

## **Comments on Proposed Regulation 1142**

### **Introduction**

In January 2006, the Secretary of the Delaware Department of Natural Resources and Environmental Control (“DNREC”) issued a “Start Action Notice” to announce the intended development of a NO<sub>x</sub> emissions control regulation. According to the Start Action Notice, the intent of the regulation would be to reduce NO<sub>x</sub> emissions from large boilers and process heaters with heat inputs greater than or equal to 200 MMBtu/hr and located at petroleum refineries in the State. Between March and August 2006, DNREC’s Air Quality Management Section (“AQM”) has held five stakeholder committee meetings to provide a forum for stakeholders affected by proposed Regulation 1142 to comment upon the proposed regulation and aid the Department in formulating the rule. The committee consisted of representatives from AQM, the Delaware Department of Health, various environmental and community groups, and The Premcor Refining Group Inc., a Valero Company (“Premcor”). As the owner and operator of the Delaware City Refinery (“DCR”)—the only facility potentially affected by the proposed regulation—Premcor has actively participated in each of the stakeholder committee meetings.

In April 2006, AQM circulated to the committee a draft of regulation 1142 that did not contain specific emission limits or other information relevant to specific compliance requirements. In mid-August, 2006, AQM circulated a second draft regulation that contained, for the first time, draft specific emission limits, averaging periods, and other compliance information. These draft regulatory terms were discussed at length at the stakeholder meeting in August 2006. At the conclusion of that meeting, Premcor noted that it believed a number of issues and questions related to the proposed regulation remained outstanding. Premcor agreed to provide AQM with additional comments on the proposed regulation for AQM’s consideration in advance of a public workshop concerning the proposed regulation, which is now scheduled for October 5, 2006.

Premcor provides the following comments as a supplement to the comments Premcor has made throughout the stakeholder committee process, including the written comments distributed to AQM and the committee at the August meeting. The comments reflect outstanding concerns that have not been addressed through the stakeholder process, which in turn have resulted in draft emission limits and other provisions that have not been adequately explained or supported.

### **Commitment to NO<sub>x</sub> Emission Reductions from the Refinery**

As demonstrated by Premcor’s prior actions concerning the Refinery, Premcor will work cooperatively with DNREC to pursue ozone and PM<sub>2.5</sub> attainment, and is not opposed to implementing reasonable and appropriate control options that equitably reflect the DCR’s relative impact upon the region’s nonattainment status. To that end, Premcor has engaged in a number of NO<sub>x</sub> emission reduction efforts at the DCR, has committed to significant additional reductions, and continues to investigate opportunities to achieve further reductions through available and feasible control measures.

## Specific Comments

### 1. The rulemaking record does not reflect any evaluation of the relationship between specific emissions at the DCR and contribution to nonattainment.

DNREC has consistently maintained that the provisions proposed in Regulation 1142 are appropriate because they are a key component of Delaware's efforts to meet its attainment obligations with respect to ozone and PM 2.5, and that the process heaters and boilers at the DCR are contributing to nonattainment. Nevertheless, the current rulemaking record contains little information as to the effect of NO<sub>x</sub> emission reductions from DCR process heaters and boilers upon the attainment status within the Philadelphia-Wilmington-Atlantic City ("PWA") nonattainment region.

At the start of the stakeholder process, DNREC noted that the "zero-out" modeling, using 2002 emissions data, showed that "Delaware emissions alone can cause exceeding [sic] of the federal ozone standard in Delaware and the downwind states." This statement does not, however, relate attainment concerns to specific NO<sub>x</sub> emission sources, for example by consideration of the specific locations of the monitors shown to be in nonattainment or any data that indicates the cause of such nonattainment. In addition, DNREC has noted that recent modeling performed by the Ozone Transport Commission ("OTC") has shown that current "on the books" NO<sub>x</sub> and VOC reductions result in all Delaware monitoring stations achieving attainment.

