Electronic Supplementary Material (ESI) for Environmental Science: Processes & Impacts.

Changes in neighborhood air quality after idling of an urban oil production site

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SUPPLEMENTAL INFORMATION

Table S1: Concentrations of minute-averaged methane and non-methane hydrocarbons measured near the AllenCo oil and gas development site in North University Park neighborhood in Los Angeles, California with negative measurements in Phase 3 included.

		Methane (ppm)			NMHC (ppm)		
Dates	Phase	Mean	Median[25th, 75th]	Range	Mean	Median[25th, 75th]	Range
10/4/2013 - 11/21/2013	1	2.547	2.246 [2.05, 2.685]	1.712 - 110	0.714	0.197[0.069, 0.497]	0 - 219.1
11/22/2013 - 1/31/2014	2	2.157	2.092 [1.743, 2.46]	0 - 54.280	0.376	0.254[0.137, 0.477]	0 - 184.6
2/1/2014 - 3/18/2014	3	1.599	1.473[1.38, 1.668]	1.158 - 6.094	0.236	0.137[0.04, 0.299]	(-10.97 - 35.55)

Table S2. *Summary of PMF and error estimation diagnostics by run for VOC data.*

Diagnostic	5 factors	**6 factors**	7 factors	8 factors
Q expected	1331.0	1196.0	1061.0	926.0
Q true	2374.5	1824.4	1404.8	1097.3
Q robust	2223.8	1728.7	1322.0	1016.9
DISP %dQ	<0.01%	<0.01%	<0.01%	0.10%
DISP swaps	0	0	0	0
Factors with the lowest BS mapping	Factor MVE 80%	Factor MVE 99%	Industrial solvents 80%	Industrial solvents 82%

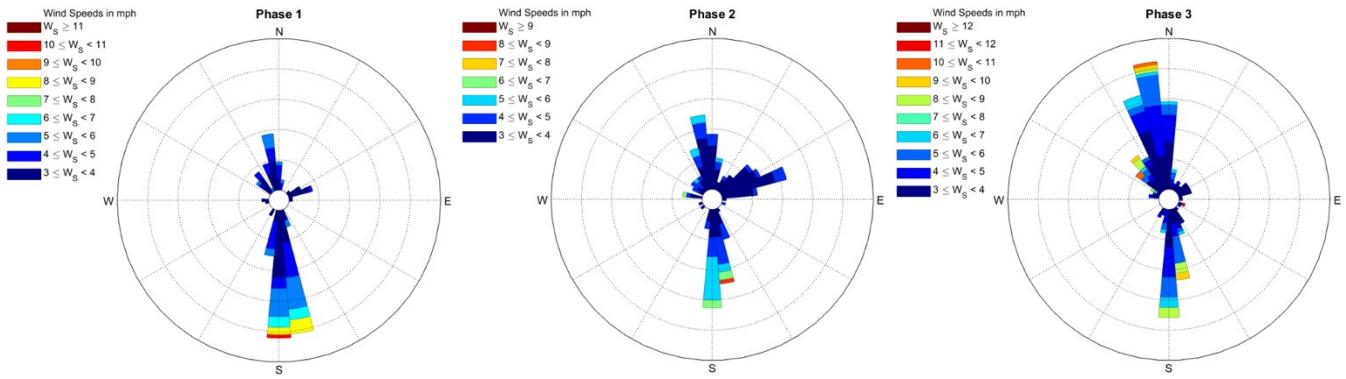

Figure S1: Wind Rose for each of the phases of the analysis. Data from meteorological stations at University of Southern California University Park Campus.

