture Condition (circle one)

☒ Dry Moist Wet

PG Signature Nick Hoffman

PG Registration # 7735

Additional Comments _____

Location ID: DG-872		Subarea: 5A		Date Started: 6-6-13		Date Completed:	
Client: DOE		Project Name/ID: SSFL-66258-63376-1203-002-223-02231-SSPH3				Total Depth: 1st DPT=4.6	
Company Name: CDM SMITH		Drill Contractor/Driller: Strongarm		Drill Method: DPT		2nd DPT=4.1	
GPS collected? <input checked="" type="checkbox"/> Yes or No		Borehole diameter: 2.25		Depth Drilled into Bedrock: 3.2		4th DPT=3.2	
Radiological Background: 8=14 α=83		Depth to GW:		Sampling Method: DPT Sleeves		5th DPT=3.3	
PID Background: 0.0		Radiological Equipment Used:		Geologist: David Rojas			
<input checked="" type="checkbox"/> MicroR <input checked="" type="checkbox"/> Alpha/Beta <input checked="" type="checkbox"/> Pancake		PA Review & No					

Depth (feet)	bgs	Recovery (feet)	PID (ppm)	Radiological (uR/cpm)	Sample Name	Sample Time	USCS	Description of Materials
0.0-0.5		0.5/0.5	0.0	14/87	SL-872	1255	SP	SAND with SILT, brn (7.5YR 5/4) mottled w/lt brn (7.5YR 6/4) fgn, pg, sr to sa quartz, loose, chpy; few to some silty sand nodules, sr to sa, mod cemented, mod friable to ant org (roots)
0.5-1.0		0.0	10/66	SA5A-SB				
1.0-1.5		3.5/4	0.0	10/42				
1.5-2.0			0.0	10/60				
2.0-2.5			0.0	10/96	SL-872	1320	SP	SAND strong brn (7.5YR 5/6) mottled w/lt brn (7.5YR 6/4) and yel red (5YR 5/6), fgn w/ few mod gn & tr coarse; gm, pg, sr to sa, quartz, chpy, tr ant org (roots) woody material w/back; some silty sand nodules mod to mod well consolidated, mod to pale to hard
2.5-3.0			0.0	10/78	SA5A-SB			
3.0-3.5		0.6/0.6	0.0	10/80			SP	SAND lt yel brn (10YR 6/4) mottled w/yel brn (10YR 5/6), dk yel brn & v pale brn (10YR 7/4) fgn, pg, sr to sa quartz, mod loose, chpy; some weathered sdstr gravel, mod well cemented, sa to angular, fine sized

CDM Smith

BORING LOG AND SAMPLING RECORD

Page 1 of ____

ABBREVIATIONS:

amt: amount	gr: grained	pg: poorly graded	t: trace	nr: no recovery
c: coarse	lt: light	rnd: rounded	v: very	
dk: dark	m: medium	sa: subangular	wg: well graded	
f: fine	mod: moderate	sr: subrounded	φ: diameter	bgs: below ground surface

SSFL Phase 3 – Field Sample Data Sheet

CDM Smith

FSDS Checked By V. C. Jr.

Sample ID SL-872-SA5A-SB-0.0-0.5 Date/Time 6-6-13/1255

Matrix (circle one)	Start Depth <u>0.0</u>	Depth Units (circle one)
Soil Sediment Water	End Depth <u>0.5</u>	Inches <u>Feet</u>

Check If Composite ☐ Collection Method (circle one)

DPT Slide Hammer Hand Auger/Slide Hammer Trenching Sediment

QC Type (circle one)

N FD FB RB Parent Sample ID NA

Field Geologist David Rojas

Sampler Vidal Cortes

Analysis

Parameters	Method	Analyze?
Metals	EPA 6010	X
	EPA 6020	X
	EPA 7471 (Soil)	X
	EPA 7470 (Water)	
Fluoride	EPA 300.0/9056	
SVOCs	EPA 8270	
TIC	EPA 8270	
PAHs	EPA 8270 SIM	X
1,4 Dioxane	EPA 8270 SIM	
Dioxins	EPA 1613	X
PCBs/PCTs	EPA 8082	
Perchlorate	EPA 314.0/331	
Perchlorate Confirmation	EPA 6850/6860	
pH	EPA 9045 (Soil)	X
	EPA 9040 (Water)	
Hexavalent Chromium	EPA 7196/7199	
Herbicides	EPA 8151	
Pesticides	EPA 8081	

Parameters	Method	Analyze?
Encores	VOCs	EPA 8260
	1,4 Dioxane	EPA 8260 SIM
	TPH-GRO	EPA 8015
	TPH-EFH	EPA 8015
Sediment	Glycols	EPA 8015
	Alcohols	EPA 8015
	Terphenyls	EPA 8015
	Nitrates	EPA 300.0/9056
	Energetics	EPA 8330
	Cyanide	EPA 9012
	Formaldehyde	EPA 8315
	NDMA	EPA 1625
	Organotin	NOAA Status and Trends, Krone et al.
	Methyl Mercury	EPA 1630

2 DPT SS sleeves & 1 4oz jar

SSFL Phase 3 – Field Data Sample Sheet (Sample Descriptions)

Soil Classification (circle one)

MAJOR DIVISION			GROUP SYMBOL	LETTER SYMBOL	GROUP NAME
COARSE GRAINED SOILS CONTAINS MORE THAN 50% FINES	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVEL WITH $\leq 5\%$ FINES		GW	Well-graded GRAVEL
				GP	Poorly graded GRAVEL
		GRAVEL WITH BETWEEN 5% AND 15% FINES		GW-GM	Well-graded GRAVEL with silt
				GW-GC	Well-graded GRAVEL with clay
				GP-GM	Poorly graded GRAVEL with silt
				GP-GC	Poorly graded GRAVEL with clay
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	SAND WITH $\leq 5\%$ FINES		GM	Silty GRAVEL
				GC	Clayey GRAVEL
		SAND WITH BETWEEN 5% AND 15% FINES		SW	Well-graded SAND
				SP	Poorly graded SAND
				SW-SM	Well-graded SAND with silt
				SW-SC	Well-graded SAND with clay
FINE GRAINED SOILS CONTAINS MORE THAN 50% FINES	SILT AND CLAY	LIQUID LIMIT LESS THAN 50		SP-SM	Poorly graded SAND with silt
				SP-SC	Poorly graded SAND with clay
				SM	Silty SAND
				SC	Clayey SAND
		LIQUID LIMIT GREATER THAN 50		ML	Inorganic SILT with low plasticity
				CL	Lean inorganic CLAY with low plasticity
				OL	Organic SILT with low plasticity
				MH	Elastic inorganic SILT with moderate to high plasticity
HIGHLY ORGANIC SOILS				CH	Fat inorganic CLAY with moderate to high plasticity
				OH	Organic SILT or CLAY with moderate to high plasticity
				PT	PEAT soils with high organic contents

Fill Material

1. Is Fill Material Present Yes ☒ No ☐

2. Percentage Fill (%) None

3. Fill Description (circle all that apply)

Asphalt Metal Plastic

Concrete Wood Glass

Igneous/Metamorphic Gravel ☒ N/A

Other _____

Is Staining Present Yes ☒ No ☐

Color brn (7.5YR 5/4) mottled w/lt brn (7.5YR 6/4)

Odor

1. Odor Strength (circle one)

☒ None ☐ Slight ☐ Strong

2. Odor Description (circle one)

Organic Petroleum Chemical

☒ N/A Other _____

Moisture Condition (circle one)

☒ Dry ☐ Moist ☐ Wet

PG Signature *Walter D. Brown*

PG Registration # 7735

Additional Comments _____

SSFL Phase 3 – Field Sample Data Sheet

CDM Smith

FSDS Checked By N. Gtz

Sample ID SL-872-SA5A-SB-2.5-3.5 Date/Time 6-6-13 / 1320

Matrix (circle one)
☒ Soil Sediment Water

Start Depth 2.5
 End Depth 3.5

Depth Units (circle one)
 Inches ☒ Feet

Check if Composite ☐

Collection Method (circle one)
☒ DPT Slide Hammer Hand Auger/Slide Hammer Trenching Sediment

QC Type (circle one)
☒ N FD FB RB

Parent Sample ID NA

Field Geologist David Rojas

Sampler Vidal Cortes

Analysis

Parameters	Method	Analyze?
Metals	EPA 6010	<input checked="" type="checkbox"/>
	EPA 6020	<input checked="" type="checkbox"/>
	EPA 7471 (Soil)	<input checked="" type="checkbox"/>
	EPA 7470 (Water)	
Fluoride	EPA 300.0/9056	
SVOCs	EPA 8270	
TIC	EPA 8270	
PAHs	EPA 8270 SIM	<input checked="" type="checkbox"/>
1,4 Dioxane	EPA 8270 SIM	
Dioxins	EPA 1613	<input checked="" type="checkbox"/>
PCBs/PCTs	EPA 8082	
Perchlorate	EPA 314.0/331	
Perchlorate Confirmation	EPA 6850/6860	
pH	EPA 9045 (Soil)	<input checked="" type="checkbox"/>
	EPA 9040 (Water)	
Hexavalent Chromium	EPA 7196/7199	
Herbicides	EPA 8151	
Pesticides	EPA 8081	

Parameters	Method	Analyze?
Encores	VOCs	EPA 8260
	1,4 Dioxane	EPA 8260 SIM
	TPH-GRO	EPA 8015
	TPH-EFH	EPA 8015
	Glycols	EPA 8015
	Alcohols	EPA 8015
	Terphenyls	EPA 8015
	Nitrates	EPA 300.0/9056
	Energetics	EPA 8330
	Cyanide	EPA 9012
Sediment	Formaldehyde	EPA 8315
	NDMA	EPA 1625
	Organotin	NOAA Status and Trends, Krone et al.
	Methyl Mercury	EPA 1630

2 Horjau & 2 Encores

SSFL Phase 3 – Field Data Sample Sheet (Sample Descriptions)

Soil Classification (circle one)

MAJOR DIVISION			GROUP SYMBOL	LETTER SYMBOL	GROUP NAME	
COARSE GRAINED SOILS CONTAINS MORE THAN 50% FINES	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVEL WITH <u>≤ 5% FINES</u>		GW	Well-graded GRAVEL	
				GP	Poorly graded GRAVEL	
		GRAVEL WITH BETWEEN 5% AND 15% FINES		GW-GM	Well-graded GRAVEL with silt	
				GW-GC	Well-graded GRAVEL with clay	
				GP-GM	Poorly graded GRAVEL with silt	
				GP-GC	Poorly graded GRAVEL with clay	
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	GRAVEL WITH <u>≥ 10% FINES</u>		GM	Silty GRAVEL	
				GC	Clayey GRAVEL	
		SAND WITH <u>≤ 5% FINES</u>		SW	Well-graded SAND	
				SP	Poorly graded SAND	
			SAND WITH BETWEEN 5% AND 15% FINES		SW-SM	Well-graded SAND with silt
					SW-SC	Well-graded SAND with clay
	SP-SM	Poorly graded SAND with silt				
	SP-SC	Poorly graded SAND with clay				
FINE GRAINED SOILS CONTAINS MORE THAN 50% FINES	SILT AND CLAY	SAND WITH <u>≥ 15% FINES</u>		SM	Silty SAND	
				SC	Clayey SAND	
		LIQUID LIMIT <u>LESS THAN 50</u>		ML	Inorganic SILT with low plasticity	
				CL	Lean inorganic CLAY with low plasticity	
		LIQUID LIMIT <u>GREATER THAN 50</u>		OL	Organic SILT with low plasticity	
				MH	Elastic inorganic SILT with moderate to high plasticity	
			CH	Fat inorganic CLAY with moderate to high plasticity		
			CH	Organic SILT or CLAY with moderate to high plasticity		
	HIGHLY ORGANIC SOILS				PT	PEAT soils with high organic contents

Fill Material

1. Is Fill Material Present ☒ Yes ☐ No
2. Percentage Fill (%) trace (1%)
3. Fill Description (circle all that apply)
- | | | |
|----------------------------|-------------|---------|
| Asphalt | Metal | Plastic |
| Concrete | <u>Wood</u> | Glass |
| Igneous/Metamorphic Gravel | N/A | |
| Other _____ | | |

Is Staining Present

Yes ☐ No ☒

Color 1/4" (6.5YR 5/6) mottled w/ 1/4" (6.5YR 5/6)

