



WEEK 5 REPORT – LOCAL SOURCES AND ASSOCIATED GRAPHS

JANUARY 13TH, 2017

Summary

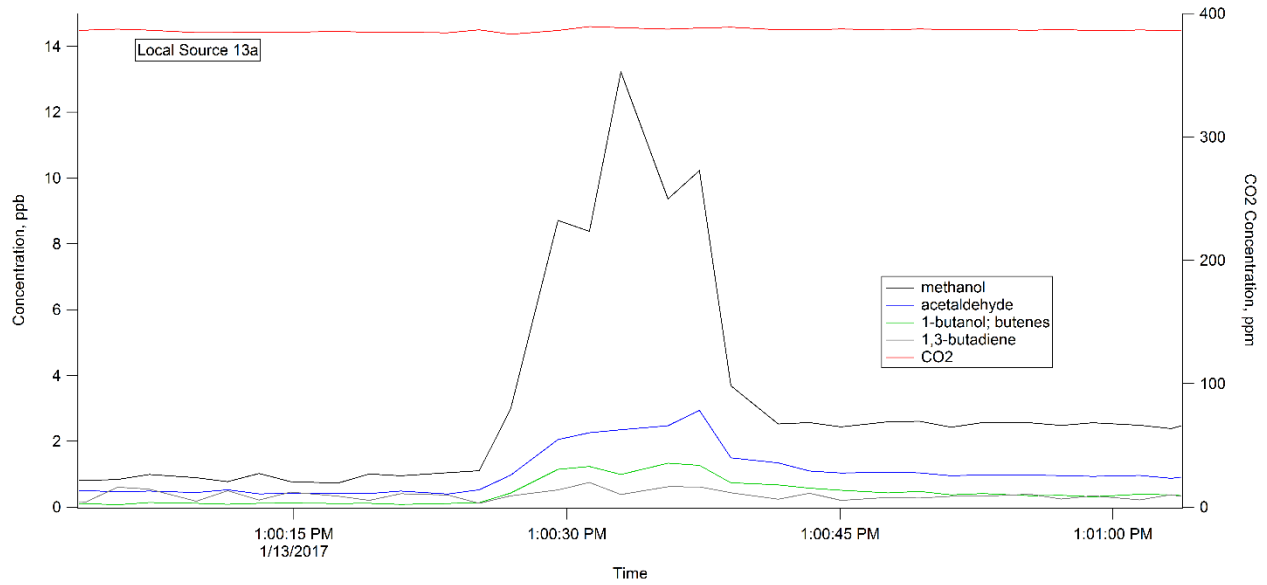
The mobile lab operated between 6:30 AM and 2:30 PM January 13th. The field analyst primarily positioned the lab downwind of the AP farm, with some time spent driving around the 200E tank farms.

