

## Delaware City Refinery Comments for the August 23, 2006 Heater/Boiler NO<sub>x</sub> RACT Rule Development Committee Meeting

### General Comments/Questions:

- 1) There appears to be an inaccurate representation in the July 19<sup>th</sup> committee meeting minutes regarding John Deemer's comments about NO<sub>x</sub> controls on the Coker CO boiler. The minutes erroneously suggest Valero is intending to install additional NO<sub>x</sub> controls on this source. What the minutes should have reflected is that Valero recently installed SNCR controls on this source and that we are currently optimizing these controls to maximize NO<sub>x</sub> reductions.

Valero still maintains that no additional NO<sub>x</sub> controls are needed on the Coker CO Boiler beyond the SNCR that was recently installed. Cost for installation of this technology exceeded 6 million dollars.

- 2) The slide presentation from the March 15 meeting indicates that "*previous 'zero-out-modeling' shows that the Delaware emissions alone can cause exceeding the federal ozone standards in Delaware and the downwind states.*" Valero would like to know when this "previous" modeling was completed and whether it included all of the current "on-the-books" controls (e.g., Valero's agreement to reduce FCCU CO Boiler NO<sub>x</sub> to <20 ppmv by May 2009 and the significant NO<sub>x</sub> reductions the refinery is/has made to its heaters and boilers under the EPA Section 114 agreement, etc.)? Valero believes that any modeling used to predict future attainment status should be inclusive of these on-the-book reductions in order to determine the reductions required to meet the Federal NAAQS. This will enable the Department to assess the current level of reductions required and better assess what remaining reductions are realistically available from the Delaware City Refinery as well as from other sources in the state.
- 3) The March 15 Meeting minutes indicate that all ambient monitoring stations within Delaware are showing attainment and that it is the out-of-state monitors that are indicating non-attainment design values. If this is correct, could you please explain: 1) what NO<sub>x</sub> reduction measures the other states possessing these non-compliant monitors are doing and whether Delaware is in dialogue with these states on this issue; 2) whether Delaware's proposed heater and boiler rule NO<sub>x</sub> reduction requirements are more stringent than what the non-compliant states are proposing; 3) whether a multi-state emissions cap-and-trade program has been considered and whether DNREC believes it would provide a more cost-effective approach for reducing regional NO<sub>x</sub> levels.
- 4) Has it been established that the particular monitoring stations showing non-compliant design values (> 85 ppb) are in fact downwind of the Valero refinery and are substantially affected by refinery emissions? Can you provide the location(s) of these monitors? Have the effects of mobile source emissions on these particular monitors been evaluated?

- 5) The slide presentation from the March 15 meeting indicates that “*SIP modeling to determine how much more VOC/NO<sub>x</sub> reductions are needed for the Philadelphia CMSA to attain in 2010 will be completed very soon.*”
- Did this modeling get completed?
  - If so, is it available for review?
  - Did it support the need to reduce the proposed heater/boiler NO<sub>x</sub> requirement from 0.04 lb/MMBtu to 0.03 lb/MMBtu?
  - If not, then what is the basis for the proposed reduction?
  - Has DNREC calculated the TPD reduction that a limit of 0.03 lb/MMBtu would provide, relative to 0.04 lb/MMBtu?
  - If Valero contributed 8.7 TPD to the 2002 baseline (as noted in the March 15 slide presentation), then what exactly is the TPD level of reductions being sought from the refinery?
- 6) Valero questions whether the targeted initiatives being proposed for reducing NO<sub>x</sub> within the state are equitable and cost-effective.
- Has the state looked at the cost-effectiveness of achieving early reductions from mobile sources through more stringent speed limits or re-timing of traffic lights?
  - Is it equitable that the proposed rule for EGF’s allows a two-stage phase in period for NO<sub>x</sub> reductions (0.15 lb/MMBtu required by Jan. 1, 2009 and 0.125 lb/MMBtu required by Jan. 1, 2012) whereas the refinery rule requires 0.03 lbs/MMBtu to be achieved by December 31, 2008?
  - Can Delaware demonstrate that the refinery is not disproportionately carrying the reduction load, relative to EGF’s and other industries (i.e., what exactly is the TPD and percent reductions being required of EGF’s versus the refinery)?
  - What is the basis for the EGF emission limits?
  - What does the Department consider as cost effectiveness? Cost figures between the EGFs and refinery sources differ significantly.
- 7) The meeting minutes to the July 29<sup>th</sup> meeting indicate that “*the NO<sub>x</sub> trading program (Reg 39) expires in 2008, its affected units will be subject to RACT level controls only, and that is why we are proposing this beyond-RACT rule.*” Could Delaware use the multi-state CAIR Rule to achieve the desired reductions (we understand that participating states can choose to include non-EGF units in their CAIR programs), thereby providing a more cost-effective, regional-based cap-and-trade approach for achieving emission reductions?
- 8) Has the state fully explored whether a cap-and-trade program encompassing multiple industries (e.g., the EGF’s and refineries) would be feasible and more cost-effective?
- 9) Can the Department provide the basis for selecting the emission limits that have been included in sections 2.3.1.1 and 2.31.2 of the rule? Has this determination been based on an evaluation of all of the state NO<sub>x</sub> sources and available emission reductions at the DCR? Was the cost effectiveness of controlling these sources included in this determination similar to an EPA Top Down BACT analysis?

