APPENDIX B
FIELD LOGS

WESTON SOLUTIONS

SOIL BORING LOG

CLIENT	PROJECT	LOCATION	BORING NUMBER
U.S. EPA	Fulton TBA	2300 Fulton Rd	SB01

DEPTH (FT)	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	USCS	BLOW COUNT	PID/FID (ppm)	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY	WELL CONSTRUCTION	REMARKS/FIELD OBSERVATIONS
	Concrete, rubble		GW		0.0	0-2	S +FDC	43/60		
	Sandy gravel, dark brown, pebble to cobble, angular limestone fill, and to coarse gr. sand, moist		GW		0.0	2-4	S +pH			
					0.0					
5	Light brown clayey sand, med gr. moist (red brick cobble at 4.5 ft)		SP		0.0			32/60		5
					0.0					
					0.0	8-10	S			
10	Some gravel, pebble, rounded				0.0			48/60		10
					0.0					
					0.0					
15	Brown sand, coarse gr. trace gravel rounded, quartz sand, moist		SW					40/48		15
	Clayey sand, fine-med gr., light brown, moist, trace gravel		SW		0.0					
	Brown sand, coarse gr., trace gravel, moist		SW		0.0					
	Light brown clay, dense, some sand (fine) moist		CL							
20	Clayey sand, fine-med gr, moist		SW		0.0			31/60		20
					0.0					
	Brown sand, med gr, moist		SP			23-25	S			
25	(Becoming wet at 25 ft bgs)							54/60		25
30										End of boring

EXPLANATION

Begin: 0900
0940 - Soil sample FAW-SB01(0-2)-102813, 0-2 ft bgs, +FDC
and soil sample FAW-SB01(2-4)-102813, 2-4 ft bgs, +pH
1005 - soil sample FAW-SB01(8-10)-102813, 8-10 ft bgs,
1110 - soil sample FAW-SB01(23-25)-10/28/13, 23-25 ft bgs
Finish: 1135

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DRILLING METHOD: Roto sonic

DRILLED BY: Frontz Drilling

LOGGED BY: Weston Solutions

WESTON SOLUTIONS

SOIL BORING LOG

CLIENT	PROJECT	LOCATION	BORING NUMBER
U.S. EPA	Fulton TBA	2300 Fulton Rd	MW01

DEPTH (FT)	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	USCS	BLOW COUNT	PID/FID (ppm)	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY	WELL CONSTRUCTION	REMARKS/FIELD OBSERVATIONS
	Dark brown Sand, Some gravel Med-coarse gr, moist, loose, Gravel includes fill limestone, concrete glass fragments	Red brick fill	SW		0.0	0-2	S+D +FOC	41/60	stick up	
					0.0	2-4	S + PH			
5	Light brown Sand, fine gr, loose, dry, Some med-cr gr. sand, trace gravel	Sandstone Cobble; Red brick fill	SW		0.0			45/60	2" PVC Riser	5
					0.0					
	Brown Sand, med gr, dry, loose, Some coarse gr Sand and gravel (rounded pebbles), poorly sorted					8-10	S			
10			SW					38/60		10
15	Red brick fill									15
	/more gravelly							48/60		
	Light brown clay, dense, some sand, moist, low plasticity		CL							
20	Brown sand, med-cr gr, dry, loose, Some gravel, poorly sorted		SW							20
	Light brown sand, fine gr, damp, some clay and silt, dense		SP					44/60		
	Light yellow-brown Sand, dry, med gr, loose, Well sorted		SP							
25	(becoming wet at 26 ft bgs)	Blue-gray staining, strong petroleum odor 27.5-28.5 ft bgs			17.1 ppm	24-26	S	36/60	2" PVC 10 ft Screen 0.010	25 ▽
30										30 End of boring (sampling)

EXPLANATION

Begin: 1225

1245 - Collected soil sample FAW-MW01(0-2)-102813 and field duplicate FAW-MW01(0-2)-102813D, 0-2 ft bgs, + FOC.

1255 - Collected soil sample FAW-MW01(2-4)-102813, 2-4 ft bgs, + pH.

1300 - Collected soil sample FAW-MW01(8-10)-102813, 8-10 ft bgs.

1345 - Collected soil sample FAW-MW01(24-26)-102813, 26-28 ft bgs.

