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DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL
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Office of the
Secretary

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Secretary's Order No. **2005-A-0013**

Re: Application of the Premcor Refining Group, Inc. for an Air Quality Management Operating Permit for Emissions Units Associated with Equipment Installed at the Delaware City Refinery's Power Plant (Title V Permit Part 3 Delaware City Refinery Power Plant Repowering Project)

Date of Issuance: **February 14, 2005**

Effective Date: **February 14, 2005**

Under the authority vested in the Secretary of the Department of Natural Resources and Environmental Control ("Department") under 29 Del. C. §§8001 et seq., the following findings and conclusions are entered as an Order of the Secretary on the Title V permit application of Premcor Refining Group, Inc. ("Premcor") and the Department's draft permit:

1. This proceeding considers Premcor's Title V Part 3 permit application for an operating permit under the Department's Regulation No. 30, Regulations Governing the Control of Air Pollution ("Regulation No. 30"), which was promulgated pursuant to Title V of the federal Clean Air Act, as amended. On May 7, 2004, the Department issued a draft permit, and this was the subject of public notice in order to allow the public to comment and to request a public hearing. The Department received a meritorious request for a hearing and comments, and scheduled and provided public notice of a public

hearing, which was held on August 18, 2004. On February 10, 2005, the Hearing Officer issued a Report ("Report") that reviewed the public hearing record and made recommendations, including for approval of a proposed permit. The Report is appended hereto and incorporated into this Order.

2. The draft permit is for emissions units for Premcor's Repowering Project ("Project"), which consists of equipment Premcor installed at the Delaware City Refinery's ("DCR") power plant in order to convert the fuel burned at the power plants' boilers Nos. 1, 2 and 3. Instead of burning petroleum coke, these boilers now use gas. In addition, the Project produces syngas from the high sulfur coke, and the syngas is then processed and used as a fuel in two combustion turbines and Boiler No. 3. Due to the complexity of the DCR's Title V permitting process, the Department for administrative purposes previously determined that DCR's Title V permit should be segmented into three parts, and this Project was identified as Part 3.

3. Based upon the public hearing record, I find and conclude that there is adequate support for approving a proposed permit, as recommended in the Report. The Report reviews the public comments transcribed at the public hearing and the documents submitted into the public hearing's record, including those provided after the hearing as part of the extended public comment period. Several groups and individuals presented comments at the public hearing, and these comments raised issues concerning the Department's draft permit. Premcor also provided extensive comments. I have considered these comments, and find and conclude that the Report's recommendations are appropriate and should be adopted. The Report discusses the comments at length, but two issues in particular warrant further consideration in this Order.

4. The first issue is the Department's condition to the proposed permit that would reflect an operating limit on Boiler No. 4 based upon the information Premcor provided for the existing design rating for the boiler. Several public comments advocated such a condition, which was not included in the draft permit although the Department reserved the right to include such a condition. Premcor opposed this condition, and argued that the Department has no legal authority to impose a new condition on the equipment that had was not included in the existing permit. The Report concluded that the Department's use of an existing design rating, as provided by Premcor, does not constitute any 'new substantive control requirements' within the meaning of Regulation No. 30. This is the appropriate Department position. The condition will reflect existing operating conditions for boiler No. 4, which should be reflected in an operating permit under Regulation No. 30. Premcor's position may have merit if the Department imposed a limit different from what currently exists, but reflecting Premcor's current operating conditions in an operating permit is not a 'new' control. Instead, it represents known operating limits and these should be included in a Title V permit consistent with Regulation No. 30. A Title V permit needs to be based upon known maximum operating conditions, and the boiler's existing design rating is an appropriate limit to use.

5. The second issue that requires additional discussion in this Order is whether a compliance schedule is required under Regulation No. 30 for any emission unit that is not in compliance. The dispute centers on certain units that the Department's experts indicate can become compliant through certain operational changes. Premcor seeks a compliance schedule based upon December 2006. The Report concluded that

Premcor failed to adequately support its position as required by Regulation No. 30, and that Premcor was responsible for operating all units in compliance with their existing permits or providing a satisfactory compliance schedule if the units are not in compliance when the permit is issued.

6. The joint comments of the Mid-Atlantic Environmental Law Clinic and the Sierra Club also seek compliance schedules based upon DCR's history of non-compliance. The Report recommends that no compliance schedule be required at this time, but that Condition 2.b. of the draft permit does impose on Premcor the requirement to submit a satisfactory compliance schedule when the final permit is issued if a unit is not in compliance. This is consistent with Regulation No. 30, which requires a compliance schedule for noncompliance when the permit is issued. This interpretation defers to the Department's expert advice that Premcor can make the necessary changes before the permit is issued or submit a satisfactory compliance schedule to the Department pursuant to Condition 2. b. In the meantime, any current permit limits that Premcor does not meet may be subject to a Department enforcement action. This resolution of the issue is reasonable, is consistent with the law and the regulations.

7. In sum, I find and conclude that the record supports the approval of a proposed permit based on the draft permit, as amended by the Department and consistent with this Order, in order that the Unites States Environmental Protection Agency may review and approve the proposed permit and allow the Department to issue a final permit pursuant to Regulation No. 30.

8. The Department provided adequate public notice of the hearing in a manner required by the applicable law and regulations.

9. The Department considered all timely public comments and questions on the permit applications, as presented to the Department in writing and orally at the public hearing and the public comment session.

10. The Department relied on the expert technical advice and investigation of the Department's employees and contractors in their review of the application and advice on the proposed permit.

11. The Department has an adequate record for its decision, and no further opportunity for comments or a public hearing is appropriate or necessary.

/s/ *John A. Hughes*

John A. Hughes
Secretary

HEARING OFFICER'S REPORT

TO: The Honorable John A. Hughes
Secretary, Department of Natural Resources and Environmental Control

FROM: Robert P. Haynes, Esquire
Hearing Officer, Office of the Secretary
Department of Natural Resources and Environmental Control

RE: Application Of The Premcor Refining Group, Inc. for an Air Quality Management Operating Permit for Emission Units Associated with Equipment Installed at the Delaware City Refinery's Power Plant. (Title V Permit Part 3 Delaware City Refinery Power Plant Repowering Project)

DATE: February 10, 2005

I. BACKGROUND

This Hearing Officer, delegated authority by the Secretary of the Department of Natural Resources and Environmental Control ("DNREC" or "Department") pursuant to 29 Del. C. §§6606 and 8003, presided over a duly noticed public hearing commencing at 6:00 p.m. at the Department's Lukens Drive offices in New Castle.

The hearing was held to consider public comments and questions on The Premcor Refining, Group Inc.'s ("Premcor") application and the Department's draft permit, as prepared by the Division of Air and Waste Management's Air Quality Management ("AQM") Section. The draft permit was prepared based upon the Department's review of Motiva Enterprises LLC's ("Motiva") May 29, 1997 permit application under Title V for the Delaware City Refinery ("DCR"), as required by the federal Clean Air Act, as amended. Motiva submitted revised applications, ending with the eighth revision filed on February 11, 2004.

On May 1, 2004, Premcor acquired Motiva's ("DCR"), and the Department transferred the pending application to Premcor. On May 7, 2004, the Department issued a draft permit and provided public notice in order to receive public comments, including requests for a public hearing. On June 10, 2004, the Mid-Atlantic Environmental Law Center ("MAELC") and the

Sierra Club jointly submitted a meritorious request for a public hearing and comments, and a public hearing was scheduled and public notice provided.

The Department previously determined, based upon its resources and the size and complexities involved with DCR's Title V permitting process that the Department for administrative purposes needed to divide the process into three parts. The Department issued the Part 1 permit on November 14, 2001, which occurred without any public request for a hearing. Part 2 is still pending, and Part 3 is based upon Premcor's Repowering Project ("Project").

The Project resulted in the conversion away from using coke as a fuel in DCR's power plant's boilers Nos. 1, 2 and 3. These boilers now burn gas to generate steam used in the refinery process and to generate electricity. In addition, the Project produces low Btu syngas from the high sulfur coke using two Texaco gasifers. The syngas is processed and burned in the two combustion turbines and Boiler No. 3. The Project's specific units in the Project are identified as: 1) Emission Unit 80, consisting of the Delaware City Power Plant's Boilers Nos. 1, 2, 3 and 4; 2) Emission Unit 82, consisting of two Texaco gasifiers and two gas coolers, an amine acid gas removal system, and a syngas flare, and 3) Emission Unit 84, consisting of two combined cycle, primarily syngas gas-fired, turbine units and associated 90 megawatt ("MW") heat recovery steam generators with natural gas fired duct burners. Emission Unit 82 was constructed as part of the Project. The units are currently operating pursuant to permits issued under Regulation No. 2 of the Department's *Regulations Governing the Control of Air Pollution*.

