

APPENDIX M:

**PAIRINGS BETWEEN THE PMF AND UNMIX
SOURCE APPORTIONMENT RESULTS**

Appendix M: Pairings Between the PMF and UNMIX Source Apportionment Results

The two tables in this section indicate common solutions between the PMF and UNMIX source apportionment results. Table M-1 is based on similar relative source strength time series solutions and Table M-2 is based on common source profiles. Table M-1 should be considered the primary means of pairing the solutions. The pairs in Table M-2 indicate similar sources, but may not be the same source.

Table M-1. Common solution pairs between the PMF and UNMIX results, based on the relative source strength time series

Site	UNMIX Solution Number	Correlation	PMF Solution Number	Mean Mass for the Site (ng/m ³)	Mass Apportioned to the Source by PMF	Mass Apportioned to the Source by UNMIX
Acadia National Park	1	0.998	3	6805.3	392.5	559.7
Acadia National Park	3	0.830	6	6805.3	3936.4	3491.2
Acadia National Park	4	0.918	2	6805.3	9.5	1385.6
Acadia National Park	5	0.710	8	6805.3	399.3	296.2
Acadia National Park	6	0.852	4	6805.3	72.7	606.1
Arendtsville	3	0.791	5	12969.7	13.4	168.7
Arendtsville	4	0.939	4	12969.7	111.0	1.8
Arendtsville	5	0.891	9	12969.7	2019.3	8818.4
Arendtsville	6	0.846	2	12969.7	58.3	2077.3
Boundary Waters Canoe Area	1	0.990	5	5201.1	199.7	360.1
Boundary Waters Canoe Area	4	0.939	3	5201.1	10.3	649.3
Boundary Waters Canoe Area	5	0.949	9	5201.1	148.9	602.4
Boundary Waters Canoe Area	6	0.832	4	5201.1	2188.4	2100.7
Brigantine National Wildlife Refuge	1	0.993	5	11022.1	662.6	1093.1
Brigantine National Wildlife Refuge	3	0.928	1	11022.1	330.4	219.9
Brigantine National Wildlife Refuge	4	0.819	7	11022.1	5704.1	6514.3
Brigantine National Wildlife Refuge	5	0.960	9	11022.1	112.4	712.7
Brigantine National Wildlife Refuge	6	0.785	2	11022.1	651.2	905.1
Bondville	2	0.971	8	12515.2	102.3	586.4
Bondville	3	0.918	4	12515.2	970.7	622.5
Bondville	5	0.779	1	12515.2	829.0	1603.9
Connecticut Hill	3	0.907	3	10529.8	1513.0	873.2
Connecticut Hill	4	0.946	9	10529.8	84.3	75.4
Connecticut Hill	5	0.782	8	10529.8	12.5	1766.0
Connecticut Hill	6	0.909	5	10529.8	34.6	2014.1
Dolly Sods Wilderness Area	1	0.974	6	11537.4	1162.7	1051.5
Dolly Sods Wilderness Area	3	0.927	4	11537.4	5041.9	6436.9
Dolly Sods Wilderness Area	4	0.745	2	11537.4	4141.7	1723.7
Dolly Sods Wilderness Area	5	0.916	3	11537.4	379.8	1419.7
Dolly Sods Wilderness Area	6	0.981	1	11537.4	638.0	253.7
Great Smoky Mountains National Park	1	0.994	7	12388.2	177.5	2369.9
Great Smoky Mountains National Park	4	0.838	8	12388.2	328.0	1671.1
Great Smoky Mountains National Park	5	0.978	5	12388.2	556.5	2218.1
Great Smoky Mountains National Park	6	0.833	4	12388.2	391.9	3576.6
James River Face Wilderness Area	3	0.892	4	14462.7	509.7	1321.4
James River Face Wilderness Area	4	0.975	6	14462.7	267.5	1613.6
James River Face Wilderness Area	5	0.886	1	14462.7	287.4	2629.1
Livonia	1	0.900	4	13041.6	463.2	375.4
Livonia	3	0.978	9	13041.6	141.8	2017.6
Livonia	5	0.964	3	13041.6	6259.6	825.0

Table M-1. Common solution pairs between the PMF and UNMIX results, based on the relative source strength time series (continued)

