

VOC Emissions Inventory Improvement Stakeholder Group

Summary of March 8, 2005, Stakeholder Meeting

Moderator: Vincent Meiller

Topics covered from planned agenda.

Flares

- Flow monitoring.
 - How many flares will have flow monitoring as result of the HRVOC rules? The original rule estimated the total number of flares at approximately 300; however, it is difficult to estimate the current number due to the flexibility provided in the recent changes to the rules. The total number of flares in the HGB area is estimated to be between 500 and 600.
- Parameter monitoring for flare performance (BTU monitoring & steam/air assist monitoring).
 - 40 CFR 60.18 flare performance parameters are based on flare exit velocity and net heating value of the waste gas stream; however, steam and air assist rates can affect flare performance. Some data from original EPA studies indicates that excess steam assist (> 5 pounds steam per pound of waste gas) or air assist can decrease flare efficiency.
 - TCEQ has sponsored studies on flare monitoring technologies, including steam and air assist monitoring.
 - Another project evaluated using passive FTIR to measure flare combustion efficiency and speciated VOCs from the flare. The application of passive FTIR to flare measurements is still early in method development stage. Funding for next phase of study is still pending.
 - Reports on these projects are available at:
http://www.tnrcc.state.tx.us/air/aqp/airquality_contracts.html
 - EPA - There is currently a large reliance on engineering estimates for flow and destruction efficiencies. Actual measurement should be performed if possible. Southcoast Air Quality Management District required monitoring on 23 flares, and they discovered that monitoring has brought emissions down.
- Some Canadian flare studies are being performed in wind tunnels, but are on small scale flares. There may be some question on results when applied to actual scale flares.
- Periodic testing vs continuous monitoring.
- Total VOC vs speciation monitoring.
- Categories of flares: No comments on other categories of flares, but some flares do not have sample taps for collecting samples.
- Are the EI forms being used for flares sufficient for the data needs? The forms are designed to support the modeling needs and may be updated if needed. The one-hour inventory provides more specific inventory data on flares.

Vents gas streams:

- PRV monitoring.
 - HRVOC rules require monitoring to determine when and how long the PRV is open and estimate of flow rate, but not speciation.
 - New gas imaging camera being evaluated for fugitive surveys may be beneficial for finding PRVs that are not seating properly.
- Parametric monitoring of vent gas streams and control systems with limited life.
 - Emissions may be variable over time as control system degrades.
 - Parameter monitoring may help with some control systems. A stakeholder suggested temperature monitoring may be a good indicator on catalyst systems.
- Polymer facilities: Headspace methods.
 - Headspace methods like the Beverage Can Method are an economical method of getting speciated emission data; however, there are some problems with methodology.
 - The TCEQ does not have a reference method.
 - The Beverage Can Method is out-of-date and has very limited QA/QC.
 - Netting approach to headspace method sometimes leads to negative calculated emissions.
- Batch processes.
 - Batch type processes can be defined, but there is no easy way to define a batch emission point. We need stakeholder input on how to more accurately represent batch emissions in the inventory. A stakeholder suggested looking at the definition of batch provided in 40 CFR 63, Miscellaneous Organic NESHAP (MON). The VOC emissions from batch type processes are typically more variable.

Additional topics discussed/comments from stakeholders:

- Stakeholders asked again about criteria for judging when the inventory is good enough.
- Title V reporting requirements and potential enforcement may discourage companies from doing testing or monitoring beyond regulatory requirements to obtain better emission data for the inventory.
- Inconsistencies within the TCEQ contribute to the problem with the VOC emissions inventory. Example: Total VOC testing for compliance purposes under permit or regulation maybe acceptable, but doesn't address the data needs of the emissions inventory.
- Stakeholders suggested the formation of a workgroup comprising Permits, Compliance, Title V, Emission Inventory and other parts of the agency to help address VOC emission inventory problems.
- A stakeholder suggested that the stakeholder group may be more effective if the focus was on source category types rather than emission point types, and suggested meetings focused on facility types like polymer, pipelines, refineries, etc.