Nonetheless, DNREC points to the expected OTC determination that certain monitoring stations in Pennsylvania and New Jersey will remain in nonattainment without additional reductions. DNREC also has stated that DCR's contribution of 10.5 TPD of NO<sub>x</sub> emissions represents a "significant" portion of the 144.5 TPD of NO<sub>x</sub> emissions from Kent and New Castle counties. These two statements appear to provide the only basis for DNREC's conclusion that Delaware's regulatory program under Title I of the Clean Air Act should necessarily include more stringent limits on large process heaters and boilers at the DCR.

To the extent that DNREC's analysis focuses on potential impacts of Delaware emissions upon "downwind", out-of-state areas, DNREC's rationale for further regulating process heaters and boilers at the DCR is not well-supported. First, DNREC's analysis appears to assume that all upwind sources affect all downwind monitoring stations in a similar and proportional fashion. Air transport modeling, however, is a specialized and complex process. Reducing this complex modeling to oversimplified notions of NO<sub>x</sub> transport runs the risk of resulting in costly regulations that do little to achieve attainment within the PWA. Second, DNREC appears to conclude, without identified support, that emissions from Delaware sources -- more specifically, from DCR -- are principally responsible for the nonattainment concerns in the downwind states. In any event DNREC's analysis does not appear to consider additional control measures yet to be implemented in other OTC states.

2. The rulemaking record does not contain sufficient information concerning the air transport modeling used by DNREC to support the limits in proposed Regulation 1142.

As noted above, air transport modeling is a critical tool that should be used to develop and evaluate any regulation designed to move the PWA region towards attainment. Indeed, at various times during the stakeholder process, DNREC has generally referenced modeling results that purport to justify the restrictions proposed through Regulation 1142.

While DNREC has acknowledged the important role of NO<sub>x</sub> transport modeling in the regulatory development process, it appears that DNREC has not performed its own modeling. Instead, DNREC appears to rely primarily upon ongoing and incomplete modeling efforts undertaken by the OTC. At the outset, Premcor questions whether, in crafting regulations that directly affect Delaware citizens and businesses, DNREC can and should rely to such a degree upon modeling performed under the auspices of a multi-state organization that includes states from outside the PWA. The concerns arising from reliance upon the OTC modeling are exacerbated by the fact that the OTC modeling is not directed towards evaluating the effect of NO<sub>x</sub> emission reductions from specific sources within Delaware. Second, DNREC's reliance upon the OTC modeling efforts have made DNREC's regulatory effort subject to the OTC's modeling schedule, which in turn has put DNREC in the position of developing regulatory limits and restrictions before the OTC has completed its modeling exercise. Finally in this context, DNREC's decision to defer to the OTC modeling efforts has resulted in a situation where DNREC has responded to questions about details of the modeling exercise by stating that commentors wishing to review or comment upon the modeling work that DNREC has adopted must seek such information from and make any comments to the OTC rather than DNREC.

In the context of developing this significant regulation, it is essential that DNREC maintains the open and public process that DNREC has envisioned, affording affected participants an opportunity to review and comment fully upon the development of this regulation. At a minimum, before the Regulation 1142 development process proceeds, DNREC should be in a position to explain in detail the methods used in the attainment modeling relied upon by DNREC, the assumptions in such modeling, the Delaware-specific inputs used in this modeling, all results of each modeling exercise undertaken by the OTC, and specifically how the provisions of Regulation 1142 will affect the results of such modeling.

3. DNREC may not have sufficiently considered commitments for NO<sub>x</sub> reductions from DCR.

Recently and over the next few years, the DCR has undertaken and intends to undertake a number of projects that will reduce NO<sub>x</sub> emissions from the refinery. These NO<sub>x</sub> reductions—some of which are associated with units affected by proposed Regulation 1142—will move the PWA towards ozone attainment, and therefore should

be considered when evaluating the effectiveness of proposed Regulation 1142. It is unclear, however, to what extent DNREC has considered these NOx reductions during the regulatory development process.