II. SUMMARY OF THE PUBLIC HEARING RECORD

The public hearing record contains a ninety page verbatim transcript of the public hearing, and exhibits (cited as "Ex."). An estimated forty persons attended the public hearing.

Mr. Ravi Rangan, P.E., an Environmental Engineer with AQM, presented the Department's hearing exhibits that were admitted into the record. DNREC Ex. 1 is Premcor's

application, as revised.[1] DNREC Ex. 2 is the May 7, 2004 draft permit, including technical review memorandum. DNREC Ex. 3 consists of the written comments that the Department received from Premcor, the United States Environmental Protection Agency ("EPA"), and the Sierra Club/Mid-Atlantic Environmental Law Center ("MAELC") in response to the initial public notice. A more detailed discussion of the comments is set forth below in the Discussion section of this report. DNREC Ex. 4 through Ex. 7 are letters that DNREC sent concerning the public hearing, the public notices of the draft permit and the public hearing, and the proof of publication of the notices. DNREC Ex. 8 is a copy of the hearing presentation. The Department's consultant, Malay Jindal, with MACTEC Engineering and Consulting, made a brief presentation.

Several representatives of Premcor and the following groups were present and spoke: MAELC, the Delaware Chapter of the Sierra Club, the Delaware Nature Society, Green Delaware, and Common Cause.

Some of the public comments included concerns with the Department's public hearing process, but the Department will addressing these in another proceeding and they will not be addressed in this report as they are not relevant to the draft permit.[2] The public comments generally supported the written and oral MAELC/Sierra Club comments, and a more detailed review of the comments is set forth in the following discussion.

III. DISCUSSION

The Department's personnel and consultants assisted in considering the public hearing record, and this assistance is set forth in two Department's Response Documents, dated September 29, 2004 and December 17, 2004 (cited as "September RD" and "December RD",

[1] This exhibit is voluminous and remains in AQM's public files. A chronological list of the file was set forth in the AQM technical review memorandum, which was Ex. 2 as part of the draft permit.
[2] The Department is circulating a draft of Public Hearing Guidelines that may address some of these concerns.

respectively). In addition, the Department of Justice provided advice in a February 8, 2005 memorandum that clarifies the prior Response Documents. These post-hearing documents are attached hereto as Appendix A and incorporated herein. The Response Documents comprehensively address the public comments and provide valuable expertise and specialized technical knowledge.[3]

A. Premcor Comments

Premcor's June 14, 2004 comments provided overall comments and specific comments for each condition that concerned Premcor. The September RD addressed these comments. In addition, Premcor submitted an October 22, 2004 comments in response to the September RD, which caused the Department to prepare the December RD. To the extent that the series of comments appear to have narrowed the disputes, this Report will primarily will address the issues that remain contested.

1) Format for Submitting Reports

Premcor's first general comment concerns the supplemental reporting requirements, and Premcor seeks clarification to be allowed to fax and e-mail reports to the Department when no imminent public health risk was present. AQM's September RD does not support the requested change because the reporting requirement's use of telephone contact is "boiler plate" language in all the Department's Title V permits pursuant to the Department's regulation. I agree that no change is necessary to the Department's boiler plate language, which may require changing the Department's regulation that the reporting requirement is based upon. It is appropriate to require the personal contact via telephone, which avoids problems with actual receipt of the information sent electronically or by fax.

[3] These are internal, non-binding documents prepared to assist the Hearing Officer and the Secretary in reviewing the public hearing record and the positions available.

2) Stack Testing

Premcor's second general comment concerns clarification on stack tests in several conditions in the draft permit. Premcor seeks to rely on the most recent stack test available as the reporting requirement. The Department's September RD indicates that the Department seeks to rely on the most recent stack test within the last five years, which is a requirement set forth in the draft permit's definition of "stack test based emissions factor." Regulation 2 also authorizes the Department to obtain tests as needed.

I recommend that the permit reflect a requirement for a stack test at least every five years. This is an important regulatory control and it should be made clear to Premcor and others. The issue of the frequency of the stack testing was the subject of public questions during the hearing, and it was evident that the most recent stack test was not done within the five year period. In addition, Premcor indicated delays in getting the complete results from Motiva or its contractor. The Department's use of a five year time period as the maximum frequency between tests is reasonable because it is based on the duration of a standard Title V permit for a source of this size. This time period allows periodic review based on current operating conditions at the facility under the Department's test protocol. As noted, the maximum duration between stack testing does not preclude the Department from requiring, as needed, a more frequent testing if the Department determines that conditions required such testing, such as changes that may cause the most recent stack test to be no longer relevant for evaluating the facility.

3) Compliance Schedule

Premcor's third general comment entails the lack of a compliance schedule in the draft permit. Premcor proposes a compliance schedule that would allow compliance by December 30, 2006. The September RD indicates that no compliance schedule is needed because AQM considers that proper operations could bring the marginally non-compliant units into compliance.

The September RD indicates that the existing permits allow the Department to pursue non-compliance through enforcement. Thus, AQM does not require a compliance schedule at this time if it considers that the units should be operating in compliance with the existing permits without any significant changes.

Premcor's October 22, 2004 comments assert that Premcor's forms AQM-1001Z were valid and complete and submitted as compliance schedules that supported Premcor's position that compliance would occur by December 2006. Premcor contends that the non-compliance for the PM-10 emissions may not be remedied through operational changes. Premcor indicates that compliance testing for Boiler 2 will be made available to the Department when it becomes available. The December RD refutes that Premcor's AQM 1001Z forms contained any sufficient level of detail to be an adequate compliance schedule.

I do not recommend the change sought by Premcor. AQM's position has considerable merit that Premcor should be held accountable to the existing permit limits in order to ensure the most rapid progress towards full compliance, including the possibility of Department enforcement action for any violations of existing permits. This dispute is over the extent of changes needed to bring units into full compliance, and it is clear that the Department's experts believe that compliance can be readily achieved and that is why no compliance schedule is required for the marginally non-compliant units. Regulation No. 30 requires Premcor to prepare an acceptable compliance schedule for any unit that is not in compliance. Thus, Premcor should provide the Department with the necessary information to satisfy the Department. Premcor admits that Boiler No. 2 tests need to be provided, and I defer to the expertise of AQM that a more detailed AQM-1001Z form is needed to support a compliance schedule satisfactory to the Department.

This issue also is addressed under the discussion of the MAELC comments, where I discuss that Premcor, as Condition 2.b. to a permit, must provide a compliance schedule satisfactory to the Department for any units not in compliance in order to comply with Regulation 30 at the time of the final permit if Premcor believes that more that operational changes and adjustment are necessary. Under Regulation No. 30, the responsibility for preparing a compliance schedule satisfactory to the Department falls upon Premcor. The Department's experts have indicated that the Premcor proposed compliance schedule is not satisfactory, but that compliance may occur through operational changes for 'marginal non-compliance' that do not warrant submitting a compliance schedule. I agree that Premcor must either provide proposed compliance schedules acceptable to the Department pursuant to Condition 2.b of the draft permit, or bring the marginally non-compliant units into compliance before the final permit is issued. Condition 2.b. requires Premcor to submit an acceptable compliance schedule for units not in compliance. If Premcor is unable to comply with permit limits when a final Title V (Part 3) permit is issued through improved operations, then Premcor should then submit pursuant to draft permit Condition 2.b. a compliance schedule in order to comply with Regulation No. 30.

4) Reduced Reporting

Premcor's fourth general comment suggests changing from quarterly to semi-annual reporting of emission data, and a reduction in the amount of data reported in the reports. The September RD indicates that no change in the reporting should occur because of the evolving nature of the Project. Premcor further argues for a reduced administrative and regulatory burden in its October 22, 2005, and the December RD reasserts the need for the reporting without change.

I recommend no change in the reporting at this time based on the Department's stated need for the records. The Department has no need for the records for the sake of having more

paper records. Instead, the Department has stated that the submission of the records to the Department, as opposed to being maintained by Premcor and available for Department review at the facility, is necessary and essential to fulfill its regulatory role. This is sufficient reason to maintain the reporting requirement without change. In addition, the facility may need more oversight based upon its compliance history. I recommend the Department and Premcor continue to discuss ways to reduce any unnecessary regulatory oversight and filing requirement outside of this specific permit process.

