

COMMUNITY COMPRESSOR STATION FORMALDEHYDE MONITORING PROTOCOL

Testing Limits

Wind: 5-24 MPH (Light breeze so as to avoid a radial plume to fresh breeze to avoid dispersal of plume).

Temperature: 50-95 F

Relative Humidity 5-90%

Do not test if raining

Minimum 10% of tubes for duplicate testing (if there is a discrepancy call company. this will increase the CI)

Sample just before daybreak when the boundary barrier is lowest and at solar zenith when formaldehyde is most likely to be degraded the fastest. Do this for three days. 1) if the average solar zenith readings are above 10 ppb then proceed with both day break and solar zenith testing. If the average solar zenith readings fall below 10 ppb (the limit of detection) continue only testing at daybreak. Four (one for each season) two week testing regimens are recommended.

1. Wind speed, temp, RH assessed, if no contraindication (above) assess wind direction.
2. Place monitors 1/4 mile to 1/2 distance upwind and downwind. (Or if downwind is mid-slope at a grade higher than 10% sample at topographic low and a corresponding distance for upwind).
3. Begin formaldehyde sampling.
4. Exit the plume after sampling has begun. If at any point you feel light headed, nauseous or otherwise ill please put on the VOC respirator and seek refuge in your car or by putting distance between yourself and the toxicant source.
5. Assess starting and stopping temperature, wind speed, wind direction, RH, UV intensity, barometric pressure, number of engines operating by FLIR, number of cars/trucks that passed each monitor.
6. Note formaldehyde reading. Photograph formaldehyde tube on supplied index card and photoelectric meter read-out. Scan the data sheet and email data sheet and pictures to REDACTED FOR PUBLIC LAB RESEARCH NOTE@protonmail.ch (an encrypted account that is un-subpoenable in the US).
7. Upload data sheet information to google spreadsheet and retain hard copy for backup.

*****Please note: Monitoring carries the inherent risks of travel, contaminant exposure, working near roadways. By participating in this project you agree that you are participating at your own risk and will not hold project organizers, consultants, or collaborators responsible for any negative outcomes associated with participation in this project. *****

COMMUNITY COMPRESSOR STATION FORMALDEHYDE
MONITORING DATA SHEET

Compressor Name _____ Date _____

If multiple samples in a single day # ____ of ____

Monitor's Call Name: _____

Meteorological Parameters

Parameter	Starting Value	Ending Value	Method/Equipment (fill out first time for each site, then only note changes)
Wind Speed			
Wind Direction (cardinal and degree)			
Temperature			
Wind Direction (cardinal and degree)			
Relative Humidity			
Barometric Pressure			
Number of active engines			

Toxicant Parameters

UPWIND: Please mark location on accompanying map (attached)

What is the elevation change between the emissions site and the sampling site?

Source elevation _____ Upwind elevation _____

Formaldehyde sample **start time:** _____ AM PM

	Value	Duplicate (10% samples must have duplicates)	Method/Equipment (method must be the same for duplicates)
Formaldehyde			
	Value at start	Value at end	
Ultrafine Particulates			

How far was the sampling from the road? _____ feet

Is this road visible to you from the monitoring location Yes No

How many vehicles passed near this monitoring site during sampling (roman numerals below):

Industrial trucks:

Cars and light trucks:

DOWNWIND: Please mark location on accompanying map (attached)

What is the elevation change between the emissions site and the sampling site?

Source elevation _____ Downwind elevation _____

Formaldehyde sample **start time:** _____ AM PM

	Value	Serial Number (if tube)	Duplicate Value	Serial Number	Method/Equipment (method must be the same for duplicates)
Formaldehyde					

How far was the sampling from the road? _____ feet

Is this road visible to you from the monitoring location Yes No

If yes, how many vehicles passed near this monitoring site during sampling (roman numerals below):

Industrial trucks:

Cars and light trucks:

Any further observations? (e.g. any large obstructions between emission site and monitoring site? abnormal activities?)



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