For example, until DNREC's September 5, 2006 responses to the comments and questions submitted by Premcor at the August 2006 committee meeting, DNREC had not specifically referenced (as part of its attainment evaluation) Premcor's plans to reduce NOx emissions from the FCCU CO boiler in accordance with the provisions of an agreement between DNREC and Premcor executed in July 2006. DNREC's September 5 responses assert that the modeling completed by the OTC in April 2006 took these FCCU CO boiler reductions into account but nonetheless projected nonattainment within the PWA region.<sup>1</sup> It is not clear how modeling completed in April 2006 could properly incorporate the reductions provided under an agreement that was executed in July 2006. Even assuming, however, that such reductions were incorporated into OTC's analysis, it is not clear whether the OTC modeling committee accurately incorporated those reductions, and if so, what effect those significant reductions had upon the modeling results.

In addition to the significant NOx emission reductions anticipated from Premcor's committed controls for the FCCU, Premcor is also completing implementation of a selective non-catalytic reduction ("SNCR") system to control NOx emissions from its Fluid Coking Unit ("FCU") CO boiler, at a cost of more than \$6 million dollars. The SNCR system will achieve significant NOx emission reductions, and the post-control emission rate will be reflected in an enforceable permit limitation. However, DNREC's regulatory analysis also does not appear to reflect the effects of this control system.

4. The current record does not accurately reflect relevant aspects of the "comparable" regulations, programs and control standards DNREC has cited in support of Regulation 1142 provisions.

In support of the process heater and boiler NOx reduction proposals currently identified in draft Regulation 1142, DNREC has pointed to "comparable" NOx reduction requirements in two other states: Texas and California. DNREC's latest draft version of proposed Regulation 1142, however, is not consistent with the referenced regulatory programs for a number of reasons, including the absence of provisions that provide the regulated entities with necessary operational flexibility to achieve these limits. DNREC's failure to include these aspects of the Texas and California programs calls into question DNREC's reliance upon the limits imposed by these states outside the PWA region.

For example, the Texas regulations applicable to the Beaumont-Port Arthur and Dallas nonattainment areas containing the limits referenced by DNREC of 0.10 lb/MMBtu (for boilers) and 0.08 lb/MMBtu (for process heaters) provide an option for a 30 day rolling average. The latest draft version of Regulation 1142, by contrast,

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<sup>1</sup> After reviewing the portion of the March 15, 2006 committee minutes, to which DNREC directed Premcor in response to Premcor's questions about "on-the-books" controls, there appears to be no mention of the FCCU CO boiler NOx reductions contemplated by the agreement executed in July 2006.

mandates a more stringent NO<sub>x</sub> emission limit of 0.04 lb/MMBtu for affected units. Second, the Delaware standard would be evaluated on a more restrictive 24 hour rolling average. Third, the Texas regulations grant facilities the option to achieve compliance through a plant-wide emission specification that sweeps in boilers and process heaters with heat input capacities between 40 MMBtu and 100 MMBtu per hour. The facility-wide limit of 0.03 lb/MMBtu imposed by the draft version of Regulation 1142 does not permit such flexibility, and instead imposes a facility-wide annual average limit on only large units.

In addition, DNREC points approvingly to the limits of 0.02 lb/MMBtu and 40 ppm imposed upon gas-fired boilers and FCCU CO boilers, respectively, in the Houston-Galveston nonattainment area. As DNREC has acknowledged, however, Houston-Galveston facilities subject to these stringent limits may also participate in an area-wide NO<sub>x</sub> cap and trade program that allows the facilities to purchase available emission credits if specific units cannot achieve the prescribed limits. Similarly, California facilities subject to the 0.03 lb/MMBtu limit imposed by California's South Coast Air Quality Management District and cited by DNREC may participate in the District's Regional Clean Air Incentives Market ("RECLAIM"), another broad-based NO<sub>x</sub> emissions cap and trade program. In contrast to the cap and trade options available in Texas and California, the draft version of Regulation 1142 does not provide for any cap and trade program. Moreover, unlike the regulatory programs in Texas and California, the draft version of Regulation 1142 is currently focused upon a single facility, which severely limits the availability of cap and trade or other compliance options. In sum, due to the absence of the compliance flexibility built into the Texas and California programs, the burden imposed upon DCR under the Delaware scheme would be substantially greater than under the requirements included in the Texas and California programs. For this and other reasons, DNREC's reliance upon the Houston-Galveston and California limits to support the current version of draft Regulation 1142 is misplaced.