1350 - Setting 2" PVC well

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DRILLING METHOD: Rotosonic

DRILLED BY: Frontz Drilling

LOGGED BY: Weston Solutions

WESTON SOLUTIONS

SOIL BORING LOG

CLIENT	PROJECT	LOCATION	BORING NUMBER
U.S. EPA	Fulton TBA	2300 Fulton Rd	MW02

DEPTH (FT)	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	USCS	BLOW COUNT	PID/FID (ppm)	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY	WELL CONSTRUCTION	REMARKS/FIELD OBSERVATIONS
	Loam topsoil		OL							
	Light brown sand, med - coarse gr, loose, moist, some rounded gravel		SW		0.2	0-2	S+FOC +MS/MSD	60/60		
	Gravel, gray limestone and red brick fill angular, (some black clay, gray, low plast, moist)		GP		126	2-4	S+PH			
	Black sandy gravel, angular fill with metal		GW		0.0				2" PVC Riser	
5	Yellowish-brown sand, fine-med gr, moist, loose, well sorted		SP		0.8	6-8 *sample 10/30	S	51/60		5
	Black sandy clay, moist, low plasticity		CL		0.0					
	Brown-black, gravelly sand, med-cr gr, moist, poorly sorted, gravel rounded pebbles		SW							
10					0.8			54/60		10
	Gray sandy clay, damp, low plasticity one large wood fragment, petroleum odor, sand med gr		CL		0.0					
15	Dark brown sandy clay, moist, low plasticity trace gravel		CL		2.1	14-16	S			15
	Brown sand, coarse grained, moist, some gravel, rounded pebbles, poorly sorted		SW		0.0			46/60		
					0.0					
20	Light brown sand, med grained, moist, some coarse sand and clay, few pebble gravel, rounded, poorly sorted (becoming wet at 23.5 ft bgs)		SW		0.0	21-23	S	38/60	2" PVC Screen 10 ft 0.010	20
25	Light brown sand, med grained, well sorted, wet, trace silt and clay, dense		SP					51/60		25
30	End of sampling								31	30 End of boring

EXPLANATION

Begin: 0800
Reached 30 ft bgs: 0930
0825 - Collected Soil Sample FAW-MW02(0-2)-102913, 0-2 ft bgs, MS/MSD, + FOC
0830 - Collected Soil Sample FAW-MW02(2-4)-102913, 2-4 ft bgs, tpH
0942 - Collected Soil Sample FAW-MW02(14-16)-102913, 14-16 ft bgs
1000 - Collected Soil Sample FAW-MW02(21-23)-102913, 21-23 ft bgs

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DRILLING METHOD: Rotosonic
DRILLED BY: Frontz Drilling
LOGGED BY: Weston Solutions

* Returned to MW02 on 10/30/2013, rig positioned 6 ft N of MW02 well, collected soil sample from 6-8 ft bgs (location name MW02a.

WESTON SOLUTIONS INC

SOIL BORING LOG

CLIENT: U.S. EPA | PROJECT: FULTON TBA | LOCATION: 2300 Fulton Rd | BORING NUMBER: MW03

DEPTH (FT)	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	USCS	BLOW COUNT	PID/FID (ppm)	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY	WELL CONSTRUCTION	REMARKS/FIELD OBSERVATIONS
	Limestone & red brick fill		GW		0.0	0-2	S+FOC	33/60		
	Gravelly clay, gray, dense, moist, high plasticity clay matrix, black staining odor, limestone gravel		CH		0.3	2-4	S+pH			
	Fragmented sandstone, K-feldspar, siliceous matrix, very hard		GW		6.8	4-6	S		2" PVC Riser	
5	Gravelly clay, gray, dense, moist, limestone & red brick gravel		CH		0.2			55/60		5
	Light brown sandy clay, moist, very dense		CL							
	Light brown Sand, med grained, some coarse gr. sand, dry, loose, poorly sorted		SW		0.0					
10	(at 13 ft bgs becoming coarser with some rounded alluvial gravel)				0.9			50/60		10
					0.2					
15	Brown clay, dense, dry, some gravel, low P				0.0					15
					0.0			50/60		
	Brown clay, dense, dry, some gravel, low P				0.0					
20	Light brown sand, moist, medgr, loose, well sorted		SP		0.0	21-23	S+FD	55/60	2" PVC 10 ft Screen 0.010	20
	(Becoming wet at 23 ft bgs)				0.0					
25								52/60		25
30	End of Sampling									30
										End of boring

EXPLANATION

Begin: 1215
Reached 30 ft bgs: 1320
1235 - FAW-MW03(0-2)-102913, 0-2 ft bgs, + FOC
1240 - Collected soil sample FAW-MW03(2-4)-102913, 2-4 ft bgs, + pH
1252 - Collected soil sample FAW-MW03(4-6)-102913, 4-6 ft bgs,
1330 - Collected soil sample FAW-MW03(21-23)-102913, 21-23 ft bgs, + field
duplicate soil sample FAW-MW03(21-23)-102913D