January 13th Local Sources

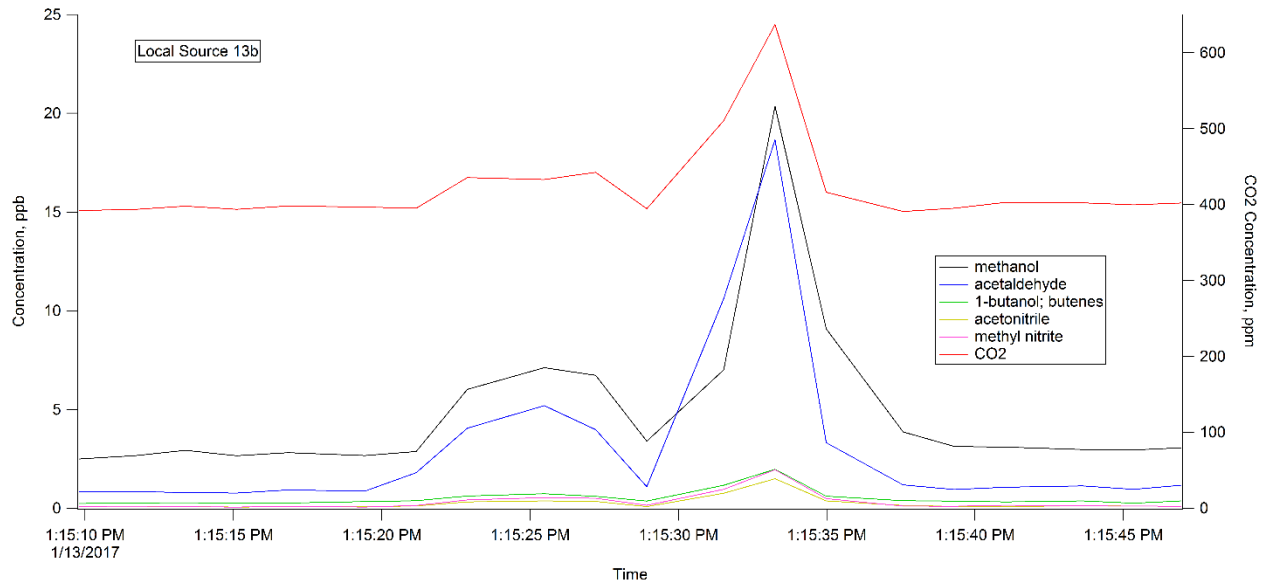
LS13a, 01/13/17, 1:00:25 PM	1.04 bar, 11 F, wind SE 1 mph	methanol: 13.2 ppb acetaldehyde: 2.9 ppb 1-butanol; butenes: 0.7 ppb 1,3-butadiene: 0.7 ppb CO2: 389 ppm Detected along the S fence line of AP farm, this event spans approximately 15 seconds and is accompanied by a slight rise in CO2.
LS13b, 01/13/17, 1:15:20 PM	1.04 bar, 9 F, wind SE 8 mph	methanol: 20.4 ppb acetaldehyde: 18.7 ppb 1-butanol; butenes: 2.0 ppb methyl nitrite: 1.9 ppb acetonitrile: 1.5 ppb CO2: 637 ppm While monitoring along the E fence line of AX farm, detected an event that spanned approximately 15 seconds. CO2 correlates with the constituents of the source, and is elevated.