Along these same lines, DNREC has referenced emission or control standards applied to units permitted in other states, as identified in EPA's RACT/BACT/LAER clearinghouse. According to DNREC, the identification of these limits in the clearinghouse demonstrates the levels of control Premcor should be able to achieve for affected units at the DCR. DNREC has acknowledged, however, that some of the out-of-state limits included in the record were applicable to new units (although at the August meeting, DNREC was not clear as to which limits were imposed upon new units and which were imposed upon existing units). For example, it appears that the limits noted by DNREC to be applicable to three units permitted in Arizona are associated with the Clean Fuels facility in Yuma, the first "greenfield" refinery to be constructed in the United States in over thirty years. Using limits imposed upon a refinery that has yet to be constructed—and thus has yet to demonstrate that the permitted limits are achievable—as a basis for limits fails to consider the types of control that are appropriate and feasible for units at the DCR. Limits imposed upon new units may be completely inapplicable to the existing units at the DCR subject to Regulation 1142.

Finally in this context, DNREC has noted that one of the sources for the limits prescribed by the current draft of Regulation 1142 is the 0.04 lb/MMBtu design point for ultra low-NOx burners (“ULNBs”) included in consent decrees between various refiners and EPA. DNREC’s use of this 0.04 lb/MMBtu figure is misplaced for at least two reasons. First, the consent decrees DNREC has referenced are complex agreements that include numerous, inter-related provisions, intended to address specific sources for specific reasons reflected through the agreement.<sup>2</sup> Second, setting aside for the moment the fundamental problems associated with referencing a consent decree term in support of a regulatory limit, the relevant process heater and boiler limits contained in these consent decrees are not analogous to the current draft regulation. Specifically, the consent decrees call out the 0.04 lb/MMBtu figure as a mandatory design point for ULNBs when firing natural gas. The consent decrees do not impose a NOx emission limit of 0.04 lb/MMBtu on process heaters or boilers, or indeed say anything about whether a such rate is achievable when the units employing ULNBs fire refinery fuel gas.

5. The record lacks sufficient technical justification for imposing a 0.03 lb/MMBtu limit on affected sources at the refinery in lieu of a 0.04 lb/MMBtu limit

From the outset of the Regulation 1142 committee process, DNREC has looked to an emissions level of 0.04 lb/MMBtu as a starting point for NOx emission limits to be imposed by Regulation 1142. In the draft regulation circulated shortly before the August committee meeting, DNREC included, for the first time, an annual average limit of 0.03 lb/MMBtu on a facility-wide basis.<sup>3</sup> To our knowledge DNREC has not identified any technical basis to shift to this 0.03 lb/MMBtu limit. The first four committee meeting minutes reference general discussions about limits other than 0.04 lb/MMBtu, with a conclusion that the various environmental groups supported a more stringent limit of 0.03 lb/MMBtu. None of these materials, however, contain any technical justification for pursuing this new limit. There is no information as to the specific benefits DNREC hopes to achieve through the 0.03 lb/MMBtu limit, the costs DNREC believes this new

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<sup>2</sup> Moreover, the purpose of the negotiated consent decrees -- through which the refinery parties have agreed to undertake certain actions not necessarily required by regulation in exchange for a release from liability for certain alleged Clean Air Act violations -- is materially different than the objectives of a prospective regulatory program. Turning to a provision of a negotiated agreement with a government authority to provide a baseline for future mandatory regulatory action misconstrues the purposes behind such consent agreements, and possibly provides a disincentive for regulated entities to enter into such agreements in the first instance out of a concern that these negotiated limits will be used against the facility in a regulatory development setting.