Site	UNMIX Solution Number	Correlation	PMF Solution Number	Mean Mass for the Site (ng/m ³)	Mass Apportioned to the Source by PMF	Mass Apportioned to the Source by UNMIX
Lye Brook Wilderness Area	1	0.995	8	6948.0	376.4	947.6
Lye Brook Wilderness Area	4	0.969	3	6948.0	134.3	1109.0
Lye Brook Wilderness Area	6	0.875	6	6948.0	3197.1	3495.3
Mammoth Cave National Park	4	0.878	1	13052.3	525.3	1937.3
Mammoth Cave National Park	5	0.990	2	13052.3	62.8	333.8
M.K. Goddard	1	0.851	8	12184.9	207.6	1605.0
M.K. Goddard	2	0.961	4	12184.9	5785.6	484.5
M.K. Goddard	3	0.899	3	12184.9	437.1	1299.6
M.K. Goddard	5	0.837	1	12184.9	6.6	3441.4
Quaker City	1	0.908	2	12643.0	881.9	4785.6
Quaker City	3	0.759	8	12643.0	36.5	2656.3
Quaker City	5	0.899	3	12643.0	7890.6	3449.9
Shenandoah National Park	1	0.991	2	11263.1	328.2	1312.5
Shenandoah National Park	4	0.809	7	11263.1	2866.1	6459.0
Shenandoah National Park	5	0.968	1	11263.1	176.5	886.1
Shenandoah National Park	6	0.795	9	11263.1	1079.0	1794.2
Washington D.C.	1	0.990	1	16786.5	289.1	1120.8
Washington D.C.	3	0.992	3	16786.5	278.3	611.7
Washington D.C.	5	0.955	9	16786.5	198.6	4235.0

Table M-2. Similar solution pairs between the PMF and UNMIX results, based on the similarity of the profiles

Site Name	Profile Fit	PMF Solution Number	UNMIX Solution Number
Acadia National Park	11.6	3	1
Acadia National Park	14.2	8	5
Acadia National Park	15.8	4	6
Acadia National Park	15.8	1	2
Acadia National Park	16.7	2	4
Acadia National Park	17.6	5	3
Arendtsville	11.8	1	3
Arendtsville	18.7	3	6
Bondville	12.2	2	3
Bondville	13.2	4	4
Bondville	18.8	8	2
Boundary Waters Canoe Area	6.8	5	1
Boundary Waters Canoe Area	11.7	4	6
Boundary Waters Canoe Area	17.1	3	4
Boundary Waters Canoe Area	19.7	6	3
Boundary Waters Canoe Area	20.8	2	5
Brigantine National Wildlife Refuge	4.2	9	5
Brigantine National Wildlife Refuge	10.6	5	1
Brigantine National Wildlife Refuge	14.7	3	2
Brigantine National Wildlife Refuge	15.0	1	3
Brigantine National Wildlife Refuge	15.6	7	4
Brigantine National Wildlife Refuge	17.7	2	6
Connecticut Hill	16.9	6	4
Dolly Sods Wilderness Area	6.1	6	1
Dolly Sods Wilderness Area	10.8	4	3
Dolly Sods Wilderness Area	14.1	2	4
Dolly Sods Wilderness Area	16.4	3	5
Dolly Sods Wilderness Area	20.5	1	6
Great Smoky Mountains National Park	12.5	7	1
Great Smoky Mountains National Park	14.0	8	4
Great Smoky Mountains National Park	17.1	6	3
Great Smoky Mountains National Park	18.5	4	6
James River Face Wilderness Area	8.1	4	3
James River Face Wilderness Area	13.8	6	4
James River Face Wilderness Area	15.2	8	2
James River Face Wilderness Area	17.4	1	5
Livonia	16.9	6	2
Livonia	27.5	4	6

Table M-2. Similar solution pairs between the PMF and UNMIX results, based on the similarity of the profiles (continued)

Site Name	Profile Fit	PMF Solution Number	UNMIX Solution Number
Lye Brook Wilderness Area	8.4	8	1
Lye Brook Wilderness Area	18.2	9	2
Lye Brook Wilderness Area	18.2	6	6
Lye Brook Wilderness Area	18.3	1	5
Lye Brook Wilderness Area	21.4	5	3
M.K. Goddard	14.9	3	2
M.K. Goddard	18.6	4	3
M.K. Goddard	19.0	2	1
M.K. Goddard	20.9	7	4
M.K. Goddard	23.1	8	5
Mammoth Cave National Park	5.3	2	5
Mammoth Cave National Park	15.9	7	3
Mammoth Cave National Park	16.4	6	2
Mammoth Cave National Park	18.7	1	4
Quaker City	11.9	6	2
Quaker City	17.6	3	3
Quaker City	22.0	8	1
Shenandoah National Park	9.4	2	1
Shenandoah National Park	15.3	6	3
Shenandoah National Park	18.1	9	6
Washington, D.C.	7.5	1	1
Washington, D.C.	9.2	3	3
Washington, D.C.	13.5	2	4
Washington, D.C.	18.0	5	6
Washington, D.C.	20.3	6	2
Washington, D.C.	22.1	9	5