


## **APPENDIX C SOIL BORING LOGS**


## **APPENDIX C-1 INITIAL INVESTIGATION**

# SOIL BORING LOG

		PROJECT NO.:	117-0509160.01	Boring No:	016_C007
		PROJECT NAME:	PPG Site 016	LOCATION SKETCH	
COMPLETION DATE:	TOTAL DEPTH OF BOREHOLE:	MONITORING DEVICE:	GEOLOGIST / OFFICE:		
7/7/2011	30	PID MiniRAE 2000	Jim M / Whitehouse Station		
DRILLING CONTRACTOR / DRILLER:		DRILLING EQUIPMENT:	DRILLING METHOD / BIT:		
EPI \ Warren Atkinson		Geoprobe Track Rig	Direct Push		
SAMPLING METHOD:	DEPTH TO GROUNDWATER	GROUND SURFACE ELEVATION:	WELL INSTALLED?		
5' Sleeves, 1.25"	~ 5.0'		No		
MEMO:					
*Cored through ~ 0.6' of concrete before advancing with geoprobe					


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.6 Concrete	
_1		0.0	0.6 - 1.8 Yellowish Brown (10YR 5/6) medium SAND, little fine sand, little white (2.5YR 8/1) Clay, loose, dry, no odor (SP)	016_C007_0.6 (0.6' - 1.1')
_2	3.0	0.0	1.8 - 2.6 Dark Olive Gray (5Y 3/2) fine SAND, some silt, little gray (2.5Y 6/1) clay, dense, dry, no odor (SM)	
_3	4.4*	0.0	2.6 - 3.6 Dark Reddish Brown (2.5YR 3/3) Clayey SILT, little medium-fine sand, low plasticity, firm, dry, no odor (ML)	
_4		0.0		
_5		0.0		
_6		0.0	5.0 - 8.0 Dark Gray (5YR 4/1) medium-fine SAND, trace silt and medium-fine round quartz gravel, loose, wet, no odor (SP)	016_C007_5.0 (5.0' - 5.5')
_7	3.0	0.0	Transitions into Very Dark Gray fine SAND & SILT (10YR 3/1), soft, wet, slight sulfurous odor (SM)	
_8	5.0	0.0		016_C007_7.5 (7.5' - 8.0')
_9		0.0		
_10		0.0		
_11		0.0	10.0 - 11.2 Dark Gray (7.5YR 4/1) medium-fine SAND, little silt, trace fine round gravel, loose, wet, slight sulfurous odor (SP)	
_12	3.7	0.0	11.2 - 13.7 Dark Gray (5Y 4/1) CLAY, little silt & very fine sand in thin (<1/2") lenses, soft, high plasticity, moist-wet, slight sulfurous odor (OH)	016_C007_10.7 (10.7' - 11.2')
_13	5.0	0.0		Fill/native soil interface at 11.2'
_14		0.0		
_15		0.0		
_16		0.0	15.0 - 16.0 As Above (11.2' - 13.7') (OH)	016_C007_15.0 (15.0' - 15.5')
_17	1.7	0.0	16.0 - 16.7 As Above (11.2' - 13.7'), hue change to Black (5Y 2.5/1), trace peat, strong sulfurous odor (OH)	
_18	5.0			
_19				
_20				
_21		1.6	20.0 - 20.5 Very Dark Grayish Brown (10YR 3/2) PEAT, little Dark Gray (5Y 4/1) CLAY, soft, low plasticity, wet, strong sulfurous odor (PT)	016_C007_20.0 (20.0' - 20.5')
_22	0.5			PID bkgd: 1.0 ppm
_23	5.0			
_24				
_25				

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_C007
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 7/7/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ Warren Atkinson		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 5.0'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: *Cored through ~ 0.6' of concrete before advancing with geoprobe			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
_25		0.0	25.0 - 25.7 Greenish Gray (GLE2 5/5BG) CLAY, soft, moderate plasticity, moist-wet, slight sulfurous odor (OH), Transitions into Reddish Brown (2.5YR 4/4) fine-medium Silty SAND, little fine-medium subangular gravel, trace clay, dense, moist-wet, no odor (SM)	016_C007_25.0 (25.0' - 25.5')
_26				_26
_27	0.7			_27
_28	5.0			_28
_29				_29
_30				_30
_31			End of Boring at 30' b.g.s.	_31
_32				_32
_33				_33
_34				_34
_35				_35
_36				_36
_37				_37
_38				_38
_39				_39
_40				_40
_41				_41
_42				_42
_43				_43
_44				_44
_45				_45
_46				_46
_47				_47
_48				_48
_49				_49
_50				_50

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_C009
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 7/7/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ Warren Atkinson	DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push	
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 5.0'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: *Cored through ~ 0.5' of concrete before advancing with geoprobe			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.5 Concrete	
_1		0.0	0.5 - 1.3 Olive Brown (2.5 YR 4/4) medium-fine SAND, little slag, trace fine gravel, medium-dense, dry, no odor (SP)	016_C009_0.5 (0.5' - 1.0')
_2	2.8	0.0	1.3 - 1.6 Dark Greenish-Gray (GLE Y1 4/10GY) weathered schist: fine SAND, some mica & schist gravel/cobbles, little medum sand, trace silt, dense, dry, no odor (SP)	
_3	4.5*	0.0	1.6 - 2.0 Gray (10YR 6/1) Silty CLAY, trace mica, stiff, low plasticity, dry (CL)	
_4		0.0	2.0 - 2.8 Black (10YR 2/1) fine SAND, little silt, very dense, dry, no odor (SP)	
_5		0.0	2.8 - 3.3 Light Gray (10YR 7/1) GRAVEL (broken-up concrete), dry (GW)	
_6		0.0	5.0 - 7.2 Dark Reddish Brown (5YR 3/2) medium-fine SAND, little silt, loose, wet, slight sulfurous odor (SM)	016_C009_5.0 (5.0' - 5.5')
_7		0.0	7.2 - 7.5 Black (5Y 4/1) Silty CLAY, very soft, moderate plasticity, moist, slight sulfurous odor (OH)	
_8	3.1	0.0	7.5 - 8.1 Dark Gray (2.5Y 4/1) medium-fine SAND, loose, wet, slight sulfurous odor (SP/SW)	016_C009_7.6 (7.6' - 8.1')
_9	5.0	0.0		
_10		0.0		
_11		0.0	10.0 - 11.0 Dark Gray (2.5Y 4/1) fine-coarse SAND, trace shells, loose, wet, slight sulfurous odor (SW)	
_12		0.0	11.0 - 11.7 As Above (10' - 11') except fine SAND, little medium sand (SP)	
_13	4.0	0.0	11.7 - 12.2 As Above (10' - 11') (SW)	016_C009_11.7 (11.7' - 12.2')
_14	5.0	0.0	12.2 - 14.0 Dark Gray (5Y 4/1) CLAY, little silt, occasional thin (<1/2") lense of some fine-very fine sand, soft, high plasticity, moist, slight sulfurous odor (OH)	Fill/native soil interface at 12.2'
_15		0.0		
_16		0.0	15.0 - 16.2 As Above (12.2' - 14')	016_C009_15.7 (15.7' - 16.2')
_17		0.0	16.2 - 17.1 As Above (15.0' - 15.3'), hue change to Black (5Y 2.5/1), strong strong sulfurous odor (OH)	
_18	4.0	0.1	17.1 - 19.0 Dark Gray (5Y 4/1) CLAY and Dark Brown (10YR 3/3) PEAT, moderate plasticity, soft, moist, strong sulfurous odor (OH/PT)	
_19	5.0	0.5		
_20		2.2		
		7.6		
_21		14.5	20.0 - 21.5 Very Dark Grayish Brown (10YR 3/2) to Dark Yellowish Brown (10YR 4/6) PEAT, little to trace Dark Gray (5Y 4/1) Silty CLAY, soft, low plasticity, moist, strong sulfurous odor (PT)	(forgot to collect sample from 20.0 - 20.5)
_22		10.1	21.5 - 22.2 Dark Gray (10YR 3/1) grading to Greenish Gray (GLE Y2 5/5BG) Silty CLAY, low plasticity, soft grading to stiff, moist, no odor (CL)	
_23	4.0	0.3	22.2 - 24.0 Greenish Gray (GLE Y2 6/5BG) very fine SAND, some silt, little fine sand and dense, wet, no odor (SM)	
_24	5.0	0.0		016_C009_23.5 (23.5' - 24.0')
_25		0.0		

# SOIL BORING LOG

		PROJECT NO: 117-0509160.01	Boring No: 016_C009
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 7/7/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ Warren Atkinson		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 5.0'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: *Cored through ~ 0.5' of concrete before advancing with geoprobe			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
_26		0.0	25.0 - 25.5 Greenish Gray (GLE Y2 6/5BG) SILT, little very fine sand, some medium-coarse angular gravel 25.4' - 25.5', stiff, moist, no odor (ML)	_26
_27		0.0	25.5 - 26.4 Reddish Brown (2.5YR 4/3) SILT, some clay, low plasticity, stiff, moist, no odor (ML)	_27
_28	2.7 5.0	0.0	26.4 - 26.7 Dusky Red (2.5YR 3/2) medium-coarse SAND, some fine sand, dense, wet, no odor (SW)	_28
_29			26.7 - 27.1 Reddish Brown (2.5YR 4/3) very fine SAND, some silt, little clay, trace medium sand, dense, wet, no odor (SM)	_29
_30			27.1 - 27.7 Dark Greenish Gray (GLE Y1 4/10Y) CLAY, some silt & coarse-fine subround gravel, low plasticity, stiff, moist, no odor (CL/GC)	_30
_31			<b>End of Boring at 30' b.g.s.</b>	_31
_32				_32
_33				_33
_34				_34
_35				_35
_36				_36
_37				_37
_38				_38
_39				_39
_40				_40
_41				_41
_42				_42
_43				_43
_44				_44
_45				_45
_46				_46
_47				_47
_48				_48
_49				_49
_50				_50

# SOIL BORING LOG

		PROJECT NO.:	117-0509160.01	Boring No:	016_C011
		PROJECT NAME:	PPG Site 016	LOCATION SKETCH	
COMPLETION DATE:	TOTAL DEPTH OF BOREHOLE:	MONITORING DEVICE:	GEOLOGIST / OFFICE:		
8/16/2011	30	PID MiniRAE 2000	Jim M. / Whitehouse Station		
DRILLING CONTRACTOR / DRILLER:		DRILLING EQUIPMENT:	DRILLING METHOD / BIT:		
EPI \ John Brass		Geoprobe Track Rig	Direct Push		
SAMPLING METHOD:	DEPTH TO GROUNDWATER	GROUND SURFACE ELEVATION:	WELL INSTALLED?		
5' Sleeves, 1.25"	~ 5.0'		No		
MEMO:					
*Cored through ~ 0.5' of concrete before advancing with geoprobe					

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.5 Concrete	
_1		0.0	0.5 - 1.0 Brownish Yellow (10YR 6/6) fine SAND, little medium sand, trace medium-fine subround gravel, moist, loose, no odor (SP)	016_C011_0.5 (0.5' - 1.0')
_2	3.0	0.0	1.0 - 2.0 Dark Gray (5Y 4/1) fine SAND, little silt, mica, & schist gravel, trace brick fragments, medium-dense, moist, no odor (SM)	
_3	4.5*	0.0	2.0 - 2.4 Very Dark Gray (5Y 3/1) Silty CLAY, trace mica, soft, moist (OH)	
_4		0.0	2.4 - 3.1 Very Dark Gray (5Y 3/1) SILT, little fine sand & clay, trace mica, schist gravel, & glass fragments, soft, moist, slight sulfurous odor (ML)	
_5		0.0	3.1 - 3.5 Dark Gray (10YR 4/1) medium-fine SAND, little silt & clay, soft, moist, no odor (SM/SC)	
_6		0.0	5.0 - 7.5 Dark Gray (10YR 4/1) sandy SILT, little clay, some clay stringers, Brown (7.5YR 4/2) medium-fine sand 5.4'-5.6', trace red siltstone & sandstone gravel throughout, firm, moist-wet, no odor (ML)	016_C011_5.0 (5.0' - 5.5')
_7	3.5	0.0	7.5 - 8.5 Dark Gray (2.5Y 4/1) fine-very fine SAND, little silt, loose, wet, no odor (SM), Transitions into Brown (7.5YR 4/2) coarse-fine SAND, little fine subround gravel & shells, loose, wet, slight sulfurous odor (SW)	
_8	5.0	0.0		
_9		0.0		
_10		0.0		
_11		0.0	10.0 - 11.2 Dark Gray (7.5YR 4/1) medium-fine SAND, little coarse sand, trace fine gravel & shells (SW), Transitions into fine-very fine SAND, trace silt, wet, loose, slight sulfurous odor (SP)	016_C011_10.7 (10.7' - 11.2')
_12	3.5	0.0	11.2 - 13.5 Very Dark Gray (5Y 3/1) CLAY, trace silt & fine-very fine sand, trace peat	Fill/native soil interface at 11.2'
_13	5.0	0.0	13.0' - 13.5', Brown (10YR 4/3) sandy SILT, trace clay at 11.5', 12.2' and 12.5', moist throughout, soft, slight sulfurous odor (OL)	
_14		0.0		
_15		0.0		
_16		0.0	15.0 - 16.2 Dark Gray (5Y 4/1) CLAY, soft, moist-wet, slight sulfurous odor (OH)	016_C011_15.0 (15.0' - 15.5')
_17	3.0	0.0	16.2 - 16.6 Black (5Y 2.5/1) CLAY, soft, moist-wet, slight sulfurous odor (OH)	
_18	5.0	0.2	16.6 - 17.1 Very Dark Gray (5Y 3/1) SILT, some fine-very fine sand, little clay, abundant shells, trace peat, loose, wet, slight sulfurous odor (ML)	
_19		2.1	17.1 - 18.0 Greenish Gray (GLE Y2 6/5BG) CLAY, little silt, trace fine sand, soft, moist, slight sulfurous odor (CH), Transitions into medium-fine SAND & coarse-fine GRAVEL, little silty & clay, dense, moist-wet, no odor (GC)	
_20		1.7		
_21		0.0	20.0 - 20.3 Greenish Gray (GLE Y2 6/5BG) medium-fine SAND & coarse-fine GRAVEL, little silt & clay, dense, moist-wet, no odor (GC)	016_C011_20.0 (20.0' - 20.5')
_22	3.3	0.0	20.3 - 21.6 Reddish Brown (5YR 4/4) SILT, some very fine sand, little coarse-fine subangular siltstone gravel, moist, firm, no odor (ML)	
_23	5.0	0.0	21.6 - 22.2 Brown (7.5YR 4/4) coarse SAND & fine subangular GRAVEL, some medium sand & medium gravel, little fine sand & silt, loose, wet, no odor (GM)	
_24		0.0	22.2 - 23.3 Reddish Brown (2.5YR 4/4) SILT, little very fine sand & fine-coarse angular gravel, moist, stiff, no odor (ML)	
_25		0.0		


# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_C011
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/16/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 5.0'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: *Cored through ~ 0.5' of concrete before advancing with geoprobe			

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
_25			25.0 - 25.3 Red (2.5YR 4/6) coarse-fine angular siltstone GRAVEL, trace fine sand & silt, wet, loose, no odor (GW)	016_C011_25.3 (25.3' - 25.8')
_26			25.3 - 27.9 Brown (7.5YR 5/3) Silty medium-fine SAND, some coarse sand & fine angular gravel (red & gray siltstone), little coarse-medium gravel, trace clay, medium-dense, wet, no odor (SM), Transitions into SILT, some very fine sand, little medium-fine angular gravel, little clay, very stiff, moist-dry, no odor (ML)	
_27	2.9			
_28	5.0			
_29				
_30				
_31			<b>End of Boring at 30' b.g.s.</b>	
_32				
_33				
_34				
_35				
_36				
_37				
_38				
_39				
_40				
_41				
_42				
_43				
_44				
_45				
_46				
_47				
_48				
_49				
_50				




# SOIL BORING LOG

		PROJECT NO.:	117-0509160.01	Boring No:	016_C013
		PROJECT NAME:	PPG Site 016	LOCATION SKETCH	
COMPLETION DATE:	TOTAL DEPTH OF BOREHOLE:	MONITORING DEVICE:	GEOLOGIST / OFFICE:		
8/24/2011	26	PID MiniRAE 2000	Jim M. / Whitehouse Station		
DRILLING CONTRACTOR / DRILLER:		DRILLING EQUIPMENT:	DRILLING METHOD / BIT:		
EPI \ John Brass		Geoprobe Track Rig	Direct Push		
SAMPLING METHOD:	DEPTH TO GROUNDWATER:	GROUND SURFACE ELEVATION:	WELL INSTALLED?		
5' Sleeves, 1.25"	~ 3.2'		No		
MEMO: *Cored through ~ 0.5' of concrete before advancing with geoprobe Refusal at 5' (1st attempt), 3' (2nd attempt), then 26' (third attempt)					


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.5 Concrete	
_1		0.0	0.5 - 1.0 Olive Yellow (2.5Y 6/6) medium-fine SAND, trace medium-fine subround gravel & coarse sand, loose, moist, no odor (SW)	016_C013_0.5 (0.5' - 1.0')
_2	3.1	0.0	1.0 - 2.0 Very Dark Gray (2.5Y 3/1) fine SAND, little medium sand, little gray coarse-fine subangular gravel, medium-dense, dry, no odor (SP)	
_3	4.5*	0.0	2.0 - 3.2 Black (2.5Y 2/1) SILT, some very fine sand, little coarse-fine gray gravel, trace schist gravel/mica, medium-dense, moist, no odor (ML)	016_C013_3.1 (3.1' - 3.6')
_4		0.0	3.2 - 3.6 Very Dark Grayish Brown (2.5Y 3/2) fine SAND, little medium sand, trace fine subround quartz gravel, wet, loose, no odor (SP)	
_5				
_6		0.0	5.0 - 6.5 Very Dark Gray (5Y 3/1) fine-very fine SAND, little silt & coarse-fine subround quartz gravel, wet, loose, slight sulfurous odor (SM)	
_7	3.4	0.0	6.5 - 7.7 Dark Gray (2.5Y 4/1) medium SAND, little fine sand, trace shells & gravel, loose, wet, slight sulfurous odor (SP)	
_8	5.0	0.0	7.7 - 8.0 Dark Gray (2.5Y 4/1) SILT, some very fine sand, little clay, soft, moist-wet, slight sulfurous odor (ML)	016_C013_7.5 (7.5' - 8.0')
_9		0.0	8.0 - 8.4 As Above (6.5' - 7.7')	
_10				
_11		0.0	10.0 - 10.7 Dark Gray (10YR 4/1) medium-fine SAND, trace shells & gravel, loose, wet, slight sulfurous odor (SW)	016_C013_10.2 (10.2' - 10.7')
_12	1.9	0.0	10.7 - 11.0 Dark Gray (5Y 4/1) CLAY, soft, moist, slight sulfurous odor (OH)	Fill/native soil interface at 10.7'
_13	5.0			
_14				
_15				
_16		0.0	15.0 - 16.0 As Above (10.7' - 11')	016_C013_15.0 (15.0 - 15.5')
_17	2.8	0.0	16.0 - 16.4 Very Dark Gray (5Y 3/1) SILT, some very fine sand & clay, little shells, soft, wet, strong sulfurous odor (ML)	
_18	5.0	0.0	16.4 - 16.7 Very Dark Brown (10YR 2/2) PEAT, soft, moist, strong sulfurous odor (PT)	
_19		0.0	16.7 - 17.2 Dark Grayish Brown (10YR 4/2) medium-fine subangular-subround gravel, some coarse-fine sand, trace silt, medium-dense, wet, no odor (GW)	
_20		0.0	17.2 - 17.8 Brown (10YR 5/3) with slight Greenish Gray (GLE Y2 6/5BG) mottling SILT, some fine sand, little clay, little coarse-medium subangular brown gravel, medium-dense, moist-wet, no odor (ML)	
_21		0.0	20.0 - 24.2 Brown (7.5YR 5/4) fine SAND & coarse-fine subangular gravel, some silt, trace medium sand & clay, loose, wet, no odor (GM), Transitions into	016_C013_20.0 (20.0 - 20.5')
_22	4.2	0.0	Brown (7.5YR 5/4) SILT, little fine-very fine sand & coarse-fine subangular gravel, dense, moist, no odor (ML)	
_23	5.0	0.0		
_24		0.0		
_25		0.0		

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_C013
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/24/2011	TOTAL DEPTH OF BOREHOLE: 26	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 3.2'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: Refusal at 5' (1st attempt), 3' (2nd attempt), then 26' (third attempt)			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
_26		0.0	25.0 - 25.6 Reddish Brown (5YR 4/4) medium-fine SAND & coarse-fine angular GRAVEL & COBBLES, some silt, loose, wet, no odor (GM)	016_C013_25.0 (25.0 - 25.5')
_27				_26
_28	0.6 5.0			_27
_29				_28
_30				_29
_31				_30
_32				_31
_33				_32
_34				_33
_35				_34
_36				_35
_37				_36
_38				_37
_39				_38
_40				_39
_41				_40
_42				_41
_43				_42
_44				_43
_45				_44
_46				_45
_47				_46
_48				_47
_49				_48
_50				_49
_50				_50

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_C016
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/15/2011	TOTAL DEPTH OF BOREHOLE: 9	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 5'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: *Cored through ~ 0.6' of concrete before advancing with geoprobe Refusal at 9', no more attempts			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.6 Concrete	
_1		0.0	0.6 - 1.0 Brownish Yellow (10YR 6/8) medium-fine SAND, little subround gravel, trace coarse sand, loose, dry, no odor (SW)	016_C016_0.6 (0.6' - 1.2')
_2	2.4	0.0	1.0 - 3.0 Dark Yellowish Brown (10YR 4/4) fine SAND, little silt, schist gravel, & mica, red brick gravel @ 1.8', dry, medium-dense, no odor (SM),	
_3	4.4*	0.0	Transitions into coarse-fine schist GRAVEL & MICA, dense, dry, no odor (GW)	
_4				
_5				
_6		0.0	5.0 - 5.3 Dark Grayish Brown (10YR 4/2) Silty fine SAND, some schist gravel & mica, medium-dense, moist-wet, no odor (SM)	016_C016_0.6 (5' - 5.5')
_7		0.0	5.3 - 5.8 Dark Gray (5Y 4/1) Silty medium-fine SAND, some schist & mica, medium-dense, moist-wet, no odor (SM)	
_8	1.3		5.8 - 6.3 Light Greenish Gray (GLE Y1 8/10Y) to Greenish Black (GLE Y1 2.5/10Y) coarse-fine schist GRAVEL, COBBLES, & mica, dense, dry, no odor (GW)	
_9	5.0			
_10			<b>End of Boring at 9' b.g.s. (Refusal)</b>	
_11				
_12				
_13				
_14				
_15				
_16				
_17				
_18				
_19				
_20				
_21				
_22				
_23				
_24				
_25				

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_C017
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/23/2011	TOTAL DEPTH OF BOREHOLE: 9	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass	DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push	
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 5'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: *Cored through ~ 0.4' of concrete before advancing with geoprobe Refusal at 1.1 (8/17/11), re-attempted on 8/23/11: refusal at 2', then at 9'. Soil logged on 8/23/11			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.4 Concrete	
_1		0.0	0.4 - 2.7 Dark Grayish Brown (2.5Y 4/2) fine SAND, little silt, trace medium sand, trace schist gravel 0.4' - 1.2', some schist gravel 1.2' - 2.7', white subround cobbles 2.5' - 2.7', dense, dry, no odor (SP)	016_C017_0.4 (0.4' - 0.9') (sampled 8/17/2011)
_2		0.0		
_3	2.3 4.6*	0.0		
_4				
_5				
_6		0.0	5.0 - 5.3 Dark Grayish Brown (2.5Y 4/2) medium-fine SAND, little schist gravel, trace coarse sand, wet, loose, no odor (SW) 5.3 - 6.3 Olive Gray (5Y 4/2) schist GRAVEL & COBBLES, medium-dense, wet, no odor (GW) 6.3 - 6.7 Dark Gray (2.5Y 4/1) very fine SAND, trace fine sand & mica, wet, loose, slight sulfurous odor (SP)	016_C017_5.0 (5.0' - 5.5') (sampled 8/23/2011)
_7	1.7 4.0	0.0		
_8				
_9				
_10			<b>End of Boring at 9' b.g.s. (Refusal)</b>	
_11				
_12				
_13				
_14				
_15				
_16				
_17				
_18				
_19				
_20				
_21				
_22				
_23				
_24				
_25				

# SOIL BORING LOG

		PROJECT NO.:	117-0509160.01	Boring No:	016_D005
		PROJECT NAME:	PPG Site 016	LOCATION SKETCH	
COMPLETION DATE:	TOTAL DEPTH OF BOREHOLE:	MONITORING DEVICE:	GEOLOGIST / OFFICE:		
7/8/2011	30	PID MiniRAE 2000	Jim M. / Whitehouse Station		
DRILLING CONTRACTOR / DRILLER:		DRILLING EQUIPMENT:	DRILLING METHOD / BIT:		
EPI \ Warren Atkinson		Geoprobe Track Rig	Direct Push		
SAMPLING METHOD:	DEPTH TO GROUNDWATER	GROUND SURFACE ELEVATION:	WELL INSTALLED?		
5' Sleeves, 1.25"	~ 3.0'		No		
MEMO: Stepped out ~ 10 SE from original location due to utilities					


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
0		0.0	0.0 - 1.7 Light Grayish Brown (10YR 6/2) fine SAND, some medium sand, little coarse to fine subangular gravel, dense, dry, no odor (SP)	016_D005_0.0 (0.0' - 0.5')
1		0.0		
2		0.0	1.7 - 3.0 Brown (7.5YR 4/2) medium-fine SAND, little subangular gravel, 40% COPR (medium-fine subround gravel) from 1.7' - 2.2' and 2.5' - 3.0', dense, dry, no odor (SP)	016_D005_1.2 (1.2' - 1.7') 016_D005_1.7 (1.7' - 2.2')
3	4.4	0.0		
4	5.0	0.0	3.0 - 4.4 Dark Reddish Gray (5YR 4/2) coarse-medium SAND, trace medium-fine subround gravel (non-COPR), moist-wet, loose, no odor (SW)	016_D005_2.5 (2.5' - 3.0') 016_D005_3.0 (3.0' - 3.5')
5		0.0		40% COPR noted 1.7' - 2.2' & 2.5' - 3.0'
6		0.0	5.0 - 6.0 As Above (3' - 3.5'), Dark Gray (10YR 4/1), moist-wet (SW)	
7		0.0	6.0 - 6.4 Very Dark Gray (5Y 3/1) CLAY, trace silt, soft, moderate plasticity, slight sulfurous odor (OH)	
8	3.3	0.0	6.4 - 6.9 Weak Red (2.5YR 4/3) fine SAND, some medium sand, loose, wet, slight sulfurous odor (SP)	016_D005_7.0 (7.0' - 7.5')
9	5.0	0.0	6.9 - 8.3 Dark Gray (2.5Y 4/1) medium-fine SAND, little silt & coarse sand, loose, wet, slight sulfurous odor (SW)	
10		0.0		
11		0.0	10.0 - 10.3 As Above (6.9' - 8.3'), mostly fine SAND (SP)	016_D005_10.0 (10.0' - 10.5')
12		0.0	10.3 - 12.3 Dark Gray (5Y 4/1) CLAY, high plasticity, soft, moist, slight sulfurous odor (OH)	Fill/native soil interface at 10.3'
13	4.5	0.0	12.3 - 14.5 As Above (10.3' - 12.3'), hue change to Black (5Y 2.5/1) (OH)	
14	5.0	0.0		
15		0.0	15.0 - 16.0 As Above (10.3' - 12.3')	016_D005_14.0 (14.0' - 14.5')
16		0.0	16.0 - 18.3 Dark Brown (10YR 3/3) PEAT and Dark Gray (5Y 4/1) CLAY, soft, moderate plasticity, moist, strong sulfurous odor (PT/OH)	
17	3.3	0.1		
18	5.0	0.6		016_D005_17.8 (17.8' - 18.3')
19		2.2		
20		2.1		
21		0.0	20.0 - 21.0 Greenish Gray (GLE Y2 5/5BG) Clayey SILT, little subround cobbles & fine-coarse gravel, trace fine sand, stiff, low plasticity, moist, no odor (ML)	
22		0.0	21.0 - 21.2 Reddish-Brown (5YR 4/3) Clayey SILT, little fine-coarse gravel and fine sand, stiff, low plasticity, moist, no odor (ML)	
23	1.2			
24	5.0			
25				

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_D005
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 7/8/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ Warren Atkinson		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 3.0'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: Stepped out ~ 10 SE from original location due to utilities			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
_26		0.0	25.0 - 28.2 Reddish Brown (5YR 4/3) Silty medium-fine SAND, little clay, firm, moist-wet, no odor (SM)	016_D005_25.0 (25.0' - 25.5')
_27		0.0		28.2 - 28.5 Reddish Brown (5YR 4/3) medium-coarse SAND (SW)
_28	4.6 5.0	0.0	28.5 - 29.6 Red (2.5Y 4/6) SILT, some fine sand, little subround to subangular fine-coarse gravel, stiff, moist, no odor (ML)	
_29		0.0		
_30		0.0		
_31			<b>End of Boring at 30' b.g.s.</b>	
_32				
_33				
_34				
_35				
_36				
_37				
_38				
_39				
_40				
_41				
_42				
_43				
_44				
_45				
_46				
_47				
_48				
_49				
_50				

# SOIL BORING LOG

		PROJECT NO.:	117-0509160.01	Boring No:	016_D005a
		PROJECT NAME:	PPG Site 016	LOCATION SKETCH	
COMPLETION DATE:	TOTAL DEPTH OF BOREHOLE:	MONITORING DEVICE:	GEOLOGIST / OFFICE:		
8/8/2011	30	PID MiniRAE 2000	Jim M. / Whitehouse Station		
DRILLING CONTRACTOR / DRILLER:		DRILLING EQUIPMENT:	DRILLING METHOD / BIT:		
EPI \ John Brass		Geoprobe Track Rig	Direct Push		
SAMPLING METHOD:	DEPTH TO GROUNDWATER	GROUND SURFACE ELEVATION:	WELL INSTALLED?		
5' Sleeves, 1.25"	~ 5'		No		
MEMO:					
*Cored through ~ 0.4' of concrete before advancing with geoprobe					

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY	
			0.0 - 0.4 Concrete		0
1		0.0	0.4 - 1.6 Yellowish Brown (10YR 5/6) medium SAND, little coarse sand, medium-fine subround gravel & fine sand, medium-dense, moist, no odor (SW)	016_D005a_0.4 (0.4' - 0.9')	1
2	2.4	0.0	1.6 - 2.2 Dark Gray (5Y 4/1) fine SAND, some silt, little mica & schist gravel, dense, moist, no odor (SM)		2
3	4.6*	0.0	2.2 - 2.8 White to Very Dark Gray (2.5Y 8/1 to 3/1) coarse-fine schist GRAVEL, COBBLES, and mica, dense, dry, no odor (GW)		3
4		0.0			4
5		0.0			5
6		0.0	5.0 - 5.2 As Above (2.2'-2.8'), wet	016_D005a_5.0 (5.0' - 5.5')	6
7		0.0	5.2 - 6.7 Very Dark Gray (2.5Y 3/1) Silty fine SAND, little wood fragments & organic matter, trace metal fragments, loose, wet, slight sulfurous odor (SM)		7
8	2.8	0.0	6.7 - 7.8 Black (10YR 2.5/1) CLAY & organic SILT, little organic matter, trace metal fragments, soft, moderate plasticity, moist-wet, slight sulfurous odor (OH)		8
9	5.0	0.0			9
10		0.0			10
11		0.0	10.0 - 10.3 Brown (7.5YR 4/2) Clayey SILT, low plasticity, firm, moist, slight sulfurous odor (ML)		11
12	3.5	0.0	10.3 - 11.7 Gray (2.5Y 4/1) medium SAND, little fine & coarse sand, trace shells and fine subround gravel, loose, wet, slight sulfurous odor (SW)	016_D005a_11.2 (11.2' - 11.7')	12
13	5.0	0.0	11.7 - 12.7 Dark Gray (5Y 4/1) CLAY, soft, moderate plasticity, moist, slight sulfurous odor (OH)	Fill/native soil interface at 11.7'	13
14		0.0	12.7 - 13.5 Gray (2.5Y 4/1) fine-very fine SAND, trace silt, wet, loose, slight sulfurous odor (SP)		14
15		0.0			15
16		0.0	15.0 - 17.5 As Above (11.7' - 12.7')	016_D005a_15.0 (15.0' - 15.5')	16
17	3.4	0.0			17
18	5.0	0.0	17.5 - 18.0 As Above (11.7' - 12.7'), but Black (5Y 2.5/1)		18
19		0.4	18.0 - 18.4 Dark Yellowish Brown (10YR 4/6) to Very Dark Grayish Brown (10YR 3/2) PEAT, little Dark Gray (5Y 4/1) CLAY, soft, moist, strong sulfurous odor (PT)		19
20					20
21		3.6	20.0 - 21.7 As Above (18'-18.5')	016_D005a_20.0 (20.0' - 20.5')	21
22		8.8			22
23	3.3	1.0	21.7 - 21.8 Gray (2.5Y 6/1) fine SAND, little very fine sand & silt, moist-wet, loose, slight sulfurous odor (SM)		23
24	5.0	0.3	21.8 - 22.8 Dark Gray (2.5Y 4/1) CLAY, soft, moist, Transitions into Greenish Gray (GLE2 6/10BG) CLAY, little silt & very fine sand, soft, moderate plasticity, moist, slight sulfurous odor (OH/CH)		24
25		0.0	22.8 - 23.3 Greenish Gray (GLE2 6/10BG) Clayey medium-fine SAND, little silt, some cobbles & coarse gravel, wet, medium-dense, slight sulf. odor (SC)		25


# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_D005a
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/8/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER ~ 5'	GROUND SURFACE ELEVATION:	WELL INSTALLED? No
MEMO: *Cored through ~ 0.4' of concrete before advancing with geoprobe			

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
_26			25.0 - 28.8 Greenish Gray (GLE Y2 6/10BG) Silty CLAY, some very fine-fine sand, trace coarse sand & medium-fine subround gray gravel, stiff, moist-wet, low plasticity, no odor (CL)	016_D005a_25.0 (25.0' -25.5')
_27				_27
_28	3.3 5.0			_28
_29				_29
_30				_30
_31			<b>End of Boring at 30' b.g.s.</b>	
_32				_32
_33				_33
_34				_34
_35				_35
_36				_36
_37				_37
_38				_38
_39				_39
_40				_40
_41				_41
_42				_42
_43				_43
_44				_44
_45				_45
_46				_46
_47				_47
_48				_48
_49				_49
_50				_50




# SOIL BORING LOG

		PROJECT NO.:	117-0509160.01	Boring No:	016_D007
		PROJECT NAME:	PPG Site 016	LOCATION SKETCH	
COMPLETION DATE:	TOTAL DEPTH OF BOREHOLE:	MONITORING DEVICE:	GEOLOGIST / OFFICE:		
8/8/2011	30	PID MiniRAE 2000	Jim M. / Whitehouse Station		
DRILLING CONTRACTOR / DRILLER:		DRILLING EQUIPMENT:	DRILLING METHOD / BIT:		
EPI \ John Brass		Geoprobe Track Rig	Direct Push		
SAMPLING METHOD:	DEPTH TO GROUNDWATER	GROUND SURFACE ELEVATION:	WELL INSTALLED?		
5' Sleeves, 1.25"	~ 5'		No		
MEMO:					
*Cored through ~ 0.4' of concrete before advancing with geoprobe					


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.4 Concrete	
_1		0.0	0.4 - 1.6 Yellowish Brown (10YR 5/6) medium SAND, little coarse sand & medium-fine gravel, little fine sand, moist, medium-dense, no odor (SW)	016_D007_0.4 (0.4' - 0.9')
_2	3.2	0.0	1.6 - 2.1 Dark Gray (5Y 4/1) Silty fine SAND, little mica & schist gravel, dense, moist, no odor (SM)	
_3	4.6*	0.0	2.1 - 2.5 White to Black (GLE Y1 8/1 to 2.5/1) coarse-fine schist gravel & mica, dense, dry, no odor (GW)	
_4		0.0	2.5 - 3.0 Dark Gray (5Y 4/1) SILT, little fine sand & clay, moist, stiff, no odor (ML)	
_5		0.0	3.0 - 3.6 Black (2.5Y 2.5/1) fine SAND, slightly cemented, little coal fragments, very dense, dry, no odor (SP)	
_6		0.0	5.0 - 7.2 Very Dark Gray (2.5Y 3/1) SILT & fine SAND, trace coal & organics, and wood fragments, trace shells, medium-dense, moist, no odor (ML)	016_D007_5.0 (5.0' - 5.5')
_7	3.4	0.0	7.2 - 7.9 Black (2.5Y 2.5/1) CLAY, little organic silt, trace rootlets, soft, moist, slight sulfurous odor, moderate plasticity (OH)	
_8	5.0	0.0	7.9 - 8.4 Brown (7.5YR 4/2) SILT & very fine SAND, wet, loose, (ML) Transitions into medium-fine SAND, moist-wet, loose, slight sulfurous odor (SW/SP)	
_9		0.0		
_10		0.0		
_11		0.0	10.0 - 11.5 Gray (2.5Y 5/1) medium SAND, little fine & coarse sand, trace shells & fine subround gravel, loose, wet, slight sulfurous odor (SW)	
_12	3.3	0.0	11.5 - 12.7 Gray (2.5Y 5/1) fine-very fine SAND, little medium sand & silt, loose, wet, no odor (SM)	016_D007_12.2 (12.2' - 12.7') (fill/native soil interface)
_13	5.0	0.0	12.7 - 13.3 Dark Gray (5Y 4/1) CLAY, soft, moist, moderate plasticity, slight sulfurous odor (OH)	
_14		0.0		
_15		0.0		
_16		0.0	15.0 - 15.6 Dark Gray (2.5Y 4/1) Clayey SILT, trace very fine sand, very soft, wet, slight sulfurous odor (ML)	
_17	4.0	0.0	15.6 - 18.6 Olive Gray (5Y 4/2) CLAY, Black (5Y 2.5/1) from 17.5' - 18.6', soft, moist, slight sulfurous odor (OH)	016_D007_16.0 (16.0' - 16.5')
_18	5.0	0.0	18.6 - 19.0 Dark Yellowish Brown (10YR 4/6) to Very Dark Grayish Brown (10YR 3/2) PEAT, little Dark Gray (5Y 4/1) CLAY, soft, moist, strong sulfurous odor (PT)	
_19		0.0		
_20		0.0		
_21		13.6	20.0 - 21.3 As Above (18.6' - 19')	016_D007_20.0 (20.0' - 20.5')
_22	2.6	40.3	21.3 - 22.6 Greenish Gray (GLE Y2 6/10BG) CLAY, little fine sand & silt, trace gravel, low plasticity, soft, moist (CL), Transitions into clayey fine SAND, little silt, medium-dense, moist-wet (SC), then into clayey SILT, stiff, moist (ML)	
_23	5.0	15.3		
_24		46.6		
_25		15.3		