Odor Strong (7.5YR 5/6) mottled w/ 1/4" (6.5YR 5/6)

1. Odor Strength (circle one)

None Slight Strong

2. Odor Description (circle one)

Organic Petroleum Chemical

N/A Other _____

Moisture Condition (circle one)

Dry Moist Wet

PG Signature [Signature]

PG Registration # 7735

Additional Comments _____

Location ID: DG-873		Subarea: 5A		Date Started: 6-6-13		Date Completed:	
Client: DOE		Project Name/ID: SSFL-66268-63376-1203-002-223-02234-68PH3 <i>Sm Asia</i>				Total Depth: 1st DPT = 2.9 2nd DPT = 2.7 3rd DPT = 2.7	
Company Name: CDM SMITH		Drill Contractor/Driller: Strongarm				Depth Drilled into Bedrock: NA	
GPS collected? <input checked="" type="checkbox"/> Yes or No		Drill Method: DPT					
Radiological Background: 8=12-93		Borehole diameter: 2.25"					
PID Background: 0.0		Depth to GW: NA				Sampling Method: DPT sleeves	
Radiological Equipment Used: <input checked="" type="checkbox"/> MicroR <input checked="" type="checkbox"/> Alpha/Beta <input checked="" type="checkbox"/> Pancake		PG Review & No: <i>Null Johnson 7735</i>				Geologist: David Rojas	

Depth (feet)	bgs	Recovery (feet)	PID (ppm)	Radiological (uR/cpm)	Sample Name	Sample Time	USCS	Description of Materials
SAMPLE 0.0-0.5		0.5	0.0	10/97	SL-873	1415	SP	SAND, yel brn (10YR 5/4) mottled w/ brn yel (10YR 6/6) and tr yel red (5YR 5/8) fgnw, pg, sr, sa, quartz, mod well consolidated, sli friable to hard, dry, tr to fgnw and med & coarse grw, <5% silt
		0.5	0.0	10/86	SASA-SB			
1		2.4	0.0	10/60				
2		2.4	0.0	10/66			SP	SAND, v pale brn (10YR 7/4) mottled w/ olive brn (2.5Y 4/4) and lt brn gray (2.5Y 4/2) & strong brown (7.5YR 5/8) fgnw, pg, sr to sa, quartz, dry, mod well to well consolidated becoming more consolidated w/ depth, sli friable to hard, dry <5% silt
			0.0	10/90				

CDM Smith**BORING LOG AND SAMPLING RECORD**

Page 1 of ____

ABBREVIATIONS:

amt: amount	gr: grained	pg: poorly graded	t: trace	nr: no recovery
c: coarse	lt: light	rnd: rounded	v: very	
dk: dark	m: medium	sa: subangular	wg: well graded	
f: fine	mod: moderate	sr: subrounded	φ: diameter	bgs: below ground surface

SSFL Phase 3 – Field Sample Data Sheet

CDM Smith

FSDS Checked By V. C. [Signature]

Sample ID SL-873-SA5A-SB-0.0-0.5 Date/Time 6-6-13 / 1415

Matrix (circle one)

☒ Soil ☐ Sediment ☐ Water

Start Depth 0.0

End Depth 0.5

Depth Units (circle one)

Inches ☐ Feet ☒

Check if Composite ☐

Collection Method (circle one)

☒ DPT ☐ Slide Hammer ☐ Hand Auger/Slide Hammer ☐ Trenching ☐ Sediment

QC Type (circle one)

☒ N ☐ FD ☐ FB ☐ RB

Parent Sample ID NA

Field Geologist David Rojas

Sampler Vidal Cortes

Analysis

Parameters	Method	Analyze?
Metals	EPA 6010	<input checked="" type="checkbox"/>
	EPA 6020	<input checked="" type="checkbox"/>
	EPA 7471 (Soil)	<input checked="" type="checkbox"/>
	EPA 7470 (Water)	
Fluoride	EPA 300.0/9056	
SVOCs	EPA 8270	
TIC	EPA 8270	
PAHs	EPA 8270 SIM	<input checked="" type="checkbox"/>
1,4 Dioxane	EPA 8270 SIM	
Dioxins	EPA 1613	<input checked="" type="checkbox"/>
PCBs/PCTs	EPA 8082	
Perchlorate	EPA 314.0/331	
Perchlorate Confirmation	EPA 6850/6860	
pH	EPA 9045 (Soil)	<input checked="" type="checkbox"/>
	EPA 9040 (Water)	
Hexavalent Chromium	EPA 7196/7199	
Herbicides	EPA 8151	
Pesticides	EPA 8081	

Parameters	Method	Analyze?
Encores	VOCs	EPA 8260
	1,4 Dioxane	EPA 8260 SIM
	TPH-GRO	EPA 8015
	TPH-EFH	EPA 8015
Sediment	Glycols	EPA 8015
	Alcohols	EPA 8015
	Terphenyls	EPA 8015
	Nitrates	EPA 300.0/9056
	Energetics	EPA 8330
	Cyanide	EPA 9012
	Formaldehyde	EPA 8315
	NDMA	EPA 1625
	Organotin	NOAA Status and Trends, Krone et al.
	Methyl Mercury	EPA 1630

2 DPT SS Sleeves & 1 4oz jar

SSFL Phase 3 – Field Data Sample Sheet (Sample Descriptions)

Soil Classification (circle one)

MAJOR DIVISION			GROUP SYMBOL	LETTER SYMBOL	GROUP NAME
COARSE GRAINED SOILS CONTAINS MORE THAN 50% FINES	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVEL WITH <u>≤ 5% FINES</u>		GW	Well-graded GRAVEL
				GP	Poorly graded GRAVEL
		GRAVEL WITH BETWEEN 5% AND 15% FINES		GW-GM	Well-graded GRAVEL with silt
				GW-GC	Well-graded GRAVEL with clay
		GRAVEL WITH <u>≥ 10% FINES</u>		GP-GM	Poorly graded GRAVEL with silt
				GP-GC	Poorly graded GRAVEL with clay
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	SAND WITH <u>≤ 5% FINES</u>		GM	Silty GRAVEL
				GC	Clayey GRAVEL
		SAND WITH BETWEEN 5% AND 15% FINES		SW	Well-graded SAND
				<u>SP</u>	Poorly graded SAND
				SW-SM	Well-graded SAND with silt
				SW-SC	Well-graded SAND with clay
FINE GRAINED SOILS CONTAINS MORE THAN 50% FINES	SILT AND CLAY	LIQUID LIMIT LESS THAN 50		SP-SM	Poorly graded SAND with silt
				SP-SC	Poorly graded SAND with clay
		SAND WITH <u>≥ 15% FINES</u>		SM	Silty SAND
				SC	Clayey SAND
	HIGHLY ORGANIC SOILS	LIQUID LIMIT GREATER THAN 50		ML	Inorganic SILT with low plasticity
				CL	Lean inorganic CLAY with low plasticity
				OL	Organic SILT with low plasticity
				MH	Elastic inorganic SILT with moderate to high plasticity
				CH	Fat inorganic CLAY with moderate to high plasticity
				CH	Organic SILT or CLAY with moderate to high plasticity
				PT	PEAT soils with high organic contents

Fill Material

1. Is Fill Material Present Yes No
2. Percentage Fill (%) None
3. Fill Description (circle all that apply)
- Asphalt Metal Plastic
- Concrete Wood Glass
- Igneous/Metamorphic Gravel N/A
- Other _____

Is Staining Present

Yes No

Color gel brn (10YR 5/4) mottled w/ brn gel (10YR 6/6) & gel red (5YR 5/8)

Odor

1. Odor Strength (circle one)

None Slight Strong

2. Odor Description (circle one)

Organic Petroleum Chemical

N/A Other _____

Moisture Condition (circle one)

Dry Moist Wet

PG Signature Mike R. [Signature]

PG Registration # 7735

Additional Comments _____

Appendix F

Chain of Custodies

Sample Delivery Group

PH041

13013 1393100 7023185-89

**2425 New Holland Pike
Lancaster, PA 17601**

[illegible]

Sample Delivery Group

PH042

SSFL Phase 3 Chain of Custody

Lancaster, PA 17601

Special Instructions:

Sampler: 

[illegible]

SSFL Phase 3 Chain of Custody

2425 New Holland Pike

Special Instructions:

Sampler:

[illegible]

SSFL Phase 3 Chain of Custody

Contact Phone: (818)466-8007

Lab Address

**2425 New Holland Pike
Lancaster, PA 17601**

Special Instructions:

Sampler:

[illegible]

Sample Delivery Group

PH043

acc #13013 Cp #1393848

SSFL Phase 3 Chain of Custody

CDM Smith

DateShipped: 5/30/2013

CarrierName: FedEx

Airbill No: 799885359473

COC No:

Cooler #:

1. **Identify the subject and predicate of the sentence.**

Lab Phone:

Lab Address

20130530-02

2

lancaster

717-556-7259

2425 New Holland Pike

Lancaster. PA 17601

Sample	Date/ Time	Matrix	Preserv.	Type/No of Containers	Turn Around Time	Other Analysis/Notes
SL-835-SA5A-SB-0.0-0.5	5/30/13 10:55	SO	None	1 - SS-Sieve	10 day	
SL-836-SA5A-SB-0.0-0.5	5/30/13 10:20	SO	None	2 - SS-Sieve	10 day	
SL-836-SA5A-SB-0.0-0.5	5/30/13 10:20	SO	None	1 - 4 oz glass	10 day	
SL-836-SA5A-SB-2.5-3.5	5/30/13 10:30	SO	None	2 - 16 oz glass	10 day	
SL-836-SA5A-SB-2.5-3.5	5/30/13 10:30	SO	None	1 - 4 oz glass	10 day	
SL-837-SA5A-SB-0.0-0.5	5/30/13 08:55	SO	None	2 - SS-Sieve	10 day	
SL-837-SA5A-SB-0.0-0.5	5/30/13 08:55	SO	None	1 - 4 oz glass	10 day	
SL-837-SA5A-SB-4.5-5.5MS	5/30/13 09:10	SO	None	6 - 16 oz glass	10 day	
SL-837-SA5A-SB-4.5-5.5MS	5/30/13 09:10	SO	None	1 - 8 oz glass	10 day	
SL-1237-SA5A-SB-4.5-5.5	5/30/13 09:20	SO	None	2 - 16 oz glass	10 day	
SL-1237-SA5A-SB-4.5-5.5	5/30/13 09:20	SO	None	1 - 4 oz glass	10 day	

Sampler:

Special Instructions:

[illegible]

acc#13013 Cp#1393848 Sample#7076730-46

SSFL Phase 3 Chain of Custody

CDM Smith

Date Shipped: 5/30/2013

Carrier Name: FedEx

Airbill No: 799885359473

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

COC No:

Cooler #:

Lab:

Lab Phone:

Lab Address:

20130530-03

3

Lancaster

717-556-7259

2425 New Holland Pike
Lancaster, PA 17601

Sample	Date/ Time	Matrix	Preserv.	Type/No of Containers	Turn Around Time	Other Analysis/Notes
TB-053013	5/30/13 08:00	WQ	HCl	3 - 40 mL Vial	10 day	
SL-836-SA5A-SB-2.5-3.5	5/30/13 10:30	SO	None	2 - Enore	10 day	
SL-837-SA5A-SB-4.5-5.5MS	5/30/13 09:10	SO	None	6 - Enore	10 day	MS/MSD
SL-1237-SA5A-SB-4.5-5.5	5/30/13 09:20	SO	None	2 - Enore	10 day	
SL-819-SA5A-SB-0.0-0.5	5/30/13 14:30	SO	None	2 - SS-Sleeve	10 day	
SL-819-SA5A-SB-0.0-0.5	5/30/13 14:30	SO	None	1 - 4 oz glass	10 day	
SL-819-SA5A-SB-6.5-7.5	5/30/13 14:45	SO	None	2 - 16 oz glass	10 day	
SL-819-SA5A-SB-6.5-7.5	5/30/13 14:45	SO	None	1 - 4 oz glass	10 day	
SL-819-SA5A-SB-6.5-7.5	5/30/13 14:45	SO	None	2 - Enore	10 day	
SL-833-SA5A-SB-0.0-0.5	5/30/13 13:45	SO	None	2 - SS-Sleeve	10 day	
SL-833-SA5A-SB-0.0-0.5	5/30/13 13:45	SO	None	1 - 4 oz glass	10 day	
SL-833-SA5A-SB-2.5-3.5	5/30/13 13:55	SO	None	2 - 16 oz glass	10 day	
SL-833-SA5A-SB-2.5-3.5	5/30/13 13:55	SO	None	1 - 4 oz glass	10 day	
SL-833-SA5A-SB-2.5-3.5	5/30/13 13:55	SO	None	2 - Enore	10 day	
SL-834-SA5A-SB-0.0-0.5	5/30/13 13:00	SO	None	2 - SS-Sleeve	10 day	
SL-834-SA5A-SB-0.0-0.5	5/30/13 13:00	SO	None	1 - 4 oz glass	10 day	
SL-834-SA5A-SB-2.4-3.4	5/30/13 13:10	SO	None	2 - 16 oz glass	10 day	
SL-834-SA5A-SB-2.4-3.4	5/30/13 13:10	SO	None	1 - 4 oz glass	10 day	
SL-834-SA5A-SB-2.4-3.4	5/30/13 13:10	SO	None	2 - Enore	10 day	