5) Permit Shield

Premcor's fifth general comment concerns its request for a permit shield, which means that compliance with the issued permit shall constitute compliance with any applicable requirements specifically identified in the permit on its date of issuance. The September RD does not preclude including such permit shield language in the future permit when the phases are completed, but also states that such a condition is premature at this time given the project's segmented permit process. Premcor's October 22, 2004 response does not offer any new argument and the December RD also repeats the September RD's position. Until all parts of the project are completed, the Department does not want any permit shield condition under Regulation 30 Section 6(f). The September RD indicates that permit issued as Part 1 did not contain any permit shield, and this permit should be treated similarly. This is a reasonable position and I recommend its adoption.

6) Capacity Limit for Boiler No. 4

Premcor sought clarification that the draft permit's reference to Boiler No 4's design rating of 737 mmBtu/hr did not mean that the Department intended to impose an operational limit on the boiler. The September RD indicated that the Department intended to impose an operational limit as a condition to the permit. AQM indicated that eventually it would develop a

potential to emit limit based upon this unit's design capacity, as rated by mmBtu/hr, fuel use and hours of operation. The September RD sets forth the position, based upon the public comments and internal review, that the permit should contain such a limit.

In response, Premcor's October 22, 2004 comments raise an argument that such a substantive change should not occur in this Title V permitting process, citing Section 1 of Regulation 30. In addition, Premcor states that the change should not occur after the public hearing. The December RD cites Section 1.5 and Section 11.8 (c) of Regulation 2 to support its position that capacity limits can be included at this stage of this proceeding.

Upon review of the cited regulations, I find that the December RD position is supported because the condition does not result in the "establishment of any new substantive control requirement" as set forth in Section 1 of Regulation 30. Instead, the condition merely reflects Premcor's stated existing design limit for Boiler No. 4. It is not clear from Premcor's position if it intends to operate Boiler No. 4 in excess of its design rating. The existing Regulation 2 permit for Boiler No. 4 was based upon the design rating. The purpose of providing the design rating as part of the application process is to ensure proper calculation of emissions. The design rating of a boiler is an operational foundation upon which the permit is based, not some moving target that Premcor can unilaterally increase. The draft permit refers to the pending construction permit to re-rate Boiler No. 3 from 618 mmBtu/hr to 716 mmBtu/hr, which indicates that any re-rating of a boiler should require a permit before it operates in excess of its design limit. The draft permit does indicate the Department's intent in the draft permit not to impose the boilers' design capacities as limits, but the Department reserved the right to re-evaluate this tentative decision.

Premcor overlooks that Boiler No. 4 still is subject to an operating permit, which was issued based upon the design rating Premcor provided, which is the existing design rating. This permit was issued in 1993, and any changes to increase the design capacity since then should

have been submitted to the Department for approval. The draft permit does not change anything from the existing design limit that Premcor stated currently exists for Boiler No. 4. controls. Section 6(a) (10) of Regulation 30 requires "operating scenarios" in a permit that set forth "the terms and conditions applicable to all operating conditions described in the permit application and eligible for approval under the applicable requirements." The existing operating limits are eligible for approval and hardly constitute 'new controls.' The draft permit's condition to reflect its current design limit simply does not impose any 'new control,' which would be, by definition be a different rating than the current design rating. Premcor previously has indicated the unit's design rating, which the Department should reasonably rely upon to control the unit's operations as part of the approved operating scenario.

Consequently, if Premcor succeeds in its position, then the existing permit's foundation would be changed and Premcor could operate the unit in excess of the boiler's design limits in a manner contrary to what was represented to the Department when the permit was issued. In effect, the foundation of the permit would change. Prudent regulation requires that the Department reflect the design rating in the operating Title V permit, as is required by the permit's operating scenarios requirement. If this permit condition is approved in the final permit, then it will reflect the same design limits that Premcor itself presented to the Department as part of the permit review process. The Department will not be imposing any "new" control over Boiler No. 4, but will only reflect the existing design limit as an operating scenario based upon the information that Premcor provided in its permit application. Thus, any Premcor complaint is based operating, which a manner is never presented to the Department for approval. I recommend that AQM's and the public's concerns that Boiler No 4 should have a capacity limit based upon the existing design limit is appropriate and is not a new control, but is one that is consistent with the existing permit's operating foundation.

Premcor raises the fact that the Department's intent to impose the design limit as a permit condition was made after the public hearing. This was proposed by AQM after several members of the public sought the same change. The purpose of the public hearing is to allow the Department to make a change; otherwise the public hearing would be a meaningless exercise for the public to raise questions and make comments if the Department was powerless to make any change. This recommended change highlights the value and importance of the public comments. Premcor also is incorrect factually since Premcor raised the issue before the public hearing. Clearly the limit issue was present on the draft permit in order for Premcor to raise the issue before the public hearing and seek clarification. The September RD clarified the issue in a way less favorable than Premcor had sought. AQM properly was able to rely on other public comments in reviewing its position. This was appropriate because the Department's Staff can change a position up until the final Secretary's decision. The record supports the clarification, which is consistent with valid public comments, including those on behalf of MAELC, a respected legal group, and the Sierra Club, and adopted by Green Delaware.

7) Miscellaneous Comments

Premcor asserts various other specific comments that the September RD responds to as Comments 1 through Comment 20. I recommend that the September RD position be adopted without repeating the comments and responses, some of which recognize changes Premcor sought. Premcor submitted responses to Comment 5 on seeking a delay in the effective date of the permit in order to prepare for the possibly new recordkeeping requirements, but I agree with the AQM position that there will be sufficient time for Premcor to get ready for the reporting requirements.

B. MAELC/Sierra Club Comments

The MAELC and the Sierra Club submitted joint written comments as part of the official request for a public hearing, and then individually their representatives supplemented these comments by oral comments at the public hearing. The MAELC comments were on four topics: 1) the need for a compliance schedule, 2) the need for improved monitoring and recordkeeping requirements, 3) the improper segmentation of the permitting process into three separate parts, and 4) the failure to include capacity limits on Boiler No. 4. September RD addressed the comments. These comments overlap with Premcor's on the issues of the need for a compliance schedule and Boiler No. 4's capacity limits, but obviously for far different reasons than Premcor raised.

1) Compliance Schedule

The comments seek a compliance schedule in order to ensure that the noncompliant emission units in the Title V operating permit will be brought into compliance by a definite date. In support of this position, evidence of the recent history of DCR's noncompliance was attached to the comments. The comments cite Section 5(b) (8) (iii) (C) in Regulation 30 to support the contention that a compliance schedule is require for each noncompliant unit.

AQM's September RD should satisfy this concern because the prospect of an enforcement action should provide more of an effective regulatory tool than the creation of another schedule that Premcor may or may not meet. Any compliance schedule will only be used for possible enforcement, and AQM is satisfied that it has sufficient basis to seek enforcement of the violation of the existing permits. A compliance schedule with future dates may actually postpone compliance since enforcement can occur only when the future milestone dates have not been met. Thus, an enforcement action taken on the basis of current violations will result in

prompt court action if successful than waiting for a future violation of a new compliance schedule.

The September RD's reasoning refers to Premcor's current ability to bring the units into compliance through operational changes. AQM states that this ability avoids the need for a further compliance schedule because Premcor can do something now without going through regulatory steps that may be anticipated in a compliance schedule. I agree that the Regulation 30 does require a schedule if a source is not in compliance when the permit is issued. Premcor's submitted the form for a compliance schedule, but this submission was not acceptable to the Department since it lacked sufficient detail. AQM refers to marginally non-compliant units, but this term is not defined in Regulation No. 30.

Under Section 5(d) (8) (iii) (C) of Regulation 30, a unit is either in compliance or it is not, and any unit not in compliance when the permit is issued must have a compliance schedule. The units subject to this Title V permit may not be in compliance with their existing permits, but the Department's position is that the units in this permit proceeding can, with minor operational changes, comply with their existing permits when this permit is issued.[4] Regulation No. 30 does provide the Department discretion in requiring a compliance schedule for units that are not in compliance when the permit is issued. The draft permit's Condition No. 2.b. does require Premcor to submit for approval a compliance schedule for any units that Premcor is unable to meet a permit's limits at the time of issuance.

