

August 18, 2008

(Submitted via email and hand delivered at Public Hearing)

Mr. Ravi Rangan, P.E.
Environmental Engineer
Division of Air and Waste Management
Delaware Department of Natural Resources and Environmental Control
715 Grantham Lane
New Castle, DE 19720

RE: DCR Comments on DNREC Issued Draft Permits for the Delaware City Refinery Upgrade and Optimization Project

Dear Mr. Rangan:

On July 16, 2008, the State of Delaware Department of Natural Resources and Environmental Control (DNREC) published for public comment draft permits for the Delaware City Refinery (DCR) Upgrade and Optimization Project (“the UOP”). The Premcor Refining Group Inc. (Premcor), a subsidiary of Valero Energy Corporation, has previously submitted a permit application, with a most recent update in November 2007, for the UOP (“the application”).

The permits drafted by DNREC include draft permit APC-81/0828-CONSTRUCTION (Amendment 2)(PSD-NSR) for the Crude Unit (“the Crude Unit permit”) and draft permit APC-81/0829-CONSTRUCTION (Amendment 8) (PSD-NSR) for the Fluid Coker Unit, FCU Carbon Monoxide Boiler, Wet Gas Scrubber, and Selective Non-Catalytic Reduction System (“the FCU permit”). A public hearing has been scheduled for August 18, 2008 for DNREC to receive comments from interested parties. Premcor would like to submit comments prior to this public hearing for the Department’s consideration when issuing final permits for the project.

Premcor’s Comments on DRAFT Permit: APC-81/0828-CONSTRUCTION (Amendment 2) (PSD-NSR) – “The Crude Unit Permit”

Condition 1: DNREC has specified that the permit shall expire 18 months from the date of issuance. Regulation 1125 (“R1125”), Section 3.15.2 states that:

Approval to construct shall become invalid if construction is not commenced within 18 months after receipt of such approval, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. The Department may extend the 18-month period upon a satisfactory showing that an extension is justified....

This requirement states not that approval shall expire after 18 months, but rather that construction on the project must *begin* within 18 months and complete within a reasonable time thereafter.

The permit expiration requirements of DNREC Regulation 1102 (“R1102”), Section 11.10 (which require construction permits to be valid for a duration not to exceed 3 years) do not apply to modifications governed by R1125 according to R1102, Section 1.1.

Condition 2.1.1: This permit term erroneously identifies 40 CFR Part 63 Subpart CC as applicable to all new components in light liquid and gaseous service. These Part 63 requirements are only applicable to components with a concentration of Hazardous Air Pollutant (HAP) greater than 5% by weight. In light of this, Premcor proposes the following language to replace the proposed language of 2.1.1:

2.1.1 The leak detection and repair requirements to control fugitive VOC emissions from the FCU shall be in accordance the requirements in 40 CFR 60, Subpart GGG/VV for VOC components in light liquid and gaseous service and in accordance with 40 CFR 63, Subpart CC for VOC components in light liquid and gaseous service with Hazardous Air Pollutant (HAP) concentrations greater than 5% by weight.

Conditions 6.1: The language in many of these “boiler plate” type requirements has been a matter of discussion recently with both the Title V permits and also the recently issued R1102 permits. The language in this Condition is not consistent with the agreed upon language used in these recent permits. Premcor proposes that Condition 6.1 in the permit be replaced with:

6.1 Emissions in excess of any permit condition or emissions which create a condition of air pollution shall be reported to the Department immediately upon discovery and after activating the appropriate site emergency plan, in the following manner:

6.1.1 By calling the Department’s Environmental Emergency Notification and Complaint number (800) 662-8802, if the emission poses an imminent and substantial danger to public health, safety or the environment.

6.1.2 Other emissions in excess of any permit condition or emissions which create a condition of air pollution may be called to the Environmental Emergency Notification and Complaint number (800) 662-8802 or faxed to (302) 739-2466. The ability to fax in notifications may be revoked upon written notice to the Company by the Department at its sole discretion.

Condition 6.3: See comments to Condition 6.1 above.

Premcor’s Comments on DRAFT Permit: APC-81/0829-CONSTRUCTION (Amendment 8) (PSD-NSR) – “The FCU Permit”

Condition 1.1: See comments on Condition 1.1 of the Crude Unit permit above.

