APPENDIX F
Geological Formations Crossed by the Leach XPress Project

APPENDIX F
Geologic Formations by Milepost Crossed by the Leach XPress Project

Geologic Formation/ Unit	Facility	Begin MP	End MP	Period/Era	Primary Lithology	Secondary Lithology	Description
Dunkard Group	LEX	2.0	21.3	Permian, Pennsylvanian	Sandstone	Siltstone	Non-marine cyclic sequences of sandstone, siltstone, shale, limestone, and coal.
Dunkard Group	LEX	21.6	25.2	Permian, Pennsylvanian	Sandstone	Siltstone	Non-marine cyclic sequences of sandstone, siltstone, shale, limestone, and coal.
Dunkard Group	LEX	26.0, RR-5	38.7	Permian, Pennsylvanian	Sandstone	Siltstone	Non-marine cyclic sequences of sandstone, siltstone, shale, limestone, and coal.
Dunkard Group	LEX	38.8	40.6	Permian, Pennsylvanian	Sandstone	Siltstone	Non-marine cyclic sequences of sandstone, siltstone, shale, limestone, and coal.
Dunkard Group	LEX	40.7	41.4	Permian, Pennsylvanian	Sandstone	Siltstone	Non-marine cyclic sequences of sandstone, siltstone, shale, limestone, and coal.
Dunkard Group	LEX	41.5	41.8	Permian, Pennsylvanian	Sandstone	Siltstone	Non-marine cyclic sequences of sandstone, siltstone, shale, limestone, and coal.
Dunkard Group	LEX	42.0	43.9	Permian, Pennsylvanian	Sandstone	Siltstone	Non-marine cyclic sequences of sandstone, siltstone, shale, limestone, and coal.
Dunkard Group	LEX	44.0	45.0	Permian, Pennsylvanian	Sandstone	Siltstone	Non-marine cyclic sequences of sandstone, siltstone, shale, limestone, and coal.
Dunkard Group	LEX	45.1	48.0	Permian, Pennsylvanian	Sandstone	Siltstone	Non-marine cyclic sequences of sandstone, siltstone, shale, limestone, and coal.
Dunkard Group	LEX	48.1	48.3	Permian, Pennsylvanian	Sandstone	Siltstone	Non-marine cyclic sequences of sandstone, siltstone, shale, limestone, and coal.
Dunkard Group	LEX	48.4	48.5	Permian, Pennsylvanian	Sandstone	Siltstone	Non-marine cyclic sequences of sandstone, siltstone, shale, limestone, and coal.
Dunkard Group	LEX	48.5	48.7	Permian, Pennsylvanian	Sandstone	Siltstone	Non-marine cyclic sequences of sandstone, siltstone, shale, limestone, and coal.
Dunkard Group	LEX	48.9	49.2	Permian, Pennsylvanian	Sandstone	Siltstone	Non-marine cyclic sequences of sandstone, siltstone, shale, limestone, and coal.
Dunkard Group	LEX	49.3	49.3	Permian, Pennsylvanian	Sandstone	Siltstone	Non-marine cyclic sequences of sandstone, siltstone, shale, limestone, and coal.