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_D007
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/8/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 5'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: *Cored through ~ 0.4' of concrete before advancing with geoprobe			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
_26		0.0	25.0 - 28.4 Gray (10YR 5/1) Clayey SILT, little very fine sand & fine round gravel, firm, moist (ML), Transitions into Reddish Brown (5YR 4/3) Clayey SILT, some fine sand, little red subround gravel, stiff, moist, no odor (ML)	016_D007_25.0 (25.0' - 25.5')
_27		0.0		_26
_28	3.4 5.0	0.0		_27
_29		0.0		_28
_30		0.0		_29
_31				_30
_32			<b>End of Boring at 30' b.g.s.</b>	_31
_33				_32
_34				_33
_35				_34
_36				_35
_37				_36
_38				_37
_39				_38
_40				_39
_41				_40
_42				_41
_43				_42
_44				_43
_45				_44
_46				_45
_47				_46
_48				_47
_49				_48
_50				_49
_50			_50	

# SOIL BORING LOG

		PROJECT NO.:	117-0509160.01	Boring No:	016_D008
		PROJECT NAME:	PPG Site 016	LOCATION SKETCH	
COMPLETION DATE:	TOTAL DEPTH OF BOREHOLE:	MONITORING DEVICE:	GEOLOGIST / OFFICE:		
8/10/2011	25	PID MiniRAE 2000	Jim M. / Whitehouse Station		
DRILLING CONTRACTOR / DRILLER:		DRILLING EQUIPMENT:	DRILLING METHOD / BIT:		
EPI \ John Brass		Geoprobe Track Rig	Direct Push		
SAMPLING METHOD:	DEPTH TO GROUNDWATER:	GROUND SURFACE ELEVATION:	WELL INSTALLED?		
5' Sleeves, 1.25"	~ 5'		No		
MEMO: Cored through ~ 0.4' of concrete before advancing with geoprobe					


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.4 Concrete	
_1		0.0	0.4 - 0.8 Light Olive Brown (2.5Y 5/4) medium-fine SAND, little medium-fine subround gravel & coarse sand, moist, medium-dense, no odor (SW)	016_D008_0.4 (0.4' - 0.9')
_2	3.4	0.0	0.8 - 1.2 Black (2.5Y 2.5/1) coarse-fine SAND & fine subround slag GRAVEL, dry, medium-dense, no odor (SW/GW)	
_3	4.6*	0.0	1.2 - 1.7 Dark Grayish Brown (2.5Y 4/2) fine SAND, trace medium sand & silt, medium-dense, moist, no odor (SP)	
_4		0.0	1.7 - 1.9 As Above (0.4'-0.8') but fine SAND, white clay 1.8'-1.9' (SP/CL)	
_5		0.0	1.9 - 2.3 Dark Gray (5Y 4/1) fine SAND & SILT, some coarse-fine schist gravel & mica, moist, firm, no odor (SM/ML)	
_6		0.0	2.3 - 2.5 As Above (0.4' - 0.8') but fine SAND (SP)	016_D008_5.0 (5.0' - 5.5')
_7		0.0	2.5 - 3.8 Very Dark Gray (2.5Y 3/1) fine SAND, some silt, little coarse-fine schist gravel & mica, dense, dry, no odor (SM)	
_8	2.7	0.0	5.0 - 6.0 As Above (2.5'-3.8'), moist-wet	016_D008_7.2 (7.2' - 7.7')
_9	5.0	0.0	6.0 - 6.2 Black (2.5Y 2.5/1) organic SILT & wood fragments, soft, moist-wet, slight sulfurous odor (ML)	
_10		0.0	6.2 - 7.4 Dark Gray (2.5Y 4/1) fine SAND, little medium sand, trace shells, wet, loose, slight sulfurous odor (SP), Transitions into Black (2.5Y 2.5/1) CLAY, little silt, very soft, moist-wet, slight sulfurous odor (OH)	
		0.0	7.4 - 7.7 Brown (7.5YR 4/2) very fine SAND & SILT, firm, moist (SM/ML)	
_11		0.0	10.0 - 12.4 Gray (2.5Y 5/1) fine SAND, some medium sand, trace shells & coarse sand, wet, loose, slight sulfurous odor (SW), Transitions into very fine SAND, little fine sand & silt, trace clay, loose, moist-wet, slight sulfurous odor (SM)	
_12	4.0	0.0	12.4 - 14.0 Dark Gray (5Y 4/1) CLAY, fine sand 13.4' - 13.6', soft, moist-wet, slight sulfurous odor (OH)	016_D008_11.9 (11.9' - 12.4')
_13	5.0	0.0		Fill/native soil interface at 12.4'
_14		0.0		
_15		0.0		
_16		0.0	15.0 - 15.4 Dark Gray (5Y 4/1) Clayey SILT, trace very fine sand, wet, very soft, slight sulfurous odor (ML)	
_17	4.6	0.0	15.4 - 19.3 As Above (12.4' - 14'), grades to Very Dark Grayish Brown (5Y4/2)	016_D008_16.0 (16.0' - 16.5')
_18	5.0	0.0		
_19		0.0	19.3 - 19.6 Dark Yellowish Brown (10YR 4/6) to Very Dark Grayish Brown (10YR 3/2) PEAT, little Dark Gray (5Y 4/1) CLAY, soft, moist, strong sulfurous odor (PT)	
_20		4.5		
_21		42.2	20.0 - 21.6 As Above (19.3' - 19.6'), trace clay (PT)	016_D008_20.0 (20.0' - 20.5')
_22	3.3	37.1		
_23	5.0	74.8	21.6 - 23.3 Gray (GLE1 5/N) CLAY, soft, moist, strong sulfurous odor (OH), Transitions into Bluish Gray (GLE2 6/10B) Clayey very fine SAND, little fine sand & silt, medium-dense, moist-wet, strong sulfurous odor (SC)	016_D008_22.8 (22.8' - 23.3')
_24		18.7		
_25		42.7		
		19.0		

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_D010
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/15/2011	TOTAL DEPTH OF BOREHOLE: 27	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER ~ 3.7'	GROUND SURFACE ELEVATION:	WELL INSTALLED? No
MEMO: Cored through ~ 0.4' of concrete before advancing with geoprobe. Refusal at 27'			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.4 Concrete	
_1		0.0	0.4 - 1.0 Very Dark Gray (10YR 3/1) coal frags. (sand & gravel), loose, dry (GW)	016_D010_0.4 (0.4' - 0.9')
_2		0.0	1.0 - 1.8 Dark Grayish Brown (2.5Y 4/2) fine SAND, little silt & medium sand, trace mica, soft, loose, no odor (SM)	
_3	3.8 4.6*	0.0	1.8 - 2.1 White (10YR 8/1) coarse-fine subround quartz gravel & coarse-fine sand, dense, dry, no odor (GW)	016_D010_2.5 (2.5' - 3.0')
_4		0.0	2.1 - 2.5 Dark Gray (2.5Y 4/1) silty very fine SAND, some mica & schist gravel, dense, dry, no odor (SM)	016_D010_3.0 (3.0' - 3.5')
_5		0.0	2.5 - 3.7 Very Dark Gray (10YR 3/1) Silty fine SAND, little subangular gravel, 15% COPR (coarse-fine round gravel) 3' - 2.5', firm, moist, no odor (SM)	016_D010_3.5 (3.5' - 4.0')
_6		0.0	3.7 - 4.2 Black (2.5Y 2.5/1) Clayey organic SILT, soft, moist-wet, slight sulfurous odor (ML)	15% COPR noted 3.0' - 3.5'
_7		0.0	5.0 - 5.7 Dark Brown (7.5YR 3/2) fine SAND, little silt & medium sand, 50% coarse-fine round COPR gravel throughout, wet, loose, no odor (SM)	016_D010_5.0 (5.0' - 5.7')
_8	3.2 5.0	0.0	5.7 - 7.4 Dark Reddish Gray (5YR 4/2) fine-very fine SAND, little silt, loose, wet, no odor (SM), Transitions into Dark Gray (5YR 4/1) fine SAND, some medium sand, trace shells & coarse sand, wet, loose, slight sulfurous odor (SW)	016_D010_5.7 (5.7' - 6.2')
_9		0.0	7.4 - 7.6 Brown (7.5YR 4/3) sandy SILT, little clay, firm, moist-wet (ML)	50% COPR noted 5.0' - 5.7'
_10		0.0	7.6 - 8.2 Dark Gray (2.5Y 4/1) medium-fine SAND, trace shells & coarse sand, wet, loose, slight sulfurous odor (SW)	
_11		0.0	10.0 - 11.2 As Above (7.6' - 8.1'), Transitions into Dark Gray (10YR 4/1) medium-fine SAND, little coarse sand, trace fine gravel & shells, wet, loose, slight sulfurous odor (SW)	016_D010_10.7 (10.7' - 11.2')
_12	3.8 5.0	0.0	11.2 - 12.1 Dark Gray (5Y 4/1) CLAY, soft, moist, slight sulfurous odor (OH)	Fill/native soil interface at 11.2'
_13		0.0	12.1 - 12.5 Dark Gray (2.5Y 4/1) Silty very fine SAND, loose, wet, slight sulfurous odor (SM)	
_14		0.0	12.5 - 13.4 As Above (11.2' - 12.1')	
_15		0.0	13.4 - 13.8 As Above (12.1' - 12.5')	
_16		0.0	15.0 - 16.8 As Above (11.2' - 12.1'), trace silt & peat, slight sulfurous odor (OH)	016_D010_15.0 (15.0' - 15.5')
_17		0.0		
_18	1.8 5.0	0.0		
_19		0.0		
_20		0.0		
_21		1.8	20.0 - 20.8 Dark Yellowish Brown (10YR 4/6) to Very Dark Grayish Brown (10YR 3/2) PEAT, Dark Gray (5Y 4/1) CLAY with little shells 20' - 20.1', soft, moist, strong sulfurous odor (PT)	016_D010_20.0 (20.0' - 20.5')
_22		0.6		
_23	3.6 5.0	0.0	20.8 - 21.1 Dark Grayish Brown (2.5Y 4/2) silty CLAY, soft, wet, slight sulfurous odor (OH)	
_24		0.0	21.1 - 22.7 Greenish Gray (GLE2 6/10BG) CLAY, soft, moist, no odor (CH), Transitions to clayey medium-fine SAND, little silt, medium-dense, trace gravel, no odor (SC)	
_25		0.0	22.7 - 23.6 Reddish Brown (5YR 4/3) Silty fine-very fine SAND, little clay & gravel, moist, dense, no odor (SM)	

# SOIL BORING LOG

		PROJECT NO: 117-0509160.01	Boring No: 016_D010
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/15/2011	TOTAL DEPTH OF BOREHOLE: 27	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 3.7'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: Cored through ~ 0.4' of concrete before advancing with geoprobe. Refusal at 27'			

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
_26	2.0	0.0	25.0 - 27.0 As Above (22.7' - 23.6'), dense, moist-wet, no odor (SM)	016_D010_25.0 (25.0' - 25.5')
_27	2.0	0.0		<b>End of Boring at 27' b.g.s. (refusal)</b>
_28				
_29				
_30				
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_49				
_50				


# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_D012
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/16/2011	TOTAL DEPTH OF BOREHOLE: 18.5	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 5'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: *Cored through ~ 0.4' of concrete before advancing with geoprobe Refusal at 18.5'			

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.4 Concrete	
_1		0.0	0.4 - 1.2 Dark Grayish Brown (2.5Y 4/2) fine SAND, trace silt & very fine sand, little medium-fine subround gravel, medium-dense, moist, no odor (SP)	016_D012_0.4 (0.4' - 0.9')
_2	3.2	0.0	1.2 - 2.5 Dark Gray (5YR 4/1) to Reddish Brown (5YR 4/3) Silty fine SAND, little medium sand, mica, & schist gravel, dense, moist, no odor (SM)	
_3	4.6*	0.0	2.5 - 3.6 Black (2.5Y 2.5/1) SILT, some fine sand, little medium-coarse subround gray gravel, trace slag & schist gravel, trace fine-medium COPR gravel	016_D012_2.6 (2.6' - 3.1')
_4		0.0	3.1' - 3.6', firm, moist, no odor (ML)	016_D012_3.1 (3.1' - 3.6')
_5				trace COPR noted 3.1' - 3.6'
_6		0.0	5.0 - 6.1 As Above (2.5 - 3.6), no COPR, trace slag & schist gravel, firm, moist-wet, no odor (ML)	016_D012_5.0 (5.0' - 5.5')
_7	3.5	0.0	6.1 - 6.4 Light Gray (10YR 7/1) to Dark Yellowish Brown (10YR 3/4) sandstone COBBLES & coarse-fine GRAVEL, little coarse sand, dense, moist-wet, no odor (GW)	
_8	5.0	0.0	6.4 - 7.0 Very Dark Gray (5Y 3/1) SILT, some very fine sand, little clay, soft, moist-wet, slight sulfurous odor (ML)	
_9		0.0	7.0 - 7.4 As Above (6.4' - 7') but Brown (7.5YR 4/3) (ML)	
_10		0.0	7.4 - 8.5 Dark Gray (2.5Y 4/1) medium-fine SAND, trace shells, wet, loost, slight sulfurous odor (SW)	
_11		0.0	10.0 - 13.0 As Above (7.4' - 8.4'), interbedded with Clayey SILT, little very fine sand, soft, wet, slight sulfurous odor (SW/ML)	016_D012_10.0 (10.0' - 10.5')
_12	5.0	0.0		
_13	5.0	0.0	13.0 - 15.0 Dark Gray (5Y 4/1) CLAY, occasional thin (< 1/2") lense of clayey silt, moist-wet, soft, slight sulfurous odor (OH)	016_D012_12.5 (12.5' - 13.0')
_14		0.0		Fill/native soil interface at 13'
_15		0.0		
_16		0.0	15.0 - 16.5 As Above (13.0' - 15.0')	
_17	3.2	0.0	16.5 - 17.4 As Above (13.0' - 15.0'), but Black (5Y 2.5/1)	016_D012_16.5 (16.5' - 17.0')
_18	3.5	1.2	17.4 - 18.2 Dark Yellowish Brown (10YR 4/6) to Very Dark Grayish Brown (10YR 3/2) PEAT, trace CLAY, soft, moist, strong sulfurous odor (PT)	
_19		3.6	<b>End of Boring at 18.5' b.g.s. (refusal)</b>	
_20				
_21				
_22				
_23				
_24				
_25				




# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_D014
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/17/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER ~ 6'	GROUND SURFACE ELEVATION:	WELL INSTALLED? No
MEMO: Cored through ~ 0.5' of concrete before advancing with geoprobe			

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.5 Concrete	
1		0.0	0.5 - 1.0 Brownish Yellow (10YR 6/6) medium-fine SAND, trace medium-fine subround gravel, trace coarse sand, loose, moist, no odor (SW)	016_D014_0.5 (0.5' - 1.0')
2	2.8	0.0	1.0 - 1.5 Dark Grayish Brown (10YR 4/2) Silty fine SAND, little gray subround gravel, trace schist gravel, medium-dense, dry, no odor (SM)	016_D014_1.4 (1.4' - 1.9') 016_D014_1.9 (1.9' - 2.4')
3	4.5*	0.0	1.5 - 1.8 As Above (0.5' - 1.0'), mostly fine sand, little white clay (SP)	016_D014_2.4 (2.4' - 2.9')
4		0.0	1.8 - 3.4 Very Dark Grayish Brown (10YR 3/2) silty fine SAND, little coarse subround gravel & cobbles, trace fine subround COPR gravel 2.2' - 2.4', trace glass fragments, trace red silstone gravel, medium-dense, dry, no odor (SP)	trace COPR 2.2' - 2.4'
6		0.0	5.0 - 5.6 Very Dark Grayish Brown (10YR 3/2) SILT, some fine sand, little coarse-fine subangular gray gravel, stiff, dry, no odor (ML)	
7	4.0	0.0	5.6 - 6.7 Black (10YR 2.5/1) fine-medium SAND, little silt & slag (medium-fine subround gravel), wet 6' - 6.7', loose, slight sulfurous odor (SW)	016_D014_6.5 (6.5' - 7.0')
8	5.0	0.0	6.7 - 9.0 Dark Gray (2.5Y 4/1) medium SAND, little fine sand, trace coarse sand, trace shells, wet, loose, slight sulfurous odor (SW)	
11		0.0	10.0 - 10.7 As Above (6.7' - 9.0') (SW)	016_D014_10.0 (10.0' - 10.5')
12	0.7			
13	5.0			Fill/native soil interface not recovered
16		0.0	15.0 - 15.3 Dark Gray (2.5Y 4/1) Silty CLAY, trace fine sand, wet, soft, slight sulfurous odor (OH)	
17	4.0	0.0	15.3 - 17.0 Black (5Y 4/1) CLAY, little silt, moist-wet, very soft, strong sulfurous odor (OH)	016_D014_10.0 (16.5' - 17.0')
18	5.0	0.0	17.0 - 17.7 Dark Gray (2.5Y 4/1) Silty CLAY, some shells, little peat, soft, moist, strong sulfurous odor (OH)	
19		0.0	17.7 - 18.6 Greenish Gray (GLE2 6/10BG) with Brown (7.5YR 5/2) and Reddish Brown (5YR 4/4) mottling Silty CLAY, little fine sand & gray to red-brown gravel, soft grading to firm, moist, slight sulfurous odor (CL)	
20		0.0	18.6 - 19.0 Grayish Brown (10YR 5/2) medium-fine SAND, some silt, little clay & coarse-fine gray gravel, dense, moist-wet, no odor (SM)	
21		0.0	20.0 - 20.2 As Above (18.6' - 18.9')	
22	3.1	0.0	20.2 - 21.5 Brown (7.5YR 4/4) SILT, some coarse-fine gray/red gravel, little fine sand, stiff, moist, no odor (ML)	016_D014_21.0 (21.0' - 21.5')
23	5.0	0.0	21.5 - 22.3 Reddish Brown (5YR 5/3) Silty fine SAND, little gray medium-fine gravel, medium-dense, wet, no odor (SM)	
24		0.0	22.3 - 22.6 Reddish Brown (5YR 5/3) coarse-fine SAND, some medium-fine gravel, trace silt, medium-dense, wet, no odor (SW)	
25			22.6 - 23.1 As Above (21.5' - 22.3') (SM)	


# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_D014
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/17/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 6'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: Cored through ~ 0.5' of concrete before advancing with geoprobe			

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
_25		0.0	25.0 - 25.9 As Above (21.5' - 22.3') (SM)	016_D014_25.0 (25.0' - 25.5')
_26		0.0		
_27	2.8	0.0	25.9 - 26.9 Reddish Brown (5YR 5/3) coarse-medium SAND & medium-fine subround gray to red-brown GRAVEL, little fine sand, silt, & coarse gravel, medium-dense, wet, no odor (GM)	
_28	5.0	0.0	26.9 - 27.2 Pinkish Gray (7.5YR 6/2) flat sandstone COBBLES, wet, dense, no odor (GP)	
_29			27.2 - 27.8 Reddish Brown (5YR 5/3) Silty fine SAND, little medium-fine subangular gravel, trace medium sand, dense, moist-wet, no odor (SM)	
_30				
_31				
_32				
_33				
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# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_D016
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/15/2011	TOTAL DEPTH OF BOREHOLE: 2	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER	GROUND SURFACE ELEVATION:	WELL INSTALLED? No
MEMO: *Cored through ~ 0.4' of concrete before advancing with geoprobe Refusal at 2' (1st attempt), re-attempted twice on 8/23/2011, hit refusal at 2' on both attempts			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.4 Concrete	0
1	1.2	0.0	0.4 - 0.8 Dark Brown (7.5YR 3/3) medium-fine SAND, little medium-fine subround gravel, trace coarse sand, loose, dry, no odor (SW)	016_D016_0.4 (0.4' - 0.9') 1
2	1.6*	0.0	0.8 - 1.3 Dark Yellowish Brown (10YR 4/4) fine SAND, little silt, some schist gravel, medium-dense, dry, no odor (SM)	2
3			1.3 - 1.6 White (GLE Y1 8/N) schist COBBLES & coarse-fine GRAVEL, dense, dry, no odor (GW)	3
4			<b>End of Boring at 2' b.g.s. (refusal)</b>	4
5				5
6				6
7				7
8				8
9				9
10				10
11				11
12				12
13				13
14				14
15				15
16				16
17				17
18				18
19				19
20				20
21				21
22				22
23				23
24				24
25				25

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_D018
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/17/2011	TOTAL DEPTH OF BOREHOLE: 14	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 5'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: *Cored through ~ 0.4' of concrete before advancing with geoprobe. Refusal at 14'			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY	
			0.0 - 0.4 Concrete		
1	1.6 4.6*	0.0	0.4 - 0.8 Yellowish Brown (10YR 5/6) medium-fine SAND, trace medium-fine subround gravel & coarse sand, loose, dry, no odor (SW)	016_D018_0.4 (0.4' - 0.9')	
2		0.0	0.8 - 2.0 White/Silver/Reddish Brown schist gravel & mica, dense, dry, no odor (GW)		
3					
4					
5					
6	1.3 5.0	0.0	5.0 - 5.6 Brown (10YR 4/3) coarse-fine SAND, schist GRAVEL, & MICA, dense, wet, no odor (GW)	016_D018_5.0 (5.0' - 5.5')	
7		0.0	5.6 - 5.9 As Above (5.0' - 5.6') but Very Dark Gray (2.5Y 3/1)		
8			5.9 - 6.3 Dark Gray (2.5Y 4/1) Silty fine SAND, some medium-fine schist gravel, very wet, very loose, slight sulfurous odor (SM)		
9					
10					
11	0.8 5.0	0.0	10.0 - 10.3 Very Dark Gray (2.5Y 4/1) coarse-medium subangular gravel, little fine sand, trace silt, dense, wet, slight sulfurous odor (GP)	016_D018_10.0 (10.0' - 10.5')	
12		0.0	10.3 - 10.8 Very Dark Gray (2.5Y 4/1) medium-fine sand, dense, wet, slight sulfurous odor (GP)		
13					
14					
15			<b>End of Boring at 14' b.g.s. (refusal)</b>		
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_E005
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/8/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 5.0'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: *Cored through ~ 0.4' of concrete before advancing with geoprobe			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.4 Concrete	
_1		0.0	0.4 - 1.3 Yellowish Brown (10YR 5/6) medium SAND, little coarse sand & medium to fine subround gravel, little fine sand, moist, medium-dense, no odor (SP/SW)	016_E005_0.4 (0.4' - 0.9')
_2	2.9	0.0	1.3 - 1.9 Olive (5Y 5/3) to Olive Yellow (5Y 6/6) medium-fine SAND, trace slag & gray coarse-fine angular gravel, moist, loose, no odor (SP)	
_3	4.4*	0.0	1.9 - 2.2 White to black (GLE Y1 8/1 - 2.5/1) coarse-fine schist GRAVEL, COBBLES, & mica, dense, dry, no odor (GW)	
_4		0.0	2.2 - 3.3 Dark Gray (5Y 4/1) SILT, little fine sand & gray medium-fine gravel, trace red brick or sandstone gravel, firm, moist, no odor (ML)	
_5		0.0	5.0 - 6.3 Dark Greenish-Gray (GLE Y1 4/10GY) coarse-fine schist GRAVEL, COBBLES, & mica, medium-dense, moist, no odor (GW)	016_E005_5.0 (5.0' - 5.5')
_6		0.0	6.3 - 7.0 Olive Brown (2.5Y 4/3) fine SAND & SILT, trace mica, firm, moist, no odor (ML)	
_7	3.6	0.0	7.0 - 8.3 Very Dark Gray (5Y 3/1) CLAY, little organic silt & rootlets, moderate plasticity, soft, moist-wet, slight sulfurous odor (OH)	
_8	5.0	0.0	8.3 - 8.6 Brown (7.5YR 4/2) medium-fine SAND, little coarse sand & fine subround gravel, loose, wet, slight sulfurous odor (SW)	016_E005_8.1 (8.1' - 8.6')
_9		0.0	10.0 - 10.2 Reddish Brown (5YR 4/3) Silty fine-very fine SAND, trace clay, moist, loose, slight sulfurous odor (SM)	
_10		0.0	10.2 - 11.7 Gray (2.5Y 5/1) medium SAND, little fine & coarse sand, trace shells & fine subround gravel, loose, wet, slight sulfurous odor (SW)	016_E005_11.3 (11.3' - 11.8')
_11	3.4	0.0	11.7 - 13.4 Gray (5Y 4/1) CLAY interbedded with thin lenses of silty very fine sand & medium-fine sand, moist-wet, soft, moderate plasticity, slight sulfurous odor (OH)	(fill/native soil interface)
_12	5.0	0.0	15.0 - 17.6 As Above (11.7' - 13.4'), 15.9' - 16.2': SILT & very fine SAND, some clay, wet at 15-15.6' and 15.9'-16.2', moist otherwise	016_E005_15.5 (15.5' - 16.0')
_13		0.0	17.6 - 18.4 Very Dark Gray (5Y 3/1) CLAY, soft, moist, strong sulfurous odor (OH)	
_14	3.8	0.0	18.4 - 18.8 Dark Yellowish Brown (10YR 4/6) to Very Dark Grayish Brown (10YR 3/2) PEAT, little Dark Gray (5Y 4/1) CLAY, soft, moist, strong sulfurous odor (PT)	
_15	5.0	0.0	20.0 - 21.4 As Above (18.4' - 18.8')	016_E005_20.0 (20.0' - 20.5')
_16		0.0	21.4 - 22.7 Greenish Gray (GLE Y2 6/10BG) CLAY, trace silt, moderate plasticity, soft, moist, slight sulfurous odor (CH), Transitions into Greenish Gray (GLE Y2 6/10BG) Clayey fine-very fine SAND, some silt, trace fine subround white gravel, soft, moist, no odor (SC)	
_17	2.7	4.6		
_18	5.0	0.6		
_19		0.6		
_20				
_21				
_22				
_23				
_24				
_25				

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_E005
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/8/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass	DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push	
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 5.0'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: *Cored through ~ 0.4' of concrete before advancing with geoprobe			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
_26			25.0 - 26.7 Greenish Gray (GLE2 5/10BG) Clayey SILT, firm, moist, no odor, increasing medium-fine sand content with depth (ML)	016_E005_25.0 (25.0' - 25.5')
_27	4.7		26.7 - 27.8 Gray (7.5YR 5/1) Silty medium-fine SAND, little coarse sand & clay, wet, loose, no odor (SM)	
_28	5.0		27.8 - 28.4 Brown (7.5YR 5/2) Silty fine-very fine SAND, little clay, wet, medium-dense, no odor (SM)	
_29			28.4 - 29.7 As Above (26.7' - 27.8') but Brown (7.5YR 5/3), little fine subangular to subround gravel, trace medium gravel, loose, wet, no odor (SM)	
_30			<b>End of Boring at 30' b.g.s.</b>	
_31				
_32				
_33				
_34				
_35				
_36				
_37				
_38				
_39				
_40				
_41				
_42				
_43				
_44				
_45				
_46				
_47				
_48				
_49				
_50				

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_E007
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/10/2011	TOTAL DEPTH OF BOREHOLE: 25	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER ~ 5.0'	GROUND SURFACE ELEVATION:	WELL INSTALLED? No
MEMO: *Cored through ~ 0.5' of concrete before advancing with geoprobe			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.5 Concrete	
_1		0.0	0.5 - 1.5 Yellowish Brown (10YR 5/6) medium SAND, little coarse sand, fine sand, & fine-medium subround gravel, moist, medium-dense, no odor (SW)	016_E007_0.5 (0.5' - 1.0')
_2	4.0	0.0	1.5 - 3.0 Dark Gray (5Y 4/1) fine SAND & SILT, some coarse-fine schist gravel & mica, moist, firm, no odor (SM/ML)	
_3	4.5*	0.0	3.0 - 4.0 Yellowish Brown (10YR 5/6) Silty fine SAND, little clay, mica & schist fragments @ 3.6', Light Brownish Gray (10YR 6/2) Silty CLAY 3.8'-4', medium-dense, moist, no odor (SM)	
_4		0.0		
_5		0.0		
_6		0.0	5.0 - 5.6 As Above (3.0' - 4.0'), little mica and schist, moist-wet, medium-dense, no odor (SM)	016_E007_5.0 (5.0' - 5.5')
_7	4.0	0.0	5.6 - 7.6 Very Dark Grayish Brown (2.5Y 3/2) SILT, little fine sand, trace clay, firm, moist-wet, no odor (ML)	
_8	5.0	0.0	7.6 - 8.5 Black (10YR 2.5/1) CLAY, little silt, soft, moderate plasticity, moist, slight sulfurous odor (OH)	
_9		0.0	8.5 - 9.0 Brown (7.5YR 4/2) medium-fine SAND, loose, wet, slight sulfurous odor (SP/SW)	
_10		0.0		
_11		0.0	10.0 - 13.0 Dark Gray (2.5Y 4/1) medium-fine sand, trace coarse sand & shells, wet, loose, slight sulfurous odor (SW)	
_12	4.7	0.0		
_13	5.0	0.0	13.0 - 13.3 Gray (10YR 5/1) SILT, some very fine sand, little clay, soft, moist-wet, slight sulfurous odor (ML)	016_E007_12.5 (12.5' - 13.0')
_14		0.0	13.3 - 14.0 Gray (2.5YR 5/1) fine SAND, little silt, wet, loose, slight sulfurous odor (SM)	Fill/native soil interface at 13'
_15		0.0	14.0 - 14.7 Dark Gray (2.5Y 4/1) CLAY, little silt, soft, moist, moderate plasticity, slight sulfurous odor (OH)	
_16		0.0	15.0 - 19.1 Dark Gray (5Y 4/1) CLAY grading to Very Dark Gray (5Y 3/1) CLAY (OH), soft, moist, slight sulfurous odor (OH), wet clayey SILT, little very fine sand from 15.4' - 16.3' (ML)	
_17	4.6	0.0		016_E007_16.5 (16.5' - 17.0')
_18	5.0	0.0		
_19		0.0	19.1 - 19.6 Dark Yellowish Brown (10YR 4/6) to Very Dark Grayish Brown (10YR 3/2) PEAT, little Dark Gray (5Y 4/1) CLAY, soft, moist, strong sulfurous odor (PT)	
_20		1.7		
_21		13.0	20.0 - 21.4 As Above (19.1' - 19.6')	016_E007_20.0 (20.0' - 20.5')
_22	4.0	38.9	21.4 - 22.5 Dark Gray (2.5Y 4/1) CLAY, trace silt, moderate plasticity, soft, moist, strong sulfurous odor (OH), Transitions into Greenish Gray (GLEY2 6/10BG)	
_23	5.0	8.8	Clayey fine-very fine SAND, little silt, soft, moist-wet, strong sulfurous odor (SC)	
_24		6.1	22.5 - 24.0 Greenish Gray (GLEY2 6/10BG) SILT, little clay & fine-very fine sand, little subround gravel, stiff, moist, slight sulfurous odor (ML), Transitions into Dark Bluish Gray (GLEY2 4/5PB) SILT, some cobbles & fine subangular gravel, trace fine sand, little clay, moist, stiff, no odor (ML/GM)	016_E007_23.5 (23.5' - 24.0')
_25		8.9		
		14.5		
		4.8		
		0.0		

# SOIL BORING LOG

		PROJECT NO.:	117-0509160.01	Boring No:	016_E009
		PROJECT NAME:	PPG Site 016	LOCATION SKETCH	
COMPLETION DATE:	TOTAL DEPTH OF BOREHOLE:	MONITORING DEVICE:	GEOLOGIST / OFFICE:		
7/7/2011	30	PID MiniRAE 2000	Jim M. / Whitehouse Station		
DRILLING CONTRACTOR / DRILLER:		DRILLING EQUIPMENT:	DRILLING METHOD / BIT:		
EPI \ Warren Atkinson		Geoprobe Track Rig	Direct Push		
SAMPLING METHOD:	DEPTH TO GROUNDWATER	GROUND SURFACE ELEVATION:	WELL INSTALLED?		
5' Sleeves, 1.25"	~ 5.0'		Yes - 016_MW04 (on 8/2/2011)		
MEMO:					
*Cored through ~ 0.5' of concrete before advancing with geoprobe					

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.5 Concrete	
_1		0.0	0.5 - 0.9 Black (2.5Y 2.5/1) medium-fine SAND, some medium-fine gravel, dense, dry, no odor (SW)	016_E009_0.5 0.5' - 1.0'
_2	3.5	0.0	0.9 - 1.8 Dark Reddish Gray (5YR 4/2) medium-fine SAND, some medium-fine subround gravel, trace slag, dense, dry, no odor (SW)	
_3	4.5*	0.0	1.8 - 2.5 Dark Greenish-Gray (GLE Y1 4/10GY) weathered schist: medium-fine SAND, some mica & schist gravel/cobbles, trace silt, dense, dry, no odor (SP)	
_4		0.0	2.5 - 4.0 Very Dark Grayish Brown (10YR 3/2) fine SAND, little silt, medium-dense, moist, no odor (SP)	016_E009_3.5 3.5' - 4.0'
_5		0.0	5.0 - 7.5 Brown (7.5YR 4/2) medium SAND, little fine & coarse sand, loose, moist-wet, no odor (SW). Transitions into Dark Brown (7.5 YR 3/2) fine SAND & SILT, soft, wet, slight sulfurous odor (SM), Transitions into Dark Brown (7.5YR 3/2) SILT, little very fine sand, little clay, firm, moist-wet, slight sulfurous odor (ML)	
_6	3.5	0.0		016_E009_7.0 7.0' - 7.5'
_7	5.0	0.0		
_8		0.0		
_9		0.0		
_10		0.0		
_11		0.0	10.0 - 11.7 Dark Gray (7.5YR 4/1) medium-fine SAND, trace shells, loose, wet, slight sulfurous odor (SP)	
_12	5.0	0.0	11.7 - 15.0 Dark Gray (5Y 4/1) Silty CLAY, occasional thin (< 1/2") lenses of little fine sand, trace shell fragments, soft, moderate to highly plastic, moist-wet, slight sulfurous odor (OH)	016_E009_11.2 11.2' - 11.7' (fill/native soil interface)
_13	5.0	0.0		
_14		0.0		
_15		0.0		
_16		0.0	15.0 - 17.4 As Above (11.7' - 15.0') (OH)	016_E009_15.5 15.5' - 16.0'
_17	4.3	0.0	17.4 - 18.5 As Above (11.3' - 13.8'), hue change to Black (5Y 2.5/1), strong sulfurous odor (OH)	
_18	5.0	0.0	18.5 - 19.3 Dark Brown (10YR 3/3) PEAT, little Dark Gray (5Y 4/1) CLAY, soft, low plasticity, moist, strong sulfurous odor (PT)	
_19		0.0		
_20		0.0		
_21		0.0	20.0 - 20.7 As Above (18.5' - 19.3') (PT)	016_E009_20.0 20.0 - 20.5
_22	2.5	0.0	20.7 - 22.5 Greenish Gray (GLE Y2 5/5BG) Silty CLAY, soft, low to moderate plasticity, moist, slight sulfurous odor (CL), transitions into Greenish Gray (GLE Y2 6/5BG) SILT, some fine to very fine sand, little clay, coarse gravel in bottom of sleeve, moist (21' - 22') to dry (22' - 22.5'), firm, no odor (ML)	
_23	5.0	0.0		
_24				
_25				


# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_E009
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 7/7/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ Warren Atkinson		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER ~ 5.0'	GROUND SURFACE ELEVATION:	WELL INSTALLED? Yes - 016_MW04 (on 8/2/2011)
MEMO:			

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
_25		0.0	25.0 - 27.3 As Above (21' - 22.5'), but with little fine-coarse subround gravel (ML) Transitions to Weak Red (2.5YR 4/2) SILT, little fine sand and fine-coarse subround gravel, trace round cobbles, stiff, moist, no odor (ML)	016_E009_25.0   25.0 - 25.5
_26		0.0		_26
_27	2.3	0.0		_27
_28	5.0	0.0		_28
_29				_29
_30				_30
_31			<b>End of Boring at 30' b.g.s.</b>  <b>016_MW04 Well Information:</b> 016_MW04 installed on 8/2/11 using 8" hollow stem augers equipped on a geoprobe track rig  2-inch diameter 10-slot SCH40 PVC screen set at 5.0' - 10.0' bgs. 2-inch diameter SCH40 PVC riser from 5.0' bgs. to surface #1 Sand from 3.0' to 10.0' bgs. Cement-bentonite grout from 3.0' to 0.5' Flush-mount completion, cement around outer casing 0.5' to surface  DTW: 4.10 b.g.s. measured on 8/30/11	_31
_32				_32
_33				_33
_34				_34
_35				_35
_36				_36
_37				_37
_38				_38
_39				_39
_40				_40
_41				_41
_42				_42
_43				_43
_44				_44
_45				_45
_46				_46
_47				_47
_48				_48
_49				_49
_50				_50




# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_E011
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/16/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 3.1'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: *Cored through ~ 0.7' of concrete before advancing with geoprobe			