January 13th Graphs

LS13a



LS13b



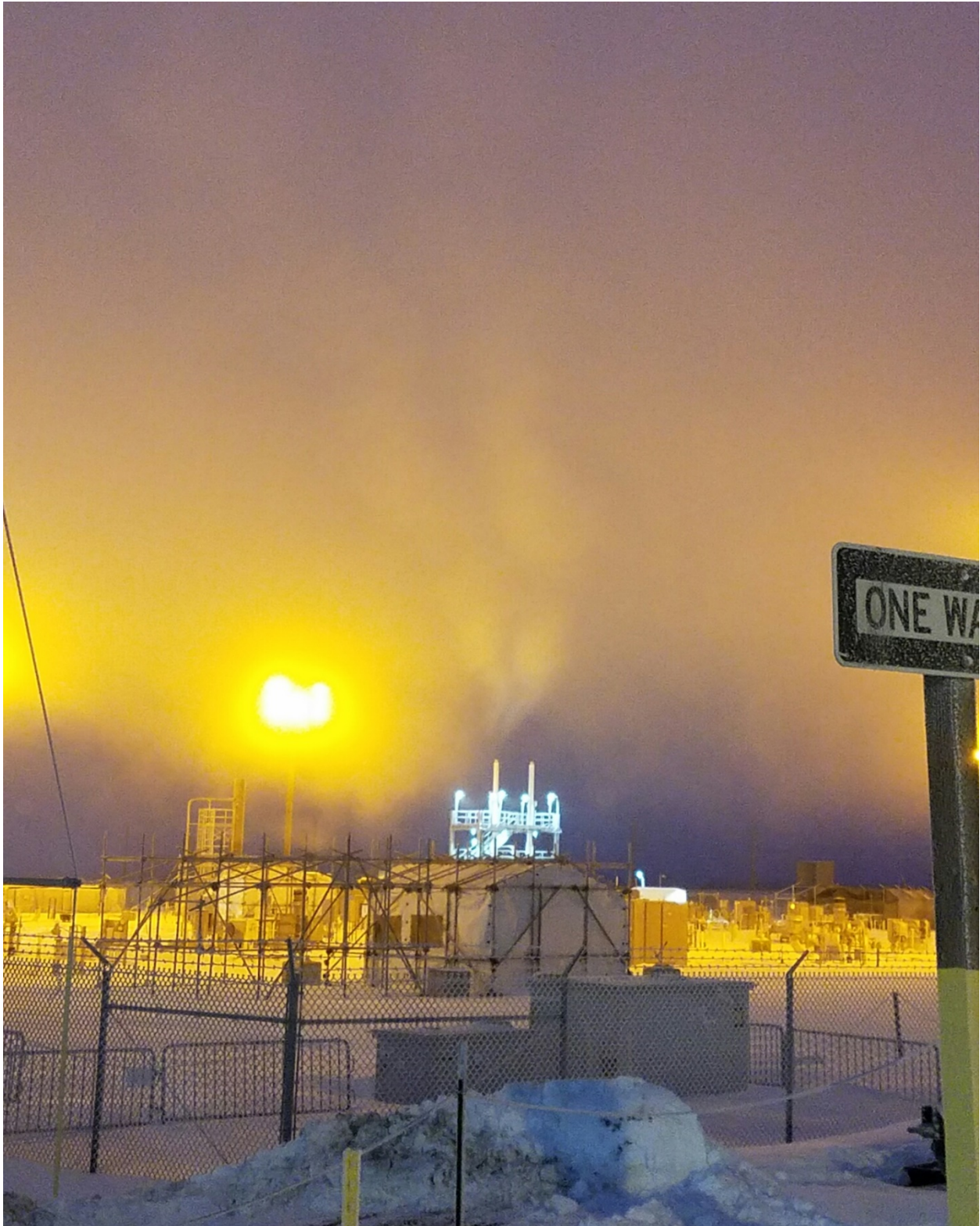
January 13th Maps

200E



January 13th AP Stack Dispersion

7:04 AM



7:13 AM



JANUARY 15TH, 2017**Summary**

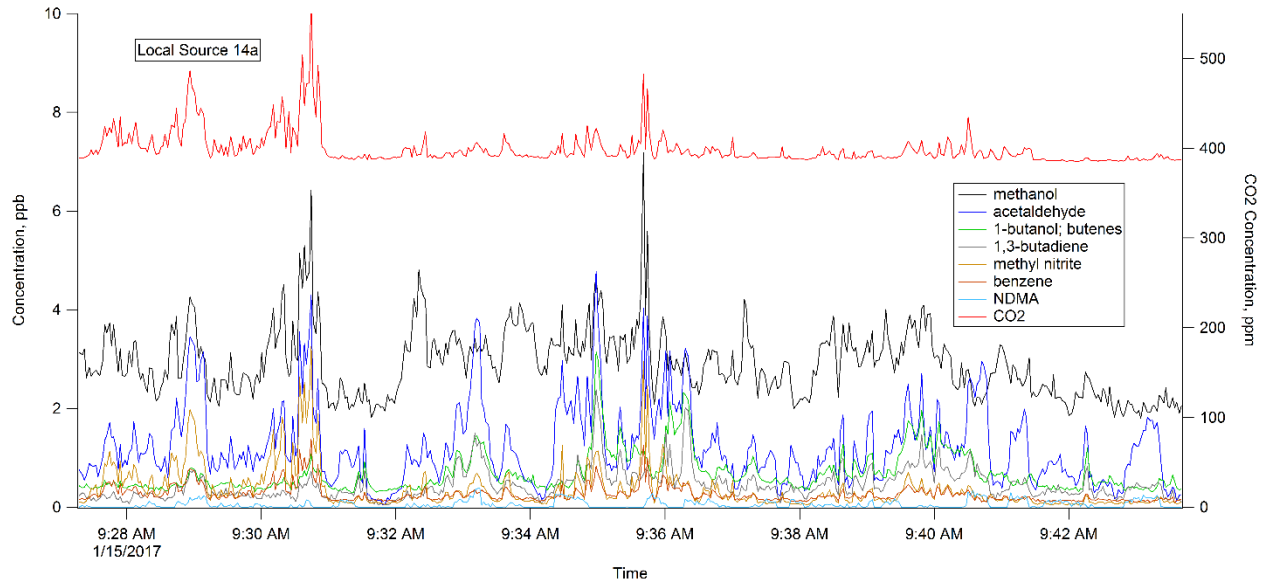
The mobile lab operated between 6:00 AM and 2:45 PM January 15th. The field analyst primarily positioned the lab downwind of the AP farm, with some time spent driving around the 200E tank farms. Field analyst noted problems with the PTR-MS instrument around 7:00 AM, shut down the instrument, performed maintenance, ran zero air and sensitivity checks, and resumed data collection by 8:00 AM.

