

SYSTEM	SERIES	STRATIGRAPHY (SITE & KY.)	MU Column (column P)	Stratigraphy Column (column Q)	Hydro-stratigraphy (column R)	GENERAL LITHOLOGY (From Lithologic Logs - Column T)	DEPOSITIONAL ENVIRONMENT (Literature)	LITERATURE LITHOSTRATIGRAPHY	PGDP Flow System					
QUATERNARY	Holocene	Surface_Soil	Surface_Soil	Surface_Soil	Ground/Surface_Soil	Surficial Material including topsoil and fill. Fill ID'ed in USCS columns								
		Alluvium	PostModAlluv_Colluv	Qal	HU1	Modern alluvial material at or immediately below ground surface. Most prevalent on terrace immediately adjacent to Ohio River	Fluvial	Silt, Clay, Sand, Gravel - frequent gray coloration						
	Pleistocene	Continental Deposits		Loess		Loess	Ql	Shallow silt/clay with occasional traces of sand and/or gravel. Loess packages not differentiated in lithologic logs (or in database)	Lacustrine	Silt of Eolian origin.				
		Upper Continental Deposits (UCD)	UCD_Upper	Qss (QTc)	HU2	UCD_Sand+GRAVEL	SHALLOWEST ENCOUNTER OF UCD MATERIAL WHEN IDENTIFIED ABOVE COARSE HU2A MATERIAL DESCRIBED BELOW. GENERALLY INDICATED BY OCCURRENCE OF Sd OR Gr AS MORE THAN TRACE OF INTERVAL AND/OR BY SIGNIFICANT COLOR/TEXTURAL CHANGES IN Ml'S AND Cl'S. VERY GENERALLY, THE TRANSITION FROM LOESS TO UCD MATERIAL OCCURS BETWEEN 10' & 20' BGS.	Iterations of fluvial and lacustrine deposition	Pleistocene Silt and Sand Deposits (Finch, 1967) ~ ID'ed separately as being more recent than Continental Deposits.	Upper Continental Recharge System (UCRS)				
			UCD_SiltsandCl_LOWER			Sub-unit is shallowest encounter > trace coarse materials below Loess. (Generally 350 - 365' amsl). Clayey and silty matrix materials routine. Orange - Red - Brown coloration frequently present. Very frequent across Industrial Site but apparently thinning north of SnT/U-Landfill complex.								
			UCD_CLAY+_LOWER			Sub-unit encountered below coarse interval of HU2A. Occurs as change to: 1) vf-f sand or silty sand intervals of varying thickness and/or; 2) Silts, Clays (sometimes sandy). Generally occurs @ 345 -350' amsl. Sequences of silts & clays occur with minor sands and gravels to varying elevations (depths) in this unit. The base of HU2 and this sub-unit classified as the contact with the upper extent of clays/silts of HU3 which are contiguous to material comprising the top of the Regional Gravel Aquifer (HU4 and HU5/LCD).								
			UCD_Basal_Sand(Silty)			HU3	Upper aquitard for Regional Gravel Aquifer unit consists of intervals of Silt/Clay contiguous to top of Regional Gravel Aquifer/LCD. At individual locations silt/clay material may be contiguous to thicknesses of 30+ feet.							
			LCD_UFS_m2f			HU4	Silty or slightly clayey vf - f Sand. Occurs immediately below UCD silts/clays of HU3. Frequently present							
			LCD_c2m_Gr_UFS			HU5	Clean f-m Sand. Little or no Gravel. Frequently present							
		LCD_GRAVEL	Contiguous combinations of Gr/Sd and Sd/Gr intervals, varying angularity/roundness, sand vf-c as quartz. Frequently f-m with occ. coarse or cobble. Very occ. silt as portion of matrix. Primary Regional Gravel Aquifer (RGA) materials. Laterally extensive.											
Lower Continental Deposits (LCD)					Iterations of fluvial wandering, erosion and deposition		Regional Gravel Aquifer (RGA)							
TERTIARY	Pliocene (?) & Pleistocene													
	Eocene	Claiborne and Wilcox Formations	NA	Tcw	na	Only a handful of Tcw points recorded in database as they were generally south and at higher elevation than area of interest and not recorded in dbase and evaluated.								
	Paleocene	Porters Creek Clay (PCC)	Porters_Creek_Clay	Tpc		Clay with varying amounts of vf-f Sand. Dark gray to black, fractures~blocky~conchoidal. Micaceous in several horizons. Some areas on upper elevations of terrace may weather to white. In vicinity of PGDP, a. Appears to pinch out to the north and west of a line extending from C-400 building to NE corner of industrial area and beyond. Underlies terrace bounding southern edge of Regional Gravel Aquifer. Weathered PCC residuum noted in site logs immediately overlying fines in upper McNairy Formation. Locally may be synonymous with Cretaceous-Tertiary Clayton Formation or -	Marine deposit. Indicates advance of sea over Miss. Embayment	Massive, compact, essentially unbedded or weakly bedded, dark gray to nearly black clay that has a blocky fracture. It is gray-tan to white where weathered.						
CRETACEOUS	Upper Cretaceous & Paleocene	McNairy Formation	Upper_McN	TKcm	HU6	Clayton Formation (?????) - Not Differentiated by or at PGDP	Silty Clay, green(ish). Pebbly at base. Glauconitic id'ed in several horizons (255-290' amsl). Green-ish' clays id'ed from 260-290' amsl.	Marine clay deposit. Indicates advance of sea over Miss. Embayment	Silty Clay, green to buff. Pebbly at base. (Willman, 1901/published 1975) Less sandy more glauconitic than Owl Creek. Grades upward into the massive dark clays of the PCC. Unconformable contact with underlying Owl Creek. Gravel/pebbles at base of unit. Mapped collectively with upper McNairy Formation sands, silts, clays. Not mapped as separate unit in Joppa or Heath Quadrangles.	McNairy Flow System				
						Owl Creek Formation (?????)	Green-ish' clays id'ed from 260-290' amsl. Some locs strong brown clays, green(ish) clays. 'Micaceous in several horizons with shallowest from 260 - 280' amsl.	Brief advance of sea over McNairy delta.	Glauconitic, very micaceous, sandy, silty clay (Willman, 1901/published 1975). Lt. greenish gray to brown clay, sandy, glauconitic, micaceous. Weathered zone below Clayton with hematite nodules & oxidized clay (Kolata, 1981). Conformably overlies McN Formation. 0-10 feet thick where logged in region. Nearest type exposure immediately upstream of Olmstead Dam.					
						Upper_McN_SAND		HU5A	Sand (vf-c) or silty sand, occasional gravel. Occurring below and contiguous to base of Gr/Sd and Sd/Gr intervals of HU5 (LCD). Occurs where apparent removal of Porters Creek Clay/Upper McNairy silt/clay materials has occurred.					
						Levings_McN	TKm_Lev	HU6B	Silt/Clay. Dark to very dark gray to black. Some Sand/silty Sand. Pyrite and lignite noted in logs.			gray to black silt with beds of lignite, pyritic	McNairy Flow System	
						LOWER_McN	TKm_Lwr	HU6C	Sand, silty Sand and Clay.		fine, white to light gray, cross-bedded, micaceous sand	Glauconitic, micaceous, silty clay that is sandy and pebbly at the base		
						Rubble Zone	RUBBLE_ZONE	RZ	HU6D	Cobbles and boulders from weathering of underlying limestone.				
MISSISSIPPIAN		Miss_LS	MLs	HU7	Limestone									