



APPENDIX C-1 INITIAL INVESTIGATION

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|--|------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 065_A005 |
| | | PROJECT NAME: PPG Site 065 | | LOCATION SKETCH |
| COMPLETION DATE: 8/1/2011 | TOTAL DEPTH OF BOREHOLE: 20 | 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 ~ 1.6' | GROUND SURFACE ELEVATION: | WELL INSTALLED? No | |
| MEMO: | | | | |

| DEPTH (Feet) | RECOVERY (feet) | OVM (PPM) | BURMEISTER SYSTEM SOIL DESCRIPTION | FIELD NOTES & SAMPLE SUMMARY |
|-----------------|--------------------|--------------|--|-------------------------------------|
| 0 | | 72.1 | 0.0 - 0.6 Dark Gray (2.5Y 4/1) fine SAND, little medium sand, loose, moist, strong solvent odor, wood fragments 0.5' - 0.6' (SP) | 065_A005_0.0 (0.0' - 0.5') |
| 1 | | 23.7 | | |
| 2 | | 12.9 | 0.6 - 1.8 Very Dark Gray (2.5Y 3/1) coarse-fine SAND, some coarse-medium gray angular gravel & cobbles, little silt, medium-dense, moist, wet 1.6' - 1.8', strong solvent odor (SW/SM) | |
| 3 | 2.8 | 9.0 | | |
| 4 | 5.0 | 13.1 | 1.8 - 2.1 Very Dark Gray (2.5Y 3/1) medium-fine SAND, trace coarse sand, trace fine subround gravel, & silt, loose, moist-wet, strong solvent odor (SW/SP) | |
| 5 | | | 2.1 - 2.8 Black (2.5Y 2.5/1) fine SAND, some coarse-medium sand & coarse-medium subangular-subround gravel (coal & slag), little silt, medium-dense, moist-wet, strong solvent odor (SW/SM) | |
| 6 | | 625.0 | 5.0 - 5.7 As Above (2.1' - 2.8'), Very Dark Gray (2.5Y 3/1) (SW/SM) | 065_A005_5.0 (5.0' - 5.5') |
| 7 | | 540.0 | 5.7 - 6.6 Dark Grayish Brown (2.5Y 4/2) Silty fine SAND & coarse-fine subangular-subround GRAVEL, very loose, wet, strong solvent odor (GM) | |
| 8 | 3.5 | 332.0 | | |
| 9 | 5.0 | 167.0 | 6.6 - 8.5 Dark Grayish Brown (2.5Y 4/2) Silty medium-fine SAND, little medium-fine subangular to subround gravel, loose, wet, slight solvent odor (SM) | |
| 10 | | 81.0 | | |
| 11 | | 25.3 | 10.0 - 10.2 As Above (6.6' - 8.5'), no gravel (SM) | 065_A005_10.0 (10.0' - 10.5') |
| 12 | | 9.1 | 10.2 - 10.7 Very Dark Grayish Brown (10YR 3/2) PEAT & SILT, very soft, moist, slight sulfurous odor (PT) | Fill/Native soil interface at 10.2' |
| 13 | 1.1 | | 10.7 - 10.8 Dark Reddish Brown (2.5YR 3/4) Sandstone COBBLES (GP) | |
| 14 | 5.0 | | 10.8 - 11.1 Greenish Gray (GLEY2 6/5BG) Clayey fine-very fine SAND, little silt, moist, soft, no odor (SC) | |
| 15 | | | | |
| 16 | | 3.1 | 15.0 - 15.3 Greenish Gray (GLEY2 6/5BG) CLAY, little silt, moderate plasticity, soft, moist, no odor (CH) | 065_A005_15.0 (15.0' - 15.5') |
| 17 | | 3.5 | | |
| 18 | 3.0 | 2.5 | 15.3 - 15.5 Gray (GLEY1 5/N) medium-fine SAND, little silt, medium-dense, moist-wet, no odor (SM) | PID bkgd: 1.4 ppm (high humidity) |
| 19 | 5.0 | 1.6 | 15.5 - 18.0 Reddish Brown (7.5YR 5/3) medium-fine SAND, trace coarse sand & fine subangular gravel, wet, loose, no odor (SW), Transitions to Reddish Brown (5YR 4/4) SILT, little very fine sand & coarse-fine red siltstone gravel, trace coarse-fine greenish gray subround gravel, stiff, dry, no odor (ML) | 065_A005_17.5 (17.5' - 18.0') |
| 20 | | 1.6 | | |
| 21 | | | End of Boring at 20' bgs. | |
| 22 | | | | |
| 23 | | | | |
| 24 | | | | |
| 25 | | | | |


SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|--|------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 065_A006 |
| | | PROJECT NAME: PPG Site 065 | | LOCATION SKETCH |
| COMPLETION DATE: 8/1/2011 | TOTAL DEPTH OF BOREHOLE: 20 | 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 ~ 2.0' | GROUND SURFACE ELEVATION: | WELL INSTALLED? No | |
| MEMO: | | | | |

| DEPTH (Feet) | RECOVERY (feet) | OVM (PPM) | BURMEISTER SYSTEM SOIL DESCRIPTION | FIELD NOTES & SAMPLE SUMMARY |
|-----------------|--------------------|--------------|---|--|
| 0 | | 738.0 | 0.0 - 0.3 Gray (2.5Y 5/1) fine SAND, little medium sand, some light greenish gray sandstone cobbles & coarse-medium sand, loose, moist (SP) | 065_A006_0.0 (0.0' - 0.5') |
| 1 | | 1060.0 | | |
| 2 | | 236.0 | 0.3 - 1.5 Very Dark Gray (GLE Y1 3/N) coarse-medium angular GRAVEL & COBBLES, some coarse-fine sand, trace silt, dense, moist (GW) | Strong solvent odor in 0' - 5' interval |
| 3 | 4.3 | 1826.0 | | |
| 4 | 5.0 | 439.0 | 1.5 - 2.0 Black (2.5Y 2.5/1) medium-fine SAND, wet, loose (SW) | |
| 5 | | 131.0 | 2.0 - 3.2 Dark Grayish Brown (10YR 4/2) coarse-fine SAND, little silt & coal, little ang. medium-fine gravel, trace slag, wet, loose, slight sheen (SW) | |
| 6 | | 124.0 | | |
| 7 | | 60.0 | 3.2 - 3.5 Red (2.5YR 4/6) coarse-fine angular sandstone GRAVEL, some coarse-medium SAND, loose, wet, slight sheen (GW) | 065_A006_3.8 (3.8' - 4.2') (gravel at 4.3') |
| 8 | | | 3.5 - 4.3 Dark Grayish Brown (10YR 4/2) Silty CLAY, little fine sand & fine subround gravel, firm, moist (OH), Transitions to Dark Gray (5Y 4/1) Silty very fine SAND, little clay, loose, moist (SM) | |
| 9 | 4.0 | 17.1 | | |
| 10 | 5.0 | 20.9 | 5.0 - 6.3 Dark Grayish Brown (10YR 4/2) Silty medium-fine SAND, some medium-fine subround-subangular sandstone gravel, firm, moist-wet (SM) | Slight solvent odor in 5' - 10' interval |
| 11 | | 7.4 | | |
| 12 | | 10.5 | 6.3 - 6.9 Strong Brown (7.5YR 5/6) SILT, some fine sand, little coarse-fine subround-subangular sandstone gravel, firm, moist-wet (ML) | |
| 13 | | 13.2 | | |
| 14 | | 9.1 | 6.9 - 8.7 Dark Grayish Brown (2.5Y 4/2) Silty fine SAND, little medium sand, trace coarse-medium round gravel, medium-dense, moist-wet (SM) | 065_A006_8.2 (8.2' - 8.7') |
| 15 | | 7.4 | | |
| 16 | | | 8.7 - 9.0 White (GLE Y1 8/N) coarse GRAVEL & COBBLES (gneiss), pulverized (from drilling) fine sand, loose, dry, no odor (GP) | (cobbles 8.7' - 9', fill/native soil interface btw 9'-10') |
| 17 | | 16.9 | | |
| 18 | | 55.7 | 10.0 - 11.7 Very Dark Grayish Brown (10YR 3/2) PEAT, little silt, very soft, moist, slight sulfurous odor (PT) | PID bkgd: 0.7 ppm (high humidity) |
| 19 | | 34.4 | | |
| 20 | 2.2 | 0.8 | 11.7 - 12.2 Greenish Gray (GLE Y2 5/5BG) Silty CLAY, trace very fine sand & fine subround gravel 12.1' - 12.2', soft, moderate palsticity, moist, no odor (CH) | 065_A006_11.7 (11.7' - 12.2') |
| 21 | 5.0 | | | |
| 22 | | | | |
| 23 | | | | |
| 24 | | | | |
| 25 | | | | |
| 26 | | | | |
| 27 | | | | |
| 28 | | | | |
| 29 | | | | |
| 30 | | | | |
| 31 | | | | |
| 32 | | | | |
| 33 | | | | |
| 34 | | | | |
| 35 | | | | |
| 36 | | | | |
| 37 | | | | |
| 38 | | | | |
| 39 | | | | |
| 40 | | | | |
| 41 | | | | |
| 42 | | | | |
| 43 | | | | |
| 44 | | | | |
| 45 | | | | |
| 46 | | | | |
| 47 | | | | |
| 48 | | | | |
| 49 | | | | |
| 50 | | | | |
| 51 | | | | |
| 52 | | | | |
| 53 | | | | |
| 54 | | | | |
| 55 | | | | |
| 56 | | | | |
| 57 | | | | |
| 58 | | | | |
| 59 | | | | |
| 60 | | | | |
| 61 | | | | |
| 62 | | | | |
| 63 | | | | |
| 64 | | | | |
| 65 | | | | |
| 66 | | | | |
| 67 | | | | |
| 68 | | | | |
| 69 | | | | |
| 70 | | | | |
| 71 | | | | |
| 72 | | | | |
| 73 | | | | |
| 74 | | | | |
| 75 | | | | |
| 76 | | | | |
| 77 | | | | |
| 78 | | | | |
| 79 | | | | |
| 80 | | | | |
| 81 | | | | |
| 82 | | | | |
| 83 | | | | |
| 84 | | | | |
| 85 | | | | |
| 86 | | | | |
| 87 | | | | |
| 88 | | | | |
| 89 | | | | |
| 90 | | | | |
| 91 | | | | |
| 92 | | | | |
| 93 | | | | |
| 94 | | | | |
| 95 | | | | |
| 96 | | | | |
| 97 | | | | |
| 98 | | | | |
| 99 | | | | |
| 100 | | | | |


End of Boring at 20' bgs.

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|--|------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 065_A007 |
| | | PROJECT NAME: PPG Site 065 | | LOCATION SKETCH |
| COMPLETION DATE: 8/1/2011 | TOTAL DEPTH OF BOREHOLE: 20 | 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 ~ 1.5' | GROUND SURFACE ELEVATION: | WELL INSTALLED? No | |
| MEMO: | | | | |


| DEPTH (Feet) | RECOVERY (feet) | OVM (PPM) | BURMEISTER SYSTEM SOIL DESCRIPTION | FIELD NOTES & SAMPLE SUMMARY |
|-----------------|--------------------|--------------|---|--|
| 0 | | | | |
| 1 | | 40.7 | 0.0 - 0.4 Dark Brown (7.5YR 3/2) fine SAND, little medium sand, moist, loose, wood fragments at 0.4' (SP) | 065_A007_0.0 (0.0' - 0.5') |
| 2 | 3.6 | 73.6 | 0.4 - 1.8 Black (2.5Y 2.5/1) medium-fine SAND grading into coarse-fine SAND, some coarse-fine angular gray gravel & cobbles, trace silt & coal, moist, wet 1.5' - 1.8', sheen/staining 1.5' - 1.8' (SW) | Strong solvent odor in 0' - 5' interval |
| 3 | 5.0 | 865.0 | 1.8 - 2.1 Brown (10YR 4/3) SILT, some fine sand, little medium sand, stiff, moist (ML) | |
| 4 | | 625.0 | 2.1 - 3.6 Black (2.5Y 2.5/1) medium-fine SAND, some gravel, little silt, wet, loose, little white (2.5Y 8/1) silty clay stringers, silty clay 3' - 3.3' (SM/CL) | 065_A007_3.1 (3.1' - 3.6') |
| 5 | | 784.0 | 3.3 - 3.6 Dark Gray (5Y 4/1) medium-fine SAND, little silt & gray angular gravel, loose, wet, slight staining (SM) | |
| 6 | | 129.0 | | |
| 6 | | 13.7 | 5.0 - 7.4 Black stained (2.5Y 2.5/1) medium-fine SAND, little coarse-fine angular to subround gravel, trace coal, slag, & glass, white silty clayey medium-fine sand at 6.5', less staining 5.8' - 6.5' (Dark Gray 5Y 4/1) (SP/SW) | Slight solvent odor in 5' - 10' interval |
| 7 | | 14.0 | | |
| 8 | 2.4 | 5.0 | | 065_A007_6.9 (6.9' - 7.4') |
| 9 | 5.0 | 5.0 | | Fill/native soil interface between 7.4' - 10', not recovered |
| 10 | | 4.6 | | |
| 11 | | 5.1 | 10.0 - 11.6 Very Dark Grayish Brown (10YR 3/2) PEAT, little silty clay, very soft, moist, strong sulfurous odor (PT) | |
| 12 | | 32.8 | | |
| 13 | 1.9 | 31.0 | 11.6 - 11.9 Greenish Gray (GLEY2 5/5BG) CLAY, soft, moist, moderate plasticity, no odor (CH) | 065_A007_11.0 (11.0' - 11.5') |
| 14 | 5.0 | 0.7 | | |
| 15 | | | | |
| 16 | | 0.7 | 15.0 - 15.9 As Above (11.6' - 11.9'), Transitions into fine-very fine sand, little clay (CL) | 065_A007_15.0 (15.0' - 15.5') |
| 17 | | 1.2 | | |
| 18 | 3.4 | 1.3 | 15.9 - 18.4 Brown (7.5YR 5/3) medium-fine SAND, trace coarse sand & fine subangular gravel, loose, wet, no odor (SW), Transitions to Reddish Brown (5YR 4/4) SILT, little very fine sand & coarse-fine red sandstone gravel, stiff, moist-dry, no odor (ML) | PID bkgd: 0.7 to 1.3 ppm (high humidity) |
| 19 | 5.0 | 1.5 | | |
| 20 | | 1.3 | | |
| 21 | | 1.3 | | |
| 22 | | | End of Boring at 20' bgs. | |
| 23 | | | | |
| 24 | | | | |
| 25 | | | | |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|--|------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 065_A008 |
| | | PROJECT NAME: PPG Site 065 | | LOCATION SKETCH |
| COMPLETION DATE: 8/1/2011 | TOTAL DEPTH OF BOREHOLE: 20 | 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 ~ 1.3' | GROUND SURFACE ELEVATION: | WELL INSTALLED? No | |
| MEMO: | | | | |


| DEPTH (Feet) | RECOVERY (feet) | OVM (PPM) | BURMEISTER SYSTEM SOIL DESCRIPTION | FIELD NOTES & SAMPLE SUMMARY |
|-----------------|--------------------|--------------|--|--|
| 0 | | 179.0 | 0.0 - 0.7 Dark Brown (7.5YR 3/2) fine SAND, little medium sand, moist, loose (SP) | 065_A008_0.0 (0.0' - 0.5') |
| 1 | | 42.5 | 0.7 - 1.4 Black (2.5Y 2.5/1) medium-fine SAND, little coal & fine gravel (slag), loose, moist, wet at 1.3', faint sheen, staining (SW) | |
| 2 | 3.7 | 269.0 | 1.4 - 1.8 Black (2.5Y 2.5/1) Silty coarse-fine SAND & coarse-fine subround-angular GRAVEL (slag & coal), loose, wet, faint sheen, staining (GW) | Slight solvent odor in 0' - 5' interval |
| 3 | 5.0 | 116.0 | 1.8 - 2.1 Dark Gray (2.5Y 4/1) medium SAND, little gray-green Silty CLAY 2'-2.1', loose, wet, faint sheen, staining (SP/OH) | |
| 4 | | 74.3 | 2.1 - 2.5 As Above (1.4' - 1.8') (GW) | |
| 5 | | 14.0 | 2.5 - 3.7 Dark Gray (5Y 4/1) Silty CLAY, soft, moist-wet (OH), Transitions to Olive Gray (5Y 4/2) fine SAND, little medium sand, loose, wet (SP) | |
| 6 | | 20.7 | | |
| 6 | | 14.4 | 5.0 - 5.5 Olive Gray (5Y 4/2) fine SAND, little medium sand, loose, wet (SP) | 065_A008_5.0 (5.0' - 5.5') |
| 7 | | 4.8 | 5.5 - 7.5 Grayish Brown (2.5Y 5/2) Silty fine SAND, little medium sand & coarse-fine angular gray gravel, trace clay, very loose, wet (SM) | Slight solvent odor in 5' - 10' interval |
| 8 | 2.5 | 3.1 | | 065_A008_7.0 (7.0' - 7.5') |
| 9 | 5.0 | 4.3 | | Fill/native soil interface between 7.5' - 10', not recovered |
| 10 | | 3.4 | | |
| 11 | | 9.6 | 10.0 - 10.7 Dark Grayish Brown (10YR 4/2) PEAT, little silty clay, very soft, moist, strong sulfurous odor (PT) | 065_A008_10.4 (10.4' - 10.9') |
| 12 | | 3.0 | 10.7 - 10.8 Black (2.5Y 2.5/1) coarse angular GRAVEL (GP) | |
| 13 | 0.9 | | 10.8 - 10.9 Greenish Gray (GLEY2 6/5BG) coarse-medium SAND, little silt & gray subangular sandstone gravel, loose, moist, no odor (SM) | |
| 14 | 5.0 | | | |
| 15 | | 0.7 | 15.0 - 16.5 Gray (10YR 5/1) Clayey fine SAND, little silt, medium-dense, moist-wet, no odor (SC), Transitions into Silty medium-fine SAND, trace clay, medium-dense, wet, no odor (SM) | 065_A008_15.0 (15.0' - 15.5') |
| 16 | | 0.4 | | |
| 17 | 4.1 | 0.2 | 16.5 - 19.1 Brown (7.5YR 4/3) SILT, little clay & coarse-fine subround gravel (gray-green to red-brown), stiff, moist, no odor (ML) | PID bkgd: 0.2 ppm (high humidity) |
| 18 | 5.0 | 0.1 | | |
| 19 | | 0.2 | | |
| 20 | | 0.2 | | |
| 21 | | 0.2 | End of Boring at 20' bgs. | |
| 22 | | 0.2 | | |
| 23 | | | | |
| 24 | | | | |
| 25 | | | | |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|--|------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 065_A009 |
| | | PROJECT NAME: PPG Site 065 | | LOCATION SKETCH |
| COMPLETION DATE: 8/1/2011 | TOTAL DEPTH OF BOREHOLE: 20 | 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 ~ 1.8' | GROUND SURFACE ELEVATION: | WELL INSTALLED? No | |
| MEMO: | | | | |