APPENDIX F
Geologic Formations by Milepost Crossed by the Leach XPress Project

Geologic Formation/ Unit	Facility	Begin MP	End MP	Period/Era	Primary Lithology	Secondary Lithology	Description
Dunkard Group	LEX	49.6	49.7	Permian, Pennsylvanian	Sandstone	Siltstone	Non-marine cyclic sequences of sandstone, siltstone, shale, limestone, and coal.
Dunkard Group	LEX	49.8	49.8	Permian, Pennsylvanian	Sandstone	Siltstone	Non-marine cyclic sequences of sandstone, siltstone, shale, limestone, and coal.
Dunkard Group	LEX	50.1	50.2	Permian, Pennsylvanian	Sandstone	Siltstone	Non-marine cyclic sequences of sandstone, siltstone, shale, limestone, and coal.
Dunkard Group	LEX	50.4	50.5	Permian, Pennsylvanian	Sandstone	Siltstone	Non-marine cyclic sequences of sandstone, siltstone, shale, limestone, and coal.
Dunkard Group	LEX	51.8	51.9	Permian, Pennsylvanian	Sandstone	Siltstone	Non-marine cyclic sequences of sandstone, siltstone, shale, limestone, and coal.
Dunkard Group	LEX	51.9	52.0	Permian, Pennsylvanian	Sandstone	Siltstone	Non-marine cyclic sequences of sandstone, siltstone, shale, limestone, and coal.
Dunkard Group	LEX	52.1	52.2	Permian, Pennsylvanian	Sandstone	Siltstone	Non-marine cyclic sequences of sandstone, siltstone, shale, limestone, and coal.
Dunkard Group	LEX	52.7	52.8	Permian, Pennsylvanian	Sandstone	Siltstone	Non-marine cyclic sequences of sandstone, siltstone, shale, limestone, and coal.
Dunkard Group	LEX	54.4	54.5	Permian, Pennsylvanian	Sandstone	Siltstone	Non-marine cyclic sequences of sandstone, siltstone, shale, limestone, and coal.
Dunkard Group	LEX	57.4	57.4	Permian, Pennsylvanian	Sandstone	Siltstone	Non-marine cyclic sequences of sandstone, siltstone, shale, limestone, and coal.
Dunkard Group	LEX	73.9	74.0	Permian, Pennsylvanian	Sandstone	Siltstone	Non-marine cyclic sequences of sandstone, siltstone, shale, limestone, and coal.
Dunkard Group	LEX	74.9	75.0	Permian, Pennsylvanian	Sandstone	Siltstone	Non-marine cyclic sequences of sandstone, siltstone, shale, limestone, and coal.
Dunkard Group	LEX	75.2	75.2	Permian, Pennsylvanian	Sandstone	Siltstone	Non-marine cyclic sequences of sandstone, siltstone, shale, limestone, and coal.
Dunkard Group	LEX	75.8	75.9	Permian, Pennsylvanian	Sandstone	Siltstone	Non-marine cyclic sequences of sandstone, siltstone, shale, limestone, and coal.

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Geologic Formation/ Unit	Facility	Begin MP	End MP	Period/Era	Primary Lithology	Secondary Lithology	Description
Dunkard Group	LEX	76.2	76.3	Permian, Pennsylvanian	Sandstone	Siltstone	Non-marine cyclic sequences of sandstone, siltstone, shale, limestone, and coal.
Dunkard Group	LEX	77.0	77.1	Permian, Pennsylvanian	Sandstone	Siltstone	Non-marine cyclic sequences of sandstone, siltstone, shale, limestone, and coal.
Dunkard Group	LEX	77.3	77.4	Permian, Pennsylvanian	Sandstone	Siltstone	Non-marine cyclic sequences of sandstone, siltstone, shale, limestone, and coal.
Dunkard Group	LEX	77.9	78.0	Permian, Pennsylvanian	Sandstone	Siltstone	Non-marine cyclic sequences of sandstone, siltstone, shale, limestone, and coal.
Dunkard Group	LEX	78.3	78.4	Permian, Pennsylvanian	Sandstone	Siltstone	Non-marine cyclic sequences of sandstone, siltstone, shale, limestone, and coal.
Dunkard Group	Mainline Valve 1	3.1	3.1	Permian, Pennsylvanian	Sandstone	Siltstone	Non-marine cyclic sequences of sandstone, siltstone, shale, limestone, and coal.
Dunkard Group	Mainline Valve 2	18.6, RR-4	18.6, RR-4	Permian, Pennsylvanian	Sandstone	Siltstone	Non-marine cyclic sequences of sandstone, siltstone, shale, limestone, and coal.
Dunkard Group	Mainline Valve 3	31.7	31.7	Permian, Pennsylvanian	Sandstone	Siltstone	Non-marine cyclic sequences of sandstone, siltstone, shale, limestone, and coal.
Dunkard Group	Mainline Valve 4	49.3	49.3	Permian, Pennsylvanian	Sandstone	Siltstone	Non-marine cyclic sequences of sandstone, siltstone, shale, limestone, and coal.
Dunkard Group	Lone Oak CS	7.4	7.4	Permian, Pennsylvanian	Sandstone	Siltstone	Non-marine cyclic sequences of sandstone, siltstone, shale, limestone, and coal.
Monongahlea Group	LEX	0.0	0.0	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	1.6	2.0	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	21.3	21.6	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	25.2	25.6, RR-5	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone

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Geologic Formation/ Unit	Facility	Begin MP	End MP	Period/Era	Primary Lithology	Secondary Lithology	Description
Monongahlea Group	LEX	25.6, RR-5	26.0, RR-5	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	38.7	38.8	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	40.6	40.7	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	41.4	41.5	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	41.8	42.0	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	43.9	44.0	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	45.0	45.1	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	48.0	48.1	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	48.3	48.4	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	48.5	48.5	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	48.7	48.9	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	49.2	49.3	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	49.3	49.6	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea	LEX	49.7	49.8	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale,

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Geologic Formation/ Unit	Facility	Begin MP	End MP	Period/Era	Primary Lithology	Secondary Lithology	Description
Group							siltstone, and mudstone
Monongahlea Group	LEX	49.8	50.1	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	50.2	50.4	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	50.5	50.8, RR-6	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	51.0, RR-6	51.2	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	51.3	51.8	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	51.9	51.9	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	52.0	52.1	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	52.2	52.4	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	52.5	52.7	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	52.8	54.4	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	54.5	55.3, RR-7	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	55.5, RR-7	57.4	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	57.4	57.8	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone

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Geologic Formation/ Unit	Facility	Begin MP	End MP	Period/Era	Primary Lithology	Secondary Lithology	Description
Monongahlea Group	LEX	58.2	58.7	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	58.8	59.0	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	59.2	59.5	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	60.0	60.1	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	60.5	61.1	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	62.4	62.5	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	62.5	63.2	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	63.4	63.5	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	64.1	64.2	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	64.5	64.6	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	68.0	68.2	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	71.3	73.9	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	74.0	74.9	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone

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Geologic Formation/ Unit	Facility	Begin MP	End MP	Period/Era	Primary Lithology	Secondary Lithology	Description
Monongahlea Group	LEX	75.0	75.2	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	75.2	75.8	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	75.9	76.2	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	76.3	77.0	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	77.1	77.3	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	77.4	77.9	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	78.0	78.3	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	78.4	79.1	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	83.0	83.1	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	84.0	86.0	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	86.3	86.5	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	87.0	87.2	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	88.4	88.4	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea	LEX	88.7	89.0	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale,

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Geologic Formation/ Unit	Facility	Begin MP	End MP	Period/Era	Primary Lithology	Secondary Lithology	Description
Group							siltstone, and mudstone
Monongahlea Group	LEX	90.2	90.3	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	90.4	90.8	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	90.9	91.3	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	91.7	91.8	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	92.4	92.5	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	92.6	92.6	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX	93.4	93.6	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	Summerfield CS	57.1	57.1	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	Mainline Valve 6	84.3	84.3	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Monongahlea Group	LEX launcher	0.0	0.0	Pennsylvanian	Sandstone	Siltstone	Black, red, gray, and green shale, siltstone, and mudstone
Conemaugh Group	LEX	50.8, RR-6	50.9, RR-6	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Conemaugh Group	LEX	51.2	51.3	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Conemaugh Group	LEX	52.4	52.5	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Conemaugh Group	LEX	55.3, RR-7	55.5, RR-7	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.

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Geologic Formation/ Unit	Facility	Begin MP	End MP	Period/Era	Primary Lithology	Secondary Lithology	Description
Conemaugh Group	LEX	57.8	58.2	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Conemaugh Group	LEX	58.7	58.8	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Conemaugh Group	LEX	59.0	59.2	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Conemaugh Group	LEX	59.5	60.0	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Conemaugh Group	LEX	60.1	60.5	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Conemaugh Group	LEX	61.1	62.4	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Conemaugh Group	LEX	62.5	62.5	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Conemaugh Group	LEX	63.2	63.4	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Conemaugh Group	LEX	63.5	64.1	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Conemaugh Group	LEX	64.2	64.5	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Conemaugh Group	LEX	64.6	68.0	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Conemaugh Group	LEX	68.2	71.3	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Conemaugh Group	LEX	79.1	83.0	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Conemaugh Group	LEX	83.1	84.0	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Conemaugh Group	LEX	86.0	86.3	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Conemaugh Group	LEX	86.5	87.0	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Conemaugh Group	LEX	87.2	88.4	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Conemaugh Group	LEX	88.4	88.7	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Conemaugh Group	LEX	89.0	90.2	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Conemaugh Group	LEX	90.3	90.4	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.