Condition 2.1.1.1: The permit changes the pollutant label from “VOC” to “Hydrocarbon” from previous revisions of the permit. DNREC Regulation 1 defines a “Volatile Organic Compound” and lists numerous hydrocarbon compounds which are excluded from the definition of “VOC” because they “have been determined to have negligible photochemical reactivity”.

Premcor’s compliance testing of the FCU for VOC in January 2007 served as the basis for the 0.14 lb/mmDSCF. As stated in the stack test report, USEPA Method 18 procedures were conducted at the outlet to determine the methane concentration, and that amount was subtracted from the total organic or “hydrocarbon” compounds measured by USEPA Method 25A procedures.

Premcor contends that the change DNREC proposes from “VOC Emissions” to “Hydrocarbon Emissions” is inappropriate.

Condition 2.1.1.2: See comments on Condition 2.1.1 of the Crude Unit permit. Further, the proposed permit has a typographical error in the reference to 40 CFR 63, Subpart CC (referred to as 40 CFR **60**, Subpart CC)

Condition 2.1.2.1: In Attachment C (“Fluidized Coker Emissions” datasheet) of the application, Premcor estimated the potential to emit (PTE) for NO_x of the Fluid Coking Unit. The PTE was calculated using a concentration based upon 2006 historical data. This concentration was 90 ppm. This concentration, in conjunction with the total design stack flow of 43,042 lb-mol/hr was used to calculate the PTE. Neither of these values (the 90 ppm concentration and the stack flow) was corrected for moisture or excess air. The Department incorporated this 90 ppm value into the permit, yet stipulated that this should be on a dry, 0% oxygen basis, which is inconsistent with the data contained in the application. Should this 90 ppm value be corrected according to the design moisture and excess oxygen values contained in the datasheet (19.3% moisture, 2.63% excess oxygen) the result would be 128 ppm.

Premcor understands that the Department wishes to establish a long term NO_x concentration limit for the FCU. However, a mechanism for establishing this limit had already been incorporated into the existing operating permit of the unit. This mechanism is for Premcor to propose a value based on approximately 6 months of 12-month rolling NO_x concentration (on a dry basis, corrected to 0% oxygen) data spanning from approximately November 2007 to May 2008.

On July 28, 2008, Premcor submitted this proposal based on the recent historical data using a statistical approach similar to those used by EPA to analyze emissions data in support of limit setting for control technology based standards such as New Source Performance Standards and Maximum Achievable Control Technology. This approach has been utilized in previous emissions limit proposals submitted by Premcor and subsequently approved by the Department.

The NO_x proposed in submittal was 118 ppm (dry, corrected to 0% oxygen) on a 365-day rolling basis. Premcor proposes this limit should also be appropriate to the FCU following the UOP project.

Condition 2.1.2.2: Premcor does not believe this condition is necessary for inclusion in the permit. As discussed further below, Premcor believes that any violation of the annual mass emission limitation is subject to review for enforcement action, the resolution of which would be determined based on the conditions leading to the violation of the limit.

Further, the first sentence of draft Condition 2.1.2.2 does not fully reflect the NSR analysis completed in the application and reflected in the permit values. As allowed under R1125, Section 1.8, Premcor did propose an annual mass emission limit of 689.8 TPY for NO_x in the permit application. However, this limit was applied in conjunction with the application of available emission netting credits to prevent triggering the nonattainment new source review requirements of R1125, Section 2.

The second sentence of draft Condition 2.1.2.2 states: *“the nonattainment new source review requirements of the Clean Air Act and the provisions of Regulation 1125, Section 1.8 shall apply to violations of the annual mass emission limitation in Condition 2.1.2.1.”*

R1125, Section 1.8 states: *“If a source petitions the Department for relief from any resulting limitation... the source is subject to review under Regulation 1125, Sections 2 and 3 as though construction has not yet commenced on the source or modification.”* R1125, Section 1.8 requires a review of Section 2 and 3 (NSR) applicability, but does not presume an outcome of the review. Premcor agrees that Section 1.8 is appropriate for foreseeable scenarios where the annual emission limit may be at risk of being exceeded. Further, Premcor believes that the conditions of R1125, Section 1.8 are sufficiently covered in the draft permit through condition 1.10 and that it is not necessary to restate in Condition 2.1.2.2.