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.7 Concrete	
_1		0.0	0.7 - 1.5 Light Olive Brown (2.5Y 5/3) fine SAND, little silt, little Light Gray (2.5Y 7/1) coarse-medium subround gravel, red (2.5YR 4/6) sandstone cobbles 1.2'-1.5', medium-dense, no odor (SM)	016_E011_0.7 (0.7' - 1.2')
_2		0.0		
_3	3.2 4.3*	0.0	1.5 - 2.4 Grayish Brown (2.5Y 5/2) grading to Very Dark Gray (7.5Y 3/1) SILT, some fine sand, little clay, trace mica & gravel, moist, soft (ML)	016_E011_2.6 (2.6' - 3.1')
_4		0.0	2.4 - 2.6 Pale Olive (5Y 6/3) fine SAND, little medium sand, moist, loose (SP)	016_E011_3.1 (3.1' - '3.9')
_5		0.0	2.6 - 3.1 As Above (1.5' - 2.4'), 7.5Y 3/1	25% COPR noted 3.1' - 3.9'
		0.0	3.1 - 3.9 Very Dark Brown (10YR 2/2) SILT, some fine sand, little clay, 25% fine-medium COPR gravel throughout, wet, soft, no odor (ML)	
_6		0.0	5.0 - 7.2 As Above (3.1' - 3.9'), but Very Dark Grayish Brown (10YR 3/2), 25% fine-medium COPR gravel throughout, wet, soft, no odor (ML)	016_E011_5.0 (5.0' - 5.5')
_7		0.0		25% COPR noted 5.0' - 7.2'
_8	4.1 5.0	0.0	7.2 - 7.9 Brown (7.5YR 4/2) fine-very fine SAND, trace silt, loose, wet, slight sulfurous odor (SP)	016_E011_7.2 (7.2' - 7.7')
_9		0.0	7.9 - 9.1 Dark Gray (2.5Y 4/1) medium-fine SAND, trace shells & coarse sand, wet, loose, slight sulfurous odor (SW)	
_10		0.0		
_11		0.0	10.0 - 12.7 As Above (7.9' - 9.1)	
_12		0.0		
_13	4.3 5.0	0.0	12.7 - 13.8 Dark Gray (5Y 4/1) CLAY, occasional thin (<1/2") lenses of silty fine sand, moist-wet, soft, slight sulfurous odor (OH)	016_E011_12.2 (12.2' - 12.7')
_14		0.0	13.8 - 14.3 Dark Gray (5Y 4/1) Silty fine-very fine SAND, wet, loose, slight sulfurous odor (SM)	Fill/native soil interface at 12.7'
_15		0.0		
_16			15.0 - 20.0 No Recovery	
_17				
_18	0.0 5.0			
_19				
_20				
_21		5.6 1.3	20.0 - 20.8 Dark Brown (10YR 3/3) PEAT, trace CLAY, soft, low plasticity, moist, strong sulfurous odor (PT)	016_E011_20.0 (20.0' - 20.5')
_22		0.0	20.8 - 22.1 Greenish Gray (GLE Y2 6/5BG) clayey fine-very fine SAND, little silt, trace coarse-fine subround gravel, dense, moist, no odor (SC)	
_23	2.1 5.0	0.0		
_24				
_25				




# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_E011
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/16/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 3.1'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: *Cored through ~ 0.7' of concrete before advancing with geoprobe			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
_26		0.0	25.0 - 25.2 Gray (2.5 YR 5/1) Silty fine SAND, trace medium sand & clay, wet, medium-dense, no odor (SM) 25.2 - 27.7 Reddish Brown (5YR 5/4) Silty fine-medium SAND, some coarse sand & fine subangular gravel, trace medium gravel, wet, loose, no odor (SM), Transitions into Brown (7.5YR 4/3) SILT, little fine sand & fine subangular gravel, dense, moist, no odor (ML)	016_E011_25.0 (25.0' - 25.5')
_27		0.0		_26
_28	2.7 5.0	0.0		_27
_29		0.0		_28
_30				_29
_31			<b>End of Boring at 30' b.g.s.</b>	_30
_32				_31
_33				_32
_34				_33
_35				_34
_36				_35
_37				_36
_38				_37
_39				_38
_40				_39
_41				_40
_42				_41
_43				_42
_44				_43
_45				_44
_46				_45
_47				_46
_48				_47
_49				_48
_50				_49

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_E013
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/25/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 3.0'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: *Cored through ~ 0.5' of concrete before advancing with geoprobe			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.5 Concrete	
_1		0.0	0.5 - 1.0 Dark Grayish Brown (2.5Y 4/2) fine SAND, little coarse-fine schist gravel & mica, trace silt, medium-dense, dry, no odor (SP)	016_E013_0.5 (0.5' - 1.0')
_2	2.8	0.0	1.0 - 1.3 Brownish Yellow (10YR 6/6) medium-fine SAND, little medium-fine subround gravel, trace coarse sand, medium-dense, dry, no odor (SW)	
_3	4.5*	0.0	1.3 - 2.3 Very Dark Grayish Brown (2.5Y 3/2) fine SAND, little medium sand & schist gravel, medium-dense, dry, no odor (SP)	
_4		0.0	2.3 - 3.4 Dark Grayish Brown (2.5Y 4/2) SILT, little very fine sand & clay, rootlets 3' - 3.3', soft, moist 2.3'-3', moist-wet 3' - 3.4', no odor (ML)	
_5		0.0	5.0 - 5.6 Dark Brown (10YR 3/3) PEAT, little silt, some rootlets, very soft, wet, strong sulfurous odor (PT)	016_E013_5.0 (5.0' - 5.5')
_6		0.0	5.6 - 5.8 Very Dark Gray (2.5Y 3/1) CLAY, soft, moist, slight sulfurous odor (OH)	
_7	3.3	0.0	5.8 - 5.9 Very Dark Grayish Brown (2.5Y 3/2) coarse-medium SAND, little gravel, loose, wet, slight sulfurous odor (SW)	
_8	5.0	0.0	5.9 - 6.3 Very Dark Grayish Brown (2.5Y 3/2) SILT, some very fine sand, soft, wet, slight sulfurous odor (ML)	016_E013_7.8 (7.8' - 8.3')
_9		0.0	6.3 - 8.3 Dark Gray (2.5Y 4/1) medium SAND, little fine & coarse sand, trace gravel & shells, wet, loose, slight sulfurous odor (SW)	
_10		0.0	10.0 - 11.0 As Above (6.3' - 8.3'), but Dark Grayish Brown (10YR 4/2)	
_11		0.0	11.0 - 11.5 Dark Gray (2.5Y 4/1) Clayey SILT, little very fine sand, wet, soft, slight sulfurous odor (ML)	
_12	3.6	0.0	11.5 - 12.0 Brown (7.5YR 4/2) coarse SAND & fine subround GRAVEL, some medium sand, little medium gravel, loose, wet, slight sulfurous odor (SW)	016_E013_11.5 (11.5' - 12.0')
_13	5.0	0.0	12.0 - 13.6 Dark Gray (5Y 4/1) CLAY, occasional thin (< 1/2") lense of silty fine to very fine sand, soft, moist, slight sulfurous odor (OH)	
_14		0.0	15.0 - 16.4 As Above (12' - 13.6') (OH)	
_15		0.0	16.4 - 17.6 As Above (12' - 13.6'), but Very Dark Gray (5Y 3/1) (OH)	016_E013_16.0 (16.0' - 16.5')
_16	3.7	0.0	17.6 - 17.8 Dark Gray (5Y 4/1) Silty CLAY, little very fine sand, fine sand, & shells, soft, moist-wet, slight sulfurous odor (OL)	
_17	5.0	0.4	17.8 - 18.6 Dark Yellowish Brown (10YR 4/6) to Very Dark Grayish Brown (10YR 3/2) PEAT, trace Dark Gray (5Y 4/1) CLAY, soft, moist, strong sulfurous odor (PT)	
_18		6.9		
_19		0.0	20.0 - 21.4 Greenish Gray (GLE Y2 6/5BG) Clayey SILT, little fine sand, soft, wet, no odor (ML) Transitions to clayey fine SAND, little silt, trace gravel, medium-dense, wet, no odor (SC)	016_E013_20.0 (20.0' - 20.5')
_20		0.0	21.4 - 23.6 Brown (7.5YR 4/3) SILT, little clay & medium-fine subangular gravel, trace fine-very fine sand, soft, moist-wet, no odor (ML)	
_21	3.6	0.0		
_22	5.0	0.0		
_23		0.0		
_24		0.0		
_25		0.0		

# SOIL BORING LOG

		PROJECT NO: 117-0509160.01	Boring No: 016_E013
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/25/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 3.0'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: *Cored through ~ 0.5' of concrete before advancing with geoprobe			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
_25				_25
_26			25.0 - 30.0 No Recovery	_26
_27				_27
_28	0.0 5.0			_28
_29				_29
_30				_30
_31			<b>End of Boring at 30' b.g.s.</b>	_31
_32				_32
_33				_33
_34				_34
_35				_35
_36				_36
_37				_37
_38				_38
_39				_39
_40				_40
_41				_41
_42				_42
_43				_43
_44				_44
_45				_45
_46				_46
_47				_47
_48				_48
_49				_49
_50				_50

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_E015
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/12/2011	TOTAL DEPTH OF BOREHOLE: 12	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 5'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: *Cored through ~ 0.5' of concrete before advancing with geoprobe. Refusal at 12' - no more borings attempted			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.5 Concrete	
_1		0.0	0.5 - 0.7 White (10YR 8/1) subround medium-coarse GRAVEL & Yellowish Brown (10YR 5/6) medium-fine sand, little coarse sand, loose, dry, no odor (GP)	016_E015_0.5 (0.5' - 1.0')
_2	3.0	0.0	0.7 - 0.8 Dark Gray (2.5Y 4.1) coarse-fine schist GRAVEL & mica (SW)	
_3	4.5*	0.0	0.8 - 1.1 Reddish Brown (5YR 5/4) fine SAND, little silt, some siltstone cobbles, medium-dense, dry, no odor (SM)	
_4		0.2	1.1 - 2.0 Very Dark Gray (2.5Y 4/1) fine SAND, little silt & medium sand, some subround to subangular coarse-fine gravel & cobbles, medium-dense, dry, no odor (SM)	
_5			2.0 - 2.2 Black coal fragments, dry, loose, slight hydrocarbon odor (GW)	
_6		39.8	2.2 - 3.5 Dark Gray (2.5Y 4/1) fine SAND, trace medium sand, loose, moist, slight hydrocarbon odor 3' - 3.5' (SP)	016_E015_5.0 (5.0' - 5.5')
_7	2.3	174.0	5.0 - 7.3 Dark Gray (2.5Y 4/1) fine SAND, little medium sand, trace coarse sand & gravel, wet, loose, strong hydrocarbon odor, (SW/SP) Transitions into medium SAND, little fine sand, trace shells, coarse sand, & gravel, wood fragments 6.7'-6.8', wet, loose, strong petroleum odor (SW/SP)	
_8	5.0	13.0		
_9		1.8		
_10				
_11	1.0	0.3	10.0 - 10.5 Dark Gray (2.5Y 4/1) medium SAND, little coarse sand, trace fine gravel & shells, wet, loose, slight petroleum odor (SW)	016_E015_10.0 (10.0' - 10.5')
_12	2.0	0.0	10.5 - 10.8 Dark Gray (2.5Y 4/1) CLAY, some silt, soft, moist, slight sul. odor (OH) 10.8 - 11.0 White (2.5Y 8/1) SAND, GRAVEL, & COBBLES (GW)	
_13			<b>End of Boring at 12' b.g.s. (Refusal)</b>	
_14				
_15				
_16				
_17				
_18				
_19				
_20				
_21				
_22				
_23				
_24				
_25				

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_E017
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/15/2011	TOTAL DEPTH OF BOREHOLE: 8	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 5'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: Refusal at 3' (1st attempt), then at 8' (2nd attempt) *Cored through ~ 0.5' of concrete before advancing with geoprobe			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.5 Concrete	
_1		0.0	0.5 - 1.1 Yellowish Brown (10YR 5/4) medium-fine SAND, little medium-fine subround gravel, moist, loose, no odor (SW)	016_E017_0.5 (0.5' - 1.0')
_2	2.4	0.0	1.1 - 1.3 Gray (10YR 6/1) mottled Yellowish Brown (10YR 5/6) Silty CLAY, some very fine sand, firm, moist, low plasticity, no odor (CL)	
_3	4.5*	0.0	1.3 - 1.8 Dark Yellowish Brown (10YR 4/4) SILT & very fine sand, little/some mica & schist fragments, firm, moist, no odor (ML)	
_4			1.8 - 2.9 Silver/Yellow-Brown/Black medium-coarse schist GRAVEL, COBBLES, and mica, dense, dry, no odor (SW)	
_5		0.0		
_6	1.6	0.0	5.0 - 6.6 Dark Gray (5Y 4/1) coarse-medium subangular-angular GRAVEL, some coarse sand & fine gravel, little medium-fine sand & silt, loose, wet, no odor (GM)	016_E017_5.0 (5.0' - 5.5')
_7	3.0	0.0		
_8				
_9			<b>End of Boring at 8' b.g.s. (Refusal)</b>	
_10				
_11				
_12				
_13				
_14				
_15				
_16				
_17				
_18				
_19				
_20				
_21				
_22				
_23				
_24				
_25				

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_E019 / 016_MW01
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/22/2011	TOTAL DEPTH OF BOREHOLE: 12.5	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER ~ 5.0'	GROUND SURFACE ELEVATION:	WELL INSTALLED? Yes - 016_MW01
MEMO: *Cored through ~ 0.6' of concrete before advancing with geoprobe. Refusal at 12.5'			

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.6 Concrete	
_1		0.0	0.6 - 1.0 Yellowish Brown (10YR 5/4) fine-very fine SAND, little silt, trace medium-fine subround gravel, moist-wet (from coring), loose, no odor (SM)	016_E019_0.6 (0.6' - 1.1')
_2	1.2	0.0	1.0 - 1.4 Light Bluish Gray (GLE Y2 8/5PB) coarse-fine schist GRAVEL, some mica & medium-coarse quartz sand, dense, dry, no odor (GW)	
_3	4.4*		1.4 - 1.8 Dark Grayish Brown (10YR 4/2) silty fine-very fine SAND, trace clay, trace schist gravel, medium-dense, moist, no odor (SM)	
_4				
_5				
_6		0.0	5.0 - 5.4 Brown (7.5YR 4/2) SILT, fine SAND, & schist GRAVEL, medium-dense, wet, no odor (GM)	016_E019_5.0 (5.0' - 5.5')
_7	1.7	0.0	5.4 - 6.0 Very Dark Gray (2.5Y 3/1) medium-coarse sandstone GRAVEL & COBBLES, some coarse-fine sand, little schist & mica, trace silt, medium-dense, wet, no odor (GW)	
_8	5.0	0.7	6.0 - 6.2 Greenish Gray (GLE Y2 6/5BG) CLAY, firm, moist, slight sulfurous odor (CH or OH)	
_9			6.2 - 6.7 Very Dark Gray (2.5Y 3/1) PEAT & organic SILT, little clay, trace shell fragments, very soft, moist, strong sulfurous odor (PT)	
_10				
_11	1.3	1.5	10.0 - 10.7 As Above (6.2' - 6.7') (PT)	016_E019_10.0 (10.0' - 10.5')
_12	5.0	0.0	10.7 - 11.3 Greenish Gray (GLE Y1 3/10GY to 6/10GY) coarse-fine schist GRAVEL, some Very Dark Gray (2.5Y 3/1) PEAT & organic SILT, dense, moist, slight sulfurous odor (GM)	
_13			<b>End of Boring at 12.5' b.g.s. (Refusal)</b>	
_14			<b>016_MW01 Well Information:</b>	
_15			016_MW01 installed on 8/22/11 using 8" hollow stem augers equipped on a geoprobe track rig	
_16			2-inch diameter 10-slot SCH40 PVC screen set at 4.5' - 9.5' bgs.	
_17			2-inch diameter SCH40 PVC riser from 4.5' bgs. to surface	
_18			#1 Sand from 2.5' to 10.0' bgs.	
_19			Cement-bentonite grout from 2.5' to 0.5'	
_20			Flush-mount completion, cement around outer casing 0.5' to surface	
_21			DTW: 4.10' bgs on 8/23/2011	
_22				
_23				
_24				
_25				


# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_F005
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 7/8/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ Warren Atkinson	DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push	
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 2.3'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO:			

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
0		0.0	0.0 - 0.8 Brown (10YR 5/3) grading to very Dark Grayish Brown (10YR 3/1) fine-medium SAND, trace coarse gray angular gravel, loose to medium dense, dry, no odor (SP)	016_F005_0.0 (0.0' - 0.5')
1		0.0		016_F005_1.1 (1.1' - 1.6')
2	4.4	0.0	0.8 - 2.3 Reddish Brown (2.5YR 4/3) fine-medium SAND, little subround to subangular gravel, moist, medium-dense, moist-wet at 2.3', no odor (SP)	016_F005_1.6 (1.6' - 2.1')
3	5.0	0.0	2.3 - 4.4 Very Dark Grayish Brown (10YR 3/2) medium SAND, little fine sand, trace coarse sand & silt, 80% COPR from 1.6' - 2.1', loose to medium dense, moist-wet, no odor (SP)	016_F005_2.1 (2.1' - 2.6')
4		0.0		80% COPR noted 1.5' - 2.1'
5		0.0		
6		0.0	5.0 - 5.4 Reddish Brown (5YR 4/3) medium-fine SAND, little coarse sand, trace silt, loose, moist-wet, no odor (SW)	016_F005_5.0 (5.0' - 5.5')
7	1.1	0.0	5.4 - 6.1 Dark Gray (2.5YR 4/1) medium SAND, some fine sand, trace clay & silt stringers, loose, moist-wet, slight sulfurous odor (SP)	
8	5.0			
9				
10				
11		0.0	10.0 - 10.2 As Above (5.4' - 6.1')	016_F005_10.0 (10.0' - 10.5')
12	4.6	0.0	10.2 - 14.6 Dark Gray (5Y 4/1) CLAY, little silt, high plasticity, soft, moist, slight sulfurous odor (OH)	Fill/native soil interface at 10.5'
13	5.0	0.0		
14		0.0		
15		0.0		016_F005_14.0 (14.0' - 14.5')
16		0.0	15.0 - 16.3 Black (5Y 2.5/1) CLAY, trace peat, soft, high plasticity, moist, slight sulfurous odor (OH)	
17	3.1	1.2	16.3 - 18.1 Very Dark Grayish Brown (10YR 3/2) to Dark Yellowish Brown (10YR 4/6) PEAT, little Dark Gray (5Y 4/1) CLAY throughout, soft, high plasticity, moist, strong sulfurous odor (PT)	
18	5.0	1.7		
19		8.8		
20		12.2		
21		0.0	20.0 - 20.5 Very Dark Gray (5Y 3/1) CLAY, trace peat, moderate to high plasticity, soft, moist, slight sulfurous odor (OH)	016_F005_20.0 (20.0' - 20.5')
22	3.5	0.0	20.5 - 22.1 Greenish Gray (GLE2 5/5BG) CLAY, little very fine sand, low plasticity, grades from soft to stiff, moist, no odor (CL)	
23	5.0	0.0	22.1 - 22.5 Dark Reddish Gray (5YR 4/2) medium SAND, some fine sand, little round cobbles & coarse round sand, medium dense, wet, no odor (SP)	
24		0.0	22.5 - 23.5 Dark Reddish Gray (5YR 4/2) SILT, little coarse-fine subround gravel, stiff, moist, no odor (ML)	016_F005_23.0 (23.0' - 23.5')
25				




# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_F005
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 7/8/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ Warren Atkinson		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 2.3'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO:			

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
		0.0	25.0 - 28.7 As Above (22.5' - 23.5'), little medium-fine sand throughout (ML)	25
26		0.0		26
27	3.7	0.0		27
28	5.0	0.0		28
29		0.0		29
30				30
31			<b>End of Boring at 30' b.g.s.</b>	31
32				32
33				33
34				34
35				35
36				36
37				37
38				38
39				39
40				40
41				41
42				42
43				43
44				44
45				45
46				46
47				47
48				48
49				49
50				50




# SOIL BORING LOG

		PROJECT NO.:	117-0509160.01	Boring No:	016_F005a
		PROJECT NAME:	PPG Site 016	LOCATION SKETCH	
COMPLETION DATE:	TOTAL DEPTH OF BOREHOLE:	MONITORING DEVICE:	GEOLOGIST / OFFICE:		
8/8/2011	25	PID MiniRAE 2000	Jim M. / Whitehouse Station		
DRILLING CONTRACTOR / DRILLER:		DRILLING EQUIPMENT:	DRILLING METHOD / BIT:		
EPI \ John Brass		Geoprobe Track Rig	Direct Push		
SAMPLING METHOD:		DEPTH TO GROUNDWATER	GROUND SURFACE ELEVATION:	WELL INSTALLED?	
5' Sleeves, 1.25"		~ 3'		No	
MEMO: Cored through ~ 0.4' of concrete before advancing with geoprobe					
*Refusal @ 3.3' 1st attempt, 3.7' on 2nd attempt (sampled 0.4' - 0.9'), advance directly to 5' on third attempt					


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.4 Concrete	
1		0.0	0.4 - 1.5 Yellowish Brown (10YR 5/6) medium SAND, little coarse sand & fine-medium subround quartz gravel, little fine sand, dry, medium-dense, no odor (SW)	016_F005a_0.4 (0.4' - 0.9') (taken from second step-out)
2	3.3	0.5		
3	3.3*	0.8	1.5 - 3.7 Dark Gray (2.5Y 4/1) fine SAND & SILT, trace medium-fine subangular gravel, trace mica, moist, moist-wet 3'-3.7', abundant schist gravel 3.4'-3.7', dense, no odor (ML)	
4		1.6		
5		1.5		
6		1.8		
7		3.1		
8		0.0	5.0 - 5.3 Silver to Dark Grayish Brown (10YR 4/2) coarse-fine schist GRAVEL, COBBLES, and mica, dense, dry, no odor (GW)	016_F005a_5.0 (5.0' - 5.5') (taken from third step-out)
9	3.3	0.0	5.3 - 8.0 Dark Gray (2.5Y 4/1) fine SAND & SILT, trace mica, moist, firm, no odor, (ML), Transitions into Very Dark Gray (5Y 3/1) CLAY, trace silt, lense of gray fine sand 6.6'-6.8', black organic silt & rootlets 7'-8', wood fragments (with slight hydrocarbon odor) at 7.3', moderate plasticity, soft, moist-wet, slight sulfurous odor (OH)	
10	5.0	0.3		
11		0.8		
12		0.0	8.0 - 8.3 Brown (7.5YR 4/2) fine SAND, some medium sand, little coarse sand & fine subround gravel, loose, wet, slight sulfurous odor (SW)	
13		0.0	10.0 - 10.6 As Above (8'-8.3'), little silt, trace medium sand & shells	
14	4.5	0.0	10.6 - 12.1 Gray (2.5Y 5/1) medium SAND, little fine & coarse sand, trace shells & fine subround gravel, loose, wet, slight sulfurous odor (SW)	
15	5.0	0.0	12.1 - 12.7 Dark Grayish Brown (10YR 4/2) Silty fine-very fine SAND, loose, wet, slight sulfurous odor (SM)	016_F005a_12.2 (12.2' -12.7') (fill/native soil interface)
16		0.0	12.7 - 14.5 Dark Gray (5Y 4/1) CLAY, trace silt, occasional thin fine-very fine sand lenses, very soft, moist-wet, slight sulfurous odor (OH)	(taken from third step-out)
17		0.0		
18		0.0	15.0 - 18.4 As Above (12.7' - 14.5'), wet 15' - 15.7', SILT & fine SAND 17' - 17.3', hue change to Black (5Y 2.5/1) 18.3' - 19.4' (OH)	016_F005a_16.0 (16.0' -16.5') (taken from third step-out)
19	4.4	0.0		
20	5.0	0.0		
21		0.0	20.0 - 22.4 Dark Yellowish Brown (10YR 4/6) to Very Dark Grayish Brown (10YR 3/2) PEAT, little Dark Gray (5Y 4/1) CLAY, soft, moist, strong sulfurous odor (PT)	016_F005a_20.0 (20.0' -20.5') (taken from third step-out)
22	3.6	10.3	22.4 - 23.0 Very Dark Gray (10YR 3/1) CLAY, trace silt, soft, moderate plasticity, moist, strong sulfurous odor (OH)	
23	5.0	7.7	23.0 - 23.6 Greenish Gray (GLE2 5/5BG) Silty CLAY, moderate plasticity, soft, moist, no odor (CH)	016_F005a_23.1 (23.1' -23.6') (taken from third step-out)
24		3.1		
25		1.4		
		0.5		
		0.0		
		0.0		

# SOIL BORING LOG

		PROJECT NO.:	117-0509160.01	Boring No:	016_F007
		PROJECT NAME:	PPG Site 016	LOCATION SKETCH	
COMPLETION DATE:	TOTAL DEPTH OF BOREHOLE:	MONITORING DEVICE:	GEOLOGIST / OFFICE:		
8/9/2011	25	PID MiniRAE 2000	Jim M. / Whitehouse Station		
DRILLING CONTRACTOR / DRILLER:	DRILLING EQUIPMENT:	DRILLING METHOD / BIT:			
EPI \ John Brass	Geoprobe Track Rig	Direct Push			
SAMPLING METHOD:	DEPTH TO GROUNDWATER	GROUND SURFACE ELEVATION:	WELL INSTALLED?		
5' Sleeves, 1.25"	~ 3.2'		No		
MEMO: Cored through ~ 0.6' of concrete before advancing with geoprobe					


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.6 Concrete	
_1		0.0	0.6 - 1.5 Yellowish Brown (10YR 5/6) medium SAND, little coarse sand & medium-fine subround gravel, little fine sand, moist, medium-dense, no odor (SW)	016_F007_0.6 (0.6' - 1.1')
_2	3.0	0.0	1.5 - 2.2 Dark Grayish Brown (10YR 4/2) fine SAND & SILT, little medium-fine ang. gray gravel & coal, trace mica, medium-dense, dry, no odor (ML)	
_3	4.4*	0.0	2.2 - 2.5 Dark Gray (5Y 4/1) schist GRAVEL, COBBLES, & mica (GW)	
_4		0.0	2.5 - 2.7 Olive Yellow (2.5Y 6/6) medium SAND, loose, moist, no odor (SP)	
_5		0.0	2.7 - 3.2 As Above (2.2'-2.5') but with fine SAND & SILT, moist, medium-dense (GM)	
			3.2 - 3.6 Dark Grayish Brown (10YR 4/2) fine-very fine SAND, some silt, medium-dense, moist-wet, no odor (SM)	
_6		0.0	5.0 - 6.5 As Above (3.2' - 3.6'), Transitions into medium-fine SAND, little coarse sand, trace shells, loose, wet, slight sulfurous odor (SW)	016_F007_5.0 (5.0' - 5.5')
_7	2.4	0.0	6.5 - 7.4 Brown (7.5YR 4/2) coarse-fine SAND, trace shells & fine subround gravel, wet, loose, slight sulfurous odor, zone of fine-very fine silty SAND, little clay, from 6.6' - 6.8', Transitions into Dark Gray (7.5YR 4/2) by 7.2' (SW)	
_8	5.0	0.0		
_9				
_10				
_11		0.0	10.0 - 12.0 Dark Gray (2.5Y 4/1) coarse-medium SAND, little fine sand, trace shells & fine gravel (SW), Transitions into fine-very fine SAND, little silt, wet, loose, slight sulfurous odor (SM)	
_12	4.2	0.0	12.0 - 14.2 Dark Gray (5Y 4/1) CLAY, fine sand & silt 13'-13.5' and at 14', soft, moderate plasticity, moist-wet, no odor (OH)	016_F007_11.5 (11.5' - 12.0' Fill/native soil interface at 12'
_13	5.0	0.0		
_14		0.0		
_15		0.0		
_16		0.0	15.0 - 16.0 Dark Gray (5Y 4/1) Silty CLAY, little very fine sand, wet, very soft, slight sulfurous odor, low plasticity (OL)	016_F007_15.5 (15.5' - 16.0'
_17	4.2	0.0	16.0 - 18.7 As Above (12.0' - 14.2'), Black (5Y 2.5/1) CLAY 17.3' - 18.4'	
_18	5.0	0.0		
_19		0.0		
_20		1.1	18.7 - 19.2 Dark Yellowish Brown (10YR 4/6) to Very Dark Grayish Brown (10YR 3/2) PEAT, little Dark Gray (5Y 4/1) CLAY, soft, moist, strong sulfurous odor (PT)	
_21		14.6	20.0 - 21.5 As Above (18.7' - 19.2')	016_F007_20.0 (20.0' - 20.5'
_22		8.3		
_23	4.8	1.6	21.5 - 24.8 Dark Gray (10YR 4/1) CLAY, little silt, moderate plasticity, soft, moist-wet, slight sulfurous odor (OH), Transitions into Greenish Gray (GLEY2 6/5B) Clayey fine-very fine SAND, soft, moist-wet, no odor (SC), Transitions into Greenish Gray (GLEY2 6/5B) medium-fine SAND, some silt, trace clay, medium-dense, moist-wet, no odor (SM)	
_24	5.0	0.0		
_25		0.0		016_F007_24.0 (24.0' - 24.5')

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_F008
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/10/2011	TOTAL DEPTH OF BOREHOLE: 25	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER ~ 5.4'	GROUND SURFACE ELEVATION:	WELL INSTALLED? No
MEMO: *Cored through ~ 0.4' of concrete before advancing with geoprobe			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.4 Concrete	
_1		0.0	0.4 - 0.7 Light Olive Brown (2.5Y 5/3) fine SAND, little medium sand, trace fine-medium subround-subangular gravel, dry, loose, no odor (SP)	016_F008_0.4 (0.4' - 0.9')
_2	3.2	0.0	0.7 - 1.8 Reddish Brown (2.5YR 4/3) very fine SAND & SILT, some Red (2.5YR 4/6) subround sandstone gravel, dry, dense, no odor (SM/ML)	
_3	4.6*	0.0	1.8 - 3.6 Dark Gray (2.5Y 4/1) fine SAND & SILT, trace clay, little mica & medium-fine subround schist gravel, medium-dense, moist, no odor (SM/ML)	
_4		0.0		
_5		0.0	5.0 - 5.4 As Above (1.8' - 3.6')	016_F008_5.0 (5.0' - 5.5')
_6		0.0	5.4 - 6.7 Very Dark Gray (10YR 3/1) SILT, some fine sand, little clay, low plasticity, soft, moist-wet, no odor (ML)	
_7	3.3	0.0	6.7 - 7.3 Gray (2.5Y 5/1) fine-very fine SAND, little silt, wet, loose, slight sulfurous odor (SM)	
_8	5.0	0.0	7.3 - 8.3 Dark Grayish Brown (10YR 4/2) medium-fine SAND, trace coarse sand & shells, loose, wet, slight sulfurous odor (SW)	016_F008_7.8 (7.8' - 8.3')
_9				
_10				
_11		0.0	10.0 - 11.7 Gray (2.5Y 5/1) medium SAND, little fine & coarse sand, trace fine gravel and shells, loose, wet, no odor (SW), Transitions into Dark Gray	016_F008_11.2 (11.2' - 11.7')
_12	3.2	0.0	(2.5Y 4/1) medium-fine SAND, trace coarse sand & shells (SW),	Fill/native soil interface at 11.7'
_13	5.0	0.0	11.7 - 12.3 Dark Gray (2.5Y 4/1) Clayey SILT, trace fine-very fine sand, soft, moist-wet, slight sulfurous odor (ML)	
_14		0.0	12.3 - 12.8 Dark Gray (2.5Y 4/1) fine SAND, little silt, wet, loose, slight sulfurous odor (SM)	
_15			12.8 - 13.2 Dark Gray (5Y 4/1) CLAY, soft, moist-wet, high plasticity, slight sulfurous odor (OH)	
_16		0.0	15.0 - 15.6 Dark Gray (5Y 4/1) Silty CLAY, trace very fine sand, wet, very loose, slight sulfurous odor (OH)	016_F008_15.6 (15.6' - 16.1')
_17	1.1		15.6 - 16.1 As Above (12.8' - 13.2'), some very fine-fine sand 16'-16.1' (OH)	
_18	5.0			
_19				
_20				
_21		4.0	20.0 - 21.3 Very Dark Grayish Brown (10YR 3/2) to Dark Yellowish Brown (10YR 4/6) PEAT, little Dark Gray (5Y 4/1) CLAY, soft, moist, strong sulfurous odor (PT)	016_F008_20.0 (20.0' - 20.5')
_22	3.7	0.3	21.3 - 23.7 Greenish Gray (GLE Y2 6/5B) CLAY, soft, moderate plasticity, moist-wet, slight sulfurous odor (CH), Transitions into Greenish Gray (GLE Y2 6/5B)	
_23	5.0	0.0	Clayey SILT, trace fine sand, little medium-fine subround gravel, stiff, moist, no odor (ML)	016_F008_23.2 (23.2' - 23.7')
_24		0.0		
_25				

# SOIL BORING LOG

		PROJECT NO.:	117-0509160.01	Boring No:	016_F010
		PROJECT NAME:	PPG Site 016	LOCATION SKETCH	
COMPLETION DATE:	TOTAL DEPTH OF BOREHOLE:	MONITORING DEVICE:	GEOLOGIST / OFFICE:		
8/23/2011	30	PID MiniRAE 2000	Jim M. / Whitehouse Station		
DRILLING CONTRACTOR / DRILLER:	DRILLING EQUIPMENT:	DRILLING METHOD / BIT:			
EPI \ John Brass	Geoprobe Track Rig	Direct Push			
SAMPLING METHOD:	DEPTH TO GROUNDWATER	GROUND SURFACE ELEVATION:	WELL INSTALLED?		
5' Sleeves, 1.25"	~ 3.3'		No		
MEMO:					
*Cored through ~ 0.4' of concrete before advancing with geoprobe					

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.4 Concrete	
_1		0.0	0.4 - 1.0 Yellowish Brown (10YR 5/6) fine SAND, little medium sand & silt, trace medium-fine subround gravel, medium-dense, dry, no odor (SP)	016_F010_0.4 (0.4' - 0.9')
_2	3.0	0.0	1.0 - 1.2 Dark Brown (7.5YR 3/2) Sandy SILT, little gray coarse-fine angular gravel, dense, dry, no odor (ML)	016_F010_2.0 (2.0' - 2.5')
_3	4.6*	0.0	1.2 - 1.8 White (GLE Y1 8/N) coarse-fine schist GRAVEL & COBBLES, concrete cobbles 1.2'-1.3', medium-dense, dry, no odor (GW)	016_F010_2.5 (2.5' - 3.5')
_4		0.0	1.8 - 2.5 Very Dark Grayish Brown (10YR 3/2) Sandy SILT, trace gray medium-coarse subround gravel & cobbles, medium-dense, moist, no odor (ML)	15% COPR noted 2.5' - 3.5'
_5		0.0	2.5 - 3.4 Very Dark Grayish Brown (10YR 3/2), little fine sand, 15% medium-fine round COPR gravel, loose, wet 3.3'-3.5', no odor (SP)	016_F010_5.0 (5.0' - 5.5')
_6		0.0	5.0 - 5.7 As Above (2.5' - 3.5'), little fine subround quartz gravel, no COPR gravel, wet, loose, no odor (SP), Dark Gray (GLE Y1 4/N) CLAY 5.4'-5.7' (OH)	
_7	3.3	0.0	5.7 - 7.0 Very Dark Gray (2.5Y 3/1) fine SAND, little medium sand & silt, trace coarse-fine subround gravel, loose, wet, no odor (SM), Transitions to Dark Grayish	
_8	5.0	0.0	6.4 - 7.0 Brown (10YR 4/2) Silty very fine SAND, loose, wet, slight sul. odor (SM)	016_F010_7.8 (7.8' - 8.3')
_9		0.0	7.0 - 7.6 Brown (7.5YR 4/2) coarse SAND & fine subround GRAVEL, some medium sand, wet, loose, slight sul. odor (SW/GW), Transitions to fine SAND, little very fine sand & medium sand, trace gravel, wet, loose (SW)	
_10		0.0	7.6 - 8.3 Dark Gray (2.5Y 4/1) medium SAND, little fine sand, trace fine gravel & shells, wet, loose, slight sulfurous odor (SP)	
_11		0.0	10.0 - 11.4 Dark Gray (2.5Y 4/1) medium-fine SAND, trace coarse sand, gravel, & shells, wet, loose, slight sulfurous odor (SW)	
_12	3.8	0.0	11.4 - 11.7 Dark Gray (2.5Y 4/1) Silty fine-very fine SAND, wet, loose, slight sulfurous odor (SM)	016_F010_12.3 (12.3' - 12.8')
_13	5.0	0.0	11.7 - 12.1 As Above (10.0' - 11.4') (SW)	
_14		0.0	12.1 - 12.3 As Above (11.4' - 11.7') (SM)	Fill/native soil interface at 12.8'
_15		0.0	12.3 - 12.8 As Above (10.0' - 11.4') (SW)	
		0.0	12.8 - 13.8 Dark Gray (5Y 4/1) CLAY, thin (<1/2") lenses of fine sand at 13.1', 13.3', and 13.7' - 13.8', soft, moist, slight sulfurous odor (OH)	
_16		0.0	15.0 - 18.0 As Above (12.8' - 13.8'), Very Dark Gray (5Y 3/1) 16.6' - 18', trace shells & peat 16.4' - 18', soft, moist, slight sulfurous odor (OH)	016_F010_16.0 (16.0' - 16.5')
_17	2.3	2.2		
_18	5.0		18.0 - 18.3 Very Dark Grayish Brown (10YR 3/2) to Dark Yellowish Brown (10YR 4/6) PEAT, little Dark Gray (5Y 4/1) CLAY, soft, moist, strong sulfurous odor (PT)	
_19				
_20				
_21		7.9	20.0 - 20.3 As Above (18' - 18.3'), no clay, little black organic silt, very soft, moist-wet, strong sulfurous odor (PT)	016_F010_20.0 (20.0' - 20.5')
_22	4.0	0.0	20.3 - 22.0 Grayish Brown (10YR 5/2) CLAY, trace silt, soft, moderate plasticity, moist, slight sulfurous odor (OH), grading into Greenish Gray (GLE Y2 5/10G) CLAY (OH or CH)	
_23	5.0	0.0	22.0 - 24.0 (GLE Y2 5/10G) Silty CLAY, little fine sand, trace medium-fine subround greenish gray gravel, Greenish Gray (GLE Y1 6/10GY) & Reddish Brown (5YR 4/3) mottling 23.2' - 24', firm, moist, low plasticity, no odor (CL)	
_24		0.0		
_25		0.0		


# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_F010
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/23/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 3.3'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: *Cored through ~ 0.4' of concrete before advancing with geoprobe			