COC Rev 2

Rec'd By: Pat yf 5/31/2013 09:50 Page 114 of 2684
Page 102 of 105

COC: 20130530-03, Page 102 of 2684

SSFL Phase 3 Chain of Custody

**2425 New Holland Pike
Lancaster, PA 17601**

PH043 Page 115 of 2684
Page 103 of 105

Sample Delivery Group

PH044

SSFL Phase 3 Chain of Custody

A-13013
G-1394124
S-7078551-59

CDM Smith
Date Shipped: 5/31/2013
Carrier Name: FedEx
Airbill No: 799897145475

COC No: 20130531-01
Cooler #: 1
Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

Sample	Date/ Time	Matrix	Preserv.	Type/No of Containers	Turn Around Time	Other Analysis/Notes
SL-815-SASA-SB-0.0-0.5	5/31/13 08:35	SO	None	2 - SS-Sleeve	10 day	
SL-815-SASA-SB-0.0-0.5	5/31/13 08:35	SO	None	1 - 4 oz glass	10 day	
SL-838-SASA-SB-0.0-0.5MS	5/31/13 09:35	SO	None	6 - SS-Sleeve	10 day	MS/MSD
SL-838-SASA-SB-0.0-0.5MS	5/31/13 09:35	SO	None	1 - 8 oz glass	10 day	MS/MSD
SL-1238-SASA-SB-0.0-0.5	5/31/13 09:45	SO	None	2 - SS-Sleeve	10 day	
SL-1238-SASA-SB-0.0-0.5	5/31/13 09:45	SO	None	1 - 4 oz glass	10 day	
SL-840-SASA-SB-0.0-0.5	5/31/13 10:45	SO	None	2 - SS-Sleeve	10 day	
SL-840-SASA-SB-0.0-0.5	5/31/13 10:45	SO	None	1 - 4 oz glass	10 day	
SL-839-SASA-SB-0.0-0.5	5/31/13 13:15	SO	None	2 - SS-Sleeve	10 day	
SL-839-SASA-SB-0.0-0.5	5/31/13 13:15	SO	None	1 - 4 oz glass	10 day	
SL-841-SASA-SB-0.0-0.5	5/31/13 13:45	SO	None	2 - SS-Sleeve	10 day	
SL-841-SASA-SB-0.0-0.5	5/31/13 13:45	SO	None	1 - 4 oz glass	10 day	

Special Instructions: *V. Carter*

Relinquished by	Date	Time	Received by	Date	Time
<i>Samuel M. Lopez</i>	5/31/13	11:00	<i>V. Carter</i>	6/13	08:50

Sample Delivery Group

PH047

acct #13013 Cp #1395136 Sample # 7083686-98

CDM Smith

DateShipped: 6/5/2013

CarrierName: FedEx

AirbillNo: 799931220808

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

COC No:

Cooler #:

Lab:

Phone:

Address

20130605-01

1

Lancaster

717-556-7259

Holland Pike

ter. PA 17601

Sample	Date/ Time	Matrix	Preserv.	Type/No of Containers	Turn Around Time	Other Analysis/Notes
EB1-060513	6/5/13 15:00	WQ	HNO3 pH<2	1 - 250 ml. Poly	10 day	
EB1-060513	6/5/13 15:00	WQ	None	2 - 250 ml. Amber	10 day	
EB1-060513	6/5/13 15:00	WQ	None	2 - 1 L. Amber	10 day	
EB1-060513	6/5/13 15:00	WQ	None	1 - 250 ml. Poly	10 day	
EB1-060513	6/5/13 15:00	WQ	HCl	2 - 1 L. Amber	10 day	
EB1-060513	6/5/13 15:00	WQ	HCl	3 - 40 ml. Vial	10 day	

Special Instructions:

Sampler: P. A. A. A.

[illegible]

06/17/2013 Cp# 1395136 Sample# 7083636-48

SSFL Phase 3 Chain of Custody

CDM Smith

Date Shipped: 6/5/2013

Carrier Name: FedEx

Airbill No: 799931220808

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

COC No:

Cooler #:

Lab:

Lab Phone:

Lab Address

20130605-02

2

Lancaster

717-556-7259

2425 New Holland Pike
Lancaster, PA 17601

Sample	Date/ Time	Matrix	Preserv.	Type/No of Containers	Turn Around Time	Other Analysis/Notes
EB2-060513	6/5/13 15:30	WQ	HNO3 pH<2	1 - 250 mL Poly	10 day	
EB2-060513	6/5/13 15:30	WQ	None	2 - 250 mL Amber	10 day	
EB2-060513	6/5/13 15:30	WQ	None	2 - 11 Amber	10 day	
EB2-060513	6/5/13 15:30	WQ	None	1 - 250 mL Poly	10 day	
EB2-060513	6/5/13 15:30	WQ	HCl	2 - 11 Amber	10 day	
EB2-060513	6/5/13 15:30	WQ	HCl	3 - 40 mL Vial	10 day	

Methyl Mercury 1630						
Organotin						
NDMA 1625						
Formaldehyde 8315						
Cyanide 9012						
Energetics 8330						
Nitrates 300.0/9056						
Terphenyls 8015						
Alcohols 8015						
Glycols 8015						
TPH-EFH 8015						
TPH-GRO 8015						
1,4 Dioxane 8260 SIM						
VOCs 8260						
Pesticides 8081						
Herbicides 8151						
Hex Cr 7196/7199						
pH 9040 (Water)						
pH 9045 (Soil)						
Perchlorate Confirm 6850/6860						
Perchlorate 314.0/331						
PCBs/PCTs 8082						
Dioxins 1613						
1,4 Dioxane 8270 SIM						
PAHs 8270 SIM						
TIC 8270						
SVOC 8270						
Fluoride 300.0/9056						
Mercury 7470 (Water)						
Mercury 7471 (Soil)						
Metals 6010 and 6020						

Special Instructions:

Sampler:

Relinquished by	Date	Time	Received by	Date	Time	Relinquished by	Date	Time	Received by	Date	Time
Samuel Lopez	6/6/13	11:00									

6/11/13 Cap # 1395136 Sample # 7053686-98 **SSFL Phase 3 Chain of Custody**

CDM Smith
 DateShipped: 6/5/2013
 CarrierName: FedEx
 AirbillNo: 799931220808
 Contact Name: Pam Hartman
 Contact Phone: (818)466-8007
 COC No: 20130605-03
 Cooler #: 3
 Lab: Lancaster
 Lab Phone: 717-556-7259
 Lab Address: 2425 New Holland Pike
 Lancaster, PA 17601

Sample	Date/ Time	Matrix	Preserv.	Type/No of Containers	Turn Around Time	Other Analysis/Notes
SL-772-SA5A-SB-0-0-0.5	6/4/13 14:25	SO	None	2 - 55-Sleeve	10 day	
SL-772-SA5A-SB-0-0-0.5	6/4/13 14:25	SO	None	1 - 4 oz glass	10 day	
TB-060513	6/5/13 08:00	WQ	HCl	3 - 40 mL Vial	10 day	
SL-811-SA5A-SB-0-0-0.5	6/5/13 08:45	SO	None	2 - 55-Sleeve	10 day	
SL-811-SA5A-SB-0-0-0.5	6/5/13 08:45	SO	None	1 - 4 oz glass	10 day	
SL-811-SA5A-SB-5-5-6.5	6/5/13 09:00	SO	None	2 - 16 oz glass	10 day	
SL-811-SA5A-SB-5-5-6.5	6/5/13 09:00	SO	None	1 - 4 oz glass	10 day	
SL-811-SA5A-SB-5-5-6.5	6/5/13 09:00	SO	None	2 - Encore	10 day	
SL-813-SA5A-SB-0-0-0.5	6/5/13 09:45	SO	None	2 - 55-Sleeve	10 day	
SL-813-SA5A-SB-0-0-0.5	6/5/13 09:45	SO	None	1 - 4 oz glass	10 day	
SL-814-SA5A-SB-0-0-0.5	6/5/13 10:25	SO	None	2 - 55-Sleeve	10 day	
SL-814-SA5A-SB-0-0-0.5	6/5/13 10:25	SO	None	1 - 4 oz glass	10 day	
SL-814-SA5A-SB-4-0-5.0	6/5/13 10:40	SO	None	2 - 16 oz glass	10 day	
SL-814-SA5A-SB-4-0-5.0	6/5/13 10:40	SO	None	1 - 4 oz glass	10 day	
SL-814-SA5A-SB-4-0-5.0	6/5/13 10:40	SO	None	2 - Encore	10 day	
SL-859-SA5A-SB-0-0-0.5	6/5/13 13:50	SO	None	2 - 55-Sleeve	10 day	
SL-859-SA5A-SB-0-0-0.5	6/5/13 13:50	SO	None	1 - 4 oz glass	10 day	
SL-861-SA5A-SB-0-0-0.5	6/5/13 14:20	SO	None	2 - 55-Sleeve	10 day	
SL-861-SA5A-SB-0-0-0.5	6/5/13 14:20	SO	None	1 - 4 oz glass	10 day	
SL-861-SA5A-SB-4-0-5.0	6/5/13 15:05	SO	None	2 - 16 oz glass	10 day	
SL-861-SA5A-SB-4-0-5.0	6/5/13 15:05	SO	None	2 - Encore	10 day	
SL-861-SA5A-SB-7-0-8.0	6/5/13 15:15	SO	None	2 - 16 oz glass	10 day	
SL-861-SA5A-SB-7-0-8.0	6/5/13 15:15	SO	None	2 - Encore	10 day	

Methyl Mercury 1630
 Organotin
 NDMA 1625
 Formaldehyde 8315
 Cyanide 9012
 Energetics 8330
 Nitrates 300.0/9056
 Terphenyls 8015
 Alcohols 8015
 Glycols 8015
 TPH-EFH 8015
 TPH-GRO 8015
 1,4 Dioxane 8260 SIM
 VOCs 8260
 Pesticides 8081
 Herbicides 8151
 Hex Cr 7196/7199
 pH 9040 (Water)
 pH 9045 (Soil)
 Perchlorate Confirm 6850/6860
 Perchlorate 314.0/331
 PCBs/PCTs 8082
 Dioxins 1613
 1,4 Dioxane 8270 SIM
 PAHs 8270 SIM
 TIC 8270
 SVOC 8270
 Fluoride 300.0/9056
 Mercury 7470 (Water)
 Mercury 7471 (Soil)
 Metals 6010 and 6020

Sample Delivery Group

PH050

Sample Delivery Group

PH051

Sample # 7086819-23

SSFL Phase 3 Chain of Custody

CDM Smith

DateShipped: 6/7/2013

CarrierName: FedEx

AirbillNo: 799949968321

Contact Name:

Contact Phone:

Pam Hartman

(818)466-8007

COC No:

Cooler #:

Lab:

Lab Phone:

Lab Address

20130607-01

1

Lancaster

717-556-7259

2425 New Holland Pike
Lancaster, PA 17601

[illegible]

Special Instructions:

Sampler:

[illegible]

Sample Delivery Group

PH052

Sample Delivery Group

PH053

SSFL Phase 3 Chain of Custody

CDM Smith

DateShipped: 6/10/2013

CarrierName: FedEx

AirbillNo: 799965626724

Contact Name:

Contact Phone: (818)466-8007

COC No:

Cooler #:

Lab:

Lab Phone:

Lab Address

20130610-02

2

Lancaster

717-556-7259

2425 New Holland Pike

Lancaster, PA 17601

Sample	Date/ Time	Matrix	Preserv.	Type/No of Containers	Turn Around Time	Other Analysis/Notes
TB-061013	6/10/13 08:00	WQ	HCl	3 - 40 mL Vial	10 day	
SL-1176-SASA-SB-6.0-7.0MS	6/10/13 11:30	SO	None	6 - Encore	10 day	MS/MSD
SL-1176-SASA-SB-6.0-7.0	6/10/13 11:40	SO	None	2 - Encore	10 day	
SL-777-SASA-SB-0.0-0.5	6/10/13 14:45	SO	None	2 - SS-Sleeve	10 day	
SL-777-SASA-SB-0.0-0.5	6/10/13 14:45	SO	None	1 - 4 oz glass	10 day	
SL-779-SASA-SB-0.0-0.5	6/10/13 14:00	SO	None	2 - SS-Sleeve	10 day	
SL-779-SASA-SB-0.0-0.5	6/10/13 14:00	SO	None	1 - 4 oz glass	10 day	

Special Instructions:

Sampler: \

[illegible]

Sample Delivery Group

PH054

acct# 13013 Cp # 1396442

SSFL Phase 3 Chain of Custody

CDM Smith

DateShipped: 6/11/2013

CarrierName: FedEx

AirbillNo: 7999 7637 8065

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

COC No.:

Cooler #:

Lab:

Lab Phone:

Lab Address

20130611-01

1

Lancaster

717-556-7259

2425 New Holland Pike

Lancaster, PA 17601

Sample	Date/ Time	Matrix	Preserv.	Type/No of Containers	Turn Around Time	Other Analysis/Notes
SL-783-SASA-SB-0.0-0.5MS	6/11/13 10:00	SO	None	6 - SS-Sleeve	10 day	MS/MSD
SL-783-SASA-SB-0.0-0.5MS	6/11/13 10:00	SO	None	2 - 8 oz glass	10 day	MS/MSD
SL-1183-SASA-SB-0.0-0.5	6/11/13 10:15	SO	None	2 - SS-Sleeve	10 day	
SL-1183-SASA-SB-0.0-0.5	6/11/13 10:15	SO	None	2 - 4 oz glass	10 day	
SL-789-SASA-SB-0.0-0.5	6/11/13 09:00	SO	None	2 - SS-Sleeve	10 day	
SL-789-SASA-SB-0.0-0.5	6/11/13 09:00	SO	None	2 - 4 oz glass	10 day	
SL-789-SASA-SB-5.0-6.0	6/11/13 09:30	SO	None	2 - 16 oz glass	10 day	
SL-789-SASA-SB-5.0-6.0	6/11/13 09:30	SO	None	1 - 4 oz glass	10 day	
SL-789-SASA-SB-5.0-6.0	6/11/13 09:30	SO	None	2 - Encore	10 day	
TB-061113	6/11/13 08:00	WQ	HCl	3 - 40 ml Vial	10 day	
SL-785-SASA-SB-0.0-0.5	6/11/13 14:05	SO	None	2 - SS-Sleeve	10 day	
SL-785-SASA-SB-0.0-0.5	6/11/13 14:05	SO	None	1 - 4 oz glass	10 day	
SL-786-SASA-SB-0.0-0.5	6/11/13 13:20	SO	None	2 - SS-Sleeve	10 day	
SL-786-SASA-SB-0.0-0.5	6/11/13 13:20	SO	None	1 - 4 oz glass	10 day	
SL-787-SASA-SB-0.0-0.5	6/11/13 12:30	SO	None	2 - SS-Sleeve	10 day	
SL-787-SASA-SB-0.0-0.5	6/11/13 12:30	SO	None	1 - 4 oz glass	10 day	
SL-788-SASA-SB-0.0-0.5	6/11/13 14:50	SO	None	2 - SS-Sleeve	10 day	
SL-788-SASA-SB-0.0-0.5	6/11/13 14:50	SO	None	1 - 4 oz glass	10 day	

Sample Delivery Group

PH055

13013 1396835 7091426-43

Lab Address 2425 New Holland Pike
Lancaster, PA 17601

1

Special Instructions:

Sampler:

[illegible]

SSFL Phase 3 Chain of Custody

CDM Smith

Date Shipped: 6/12/2013

Carrier Name: FedEx

Airbill No: 799987261502

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

COC No:

20130612-02

Cooler #:

2

Lab:

Lancaster

Lab Phone:

717-556-7259

Lab Address

2425 New Holland Pike
Lancaster, PA 17601

13013

1390835 7091426-43

Sample	Date/ Time	Matrix	Preserv.	Type/No of Containers	Turn Around Time	Other Analysis/Notes
EB2-061213	6/12/13 15:30	WQ	None	2 - 1 L Amber	10 day	
EB2-061213	6/12/13 15:30	WQ	HCl	2 - 1 L Amber	10 day	
EB2-061213	6/12/13 15:30	WQ	None	2 - 250 mL Poly	10 day	
EB2-061213	6/12/13 15:30	WQ	HNO3 pH<2	1 - 250 mL Poly	10 day	
EB2-061213	6/12/13 15:30	WQ	None	1 - 250 mL Amber	10 day	
Methyl Mercury 1630						
Organotin						
NDMA 1625						
Formaldehyde 8315						
Cyanide 9012						
Energetics 8330						
Nitrates 300.0/9056						
Terphenyls 8015						
Alcohols 8015						
Glycols 8015						
TPH-EFH 8015						
TPH-GRO 8015						
1,4 Dioxane 8260 SIM						
VOCs 8260						
Pesticides 8081						
Herbicides 8151						
Hex Cr 7196/7199						
pH 9040 (Water)						
pH 9045 (Soil)						
Perchlorate Confirm 6850/6860						
Perchlorate 314.0/331						
PCBs/PCTs 8082						
Dioxins 1613						
1,4 Dioxane 8270 SIM						
PAHs 8270 SIM						
TIC 8270						
SVOC 8270						
Fluoride 300.0/9056						
Mercury 7470 (Water)						
Mercury 7471 (Soil)						
Metals 6010 and 6020						

Special Instructions:

Sampler: *P. Hartman*

Relinquished by	Date	Time	Received by	Date	Time	Relinquished by	Date	Time	Received by	Date	Time
<i>Stephanie Love</i>	6/13/13	1600							<i>P. Hartman</i>	6/13/13	0915

13013 1396835 7091426-43

Contact Phone: (818)466-8007

Lab Address
2425 New Holland Pike
Lancaster, PA 17601

3

Lancaster

717-556-7259

**2425 New Holland Pike
Lancaster, PA 17601**

Special Instructions:

Sampler: P. Hart

[illegible]

7091426-43

Contact Phone: (818)466-8007

Lancaster, PA 17601

Lancaster

2425 New Holland Pike

[illegible]PH055 Page 112 of 3565
Page 98 of 101

REC-20130612-01, Page 2 of 11

1401

13013 1396835 7091426-43

Lancaster, PA 17601

1

Lancaster

717-556-7259

2425 New Holland Pike

Lancaster, PA 17601

Special Instructions:

Sampler:238

Sample Delivery Group

PH056

SSFL Phase 3 Chain of Custody

Contact Phone: (818)466-8007

Lab Address

2425 New Holland Pike

[illegible]PH056 Page 54 of 2144
Page 46 of 48

Sample Delivery Group

PH057

Oct #13013 Cp #1397462 Sample # 7094786-95

SSFL Phase 3 Chain of Custody

CDM Smith

Date Shipped: 6/14/2013

Carrier Name: FedEx

Airbill No: 796006653747

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

COC No:

Cooler #:

Lab:

Lab Phone:

Lab Address

20130614-01

1

Lancaster

717-556-7259

2425 New Holland Pike
Lancaster, PA 17601

Sample	Date/ Time	Matrix	Preserv.	Type/No of Containers	Turn Around Time	Other Analysis/Notes
SL-850-SASA-SB-0.0-0.5	6/14/13 09:05	SO	None	2 - SS-Sleeve	10 day	
SL-850-SASA-SB-0.0-0.5	6/14/13 09:05	SO	None	1 - 4 oz glass	10 day	
SL-869-SASA-SB-0.0-0.5	6/14/13 09:55	SO	None	2 - SS-Sleeve	10 day	
SL-869-SASA-SB-0.0-0.5	6/14/13 09:55	SO	None	1 - 4 oz glass	10 day	
SL-870-SASA-SB-0.0-0.5	6/14/13 10:40	SO	None	2 - SS-Sleeve	10 day	
SL-870-SASA-SB-0.0-0.5	6/14/13 10:40	SO	None	1 - 4 oz glass	10 day	
SL-852-SASA-SB-0.0-0.5MS	6/14/13 12:50	SO	None	6 - SS-Sleeve	10 day	MS/MSD
SL-852-SASA-SB-0.0-0.5MS	6/14/13 12:50	SO	None	1 - 8 oz glass	10 day	MS/MSD
SL-1252-SASA-SB-0.0-0.5	6/14/13 13:10	SO	None	2 - SS-Sleeve	10 day	
SL-1252-SASA-SB-0.0-0.5	6/14/13 13:10	SO	None	1 - 4 oz glass	10 day	
SL-852-SASA-SB-4.5-5.5	6/14/13 13:25	SO	None	2 - SS-Sleeve	10 day	
SL-852-SASA-SB-4.5-5.5	6/14/13 13:25	SO	None	1 - 4 oz glass	10 day	
SL-852-SASA-SB-4.5-5.5	6/14/13 13:25	SO	None	2 - Encore	10 day	
SL-852-SASA-SB-4.5-5.5	6/14/13 13:25	SO	None	3 - 40 mL Vial	10 day	
TB-061413	6/14/13 08:00	WQ	HCl			

Special Instructions:

Sampler:

Relinquished by	Date	Time	Received by	Date	Time
<i>[Signature]</i>	6/14/13	14:00	<i>[Signature]</i>	6/15/13	09:30

Sample Delivery Group

PH058

13013 1397820 7096471-81

**2425 New Holland Pike
Lancaster, PA 17601**

Special Instructions: Sampler: 

[illegible]

Sample Delivery Group

PH059

13013/1398132/7097884-92

SSFL Phase 3 Chain of Custody

CDM Smith

Date Shipped: 6/18/2013

Carrier Name: FedEx

Airbill No: 796032196537

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

COC No:

Cooler #:

Lab:

Lab Phone:

Lab Address:

20130618-01

1

Lancaster

717-556-7259

2425 New Holland Pike
Lancaster, PA 17601

Sample	Date/ Time	Matrix	Preserv.	Type/No of Containers	Turn Around Time	Other Analysis/Notes
TB-061813	6/18/13 08:00	WQ	HCl	3 - 40 mL Vial	10 day	
SL-854-SASA-SB-0.0-0.5	6/18/13 09:45	SO	None	2 - 55-Sieve	10 day	
SL-854-SASA-SB-0.0-0.5	6/18/13 09:45	SO	None	1 - 4 oz glass	10 day	
SL-854-SASA-SB-4.0-5.0	6/18/13 10:00	SO	None	2 - 16 oz glass	10 day	
SL-854-SASA-SB-4.0-5.0	6/18/13 10:00	SO	None	2 - Encore	10 day	
SL-855-SASA-SB-0.0-0.5	6/18/13 10:30	SO	None	2 - 55-Sieve	10 day	
SL-855-SASA-SB-0.0-0.5	6/18/13 10:30	SO	None	1 - 4 oz glass	10 day	
SL-860-SASA-SB-0.0-0.5	6/18/13 12:40	SO	None	2 - 55-Sieve	10 day	
SL-860-SASA-SB-0.0-0.5	6/18/13 12:40	SO	None	1 - 4 oz glass	10 day	
SL-860-SASA-SB-4.0-5.0	6/18/13 12:50	SO	None	2 - 16 oz glass	10 day	
SL-860-SASA-SB-4.0-5.0	6/18/13 12:50	SO	None	2 - Encore	10 day	
SL-860-SASA-SB-10.5-11.5	6/18/13 13:00	SO	None	2 - 16 oz glass	10 day	
SL-860-SASA-SB-10.5-11.5	6/18/13 13:00	SO	None	2 - Encore	10 day	
SL-864-SASA-SB-0.0-0.5	6/18/13 13:55	SO	None	2 - 55-Sieve	10 day	
SL-864-SASA-SB-0.0-0.5	6/18/13 13:55	SO	None	1 - 4 oz glass	10 day	
SL-864-SASA-SB-4.0-5.0	6/18/13 14:10	SO	None	2 - 16 oz glass	10 day	
SL-864-SASA-SB-4.0-5.0	6/18/13 14:10	SO	None	2 - Encore	10 day	

lot 2

SSFL Phase 3 Chain of Custody

Lancaster, PA 17601

Sampler:PH059 Page 69 of 1553
Page 60 of 62

Sample Delivery Group

PH060

13013 1398465 7099654-64

Lancaster. PA 17601

	Sample	Date/ Time	Matrix	Preserv.	Type/No of Containers	Turn Around Time	Other Analysis/Notes
Methyl Mercury 1630	E8B1-061913	6/19/13 15:00	WQ	HNO3 pH<2	1 - 250 mL Poly	10 day	
Organotin	E8B1-061913	6/19/13 15:00	WQ	None	1 - 250 mL Amber	10 day	
NDMA 1625	E8B1-061913	6/19/13 15:00	WQ	None	2 - 1 L Amber	10 day	
Formaldehyde 8315	E8B1-061913	6/19/13 15:00	WQ	None	1 - 250 mL Poly	10 day	
Cyanide 9012	E8B1-061913	6/19/13 15:00	WQ	None	1 - 250 mL Poly	10 day	
Energetics 8330	E8B1-061913	6/19/13 15:00	WQ	HCl	3 - 40 mL Vial	10 day	
Nitrates 300.0/9056	E8B1-061913	6/19/13 15:00	WQ	HCl	2 - 1 L Amber	10 day	
Terphenyls 8015	E8B1-061913	6/19/13 15:00	WQ	HCl			
Alcohols 8015	E8B1-061913	6/19/13 15:00	WQ				
Glycols 8015	E8B1-061913	6/19/13 15:00	WQ				X
TPH-EFH 8015	E8B1-061913	6/19/13 15:00	WQ				X
TPH-GRO 8015	E8B1-061913	6/19/13 15:00	WQ				
1,4 Dioxane 8260 SIM	E8B1-061913	6/19/13 15:00	WQ				
VOCs 8260	E8B1-061913	6/19/13 15:00	WQ				
Pesticides 8081	E8B1-061913	6/19/13 15:00	WQ				
Herbicides 8151	E8B1-061913	6/19/13 15:00	WQ				
Hex Cr 7196/7199	E8B1-061913	6/19/13 15:00	WQ				
pH 9040 (Water)	E8B1-061913	6/19/13 15:00	WQ				
pH 9045 (Soil)	E8B1-061913	6/19/13 15:00	WQ				
Perchlorate Confirm 6850/6860	E8B1-061913	6/19/13 15:00	WQ				
Perchlorate 314.0/331	E8B1-061913	6/19/13 15:00	WQ				
PCBs/PCTs 8082	E8B1-061913	6/19/13 15:00	WQ				
Dioxins 1613	E8B1-061913	6/19/13 15:00	WQ				
1,4 Dioxane 8270 SIM	E8B1-061913	6/19/13 15:00	WQ				
PAHs 8270 SIM	E8B1-061913	6/19/13 15:00	WQ				
TIC 8270	E8B1-061913	6/19/13 15:00	WQ				
SVOC 8270	E8B1-061913	6/19/13 15:00	WQ				
Fluoride 300.0/9056	E8B1-061913	6/19/13 15:00	WQ				
Mercury 7470 (Water)	E8B1-061913	6/19/13 15:00	WQ				
Mercury 7471 (Soil)	E8B1-061913	6/19/13 15:00	WQ				
Metals 6010 and 6020	E8B1-061913	6/19/13 15:00	WQ				

Special Instructions:

Sampler:

[illegible]

13013 1398465 7099654-64

**2425 New Holland Pike
Lancaster, PA 17601**

Lancaster

Special Instructions:

Sampler:

[illegible]

13013 1398465 7099654-64

Lancaster, PA 17601

Sample	Date/ Time	Matrix	Preserv.	Type/No of Containers	Turn Around Time	Other Analysis/Notes	
TB-061913	6/19/13 08:00	WQ	HCl	3 - 40 mL Vial	10 day		
	6/19/13 09:50	SO	None	2 - SS-Sleeve	10 day		
	6/19/13 09:50	SO	None	1 - 4 oz glass	10 day		
	6/19/13 09:50	SO	None	2 - SS-Sleeve	10 day		
	6/19/13 09:00	SO	None	1 - 4 oz glass	10 day		
	6/19/13 09:20	SO	None	2 - 16 oz glass	10 day		
	6/19/13 09:20	SO	None	2 - Encore	10 day		
	6/19/13 10:40	SO	None	2 - SS-Sleeve	10 day		
	6/19/13 10:40	SO	None	1 - 4 oz glass	10 day		
	6/19/13 11:15	SO	None	1 - 16 oz glass	10 day		
	6/19/13 11:15	SO	None	2 - Encore	10 day		
	6/19/13 11:15	SO	None	1 - SS-Sleeve	10 day		
	6/19/13 13:40	SO	None	2 - SS-Sleeve	10 day		
	6/19/13 13:40	SO	None	1 - 4 oz glass	10 day		
	6/19/13 13:55	SO	None	2 - 16 oz glass	10 day		
	6/19/13 13:55	SO	None	2 - Encore	10 day		
	6/19/13 14:10	SO	None	2 - 16 oz glass	10 day		
	6/19/13 14:10	SO	None	2 - Encore	10 day		
	SL-859-SA5A-SB-0.0-0.5						
	SL-859-SA5A-SB-0.0-0.5						
	SL-863-SA5A-SB-0.0-0.5						
	SL-863-SA5A-SB-0.0-0.5						
	SL-863-SA5A-SB-4.0-5.0						
	SL-863-SA5A-SB-4.0-5.0						
	SL-866-SA5A-SB-0.0-0.5						
	SL-866-SA5A-SB-0.0-0.5						
	SL-866-SA5A-SB-5.5-6.5						
SL-866-SA5A-SB-5.5-6.5							
SL-866-SA5A-SB-5.5-6.5							
SL-865-SA5A-SB-0.0-0.5							
SL-865-SA5A-SB-0.0-0.5							
SL-865-SA5A-SB-4.0-5.0							
SL-865-SA5A-SB-4.0-5.0							
SL-865-SA5A-SB-9.0-10.0							
SL-865-SA5A-SB-9.0-10.0							

Rec'd By: Pat ga 6/20/13 PH800 Page 87 of 2605
Page 87 of 78

13013 1398465 7099654-64

**2425 New Holland Pike
Lancaster, PA 17601**

Special Instructions:

Sampler:

Victor

⑤ 6/20/13

PH060 Page 88 of 2605
Page 76 of 78

Sample Delivery Group

PH061

acct# 13013 Gp# 1398848

CDM Smith

DateShipped: 6/20/2013

CarrierName: FedEx

AirbillNo: 796051165420

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

COC No.:

Cooler #:

Lab:

Lab Phone:

Lab Address

20130620-01

1

Lancaster

717-556-7259

2425 New Holland Pike

Lancaster, PA 17601

Sample	Date/ Time	Matrix	Preserv.	Type/No of Containers	Turn Around Time	Other Analysis/Notes
TB-062013	6/20/13 08:00	WQ	HCl	3 - 40 ml Vial	10 day	
SL-867-SA5A-SB-0.0-0.5	6/20/13 08:25	SO	None	2 - SS-Sieve	10 day	
SL-867-SA5A-SB-0.0-0.5	6/20/13 08:25	SO	None	1 - 4 oz glass	10 day	
SL-867-SA5A-SB-3.5-4.5	6/20/13 08:50	SO	None	2 - SS-Sieve	10 day	
SL-867-SA5A-SB-3.5-4.5	6/20/13 08:50	SO	None	1 - 4 oz glass	10 day	
SL-867-SA5A-SB-3.5-4.5	6/20/13 08:50	SO	None	2 - Encore	10 day	
SL-868-SA5A-SB-0.0-0.5	6/20/13 09:50	SO	None	2 - SS-Sieve	10 day	
SL-868-SA5A-SB-0.0-0.5	6/20/13 09:50	SO	None	1 - 4 oz glass	10 day	
SL-868-SA5A-SB-4.0-5.0	6/20/13 10:25	SO	None	2 - SS-Sieve	10 day	
SL-868-SA5A-SB-4.0-5.0	6/20/13 10:25	SO	None	1 - 4 oz glass	10 day	
SL-868-SA5A-SB-4.0-5.0	6/20/13 10:25	SO	None	2 - Encore	10 day	

Special Instructions:

Sampler: V. (attos)

[illegible]

Sample Delivery Group

PH077

13013

SSFL Phase 3 Chain of Custody

CDM Smith

DateShipped: 7/29/2013

CarrierName: FedEx

AirbillNo: 796342615190

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

COC No: 20130729-01

Cooler #: 1

Lab: Lancaster

Lab Phone: 717-556-7259

2425 New Holland Pike

Lancaster, PA 17601

Sample	Date/ Time	Matrix	Preserv.	Type/No of Containers	Turn Around Time	Other Analysis/Notes
TB2-072913	7/29/13 08:00	WQ	HCl	3 - 40 mL Vial	10 day	
SL-853-SASA-SB-0.0-0.5	7/29/13 08:00	SO	None	2 - SS-Sieve	10 day	
SL-853-SASA-SB-0.0-0.5	7/29/13 08:00	SO	None	1 - 4 oz glass	10 day	
SL-853-SASA-SB-3.5-4.5	7/29/13 08:15	SO	None	2 - 16 oz glass	10 day	
SL-853-SASA-SB-3.5-4.5	7/29/13 08:15	SO	None	2 - Encore	10 day	
SL-851-SASA-SB-0.0-0.5	7/29/13 08:40	SO	None	2 - SS-Sieve	10 day	
SL-851-SASA-SB-0.0-0.5	7/29/13 08:40	SO	None	1 - 4 oz glass	10 day	
SL-849-SASA-SB-0.0-0.5	7/29/13 09:45	SO	None	2 - SS-Sieve	10 day	
SL-849-SASA-SB-0.0-0.5	7/29/13 09:45	SO	None	1 - 4 oz glass	10 day	

Special Instructions:

Sam

[illegible]

Sample Delivery Group

PH079

13013 1408035 7145265

Lab Address

717-556-7259

**2425 New Holland Pike
Lancaster, PA 17601**

Special Instructions:

Sampler:

[illegible]

Sample Delivery Group

PH125

SSFL Phase 3 Chain of Custody

Contact Phone: (818)466-8007

Lab Address

Lancaster, PA 17601

Special Instructions:

Sampler:

[illegible]

Sample Delivery Group

PH126

acc# 13013 Cp# 1433660 sample # 7275694-60

SSFL Phase 3 Chain of Custody

CDM Smith

Date Shipped: 11/12/2013

Carrier Name:

Airbill No:

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

COC No:

Cooler #:

Lab:

Lab Phone:

Lab Address

20131112-03

3

Lancaster

717-556-7259

2425 New Holland Pike
Lancaster, PA 17601

Sample	Date/ Time	Matrix	Preserv.	Type/No of Containers	Turn Around Time	Other Analysis/Notes
TB2-111213	11/12/13 08:00	WQ	HCl	3 - 40 mL Vial	10 day	
SL-628-SA5A-SB-0.0-0.5MS	11/12/13 13:40	SO	None	6 - SS-Sleeve	10 day	
SL-628-SA5A-SB-0.0-0.5MS	11/12/13 13:40	SO	None	1 - 4 oz glass	10 day	
SL-928-SA5A-SB-0.0-0.5	11/12/13 13:40	SO	None	2 - SS-Sleeve	10 day	
SL-928-SA5A-SB-0.0-0.5	11/12/13 13:40	SO	None	1 - 4 oz glass	10 day	
SL-628-SA5A-SB-6.5-7.5	11/12/13 14:05	SO	None	2 - 16 oz glass	10 day	
SL-628-SA5A-SB-6.5-7.5	11/12/13 14:05	SO	None	2 - Encore	10 day	

Special Instructions:

Sampler:

Relinquished by	Date	Time	Received by	Date	Time
<i>[Signature]</i>	11.12.13	1600	<i>[Signature]</i>	11/13/13	0940

Sample Delivery Group

PH127

SSFL Phase 3 Chain of Custody

2425 New Holland pike

[illegible]

acc#13013 Cp#1433661 Sample# 7275661-75 **SSFL Phase 3 Chain of Custody**

CDM Smith

Date Shipped: 11/12/2013

Carrier Name: FedEx

Airbill No:

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

COC No:

Cooler #:

Lab:

Lab Phone:

Lab Address

20131112-02

2

Lancaster

717-556-7259

2425 New Holland Pike
 Lancaster, PA 17601

Sample	Date/ Time	Matrix	Preserv.	Type/No of Containers	Turn Around Time	Other Analysis/Notes
SL-560-SA5D-SB-0.0-0.5	11/12/13 08:35	SO	None	2 - SS-Sleeve	10 day	
SL-560-SA5D-SB-4.0-5.0MS	11/12/13 09:20	SO	None	6 - 16 oz glass	10 day	
SL-560-SA5D-SB-7.0-8.0	11/12/13 09:35	SO	None	2 - 16 oz glass	10 day	
SL-860-SA5D-SB-4.0-5.0	11/12/13 09:05	SO	None	2 - 16 oz glass	10 day	
SL-560-SA5D-SB-4.0-5.0MS	11/12/13 09:20	SO	None	6 - Encore	10 day	
SL-560-SA5D-SB-0.0-0.5	11/12/13 08:35	SO	None	2 - 4 oz glass	10 day	
SL-860-SA5D-SB-4.0-5.0	11/12/13 09:05	SO	None	2 - Encore	10 day	
SL-560-SA5D-SB-7.0-8.0	11/12/13 09:35	SO	None	2 - Encore	10 day	
SL-549-SA5D-SB-0.0-0.5	11/12/13 10:25	SO	None	2 - SS-Sleeve	10 day	
SL-549-SA5D-SB-0.0-0.5	11/12/13 10:25	SO	None	1 - 4 oz glass	10 day	
SL-549-SA5D-SB-4.0-5.0	11/12/13 10:40	SO	None	2 - 16 oz glass	10 day	
SL-549-SA5D-SB-4.0-5.0	11/12/13 10:40	SO	None	2 - Encore	10 day	
SL-549-SA5D-SB-11.0-12.0	11/12/13 11:05	SO	None	2 - 16 oz glass	10 day	
SL-549-SA5D-SB-11.0-12.0	11/12/13 11:05	SO	None	2 - Encore	10 day	
TB1-111213	11/12/13 08:00	WQ	HCl	3 - 40 ml Vial	10 day	

Special Instructions:	Sampler:
	Andy Viana

Relinquished by	Date	Time	Received by	Date	Time
<i>[Signature]</i>	11/12/13	1600	<i>[Signature]</i>	11/13/13	0940

Sample Delivery Group

PH128

QCC# 4413013
11/13/13

Cap# 1433971

Sample# 7276995-7010
SSFL Phase 3 Chain of Custody

CDM Smith

Date Shipped: 11/13/2013

Carrier Name: FedEx

Airbill No:

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

COC No:

Cooler #:

Lab:

Lab Phone:

Lab Address

20131113-01

1

Lancaster

717-556-7259

2425 New Holland Pike
Lancaster, PA 17601

Sample	Date/ Time	Matrix	Preserv.	Type/No of Containers	Turn Around Time	Other Analysis/Notes
SL-654-SA5A-SB-0.0-0.5	11/13/13 08:05	SO	None	1 - 4 oz glass	10 day	
SL-654-SA5A-SB-0.0-0.5	11/13/13 08:05	SO	None	2 - SS-Sleeve	10 day	
SL-654-SA5A-SB-3.0-4.0MS	11/13/13 08:20	SO	None	6 - 16 oz glass	10 day	
SL-654-SA5A-SB-3.0-4.0	11/13/13 08:25	SO	None	2 - 16 oz glass	10 day	
SL-657-SA5A-SB-7.0-8.0	11/13/13 09:50	SO	None	2 - 16 oz glass	10 day	
SL-658-SA5A-SB-0.0-0.5	11/13/13 10:35	SO	None	1 - 4 oz glass	10 day	
SL-658-SA5A-SB-0.0-0.5	11/13/13 10:35	SO	None	2 - SS-Sleeve	10 day	
SL-657-SA5A-SB-0.0-0.5	11/13/13 09:35	SO	None	2 - SS-Sleeve	10 day	
SL-657-SA5A-SB-0.0-0.5	11/13/13 09:35	SO	None	1 - 4 oz glass	10 day	
SL-658-SA5A-SB-7.0-8.0	11/13/13 10:45	SO	None	2 - 16 oz glass	10 day	
SL-654-SA5A-SB-3.0-4.0MS	11/13/13 08:20	SO	None	6 - Encore	10 day	
SL-654-SA5A-SB-3.0-4.0	11/13/13 08:25	SO	None	2 - Encore	10 day	
SL-657-SA5A-SB-0.0-0.5	11/13/13 09:35	SO	None	2 - Encore	10 day	
SL-658-SA5A-SB-0.0-0.5	11/13/13 10:35	SO	None	2 - Encore	10 day	
SL-667-SA5A-SB-3.0-4.0	11/13/13 13:40	SO	None	2 - Encore	10 day	
SL-657-SA5A-SB-4.0-5.0	11/13/13 14:20	SO	None	2 - Encore	10 day	
SL-658-SA5A-SB-4.0-5.0	11/13/13 14:00	SO	None	2 - Encore	10 day	
						Methyl Mercury 1630
						Organotin
						NDMA 1625
						Formaldehyde 8315
						Cyanide 9012
						Energetics 8330
						Nitrates 300.0/9056
						Terphenyls 8015
						Alcohols 8015
						Glycols 8015
						TPH-EFH 8015
						TPH-GRO 8015
						1,4 Dioxane 8260 SIM
						VOCs 8260
						Pesticides 8081
						Herbicides 8151
						Hex Cr 7196/7199
						pH 9040 (Water)
						pH 9045 (Soil)
						Perchlorate Confirm 6850/6860
						Perchlorate 314.0/331
						PCBs/PCTs 8082
						Dioxins 1613
						1,4 Dioxane 8270 SIM
						PAHs 8270 SIM
						TIC 8270
						SVOC 8270
						Fluoride 300.0/9056
						Mercury 7470 (Water)
						Mercury 7471 (Soil)
						Metals 6010 and 6020

acct# 13013 Cp# 1433971

CDM Smith

DateShipped: 11/13/2013

CarrierName: FedEx

AirbillNo:

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

COC No.:

Cooler #:

Lab:

Lab Phone:

Lab Address

20131113-01

1

Lancaster

717-556-7259

2425 New Holland Pike
Lancaster, PA 17601

Sample	Date/ Time	Matrix	Preserv.	Type/No of Containers	Turn Around Time
					Methyl Mercury 1630
					Organotin
					NDMA 1625
					Formaldehyde 8315
					Cyanide 9012
					Energetics 8330
					Nitrates 300.0/9056
					Terphenyls 8015
					Alcohols 8015
					Glycols 8015
					TPH-EFH 8015
					TPH-GRO 8015
					1,4 Dioxane 8260 SIM
					VOCs 8260
					Pesticides 8081
					Herbicides 8151
					Hex Cr 7196/7199
					pH 9040 (Water)
					pH 9045 (Soil)
					Perchlorate Confirm 6850/6860
					Perchlorate 314.0/331
					PCBs/PCTs 8082
					Dioxins 1613
					1,4 Dioxane 8270 SIM
					PAHs 8270 SIM
					TIC 8270
					SVOC 8270
					Fluoride 300.0/9056
					Mercury 7470 (Water)
					Mercury 7471 (Soil)
					Metals 6010 and 6020

Samplers

Special Instructions:

Relinquished by

Date _____

Time

red by

Date _____

Time

Rel

hed by

Date _____

Time

Receiv

Figure 1

100

1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 26

sample # 7276995-7D1D

SSFL Phase 3 Chain of Custody

CDM Smith				COC No:	20131113-02
DateShipped:	11/13/2013	Contact Name:	Pam Hartman	Cooler #:	2
CarrierName:	FedEx	Contact Phone:	(818)466-8007	Lab:	Lancaster
AirbillNo:				Lab Phone:	717-556-7259
				Lab Address	2425 New Holland Pike Lancaster, PA 17601

[illegible]

Samplers

Special Instructions:

	Relinquished by	Date	Time	Received by	Date	Time	Relinquished by	Date	Time	Received by	Date	Time
06 18	[Signature]	11.73.13	1600									
08										Cashin	11/14/13	0915

OCCT#13013 Cup #1433971 Sample# 7276995-7010

SSFL Phase 3 Chain of Custody

CDM Smith

Date Shipped: 11/13/2013

Carrier Name: FedEx

Airbill No: 797153393699

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

COC No:

20131113-01

Cooler #:

1

Lab:

Lancaster

Lab Phone:

717-556-7259

Lab Address:

2425 New Holland Pike
Lancaster, PA 17601

Revised COC NY 11/14/13

Sample	Date/ Time	Matrix	Preserv.	Type/No of Containers	Turn Around Time	Other Analysis/Notes
SL-654-SASA-SB-0.0-0.5	11/13/13 08:05	SO	None	1 - 4 oz glass	10 day	
SL-654-SASA-SB-0.0-0.5	11/13/13 08:05	SO	None	2 - 55-Sieve	10 day	
SL-654-SASA-SB-3.0-4.0MS	11/13/13 08:20	SO	None	6 - 16 oz glass	10 day	
SL-954-SASA-SB-3.0-4.0	11/13/13 08:25	SO	None	2 - 16 oz glass	10 day	
SL-657-SASA-SB-7.0-8.0	11/13/13 09:50	SO	None	2 - 16 oz glass	10 day	
SL-658-SASA-SB-0.0-0.5	11/13/13 10:35	SO	None	1 - 4 oz glass	10 day	
SL-658-SASA-SB-0.0-0.5	11/13/13 10:35	SO	None	2 - 55-Sieve	10 day	
SL-657-SASA-SB-0.0-0.5	11/13/13 09:35	SO	None	2 - 55-Sieve	10 day	
SL-657-SASA-SB-0.0-0.5	11/13/13 09:35	SO	None	1 - 4 oz glass	10 day	
SL-658-SASA-SB-7.0-8.0	11/13/13 10:45	SO	None	2 - 16 oz glass	10 day	
SL-654-SASA-SB-3.0-4.0MS	11/13/13 08:20	SO	None	6 - Encore	10 day	
SL-954-SASA-SB-3.0-4.0	11/13/13 08:25	SO	None	2 - Encore	10 day	
SL-667-SASA-SB-3.0-4.0	11/13/13 13:40	SO	None	2 - Encore	10 day	
SL-657-SASA-SB-4.0-5.0	11/13/13 14:20	SO	None	2 - Encore	10 day	
SL-658-SASA-SB-4.0-5.0	11/13/13 14:00	SO	None	2 - Encore	10 day	
SL-657-SASA-SB-7.0-8.0	11/13/13 09:50	SO	None	2 - Encore	10 day	
SL-658-SASA-SB-7.0-8.0	11/13/13 10:45	SO	None	2 - Encore	10 day	
						Methyl Mercury 1630
						Organotin
						NDMA 1625
						Formaldehyde 8315
						Cyanide 9012
						Energetics 8330
						Nitrates 300.0/9056
						Terphenyls 8015
						Alcohols 8015
						Glycols 8015
						TPH-EFH 8015
						TPH-GRO 8015
						1,4 Dioxane 8260 SIM
						VOCs 8260
						Pesticides 8081
						Herbicides 8151
						Hex Cr 7196/7199
						pH 9040 (Water)
						pH 9045 (Soil)
						Perchlorate Confirm 6850/6860
						Perchlorate 314.0/331
						PCBs/PCTs 8082
						Dioxins 1613
						1,4 Dioxane 8270 SIM
						PAHs 8270 SIM
						TIC 8270
						SVOC 8270
						Fluoride 300.0/9056
						Mercury 7470 (Water)
						Mercury 7471 (Soil)
						Metals 6010 and 6020

Sample Delivery Group

PH129

Sample # 7279098-116

CDM Smith

DateShipped: 11/14/2013

CarrierName: FedEx

AirbillNo: 797164273268

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

COC No:

Cooler #:

Lab:

Lab Phone:

Lab Address

20131114-01

1

Lancaster

717-556-7259

2425 New Holland Pike
Lancaster, PA 17601

Sample	Date/ Time	Matrix	Preserv.	Type/No of Containers	Turn Around Time	
FB-111413	11/14/13 15:30	WQ	HCl	9 - 40 mL Vial	10 day	Methyl Mercury 1630
FB-111413	11/14/13 15:30	WQ	HCl	2 - 40 mL Vial	10 day	Organotin
FB-111413	11/14/13 15:30	WQ	None	4 - 250 mL Amber	10 day	NDMA 1625
FB-111413	11/14/13 15:30	WQ	HCl	2 - 1 L Amber	10 day	Formaldehyde 8315
FB-111413	11/14/13 15:30	WQ	None	2 - 1 L Amber	10 day	Cyanide 9012
FB-111413	11/14/13 15:30	WQ	None	2 - 250 mL Poly	10 day	Energetics 8330
FB-111413	11/14/13 15:30	WQ	HN03 pH<2	1 - 250 mL Poly	10 day	Nitrates 300.0/9056
FB-111413	11/14/13 15:30	WQ	None	1 - 250 mL Amber	10 day	Terphenyls 8015
FB-111413	11/14/13 15:30	WQ	None	1 - 250 mL Amber	10 day	Alcohols 8015
						Glycols 8015
						TPH-EFH 8015
						TPH-GRO 8015
						1,4 Dioxane 8260 SIM
						VOCs 8260
						Pesticides 8081
						Herbicides 8151
						Hex Cr 7196/7199
						pH 9040 (Water)
						pH 9045 (Soil)
						Perchlorate Confirm 6850/6860
						Perchlorate 314.0/331
						PCBs/PCTs 8082
						Dioxins 1613
						1,4 Dioxane 8270 SIM
						PAHs 8270 SIM
						TIC 8270
						SVOC 8270
						Fluoride 300.0/9056
						Mercury 7470 (Water)
						Mercury 7471 (Soil)
						Metals 6010 and 6020
						Other Analysis/Notes
						TIC for morpholine only.

Special Instructions:

Sampler:

[illegible]

Survey to 11513915

Sample # 7279098-116

SSFL Phase 3 Chain of Custody

CDM Smith

DateShipped: 11/14/2013

CarrierName: FedEx

AirbillNo: 7971 6427 3268

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

COC No:

Cooler #:

Lab:

Lab Phone:

Lab Address

20131114-02

2

Lancaster

717-556-7259

2425 New Holland Pike

Lancaster, PA 17601

Sample	Date/ Time	Matrix	Preserv.	Type/No of Containers	Turn Around Time	Other Analysis/Notes
SL-508-SA5A-SB-0.0-0.5	11/14/13 09:35	SO	None	2 - SS-Sieve	10 day	
SL-508-SA5A-SB-0.0-0.5	11/14/13 09:35	SO	None	1 - 4 oz glass	10 day	
SL-508-SA5A-SB-4.0-5.0	11/14/13 09:47	SO	None	2 - 16 oz glass	10 day	
SL-508-SA5A-SB-9.0-10.0	11/14/13 09:55	SO	None	2 - 16 oz glass	10 day	
SL-508-SA5A-SB-17.0-18.0	11/14/13 10:02	SO	None	2 - 16 oz glass	10 day	
SL-508-SA5A-SB-21.0-22.0	11/14/13 10:09	SO	None	2 - 16 oz glass	10 day	
SL-508-SA5A-SB-33.0-34.0	11/14/13 09:18	SO	None	2 - 16 oz glass	10 day	
						Methyl Mercury 1630
						Organotin
						NDMA 1625
						Formaldehyde 8315
						Cyanide 9012
						Energetics 8330
						Nitrates 300.0/9056
						Terphenyls 8015
						Alcohols 8015
						Glycols 8015
					X	TPH-EFH 8015
						TPH-GRO 8015
					X	1,4 Dioxane 8260 SIM
						VOCs 8260
						Pesticides 8081
						Herbicides 8151
						Hex Cr 7196/7199
						pH 9040 (Water)
						pH 9045 (Soil)
					X	Perchlorate Confirm 6850/6860
						Perchlorate 314.0/331
					X	PCBs/PCTs 8082
					X	Dioxins 1613
					X	1,4 Dioxane 8270 SIM
					X	PAHs 8270 SIM
						TIC 8270
						SVOC 8270
						Fluoride 300.0/9056
						Mercury 7470 (Water)
					X	Mercury 7471 (Soil)
					X	Metals 6010 and 6020

Special Instructions:

Sampler:

[illegible]

Swanwick, 111513 915

Sample # 7279098-116

CDM Smith

DateShipped: 11/14/2013

CarrierName: FedEx

AirbillNo: 797164273268

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

COC No:

Cooler #:

Lab:

Lab Phone:

Lab Address

20131114-03

3

Lancaster

717-556-7259

2425 New Holland Pike

Lancaster, PA 17601

Sample	Date/ Time	Matrix	Preserv.	Type/No of Containers	Turn Around Time	Other Analysis/Notes
11/14/13 08:00	11/14/13 08:00	WQ	HCl	9 - 40 mL Vial	10 day	
11/14/13 09:47	11/14/13 09:47	SO	None	2 - Encore	10 day	
11/14/13 09:55	11/14/13 09:55	SO	None	2 - Encore	10 day	
11/14/13 10:02	11/14/13 10:02	SO	None	2 - Encore	10 day	
11/14/13 10:09	11/14/13 10:09	SO	None	2 - Encore	10 day	
11/14/13 09:18	11/14/13 09:18	SO	None	2 - Encore	10 day	
11/14/13 13:50	11/14/13 13:50	SO	None	2 - Encore	10 day	
11/14/13 14:20	11/14/13 14:20	SO	None	24 - Encore	10 day	
11/14/13 14:25	11/14/13 14:25	SO	None	8 - Encore	10 day	
11/14/13 14:35	11/14/13 14:35	SO	None	8 - Encore	10 day	

Special Instructions:

Sampler:

[illegible]

Plc # 7279098-116
SSFL Phase 3 Chain of Custody

COC No: 20131114-04

Contact Name: Pam Hartman

Contact Name: Pam Hartman
Contact Phone: (818)466-8007

Cooler #:

Lancaster

717-556-7259

2425 New Holland Pike

Lancaster, PA 17601

Special Instructions:

Sampler:

[illegible]

Branchburg 111513 915-

Sample Delivery Group

PH131

SSFL Phase 3 Chain of Custody

13013 1434844 7282325-46

CDM Smith

Date Shipped: 11/18/2013

Carrier Name: FedEx

Airbill No: 8017 8586 9939

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

COC No:

Cooler #: 1

Lab:

Lab Phone:

Lab Address

20131118-01

Lancaster


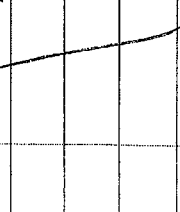
717-556-7259

2425 New Holland Pike
Lancaster, PA 17601

Sample	Date/ Time	Matrix	Preserv.	Type/No of Containers	Turn Around Time	Other Analysis/Notes
TB-111813	11/18/13 08:00	WQ	HCl	9 - 40 mL Vial	10 day	
SL-696-SA5A-SB-0.0-0.5	11/18/13 08:56	SO	None	2 - SS-Sieve	10 day	
SL-696-SA5A-SB-0.0-0.5	11/18/13 08:56	SO	None	1 - 4 oz glass	10 day	
SL-696-SA5A-SB-4.0-5.0	11/18/13 09:05	SO	None	2 - 16 oz glass	10 day	
SL-696-SA5A-SB-4.0-5.0	11/18/13 09:05	SO	None	2 - Encore	10 day	
SL-709-SA5A-SB-0.0-0.5	11/18/13 10:10	SO	None	2 - SS-Sieve	10 day	
SL-709-SA5A-SB-0.0-0.5	11/18/13 10:10	SO	None	1 - 4 oz glass	10 day	
SL-1009-SA5A-SB-4.0-5.0	11/18/13 10:20	SO	None	2 - 16 oz glass	10 day	
SL-1009-SA5A-SB-4.0-5.0	11/18/13 10:20	SO	None	2 - Encore	10 day	
SL-709-SA5A-SB-4.0-5.0MS	11/18/13 10:15	SO	None	6 - 16 oz glass	10 day	
SL-709-SA5A-SB-4.0-5.0MS	11/18/13 10:15	SO	None	6 - Encore	10 day	
SL-709-SA5A-SB-8.0-9.0	11/18/13 10:25	SO	None	2 - 16 oz glass	10 day	
SL-709-SA5A-SB-8.0-9.0	11/18/13 10:25	SO	None	2 - Encore	10 day	
SL-735-SA5A-SB-2.5-3.5	11/18/13 14:00	SO	None	2 - Encore	10 day	
SL-736-SA5A-SB-3.0-4.0	11/18/13 14:34	SO	None	2 - Encore	10 day	

Special Instructions:

Sampler:

Relinquished by	Date	Time	Received by	Date	Time	Relinquished by	Date	Time	Received by	Date	Time
	11/18/13	1600								11/19/13	0950

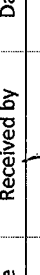
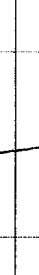
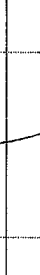
13013 1434844 7282325-46

Lancaster, PA 17601

Special Instructions:

Sampler:

A large, stylized handwritten signature in black ink, written over the 'Sampler:' label and extending across the top of the page.

Relinquished by	Date	Time	Received by	Date	Time	Relinquished by	Date	Time	Received by	Date	Time
	11/18/13	1605								11/19/13	0950

Sample Delivery Group

PH132

7284464-78

Lab Address

Lancaster

2425 New Holland Pike
Lancaster, PA 17601

Special Instructions:

Sampler: 

Special Instructions:

[illegible]

Swent / 11-20-13 / 1010

13013 1435253 7284464-78

Lancaster, PA 17601

Special Instructions:

C

[illegible]

Beverly 11.20.13 1010
 Keny

13013 1435253 7284464-78

Contact Phone: (818)466-8007

Lab Address

2425 New Holland Pike

Special Instructions:

Sampler:

[illegible]

Sweeney	1120.13	1010
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Bay

Sample Delivery Group

PH133

13013 1436294 7290754-64

Lab: Lancaster
Lab Phone: 717-556-7259
Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

[illegible]

Sample Delivery Group

PH134

13013 1436802 7293060-71

2425 New Holland Pike
Lancaster, PA 17601

[illegible]

DOC 20151125-02, Page 1 of 1

Sample Delivery Group

PH135

SSFL Phase 3 Chain of Custody

13013 1437148 7295434-45

CDM Smith

Date Shipped: 11/26/2013

Carrier Name: FedEx

Airbill No: 797258714660

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

COC No:

Cooler #:

Lab:

Lab Phone:

Lab Address

20131126-01

1

Lancaster

717-556-7259

2425 New Holland Pike

Lancaster, PA 17601

Sample	Date/ Time	Matrix	Preserv.	Type/No of Containers	Turn Around Time	Other Analysis/Notes
SL-713-SASA-SB-0.0-0.5	11/26/13 08:45	SO	None	2 - SS-Sleeve	10 day	
SL-713-SASA-SB-0.0-0.5	11/26/13 08:45	SO	None	1 - 4 oz glass	10 day	
SL-713-SASA-SB-2.5-3.5	11/26/13 09:00	SO	None	2 - 16 oz glass	10 day	
SL-713-SASA-SB-2.5-3.5	11/26/13 09:00	SO	None	2 - Encore	10 day	
SL-719-SASA-SB-0.0-0.5	11/26/13 09:40	SO	None	2 - SS-Sleeve	10 day	
SL-719-SASA-SB-0.0-0.5	11/26/13 09:40	SO	None	1 - 4 oz glass	10 day	
SL-720-SASA-SB-0.0-0.5	11/26/13 10:10	SO	None	2 - SS-Sleeve	10 day	
SL-720-SASA-SB-0.0-0.5	11/26/13 10:10	SO	None	1 - 4 oz glass	10 day	
SL-724-SASA-SB-0.0-0.5	11/26/13 10:40	SO	None	2 - SS-Sleeve	10 day	
SL-724-SASA-SB-0.0-0.5	11/26/13 10:40	SO	None	1 - 4 oz glass	10 day	
TB-112613	11/26/13 08:00	WQ	HCl	3 - 40 mL Vial	10 day	
SL-738-SASA-SB-0.0-0.5	11/26/13 01:15	SO	None	2 - SS-Sleeve	10 day	
SL-738-SASA-SB-0.0-0.5	11/26/13 01:15	SO	None	1 - 4 oz glass	10 day	
SL-738-SASA-SB-3.0-4.0	11/26/13 01:20	SO	None	2 - 16 oz glass	10 day	
SL-738-SASA-SB-3.0-4.0	11/26/13 01:20	SO	None	2 - Encore	10 day	
SL-767-SASA-SB-0.0-0.5	11/26/13 01:55	SO	None	2 - SS-Sleeve	10 day	
SL-767-SASA-SB-0.0-0.5	11/26/13 01:55	SO	None	1 - 4 oz glass	10 day	
SL-767-SASA-SB-2.5-3.5	11/26/13 02:05	SO	None	2 - 16 oz glass	10 day	
SL-767-SASA-SB-2.5-3.5	11/26/13 02:05	SO	None	1 - Encore	10 day	