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Geologic Formation/ Unit	Facility	Begin MP	End MP	Period/Era	Primary Lithology	Secondary Lithology	Description
Conemaugh Group	LEX	90.8	90.9	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Conemaugh Group	LEX	91.3	91.7	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Conemaugh Group	LEX	91.8	92.4	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Conemaugh Group	LEX	92.5	92.6	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Conemaugh Group	LEX	92.6	93.4	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Conemaugh Group	LEX	93.6	98.2	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Conemaugh Group	LEX	98.4	99.9	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Conemaugh Group	LEX	100.3	101.9	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Conemaugh Group	LEX	102.1	102.6	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Conemaugh Group	LEX	103.1	105.4	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Conemaugh Group	LEX	105.4	105.9	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Conemaugh Group	LEX	105.9	106.2	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Conemaugh Group	LEX	106.3	106.6	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Conemaugh Group	LEX	106.7	107.1	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Conemaugh Group	LEX	107.3	109.4	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Conemaugh Group	LEX	111.2	111.3	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Conemaugh Group	BM-111 Loop	0.8	2.6	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Conemaugh Group	Mainline Valve 5	65.6	65.6	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Conemaugh Group	Mainline Valve 7	104.2	104.2	Pennsylvanian	Siltstone	Shale	Black, red, gray, and green shale, siltstone, and mudstone.
Allegheny and Pottsville	LEX	98.2	98.4	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine

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Geologic Formation/ Unit	Facility	Begin MP	End MP	Period/Era	Primary Lithology	Secondary Lithology	Description
Groups, Undivided							fossils.
Allegheny and Pottsville Groups, Undivided	LEX	99.9	100.3	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine fossils.
Allegheny and Pottsville Groups, Undivided	LEX	101.9	102.1	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine fossils.
Allegheny and Pottsville Groups, Undivided	LEX	102.6	103.1	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine fossils.
Allegheny and Pottsville Groups, Undivided	LEX	105.4	105.4	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine fossils.
Allegheny and Pottsville Groups, Undivided	LEX	105.9	105.9	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine fossils.
Allegheny and Pottsville Groups, Undivided	LEX	106.2	106.3	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine fossils.
Allegheny and Pottsville Groups, Undivided	LEX	106.6	106.7	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine fossils.
Allegheny and Pottsville Groups, Undivided	LEX	107.1	107.3	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine fossils.
Allegheny and Pottsville Groups, Undivided	LEX	109.4	111.2	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine fossils.
Allegheny and Pottsville Groups, Undivided	LEX	111.3	117.4	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine fossils.

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Geologic Formation/ Unit	Facility	Begin MP	End MP	Period/Era	Primary Lithology	Secondary Lithology	Description
Allegheny and Pottsville Groups, Undivided	LEX	117.5	117.6	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine fossils.
Allegheny and Pottsville Groups, Undivided	LEX	117.7	117.9	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine fossils.
Allegheny and Pottsville Groups, Undivided	LEX	118.4	118.6	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine fossils.
Allegheny and Pottsville Groups, Undivided	LEX	119.3	119.6	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine fossils.
Allegheny and Pottsville Groups, Undivided	LEX	119.7	119.8	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine fossils.
Allegheny and Pottsville Groups, Undivided	LEX	120.3	121.1	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine fossils.
Allegheny and Pottsville Groups, Undivided	LEX	121.6	121.8	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine fossils.
Allegheny and Pottsville Groups, Undivided	R-801 Loop	1.8	1.8	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine fossils.
Allegheny and Pottsville Groups, Undivided	R-801 Loop	3.8	4.0	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine fossils.
Allegheny and Pottsville Groups, Undivided	R-801 Loop	4.4	4.5	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine fossils.
Allegheny and Pottsville	R-801 Loop	6.0	6.4	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine

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Geologic Formation/ Unit	Facility	Begin MP	End MP	Period/Era	Primary Lithology	Secondary Lithology	Description
Groups, Undivided							fossils.
Allegheny and Pottsville Groups, Undivided	R-801 Loop	8.1	8.2	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine fossils.
Allegheny and Pottsville Groups, Undivided	R-801 Loop	9.4	11.5	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine fossils.
Allegheny and Pottsville Groups, Undivided	R-801 Loop	11.8	12.1	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine fossils.
Allegheny and Pottsville Groups, Undivided	R-801 Loop	12.3	13.3	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine fossils.
Allegheny and Pottsville Groups, Undivided	R-801 Loop	13.5	13.6	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine fossils.
Allegheny and Pottsville Groups, Undivided	R-801 Loop	13.8	15.5	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine fossils.
Allegheny and Pottsville Groups, Undivided	R-801 Loop	15.6	16.3	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine fossils.
Allegheny and Pottsville Groups, Undivided	R-801 Loop	16.4	19.7	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine fossils.
Allegheny and Pottsville Groups, Undivided	R-801 Loop	19.7	24.2	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine fossils.
Allegheny and Pottsville Groups, Undivided	BM-111 Loop	0.0	0.1	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine fossils.

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Geologic Formation/ Unit	Facility	Begin MP	End MP	Period/Era	Primary Lithology	Secondary Lithology	Description
Allegheny and Pottsville Groups, Undivided	Benton Regulator Station	12.8	12.8	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine fossils.
Allegheny and Pottsville Groups, Undivided	RS-1286 Regulator Station	21.6	21.6	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine fossils.
Allegheny and Pottsville Groups, Undivided	McArthur Regulator Station	24.2	24.2	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine fossils.
Allegheny and Pottsville Groups, Undivided	BM-111 Loop Launcher	0.0	0.0	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine fossils.
Allegheny and Pottsville Groups, Undivided	Oak Hill Compressor Station	51.50 [a]	51.50 [a]	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine fossils.
Allegheny and Pottsville Groups, Undivided	Mainline Valve 9	9.7	10.7	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine fossils.
Allegheny and Pottsville Groups, Undivided	R-130 Odorization Site	37.08 [a]	37.08 [a]	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine fossils.
Allegheny and Pottsville Groups, Undivided	R-300 / R-500 Odorization Site	88.02 [a]	88.02 [a]	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine fossils.
Allegheny and Pottsville Groups, Undivided	R-486 Odorization Site	34.72 [a]	34.72 [a]	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine fossils.
Allegheny and Pottsville Groups, Undivided	R-543 Odorization Site	53.68 [a]	53.68 [a]	Pennsylvanian	Shale	Siltstone	Gray, olive, and greenish shale, siltstone, and underclay. Locally contains marine fossils.
Black Hand Sandstone	LEX	121.2	121.5	Mississippian	Sandstone	Conglomerate	Yellow-gray to white sandstone and conglomerate that grades laterally into

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Geologic Formation/ Unit	Facility	Begin MP	End MP	Period/Era	Primary Lithology	Secondary Lithology	Description
Member of Cuyahoga Formation							shale and siltstone.
Black Hand Sandstone Member of Cuyahoga Formation	LEX	122.0	123.7	Mississippian	Sandstone	Conglomerate	Yellow-gray to white sandstone and conglomerate that grades laterally into shale and siltstone.
Black Hand Sandstone Member of Cuyahoga Formation	LEX	124.0	124.2	Mississippian	Sandstone	Conglomerate	Yellow-gray to white sandstone and conglomerate that grades laterally into shale and siltstone.
Black Hand Sandstone Member of Cuyahoga Formation	LEX	124.4	124.6	Mississippian	Sandstone	Conglomerate	Yellow-gray to white sandstone and conglomerate that grades laterally into shale and siltstone.
Black Hand Sandstone Member of Cuyahoga Formation	LEX	125.1	125.3	Mississippian	Sandstone	Conglomerate	Yellow-gray to white sandstone and conglomerate that grades laterally into shale and siltstone.
Black Hand Sandstone Member of Cuyahoga Formation	LEX	126.1	126.1	Mississippian	Sandstone	Conglomerate	Yellow-gray to white sandstone and conglomerate that grades laterally into shale and siltstone.
Black Hand Sandstone Member of Cuyahoga Formation	LEX	127.0	127.1	Mississippian	Sandstone	Conglomerate	Yellow-gray to white sandstone and conglomerate that grades laterally into shale and siltstone.
Black Hand Sandstone Member of Cuyahoga Formation	LEX	127.6	128.2	Mississippian	Sandstone	Conglomerate	Yellow-gray to white sandstone and conglomerate that grades laterally into shale and siltstone.
Black Hand Sandstone Member of Cuyahoga Formation	LEX	129.1	129.2	Mississippian	Sandstone	Conglomerate	Yellow-gray to white sandstone and conglomerate that grades laterally into shale and siltstone.
Black Hand Sandstone	LEX	129.7	131.3	Mississippian	Sandstone	Conglomerate	Yellow-gray to white sandstone and conglomerate that grades laterally into