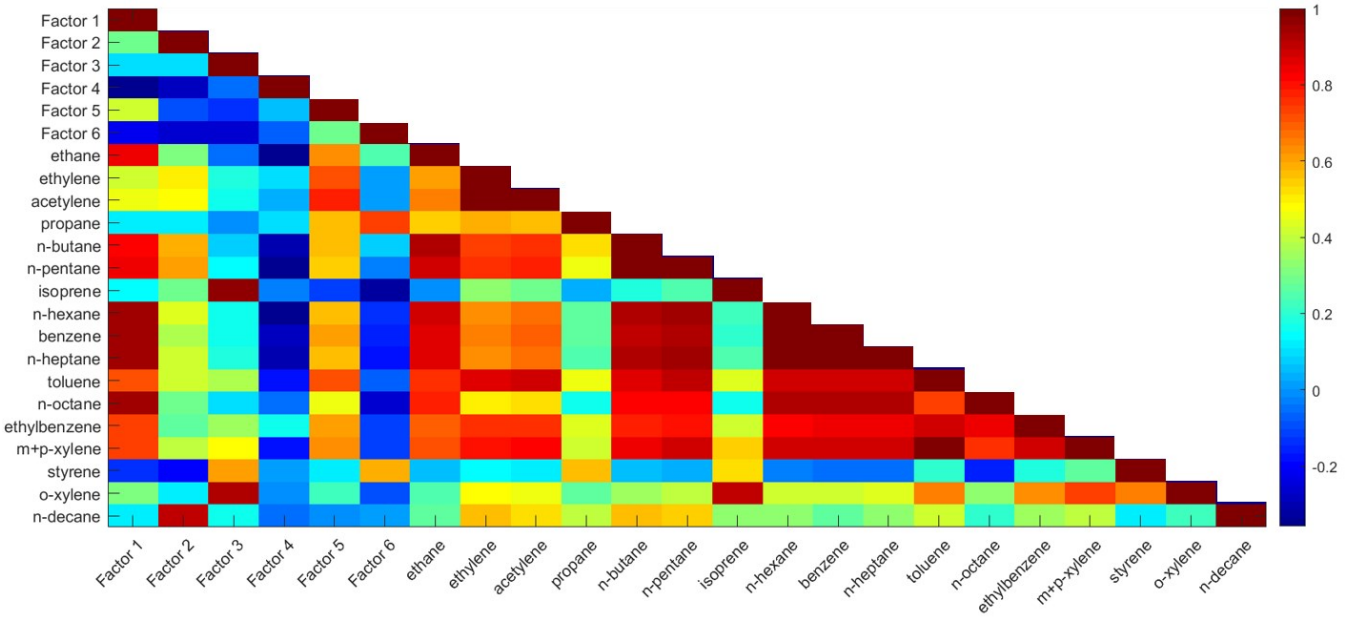

Figure S2: Pearson correlation matrix of passive canister samples during the active phase. Factors shown are resolved from the PMF.