January 15th Local Sources

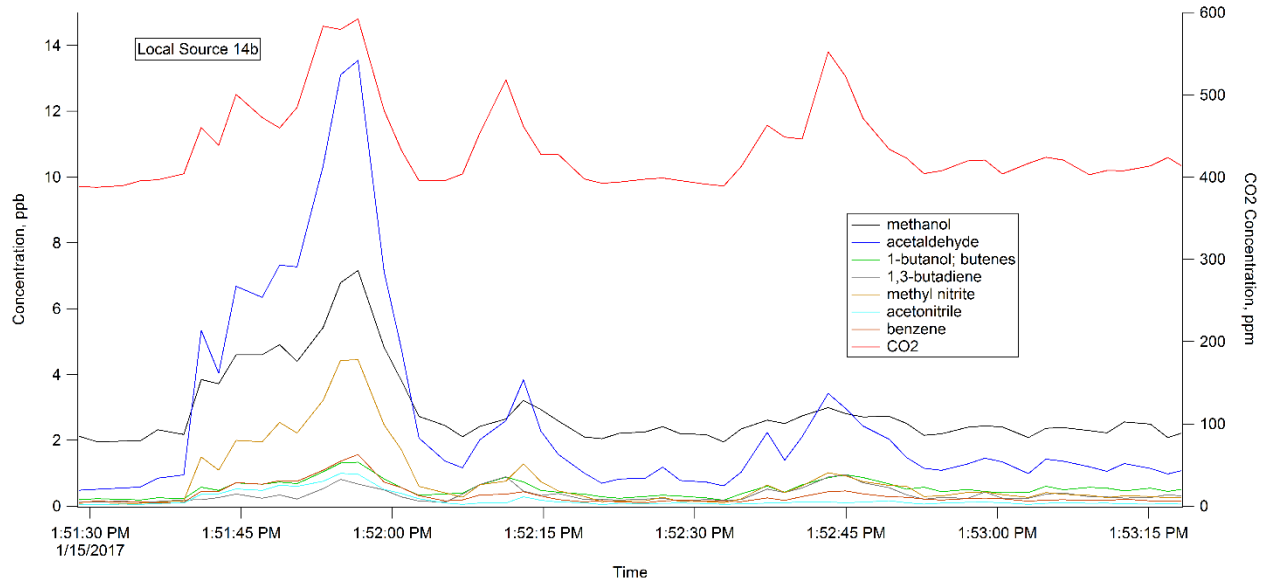
LS14a, 01/15/17, 9:28:00 AM	1.03 bar, 15 F, wind NE 2 mph	methanol: 7.2 ppb acetaldehyde: 4.8 ppb 1-butanol; butenes: 3.0 ppb 1,3-butadiene: 2.4 ppb methyl nitrite: 3.0 ppb benzene: 1.4 ppb NDMA: 0.4 ppb CO2: 573 ppm While NW of AP farm, detected a series of spikes of several compounds. This event lasts several minutes, and has clear peaks that correlate with elevated CO2. Field notes make mention of a generator located nearby along the fence line around this time.
LS14b, 01/15/17, 1:51:40 PM	1.03 bar, 17 F, wind NNE 2 mph	methanol: 7.2 ppb acetaldehyde: 13.5 ppb 1-butanol; butenes: 1.3 ppb 1,3-butadiene: 0.8 ppb methyl nitrite: 4.4 ppb acetonitrile: 1.0 ppb benzene: 1.6 ppb CO2: 592 ppm Detected along the W fence line of AP farm. This event spans approximately 30 seconds and has peaks that correlate with elevated CO2. Field notes make mention of having just recently parked behind the 272AW building.