| DEPTH (Feet) | RECOVERY (feet) | OVM (PPM) | BURMEISTER SYSTEM SOIL DESCRIPTION | FIELD NOTES & SAMPLE SUMMARY |
|-----------------|--------------------|--------------|--|---|
| 0 | | | | |
| 1 | | 480.0 | 0.0 - 0.4 Grayish Brown (2.5Y 5/2) fine SAND & coarse gray angular GRAVEL, little fine gray angular gravel, trace silt, loose, dry (GP) | 065_A009_0.0 (0.0' - 0.5') |
| 2 | | 1883.0 | 0.4 - 0.7 Black (2.5Y 2.5/1) coarse-medium angular GRAVEL some medium-fine sand, little coal & slag, medium dense, moist (GW) | |
| 3 | 2.5 | 2190.0 | 0.7 - 1.0 Black (2.5Y 2.5/1) medium-fine SAND, little slag & coal, medium-dense, moist (SW) | 065_A009_2.0 (2.0' - 2.5') |
| 4 | 5.0 | 940.0 | 1.0 - 1.8 Black (2.5Y 2.5/1) coarse-medium & medium-fine gravel (coal & slag), little fine sand, medium-dense, wet at 1.8', slight staining/sheen (SW) | Strong solvent odor in 0' - 5' interval |
| 5 | | 475.0 | 1.8 - 2.5 Gray (2.5Y 6/1) medium SAND, little fine sand, trace coarse sand & fine angular gravel, loose, moist-wet (SW) | |
| 6 | | 25.9 | 5.0 - 5.2 Yellowish Red (5YR 5/6) subround sandstone COBBLES, some Dark Gray (2.5Y 4/1) Clayey SILT, medium-dense, moist, slight sulfurous odor (GM) | |
| 7 | | 2.6 | 5.2 - 6.1 As Above (1.8' - 2.5'), no odor (SW) | 065_A009_6.0 (6.0' - 6.5') |
| 8 | 1.5 | 2.9 | 6.1 - 6.5 Black (2.5Y 2.5/1) coarse-medium GRAVEL & COBBLES (coal), some wood fragments, loose, dry, no odor (GW) | |
| 9 | 5.0 | | | |
| 10 | | | 10.0 - 15.0 No Recovery | No sample - no recovery |
| 11 | | | | |
| 12 | 0.0 | | | |
| 13 | 5.0 | | | |
| 14 | | | | |
| 15 | | | | |
| 16 | | 0.0 | 15.0 - 17.6 Gray (2.5Y 2.5/1) SILT, some very fine sand, little subround coarse-medium gravel & cobbles, stiff, dry, no odor (ML), Transitions into Brown (10YR 5/3) SILT, little very fine sand & medium-fine subround-subangular gray gravel, some coarse-fine gray gravel 16.9' - 17.2' (moist-wet), stiff, dry, no odor (ML) | 065_A009_15.0 (15.0' - 15.5') |
| 17 | | 0.0 | | |
| 18 | 2.6 | 0.0 | | |
| 19 | 5.0 | 0.0 | | |
| 20 | | | | |
| 21 | | | End of Boring at 20' bgs. | |
| 22 | | | | |
| 23 | | | | |
| 24 | | | | |
| 25 | | | | |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|--|------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 065_A010 |
| | | PROJECT NAME: PPG Site 065 | | |
| COMPLETION DATE: 8/1/2011 | TOTAL DEPTH OF BOREHOLE: 20 | 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 ~ 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 - 0.2 White concrete cobbles, loose, dry (SP) | 065_A010_0.0 (0.0' - 0.5') |
| _1 | | | 0.2 - 0.8 Dark Grayish Brown (2.5Y 4/2) fine SAND, little medium sand & medium-fine slag gravel, trace coal fragments, loose, dry, no odor (SP) | PID not working - lamp issue |
| _2 | 0.8 | | | |
| _3 | 5.0 | | | |
| _4 | | | | |
| _5 | | | | |
| _6 | | | 5.0 - 5.2 Black (2.5Y 2.5/1) medium-fine SAND, little slag & coal gravel, little silt, loose, wet, no odor (SM) | 065_A010_5.0 (5.0' - 5.5') |
| _7 | | | 5.2 - 5.9 Brown (7.5YR 5/4) SILT, little fine sand, little gray & red subround fine gravel, stiff, dry-moist, no odor (ML) | |
| _8 | 0.9 | | | |
| _9 | 5.0 | | | |
| _10 | | | | |
| _11 | | | 10.0 - 15.0 No Recovery | No sample - no recovery |
| _12 | | | | |
| _13 | 0.0 | | | |
| _14 | 5.0 | | | |
| _15 | | | | |
| _16 | | | 15.0 - 15.3 Brown (7.5YR 4/4) SILT, little very fine sand & subround gray & red gravel, stiff, dry, no odor (ML) | 065_A010_15.0 (15.0' - 15.5') |
| _17 | | | 15.3 - 17.6 Grayish Brown (10YR 5/2) grading to Brown (7.5YR 5/2) SILT, little very fine sand & medium-fine subround-subangular gray gravel, stiff, dry-moist, no odor (ML) | |
| _18 | 2.6 | | | |
| _19 | 5.0 | | | |
| _20 | | | | |
| _21 | | | End of Boring at 20' bgs. | |
| _22 | | | | |
| _23 | | | | |
| _24 | | | | |
| _25 | | | | |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|--|------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 065_A011 |
| | | PROJECT NAME: PPG Site 065 | | LOCATION SKETCH |
| COMPLETION DATE: 7/28/2011 | TOTAL DEPTH OF BOREHOLE: 20 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M. / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Bob Fleming | | 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 - 0.5 Gray (GLE Y1 6/N) coarse-fine angular GRAVEL, some medium-fine Dark Grayish Brown (2.5Y 4/2) sand, loose, dry, no odor (GW) | 065_A011_0.0 (0.0' - 0.5') |
| _1 | | 0.4 | | |
| _2 | 2.8 | 3.5 | 0.5 - 1.1 Dark Gray (2.5Y 4/1) medium SAND, little fine sand & medium-fine gray angular gravel & coal, loose, moist, no odor (SP) | |
| _3 | 5.0 | 5.2 | | |
| _4 | | 2.0 | 1.1 - 1.7 Black (2.5Y 2.5/1) medium-fine SAND, little coarse subround slag sand & medium-fine slag gravel, little coal, loose, moist, no odor (SW) | |
| _5 | | 0.3 | 1.7 - 2.1 Yellowish Brown (10YR 5/4) coarse-medium SAND & coarse-fine subround quartz GRAVEL, loose, moist, no odor (GW) | |
| _6 | | 0.0 | 2.1 - 2.8 Dark Gray (10YR 4/1) Silty medium-fine SAND, little subround-subangular gray gravel, trace slag & coal, loose, wet at 2.3', no odor (SM) | |
| _7 | | 0.0 | 5.0 - 5.2 As Above (2.1' - 2.8'), wet (SM) | 065_A011_5.0 (5.0' - 5.5') |
| _8 | 2.1 | 0.0 | 5.2 - 5.7 Olive Gray (5Y 5/2) SILT, some very fine sand, little clay, firm, moist-wet, no odor (ML) | |
| _9 | 5.0 | 0.0 | 5.7 - 6.8 Reddish Brown (5YR 4/3) Silty fine SAND, little medium sand & clay, trace fine red subround sandstone gravel, dense, moist-wet, no odor (SM) | |
| _10 | | 0.0 | 6.8 - 7.1 As Above (5.2' - 5.7') | |
| _11 | | 0.6 | 10.0 - 10.5 As Above (5.2' - 5.7'), but Silty CLAY with trace very fine sand, soft, wet, Brown (10YR 5/3) mottling slight sulfurous odor (CH or OH) | 065_A011_10.0 (10.0' - 10.5') |
| _12 | | 2.6 | 10.5 - 12.9 Very Dark Grayish Brown (10YR 3/2) PEAT, some Very Dark Gray (5Y 3/1) Silty CLAY, soft, moist, strong sulfurous odor (PT) | Fill/native soil interface at 10.5' |
| _13 | 2.9 | 5.0 | | |
| _14 | 5.0 | 4.9 | | |
| _15 | | 3.7 | | |
| _16 | | 0.0 | 15.0 - 18.5 Gray (2.5Y 5/1) Clayey fine SAND, little silt, loose, moist-wet, slight sulfurous odor (SC), Transitions into Reddish Brown (5YR 4/3) SILT, little fine gravel, trace medium gravel, stiff, moist, no odor (ML) | 065_A011_15.0 (15.0' - 15.5') |
| _17 | 3.5 | 0.0 | | |
| _18 | 5.0 | 0.0 | | |
| _19 | | 0.0 | | 065_A011_18.0 (18.0' - 18.5') |
| _20 | | 0.0 | | |
| _21 | | | End of Boring at 20' bgs. | |
| _22 | | | | |
| _23 | | | | |
| _24 | | | | |
| _25 | | | | |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|--|------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 065_A012 |
| | | PROJECT NAME: PPG Site 065 | | |
| COMPLETION DATE: 8/1/2011 | TOTAL DEPTH OF BOREHOLE: 20 | 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 ~ 2.0' | 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 - 0.8 Very Dark Gray (10YR 3/1) fine SAND, trace silt, little coarse-fine gray subangular gravel, loose, dry, no odor (SP) | 065_A012_0.0 (0.0' - 0.5') |
| _1 | | 0.0 | | |
| _2 | 2.3 | 0.0 | 0.8 - 1.6 Very Dark Gray (10YR 3/1) to Yellowish Brown (10YR 5/4) medium-fine SAND, little coarse-medium yellowish brown gravel, medium-dense, moist, no odor (SW) | |
| _3 | 5.0 | 0.0 | 1.6 - 2.3 Olive Gray (5Y 4/2) to Black (5Y 2.5/1) Silty medium-fine SAND, some wood fragments, loose, moist-wet, wet at 2', no odor (SW) | |
| _4 | | | | |
| _5 | | | | |
| _6 | | 0.0 | 5.0 - 5.3 Reddish Brown (2.5Y 5/3) coarse-medium angular brick GRAVEL, some Black (2.5Y 2.5/1) medium-fine sand, little slag (coarse sand & fine gravel), loose, wet, no odor (GW) | 065_A012_5.0 (5.0' - 5.5') |
| _7 | | 0.0 | 5.3 - 6.1 Olive (5Y 5/3) Clayey medium-fine SAND, little silt, loose, moist-wet, no odor (SC) | |
| _8 | | 0.0 | 6.1 - 6.9 Grayish Brown (10YR 5/2) Clayey medium-fine SAND, little silt & coarse sand, trace medium-fine angular gravel, loose, wet, no odor (SC) | |
| _9 | | | | |
| _10 | | | | |
| _11 | | 8.1 | 10.0 - 10.3 Gray (2.5Y 5/1) medium-fine SAND & coarse-fine subround gravel, loose, dry-moist, no odor (GW) | 065_A012_10.0 (10.0' - 10.5') |
| _12 | | 27.0 | 10.3 - 13.3 Very Dark Grayish Brown (10YR 3/2) PEAT, little Dark Gray (2.5Y 4/1) Silty CLAY, soft, moist, strong sulfurous odor (PT) | |
| _13 | 3.3 | 77.1 | | |
| _14 | 5.0 | 6.9 | | |
| _15 | | 42.7 | | |
| _16 | | 24.8 | | |
| _17 | | 0.0 | 15.0 - 15.9 Gray (2.5Y 5/1) Silty medium-fine SAND, little clay, loose, wet, no odor (SM) | 065_A012_15.0 (15.0' - 15.5') |
| _18 | 4.0 | 0.0 | 15.9 - 16.4 Gray (5Y 5/1) Sandy CLAY, some silt, soft, low plasticity, moist-wet, no odor (CL) | |
| _19 | 5.0 | 0.1 | 16.4 - 19.0 Reddish Brown (5YR 4/4) SILT, little medium-fine subround red gravel, little clay & very fine sand, stiff, firm 18' - 19', dry-moist, moist-wet 18' - 19', no odor (ML) | |
| _20 | | 0.0 | | 065_A012_18.5 (18.5' - 19.0') |
| _21 | | 0.0 | End of Boring at 20' bgs. | |
| _22 | | | | |
| _23 | | | | |
| _24 | | | | |
| _25 | | | | |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|--|------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 065_A013 |
| | | PROJECT NAME: PPG Site 065 | | LOCATION SKETCH |
| COMPLETION DATE: 7/28/2011 | TOTAL DEPTH OF BOREHOLE: 20 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M. / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Bob Fleming | | 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 - 0.1 Light Brownish Gray (2.5Y 6/2) fine SAND, little medium sand & coarse-fine light gray gravel, loose, dry, no odor (SP) | 065_A013_0.0 (0.0' - 0.5') |
| 1 | | 0.0 | | trace COPR noted 0.1' - 0.5' |
| 2 | | 0.0 | 0.1 - 3.5 Very Dark Gray (2.5Y 3/1) medium-fine SAND & medium-fine GRAVEL (coal & slag), trace metal fragments & glass, loose, moist-dry, moist-wet at 3.5', no odor (SW) | |
| 3 | 4.1 | 0.0 | | |
| 4 | 5.0 | 0.0 | 3.5 - 3.8 Dark Gray (10YR 4/1) SILT, some fine sand, little subangular coarse-fine gravel. Stiff, moist, no odor (ML) | |
| 5 | | 0.0 | 3.5 - 4.1 Brown (7.5YR 4/2) medium SAND, little fine sand, coarse sand, & medium-fine subround gravel, medium-dense, moist-wet, no odor (SW) | |
| 6 | | 0.0 | 5.0 - 5.7 As Above (3.5' - 4.1') but Silty, wet, no odor (SM) | 065_A013_5.0 (5.0' - 5.5') |
| 7 | | 0.0 | 5.7 - 8.3 Very Dark Gray (10YR 3/1) Silty medium-fine SAND, some coarse-fine angular gravel (coal), trace slag, trace silty clay in small 1" seams, loose, wet, no odor (SM) | |
| 8 | 3.3 | 0.0 | | |
| 9 | 5.0 | 0.0 | | |
| 10 | | 0.0 | 10.0 - 10.5 As Above (5.7' - 8.3') | 065_A013_10.0 (10.0' - 10.5') |
| 11 | | 25.1 | 10.5 - 12.7 Very Dark Grayish Brown (10YR 3/2) PEAT & Dark Olive Gray (2.5Y 3/2) clay, little silt, soft, moist, strong sulfurous odor (PT/OH) | Fill/native soil interface at 10.5' |
| 12 | 2.7 | 11.0 | | |
| 13 | 5.0 | 27.0 | | |
| 14 | | 140.0 | | |
| 15 | | 126.0 | | |
| 16 | | 54.6 | 15.0 - 15.9 As Above (10.5' - 12.7') | 065_A013_15.0 (15.0' - 15.5') |
| 17 | | 42.2 | 15.9 - 17.5 Grayish Brown (2.5Y 5/2) grading to Greenish Gray (GLE Y2 6/5BG) clayey SILT, some very fine SAND, soft, moist-wet, slight sulfurous odor (ML), | |
| 18 | 2.5 | 22.4 | Transitions to Brown (10YR 4/3) SILT, some fine sand, little red medium-fine sand, firm, moist, no odor (ML) | 065_A013_17.0 (17.0' - 17.5') |
| 19 | 5.0 | 7.9 | | |
| 20 | | 0.6 | | |
| 21 | | | End of Boring at 20' bgs. | |
| 22 | | | | |
| 23 | | | | |
| 24 | | | | |
| 25 | | | | |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|--|------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 065_A014 |
| | | PROJECT NAME: PPG Site 065 | | |
| COMPLETION DATE: 8/1/2011 | TOTAL DEPTH OF BOREHOLE: 20 | 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 ~ 2.2' | 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 Grayish Brown (2.5Y 5/2) fine SAND, little medium-fine angular gray gravel, trace silt, (SP) | 065_A014_0.0 (0.0' - 0.5') |
| 1 | | 0.0 | | Trace COPR noted 0.2' - 1.5' |
| 2 | 4.3 | 0.0 | 1.1 - 1.3 Yellowish Brown (10YR 5/6) fine SAND, little medium sand & fine angular gray gravel, trace slag, dry, loose, no odor (SP) | 065_A014_1.5 (1.5' - 2.0') |
| 3 | 5.0 | 0.0 | 1.3 - 3.4 Very Dark Gray (10YR 3/1) fine SAND & medium-fine GRAVEL (slag & coal), little gray coarse-fine angular gravel, moist, moist-wet 2.2' - 3.4', no odor (GW) | |
| 4 | | 0.0 | 3.4 - 4.3 Brown (10YR 4/3) coarse-fine SAND, little gray round cobbles, trace silt, medium-dense, moist-wet, no odor (SW) | |
| 5 | | 0.0 | | |
| 6 | | 0.0 | 5.0 - 5.5 As Above (3.4' - 4.3') but some silt, trace coal (SM) | 065_A014_5.5 (5.5' - 6.0') |
| 7 | 2.0 | 0.0 | 5.5 - 6.3 Dark Gray (10YR 4/1) Silty medium-fine SAND, little coarse sand & medium-fine subround gray gravel, medium-dense, moist-wet, no odor (SM) | |
| 8 | 5.0 | 0.0 | 6.3 - 7.0 Very Dark Gray (10YR 3/1) medium-fine SAND, little medium subround gray gravel, little slag, trace coal & silt, loose, moist-wet, no odor (SW/SP) | |
| 9 | | | | |
| 10 | | | | |
| 11 | | 0.0 | 10.0 - 10.7 As Above (6.3' - 7'), some silt (SM) | 065_A014_10.2 (10.2' - 10.7') |
| 12 | 2.3 | 156.0 | 10.7 - 12.3 Very Dark Grayish Brown (10YR 3/2) PEAT, some Dark Olive Gray (2.5Y 3/2) clay, little silt, soft, moist, strong sulfurous odor (PT) | Fill/native soil interface at 10.7' |
| 13 | 5.0 | 60.6 | | |
| 14 | | 121.0 | | |
| 15 | | | | |
| 16 | | 84.4 | 15.0 - 16.9 As Above (10.7' - 12.3') | 065_A014_15.0 (15.0' - 15.5') |
| 17 | 2.2 | 61.3 | | |
| 18 | 5.0 | 393.0 | 16.9 - 17.2 Light Gray (GLE1 7/N) coarse-medium SAND & coarse-fine subround sandstone GRAVEL, loose, moist, no odor (GW) | 065_A014_16.7 (16.7' - 17.2') |
| 19 | | 0.2 | | |
| 20 | | | | |
| 21 | | | End of Boring at 20' bgs. | |
| 22 | | | | |
| 23 | | | | |
| 24 | | | | |
| 25 | | | | |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|--|------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 065_A015 |
| | | PROJECT NAME: PPG Site 065 | | |
| COMPLETION DATE: 8/1/2011 | TOTAL DEPTH OF BOREHOLE: 20 | 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 ~ 2.4' | 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 - 0.3 Asphalt | 065_A015_0.0 (0.0' - 0.5') |
| 1 | | 0.0 | 0.3 - 1.2 Dary Grayish Brown (2.5Y 4/2) fine SAND, little medium sand & coarse-fine asphalt gravel, loose, dry-moist, no odor (SP) | |
| 2 | 4.2 | 0.0 | 1.2 - 1.4 Light Grayish Brown (2.5Y 6/2) fine SAND, loose, dry, no odor (SP) | |
| 3 | 5.0 | 0.0 | 1.4 - 1.6 As Above (0.3' - 1.2'), no asphalt (SP) | |
| 4 | | 0.0 | 1.6 - 3.5 Very Dark Gray (2.5Y 3/1) coarse-fine SAND, some medium-fine gravel (slag & coal) loose, moist, wet at 2.4', no odor (SW) | |
| 5 | | 0.0 | 3.5 - 3.7 Dark Yellowish Brown (10YR 4/4) medium SAND & medium-fine subround gravel, trace silt, moist-wet, loose, no odor (GW) | |
| | | 0.0 | 3.7 - 4.2 As Above (1.6' - 3.5'), mostly coal & slag fragments, moist-wet (GW) | |
| 6 | | 0.0 | 5.0 - 5.2 As Above (3.7' - 4.2') (GW) | 065_A015_5.0 (5.0' - 5.5') |
| 7 | 2.3 | 0.0 | 5.2 - 6.2 Very Dark Gray (2.5Y 3/1) fine SAND, some silt, little glass, coal & slag, red brick cobbles 5.4'-5.5', medium-dense, moist, no odor (SM) | |
| 8 | 5.0 | 0.0 | 6.2 - 7.3 Dark Gray (10YR 4/1) medium-fine SAND, little medium-fine subround gray gravel, trace silt, trace glass, red brick cobble & 7.1', loose, moist-wet, no odor (SW) | |
| 9 | | | | |
| 10 | | | | |
| 11 | | 1.0 | 10.0 - 10.8 Very Dark Gray (2.5Y 3/1) fine SAND & coarse-fine GRAVEL (slag), some silt, little coal, loose, wet, slight sulfurous odor (GW) | 065_A015_10.3 (10.3' - 10.8') |
| 12 | 2.2 | 45.5 | 10.8 - 12.2 Very Dark Grayish Brown (10YR 3/2) PEAT, some Dark Olive Gray (2.5Y 3/2) clay, little silt, soft, moist, strong sulfurous odor (PT) | |
| 13 | 5.0 | 251.0 | | Fill/native soil interface at 10.8' |
| 14 | | 19.0 | | |
| 15 | | | | |
| 16 | | 103.0 | 15.0 - 18.5 As Above (10.8' - 12.2') | 065_A015_15.0 (15.0' - 15.5') |
| 17 | 4.5 | 66.8 | | |
| 18 | 5.0 | 62.6 | | |
| 19 | | 17.5 | | |
| 20 | | 37.0 | 18.5 - 19.5 Greenish Gray (GLEY2 6/5BG) fine SAND, some silt, little clay, loose, moist-wet, strong sulfurous odor (SM), Transitions to Silty CLAY, moderate plasticity, soft grading to firm, moist-dry, strong sulfurous odor (CH) | 065_A015_19.0 (19.0' - 19.5') |
| 21 | | 179.0 | | |
| 22 | | 35.9 | | |
| 23 | | 147.0 | | |
| 24 | | 243.0 | | |
| 25 | | | End of Boring at 20' bgs. | |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|---|------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_B003 |
| | | PROJECT NAME: PPG Site 063 | | |
| COMPLETION DATE: 7/22/2011 | TOTAL DEPTH OF BOREHOLE: 20 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Bob Fleming | | 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: | | | | |


| DEPTH (Feet) | RECOVERY (feet) | OVM (PPM) | BURMEISTER SYSTEM SOIL DESCRIPTION | FIELD NOTES & SAMPLE SUMMARY |
|-----------------|--------------------|--------------|---|------------------------------------|
| 0 | | 0.0 | 0.0 - 1.0 Gray (10YR 5/1) medium-fine SAND & gray coarse-fine gravel, loose, dry, no odor (SP) | 063_B003_0.0 (0.0' - 0.5') |
| 1 | | 4.0 | | 063_B003_0.5 (0.5' - 1.0') |
| 2 | | 0.3 | 1.0 - 2.8 Black (7.5YR 2.5/1) coarse-fine SAND & medium-fine subangular gravel (slag), little coal fragments, loose to medium-dense, moist, wet at 2.7', slight solvent odor & staining from 2.5' - 2.8' (SW) | 063_B003_1.0 (1.0' - 1.5') |
| 3 | 3.6 | 0.1 | | 5% COPR noted 0.2' - 0.5' |
| 4 | 5.0 | 0.8 | 2.8 - 3.5 Brown (7.5YR 4/2) SILT, little fine sand & clay, firm grading to soft, moist, strong solvent odor & staining (ML) | 15% COPR noted 0.5' - 1.0' |
| 5 | | 9.7 | | |
| | | 363.0 | | |
| 6 | | 525.0 | 5.0 - 6.1 Brown (7.5YR 4/2) SILT, little fine sand & clay, coarse-fine subround gray gravel, cobbles from 5.5'-5.9', moist, wet from 5.5'-5.9', firm, strong solvent odor and staining throughout (ML) | 063_B003_5.0 (5.0' - 5.5') |
| 7 | | 42.2 | | |
| 8 | 3.0 | 22.8 | 6.1 - 7.4 Reddish Brown (5YR 5/3) clayey SILT, little fine sand, trace medium-fine Red round sandstone gravel, firm grading to soft, moist to moist-wet, slight solvent odor (ML) | 063_B003_6.9 (6.9' - 7.4') |
| 9 | 5.0 | 6.1 | | Fill/native soil interface at 7.4' |
| 10 | | 2.7 | 7.4 - 8.0 Very Dark Grayish Brown (10YR 3/2) PEAT, little Very Dark Gray (5Y 3/1) CLAY, moderate plasticity, soft, moist, abundant plant fibers, strong sulfurous odor (PT) | |
| 11 | | 1.0 | | |
| 12 | | 0.6 | 10.0 - 11.4 As Above (7.4' - 8.0') (PT) | |
| 13 | 2.0 | 0.3 | | 063_B003_11.0 (11.0' - 11.5') |
| 14 | 5.0 | 3.9 | 11.4 - 12.0 Greenish Gray (GLE2 5/5BG) Clayey fine SAND, little silt, soft, moist, no odor (SC), Transitions into Reddish Brown (5YR 4/4) fine SAND, some silt, little medium sand, trace fine round sandstone gravel, dense, moist, no odor (SM) | |
| 15 | | 1.4 | | |
| 16 | | 0.7 | 15.0 - 15.3 Reddish Brown (2.5YR 5/4) SILT & fine SAND, trace fine red round sandstone gravel, dense, dry-moist, no odor (ML) | 063_B003_15.0 (15.0' - 15.5') |
| 17 | | 1.6 | | |
| 18 | 2.7 | 0.0 | 15.3 - 17.7 Brown (7.5YR 5/3) fine SAND, some gravel (Gray 7.5YR 5/1 coarse-medium round gravel, Red 2.5YR 4/6 flat siltstone, Greenish Gray GLEY1 5/5GY medium-fine subangular sandstone), dense, moist, no odor (SP) | |
| 19 | 5.0 | 0.0 | | |
| 20 | | 0.0 | | |
| 21 | | | End of Boring at 20' bgs. | |
| 22 | | | | |
| 23 | | | | |
| 24 | | | | |
| 25 | | | | |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|--|---|------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_B004 |
| | | PROJECT NAME: PPG Site 063 | | LOCATION SKETCH |
| COMPLETION DATE: 7/21/2011 | TOTAL DEPTH OF BOREHOLE: 20 | MONITORING DEVICE: None - PID not working | GEOLOGIST / OFFICE: Jim M / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Bob Fleming | | DRILLING EQUIPMENT: Geoprobe Track Rig | DRILLING METHOD / BIT: Direct Push | |
| SAMPLING METHOD: 5' Sleeves, 1.25" | DEPTH TO GROUNDWATER ~ 1.9' | GROUND SURFACE ELEVATION: | WELL INSTALLED? No | |
| MEMO: | | | | |

| DEPTH (Feet) | RECOVERY (feet) | OVM (PPM) | BURMEISTER SYSTEM SOIL DESCRIPTION | FIELD NOTES & SAMPLE SUMMARY |
|-----------------|--------------------|--------------|--|---|
| _0 | | | 0.0 - 0.5 Brown (7.5YR 5/4) medium-fine SAND, little Reddish Brown (2.5YR 4/4) fine subround sandstone gravel, loose, dry, no odor (SP) | 063_B004_0.0 (0.0' - 0.5') |
| _1 | | | 0.5 - 0.8 Bluish Gray (GLE Y2 7/10B) GRAVEL & COBBLES (broken-up concrete) (GP), Olive Gray (5Y 5/2) fine SAND & SILT from 0.7' - 0.8' (ML), medium-dense/firm, dry, no odor | PID not working - lamp issue |
| _2 | 3.5 | | 0.8 - 2.0 Black (10YR 2.5/1) medium-fine SAND & medium-fine subround gravel (Slag) loose, moist, moist-wet at 1.9', strong solvent odor (GP) | |
| _3 | 5.0 | | 2.0 - 3.1 Grayish Brown (10YR 5/2) SILT, some fine sand, little medium sand, firm, moist, slight solvent odor (ML) | 063_B004_3.0 (3.0' - 3.5') |
| _4 | | | 3.1 - 3.5 Very Dark Gray (10YR 3/1) coarse-fine SAND, little silt & fine angular gravel, very loose, wet, strong solvent odor (SW) | |
| _5 | | | 5.0 - 5.4 As Above (3.1' - 3.5'), some silt, little coarse-fine angular gravel, strong solvent odor (SM) | |
| _6 | 1.3 | | 5.4 - 6.3 Brown (7.5YR 5/3) SILT & fine SAND, little medium sand, trace medium-fine subangular gray gravel, abundant wood fragments (creosote-treated) from 6' to 6.3', firm, moist, strong solvent odor (ML) | Fill/native soil interface not recovered in 5'-10' core. Sampled 10'-10.5' section in native soil |
| _7 | 5.0 | | 10.0 - 10.5 Very Dark Grayish Brown (10YR 3/2) PEAT, little Very Dark Gray (5Y 3/1) CLAY, moderate plasticity, soft, moist, abundant plant fibers, slight sulfurous odor (PT) | 063_B004_10.0 (10.0' - 10.5') |
| _8 | | | 10.5 - 11.5 Gray (5Y 5/1) Clayey fine SAND, little silt, soft, moderate plasticity, moist, no odor (SC), Transitions into Reddish Brown (5YR 5/3) medium-fine SAND, medium-dense, moist, no odor (SP) | |
| _9 | | | 15.0 - 16.7 Reddish Brown (5YR 5/3) fine SAND, little medium sand & silt, dense, moist, no odor (SP), Transitions into Brown (7.5YR 4/3) SILT, little fine sand & fine-medium gray angular gravel, abundant from 16' - 16.2', stiff, moist, no odor (ML) | 063_B004_15.0 (15.0' - 15.5') |
| _10 | 1.7 | | | |
| _11 | 5.0 | | | No sample 19' - 19.5' due to low recovery |
| _12 | | | End of Boring at 20' bgs. | |
| _13 | | | | |
| _14 | | | | |
| _15 | | | | |
| _16 | | | | |
| _17 | | | | |
| _18 | | | | |
| _19 | | | | |
| _20 | | | | |
| _21 | | | | |
| _22 | | | | |
| _23 | | | | |
| _24 | | | | |
| _25 | | | | |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|---|------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_B005 |
| | | PROJECT NAME: PPG Site 063 | | LOCATION SKETCH |
| COMPLETION DATE: 7/19/2011 | TOTAL DEPTH OF BOREHOLE: 37 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Bob Fleming | | DRILLING EQUIPMENT: Geoprobe Track Rig | DRILLING METHOD / BIT: Direct Push | |
| SAMPLING METHOD: 5' Sleeves, 1.25" | DEPTH TO GROUNDWATER ~ 2.0' | GROUND SURFACE ELEVATION: | WELL INSTALLED? No | |
| MEMO: Hand-dug 2'x2' hole to 1.3' to remove liner. | | | | |


| DEPTH (Feet) | RECOVERY (feet) | OVM (PPM) | BURMEISTER SYSTEM SOIL DESCRIPTION | FIELD NOTES & SAMPLE SUMMARY |
|-----------------|--------------------|--------------|--|-------------------------------------|
| 0 | | | 0.0 - 0.6 QP Stone (coarse subangular gravel & cobbles) (GP) | |
| 1 | | | 0.6 - 1.3 Olive Gray (5Y 4/2) fine SAND, little m. sand, loose, moist-wet, no odor (SP) | |
| 2 | | 2144.0 | 1.3 - 2.0 Dark Brown (7.5YR 3/2) coarse-fine SAND, little medium-fine subround gravel (slag) and gray gravel, moist-wet, wet at 2', loose, slight solvent odor (SW) | 063_B005_1.3 (1.3' - 1.8') |
| 3 | 3.0 | 596.0 | 2.0 - 3.3 Brown (7.5YR 4/3) SILT & fine SAND, little subangular-subround gray gravel, stiff, moist, strong solvent odor (ML) | |
| 4 | 3.7 | 123.0 | | |
| 5 | | 3999.0 | 3.3 - 3.8 Very Dark Gray (10YR 3/1) medium-fine SAND & coarse-fine subangular to subround GRAVEL, little coarse sand & Brown (7.5YR 4/3) silt, strong solvent odor & staining throughout (SW) | 063_B005_3.3 (3.3' - 3.8') |
| 6 | | 1929.0 | | |
| 7 | | | 5.0 - 10.0 No recovery | |
| 8 | 0.0 | | | |
| 9 | 5.0 | | | |
| 10 | | | | |
| 11 | | 2258.0 | 10.0 - 10.2 Reddish Brown (2.5YR 4/3) medium SAND, some fine sand, trace silt, loose, moist-wet, strong solvent odor (SP) | |
| 12 | | 447.0 | 10.2 - 11.9 Brown (2.5YR 4/3) SILT & fine SAND, trace medium sand, little coarse-fine subangular-subround gray gravel, dense, moist, slight solvent odor (ML) | 063_B005_11.4 (11.4' - 11.9') |
| 13 | 3.8 | 62.1 | 11.9 - 12.8 Very Dark Grayish Brown (10YR 3/2) PEAT, little Very Dark Gray (5Y 3/1) CLAY, moderate plasticity, soft, moist, abundant plant fibers, slight sulfurous odor (PT) | Fill/native soil interface at 11.9' |
| 14 | 5.0 | 35.9 | 12.8 - 13.8 Greenish-Gray (GLE2 6/5BG) Clayey fine SAND, little medium sand & silt, medium-dense, moist, no odor (SC) | |
| 15 | | 18.2 | | |
| 16 | | 0.0 | | |
| 17 | | 0.0 | | |
| 18 | | 53.6 | 15.0 - 16.0 Reddish Brown (5YR 5/3) medium-fine SAND, trace subround medium-fine sandstone gravel, dense, moist-wet, slight hydrocarbon odor (SP), Transitions into Reddish Brown (5YR 4/3) SILT, little fine sand, trace medium-fine dark gray angular gravel, dense, dry-moist, no odor (ML) | 063_B005_15.5 (15.5' - 16.0') |
| 19 | 1.0 | 0.0 | | |
| 20 | 5.0 | | | |
| 21 | | 332.0 | 20.0 - 20.2 Dark Gray (10YR 4/1) coarse-fine angular siltstone gravel & coarse sand, dense, moist-wet, slight hydrocarbon odor (GW) | 063_B005_20.0 (20.0' - 20.5') |
| 22 | | 14.0 | 20.2 - 21.4 Brown (7.5YR 5/3) SILT, some fine sand, little medium sand & coarse-fine subangular gray siltstone gravel, stiff, wet, slight hydrocarbon odor (ML) | |
| 23 | 1.4 | 0.0 | | |
| 24 | 5.0 | | | |
| 25 | | | | |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|---|------------------------|
| | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_B005 |
| | | PROJECT NAME: PPG Site 063 | | |
| COMPLETION DATE: 7/19/2011 | TOTAL DEPTH OF BOREHOLE: 37 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Bob Fleming | | DRILLING EQUIPMENT: Geoprobe Track Rig | DRILLING METHOD / BIT: Direct Push | |
| SAMPLING METHOD: 5' Sleeves, 1.25" | DEPTH TO GROUNDWATER ~ 2.0' | GROUND SURFACE ELEVATION: | WELL INSTALLED? No | |
| MEMO: Hand-dug 2'x2' hole to 1.3' to remove liner. | | | | |
| 0 | | | | |


| DEPTH (Feet) | RECOVERY (feet) | OVM (PPM) | BURMEISTER SYSTEM SOIL DESCRIPTION | FIELD NOTES & SAMPLE SUMMARY |
|-----------------|--------------------|--------------|--|---------------------------------|
| _26 | | 76.2 | 25.0 - 27.8 Brown (7.5YR 5/3) SILT & Dusky Red (2.5YR 3/2) coarse-fine gravel & cobbles from 25' - 26', little medium-fine gravel from 26' - 27.8', little fine sand, trace medium sand, very stiff, moist, slight hydrocarbon odor (GM) | _26 |
| _27 | | 14.0 | | _27 |
| _28 | <u>2.8</u> | 0.0 | | _28 |
| _29 | 5.0 | 0.0 | | _29 |
| _30 | | | | _30 |
| _31 | | 0.0 | 30.0 - 30.9 Grayish Brown (10YR 5/2) SILT, some fine sand, little coarse-medium Greenish Gray (GLE Y1 5/10Y) siltstone gravel, very stiff, dry, no odor (ML), Transitions into Brown (10YR 4/3) SILT, little Weak Red (10R 4/3) coarse-medium siltstone gravel, very dense, dry, no odor (ML) 30.9 - 32.2 Yellowish Red (5YR 5/6) fine SAND, little very fine & medium sand, trace Weak Red (10R 4/3) siltstone gravel, very dense, moist, no odor (SP) | _31 |
| _32 | | 0.0 | | _32 |
| _33 | <u>2.2</u> | 0.0 | | _33 |
| _34 | 5.0 | 0.0 | | _34 |
| _35 | | | | _35 |
| _36 | <u>2.3</u> | 0.0 | 35.0 - 37.3 Weak Red (10R 4/3) SILT, little fine sand, little subround coarse-fine siltstone gravel throughout, siltstone cobbles 35' - 35.3', trace Greenish Gray (GLE Y1 6/5G) medium-coarse sand & fine subangular sandstone gravel 35.9'-36.2' and at 37'-37.3' (GLE Y1 7/5GY), very dense, dry, no odor (ML) | _36 |
| _37 | 2.3 | 0.0 | | _37 |
| _38 | | | End of Boring at 37.2' bgs. (refusal) | _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.: 117-0509160.02 | | Boring No: 063_B006 / 063_MW01 |
| | | PROJECT NAME: PPG Site 063 | | LOCATION SKETCH |
| COMPLETION DATE: 7/15/2011 | TOTAL DEPTH OF BOREHOLE: 20 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M. / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Ray Smith | | DRILLING EQUIPMENT: Geoprobe Track Rig | DRILLING METHOD / BIT: Direct Push | |
| SAMPLING METHOD: 5' Sleeves, 1.25" | DEPTH TO GROUNDWATER ~1.5' | GROUND SURFACE ELEVATION: | WELL INSTALLED? Yes - 063_MW01 | |
| MEMO: Moved 8' toward Burma road from original location, hand-dug 2'x2' hole to 1' to remove liner. Geoprobe refusal at 2' on two attempts (stone). Moved 5' towards original location and successfully advanced boring | | | | |