<sup>3</sup> In its September 5 response, DNREC appears to take issue with Premcor’s characterization of the new 0.03 lb/MMBtu limit as a reduction of the 0.04 lb/MMBtu starting point, because the 0.04 lb/MMBtu limit remained in the recent draft as a limit for each unit on a 24-hour rolling average basis. While Premcor acknowledges that the 0.04 lb/MMBtu figure remains in the proposed regulation in some form, the point of Premcor’s original comment was to emphasize that the 0.03 lb/MMBtu limit that appears in the draft of the regulation constituted a significantly more stringent limit for facility-wide compliance than the value previously identified by DNREC for consideration for purposes of regulatory development.

limit will impose upon the DCR, and how, if at all, these benefits assist Delaware in achieving ozone attainment.

6. DNREC has unjustifiably fashioned the Regulation 1142 to impose expensive control requirements solely upon a single facility.

DNREC emissions information indicates that NO<sub>x</sub> emissions from the refinery constituted less than 8% of the 2002 NO<sub>x</sub> emissions from sources within New Castle and Kent counties.<sup>4</sup> This same information noted that the DCR units potentially subject to the draft of Regulation 1142 comprise approximately 6% of the 2002 NO<sub>x</sub> emissions total.<sup>5</sup> Based upon these figures, it is unclear how reducing NO<sub>x</sub> emissions from large process heaters and boilers through costly controls will result in any significant movement towards attainment within the PWA region, or necessarily constitute the most effective or efficient control option.

These NO<sub>x</sub> emission figures indicate that the aggregate contribution of emissions from other stationary sources may be significantly contributing to nonattainment within the PWA region, and that additional controls upon these sources may more effectively, and more equitably, allow Delaware to meet its commitments with respect to achieving attainment within the PWA region. For example, controlling smaller heaters and boilers outside the refinery could produce significant NO<sub>x</sub> reductions. This possibility appears to have been raised a number of times by committee members. In response to such comments, DNREC has noted only that small boilers “might” be included in the 2002 emission inventory as area sources, and that area sources accounted for less than 2 TPD of NO<sub>x</sub> emissions in Kent and New Castle counties.

Accepting for purposes of this analysis DNREC’s statement about smaller heaters and boilers being included in the inventory as area sources, this fact does not necessarily preclude the ability for these sources, in the aggregate, to achieve meaningful NO<sub>x</sub> reductions through installation of cost-effective controls. Indeed, Pete Jacoby, a committee member with expertise in process heater and boiler operation, suggested that significant NO<sub>x</sub> reductions could be achieved by requiring all owners and operators of process heaters and boilers smaller than 200 MMBtu/hr to make less costly upgrades to their pollution control equipment.

In addition, DNREC’s 2002 emission data identifies approximately 10.5 TPD of NO<sub>x</sub> emissions from other unaccounted point sources. These sources are apparently are not currently addressed as part of Delaware’s efforts to move towards attainment.<sup>6</sup> Because the NO<sub>x</sub> contribution of their sources to attainment issues within the PWA is apparently similar, it is unclear from the record why the 10.5 TPD of NO<sub>x</sub> emissions

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<sup>4</sup> 10.5 TPD out of 144.5 TPD.

<sup>5</sup> 8.7 TPD out of 144.5 TPD.

<sup>6</sup> In the July 19, 2006 meeting minutes, DNREC indicated that, of the 49 TPD of NO<sub>x</sub> emissions contributed by point sources, 10.5 TPD are from the DCR and 28 are from EGUs. Accordingly, this leaves 10.5 TPD from other point sources in Kent and New Castle counties.

from “other” point sources should be addressed separately and on a different schedule (if at all) relative to the 10.5 TPD of NO<sub>x</sub> emissions from the DCR. And because DNREC has not yet chosen to examine the controls that could be required for these other point sources, it is also unclear as to whether additional restrictions imposed upon these “other” units could result in significant reductions in NO<sub>x</sub> emissions in Delaware, and whether such controls are feasible and cost effective.