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
_25		0.0	25.0 - 28.3 Reddish Brown (5YR 4/3 to 5/3) Silty fine SAND, little medium-fine reddish brown subround gravel & clay, trace Dark Greenish Gray (GLEYS 4/5G) coarse to fine subround gravel from 25'-25.6', medium-dense, moist-wet, no odor (SM/SC), Transitions into Brown (7.5YR 5/3) SILT, some very fine sand, little coarse-fine gray subangular gravel, dense, dry-moist, no odor (ML)	016_F010_25.0 (25.0' - 25.5')
_26		0.0		_26
_27	3.3	0.0		_27
_28	5.0	0.0		_28
_29				_29
_30				_30
_31			End of Boring at 30' b.g.s.	_31
_32				_32
_33				_33
_34				_34
_35				_35
_36				_36
_37				_37
_38				_38
_39				_39
_40				_40
_41				_41
_42				_42
_43				_43
_44				_44
_45				_45
_46				_46
_47				_47
_48				_48
_49				_49
_50				_50




# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_F012
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/18/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M./ Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER ~ 3.0'	GROUND SURFACE ELEVATION:	WELL INSTALLED? No
MEMO: Cored through ~ 0.5' of concrete before advancing with geoprobe			

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.5 Concrete	
_1		0.0	0.5 - 0.8 Yellowish Brown (10YR 5/6) medium-fine SAND, little medium-fine subround gravel, medium-dense, dry, no odor (SW)	016_F012_0.5 (0.5' - 1.0')
_2	3.0	0.0	0.8 - 2.7 Dark Gray (5Y 4/1) grading to Very Dark Gray (2.5Y 3/1) Silty fine SAND, little schist gravel, Reddish Brown (5YR 4/4) Siltstone cobbles	016_F012_2.0 (2.0' - 2.5')
_3	4.5*	0.0	2.5'-2.5', dense, dry, no odor (SM)	
_4		0.0	2.7 - 3.0 Dark Gray (2.5Y 4/1) fine SAND & fine-medium round COPR GRAVEL (40%), little silt, medium-dense, moist, no odor (SM/GM)	016_F012_3.0 (3.0' - 3.5') 40% COPR noted 2.7' - 3.5'
_5		0.0	3.0 - 3.5 Dark Reddish Brown (5YR 3/4) SILT & fine-medium round COPR GRAVEL (40%), little fine sand, medium-dense, wet, no odor (ML/GM)	
_6		0.0	5.0 - 5.5 As Above (3' - 3.5')	016_F012_5.1 (5.1' - 5.5')
_7		0.0	5.5 - 6.3 Very Dark Gray (2.5Y 3/1) medium-fine SAND, wet, loose, no odor (SW), Transitions into Black (2.5Y 2.5/1) fine-very fine SAND, trace silt, loose, wet, no odor (SP)	40% COPR noted 5.1' - 5.5'
_8	2.9	0.0	6.3 - 7.9 Dark Grayish Brown (2.5Y 4/2) fine-very fine SAND, little silt (SM), Transitions to medium-fine SAND, trace coarse sand, shells, and fine subround gravel, wet, loose, slight sulfurous odor (SW)	016_F012_7.4 (7.4' - 7.9')
_9	5.0	0.0		
_10		0.0		
_11		0.0	10.0 - 12.4 Dark Gray (2.5Y 4/1) medium-fine SAND, trace coarse sand, shells, & fine subround gravel, loose, wet, slight sulfurous odor (SW)	
_12		0.0		
_13	2.9	0.0	12.4 - 12.9 Dark Gray (5Y 4/1) Silty CLAY, trace fine sand, soft, moist-wet, slight sulfurous odor (OL)	016_F012_11.9 (11.9' - 12.4')
_14	5.0	0.0		Fill/native soil interface at 12.4'
_15				
_16			15.0 - 20.0 No Recovery	No sample - no recovery
_17				
_18	0.0			
_19	5.0			
_20				
_21		0.4	20.0 - 20.2 Very Dark Grayish Brown (10YR 3/2) PEAT, soft, moist, low plasticity, strong sulfurous odor (PT)	016_F012_20.0 (20.0' - 20.5')
_22		0.0	20.2 - 22.2 Greenish Gray (GLE Y2 6/5BG) Sandy CLAY, little silt, trace subround medium-fine gravel, medium-dense, wet, no odor (CL)	
_23	2.2	0.0		
_24	5.0			
_25				


# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_F012
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/18/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M./ Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 3.0'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: Cored through ~ 0.5' of concrete before advancing with geoprobe			

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
_25		0.0	25.0 - 28.7 Greenish Gray (GLE Y2 6/5BG) Silty medium-fine SAND, little clay & medium-fine subround-subangular gravel, medium-dense, wet, no odor (SM), Transitions into Reddish Brown (5YR 4/4) Silty fine SAND, some clay & fine subround gravel, little medium gravel, loose, wet, no odor (SC)	016_F012_25.0 (25.0' - 25.5')
_26		0.0		_26
_27	3.7	0.0		_27
_28	5.0	0.0		_28
_29		0.0		_29
_30		0.0		_30
_31			<b>End of Boring at 30' b.g.s.</b>	_31
_32				_32
_33				_33
_34				_34
_35				_35
_36				_36
_37				_37
_38				_38
_39				_39
_40				_40
_41				_41
_42				_42
_43				_43
_44				_44
_45				_45
_46				_46
_47				_47
_48				_48
_49				_49
_50				_50




# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_F014
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/12/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 3.5'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: Cored through ~ 0.4' of concrete before advancing with geoprobe			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY	
			0.0 - 0.4 Concrete		
_1		0.0	0.4 - 0.9 Brownish Yellow (10YR 6/6) medium SAND, little fine sand & fine subround gravel, medium-dense, moist-wet, no odor (SP)	016_F014_0.4 (0.4' - 0.9')	
_2	3.3	0.0	0.9 - 1.1 Black (2.5Y 2.5/1) very fine SAND & SILT, loose, dry, no odor (SM/ML)		
_3	4.4*	0.0	1.1 - 2.3 As Above (0.4' - 0.9') but Yellowish Brown (10YR 5/4), moist (SP)	016_F014_1.8 (1.8' - 2.3')	
		0.0	2.3 - 2.4 Black (2.5Y 2.5/1) fine SAND, some coarse-fine subround gravel, 30% COPR (fine round gravel), medium-dense, dry, no odor (SP)	016_F014_2.3 (2.3' - 3.1')	
_4		0.0	2.4 - 3.1 Reddish Brown (5YR 4/4) SILT, little fine sand, 30% COPR (fine round gravel) 2.4' - 2.9', firm, moist, no odor (ML)	016_F014_3.1 (3.1' - 3.6')	
_5		0.0	3.1 - 3.7 Dark Gray (GLE Y1 4/N) medium-fine SAND, trace medium-fine subround quartz gravel, moist, moist-wet 3.5' - 3.7', no odor (SW)	30% COPR noted 2.3' - 3.1'	
_6		0.0	5.0 - 8.4 Dark Gray (GLE Y1 4/N) coarse-fine SAND, trace fine subround gravel, wet, moist, no odor (SW), Transitions into Dark Gray (2.5Y 4/1) medium SAND, little coarse & fine sand, trace fine subround gravel & shells, wet, loose, slight sulfurous odor (SW)		
_7	3.4	0.0			
_8	5.0	0.0			016_F014_7.0 (7.0' - 7.5')
_9		0.0			
_10		0.0			
_11		0.0	10.0 - 11.2 Dark Gray (2.5Y 4/1) medium SAND, little coarse & fine sand, trace fine subround gravel & shells, wet, loose, slight sulfurous odor (SW) Transitions into Gray (10YR 5/1) coarse SAND, some medium sand & fine subround gravel, trace shells & medium subround gravel, loose, wet, slight sulfurous odor (SW)		
_12	1.2	0.0			016_F014_10.7 (10.7' - 11.2')
_13	5.0	0.0			Fill/native soil interace not recovered
_14		0.0			
_15		0.0			
_16		0.0	15.0 - 16.0 Gray (10YR 5/1) coarse SAND, some medium sand & fine gravel, trace shells & medium subround gravel, loose, wet, slight sulfurous odor (SW)	016_F014_15.5 (15.5' - 16.0')	
_17	3.1	0.0	16.0 - 16.9 Dark Gray (5Y 4/1) Silty CLAY, trace very fine sand (OH), Transitions into CLAY, trace silt, soft, moist-wet, moderate plasticity, slight sulfurous odor (OH)		
_18	5.0	0.1	16.9 - 17.6 Very Dark Gray (5Y 3/1) CLAY, trace peat & shells, moist, soft, strong sulfurous odor (OH)		
_19		0.0	17.6 - 18.0 Dark Gray (5Y 4/1) CLAY, soft, moist, slight sulfurous odor (OH)		
_20		0.0	18.0 - 18.1 Very Dark Grayish Brown (10YR 3/2) PEAT, little Dark Gray (5Y 4/1) CLAY, soft, moist, strong sulfurous odor (PT)		
_21		2.1	20.0 - 20.5 Very Dark Grayish Brown (10YR 3/2) PEAT & Black (2.5Y 2.5/1) organic SILT, trace clay, very soft, moist-wet, strong sulfurous odor (PT) 20.5 - 21.1 Gray (10YR 5/1) Silty CLAY, trace subangular-subround fine gravel, soft, moist, low plasticity, slight sulfurous odor (OL), Transitions into Brown (7.5YR 4/4) SILT, some very fine sand, trace subangular fine gravel, stiff, moist, no odor (ML)	016_F014_20.0 (20.0' - 20.5')	
_22	1.2	0.1			
_23	5.0	0.1			
_24		0.1			
_25		0.1			

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_F014
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/12/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 3.5'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: Cored through ~ 0.4' of concrete before advancing with geoprobe			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
_25		0.0	25.0 - 26.2 Brown (7.5YR 4/4) SILT & fine-very fine SAND, little coarse-fine subround gravel, stiff, moist-wet, no odor (ML/SM)	016_F014_25.0 (25.0' - 25.5')
_26		0.0		_26
_27				_27
_28	1.2 5.0			_28
_29				_29
_30				_30
_31			<b>End of Boring at 30' b.g.s.</b>	_31
_32				_32
_33				_33
_34				_34
_35				_35
_36				_36
_37				_37
_38				_38
_39				_39
_40				_40
_41				_41
_42				_42
_43				_43
_44				_44
_45				_45
_46				_46
_47				_47
_48				_48
_49				_49
_50				_50

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_F016
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/18/2011	TOTAL DEPTH OF BOREHOLE: 8	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 3.3'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: *Cored through ~ 0.5' of concrete before advancing with geoprobe Refusal at 8'			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.5 Concrete	
_1		0.0	0.5 - 0.8 Yellowish Brown (10YR 5/6) medium-fine SAND, little medium-fine subround gravel, medium-dense, moist, no odor (SW)	016_F016_0.5 (0.5' - 1.0')
_2		0.0	0.8 - 1.0 As Above (0.5' - 0.8') but Light Olive Brown (2.5Y 5/4) (SW)	
_3	2.9 4.5*	0.0	1.0 - 1.3 White (GLE Y1 8/N) schist GRAVEL & COBBLES, dense, dry (GW)	
_4		0.0	1.3 - 2.1 As Above (0.8' - 1.0')	
_5		0.0	2.1 - 2.2 As Above (1.0' - 1.3')	
_6		0.0	2.2 - 3.4 Yellowish Brown (10YR 5/4) Silty fine SAND, little clay & medium-fine subround gravel, moist-wet at 3.3', firm, no odor (SM)	
_7	1.0 3.0	0.0	5.0 - 5.3 Dark Grayish Brown (2.5Y 4/2) fine-very fine SAND, little silt, some coarse-fine subround gravel, medium-dense, moist-wet, no odor (SM)	016_F016_5.5 (5.0' - 5.5')
_8			5.3 - 6.0 Dark Gray (2.5Y 4/1) fine-very fine SAND, little silt, some coarse-fine schist gravel & mica, very dense, moist, no odor (SM)	
_9			<b>End of Boring at 8' b.g.s. (Refusal)</b>	
_10				
_11				
_12				
_13				
_14				
_15				
_16				
_17				
_18				
_19				
_20				
_21				
_22				
_23				
_24				
_25				

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_G005
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 7/6/2011	TOTAL DEPTH OF BOREHOLE: 25	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ Warren Atkinson		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER ~6.0'	GROUND SURFACE ELEVATION:	WELL INSTALLED? No
MEMO: Cored through ~ 0.50' of concrete. Hand-augered down to 1.5' - hit refusal			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.5 Concrete	
_1		0.0	0.5 - 1.0 Yellowish Brown (10YR 5/6) medium-fine SAND, little coarse-fine subround gravel, trace slag, trace clay, loose, dry-moist, no odor (SP)	016_G005_0.5 (0.5' - 1.0')
_2			1.0 - 1.5 Very Dark Gray (10YR 3/1) medium-coarse SAND, some coal & slag, loose, dry, no odor (SW)	
_3			1.5 - 1.7 As Above (1.0' - 1.5'), mostly coal & slag fragments (GW)	
_4	2.5 3.5*		1.7 - 4.0 Very Dark Greenish-Gray (GLE Y1 3/10GY) weathered schist: fine SAND, some mica & schist gravel/cobbles, little silt, trace medium sand, dense, dry, no odor (SP)	016_G005_3.5 (3.5' - 4.0')
_5				
_6		0.0	5.0 - 5.5 As Above (1.7' - 4.0'), slight sulfurous odor (SP)	
_7		0.0	5.5 - 7.0 Black (10YR 2/1) medium-fine SAND, medium-dense, moist, slight slight sulfurous odor (SP), Transitions into Very Dark Gray (10YR 3/1) medium-fine SAND, moist-wet (at 6'), medium-dense, slight sulfurous odor (SP)	016_G005_7.4 (7.4' - 7.9')
_8	2.9 5.0	0.0	7.0 - 7.9 Dark Gray (10YR 4/1) medium-fine SAND, little silt, loose, moist-wet, slight sulfurous odor (SP), Transitions into fine SAND, little silt (SP)	
_9				
_10				
_11		0.0	10.0 - 11.0 Dark Gray (10YR 4/1) very fine SAND, some silt, little fine sand, loose, moist-wet, slight sulfurous odor (SM)	016_G005_10.5 (10.5' - 11.0')
_12		0.0	11.0 - 13.6 Dark Gray (5Y 4/1) CLAY, occasional thin (< 1/2") lenses of little fine sand, very soft, moderate to highly plastic, moist-wet, slight sulfurous odor (OH)	Fill/native soil interface at 11'
_13	3.6 5.0	0.0		
_14				
_15				
_16		0.0	15.0 - 16.0 As Above (11' - 13.6')	016_G005_15.0 (15.0' - 15.5')
_17		0.0	16.0 - 17.8 Black (5Y 2.5/1) CLAY, little silt, trace shells, soft, moderate to high plasticity, moist, strong sulfurous odor (OH)	
_18	2.8 5.0	0.0		
_19				
_20				
_21		0.0	20.0 - 22.7 As Above (16' - 17.8')	016_G005_20.0 (20.0' - 20.5')
_22		0.0		
_23	3.4 5.0	0.0	22.7 - 23.4 Dark Grayish Brown (10YR 4/2) medium-fine SAND, little coarse sand & subangular coarse gravel, dense, moist-wet, no odor (SW)	
_24		0.0		
_25				

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_G005
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 7/6/2011	TOTAL DEPTH OF BOREHOLE: 25	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ Warren Atkinson		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~6.0'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: Cored through ~ 0.50' of concrete. Hand-augered down to 1.5' - hit refusal			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
_26			25.0 - 30.0 No Recovery	_26
_27				_27
_28	0.0 5.0			_28
_29				_29
_30				_30
_31				End of Boring at 30' b.g.s.
_32			_32	
_33			_33	
_34			_34	
_35			_35	
_36			_36	
_37			_37	
_38			_38	
_39			_39	
_40			_40	
_41			_41	
_42			_42	
_43			_43	
_44			_44	
_45			_45	
_46			_46	
_47			_47	
_48			_48	
_49			_49	
_50			_50	

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_G007
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/9/2011	TOTAL DEPTH OF BOREHOLE: 25	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 3.2'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: *Cored through ~ 0.4' of concrete before advancing with geoprobe			

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.4 Concrete	
_1		0.0	0.4 - 0.9 Very Dark Gray (10YR 3/1) fine SAND & medium-fine subround slag GRAVEL, loose, dry, no odor (GP/SP)	016_G007_0.4 (0.4' - 0.9')
_2	3.2	0.0	0.9 - 1.1 Yellowish Brown (10YR 5/6) medium SAND, little fine sand, loose, dry, no odor (SP)	
_3	4.6*	0.0	1.1 - 3.0 Dark Grayish Brown (7.5YR 4/2) fine SAND & SILT, little coarse-fine gray subangular gravel, trace mica, medium-dense, moist, no odor (ML)	
_4		0.0	3.0 - 3.2 Dark Gray (7.5YR 4/1) Silty CLAY, soft, moist, moderate plasticity (OH)	
_5		0.0	3.2 - 3.6 Dark Grayish Brown (10YR 4/2) fine-very fine SAND, trace silt, trace mica, loose, moist-wet, no odor (SP)	
_6		0.0	5.0 - 6.2 As Above (3.2'-3.6'), wet, Transitions into Dark Grayish Brown (10YR 4/2) medium-fine SAND, loose, wet, no odor (SP/SW)	016_G007_5.0 (5.0' - 5.5')
_7	3.6	0.0	6.2 - 7.8 Dark Gray (10YR 4/1) medium SAND, some fine sand, trace coarse sand & shells (SW), Transitions to Dark Grayish Brown (10YR 4/2) SILT, little clay and very fine sand, soft, wet, slight sulfurous odor (ML)	
_8	5.0	0.0	7.8 - 8.6 Dark Reddish Gray (5YR 4/2) medium-fine SAND, trace coarse sand & shells, loose, wet, slight sulfurous odor (SW)	016_G007_8.1 (8.1' - 8.6')
_9		0.0		
_10		0.0	10.0 - 12.7 As Above (7.8'-8.6') but Dark Gray (2.5Y 4/1) (SW)	
_11		0.0		
_12	4.2	0.0		016_G007_12.2 (12.2' - 12.7')
_13	5.0	0.0	12.7 - 14.2 Very Dark Gray (5Y 3/1) CLAY, little silt & very fine sand 14'-14.2', soft, moderate plasticity, slight sulfurous odor (OH)	Fill/native soil interface at 12.7'
_14		0.0		
_15		0.0	15.0 - 18.1 As Above (12.7' - 14.2'), little silt & wet from 15' - 15.5', trace peat 17'-18.1'	
_16		0.0		016_G007_16.0 (16.0' - 16.5')
_17	4.1	0.0		
_18	5.0	0.0	18.1 - 19.2 As Above (12.7' - 14.2') but Verk Dark Gray (5Y 3/1), trace peat, abundant peat in bottom of sleeve (19.2')	
_19		0.0		
_20		1.4	20.0 - 22.1 Dark Yellowish Brown (10YR 4/6) to Very Dark Grayish Brown (10YR 3/2) PEAT, little Dark Gray (5Y 4/1) CLAY, soft, moist, strong sulfurous odor (PT)	016_G007_20.0 (20.0' - 20.5')
_21		3.3		
_22	3.6	0.0	22.1 - 22.8 Dark Gray (2.5Y 4/1) CLAY, trace silt, moderate plasticity, soft, moist, slight sulfurous odor (OH)	
_23	5.0	0.1	22.8 - 23.6 Greenish Gray (GLE2 5/10B) Silty CLAY, some fine-very fine sand, little medium-fine subround green-gray sandstone gravel, soft, moist, no odor (CL), Transitions into Dark Grayish Brown (7.5YR 4/2) Silty fine-very fine SAND, little clay, soft grading to firm, moist-wet, no odor (SM)	016_G007_23.1 (23.1' - 23.6')
_24		0.0		
_25		0.0		


# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_G008
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/10/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 3.4'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: *Cored through ~ 0.5' of concrete before advancing with geoprobe			

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.5 Concrete	
_1	3.1 4.5*	0.0	0.5 - 1.2 Light Yellowish Brown (2.5Y 6/4) fine SAND, trace silt & fine round quartz gravel, little white clay stringers, medium-dense, moist, no odor (SP)	016_G008_0.5 (0.5' - 1.0')
_2		0.0	1.2 - 2.2 Dark Gray (7.5YR 4/1) fine SAND & SILT, little Reddish Brown (2.5Y 4/4) medium-fine subround-subangular gravel, dense, dry, no odor (SM/ML)	
_3		0.0	2.2 - 2.8 Very Dark Grayish Brown (10YR 3/2) Silty fine SAND, little fine subround schist gravel, trace mica, moist, dense, no odor (SM)	
_4		0.0	2.8 - 2.9 Light bluish gray (GLE Y2 8/5PB) concrete cobbles (GP)	
_5		0.0	2.9 - 3.5 Dark Gray (2.5YR 4/1) Silty medium-fine SAND, little schist gravel & mica, medium-dense, moist-wet 3.4' - 3.5', no odor (SM)	
_6	3.2 5.0	0.0	5.0 - 6.3 Black (2.5Y 2.5/1) fine SAND & SILT, trace COPR (medium-fine round gravel) 5.2' - 6', little clay, firm, moist-wet, no odor (ML)	016_G008_5.0 (5.0' - 6.0')
_7		0.0	6.3 - 8.2 Dark Gray (2.5Y 4/1) fine SAND, trace medium sand & silt, loose, wet, slight sulfurous odor (SP), Transitions into Reddish Brown (5YR 5/3) fine SAND, some medium sand, little very fine sand, wet, loost, trace shells, slight sulfurous odor (SW)	016_G008_6.0 (6.0' - 6.5')
_8		0.0		Trace COPR noted 5.2' - 6.0'
_9		0.0		
_10		0.0		
_11	3.5 5.0	0.0	10.0 - 11.7 Dark Gray (2.5Y 4/1) medium SAND, little fine sand, trace coarse sand & shells (SP/SW), Transitions into fine SAND, some medium sand, trace shells & coarse sand, wet, loose, slight sulfurous odor (SW)	016_G008_11.2 (11.2' - 11.7')
_12		0.0	11.7 - 13.5 Dark Gray (5Y 4/1) CLAY, occasional (< 1/2") lense of SILT & very fine SAND, soft, moderate plasticity, moist-wet, slight sulfurous odor (OH)	Fill/native soil interface at 11.7'
_13		0.0		
_14		0.0		
_15		0.0		
_16	3.9 5.0	0.0	15.0 - 15.8 Dark Gray (5Y 4/1) Silty CLAY, trace very fine SAND, wet, very loose, slight sulfurous odor (OH)	016_G008_15.5 (15.5' - 16.0')
_17		0.0	15.8 - 18.9 As Above (11.2' - 13.5'), hue change to Black (5Y 2.5/1) 17.9' - 18.9', trace shells 18'-18.9', soft, moderate plasticity, moist-wet, slight sulfurous odor (OH)	
_18		0.0		
_19		0.0		
_20		0.0		
_21	1.8 5.0	0.0	20.0 - 20.4 As Above (15.8' - 18.9'), strong sulfurous odor	016_G008_20.0 (20.0' - 20.5')
_22		0.0	20.4 - 21.8 Greenish Gray (GLE Y2 6/5BG) Silty CLAY, little fine-very fine sand, little fine subround-subangular gravel, moist-wet, soft, no odor (CL)	
_23		12.8		
_24		0.0		
_25		0.0		




# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_G008
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/10/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 3.4'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: *Cored through ~ 0.5' of concrete before advancing with geoprobe			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
26		0.0	25.0 - 25.8 As Above (20.4' - 21.8')	016_G008_25.0 (25.0' - 25.5')
27		0.0	25.8 - 27.4 Grayish Brown (10YR 5/2) Silty CLAY, some very fine sand, trace fine subround-subangular gravel, stiff, moist, no odor (CL)	
28	4.0 5.0	0.0	27.4 - 29.0 Reddish Brown (5YR 4/4) SILT, little fine sand & clay, trace medium-fine subround gravel, very dense, dry-moist, no odor (ML)	
29		0.0		
30		0.0		
31			<b>End of Boring at 30' b.g.s.</b>	
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# SOIL BORING LOG

		PROJECT NO.:	117-0509160.01	Boring No:	016_G009
		PROJECT NAME:	PPG Site 016	LOCATION SKETCH	
COMPLETION DATE:	TOTAL DEPTH OF BOREHOLE:	MONITORING DEVICE:	GEOLOGIST / OFFICE:		
7/7/2011	30	PID MiniRAE 2000	Jim M. / Whitehouse Station		
DRILLING CONTRACTOR / DRILLER:		DRILLING EQUIPMENT:	DRILLING METHOD / BIT:		
EPI \ Warren Atkinson		Geoprobe Track Rig	Direct Push		
SAMPLING METHOD:	DEPTH TO GROUNDWATER	GROUND SURFACE ELEVATION:	WELL INSTALLED?		
5' Sleeves, 1.25"	~ 6.5'		No		
MEMO: Cored through ~ 0.6' of concrete before advancing with geoprobe					


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.6 Concrete	
_1		0.0	0.6 - 1.1 Dark Yellowish Brown (10YR 4/4) sandstone fragments (GW)	
_2	3.4	0.0	1.1 - 1.6 Dark Reddish Gray (5YR 4/2) medium-fine SAND, some fine-medium subround quartz gravel, trace slag, dense, dry, no odor (SP)	016_G009_1.1 (1.1' - 1.6') (could not sample 0.6' - 1.1' due to gravel)
_3	4.4*	0.0	1.6 - 2.6 Dark Greenish-Gray (GLE Y1 4/10GY) weathered schist: medium-fine SAND, some mica & schist gravel/cobbles, trace silt, dense, dry, no odor (SP)	
_4		0.0	2.6 - 4.0 Very Dark Grayish Brown (10YR 3/2) fine SAND, some silt, mostly silt by 2.9', trace medium-coarse subround quartz gravel, medium-dense, dry-moist, no odor (SM/ML)	
_5		0.0	5.0 - 6.5 Very Dark Grayish Brown (10YR 3/2) SILT & fine SAND, subangular gray gravel (broken-up cobbles) 5.1' - 5.3', trace slag, moist, firm, no odor (ML)	016_G009_5.0 (5.0' - 5.5')
_6		0.0	6.5 - 8.3 Dark Reddish Gray (5YR 4/2) medium SAND, little fine sand, trace coarse sand, loose, wet, slight sulfurous odor (SP)	
_7	3.3	0.0		
_8	5.0	0.0		
_9		0.0		
_10		0.0		
_11		0.0	10.0 - 11.2 Dark Reddish Gray (5YR 4/2) fine SAND, little silt, trace medium sand, loose, wet, slight sulfurous odor (SP)	016_G009_10.0 (10.0' - 10.5')
_12	3.9	0.0	11.2 - 12.0 Dark Gray (2.5Y 4/1) SILT, little fine sand, soft, moist, slight sulfurous odor (ML)	
_13	5.0	0.0	12.0 - 13.0 Dark Gray (2.5Y 4/1) fine to very fine SAND grading to medium-fine SAND, little shells, loose, wet, slight sulfurous odor (SP)	016_G009_12.5 (12.5' - 13.0)
_14		0.0	13.0 - 13.9 Dark Gray (5Y 4/1) CLAY, soft, high plasticity, moist, slight sulfurous odor (OH)	Fill/native soil interface at 13'
_15		0.0		
_16		0.0	15.0 - 17.6 Dark Gray (5Y 4/1) Silty CLAY, occasional thin (< 1/2") lenses of little fine sand, trace shell fragments, soft, moderate to highly plastic, moist-wet, slight sulfurous odor (OH)	
_17	3.8	0.0		016_G009_16.5 (16.5' - 17.0)
_18	5.0	0.0	17.6 - 18.8 As Above (11.3' - 13.8'), hue change to Black (5Y 2.5/1), trace peat, strong sulfurous odor (OH)	
_19		0.0		
_20		8.8		
_21		12.7	20.0 - 22.0 Very Dark Grayish Brown (10YR 3/2) PEAT, little Dark Gray (5Y 4/1) CLAY, moderate plasticity, soft, moist, strong sulfurous odor (PT)	016_G009_20.5 (20.5' - 21.0)
_22	3.1	15.4		
_23	5.0	1.1	22.0 - 23.1 Greenish Gray (GLE Y 2 5\5B) Clayey SILT, some fine-very fine sand, soft grading to stiff with depth, little coarse-medium round gravel, moist, no odor (ML)	
_24		0.0		
_25		0.0		

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_G009
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 7/7/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ Warren Atkinson		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 6.5'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: Cored through ~ 0.6' of concrete before advancing with geoprobe			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
_26		0.0 0.0	25.0 - 26.1 Greenish Gray (GLE2 5\5BG) fine SAND, some medium sand, little clay and silt, dense, wet, no odor (SM)	016_G009_25.0 (25.0' - 25.5)
_27				_25
_28	1.1 5.0			_26
_29				_27
_30				_28
_31				_29
_32			<b>End of Boring at 30' b.g.s.</b>	_30
_33				_31
_34				_32
_35				_33
_36				_34
_37				_35
_38				_36
_39				_37
_40				_38
_41				_39
_42				_40
_43				_41
_44				_42
_45				_43
_46				_44
_47				_45
_48				_46
_49			_47	
_50			_48	

# SOIL BORING LOG

		PROJECT NO.:	117-0509160.01	Boring No:	016_G010
		PROJECT NAME:	PPG Site 016	LOCATION SKETCH	
COMPLETION DATE:	TOTAL DEPTH OF BOREHOLE:	MONITORING DEVICE:	GEOLOGIST / OFFICE:		
8/11/2011	30	PID MiniRAE 2000	Jim M. / Whitehouse Station		
DRILLING CONTRACTOR / DRILLER:		DRILLING EQUIPMENT:	DRILLING METHOD / BIT:		
EPI \ John Brass		Geoprobe Track Rig	Direct Push		
SAMPLING METHOD:	DEPTH TO GROUNDWATER	GROUND SURFACE ELEVATION:	WELL INSTALLED?		
5' Sleeves, 1.25"	~ 4'		No		
MEMO:					
*Cored through ~ 0.6' of concrete before advancing with geoprobe					


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.6 Concrete	
_1		0.0	0.6 - 2.6 Dark Gray (2.5Y 4/1) SILT, little fine sand, some coarse-fine angular gravel, trace schist gravel & mica, dense, dry, no odor (ML)	016_G010_0.6 (0.6' - 1.1')
_2		0.0		
_3	3.8 4.4*	0.0	2.6 - 3.5 Brown (10YR 5/3) SILT, little very fine sand & coarse-fine gray gravel, trace fine subangular red sandstone gravel, dry, dense, no odor (ML)	
_4		0.0	3.5 - 4.4 Very Dark Gray (2.5Y 3/1) fine SAND & SILT, trace clay, 15% COPR (fine-medium round gravel) 3.5' - 4.4', firm grading to soft, moist-wet 4'-4.4', no odor (SM)	016_G010_3.0 (3.0' - 3.5') 15% COPR noted 3.5' - 4.4' 016_G010_3.9 (3.9' - 4.4')
_5		0.0		
_6		0.0	5.0 - 6.1 Dark Gray (2.5Y 4/1) medium SAND, little fine sand, trace coarse sand, loose, wet, no odor (SW), Transitions into medium-fine SAND, trace coarse sand, wet, loose, slight sulfurous odor (SW)	016_G010_5.0 (5.0' - 5.5')
_7		0.0	6.1 - 7.4 Brown (7.5YR 4/2) coarse-medium SAND, little fine subround gravel, wet, loose, slight sulfurous odor (SW), Transitions into medium SAND, trace fine & coarse sand (SP)	
_8	3.4 5.0	0.0	7.4 - 8.4 Dark Gray (2.5Y 4/1) medium SAND, some coarse sand, little shells & fine subround gravel, loose, wet, slight sulfurous odor (SW)	016_G010_7.9 (7.9' - 8.4')
_9		0.0		
_10		0.0		
_11		0.0	10.0 - 13.4 Dark Gray (2.5Y 4/1) coarse-medium SAND, little fine subround gravel, trace medium gravel, little shells, loose, wet, slight sulfurous odor (SW)	
_12		0.0	Transitions into fine SAND, little medium sand, wet, loose, slight sulfurous odor (SP)	
_13	3.4 5.0	0.0		016_G013_12.9 (12.9' - 13.4')
_14		0.0		Fill/native soil interface not recovered
_15		0.0		
_16		0.0	15.0 - 15.7 Dark Gray (5Y 4/1) Clayey SILT, trace fine sand, wet, very soft, slight sulfurous odor (ML)	
_17		0.0	15.7 - 17.4 Dark Gray (5Y 4/1) CLAY, trace silt & peat, soft, moist, slight sulfurous odor (OH)	
_18	3.2 5.0	0.0	17.4 - 18.2 As Above (15.7' - 17.4') but Very Dark Gray (5Y 3/1), trace peat & shells, slight sulfurous odor (OH)	016_G013_17.0 (17.0' - 17.5')
_19		0.0		
_20		0.0		
_21		0.0	20.0 - 20.6 Dark Gray (5Y 4/1) Clayey SILT, trace fine sand, wet, very soft, strong sulfurous odor (ML)	
_22		9.8	20.6 - 22.1 Dark Brown (10YR 3/3) PEAT, trace Dark Gray (5Y 4/1) CLAY, soft, low plasticity, moist, strong sulfurous odor (PT)	016_G013_21.0 (21.0' - 21.5')
_23	4.0 5.0	19.2	22.1 - 24.0 Greenish Gray (GLE2 6/5B) Clayey SILT, trace fine-very fine sand, trace cobbles & coarse-fine gravel, soft, moist-wet, slight sulfurous odor (ML), Transitions into Greenish Gray (GLE1 6/10GY) fine-very fine SAND, little silt, medium-dense, moist, no odor (SM)	
_24		0.0		
_25		0.0		

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_G010
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/11/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 4'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: *Cored through ~ 0.6' of concrete before advancing with geoprobe			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
_26		0.0	25.0 - 26.8 Greenish Gray (GLE Y1 6/5GY) fine SAND, little silt, some coarse-fine greenish-gray subangular-subround gravel, trace clay 25' - 25.5', dense, moist-wet, no odor (SM)	016_G013_25.0 (25.0' - 25.5')
_27		0.0		
_28	4.1 5.0	0.0	26.8 - 28.1 Gray (10YR 5/1) Silty medium-fine SAND, little medium-fine greenish-gray subangular-subround gravel, medium-dense, moist-wet, no odor (SM) Transitions into Grayish Brown (10YR 5/2) SILT, some fine SAND, little greenish-gray subangular-subround gravel, stiff, moist, no odor (ML)	_26
_29		0.0		_27
_30		0.0		_28
_31			<b>End of Boring at 30' b.g.s.</b>	_29
_32				_30
_33				_31
_34				_32
_35				_33
_36				_34
_37				_35
_38				_36
_39				_37
_40				_38
_41				_39
_42				_40
_43				_41
_44				_42
_45				_43
_46				_44
_47				_45
_48				_46
_49				_47
_50				_48

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_G011
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/11/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 5'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: Cored through ~ 0.7' of concrete before advancing with geoprobe			

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.7 Concrete	
_1		0.0	0.7 - 1.8 Olive Yellow (2.5Y 6/6) medium-fine SAND, little medium-fine subround gravel & coarse sand, medium-dense, moist-wet (from coring) (SW)	016_G011_0.7 (0.7' - 1.2')
_2	3.4	0.0	1.8 - 2.3 Grayish Brown (2.5Y 5/2) fine SAND, little medium sand, trace silt, little fine subround schist gravel, trace mica, loose, moist, no odor (SP)	016_G011_2.3 (2.3' - 2.8')
_3	4.3	0.0	2.3 - 2.4 Gray (2.5Y 6/1) Silty CLAY, dry, firm, no odor (CL)	
_4		0.0	2.4 - 2.8 Light Olive Brown (2.5Y 5/4) medium-fine SAND, loose, moist, no odor (SP)	
_5		0.0	2.8 - 4.1 Very Dark Gray (10YR 3/1) SILT & fine SAND, 30% medium-fine round COPR gravel, trace gray fine angular gravel, trace coal frags., medium-dense, moist, no odor (SM)	016_G011_3.6 (3.6' - 4.1') 30% COPR noted 2.8' - 4.1'
_6		0.0	5.0 - 6.1 Very Dark Gray (2.5Y 3/1) fine-very fine SAND, trace silt, wet, loose, no odor (SP)	016_G011_5.0 (5.0' - 5.5')
_7	3.6	0.0	6.1 - 8.6 Reddish Brown (5YR 4.3) coarse-fine SAND, little fine subround gravel & shells, wet, loose (SW), Transitions into Dark Gray (2.5Y 4/1) coarse-medium SAND, little fine sand & shells, trace subround fine gravel, wet, loose, slight sulfurous odor (SW)	
_8	5.0	0.0		
_9		0.0		
_10		0.0		
_11		0.0	10.0 - 12.2 Dark Gray (2.5Y 4/1) medium-fine SAND, trace silt, coarse sand, & shells, loose, wet, slight sulfurous odor (SW)	
_12	4.5	0.0	12.2 - 12.6 Dark Gray (5Y 4/1) Clayey SILT, little very fine sand, soft, moist-wet, slight sulfurous odor (ML)	016_G011_11.7 (11.7' - 12.2')
_13	5.0	0.0	12.6 - 12.9 Dark Gray (5Y 4/1) very fine SAND, little fine sand & silt, wet, loose, slight sulfurous odor (SM)	
_14		0.0	12.9 - 13.9 As Above (12.2' - 12.6') (ML)	
_15		0.0	13.9 - 14.5 As Above (12.6' - 12.9') (SM)	
_16		0.0	15.0 - 15.5 As Above (12.6' - 12.9') (SM)	
_17	3.8	0.0	15.5 - 16.3 Dark Gray (5Y 4/1) SILT, some fine-very fine sand, little clay, soft, wet, slight sulfurous odor (ML)	016_G011_16.0 (16.0' - 16.5')
_18	5.0	0.0	16.3 - 17.3 Dark Gray (5Y 4/1) Silty CLAY, soft, moist-wet, low plasticity, slight sulfurous odor (OL)	
_19		0.0	17.3 - 18.8 Dark Gray (5Y 4/1) CLAY, trace silt, soft, moderate plasticity, moist, slight sulfurous odor (OH)	
_20		0.0		
_21		1.1	20.0 - 20.5 Dark Gray (5Y 4/1) Clayey SILT, trace very fine sand, very loose, wet, slight sulfurous odor (ML)	016_G011_20.0 (20.0' - 20.5')
_22	2.2	10.5	20.5 - 21.4 Very Dark Grayish Brown (10YR 3/2) PEAT, trace Dark Gray (5Y 4/1) CLAY throughout, soft, low plasticity, moist, strong sulfurous odor (PT)	
_23	5.0	3.7	21.4 - 22.2 Gray (2.5Y 5/1) Silty CLAY, firm, low plasticity, moist, slight sulfurous odor (OL), Transitions into Greenish Gray (GLE Y2 6/5BG) medium-fine SAND, trace fine subround gravel, dense, wet, no odor (SP)	
_24		0.3		
_25				


# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_G011
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/11/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 5'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: Cored through ~ 0.7' of concrete before advancing with geoprobe			

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
_25				_25
_26			25.0 - 30.0 No Recovery	_26
_27				_27
_28	0.0 5.0			_28
_29				_29
_30				_30
_31				End of Boring at 30' b.g.s.
_32			_32	
_33			_33	
_34			_34	
_35			_35	
_36			_36	
_37			_37	
_38			_38	
_39			_39	
_40			_40	
_41			_41	
_42			_42	
_43			_43	
_44			_44	
_45			_45	
_46			_46	
_47			_47	
_48			_48	
_49			_49	
_50			_50	




# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_G012
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/11/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER ~ 3.1'	GROUND SURFACE ELEVATION:	WELL INSTALLED? No
MEMO: *Cored through ~ 0.6' of concrete before advancing with geoprobe			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.6 Concrete	
_1		0.0	0.6 - 1.5 Light Olive Brown (2.5Y 5/6) Silty medium-fine SAND, little medium-fine subround gravel, moist-wet (from coring), medium-dense, no odor (SM)	016_G012_0.6 (0.6' - 1.1')
_2	3.3	0.0	1.5 - 2.5 Grayish Brown (10YR 5/2) fine SAND & SILT, little schist gravel, trace gray medium-fine angular gravel, dense, dry, no odor (SM/ML)	
_3	4.4*	0.0	2.5 - 3.5 Light Yellowish Brown (2.5Y 6/4) medium SAND, loose, moist-wet 3.1' - 3.5', no odor (SP)	016_G012_2.9 (2.9' - 3.4')
_4		0.0	3.5 - 4.0 Very Dark Gray (2.5Y 3/1) medium-fine SAND, trace coarse sand & fine subround gravel, wet, loost, no odor (SW)	016_G012_3.4 (3.4' - 2.9')
_5				40% COPR noted 3.4' - 3.5'
_6		0.0	5.0 - 6.1 As Above (3.5' - 4.0')	016_G012_5.0 (5.0' - 5.5')
_7	3.3	0.0	6.1 - 8.3 Brown (7.5YR 4/3) coarse-fine SAND, trace fine subround gravel, wet, loose, no odor (SW), Transitions into Dark Gray (2.5Y 4/1) medium SAND, little fine & coarse sand, trace shells & fine gravel, loose, wet, slight sulfurous odor (SW)	
_8	5.0	0.0		016_G012_7.8 (7.8' - 8.3')
_9				
_10				
_11		0.0	10.0 - 13.7 Dark Gray (2.5Y 4/1) medium SAND, some fine sand, trace coarse sand & shells (SW), Transitions into Gray (2.5Y 6/1) fine SAND, some very fine sand, trace silt, loose, wet, slight sulfurous odor (SP)	
_12	3.7	0.0		
_13	5.0	0.0		016_G012_13.2 (13.2' - 13.7')
_14				Fill/native soil interface not recovered
_15				
_16		0.0	15.0 - 16.0 Dark Gray (2.5Y 4/1) Silty fine SAND, little medium sand & clay, loose, wet, slight sulfurous odor (SM)	
_17	3.5	0.0	16.0 - 17.7 Dark Gray (5Y 4/1) CLAY, trace silt, moderate plasticity, soft, moist, slight sulfurous odor (OH)	016_G012_17.0 (17.0' - 17.5')
_18	5.0	0.0	17.7 - 18.5 As Above (16.0' - 17.7') except Very Dark Gray (5Y 3/1), trace shells (OH)	
_19				
_20				
_21		1.2	20.0 - 20.3 Dark Gray (5Y 4/1) Silty CLAY, little very fine sand, trace shells, wet, very soft, slight sulfurous odor (OH)	
_22	1.8	2.3	20.3 - 20.9 Very Dark Grayish Brown (10YR 3/2) PEAT, little Dark Gray (5Y 4/1) CLAY throughout, soft, low plasticity, moist, strong sulfurous odor (PT)	016_G012_21.0 (21.0' - 21.5')
_23	5.0	0.1	20.9 - 21.8 Bluish Gray (GLE2 5/10B) Silty CLAY, trace very fine sand, firm, moist, low plasticity, slight sulfurous odor (CL), Transitions into Bluish Gray (GLE2 5/10B) fine SAND, little medium sand, trace silt, medium-dense, moist-wet, no odor (SP)	
_24		0.0		
_25				

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_G012
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/11/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 3.1'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: *Cored through ~ 0.6' of concrete before advancing with geoprobe			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
_25			25.0 - 30.0 No Recovery	_25
_26				_26
_27				_27
_28	0.0 5.0			_28
_29				_29
_30				_30
_31			End of Boring at 30' b.g.s.	_31
_32				_32
_33				_33
_34				_34
_35				_35
_36				_36
_37				_37
_38				_38
_39				_39
_40				_40
_41				_41
_42				_42
_43				_43
_44				_44
_45				_45
_46			_46	
_47			_47	
_48			_48	
_49			_49	
_50			_50	

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_G013
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/11/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER ~ 3.2'	GROUND SURFACE ELEVATION:	WELL INSTALLED? No
MEMO: *Cored through ~ 0.6' of concrete before advancing with geoprobe			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.6 Concrete	
_1		0.0	0.6 - 3.2 Light Olive Brown (2.5Y 5/4) medium SAND, little fine sand & medium-fine subround gravel (SP), 1.5' - 1.8': Dark Gray (2.5Y 4/1) SILT, some fine sand, little schist gravel & mica (ML), moist-wet (from coring), medium-dense, no odor (SP)	016_G013_0.6 (0.6' - 1.1')
_2	3.6	0.0		
_3	4.4*	0.0	3.2 - 3.8 Olive Brown (2.5YR 4/4) SILT, little fine sand & clay, 30% COPR (fine-medium round gravel) throughout, moist-wet, firm, no odor (ML)	016_G013_2.7 (2.7' - 3.2')
_4		0.0	3.8 - 4.1 Very Dark Gray (2.5Y 3/1) medium SAND, little coarse sand, trace fine gravel & fine sand, loose, moist-wet, no odor (SW)	016_G013_3.2 (3.2' - 3.7')
_5		0.0		016_G013_3.8 (3.8' - 4.1')
				20% COPR noted 3.2' - 3.8"
_6		0.0	5.0 - 5.8 Dark Gray (2.5YR 4/1) fine-very fine SAND, little silt, loose, wet, no odor (SM), Transitions into Silty very fine SAND, trace fine sand & clay, loose, wet, no odor (SM)	
_7	3.5	0.0	5.8 - 8.5 Dark Gray (2.5YR 4/1) ,medium SAND, little coarse sand, trace fine gravel, shells, & fine sand, wet, loose, slight sulfurous odor (SW)	016_G013_7.0 (7.0' - 7.5')
_8	5.0	0.0		
_9		0.0		
_10		0.0	10.0 - 13.3 As Above (5.8' - 8.5'), Transitions into fine SAND, some medium sand, trace shells & coarse sand, loose, wet, slight sulfurous odor (SW)	
_11		0.0		
_12	3.3	0.0		
_13	5.0	0.0		016_G013_12.8 (12.8' - 13.3')
_14				Fill/native soil interface not recovered
_15		0.0	15.0 - 16.0 Dark Gray (5Y 4/1) CLAY, little silt, moderate plasticity, soft, wet, slight sulfurous odor (OH)	
_16		0.0	16.0 - 17.3 Dark Gray (5Y 4/1) Clayey SILT, little fine sand, very loose, wet, slight sulfurous odor (ML)	
_17	4.7	0.0	17.3 - 18.3 Dark Gray (5Y 4/1) CLAY, trace silt & peat, moderate plasticity, moist, soft, slight sulfurous odor (OH)	016_G013_17.0 (17.0' - 17.5')
_18	5.0	0.0	18.3 - 19.7 Very Dark Gray (5Y 3/1) CLAY, trace peat & shells (abundant 19.4' - 19.7'), moderate plasticity, moist, soft, slight sulfurous odor (OH)	
_19		0.0		
_20		0.0		
_21		1.4	20.0 - 20.7 Dark Gray (5Y 4/1) silty CLAY, very loose, wet, slight sulfurous odor (OH)	
		6.6	20.7 - 21.8 Very Dark Grayish Brown (10YR 3/2) PEAT, little Dark Gray (5Y 4/1) CLAY throughout, soft, low plasticity, moist, strong sulfurous odor (PT)	016_G013_21.0 (21.0' - 21.5')
_22	3.0	3.4	21.8 - 23.0 Greenish Gray (GLE2 5/5BG) CLAY, trace silt, soft, moderate plasticity, no odor (CH), Transitions into Greenish Gray (GLE2 5/5BG) medium-fine SAND, trace silt, moist-wet, medium-dense, no odor (SW/SP)	
_23	5.0	0.0		
_24		0.0		
_25		0.0		

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_G013
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/11/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 3.2'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: *Cored through ~ 0.6' of concrete before advancing with geoprobe			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
_25		0.0	25.0 - 27.0 Greenish Gray (GLE Y2 6/5BG) medium-fine SAND, trace silt, moist-wet, medium-dense, no odor (SW/SP), Transitions into Greenish Gray	016_G013_25.0 (25.0' - 25.5')
_26		0.0	(GLE Y2 6/5BG) very fine SAND, little silt, trace fine sand (SM), then to	
_27	4.4	0.0	fine SAND, little medium & very fine SAND, dense, moist-wet, no odor (SW)	
_28	5.0	0.0	27.0 - 29.4 Dark Grayish Brown (10YR 4/2) fine SAND, little very fine SAND, trace	
_29		0.0	medium sand, medium-dense, wet, no odor (SW), Transitions into	
_30		0.0	Brown (7.5YR 4/3) SILT & medium-fine SAND, little medium-fine subround to subangular gray to red-brown gravel, dense, moist, no odor (SM)	
_31			<b>End of Boring at 30' b.g.s.</b>	
_32				
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# SOIL BORING LOG

		PROJECT NO.:	117-0509160.01	Boring No:	016_G014
		PROJECT NAME:	PPG Site 016	LOCATION SKETCH	
COMPLETION DATE:	TOTAL DEPTH OF BOREHOLE:	MONITORING DEVICE:	GEOLOGIST / OFFICE:		
8/18/2011	30	PID MiniRAE 2000	Jim M. / Whitehouse Station		
DRILLING CONTRACTOR / DRILLER:		DRILLING EQUIPMENT:	DRILLING METHOD / BIT:		
EPI \ John Brass		Geoprobe Track Rig	Direct Push		
SAMPLING METHOD:	DEPTH TO GROUNDWATER	GROUND SURFACE ELEVATION:	WELL INSTALLED?		
5' Sleeves, 1.25"	~ 2.8'		No		
MEMO:					
*Cored through ~ 0.5' of concrete before advancing with geoprobe					


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.5 Concrete	
_1		0.0	0.5 - 1.0 Yellowish Brown (10YR 5/6) medium-fine SAND, little medium-fine subround gravel, medium-dense, dry, no odor (SW)	016_G014_0.5 (0.5' - 1.0')
_2	3.4	0.0	1.0 - 1.6 Very Dark Grayish Brown (10YR 3/2) fine SAND, little silt & medium-fine subround gray gravel, dense, dry, no odor (SM)	016_G014_2.0 (2.0' - 2.5')
_3	4.5*	0.0	1.6 - 2.4 Olive Yellow (2.5Y 6/6) fine SAND, little medium sand & white clay, dense, dry, no odor (SC)	016_G014_2.5 (2.5' - 3.2')
_4		0.0	2.4 - 2.8 Black (10YR 2.5/1) medium-fine SAND & medium-fine round COPR gravel 2.5' - 2.8' (40%), loose, moist, no odor (GP)	016_G014_3.2 (3.2' - 3.7')
_5		0.0	2.8 - 3.2 Reddish Brown (2.5YR 4/4) Silty fine SAND & medium-fine round COPR gravel 2.8' - 3.2' (40%), medium-dense, wet, no odor (GM)	40% COPR noted 2.5' - 3.2'
_6		0.0	3.2 - 3.9 Black (10YR 2.5/1) medium-fine SAND, loose, moist, (GW)	
_7	3.4	0.0	4.0 - 5.4 Very Dark Gray (2.5Y 3/1) medium-fine SAND, loose, wet, no odor (SW)	
_8	5.0	0.0	5.4 - 8.4 Dark Gray (2.5Y 4/1) medium-fine SAND, trace coarse sand, gravel, & shells, wet, loose, slight sulfurous odor (SW)	016_G014_7.0 (7.0' - 7.5')
_9		0.0		
_10		0.0		
_11		0.0	10.0 - 12.4 Dark Reddish Gray (5YR 4/2) coarse-medium SAND, little fine gravel & shells, trace fine sand, slight sulfurous odor (SW)	016_G014_10.0 (10.0' - 10.5')
_12	4.4	0.0		
_13	5.0	0.0	12.4 - 13.8 Dark Gray (5Y 4/1) fine-very fine SAND, little silt, trace shells, wet, slight sulfurous odor (SM)	
_14		0.0	13.8 - 14.4 Dark Gray (5Y 4/1) Clayey SILT, trace very fine sand, wet, soft, slight sulfurous odor (ML)	016_G014_13.3 (13.3' - 13.8')
_15		0.0		Fill/native soil interface at 13.8'
_16			15.0 - 20.0 No Recovery	No sample - no recovery
_17	0.0			
_18	5.0			
_19				
_20				
_21		0.0	20.0 - 21.0 Dark Gray (5Y 4/1) Silty CLAY, very loose, wet, slight sulfurous odor (OL)	
_22	3.8	12.2	21.0 - 22.0 Very Dark Grayish Brown (10YR 3/2) PEAT, little black organic silt, trace clay, very soft, wet, strong sulfurous odor (PT)	016_G014_21.0 (21.0' - 21.5')
_23	5.0	6.1	22.0 - 23.3 Dark Grayish Brown (10YR 4/2) CLAY, little silt, very soft, moist-wet, moderate plasticity (OH), Transitions into Greenish Gray (GLEY2 6/10BG) CLAY, trace silt, soft, moist, no odor (CH)	
_24		0.0	23.3 - 23.8 Greenish Gray (GLEY2 6/10BG) fine SAND, little medium sand & silt, dense, wet, no odor (SM)	
_25		0.0		

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_G014
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/18/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 2.8'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: *Cored through ~ 0.5' of concrete before advancing with geoprobe			

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
_25		0.0	25.0 - 28.8 As Above (23.3' - 23.8'), Transitions into Reddish Brown (5YR 4/4) SILT, some clay, little coarse-fine sand & fine angular gravel, firm, moist-wet, no odor (ML)	016_G014_25.0 (25.0' - 25.5')
_26		0.0		_26
_27		0.0		_27
_28	3.8 5.0	0.0		_28
_29		0.0		_29
_30		0.0		_30
_31				<b>End of Boring at 30' b.g.s.</b>
_32				_32
_33				_33
_34				_34
_35				_35
_36				_36
_37				_37
_38				_38
_39				_39
_40				_40
_41				_41
_42				_42
_43				_43
_44				_44
_45				_45
_46				_46
_47				_47
_48				_48
_49				_49
_50				_50


# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_G016 / 016_MW02
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/15/2011	TOTAL DEPTH OF BOREHOLE: 12	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: 3.9' (measured from well)	GROUND SURFACE ELEVATION:	WELL INSTALLED?: Yes - 016_MW02
MEMO: *Cored through ~ 0.6' of concrete before advancing with geoprobe Very poor recovery overall. Refusal at 12'			

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.6 Concrete	
1		0.0	0.6 - 1.1 Dark Grayish Brown (10YR 4/2) medium-fine SAND, little silt & medium-fine subround gravel & schist gravel, medium-dense, moist, no odor (SM)	016_G015_0.6 (0.6' - 1.1')
2	0.5			
3	4.4*			
4				
5				
6			5.0 - 10.0 No Recovery	
7				
8	0.0			
9	5.0			
10				
11	0.3	0.0	10.0 - 10.3 Dark Gray (2.5Y 4/1) medium SAND, little fine sand, trace coarse sand & fine subround gravel & shells, loose, wet, slight sulfurous odor (SW)	016_G015_10.0 (10.0' - 10.5')
12	5.0			
13			<b>End of Boring at 12' b.g.s. (Refusal)</b>  <b>016_MW02 Well Information:</b> 016_MW02 installed on 8/18/11 using 8" hollow stem augers equipped on a geoprobe track rig  2-inch diameter 10-slot SCH40 PVC screen set at 4.5' - 9.5' bgs. 2-inch diameter SCH40 PVC riser from 4.5' bgs. to surface #1 Sand from 2.5' to 10.0' bgs. Cement-bentonite grout from 2.5' to 0.5' Flush-mount completion, cement around outer casing 0.5' to surface  DTW: 3.9' bgs on 8/19/2011	
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				




# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_G016
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/12/2011	TOTAL DEPTH OF BOREHOLE: 10	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 5'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: *Cored through ~ 0.6' of concrete before advancing with geoprobe Refusal at 10' on 1st attempt, 2nd attempt at 5', 3rd attempt at 3'			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.6 Concrete	
_1		0.0	0.6 - 1.3 Yellowish Brown (10YR 5/6) medium-fine SAND, little medium-fine subround gravel & coarse sand, medium-dense, dry, no odor (SW)	016_G016_0.6 (0.6' - 1.1')
_2	2.5	0.0	1.3 - 2.5 Light Brownish Gray (10YR 6/2) medium-fine SAND, trace coarse sand & fine subangular-subround gravel, shell fragments at 1.3', dry, loose, no odor (SW)	
_3	4.4*	0.0	2.5 - 3.1 Gray (10YR 6/1) medium-fine SAND & mica flakes, little medium-fine subround schist gravel, loose, dry, no odor (SP/SW)	
_4				
_5				
_6		0.0	5.0 - 5.1 Dark Grayish Brown (2.5Y 4/2) fine SAND, little silt, trace mica, loose, wet, no odor (SM)	016_G016_5.0 (5.0' - 5.5')
_7		0.0	5.1 - 5.7 Dark Gray (5Y 4/1) fine SAND & SILT, some mica & schist gravel, loose, wet, no odor (SM)	
_8	1.0		5.7 - 6.0 Dark Gray (5Y 4/1) coarse-fine subangular gravel, some fine sand, little silt, loose, wet, no odor (GW)	
_9	5.0			
_10				
_11			<b>End of Boring at 10' b.g.s. (refusal)</b>	
_12				
_13				
_14				
_15				
_16				
_17				
_18				
_19				
_20				
_21				
_22				
_23				
_24				
_25				

# SOIL BORING LOG

		PROJECT NO.:	117-0509160.01	Boring No:	016_G017
		PROJECT NAME:	PPG Site 016	LOCATION SKETCH	
COMPLETION DATE:	TOTAL DEPTH OF BOREHOLE:	MONITORING DEVICE:	GEOLOGIST / OFFICE:		
8/22/2011	15	PID MiniRAE 2000	Jim M. / Whitehouse Station		
DRILLING CONTRACTOR / DRILLER:		DRILLING EQUIPMENT:	DRILLING METHOD / BIT:		
EPI \ John Brass		Geoprobe Track Rig	Direct Push		
SAMPLING METHOD:	DEPTH TO GROUNDWATER	GROUND SURFACE ELEVATION:	WELL INSTALLED?		
5' Sleeves, 1.25"	~ 5'		No		
MEMO: *Cored through ~ 0.6' of concrete before advancing with geoprobe. Refusal at 15'					
Refusal at 3' on 1st attempt, refusal at 15' on 2nd attempt					


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.6 Concrete	
_1		0.0	0.6 - 0.7 Yellowish Brown (10YR 5/6) medium-fine SAND, loose, moist (SW)	016_G017_0.6 (0.6' - 1.1')
_2	2.4	0.0	0.7 - 2.8 Dark Grayish Brown (10YR 4/2) medium SAND, little fine sand, trace fine subround quartz gravel, trace reddish brown medium-fine COPR gravel, little schist gravel 2.5' - 2.8', loose, moist, no odor (SP)	016_G017_1.1 (1.1' - 2.1')
_3	4.4*	0.0	2.8 - 3.0 Light Greenish Gray (GLE Y1 8/10Y) coarse-fine schist GRAVEL & COBBLES, medium-dense, moist, no odor (GW)	Trace COPR 1.1' - 2.1'
_4				
_5				
_6		0.0	5.0 - 5.3 Brown (7.5YR 4/2) SILT, fine SAND, & schist GRAVEL, medium-dense, wet, no odor (GM)	
_7	1.3	0.0	5.3 - 6.3 Light to Dark Bluish Gray (GLE Y2 7/5PB to 3/5PB) coarse-fine schist GRAVEL & MICA, trace medium-fine sand & schist cobbles, some medium-fine sand 5.8' - 6.3', dense, wet, no odor (GW)	016_G017_5.8 (5.8' - 6.3')
_8	5.0			
_9				
_10				
_11		2.6	10.0 - 12.6 Very Dark Gray (2.5Y 3/1) PEAT & organic SILT, little clay, trace shell fragments, very soft, moist, strong sulfurous odor (PT)	016_G017_10.0 (10.0' - 10.5')
_12		1.3		
_13	2.6	0.5		
_14	5.0	5.6		
_15		6.7		
_16			<b>End of Boring at 15' b.g.s. (Refusal)</b>	
_17				
_18				
_19				
_20				
_21				
_22				
_23				
_24				
_25				

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_H005
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 7/5/2011	TOTAL DEPTH OF BOREHOLE: 25	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ Warren Atkinson		DRILLING EQUIPMENT: Dingo	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 4' Sleeves, 2"	DEPTH TO GROUNDWATER: ~ 5.5'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: Cored through ~ 0.5' of concrete before advancing with geoprobe			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.5 Concrete	
1		0.0	0.5 - 1.5 Black (7.5 YR 2.5/1) coarse-fine GRAVEL, some fine sand & silt, little coarse sand, very loose, wet, no odor (GM)	016_H005_0.5 (0.5' - 1.0')
2		0.0	1.5 - 2.0 Black (7.5 YR 2.5/1) fine SAND & SILT, soft, moist, no odor (ML)	
3	1.7	0.0	2.0 - 3.7 Very Dark Greenish-Gray (GLY1 3/10GY) weathered schist: fine-medium SAND, some mica & schist gravel, trace silt, loose, moist, no odor (SP)	016_H005_3.2 (3.2' - 3.7')
4	2.0	0.0		
5		0.0	4.0 - 5.5 As Above (2.0' - 3.7')	016_H005_5.0 (5.0' - 5.5')
6	2.9	0.0	5.5 - 6.0 Dark Reddish Brown (5YR 3/2) fine round GRAVEL (potential COPR, 50%), some fine SAND, little silt, soft to firm, moist, moist-wet at 6', slight sulfurous odor (GP)	016_H005_5.5 (5.5' - 6.0')
7	4.0	0.0	6.0 - 6.9 Very Dark Gray (2.5Y 3/1) medium SAND, little fine sand, trace coarse sand, loose, moist-wet, slight sulfurous odor (SP)	016_H005_6.0 (6.0' - 6.5')
8		0.0		potential COPR - 50% 5.5' - 6.0'
9		0.0	8.0 - 9.0 Dark Reddish Brown (5YR 3/2) coarse-fine SAND, little silt & fine gravel, very loose, wet, slight sulfurous odor (SW)	
10	4.0	0.0	9.0 - 12.0 Dark Reddish Brown (5YR 3/2) medium SAND, trace fine & coarse sand, trace shells, loose, wet, slight sulfurous odor (SP)	
11	4.0	0.0		
12		0.0		016_H005_11.5 (11.5' - 12.0')
13		0.0	12.0 - 12.6 Dark Gray (5Y 4/1) Silty CLAY, trace fine sand, moderate plasticity, very soft, moist-wet, slight sulfurous odor (OH)	(fill/native soil interface?)
14	4.0	0.0	12.6 - 14.4 As Above (9' - 12') (SP)	
15	4.0	0.0	14.4 - 16.0 Dark Reddish Brown (5Y 3/2) coarse-fine SAND, some coarse-fine subround gravel, little silt, very loose, wet, slight sulfurous odor (SW)	016_H005_15.5 (15.5' - 16.0')
16		0.0	16.0 - 19.0 As Above (14.4' - 16'), possibly cave-in (SW)	
17		0.0		
18	3.0	0.0		No sample
19	4.0	0.0		
20		0.0		
21		0.0	20.0 - 23.0 As Above (14.4' - 16'), possibly cave-in (SW)	
22	3.5	0.0		
23	4.0	0.0	23.0 - 23.5 Dark Gray (7.5Y 4/1) Silty CLAY, trace fine sand, moderate plasticity, very soft, moist-wet, slight sulfurous odor (OH)	016_H005_23.0 (23.0' - 23.5')
24		0.0		
25			<b>End of Boring at 24' b.g.s.</b>	

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_H007
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 7/6/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ Warren Atkinson	DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push	
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 5.8'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: *Cored through ~ 0.5' of concrete before advancing with geoprobe			

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.5 Concrete	
_1		0.0	0.5 - 1.3 Black (10YR 2.5/1) SLAG & COAL fragments, loose, moist (from coring), no odor (GW)	016_H007_0.5 (0.5' - 1.0') (Below concrete)
_2	3.5	0.0	1.3 - 3.1 Dark Yellowish Brown (10YR 4/4) fine-medium SAND, little red brick fragments throughout, broken-up concrete at 1.9', stiff, dry, no odor (SP)	
_3	4.5*	0.0	3.1 - 4.0 Very Dark Gray (10YR 3/1) fine sand, little medium sand, trace mica and fine schist gravel, trace rootlets, medium dense, moist, no odor (SP)	
_4		0.0		016_H007_3.5 (3.5' - 4.0')
_5		0.0		
_6		0.0	5.0 - 5.6 As Above (3.1' - 4.0'), some silt, Dark Reddish Brown sandstone fragments 5.4' - 5.6' (SM/GP)	
_7		0.0	5.6 - 7.0 Very Dark Gray (10YR 3/1) fine-medium SAND, trace silt, loose, moist-wet at 5.8', loose, slight sulfurous odor (SP)	
_8	3.2	0.0	7.0 - 8.2 Dark Grayish Brown (10YR 4/2) fine-coarse SAND, trace silt and shells, trace fine subround gravel, loose, wet, slight sulfurous odor (SW)	016_H007_7.5 (7.5' - 8.0')
_9	5.0	0.0		
_10		0.0		
_11		0.0	10.0 - 13.5 Dark Gray (10YR 4/1) fine SAND, little medium and very fine sand, abundant shells, medium-dense, wet, slight sulfurous odor (SW)	
_12		0.0		016_H007_11.5 (11.5' - 12.0')
_13	3.5	0.0		
_14	5.0	0.0		
_15		0.0		
_16		0.0	15.0 - 15.5 As Above (10.0' - 13.5') (SW)	016_H007_15.0 (15.0' - 15.5')
_17		0.0	15.5 - 17.2 Dark Gray (5Y 4/1) CLAY, very soft, moderate-high plasticity, moist, slight sulfurous odor (OH)	(fill/native soil interface)
_18	3.4	0.0	17.2 - 18.4 Black (5Y 2.5/1) CLAY, little silt, trace peat & shells, moderate to high plasticity, soft, moist, strong sulfurous odor (OH)	
_19	5.0	0.0		
_20		0.0		
_21		0.0	20.0 - 22.7 Dark Brown (10YR 3/3) PEAT, some Very Dark Gray (5Y 3/1) CLAY from 20.0' - 22.5', low to moderate plasticity, soft, moist, strong sulfurous odor (PT)	016_H007_20.0 (20.0' - 20.5')
_22		0.0		
_23	3.8	0.0	22.7 - 23.4 Greenish Gray (GLE Y 2 5/5BG) Silty CLAY, soft, moderate to low plasticity, moist, slight sulfurous odor (CL)	
_24	5.0	0.0	23.4 - 23.8 Greenish Gray (GLE Y 2 5/5BG) medium-coarse SAND, little coarse subangular gravel & cobbles, dense, wet, no odor (SW)	016_H007_23.3 (23.3' - 23.8')
_25				


# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_H007
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 7/6/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ Warren Atkinson		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER ~ 5.8'	GROUND SURFACE ELEVATION:	WELL INSTALLED? No
MEMO: 0 *Cored through ~ 0.5' of concrete before advancing with geoprobe			

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
_25		0.0	25.0 - 28.5 Reddish Brown (5YR 4/3) fine SAND, some silt, little medium sand & very fine sand, loose to medium-dense, wet, no odor (SM), Transitions into Reddish Brown (5YR 4/3) very fine SAND, some silt, little fine sand, medium-dense, loose, no odor (SM)	_25
_26		0.0		_26
_27		0.0		_27
_28	3.5 4.0	0.0		_28
_29		0.0		_29
_30		0.0		_30
_31			End of Boring at 30' b.g.s.	_31
_32				_32
_33				_33
_34				_34
_35				_35
_36				_36
_37				_37
_38				_38
_39				_39
_40				_40
_41				_41
_42				_42
_43				_43
_44				_44
_45				_45
_46				_46
_47				_47
_48				_48
_49				_49
_50				_50


016\_H007\_27.5 (27.5' - 28.0')

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_H008
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/10/2011	TOTAL DEPTH OF BOREHOLE: 25	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 3.0'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: *Cored through ~ 0.4' of concrete before advancing with geoprobe			

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.4 Concrete	
_1		0.0	0.4 - 1.1 Brown (10YR 4/3) silty medium-fine SAND, some coarse-fine angular reddish gray gravel, trace clay, moist-wet, dense, no odor (SM)	016_H008_0.4 (0.4' - 0.9')
_2	2.8	0.0	1.1 - 1.8 Reddish Brown (5YR 5/4) SILT, little very fine sand, some coarse gray ang. gravel, trace fine subround red sandstone gravel, stiff, moist (ML)	
_3	4.6*	0.0	1.8 - 2.7 Brown (10YR 5/3) fine SAND, little medium-fine subround schist gravel & mica, medium-dense, moist, no odor (SP)	016_H008_2.2 (2.2' - 2.7') 016_H008_2.7 (2.7' - 3.2')
_4		0.0	2.7 - 3.0 Dark Gray (2.5Y 4/1) medium-fine SAND, trace fine round schist gravel & coarse sand, 20% COPR (f-m round gravel) 2.7'-3', moist, medium-dense, no odor (SW)	20% COPR noted 2.7'-3.2'
_5		0.0	3.0 - 3.2 Reddish Brown (5YR 4/4) SILT, little very fine sand, trace fine gray angular gravel, 20% COPR (f-m round gravel) 3'-3.2', moist-wet, firm, no odor (ML)	016_H008_5.0 (5.0' - 5.5')
_6		0.0	5.0 - 7.0 Dark Gray (2.5Y 4/1) medium-fine SAND, trace shells & coarse sand, wet, loose, slight sulfurous odor (SW), Transitions into Brown (7.5YR 4/2) medium-fine SAND, trace shells & coarse sand, wet, loose, slight sulfurous odor (SW)	
_7	3.5	0.0		
_8	5.0	0.0		016_H008_8.0 (8.0' - 8.5')
_9		0.0	7.0 - 8.5 Dark Gray (2.5Y 4/1) medium-fine SAND, trace shells & coarse sand, wet, loose, slight sulfurous odor (SW)	
_10		0.0	10.0 - 11.8 As Above (7' - 8.5')	
_11		0.0	11.8 - 12.2 Dark Gray (2.5Y 4/1) Silty CLAY, trace very fine sand, very soft, wet, slight sulfurous odor (OH)	
_12	4.0	0.0		016_H008_11.3 (11.3' - 11.8')
_13	5.0	0.0		Fill/native soil interface at 11.8'
_14		0.0	12.2 - 13.5 Dark Gray (2.5Y 4/1) fine sand, little very fine sand, trace medium sand (SP), Transitions into medium SAND, little coarse sand, trace fine sand, shells, & gravel, wet, loose, slight sulfurous odor (SW)	
_15		0.0	13.5 - 14.0 Dark Gray (5Y 4/1) CLAY, soft, moist, moderate plasticity, slight sulfurous odor (OH)	
_16		0.0	15.0 - 15.8 Dark Gray (5Y 4/1) Silty CLAY, little very fine sand, wet, very soft, slight sulfurous odor (OH)	016_H008_15.5 (15.5' - 16.0')
_17		0.0	15.8 - 17.1 As Above (13.5' - 14.0')	
_18	2.5	0.0	17.1 - 17.5 As Above (13.5' - 14.0'), hue change to Black (5Y 2.5/1)	
_19	5.0	0.0		
_20		1.1	20.0 - 23.0 Very Dark Gray (5Y 3/1) CLAY, soft, moist, high plasticity, trace brown peat throughout, abundant shells 21' - 21.5', strong sulfurous odor (OH)	016_H008_20.0 (20.0' - 20.5')
_21		0.6		
_22		0.1	23.0 - 23.8 Gray (5Y 5/1) CLAY, soft, moist (OH/CH), Transitions into Gray (5Y 5/1) very fine SAND & SILT, some clay, firm grading to soft, moist-wet, slight sulfurous odor (ML)	
_23	3.8	0.2		
_24	5.0	0.0		016_H008_23.3 (23.3' - 23.8')
_25		0.0		


# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_H009
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/19/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER ~ 5'	GROUND SURFACE ELEVATION:	WELL INSTALLED? No
MEMO: Cored through ~ 0.4' of concrete before advancing with geoprobe			

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.4 Concrete	
_1		0.0	0.4 - 1.6 Yellowish Brown (10YR 5/6) medium-fine SAND, little medium-fine subround gravel, slag (sand & medium-fine black gravel) 0.6' - 1.1', loose, dry, no odor (SW)	016_H009_0.4 (0.4' - 0.9')
_2		0.0		
_3	3.4 4.4*	0.0	1.6 - 1.9 Dark Grayish Brown (10YR 4/2) fine SAND, some silt, little schist gravel, medium-dense, dry, no odor (SM)	
_4		0.0	1.9 - 2.6 Dark Brown (10YR 3/3) Silty fine SAND, some schist gravel, dense, dry (SM)	
_5		0.0	2.6 - 3.2 Very Dark Gray (2.5Y 3/1) SILT, little clay & very fine sand, trace rootlets, firm, moist, no odor (ML)	
			3.2 - 3.9 Very Dark Gray (2.5Y 3/1) medium-fine SAND, little silt, moist, loose, no odor (SM)	
_6		0.0	5.0 - 7.2 Dark Reddish Gray (5YR 4/2) coarse-fine SAND, trace fine gravel & , rootlets, loose, wet, no odor (SW)	016_H009_5.0 (5.0' - 5.5')
_7		0.0		
_8	3.0 5.0	0.0	7.2 - 8.0 Dark Gray (2.5Y 4/1) medium SAND, little fine sand & shells, trace coarse sand & fine subround gravel, loose, wet, slight sulfurous odor (SW)	
_9				
_10				
_11		0.0	10.0 - 10.4 As Above (7.2' - 8.0')	016_H009_10.0 (10.0' - 10.5')
_12		0.0	10.4 - 11.1 Dark Gray (2.5Y 4/1) very fine SAND, little silt & fine sand, wet, loose, slight sulfurous odor (SM)	Fill/native soil interface not recovered
_13	1.1 5.0			
_14				
_15				
_16			15.0 - 20.0 No recovery	No sample - no recovery
_17				
_18	0.0 5.0			
_19				
_20				
_21		0.0	20.0 - 20.8 Greenish Gray (GLE Y2 6/5BG) SILT, little clay, little greenish gray fine-medium subround gravel, trace fine sand, stiff, dry, no odor (ML)	016_H009_20.0 (20.0' - 20.5')
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_23	0.8 5.0			
_24				
_25				




# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_H009
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/19/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER ~ 5'	GROUND SURFACE ELEVATION:	WELL INSTALLED? No
MEMO: Cored through ~ 0.4' of concrete before advancing with geoprobe			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
25		0.0	25.0 - 25.5 Brown (7.5YR 5/2) fine-very fine SAND, little silt & clay, trace medium-	016_H009_25.0 (25.0' - 25.5')
26		0.0	fine subround gravel, medium-dense, moist-wet, no odor (SC)	
27		0.0	25.5 - 25.7 Brown (7.5YR 5/2) and Reddish Brown (2.5Y 5/3) coarse-fine angular	
28	3.0	0.0	GRAVEL, trace very fine sand & silt, loose, wet, no odor (GW)	
29	5.0	0.0	25.7 - 25.9 Brown (7.5YR 5/2) Silty fine-very fine SAND, little coarse-fine reddish-	
30		0.0	brown (5YR 4/4) gravel, trace clay, moist-wet, dense, no odor (SM)	
			25.9 - 26.1 Dark Reddish Brown (2.5Y 3/3) coarse SAND & medium-fine subangular	
			GRAVEL, trace silt, wet, medium-dense, no odor (GW)	
			26.1 - 28.0 As Above (25.7' - 25.9') (SM)	
31			<b>End of Boring at 30' b.g.s.</b>	
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# SOIL BORING LOG

		PROJECT NO.:	117-0509160.01	Boring No:	016_H010
		PROJECT NAME:	PPG Site 016	LOCATION SKETCH	
COMPLETION DATE:	TOTAL DEPTH OF BOREHOLE:	MONITORING DEVICE:	GEOLOGIST / OFFICE:		
8/17/2011	30	PID MiniRAE 2000	Jim M. / Whitehouse Station		
DRILLING CONTRACTOR / DRILLER:		DRILLING EQUIPMENT:	DRILLING METHOD / BIT:		
EPI \ John Brass		Geoprobe Track Rig	Direct Push		
SAMPLING METHOD:	DEPTH TO GROUNDWATER	GROUND SURFACE ELEVATION:	WELL INSTALLED?		
5' Sleeves, 1.25"	~ 3.2'		No		
MEMO:					
*Cored through ~ 0.5' of concrete before advancing with geoprobe					