| DEPTH (Feet) | RECOVERY (feet) | OVM (PPM) | BURMEISTER SYSTEM SOIL DESCRIPTION | FIELD NOTES & SAMPLE SUMMARY |
|-----------------|--------------------|--------------|---|------------------------------------|
| 0 | | | 0.0 - 0.5 QP Stone (coarse subangular gravel & cobbles) (GP) | |
| 1 | | | 0.5 - 1.0 Olive Gray (5Y 4/2) fine SAND, little m. sand, loose, moist-wet, no odor (SP) | |
| 2 | | 79.4 | 1.0 - 1.5 As Above (0.5'-1'), moist, strong solvent odor (SP) | 063_B006_1.0 (1.0' - 1.5') |
| 3 | 2.4 | 270.0 | 1.5 - 2.0 Black (7.5YR 2.5/1) coarse-fine SAND & SLAG, little medium-fine angular gravel, medium-dense, moist-wet, strong solvent odor (SW) | 063_B006_1.5 (1.5' - 2.0') |
| 4 | 4.0 | 76.1 | 2.0 - 3.0 Dark Yellowish Brown (10YR 4/4) solvent odor (ML) | 063_B006_2.0 (2.0' - 2.5') |
| 5 | | 44.4 | 3.0 - 3.4 Dark Brown (10YR 3/3) coarse-fine SAND, some silt, little fine subround quartz gravel, medium-dense, moist-wet, slight solvent odor (SM) | 20% COPR noted 1.5' - 1.7' |
| 6 | | 13.6 | 5.0 - 7.0 Dark Brown (10YR 3/3) medium-fine SAND, little silt & gravel, trace wood fragments (treated, has strong odor), medium-dense, wet, strong creosote or solvent odor (SP) | |
| 7 | 1.4 | 1.4 | 7.0 - 8.0 Very Dark Grayish Brown (10YR 3/2) PEAT, little Very Dark Gray (5Y 3/1) CLAY, moderate plasticity, soft, moist-wet, abundant plant fibers, strong sulfurous odor (PT) | 063_B006_6.5 (6.5' - 7.0') |
| 8 | 5.0 | 1.0 | | Fill/native soil interface at 7.0' |
| 9 | | | | |
| 10 | | | | |
| 11 | | 0.5 | 10.0 - 12.2 As Above (7.0' - 8.0') | 063_B006_10.0 (10.0' - 10.5') |
| 12 | | 1.3 | 12.2 - 13.8 Greenish Gray (GLEYS 5/5BG) Silty CLAY, moderate plasticity, soft, moist, slight hydrocarbon odor (CL/CH), Transitions into Reddish Brown (5YR 4/3) medium-fine SAND, little subround medium-fine gravel (sandstone fragments), dense, moist-wet, slight hydrocarbon odor (SP) | |
| 13 | 3.8 | 2.4 | | 063_B006_12.2 (12.2' - 12.7') |
| 14 | 5.0 | 3.1 | | |
| 15 | | 0.9 | | |
| 16 | | 3.4 | | |
| 17 | | 10.2 | | |
| 18 | | 6.9 | 15.0 - 18.0 Reddish Brown (5YR 4/3) medium-fine SAND, little subround medium-fine gravel (sandstone fragments), dense, moist-wet, slight hydrocarbon odor, gray staining at 15.3' (SP), Transitions into Dark Yellowish Brown (10YR 4/4) SILT, little medium-fine angular gravel, trace fine sand, some fine-medium sand from 17.2' - 17.4', stiff, moist, no odor (ML) | |
| 19 | 3.0 | 0.0 | | |
| 20 | 5.0 | 0.0 | | |
| 21 | | | End of Boring at 20' bgs. | |
| 22 | | | Well Information: | |
| 23 | | | 2-inch diameter 10-slot SCH40 PVC screen set at 2.0' - 7.0' bgs. | |
| 24 | | | 2-inch diameter SCH40 PVC riser from 2.0' bgs. to 2.5' above grade | |
| 25 | | | #1 Sand from 1.5' to 7.0' bgs., Grout from 1.0' to 1.5' | |
| | | | 2' x 2' section of PVC liner placed on top of HDPE liner | |
| | | | Cemented-in 2' x 2' hole for well pad from 1.0' bgs to surface | |
| | | | Stick-up completion | |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|--|------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_B007 |
| | | PROJECT NAME: PPG Site 063 | | LOCATION SKETCH |
| COMPLETION DATE: 7/19/2011 | TOTAL DEPTH OF BOREHOLE: 28 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M. / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Bob Fleming | | DRILLING EQUIPMENT: Geoprobe Track Rig | DRILLING METHOD / BIT: Direct Push | |
| SAMPLING METHOD: 5' Sleeves, 1.25" | DEPTH TO GROUNDWATER ~ 1.8' | GROUND SURFACE ELEVATION: | WELL INSTALLED? No | |
| MEMO: Hand-dug 2'x2' hole to 1.0' to remove liner. | | | | |


| DEPTH (Feet) | RECOVERY (feet) | OVM (PPM) | BURMEISTER SYSTEM SOIL DESCRIPTION | FIELD NOTES & SAMPLE SUMMARY |
|-----------------|--------------------|--------------|--|------------------------------------|
| 0 | | | 0.0 - 0.5 QP Stone (coarse subangular gravel & cobbles) (GP) | |
| 1 | | | 0.5 - 1.0 Olive Gray (5Y 4/2) fine SAND, little m. sand, loose, moist-wet, no odor (SP) | |
| 2 | | 211.0 | 1.0 - 1.3 As Above (0.5' - 1.0'), strong solvent odor (SP) | 063_B007_1.0 (1.0' - 1.5') |
| 3 | 2.2 | 57.3 | 1.3 - 1.8 Black (10YR 2.5/1) coarse-fine SAND, little fine subround gravel (slag), little coarse-fine angular gravel, loose, moist-wet, strong solvent odor (SW) | |
| 4 | 4.0 | 17.6 | 1.8 - 3.2 Brown (7.5YR 4/3) fine SAND, some coarse-fine subangular-subround gravel, little silt, loose, wet, strong solvent odor (SP), Transitions into Brown (7.5YR 4/3) medium-fine SAND, some silt, some coarse-fine subangular to subround gravel, soft grading to firm, wet, strong petroleum odor, petroleum staining at 2.5' (SM) | |
| 5 | | 81.0 | | |
| 6 | | 109.0 | | |
| 7 | | 141.0 | 5.0 - 6.2 Reddish Brown (5YR 4/3) medium-fine SAND, some silt & coarse-fine subangular to subround gravel, Weak Red (10R 4/2) siltstone gravel 6.1'-6.2', firm, moist-wet, slight solvent odor (SM) | 063_B007_5.0 (5.0' - 5.5') |
| 8 | 2.6 | 0.0 | 6.2 - 7.1 Olive Gray (5Y 5/2) fine to very fine SAND, little silt, loose to medium-dense, moist-wet, trace shells, no odor (SP/SM) | 063_B007_7.1 (7.1' - 7.6') |
| 9 | 5.0 | 42.6 | 7.1 - 7.6 Olive Brown (2.5Y 4/4) medium-fine SAND, some silt & coarse-fine angular gravel, Very Dark Grayish Brown (10YR 3/2) Peat in bottom of sleeve, medium-dense, moist- no odor (SM) | Fill/native soil interface at 7.6' |
| 10 | | 0.0 | | |
| 11 | | 6.6 | 10.0 - 12.2 Very Dark Grayish Brown (10YR 3/2) PEAT, little Very Dark Gray (5Y 3/1) CLAY, low plasticity, soft, moist-wet, abundant plant fibers, slight sulfurous odor (PT) | 063_B007_11.1 (11.1' - 11.6') |
| 12 | 2.9 | 7.9 | 12.2 - 12.7 Greenish Gray (GLE2 6/5BG) Clayey fine SAND, little medium sand & silt, medium-stiff, moist, no odor (SC) | |
| 13 | 5.0 | 2.2 | 12.7 - 12.9 Reddish Brown (5YR 4/3) medium-fine SAND, little subround medium-fine sandstone gravel & coarse sand, dense, moist, no odor (SW) | |
| 14 | | 0.2 | | |
| 15 | | 0.0 | | |
| 16 | | 0.0 | 15.0 -18.3 As Above (12.7' - 12.9'), but Brown (7.5YR 4/3), Transitions into Reddish Brown (5YR 4/3) SILT, little fine sand, trace medium-fine angular Dark Greenish Gray (GLE1 4/5GY) shale gravel, dense, moist, no odor (ML) | 063_B007_15.0 (15.0' - 15.5') |
| 17 | 3.3 | 0.0 | | |
| 18 | 5.0 | 0.0 | | |
| 19 | | 0.0 | | |
| 20 | | 0.0 | | |
| 21 | | 0.0 | 20.0 - 24.0 Reddish Brown (5YR 4/3) SILT, some fine sand, little medium sand & fine-medium Dark Gray (GLE1 4/N) shale gravel, some medium sand 20' - 21', dense, moist, no odor (ML) | |
| 22 | 4.0 | 0.0 | | |
| 23 | 5.0 | 0.0 | | |
| 24 | | 0.0 | | |
| 25 | | 0.0 | | |

SOIL BORING LOG

| | | | | |
|---|---------------------------------|---|--|------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_B007 |
| | | PROJECT NAME: PPG Site 063 | | |
| COMPLETION DATE: 7/19/2011 | TOTAL DEPTH OF BOREHOLE: 28 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M. / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Bob Fleming | | DRILLING EQUIPMENT: Geoprobe Track Rig | DRILLING METHOD / BIT: Direct Push | |
| SAMPLING METHOD: 5' Sleeves, 1.25" | DEPTH TO GROUNDWATER: ~ 1.8' | GROUND SURFACE ELEVATION: | WELL INSTALLED?: No | |
| MEMO: Hand-dug 2'x2' hole to 1.0' to remove liner. | | | | |

| DEPTH (Feet) | RECOVERY (feet) | OVM (PPM) | BURMEISTER SYSTEM SOIL DESCRIPTION | FIELD NOTES & SAMPLE SUMMARY |
|-----------------|--------------------|--------------|---|---------------------------------|
| _26 | 3.0 | 0.0 | 25.0 - 28.0 As Above (20' - 24'), some Light Olive Brown (2.5Y 5/6) coarse-medium SAND & fine gravel from 25' - 25.4', dense, moist, wet at 26.1' & 26.7', no odor (ML) | _26 |
| _27 | 3.0 | 0.0 | | _27 |
| _28 | | 0.0 | | _28 |
| _29 | | 0.0 | | _29 |
| _30 | | | End of Boring at 28.0' (Refusal) | _30 |
| _31 | | | | _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.: 117-0509160.02 | | Boring No: 063_B008 |
| | | PROJECT NAME: PPG Site 063 | | LOCATION SKETCH |
| COMPLETION DATE: 7/20/2011 | TOTAL DEPTH OF BOREHOLE: 20 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Bob Fleming | | DRILLING EQUIPMENT: Geoprobe Track Rig | DRILLING METHOD / BIT: Direct Push | |
| SAMPLING METHOD: 5' Sleeves, 1.25" | DEPTH TO GROUNDWATER ~ 1.6' | GROUND SURFACE ELEVATION: | WELL INSTALLED? No | |
| MEMO: Hand-dug 2'x2' hole to 1.0' to remove liner. | | | | |


| DEPTH (Feet) | RECOVERY (feet) | OVM (PPM) | BURMEISTER SYSTEM SOIL DESCRIPTION | FIELD NOTES & SAMPLE SUMMARY | |
|-----------------|--------------------|--------------|--|-------------------------------------|--|
| 0 | | | 0.0 - 0.5 QP Stone (coarse subangular gravel & cobbles) (GP) | | |
| 1 | | | 0.5 - 1.0 Olive Gray (5Y 4/2) medium-fine SAND, loose, moist, no odor (SP) | | |
| 2 | | 0.0 | 1.0 - 1.6 As Above (0.5' - 1'), strong solvent odor (SP) | 063_B008_1.0 (1.0' - 1.5') | |
| 3 | 2.7 | 1.0 | 1.6 - 2.2 Black (10YR 2.5/1) coarse-fine SAND, some medium-fine subround to subangular gravel, loose, moist-wet, strong solvent odor (SW) | 063_B008_1.7 (1.7' - 2.2') | |
| 4 | 4.0 | 599.0 | 2.2 - 3.7 Grayish Brown (2.5YR 5/2) Silty medium-fine SAND, moist-wet, loose, strong solvent odor (SM) | 063_B008_2.2 (2.2' - 2.6') | |
| 5 | | 76.3 | | 15% COPR 1.7' - 2.0' | |
| 6 | | 57.7 | | | |
| 7 | | | 5.0 - 7.0 Dark Gray (10YR 4/1) medium-fine SAND, little coarse-fine subround gray angular gravel, crushed-up white cobbles 5.5' - 5.6', medium-dense, moist, no odor (SP), Transitions into Light Olive Brown (2.5Y 5/3) SILT & fine SAND, little white medium-coarse gravel & cobbles, abundant from 6.7' - 7.0', firm, moist, no odor (ML) | 063_B008_6.5 (6.5' - 7.0') | |
| 8 | 2.0 | 0.0 | | | |
| 9 | 5.0 | 0.0 | | | |
| 10 | | 0.0 | 10.0 - 10.5 Red (2.5YR 4/6) SILT, little fine sand, stiff, dry, no odor (ML) | 063_B008_10.5 (10.5 - 11.0') | |
| 11 | | 2.2 | 10.5 - 12.5 Very Dark Grayish Brown (2.5 YR 2.5/1) PEAT, little Very Dark Gray (5Y 3/1) CLAY, low plasticity, soft, moist-wet, abundant plant fibers, slight sulfurous odor (PT) | Fill/native soil interface at 10.5' | |
| 12 | 3.3 | 6.8 | 12.5 - 13.3 Gray (2.5Y 5/1) Clayey fine SAND, little medium sand, soft, moist, no odor (SC), Transitions into Reddish Brown (5YR 4/3) SILT, little fine sand, trace fine angular gravel, stiff, moist, no odor (ML) | 063_B008_12.8 (12.8 - 13.3') | |
| 13 | 5.0 | 1.3 | | | |
| 14 | | 0.7 | | | |
| 15 | | 0.0 | 15.0 - 17.8 Reddish Brown (2.5YR 5/3) SILT, little fine sand, trace fine gravel, stiff, dry, no odor (ML) | | |
| 16 | | 0.0 | | | |
| 17 | | 0.0 | | 063_B008_16.5 (16.5' - 17.0') | |
| 18 | 2.8 | 0.0 | | | |
| 19 | 5.0 | 0.0 | | | |
| 20 | | 0.0 | | | |
| 21 | | | End of Boring at 20' bgs. | | |
| 22 | | | | | |
| 23 | | | | | |
| 24 | | | | | |
| 25 | | | | | |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|--|-----------------------------------|
| | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_B009 / 063_MW02 |
| | | PROJECT NAME: PPG Site 063 | | LOCATION SKETCH |
| COMPLETION DATE: 7/11/2011 | TOTAL DEPTH OF BOREHOLE: 20 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M. / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Ray Smith | | DRILLING EQUIPMENT: Geoprobe Track Rig | DRILLING METHOD / BIT: Direct Push | |
| SAMPLING METHOD: 5' Sleeves, 1.25" | DEPTH TO GROUNDWATER ~ 2.0' | GROUND SURFACE ELEVATION: | WELL INSTALLED? Yes - 063_MW02 | |
| MEMO: | | | | |


| DEPTH (Feet) | RECOVERY (feet) | OVM (PPM) | BURMEISTER SYSTEM SOIL DESCRIPTION | FIELD NOTES & SAMPLE SUMMARY | |
|-----------------|--------------------|--------------|--|---------------------------------|--|
| 0 | | 542.0 | 0.0 - 0.3 Wood fragments, strong odor (solvents or creosote) | 063_B009_0.0 (0.0' - 0.5') | |
| 1 | | 2.0 | 0.3 - 0.9 Black (10YR 2.5/1) coarse-medium SAND, | 063_B009_0.5 (0.5' - 1.0') | |
| 2 | | 0.0 | little-some slag & coal fragments, loose, moist | 75% COPR noted 0.3' - 0.5' | |
| 3 | 2.7 | 0.0 | odor (SW) | 063_B009_1.7 (1.7' - 2.2') | |
| 4 | 5.0 | 0.0 | 0.9 - 2.7 Very Dark Gray (10YR 3/1) medium-fine SAND, little coarse-fine angular | | |
| 5 | | | gravel, little silt, loose, moist, wet at 2' | | |
| 6 | | | 5.0 - 9.4 No recovery - drilling difficult and rocky | | |
| 7 | | | | | |
| 8 | 0.7 | | | | |
| 9 | 5.0 | | 9.3 - 9.8 Olive Brown (2.5YR 4/3) Clayey SILT, trace fine sand, little coarse-fine | 063_B009_9.3 (9.3' - 9.8') | |
| 10 | | 0.0 | gray angular gravel, soft, low plasticity, moist, no odor (ML) | (fill/native soil interface) | |
| | | 1.1 | 9.8 - 10.0 Dark Brown (10YR 3/3) PEAT, soft, moist, strong sulfurous odor (PT) | | |
| 11 | | 6.4 | 10.0 - 11.7 As Above (9.8' - 10.0') | | |
| 12 | | 3.4 | | | |
| 13 | 3.7 | 0.6 | 11.7 - 13.7 Gray to Grayish Brown (10YR 5/1 - 5/2) SILT, little fine sand, little | | |
| 14 | 5.0 | 0.4 | coarse-fine angular gravel, firm, moist, no odor (ML) | 063_B009_13.0 (13.0' - 13.5') | |
| 15 | | 0.0 | | | |
| 16 | | 0.0 | 15' - 20' No Recovery | | |
| 17 | | 5.0 | | | |
| 18 | | | | | |
| 19 | | | | | |
| 20 | | | | | |
| 21 | | | End of Boring at 20' bgs. | | |
| 22 | | | Well Information: | | |
| 23 | | | 2-inch diameter 10-slot SCH40 PVC screen set at 5.0' - 10.0' bgs. | | |
| 24 | | | 2-inch diameter SCH40 PVC riser from 5.0' bgs. to 2.5' above grade | | |
| 25 | | | #1 Sand from 3.0' to 10.0' bgs., Grout from 1.0' to 3.0' | | |
| | | | 2' x 2' section of PVC liner placed on top of HDPE liner | | |
| | | | Cemented-in 2' x 2' hole for well pad from 1.0' bgs to surface | | |
| | | | Stick-up completion | | |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|--|------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_B010 |
| | | PROJECT NAME: PPG Site 063 | | LOCATION SKETCH |
| COMPLETION DATE: 7/28/2011 | TOTAL DEPTH OF BOREHOLE: 20 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M. / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Bob Fleming | | DRILLING EQUIPMENT: Geoprobe Track Rig | DRILLING METHOD / BIT: Direct Push | |
| SAMPLING METHOD: 5' Sleeves, 1.25" | DEPTH TO GROUNDWATER ~ 2.0' | GROUND SURFACE ELEVATION: | WELL INSTALLED? No | |
| MEMO: | | | | |


| DEPTH (Feet) | RECOVERY (feet) | OVM (PPM) | BURMEISTER SYSTEM SOIL DESCRIPTION | FIELD NOTES & SAMPLE SUMMARY |
|-----------------|--------------------|--------------|---|---|
| 0 | | 25.3 | 0.0 - 0.5 Light Brownish Gray (2.5Y 6/2) medium-fine SAND, little subround-subangular tan/light gray gravel, loose, dry, slight solvent odor (SW) | 063_B010_0.0 (0.0' - 0.5') |
| 1 | | 7430.0 | | Trace COPR 0.5' - 0.5' |
| 2 | | 9999.0 | 0.5 - 3.3 Very Dark Gray (3.5Y 3/1) medium-fine SAND, some silt, trace subround-subangular medium-fine gray gravel, medium-dense, moist, moist-wet 2' - 3.3', strong solvent odor (GM/SM) | 063_B010_1.5 (1.5' - 2.0') |
| 3 | 3.6 | 327.0 | | 50% COPR 0.5' - 3' |
| 4 | 5.0 | 438.0 | | |
| 5 | | 124.0 | 3.4 - 3.6 Reddish Brown (5YR 4/4) coarse-medium SAND & medium-fine subround - subangular sandstone GRAVEL, loose, dry, slight solvent odor (GW) | 063_B010_3.0 (3.0' - 3.5') |
| 6 | | 77.0 | | Strong solvent odor throughout 0' - 5' interval |
| 7 | | 12.9 | 5.0 - 5.5 Very Dark Gray (3.5Y 3/1) Silty fine SAND little subround to subangular medium-fine gravel, medium-dense, moist-wet, slight solvent odor (SM) | 063_B010_5.0 (5.0' - 5.5') |
| 8 | 2.8 | 3.0 | | |
| 9 | 5.0 | 9.5 | 5.5 - 6.4 Dark Grayish Brown (10YR 4/2) grading to Olive Gray (5Y 5/2) Silty fine SAND, trace clay & medium-fine subangular gravel, medium-dense, moist-wet, slight solvent odor (SM) | |
| 10 | | 2.6 | | |
| 11 | | 0.6 | 6.4 - 7.8 Reddish Brown (5YR 4/4) SILT, some medium-fine SAND, little fine gray angular gravel & medium-fine subround red siltstone gravel, stiff, moist, no odor (ML) | 063_B010_7.3 (7.3' - 7.8') |
| 12 | | | Dark Brown Peat in bottom of sleeve | Fill/native soil interface at 7.8' |
| 13 | | 4.9 | 10.0 - 11.9 Very Dark Grayish Brown (10YR 3/2) PEAT, little Very Dark Gray (2.5Y 3/1) CLAY, low plasticity, soft, moist-wet, abundant plant fibers, strong sulfurous odor (PT) | 063_B010_11.0 (11.0' - 11.5') |
| 14 | 2.5 | 1.3 | | |
| 15 | 5.0 | 0.7 | 11.9 - 12.1 Brown (7.5YR 4/2) Clayey SILT, little fine-very fine sand, soft, moist, no odor (ML) | |
| 16 | | 0.0 | 12.1 - 12.3 Light Greenish Gray/White (GLE Y2 8/5BG) coarse-medium SAND & subround sandstone COBBLES, loose, dry no odor (GP) | |
| 17 | | 0.0 | 12.3 - 12.5 Brown (7.5YR 4/2) SILT, little clay & fine sand, some coarse-medium subround red/gray siltstone gravel, stiff, moist, no odor (ML) | |
| 18 | | 0.0 | 15.0 - 16.7 Grayish Brown (10YR 5/2) SILT, little fine sand, little coarse-fine subround reddish brown & dark gray gravel, stiff, moist, no odor (ML) | 063_B010_15.0 (15.0' - 15.5') |
| 19 | 1.7 | 0.0 | | |
| 20 | 5.0 | 0.0 | | |
| 21 | | | End of Boring at 20' bgs. | |
| 22 | | | | |
| 23 | | | | |
| 24 | | | | |
| 25 | | | | |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|--|-------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_B010a |
| | | PROJECT NAME: PPG Site 063 | | LOCATION SKETCH |
| COMPLETION DATE: 7/27/2011 | TOTAL DEPTH OF BOREHOLE: 20 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M. / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Bob Fleming | | 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: | | | | |

| DEPTH (Feet) | RECOVERY (feet) | OVM (PPM) | BURMEISTER SYSTEM SOIL DESCRIPTION | FIELD NOTES & SAMPLE SUMMARY |
|-----------------|--------------------|--------------|---|---|
| 0 | | 46.1 | 0.0 - 0.3 Olive Gray (5Y 4/2) fine-medium SAND, loose, moist, slight solvent odor (SW) | 063_B010a_0.0 (0.0' - 0.5') |
| 1 | | 74.6 | 0.3 - 2.7 Black (2.5Y 2.5/1) medium-fine SAND, little coal, trace slag & fine red subround gravel, moist, wet 1.7' - 2.7', slight solvent odor (SW) | |
| 2 | 4.0 | 541.0 | | |
| 3 | 5.0 | 24.7 | 2.7 - 3.2 Yellowish Brown (10YR 5/4) coarse-medium SAND & medium-fine subround gravel, loose, wet, dark staining 3.0' - 3.2', slight sheen, strong solvent odor (SW) | |
| 4 | | 1.1 | 3.2 - 4.0 Dark Grayish Brown (10YR 4/2) Silty fine SAND, some fine angular gravel, little coarse-medium gravel, stiff, moist-dry, no odor (SM) | |
| 5 | | 2.7 | | |
| 6 | | 2.5 | | |
| 7 | | 0.7 | 5.0 - 8.0 Olive Gray (5Y 5/2) Clayey SILT, trace fine sand & shells, trace glass fragments, firm, low plasticity, moist, no odor (ML), Transitions to Clayey SILT, trace glass, soft, moist, slight sulfurous odor (ML) | 063_B010a_5.0 (5.0' - 5.5') |
| 8 | 4.0 | 1.2 | | |
| 9 | 5.0 | 0.4 | 8.0 - 9.0 Very Dark Grayish Brown (10YR 3/2) PEAT, little Very Dark Gray (2.5Y 3/1) CLAY, low plasticity, soft, moist-wet, abundant plant fibers, strong sulfurous odor (PT) | 063_B010a_7.5 (7.5' - 8.0') Fill/native soil interface at 8' |
| 10 | | 0.0 | | |
| 11 | | 0.4 | 10.0 - 11.4 As Above (8' - 9') | |
| 12 | 3.2 | 0.3 | 11.4 - 13.2 Brown (7.5YR 4/2) Clayey fine-very fine SAND, little silt, slight red and gray mottling, trace greenish gray coarse-fine siltstone gravel & medium sand, loose, moist, slight sulfurous odor (SC), Transitions to Grayish Brown (2.5Y 5/2) SILT, little fine sand, some gray medium-fine angular sandstone gravel & medium-fine subround reddish-brown siltstone gravel, little clay, trace gray angular gravel, stiff, moist-dry, no odor (ML) | 063_B010a_11.5 (11.5' - 12.0') |
| 13 | 5.0 | 0.0 | | |
| 14 | | 0.0 | | |
| 15 | | 0.0 | | |
| 16 | | 0.0 | 15.0 - 16.8 Grayish Brown grading to Brown (10YR 5/2-5/3) SILT, little fine sand & medium-fine gray angular gravel, trace medium sand, Pale Yellow (7.5Y 7/3) coarse-medium sand & coarse subround sandstone flat gravel & cobbles 16' - 16.3', Light Greenish Gray (GLE Y1 8/10Y) coarse-medium sand & coarse subround flat sandstone gravel & cobbles 16.6' - 16.8', stiff, moist, no odor (ML) | 063_B010a_15.0 (15.0' - 15.5') |
| 17 | 1.8 | 0.0 | | |
| 18 | 5.0 | 0.0 | | |
| 19 | | | | |
| 20 | | | | |
| 21 | | | End of Boring at 20' bgs. | |
| 22 | | | | |
| 23 | | | | |
| 24 | | | | |
| 25 | | | | |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|--|------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_B011 |
| | | PROJECT NAME: PPG Site 063 | | |
| COMPLETION DATE: 7/28/2011 | TOTAL DEPTH OF BOREHOLE: 20 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M. / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Bob Fleming | | DRILLING EQUIPMENT: Geoprobe Track Rig | DRILLING METHOD / BIT: Direct Push | |
| SAMPLING METHOD: 5' Sleeves, 1.25" | DEPTH TO GROUNDWATER ~ 2.2 | GROUND SURFACE ELEVATION: | WELL INSTALLED? No | |
| MEMO: | | | | |

| DEPTH (Feet) | RECOVERY (feet) | OVM (PPM) | BURMEISTER SYSTEM SOIL DESCRIPTION | FIELD NOTES & SAMPLE SUMMARY |
|-----------------|--------------------|--------------|--|---------------------------------|
| 0 | | 261.0 | 0.0 - 1.8 Black medium-fine SAND, little fine slag gravel & coal, trace silt, some gray | 063_B011_0.0 (0.0' - 0.5') |
| 1 | | 724.0 | coarse-fine angular gravel 0'-0.5', | 063_B011_0.5 (0.5' - 1.0') |
| 2 | 3.1 | 50.6 | medium-dense, dry, strong solvent odor (SP) | 30% COPR 0.2' - 0.5' |
| 3 | 5.0 | 8.5 | 1.8 - 2.2 Yellowish Brown (10YR 5/6) coarse-fine SAND & coarse-fine subround | |
| 4 | | 4.5 | gravel, moist, wet at 2.2', loose, slight solvent odor (SW) | |
| 5 | | 3.9 | 2.2 - 3.1 Dark Gray (10YR 4/1) Silty medium-fine SAND, some coarse-fine gravel | |
| 6 | | 2.3 | (slag & coal), loose, wet, slight solvent odor (SM) | |
| 7 | | 8.7 | 5.0 - 6.5 Brown (7.5YR 4/2) Silty fine SAND, little clay, trace fine angular gray | 063_B011_5.0 (5.0' - 5.5') |
| 8 | 2.9 | 40.8 | gravel & glass fragments, medium-dense, moist-wet, slight solvent odor (SM) | |
| 9 | 5.0 | 35.3 | 6.5 - 7.9 Olive Gray (5Y 5/2) SILT, some very fine sand & clay, dark gray staining | |
| 10 | | 5.8 | 6.4' - 6.8', soft, moist, slight solvent odor (ML) | |
| 11 | | 4.0 | | |
| 12 | | 0.4 | 10.0 - 10.3 Dark Grayish Brown (2.5Y 4/2) SILT & Dark Reddish Gray (5YR 4/2) | 063_B011_10.0 (10.0' - 10.5') |
| 13 | 3.4 | 0.5 | siltstone COBBLES, little very fine sand, trace clay, stiff, dry, no odor (GM) | Fill/native soil interface |
| 14 | 5.0 | 1.1 | 10.3 - 12.8 Very Dark Grayish Brown (10YR 3/2) PEAT, little Olive Gray (5Y 4/2) | at 10.3' |
| 15 | | 0.7 | CLAY, low plasticity, soft, moist-wet, abundant plant fibers, | |
| 16 | | 4.3 | slight sulfurous odor (PT) | |
| 17 | | 0.5 | 12.8 - 13.4 Greenish Gray (GLY2 6/10BG) CLAY, some medium-fine SAND, little silt, | |
| 18 | | 0.0 | trace medium-fine subround gravel, little Yellowish Red (5YR 4/6) mottling, | |
| 19 | | 0.2 | loose, moist-wet, no odor (CL/SC) | |
| 20 | | 0.2 | 15.0 - 15.8 Gray (7.5YR 5/1) Clayey medium-fine SAND, little silt, little coarse-fine gray | 063_B011_15.0 (15.0' - 15.5') |
| 21 | | 0.0 | angular gravel, loose, moist-wet, no odor (SC) | |
| 22 | 3.5 | 0.0 | 15.8 - 18.5 Pale Brown (10YR 6/3) SILT, some fine sand, little coarse-fine gray angular | |
| 23 | 5.0 | 0.0 | gravel, abundant 16.2'-16.5' & 17'-17.3', trace clay, stiff, moist, no odor (ML) | |
| 24 | | 0.1 | | 063_B011_18.0 (18.0' - 18.5') |
| 25 | | 0.0 | | |
| 26 | | | End of Boring at 20' bgs. | |