January 15th Graphs

LS14a



LS14b



January 15th Maps

200E



January 15th AP Stack Dispersion

6:20 AM



JANUARY 16TH, 2017**Summary**

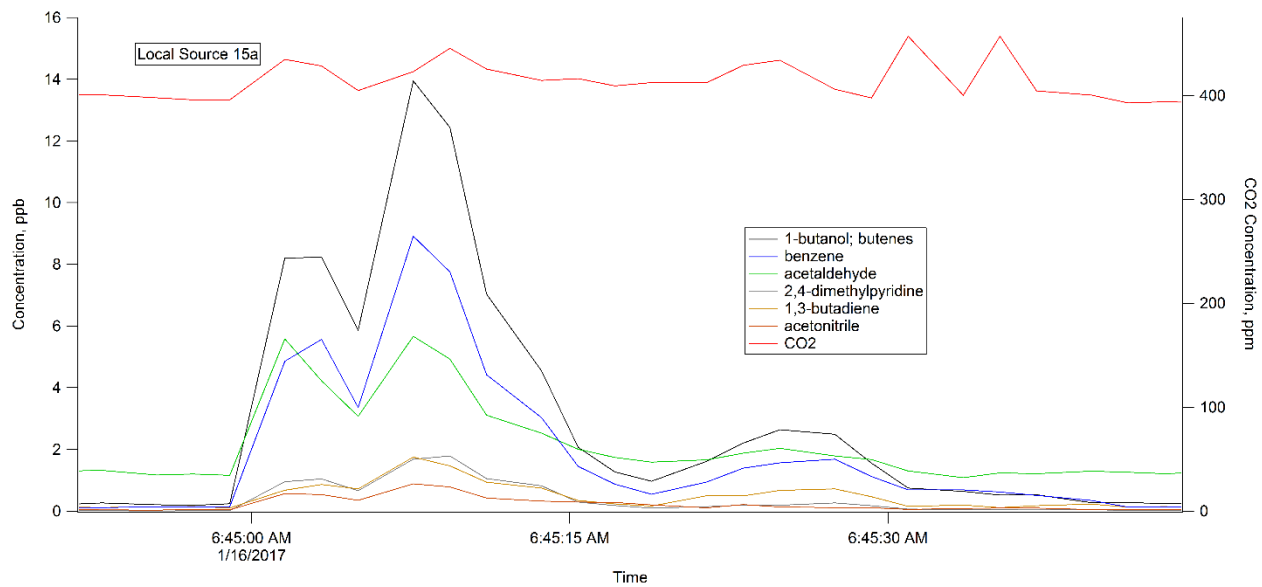
The mobile lab operated between 6:15 AM and 2:00 PM January 16th. The field analyst primarily positioned the lab downwind of the AP farm, with some time spent driving around the 200E tank farms.

January 16th Local Sources

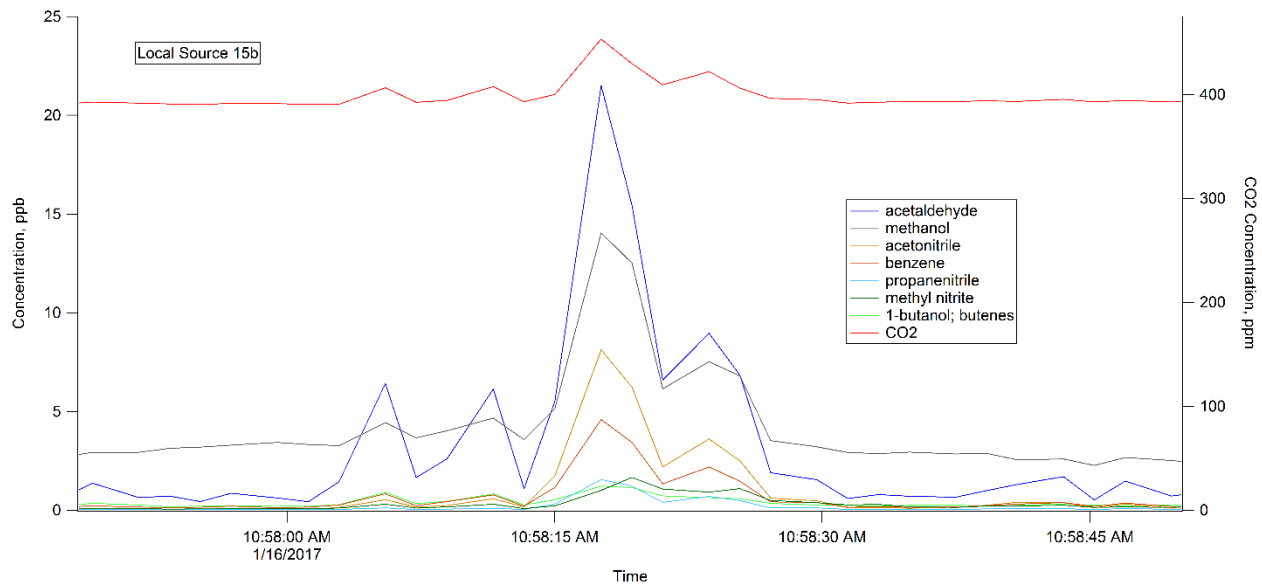
LS15a, 01/16/17, 6:44:58 AM	1.03 bar, 10 F, wind ESE 2 mph	1-butanol; butenes: 13.9 ppb benzene: 8.9 ppb acetaldehyde: 5.7 ppb 2,4-dimethylpyridine: 1.8 ppb 1,3-butadiene: 1.7 ppb acetonitrile: 0.9 ppb CO2: 445 ppm Detected NW of AP farm. This event spans approximately 30 seconds and has peaks that correlate with elevated CO2. Field notes make mention of having recently begun a drive around the perimeters of the tank farms.
LS15b, 01/16/17, 10:58:00 AM	1.04 bar, 14 F, wind SE 3 mph	acetaldehyde: 21.5 ppb methanol: 14.0 ppb acetonitrile: 2.1 ppb benzene: 4.6 ppb propanenitrile: 1.5 ppb methyl nitrite: 1.6 ppb 1-butanol; butenes: 1.2 ppb CO2: 453 ppm Detected NW of AP farm. This event spans approximately 30 seconds and is accompanied by correlating rises in CO2.
LS15c, 01/16/17, 1:42:25 PM	1.04 bar, 20 F, wind NNW 2 mph	acetaldehyde: 12.3 ppb 1-butanol; butenes: 7.6 ppb 1,3-butadiene: 6.5 ppb methyl nitrite: 2.2 ppb benzene: 1.9 ppb 3-methyl-3-buten-2-one; 2-methyl-2-butenal: 1.5 ppb butanal: 1.0 ppb 2-methylfuran: 0.9 ppb 2,5-dimethylfuran: 0.7 ppb propanenitrile: 0.3 ppb acetonitrile: 0.2 ppb CO2: 447 ppm Detected S of AP farm. This event spans approximately 90 seconds and has peaks that correlate with elevated CO2.