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.5 Concrete	
_1		0.0	0.5 - 0.7 Light Olive Brown (10YR 5/6) medium-fine SAND, little medium-fine gravel, trace coarse sand, moist, loose, no odor (SW)	016_H010_0.5 (0.5' - 1.0')
_2	3.1	0.0	0.7 - 1.0 Black (GLE Y1 2.5/N) medium-fine GRAVEL (coal & slag), loose, dry, (SW)	
	4.5*	0.0	1.0 - 1.7 White (GLE Y1 8/1) GRAVEL & COBBLES (concrete), dense, dry (SW)	
_3		0.0	1.7 - 2.9 Very Dark Grayish Brown (2.5Y 3/1) fine SAND, some silt & gray medium-fine angular gravel, cobbles at 2.4', dense, dry, no odor (SM)	016_H010_2.4 (2.4' - 2.9')
			2.9 - 3.3 Dark Reddish Brown (5YR 3/2) SILT, some fine sand, 20% medium-fine COPR gravel 2.9' - 3.3', wet 3.2' - 3.3', firm, no odor (ML)	016_H010_2.9 (2.9' - 3.4')
_4			3.3 - 3.6 Very Dark Gray (10YR 3/1) medium-fine SAND, wet, loose, no odor (SW)	016_H010_3.4 (3.4' - 3.7')
				20% COPR noted 3.4' - 3.7'
_5		0.0	5.0 - 5.8 Very Dark Gray (10YR 3/1) coarse-fine SAND, little fine round quartz gravel, trace glass fragments, wet, loose, no odor (SW)	
_6		0.0	5.8 - 7.2 Dark Grayish Brown (10YR 4/2) coarse-medium SAND, little fine-coarse subround gravel & medium sand, loose, wet, no odor (SW)	
_7	3.5	0.0	7.2 - 8.5 Dark Gray (2.5Y 4/1) medium-fine SAND, trace gravel, coarse sand, & shells, wet, slight sulfurous odor (SW)	016_H010_7.5 (7.5' - 8.0')
_8	5.0	0.0		
_9		0.0		
_10		0.0	10.0 - 12.7 As Above (7.2' - 8.5') (SW)	
_11		0.0		
_12	3.7	0.0		016_H010_12.2 (12.2' - 12.7')
_13	5.0	0.0	12.7 - 13.7 Dark Gray (5Y 4/1) CLAY, fine sand at 13.5', soft, moist, slight sulfurous odor (OH)	
_14		0.0		
_15		0.0	15.0 - 17.1 As Above (12.7' - 13.7') (OH)	
_16		0.0		016_H010_16.0 (16.0' - 16.5)
_17	2.5	0.0	17.1 - 17.5 As Above (12.7' - 13.7'), but Very Dark Gray (5Y 3/1) (OH)	
_18	5.0	0.0		
_19		0.0		
_20		0.0	20.0 - 21.7 Dark Yellowish Brown (10YR 4/6) to Very Dark Grayish Brown (10YR 3/2) PEAT, trace CLAY, soft, moist, strong sulfurous odor (PT)	016_H010_20.0 (20.0' - 20.5)
_21		11.2		
		7.8		
_22	3.6	0.0	21.7 - 23.6 Bluish Gray (GLE Y2 5/5PB) CLAY, little silt, low plasticity, soft, moist-wet, no odor (CL), Transitions into Greenish Gray (GLE Y2 6/5BG)	
_23	5.0	0.0	clayey fine-very fine SAND, little silt, medium-dense, moist, no odor (SC)	
_24		0.0		
_25		0.0		

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_H010
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/17/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER ~ 3.2'	GROUND SURFACE ELEVATION:	WELL INSTALLED? No
MEMO: *Cored through ~ 0.5' of concrete before advancing with geoprobe			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
25		0.0	25.0 - 26.3 Grayish Brown (10YR 5/2) clayey fine-very fine SAND, little silt, medium-	016_H010_25.0 (25.0' - 25.5)
26		0.0	dense, moist, no odor (SC), Transitions into Clayey SILT, low plasticity,	
27		0.0	firm, moist, no odor (ML)	
28	3.7	0.0	26.3 - 28.2 Grayish Brown (10YR 5/2) medium SAND, little fine sand, trace fine	
29	5.0	0.0	subround gravel, loose, wet, no odor (SP)	
30		0.0	28.2 - 28.7 Reddish Brown (5YR 4/3) medium SAND, some fine subround gravel,	
31			little fine sand & medium gravel, trace silt, wet, loost, no odor (SP)	
32			<b>End of Boring at 30' b.g.s.</b>	
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# SOIL BORING LOG

		PROJECT NO.:	117-0509160.01	Boring No:	016_H011 / 016_MW03
		PROJECT NAME:	PPG Site 016	LOCATION SKETCH	
COMPLETION DATE:	TOTAL DEPTH OF BOREHOLE:	MONITORING DEVICE:	GEOLOGIST / OFFICE:		
8/16/2011	30	PID MiniRAE 2000	Jim M. / Whitehouse Station		
DRILLING CONTRACTOR / DRILLER:		DRILLING EQUIPMENT:	DRILLING METHOD / BIT:		
EPI \ John Brass		Geoprobe Track Rig	Direct Push		
SAMPLING METHOD:	DEPTH TO GROUNDWATER	GROUND SURFACE ELEVATION:	WELL INSTALLED?		
5' Sleeves, 1.25"	~ 3.6'		Yes - 016_MW03		
MEMO:					
*Cored through ~ 0.6' of concrete before advancing with geoprobe					


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.6 Concrete	
_1		0.0	0.6 - 1.6 Brownish Yellow (10YR 6/6) fine-medium SAND, little medium-fine subround gravel, cobbles at 1.6', medium-dense, moist, no odor (SW)	016_H011_0.6 (0.6' - 1.1')
_2	3.1	0.0	1.6 - 2.5 Dark Gray (2.5Y 4/1) fine SAND, little silt, trace fine round COPR gravel 1.6'-1.7', little schist gravel & mica, dense, moist, no odor (SM)	016_H011_1.1 (1.1' - 1.6')
_3	4.4*	0.0	2.5 - 2.7 Pale Olive (5Y 6/4) fine SAND, little medium sand, loose, moist (SP)	016_H011_1.6 (1.6' - 2.1')
_4		0.0	2.7 - 2.9 Black (10YR 2.5/1) fine SAND, trace silt, 30% fine round COPR gravel, medium-dense, moist, no odor (SP)	016_H011_2.2 (2.2' - 2.7')
_5		0.0	2.9 - 3.2 Reddish Brown (5YR 4/4) SILT and medium-fine round COPR GRAVEL (70%), little fine sand, medium-dense, moist, no odor (GM)	016_H011_2.7 (2.7' - 3.2')
			3.2 - 3.7 Very Dark Gray (2.5Y 3/1) medium-fine SAND, wet @ 3.6' (SW)	016_H011_3.2 (3.2' - 3.7')
_6		0.0	5.0 - 8.5 Dark Grayish Brown (10YR 4/2) medium SAND, some fine sand, trace coarse sand, shells, & fine gravel, loose, wet, no odor (SW), Transitions to Dark Gray (2.5Y 4/1) coarse-medium SAND, some fine subround gravel, little shells, trace fine sand, wet, loose, slight sulfurous odor (SW)	15% COPR 1.6' - 1.7'
_7	3.5	0.0		30% COPR 2.7' - 2.9'
_8	5.0	0.0		70% COPR 2.9' - 3.2'
_9		0.0		016_H011_8.0 (8.0' - 8.5')
_10		0.0		
_11			10.0 - 15.0 No Recovery	No sample - no recovery
_12	0.0			
_13	5.0			
_14				
_15				
_16			15.0 - 20.0 No Recovery	No sample - no recovery
_17	0.0			
_18	5.0			
_19				
_20				
_21			20.0 - 25.0 No Recovery	No sample - no recovery
_22	0.0			
_23	5.0			
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# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_H011 / 016_MW03
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/16/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER ~ 3.6'	GROUND SURFACE ELEVATION:	WELL INSTALLED? Yes - 016_MW03
MEMO: *Cored through ~ 0.6' of concrete before advancing with geoprobe			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
25		0.0	25.0 - 26.1 Greenish Gray (GLE Y2 6/5BG) Silty medium-fine SAND, little medium-fine subround gravel, loose, wet, no odor (SM) Transitions into SILT, some very fine sand, moist, firm, no odor (ML)	016_H011_25.0 (25.0' - 25.5')
26		0.0		
27		0.0	26.1 - 27.8 Greenish Gray (GLE Y2 5/5BG) grading to Reddish Gray (5YR 5/2) fine SAND, wet, loose, no odor (SP),	
28	3.6 5.0	0.0		
29		0.0	27.8 - 28.6 Reddish Brown (5YR 5/3) medium-fine SAND, little fine subangular gravel & coarse sand, trace silt & medium gravel, dense, wet, no odor (SW)	
30				
31			<b>End of Boring at 30' b.g.s.</b>	
32			<b>016_MW03 Well Information:</b> 016_MW03 installed on 8/17/11 using 8" hollow stem augers equipped on a geoprobe track rig	
33			2-inch diameter 10-slot SCH40 PVC screen set at 4.5' - 9.5' bgs.	
34			2-inch diameter SCH40 PVC riser from 4.5' bgs. to surface	
35			#1 Sand from 2.5' to 10.0' bgs.	
36			Cement-bentonite grout from 2.5' to 0.5'	
37			Flush-mount completion, cement around outer casing 0.5' to surface	
38			DTW: 4.2' bgs on 8/17/2011	
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# SOIL BORING LOG

		PROJECT NO.:	117-0509160.01	Boring No:	016_H012
		PROJECT NAME:	PPG Site 016	LOCATION SKETCH	
COMPLETION DATE:	TOTAL DEPTH OF BOREHOLE:	MONITORING DEVICE:	GEOLOGIST / OFFICE:		
8/26/2011	30	PID MiniRAE 2000	Jim M. / Whitehouse Station		
DRILLING CONTRACTOR / DRILLER:		DRILLING EQUIPMENT:	DRILLING METHOD / BIT:		
EPI \ John Brass		Geoprobe Track Rig	Direct Push		
SAMPLING METHOD:	DEPTH TO GROUNDWATER	GROUND SURFACE ELEVATION:	WELL INSTALLED?		
5' Sleeves, 1.25"			No		
MEMO:					
*Cored through ~ 0.5' of concrete before advancing with geoprobe.					

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.5 Concrete	
1		0.0	0.5 - 1.2 Light Yellowish Brown (10YR 6/6) medium-fine SAND, little subround medium-fine gravel, medium-dense, dry, no odor (SW)	016_H012_0.5 (0.5' - 1.0')
2	3.5	0.0	1.2 - 1.8 Yellowish Brown (10YR 5/6) fine SAND, little medium sand, trace silt, unknown black granular material 1.7'-1.8', medium-dense, dry (SP)	016_H012_2.2 (2.2' - 2.7')
3	4.5*	0.0	1.8 - 2.3 Dark Grayish Brown (2.5Y 4/2) very fine SAND, some silt, little schist gravel & mica, medium-dense, dry, no odor (SM)	016_H012_2.7 (2.7' - 3.3')
4		0.0	2.3 - 2.7 Light Brown (10YR 5/3) medium-fine SAND, loose, moist, no odor (SW)	016_H012_3.3 (3.3' - 3.8')
5		0.0	2.7 - 3.3 Very Dark Grayish Brown (10YR 3/2) grading to Reddish Brown (2.5YR 4/4) medium-fine subround COPR GRAVEL & fine SAND, some silt, moist, moist-wet 3' - 3.3', dense, no odor (GM)	50% COPR noted 2.7' - 3.3'
6			3.3 - 4.0 Brown (7.5YR 4/2) medium SAND, some fine sand, trace sand & gravel, wet, loose, no odor (SW)	
7	3.5	0.0	5.0 - 8.5 As Above (3.3' - 4'), Transitions to Dark Gray (2.5Y 4/1) medium SAND, some fine sand, trace subround gravel & shells, abundant shells 6.7' to 6.8', loose, wet, slight sulfurous odor (SW)	016_H012_6.5 (6.5' - 7.0')
8	5.0	0.0		
9		0.0		
10		0.0		
11		0.0	10.0 - 12.7 Dark Grayish Brown (10YR 4/2) medium SAND, little coarse & fine sand, trace gravel & shells, wet, loose, slight sulfurous odor (SW)	
12	2.9	0.0		016_H012_12.2 (12.2' - 12.7')
13	5.0	0.0	12.7 - 12.9 Dark Gray (5Y 4/1) CLAY, soft, moist-wet, slight sulfurous odor (OH)	
14				
15		0.0	15.0 - 17.0 As Above (12.7' - 12.9') (OH)	
16		0.0		016_H012_16.0 (16.0' - 16.5')
17	3.0	0.0	17.0 - 18.0 As Above (12.7' - 12.9') but Very Dark Gray (5Y 3/1), trace shells	
18	5.0	0.0	17.8' - 18' (OH)	
19				
20		0.0	20.0 - 20.8 As Above (12.7' - 12.9') (OH)	016_H012_20.0 (20.0' - 20.5')
21		1.7		
22	2.0	16.6	20.8 - 21.7 Dark Brown (10YR 3/3) PEAT, trace clay, moist-wet, soft, strong sulfurous odor (PT)	
23	5.0	1.1	21.7 - 22.0 Greenish Gray (GLY2 6/5BG) SILT, some fine-very fine sand, little clay, firm, moist-wet, slight sulfurous odor (ML)	
24				
25				


# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_H012
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/26/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: 0	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: *Cored through ~ 0.5' of concrete before advancing with geoprobe.			

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
_25		0.0	25.0 - 28.5 As Above (21.7' - 22'), Transitions to fine SAND, little medium sand, trace silt, medium-dense, moist-wet, no odor (SP), then to Brown (7.5YR 4/2) fine SAND, little medium sand, medium-dense, wet, no odor (SP)	016_H012_25.0 (25.0' - 25.5')
_26		0.0		_26
_27	3.8	0.0		_27
_28	5.0	0.0		_28
_29		0.0		_29
_30		0.0		_30
_31			End of Boring at 30' b.g.s.	_31
_32				_32
_33				_33
_34				_34
_35				_35
_36				_36
_37				_37
_38				_38
_39				_39
_40				_40
_41				_41
_42				_42
_43				_43
_44				_44
_45				_45
_46				_46
_47				_47
_48				_48
_49				_49
_50				_50




# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_H013
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/24/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: JM / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER ~ 3.3'	GROUND SURFACE ELEVATION:	WELL INSTALLED? No
MEMO: Cored through ~ 0.6' of concrete before advancing with geoprobe			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.6 Concrete	
_1		0.0	0.6 - 1.2 Olive Yellow (2.5Y 6/6) medium-fine SAND, little medium-fine subround gravel, trace white clay & coarse sand, medium-dense, dry (SW)	016_H013_0.6 (0.6' - 1.1')
_2		0.0	1.2 - 1.6 Dark Greenish Gray (GLE Y1 3/10Y) SILT, fine SAND, & coarse-medium gray angular GRAVEL, dense, dry, no odor (GM)	016_H013_2.3 (2.3' - 2.8')
_3	3.1 4.4*	0.0	1.6 - 2.1 Dark Grayish Brown (2.5Y 4/2) very fine SAND, little silt, schist gravel/mica, dense, dry, no odor (SM)	016_H013_2.8 (2.8' - 3.1')
_4		0.0	2.1 - 2.8 As Above (0.6' - 1.2') (SW), Pale Yellow (2.5Y 7/3) Clayey Silt 2.5'-2.8'	016_H013_3.1 (3.1' - 3.6')
_5		0.0	2.8 - 3.3 Dark Brown (7.5YR 3/2) fine SAND, little silt, 30% medium-fine subround COPR gravel 2.8' -3.1', medium-dense, moist, no odor (SM)	30% COPR 2.8' - 3.1'
_6		0.0	3.3 - 3.7 Very Dark Grayish Brown (10YR 3/2) medium-fine SAND, trace subround fine gravel (non-COPR), wet, loose, no odor (SW)	
_7		0.0	5.0 - 5.3 Very Dark Gray (2.5Y 3/1) SILT, some very fine-fine sand, loose, wet, no odor (ML)	
_8	3.6 5.0	0.0	5.3 - 5.9 Dark Grayish Brown (10YR 4/2) medium-coarse SAND, little fine subround gravel, wet, loose, slight sulfurous odor (SW)	016_H013_7.0 (7.0' - 7.5')
_9		0.0	5.9 - 8.6 Dark Grayish Brown (10YR 4/2) medium SAND, little fine sand, trace gravel & shells, wet, loose, slight sulfurous odor (SP)	
_10				
_11		0.0	10.0 - 12.5 Dark Gray (10YR 4/1) coarse-fine SAND, trace gravel & shells, wet, loose, slight sulfurous odor (SW)	
_12		0.0		
_13	2.5 5.0	0.0		016_H013_12.0 (12.0' - 12.5')
_14				Fill/native soil interface not recovered
_15				
_16			15.0 - 20.0 No Recovery	No sample - no recovery
_17				
_18	0.0 5.0			
_19				
_20				
_21		0.0	20.0 - 20.4 Dark Brown (10YR 3/3) CLAY, little shells, soft, moist, strong sulfurous odor, moderate plasticity (OH)	016_H013_20.0 (20.0' - 20.5')
_22		0.0	20.4 - 21.3 Greenish Gray (GLE Y2 6/5BG) CLAY, trace silt, soft, moist, moderate plasticity, no odor (CH)	
_23	2.3 5.0	0.0	21.3 - 21.7 Greenish Gray (GLE Y2 6/5BG) very fine SAND, some silt, little clay, medium-dense, moist-wet, no odor (SM)	
_24			21.7 - 22.3 As Above (20.4 - 21.3), Silty CLAY, firm, moist, low plasticity (CL)	
_25				

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_H013
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/24/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: JM / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 3.3'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: Cored through ~ 0.6' of concrete before advancing with geoprobe			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
_26		0.0	25.0 - 27.8 Greenish Gray (GLE2 6/5BG) very fine SAND, little silt & clay, medium-dense, moist-wet, no odor (SM), Transitions to Dark Gray (10YR 4/1) fine-very fine SAND, little silt, trace medium sand, medium-dense, moist-wet, no odor (SM)	016_H013_25.0 (25.0' - 25.5')
_27	3.6	0.0		_26
_28	5.0	0.0	27.8 - 28.6 Dark Reddish Gray (5Y 4/2) fine-very fine SAND, trace coarse-medium subround gravel, dense, moist-wet, no odor (SP)	_27
_29		0.0		_28
_30			<b>End of Boring at 30' b.g.s.</b>	_29
_31				_30
_32				_31
_33				_32
_34				_33
_35				_34
_36				_35
_37				_36
_38				_37
_39				_38
_40				_39
_41			_40	
_42			_41	
_43			_42	
_44			_43	
_45			_44	
_46			_45	
_47			_46	
_48			_47	
_49			_48	
_50			_49	
_50			_50	

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_H014
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/25/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER ~ 2'	GROUND SURFACE ELEVATION:	WELL INSTALLED? No
MEMO: *Cored through ~ 0.4' of concrete before advancing with geoprobe.			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.4 Concrete	
_1		0.0	0.4 - 1.1 Light Olive Brown (2.5YR 5/3) fine SAND, little silt & coarse-medium gray angular gravel, trace medium sand, medium-dense, dry, no odor (SM)	016_H014_0.4 (0.4' - 0.9')
_2		0.0	1.1 - 1.3 Dark Grayish Brown (2.5Y 4/2) medium-fine SAND, little subround medium-fine gravel (non-COPR), medium-dense, dry, no odor (SW)	
_3	<u>2.2</u> 4.6*	0.0	1.3 - 2.0 Yellow (2.5Y 7/8) fine SAND, little medium sand & white silty clay, medium-dense, moist, no odor (SC)	
_4			2.0 - 2.6 Very Dark Gray (10YR 3/1) Silty fine SAND, soft, moist-wet, no odor (SM)	
_5				
_6		0.0	5.0 - 8.3 Dark Grayish Brown (10Y 4/2) medium SAND, little coarse & fine sand, trace gravel & shells, loose, wet, slight sulfurous odor (SW)	016_H014_5.0 (5.0' - 5.5')
_7		0.0		
_8	<u>3.3</u> 5.0	0.0		
_9				
_10				
_11		0.0	10.0 - 11.6 As Above (5' - 8.3') except Dark Gray (10YR 4/1), some coarse sand (SW)	
_12		0.0		016_H014_11.1 (11.1' - 11.6')
_13	<u>1.7</u> 5.0	0.0		Fill/native soil interface not recovered
_14				
_15				
_16		0.0	15.0 - 16.8 Dark Gray (5Y 4/1) CLAY, soft, moist, moderate plasticity, slight sulfurous odor (OH)	016_H014_15.0 (15.0' - 15.5')
_17		0.0	16.8 - 18.3 As Above (15' - 16.8'), but Black (5Y 2.5/1) (OH)	
_18	<u>3.7</u> 5.0	0.0	18.3 - 18.7 As Above (15' - 16.8'), but with little shells (OH)	
_19		0.0		
_20				
_21		0.0	20.0 - 20.8 As Above (15' - 16.8'), trace silt (OH)	016_H014_20.0 (20.0' - 20.5')
_22		0.9	20.8 - 21.2 Dark Yellowish Brown (10YR 4/6) to Very Dark Grayish Brown (10YR 3/2) PEAT, trace CLAY, soft, moist, strong sulfurous odor (PT)	
_23	<u>1.5</u> 5.0	0.0	21.2 - 21.5 Greenish Gray (GLE Y2 6/10BG) CLAY, firm, moist, slight sulfurous odor, moderate plasticity (CH)	
_24				
_25				

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_H014
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/25/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER ~ 2'	GROUND SURFACE ELEVATION:	WELL INSTALLED? No
MEMO: *Cored through ~ 0.4' of concrete before advancing with geoprobe.			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
_25		0.0	25.0 - 26.9 Greenish Gray (GLE Y2 6/5BG) fine-very fine SAND, little silt & clay, medium-dense, moist-wet, no odor (SC), Transitions to fine SAND, little very fine sand, medium-dense, wet, no odor (SP)	016_H014_25.0 (25.0' - 25.5')
_26		0.0		_26
_27	3.6	0.0	26.9 - 28.5 Dark Gray grading to Brown (7.5YR 4/1 - 4/3) medium-fine SAND, some coarse sand, little reddish brown coarse-fine angular gravel, slight mottling - Greenish Gray (GLE Y2 6/5BG) 28' - 28.3', gray cobbles 27.7' - 27.9', medium-dense, wet, no odor (SW)	_27
_28	5.0	0.0		_28
_29		0.0		_29
_30				_30
_31			<b>End of Boring at 30' b.g.s.</b>	_31
_32				_32
_33				_33
_34				_34
_35				_35
_36				_36
_37				_37
_38				_38
_39				_39
_40				_40
_41				_41
_42				_42
_43				_43
_44				_44
_45				_45
_46				_46
_47				_47
_48				_48
_49				_49
_50				_50

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_H016
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 7/6/2011	TOTAL DEPTH OF BOREHOLE: 5.3	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 5'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: *Cored through ~ 0.6' of concrete before advancing with geoprobe. Refusal at 5.3'			

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.6 Concrete	016_H016_Core (0.0' - 0.6')
1		0.0	0.6 - 1.1 Dark Reddish Brown (5YR 3/2) fine SAND & medium-fine subround	016_H016_0.6 (0.6' - 1.1')
2		0.0	COPR GRAVEL, little silt, loose, dry, no odor (GM)	016_H016_1.1 (1.1' - 1.6')
3	2.8	0.0	1.1 - 2.7 Light Yellowish Brown (2.5Y 6/3) medium SAND, trace fine sand &	40% COPR noted 0.6' - 1.1'
4	3.4*	0.0	coarse-fine gravel, loose, dry, no odor (SP)	Took core sample from concrete foundation, no discoloration or COPR nodules noted in sample
5		0.0		
6	0.3 / 0.3	0.0	5.0 - 5.3 Brown (10YR 4/3) medium SAND, little fine sand & coarse-fine subround gravel, loose, wet, no odor (SP)	016_H016_5.0 (5.0' - 5.3')
7			<b>End of Boring at 5.3' b.g.s. (Refusal)</b>	
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# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_I005
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 7/6/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ Warren Atkinson		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER ~ 5.0'	GROUND SURFACE ELEVATION:	WELL INSTALLED? No
MEMO: *Cored through ~ 1' of concrete. Attempted to hand auger but hit immediate refusal			

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
0			0.0 - 1.0 Concrete	PID bkgd: 4.6 ppm
1				
2		0.0	1.0 - 1.5 Very Dark Grayish Brown (10YR 3/2) fine SAND, some medium sand & silt, loose, moist, slight sulfurous odor (SM)	016_I005_1.0 (1.0' - 1.5')
3	1.3	5.4		016_I005_1.8 (1.8' - 2.3')
4	4.0*	5.6	1.5 - 2.3 Very Dark Grayish Brown (10YR 3/2) fine-coarse SAND, some silt, little fine gravel, loose, wet (likely water from coring), slight sulfurous odor (SM)	
5				
6		7.6	5.0 - 5.4 Very Dark Grayish Brown (10YR 3/2) fine-coarse SAND, some silt, little fine gravel, loose, moist-wet, slight petroleum odor, no staining (SM)	PID bkgd: 4.7 ppm
7		6.3		
8	2.3	6.5	5.4 - 7.3 Very Dark Gray (10YR 3/1) fine SAND, little very fine sand & silt, trace medium sand, loose to medium-dense, trace shell fragments, slight sulfurous odor (SP)	016_I005_6.8 (6.8' - 7.3')
9	5.0	7.5		
10				
11		6.7	10.0 - 11.3 As Above (5.4' - 7.3') (SP)	PID bkgd: 4.7 ppm
12		7.3		016_I005_10.8 (10.8' - 11.3')
13	3.8	8.0	11.3 - 13.8 Dark Gray (5Y 4/1) Silty CLAY, occasional thin (< 1") lenses of little fine sand, trace shell fragments, soft, moderate to highly plastic, moist-wet, slight sulfurous odor (OH)	Fill/native soil interface at 11.3'
14	5.0	7.7		
15		7.7		
16		7.8	15.0 - 16.3 As Above (11.3' - 13.8') (OH)	PID bkgd: 0.0 ppm (zeroed)
17		0.4		016_I005_15.0 (15.0' - 15.5')
18	3.5	0.8	16.3 - 17.4 As Above (11.3' - 13.8'), hue change to Black (5Y 2.5/1), strong sulfurous odor (OH)	
19	5.0	0.6	17.4 - 18.0 Dark Gray (5Y 4/1) CLAY, little silt, trace shells, soft, moist, moderate plasticity, strong sulfurous odor (OH)	
20		1.7	18.0 - 18.5 As Above (17.4' - 18.0') but with some peat (OH)	
21		0.6		
22		0.8	20.0 - 21.3 Dark Yellowish Brown (10YR 3/6) PEAT, some Dark Very Gray (5Y 3/1) Silty CLAY, soft to medium-stiff, moderate plasticity, moist, strong sulfurous odor (PT)	PID bkgd: 0.0 ppm
23	2.6	0.5		016_I005_20.0 (20.0' - 20.5')
24	5.0	0.2	21.3 - 22.6 Greenish Gray (GLE Y2 5/5BG) Silty CLAY, firm, moderate to low plasticity, moist, no odor (CL). Transitions into fine-medium SAND, some silt and clay, medium-dense, moist-wet, no odor (SM)	
25		0.2		


# SOIL BORING LOG

		PROJECT NO.: 117-0509160	Boring No: 016_I005
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 7/6/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ Warren		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 5.0'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO:			

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
		0.2	25.0 - 26.6 Greenish Gray (GLEY2 6/5BG) fine-medium SAND, loose, wet, no odor (SP), Transitions to coarse SAND, some medium sand, little fine subangular gravel, loose, moist, no odor (SW)	PID bkgd: 0.0 ppm
_26		0.4		016_I005_25.0 (25.0' - 25.5')
		1.2		
_27		1.3	26.6 - 27.4 Greenish Gray (GLEY2 6/5BG) fine SAND, little medium sand, trace silt, loose, wet, no odor (SP)	
	4.6	2.1		
_28	5.0	0.0	27.4 - 29.0 Weak Red (2.5YR 4/2) medium SAND, some to little fine sand, loose, moist-wet, no odor (SP)	
		0.0		
_29		0.0		
		0.0	29.0 - 29.6 Red (2.5YR 4/8) SILT, little clay, stiff, low plasticity, moist, no odor (ML)	
_30			<b>End of Boring at 30' b.g.s.</b>	
_31				
_32				
_33				
_34				
_35				
_36				
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# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_I006 / 016_MW05
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 7/6/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ Warren Atkinson		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 3.2'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: Yes - 016_MW05 (on 8/2/11)
MEMO: Cored through ~ 0.6' of concrete before advancing with geoprobe. Hand augered to 1.1' - hit refusal			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.6 Concrete	
1		0.0	0.6 - 1.1 Dark Brown (7.5YR 3/2) fine-coarse SAND, some fine-coarse subround-subangular gravel, trace silt, loose, moist-wet (from coring), no odor (SW)	016_I006_0.6 0.6' - 1.1'
2		0.0	1.1 - 1.8 Weak Red (10R 4/3) fine-coarse GRAVEL (broken-up siltstone), little coarse sand, loose, dry, no odor (GW)	
3	2.8 3.9*	0.0	1.8 - 2.5 Olive Brown (2.5YR 4/3) medium SAND, trace coarse sand & subround fine-medium gravel, trace fine sand, loose, moist, no odor (SP)	
4		0.0	2.5 - 3.2 Very Dark Gray (5Y 3/1) SILT, some fine sand, little clay, trace wood fragments, very soft, low plasticity, moist (ML)	016_I006_3.4 3.4' - 3.9'
5		0.0	3.2 - 3.9 Black (2.5Y 2.5/1) fine-medium SAND, little wood fragments & Reddish Brown (2.5Y 4/3) Silty CLAY, loose, wet, slight sulfurous odor (SP)	
6		0.0	5.0 - 7.0 Dark Reddish Brown (5YR 3/2) fine-coarse SAND, little fine subround gravel, loose, wet, slight sulfurous odor (SW)	
7		0.0		
8	3.4 5.0	0.0	7.0 - 8.4 Dark Gray (10YR 4/1) fine-medium SAND, trace shell fragments, Transitions into Dark Gray (10YR 4/1) fine to very fine SAND, loose, wet, slight sulfurous odor (SP)	016_I006_7.5 7.5' - 8.0'
9		0.0		
10		0.0		
11		0.0	10.0 - 11.2 Dark Gray (10YR 4/1) fine to very fine SAND, some silt, loose, wet, slight sulfurous odor (SM)	016_I006_10.7 10.7' - 11.2'
12		0.0	11.2 - 12.9 Dark Gray (5Y 4/1) Silty CLAY, occasional thin (< 1/2") lenses of little fine sand, soft, moderate to highly plastic, moist, slight sulfurous odor (OH)	Fill/native soil interface at 11.2'
13	2.9 5.0	0.0		
14		0.0		
15		0.0		
16		0.0	15.0 - 15.6 As Above (11.2' - 12.9') (OH)	016_I006_15.0 15.0' - 15.5'
17		0.0	15.6 - 18.0 As Above (11.2' - 12.9'), hue change to Black (5Y 2.5/N), little silt, trace shells, strong sulfurous odor (OH)	
18	3.0 5.0	0.0		
19		0.0		
20		0.0		
21		3.3	20.0 - 21.3 Dark Brown (10YR 3/4) PEAT, little Dark Gray (5Y 4/1) CLAY, low plasticity, soft, moist, strong sulfurous odor (PT)	016_I006_20.0 20.0' - 20.5'
22		6.1		
23	2.6 5.0	0.4	21.3 - 22.6 Greenish Gray (GLY2 5/5BG) SILT, some clay and fine sand, low plasticity, soft, moist, slight sulfurous odor (ML), Transitions into Greenish Gray (GLY2 6/5BG) Silty fine-medium SAND, little clay, medium-dense, moist-wet, no odor (SM)	
24		0.0		
25		0.0		

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_I006 / 016_MW05
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 7/6/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ Warren Atkinson	DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push	
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER ~ 3.2'	GROUND SURFACE ELEVATION:	WELL INSTALLED? Yes - 016_MW05 (on 8/2/11)
MEMO: Cored through ~ 0.6' of concrete before advancing with geoprobe. Hand augered to 1.1' - hit refusal			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
_26		0.0	25.0 - 28.7 Dark Grayish Brown (2.5Y 4/4) grading to Dark Yellowish Brown (2.5Y 4/4) medium SAND, some fine sand, medium-dense, moist-wet, no odor (SP)	016_I006_25.0   25.0' - 25.5'
_27		0.0		
_28	3.7 5.0	0.0		
_29		0.0		
_30		0.0		
_31				<b>End of Boring at 30' b.g.s.</b>  <b>016_MW05 Well Information:</b> 016_MW05 installed on 8/2/11 using 8" hollow stem augers equipped on a geoprobe track rig  2-inch diameter 10-slot SCH40 PVC screen set at 5.0' - 10.0' bgs. 2-inch diameter SCH40 PVC riser from 5.0' bgs. to surface #1 Sand from 3.0' to 10.0' bgs. Cement-bentonite grout from 3.0' to 0.5' Flush-mount completion, cement around outer casing 0.5' to surface  DTW: 3.20' below TIC, measured on 8/5/2011
_32				
_33				
_34				
_35				
_36				
_37				
_38				
_39				
_40				
_41				
_42				
_43				
_44				
_45				
_46				
_47				
_48				
_49				
_50				

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_I006a
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 7/6/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ Warren Atkinson		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 5.0'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: *Cored through ~ 0.7' of concrete before advancing with geoprobe. Hand-augered to 1.2' - hit refusal			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.7 Concrete	
1		0.0	0.7 - 1.2 Very Dark Grayish Brown (10YR 3/2) fine-coarse SAND, some fine-coarse subangular gravel, little mica, trace silt, dry, loose, no odor (SW)	016_I006a_0.7 0.7' - 1.2'
2		0.0	1.2 - 3.1 Black (2.5Y 2.5/1) fine-medium SAND, little coarse sand, fine-medium subround gravel from 1.2' - 1.5' (SW)	
3	2.5	0.0		
4	3.8*	0.0	3.1 - 3.4 Dark Greenish-Gray (GLE Y1 4/10GY) weathered schist: fine SAND, some mica & schist gravel/cobbles, little medum sand, trace silt, dense, dry, no odor (SP)	016_I006a_2.9 2.9' - 3.4'
5		0.0		
6		0.0	5.0 - 6.2 Dark Reddish Brown (5YR 3/2) medium SAND, little fine & coarse sand, trace fine round gravel, loose, wet, slight sulfurous odor (SP)	
7		0.0	6.2 - 8.2 Dark Gray (10YR 4/1) fine-medium SAND, little coarse sand, trace silt, loose, wet, slight sulfurous odor (SW)	
8	3.6	0.0		
9	5.0	0.0	8.2 - 8.6 Dark Gray (5Y 4/1) Silty CLAY, soft, moderate to high plasticity, very soft, wet, slight sulfurous odor (OH)	016_I006a_7.7 7.7' - 8.2' Fill/native soil interface at 8.2'
10		0.0		
11		0.0	10.0 - 12.8 As Above (8.2' - 8.6') (OH)	
12		0.0		
13	3.1	0.0		016_I006a_11.5 11.5' - 12.0'
14	5.0	0.0	12.8 - 13.1 Black (5Y 2.5/1) CLAY, little silt, moderate plasticity, very soft, moist, strong sulfurous odor (OH)	
15		0.0		
16		0.0	15.1 - 15.8 As Above (12.8' - 13.1'), trace shells fragments (OH)	
17		0.0		
18	3.0	0.0	15.8 - 18.0 Very Dark Gray (5Y 3/1) CLAY, little silt, little peat from 17.6'-18', trace shells, moderate to high plasticity, very soft, moist, strong sulfurous odor (OH)	016_I006a_15.5 15.5' - 16.0'
19	5.0	0.0		
20		0.0		
21		1.1	20.0 - 20.5 As Above (15.8' - 18') with some peat (OH/PT)	016_I006a_20.0 20.0' - 20.5'
22		0.0	20.5 - 21.5 Greenish Gray (GLE Y2 5/5BG) Clayey SILT, trace very fine sand, moderate plasticity, firm, moist, no odor (ML)	
23	3.4	0.0	21.5 - 22.5 Greenish Gray (GLE Y2 6/5BG) Silty CLAY, moderate plasticity, soft to firm, moist, no odor (CL)	
24	5.0	0.0	22.5 - 23.4 Olive Brown (2.5Y 4/3) medium SAND, some fine sand, trace coarse sand, medium-dense, moist-wet, no odor (SP)	
25		0.0		

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_I006a
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 7/6/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ Warren Atkinson		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 5.0'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: *Cored through ~ 0.7' of concrete before advancing with geoprobe. Hand-augered to 1.2' - hit refusal			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
_26			25.0 - 30.0 No recovery - driller noted running sands	_26
_27				_27
_28	0.0 5.0			_28
_29				_29
_30				_30
_31				<b>End of Boring at 30' b.g.s.</b>
_32			_32	
_33			_33	
_34			_34	
_35			_35	
_36			_36	
_37			_37	
_38			_38	
_39			_39	
_40			_40	
_41			_41	
_42			_42	
_43			_43	
_44			_44	
_45			_45	
_46			_46	
_47			_47	
_48			_48	
_49			_49	
_50			_50	

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_I009
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/9/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER ~ 3'	GROUND SURFACE ELEVATION:	WELL INSTALLED? No
MEMO:			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
0		0.0	0.0 - 0.1 Asphalt	016_I009_0.0 (0.0' - 0.5')
1		0.0	0.1 - 2.9 Dark Grayish Brown (2.5Y 4/2) fine SAND, some silt & gray coarse-fine angular to round gravel, little schist gravel & mica, dense, dry, no odor (SM)	
2	3.8	0.0		
3	5.0	0.0	2.9 - 3.8 Brown (7.5YR 4/2) coarse-medium SAND, trace fine subround gravel, loose, wet 3' - 3.8', no odor (SW)	
4		0.0		
5		0.0		
6		0.0	5.0 - 8.3 As Above (2.9' - 3.8'), grades into Dark Gray (7.5YR 4/1) medium SAND, some fine sand, trace coarse sand & fine subround gravel, trace shells, loose, wet, slight sulfurous odor (SW)	016_I009_5.0 (5.0' - 5.5')
7		0.0		
8	3.3	0.0		
9	5.0	0.0		
10		0.0		
11		0.0	10.0 - 12.0 Dark Gray (7.5YR 4/1) medium SAND, some fine sand, trace coarse sand, fine subround gravel, & shells, wet, loose, slight sulfurous odor (SW)	
12		0.0		016_I009_11.5 (11.5' - 12.0')
13	3.2	0.0	12.0 - 13.2 Dark Gray (5Y 4/1) CLAY, trace silt, lense of silty fine-very fine sand, little clay at 12.6' and 12.8'-13', moist, soft, slight sulfurous odor (OH)	Fill/native soil interface at 12'
14	5.0	0.0		
15		0.0	15.0 - 16.5 As Above (12'-13.2') (OH)	
16		0.0		016_I009_15.5 (15.5' - 16.0')
17		0.0	16.5 - 16.9 As Above (12'-13.2'), hue change to Very Dark Gray (5Y 3/1), little organic silt and shell fragments (OH)	
18	1.9	0.0		
19	5.0	0.0		
20		0.0		
21		0.6	20.0 - 21.5 As Above (12.0' - 13.2'), trace peat, strong sulfurous odor (OH)	016_I009_20.0 (20.0' - 20.5')
22		0.3		
23		0.0	21.5 - 22.2 Greenish Gray (GLE Y2 6/10BG) CLAY, trace silt, high plasticity, soft, moist, no odor (CH), Transitions into Grayish Brown (10YR 5/2) fine-very fine SAND, little silt, medium-dense, moist, no odor (SP/SM)	
24	2.2	0.0		
25	5.0	0.0		

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_I009
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/9/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 3'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO:			

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
_26		0.0	25.0 - 25.4 Grayish Brown (10YR 5/2) mottled Greenish Gray (GLE Y2 6/10BG) and Olive (5Y 5/4) fine-very fine SAND, little silt, medium-dense, moist, no odor (SP/SM)	016_I009_25.0 (25.0' - 25.5')
_27		0.0		
_28	3.9 5.0	0.0	25.4 - 28.9 Dark Grayish Brown (10YR 4/2) coarse-medium SAND, trace fine sand & fine subround-subangular gravel, loose, wet, no odor (SW)	_26
_29		0.0		_27
_30		0.0		_28
_31			<b>End of Boring at 30' b.g.s.</b>	_29
_32				_30
_33				_31
_34				_32
_35				_33
_36				_34
_37				_35
_38				_36
_39				_37
_40				_38
_41				_39
_42				_40
_43				_41
_44				_42
_45			_43	
_46			_44	
_47			_45	
_48			_46	
_49			_47	
_50			_48	


# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_I011
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/17/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass	DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push	
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 3.3'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: *Cored through ~ 0.5' of concrete before advancing with geoprobe.			