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DRILLING METHOD: Roto Sonic

DRILLED BY: Frontz Drilling

LOGGED BY: Weston Solutions

WESTON SOLUTIONS

SOIL BORING LOG

CLIENT: U.S. EPA | PROJECT: Fulton TBA | LOCATION: 2300 Fulton Rd | BORING NUMBER: SB02

DEPTH (FT)	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	USCS	BLOW COUNT	PID/FID (ppm)	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY	WELL CONSTRUCTION	REMARKS/FIELD OBSERVATIONS
	Black gravelly sand, moist, fill		SW		0.0	0-2	S, PH#			
	Light brown sand, moist, med gr, well sorted		SP							
	Light brown clay, low plast, moist, some sand		CL		0.0	2-4	S+PH FOC	49/60		
	Light brown clayey sand, med grained, moist, well sorted, trace rounded gravel		SP							
					0.0					
5	Dark brown-black sand, moist, med gr-coarse gr, trace gravel angular		SW							5
					0.0			54/60		
					0.0	8-10	S			
10										10
					0.0					
	White-black coal and ash fill, moist, sand-clay sized		SW					52/60		
	Red brick angular fill	4000	GW		0.0					
	Brown-yellow sand, med grained, trace clay, trace rounded gravel		SW							
15	Sand is well sorted but with gravel & clay inclusions.				0.0					15
	Black gravelly sand, some silt & clay		SW					54/60		
	Yellow-brown sand, med grained, moist, trace clay, trace rounded gravel, poorly sorted		SW		0.0					
	(becoming coarser sand)				0.0					
20										20
					0.0			56/60		
	Light brown-yellow clay, moist, high plasticity, very dense		CH		0.0					
25										25
	Light brown sand, moist, med grained, well sorted		SP		0.0			50/60		
						27-29	S			
					0.0					
30										30
										End of boring

EXPLANATION

Begin: 1325
End at 30 ft bgs: 1442
Collected Soil Sample (1400): FAW-SB02(0-2)-103013 and field duplicate FAW-SB02(0-2)-103013D, 0-2 ft bgs, +PH
1406 - Collected soil sample FAW-SB02(2-4)-103013, 2-4 ft bgs, +FOC
1425 - Collected Soil Sample FAW-SB02(8-10)-103013, 8-10 ft bgs,
1522 - Collected Soil Sample FAW-SB02(27-29)-103013, 27-30 ft

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DRILLING METHOD: Rotosonic

DRILLED BY: Frontz Drilling

LOGGED BY: Weston Solutions

WESTON SOLUTIONS

SOIL BORING LOG

CLIENT	PROJECT	LOCATION	BORING NUMBER
U.S. EPA	Fulton TBA	~~SB04~~ 2300 Fulton	SB04

DEPTH (FT)	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	USCS	BLOW COUNT	PID/FID (ppm)	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY	WELL CONSTRUCTION	REMARKS/FIELD OBSERVATIONS
	Asphalt				0.0	0-2	S-Voc/Gro	49/60		
	Brown sand, med gr, moist, well sorted		SP							
	Brown sand, med-coarse grained, some rounded gravel, moist, poorly sorted		SW		0.0	2-4	S-Voc & GRO			
					0.0					
5					0.0			52/60		5
	Red brick fill		GW		0.0	8-10	S-Voc & GRO			
	Black sand, coarse gr, dry, some limestone gravel fill									
10										10
										End of boring

EXPLANATION

Begin 0755
Reached 10 ft bgs at 0810
0838 - Collected Soil Sample FAW-SB04(0-2)-103113, + pH, no VOC/GRO
0855 - Collected Soil Sample FAW-SB04(2-4)-103113, + FOC, no VOC/GRO
0905 - Collected Soil Sample FAW-SB04(8-10)-103113, no VOC/GRO

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DRILLING METHOD: Rotosonic

DRILLED BY: Frontz Drilling

LOGGED BY: Weston Solutions

WESTON SOLUTIONS

SOIL BORING LOG

CLIENT	PROJECT	LOCATION	BORING NUMBER
U.S. EPA	Fulton TBA	2300 Fulton	SB05

DEPTH (FT)	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	USCS	BLOW COUNT	PID/FID (ppm)	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY	WELL CONSTRUCTION	REMARKS/FIELD OBSERVATIONS
	Asphalt									
	Gray clay, moist, some sand, low plast, trace gravel, limestone fill		CL		0.0	0-2	5' -VOC + GRO	25/60		Recovery poor due to multiple pieces of metal and plastic fill to 10 ft bgs
					0.0	2-4	5' -VOC + GRO			
(4)	Black sandy fill with metal, plastic, wood, and limestone gravel		GW		0.0					
5	(odor)				0.1 + 1.3(H)	6-8	5'	22/60		5
	Dark gray sand, med-coarse gr, dry, some limestone gravel fill, loose, poorly sorted		SW		0.0 + 0.5(H)					
10										10 End of boring

EXPLANATION

Begin 0910
0920 - Collected Soil Sample FAW-SB05(0-2)-103113, +pH, no VOC
0925 - Collected Soil Sample FAW-SB05(2-4)-103113, no VOC/GRO
0940 - Collected Soil Sample FAW-SB05(6-8)-103113, +FOC, +VOC/GRO due to headspace
1010 - Collected equipment blank FAW-SB05(6-8)-103113EB after sample of same name.