SOIL BORING LOG

| | | | | | |
|---|--------------------------------|---|--|-----------------------------------|--|
| | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_B012 / 063_MW03 | |
| | | PROJECT NAME: PPG Site 063 | | LOCATION SKETCH | |
| COMPLETION DATE: 7/11/2011 | TOTAL DEPTH OF BOREHOLE: 20 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M. / Whitehouse Station | | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Ray Smith | | DRILLING EQUIPMENT: Geoprobe Track Rig | DRILLING METHOD / BIT: Direct Push | | |
| SAMPLING METHOD: 5' Sleeves, 1.25" | DEPTH TO GROUNDWATER ~2.4' | GROUND SURFACE ELEVATION: | WELL INSTALLED? Yes - 063_MW03 | | |
| MEMO: Moved 8' SW from original location due to proposed location of gas pipeline | | | | | |

| DEPTH (Feet) | RECOVERY (feet) | OVM (PPM) | BURMEISTER SYSTEM SOIL DESCRIPTION | FIELD NOTES & SAMPLE SUMMARY |
|-----------------|--------------------|--------------|---|--|
| 0 | | 0.0 | 0.0 - 1.2 Very Dark Grayish Brown (10YR 3/2) fine SAND, some silt & gray angular gravel, broken-up concrete 0.6' - 0.9', dense, dry, no odor (SM) | 063_B012_0.0 (0.0' - 0.5') |
| 1 | | 0.0 | | |
| 2 | 3.2 | 0.0 | 1.2 - 2.0 Black (10YR 2/1) medium-fine S medium-dense, dry, no odor (SP) | |
| 3 | 5.0 | 0.0 | 2.0 - 2.3 Olive (2.5Y 5/4) medium-fine SAND, trace medium-fine gray round gravel (non-COPR) (SP) | |
| 4 | | 0.0 | 2.3 - 3.2 As Above (1.2' - 2.0'), (SP) Transitioning into Dark Gray (2.5Y 4/1) Silty fine SAND, little medium sand, loose, moist-wet, no odor (SM) | |
| 5 | | 0.0 | | |
| 6 | | 0.0 | 5.0 - 5.5 Reddish Brown (5YR 4/3) SILT, some fine sand, little clay, firm, moist, no odor (ML) | 063_B012_5.0 (5.0' - 5.5') |
| 7 | | 0.0 | 5.5 - 5.8 Dark Gray (5YR 4/1) SILT, little fine SAND, little clay, trace fine gray angular gravel, soft, moist-wet, no odor (ML) | |
| 8 | 0.8 | | | |
| 9 | 5.0 | | | Fill/native soil interface not recovered - sampled 10'-10.5' |
| 10 | | 0.0 | | |
| 11 | | 1.5 | 10.0 - 10.5 Reddish Brown (2.5YR 4/4) Clayey SILT, trace fine sand, low plasticity, soft, moist-wet, no odor (ML) | 063_B012_10.0 (10.0' - 10.5') |
| 12 | | 3.6 | 10.5 - 12.5 Very Dark Grayish Brown (2.5YR 3/2) PEAT, trace clay & silt, abundant plant fibers, low plasticity, soft, moist-wet, strong sulfurous odor (PT) | |
| 13 | 2.7 | 3.3 | | |
| 14 | 5.0 | 1.6 | 12.5 - 12.7 Dark Grayish Brown (10YR 4/2) clayey fine SAND, little silt, trace gravel, moist-wet, loose, slight sulfurous odor (SC) | |
| 15 | | 0.4 | | |
| 16 | | 0.0 | 15.0 - 17.5 Greenish-Gray (GLE Y2 6/6BG) fine-medium SAND, some clay, little silt, loose, moist-wet, slight sulfurous odor (SC), Transitions into Reddish Brown (2.5YR 5/3) SILT, little fine sand & medium-fine subangular gray gravel, stiff, moist, no odor (ML) | 063_B012_15.0 (15.0' - 15.5') |
| 17 | | 0.0 | | |
| 18 | 2.5 | 0.0 | | 063_B012_17.0 (17.0' - 17.5') |
| 19 | 5.0 | | | |
| 20 | | | | |
| 21 | | | End of Boring at 20' bgs. | |
| 22 | | | Well Information: | |
| 23 | | | 2-inch diameter 10-slot SCH40 PVC screen set at 5.0' - 10.0' bgs. | |
| 24 | | | 2-inch diameter SCH40 PVC riser from 5.0' bgs. to 2.5' above grade | |
| 25 | | | #1 Sand from 3.0' to 10.0' bgs., Bentonite from 3.0' to surface Stick-up completion with cement protective pad | |

SOIL BORING LOG

| | | | | | |
|---|--------------------------------|--|--|------------------------|--|
| | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_B013 | |
| | | PROJECT NAME: PPG Site 063 | | LOCATION SKETCH | |
| COMPLETION DATE: 7/28/2011 | TOTAL DEPTH OF BOREHOLE: 20 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M. / Whitehouse Station | | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Bob Fleming | | DRILLING EQUIPMENT: Geoprobe Track Rig | | | |
| SAMPLING METHOD: 5' Sleeves, 1.25" | | DEPTH TO GROUNDWATER ~ 3.3' | | | |
| MEMO: | | GROUND SURFACE ELEVATION: WELL INSTALLED? No | | | |

| DEPTH (Feet) | RECOVERY (feet) | OVM (PPM) | BURMEISTER SYSTEM SOIL DESCRIPTION | FIELD NOTES & SAMPLE SUMMARY |
|-----------------|--------------------|--------------|--|---------------------------------|
| 0 | | 0.0 | 0.0 - 3.7 Dark Brown (7.5YR 3/2) medium-fine SAND | 063_B013_0.0 (0.0' - 0.5') |
| 1 | | 0.0 | little medium-fine angular sandstone/siltstone gravel, dense, | |
| 2 | | 0.0 | dry, no odor (GW), Transitions to Black (10YR 2.5/1) medium-fine SAND & | 063_B013_1.0 (1.0' - 1.5') |
| 3 | 3.9 | 0.0 | some medium-fine slag gravel, | |
| 4 | 5.0 | 0.0 | little coal & cinders, medium-dense, moist, moist-wet 3.3'-3.9', no odor (GW) | 50% COPR 0.2' - 3.9' |
| 5 | | 0.0 | 3.7 - 3.9 Yellowish Brown (10YR 5/4) medium SAND & medium-fine round COPR | 063_B013_3.0 (3.0' - 3.5') |
| 6 | | 0.0 | GRAVEL (50%), some coarse sand & fine subround quartz gravel, trace | |
| 7 | | 0.0 | medium quartz gravel, loose, moist-wet, no odor (GW) | |
| 8 | 1.8 | 0.0 | 5.0 - 5.4 Yellowish Brown (10YR 5/4) medium SAND, some coarse sand & fine | 063_B013_5.0 (5.0' - 5.5') |
| 9 | 5.0 | 0.0 | subround gravel, trace medium gravel, no COPR, loose, moist-wet, no odor | |
| 10 | | 0.0 | (SW) | |
| 11 | | 0.0 | 5.4 - 6.0 Black (2.5Y 2.5/1) medium-fine SAND & medium-fine subround gravel (slag), | |
| 12 | | 0.0 | little coal, trace silt, moist-wet, medium-dense, no odor (GW) | |
| 13 | | 0.0 | 6.0 - 6.8 Dark Gray (2.5Y 4/1) medium-fine SAND, little silt & medium-fine slag gravel, | |
| 14 | | 0.0 | trace shells, loose, wet, no odor (SW) | |
| 15 | | 0.0 | 10.0 - 10.4 As Above (6' - 6.8') | 063_B013_10.0 (10.0' - 10.5') |
| 16 | | 0.0 | 10.4 - 10.6 Olive (5Y 5/3) SILT, some very fine sand, little clay, low plasticity, soft, | Fill/native soil interface |
| 17 | | 30.1 | moist, no odor (ML) | at 10.5' |
| 18 | | 0.0 | 10.6 - 11.0 Very Dark Grayish Brown (2.5YR 3/2) PEAT, trace clay & silt, abundant | |
| 19 | | 0.0 | plant fibers, low plasticity, soft, moist-wet, strong sulfurous odor (PT) | |
| 20 | | 0.0 | 15.0 - 15.7 As Above (10.6' - 11') | 063_B013_15.0 (15.0' - 15.5') |
| 21 | | 1.0 | 15.7 - 17.4 Greenish Gray (GLE2 6/5BG) to Gray (2.5Y 5/1) Clayey fine SAND, little | |
| 22 | | 0.0 | silt, soft, moist, slight sulfurous odor (SC), Transitions to fine SAND, little | |
| 23 | | 1.7 | silt, trace clay, loose, moist, no odor (SM), Transitions to Brown (10YR 4/3) | |
| 24 | 3.4 | 0.0 | SILT, some fine sand, little red medium-fine subround sandstone gravel, | |
| 25 | 5.0 | 0.0 | firm, moist, no odor (ML) | |
| 26 | | 0.0 | End of Boring at 20' bgs. | |

SOIL BORING LOG

| | | | | | | |
|---|-----------------------------------|---|--|------------------------|--|--|
| | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_B014 | | |
| | | PROJECT NAME: PPG Site 063 | | LOCATION SKETCH | | |
| COMPLETION DATE: 8/1/2011 | TOTAL DEPTH OF BOREHOLE: 42.0' | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M. / Whitehouse Station | | | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Bob Fleming | | 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: Boring for deep geological exploration. Refusal at 42' | | | | | | |


| DEPTH (Feet) | RECOVERY (feet) | OVM (PPM) | BURMEISTER SYSTEM SOIL DESCRIPTION | FIELD NOTES & SAMPLE SUMMARY |
|-----------------|--------------------|--------------|--|---------------------------------|
| 0 | | 0.0 | 0.0 - 4.1 Dark Grayish Brown (2.5Y 4/2) fine SAND, | 063_B014_0.0 (0.0' - 0.5') |
| 1 | | 0.0 | little medium sand & fine gray angular gravel, trace silt, white | 25% COPR 0.2' - 1.0' |
| 2 | | 0.0 | concrete cobbles 1.9' - 2.2', wood fragments 1.7' - 1.9', medium-dense, | 063_B014_1.25 (1.25' - 1.75') |
| 3 | 4.7 | 0.0 | dry-moist, no odor (SP) | 063_B014_2.25 (2.25' - 2.75') |
| 4 | 5.0 | 0.0 | | 40% COPR 2.0' - 3.0' |
| 5 | | 0.0 | 4.1 - 4.7 Black (2.5Y 2.5/1) medium-fine subround GRAVEL (slag), little coal, loose, | 063_B014_3.0 (3.0' - 3.5') |
| | | 0.0 | moist, no odor (SW) | |
| 6 | | 0.0 | 5.0 - 5.2 As Above (4.1' - 4.7') | |
| 7 | | 0.0 | 5.2 - 6.0 Yellowish Brown (10YR 5/4) medium SAND, some coarse sand & coarse- | |
| 8 | 4.2 | 0.0 | fine round quartz gravel, trace fine sand, loose, wet 5.4' - 6', no odor (SW) | 063_B014_7.0 (7.0' - 7.5') |
| 9 | 5.0 | 0.0 | 6.0 - 9.2 Black (2.5Y 2.5/1) medium-fine SAND, little silt & medium-fine black | |
| 10 | | 0.0 | angular gravel (lignite & coal), Light Gray (GLE Y1 7/N) CLAY 6.5' - 6.7', | |
| | | 0.0 | loose, wet, slight sulfurous odor 8.8' - 9.2' (SM) | |
| | | 1.6 | | |
| 11 | | 3.1 | 11.0 - 11.7 As Above (6' - 9.2') but medium-fine SAND & medium-fine black angular | |
| 12 | | 0.7 | gravel (lignite & coal), wet, slight sulfurous odor (SW/GW) | 063_B014_11.2 (11.2' - 11.7') |
| 13 | 3.3 | 175.0 | 11.7 - 13.3 Very Dark Grayish Brown (2.5YR 3/2) PEAT, some Very Dark Gray (5Y 3/1) | Fill/native soil interface |
| 14 | 5.0 | 339.0 | CLAY, moderate plasticity, soft, moist-wet, very strong sulfurous odor (PT) | at 11.7' |
| 15 | | 365.0 | | |
| 16 | | 338.0 | 15.0 - 18.2 As Above (11.7' - 13.3'), very strong sulfurous odor (PT) | 063_B014_15.0 (15.0' - 15.5') |
| 17 | | 442.0 | | |
| 18 | 3.8 | 552.0 | | |
| 19 | 5.0 | 625.0 | 18.2 - 18.7 Greenish Gray (GLE Y2 5/5BG) clayey fine SAND, little silt & medium sand, | |
| 20 | | 818.0 | trace fine subround gravel, soft, moist-wet, strong sulfurous odor (SC) | |
| | | 755.0 | | |
| | | 457.0 | | |
| 21 | | 1.0 | 20.0 - 21.6 Greenish Gray (GLE Y2 5/5BG) fine SAND, little clay & medium sand, trace | 063_B014_20.0 (20.0' - 20.5') |
| 22 | | 3.6 | silt & fine subround gravel (SC), medium-dense, moist-wet, strong sulfurous | |
| 23 | 4.7 | 56.1 | odor (SC) | |
| 24 | 5.0 | 3.7 | 21.6 - 23.2 Brown (7.5YR 5/2) Silty medium-fine SAND, trace clay & fine round gravel, | |
| | | 0.3 | loose, moist-wet, no odor (SM) | |
| | | | 23.2 - 24.7 Brown (7.5YR 5/4) SILT little fine sand & fine subround gravel, some medium- | |
| | | | fine sand 23.9' - 24.3' (wet & medium-dense), firm, moist, no odor (ML) | |
| 25 | | | | |

SOIL BORING LOG

| | | | | | |
|--|--|--|---|-------------------------------|--|
| | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_B014 | |
| | | PROJECT NAME: PPG Site 063 | | LOCATION SKETCH | |
| COMPLETION DATE: 8/1/2011 | TOTAL DEPTH OF BOREHOLE: 41.7' | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M. / Whitehouse Station | | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Bob Fleming | | 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: Boring for deep geological exploration. Refusal at 42' | | | | | |


| DEPTH (Feet) | RECOVERY (feet) | OVM (PPM) | BURMEISTER SYSTEM SOIL DESCRIPTION | FIELD NOTES & SAMPLE SUMMARY |
|-----------------|--------------------|--------------|--|---------------------------------|
| _26 | | 0.0 | 25.0 - 26.0 Reddish Brown (5YR 5/4) Silty medium-fine SAND, little coarse-fine subround gray gravel, loose, wet, no odor (SM) | _26 |
| | | 0.0 | | _27 |
| _27 | | 0.0 | 26.0 - 28.0 Reddish Brown (5YR 5/4) SILT, some fine sand little coarse-fine subround gray to dark red-gray gravel & cobbles, soft grading to firm, moist-wet, no odor (ML) | _27 |
| | <u>4.8</u> | 0.0 | | _28 |
| _28 | 5.0 | 0.0 | 28.0 - 29.8 Brown (7.5YR 5/3) SILT, little fine sand & coarse-fine subround gray gravel, stiff, moist, no odor (ML) | _28 |
| | | 0.0 | | _29 |
| _29 | | 0.0 | | _30 |
| _30 | | 0.0 | | |
| _31 | | 0.0 | 30.0 - 34.7 As Above (28.0 - 29.8) but with some fine sand, moist-wet, soft/firm, grading to Reddish Brown (5YR 4/4) SILT, little medium-fine gravel, little/trace fine sand, stiff, moist-dry, no odor (ML) | _31 |
| | | 0.0 | | _32 |
| _32 | | 0.0 | | _33 |
| | <u>4.7</u> | 0.0 | | _34 |
| _33 | 5.0 | 0.0 | | _35 |
| _34 | | 0.0 | | |
| _35 | | 0.0 | | |
| _36 | | 0.0 | 35.0 - 37.5 Brown (7.5YR 4/3 to 4/2) SILT, some/little fine sand, little coarse-fine subangular gray gravel, moist-wet throughout, firm, no odor (ML) | _36 |
| | | 0.0 | | _37 |
| _37 | | 0.0 | 37.5 - 38.6 Brown (7.5YR 4/2) SILT & coarse-fine dark gray GRAVEL & COBBLES, little/trace fine sand, wet, dense, no odor (GM/ML) | _37 |
| | <u>3.6</u> | 0.0 | | _38 |
| _38 | 5.0 | 0.0 | | _39 |
| _39 | | 0.0 | | _40 |
| _40 | | 0.0 | | |
| _41 | | 0.0 | 40.0 - 41.7 Brown (7.5YR 4/3) Silty fine SAND & Dark Gray coarse SAND & coarse-fine GRAVEL, little dark gray cobbles, medium-dense to loose, wet, no odor (GM) | _41 |
| | <u>1.7</u> | 0.0 | | _42 |
| _42 | 2.0 | 0.0 | | |
| _43 | | | End of Boring at 42' bgs. (Refusal) | _43 |
| _44 | | | | _44 |
| _45 | | | | _45 |
| _46 | | | | _46 |
| _47 | | | | _47 |
| _48 | | | | _48 |
| _49 | | | | _49 |
| _50 | | | | _50 |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|--|-----------------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_B015 / 063_MW04 |
| | | PROJECT NAME: PPG Site 063 | | LOCATION SKETCH |
| COMPLETION DATE: 7/14/2011 | TOTAL DEPTH OF BOREHOLE: 20 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M. / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Ray Smith | | 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 - 063_MW04 | |
| MEMO: Used combination of hang augering, shoveling, and air knifing with vacuum to soft dig to 5' bgs. | | | | |


| DEPTH (Feet) | RECOVERY (feet) | OVM (PPM) | BURMEISTER SYSTEM SOIL DESCRIPTION | FIELD NOTES & SAMPLE SUMMARY |
|-----------------|--------------------|--------------|--|---------------------------------|
| 0 | | 0.0 | 0.0 - 0.2 Grayish Brown (10YR 5/2) fine SAND, little coarse gray gravel & cobbles, trace medium-fine gravel & medium sand, dry, loose, no odor (SP) | 063_B015_0.0 (0.0' - 0.5') |
| 1 | | 0.0 | 0.2 - 0.3 Concrete (shoveled out) | |
| 2 | N/A | 0.0 | 0.3 - 0.5 As Above (0' - 0.2'), little slag, loose, dry, no odor (SP) | |
| 3 | | 0.0 | 0.5 - 1.0 Brown (10YR 4/3) medium-fine SAND, little subround & angular coarse-fine gravel, trace slag, loose, dry, no odor (SP) | |
| 4 | | 0.0 | 1.0 - 2.0 As Above (0.5' - 1'), moist, trace slag (SP) | |
| 5 | | 0.0 | 2.0 - 2.5 No auger recovery - rocky, used air-knife to vacuum to 2.5' | |
| | | 0.0 | 2.5 - 4.0 Black (2.5Y 2.5/1) coarse-fine GRAVEL (slag), some coal, little cinders & brown medium-fine sand, moist, moist-wet 3.5' - 4', loose, no odor (GW) | 063_B015_4.0 (4.0' - 4.5') |
| 6 | | 0.0 | 4.0 - 4.5 Yellowish Brown (10YR 5/6) medium SAND, some coarse-medium gravel & cobbles, loose, moist-wet, no odor (SW) | |
| 7 | | 0.0 | 4.5 - 5.0 Auger refusal at 4.5', used air knife to vacuum to 5' | |
| 8 | 2.8 5.0 | 0.0 | 5.0 - 5.3 Brown (10YR 4/3) medium-fine SAND, little silt, loose, wet, slight sulfurous odor (SM) | 063_B015_7.3 (7.3' - 7.8') |
| 9 | | 0.0 | 5.3 - 7.8 Black (2.5Y 2.5/1) medium-fine SAND, some medium-fine gravel, little silt, loose, wet, slight sulfurous odor (SM) | |
| 10 | | 0.0 | 10.0 - 11.0 As Above (5.3' - 7.8') | |
| 11 | | 0.0 | | 063_B015_10.5 (10.5' - 11.0') |
| 12 | | 3.2 | 11.0 - 13.2 Very Dark Grayish Brown (2.5YR 3/2) PEAT, some Very Dark Gray (5Y 3/1) CLAY, moderate plasticity, soft, moist-wet, strong sulfurous odor (PT) | |
| 13 | 3.2 5.0 | 38.3 | | |
| 14 | | 12.4 | | |
| 15 | | 67.9 | | |
| 16 | | 76.8 | 15.0 - 17.3 Very Dark Grayish Brown (2.5YR 3/2) PEAT, some Very Dark Gray (5Y 3/1) CLAY, moderate plasticity, soft, moist-wet, very strong sulfurous odor (PT) | 063_B015_15.0 (15.0' - 15.5') |
| 17 | | 846.0 | | |
| 18 | 2.8 5.0 | 107.0 | 17.3 - 17.8 Dark Gray (10YR 4/1) Clayey fine SAND, little silt, soft/loose, moist-wet, strong sulfurous odor (SC) | 063_B015_17.3 (17.3' - 17.8') |
| 19 | | 222.0 | | |
| 20 | | 1041.0 | | |
| 21 | | | End of Boring at 20' bgs. | |
| 22 | | | Well Information: 2-inch diameter 10-slot SCH40 PVC screen set at 5.0' - 10.0' bgs. | |
| 23 | | | 2-inch diameter SCH40 PVC riser from 5.0' bgs. to 2.5' above grade | |
| 24 | | | #1 Sand from 3.0' to 10.0' bgs., Bentonite from 3.0' to surface | |
| 25 | | | Stick-up completion with cement protective pad | |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|--|--|------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_C003 |
| | | PROJECT NAME: PPG Site 063 | | LOCATION SKETCH |
| COMPLETION DATE: 7/21/2011 | TOTAL DEPTH OF BOREHOLE: 20 | MONITORING DEVICE: None - PID not working | GEOLOGIST / OFFICE: Jim M. / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Bob Fleming | | DRILLING EQUIPMENT: Geoprobe Track Rig | DRILLING METHOD / BIT: Direct Push | |
| SAMPLING METHOD: 5' Sleeves, 1.25" | DEPTH TO GROUNDWATER ~ 1.6' | GROUND SURFACE ELEVATION: | WELL INSTALLED? No | |
| MEMO: PID not working - lamp issue | | | | |


| DEPTH (Feet) | RECOVERY (feet) | OVM (PPM) | BURMEISTER SYSTEM SOIL DESCRIPTION | FIELD NOTES & SAMPLE SUMMARY |
|-----------------|--------------------|--------------|---|------------------------------------|
| 0 | | | 0.0 - 0.2 Grayish Brown (2.5Y 5/2) fine SAND & coarse gray angular gravel, little medium sand, dry, loose, no odor (GP) | 063_C003_0.0 (0.0' - 0.5') |
| 1 | | | 0.2 - 0.8 Black (2.5Y 2.5/1) SAND, little medium sand, dry, loose, no odor (SP) | 063_C003_0.5 (0.5' - 1.0') |
| 2 | 3.7 | | 0.8 - 1.2 Brown (7.5YR 4/2) SILT, some fine sand, firm, dry, no odor (ML) | 30% COPR 0.2' - 0.5' |
| 3 | 5.0 | | 1.2 - 1.6 Black (2.5Y 2.5/1) coarse-fine SAND, some fine subround slag gravel, loose, moist, no odor (SW) | |
| 4 | | | 1.6 - 3.7 Dark Grayish Brown (2.5Y 4/2) SILT, some fine sand, trace coarse-fine gray subround gravel, little wood fragments, firm grading to soft, moist-wet, strong solvent odor (ML) | |
| 5 | | | 5.0 - 7.2 Grayish Brown (2.5Y 5/2) CLAY, some silt, trace fine sand, moderate plasticity, soft, moist-wet, slight solvent odor (OH/CH) | 063_C003_5.0 (5.0' - 5.5') |
| 6 | | | 7.2 - 8.6 Very Dark Grayish Brown (2.5YR 3/2) PEAT, trace clay & silt, abundant plant fibers, low plasticity, soft, moist-wet, strong sulfurous odor (PT) | 063_C003_6.7 (6.7' - 7.2') |
| 7 | 3.7 | | | Fill native soil interface at 7.2' |
| 8 | 5.0 | | | |
| 9 | | | 10.0 - 11.0 Dark Gray (5Y 4/1) Clayey fine SAND, little silt, moist, soft, no odor (SC) | |
| 10 | | | 11.0 - 12.5 Reddish Brown (5YR 4/3) fine SAND, some silt, little medium sand, medium-dense, moist-dry, no odor, little coarse-fine Greenish Gray (GLE Y1 5/10GY) gravel 12.4' - 12.8', no odor (SM) | 063_C003_10.5 (10.5' - 11.0') |
| 11 | 3.7 | | 12.5 - 13.0 Brown (7.5YR 4/3) Silty medium-fine SAND, moist-wet, dense, no odor, little angular Greenish Gray GLEY1 5/5GY coarse gravel & cobbles (shale) (SM) | |
| 12 | 5.0 | | 13.0 - 13.6 Red (2.5YR 4/6) coarse-fine flat sandstone GRAVEL & COBBLES, loose, dry, no odor (GW) | |
| 13 | | | 15.0 - 15.2 Dark Greenish Gray (GLE Y1 4/5G) medium SAND, some fine sand, little silt, loose, moist, no odor (SM) | 063_C003_15.5 (15.0' - 15.5') |
| 14 | | | 15.2 - 16.0 Brown (7.5YR 4/3) SILT, some medium-fine sand, little medium-fine subround gray gravel, firm, moist-wet, no odor (ML) | |
| 15 | 3.2 | | 16.0 - 17.2 Brown (7.5YR 4/3) SILT, little fine sand, trace coarse-fine subround gray gravel & cobbles, firm, moist, no odor (ML) | |
| 16 | 5.0 | | 17.2 - 17.7 Gray subangular coarse GRAVEL & COBBLES, little fine sand & silt, wet, loose, no odor (GM) | |
| 17 | | | 17.7 - 18.7 As Above (16' - 17.2') | |
| 18 | | | End of Boring at 20' bgs. | |
| 19 | | | | |
| 20 | | | | |
| 21 | | | | |
| 22 | | | | |
| 23 | | | | |
| 24 | | | | |
| 25 | | | | |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|--|------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_C004 |
| | | PROJECT NAME: PPG Site 063 | | |
| COMPLETION DATE: 7/21/2011 | TOTAL DEPTH OF BOREHOLE: 20 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M. / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Bob Fleming | | DRILLING EQUIPMENT: Geoprobe Track Rig | DRILLING METHOD / BIT: Direct Push | |
| SAMPLING METHOD: 5' Sleeves, 1.25" | DEPTH TO GROUNDWATER ~ 2.2' | GROUND SURFACE ELEVATION: | WELL INSTALLED? No | |
| MEMO: | | | | |


