Refinery Sector Rule
Wednesday, April 2, 2014

Phillips 66 U.S. Refining Presence

Phillips 66 (P66) is a downstream manufacturing and logistics company and is one of the largest refiners in the US. P66 operates 11 US refineries with a total crude capacity of 1.8 million barrels per day representing about 10% of the total US. P66 employs 12,000 people in the US and almost 14,000 world-wide. We are committed to keeping the US refining sector strong while also investing in effective environmental improvements. From 2003-2014, P66 will have invested around $2B for environmental controls in our refineries.

Refinery Sector Rule:

Industry estimates that the cost to comply for the U. S. refining industry will exceed $100 million annually. These costs will be expended to address a level of residual risk that EPA has already determined, and we anticipate has reaffirmed, to be acceptable per Clean Air Act guidance. EPA should:

1) Recognize that residual risk under the Clean Air Act framework is acceptable and additional control requirements are discretionary
2) Recognize that many elements of the anticipated proposed rule will not be cost effective and should be eliminated or minimized
3) Limit the scope to specifically identified, narrow regulatory gaps and
4) Avoid revisiting previous floor determinations.

SPECIFIC CONCERNS

A coker depressurization work practice of 2 psig is not cost effective.

- P66 assets constitute approximately ~15% of cokers in the US.
- P66 performed emissions vs. cost evaluation for depressurization work practices at each of its cokers.
- A 2 psig limit would require significant capital investment across at least half of P66 cokers.
- The projects are unjustified because 1) actual emission reductions are minimal and 2) the projects are costly:
  - Volatile Organic Compound (VOC) reduction: **$80,000-$115,000/ton VOC**
  - Hazardous Air Pollutant (HAP) reduction: **$400,000-$600,000/ton HAP**
  - One project is as high as **$3,500,000/ton HAP**
  - Typical thresholds used to justify previous rules ~$5,000/ton VOC & ~$50,000/ton HAP.
- EPA previously concluded that 2 psig was not justified – that conclusion remains valid.
- If promulgated, additional costs and impacts to fuel availability are incurred when capital projects cannot be scheduled with normal turn-around cycles (4-5 years). A 3+ year compliance schedule is paramount to allow industry to cost effectively implement any final controls.
- **Based on cost evaluations, the Agency's inadequate justification of the need for additional controls, and the Agency's overstating the risk, we recommend that cokers not be included in this rule.**

Requirements for all flares to continuously monitor combustion efficiency parameters, irrespective of engineering design, is a high-cost, significant overshoot to close a narrow regulatory gap.

- Recently imposed NSPS Ja flare rules resulted in instrumentation costs on the order of millions of dollars per flare and will likely result in significant overall flaring reductions.
- The anticipated proposal is likely to require significant additional costs with few synergies with earlier investments deriving little benefit.
- The anticipated proposal is overly broad and should only focus on the narrow flaring gap of over-steaming in steam-assisted flares.
  - There are significant operating and design differences between steam assisted flares and other types of flares such as air-assisted flares and unassisted flares.

Fence-line monitoring is not required to address the regulatory objectives of the refinery sector rule and bears high recurring annual expense.

- Fence-line concentrations are not correlated to community risk.
- Fence-line monitoring carries a significant recurring cost of ~$100,000/facility annually
- An action level that is too low will result in many unnecessary root cause analyses of temporary, insignificant excursions of clinically insignificant short term concentrations.[1]

[1] OSHA TWA exposure limit for benzene is 1,000 ppb.