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DRILLING METHOD: Rotosonic

DRILLED BY: Frontier Drilling

LOGGED BY: Weston Solutions

WESTON SOLUTIONS

SOIL BORING LOG

CLIENT	PROJECT	LOCATION	BORING NUMBER
U.S. EPA	Fulton TBA	2300 Fulton Rd	SB12

DEPTH (FT)	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	USCS	BLOW COUNT	PID/FID (ppm)	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY	WELL CONSTRUCTION	REMARKS/FIELD OBSERVATIONS
	Black sand, med gr, moist, loose, some clay and gravel ref brick fill		SW		0.0	0-2	SS PH	26		
	Light yellow-brown clayey sand, med grained, moist, poorly sorted		SW		0.0	2-4	SS FOC	60		
5					0.2 0.1(A)	4-6	SS			5
					0.0			45		
	Dark brown sand, med-coarse gr, moist, loose, some rounded gravel, poorly sorted		SW		0.0			60		
10										10
										End of boring

EXPLANATION

Begin: 1030
1040 - Collected soil sample FAN-SB12(0-2)-103113, +PH
1055 - Collected soil sample FAN-SB12(2-4)-103113, +FOC
1107 - Collected soil sample FAN-SB12(4-6)-103113,

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DRILLING METHOD: Rotosonic

DRILLED BY: Frontz Drilling

LOGGED BY: Weston Solutions

WESTON SOLUTIONS

SOIL BORING LOG

CLIENT: U.S. EPA

PROJECT: Fulton TBA ~~U.S. EPA~~

LOCATION: 2300 Fulton Rd

BORING NUMBER: SB03

DEPTH (FT)	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	USCS	BLOW COUNT	PID/FID (ppm)	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY	WELL CONSTRUCTION	REMARKS/FIELD OBSERVATIONS
	Limestone gravel and red brick fill				0.0	0-2	SHPH			
	Black sand, med-coarse grained, moist, some clay and gravel fill		SW		0.0	2-4	SH + FOC	40/60		
5					0.2 / 0.1(B)	4-6	SH			5
	Red brick fragments				0.0					
	Light brown sand, med gr, moist, some clay, poorly sorted		SW		0.0					
10										10 End of boring

EXPLANATION

Begin: 1120
1135 - Collected soil sample FAW-SB03(0-2)-103113 HPH, 0-2 ft bgs
1140 - Collected soil sample FAW-SB03(2-4)-103113, 2-4 ft bgs, + FOC
1155 - Collected Soil sample FAW-SB03(4-6)-103113, 4-6 ft bgs

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DRILLING METHOD: Rotasonic

DRILLED BY: Frontz Drilling

LOGGED BY: Weston Solutions

WESTON SOLUTIONS

SOIL BORING LOG

CLIENT	PROJECT	LOCATION	BORING NUMBER
U.S. EPA	Fulton TBA	2300 Fulton Rd	SB06

DEPTH (FT)	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	USCS	BLOW COUNT	PID/FID (ppm)	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY	WELL CONSTRUCTION	REMARKS/FIELD OBSERVATIONS
	Dark brown, Sand, med-coarse gr, trace silt & clay, some red brick and limestone angular fill, moist		GW		0.0	0-2	SHFA	40/60		
	Blue-gray clay, high plast, moist, some limestone angular fill		CH		0.0	2-4	SHPH			
5	Dark brown-black gravelly sand, dry, loose, some red brick and limestone and metallic fill, petroleum odor		SW		0.0					5
	Blue-gray clay, high plast, moist, trace gravel		CH		0.0			12/60		
	Dark brown sand, med-coarse gr, moist, some red brick and glass angular fill		SW		0.0	8-10	S (no VOC)			
10										10
15										15
20										20
25										25
30										30

EXPLANATION

Begin: 1238
Reached 10 ft bgs at 1300
1312 - Collected soil sample FAN-SB06 (0-2)-103013, 0-2 ft bgs, + PAC
1315 - Collected soil sample FAN-SB06 (2-4)-103013, 2-4 ft bgs, + pH
1323 - Collected soil sample FAN-SB06 (8-10)-103013, 8-10 ft bgs, no Terracore VOC and TPH-GRO sample collected 8-10 since 0.0 va

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DRILLING METHOD: Rotosonic

DRILLED BY: Fronte Drilling

LOGGED BY: Weston Solutions

WESTON SOLUTIONS

SOIL BORING LOG

CLIENT	PROJECT	LOCATION	BORING NUMBER
U.S. EPA	Fulton TBA	2300 Fulton Rd	SB07

DEPTH (FT)	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	USCS	BLOW COUNT	PID/FID (ppm)	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY	WELL CONSTRUCTION	REMARKS/FIELD OBSERVATIONS
	Gravelly Sand mixed with red brick fragments fill; med gr, moist, some clay		SW		0.0	0-2	S tPH -VOC+GRO	46/60		
	Blue-gray Clay, moist, low plast, some Sand (fine-med) and angular shale gravel. Becomes denser and hard at 4-5		CL		0.0	2-4	S+ FOL -VOC+ GRO			
5					0.0					5
	Black gravely Sand, med-coarse gr, dry, few concrete and red brick cobbles, loose, poorly sorted		SW		0.0		S- VOC+ GRO	47/60		
	Brown Sand, med gr, some silt and fine sand, dry, loose, few pebble-sized pieces of coal, poorly sorted		SW		0.0	8-10				
10										10