| DEPTH (Feet) | RECOVERY (feet) | OVM (PPM) | BURMEISTER SYSTEM SOIL DESCRIPTION | FIELD NOTES & SAMPLE SUMMARY |
|-----------------|--------------------|--------------|---|------------------------------------|
| 0 | | | 0.0 - 0.2 Grayish Brown (2.5Y 5/2) fine SAND & coarse gray angular gravel, little medium sand, dry, loose, no odor (GP) | 063_C004_0.2 (0.2' - 0.7') |
| 1 | | | 0.2 - 0.7 Dark Brown (7.5YR 3/2) fine SAND, little medium sand, trace silt, trace medium-fine gray ang. Gravel, loose, dry, no odor (SP) | 063_C004_0.7 (0.7' - 1.2') |
| 2 | | | 0.7 - 1.2 As Above (0.2' - 0.7'), bright yellow-green hue to some of the gravel (SP) | 063_C004_1.2 (1.2' - 1.7') |
| 3 | 3.1 | | 1.2 - 1.6 Dark Brown (7.5YR 3/2) Silt, some fine-medium sand, little coarse-fine gray angular gravel, m. dense, moist, no odor (ML) | 20% COPR 0.2' - 0.7' |
| 4 | 5.0 | | 1.6 - 2.2 Dark Yellowish Brown (10YR 4/4) SILT, some fine sand, little medium-fine gray angular gravel, dense, dry, no odor (ML) | 40% COPR 0.7' - 1.2' |
| 5 | | | 2.2 - 3.1 Dark Grayish Brown (10YR 4/2) SILT, some fine sand, wet, soft, wood fragments with strong creosote/solvent odor, staining (ML) | |
| 6 | | | 5.0 - 6.2 Reddish Gray (5YR 5/2) Silty CLAY, some reddish brown medium-fine flat siltstone gravel, firm grading to soft, moist, slight solvent odor (CL) | 063_C004_5.7 (5.7' - 6.2') |
| 7 | 1.4 | | 6.2 - 6.4 Very Dark Grayish Brown (2.5YR 3/2) PEAT, trace clay & silt, abundant plant fibers, low plasticity, soft, moist-wet, strong sulfurous odor (PT) | Fill/native soil interface at 6.4' |
| 8 | 5.0 | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | 10.0 - 10.3 As Above (6.2' - 6.4') | 063_C004_10.0 (10.0' - 10.5') |
| 12 | | | 10.3 - 11.5 Greenish Gray (GLE Y2 6/5BG) CLAY, some fine sand & silt, soft, moist, no odor (CL) | |
| 13 | 2.7 | | 11.5 - 11.9 Reddish Brown (5YR 4/4) medium-fine SAND, little clay & silt, little medium-fine subangular gravel, medium-dense, moist-wet, no odor (SC) | |
| 14 | 5.0 | | 11.9 - 12.7 Grayish Brown (10YR 5/2) coarse-medium GRAVEL & COBBLES, little medium-fine sand & silt, loose, wet, no odor (GM) | |
| 15 | | | | |
| 16 | | | 15.0 - 16.0 Brown (7.5YR 4/3) medium-fine SAND, some silt, little coarse-fine gray angular gravel, medium-dense, moist-wet, no odor (SM) | 063_C004_15.0 (15.0' - 15.5') |
| 17 | 1.1 | | | |
| 18 | 5.0 | | | |
| 19 | | | | |
| 20 | | | | |
| 21 | | | End of Boring at 20' bgs. | |
| 22 | | | | |
| 23 | | | | |
| 24 | | | | |
| 25 | | | | |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|--|-------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_C004a |
| | | PROJECT NAME: PPG Site 063 | | LOCATION SKETCH |
| COMPLETION DATE: 7/21/2011 | TOTAL DEPTH OF BOREHOLE: 20 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M. / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Bob Fleming | | DRILLING EQUIPMENT: Geoprobe Track Rig | DRILLING METHOD / BIT: Direct Push | |
| SAMPLING METHOD: 5' Sleeves, 1.25" | DEPTH TO GROUNDWATER ~ 1.5' | 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 - 0.2 Asphalt | 063_C004a_0.2 (0.2' - 0.7') |
| 1 | | 0.0 | 0.2 - 0.8 Dark Brown (10YR 3/3) medium-fine SAND, little metal fragments, trace fine angular gravel, loose, dry, no odor (SW) | 063_C004a_0.7 (0.7' - 1.2') |
| 2 | 3.1 | 0.0 | 0.8 - 1.6 Black (2.5Y 2.5/1) coarse-fine SAND, some medium-fine slag gravel, loose, moist, wet at 1.5', no odor (SW) | 15% COPR 0.2' - 0.7' |
| 3 | 5.0 | 0.7 | 1.6 - 3.1 Dark Grayish Brown (10YR 4/2) Silty medium-fine SAND, trace medium-fine subround gravel (non-COPR), loose, wet, no odor (SM), Transitions to Dark Brown (5Y 4/1) SILT, some fine sand, little subround medium-fine gravel, medium-dense, moist-wet, strong hydrocarbon odor (ML) | |
| 4 | | 90.2 | | |
| 5 | | | | |
| 6 | | 111.0 | 5.0 - 7.2 Dark Grayish Brown (10YR 4/2) Silty CLAY, some fine sand, trace fine round gravel, soft, moist-wet, slight hydrocarbon odor (CL) | |
| 7 | 3.4 | 117.0 | | 063_C004a_6.7 (6.7' - 7.2') |
| 8 | 5.0 | 48.8 | 7.2 - 8.4 Very Dark Grayish Brown (2.5YR 3/2) PEAT, trace clay & silt, abundant plant fibers, low plasticity, soft, moist-wet, slight hydrocarbon odor (PT) | |
| 9 | | 17.5 | | |
| 10 | | 24.5 | | |
| 11 | | 22.4 | | |
| 12 | | 26.4 | | |
| 13 | | | 10.0 - 11.2 As Above (7.2' - 8.4'), Transitions to Dark Gray (2.5Y 4/1) CLAY, some fine sand, little silt, soft, moist, slight hydrocarbon odor (OL) | |
| 14 | 3.4 | 977.0 | 11.2 - 13.0 Reddish Brown (2.5YR 5/4) SILT, some fine sand, little medium-fine subround red/gray siltstone gravel, stiff, moist, slight hydrocarbon odor (ML), Transitions to Dark Gray (5YR 4/1) to Brown (7.5YR 4/3) coarse SAND & coarse-fine subround sandstone & siltstone GRAVEL, little medium-fine sand, loose, wet, strong hydrocarbon odor (GW). | 063_C004a_11.0 (11.0' - 11.5') |
| 15 | 5.0 | 903.0 | | |
| 16 | | 855.0 | | |
| 17 | | 716.0 | | |
| 18 | | 788.0 | 13.0 - 13.4 Weak Red (2.5YR 4/2) SILT, some fine SAND, firm, moist-wet, strong hydrocarbon odor (ML) | |
| 19 | | | | |
| 20 | | | | |
| 21 | | 815.0 | 15.0 - 16.5 Brown (7.5YR 4/3) SILT, some fine sand, little medium sand & medium-fine subangular gray gravel, stiff, moist-wet, strong hydrocarbon odor (ML) | 063_C004a_15.0 (15.0' - 15.5') |
| 22 | 1.6 | 890.0 | | |
| 23 | 5.0 | 1106.0 | | |
| 24 | | | | |
| 25 | | | End of Boring at 20' bgs. | |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|--|------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_C005 |
| | | PROJECT NAME: PPG Site 063 | | LOCATION SKETCH |
| COMPLETION DATE: 7/13/2011 | TOTAL DEPTH OF BOREHOLE: 20 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M. / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Ray Smith | | 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: *Hand-dug 2'x2' hole to 1' to remove liner. | | | | |


| DEPTH (Feet) | RECOVERY (feet) | OVM (PPM) | BURMEISTER SYSTEM SOIL DESCRIPTION | FIELD NOTES & SAMPLE SUMMARY |
|-----------------|--------------------|--------------|---|---------------------------------|
| 0 | | | 0.0 - 0.5 QP Stone (coarse subangular gravel & cobbles) (GP) | |
| 1 | | | 0.5 - 1.0 Olive Gray (5Y 4/2) medium-fine SAND, loose, moist, no odor (SP) | |
| 2 | 3.5 4.0 | 1.7 | 1.0 - 1.4 As Above (0.5'-1'), moist, slight solvent odor (SP) | 063_C005_1.0 (1.0' - 1.5') |
| 3 | | 0.6 | 1.4 - 2.4 Dark Brown (7.5YR 3/2) SILT, some fine sand, bright green fine sand & silty clay 1.8' - 1.9', medium-dense, moist, slight solvent odor (ML) | 063_C005_2.0 (2.0' - 2.5') |
| 4 | | 2.5 | 2.4 - 3.1 Bright Green (unknown munsell color) SILT, some fine SAND (ML) | 063_C005_2.5 (2.5' - 3.0') |
| 5 | | 3.9 | 3.1 - 4.5 Dark Grayish Brown (7.5YR 4/2) SILT, some fine sand, trace gray angular gravel, soft, wet at 4', strong solvent odor, wood in bottom of sleeve (ML) | 60% COPR 2.0' - 2.4' |
| 6 | | 10.8 | | |
| 7 | 10.1 | | | |
| 8 | 4.0 5.0 | 169.0 | 5.0 - 8.0 Reddish Brown (2.5YR 4/3) SILT, some fine sand, firm, moist-wet, slight solvent odor (ML) | |
| 9 | | 186.0 | | |
| 10 | | 12.8 | 8.0 - 9.0 Very Dark Grayish Brown (2.5YR 3/2) PEAT, trace clay & silt, abundant plant fibers, low plasticity, soft, moist-wet, strong sulfurous odor (PT) | 063_C005_7.5 (7.5' - 8.0') |
| 11 | | 7.3 | | |
| 12 | 3.3 5.0 | 7.5 | | |
| 13 | | 4.5 | 10.0 - 11.5 As Above (8' - 9'), Transitions to Greenish Gray (GLE2 5/6BG) Clayey SILT, trace fine sand, soft, low plasticity, moist, slight hydrocarbon odor (ML) | |
| 14 | | 1.4 | 11.5 - 12.1 Greenish Gray (GLE2 5/6BG) medium-fine SAND, trace fine shale gravel, medium-dense, moist-wet, slight hydrocarbon odor (SW) | 063_C005_11.5 (11.5' - 12.0') |
| 15 | | 10.4 | | |
| 16 | 3.8 5.0 | 5.9 | 12.1 - 13.3 Yellowish Red (5YR 5/6) SILT, little fine sand, trace fine shale gravel, very dense, dry, slight hydrocarbon odor (ML) | |
| 17 | | 1.1 | | |
| 18 | | 1.6 | | |
| 19 | | 11.6 | 15.0 - 15.8 As Above (12.1' - 13.3'), but little medium-fine sand, stron hydrocarbon odor (ML) | 063_C005_15.5 (15.5' - 16.0') |
| 20 | | 1483.0 | 15.8 - 18.8 Dark Grayish Brown (10YR 4/2) Silty fine SAND, race fine angular shale gravel, high gravel content 16.1' - 16.6', medium-dense, moist, strong hydrocarbon odor (SM) | |
| 21 | | 1200.0 | | |
| 22 | | 416.0 | | |
| 23 | | 92.8 | | |
| 24 | | 44.6 | | |
| 25 | | 8.5 | | |
| 26 | | | End of Boring at 20' bgs. | |

SOIL BORING LOG

| | | | | |
|---|---------------------------------|---|---|------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_C006 |
| | | PROJECT NAME: PPG Site 063 | | LOCATION SKETCH |
| COMPLETION DATE: 7/13/2011 | TOTAL DEPTH OF BOREHOLE: 18 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Ray Smith | | DRILLING EQUIPMENT: Geoprobe Track Rig | DRILLING METHOD / BIT: Direct Push | |
| SAMPLING METHOD: 5' Sleeves, 1.25" | DEPTH TO GROUNDWATER ~ 1.75' | GROUND SURFACE ELEVATION: | WELL INSTALLED? No | |
| MEMO: *Hand-dug 2'x2' hole to 1' to remove liner. | | | | |


| DEPTH (Feet) | RECOVERY (feet) | OVM (PPM) | BURMEISTER SYSTEM SOIL DESCRIPTION | FIELD NOTES & SAMPLE SUMMARY |
|-----------------|--------------------|--------------|---|--|
| 0 | | | 0.0 - 0.5 QP Stone (coarse subangular gravel & cobbles) (GP) | |
| 1 | | | 0.5 - 1.0 Olive Gray (5Y 4/2) medium-fine SAND, loose, moist, no odor (SP) | |
| 2 | | 2464.0 | 1.0 - 1.5 As Above (0.5'-1'), moist, strong solvent odor (SP) | 063_C006_1.0 (1.0' - 1.5') |
| 3 | 3.0 | 24.5 | 1.5 - 1.75 Dark Brown (7.5YR 3/2) fine SAND & SILT, medium-dense, moist, strong solvent odor (ML) | 063_C006_1.75 (1.75' - 2.25') |
| 4 | 4.0* | 43.7 | 1.75 - 2.25 Black (7.5YR 2.5/1) coarse-fine SAND & SLAG, loose, wet, slight solvent odor (SP) | 063_C006_2.25 (2.25' - 2.75') |
| 5 | | 23.9 | 2.3 - 4.0 Brown (10YR 4/3) fine SAND & SILT, little clay & medium-fine gray angular gravel, treated wood fragments in bottom of sleeve (creosote odor), soft grading to firm, moist, strong solvent odor throughout (ML) | 30% COPR noted 2.25'-2.75' |
| 6 | | 16.1 | 5.0 - 8.0 Brown (7.5YR 4/3) SILT, some fine sand, little medium-fine gray angular gravel, stiff, moist, strong odor (solvents?) (ML), Transitions into Olive Gray (5Y 5/2) SILT, little clay & fine sand, soft, moist, slight solvent odor (ML) | 063_C006_6.5 (6.5' - 7.0') |
| 7 | | 4.5 | | |
| 8 | 4.0 | 1.1 | | |
| 9 | 5.0 | 0.3 | 8.0 - 9.0 Very Dark Grayish Brown (10YR 3/2) PEAT, trace Dark Gray (5Y 4/1) CLAY, moderate plasticity, soft, moist-wet, strong sulfurous odor (PT) | 063_C006_7.5 (7.5' - 8.0') (fill/native soil interface) |
| 10 | | 1.0 | | |
| 11 | | 16.1 | 10.0 - 11.7 Dark Brown (10YR 3/3) PEAT grading to Greenish Gray (GLEY2 6/5BG) SILT, some fine sand & clay, soft, moist, slight hydrocarbon odor (ML) | |
| 12 | | 10.9 | 11.7 - 12.1 Reddish Brown (5YR 4/4) medium-fine SAND, loose, wet, strong hydrocarbon odor (SW) | 063_C006_11.5 (11.5' - 12.0') |
| 13 | 3.4 | 4.1 | 12.1 - 13.4 Yellowish Red (5YR 5/6) SILT, little fine sand & clay, trace medium-fine angular gray gravel, stiff, slight hydrocarbon odor (ML) | |
| 14 | 5.0 | 1580.0 | | |
| 15 | | 124.0 | | |
| 16 | | 11.4 | 15.0 - 18.0 As Above (12.1' - 13.4'), some fine sand from 16.5' - 17.2', refusal at 18' (gravel & cobbles) | 063_C006_15.5 (15.5' - 16.0') |
| 17 | 3.0 | 0.8 | | |
| 18 | 3.0 | 0.8 | | |
| 19 | | 2.4 | | |
| 20 | | 2.2 | | |
| 21 | | 1.1 | | |
| 22 | | 0.7 | | |
| 23 | | | End of Boring at 18' bgs. (refusal) | |
| 24 | | | | |
| 25 | | | | |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|---|------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_C007 |
| | | PROJECT NAME: PPG Site 063 | | LOCATION SKETCH |
| COMPLETION DATE: 7/14/2011 | TOTAL DEPTH OF BOREHOLE: 20 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Ray Smith | | DRILLING EQUIPMENT: Geoprobe Track Rig | DRILLING METHOD / BIT: Direct Push | |
| SAMPLING METHOD: 5' Sleeves, 1.25" | DEPTH TO GROUNDWATER ~ 1.7' | GROUND SURFACE ELEVATION: | WELL INSTALLED? No | |
| MEMO: *Hand-dug 2'x2' hole to 1' to remove liner. | | | | |


| DEPTH (Feet) | RECOVERY (feet) | OVM (PPM) | BURMEISTER SYSTEM SOIL DESCRIPTION | FIELD NOTES & SAMPLE SUMMARY |
|-----------------|--------------------|--------------------|--|----------------------------------|
| 0 | | | 0.0 - 0.5 QP Stone (coarse subangular gravel & cobbles) (GP) | |
| 1 | | | 0.5 - 1.0 Olive Gray (5Y 4/2) medium-fine SAND, loose, moist, no odor (SP) | |
| 2 | 4.0 | 25.2 317.0 | 1.0 - 1.5 As Above (0.5'-1'), moist, strong solvent odor (SP) | 063_C007_1.0 (1.0' - 1.5') |
| 3 | 4.0 | 27.8 36.4 | 1.5 - 1.7 Very Dark Grayish Brown (7.5YR 3/2) Silty fine SAND, dry, medium-dense, slight solvent odor (SM) | 063_C007_2.3 (2.3' - 2.8') |
| 4 | | 44.4 | 1.7 - 2.8 Black (10YR 2.5/1) coarse-fine SAND & medium-fine slag GRAVEL, loose, wet, slight solvent odor (GW) | 063_C007_2.8 (2.8' - 3.3') |
| 5 | | 3.2 5.2 31.6 | 2.8 - 5.0 Brown (10YR 4/3) SILT, little fine sand & clay, trace gray angular gravel, stiff, moist, slight solvent odor (ML) | Trace COPR 2.3' - 2.8' |
| 6 | | 30.0 25.6 | 5.0 - 8.0 As Above (2.8' - 5'), Transitions to Olive Gray (5Y 5/2) SILT, some fine sand, soft, moist, slight solvent odor (ML) | |
| 7 | 3.5 | 7.1 0.3 | | |
| 8 | 5.0 | 1.1 0.0 | 8.0 - 8.5 Very Dark Grayish Brown (10YR 3/2) PEAT, trace Dark Gray (5Y 4/1) CLAY, moderate plasticity, soft, moist-wet, strong sulfurous odor (PT) | 063_C007_7.5 (7.5' - 8.0') |
| 9 | | 0.3 | | Fill/native soil interface at 8' |
| 10 | | | | |
| 11 | | 0.0 0.0 0.0 | 10.0 - 11.3 As Above (8' - 8.5'), Transitions to Greenish Gray (GLE2 6/5BG) SILT, little clay & fine sand, soft, moist, no odor (ML) | |
| 12 | 3.3 | 0.0 | 11.3 - 13.3 Yellowish Red (5YR 5/6) SILT, little fine sand & clay, trace medium-fine angular gravel, stiff, dry, no odor (ML) | 063_C007_12.0 (12.0' - 12.5') |
| 13 | 5.0 | 0.0 | | |
| 14 | | | | |
| 15 | | | | |
| 16 | | 0.0 0.0 0.0 | 15.0 - 20.0 As Above (11.3' - 13.3'), some medium-fine sand, soft, moist-wet at 16' - 18.5', otherwise stiff, dry, no odor (MI) | 063_C007_16.0 (16.0' - 16.5') |
| 17 | 5.0 | 0.0 | | |
| 18 | 5.0 | 0.0 | | |
| 19 | | 0.0 | | |
| 20 | | 0.0 | | |
| 21 | | | End of Boring at 20' bgs. | |
| 22 | | | | |
| 23 | | | | |
| 24 | | | | |
| 25 | | | | |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|---|------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_C008 |
| | | PROJECT NAME: PPG Site 063 | | LOCATION SKETCH |
| COMPLETION DATE: 7/20/2011 | TOTAL DEPTH OF BOREHOLE: 20 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Bob Fleming | | DRILLING EQUIPMENT: Geoprobe Track Rig | DRILLING METHOD / BIT: Direct Push | |
| SAMPLING METHOD: 5' Sleeves, 1.25" | DEPTH TO GROUNDWATER ~ 1.5' | GROUND SURFACE ELEVATION: | WELL INSTALLED? No | |
| MEMO: *Hand-dug 2'x2' hole to 1' to remove liner. | | | | |


| DEPTH (Feet) | RECOVERY (feet) | OVM (PPM) | BURMEISTER SYSTEM SOIL DESCRIPTION | FIELD NOTES & SAMPLE SUMMARY |
|-----------------|--------------------|--------------|--|--|
| 0 | | | 0.0 - 0.5 QP Stone (coarse subangular gravel & cobbles) (GP) | |
| 1 | | | 0.5 - 1.0 Olive Gray (5Y 4/2) medium-fine SAND, loose, moist, no odor (SP) | |
| 2 | 2.2 | 246.0 | 1.0 - 1.5 As Above (0.5'-1'), moist, strong solvent odor (SP) | 063_C008_1.0 (1.0' - 1.5') |
| 3 | 4.0 | 3000.0 | 1.5 - 2.2 Black (2.5Y 2.5/1) coarse-medium SAND & medium-fine slag GRAVEL, little silt, loose, moist-wet, slight solvent odor (GM) | |
| 4 | | 246.0 | 2.2 - 3.2 Dark Grayish Brown (10YR 4/2) SILT, little fine sand, trace medium-fine subangular gravel, moist, stiff, slight solvent odor, some sandstone gravel (Light Grayish Brown 2.5Y 6/2) 3' - 3.2', (ML) | |
| 5 | | 226.0 | | |
| 6 | | 641.0 | | |
| 7 | | 0.0 | 5.0 - 7.2 As Above (2.2' - 3.2') but Silty CLAY, trace fine sand, no gravel, moderate plasticity, soft, moist, Olive Gray (5Y 5/2) Silty CLAY 5.8' - 5.9' (CH) | 063_C008_5.0 (5.0' - 5.5') |
| 8 | 3.2 | 0.0 | | |
| 9 | 5.0 | 0.0 | 7.2 - 8.1 Very Dark Grayish Brown (10YR 3/2) PEAT, trace Dark Gray (5Y 4/1) clay, low plasticity, soft, moist-wet, strong sulfurous odor (PT) | 063_C008_6.7 (6.7' - 7.2') Fill/native soil interface at 7.2' |
| 10 | | 0.0 | | |
| 11 | | 0.0 | 10.0 - 11.5 Brown (7.5YR 5/2) medium-fine SAND, little clay, trace sand, peat 10' - 10.1', medium-dense, moist-wet, trace Dusky Red (2.5YR 3/2) siltstone gravel (SC) | 063_C008_11.0 (11.0' - 11.5') |
| 12 | 3.3 | 0.0 | 11.5 - 13.3 Reddish Brown (5YR 4/3) SILT, little fine sand, trace medium-fine angular flat shale gravel, stiff, moist, no odor (ML), Transitions to Strong Brown (7.5YR 5/6) SILT, little fine sand, Light Greenish Gray (GLE Y1 7/5GY) coarse sandstone fragments & medium sand 2' - 2.4', stiff, moist, no odor (ML) | |
| 13 | 5.0 | 0.0 | | |
| 14 | | 0.0 | | |
| 15 | | 0.0 | | |
| 16 | | 0.0 | 15.0 - 17.2 as Above (11.5' - 13.3') but Brown (10YR 5/3), coarse Weak Red (10R 4/2) subround to subangular siltstone gravel 16.8' - 17.1', stiff, dry, no odor (ML) | 063_C008_15.0 (15.0' - 15.5') |
| 17 | 2.2 | 0.0 | | |
| 18 | 5.0 | 0.0 | | |
| 19 | | | | |
| 20 | | | | |
| 21 | | | End of Boring at 20' bgs. | |
| 22 | | | | |
| 23 | | | | |
| 24 | | | | |
| 25 | | | | |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|--|------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_C009 |
| | | PROJECT NAME: PPG Site 063 | | LOCATION SKETCH |
| COMPLETION DATE: 7/20/2011 | TOTAL DEPTH OF BOREHOLE: 20 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M. / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Bob Fleming | | DRILLING EQUIPMENT: Geoprobe Track Rig | DRILLING METHOD / BIT: Direct Push | |
| SAMPLING METHOD: 5' Sleeves, 1.25" | DEPTH TO GROUNDWATER ~ 1.7' | GROUND SURFACE ELEVATION: | WELL INSTALLED? No | |
| MEMO: | | | | |

| DEPTH (Feet) | RECOVERY (feet) | OVM (PPM) | BURMEISTER SYSTEM SOIL DESCRIPTION | FIELD NOTES & SAMPLE SUMMARY |
|-----------------|--------------------|--------------|---|---------------------------------|
| 0 | | | 0.0 - 0.5 QP Stone (coarse subangular gravel & cobbles) (GP) | |
| 1 | | | 0.5 - 1.0 Olive Gray (5Y 4/2) medium-fine SAND, loose, moist, no odor (SP) | |
| 2 | 3.1 | 3527.0 | 1.0 - 1.7 As Above (0.5'-1'), moist, strong solvent odor (SP) | 063_C009_1.0 (1.0' - 1.5') |
| 3 | | 1505.0 | 1.7 - 2.4 Black (10YR 2.5/1) medium-fine SAND, little slag gravel, loose, moist-wet, strong solvent odor (SW) | |
| 4 | 4.0 | 711.0 | 2.4 - 2.7 Very Dark Grayish Brown (10YR 3/2) coarse-fine SAND & medium-fine slag GRAVEL, wet, loose, strong solvent odor (GW) | |
| 5 | | 457.0 | 2.7 - 4.0 Olive Gray (5Y 4/2) SILT, some fine sand, trace fine angular gravel, moist, firm, strong solvent odor (ML), Transitions to Dark Grayish Brown (10YR 4/2) | |
| 6 | | 3756.0 | Silty fine SAND, little medium sand, moist-wet, loose, strong solvent odor (SM) | |
| 7 | 3.0 | 72.0 | 5.0 - 7.0 Grayish Brown (10YR 5/2) Silty CLAY, soft grading to firm, moist, strong solvent odor (CH) | 063_C009_5.0 (5.0' - 5.5') |
| 8 | | 4044.0 | 7.0 - 8.0 Very Dark Grayish Brown (10YR 3/2) PEAT, trace Dark Gray (5Y 4/1) clay, low plasticity, soft, moist-wet, slight solvent odor (PT) | 063_C009_6.5 (6.5' - 7.0') |
| 9 | 5.0 | 3891.0 | | |
| 10 | | 463.0 | | |
| 11 | | 14.0 | | |
| 12 | 0.8 | | Poor recovery - geology representative more of 14' then 10' based on nearby borings | |
| 13 | | 5.0 | | |
| 14 | | | | |
| 15 | | 0.0 | 14.0 - 15.0 Dark Reddish Gray (5YR 3/2) SILT, some clay, little medium-fine red angular siltstone gravel, soft-firm, moist, no odor (ML) | 063_C009_14.0 (14.0' - 14.5') |
| 16 | | 0.0 | 15.0 - 16.1 As Above (14' - 15') (ML), Transitions to Light Olive Brown (2.5Y 5/4) coarse-fine sandstone angular GRAVEL, some coarse-medium sand, trace silt & fine sand, Very Dark Grayish Brown (10YR 3/2) Siltstone fgravel at 15.6', loose, wet, no odor (GW) | |
| 17 | 1.1 | 0.0 | | |
| 18 | | 5.0 | | |
| 19 | | | | |
| 20 | | | | |
| 21 | | | End of Boring at 20' bgs. | |
| 22 | | | | |
| 23 | | | | |
| 24 | | | | |
| 25 | | | | |