Rec by Duane Bay
ELLE
11/27/13
COC: 20131126-01 Page 1 of 1

SSFL Phase 3 Chain of Custody

13013 / 1437148 / 7295434-45

CDM Smith

Date Shipped: 11/26/2013

Carrier Name: FedEx

Airbill No: 797258714660

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

COC No: 20131126-01

Cooler #: 1

Lab: Lancaster

Lab Phone: 717-556-7259

Lab Address: 2425 New Holland Pike
Lancaster, PA 17601

Revised COC NM212713

Sample	Date/ Time	Matrix	Preserv.	Type/No of Containers	Turn Around Time	Other Analysis/Notes
SL-713-SASA-SB-0.0-0.5	11/26/13 08:45	SO	None	2 - SS-Sleeve	10 day	
SL-713-SASA-SB-0.0-0.5	11/26/13 08:45	SO	None	1 - 4 oz glass	10 day	
SL-713-SASA-SB-2.5-3.5	11/26/13 09:00	SO	None	2 - 16 oz glass	10 day	
SL-713-SASA-SB-2.5-3.5	11/26/13 09:00	SO	None	2 - Encore	10 day	
SL-719-SASA-SB-0.0-0.5	11/26/13 09:40	SO	None	2 - SS-Sleeve	10 day	
SL-719-SASA-SB-0.0-0.5	11/26/13 09:40	SO	None	1 - 4 oz glass	10 day	
SL-720-SASA-SB-0.0-0.5	11/26/13 10:10	SO	None	2 - SS-Sleeve	10 day	
SL-720-SASA-SB-0.0-0.5	11/26/13 10:10	SO	None	1 - 4 oz glass	10 day	
SL-724-SASA-SB-0.0-0.5	11/26/13 10:40	SO	None	2 - SS-Sleeve	10 day	
SL-724-SASA-SB-0.0-0.5	11/26/13 10:40	SO	None	1 - 4 oz glass	10 day	
SL-724-SASA-SB-0.0-0.5	11/26/13 08:00	WQ	HCl	3 - 40 mL Vial	10 day	
SL-738-SASA-SB-0.0-0.5	11/26/13 01:15	SO	None	2 - SS-Sleeve	10 day	
SL-738-SASA-SB-0.0-0.5	11/26/13 01:15	SO	None	1 - 4 oz glass	10 day	
SL-738-SASA-SB-3.0-4.0	11/26/13 01:20	SO	None	2 - 16 oz glass	10 day	
SL-738-SASA-SB-3.0-4.0	11/26/13 01:20	SO	None	2 - Encore	10 day	
SL-767-SASA-SB-0.0-0.5	11/26/13 01:55	SO	None	2 - SS-Sleeve	10 day	
SL-767-SASA-SB-0.0-0.5	11/26/13 01:55	SO	None	1 - 4 oz glass	10 day	
SL-767-SASA-SB-2.5-3.5	11/26/13 02:05	SO	None	2 - 16 oz glass	10 day	
SL-767-SASA-SB-2.5-3.5	11/26/13 02:05	SO	None	1 - Encore	10 day	

13013 1437148 7295434-45

2425 New Holland Pike
Lancaster, PA 17601

Special Instructions:

Sampler's: Paula Park

Sum 16 1013

13013 1437148 7295434-45

2425 New Holland Pike

Special Instructions:

[illegible]

13013 1437148 7295434-45

2425 New Holland Pike
Lancaster, PA 17601

Special Instructions:

Sampler:

David L. Friedman

[illegible]

Sum/h 112731015

Sample Delivery Group

PH136

3013 1437889 7298805-07

Contact Phone: (818)466-8007

Lab Address

2425 New Holland Pike
Lancaster, PA 17601

Special Instructions:

Sampler:

[illegible][illegible]

SSFL Phase 3 Chain of Custody

3013 1437889 7298805-07

CDM Smith

Date Shipped: 12/2/2013

Carrier Name: FedEx

Airbill No: 797290597399

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

COC No:

Cooler #:

Lab:

Lab Phone:

Lab Address

220131202-02

2

Lancaster

717-556-7259

2425 New Holland Pike

Lancaster, PA 17601

Sample	Date/ Time	Matrix	Preserv.	Type/No of Containers	Turn Around Time	Other Analysis/Notes
SL-616-SA5A-SB-0.0-0.5	12/2/13 02:45	SO	None	2 - SS-Sleeve	10 day	Grain Size ASTM 2488-09a
SL-616-SA5A-SB-0.0-0.5	12/2/13 02:45	SO	None	1 - 4 oz glass	10 day	TOC ASTM D5310
SL-679-SA5A-SB-0.0-0.5	12/2/13 01:20	SO	None	2 - SS-Sleeve	10 day	Total Nitrogen ASTM D5373
SL-679-SA5A-SB-0.0-0.5	12/2/13 01:20	SO	None	1 - 4 oz glass	10 day	Methyl Mercury 1630

Special Instructions:

Sampler:

Melinda Hall

Relinquished by	Date	Time	Received by	Date	Time	Relinquished by	Date	Time	Received by	Date	Time
<i>[Signature]</i>	12/2/13	1630									

Summary 12-3-13 940
Bauer

Sample Delivery Group

PH138

SSFL Phase 3 Chain of Custody

13013 1438204 7300094-115

CDM Smith

Date Shipped: 12/3/2013

Carrier Name: FedEx

Airbill No: 7973 0122 0162

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

COC No:

Cooler #:

Lab:

Lab Phone:

Lab Address

20131203-01

1

Lancaster

717-556-7259

2425 New Holland Pike
Lancaster, PA 17601

Sample	Date/ Time	Matrix	Preserv.	Type/No of Containers	Turn Around Time	Other Analysis/Notes
SL-502-NBZ-SB-0.0-0.5	12/3/13 09:20	SO	None	1 - SS-Sleeve	10 day	
SL-502-NBZ-SB-4.0-5.0	12/3/13 09:35	SO	None	1 - 16 oz Glass	10 day	
SL-502-NBZ-SB-4.0-5.0	12/3/13 09:35	SO	None	2 - Encore	10 day	
SL-503-NBZ-SB-0.0-0.5	12/3/13 10:00	SO	None	1 - SS-Sleeve	10 day	
SL-503-NBZ-SB-2.0-3.0	12/3/13 10:20	SO	None	1 - 16 oz Glass	10 day	
SL-503-NBZ-SB-2.0-3.0	12/3/13 10:20	SO	None	2 - Encore	10 day	
SL-504-NBZ-SB-0.0-0.5MS	12/3/13 10:45	SO	None	2 - SS-Sleeve	10 day	
SL-804-NBZ-SB-0.0-0.5	12/3/13 10:55	SO	None	1 - SS-Sleeve	10 day	
SL-530-NBZ-SB-0.0-0.5	12/3/13 09:40	SO	None	1 - SS-Sleeve	10 day	
SL-531-NBZ-SB-0.0-0.5	12/3/13 13:50	SO	None	1 - SS-Sleeve	10 day	
SL-532-NBZ-SB-0.0-0.5	12/3/13 10:20	SO	None	1 - SS-Sleeve	10 day	
SL-533-NBZ-SB-0.0-0.5	12/3/13 13:05	SO	None	1 - SS-Sleeve	10 day	
SL-509-NBZ-SB-2.5-3.5MS	12/3/13 13:30	SO	None	6 - Encore	10 day	
SL-809-NBZ-SB-2.5-3.5	12/3/13 13:40	SO	None	2 - Encore	10 day	
SL-510-NBZ-SB-4.0-5.0	12/3/13 14:45	SO	None	2 - Encore	10 day	
TB-120313	12/3/13 08:00	WQ	HCl	3 - 40 mL Vial	10 day	

Special Instructions:

Relinquished by	Date	Time	Received by	Date	Time	Relinquished by	Date	Time	Received by	Date	Time
<i>[Signature]</i>	12/3/13	1000									

[Signature] 12.4.13 935
[Signature]

SSFL Phase 3 Chain of Custody

13013 1438204 7300094-115

CDM Smith

Date Shipped: 12/3/2013

Carrier Name: FedEx

Airbill No: 7973 0122 0162

Contact Name: Pam Hartman

Contact Phone: (818)466-8007

COC No:

Cooler #:

Lab:

Lab Phone:

Lab Address

20131203-03

2

Lancaster

717-556-7259

2425 New Holland Pike
Lancaster, PA 17601

Sample	Date/ Time	Matrix	Preserv.	Type/No of Containers	Turn Around Time	Other Analysis/Notes
SL-509-NBZ-SB-0.0-0.5	12/3/13 13:15	SO	None	2-SS-Sleeve	10 day	
SL-509-NBZ-SB-0.0-0.5	12/3/13 13:15	SO	None	1-4 oz glass	10 day	
SL-509-NBZ-SB-2.5-3.5MS	12/3/13 13:30	SO	None	6-16 oz glass	10 day	
SL-809-NBZ-SB-2.5-3.5	12/3/13 13:40	SO	None	2-16 oz glass	10 day	
SL-510-NBZ-SB-0.0-0.5	12/3/13 14:30	SO	None	1-4 oz glass	10 day	
SL-510-NBZ-SB-0.0-0.5	12/3/13 14:30	SO	None	2-SS-Sleeve	10 day	
SL-510-NBZ-SB-4.0-5.0	12/3/13 14:45	SO	None	2-16 oz glass	10 day	
						Grain Size ASTM 2488-09a
						TOC ASTM D5310
						Total Nitrogen ASTM D5373
						Methyl Mercury 1630
						Organotin
						NDMA 1625
						Formaldehyde 8315
						Cyanide 9012
						Energetics 8330
						Nitrates 300.0/9056
						Terphenyls 8015
						Alcohols 8015
						Glycols 8015
						TPH-EFH 8015
						TPH-GRO 8015
						1,4 Dioxane 8260 SIM
						VOCs 8260
						Pesticides 8081
						Herbicides 8151
						Hex Cr 7196/7199
						pH 9040 (Water)
						pH 9045 (Soil)
						Perchlorate Confirm 6850/6860
						Perchlorate 314.0/331
						PCBs/PCTs 8082
						Dioxins 1613
						1,4 Dioxane 8270 SIM
						PAHs 8270 SIM
						TIC 8270
						SVOC 8270
						Fluoride 300.0/9056
						Mercury 7470 (Water)
						Mercury 7471 (Soil)
						Metals 6010 and 6020

Special Instructions:

Sampler:

Relinquished by	Date	Time	Received by	Date	Time	Relinquished by	Date	Time	Received by	Date	Time
	12/3/13	1601									

Samuel Hardy 12-4-13
935

13013 1438204 7300094-115

Contact Phone: (818)466-8007

Lab Address

2425 New Holland Pike
Lancaster, PA 17601

Special Instructions:

Relinquished by	Date	Time	Received by	Date	Time	Relinquished by	Date	Time	Received by	Date	Time
[Signature]	12/13/13	1600	/	/	/	/	/	/	/	/	/
/	/	/	/	/	/	/	/	/	/	/	/
/	/	/	/	/	/	/	/	/	/	/	/

Sampler: [Signature]
[Handwritten notes at bottom right]

Special Instructions:

Sampler:

credit cards

Buena Vista, 124.13 935-