Moreover, the MAELC comments reflect the emissions from all units at DCR. This segment of the permitting process entails just the emission units that are subject of this permit. As noted above, AQM believes that Premcor can remedy any past emissions in excess of permit

[4] Section 5(d) (8) (ii) and (iii) of Regulation 30 requires a determination of compliance when the permit is issued, and this is consistent with Condition 2. b. of the draft permit, which requires compliance with all existing permits on a "timely basis unless a more detailed schedule is expressly required by the applicable requirement."

limits through operational improvements. Consequently, until the final permit is issued, the Department's position properly is to require compliance with all existing permits, as is set forth in Condition 2. b of the draft permit, and to require Premcor to submit an acceptable compliance schedule if it fails to make operational improvements. Thus, if Premcor is unable to be in compliance after the issuance of the final permit, then under Regulation 30, Premcor must provide a compliance schedule satisfactory to the Department for any unit not in compliance at that time, which should satisfy MAELC's concern.

2) Improved Monitoring and Recordkeeping

This comment seeks to require compliance stack testing for nitrogen oxygen ("NOx"), sulfuric oxide ("SOx"), hydrogen sulphide ("H2SO"), volatile organic compounds ("VOC") and particular matter ("PM") under maximum process operations and throughputs, and repeated every three years. AQM's September RD indicates that requirements for continuous emissions monitoring systems ("CEMS") and stack testing are included in the draft permit. The frequency of the stack testing is five years, which will coincide with permit reviews. I agree that the draft permit addresses this comment in a reasonable manner and recommend no change in response to the comment.

3) Segmentation of the Title V Permit Process

This comment opposes the Department's procedure, begun when the Title V Part 1 permit was initiated several years ago, that divided the project into three parts for purposes of the Title V permit for the Project. AQM in the September RD indicates that the process actually is a single permit, with the same permit number that was divided up for administrative purposes because of the project's large size and complexity and the Department's limited resources. Processing the entire project at one time was simply not possible based upon the available

resources. Hence, the Part 1 permit was issued in 2001 without any object to the segmentation of the project, including from MAELC.

MAELC argues that the segmentation creates the opportunity for regulatory 'gaps' in coverage, particularly for Boiler No. 4. AQM September RD disputes that any gap exists, but does recognize that Boiler No. 4 was treated differently because of its age. The Department's legal position, as set forth in the Department of Justice document attached hereto as a Response Document, addresses this issue because it is a legal. Thus, to the extent the any other position differs, the DOJ position should control and it is recommended that it be adopted as part of the Secretary's final decision.

4) Capacity Limit for Boilers

This comment seeks to require capacity limits on all the boilers and the combined cycle units. A boiler's capacity, MAELC submits, is an essential part of the calculation of its potential to emit ("PTE") and should be included in the Title V permit in order to limit emissions. AQM's September RD indicates that all the other units in this part of the Title V permit, with the exception of Boiler No. 4, do have emission limits based upon a PTE, which was calculated for the group at a level that was considerably lower than the combined PTE of the individual units. AQM further indicates its intent to pursue emission limits for Boiler No. 4 to the extent possible.

C) Miscellaneous Questions from the Public Hearing

The September RD reviews and answers the questions from the public hearing and from my review of the hearing record the September RD is a comprehensive response that fully and accurately answers the questions. Green Delaware's representative adopted the MAELC's position and requested information that was provided in the September RD. Consequently, no further discussion is necessary other than to state that the public questions were excellent and indicate a high degree of dedication, skill and effort by the public participants in the public

hearing process. The September RD previously was made available to the public on the Department's web page and elsewhere, which should allow the members of the public who were present an opportunity to review it. The Department also issued a public notice of an extended public comment period that ended on October 24, 2004, but no further questions or comments were received, except for Premcor's October 22, 2004 comments that were addressed above.

As the above review of the record and discussion indicates, the record has ample support for issuing the draft permit as a proposed permit as recommended herein in order to allow further review by EPA and ultimately for issuance of a final permit.

IV. RECOMMENDED FINDINGS AND CONCLUSIONS

Based on the record developed, I find and conclude that the record and the law support issuance of the proposed permit for review by the EPA and ultimately in final form if approved by EPA.

In conclusion, I recommend the Secretary adopt the following findings and conclusions:

1.) The Department provided adequate public notice of the hearing in a manner required by the law and regulations;

2.) The Department considered all relevant, timely submitted public comments in reaching its determination;

3.) The Department has jurisdiction over this matter under its authorizing statute and regulations promulgated thereunder; and

4.) The Department's authorized official shall revise the draft permit necessary to conform to the Secretary's Order and submit as a proposed permit to EPA for its review, and shall issue a final permit upon an acceptable EPA review.

/s/Robert P. Haynes
Robert P. Haynes, Esquire
Hearing Officer

Appendix A
Department Response Documents
September 29, 2004 memo
December 17, 2004 memo
February 8, 2005 memo

MEMORANDUM

TO: Robert Haynes

THROUGH: John B. Blevins

Ali Mirzakhalili, P.E.

Robert J. Taggart

FROM: Ravi Rangan, P.E.

SUBJECT: **Response Document Developed by the Air Quality Management (AQM) Section for the Public Hearing Held on August 18, 2004 for the Title V – Part 3 Draft Permit for The Premcor Refining Group, Inc.**

DATE: September 29, 2004

The Air Quality Management (AQM) Section of the Department of Natural Resources and Environmental Control has completed its review of the transcript of the public hearing held on August 18, 2004 to receive comment on The Premcor Refining Group, Inc.'s (Premcor's) Title V – Part 3 draft permit.

Part 3 of Premcor's Title V application addresses the company's power plant and repowering project, located at the Delaware City Refinery and includes the gasifiers, combustion turbines, a flare, power plant boilers, a cooling tower and other components. The attached response document provides AQM's responses to the written comments received prior to the hearing from the following entities:

- Premcor;
- The Mid-Atlantic Environmental Law Center (MAELC) on behalf of the Sierra Club; and
- United States Environmental Protection Agency (EPA), Region III

It also provides responses to questions raised during the hearing by the following entities:

- The Mid-Atlantic Environmental Law Center (MAELC) on behalf of the Sierra Club;
- The Sierra Club; and
- Green Delaware

Your patience in awaiting receipt of these responses is appreciated. I hope this information will assist you in reviewing the issues and making your recommendation to the Secretary.

Responses to Public Comments

Title V (Part 3) Operating Permit
Delaware City Power Plant / Premcor Refinery

September 2004

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TABLE OF CONTENTS

1.0 General Comments from Premcor 4

2.0 Specific Comments from Premcor 7

3.0 General Comments from Mid-Atlantic Environmental Law Center (MAELC)/Sierra Club 13

4.0 Specific Comments from MAELC / Sierra Club as Provided During the Public Hearing on August 18, 2004 18

5.0 Comments from EPA 23

6.0 Comments from Green Delaware 24

APPENDICES

A. Comment Letter from Premcor, dated June 14, 2004

B. Comment Letter / Request for Public Hearing from MAELC, dated June 10, 2004

C. Comments from EPA, via electronic mail dated June 17, 2004

D. Testimony from MAELC at the Public Hearing, dated August 18, 2004

1.0 General Comments from Premcor

Comment: Comment 1: Clarification of Supplemental Reporting Requirement.

Response: In this comment, the facility has requested that supplemental reporting of excess emissions in instances that do not pose an imminent and substantial danger to public health be allowed via fax or electronic mail as an alternative to telephone reporting. DNREC disagrees. Condition 3 c. 2. i. B. has been developed as a boiler plate condition that is applicable to all Title V sources in the state. However, DNREC notes that the draft permit contains an incorrect regulatory citation, i.e., *Regulation No. 30, Section 6(a)(3)(C)(iii)(**cc**)*. The correct citation should be *Regulation No. 30, Section 6(a)(3)(C)(iii)(**bb**)*. Therefore, DNREC has made the correction to the above referenced regulatory citation, but has left the boiler plate condition intact.

Comment: Comment 2: Clarification of the term "Stack Test Based Emissions Factor"

Response: In this comment, the facility refers to the term "Stack Test Based Emissions Factor" that is required to be used in determining compliance with certain emission limits in the permit, e.g., PM-10 emission limit for the boilers and the combined cycle units (CCUs). This emissions factor is derived from the stack test performed for the unit and pollutant in question, and subsequently used to calculate actual emissions from the unit using actual operating data such as fuel use and hours of operation. The facility has requested that this term be defined to clarify that the factor is derived once from the most recent stack test and that a stack test is not required each time emissions calculations are performed. DNREC concurs with the facility that the purpose of this emissions factor is for use in both current and future compliance determination, and that a stack test is not required each time compliance calculations have to be performed. However, DNREC believes that the emissions factor used in compliance demonstration must be representative of current operating conditions of the unit. For this reason, DNREC is requiring that the emissions factor be updated over time and therefore be derived from stack tests that are no more than five years old. The following definition is included in Condition 2.e of the proposed permit.