SOIL BORING LOG


| | | | | |
|---|--------------------------------|---|--|-------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_C009a |
| | | PROJECT NAME: PPG Site 063 | | LOCATION SKETCH |
| COMPLETION DATE: 7/27/2011 | TOTAL DEPTH OF BOREHOLE: 20 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M. / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Bob Fleming | | 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: | | | | |

| DEPTH (Feet) | RECOVERY (feet) | OVM (PPM) | BURMEISTER SYSTEM SOIL DESCRIPTION | FIELD NOTES & SAMPLE SUMMARY |
|-----------------|--------------------|--------------|--|---------------------------------|
| 0 | | 0.0 | 0.0 - 0.5 Light Grayish Brown (2.5Y 6/2) fine SAND, little coarse light gray | 063_C009a_0.0 (0.0' - 0.5') |
| 1 | | 0.9 | subangular gravel, loose, dry, no odor (SP) | |
| 2 | 2.1 | 736.0 | 0.5 - 1.2 Dark Yellowish Brown (10YR 4/4) fine SAND, little coarse light gray gravel, | |
| 3 | 5.0 | 67.3 | dry, loose, slight solvent odor (SP) | |
| 4 | | | 1.2 - 1.8 Very Dark Gray (5Y 3/1) medium SAND, little fine sand, trace fine slag | |
| 5 | | | gravel & coal, little wood fragments, moist, wet at 1.8', strong solvent odor (SP) | |
| 6 | | | 1.8 - 2.1 Dark Gray (2.5Y 4/1) fine SAND, little medium sand, trace silt & mica, | |
| 7 | | | medium-dense, wet, strong solvent odor (SP), Transitions to Dark Grayish | |
| 8 | | | Brown (2.5Y 4/2) SILT, little very fine sand, firm, moist-wet, slight | |
| 9 | | | solvent odor (ML) | |
| 10 | | 37.3 | 5.0 - 6.9 As Above (1.8' - 2.1') (ML), Transitions to Olive Gray (5Y 5/2) Silt CLAY, | |
| 11 | | 5.8 | very soft, moist-wet, slight solvent odor (CH), then to Brown (7.5YR 4/3) | |
| 12 | | 54.3 | SILT, some fine sand, trace red sandstone gravel, firm, moist, slight solvent | |
| 13 | 2.7 | 162.0 | odor (ML) | 063_C009a_6.4 (6.4' - 6.9') |
| 14 | 5.0 | 41.1 | 6.9 - 7.7 Black (10YR 2.5/1) organic SILT, very soft, moist-wet, low plasticity, trace | |
| 15 | | | peat, slight solvent odor (ML), Transitions to Grayish Brown (10YR 5/2) SILT, | |
| 16 | | | some clay, little fine sand, some red & green-gray mottling, soft, wet, slight | |
| 17 | | | solvent odor (ML) | |
| 18 | | 1.3 | 10.0 - 11.3 Reddish Brown (10YR 4/3) SILT, little fine sand & clay, little medium-fine | |
| 19 | | 3.8 | red angular siltstone gravel, soft, moist-wet, no odor (ML) | |
| 20 | | 40.1 | 11.3 - 11.6 Light Greenish Gray (GLE Y1 7/5GY) siltstone & shale GRAVEL & | |
| 21 | | 13.7 | COBBLES (GW) | |
| 22 | | 16.0 | 11.6 - 12.8 Dark Grayish Brown (10YR 4/2) SILT, some fine sand, little greenish-gray & | |
| 23 | | | red siltstone gravel, stiff, dry, no odor (ML) | |
| 24 | | | | |
| 25 | | | | |
| 26 | | | | |
| 27 | | | | |
| 28 | | | | |
| 29 | | | | |
| 30 | | | | |
| 31 | | | | |
| 32 | | | | |
| 33 | | | | |
| 34 | | | | |
| 35 | | | | |
| 36 | | | | |
| 37 | | | | |
| 38 | | | | |
| 39 | | | | |
| 40 | | | | |
| 41 | | | | |
| 42 | | | | |
| 43 | | | | |
| 44 | | | | |
| 45 | | | | |
| 46 | | | | |
| 47 | | | | |
| 48 | | | | |
| 49 | | | | |
| 50 | | | | |
| 51 | | | | |
| 52 | | | | |
| 53 | | | | |
| 54 | | | | |
| 55 | | | | |
| 56 | | | | |
| 57 | | | | |
| 58 | | | | |
| 59 | | | | |
| 60 | | | | |
| 61 | | | | |
| 62 | | | | |
| 63 | | | | |
| 64 | | | | |
| 65 | | | | |
| 66 | | | | |
| 67 | | | | |
| 68 | | | | |
| 69 | | | | |
| 70 | | | | |
| 71 | | | | |
| 72 | | | | |
| 73 | | | | |
| 74 | | | | |
| 75 | | | | |
| 76 | | | | |
| 77 | | | | |
| 78 | | | | |
| 79 | | | | |
| 80 | | | | |
| 81 | | | | |
| 82 | | | | |
| 83 | | | | |
| 84 | | | | |
| 85 | | | | |
| 86 | | | | |
| 87 | | | | |
| 88 | | | | |
| 89 | | | | |
| 90 | | | | |
| 91 | | | | |
| 92 | | | | |
| 93 | | | | |
| 94 | | | | |
| 95 | | | | |
| 96 | | | | |
| 97 | | | | |
| 98 | | | | |
| 99 | | | | |
| 100 | | | | |

End of Boring at 20' bgs.


No odor in 15' - 20' interval
high PID response likely due to
high humidity

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|--|------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_C010 |
| | | PROJECT NAME: PPG Site 063 | | LOCATION SKETCH |
| COMPLETION DATE: 7/21/2011 | TOTAL DEPTH OF BOREHOLE: 20 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M. / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Bob Fleming | | DRILLING EQUIPMENT: Geoprobe Track Rig | DRILLING METHOD / BIT: Direct Push | |
| SAMPLING METHOD: 5' Sleeves, 1.25" | DEPTH TO GROUNDWATER ~ 1.6' | GROUND SURFACE ELEVATION: | WELL INSTALLED? No | |
| MEMO: | | | | |


| DEPTH (Feet) | RECOVERY (feet) | OVM (PPM) | BURMEISTER SYSTEM SOIL DESCRIPTION | FIELD NOTES & SAMPLE SUMMARY |
|-----------------|--------------------|--------------|---|---------------------------------|
| 0 | | | | |
| 1 | | 432.0 | 0.0 - 0.7 Dark Gray (2.5Y 4/1) fine SAND & medium-coarse subangular gray gravel, trace silt & medium sand, greenish gray siltstone gravel 0.6' - 0.7', dry, loose, slight solvent odor (GP) | 063_C010_0.0 (0.0' - 0.5') |
| 2 | | 33.5 | | 063_C010_0.7 (0.7' - 1.2') |
| 3 | 3.5 | 10.1 | 0.7 - 2.0 Black (2.5Y 2.5/1) medium-fine SAND & medium-fine slag GRAVEL, coal, medium-dense, wet at 1.7', slight solvent odor (GW) | 063_C010_1.2 (1.2 - 1.7') |
| 4 | 5.0 | 20.2 | | 50% COPR 0.7' - 1.2' |
| 5 | | 38.5 | 2.0 - 3.5 Olive Gray (5Y 4/2) Clayey SILT with Reddish Brown (5YR 4/4) mottling from 3'-3.5', little subround red sandstone gravel, firm, moist, slight solvent odor (ML) | |
| 6 | | 145.0 | | |
| 7 | | 89.3 | 5.0 - 6.9 Olive Gray (5Y 5/2) Clayey SILT, trace very fine sand, moist, soft-firm, trace shells, slight solvent odor (ML) | |
| 8 | 3.0 | 13.5 | | 063_C010_6.4 (6.4 - 6.9') |
| 9 | 5.0 | 16.1 | 6.9 - 8.0 Very Dark Grayish Brown (10YR 3/2) PEAT, trace Dark Gray (5Y 4/1) clay, low plasticity, soft, moist-wet, strong sulfurous odor (PT) | |
| 10 | | 2.8 | | |
| 11 | | 0.0 | 10.0 - 10.7 Brown (7.5YR 4/3) SILT, little fine sand & medium-fine angular red siltstone gravel, abundant 10.3' - 10.5', stiff, moist, no odor (ML0) | 063_C010_10.5 (10.5 - 11.0') |
| 12 | | 0.0 | 10.7 - 13.0 Grayish Brown (10YR 5/2) SILT, little fine sand & medium-fine gray & greenish gray angular gravel, stiff, moist, no odor (ML) | |
| 13 | 3.0 | 0.0 | | |
| 14 | 5.0 | 0.0 | | |
| 15 | | 0.0 | 15.0 - 17.0 As Above (10.7' - 13') but Brown (10YR 5/3), abundant light gray sandstone cobbles 15.0' - 15.4' (ML) | 063_C010_15.0 (15.0 - 15.5') |
| 16 | | 0.0 | | |
| 17 | 2.0 | 0.0 | | |
| 18 | 5.0 | 0.0 | | |
| 19 | | | | |
| 20 | | | | |
| 21 | | | End of Boring at 20' bgs. | |
| 22 | | | | |
| 23 | | | | |
| 24 | | | | |
| 25 | | | | |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|--|------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_C011 |
| | | PROJECT NAME: PPG Site 063 | | LOCATION SKETCH |
| COMPLETION DATE: 7/25/2011 | TOTAL DEPTH OF BOREHOLE: 35 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M. / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Bob Fleming | | DRILLING EQUIPMENT: Geoprobe Track Rig | DRILLING METHOD / BIT: Direct Push | |
| SAMPLING METHOD: 5' Sleeves, 1.25" | DEPTH TO GROUNDWATER ~ 2.2' | GROUND SURFACE ELEVATION: | WELL INSTALLED? No | |
| MEMO: Boring for deep geological exploration | | | | |


| DEPTH (Feet) | RECOVERY (feet) | OVM (PPM) | BURMEISTER SYSTEM SOIL DESCRIPTION | FIELD NOTES & SAMPLE SUMMARY |
|-----------------|--------------------|--------------|---|------------------------------------|
| 0 | | 0.5 | 0.0 - 0.4 Grayish Brown (10YR 5/2) coarse GRAVEL & COBBLES, loose, dry (GP) | |
| 1 | | 16.1 | 0.4 - 1.2 Dark Yellowish Brown (10YR 3/4) fine SAND, some medium sand & medium-fine subround gravel, white cobbles 0.5' - 0.6', loose, dry, slight solvent odor (SW) | 063_C011_0.4 (0.4' - 0.9') |
| 2 | 3.9 | 276.0 | | 063_C011_0.9 (0.9' - 1.4') |
| 3 | 4.0 | 21.5 | 1.2 - 2.6 Black (2.5Y 2.5/1) medium-fine SAND, little fine subround slag gravel, loose, moist-wet, slight solvent odor (SW), Transitions to coarse-fine SAND & medium-fine slag GRAVEL, wet at 2.2', loose, strong solvent odor & staining (GW) | 063_C011_1.4 (1.4' - 1.9') |
| 4 | | 1099.0 | | 25% COPR 0.9' - 1.2' |
| 5 | | 49.6 | 2.6 - 3.9 Olive Gray (5Y 5/2) very fine SAND, some silt, little clay, slight reddish brown & gray mottling, firm, moist, slight solvent odor (SM) | |
| 6 | | 16.5 | | 063_C011_5.0 (5.0' - 5.5') |
| 7 | 3.5 | 425.0 | 5.0 - 7.2 Olive Clayey SILT, trace fine sand & shells, low palsticity, moist, soft, strong solvent odor (CL) | |
| 8 | 4.0 | | 7.2 - 8.5 Very Dark Grayish Brown (10YR 3/2) PEAT, little Very Dark Gray (5Y 3/1) clay, low plasticity, soft, moist-wet, strong sulfurous odor odor (PT) | 063_C011_6.7 (6.7' - 7.2') |
| 9 | | | | Fill/native soil interface at 7.2' |
| 10 | | | | |
| 11 | | 0.4 | 10.0 - 10.3 As Above (7.2' - 8.5') (PT) | |
| 12 | 3.5 | 0.4 | 10.3 - 13.5 Brown (10YR 4/3) Silty CLAY, little/trace fine sand, trace coarse-fine dark red subround siltstone gravel, very soft, no odor (CL), Transitions to Olive Brown (2.5Y 4/3) Silty coarse-fine SAND, some fine gray angular gravel, little coarse-medium angular gravel & cobbles, medium-dense, wet, no odor (SW) | 063_C011_10.5 (10.5' - 11.0') |
| 13 | 4.0 | 0.4 | | PID bkgd: 0.4 ppm |
| 14 | | 0.4 | | |
| 15 | | 0.4 | | |
| 16 | | 0.4 | 15.0 - 18.3 Brown (10YR to 7.5YR 4/3) coarse angular to subround GRAVEL & COBBLES, little dark red-gray gravel & coarse-medium sand, trace fine sand & silt, loose, wet, no odor (GW) | 063_C011_15.0 (15.0' - 15.5') |
| 17 | 3.3 | 0.4 | | |
| 18 | 4.0 | 0.4 | | PID bkgd: 0.4 ppm |
| 19 | | 0.4 | | |
| 20 | | 0.4 | | |
| 21 | | 0.4 | 20.0 - 24.2 As Above (15' - 18.3'), Transitions to Brown (7.5YR 4/3) Silty medium-fine SAND, some medium-fine angular gravel, trace coarse gravel & cobbles, medium-dense, moist-wet, no odor (SM) | |
| 22 | 4.2 | 0.4 | | PID bkgd: 0.4 ppm |
| 23 | 4.0 | 0.4 | | |
| 24 | | 0.4 | | |
| 25 | | 0.4 | | |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|--|------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_C011 |
| | | PROJECT NAME: PPG Site 063 | | |
| COMPLETION DATE: 7/25/2011 | TOTAL DEPTH OF BOREHOLE: 35 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M. / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Bob Fleming | | DRILLING EQUIPMENT: Geoprobe Track Rig | DRILLING METHOD / BIT: Direct Push | |
| SAMPLING METHOD: 5' Sleeves, 1.25" | DEPTH TO GROUNDWATER ~ 2.2' | GROUND SURFACE ELEVATION: | WELL INSTALLED? No | |
| MEMO: Boring for deep geological exploration | | | | |
| 0 | | | | |


| DEPTH (Feet) | RECOVERY (feet) | OVM (PPM) | BURMEISTER SYSTEM SOIL DESCRIPTION | FIELD NOTES & SAMPLE SUMMARY |
|-----------------|--------------------|--------------|---|---------------------------------|
| _26 | | 0.4 | 25.0 - 26.7 Brown (7.5YR 4/3) Silty medium-fine SAND, some gravel, medium-dense, moist-wet, no odor (SM), Transitions to Reddish Brown (5YR 5/4 to 2.5YR 4/3) SILT, some fine sand, little reddish brown medium-fine angular gravel & reddish-brown gravelly clay (weathered siltstone), stiff, dry-moist, no odor (ML) | PID bkgd: 0.4 ppm |
| | | 0.4 | | |
| _27 | | 0.4 | | |
| | 3.3 | 0.4 | | |
| _28 | | 0.4 | | |
| | 4.0 | 0.4 | | |
| _29 | | | | |
| _30 | | | | |
| _31 | | 0.4 | 30.0 - 34.6 Reddish Brown (2.5YR 4/3) SILT, little fine sand & medium-fine angular siltstone gravel, some dusky red (2.5YR 3/2) medium-fine sand 30' - 30.8', some reddish brown (5YR 4/3) medium-fine sand 33' - 33.3', very stiff, dry, no odor (ML) | PID bkgd: 0.4 ppm |
| | | 0.4 | | |
| _32 | | 0.4 | | |
| | 4.6 | 0.4 | | |
| _33 | | 0.4 | | |
| | 4.0 | 0.4 | | |
| _34 | | 0.4 | | |
| | | 0.4 | | |
| _35 | | | | |
| _36 | | | End of Boring at 35' bgs. (Refusal) | |
| _37 | | | | |
| _38 | | | | |
| _39 | | | | |
| _40 | | | | |
| _41 | | | | |
| _42 | | | | |
| _43 | | | | |
| _44 | | | | |
| _45 | | | | |
| _46 | | | | |
| _47 | | | | |
| _48 | | | | |
| _49 | | | | |
| _50 | | | | |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|--|------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_C012 |
| | | PROJECT NAME: PPG Site 063 | | LOCATION SKETCH |
| COMPLETION DATE: 7/28/2011 | TOTAL DEPTH OF BOREHOLE: 20 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M. / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Bob Fleming | | DRILLING EQUIPMENT: Geoprobe Track Rig | DRILLING METHOD / BIT: Direct Push | |
| SAMPLING METHOD: 5' Sleeves, 1.25" | DEPTH TO GROUNDWATER ~ 2.0' | 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 - 0.8 Brown (7.5YR 4/2) medium-fine SAND, little subangular coarse gravel, loose, dry, no odor (SW) | 063_C012_0.0 (0.0' - 0.5') |
| 1 | | 0.0 | | |
| 2 | 3.4 | 0.0 | 0.8 - 1.4 Light Yellowish Brown (2.5Y 6/3) grading to Dark Grayish Brown (2.5Y 4/2) medium SAND, little fine sand, trace coarse sand, loose, moist, no odor (SP) | |
| 3 | 5.0 | 0.0 | 1.4 - 3.4 Black (2.5Y 2.5/1) medium-fine SAND & coarse-fine subround slag GRAVEL, little coal, silt & fine sand 2.9' - 3.4', moist, wet at 2', no odor (SW) | |
| 4 | | 0.0 | | |
| 5 | | 0.0 | | |
| 6 | | 0.0 | 5.0 - 6.1 Dark Gray (10YR 4/1) SILT, little fine sand & fine subround gray gravel, stiff, moist-wet, no odor (ML) | |
| 7 | 1.9 | 0.0 | 6.1 - 6.6 Reddish Brown (5YR 4/3) SILT, little fine sand & coarse-fine gray angular gravel & coarse-medium red sandstone gravel, stiff, moist, no odor (ML) | 063_C012_6.4 (6.4' - 6.9') |
| 8 | 5.0 | 0.0 | 6.6 - 6.9 Olive Gray (5Y 4/2) SILT, some clay, little fine sand, soft, low plasticity, slight sulfurous odor (ML) | |
| 9 | | 0.0 | | |
| 10 | | 0.0 | | |
| 11 | | 1.1 | 10.0 - 11.9 Very Dark Grayish Brown (10YR 3/2) PEAT, little Very Dark Gray (5Y 3/1) clay, low plasticity, soft, moist-wet, strong sulfurous odor odor (PT) | 063_C012_10.5 (10.5' - 11.0') |
| 12 | 2.2 | 0.5 | | |
| 13 | 5.0 | 0.3 | 11.9 - 12.1 Reddish Gray (5YR 5/2) Clayey fine SAND, some silt & coarse-fine subround red sandstone gravel, firm, moist-wet, slight sulfurous odor (SC) | |
| 14 | | 0.0 | | |
| 15 | | 0.0 | | |
| 16 | | 0.0 | 15.0 - 15.7 Dark Grayish Brown (10YR 4/2) coarse-fine subangular GRAVEL & COBBLES, some fine sand & silt, medium-dense, wet, no odor, abundant coarse gray gravel & cobbles 15.5' - 15.7' (GM) | 063_C012_15.8 (15.8' - 16.3') |
| 17 | 1.3 | 0.0 | 15.7 - 16.3 Light Brown (7.5YR 6/3) SILT, little clay & fine sand, little medium-fine gray subround/subangular gravel, firm, moist, no odor (ML) | |
| 18 | 5.0 | | | |
| 19 | | | | |
| 20 | | | | |
| 21 | | | End of Boring at 20' bgs. | |
| 22 | | | | |
| 23 | | | | |
| 24 | | | | |
| 25 | | | | |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|--|-----------------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_D003 / 063_MW05 |
| | | PROJECT NAME: PPG Site 063 | | LOCATION SKETCH |
| COMPLETION DATE: 7/13/2011 | TOTAL DEPTH OF BOREHOLE: 20 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M. / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Ray Smith | | 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 - 063_MW05 | |
| MEMO: | | | | |


| DEPTH (Feet) | RECOVERY (feet) | OVM (PPM) | BURMEISTER SYSTEM SOIL DESCRIPTION | FIELD NOTES & SAMPLE SUMMARY |
|-----------------|--------------------|--------------|---|---------------------------------|
| 0 | | 0.0 | 0.0 - 0.2 coarse angular gray gravel (GP) | 063_D003_0.0 (0.0' - 0.5') |
| 1 | | 0.0 | 0.2 - 1.4 Brown (7.5YR 4/2) medium-fine SAND, little silt, trace medium-fine angular gravel, medium-dense, dry, no odor (SM) | |
| 2 | 4.1 | 1.1 | 1.4 - 1.7 Black (2.5Y 2.5/1) medium-fine SAND & medium-fine slag GRAVEL, dry, loose, no odor (GW) | |
| 3 | 5.0 | 0.8 | 1.7 - 4.1 Brown (10YR 4/2) SILT, some fine sand, soft, moist, no odor (ML) | |
| 4 | | | | 063_D003_3.8 (3.8' - 4.2') |
| 5 | | 0.0 | 5.0 - 5.5 Brown (7.5YR 4/3) SILT, some fine sand & coarse-fine angular gray gravel, Reddish Brown (2.5YR 4/4) gravel 5.1' - 5.4', moist-wet, firm, slight sulfurous odor (ML) | |
| 6 | | 0.3 | | |
| 7 | 2.2 | 0.4 | 5.5 - 6.4 Dark Brown (7.5YR 4/1) coarse-medium SAND, some silt, loose, wet, slight sulfurous odor (SM) | 063_D003_6.7 (6.7' - 7.2') |
| 8 | 5.0 | 0.5 | 6.4 - 7.2 Brown (7.5YR 4/3) fine SAND, some silt, medium sand, & medium-fine subangular gray to red brown gravel, medium-dense, moist, no odor (SM) | |
| 9 | | | | |
| 10 | | 30.8 | 10.0 - 11.2 Greenish Gray (GLEY2 5/5BG) Clayey SILT, little fine sand, low palsticity, soft, moist, strong hydrocarbon odor (ML) | |
| 11 | | 210.0 | | |
| 12 | 3.4 | 16.5 | 11.2 - 13.4 Brown (7.5YR 4/2) SILT, some fine sand, little subangular gray gravel, cobblew 11.6' 0 11.8', stiff, moist, slight hydrocarbon odor (ML) | |
| 13 | 5.0 | 5.7 | | |
| 14 | | 1.1 | | 063_D003_13.0 (13.0' - 13.5') |
| 15 | | 0.5 | | |
| 16 | | 0.0 | 15.0 - 18.3 Brown (7.5YR 5/2_ coarse-medium SAND & fine subangular GRAVEL, little silt, trace fine sand, wet, loose, no odor (GW), Transitions to Reddish Brown (2.5YR 4/3) SILT, little fine sand, trace medium sand & medium-fine gray subangular gravel, stiff, moist, no odor (ML), coarse-fine sand & little fine gravel in bottom of sleeve | |
| 17 | 3.3 | 0.0 | | 063_D003_17.0 (17.0' - 17.5') |
| 18 | 5.0 | 0.0 | | |
| 19 | | | | |
| 20 | | | | |
| 21 | | | End of Boring at 20' bgs. | |
| 22 | | | Well Information: 2-inch diameter 10-slot SCH40 PVC screen set at 2.0' - 7.0.0' bgs. | |
| 23 | | | 2-inch diameter SCH40 PVC riser from 2.0' bgs. to 0' bgs. | |
| 24 | | | #1 Sand from 1.0' to 2.0' bgs., Grout from 1.0' to surface | |
| 25 | | | Flush mount completion with cement protective pad | |