The absence of current efforts to explore NO<sub>x</sub> reductions from sources other than DCR and EGUs results in a regulatory scheme that requires a small number of facilities to shoulder virtually all of the burden with respect to Delaware’s ozone attainment obligations. This singular focus upon an individual facility is not only inequitable but could be unnecessary if some of Delaware’s necessary NO<sub>x</sub> reductions could be secured in a cost effective manner at a broader spectrum of sources.

7. DNREC has discounted the benefits of emission reductions achievable from mobile sources through state-specific measures.

The 2002 emissions data indicates that mobile sources comprise 50.6 TPD, or about 35%, of the NO<sub>x</sub> emissions from Kent and New Castle counties. Despite the fact that the amount of NO<sub>x</sub> emissions from mobile sources is approximately equal to the amount of NO<sub>x</sub> emissions from point sources, the record indicates that DNREC has devoted significantly more resources towards developing regulation of point sources than has been devoted to exploring control alternatives from mobile sources.

Specifically, it appears that DNREC has ceded responsibility for examining NO<sub>x</sub> reduction alternatives from mobile sources to DelDOT. According to DNREC, DelDOT is the major “task-taker” for cost and reduction estimates from mobile sources, and it is DelDOT that performs the required travel-demand and MOBILE emission modeling necessary for examining such alternatives. While DNREC has noted that it works closely with DelDOT on these issues, currently there is little information in the record to indicate that DNREC has extensively analyzed NO<sub>x</sub> reduction alternatives for mobile sources. For example, DNREC has noted that someone (presumably DelDOT) performed a preliminary study looking at projected emissions reductions resulting from lowering the speed limit on I-495. It is not clear whether this study was ever finalized, or whether establishing more stringent speed limits on other roadways were ever examined as part of this study. Further, the record does not reflect that other state-specific measures, such as retiming of traffic lights or enhanced inspection and maintenance programs, were ever considered. Given the recognized magnitude of NO<sub>x</sub> emissions from mobile sources, Premcor believes that more efforts should be directed towards examining NO<sub>x</sub> and VOC reduction alternatives for mobile sources as part of any comprehensive attainment demonstration.

By contrast, other states—including states within the PWA—have proposed significant measures to reduce emissions from mobile sources as part of their efforts to meet ozone attainment requirements. For example, Pennsylvania intends to promulgate regulations to implement its Clean Vehicles Program, a program whereby new vehicles

will be required to meet the emission standards of the California Low Emission Vehicle Program beginning in 2008. New Jersey, the other state within the PWA, adopted similar rules in 2005. There is currently no information in the rulemaking record indicating whether DNREC has evaluated the effect of adopting similar rules on ozone attainment issues.

8. DNREC has not presented sufficient information demonstrating that that the DCR affected units can reasonably achieve the NOx emission limits prescribed by draft Regulation 1142.

To date, DNREC has supported its conclusion that the DCR units affected by Regulation 1142 can reasonably achieve the currently proposed NOx emission limits through reference to three sources: (1) NOx emission limits imposed upon process heaters and boilers through regulatory programs in states outside the PWA; (2) selected data from EPA's RACT/BACT/LAER clearinghouse; and (3) design standards for ULNB's included in consent decrees between various refiners and EPA. As discussed in more detail above, DNREC's reliance upon these sources is either incomplete or misplaced. Instead, DNREC has not evaluated, let alone demonstrated, on a source-specific basis that the DCR affected units can reasonably achieve the standards identified in the current draft of Regulation 1142. Each process heater and boiler at the DCR poses its own unique control challenges, including relative to technical feasibility, cost effectiveness, and even space limitations.