EXPLANATION

Begin: 1300
1311 - Collected Soil Sample FAN-SB07(0-2)-103113, 0-2 ft bgs, + pH, no VOC
1320 - Collected soil sample FAN-SB07(2-4)-103113, 2-4 ft bgs, + FOL, no VOC
1324 - Collected Soil Sample FAN-SB07(8-10)-103113, 8-10 ft bgs

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DRILLING METHOD: Rotosonic

DRILLED BY: Frontz Drilling

LOGGED BY: Weston Solutions

WESTON SOLUTIONS

SOIL BORING LOG

CLIENT: U.S. EPA | PROJECT: Fulton TBA | LOCATION: 2300 Fulton Rd | BORING NUMBER: SB11

DEPTH (FT)	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	USCS	BLOW COUNT	PID/FID (ppm)	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY	WELL CONSTRUCTION	REMARKS/FIELD OBSERVATIONS
	Blue-gray sandy clay, moist, low plasticity, some red-brick fragments		CL		0.0	0-2	S-VOC ~~pH~~	33/60		
					3.0	0-4	S+ ~~FoC~~ pH			
	Red sand and pulverized red sandstone, hard feldspar sandstone with siliceous matrix, fine sand to gravel size		GW							
5	Blue-gray clay, moist, low plast, some small red-brick gravel fragments		CL		0.0					5
	Light brown-yellow sand, med grained, moist, some clay, trace rounded pebble gravel, poorly sorted		SW		0.0			46/60		
					6.0	8-10	S-VOC, pH ~~FoC~~			
10										10 End of boring

EXPLANATION

Begin: 1352
1405 - Collected soil sample FAW-SB11(0-2)-103113, 0-2 ft bgs, ~~+pH~~, PCB, no VOC/GRO
1408 - Collected soil sample FAW-SB11(2-4)-103113, 2-4 ft bgs, + pH,
1420 - Collected soil sample FAW-SB11(8-10)-103113, 8-10 ft bgs, + FoC

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DRILLING METHOD: Roto sonic

DRILLED BY: Frontz Drilling

LOGGED BY: Weston Solutions

WESTON SOLUTIONS

SOIL BORING LOG

CLIENT	PROJECT	LOCATION	BORING NUMBER
U.S. EPA	Fulton TBA	2300 Fulton Rd	SB10

DEPTH (FT)	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	USCS	BLOW COUNT	PID/FID (ppm)	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY	WELL CONSTRUCTION	REMARKS/FIELD OBSERVATIONS
	Concrete & Red brick fill		GW		0.0	0-2	S			
	Black Sandy Gravel, angular, wood and concrete debris from fire, odor		GW				S+	50/60		
	Blue-gray Clay, moist, low plasticity Some Shale pebble & coal sized gravel and red brick debris fragments		CL		0.0	2-4	FOC-VOC			
5	Gray-black gravelly Sand, Some concrete gravel with black Sand-sized burnt material, odor, slag, wood, and metal fragments		SW		0.7 to 400	4-6	S+ PH			5
	Brown-yellow Sand, med grained, moist, trace coarse sand and rounded gravel, poorly sorted		SW		0.0			51/60		
					0.0					
10										10
										End of boring

EXPLANATION

1432 - Begin
1445 - Collected soil sample FAW-SB10(0-2)-103113, 0-2 ft bgs, with VOC/TPH-GRO due to staining and odor
1500 - Collected soil sample FAW-SB10(2-4)-103113, 2-4 ft bgs, +FOC
1505 - Collected soil sample FAW-SB10(4-6)-103113, 4-6 ft bgs, +PH

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DRILLING METHOD: Rotosonic

DRILLED BY: Frontz Drilling

LOGGED BY: Weston Solutions

WESTON SOLUTIONS

SOIL BORING LOG

CLIENT	PROJECT	LOCATION	BORING NUMBER
US EPA	FULTON TBA	2300 FULTON ROAD	SB09

DEPTH (FT)	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	USCS	BLOW COUNT	PID/FID (ppm)	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY	WELL CONSTRUCTION	REMARKS/FIELD OBSERVATIONS
	0-8" LIGHT BROWN SILTY CLAY WITH SAND, GRAVEL AND COBBLES (BRICKS) (FILL MATERIAL) DAMP, MEDIUM, ROOTS		CL		0.0 0.0		SPM 60 SPM -VAC	54/60		
5	8"-2.5' BROWNISH GRAY, SILTY, CLAY, SOME GRAVEL (FILL MATERIAL) DAMP, VERY STIFF		CL		0.0 0.0			60/60		
10	2.5-3.5 LIGHT GRAY AND DARK GRAY SAND AND GRAVEL (FILL) POWDERED CONCRETE, DRY LOOSE		GW		0.0		S-VAC			
	3.5'-4.0' LIGHT RED SAND AND GRAVEL (FILL) POWDERED BRICK, DRY, LOOSE		SW							
5'	4.0'-5.5' LIGHT BROWN W/ LOCALIZED POCKETS OF BLACK. WELL GRADED FINE TO MED SAND, SOME FINES, DAMP LOOSE (FILL)		SM							
	5.5'-7.0' BROWN POORLY GRADED FINE TO COARSE SAND TRACE GRAVEL (NATIVE). DAMP, LOOSE		SW							
	7.0'-7.5' BROWN SILTY CLAY SOME SAND, TRACE GRAVEL, DAMP, V. STIFF		ML							
	7.5'-9.0 BROWN WELL GRADED FINE TO COARSE SAND, DAMP, LOOSE		SW							
10	9.0'-10' - BROWN WELL GRADED FINE TO COARSE SAND, SOME FINES, TRACE GRAVEL. DAMP LOOSE		SW							