SOIL BORING LOG

| | | | | |
|--|--------------------------------|---|--|------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_D004 |
| | | PROJECT NAME: PPG Site 063 | | LOCATION SKETCH |
| COMPLETION DATE: 7/25/2011 | TOTAL DEPTH OF BOREHOLE: 32 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M. / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Bob Fleming | | DRILLING EQUIPMENT: Geoprobe Track Rig | DRILLING METHOD / BIT: Direct Push | |
| SAMPLING METHOD: 5' Sleeves, 1.25" | DEPTH TO GROUNDWATER ~ 2.0' | GROUND SURFACE ELEVATION: | WELL INSTALLED? No | |
| MEMO: Boring for deep geological exploration Refusal at 18' 1st attempt, refusal at 32' second attempt. 2nd boring attempt logged & sampled | | | | |


| DEPTH (Feet) | RECOVERY (feet) | OVM (PPM) | BURMEISTER SYSTEM SOIL DESCRIPTION | FIELD NOTES & SAMPLE SUMMARY |
|-----------------|--------------------|--------------|--|--|
| 0 | | 0.2 | 0.0 - 0.5 Brown (10YR 5/3) medium-fine SAND & dark gray asphalt gravel, loose, dry, no odor (SW) | 063_D004_0.0 (0.0' - 0.5') |
| 1 | | 0.5 | | 063_D004_0.5 (0.5' - 1.0') |
| 2 | | 0.8 | 0.5 - 1.0 Black (2.5Y 2.5/1) coarse-fine SAND, trace slag gravel & coal, dry, loose, no odor (SW) | 063_D004_1.0 (1.0' - 1.5') |
| 3 | 3.4 | 0.5 | | Trace COPR 0.5' -1.0' |
| 4 | 5.0 | 2.8 | 1.0 - 1.2 Light Gray (10YR 7/2) medium SAND, trace fine sand, loose, moist (SP) | |
| 5 | | 3.0 | 1.2 - 2.0 Black (2.5Y 2.5/1) coarse-fine SAND & fine-medium slag GRAVEL, little silt, medium-dense, moist-wet at 2', slight hydrocarbon odor (GW) | |
| 6 | | 1.2 | 2.0 - 3.4 Black (2.5Y 2.5/1) SILT, some fine sand, trace fine angular gravel, firm, moist-wet, slight solvent odor (ML), Transitions to Brown (7.5YR 4/4) SILT, some fine sand, soft, moist-wet, slight hydrocarbonodor (ML) | 063_D004_5.0 (5.0' - 5.5') |
| 7 | | 2.0 | 5.0 - 7.2 Dark Gray (10YR 4/1) SILT, some fine sand, little clay, trace fine gravel & shells, soft grading to firm, moist-wet, strong hydrocarbon odor & staining 5.7' - 5.9' (ML), Transitions to Olive (5Y 5/3) Clayey SILT, little fine sand & coarse-fine subround gravel, soft, moist, slight hydrocarbon odor (ML) | 063_D004_6.7 (6.7' - 7.2') |
| 8 | 3.8 | 0.7 | | Fill/native soil interface at 7.2' no meadow mat |
| 9 | 5.0 | 10.4 | 7.2 - 8.8 Brown (7.5YR 4/3) Silty medium-fine SAND, some coarse-fine gray angular gravel, trace cobbles, greenish-gray shale fragments & clay 8.2' - 8.5', dense, moist, slight hydrocarbon odor (SM) | |
| 10 | | 3.8 | | |
| 11 | | 2.7 | 10.0 -13.2 Brown (7.5YR 4/3) SILT, some fine sand, little fine angular gray to greenish gray gravel throughout, trace strong brown (7.5YR 5/6) medium-fine round sandstone gravel 10'-11', greenish-gray coarse-fine sand & fine gravel at 10.5', Silty fine sand 10.5' - 12', some dark greenish gray coarse siltstone gravel 12.5' - 13.2', white medium sand & sandstone cobbles 12.1' - 12.3', moist-wet & stiff throughout, stron hydrocarbon odor (ML) | 063_D004_10.5 (10.5' - 11.0') |
| 12 | | 6.7 | | |
| 13 | 3.2 | 1460.0 | | |
| 14 | 5.0 | 50.9 | | |
| 15 | | 8.7 | | |
| 16 | | 1.0 | | |
| 17 | | 0.8 | 15.0 - 19.0 Brown (10YR 5/3) Silty medium-fine SAND, some coarse sand & medium-fine angular gravel, loose grading to medium-dense, wet, slight hydrocarbon odor 15' - 16' (SM) | 063_D004_15.0 (15.0' - 15.5') |
| 18 | 5.0 | 0.1 | | PID background: 0.2 ppm |
| 19 | 5.0 | 0.2 | | |
| 20 | | 0.2 | 19.0 - 20.0 Brown (7.5YR 5/4) SILT, some fine sand, little medium-fine angular dark gray gravel, very dense, moist, no odor (ML) | |
| 21 | | 0.2 | | |
| 22 | | 0.2 | | |
| 23 | | 0.2 | | |
| 24 | | 0.2 | | |
| 25 | | 0.2 | | |
| 26 | | 0.0 | 20.0 - 23.0 Brown (7.5YR 5/4) Silty medium-fine SAND, some medium-fine gray angular gravel, moist-wet, loose, no odor (SM), Transitions to SILT, some fine sand, moist, very dense, little gravel, no odor (ML) | |
| 27 | | 0.0 | | |
| 28 | | 0.0 | | |
| 29 | | 0.0 | | |
| 30 | | 0.0 | | |
| 31 | | 0.0 | | |
| 32 | | 0.0 | | |
| 33 | | 0.0 | | |
| 34 | | 0.0 | | |
| 35 | | 0.0 | | |
| 36 | | 0.0 | | |
| 37 | | 0.0 | | |
| 38 | | 0.0 | | |
| 39 | | 0.0 | | |
| 40 | | 0.0 | | |
| 41 | | 0.0 | | |
| 42 | | 0.0 | | |
| 43 | | 0.0 | | |
| 44 | | 0.0 | | |
| 45 | | 0.0 | | |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|--|---|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_D004 LOCATION SKETCH |
| | | PROJECT NAME: PPG Site 063 | | |
| COMPLETION DATE: 7/25/2011 | TOTAL DEPTH OF BOREHOLE: 32 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M. / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Bob Fleming | | DRILLING EQUIPMENT: Geoprobe Track Rig | DRILLING METHOD / BIT: Direct Push | |
| SAMPLING METHOD: 5' Sleeves, 1.25" | DEPTH TO GROUNDWATER ~ 2.0' | GROUND SURFACE ELEVATION: | WELL INSTALLED? No | |
| MEMO: | | | | |


| DEPTH (Feet) | RECOVERY (feet) | OVM (PPM) | BURMEISTER SYSTEM SOIL DESCRIPTION | FIELD NOTES & SAMPLE SUMMARY |
|-----------------|--------------------|--------------|--|---------------------------------|
| _26 | 3.4 5.0 | 0.0 | 25.0 - 28.4 Brown (7.5YR 5/4) Silty medium-fine SAND, little medium-fine gray angular gravel, medium-dense, wet, no odor (SM), Transitions to SILT, little fine sand, little coarse-fine gy angular gravel & cobbles, stiff, moist, no odor (ML) | _26 |
| _27 | | 0.0 | | _27 |
| _28 | | 0.0 | | _28 |
| _29 | | 0.0 | | _29 |
| _30 | | 0.0 | | _30 |
| _31 | 1.4 2.0 | 0.0 | 20.0 - 31.4 Brown (7.5YR 4/4) fine to very fine SAND, trace silt, loose, wet, no odor (SM), Transitions to Brown (7.5YR 4/2) coarse-medium SAND, trace fine sand & silt, trace fine subround gravel, loose, wet, no odor (SW) | _31 |
| _32 | | 0.0 | | _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.: 117-0509160.02 | | Boring No: 063_D005 |
| | | PROJECT NAME: PPG Site 063 | | LOCATION SKETCH |
| COMPLETION DATE: 7/14/2011 | TOTAL DEPTH OF BOREHOLE: 20 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Ray Smith | | DRILLING EQUIPMENT: Geoprobe Track Rig | DRILLING METHOD / BIT: Direct Push | |
| SAMPLING METHOD: 5' Sleeves, 1.25" | DEPTH TO GROUNDWATER ~ 1.3' | 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 - 0.9 Grayish Brown (10YR 5/2) medium-fine SAND, trace silt & coarse-fine | 063_D005_0.0 (0.0' - 0.5') |
| 1 | | 77.7 | Dark Gray (10YR 4/1) angular gravel, dry, loose, no odor (SP) | |
| 2 | | 1.2 | Gray (GLE Y1 6/N) coarse-medium SAND & GRAVEL (concrete) (GP) | 063_D005_0.8 (0.8' - 1.3') |
| 3 | 2.8 | 71.2 | Black (10YR 2/1) coarse-medium SAND, some slag, | 063_D005_1.3 (1.3' - 1.8') |
| 4 | | 19.0 | medium-dense, moist-wet, strong solvent odor, (SW) | 063_D005_1.8 (1.8' - 2.3') |
| 5 | 4.0 | | 1.6 - 2.8 Brown (7.5YR 4/3) SILT, little fine sand & coarse-fine gray angular gravel (ML), Transitions into Brown (7.5YR 4/3) fine SAND & SILT, firm, moist, slight solvent odor (ML) | 50% COPR noted 1.4' - 1.7' |
| 6 | | 248.0 | 5.0 - 6.5 Dark Grayish Brown (2.5Y 4/2) Clayey fine SAND, little silt, treated wood fragments with creosote odor at 5.8', medium-stiff, moist-wet, strong solvent odor (SC) | 063_D005_6.0 (6.0' - 6.5') |
| 7 | | 243.0 | 6.5 - 6.9 Black (10YR 2/1) CLAY, some fine sand, little silt, soft, moist, strong solvent odor, low to moderate plasticity (OL) | (fill/native soil interface) |
| 8 | 3.0 | 364.0 | 6.9 - 7.3 Greenish Gray (GLE Y2 5/5BG) Clayey fine SAND, little silt, soft, moist-wet, strong solvent odor (SC) | |
| 9 | 5.0 | 1260.0 | 7.3 - 8.0 Reddish Brown (5YR 5/3) SILT, little fine sand & fine-medium gray angular gravel, trace clay, trace Olive (5Y 5/6) gravel (sandstone fragments), stiff, moist-wet, slight hydrocarbon (ML) | |
| 10 | | 596.0 | 10.0 - 13.0 As Above (7.3' - 8.0'), Transitions into Brown (10YR 4/3) SILT & fine SAND, some Olive (5Y 5/4) & Reddish Brown (5YR 4/4) subround sandstone gravel and Dark Gray (GLE Y1 4/N) angular gravel, trace clay, stiff, dry-moist, strong hydrocarbon odor, gray petroleum staining in bottom of sleeve (ML) | 063_D005_10.0 (10.0' - 10.5') |
| 11 | | 42.2 | | |
| 12 | | 1487.0 | | |
| 13 | 3.0 | 1278.0 | | |
| 14 | 5.0 | 466.0 | | |
| 15 | | 564.0 | | |
| 16 | | 58.3 | | |
| 17 | | 176.0 | 15.0 - 15.9 Dark Gray (7.5 YR 4/1) coarse-fine SAND & coarse-fine angular to subround gravel (Olive 5Y 5/4, Reddish Brown 5YR 4/4, & Dark Gray GLE Y1 4/N), very dense, moist, slight hydrocarbon odor (GW) | 063_D005_15.0 (15.0' - 15.5') |
| 18 | 3.5 | 1008.0 | 15.9 - 18.5 Brown (10YR 5/3) fine SAND & SILT, little medium-fine dark gray angular gravel, stiff, dry, no odor (ML) | |
| 19 | 5.0 | 29.4 | | |
| 20 | | 2.1 | | |
| 21 | | 1.0 | | |
| 22 | | 1.8 | | |
| 23 | | 2.8 | | |
| 24 | | 0.5 | | |
| 25 | | | End of Boring at 20' bgs. | |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|--|-----------------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_D006 / 063_MW06 |
| | | PROJECT NAME: PPG Site 063 | | LOCATION SKETCH |
| COMPLETION DATE: 7/12/2011 | TOTAL DEPTH OF BOREHOLE: 17 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M. / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Ray Smith | | DRILLING EQUIPMENT: Geoprobe Track Rig | DRILLING METHOD / BIT: Direct Push | |
| SAMPLING METHOD: 5' Sleeves, 1.25" | DEPTH TO GROUNDWATER ~ 1.6' | GROUND SURFACE ELEVATION: | WELL INSTALLED? Yes - 063_MW06 | |
| MEMO: Hand-dug 2'x2' hole to 1.0' to remove liner. | | | | |


| DEPTH (Feet) | RECOVERY (feet) | OVM (PPM) | BURMEISTER SYSTEM SOIL DESCRIPTION | FIELD NOTES & SAMPLE SUMMARY |
|-----------------|--------------------|--------------|---|----------------------------------|
| 0 | | | 0.0 - 0.5 QP Stone (coarse subangular gravel & cobbles) (GP) | |
| 1 | | | 0.5 - 1.0 Olive Gray (5Y 4/2) fine SAND, little m. sand, loose, moist-wet, no odor (SP) | |
| 2 | 3.4 | 0.0 | 1.0 - 1.6 As Above (0.5' - 1.0'), slight solvent odor (SP) | 063_D006_1.0 (1.0' - 1.5') |
| 3 | 4.0 | 4.4 | 1.6 - 2.5 Black (2.5Y 2.5/1) medium-fine SAND & medium-fine slag GRAVEL, loose, moist-wet, slight solvent odor (GW) | |
| 4 | | 0.0 | 2.5 - 4.4 Reddish Brown (5YR 4/4) SILT, little fine sand, trace medium-fine subangular gravel, trace clay, moist, firm, no odor (ML), Transitions to Olive Gray (5Y 5/2) Silty CLAY, little fine sand, trace subangular coarse-fine gravel, soft, moist, no odor (CL) | |
| 5 | | 0.0 | | |
| 6 | | 0.0 | 5.0 - 6.8 Olive Gray (5Y 5/2) Silty CLAY, little fine sand, trace subangular coarse-fine gravel, soft, moist-wet, no odor (CL) | 063_D006_5.0 (5.0' - 5.5') |
| 7 | 3.0 | 0.0 | 7.0 - 7.9 Very Dark Grayish Brown (10YR 3/2) PEAT, little Very Dark Gray (2.5Y 3/1) CLAY, low plasticity, soft, moist-wet, abundant plant fibers, slight sulfurous odor (PT) | 063_D006_6.5 (6.5' - 7.0') |
| 8 | 5.0 | 0.0 | 7.9 - 8.1 Brown (10YR 5/3) fine SAND, loose, moist-wet, no odor (SP) | Fill/native soil interface at 7' |
| 9 | | | | |
| 10 | | | | |
| 11 | | 0.0 | 10.0 - 12.5 As Above (7.9' - 8.1'), Transitions to Reddish Brown (2.5YR 4/3) SILT, little subround-subangular coarse-fine gravel, white cobbles at 11.8', dry, very stiff, no odor (ML) | 063_D006_10.0 (10.0' - 10.5') |
| 12 | 2.5 | 0.0 | | |
| 13 | 5.0 | 0.0 | | |
| 14 | | | | |
| 15 | | | | |
| 16 | 2.0 | 1800.0 | 15.0 - 17.0 Brown (10YR 4/3) Silty medium-fine SAND, trace clay & medium-fine subround-subangular gravel, strong hydrocarbon odor (SM) | 063_D006_15.0 (15.0' - 15.5') |
| 17 | 2.0 | 1500.0 | | |
| 18 | | 850.0 | End of Boring at 17' bgs. (Refusal) | |
| 19 | | 1371.0 | Well Information: | |
| 20 | | | 2-inch diameter 10-slot SCH40 PVC screen set at 2.0' - 7.0' bgs. | |
| 21 | | | 2-inch diameter SCH40 PVC riser from 2.0' bgs. to 2.57' above grade | |
| 22 | | | #1 Sand from 1.5' to 7.0' bgs., Grout from 1.0' to 1.5' | |
| 23 | | | 2' x 2' section of PVC liner placed on top of HDPE liner | |
| 24 | | | Cemented-in 2' x 2' hole for well pad from 1.0' bgs to surface | |
| 25 | | | Stick-up completion | |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|--|------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_D007 |
| | | PROJECT NAME: PPG Site 063 | | |
| COMPLETION DATE: 7/27/2011 | TOTAL DEPTH OF BOREHOLE: 20 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M. / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Bob Fleming | | DRILLING EQUIPMENT: Geoprobe Track Rig | DRILLING METHOD / BIT: Direct Push | |
| SAMPLING METHOD: 5' Sleeves, 1.25" | DEPTH TO GROUNDWATER ~ 1.5' | GROUND SURFACE ELEVATION: | WELL INSTALLED? No | |
| MEMO: | | | | |


| DEPTH (Feet) | RECOVERY (feet) | OVM (PPM) | BURMEISTER SYSTEM SOIL DESCRIPTION | FIELD NOTES & SAMPLE SUMMARY |
|-----------------|--------------------|---------------|---|------------------------------------|
| _1 | | 0.5 1078.0 | 0.0 - 0.7 Brown (10YR 5/3) fine SAND, little medium sand & medium-fine angular gray gravel, trace silt, loose, dry, no odor (SP) | 063_D007_0.0 (0.0' - 0.5') |
| _2 | | 10.8 2.8 | 0.7 - 1.0 Green (GLE Y2 6/10G) coarse-fine GRAVEL, loose, dry, no odor (GW) | |
| _3 | 3.6 5.0 | 1.9 5.8 | 1.0 - 1.9 Black (2.5Y 2.5/1) medium SAND, little fine sand, trace fine slag gravel, loose, moist-wet, strong solvent odor (SP), Transitions to fine SAND & coarse-fine subround slag GRAVEL, some silt & coal, loose, wet at 1.5', strong solvent odor (GW) | |
| _4 | | 1.6 | 1.9 - 3.6 Olive Gray (5Y 5/2) Silty CLAY, soft, moist, moderate plasticity, slight sulfurous odor (CH), Transitions to Brown (7.5YR 4/3) Silty CLAY, firm, moist, trace shells, moderate plasticity, slight sulfurous odor (CH) | |
| _5 | | | | |
| _6 | | 0.0 | 5.0 - 6.2 Olive Gray (5Y 4/2) CLAY, little silt, trace shells, wood fragments at 6.2', very soft, high plasticity, slight sulfurous odor (OH) | 063_D007_5.7 (5.7' - 6.2') |
| _7 | | 0.0 | 6.2 - 7.2 Black (2.5Y 5.2/1) organic SILT, little clay, soft, low plasticity, moist, strong sulfurous odor (ML) | Fill/native soil interface at 6.2' |
| _8 | 2.8 5.0 | 2.1 0.0 | 7.2 - 7.8 Pinkish Gray (7.5YR 6/2) Clayey fine SAND, little silt, medium-dense, moist, slight sulfurous odor (SC) | |
| _9 | | | | |
| _10 | | | | |
| _11 | | 0.0 | 10.0 - 12.6 Reddish Gray (5YR 5/2) Silty medium-fine SAND, trace subround medium-fine sandstone gravel, dense, moist-wet, no odor (SM), Transitions to Light Reddish Brown (5YR 6/3) SILT, some very fine sand, stiff, moist, no odor (ML) | 063_D007_10.0 (10.0' - 10.5') |
| _12 | | 0.0 | | |
| _13 | 2.6 5.0 | 0.0 | | |
| _14 | | | | |
| _15 | | | | |
| _16 | | 0.0 | 15.0 - 19.4 Brown (7.5YR 5/3) SILT, little fine-very fine sand & medium-fine gray angular gravel, Yellowish Brown (10YR 5/6) coarse-medium sand & fine sandstone gravel 16.9' - 17.2', moist, very stiff, no odor (ML) | 063_D007_15.0 (15.0' - 15.5') |
| _17 | | 0.0 | | |
| _18 | 4.4 5.0 | 0.0 | | |
| _19 | | 0.0 | | |
| _20 | | 0.0 | | |
| _21 | | | End of Boring at 20' bgs. | |
| _22 | | | | |
| _23 | | | | |
| _24 | | | | |
| _25 | | | | |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|--|------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_D008 |
| | | PROJECT NAME: PPG Site 063 | | LOCATION SKETCH |
| COMPLETION DATE: 7/27/2011 | TOTAL DEPTH OF BOREHOLE: 20 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M. / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Bob Fleming | | DRILLING EQUIPMENT: Geoprobe Track Rig | DRILLING METHOD / BIT: Direct Push | |
| SAMPLING METHOD: 5' Sleeves, 1.25" | DEPTH TO GROUNDWATER ~ 1.6' | 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 - 0.6 Light Olive Brown (2.5YR 5/3) fine SAND, little medium sand & medium-fine angular gravel, trace silt, loose, dry, no odor (SP) | 063_D008_0.0 (0.0' - 0.5') |
| _1 | | 0.0 | | |
| _2 | 3.6 | 0.0 | 0.6 - 2.0 Black (2.5Y 2.5/1) medium-fine SAND (slag, coal, & ash), little coarse subround slag gravel, some medium-fine subround slag gravel 1.7' - 2', loose, moist, wet at 1.6'; no odor (SW/SP) | |
| _3 | 5.0 | 0.0 | 2.0 - 2.3 Reddish Brown (5YR 4/3) SILT, some very fine sand, little round gray gravel & subround fine red sandstone gravel, soft, moist-wet, no odor (ML) | |
| _4 | | 0.0 | 2.3 - 3.6 Olive Gray (5Y 5/2) Silty CLAY, trace shells, soft, moderate palsticity, moist-wet, slight sulfurous odor (CH or OH) | |
| _5 | | 0.0 | | |
| _6 | | 0.0 | 5.0 - 5.5 Very Dark Gray (10YR 3/1) CLAY, little silt, moderate plasticity, trace shells, soft, moist, slight sulfurous odor (OH) | 063_D008_5.0 (5.0' - 5.5') (native soil?) |
| _7 | | 0.0 | 5.5 - 6.8 Olive Gray (5Y 5/2) Clayey SILT, soft, moist, low palsticity, slight sulfurous odor (ML), Transitions to Clayey SILT, little very fine sand, soft, moist (ML) | |
| _8 | 3.0 | 0.0 | 6.8 - 8.0 Reddish Gray (5YR 5/2) to Brown (7.5YR 5/2) Silty fine SAND, little medium sand & coarse-fine red (2.5YR 4/6) sandstone gravel, moist, dense, no odor (SM) | |
| _9 | 5.0 | 0.0 | | |
| _10 | | 0.0 | | |
| _11 | | 0.0 | 10.0 - 10.4 As Above (6.8' - 8') | 063_D008_10.0 (10.0' - 10.5') |
| _12 | | 0.0 | 10.4 - 12.3 Yellowish Brown (10YR 5/4) grading to Light Brown (7.5YR 6/3) medium-fine SAND, some silt, coarse sand, & fine subround/subangular gray & red siltstone gravel, moist-wet, dense, no odor (SM) | |
| _13 | 2.9 | 0.0 | 12.3 - 12.9 Dark Grayish Brown (2.5Y 4/2) coarse angular GRAVEL & COBBLES, some shale, trace silt & fine sand (Light Brownish Gray, 2.5Y 5/2), loose, wet, no odor (GP) | |
| _14 | 5.0 | 0.0 | | |
| _15 | | 0.0 | | |
| _16 | | 0.0 | 15.0 - 15.2 As Above (12.3' - 12.9'), coarse-medium SAND & medium-fine angular GRAVEL, medium-dense, wet, no odor (SW) | 063_D008_15.0 (10.5' - 15.5') |
| _17 | | 0.0 | 15.2 - 18.3 Brown (7.5YR 5/4) SILT, little fine-medium sand, some medium-fine gray angular gravel, trace red-gray siltstone gravel, stiff, moist, no odor (ML), Transitions to Yellowish Brown (10YR 5/4) SILT, little fine sand & clay, little medium-coarse subangular gray to red-gray gravel, stiff, moist, no odor (ML) | |
| _18 | 3.3 | 0.0 | | |
| _19 | 5.0 | 0.0 | | |
| _20 | | 0.0 | | |
| _21 | | | End of Boring at 20' bgs. | |
| _22 | | | | |
| _23 | | | | |
| _24 | | | | |
| _25 | | | | |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|--|-----------------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_D009 / 063_MW07 |
| | | PROJECT NAME: PPG Site 063 | | |
| COMPLETION DATE: 7/12/2011 | TOTAL DEPTH OF BOREHOLE: 20 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M. / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Ray Smith | | DRILLING EQUIPMENT: Geoprobe Track Rig | DRILLING METHOD / BIT: Direct Push | |
| SAMPLING METHOD: 5' Sleeves, 1.25" | DEPTH TO GROUNDWATER ~ 1.5' | GROUND SURFACE ELEVATION: | WELL INSTALLED? Yes - 063_MW07 | |
| MEMO: *Hand-dug 2'x2' hole to 1.5' to remove liner. | | | | |


| DEPTH (Feet) | RECOVERY (feet) | OVM (PPM) | BURMEISTER SYSTEM SOIL DESCRIPTION | FIELD NOTES & SAMPLE SUMMARY |
|-----------------|--------------------|--------------|--|------------------------------------|
| 0 | | | 0.0 - 0.5 QP Stone (coarse subangular gravel & cobbles) (GP) | |
| 1 | | | 0.5 - 1.5 Olive Gray (5Y 4/2) medium-fine SAND, loose, moist, no odor (SP) | |
| 2 | | 0.0 | 1.5 - 2.5 Black (2.5Y 2.5/1) coarse-fine slag SAND & fine subround slag GRAVEL, loose, moist-wet, no odor (SW) | 063_D009_1.5 (1.5' - 2.0') |
| 3 | 2.7 | 0.0 | 2.5 - 4.2 Olive Gray (5Y 5/2) Silty CLAY, little fine sand & subangular coarse-fine gravel, soft, moist, no odor (CL/OL) | |
| 4 | 3.5* | 0.0 | | |
| 5 | | 0.0 | | |
| 6 | | 0.0 | 5.0 - 5.7 As Above (2.5' - 4.2'), no gravel, trace fine sand, soft, moist, no odor (CH) | 063_D009_5.0 (5.0' - 5.5') |
| 7 | | 0.0 | 5.7 - 6.5 Very Dark Grayish Brown (10YR 3/2) organic SILT, some fine sand, little clay, low plasticity, moist, soft, slight sulfurous odor (ML) | Fill/native soil itnerface at 5.7' |
| 8 | 2.7 | 0.0 | 6.5 - 7.7 Brown (7.5YR 4/2) SILT, little fine sand & clay, little coarse-fine subround-subangular gravel, firm, moist, no odor (ML) | |
| 9 | 5.0 | 0.0 | | |
| 10 | | 0.0 | 10.0 - 12.0 Yellowish Brown (10YR 5/6) grading to Yellowish Red(5YR 5/6) Silty medium-to fine SAND, little clay, wet, medium-dense, no odor (SM) | 063_D009_10.0 (10.0' - 10.5') |
| 11 | | 0.0 | | |
| 12 | 3.7 | 0.0 | 12.0 - 13.7 Brown (10YR 5/3) SILT, little fine sand & coarse-fine subangular-subround gravel, stiff, moist, no odor (ML) | |
| 13 | 5.0 | 0.0 | | 063_D009_13.2 (13.2' - 13.7') |
| 14 | | 0.0 | | |
| 15 | | 0.0 | 15.0 - 18.6 As Above (12' - 13.7'), some medium-fine sand & coarse-fine gravel 16.8' - 17.4' (wet), otehrwise moist, stiff, no odor 9ML) | |
| 16 | | 0.0 | | |
| 17 | 3.6 | 0.0 | | |
| 18 | 5.0 | 0.0 | | |
| 19 | | 0.0 | | |
| 20 | | 0.0 | | |
| 21 | | | End of Boring at 20' bgs. | |
| 22 | | | Well Information: | |
| 23 | | | 2-inch diameter 10-slot SCH40 PVC screen set at 5.0' - 10.0' bgs. | |
| 24 | | | 2-inch diameter SCH40 PVC riser from 5.0' bgs. to 2.5' above grade | |
| 25 | | | #1 Sand from 3.0' to 10.0' bgs., Grout from 1.0' to 3.0' | |
| | | | 2' x 2' section of PVC liner placed on top of HDPE liner | |
| | | | Cemented-in 2' x 2' hole for well pad from 1.0' bgs to surface | |
| | | | Stick-up completion | |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|--|------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_D010 |
| | | PROJECT NAME: PPG Site 063 | | LOCATION SKETCH |
| COMPLETION DATE: 7/26/2011 | TOTAL DEPTH OF BOREHOLE: 20 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M. / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Bob Fleming | | DRILLING EQUIPMENT: Geoprobe Track Rig | DRILLING METHOD / BIT: Direct Push | |
| SAMPLING METHOD: 5' Sleeves, 1.25" | DEPTH TO GROUNDWATER ~ 2.0' | 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- 1.2 Grayish Brown (10YR 5/2) fine SAND, little medium sand & coarse-fine subangular gravel, dry, loose, no odor (SP) | 063_D010_0.0 (0.0' - 0.5') |
| 1 | | 1.2 | | 063_D010_0.5 (0.5' - 1.0') |
| 2 | | 3.5 | 1.2 - 1.8 Very Dark Gray (10YR 3/1) medium-fine SAND, little silt & medium-coarse gray angular gravel (SM) | Trace COPR 0.2' - 0.5' |
| 3 | 3.7 | 0.0 | 1.8 - 3.3 Black (10YR 2.5/1) medium-fine SAND, little fine subround slag gravel, Grayish-Brown Silt 2.3' - 2.7', loose, moist, wet 2' - 3.3' (SW/SP) | |
| 4 | 5.0 | 0.0 | 3.3 - 3.7 Olive Gray (5Y 5/2) SILT, some very fine sand, some reddish-brown to gray mottling, stiff, moist, no odor (ML) | |
| 5 | | 0.0 | 5.0 - 5.6 Olive Gray (5Y 5/2) SILT, little fine sand & clay, firm, moist, no odor (ML) | 063_D010_5.1 (5.1' - 5.6') |
| 6 | | 6.8 | 5.6 - 6.4 Very Dark Gray (10YR 3/1) Clayey organic SILT, soft, moist, strong sulfurous odor (ML) | Fill/native soil interface at 5.6' |
| 7 | | 109.0 | 6.4 - 8.8 Grayish Brown (2.5YR 5/2) Clayey fine SAND, little silt, soft, moist-wet, strong sulfurous odor (SC), Transitions to Brown (10YR 5/3) SILT, little fine sand & subround medium-fine gray gravel, firm, moist, strong sulfurous odor (ML), then to Grayish Brown (10YR 5/2) SILT, little fine SAND & medium-fine subround red-yellow sandstone gravel, subround gray gravel, subround gray gravel, & greenish-gray fine subangular gravel, stiff, moist, slight sulfurous odor (ML) | |
| 8 | 3.8 | 45.5 | | |
| 9 | 5.0 | 10.6 | | |
| 10 | | 3.7 | | |
| 11 | | 34.1 | 10.0 - 13.7 Grayish Brown (10YR 5/2) SILT, little fine SAND & medium-fine gravel (as above), stiff, moist, slight sulfurous odor (ML), Transitions to Strong Brown (7.5YR 4/6) Silty fine SAND, some medium sand, little medium-fine gray angular gravel & subround red siltstone gravel, medium-dense, moist-wet, no odor (SM) | 063_D010_10.0 (10.0' - 10.5') |
| 12 | | 5.5 | | |
| 13 | 3.7 | 0.3 | | |
| 14 | 5.0 | 0.0 | | |
| 15 | | 0.0 | | |
| 16 | | 0.0 | 15.0 - 19.4 Strong Brown (7.5YR 4/6) SILT, some fine sand, little medium sand & medium-fine gray angular gravel & subround red siltstone gravel, stiff, moist, no odor (ML), Transitions to Silty medium-fine sand, little gravel, dense, moist-wet, no odor (SM) | 063_D010_15.0 (15.0' - 15.5') |
| 17 | | 0.0 | | |
| 18 | 4.4 | 0.0 | | |
| 19 | 5.0 | 0.0 | | |
| 20 | | 0.0 | | |
| 21 | | | End of Boring at 20' bgs. | |
| 22 | | | | |
| 23 | | | | |
| 24 | | | | |
| 25 | | | | |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|--|------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_D011 |
| | | PROJECT NAME: PPG Site 063 | | |
| COMPLETION DATE: 7/28/2011 | TOTAL DEPTH OF BOREHOLE: 20 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M. / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \Bob Fleming | | DRILLING EQUIPMENT: Geoprobe Track Rig | DRILLING METHOD / BIT: Direct Push | |
| SAMPLING METHOD: 5' Sleeves, 1.25" | DEPTH TO GROUNDWATER ~ 1.4' | 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 - 0.5 Very Dark Grayish Brown (10YR 3/2) medium-fine SAND, little silt & subangular medium-fine gravel, loose, dry, no odor (SM) | 063_D011_0.0 (0.0' - 0.5') |
| _1 | | 0.0 | | |
| _2 | 2.4 | 0.0 | 0.5 - 1.6 Black (2.5Y 2.5/1) medium-fine SAND, little fine subround slag gravel, trace coal, loose, moist, moist-wet at 1.4', no odor (SW/SP) | |
| _3 | 5.0 | 0.0 | 1.6 - 2.4 Dark Grayish Brown (2.5Y 4/2) SILT, little fine sand & coarse-fine gray angular gravel, light gray concrete 1.9' - 2.1', moist, firm, no odor (ML) | |
| _4 | | | | |
| _5 | | | | |
| _6 | | 0.0 | 5.0 - 5.3 As Above (1.6' - 2.4') | 063_D011_5.0 (5.0' - 5.5') |
| _7 | | 0.0 | 5.3 - 7.5 Olive Gray (5Y 5/2) Clayey SILT, little fine-very fine sand, low palsticity, firm, moist, no odor (ML), Transitions to Dark Gray (2.5Y 4/1) Clayey SILT, trace shells, soft, moist, slight sulfurous odor (ML) | |
| _8 | 3.3 | 0.0 | 7.5 - 8.3 Very Dark Grayish Brown (10YR 3/2) PEAT, little Very Dark Gray (5Y 3/1) CLAY, low plasticity, soft, moist-wet, slight sulfurous odor (PT) | 063_D011_7.0 (7.0' - 7.5') |
| _9 | 5.0 | 0.0 | | Fill/native soil interface at 7.5' |
| _10 | | | | |
| _11 | | 0.0 | 10.0 - 10.1 As Above (7.5' - 8.3') | |
| _12 | | 0.0 | 10.1 - 12.2 Grayish Brown (10YR 4/2) SILT, some fine sand & coarse-fine subround red siltstone gravel, stiff, moist, no odor (ML), Transitions to Brown (10YR 5/3) SILT, little very fine sand & medium-fine subangular gray to greenish-gray gravel, stiff, moist, no odor (ML) | 063_D011_11.0 (11.0' - 11.5') |
| _13 | 2.2 | | | |
| _14 | 5.0 | | | |
| _15 | | | | |
| _16 | | 0.0 | 15.0 - 16.8 Brown (10YR 5/3) SILT, little very fine sand & medium-fine subangular gray to greenish-gray gravel, stiff, moist, no odor (ML), Transitions to Brown (7.5YR 5/4) SILT, some very fine sand, little coarse-fine subround gray gravel, firm, moist, no odor (ML) | 063_D011_15.0 (15.0' - 15.5') |
| _17 | | 0.0 | | |
| _18 | 1.8 | | | |
| _19 | 5.0 | | | |
| _20 | | | | |
| _21 | | | End of Boring at 20' bgs. | |
| _22 | | | | |
| _23 | | | | |
| _24 | | | | |
| _25 | | | | |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|--|------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_E003 |
| | | PROJECT NAME: PPG Site 063 | | |
| COMPLETION DATE: 7/26/2011 | TOTAL DEPTH OF BOREHOLE: 20 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M. / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Ray Smith | | 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: | | | | |