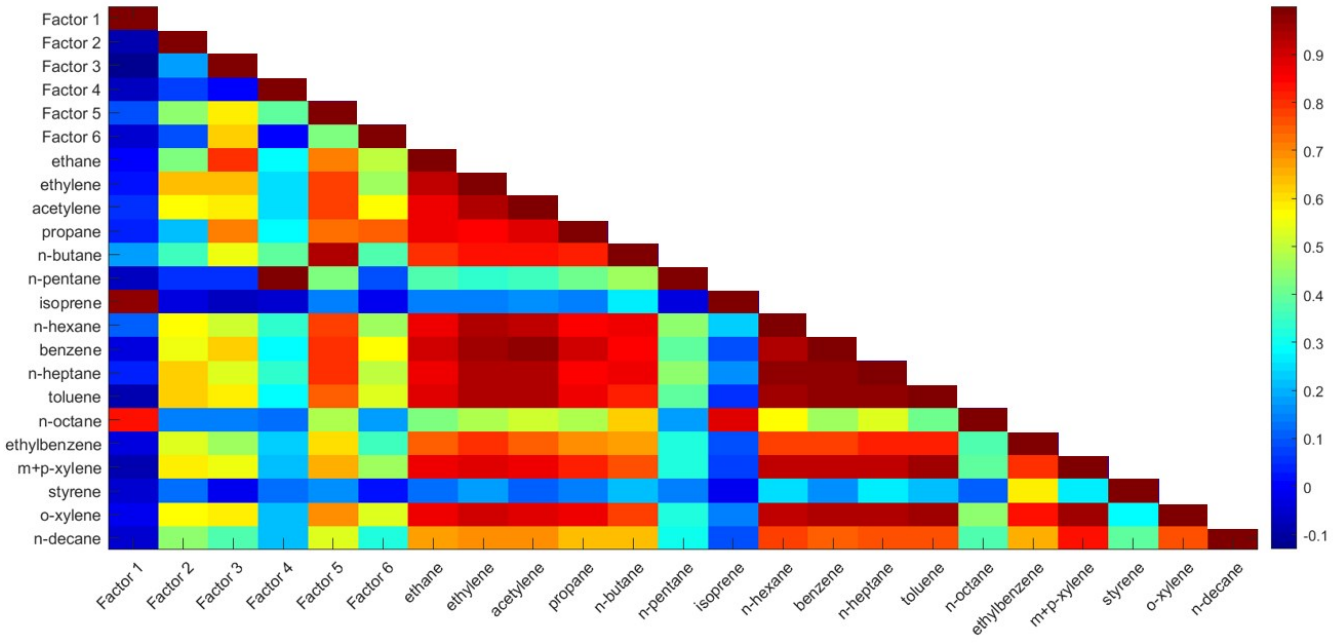

Figure S3: Pearson correlation of passive canister samples during the idle phase. Factors shown are resolved from the PMF.

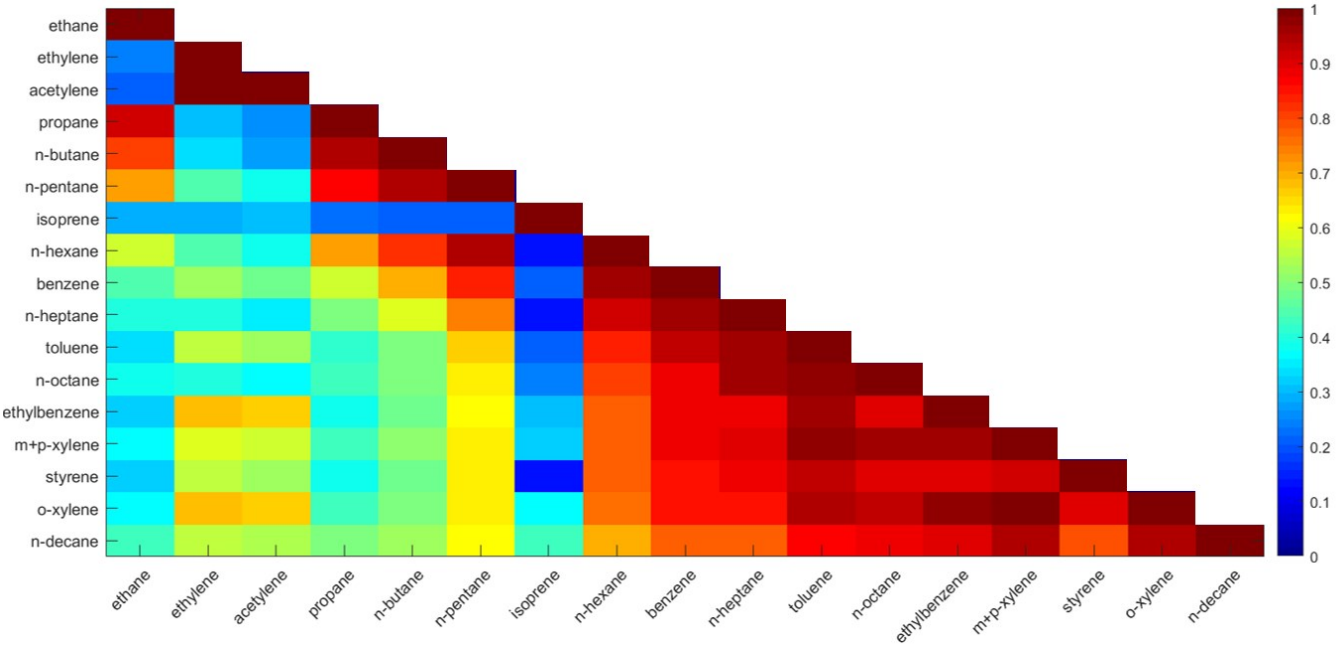

Figure S4: Pearson correlation matrix of triggered canister samples during the active phase.