EXPLANATION

BEGIN: 0815
END BORING AT 10' BGS
0835 - SOIL SAMPLE: FAW-SB09(0-2)-110113 AND FIELD DUPLICATE FM
0840 - SOIL SAMPLE: FAW-SB09(2-4)-110113, 2'-4' BGS + FSC
0850 - SOIL SAMPLE: FAW-SB09(8-10) 110113, 8'-10' BGS

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DRILLING METHOD: AUTOSONIC

DRILLED BY: FONTE DRILLING

LOGGED BY: WESTON SOLUTIONS

WESTON SOLUTIONS

SOIL BORING LOG

CLIENT	PROJECT	LOCATION	BORING NUMBER
USEPA	FULTON FBA	2300 FULTON ROAD	SB08

DEPTH (FT)	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	USCS	BLOW COUNT	PID/FID (ppm)	SAMPLE NUMBER	SAMPLE TYPE	RECOVERY	WELL CONSTRUCTION	REMARKS/FIELD OBSERVATIONS
	0-1.5' LIGHT BROWN SILTY CLAY, MUCH LARGE BRICK AND CONCRETE, TRACE SAND (FILL MATERIAL) DAMP, MEDIUM		CL		0.0 0.0		5' VOC 5' VOC + FOC MS/MSD	40/60		
	1.5'-2.5' LIGHT BROWN, POORLY GRADED FINE SAND, LARGE CONCRETE, (FILL MATERIAL) DAMP, LOOSE		SP		0.7 0.5			25/60		
	2.5'-4.0' MOTTLED BREWNISH BROWN AND LIGHT BROWN, SILTY CLAY, LARGE SHALE AND BRICK FRAGMENTS, LOCALIZED OXIDATION, DAMP, STIFF		CL		0.8					
	4.0'-5' DARK BROWN AND BLACK, WELL GRADED SAND, SOME GRAVEL, MUCH GLASS, DAMP LOOSE		SW							
	5'-7' DARK BROWN, WELL GRADED SAND, SOME FINES, LARGE BRICK AND CONCRETE FRAGMENTS, DAMP, LOOSE		SRW							
	7'-10' BLACK, WELL GRADED SAND, SOME GRAVEL, SOME FINES, GLASS, AUTO PART, PETRO ODOR + STAINING, SOME GRAVEL, MOIST, LOOSE		SW				5' PH			

EXPLANATION

BEGIN 0915
END BORING AT 10' BGS
0935 - SOIL SAMPLE - FAW-SB08(0-2) - 110113 AN
0945 - SOIL SAMPLE - FAW-SB08(2-4) - 110113 AND FOC + MS/MSD
1100 - SOIL SAMPLE FAW-SB08 (8-10) - 110113
0-5 SOIL SC CORE SCREENING = 0.0
5-10 SOIL CORE SCREENING = 0.5

DATE	PAGE
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DRILLING METHOD: ROTO SONIC

DRILLED BY: FONTZ DRILLING

LOGGED BY: WESTON SOLUTIONS

WESTON SOLUTIONS

WORK ORDER #	CLIENT		PROJECT	WELL ID	DEVELOPED BY
2234	U.S. EPA		Fulton TBA	MW01	Frontz Drilling

BEGINNING DEVELOPMENT (DATE/TIME) 10/31/2013 1412	END DEVELOPMENT (DATE/TIME) 10/31/2013 1448
BEGINNING WATER LEVEL: 27.52 ft (TOC)	ENDING WATER LEVEL: 27.85 ft (TOC)
BEGINNING WELL DEPTH: 36.75 ft (TOC)	ENDING WELL DEPTH:

STANDING WATER COLUMN:	WELL DIAMETER: 2 inch
STANDING WELL VOLUME:	SCREEN LENGTH: 10 ft

WELL CONSTRUCTION DATE: 10/28/2013	DRILLING WATER LOSS:

Time (Minutes)	VOLUME REMOVED (Gallons)	Purge Rate (mL/min)	SPEC. COND.	TEMP	pH	Turbidity ~~Other~~ (NTU)	~~Remarks~~ DO	ORP
1412		900 mL/min	609	13.49	7.02	(out of range)	12.32	77.3
1418			621	13.57	7.04	756	11.40	66.0
1421			687	13.74	7.12	456	10.57	41.5
1425			738	14.03	7.15	346	9.97	32.4
1431			845	13.58	7.15	254	9.99	-6.1
1436			901	13.54	7.10	265	8.91	-17.3
1440			979	13.54	7.09	235	7.84	-30.3
1444			998	13.51	7.06	172	7.40	-34.0
1448	8.5	900 mL/min	1013	13.49	7.04	114	7.00	-40.1
			= TOTAL VOLUME REMOVED (Gallons)					

DEVELOPMENT METHOD: Submersible pump

GENERAL NOTES:

WELL DEVELOPMENT FIELD RECORD

WL = WATER LEVEL
WD = WELL DEPTH

WESTON SOLUTIONS SM

WORK ORDER #	CLIENT		PROJECT	WELL ID	DEVELOPED BY
2234	U.S. EPA		Fulton TBA	MW02	Frantz Drilling

BEGINNING DEVELOPMENT (DATE/TIME) 10/31/2013 1258	END DEVELOPMENT (DATE/TIME) 10/31/2013 1324
BEGINNING WATER LEVEL: 24.33 ft (TOC)	ENDING WATER LEVEL: 24.31 ft (TOC)
BEGINNING WELL DEPTH:	ENDING WELL DEPTH:

STANDING WATER COLUMN:	WELL DIAMETER: 2 inch
STANDING WELL VOLUME:	SCREEN LENGTH: 10 ft

WELL CONSTRUCTION DATE: 10/29/2013	DRILLING WATER LOSS:

Time (Minutes)	VOLUME REMOVED (Gallons)	Purge Rate (mL/min)	SPEC. COND.	TEMP	pH	Turbidity ~~Other~~ (NTU)	~~Remarks~~ DO	ORP
1258		1,500 mL/min	1438	14.09	6.68	653	4.78	64.2
1302			1575	14.05	6.68	288	4.30	33.3
1305			1595	14.06	6.72	193	4.10	14.0
1309			1601	14.06	6.73	173	3.91	4.3
1313			1610	14.20	6.76	155	3.80	5.0
1316			1618	14.24	6.79	130	3.71	-0.9
1321			1621	14.32	6.80	100	3.66	7.2
1324	7.5	650 mL/min	1622	14.39	6.81	79.4	3.64	4.3
			= TOTAL VOLUME REMOVED (Gallons)					

DEVELOPMENT METHOD: Submersible pump

GENERAL NOTES:

WELL DEVELOPMENT FIELD RECORD

WL = WATER LEVEL
WD = WELL DEPTH

WESTON SOLUTIONS SM

WORK ORDER #	CLIENT		PROJECT	WELL ID	DEVELOPED BY
2234	U.S. EPA		Fulton TBA	MW03	Frontz Drilling

BEGINNING DEVELOPMENT (DATE/TIME) 10/31/2013 1510	END DEVELOPMENT (DATE/TIME) 10/31/2013 1535
BEGINNING WATER LEVEL: 24.75	ENDING WATER LEVEL: 25.00
BEGINNING WELL DEPTH:	ENDING WELL DEPTH:

STANDING WATER COLUMN:	WELL DIAMETER: 2-inch
STANDING WELL VOLUME:	SCREEN LENGTH: 10 ft

WELL CONSTRUCTION DATE: 10/29/2013	DRILLING WATER LOSS:

Time (Minutes)	VOLUME REMOVED (Gallons)	Purge Rate (mL/min)	SPEC. COND.	TEMP	pH	Turbidity ~~Other~~ (NTU)	~~Remarks~~ Do	ORP
1510		1,100 ml/min	808	13.09	7.27	(out of range)	7.44	-21.2
1515			836	13.16	6.93	(out of range)	7.99	-10.8
1519			875	13.20	7.01	644	8.08	-13.0
1523			930	13.29	7.05		7.70	-16.8
1528			952	13.46	7.09		7.35	-15.0
1531			969	13.49	7.09		7.14	-12.1
1535	7	1,100 ml/min	980	13.49	7.10		7.10	-11.8
			= TOTAL VOLUME REMOVED (Gallons)					

DEVELOPMENT METHOD: Submersible pump

GENERAL NOTES:

WELL DEVELOPMENT FIELD RECORD

WL = WATER LEVEL
WD = WELL DEPTH

WESTON SOLUTIONS

WORK ORDER #	CLIENT	PROJECT	WELL ID	SAMPLER	LOCATION
2234	U.S. EPA	Fulton TBA	MW01	START	2300 Fulton Rd

Purge Method:	NA Low flow / Bladder pump	Sample Method:	NA
Purge Date/Time:	NA 11/4/2013 1205	Sample Date/Time:	NA 11/4/2013 1235
Water Depth (ft bgs):	27.62 ft (TOC)	Well Depth (ft bgs):	36.75 ft (TOC)
Casing Diameter (in):	2	Water Volume (gal):	