> "Stack Test Based Emissions Factor" means an emissions factor derived from the results of the most recent compliance stack test performed within the last five (5) years for the unit in question.

Note that the five-year period for stack testing coincides with the five-year duration of the Title V permit. This means that the facility will be required to perform a stack test at least once during each five-year permit term.

Comment: Comment 3: Condition 5 Compliance Schedule

Response: In this comment, the facility refers to the forms AQM-1001Z submitted with Revision 8 of the Title V permit application in February 2004 presenting the proposed compliance plans for Boilers 1, 2 and 3, and requests that a compliance plan be included

in the permit. As presented, the Forms AQM-1001Z list PM-10 non-compliance for all three boilers, TSP non-compliance for Boilers 1 and 3, and VOC non-compliance for Boiler 2. The forms propose a compliance date of June 25, 2004 for Boiler 2 and December 30, 2006 for Boilers 1 and 3. DNREC does not agree with this comment because the forms AQM-1001Z submitted with the application are either not valid or are incomplete for the following reasons.

The compliance date for Boiler 2 of June 25, 2004 has already passed. This boiler is currently operating under its modified configuration and its performance tests have been completed. DNREC is awaiting the submittal of the results of these performance tests. Currently, there is no reason to believe that Boiler 2 will not meet its emission limits. Therefore, a compliance plan is not necessary for this unit.

The listed non-compliance for Boilers 1 and 3 include emission limits that are only applicable when No. 6 fuel oil is combusted. Under the facility's Consent Decree, No. 6 oil is no longer combusted in any of the boilers. Therefore, these emission limits do not apply. Consequently, no compliance plan is necessary for these limits.

With respect to the only remaining emissions limit listed in forms AQM-1001Z, i.e., the PM-10 emission limit of 0.005 lb/MMBtu when combusting gaseous fuel (refinery fuel gas, natural gas or synthesis gas), DNREC is aware that the facility has conducted stack tests for Boilers 1 and 3 and that individual runs during these tests showed compliance (e.g.: Run # 3 of the stack test conducted in October 2001 showed PM-10 emissions of 4.56 E-03 lb/mmBtu) while other runs showed marginal non-compliance compliance with the limit (e.g.: Run # 2 of the same stack test showed PM-10 emissions of 5.37 E-03 lb/mmBtu). DNREC also notes that the facility has not proposed any additional controls in its form AQM-1001Z as being required to bring the units into compliance. Instead, the AQM-1001Z form indicates the facility intends seeking a change in the permitted emission standard. It is DNREC's opinion that the marginal non-compliance can be overcome by means of minor adjustments in operating parameters and by implementing good engineering operating practices to minimize emissions. Furthermore, DNREC finds it to be a reasonable conclusion that these two boilers are capable of meeting the emission limit of 0.005 lb/MMBtu by implementing good air pollution control practices. Therefore, DNREC does not see any reason why an extended compliance schedule of more than two years, i.e., until December 30, 2006, is necessary. Instead, DNREC is requiring additional testing to be performed to demonstrate compliance and incorporating such additional testing in the proposed permit. If Boilers 1 and 3 continue to show non-compliance, DNREC will view such non-compliance as a matter for possible enforcement action.

With respect to the facility's general requirement to operate the facility in compliance, Condition 2.b of this Title V permit clearly states that the facility must stay in continuous compliance with the currently applicable requirements, and meet in a timely manner any applicable requirements that become effective during the term of the permit.

<u>Comment</u>: Comment 4: Merging of the Quarterly Reporting and the Semiannual Deviation Reporting Requirements

Response: In this comment, the facility has requested that routine quarterly emissions reports and the semi-annual monitoring and deviation reports be combined into a single semi-annual reporting requirement to avoid redundancies, and that the backup raw data supporting these reports be maintained on site instead of being included in the report. The facility has also commented that some of the data collection requirements are not necessary for compliance demonstration or are redundant with other provisions of the permit, and therefore should be removed. DNREC does not agree with this comment and does not intend to change the reporting or the data collection requirements of the permit. DNREC is cognizant of the facts that the Repowering Project is still evolving, operation has been inconsistent and sporadic. Quarterly reports have enabled DNREC to maintain an up to date status of the project. Furthermore, DNREC believes that each of these reports, and the associated data collection and documentation, serve a unique purpose in the overall demonstration of continuous compliance with the permit terms and conditions, and are therefore essential elements of the Title V permit.

Comment: Comment 5: Permit Shield

Response: In this comment, the facility has requested that a permit shield be included in the permit stating that compliance with the terms and conditions of the permit shall constitute compliance with any applicable regulations specifically identified in the permit as of the day of permit issuance. While DNREC is not opposed to this request, given that the Title V permit is being issued in three parts (owing to the complexity of this facility), it is not feasible to include a permit shield at the present time. Therefore, DNREC is currently denying a permit shield. Note that Part 1 of the Title V permit also did not include a permit shield. DNREC envisions that when all parts of the permit have been completed, and the permit is combined into a single permit document, a permit shield would then be feasible. At such time, DNREC will be in a position to consider an application by the facility to grant a permit shield.

2.0 Specific Comments from Premcor

Comment: Comment 1: Permit "cover page": The correct plant location is 4550 Wrangle Hill Road.

Response: The proposed permit and review memorandum reflect the address as 4550 Wrangle Hill Road, Delaware City, Delaware 19706.

Comment: Comment 2: Table 2 Emission Points, Units and Identification of Applicable Requirements [p. 5]: Consistent with DNREC's Review Memorandum p.17, we understand that the description of the source design capacities given in the "Source Description" for each emission unit do not constitute enforceable conditions of the permit. Premcor requests that a footnote be added at the bottom of the table to clarify this issue. Also, please note that the three components included in Emissions Unit 83 are mis-referenced; the amine acid gas removal system and syngas flare are both associated with Emissions Unit 82, while the evaporative cooler is associated with Emission Unit 50. The same corrections should also appear on Page 6, under the permit description for APC-97/0504, and page 36.

Response: While preparing the draft permit, DNREC had agreed to not include the source design capacities as enforceable permit conditions, and had acknowledged this fact in the review memorandum. DNREC disagrees with Premcor's interpretation regarding the enforceability of the source's design capacities given in the "source description". DNREC does not feel there was (or is) a need to indicate it in a footnote in the permit. Note, however, that DNREC has been evaluating whether boiler design capacities should be included as permit conditions. Based on this evaluation, and comments received from the Mid-Atlantic Environmental Law Center, the Sierra Club and Green Delaware, on the draft permit, DNREC has decided to include the design capacity of Boiler 4 as a permit condition (see further discussions below in this document).

DNREC agrees that the amine acid gas removal system and the syngas flare are a part of Emissions Unit 82 (EU 82). Listing them as EU 83 in the draft permit was inadvertent. The proposed permit and the review memorandum reflect these units as part of EU 82. The evaporative cooler will be listed as Emission Unit 50 (EU 50) in the proposed permit.

Comment: Comment 3: Item 2.l [10]: should be revised to expire five years from the date of permit issuance.

Response: The expiration date for Part 3 of the Title V permit was changed from November 13, 2006 to November 13, 2008 based on Motiva's comments on the pre-notification draft permit. The 2006 expiration date was selected to coincide with the expiration of the Part 1 permit, which was issued in 2001. DNREC is not opposed to an expiration date of five (5) years for Part 3 and has reflected a five year term in the proposed permit. However, it is DNREC's intent to merge all parts of this permit into a single permit document at a future permit renewal date, at which time the entire refinery

will have a single Title V permit expiration date. To accomplish this, a future term of one or more parts of this permit will have to be less than five years.

Comment: Comment 4: Condition 2.e [9]: add "or the version referenced in the specific permit condition or the most recent update of this reference document" at the end of definition 2 for "AP-42."

Response: DNREC has updated the definition of "AP-42" in the permit as follows to reflect the most recent editions and updates.

> "AP-42" means the Compilation Of Air Pollutant Emission Factors, Fifth Edition, AP-42, dated January 15, 1995, as amended with Supplements "A" dated February 1996, "B" dated November 1996, "C" dated November 1997, "D" dated August 1998, "E" dated September 1999, and "F" dated September 2000 and the December 2001 update, the December 2002 update and the December 2003 update.

Comment: Comment 5: Condition 3.c.2.i [16]: add in front of this general reporting requirement "The Company shall submit the initial semi-annual monitoring report no later than six (6) months after the issuance of this permit. For all subsequent semi-annual reports ..."