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Geologic Formation/ Unit	Facility	Begin MP	End MP	Period/Era	Primary Lithology	Secondary Lithology	Description
Member of Cuyahoga Formation							shale and siltstone.
Black Hand Sandstone Member of Cuyahoga Formation	LEX1	0.6	1.2	Mississippian	Sandstone	Conglomerate	Yellow-gray to white sandstone and conglomerate that grades laterally into shale and siltstone.
Black Hand Sandstone Member of Cuyahoga Formation	R-801 Loop	0.0	0.5	Mississippian	Sandstone	Conglomerate	Yellow-gray to white sandstone and conglomerate that grades laterally into shale and siltstone.
Black Hand Sandstone Member of Cuyahoga Formation	R-801 Loop	0.7	1.0	Mississippian	Sandstone	Conglomerate	Yellow-gray to white sandstone and conglomerate that grades laterally into shale and siltstone.
Black Hand Sandstone Member of Cuyahoga Formation	R-801 Loop	1.1	1.7	Mississippian	Sandstone	Conglomerate	Yellow-gray to white sandstone and conglomerate that grades laterally into shale and siltstone.
Black Hand Sandstone Member of Cuyahoga Formation	R-801 Loop	2.0	2.4	Mississippian	Sandstone	Conglomerate	Yellow-gray to white sandstone and conglomerate that grades laterally into shale and siltstone.
Black Hand Sandstone Member of Cuyahoga Formation	R-801 Loop	3.1	3.6	Mississippian	Sandstone	Conglomerate	Yellow-gray to white sandstone and conglomerate that grades laterally into shale and siltstone.
Black Hand Sandstone Member of Cuyahoga Formation	R-801 Loop	4.8	4.9	Mississippian	Sandstone	Conglomerate	Yellow-gray to white sandstone and conglomerate that grades laterally into shale and siltstone.
Black Hand Sandstone Member of Cuyahoga Formation	R-801 Loop	5.0	5.2	Mississippian	Sandstone	Conglomerate	Yellow-gray to white sandstone and conglomerate that grades laterally into shale and siltstone.
Black Hand Sandstone	R-801 Loop	6.7	6.8	Mississippian	Sandstone	Conglomerate	Yellow-gray to white sandstone and conglomerate that grades laterally into

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Geologic Formation/ Unit	Facility	Begin MP	End MP	Period/Era	Primary Lithology	Secondary Lithology	Description
Member of Cuyahoga Formation							shale and siltstone.
Black Hand Sandstone Member of Cuyahoga Formation	R-801 Loop	7.6	7.7	Mississippian	Sandstone	Conglomerate	Yellow-gray to white sandstone and conglomerate that grades laterally into shale and siltstone.
Black Hand Sandstone Member of Cuyahoga Formation	R-801 Loop	8.6	9.0	Mississippian	Sandstone	Conglomerate	Yellow-gray to white sandstone and conglomerate that grades laterally into shale and siltstone.
Black Hand Sandstone Member of Cuyahoga Formation	R-System RS	0.0	0.0	Mississippian	Sandstone	Conglomerate	Yellow-gray to white sandstone and conglomerate that grades laterally into shale and siltstone.
Black Hand Sandstone Member of Cuyahoga Formation	LEX1 receiver	1.2	1.2	Mississippian	Sandstone	Conglomerate	Yellow-gray to white sandstone and conglomerate that grades laterally into shale and siltstone.
Black Hand Sandstone Member of Cuyahoga Formation	Crawford CS	0.00 [a]	0.00 [a]	Mississippian	Sandstone	Conglomerate	Yellow-gray to white sandstone and conglomerate that grades laterally into shale and siltstone.
Black Hand Sandstone Member of Cuyahoga Formation	Benton CS	5.19 [b]	5.19 [b]	Mississippian	Sandstone	Conglomerate	Yellow-gray to white sandstone and conglomerate that grades laterally into shale and siltstone.
Maxville Limestone; Rushville, Logan, and Cuyhoga Formations, Undivided	LEX	117.4	117.5	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.
Maxville Limestone; Rushville, Logan, and Cuyhoga	LEX	117.6	117.7	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.