The control challenges are evident with respect to the Fluid Coking Unit's ("FCU") CO boiler, a waste heat boiler for which the current draft of Regulation 1142 prescribes NOx emission limits.<sup>7</sup> Initially, the record indicates that DNREC believes the emission limits for the FCU CO boiler contained in the current draft of Regulation 1142 can be achieved through the application of LoTox control technology. LoTox, however, has never been employed to control FCU NOx emissions at any location, and Premcor is not aware of any plans to do so. Accordingly, it is inappropriate to assume the use of LoTox at the DCR FCU CO boiler will effectively reduce NOx emissions to the levels currently in draft Regulation 1142. In addition, even if the control technology were technically feasible, which is not established, a number of other logistical issues could affect whether installation of LoTox at the FCU CO boiler is feasible.

In addition to the FCU CO boiler, other affected units will likely present unique control issues. For example, as noted in previous meetings, the methane reformer unit is equipped with approximately 500 burners, which would necessarily require Premcor to evaluate multiple control technologies at various points within the unit or at the stack. More generally, a more extensive, unit-specific analysis is necessary before it can be said

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<sup>7</sup> Initially, it is questionable whether CO boilers should be regulated along with the other process heaters and boilers at the refinery. The significant technical differences between CO boilers, which are waste heat boilers, and correctional gaseous fuel-fired heaters and boilers are reflected in the recently promulgated industrial process heater and boiler MACT standard, 40 C.F.R., Subpart DDDDD, which specifically excludes waste heat boilers.

that the DCR affected process heaters and boilers can achieve the limits contained in the current draft of Regulation 1142.

In an effort to supplement the rulemaking record on the aforementioned issues, Premcor intends to submit for consideration by the end of the month a more detailed technical and economic analysis whether additional NOx reductions can be reasonably achieved at the affected units.

9. Costs of compliance should be considered by DNREC in developing this regulation.

Throughout the regulatory development process, Premcor has consistently maintained that DNREC should consider whether the controls necessary to achieve the limits imposed by Regulation 1142 would be cost-effective. To that end, Premcor has presented cost data to the committee that indicates that the cost of installing controls to achieve the limits prescribed by the current version of Regulation 1142 would range from approximately \$20,000 per ton of NOx to \$145,000 per ton of NOx, spending levels that considerably exceed any accepted cost-effectiveness benchmark.

In addition to cost-effectiveness on a per-ton-of-emissions basis, Premcor believes that DNREC must strongly weigh the total cost of implementing control technology at any given source when considering the propriety of requiring additional controls for the source. For example, with respect to the FCU CO boiler, DNREC should recognize that the total cost of installing additional NOx emission control technology could be orders of magnitude higher than the amount other units, such as EGUs, are required to spend to meet the limits currently proposed by DNREC for those units. Capital expenditures of such magnitude at the DCR are significant, especially in light of the significant capital expenditures already undertaken by Premcor to achieve emission reductions at the DCR.

10. The approach towards achieving NOx reductions from, and the burden to be imposed on, the DCR is inconsistent with DNREC's simultaneous rulemaking effort for electric generating units.

As noted previously, 2002 emissions data indicates that EGUs contribute almost 28 TPD of NOx emissions in Kent and New Castle counties, which is nearly three times the amount of NOx emissions from the DCR. Recognizing the significant impact Delaware EGUs likely have upon attainment status within the PWA, DNREC has engaged in a parallel rulemaking effort with respect to the EGUs in an attempt to reduce NOx and other emissions from these units. DNREC's approach towards the EGU regulation and the most current form of NOx control contained in the EGU regulation, however, has differed substantially from the approach and result of the Regulation 1142 process.

First, with respect to EGUs, DNREC has utilized a much more systematic approach to identify appropriate NOx limits. Specifically, DNREC identified what it believed was a proven control technology employed on existing units, in this case SCR, and chose a limit based upon the application of that technology to analogous units. By

contrast, with respect to process heaters and boilers at the DCR, DNREC first conducted a general survey of regulatory and permitted NOx limits to select a proposed NOx emission “starting point” without consideration as to whether those limits were achievable at the unique DCR units and without allowance for the flexible compliance options available to affected sources in those locations.