Response: DNREC is denying Premcor's request. DNREC notes that between the time the draft Part 3 permit was made available to Premcor (i.e., May 7, 2004) to the time the permit is expected to be issued as final, more than 6 months will have elapsed. Therefore, Premcor has had ample time to develop the reports required by Condition 3.c.2.i. in the draft Part 3 permit.

Comment: Comment 6: Condition 3 Tbl 1.a.2.i.A and B [19]: Add natural gas as one of the fuels used in Boiler 4. Natural gas has always been mixed with refinery fuel gas prior to being introduced into all four boilers, yet natural gas is only mentioned as a fuel for Boilers 1, 2 and 3. This appears to be an oversight in the permitting of this boiler since the Boiler 4 permit has not been updated since 1993. Consequently, to be consistent for all four boilers we are asking to recognize natural gas as a fuel to Boiler 4 in this permit. Also, add Boiler 4 to the list of units authorized to burn oil during a curtailment.

Response: DNREC agrees that allowing the combustion of natural gas in Boiler 4 is reasonable and has included it in the proposed permit. Natural gas is a clean burning fuel similar to refinery fuel gas (RFG) and will not result in emissions higher than those resulting from RFG combustion. DNREC also understands the need for an alternate fuel during periods of natural gas curtailment, which typically have the potential to occur during winter months, and is allowing the combustion of low-sulfur No. 2 fuel oil (low-sulfur liquid fuel, or LSLF) during such periods. The use of LSLF in Boiler 4 will be subject to the same requirements as in Boilers 1, 2 and 3, including the sulfur content requirement (0.05 weight percent sulfur or less) and the semi-annual reporting that includes the following: (1) number of hours on LSLF, (2) quantity of LSLF, (3) sulfur

content of LSLF, and (4) specification sheet for each batch of LSLF. Note that the use of No. 6 fuel oil is no longer allowed at the facility under any circumstance.

Comment: Comment 7: Condition 3 Tbl 1.a.2.v.A [19]: Consistent with the request made by Mr. Michael Gritz to Mr. Robert Taggart in a letter dated 12/11/03 to allow sufficient operating experience prior to proposing revised unit emission limits, Premcor requests that the application addressing this issue be due 3/31/05.

Response: The Regulation No. 2 permit that approved the modification of Boiler 2, i.e., APC-97/0289-Construction (Amendment 5) (RACT), dated October 25, 2002, specified the combined emission limits for Boilers 1, 2 and 3 and the Combined Cycle Units (CCUs). This Regulation No. 2 permit also required the facility to submit individual emission limits for Boilers 1 and 3 and the CCUs at least six (6) months before the modification of Boiler 2 is completed, i.e., latest by December 25, 2003. However, because DNREC recognizes that there have been startup problems relating to sustained and reliable operation of the repowering project, and agrees that actual operational history is necessary to have any confidence in the achievability of the individual emission limits for these units, DNREC finds it reasonable to await operating data for a period of about a year. Given that the Boilers 1, 2 and 3 are now operational on gaseous fuels (i.e., RFG / syngas / natural gas), DNREC does not foresee a problem in allowing the facility some post-modification operating experience. The proposed Title V (Part 3) permit reflects a new deadline of March 31, 2005 for the submittal of individual emission limits for Boilers 1 and 3 and the CCUs. No later than March 31, 2005, the facility must submit a complete permit application proposing these individual emission limits that quantify the emissions reductions attributable to the increased utilization of Boiler 2. In granting this extension, DNREC notes that the current Regulation No. 2 permits for Boilers 1 and 3 (i.e., APC-97/0288-Construction and APC-97/0290-Construction) will expire on December 31, 2004. However, this Title V permit is expected be in effect by that time, and furthermore, it will be modified upon receipt of the new individual emission limits.

Comment: Comment 8: Condition 3 Tbl 1.a.2.ii.d [19]: We request a revision that says "The rates may be adjusted based on the experience of the company with these controls, consistent with minimizing emissions and good engineering practices."

Response: DNREC agrees. The proposed permit reflects the change. The steam injection and flue gas recirculation rates for the boilers may be adjusted to minimize emissions and should generally stay within the ranges specified by the manufacturer.

Comment: Comment 9: Condition 3 Tbl 1.a.2.i.E [20]: Add the phrase "Upon completion of the modifications to Boiler 2, ..."

Response: DNREC agrees. The proposed permit reflects this change. This condition only applies to Boiler 2 after its modification is completed.

Comment: Comment 10: Condition 3 Tbl 1.a.2.vi [22]: Delete this requirement since this is a consent decree limit and not a permanent limit for the Title V permit. Additionally,

we note that the fuel oil supply piping to all boilers has been removed, so there is no physical means to burn fuel oil in Boilers 1, 2, 3 and 4. Should the need to burn oil during a curtailment period arise, the oil piping would need to be reinstalled.

Response: DNREC does not agree that this requirement should be removed. The most recent Regulation No. 2 permits for Boilers 1, 2, 3 and 4 specify emission limits for combustion of No. 6 fuel oil. The Title V permit is the vehicle that DNREC is using to specify that combustion of No. 6 fuel oil is no longer allowed in these boilers. Therefore, these emission limits are no longer applicable. This requirement also clarifies that only the combustion of low-sulfur liquid fuel, i.e., No. 2 fuel oil, is allowed during periods when natural gas supply is curtailed.

Comment: Comment 11: Condition 3 Tbl 1.a.3.iii.a [23]: Delete "CCUs, duct burners."

Response: Given that the PM-10 and TSP emission limits are specified as a combined limit for the Boilers 1, 2 and 3 and the CCUs, the compliance methodology must also specify each of these units. For this reason, DNREC does not agree that the CCUs and the duct burners should be removed from this paragraph. DNREC realizes that there is a redundancy in this permit, wherein some of the emission limits and the associated compliance, monitoring, recordkeeping and reporting requirements are listed first for the boilers and then repeated again for the CCUs. This is because the boilers and the CCUs are listed separately in the Title V permit under their own Emission Unit ID's, and furthermore, the Regulation No. 2 permits for the boilers and the CCUs specify these limits independently of each other.

Comment: Comment 12: Condition 3 Tbl 1.a.5.i.E [26]: All of the boilers have the same NOx emissions limit of 0.25 lb/MMBtu.

Response: Given that DNREC has agreed to allow natural gas combustion in Boiler 4 and also allow combustion of LSLF during periods of natural gas curtailment, the NOx limit of 0.25 lb/MMBtu applies to Boiler 4. Therefore, all four boilers are subject to the same emissions limit under Regulation No. 12, Section 3.2(a). Note, however, that this limit only applies when LSLF is being fired in the boilers. The proposed permit reflects the 0.25 lb/MMBtu limit when firing oil.

Comment: Comment 13: Condition 3 Tbl 1.c.1.i.B [37]: Add the phrase "during periods of process upset and malfunction" after the word "flaring" in line 4, per previous agreement with permit staff.

Response: The referenced permit condition allows the flaring of syngas for up to 800 hours per year. DNREC agrees that this 800-hour limit only applies during periods of process upset and malfunction, and does not apply to periods of startup and shutdown. The language in the proposed permit has been revised to reflect this change. The revised language also clarifies that this limit only applies to flaring of clean syngas and not to raw syngas. It should be noted, however, that the emission limits specified in the permit (709 tons per rolling twelve months) for this flare include emissions resulting from all flaring

events, including clean and raw syngas flaring, as well as flaring during startup/shutdown and process upset/malfunction scenarios.

Comment: Comment 14: Condition 3 Tbl 1.c.2.i.B [38]: Delete this condition as it is not in the current permit and the cooling tower is not an industrial process unit.

Response: DNREC does not agree that this condition should be removed. The cooling tower qualifies as an industrial process operation as defined in Delaware Regulation No. 1, and is therefore subject to Regulation No. 5, Section 2.1.

Comment: Comment 15: Condition 3 Tbl 1.c.3.iv.B [39]: This condition can be dropped as the obligation has been completed.

Response: DNREC agrees that this permit condition requiring the analysis raw syngas by September 30, 2003 has been met, and has removed it from the proposed permit.

Comment: Comment 16: Condition 3 Tbl 1.c.4.v.A [40] and c.5.v.A [41]: This condition related to maintaining records of the amount of natural gas combusted for the pilot flame and amount of raw and clean syngas flared should be deleted, since it is not an existing permit requirement. There is no means to measure this flow; by design, pilot flames (and fuel gas use) are in continuous use when the flare is operational.