January 16th Graphs

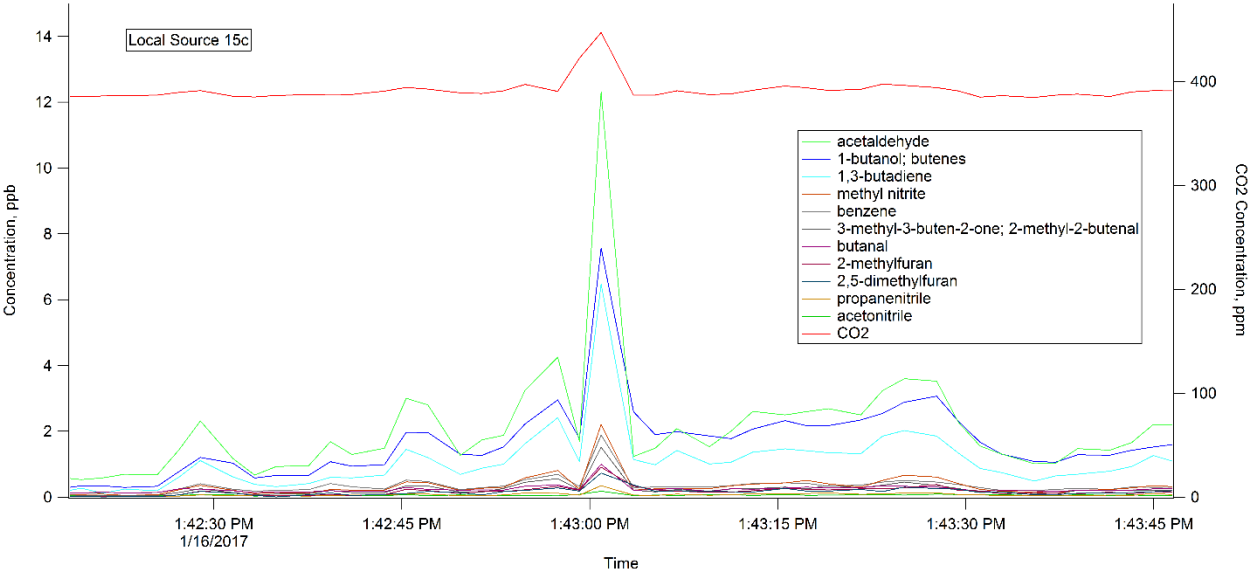
LS15a



LS15b



LS15c



January 16th Maps

200E



JANUARY 17TH, 2017**Summary**

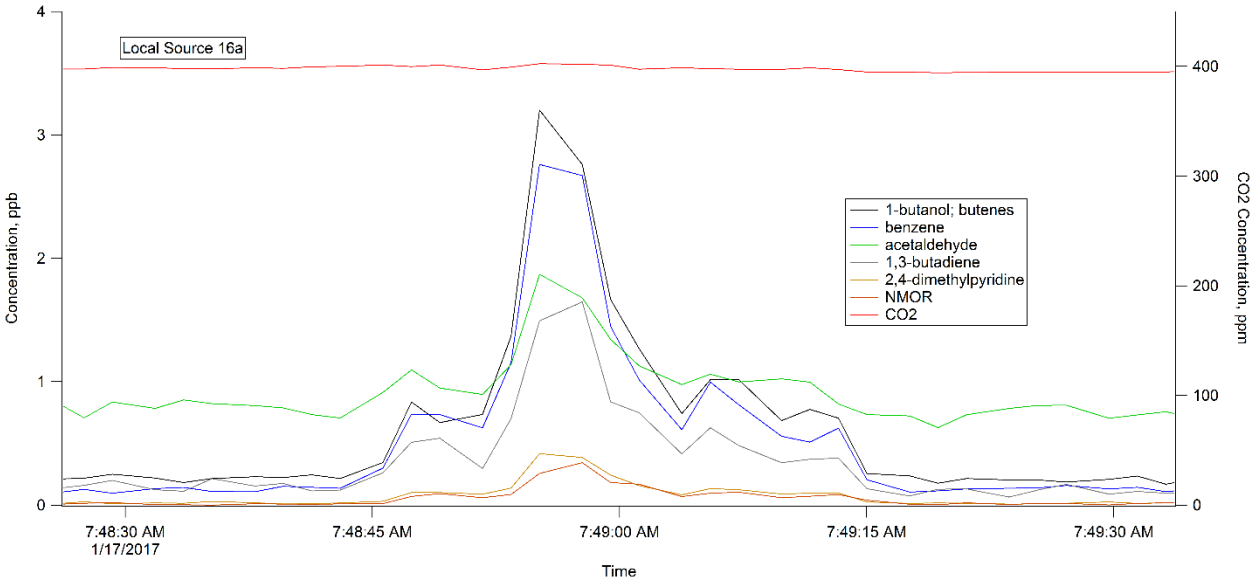
The mobile lab operated between 6:15 AM and 12:15 PM January 17th. The field analyst primarily positioned the lab downwind of the AP farm, with some time spent driving around the 200E tank farms.

January 17th Local Sources

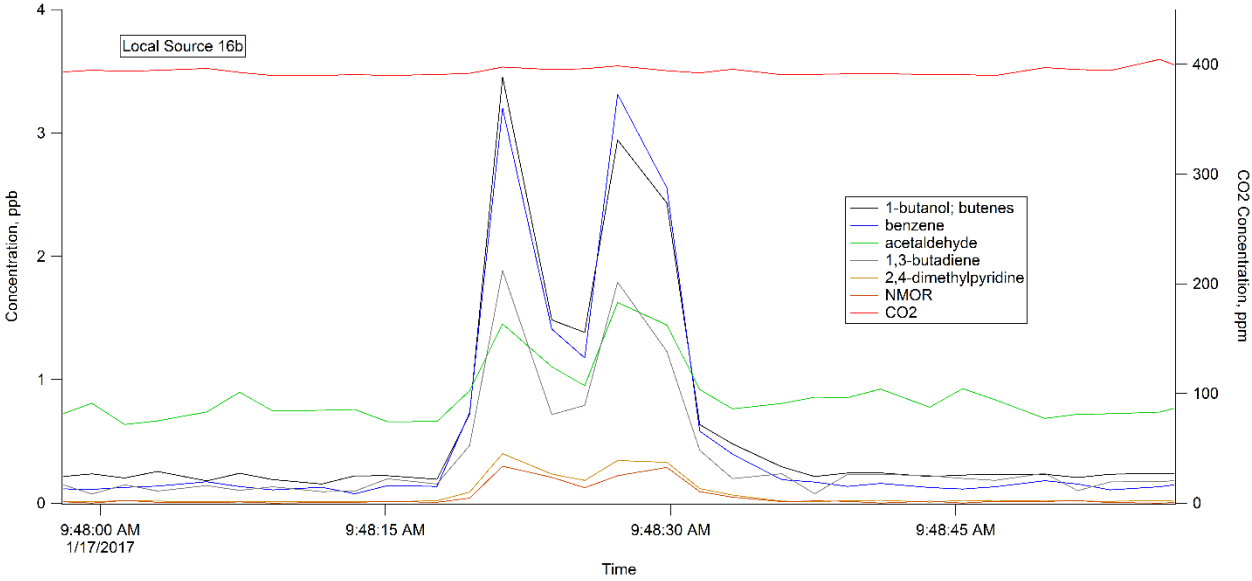
LS16a, 01/17/17, 7:48:45 AM	1.02 bar, 13 F, wind ENE 2 mph	1-butanol; butenes: 3.2 ppb benzene: 2.8 ppb acetaldehyde: 1.9 ppb 1,3-butadiene: 1.6 ppb 2,4-dimethylpyridine: 0.4 ppb NMOR: 0.3 ppb CO2: 402 ppm Detected while parked W of AY farm fence line.
LS16b, 01/17/17, 9:48:18 AM	1.02 bar, 18 F, wind NE 2 mph	1-butanol; butenes: 3.5 ppb benzene: 3.3 ppb acetaldehyde: 1.6 ppb 1,3-butadiene: 1.9 ppb 2,4-dimethylpyridine: 0.4 ppb NMOR: 0.3 ppb CO2: 398 ppm Detected while parked W of AY farm fence line. CO2 slightly elevated above background.
LS16c, 01/17/17, 12:17:00 PM	1.02 bar, 15 F, wind N/A	benzene: 10.0 ppb acetaldehyde: 1.6 ppb 1-butanol; butenes: 1.9 ppb 1,3-butadiene: 0.5 ppb CO2: 422 ppm Detected while driving SE on Glade North Rd. This event spans approximately 5 minutes and is accompanied by elevated CO2 throughout. Field notes make mention of having just left the 200E site for the afternoon.