If the annual mass emission limit is exceeded due to an unforeseeable scenario, Premcor expects that a review for enforcement action would be initiated, the resolution of which would be determined based on the conditions leading to the violation of the permit condition. Premcor believes that it would be appropriate to resolve the application of any nonattainment new source review requirements in the context of the enforcement solution.

The third sentence of Condition 2.1.2.2 in the draft permit references the application of the 51.6 TPY of NO_x emissions credits from the July 6, 2006 Agreement (Agreement) between DNREC and Premcor. However, the reference in the draft permit incorrectly refers to the credits as offsets. The Agreement specifically allows retention of some of the emissions reductions required under the Agreement for use in either netting or offsetting. Premcor has utilized these credits as part of the *netting* process for the UOP. Further, it is Premcor's intention to utilize the remaining credits for netting of future projects as well, and therefore, Premcor has updated the netting table of refinery projects to reflect the full amount of credits allowed under the Agreement (250 TPY NO_x). If the third sentence of Condition 2.1.2.2 is

retained in the final permit, the word “offsets” should be replaced with “netting credits” for clarity.

Condition 2.1.3.4/5.6.4: In these conditions, the Department has proposed to establish a PM_{2.5} limitation of 11.25% of filterable PM₁₀, compliance to which is to be demonstrated by “testing in accordance with a protocol approved by the Department.”

In response to a series of discussions with the Department on PM_{2.5} issues, Premcor submitted via email (from Thomas S. Godlewski, Jr., Premcor to Ravi Rangan, DNREC) evaluations of PM_{2.5} reductions which were achieved due to the installation of the wet gas scrubbers at the FCU and FCCU units at the refinery. As you know, no testing data exists to precisely quantify these emissions. At present, the EPA has not published any approved test methods for PM_{2.5}. Furthermore, due to the high moisture present in both of the wet gas scrubber stacks, no test method is known which can quantify these emissions.

The estimates given, as stated in the emails, were intended to estimate the magnitude of PM_{2.5} reductions achieved via the installation of the wet gas scrubbers at the FCU and FCCU units. The figures presented were based on a very limited amount of data available relative to the PM_{2.5} fractions of the particulate loading to the *inlet* of the wet gas scrubbers and cannot reliably be utilized to establish permit limits on the *outlet* of the control devices. The purpose of these submittals was to show that in the worst of cases (i.e., with the most conservative of estimates of the control devices preferentially removing larger particles over small ones), emission reductions would be still be more than enough to provide offsets as required by the new PM_{2.5} nonattainment rules for the UOP. The potential to emit PM_{2.5} cannot be properly established until test data is obtained via an EPA approved test method.

Additionally, Premcor is not aware of any methodology that will allow for the determination of particle size in a wet gas scrubber stack. As such, it is unclear how we will be able to comply with Condition 5.6.4 absent any known test method. As explained above, Premcor performed a conservative qualitative evaluation for regulatory evaluation purposes. The evaluation was not performed for the purpose of establishing permit limits.

Condition 2.1.5.2: See comment for Condition 2.1.2.2

Condition 2.1.5.3: Premcor proposes to add to end of this requirement the phrase “*as measured on a one minute average basis*” to be consistent with the recently issued Title V operating permit for the unit (AQM-003/00016 – Part 2, Condition 3, Table 1(da)(5)(ii)(B)).

Condition 2.19 and 2.1.0: The numbering of these conditions contains a typographical error. These should be numbered Conditions 2.1.9 and 2.1.10 respectively.

Condition 2.1.10 (“2.1.0”) / 4.1 / 5.8: These conditions impose new emissions limitations and monitoring/testing requirements for Reduced Sulfur Compounds (RSC). RSCs are classified as a hazardous air pollutant (HAP) and governed by the MACT standards of 40 CFR 63.