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.5 Concrete	
_1		0.0	0.5 - 1.5 Strong Brown (7.5YR 5/8) fine SAND, little medium sand, little medium-fine subround gravel, medium-dense, moist-dry, no odor (SP)	016_I011_0.5 0.5' - 1.0'
_2		0.0	1.5 - 1.8 Dark Grayish Brown (10YR 4/2) fine SAND, some coarse-fine subangular gravel, little silt, dense, dry, no odor (SM)	
_3	3.4 4.5*	0.0	1.8 - 2.5 Brown (7.5YR 4/2) Silty fine SAND, little gravel, dense, dry, no odor (SM)	016_I011_2.8 2.8' - 3.3'
_4		0.0	2.5 - 2.7 Pale Olive (5Y 6/3) medium SAND, little fine sand, moist, loose (SP)	016_I011_3.3 3.3' - 3.5'
_5		0.0	2.7 - 3.3 Dark Greenish Gray (GLE Y1 4/5GY) medum-fine SAND, some gray angular gravel & coarse sand, moist, dense, no odor (SW)	016_I011_3.5 3.5' - 3.9'
			3.3 - 3.5 Reddish Brown (5YR 4/3) sandy SILT, 40% COPR (medium-fine gravel), medium-dense, moist-wet, no odor (ML)	40% COPR noted 3.3' - 3.5'
_6		0.0	3.5 - 3.9 Dark Gray (7.5YR 4/1) medium-fine SAND, wet, loose, (SW)	
_7		0.0	5.0 - 8.0 Brown (7.5YR 4/3) coarse-fine SAND, trace fine gravel, wet, loose, no odor (SW), Transitions into Dark Gray (2.5Y 4/1) medium-fine SAND, trace shells, fine gravel, & coarse sand, wet, loose, slight sulfurous odor (SW)	
_8	3.0 5.0	0.0		016_I011_7.5 7.5' - 8.0'
_9				
_10				
_11		0.0	10.0 - 12.0 Dark Gray (2.5Y 4/1) medium-fine SAND, trace shells, fine gravel, & coarse sand, wet, loose, slight sulfurous odor (SW)	
_12		0.0		016_I011_11.5 11.5' - 12.0'
_13	2.0 5.0	0.0		Fill/native soil interface not recovered
_14				
_15				
_16			15.0 - 20.0 No Recovery	No sample - no recovery
_17				
_18	0.0 5.0			
_19				
_20				
_21		0.0	20.0 - 20.7 Greenish Gray (GLE Y2 6/10B) CLAY, trace silt, moderate plasticity, soft, moist-wet, no odor (CH)	016_I011_20.0 20.0' - 20.5'
_22				
_23	0.7 5.0			
_24				
_25				




# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_I011
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/17/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass	DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push	
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 3.3'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: *Cored through ~ 0.5' of concrete before advancing with geoprobe.			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
_25		0.0	25.0 - 26.5 As Above (20.0' - 20.7'), Transitions into Clayey SILT, little very fine sand, stiff, wet, no odor (ML)	016_I011_25.0   25.0' - 25.5'
_26		0.0		
_27	3.5	0.0	26.5 - 28.5 Bluish Gray (GLE Y2 6/10B) fine SAND, little silt, trace clay, medium-dense, wet, no odor (SM), Transitions into Dark Gray (10YR 4/1) fine SAND, little medium sand, trace silt, medium-dense, wet, no odor (SP)	_27
_28	5.0	0.0		_28
_29		0.0		_29
_30				_30
_31			<b>End of Boring at 30' b.g.s.</b>	_31
_32				_32
_33				_33
_34				_34
_35				_35
_36				_36
_37				_37
_38				_38
_39				_39
_40				_40
_41				_41
_42				_42
_43				_43
_44				_44
_45				_45
_46				_46
_47				_47
_48				_48
_49				_49
_50				_50

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_I012
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/24/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 2.7'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: *Cored through ~ 0.4' of concrete before advancing with geoprobe.			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.4 Concrete	
_1		0.0	0.4 - 0.9 Pale Brown (2.5Y 6/3) fine SAND, little medium sand & medium-fine subround gravel, loose, dry, no odor (SP)	016_I012_0.4 (0.4' - 1.1')
_2	3.3	0.0	0.9 - 1.9 Dark Grayish Brown (2.5Y 4/2) fine SAND, little silt & coarse-fine white gravel & gray angular gravel, trace schist, medium-dense, moist (SM)	016_I012_2.0 (2.0' - 2.5')
_3	4.6*	0.0	1.9 - 2.5 Brownish Yellow (10YR 6/6) medium-fine SAND, little medium-fine subround quartz gravel, medium-dense, moist, no odor (SW)	016_I012_2.5 (2.5' - 3.1')
_4		0.0	2.5 - 3.1 Dark Reddish Brown (5YR 3/2) fine SAND & 40% medium-fine round COPR GRAVEL, some silt, medium-dense, wet 2.7' - 3.1', no odor (SM/GM)	016_I012_3.1 (3.1' - 3.5')
_5			3.1 - 3.7 Grayish Brown (10YR 5/2) medium-fine SAND, trace coarse sand, wet, loose, no odor (SW)	40% COPR noted 2.5' - 3.1'
_6		0.0	5.0 - 7.0 Dark Grayish Brown (10YR 4/2) medium SAND, little fine sand & coarse sand, trace gravel & shells, wet, loose, slight sulfurous odor (SW)	
_7	3.5	0.0	7.0 - 8.5 Dark Gray (2.5YR 4/1) medium SAND, little fine sand & coarse sand, trace gravel & shells, wet, loose, slight sulfurous odor (SW)	016_I012_7.0 (7.0' - 7.5')
_8	5.0	0.0		
_9		0.0		
_10		0.0		
_11		0.0	10.0 - 12.8 As Above (7' - 8.5')	
_12	2.8	0.0		
_13	5.0	0.0		016_I012_12.3 (12.3' - 12.8')
_14				Fill/native soil interface not recovered
_15				
_16			15.0 - 20.0 No recovery	
_17				No sample - no recovery
_18	0.0			
_19	5.0			
_20				
_21		6.7	20.0 - 20.1 Dark Gray (5Y 4/1) CLAY, soft, moist, strong sulfurous odor (OH)	016_I012_20.0 (20.0' - 20.5')
_22		2.8	20.1 - 21.1 Dark Yellowish Brown (10YR 3/4) PEAT, trace clay, soft, moist, low plasticity, strong sulfurous odor (PT)	
_23	2.5	0.2	21.1 - 22.5 Gray (10YR 5/1) CLAY, trace silt, soft, moist, moderate plasticity (OH), Transitions into Greenish Gray (GLE Y2 6/5BG) Silty CLAY, stiff, low plasticity, moist, no odor (CL)	
_24	5.0	0.0		
_25		0.0		

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_I012
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/24/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 2.7'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: *Cored through ~ 0.4' of concrete before advancing with geoprobe.			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
_25		0.0	25.0 - 26.2 Greenish Gray (GLE Y2 6/5BG) Silty CLAY, stiff, low plasticity, moist, no odor (CL)	016_I012_25.0 (25.0' - 25.5')
_26		0.0		
_27		0.0	26.2 - 28.7 Dark Grayish Brown (10YR 4/2) fine-very fine SAND, little silt, trace medium-fine subround gravel, medium-dense, wet, no odor (SM),	
_28	3.7 5.0	0.0	Transitions to medium-fine SAND, trace coarse sand & gravel, loose, wet, no odor (SW)	
_29		0.0		
_30		0.0		
_31			<b>End of Boring at 30' b.g.s.</b>	
_32				
_33				
_34				
_35				
_36				
_37				
_38				
_39				
_40				
_41				
_42				
_43				
_44				
_45				
_46				
_47				
_48				
_49				
_50				

# SOIL BORING LOG

		PROJECT NO.:	117-0509160.01	Boring No:	016_I013
		PROJECT NAME:	PPG Site 016	LOCATION SKETCH	
COMPLETION DATE:	TOTAL DEPTH OF BOREHOLE:	MONITORING DEVICE:	GEOLOGIST / OFFICE:		
8/24/2011	19	PID MiniRAE 2000	Jim M. / Whitehouse Station		
DRILLING CONTRACTOR / DRILLER:		DRILLING EQUIPMENT:	DRILLING METHOD / BIT:		
EPI \ John Brass		Geoprobe Track Rig	Direct Push		
SAMPLING METHOD:	DEPTH TO GROUNDWATER:	GROUND SURFACE ELEVATION:	WELL INSTALLED?		
5' Sleeves, 1.25"	~ 3.1'		No		
MEMO:					
*Cored through ~ 0.7' of concrete before advancing with geoprobe. Refusal at 19'					


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.7 Concrete	
_1		0.0	0.7 - 1.0 Light Yellowish Brown (2.5Y 6/4) fine SAND, little medium-fine subround gravel, medium-dense, dry, no odor (SP)	016_I013_0.7 (0.7 - 1.2')
_2	3.4	0.0	1.0 - 1.9 Grayish Brown (2.5Y 5/2) fine SAND, little silt, some coarse-fine gray subangular gravel, dense, dry, no odor (SM)	016_I013_1.2 (1.2 - 1.7')
_3	4.3*	0.0	1.9 - 2.7 Dark Brown (7.5YR 3/3) fine SAND, 20% medium-fine round COPR gravel 1.9'-2.1', little gray gravel 2.1'-2.7', dry, medium-dense (SP)	016_I013_1.7 (1.7 - 2.2')
_4		0.0	2.7 - 3.1 White (GLE Y1 8/N) concrete GRAVEL & COBBLES, dry, dense (GW)	016_I013_2.2 (2.2 - 2.7')
_5		0.0	3.1 - 3.7 Reddish Brown (5YR 4/4) medium-fine round COPR GRAVEL (60%), some silt, little fine sand, medium-dense, wet, no odor (GM)	20% COPR noted 1.9' - 2.1'
_6		0.0	3.7 - 4.1 Gray (5Y 5/1) medium SAND, little coarse & fine sand, trace fine gravel, loose, wet, no odor (SW)	016_I013_3.0 (3.0 - 3.7')
_7	3.0	0.0	5.0 - 8.0 Dark Grayish Brown (10YR 4/2) grading to Dark Brown (10YR 4/1) medium SAND, some fine sand, trace coarse sand, fine gravel, & shells, loose, wet, slight sulfurous odor (SW)	016_I013_3.7 (3.7 - 4.1')
_8	5.0	0.0		60% COPR noted 3.1' - 3.7'
_9				
_10				
_11		0.0	10.0 - 11.0 As Above (5.0' - 8.0')	
_12	2.6	0.0	11.0 - 11.7 Dark Grayish Brown (10YR 4/2) coarse SAND & fine subround GRAVEL, some medium gravel, trace medium sand & coarse gravel, trace shells, loose, wet, slight sulfurous odor (GW)	016_I013_7.5 (7.5' - 8.0')
_13	5.0	0.0	11.7 - 12.4 As Above (5.0' - 8.0')	
_14		0.0	12.4 - 12.6 Dark Gray (2.5Y 4/1) Silty CLAY, some fine-very fine SAND, very soft, low palsticity, wet, slight sulfurous odor (OL)	016_I013_11.9 (11.9' - 12.4')
_15				Fill/native soil interface at 12.4'
_16			15.0 - 19.0 No recovery	No sample - no recovery
_17	0.0			
_18	5.0			
_19				
_20			<b>End of Boring at 19' b.g.s. (Refusal)</b>	
_21				
_22				
_23				
_24				
_25				

# SOIL BORING LOG

		PROJECT NO.:	117-0509160.01	Boring No:	016_I014
		PROJECT NAME:	PPG Site 016	LOCATION SKETCH	
COMPLETION DATE:	TOTAL DEPTH OF BOREHOLE:	MONITORING DEVICE:	GEOLOGIST / OFFICE:		
8/25/2011	30	PID MiniRAE 2000	Jim M. / Whitehouse Station		
DRILLING CONTRACTOR / DRILLER:	DRILLING EQUIPMENT:	DRILLING METHOD / BIT:			
EPI \ John Brass	Geoprobe Track Rig	Direct Push			
SAMPLING METHOD:	DEPTH TO GROUNDWATER	GROUND SURFACE ELEVATION:	WELL INSTALLED?		
5' Sleeves, 1.25"	~ 2.7'		No		
MEMO:					
*Cored through ~ 0.5' of concrete before advancing with geoprobe.					


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
			0.0 - 0.5 Concrete	
_1		0.0	0.5 - 1.5 Brownish Yellow (10YR 6/6) fine SAND, little medium sand & medium-fine subround gravel, medium-dense, moist, no odor (SP)	016_I014_0.5 (0.5' - 1.0')
_2		0.0	1.5 - 2.5 Yellowish Brown grading to Dark Yellowish Brown (10Y 5/4 - 3/4) Silty fine-very fine SAND, little clay, little coarse-fine angular gray gravel, trace fine round COPR gravel 2.0' - 2.5', medium-dense, moist, no odor (SM)	
_3	2.3 4.5*	0.0	2.5 - 2.8 Dark Grayish Brown (2.5Y 4/2) fine SAND, little silt, trace medium sand, trace gravel, loose, moist-wet at 2.7' - 2.8', no odor (SM)	016_I014_1.5 (1.5' - 2.0') 016_I014_2.0 (2.0' - 2.5') 016_I014_2.5 (2.5' - 2.8') Trace COPR noted 2' - 2.5'
_4				
_5				
_6		0.0	5.0 - 8.3 Dark Grayish Brown (2.5Y 4/2) medium-fine SAND, loose, wet, no odor (SW), Transitions to Brown (7.5YR 4/2) coarse-medium SAND, trace fine sand, little fine gravel & shells, wet, loose, slight sulfurous odor (SW)	016_I014_5.0 (5.0' - 5.5')
_7		0.0		
_8	3.3 5.0	0.0		
_9				016_I014_7.8 (7.8' - 8.3')
_10				
_11		0.0	10.0 - 11.4 Dark Gray (2.5Y 4/1) coarse SAND & fine subround GRAVEL, some medium sand, trace medium gravel, loose, wet, slight sulfurous odor (SW)	
_12		0.0	Transitions to Brown (7.5YR 4/2) medium SAND, little fine sand & coarse sand, trace gravel, loose, wet, slight sulfurous odor (SW)	016_I014_10.8 (10.8' - 11.4')
_13	1.4 5.0			
_14				
_15				
_16		0.0	15.0 - 16.2 Dark Gray (5Y 4/1) CLAY, trace shells, soft, moist, slight sulfurous odor (OH)	016_I014_15.0 (15.0' - 15.5')
_17		0.0		
_18	1.2 5.0			
_19				
_20				
_21		0.0	20.0 - 20.9 As Above (15' - 16.2')	016_I014_20.0 (20.0' - 20.5')
_22		0.3	20.9 - 21.7 Dark Yellowish Brown (10YR 3/4) PEAT, trace clay, soft, moist, low plasticity, strong sulfurous odor (PT)	
_23	1.9 5.0	9.6	21.7 - 21.9 Greenish Gray (GLE2 6/5BG) CLAY, soft, moist-wet, moderate plasticity, slight sulfurous odor (CH)	
_24		1.9		
_25				

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_I014
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/25/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 2.7'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: *Cored through ~ 0.5' of concrete before advancing with geoprobe.			

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
_25		0.0	25.0 - 28.5 As Above (21.7' - 21.9'), Transitions to Greenish Gray (GLE Y2 6/5BG) clayey fine SAND, little silt, medium-dense, wet, no odor (SC), then to Brown (7.5YR 4/3) fine SAND, little medium sand, medium-dense, wet, no odor (SP)	016_I014_25.0 (25.0' - 25.5')
_26		0.0		_26
_27	3.5	0.0		_27
_28	5.0	0.0		_28
_29		0.0		_29
_30		0.0		_30
_31			End of Boring at 30' b.g.s.	_31
_32				_32
_33				_33
_34				_34
_35				_35
_36				_36
_37				_37
_38				_38
_39				_39
_40				_40
_41				_41
_42				_42
_43				_43
_44				_44
_45				_45
_46				_46
_47				_47
_48				_48
_49				_49
_50				_50


# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_I015
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/25/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 5'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO: *Cored through ~ 0.7' of concrete before advancing with geoprobe.			

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY	
			0.0 - 0.7 Concrete	016_I015_Core	
_1		0.0	0.7 - 0.9 Yellowish Brown (10YR 5/4) medium-fine SAND, trace medium-fine subround gravel, trace medium-fine round COPR gravel, loose, moist-wet (from coring), no odor (SW)	016_I015_0.7 (0.7' - 0.9')	
_2		0.0		Trace COPR noted 0.7' - 0.9'	
_3	1.1 4.3*			0.9 - 1.7 Dark Gray (2.5Y 4/1) medium SAND, some fine sand, trace coarse sand, wet (from coring), loose, no odor (SW)	Took core sample from concrete foundation, no discoloration or COPR nodules noted in sample
_4					
_5					
_6		0.0	5.0 - 7.9 As Above (0.9' - 1.7'), trace medium-fine gravel & shells 6' - 7.9', loose, wet, slight sulfurous odor (GW)	016_I015_5.0 (5.0' - 5.5')	
_7		0.0			
_8	2.9 5.0	0.0			016_I015_7.4 (7.4' - 7.9')
_9		0.0			
_10					
_11		0.0	10.0 - 12.0 Brown (10YR 4/3) coarse SAND & fine subround gravel, some medium sand & shells, trace medium gravel, loose, wet, slight sulfurous odor (SW) Transitions to Very Dark Grayish Brown (10YR 3/2) medium-fine SAND, trace coarse sand & shells, loose, wet, slight sulfurous odor (SW)		
_12		0.0			016_I015_11.5 (11.5' - 12.0')
_13	2.0 5.0	0.0			Fill/native soil interface not recovered
_14		0.0			
_15					
_16			15.0 - 20.0 No Recovery	No Sample - no recovery	
_17					
_18	0.0 5.0				
_19					
_20					
_21		0.3	20.0 - 20.5 Dark Gray (5Y 4/1) CLAY, little silt, soft, moist-wet, strong sulfurous odor (OH) 20.5 - 21.2 Dark Brown (10YR 3/3) PEAT, little Dark Gray (5Y 4/1) CLAY, low plasticity, soft, moist, strong sulfurous odor (PT) 21.2 - 22.3 Greenish Gray (GLE Y2 6/5BG) CLAY, little silt, soft, moist-wet, moderate plasticity, slight sulfurous odor (CH), Transitions into Greenish Gray (GLE Y2 7/5BG) CLAY, firm, moist, moderate plasticity, no odor (CH) 22.3 - 22.5 Greenish Gray (GLE Y2 6/5BG) Silty fine-very fine SAND, trace clay, medium-dense, wet, no odor (SM)	016_I015_20.0 (20.0' - 20.5')	
_22		7.8			
_23	2.5 5.0	1.3			
_24		0.0			
_25		0.0			




# SOIL BORING LOG

		PROJECT NO.:	117-0509160.01	Boring No:	016_I015
		PROJECT NAME:	PPG Site 016	LOCATION SKETCH	
COMPLETION DATE:	TOTAL DEPTH OF BOREHOLE:	MONITORING DEVICE:	GEOLOGIST / OFFICE:		
8/25/2011	30	PID MiniRAE 2000	Jim M. / Whitehouse Station		
DRILLING CONTRACTOR / DRILLER:		DRILLING EQUIPMENT:	DRILLING METHOD / BIT:		
EPI \ John Brass		Geoprobe Track Rig	Direct Push		
SAMPLING METHOD:	DEPTH TO GROUNDWATER	GROUND SURFACE ELEVATION:	WELL INSTALLED?		
5' Sleeves, 1.25"	~ 5'		No		
MEMO:					
*Cored through ~ 0.7' of concrete before advancing with geoprobe.					


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
		0.0	25.0 - 26.7 Greenish Gray (GLE Y2 6/5BG) fine SAND, medium-dense, wet, no odor (SP)	016_I015_25.0 (25.0' - 25.5')
_26		0.0		
		0.0	26.7 - 27.0 Light Greenish Gray (GLE Y2 3/10BG) coarse-medium angular SAND, some fine angular gravel, dense, moist-wet, no odor (GW)	
_27	2.5	0.0		
		0.0	27.0 - 27.6 Brown (7.5YR 4/3) fine SAND, some coarse-fine subangular gravel, little silt, dense, moist, no odor (SM)	
_28	5.0			
_29				
_30				
			<b>End of Boring at 30' b.g.s.</b>	
_31				
_32				
_33				
_34				
_35				
_36				
_37				
_38				
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_41				
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_49				
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# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_J005
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 7/8/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ Warren Atkinson		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 5.0'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO:			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
0		0.0	0.0 - 2.0 Brown (10YR 5/3 grading to 7.5YR 4/3) medium-fine SAND, trace coarse to fine gray angular gravel, broken-up white cobbles (concrete) at 1.7', medium-stiff, dry, no odor (SP)	016_J005_0.0 (0.0' - 0.5')
1		0.0		
2	3.2	0.0	2.0 - 2.7 Very Dark Grayish Brown (10YR 2/3) medium-fine SAND, trace fine subround gravel & coarse sand, medium-dense, moist, no odor (SP)	016_J005_2.2 (2.2' - 2.7')
3	5.0	52.0	2.7 - 3.2 Black (2.5Y 2.5/1) medium-fine SAND, 50% COPR (fine-medium subround gravel) from 2.9' - 3.2', strong petroleum odor & thick petroleum product, moist-wet, medium-dense (SW)	016_J005_2.7 (2.7' - 3.2') 50% COPR noted from 2.9' - 3.2'
4				
5				
6		10.7	5.0 - 5.9 Reddish Brown (5YR 4/3) Silty medium-fine SAND, 50% COPR throughout, little coarse-medium subround gravel, slight petroleum odor and black staining, medium-dense, wet (SM)	016_J005_5.0 (5.0' - 5.5')
7	3.6	4.5		016_J005_5.9 (5.9' - 6.4')
8	5.0	3.0	5.9 - 8.6 Very Dark Gray (2.5Y 3/1) medium-fine SAND, loose, wet, slight petroleum odor and staining. No petroleum staining from 7.0' - 8.6' (2.5Y 4/1) (SP)	50% COPR noted from 5.0' - 5.9'
9		3.7		
10		2.5		
		0.0		
11		0.0	10.0 - 10.5 Dark Gray (2.5Y 4/1) coarse-fine SAND, trace shells, loose, wet, no slight sulfurous odor (SW)	016_J005_10.0 (10.0' - 10.5')
12	2.8	0.0	10.5 - 12.8 Dark Gray (5Y 4/1) CLAY, little silt, soft, high plasticity, moist, slight sulfurous odor (OH)	Fill/native soil interface at 10.5'
13	5.0	0.0		
14		0.0		
15		0.0		
16		0.0	15.0 - 16.0 As Above (10.5' - 13.0') (OH)	016_J005_15.0 (15.0' - 15.5')
17	2.7	0.0	16.0 - 16.6 As Above (10.5' - 13.0'), hue change to Black (5Y 2.5/1), little peat, strong sulfurous odor (OH)	
18	5.0	0.0	16.6 - 17.7 As Above (10.5' - 13.0'), strong sulfurous odor (OH)	
19				
20				
21		4.6	20.0 - 21.4 Dark Grayish Brown (10YR 4/2) PEAT, little Very Dark Gray (5Y 3/1) CLAY, moderate plasticity, soft, moist, strong sulfurous odor (PT)	016_J005_20.0 (20.0' - 20.5')
22	2.5	16.2	21.4 - 22.1 Gray (GLE Y1 5/N) Clayey SILT, some fine sand, low plasticity, grades from soft to stiff with depth, moist, no odor (ML)	
23	5.0	1.1		
24		0.0		
25		0.0		

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_J005
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 7/8/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ Warren Atkinson		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 5.0'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO:			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
_26			25.0 - 30.0 No Recovery	_26
_27				_27
_28	0.0 5.0			_28
_29				_29
_30				_30
_31			End of Boring at 30' b.g.s.	_31
_32				_32
_33				_33
_34				_34
_35				_35
_36				_36
_37				_37
_38				_38
_39				_39
_40				_40
_41				_41
_42				_42
_43				_43
_44				_44
_45				_45
_46			_46	
_47			_47	
_48			_48	
_49			_49	
_50			_50	

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_J014
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/9/2011	TOTAL DEPTH OF BOREHOLE: 25	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ John Brass		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 2.3'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO:			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY	
		0.0	0.0 - 0.7 Asphalt GRAVEL (GP)		_0
_1		0.0	0.7 - 2.3 Yellowish Brown (10YR 5/4) medium SAND, trace fine sand & shells, Transitions into Brown (10YR 5/3) medium-fine SAND, trace shells, wet 2.1'-2.3', loose, no odor (SP)	016_J014_0.7 (0.7' - 1.2')	_1
_2	3.8	0.0			_2
_3	5.0	0.0	2.3 - 3.8 Gray (10YR 5/1) coarse-medium SAND, some fine round to subround gravel, trace medium subround gravel and fine sand, loose, wet, no odor (SW)		_3
_4		0.0			_4
_5		0.0			_5
_6		0.0	5.0 - 7.2 Brown (7.5YR 4/2) coarse-medium SAND, little medium-fine subround gravel, trace fine sand and shells, loose, wet, slight sulfurous odor (SW)	016_J014_5.0 (5.0' - 5.5')	_6
_7		0.0			_7
_8	2.2	0.0			_8
_9	5.0				_9
_10					_10
_11			10.0 - 15.0 No Recovery - rod jammed	No sample - no recovery	_11
_12					_12
_13	0.0				_13
_14	5.0				_14
_15					_15
_16		0.0	15.0 - 16.5 Black (5Y 2.5/1) CLAY, little silt, trace fine sand, very soft, moderate plasticity, slight sulfurous odor (OH)	016_J014_15.0 (15.0' - 15.5')	_16
_17		0.0			_17
_18	1.5	0.0			_18
_19	5.0				_19
_20					_20
_21		2.8	20.0 - 20.4 Very Dark Brown (10YR 2/2) Organic SILT, little clay and peat, some shells @ 20.5', very soft, wet, strong sulfurous odor (ML/PT)	016_J014_20.0 (20.0' - 20.5')	_21
_22		0.5			_22
_23	3.8	0.0	20.4 - 23.3 Bluish Gray (GLE Y2 6/10B) Silty CLAY, moderate plasticity, soft, moist-wet, slight sulfurous odor (CH), Transitions into Greenish Gray (GLE Y2 6/5BG) fine sand, little silt & clay, medium-dense, moist-wet, no odor (SC)		_23
_24	5.0	0.0	23.3 - 23.7 Gray (2.5Y 5/1) fine-very fine SAND, little silt, medium-dense, moist-wet, (SM) Transitions into Gray (2.5Y 4/1) medium-fine SAND, trace coarse subround sand & fine gravel, medium-dense, wet, no odor (SW)	016_J014_23.3 (23.3' - 23.8')	_24
_25		0.0			_25

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_K007 / 016_MW06
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/3/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ AJ Benjamin		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 4'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: Yes - 016_MW06
MEMO:			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
0		0.0	0.0 - 0.2 Gray (GLEY 1 5/N) coarse-fine GRAVEL & COBBLES, loose, dry (GW)	016_K007_0.0 (0.0' - 0.5')
1		0.0	0.2 - 0.5 Greenish Gray (GLEY2 6/5BG) flat subround COBBLES, some coarse-medium gravel, little very fine sand, dry, loose, no odor (GW)	
2	4.0	0.0	0.5 - 2.3 Olive Gray (5Y 5/2) medium-fine SAND & mica, some coarse-fine schist gravel, dry, loose, no odor (SW)	15% COPR noted 2.8'-3.3'
3	5.0	0.0	2.3 - 3.3 Reddish Brown (5YR 4/4) SILT & very fine-fine SAND, some light gray coarse gravel & cobbles from 2.3'-2.8', 15% COPR (m-f round gravel) from 2.8'-3.3', little Olive Yellow (2.5Y 6/6) to Pale Yellow (2.5Y 7/3) coarse gravel & medium-fine sand, medium-dense, moist, no odor (ML/SM)	016_K007_2.3 (2.3' - 2.8') 016_K007_2.8 (2.8' - 3.3') 016_K007_3.3 (3.3' - 3.8') 016_K007_3.8 (3.8' - 4.0')
4		0.0	3.3 - 3.8 Gray (2.5Y 6/1) coarse-fine SAND, some coarse-fine white subround-subangular quartz gravel, loose, dry, no odor (SW/GW)	40% COPR noted 3.8'-4.0'
5		0.0	3.3 - 4.0 Reddish Brown (5YR 4/3) fine SAND, some gray coarse-fine sand, 40% COPR (fine round gravel), moist-wet @ 4', loose, no odor (SW)	016_K007_5.0 (5.0 - 5.5')
6	3.5	0.0	5.0 - 6.2 Grayish Brown (10YR 5/2) medium-fine SAND, little coarse sand, trace shells, wet, loose, no odor (SW). Transitions in Very Dark Gray (10YR 3/1), same lithology, slight sulfurous odor (SW)	
7	5.0	0.0	6.2 - 8.5 Grayish Brown (10YR 5/2) medium SAND, some coarse sand, little fine sand, trace fine subround gravel, loose, wet (SW), Transitions into Gray (2.5Y 5/1) medium-fine SAND, trace coarse sand, trace shells, loose, wet, slight sulfurous odor (SW)	
8		0.0	10.0 - 11.9 Gray (2.5Y 5/1) fine SAND, little medium sand, trace shells, fine round gravel, & coarse sand, wet, loose, slight sulfurous odor (SW)	
9		0.0	11.9 - 14.3 Dark Gray (5Y 4/1) CLAY, trace silt, moderate to high plasticity, soft to firm, fine sand 12.3' - 12.6', medium-fine sand 13.3'-13.5', moist, slight sulfurous odor (OH)	016_K007_11.4 (11.4 - 11.9')
10		0.0	15.0 - 16.1 As Above (11.9' - 14.3') (OH)	Fill/native soil interface at 11.9'
11	4.3	0.0	16.1 - 17.0 As Above (11.9' - 14.3'), but Black (5Y 2.5/1) (OH)	
12	5.0	0.0	17.0 - 18.0 As Above (11.9' - 14.3'), trace shells (OH)	016_K007_15.5 (15.5' - 16.0')
13		0.0	20.0 - 21.0 As Above (11.9' - 14.3'), trace shells, abundant 20.8'-21', trace peat, strong sulfurous odor (OH)	
14		0.0	21.0 - 21.9 Dark Brown (7.5YR 3/3) PEAT & Black (10YR 2.5/1) organic SILT, trace clay, moist-wet, very soft, strong sulfurous odor (PT)	016_K007_20.0 (20.0' - 20.5')
15		0.0	21.9 - 22.8 Greenish Gray (GLEY2 6/10BG) Clayey SILT, some very fine sand, firm, moist, slight sulfurous odor (ML), Transitions into Greenish Gray (GLEY2 6/10BG) Silty CLAY, stiff, moist, low plasticity, no odor (CL)	
16	3.0	0.0	22.8 - 23.2 Light Olive Brown (2.5Y 5/3) very fine SAND, some silt, little clay, medium-dense, moist, no odor (SM)	
17	5.0	0.0		
18		0.9		
19		1.8		
20		2.3		
21		0.0		
22		0.0		
23		0.0		
24		0.0		
25		0.0		

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_K007 / 016_MW06
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/3/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ AJ Benjamin		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER ~ 4'	GROUND SURFACE ELEVATION:	WELL INSTALLED? Yes - 016_MW06
MEMO:			

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
		0.0	25.0 - 26.3 As Above (22.8' - 23.2'), Transitions into Light Olive Brown (2.5Y 5/3)	016_K007_25.0 (25.0' - 25.5')
_26		0.0	Clayey SILT, little very fine SAND, firm, moist-wet, no odor (ML)	
		0.0	26.3 - 27.7 Brown (7.5YR 5/2) medium SAND, some fine sand, trace silt, medium-	
_27		0.0	dense, wet, no odor (SW/SP), Transitions into fine SAND, some silt,	
	4.6	0.0	trace clay, medium-dense, moist-wet, no odor (SM)	
_28	5.0	0.0	27.7 - 29.1 Brown (7.5YR 5/2) medium SAND, some fine sand, little coarse sand,	
		0.0	trace subround gravel, wet, medium-dense, no odor (SW)	
_29		0.0		
		0.0	29.1 - 29.6 Reddish Brown (5YR 5/3) fine SAND, some medium sand, medium-	
_30		0.0	dense, wet, no odor (SW/SP)	
			<b>End of Boring at 30' b.g.s.</b>	
_31				
			<b>016_MW07 Well Information:</b>	
_32			016_MW07 installed on 8/3/11 using 8" hollow stem augers equipped on a	
			geoprobe track rig	
_33				
			2-inch diameter 10-slot SCH40 PVC screen set at 4.0' - 9.0' bgs.	
_34			2-inch diameter SCH40 PVC riser from 4.0' bgs. to surface	
			#1 Sand from 2.0' to 10.0' bgs.	
_35			Cement-bentonite grout from 2.0' to 0.5'	
			Flush-mount completion with concrete protective padding around casing	
_36				
			DTW: 2.79' bgs, measured on 8/05/11	
_37				
_38				
_39				
_40				
_41				
_42				
_43				
_44				
_45				
_46				
_47				
_48				
_49				
_50				


# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_K009
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 7/8/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ Warren Atkinson		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER ~ 3.5'	GROUND SURFACE ELEVATION:	WELL INSTALLED? No
MEMO:			

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
0		0.0	0.0 - 1.1 Dark Greenish-Gray (GLE Y1 4/10GY) weathered schist: medium-fine SAND, some mica & schist gravel/cobbles, trace silt, dense, dry, no odor (SP)	016_K009_0.0 (0.0' - 0.5')
1		0.0		
2	4.0	0.0	1.1 - 2.4 Yellowish Brown (10YR 5/6) fine SAND, Light Gray (GLE Y1 7/N) COBBLES (broken-up concrete) from 1.2' - 1.5', 35% COPR 2.1' - 2.4', little slag and gray angular gravel, dry, dense, no odor (SP)	016_K009_1.4 (1.4' - 1.9') 016_K009_1.9 (1.9' - 2.4')
3	5.0	0.0		016_K009_2.4 (2.4' - 2.9')
4		0.0	2.4 - 4.0 Reddish Gray (5YR 5/2) coarse-medium SAND, little fine subround gravel, loose, moist-wet at 3.5', no odor (SW)	35% COPR noted 2.1' - 2.4'
5		0.0		
6		0.0	5.0 - 8.1 As Above (2.4' - 4.0'), Transitions into Dark Gray (2.5YR 4/1) medium SAND, little fine sand, trace coarse sand & shells, loose, wet, no odor (SP)	
7		0.0		
8	3.1	0.0		016_K009_7.0 (7.0' - 7.5')
9	5.0	0.0		
10		0.0		
11		0.0	10.0 - 11.2 Dark Gray (5YR 4/1) fine SAND, little medium sand, loose, wet, slight sulfurous odor (SP)	016_K009_10.7 (10.7' - 11.2')
12		0.0	11.2 - 13.3 Dark Gray (5Y 4/1) CLAY, occasional thin (<1") lense of little very fine sand, soft, high plasticity, moist, slight sulfurous odor (OH)	Fill/native soil interface at 12.2'
13	3.3	0.0		
14	5.0	0.0		
15		0.0		
16		0.0	15.0 - 16.3 As Above (11.2' - 13.3') (OH)	
17		0.0	16.3 - 16.7 As Above (11.2' - 13.3'), hue change to Black (5Y 2.5/1), little peat, strong sulfurous odor (OH)	016_K009_16.0 (16.0' - 16.5')
18	3.3	0.0	16.7 - 17.1 Black (GLE Y1 2.5/N) Lignite fragments, loose, dry, strong sulfurous odor (GW)	
19	5.0	0.0	17.1 - 18.3 As Above (11.2' - 13.3'), little shells, strong sulfurous odor (OH)	
20		0.0		
21		0.0	20.0 - 21.0 As Above (11.2' - 13.3'), abundant shell fragments from 20.6' - 20.9', strong sulfurous odor (OH)	016_K009_20.0 (20.0' - 20.5')
22		0.0	21.0 - 22.1 Dark Grayish Brown (10YR 4/2) PEAT, little Dark Gray (GLE Y1 4/N) CLAY, moderate plasticity, soft, moist, strong sulfurous odor (PT)	
23	3.1	0.0	22.1 - 23.1 Dark Gray (GLE Y2 4/N) Silty CLAY, soft, moderate plasticity, moist (CL), Transitioning into Greenish Gray (GLE Y2 6/6BG) SILT & very fine sand, little fine sand & clay, stiff, moist-wet, no odor (ML)	
24	5.0	0.0		
25		0.0		