Response: The purpose of natural gas combustion in the flare is to maintain the pilot flame so that it is continuously available for syngas flaring needs. Given that the total emissions from the flare include the emissions from natural gas combustion, the purpose of requiring records of the amount of natural gas combusted was to facilitate calculation of that component of the emissions. DNREC agrees that there is currently no flow meter installed for monitoring the amount of natural gas used in the flare. Furthermore, DNREC understands that natural gas combustion constitutes only a small fraction of the total flare emissions. For example, the NOx emissions from natural gas combustion are approximately 0.5 tons per year compared to the total permitted level of 28 tons per year from the flare. Similarly, the SO_2 and CO emissions from natural gas combustion are approximately 0.003 and 0.10 tons per year, respectively, compared to the permitted levels of 709 and 1,117 tons per year, respectively, from the flare. Therefore, DNREC has removed the requirement to monitor and record natural gas flow to the flare.

With respect to the amounts of raw and clean syngas flared, DNREC does not agree that this condition should be removed. The production rates of raw and clean syngas are required to be monitored and, therefore, the documentation of the amounts of raw and clean syngas flared should be a simple exercise. Furthermore, given that syngas flaring constitutes the majority of the flare emissions, documentation of these flow rates is necessary for accurate emissions calculations.

Comment: Comment 17: Condition 3 Tbl 1.d.1.iii.D [42] and 3.d.1.ii.D and 3.d.1.iv.B [43]: The requirements related to compliance with 40 CFR 60 Subpart J should all be

deleted based on the decision of the US Court of Appeals for the Third Circuit holding that this regulation does not apply to these units.

Response: These permit conditions pertain to the monitoring of H_2S and sulfur contents of syngas prior to it being combusted. The H_2S monitoring requirement stems from 40 CFR 60 Subpart J (Section 60.104(a)(1)) while the monitoring of sulfur content is a Regulation No. 2 permit condition. DNREC acknowledges that the H_2S monitoring and reporting requirement can be removed from the permit if 40 CFR 60.104(a)(1) is indeed not applicable. However, in order to accomplish this, the facility must submit a complete permit application requesting this change along with the Administrator's concurrence with the referenced court decision that this regulation is not applicable. Upon receipt of this application, DNREC will initiate an amendment process to revise the permit.

DNREC does not agree that the requirement to monitor the sulfur content of syngas can be removed because this is a Regulation No. 2 permit condition.

Comment: Comment 18: Condition 3 Tbl 1.d.7.i.B [51]: Delete … not a requirement applicable to this unit.

Response: DNREC agrees that this permit condition limiting H_2SO_4 emissions only applies to Boiler 2 and has removed it from this section of the proposed permit.

Comment: Comment 19: Condition 3 Tbl 1.e.3.iv [54]: The obligations related to opacity observations should be limited to those sources which do not have stack opacity monitors.

Response: DNREC agrees. However, this section becomes applicable during periods when the COMS is disabled or is not operating properly.

Comment: Comment 20: Lastly, we request that the staff review memorandum be amended consistent with the comments presented here related to the permit conditions.

Response: DNREC agrees. The review memorandum has been revised, as necessary, to reflect all of DNREC's responses presented in this document.

3.0 General Comments from Mid-Atlantic Environmental Law Center (MAELC)/Sierra Club

Comment: Comment 1: The Title V permit does not provide an adequate compliance schedule.

Response: In this comment, the Mid-Atlantic Environmental Law Center (MAELC) refers to the various reportable releases that have occurred at the facility in 2004 and previous years. The MAELC also refers to the numerous notices of violations (NOVs) and enforcement actions that DNREC has issued against the facility. Finally, the MAELC refers to the facility's consent decree and an ongoing lawsuit that DNREC filed in connection with a fatal explosion and fire at the facility in 2001. Based on these, the MAELC concludes that the facility needs a compliance schedule sufficient to bring it into compliance with all the emission requirements.

DNREC acknowledges the various reportable releases that have occurred at the facility as listed in Exhibit A of the MAELC's comment letter. Under Federal Emergency Planning and Community Right to Know Act (EPCRA Section 304) and the State of Delaware Regulation 6028 (7 Del. C., Section 6028), those releases that are not specified in a facility's operating permit and that exceed certain thresholds are required to be reported. These thresholds, called Delaware Reportable Quantities (DRQs), are listed in Section 3 of Regulation 6028. The reporting of the releases by the facility was in compliance with the regulation.

While required to be reported, these releases are not necessarily a matter requiring a compliance plan or a compliance schedule. When reporting these releases, the facility is required to clearly document the facts and circumstances leading to the environmental release and the measures proposed to prevent such a discharge from occurring in the future. The purpose of this reporting is to not only make DNREC and the public aware of the releases, but also to initiate corrective action measures immediately.

During the public hearing held on August 18, 2004, the MAELC commented that under 40 CFR 70.6(c) and Delaware Regulation No. 30, Section 6(c)(3), it is mandatory that a facility's Title V permit contain a compliance schedule consisting of the following three parts.

> (1) For applicable requirements with which the source is in compliance, a statement that the source will continue to comply with such requirements;
>
> (2) For applicable requirements that will become effective during the permit term, a statement that the source will meet such requirements on a timely basis; and
>
> (3) For sources not in compliance with applicable requirements at the time of permit issuance, a schedule of remedial measures, including enforceable milestones, leading to compliance.

DNREC agrees with this comment and MAELC's regulatory interpretation. Items (1) and (2) of this three-part compliance schedule are already included in the permit under Condition 2.b. With respect to item number (3), a compliance schedule is only necessary for units that are not in compliance. To that end, DNREC notes that the facility's Title V permit application (Revision 8) had identified Boilers 1, 2 and 3 as not being in compliance and included compliance schedules for these units in the AQM 1001Z forms. However, DNREC does not believe that a compliance schedule is currently necessary for these units. See further explanation of this matter in a response to Premcor's comment requesting a compliance schedule (Premcor's General Comment 3). As noted in that response, Boilers 1 and 3 were shown to be in marginal non-compliance with their PM-10 emission limit. DNREC believes that these units can presently operate in compliance with good engineering operating practices and is requiring further testing for this purpose.

DNREC believes that a compliance schedule is typically necessary for units that require a significant effort to bring it into compliance. An example of when a compliance schedule would be necessary is for a unit which has repeatedly shown non-compliance and all efforts related to operating procedures and good air pollution control practices to bring the unit into compliance have failed. Such a unit would clearly require additional measures beyond good operating practices, perhaps in the form of additional controls, fuel changes, etc., which take time to implement. In this case, a compliance plan would be necessary wherein a schedule of remedial measures would be laid out along with enforceable milestones. DNREC does not believe that any unit covered by this Part 3 of the Title V permit meets these criteria for a compliance schedule.

Comment: Comment 2: Improved monitoring and recordkeeping requirements are needed.

Response: In this comment, MAELC indicates that the permit should require compliance stack testing for NOx, SO_2, H_2SO_4, VOC and PM conducted under conditions of maximum process operations and throughputs and that these stack tests should be conducted not less than once every three years.

The compliance methods for the emission and operational limits in this permit include both stack testing and continuous emissions monitoring systems (CEMS), as well as parametric monitoring. Additionally, there are detailed reporting and recordkeeping requirements designed to document the information necessary for determining compliance with these limits. DNREC believes that these monitoring and recordkeeping requirements are reasonable and adequate for this purpose. In cases where stack tests are required, the testing is conducted using DNREC-approved methods and then only upon proper advance documentation and approval of the test protocol. In general, the stack tests are performed at or near maximum capacity operation, and the results of the stack tests are used to develop emission factors, e.g., in terms of lb/MMBtu, for the unit and pollutant in question. These emission factors can then be used to calculate emissions

based on actual operating parameters, e.g., actual amount of fuel burned or actual hours of operation. An example of such an emissions calculation is shown below.

tons/year = (lb/MMBtu) x (MMBtu/scf) x (scf/year) x (1 ton/2000 lbs)

This calculation shows that greater fuel use will result in greater emissions, and vice versa. Therefore, once an appropriate emissions factor is developed, emissions can be calculated in this manner for any operational level.

DNREC acknowledges that in order for an emission factor to be acceptable for use in determining compliance, it must be representative of current operating conditions of the unit in question. For this reason, DNREC agrees that the emission factors must be updated periodically by conducting new stack tests. In the proposed permit, a definition for the term "Stack Test Based Emissions Factor" has been included that specifies that these factors must be based on the most recent stack test results that are no more than five years old. This five-year period for stack tests coincides with the five-year term of the Title V permit. Therefore, the facility must perform new stack tests at least once within each permit term, which can then be used for compliance certification at the time of the next permit renewal.