- 10) The proposed compliance date of 12/31/08 is unreasonable. Typically facilities subject to new regulations are given a reasonable period of time, often three years or longer, to take the necessary steps to comply with the new requirements (e.g. selecting vendors, ordering equipment, and scheduling installation). Valero requests that a three year implementation schedule be included in this rulemaking, with a provision for a case-by-case determination for a longer period. Numerous factors may impact the ability to meet the proposed requirements by 12/31/08 (i.e., engineering, contracts, labor, vendors/supplies, permitting, turnaround schedule, impact on operations, etc).
- 11) Valero respectfully requests a sixth meeting regarding this rulemaking to allow time to thoroughly evaluate the comments provided herein.

Specific Comments on the Draft Rule:

- 1) Valero proposes that Section 2.3.1.1 be changed to allow compliance with the 0.04 lb/MMBtu limit to be based on a 24-hour average of all affected sources (based on heat input using an equation similar to the equation in Section 2.3.1.2). Without this change, cost-effective averaging (e.g., discretionarily over-controlling large sources, while adding no additional controls to smaller sources) will not be possible.

Allowing compliance with the 24-hour limit to be averaged over all affected sources is consistent with California's Bay Area NO<sub>x</sub> RACT Rule (Regulation 9) and provides a more cost-effective approach for achieving desired reductions.

- 2) Valero proposes that the language of Section 2.3.1.3 should more clearly allow a source for which controls are technically infeasible and/or not cost-effective to be wholly excluded from the regulation through the case-by-case determination approval process.
- 3) Valero proposes that the last sentence of Section 2.3.1.3.2 (requiring that all case-by-case determinations to be included in the annual average rate limitation of Section 2.3.1.2) be deleted. The current language would preclude a source from demonstrating cost-ineffectiveness for purposes of excluding a source from the control requirements. (i.e. As John Deemer has previously indicated, the reformer is more like a reactor than a heater or boiler and it would incur enormous cost for relatively little NO<sub>x</sub> reduction (a cost effectiveness of > \$100K/ton). Inclusion of this source in the annual average rate limitation would make it difficult for the refinery to meet the annual average limit for all sources and would reduce the overall cost effectiveness.).

- 4) Valero proposes that the words "...commits to..." in Section 2.4.1.2 be changed to instead read "...estimates..." Valero believes it is inappropriate for the regulation to require enforceable commitment dates for the completion of engineering and the awarding of contracts. The rule should instead focus on ensuring that final compliance is achieved by the required date (e.g., meet limits by x date; submit permit application y days before planned start of construction - to allow DNREC y days to review and approve application; compliance test source within 60 days of startup following installation of controls; and submit test results within 45 days of completion of testing).
- 5) The requirement for maintaining compliance records for 5 years in Section 2.4.2.7 does not belong under the initial compliance certification provisions of Section 2.4.2. It should be broken out as a stand-alone provision.