Second, with respect to cost burdens, information generated by DNREC during the EGU regulatory process notes that the cost of NOx reductions will range from \$1,200 to \$2,600 per ton for coal fired units, and from \$2,400 to \$5,000 for oil fired units. Cost information presented by Premcor during the regulatory development process, by contrast, demonstrates that the cost of NOx reductions for the DCR will exceed these rates by an order of magnitude. This huge disparity in costs of compliance is unfounded, and Premcor should not be required to shoulder the burden of moving towards ozone attainment in this disproportionate fashion.

In response to previous comments over concerns that the DCR is being unfairly required to bear the NOx reduction load in New Castle and Kent counties, DNREC has cited figures indicating that the percentage of NOx reduction in Delaware that is expected from the EGUs is similar to the reductions expected from the DCR. Regardless of the accuracy of this statement, the analysis of this issue is incomplete without any reference to the cost issues. In other words, a conclusion that both EGUs and the DCR are expected to reduce NOx emissions by 50-60% is insufficient if the 50-60% reduction imposed upon a single facility such as the DCR will cost the DCR over 10 times as much per ton of NOx reduction when compared to the EGUs. Further, the same logic would require application of an equivalent control burden on all NOx sources in New Castle and Kent counties, which would significantly reduce the necessary burden imposed uniquely on DCR.

11. The compliance dates imposed by the current version of Regulation 1142 are unreasonable and unnecessary.

The current version of draft Regulation 1142 would require full compliance with prescribed NOx emission limits by December 31, 2008. DNREC has included no information in the record as to why it believes achieving the NOx reductions mandated by this regulation can be satisfied on such an expedited basis.

As with any pollution control installation, to install the control equipment contemplated by Regulation 1142, Premcor will be required to perform extensive engineering even before applying for the required construction permits. And once Premcor obtains the necessary construction permits—a process that could take months—Premcor will need to obtain the specialized equipment, engage appropriate installation contractors, install the equipment, and perform any necessary shakedown to ensure proper operation of the equipment.<sup>8</sup> In Premcor’s experience, completing such a process

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<sup>8</sup> Typically, state and federal regulatory programs imposing significant new emission control requirements upon existing sources afford a minimum of three years for compliance to allow sufficient time for new control equipment or operational practices to be put into place.

is difficult within three years, and it is virtually impossible to complete within the two years contemplated by the current version of Regulation 1142. Moreover, a number of major pollution control projects at the DCR are currently underway, and more will commence over the next five years. These important projects necessarily require the same limited resources as the pollution control projects that would be necessary if the limits contained in the current draft of Regulation 1142 are adopted.

In addition, DNREC proposes through current draft rulemaking to afford the EGUs a two stage compliance process, with partial compliance required by January 1, 2009, and full compliance required by January 1, 2012. DNREC has provided insufficient reasons as to why Premcor should not be afforded a similar two-stage approach.

Along these lines, DNREC has suggested that the December 31, 2008 compliance deadline and the EGU's initial January 1, 2009 deadline are driven by Delaware's requirements to demonstrate reasonable further progress towards ozone attainment by May 1, 2009. Premcor has already committed to emission control projects that are projected to achieve substantial NOx reductions by May 1, 2009. The extent of the reductions would exceed 15% of the 2002 NOx emission baseline for the DCR. Based upon the above, a specific compliance deadline corresponding to the reasonable further progress deadline is unnecessary.

Accordingly, Premcor proposes that the regulation include a single compliance deadline of May 1, 2012, the current deadline for Delaware's ozone attainment demonstration. Alternatively, Premcor requests that the compliance deadline in Regulation 1142 be modified to adopt a two-stage approach, pursuant to which Premcor would achieve a portion of necessary NOx emission reductions by May 1, 2009, and the remaining reductions by May 1, 2012.

Premcor appreciates the opportunity to provide these comments to DNREC and the committee and looks forward to continued participation in the rulemaking process for proposed Regulation 1142.