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Geologic Formation/ Unit	Facility	Begin MP	End MP	Period/Era	Primary Lithology	Secondary Lithology	Description
Formations, Undivided							
Maxville Limestone; Rushville, Logan, and Cuyhoga Formations, Undivided	LEX	117.9	118.4	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.
Maxville Limestone; Rushville, Logan, and Cuyhoga Formations, Undivided	LEX	118.6	119.3	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.
Maxville Limestone; Rushville, Logan, and Cuyhoga Formations, Undivided	LEX	119.6	119.7	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.
Maxville Limestone; Rushville, Logan, and Cuyhoga Formations, Undivided	LEX	119.8	120.3	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.
Maxville Limestone; Rushville, Logan, and Cuyhoga Formations, Undivided	LEX	121.1	121.2	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.
Maxville Limestone; Rushville, Logan, and Cuyhoga Formations, Undivided	LEX	121.5	121.6	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.
Maxville Limestone;	LEX	121.8	122.0	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and

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Geologic Formation/ Unit	Facility	Begin MP	End MP	Period/Era	Primary Lithology	Secondary Lithology	Description
Rushville, Logan, and Cuyhoga Formations, Undivided							sandstone.
Maxville Limestone; Rushville, Logan, and Cuyhoga Formations, Undivided	LEX	123.7	124.0	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.
Maxville Limestone; Rushville, Logan, and Cuyhoga Formations, Undivided	LEX	124.2	124.4	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.
Maxville Limestone; Rushville, Logan, and Cuyhoga Formations, Undivided	LEX	124.6	125.1	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.
Maxville Limestone; Rushville, Logan, and Cuyhoga Formations, Undivided	LEX	125.3	126.1	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.
Maxville Limestone; Rushville, Logan, and Cuyhoga Formations, Undivided	LEX	126.1	127.0	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.
Maxville Limestone; Rushville, Logan, and Cuyhoga Formations,	LEX	127.1	127.6	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.

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Geologic Formation/ Unit	Facility	Begin MP	End MP	Period/Era	Primary Lithology	Secondary Lithology	Description
Undivided							
Maxville Limestone; Rushville, Logan, and Cuyhoga Formations, Undivided	LEX	128.2	129.1	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.
Maxville Limestone; Rushville, Logan, and Cuyhoga Formations, Undivided	LEX	129.2	129.7	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.
Maxville Limestone; Rushville, Logan, and Cuyhoga Formations, Undivided	LEX1	0.0	0.6	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.
Maxville Limestone; Rushville, Logan, and Cuyhoga Formations, Undivided	R-801 Loop	0.5	0.7	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.
Maxville Limestone; Rushville, Logan, and Cuyhoga Formations, Undivided	R-801 Loop	1.0	1.1	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.
Maxville Limestone; Rushville, Logan, and Cuyhoga Formations, Undivided	R-801 Loop	1.7	1.8	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.
Maxville Limestone; Rushville,	R-801 Loop	1.8	2.0	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.

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Geologic Formation/ Unit	Facility	Begin MP	End MP	Period/Era	Primary Lithology	Secondary Lithology	Description
Logan, and Cuyhoga Formations, Undivided							
Maxville Limestone; Rushville, Logan, and Cuyhoga Formations, Undivided	R-801 Loop	2.4	3.1	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.
Maxville Limestone; Rushville, Logan, and Cuyhoga Formations, Undivided	R-801 Loop	3.6	3.8	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.
Maxville Limestone; Rushville, Logan, and Cuyhoga Formations, Undivided	R-801 Loop	4.0	4.4	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.
Maxville Limestone; Rushville, Logan, and Cuyhoga Formations, Undivided	R-801 Loop	4.5	4.8	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.
Maxville Limestone; Rushville, Logan, and Cuyhoga Formations, Undivided	R-801 Loop	4.9	5.0	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.
Maxville Limestone; Rushville, Logan, and Cuyhoga Formations, Undivided	R-801 Loop	5.2	6.0	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.