Weather Conditions:	50 °F		
	Instrument 1	Instrument 2	Instrument 3
Parameter Meter Model #:	YSI 556 MPS	HANNA Turbidity Meter	
Calibration:			
Solutions Expiration Date:			

Well Condition	Secure	Odor	Product	Analysis	TAT	ICE	Filters
	Y	N	N				

Time	Purge Volume (gal)	Purge Rate (mL/min)	Spec. Cond.(mS/cm)	pH	Temp (C)	Turbidity (NTU)	DTW (ft)
1205		300	1066	7.08	12.01	268	27.83
1210			1099	7.11	12.17	150	27.85
1215			1123	7.11	12.41	115	27.86
1220			1151	7.11	12.45	97.8	27.87
1225			1173	7.08	12.80	57.5	27.84
1230			1193	7.11	12.63	41.3	27.84
1235			1199	7.11	12.60	28.4	27.85
1240			1208	7.11	12.58	21.2	27.85
1245	3.2		1219	7.10	12.67	18.7	27.86

TOTAL VOLUME PURGED: Gallons

RELATED FIELD OBSERVATIONS: Turbidity at Sample collection = 13.9 NTU

Headspace = 0.0 ppm VOC

WORK ORDER #	CLIENT	PROJECT	WELL ID	SAMPLER	LOCATION
2234	U.S. EPA	Fulton TBA	MW02	STAFT	2300 Fulton Rd

Purge Method:	NA Low flow / Bladder Pump	Sample Method:	NA
Purge Date/Time:	NA 11/4/2013 1337	Sample Date/Time:	NA 11/4/2013 1437
Water Depth (ft bgs):	24.37 ft (TOC)	Well Depth (ft bgs):	
Casing Diameter (in):	2	Water Volume (gal):	

Weather Conditions:	50 °F		
	Instrument 1	Instrument 2	Instrument 3
Parameter Meter Model #:	YSI 556 MPS	HANNA Turbidity Meter	
Calibration:			
Solutions Expiration Date:			

Well Condition	Secure	Odor	Product	Analysis	TAT	ICE	Filters
	Y	N	N				

Time	Purge Volume (gal)	Purge Rate (mL/min)	Spec. Cond.(mS/cm)	pH	Temp (C)	Turbidity (NTU)	DTW (ft)
1337		300	1708	6.46	13.42	43.3	24.37
1342			1712	6.94	13.45	62.6	24.37
1347			1719	6.92	13.43	43.3	24.37
1352			1730	6.92	13.49	23.9	24.37
1357			1730	6.92	13.38	15.4	24.37
1402			1734	6.91	13.33	8.29	24.37
1407			1740	6.91	13.40	3.60	24.37
1412			1742	6.91	13.59	2.59	24.37
1417	3.2		1745	6.92	13.63	1.63	24.37

TOTAL VOLUME PURGED: Gallons

RELATED FIELD OBSERVATIONS: Turbidity at Sample collection = 1.32 NTU
Headspace = 1.0 ppm VOC
Collected field duplicate

WESTON SOLUTIONS SM

WORK ORDER #	CLIENT	PROJECT	WELL ID	SAMPLER	LOCATION
2234	U.S. EPA	Fulton TBA	MW03	START	2300 Fulton Rd

Purge Method:	NA Low flow / Bladder Pump	Sample Method:	NA
Purge Date/Time:	NA 11/4/2013 1510	Sample Date/Time:	NA 11/4/2013 1630
Water Depth (ft bgs):	(error 11/4, was 24.75 on 10/31)	Well Depth (ft bgs):	
Casing Diameter (in):	2	Water Volume (gal):	

Weather Conditions:	50 °F		
Parameter Meter Model #:	Instrument 1: YSI 556 MPS	Instrument 2: HANNA Turbidity Meter	Instrument 3:
Calibration:			
Solutions Expiration Date:			

Well Condition	Secure	Odor	Product	Analysis	TAT	ICE	Filters
	Y	N	N				

Time	Purge Volume (gal)	Purge Rate (mL/min)	Spec. Cond.(mS/cm)	pH	Temp (C)	Turbidity (NTU)	DTW (ft)
1510		300	1184	7.16	12.55	(out of range)	(Error)
1515			1171	7.02	12.68	744	
1520			1170	7.01	12.65	(out of range)	
1548		200	1177	7.07	12.48	(out of range)	(out of order)
1552			1183	7.06	12.50	1000	
1557			1181	7.05	12.45	746	
1602			1181	7.05	12.39	392	
1607			1185	7.07	12.40	245	
1612			1190	7.06	12.42	188	
1617			1194	7.06	12.37	160	
1622	2.6		1195	7.06	12.34	150	
TOTAL VOLUME PURGED:		Gallons					

RELATED FIELD OBSERVATIONS:

Paused pursing 1520 - 1548 to troubleshoot interface probe and highly turbid water. Resumed without DTW reading based on little-to-no drawdown at other wells.

* MS/MSD Sample

Turbidity at Sample collection = 112 NTU

Headspace = 1.1 ppm VOC