| DEPTH (Feet) | RECOVERY (feet) | OVM (PPM) | BURMEISTER SYSTEM SOIL DESCRIPTION | FIELD NOTES & SAMPLE SUMMARY | |
|-----------------|--------------------|--------------|--|--|----------------------------------|
| _0 | | 0.0 | 0.0 - 3.1 Dark Yellowish Brown (10YR 3/4) to Dark Brown (7.5YR 4/3) medium-fine SAND, little silt, trace subangular medium-fine gravel, white concrete cobbles 3' - 3.1', dry-moist, loose, no odor (SM) | 063_E003_0.0 (0.0' - 0.5') | |
| _1 | | 0.0 | | | |
| _2 | <u>3.2</u> | 0.0 | | | |
| _3 | 5.0 | 0.0 | | | |
| _4 | | 0.0 | | | |
| _5 | | 6.6 | 5.0 - 7.0 Very Dark Grayish Brown (10YR 3/2) coarse-fine SAND & coarse-fine angular to subround GRAVEL, Dark gray shale gravel 5.9' - 6.1' (dry), pink/gray flat siltstone gravel 6.5'-7' (dry), trace silt, wet, loose, slight hydrocarbon odor (SW) | 063_E003_5.0 (5.0' - 5.5') | |
| _6 | | 21.6 | | | |
| _7 | <u>2.9</u> | 54.2 | | | 063_E003_6.0 (6.0' - 6.5') |
| _8 | 5.0 | 94.5 | | 7.0 - 7.9 Dark Grayish Brown (10YR 4/2) SILT, some fine sand, little medium sand & coarse-fine subround-subangular gray gravel, little clay, firm, moist-wet, slight hydrocarbon odor (ML) | Fill/native soil interface at 7' |
| _9 | | 431.0 | | | |
| _10 | | 149.0 | | | |
| _11 | | 137.0 | 10.0 - 13.7 As Above (7' - 7.9') (ML), Transitions to Brown (10YR 5/2) Silty fine-medium SAND, little coarse-fine subangular gray gravel, little clay, dense, moist-wet, slight hydrocarbon odor (SM) | 063_E003_10.0 (10.0' - 10.5') | |
| _12 | | 42.7 | | | |
| _13 | <u>3.3</u> | 334.0 | | | |
| _14 | 5.0 | 120.0 | | | |
| _15 | | 56.7 | | | |
| _16 | | 57.7 | 15.0 - 19.7 Brown (10YR 5/2) Silty fine-medium SAND, little coarse-fine subangular gray gravel, abundant gravel & wet 15'-15.2', little clay, dense, moist-wet, slight hydrocarbon odor (SM), Transitions to Brown (7.5YR 5/4) Silty fine SAND, some medium sand & moist-wet 17.2' - 19.2'; SILT, little fine sand 19.3' - 19.7', medium-dense grading to dense, moist, slight hydrocarbon odor (SM) | 063_E003_15.0 (15.0' - 15.5') | |
| _17 | | 38.3 | | | |
| _18 | <u>4.7</u> | 6.6 | | | |
| _19 | 5.0 | 5.7 | | | |
| _20 | | 81.9 | | | |
| _21 | | 5.5 | End of Boring at 20' bgs. | | |
| _22 | | 433.0 | | | |
| _23 | | 14.7 | | | |
| _24 | | 2.9 | | | |
| _25 | | 2.6 | | | |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|--|------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_E004 |
| | | PROJECT NAME: PPG Site 063 | | LOCATION SKETCH |
| COMPLETION DATE: 7/26/2011 | TOTAL DEPTH OF BOREHOLE: 20 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M. / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Bob Fleming | | 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 | | | | |
| 1 | | 0.0 | 0.0 - 1.2 Dark Grayish Brown (10YR 4/2) to Strong Brown (7.5YR 4/6) medium-fine SAND, little subangular-subround medium-fine gravel, trace glass, dry, loose, no odor (SW) | 063_E004_0.0 (0.0' - 0.5') |
| 2 | 2.9 | 0.0 | 1.2 - 1.9 Black (2.5Y 2.5/1) coarse SAND & fine-medium GRAVEL (slag & coal), loose, moist, no odor (GW) | |
| 3 | 5.0 | 0.0 | 1.9 - 2.3 Brown (7.5YR 4/3) SILT, some fine sand, trace red coarse-medium subround sandstone gravel, moist, firm, no odor (ML) | |
| 4 | | | 2.3 - 2.9 Brown (10YR 4/3) Silty coarse-fine SAND, some coarse-fine subround -angular gravel & cobbles, loose, wet, no odor (SW) | |
| 5 | | | | |
| 6 | | 0.0 | 5.0 - 7.2 As Above (2.3' - 2.9') but Dark Gray (10YR 4/1) to Dark Grayish Brown, loose, wet, slight hydrocarbon odor 6.0 - 7.2' | |
| 7 | | 23.2 | | 063_E004_6.5 (6.5' - 7.0') |
| 8 | 2.2 | 121.0 | | |
| 9 | 5.0 | 13.7 | | |
| 10 | | | | |
| 11 | | 7.3 | 10.0 - 11.5 Dark Gray (10YR 4/1) Coarse-fine SAND & fine subround GRAVEL, some coarse-medium gravel, little silt, loose, wet, slight hydrocarbon odor (GM/GW) | |
| 12 | | 21.3 | Transitions to Dark Grayish Brown (10YR 4/2) Silty medium-fine SAND, some fine gravel, little medium gravel, wet, moist, slight hydrocarbon odor (SM) | 063_E004_11.0 (11.0' - 11.5') |
| 13 | 3.5 | 12.6 | 11.5 - 13.5 Brown (7.5YR 4/2) Clayey SILT, little fine sand, very soft, very wet, slight hydrocarbon odor (ML), Transitions to Brown (7.5YR 5/3) SILT, some medium-fine sand, moist, soft grading to firm, little medium-fine subangular gray gravel, no odor (ML) | |
| 14 | 5.0 | 2.1 | | |
| 15 | | 3.0 | | |
| 16 | | 1.0 | | |
| 17 | | 1.6 | | |
| 18 | | | 15.0 - 16.5 Brown (7.5YR 5/3) SILT, some fine sand, little medium sand & medium-fine subangular gray gravel, stiff, dry, no odor (ML), Transitions to Strong Brown (7.5YR 5/6) Silty medium-fine SAND, little medium-fine subangular gray gravel, dense, moist-wet, no odor (SM) | 063_E004_15.0 (15.0' - 15.5') |
| 19 | 3.8 | 0.0 | | |
| 20 | 5.0 | 0.0 | | 063_E004_18.3 (18.3' - 18.8') |
| 21 | | | End of Boring at 20' bgs. | |
| 22 | | | | |
| 23 | | | | |
| 24 | | | | |
| 25 | | | | |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|--|------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_E005 |
| | | PROJECT NAME: PPG Site 063 | | |
| COMPLETION DATE: 7/26/2011 | TOTAL DEPTH OF BOREHOLE: 20 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M. / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Bob Fleming | | DRILLING EQUIPMENT: Geoprobe Track Rig | DRILLING METHOD / BIT: Direct Push | |
| SAMPLING METHOD: 5' Sleeves, 1.25" | DEPTH TO GROUNDWATER ~ 2.0' | 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 - 1.3 Dark Grayish Brown (2.5YR 4/2) medium-fine SAND, little medium-coarse subangular gravel, Transitions to Dark Grayish Brown (10YR 4/2) medium sand, loose, moist, no odor, shell fragments 0.7' - 0.8' (SP) | 063_E005_0.0 (0.0' - 0.5') |
| 1 | | 0.0 | | 063_E005_0.5 (0.5' - 1.0') |
| 2 | 3.6 | 0.0 | 1.3 - 2.2 Black (2.5Y 2.5/1) coarse-medium SAND & medium-fine subround slag GRAVEL, moist, wet at 2', loose, no odor (GW) | Trace COPR 0.2' - 0.5' |
| 3 | 5.0 | 0.0 | 2.2 - 3.6 Dark Grayish Brown (2.5YR 4/2) grading to Olive Gray (5Y 5/2) SILT, some fine sand, little coarse-fine gray angular gravel, firm, moist, slight hydrocarbon odor 3.3' - 3.6' | |
| 4 | | 85.6 | | |
| 5 | | | | |
| 6 | | 68.9 | 5.0 - 6.5 Olive Gray (5Y 5/2) SILT, little fine sand & clay, soft, moist-wet, strong hydrocarbon odor (ML) | |
| 7 | 3.8 | 144.0 | 6.5 - 7.2 Dark Reddish Gray (5YR 4/2) SILT, little fine sand & subround to subangular medium-fine gravel, firm, moist, slight hydrocarbon odor (ML) | 063_E005_6.0 (6.0' - 6.5') |
| 8 | 5.0 | 418.0 | 7.2 - 8.1 Dark Reddish Gray (5YR 4/2) Silty medium-fine SAND, little medium-fine subround gravel, light greenish-gray siltstone gravel 7.6'-7.9', medium-dense, moist-wet, slight hydrocarbon odor (SM) | Fill/native soil interface at 6.5' |
| 9 | | 1141.0 | 8.1 - 8.8 Yellowish Brown (10YR 5/6) Silty medium-fine SAND, little medium-fine subround to subangular sandstone gravel, trace silt, medium-dense, moist, slight hydrocarbon odor (SM) | |
| 10 | | 580.0 | | |
| 11 | | 31.4 | 10.0 - 11.7 As Above (8.1' - 8.8') | 063_E005_10.0 (10.0' - 10.5') |
| 12 | 2.9 | 16.6 | 11.7 - 12.5 Brown (10YR 5/3) Silty fine SAND, some fine angular gravel, little medium sand, dense, moist, no odor (SM) | |
| 13 | 5.0 | 7.0 | 12.5 - 12.9 Weak Red (10R 4/2) thin-bedded shale fragments, dry, dense, no odor (GW) | |
| 14 | | | | |
| 15 | | | | |
| 16 | | 0.0 | 15.0 - 16.4 as Above (11.7' - 12.5'), moist, trace coarse-medium red siltstone (SM) | 063_E005_15.0 (15.0' - 15.5') |
| 17 | 2.7 | 0.0 | 16.4 - 17.7 Brown (7.5YR 5/4) Silty medium-fine SAND, little coarse-fine subround to subangular gray siltstone gravel, medium-dense grading to dense, wet grading to moist, no odor (SM) | |
| 18 | 5.0 | 0.0 | | |
| 19 | | 0.0 | | |
| 20 | | 0.0 | | |
| 21 | | | End of Boring at 20' bgs. | |
| 22 | | | | |
| 23 | | | | |
| 24 | | | | |
| 25 | | | | |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|--|------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_E006 |
| | | PROJECT NAME: PPG Site 063 | | LOCATION SKETCH |
| COMPLETION DATE: 7/26/2011 | TOTAL DEPTH OF BOREHOLE: 20 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M. / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Bob Fleming | | DRILLING EQUIPMENT: Geoprobe Track Rig | DRILLING METHOD / BIT: Direct Push | |
| SAMPLING METHOD: 5' Sleeves, 1.25" | DEPTH TO GROUNDWATER ~ 1.5' | 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 Brown (10YR 5/3) fine SAND, little medium sand, little coarse-fine gray subangular gravel, loose, dry, no odor (SP) | 063_E006_0.0 (0.0' - 0.5') |
| _1 | | 0.0 | | _1 |
| _2 | | 0.0 | 1.1 - 1.5 Black (2.5Y 2.5/1) fine SAND, some silt & clay, moist, soft, no odor (SC) | |
| _3 | 3.7 5.0 | 0.0 | 1.5 - 2.0 Black (2.5Y 2.5/1) coarse-medium SAND & coarse-fine slag GRAVEL, little fine sand, loose, wet, no odor (GW) | _2 |
| _4 | | 0.0 | | _3 |
| _5 | | 0.0 | 2.0 - 3.7 Dark Gray (2.5Y 4/1) Silty CLAY, trace shells & fine sand 2'-2.5', soft, moderate plasticity, moist, slight sulfurous odor (OH) | _4 |
| _6 | | 0.0 | 5.0 - 5.7 As Above (2' - 3.7') | _5 |
| _7 | | 0.0 | 5.7 - 6.6 Olive (5Y 5/3) CLAY, little silt, moderate plasticity, soft, moist, slight sulfurous odor (OH) | 063_E006_6.0 (6.0' - 6.5') |
| _8 | 3.8 5.0 | 0.0 | 6.6 - 8.8 Brown (10YR 5/3) medium-fine SAND, some silt, little subangular-subround red siltstone gravel, medium-dense, moist-wet, no odor (SM), Transitions to Reddish Brown (5YR 5/3) SILT, some fine sand, little subround-subangular siltstone gravel, dry, stiff, no odor (ML) | Fill/native soil interface at 6.6' |
| _9 | | 0.0 | | _6 |
| _10 | | 0.0 | | _7 |
| _11 | | 0.0 | 10.0 - 12.5 Strong Brown (7.5YR 4/6) SILT, some fine sand, little gray subround-subangular fine gravel, stiff, moist, no odor (ML), Transitions to Brown (7.5YR 5/4) SILT, some fine sand, little medium-fine subangular gray to greenish gray gravel, dry, very stiff, no odor (ML) | 063_E006_10.0 (10.0' - 10.5') |
| _12 | | 0.0 | | _8 |
| _13 | 2.5 5.0 | 0.0 | | _9 |
| _14 | | 0.0 | | _10 |
| _15 | | 0.0 | | _11 |
| _16 | | 0.0 | 15.0 - 18.0 Brown (10YR 5/3) Silty medium-fine SAND, some coarse-fine subangular - subround gray gravel, dense, moist-wet, no odor (SM), Transitions to SILT, little fine sand, little subangular gray gravel, very stiff, moist, no odor (ML) | 063_E006_15.0 (15.0' - 15.5') |
| _17 | | 0.0 | | _12 |
| _18 | 3.0 5.0 | 0.0 | | _13 |
| _19 | | 0.0 | | _14 |
| _20 | | 0.0 | | _15 |
| _21 | | | End of Boring at 20' bgs. | _16 |
| _22 | | | | _17 |
| _23 | | | | _18 |
| _24 | | | | _19 |
| _25 | | | | _20 |

SOIL BORING LOG

| | | | | |
|---|--------------------------------|---|--|------------------------|
|  | | PROJECT NO.: 117-0509160.02 | | Boring No: 063_E007 |
| | | PROJECT NAME: PPG Site 063 | | LOCATION SKETCH |
| COMPLETION DATE: 7/27/2011 | TOTAL DEPTH OF BOREHOLE: 20 | MONITORING DEVICE: PID MiniRAE 2000 | GEOLOGIST / OFFICE: Jim M. / Whitehouse Station | |
| DRILLING CONTRACTOR / DRILLER: EPI \ Ray Smith | | DRILLING EQUIPMENT: Geoprobe Track Rig | DRILLING METHOD / BIT: Direct Push | |
| SAMPLING METHOD: 5' Sleeves, 1.25" | DEPTH TO GROUNDWATER ~ 1.5' | 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 - 0.8 Brown (10YR 5/3) fine SAND, little medium sand & silt, little medium-fine gray subangular gravel, loose, dry, no odor (SP) | 063_E007_0.0 (0.0' - 0.5') |
| _1 | | 0.0 | | |
| _2 | 3.5 | 0.0 | 0.8 - 1.7 Black (2.5Y 2.5/1) medium-fine SAND, some coarse sand & medium-fine slag gravel, moist, wet at 1.5', loose, no odor (SW) | |
| _3 | 5.0 | 0.0 | 1.7 - 2.0 Very Dark Gray (5Y 3/1) CLAY, little silt, trace shells, moderate plasticity, soft, moist-wet, slight sulfuroud odor (OH) | |
| _4 | | 0.0 | 2.0 - 3.5 Olive (5Y 5/3) CLAY with slight Reddish Brown (5Y 5/3) mottling, little silt, moderate plasticity, trace shells, moist, slight sulfurous odor (OH/CH) | |
| _5 | | 0.0 | | |
| _6 | | 0.0 | 5.0 - 5.5 As Above (2' - 3.5'), slight sulfurous odor (OH/CH) | 063_E007_5.0 (5.0' - 5.5') |
| _7 | | 1.3 | 5.5 - 8.0 Olive Gray (5Y 5/2) Silty CLAY, soft, moist, moderate plasticity, slight sulfurous odor (OH/CH), Transitions to Brownish Yellow (10YR 6/6) SILT, some very fine sand, little clay, firm, moist, no odor (ML), Transitions to Yellowish Red (5YR 5/6) medium-fine SAND, some silt, little Dark Reddish Brown (5YR 3/3) medium-fine sand & medium-fine gray angular gravel & fine-medium round red siltstone gravel, medium-dense, moist-wet, no odor (SM) | Fill/native soil interface at 5.5' |
| _8 | 3.0 | 0.0 | | |
| _9 | 5.0 | 0.0 | | |
| _10 | | 0.0 | | |
| _11 | | 0.0 | 10.0 -11.2 Yellowish Red (5YR 5/6) medium-fine SAND, some silt, little Dark Reddish Brown (5YR 3/3) medium-fine sand & medium-fine gravel, medium-dense, moist-wet, no odor (SM) | 063_E007_10.0 (10.0' - 10.5') |
| _12 | | 0.0 | 11.2 - 11.5 Light Gray (10YR 7/2) coarse-medium subround sandstone GRAVEL & COBBLES, some coarse-medium sand, loose, dry, no odor (GW) | |
| _13 | 2.9 | 0.0 | 11.5 - 12.9 Brown (7.5YR 5/4) Silty medium-fine SAND, little medium-fine gray angular gravel, medium-dense, moist-wet, no odor (SM) | |
| _14 | 5.0 | 0.0 | | |
| _15 | | 0.0 | | |
| _16 | | 0.0 | 15.0 - 17.9 Brown (7.5YR 5/4) Silty coarse-fine SAND, some fine subangular gravel, little medium gravel, loose, wet, no odor (SM), Transitions to SILT, some fine sand, little subround to subangular grayish brown medium-fine gravel, trace medium sand, stiff, moist, no odor (ML) | 063_E007_15.0 (15.0' - 15.5') |
| _17 | 2.9 | 0.0 | | |
| _18 | 5.0 | 0.0 | | |
| _19 | | 0.0 | | |
| _20 | | 0.0 | | |
| _21 | | | End of Boring at 20' bgs. | |
| _22 | | | | |
| _23 | | | | |
| _24 | | | | |
| _25 | | | | |

Appendix C-1

COPR Table, Initial Investigation

Sites 063 and 065 Remedial Investigation Report

PPG Industries, Inc.

Jersey City, New Jersey

| Depth (ft) | 063_B003 | 063_B004 | 063_B004a | 063_B005 | 063_B006/063_MW01 | 063_B007 | 063_B008 |
|------------|----------|----------|-----------|----------|-------------------|----------|----------|
| 0 | | | | | | | |
| 0.1 | | | | | | | |
| 0.2 | COPR | | COPR | | | | |
| 0.3 | COPR | | COPR | | | | |
| 0.4 | COPR | | COPR | | | | |
| 0.5 | COPR | | COPR | | | | |
| 0.6 | COPR | | COPR | | | | |
| 0.7 | COPR | | COPR | | | | |
| 0.8 | COPR | | COPR | | | | |
| 0.9 | COPR | | COPR | | | | |
| 1 | COPR | | COPR | | | | |
| 1.1 | | | | | | | |
| 1.2 | | | | | | | |
| 1.3 | | | | | | | |
| 1.4 | | | | | | | |
| 1.5 | | | | | COPR | | |
| 1.6 | | | | | COPR | | |
| 1.7 | | | | | COPR | | COPR |
| 1.8 | | | | | | | COPR |
| 1.9 | | | | | | | COPR |
| 2 | | | | | | | COPR |
| 2.1 | | | | | | | |
| 2.2 | | | | | | | |
| 2.3 | | | | | | | |
| 2.4 | | | | | | | |
| 2.5 | | | | | | | |
| 2.6 | | | | | | | |
| 2.7 | | | | | | | |
| 2.8 | | | | | | | |
| 2.9 | | | | | | | |
| 3 | | | | | | | |
| 3.1 | | | | | | | |
| 3.2 | | | | | | | |

Appendix C-1

COPR Table, Initial Investigation

Sites 063 and 065 Remedial Investigation Report
PPG Industries, Inc.
Jersey City, New Jersey

| Depth (ft) | 063_B003 | 063_B004 | 063_B004a | 063_B005 | 063_B006/063_MW01 | 063_B007 | 063_B008 |
|------------|----------|----------|-----------|----------|-------------------|----------|----------|
| 3.3 | | | | | | | |
| 3.4 | | | | | | | |
| 3.5 | | | | | | | |
| 3.6 | | | | | | | |
| 3.7 | | | | | | | |
| 3.8 | | | | | | | |
| 3.9 | | | | | | | |
| 4 | | | | | | | |
| 4.1 | | | | | | | |
| 4.2 | | | | | | | |
| 4.3 | | | | | | | |
| 4.4 | | | | | | | |
| 4.5 | | | | | | | |
| 4.6 | | | | | | | |
| 4.7 | | | | | | | |
| 4.8 | | | | | | | |
| 4.9 | | | | | | | |
| 5 | | | | | | | |
| 5.1 | | | | | | | |
| 5.2 | | | | | | | |
| 5.3 | | | | | | | |
| 5.4 | | | | | | | |
| 5.5 | | | | | | | |
| 5.6 | | | | | | | |
| 5.7 | | | | | | | |
| 5.8 | | | | | | | |
| 5.9 | | | | | | | |
| 6 | | | | | | | |
| 6.1 | | | | | | | |
| 6.2 | | | | | | | |
| 6.3 | | | | | | | |
| 6.4 | | | | | | | |
| 6.5 | | | | | | | |
| 6.6 | | | | | | | |
| 6.7 | | | | | | | |
| 6.8 | | | | | | | |
| 6.9 | | | | | | | |
| 7 | | | | | | | |

Appendix C-1

COPR Table, Initial Investigation

Sites 063 and 065 Remedial Investigation Report
 PPG Industries, Inc.
 Jersey City, New Jersey

| Depth (ft) | 063_B009/063_MW02 | 063_B010 | 063_B010a | 063_B011 | 063_B012/063_MW03 | 063_B013 | 063_B014 | 063_B015/063_MW04 |
|------------|-------------------|----------|-----------|----------|-------------------|----------|----------|-------------------|
| 0 | | | | | | | | |
| 0.1 | | | | | | | | |
| 0.2 | | | | COPR | | COPR | COPR | |
| 0.3 | COPR | | | COPR | | COPR | COPR | |
| 0.4 | COPR | | | COPR | | COPR | COPR | |
| 0.5 | COPR | COPR | | COPR | | COPR | COPR | |
| 0.6 | | COPR | | | | COPR | COPR | |
| 0.7 | | COPR | | | | COPR | COPR | |
| 0.8 | | COPR | | | | COPR | COPR | |
| 0.9 | | COPR | | | | COPR | COPR | |
| 1 | | COPR | | | | COPR | COPR | |
| 1.1 | | COPR | | | | COPR | | |
| 1.2 | | COPR | | | | COPR | | |
| 1.3 | | COPR | | | | COPR | | |
| 1.4 | | COPR | | | | COPR | | |
| 1.5 | | COPR | | | | COPR | | |
| 1.6 | | COPR | | | | COPR | | |
| 1.7 | | COPR | | | | COPR | | |
| 1.8 | | COPR | | | | COPR | | |
| 1.9 | | COPR | | | | COPR | | |
| 2 | | COPR | | | | COPR | COPR | |
| 2.1 | | COPR | | | | COPR | COPR | |
| 2.2 | | COPR | | | | COPR | COPR | |
| 2.3 | | COPR | | | | COPR | COPR | |
| 2.4 | | COPR | | | | COPR | COPR | |
| 2.5 | | COPR | | | | COPR | COPR | |
| 2.6 | | COPR | | | | COPR | COPR | |
| 2.7 | | COPR | | | | COPR | COPR | |
| 2.8 | | COPR | | | | COPR | COPR | |
| 2.9 | | COPR | | | | COPR | COPR | |
| 3 | | COPR | | | | COPR | COPR | |
| 3.1 | | | | | | COPR | | |
| 3.2 | | | | | | COPR | | |