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Geologic Formation/ Unit	Facility	Begin MP	End MP	Period/Era	Primary Lithology	Secondary Lithology	Description
Maxville Limestone; Rushville, Logan, and Cuyhoga Formations, Undivided	R-801 Loop	6.4	6.7	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.
Maxville Limestone; Rushville, Logan, and Cuyhoga Formations, Undivided	R-801 Loop	6.8	7.6	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.
Maxville Limestone; Rushville, Logan, and Cuyhoga Formations, Undivided	R-801 Loop	7.7	8.1	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.
Maxville Limestone; Rushville, Logan, and Cuyhoga Formations, Undivided	R-801 Loop	8.2	8.6	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.
Maxville Limestone; Rushville, Logan, and Cuyhoga Formations, Undivided	R-801 Loop	9.0	9.4	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.
Maxville Limestone; Rushville, Logan, and Cuyhoga Formations, Undivided	R-801 Loop	11.5	11.8	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.
Maxville Limestone; Rushville, Logan, and	R-801 Loop	12.1	12.3	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.

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Geologic Formation/ Unit	Facility	Begin MP	End MP	Period/Era	Primary Lithology	Secondary Lithology	Description
Cuyhoga Formations, Undivided							
Maxville Limestone; Rushville, Logan, and Cuyhoga Formations, Undivided	R-801 Loop	13.3	13.5	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.
Maxville Limestone; Rushville, Logan, and Cuyhoga Formations, Undivided	R-801 Loop	13.6	13.8	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.
Maxville Limestone; Rushville, Logan, and Cuyhoga Formations, Undivided	R-801 Loop	15.5	15.6	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.
Maxville Limestone; Rushville, Logan, and Cuyhoga Formations, Undivided	R-801 Loop	16.3	16.4	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.
Maxville Limestone; Rushville, Logan, and Cuyhoga Formations, Undivided	R-801 Loop	19.7	19.7	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.
Maxville Limestone; Rushville, Logan, and Cuyhoga Formations, Undivided	K-260 RS	0.0	0.0	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.

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Geologic Formation/ Unit	Facility	Begin MP	End MP	Period/Era	Primary Lithology	Secondary Lithology	Description
Maxville Limestone; Rushville, Logan, and Cuyhoga Formations, Undivided	Mainline Valve 8	122.0	122.0	Mississippian	Shale	Siltstone	Gray, yellow, brown shale, siltstone, and sandstone.
Quaternary Alluvium	LEX	25.6, RR-5	25.6, RR-5	Quaternary	Alluvium	N/A	Alluvial deposits of sand, gravel, silt, and clay.
Quaternary Alluvium	BM-111 Loop	0.1	0.8	Quaternary	Alluvium	N/A	Alluvial deposits of sand, gravel, silt, and clay.
Quaternary Alluvium	BM-111 Loop	2.6	2.9	Quaternary	Alluvium	N/A	Alluvial deposits of sand, gravel, silt, and clay.
Quaternary Alluvium	Ceredo CS	2.9	2.9	Quaternary	Alluvium	N/A	Alluvial deposits of sand, gravel, silt, and clay.
Greene Formation	LEX	0.6	0.6	Permian	Sandstone	Shale	Cyclic sequences of sandstone, shale, red beds, thin limestone, and thin, impure coal.
Greene Formation	LEX	0.8	1.1	Permian	Sandstone	Shale	Cyclic sequences of sandstone, shale, red beds, thin limestone, and thin, impure coal.
Washington Formation	LEX	0.5	0.6	Permian	Sandstone	Shale	Sequences of sandstone, red shale, limestone, and coal.
Washington Formation	LEX	0.6	0.8	Permian	Sandstone	Shale	Sequences of sandstone, red shale, limestone, and coal.
Washington Formation	LEX	1.1	1.2	Permian	Sandstone	Shale	Sequences of sandstone, red shale, limestone, and coal.
Waynesburg Formation	LEX	0.0	0.5	Permian and Pennsylvanian	Sandstone	Shale	Sequences of sandstone, shale, limestone, and coal.
Waynesburg Formation	LEX	1.2	1.6	Permian and Pennsylvanian	Sandstone	Shale	Sequences of sandstone, shale, limestone, and coal.

[a] Milepost is associated with Columbia's existing Line R-501.
[b] Milepost is associated with Columbia's existing Line R-515.
Source: USGS, 2005a-g.