# SOIL BORING LOG

		PROJECT NO: 117-0509160.01	Boring No: 016_K009
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 7/8/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ Warren Atkinson		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 3.5'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO:			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
_26		0.0	25.0 - 27.2 As Above (22.1' - 23.2')	016_K009_25.0 (25.0' - 25.5')
_27		0.0		
_28	4.6 5.0	0.0	27.2 - 29.6 Reddish Brown (5YR 4/3) Clayey SILT, low plasticity (ML), Transitioning into Reddish Brown (5YR 4/3) Silty fine SAND, trace clay, dense, wet (SM), Transitioning into Reddish Gray (5YR 5/2) coarse SAND & fine subrou GRAVEL, little medium sand, trace medium-coarse gravel, loose, wet, no odor (SW/GW)	_26
_29		0.0		_27
_30		0.0		_28
_31				_29
_32			<b>End of Boring at 30' b.g.s.</b>	_30
_33				_31
_34				_32
_35				_33
_36				_34
_37				_35
_38				_36
_39				_37
_40				_38
_41				_39
_42				_40
_43				_41
_44				_42
_45				_43
_46				_44
_47				_45
_48				_46
_49				_47
_50				_48

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_K013 / 016_MW08
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/3/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ AJ Benjamin		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 3.5'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: Yes - 016_MW08
MEMO:			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
0				
1		0.0	0.0 - 0.9 Gray (GLEY 1 5/N) coarse-fine GRAVEL & COBBLES, loose, dry (GW)	Due to high gravel content, no sample taken 0' - 0.5'
2		0.0	0.9 - 1.2 Light Greenish Gray (GLEY1 8/10Y) coarse-medium subround sandstone GRAVEL & COBBLES, little medium-fine sand, dry, medium dense (GW)	016_K013_1.2 (1.2' -1.7')
3	3.6	0.0	1.2 - 2.1 Yellowish Red (5YR 5/6) SILT & fine SAND, 25% COPR (medium-fine round gravel) through, trace fc subangular gray gravel, moist, loose, no odor (ML)	25% COPR noted 1.2' - 2.1'
4	5.0	0.0	2.1 - 3.6 Reddish Gray (5YR 5/2) medium SAND, some fine sand, trace coarse sand & fine subround gravel, moist, wet 3.5'-3.6', loose, no odor (SW)	016_K013_2.1 (2.1' -2.6')
5		0.0		
6		0.0	5.0 - 7.5 Dark Gray (2.5Y 4/1) medium-fine SAND, little silt, trace shells, wet, loose, slight sulfurous odor (SM), Transitions into Dark Reddish Gray (5YR 4/2) coarse-medium SAND, little fine subround to subangular gravel, trace shells, loose, wet, slight sulfurous odor (SW)	016_K013_6.0 (6.0' -6.5)
7	2.5	0.0		
8	5.0	0.0		
9		0.0		
10		0.0		
11		0.0	10.0 - 11.8 Dark Gray (10YR 4/1) coarse-medium SAND, little fine sand, trace fine subround gravel & shells, loose, wet, slight sulfurous odor (SW), Transitions into (10YR 4/1) Dark Grayish Brown (10YR 4/2) medium-fine SAND, little silt, trace shells, loose, wet, slight sulfurous odor (SM)	016_K013_11.3 (11.3' -11.8)
12	1.8	0.0		
13	5.0			Fill/native soil interface not recovered
14				
15				
16			15' - 20' No Recovery	
17				
18	0.0			
19	5.0			
20				
21		0.0	20.0 - 21.3 Dark Gray (5Y 4/1) CLAY, little silt & shells, very soft, moist-wet, moderate plasticity, slight sulfurous odor (OH)	016_K013_20.0 (20.0' -20.5)
22		0.0	21.3 - 22.4 Dark Brown (10YR 3/3) PEAT, trace Dark Gray (5Y 4/1) CLAY, soft, low plasticity, moist, strong sulfurous odor (PT)	
23	3.2	1.8	22.4 - 23.2 Dark Gray (10YR 4/1) CLAY, trace peat, moderate to high plasticity, soft, moist, slight sulfurous odor (OH), Transitions into Greenish Gray (GLEY2 6/5BG) very fine SAND, little clay & silt, medium-dense, moist-wet, no odor (SC)	
24	5.0	12.5		
25		0.4		
		0.0		

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_K013 / 016_MW08
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/3/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ AJ Benjamin		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER ~ 3.5'	GROUND SURFACE ELEVATION:	WELL INSTALLED? Yes - 016_MW08
MEMO:			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
_25		0.0	25.0 - 27.6 Greenish Gray (GLEY2 6/5BG) CLAY, little silt, moderate plasticity, firm, moist, no odor (CH), Transitions into fine-very fine SAND, little silt & clay, medium-dense, moist-wet, no odor (SC)	016_K013_25.0 (25.0' -25.5)
_26		0.0		_26
_27		0.0		_27
_28	3.6 5.0	0.0	27.6 - 28.6 Grayish Brown (10YR 5/2) fine SAND, little very fine sand & silt, medium-dense, moist-wet, no odor (SM), Transitions into Gray (10YR 5/1) coarse-medium SAND, little fine sand, trace fine subround gravel, wet, loose, no odor (SW)	_28
_29		0.0		_29
_30		0.0		_30
_31			<b>End of Boring at 30' b.g.s.</b>	_31
_32			<b>016_MW08 Well Information:</b>	_32
_33			016_MW08 installed on 8/3/11 using 8" hollow stem augers equipped on a geoprobe track rig	_33
_34			2-inch diameter 10-slot SCH40 PVC screen set at 3.5' - 8.5' bgs.	_34
_35			2-inch diameter SCH40 PVC riser from 3.5' bgs. to surface	_35
_36			#1 Sand from 1.5' to 10.0' bgs.	_36
_37			Cement-bentonite grout from 1.5' to 0.5'	_37
_38			Flush-mount completion with concrete protective padding around casing	_38
_39			DTW: 4.0' bgs, measured on 8/09/11	_39
_40				_40
_41				_41
_42				_42
_43				_43
_44				_44
_45				_45
_46				_46
_47				_47
_48				_48
_49				_49
_50				_50

# SOIL BORING LOG

		PROJECT NO.:	117-0509160.01	Boring No:	016_L005
		PROJECT NAME:	PPG Site 016	LOCATION SKETCH	
COMPLETION DATE:	TOTAL DEPTH OF BOREHOLE:	MONITORING DEVICE:	GEOLOGIST / OFFICE:		
7/8/2011	30	PID MiniRAE 2000	Jim M / Whitehouse Station		
DRILLING CONTRACTOR / DRILLER:		DRILLING EQUIPMENT:	DRILLING METHOD / BIT:		
EPI \ Warren Atkinson		Geoprobe Track Rig	Direct Push		
SAMPLING METHOD:	DEPTH TO GROUNDWATER:	GROUND SURFACE ELEVATION:	WELL INSTALLED?		
5' Sleeves, 1.25"	~ 5.0'		No		
MEMO:					


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
_0		0.0	0.0 - 2.0 Pale Brown (10YR 6/3) grading to Very Dark Grayish Brown (10YR 3/2) medium-fine SAND, trace coarse gray angular gravel, loose to medium dense, dry, no odor (SP)	016_L005_0.0 (0.0' - 0.5')
_1		0.0		_1
_2	2.5	0.0		_2
_3	3.0	0.0	2.0 - 2.5 Light Gray (10YR 7/1) COBBLES & GRAVEL (broken-up concrete), dry, loose, no odor (GW)	_3
_4				_4
_5				_5
_6		0.0	5.0 - 7.7 Brown (10YR 4/2) medium SAND, little coarse sand, trace fine sand, loose, wet, no odor (SP). Zone of Dark Reddish Gray (2.5YR 4/1) Clayey SILT from 6.6' - 7.0' (ML)	016_L005_5.0 (5.0' - 5.5')
_7		0.0		_7
_8	2.7	0.0		_8
_9	5.0			_9
_10				_10
_11		0.0	10.0 - 11.3 Dark Gray (10YR 4/1) fine SAND, little medium sand, trace shells, loose, wet, slight sulfurous odor (SP). Transitions to Dark Gray (10YR 4/1) coarse-medium SAND & fine subround GRAVEL, loose, wet, slight sulfurous odor (GW/SW)	016_L005_10.7 (10.7' - 11.3')
_12		0.0		_12
_13	2.2	0.0	11.3 - 12.2 Dark Gray (5Y 4/1) CLAY, little silt, soft, high plasticity, moist, slight sulfurous odor (OH)	Fill/native soil interface at 11.3'
_14	5.0			_14
_15				_15
_16		0.0	15.0 - 15.3 Dark Gray (5Y 4/1) CLAY, very soft, moderate plasticity, moist, slight sulfurous odor (OH)	016_L005_15.0 (15.0' - 15.5')
_17		0.0	15.3 - 17.0 As Above (15.0' - 15.3'), hue change to Black (5Y 2.5/1), little peat, strong sulfurous odor (OH)	_17
_18	2.0	0.0		_18
_19	5.0			_19
_20				_20
_21		2.3	20.0 - 21.3 Dark Grayish Brown (10YR 4/2) PEAT, little Very Dark Gray (5Y 3/1) CLAY, moderate plasticity, soft, moist, strong sulfurous odor (PT)	016_L005_20.0 (20.0' - 20.5')
_22		5.5		_21
_23	2.6	0.3	21.3 - 22.6 Dark Gray (5Y 4/1) Silty CLAY, soft, moderate plasticity, moist (CL) Transitioning to Greenish Gray (GLE Y2 6/5BG) SILT, little fine sand & clay, firm, low plasticity, moist, no odor (ML)	_22
_24	5.0	0.0		_23
_25		0.0		_24
_25				_25

# SOIL BORING LOG

		PROJECT NO.: 117-0509160.01	Boring No: 016_L005
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 7/8/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ Warren Atkinson		DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 5.0'	GROUND SURFACE ELEVATION:	WELL INSTALLED?: No
MEMO:			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
_26		0.0	25.0 - 28.4 Greenish Gray (GLEY2 6/5BG) SILT, little fine sand & clay, firm, low plasticity, moist, no odor (ML), transitions into Dark Reddish Gray (5YR 4/2) medium-coarse SAND, little fine subround gravel, trace fine sand, loose, wet, no odor (SW)	016_L005_25.0 (25.0' - 25.5')
_27		0.0		_26
_28	3.4 5.0	0.0		_27
_29		0.0		_28
_30		0.0		_29
_31				_30
_32			<b>End of Boring at 30' b.g.s.</b>	_31
_33				_32
_34				_33
_35				_34
_36				_35
_37				_36
_38				_37
_39				_38
_40				_39
_41				_40
_42				_41
_43				_42
_44				_43
_45				_44
_46				_45
_47				_46
_48				_47
_49				_48
_50				_49

# SOIL BORING LOG

		PROJECT NO.:	117-0509160.01	Boring No:	016_L010 / 016_MW07
		PROJECT NAME:	PPG Site 016	LOCATION SKETCH	
COMPLETION DATE:	TOTAL DEPTH OF BOREHOLE:	MONITORING DEVICE:	GEOLOGIST / OFFICE:		
8/3/2011	30	PID MiniRAE 2000	Jim M. / Whitehouse Station		
DRILLING CONTRACTOR / DRILLER:	DRILLING EQUIPMENT:	DRILLING METHOD / BIT:			
EPI \ AJ Benjamin	Geoprobe Track Rig	Direct Push			
SAMPLING METHOD:	DEPTH TO GROUNDWATER	GROUND SURFACE ELEVATION:	WELL INSTALLED?		
5' Sleeves, 1.25"	~ 3.5'		Yes - 016_MW07		
MEMO: Cored through ~ 0.4' of concrete before advancing with geoprobe					

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
0		0.0	0.0 - 1.3 Dark Grayish Brown (2.5Y 5/2) medium-fine SAND & mica flakes, some coarse-fine schist gravel, white cobbles 0.4' -0.5', loose, dry, no odor (SP)	016_L010_0.0 (0.0' - 0.5')
1		0.0		
2	4.5	0.0	1.3 - 2.0 Olive Brown (2.5Y 4/3) SILT & fine SAND, trace gray subround fine gravel, white cobbles 1.8'-1.9', medium-dense, dry, no odor (SM)	016_L010_1.6 (1.6' -2.1')
3	5.0	0.0	2.0 - 2.2 Light Gray (2.5Y 7/2) coarse-fine SAND, little subangular gravel, loose, dry, no odor (SW), 20% COPR (medium-fine subround gravel) 2.1'-2.2'	016_L010_2.1 (2.1' -2.6')
4		0.0	2.2 - 2.5 Reddish Brown (2.5YR 4/4) SILT, little very fine sand, 20% COPR (medium-fine round gravel) 2.2'-2.5', moist, firm, no odor (ML)	016_L010_2.6 (2.6' -3.1')
5		0.0	2.5 - 4.5 Reddish Gray (2.5YR 5/2) coarse SAND, some medium sand, little shells & fine subround to subangular gravel, moist-wet, wet at 3.5', loose, no odor (SW)	20% COPR noted 2.1' - 2.5'
6		0.0	5.0 - 9.0 As Above (2.5' - 4.5'), but with medium-fine subround gravel, Transitions into Gray (7.5YR 5/1) coarse-medium SAND, trace medium-fine subround gravel, fine sand, & shells, loose, wet, slight sulfurous odor (SW)	016_L010_5.0 (5.0' - 5.5')
7		0.0		
8	4.0	0.0		
9	5.0	0.0		
10		0.0		
11		0.0	10.0 - 12.6 Gray (7.5YR 5/1) coarse-medium SAND, trace medium-fine subround gravel, fine sand, & shells, loose, wet, slight sulfurous odor (SW)	016_L010_10.0 (10.0' - 10.5')
12		0.0	Transitions into Dark Gray (2.5Y 4/1) medium SAND, some fine sand, trace coarse sand, fine subround gravel, & shells, loose, wet, slight sulfurous odor (SW)	Fill/native soil interface not recovered
13	2.6	0.0		
14	5.0	0.0		
15		0.0		
16		0.0	15.0 - 15.5 Dark Gray (2.5Y 4/1) medium-fine SAND, trace coarse sand, fine subround gravel, & shells, loose, wet, slight sulfurous odor (SW)	016_L010_15.0 (15.0' - 15.5')
17		0.0	15.5 - 17.7 Dark Gray (5Y 4/1) CLAY, trace shells & silt, high plasticity, soft, moist, slight sulfurous odor (OH), hue change to Very Dark Gray (5Y 3/1) from 16.4' - 16.8'	
18	2.7	0.0		
19	5.0	0.0		
20		0.0		
21		0.0	20.0 - 22.1 As Above (15.5' - 17.7'), little fine-very fine sand 20.4' - 20.5' (OH)	016_L010_20.0 (20.0' - 20.5')
22		0.3		
23	3.2	0.1	22.1 - 22.7 Dark Brown (7.5YR 3/3) PEAT & Black (10YR 2.5/1) organic SILT, trace dark gray clay, soft, moist, strong sulfurous odor (PT)	
24	5.0	4.5	22.7 - 23.2 Bluish Gray (GLE Y2 6/10B) Clayey fine-very fine SAND, little silt, firm, moist-wet, slight sulfurous odor (SM)	
25		0.0		

# SOIL BORING LOG


		PROJECT NO.: 117-0509160.01	Boring No: 016_L010 / 016_MW07
		PROJECT NAME: PPG Site 016	LOCATION SKETCH
COMPLETION DATE: 8/3/2011	TOTAL DEPTH OF BOREHOLE: 30	MONITORING DEVICE: PID MiniRAE 2000	GEOLOGIST / OFFICE: Jim M. / Whitehouse Station
DRILLING CONTRACTOR / DRILLER: EPI \ AJ Benjamin	DRILLING EQUIPMENT: Geoprobe Track Rig	DRILLING METHOD / BIT: Direct Push	
SAMPLING METHOD: 5' Sleeves, 1.25"	DEPTH TO GROUNDWATER: ~ 3.5'	GROUND SURFACE ELEVATION:	WELL INSTALLED? Yes - 016_MW07
MEMO:			

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
_25		0.0	25.0 - 27.5 Greenish Gray (GLE Y2 5/5BG) CLAY, little silt, firm, moist-wet, moderate plasticity, slight sulfurous odor (CH), Transitions into Clayey SILT, some fine-very fine sand, soft, moist-wet, low plasticity, no odor (ML)	016_L010_25.0 (25.0' - 25.5')
_26		0.0		_26
_27		0.0	27.5 - 29.3 Brown (7.5YR 5/2) Silty fine-very fine SAND, little clay, medium-dense, moist-wet, no odor (SM), Transitions into medium-fine SAND, trace coarse sand & fine subround gravel, medium-dense, moist-wet, no odor (SW)	_27
_28	4.3 5.0	0.0		_28
_29		0.0		_29
_30		0.0		_30
_31			<b>End of Boring at 30' b.g.s.</b>	_31
_32			<b>016_MW07 Well Information:</b> 016_MW07 installed on 8/3/11 using 8" hollow stem augers equipped on a geoprobe track rig	_32
_33			2-inch diameter 10-slot SCH40 PVC screen set at 3.5' - 8.5' bgs.	_33
_34			2-inch diameter SCH40 PVC riser from 3.5' bgs. to surface	_34
_35			#1 Sand from 1.5' to 10.0' bgs.	_35
_36			Cement-bentonite grout from 1.5' to 0.5'	_36
_37			Flush-mount completion with concrete protective padding around casing	_37
_38			DTW: 3.87' bgs, measured on 8/19/11	_38
_39				_39
_40				_40
_41				_41
_42				_42
_43				_43
_44				_44
_45				_45
_46				_46
_47				_47
_48				_48
_49				_49
_50				_50




## **APPENDIX C-2 DELINEATION INVESTIGATION**

# SOIL BORING LOG

 <b>TETRA TECH GEO</b>		PROJECT NO: 194 8214	Boring No: 016-F005
		PROJECT NAME: PPG SITE 16	LOCATION SKETCH
COMPLETION DATE: 12-20-12	TOTAL DEPTH OF BOREHOLE: 5' bgs	MONITORING DEVICE: PID	GEOLOGIST / OFFICE: I PAUIS Kot
DRILLING CONTRACTOR / DRILLER: EPI / Bob	DRILLING EQUIPMENT: Geoprobe	DRILLING METHOD / BIT: Direct push	
SAMPLING METHOD: 5' Alaves	DEPTH TO GROUNDWATER:	GROUND SURFACE ELEVATION:	WELL INSTALLED? —
MEMO:			

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
0				
1		○	0-1' DK brown m-f SAND w/ silt and little m-c subrounded gravel, dense, dry-moist, no odor	016-F005-1.0
2	4.3			
3	5.0	○	1-2' Gray m-f SAND w/ mica fragments	016-F005-2.0
4		○	2-5 Orange-red-brown med SAND w/ little silt and rounded gravel, firm, dense	
5			no odor	
6				
7			ESB @ 5' bgs	
8				
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# SOIL BORING LOG

 <b>TETRA TECH GEO</b>		PROJECT NO: 194-8214	Boring No: 016-G020 LOCATION SKETCH
		PROJECT NAME: PPG	
COMPLETION DATE: 1-15-13	TOTAL DEPTH OF BOREHOLE: 35' bgs	MONITORING DEVICE: PID	GEOLOGIST / OFFICE: TRAVIS KOT
DRILLING CONTRACTOR / DRILLER: EPI / BOB	DRILLING EQUIPMENT: Geoprobe	DRILLING METHOD / BIT: Direct push.	
SAMPLING METHOD: 5' sleeves	DEPTH TO GROUNDWATER:	GROUND SURFACE ELEVATION:	WELL INSTALLED? _____
MEMO:			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY	
-1	0.8 <hr/> 5.0	○	0-0.5' DK brown (10YR <sup>3</sup> /2) m-f silty SAND, vegetation near top of sleeve.	016-G020-0.0	
-2					
-3		○	0.5-0.8' Gray (10YR <sup>6</sup> /1) muscovite fragments loose, dry		
-4					
-5					
-6	2.0 <hr/> 5.0	○	5-10' DK brown-gray (10YR <sup>4</sup> /2) mica frags, some m-f silty sand, loose, moist (Fill), med-coarse gravel throughout.	016-G020-5.0	
-7					
-8					
-9					
-10					
-11	1.1 <hr/> 5.0	○	10-15' DK brown m-c mica sand, some silt loose, very moist-wet, trace cobbles at ~11.0' bgs	016-G020-10.0	
-12					
-13					
-14					
-15					
-16	1.7 <hr/> 5.0	○	15-16.2' DK gray-brown m-c gravel and cobbles, some med sand and silt, med loose	016-G020-20.0	
-17					
-18		○	16.2-20 Black mica red sand, very moist (Fill)		
-19					
-20					
-21	3.3 <hr/> 5.0	○	20-20.7' Black med mica SAND, loose, moist	016-G020-20.5	
-22		○	20.7-25' DK brown CLAY (10YR <sup>2</sup> /1) some silt and vegetation, trace shells very moist, soft, light sulfur odor		
-23					
-24					
-25					Fill/nature interface at ~20.7' bgs

# SOIL BORING LOG

		PROJECT NO.: 194-8214		Boring No: 016-G020	
		PROJECT NAME: PPG		LOCATION SKETCH	
COMPLETION DATE: 1-15-13	TOTAL DEPTH OF BOREHOLE: 35' bgs	MONITORING DEVICE: PID	GEOLOGIST / OFFICE: TRAVIS KOT		
DRILLING CONTRACTOR / DRILLER: Epi / Bub		DRILLING EQUIPMENT: Geoprobe	DRILLING METHOD / BIT: Direct push		
SAMPLING METHOD: 5' sleeves	DEPTH TO GROUNDWATER	GROUND SURFACE ELEVATION:	WELL INSTALLED?		
MEMO:					

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
26		0	25-25.8' Peat	016-G020-25.0
27	4.0	0	25.8-26.3 Green-gray (GLEY 2 <sup>4</sup> /10G) CLAY, some silt, soft, moist	
28	5.0	0	26.3-27.7' Gray silty CLAY w/ some moist m-f SAND	
29		0	27.7-30' Red brown (7.5YR <sup>2</sup> /4) med SAND, trace fine sand, wet, transition to coarse SAND	016-G020-29.5
30				
31		0	30-31.1' Red brown (7.5YR <sup>4</sup> /6) m-f SILT w/ some sand and gravel, dense, moist.	
32	2.2	0	31.1-31.5 Red brown (7.5YR <sup>4</sup> /6) med SAND, trace silt, loose, wet	
33	5.0	0	31.5-35' Red brown (7.5YR <sup>4</sup> /6) SILT w/ med sand and gravel, dense, very moist	
34				
35				
36			EOB @ 35' bgs	
37				
38				
39				
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41				
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# SOIL BORING LOG

 <b>TETRA TECH GEO</b>		PROJECT NO: 194-8214	Boring No: 016-J019
		PROJECT NAME: PPG SITE 16	LOCATION SKETCH
COMPLETION DATE: 12-20-12	TOTAL DEPTH OF BOREHOLE: 25' bgs	MONITORING DEVICE: PID	GEOLOGIST / OFFICE: TRAVIS KOT
DRILLING CONTRACTOR / DRILLER: Epi / Bob		DRILLING EQUIPMENT: Creoprobe	DRILLING METHOD / BIT: Direct push
SAMPLING METHOD: 5' sleeves	DEPTH TO GROUNDWATER	GROUND SURFACE ELEVATION:	WELL INSTALLED?
MEMO:			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
0				
1		0	0-1 DK gray m-f SAND, trace silt, med firm, med-loose, moist to wet no odor.	016-J019-0.0
2	3.0			
3	5.0	0	1-5 Gray brown m-f SAND, trace rounded gravel, med-firm, wet, no odor.	
4				
5				
6		0.3	5-9 DK gray med SAND, trace fine sand, loose, wet, no odor	016-J019-5.0'
7	3.41			
8	5.0	0	9-10 DK gray m-f SAND, little silt, med-dense, wet.	
9				
10				
11		0	10-13 DK gray med SAND, trace silt, dense-loose, saturated, no odor.	
12	5.0			
13	5.0	0	13-14 DK gray fine SAND, med-dense, saturated, no odor	
14				
15		0	14-14.5 DK gray organic silt / soft silty-clay, malleable, moist, no odor	
16		0	14.5-15 Black silty CLAY, soft, moist, slight hydrocarbon odor.	
17				
18				
19				
20				
21		0	15-19 DK gray CLAY, little silt, soft, moist, no odor	016-J019-15.0
22				
23		0	19-20 Gray CLAY, little silt, soft, moist, no odor	
24		0	PEAT in last 2" of sleeve.	
25				

# SOIL BORING LOG

		PROJECT NO: <b>194-0214</b>		Boring No: <b>016-1019</b>	
		PROJECT NAME: <b>PPG SITE 16</b>		LOCATION SKETCH	
COMPLETION DATE <b>12-20-12</b>	TOTAL DEPTH OF BOREHOLE <b>25' bgs</b>	MONITORING DEVICE <b>PID</b>	GEOLOGIST / OFFICE: <b>TRAVIS KOT</b>		
DRILLING CONTRACTOR / DRILLER: <b>Epi / Bob</b>		DRILLING EQUIPMENT: <b>Geoprobe</b>	DRILLING METHOD / BIT: <b>Direct push</b>		
SAMPLING METHOD <b>S slaved</b>	DEPTH TO GROUNDWATER	GROUND SURFACE ELEVATION:	WELL INSTALLED?		
MEMO:					

DEPTH (feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
26		0	20-21 PEAT, some vegetation, moist, soft, sulfur odor.	26
27				27
28		0	21-24 Gray fine silty SAND, trace clay, med-dense, moist	28
29				29
30		0	24-25 Gray CLAY, some silt, med-moist med-firm, no odor	30
31				31
32			EOB @ 25' bgs.	32
33				33
34				34
35				35
36				36
37				37
38				38
39				39
40				40
41				41
42				42
43				43
44				44
45				45
46				46
47				47
48				48
49				49
50				50

# SOIL BORING LOG

 <b>TETRA TECH GEO</b>		PROJECT NO: 194-8214	Boring No: 016-K007
		PROJECT NAME: PPG SITE 16	LOCATION SKETCH
COMPLETION DATE: 12-20-12	TOTAL DEPTH OF BOREHOLE: 5' bgt	MONITORING DEVICE: PID	GEOLOGIST / OFFICE: TRAVIS KOT
DRILLING CONTRACTOR / DRILLER: Epi / Bob	DRILLING EQUIPMENT: Geoprobe	DRILLING METHOD / BIT: Direct push	
SAMPLING METHOD: 5' sleeves	DEPTH TO GROUNDWATER:	GROUND SURFACE ELEVATION:	WELL INSTALLED?: -
MEMO:			

DEPTH (feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
0				
1		0	0-2 Light brown f-m SAND, little silt	
2	3.0		med-coarse subrounded gravel (Fill)	
3	5.0		Loose, dry	
4		0	2-5 DK brown m-f SAND, some silt, firm,	016-K007-4.0
5			med-dense, moist, no odor	
6			EOB @ 5' bgt	
7				
8				
9				
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# SOIL BORING LOG

<b>TETRA TECH GEO</b>		PROJECT NO: 1948214	Boring No: 016 K013
		PROJECT NAME: PPG SITE 016	LOCATION SKETCH
COMPLETION DATE: 1-14-13	TOTAL DEPTH OF BOREHOLE: 30' logs	MONITORING DEVICE: PID	GEOLOGIST / OFFICE: TRAVIS KOT
DRILLING CONTRACTOR / DRILLER: EPI / BOB FLEMING	DRILLING EQUIPMENT: GEOPROBE	DRILLING METHOD / BIT: DIRECT PUSH	
SAMPLING METHOD: 5' SLEEVES	DEPTH TO GROUNDWATER:	GROUND SURFACE ELEVATION:	WELL INSTALLED? MW-10
MEMO:			


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
0				
1		0	0-0.5' DK brown m-f silty SAND, some gravel, moist, no odor	Collected 016-K013-0.0
2	3.75	0	0.5-1.3' Red brown (5yR 3/4) SILT, trace fine sand and gravel, dense, low moisture	
3	5.0	0	1.3-5' Brown (10yR 4/2) med SAND, loose, moist wet from 3-5'	
4				
5				
6		0	5-6.5' Gray brown (10yR 3/1) med-coarse SAND, some shells, loose, saturated	
7	3.75	0	6.5-10' (10yR 4/1) Med SAND, trace shells and fine gravel, loose, wet, no odor	
8	5.0			
9				
10				
11		0	10-11.83' Same as above (SAA)	
12	3.25	0	11.83-12' DK gray (10yR 3/1) CLAY, trace sand, loose, saturated, no odor.	
13	5.0	0	12-15' Brown gray (10yR 3/2) coarse SAND transitioning to fine SAND, saturated.	
14				
15				
16		0	15-15.75' SAA Fill / native interface at 15.75'	Collected
17	2.58	0	15.75-20 DK gray (GLEY 1 3/4) silty clay, loose, very moist, trace shells, slight sulfur odor.	016-K013-19.5'
18	5.0			
19				
20				
21		0	20-21.33' SAA	
22	3.08	0	21.33-22.33 Peat, abundant vegetation sulfur odor, moist	
23	5.0			
24		0	22.33-25 Gray (GLEY 1 3/4) Gray SILT, loose, moist	Collected 016-K013-24'
25				

# SOIL BORING LOG

		PROJECT NO.: 194-8214		Boring No: 016 K013		
		PROJECT NAME: PPG 010		LOCATION SKETCH		
COMPLETION DATE: 1-14-13	TOTAL DEPTH OF BOREHOLE: 30' bgs	MONITORING DEVICE: PID	GEOLOGIST / OFFICE: TRAVIS KOT			
DRILLING CONTRACTOR / DRILLER: EPI / BOB FLEMING	DRILLING EQUIPMENT: Greeprobe	DRILLING METHOD / BIT: Direct push				
SAMPLING METHOD: Sleeves	DEPTH TO GROUNDWATER:	GROUND SURFACE ELEVATION:	WELL INSTALLED? MW-10			
MEMO:						


DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
26	441	0	25-28' Gray SILT (GLEY 1 1/2") some - trace clay moist, med dense	
27				
28	5.0		28-30' (5 yr 3/4) med SAND, some SILT, loose wet, fluid sands restrict further depth. EOB @ 30' bgs.	
29				
30				
31			MW-10: Riser from 3' ags - 29' bgs Screen from 29-34' bgs. 2" PVC.	
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33				
34				
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# SOIL BORING LOG

 <b>TETRA TECH GEO</b>		PROJECT NO. <b>194-8214</b>	Boring No: <b>016-K013</b> LOCATION SKETCH
		PROJECT NAME <b>PPG SITE</b>	
COMPLETION DATE <b>12-20-12</b>	TOTAL DEPTH OF BOREHOLE <b>5' bgs</b>	MONITORING DEVICE <b>PID</b>	GEOLOGIST / OFFICE: <b>TRAVIS KOT</b>
DRILLING CONTRACTOR / DRILLER: <b>Epi / Bob</b>	DRILLING EQUIPMENT: <b>Geoprobe</b>	DRILLING METHOD / BIT: <b>Direct push</b>	
SAMPLING METHOD: <b>5' sleeves</b>	DEPTH TO GROUNDWATER	GROUND SURFACE ELEVATION:	WELL INSTALLED?
MEMO:			

DEPTH (Feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
-1		○	0-2' DK brown m-f silty SAND and subangular gravel and wood throughout, med firm, dry-moist no odor.	0
-2	4.3			1
-3	5.0			2
-4		○		3
-5				4
-6		○	2-4.5' Brown med SAND, trace rounded med gravel, moist-wet, no odor  4.5-5' Brown m-f SAND, soft, wet, no odor saturated in last 6" of sleeve.  EOB @ 5.0' bgs	5
-7				6
-8				7
-9				8
-10				9
-11				10
-12				11
-13				12
-14				13
-15				14
-16				15
-17				16
-18				17
-19				18
-20				19
-21				20
-22				21
-23				22
-24				23
-25				24
-26				25

# SOIL BORING LOG

 <b>TETRA TECH GEO</b>		PROJECT NO: 194-8214	Boring No: 016-LO13
		PROJECT NAME: PPG SITE 016	LOCATION SKETCH
COMPLETION DATE: 1-14-13	TOTAL DEPTH OF BOREHOLE: 25' bgs	MONITORING DEVICE: PID	GEOLOGIST / OFFICE: TRAVIS POT
DRILLING CONTRACTOR / DRILLER: EPI / BOB	DRILLING EQUIPMENT: Greigprobe	DRILLING METHOD / BIT: Direct push	
SAMPLING METHOD: 5' Sherwin	DEPTH TO GROUNDWATER:	GROUND SURFACE ELEVATION:	WELL INSTALLED? MW-11
MEMO:			

DEPTH (feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
1		0	0-1.75' DK brown silty SAND and brick, gravel (Fill)	Collected 016-LO13-0.0
2	4.0			
3	5.0	0	1.75-5' Brown (5yr <sup>4</sup> / <sub>2</sub> ) med SAND, trace silt, loose, very moist.	
4				
5				
6		0	5-6.5 (5yr <sup>4</sup> / <sub>2</sub> ) med SAND, some silt, loose, wet	Collected 016-LO13-5.0
7	3.0	0	6.5-10 (7.5yr <sup>3</sup> / <sub>2</sub> ) med-coarse SAND, trace silt	
8	5.0		loose, wet	
9				
10				
11		0	10-13 (7.5yr <sup>3</sup> / <sub>1</sub> ) DK brown-f-c SAND, trace silt, wet, med loose, no odor.	016-LO13-10.0
12	3.58			
13	5.0	0	13-15 DK gray-brown (2.5yr <sup>2.5</sup> / <sub>1</sub> ) silty CLAY trace fine sand, loose, wet.	
14				
15				
16		0	15-16' (DK brown) (2.5yr <sup>3</sup> / <sub>1</sub> ) med SAND, trace silt, loose, wet. (Fill/nature ~ 16' bgs).	016-LO13-15.5'
17	3.66			
18	5.0	0	16-20' DK brown to black (5yr <sup>2.5</sup> / <sub>1</sub> ) silty CLAY, loose, soft-moist, hydrocarbon odor	
19				
20				
21		0	20-21.75' DK gray (5yr <sup>2.5</sup> / <sub>1</sub> ) silty CLAY, soft, moist	016-LO13-20.0'
22	3.0			016-LO13-24.0'
23	5.0	0	21.75-25' Root, abundant vegetation, soft-dense, moist, sulfur odor.	
24				
25			FOB 25' bgs	

# SOIL BORING LOG

<b>TETRA TECH GEO</b>		PROJECT NO: 194-8214	Boring No: 016-LO20 LOCATION SKETCH
		PROJECT NAME: PPG	
COMPLETION DATE 1-15-13	TOTAL DEPTH OF BOREHOLE 20' bgs	MONITORING DEVICE PID	GEOLOGIST / OFFICE: TRAVIS KOT
DRILLING CONTRACTOR / DRILLER: EPI / BOB	DRILLING EQUIPMENT: Geoprobe	DRILLING METHOD / BIT: Direct push	
SAMPLING METHOD S' sleeves	DEPTH TO GROUNDWATER	GROUND SURFACE ELEVATION	WELL INSTALLED? MN-9
MEMO:			

DEPTH (feet)	RECOVERY (feet)	OVM (PPM)	BURMEISTER SYSTEM SOIL DESCRIPTION	FIELD NOTES & SAMPLE SUMMARY
-1	4.0	0	0-1' Brown-black mft silty SAND, some gravel, med dense, moist.	016-LO20-0.5-1 (1-5% COPR)
-2	3.0			
-3	5.0	0	1-5' (7.5 yr <sup>3/3</sup> ) Brown-orange med SAND, trace fine SAND and subangular-rounded gravel, loose, very wet at 3.5' bgs.	016-LO20-0.0-0.5 016-LO20-1.0-1.5'
-4				
-5				
-6	3.0	0	5-10 (7.5 yr <sup>3/2</sup> ) Brown m-c SAND, some shells at 5.8-6.7', saturated, med dense, trace fine sand at 7.5-10'.	016-LO20-5.0
-7	5.0			
-8				
-9				
-10				
-11	3.7	0	10-10.6 (5 yr <sup>4/1</sup> ) DK gray silty CLAY, soft very moist	016-LO20-10.0
-12	5.0		10.6-15' (2.5 yr <sup>5/2</sup> ) DK gray-brown CLAY, trace silt, trace shells, sulfur odor	
-13			Fill/native interface at ~ 10' bgs	
-14				
-15				
-16	3.7	0	15-15.8' (10 yr <sup>4/2</sup> ) Brown m-c SAND, trace silt, some shells, loose, wet	016-LO20-15.0'
-17	5.0	0	15.8-18.2' (10 yr <sup>4/2</sup> ) Brown m-c SAND, trace silt and med rounded gravel, loose, wet	
-18		0	18.2-20' (10 yr <sup>4/2</sup> ) Gray brown SILT, trace clay, soft, wet	016-LO20-19.0
-19				
-20				
-21			EOB @ 20' bgs.	
-22			MN-9: ~3' well stickup	
-23			2" PVC riser from +3' - 3' bgs	
-24			Riser screen from 3' - 8' bgs	
-25				