The Coker burner overhead gas was determined to be a MACT-1 Group-1 miscellaneous process vent (MPV). MACT stands for maximum achievable control technology, and these are the most stringent requirements given in the regulations to control HAP emissions. The MACT-1 compliance requirements for an MPV when a boiler or process heater is used to comply with the HAP reduction requirements per 63.643(b) require that the vent stream shall be introduced into the boiler/heater in a location such that the required reductions are achieved.

Monitoring provisions are given in 63.644(a)(3) and state that any MPV which utilizes a boiler/heater with a design capacity greater than 44 MW is exempt from monitoring. Further, the requirements to demonstrate compliance in 63.645 refers to 63.116(b) which states that an owner is not required to conduct a performance test when the control device is a boiler or process heater of this nature.

Furthermore, this permit limit is impractical, first, because the proposed concentration limit cannot be determined by any known or practical test method. The emission standard (0.0000368 lb/1,000 lb coke burned) corresponds to a fraction of a ppmv. There is no practical test method to determine such miniscule quantities. Also, EPA, recognizing that monitoring such emissions is not justified, and as such, sets the MACT standard as a *technology based* standard that uses a physical installation (the use of a significantly large combustion device) as the method used to determine compliance rather than impose an impractical *emissions based* limitation. Further, since there is no way to measure this concentration, the emission limitation presents insurmountable difficulties in certifying compliance in a reliable manner.

Consequently this condition adds no environmental benefit and is unnecessary. Premcor proposes to delete Condition 2.1.10 and the appropriate references in Conditions 4.1 and 5.8. Premcor believes that these deletions will not cause any harm to the environment because the Coker MPV is already subject to maximum achievable control standards (MACT) through the requirement to combust all flue gases in the COB (see Condition 2.1.5.3). Consequently, the condition does not add any known environmental benefit, while posing significant monitoring and certification issues that appear to be either impractical if not impossible to achieve.

Rather than state emission limitations for RSC, Premcor suggests that it is more appropriate to state the MACT I requirements Section 3, Operational Limitations of the permit.

Condition 4.2: This condition erroneously refers to Condition 6.2. The correct reference should be Condition 5.2.

Condition 5.1: This condition erroneously retains a reference to “after initial startup of the WGS”. Premcor proposes this reference to be changed to “*after construction authorized by this permit is completed*”.

Condition 5.5: This condition specifies the QA/QC procedures for the NO_x CEMS as those contained in 40 CFR 75. Part 75 applicability to the FCU COB is contingent upon the FCU

COB's inclusion in the NO_x Budget Program. The NO_x Budget Program was to terminate at the end of 2008 to be replaced by the EPA's proposed Clean Air Interstate Rule (CAIR). The status of CAIR is now uncertain due to the DC Circuit Court's overturning of CAIR.

As a result of the uncertainty of the future appropriate standard for the NO_x CEMS at the FCU, Premcor proposes adding the following addition to Condition 5.5:

The QA/QC procedures for the NO_x CEMS shall be established in accordance with the procedures in Appendix B of 40 CFR Part 75 to meet the requirements of the NO_x Budget Trading Program contained in DNREC Regulation 39 (Nitrogen Oxides Trading Program). If at a future date the FCU COB is no longer an affected source under DNREC Regulation 39, the appropriate procedures governing the QA/QC of the CEMS shall be those set forth in Appendix F of 40 CFR 60.

Condition 5.6: This condition requires performance testing for PM to be conducted on an annual basis. Premcor understands that the PM pollution control device (the Belco prescrubber) is still a relatively new operation and there is at present limited performance testing data available to ascertain the performance on a long term. Premcor would request that a clause be added to this condition allowing Premcor to petition the Department for less frequent testing if future data shows that testing on an annual basis to be unwarranted.

Condition 6.1.11: This condition incorrectly references Condition 3.2. The correct reference is Condition 3.5.

Condition 7.1: See comments on Condition 6.1 of the Crude Unit permit.

Condition 7.2: This condition incorrectly references Condition 6.1 (twice). The correct reference is Condition 7.1.

Condition 7.3.3: This condition incorrectly references Condition 3.1.1. The correct reference is Condition 3.1.

If you have any questions regarding submittal, please contact me at 302-834-6405.

Sincerely,



Thomas S. Godlewski, Jr.
Senior Environmental Engineer

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