January 17th Graphs

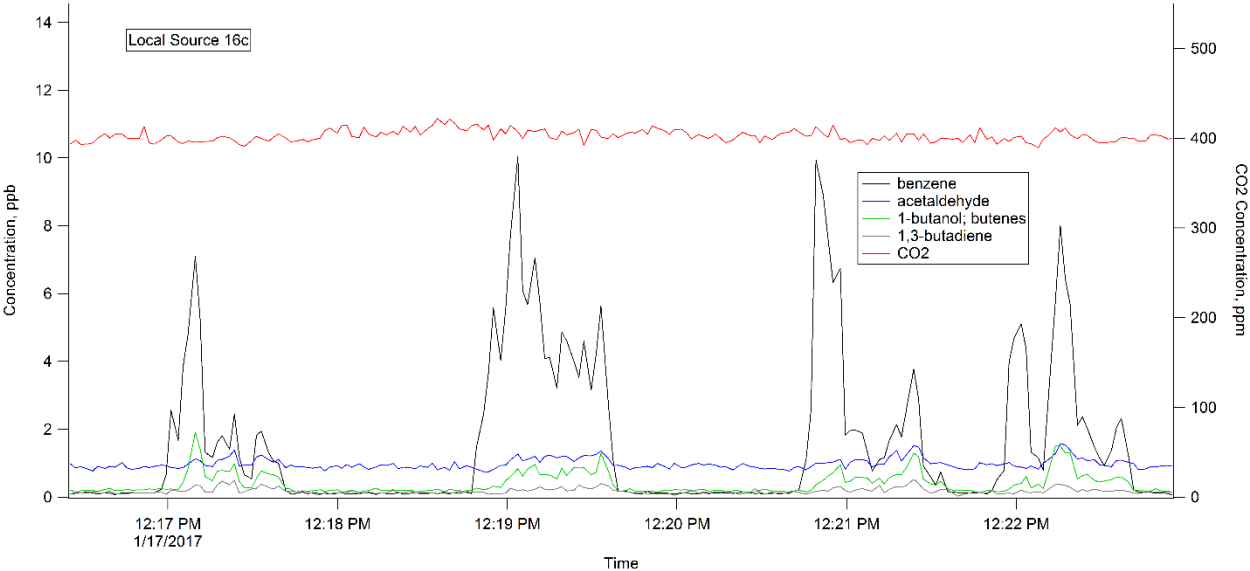
LS16a



LS16b



LS16c



January 17th Maps

200E



Highway



January 17th AP Stack Dispersion

6:30 AM