Comment: Comment 3: The segmentation of the Title V permit is improper.

Response: In this comment, the MAELC argues that the segmentation of the facility's Title V permit into three parts is improper and that all applicable emission requirements at a facility must be contained in a single permit. MAELC also comments that they have long objected to DNREC's multi-segment permitting approach.

The Delaware City Refinery is a large, complex facility wherein many of the individual units qualify as major sources by themselves under the Title V regulations. The permitting of these units requires a considerable amount of DNREC's resources in order to ensure that all of the applicable requirements are identified and that the appropriate emission and operational limits, and the associated compliance, monitoring, reporting and recordkeeping requirements are specified. While preparing this permit, DNREC realized that if the permit was withheld until all of the units were processed, and all of the ongoing changes at the facility were adequately addressed (e.g., the repowering project), it would result in delaying the issuance of the permit for several additional years. Therefore, in order to expedite permit issuance, DNREC decided to issue the permit in three parts. With respect to MAELC's comment that they have long objected to this multi-segment permitting approach, DNREC notes that no objections were received from any party, including MAELC, at the time of the issuance of Part 1 of this permit in 2001.

It is important to point out that the three parts of the permit are not three separate permits; they have the same permit number and it is DNREC's intent to combine them into a single permit document once all parts have been finalized. At that time, all terms and conditions will be listed in a single document and the permit will have a single expiration date.

The MAELC has also commented that this segmentation of the permit creates opportunity for "gaps" in coverage, and argues that such gaps have occurred, especially in the case of Boiler 4. The MAELC points out that Boiler 4 has been excluded from the various emission limits in the permit and that this may be the result of the segmentation of the permit. With respect to the general comment about gaps in coverage, DNREC contends that no "gaps" have occurred and that every applicable requirement for each covered unit has been included in the Title V permit. Each part of this Title V permit is designed to cover all applicable requirements of the units included in that part without relying on the other parts of the permit to "fill in" the gaps. DNREC also contends that its objective is to include every unit at the facility that is subject to Title V in one or the other part of the permit, and then eventually include all units into a combined single permit document.

With respect to Boiler 4, DNREC acknowledges that this unit is not included in the emissions limits specified in the permit. This is not because a "gap" has occurred; instead, the reason is that Boiler 4 is a grandfathered unit under the Clean Air Act because it was constructed before the Clean Air Act was enacted. DNREC shares MAELC's concerns regarding the emissions from this unit and has duly noted the comment. As discussed in a separate response to a comment from the MAELC regarding capacity limits (MAELC General Comment 4), DNREC has decided to include the design capacity of Boiler 4 in the permit as an applicable requirement. While capacity limits cannot take the place of specific emission limits, they do provide some level of certainty in calculating emissions when combined with actual operating history of the units in question. For further discussion, see response below.

Comment: Comment 4: Failure to include capacity limits in the draft permit.

Response: In this comment, the MAELC raises a concern that the permit does not include boiler capacities, in terms of MMBtu/hour, as applicable requirements. The MAELC points out that boiler capacity is an essential part of the calculation of its potential to emit (PTE), and absent any limits on capacity, there is a potential for increased emissions by utilizing the unit at levels greater than rates represented in the application.

DNREC can only partially agree with MAELC's comment because Boiler 4 is the only unit in the draft permit that does not have pollutant specific emission limits derived from its potential to emit. All the emission limits for Boilers 1, 2 and 3 and the CCUs in the DNREC developed Regulation 2 permits for the Repowering Project were based on each emission unit's potential to emit. Additionally, DNREC had incorporated practically enforceable Regulation 2 permit limits for Boilers 1, 2 and 3 and the CCUs that when combined were lower than the emissions attributable to the PTE for each unit. This permitting strategy while affording the refinery a certain degree of operational flexibility (to meet its steam and power requirements) established emission limits that were considerably lower than the sum of each unit's PTE.

However, with respect to Boiler 4, DNREC shares MAELC's concern. Although, there are certain safeguards built into the permit to prevent occurrences of excess emissions by limiting the short term emissions in terms of lb/MMBtu, there are no mass emission limits specified on a ton per year basis for Boiler 4. This boiler was constructed prior to the enactment of the Clean Air Act and is therefore grandfathered under the Act. While DNREC is attempting to pursue further discussions with the facility, it prefers not to unilaterally impose numerical emission limits on this boiler. Currently, the only mechanism by which the emissions of this boiler can be quantified is by using its design capacity together with actual operating data such as fuel use and hours of operation. DNREC has therefore included the design capacity of Boiler 4, i.e., 737 MMBtu/hr, as an applicable requirement in the proposed permit. Note that this action translates into ton per year limits for Boiler 4 based on its maximum design capacity. It is DNREC's intent to eventually include tons-per-year limits for Boiler 4 based on its PTE.

4.0 Specific Comments from MAELC / Sierra Club as Provided During the Public Hearing on August 18, 2004

Comment: Comment 1) On page 20, item E states that "Except during periods of start up and shutdown, the burner steam injection and flue gas recirculation systems shall be working properly." Why do they NOT have to work properly during these times? Does this mean that there are deviations in terms of emissions standards that are allowed during start up/shut down? If so, why are they not specified? Do the manufacturer's recommended steam injection and flue gas recirculation (ii Compliance Meth. pg 19 Item D) rates somehow mandate this?

Response:
Why do they NOT have to work properly during these times? During periods of startup and shutdown, the boiler is under transient operating conditions wherein it experiences large fluctuations in operating parameters. Until consistent steady-state operation is achieved, boiler performance is erratic. Injecting steam and recirculated flue gas into the boiler introduces additional variables that can affect reaching steady-state operation. Please note that even though operation is transient and at times erratic it is well controlled during startup and shutdown for safety reasons.

Does this mean that there are deviations in terms of emissions standards that are allowed during start up/shut down? If so, why are they not specified? Generally, achieving a certain specific performance criterion is not guaranteed during periods of startup and shutdown, and emission fluctuations (higher or lower) are expected during these periods. However, these are short-term emission fluctuations occurring over a period of a few hours. Furthermore, startup and shutdown of a boiler is not a routine operation and occurs very infrequently, typically for repair and maintenance purposes. Therefore, the net effect of startup and shutdown operations on normal annual emissions is minimal. Nonetheless, the emissions during startup and shutdown must be accounted for and included in the total annual emissions for compliance purposes. Deviations from the annual emission limits are not allowed.

Do the manufacturer's recommended steam injection and flue gas recirculation (ii Compliance Meth. pg 19 Item D) rates somehow mandate this? The manufacturer's recommended steam injection and flue gas recirculation rates apply during steady state operation of the boiler, and are not applicable during periods of startup and shutdown due to the transient operating conditions.

Comment: Comment 2) What are the revised capacity factors (Pg. 19 V. Reporting A) of Boilers 80-1 & 80-3 & EU 84-1 & 84-2? Use of Boiler 80-2 will increase after its modification & NOX and other pollutant emissions will decrease for the other above listed units. How is this reduction factored into this Title V permit? Will this permit need to be modified in terms of emissions standard for reduced capacity? For example on page 24 Section 4 SO2 emissions states SO2 levels of 3,827 TPY combined from EU 84-2 & 84-1 and 80-1, 80-2, 80-3. Is this based on levels from APC 90/0289? Does this exclude boiler 80-4? What will be the reduction of the 3,827 TPY once there is reduced

capacity? B. states that after modification boiler 80-2 can not emit SO2 in excess of 84.7 TPY. Why is the emission limit specified for 80-2 after modification, but not the others? The same questions for NOX, CO, VOC, Sulfuric Acid Mist & PM 10.

Response:
What are the revised capacity factors (Pg. 19 V. Reporting A) of Boilers 80-1 & 80-3 & EU 84-1 & 84-2? The revised capacity factors will be developed by the facility based on revised utilization of Boilers 1 and 3 (EU 80-1 and 80-3) and the CCUs (EU 84-1 and 84-2). The utilization of these units is expected to reduce as Boiler 2 utilization increases. (Also see response to Comment 7 of Specific Comments from Premcor)

Use of Boiler 80-2 will increase after its modification & NOX and other pollutant emissions will decrease for the other above listed units. How is this reduction factored into this Title V permit? Will this permit need to be modified in terms of emissions standard for reduced capacity? DNREC concurs with the logic that utilization of Boiler 2 will increase since it was recently modified, which will result in decreased utilization of Boilers 1 and 3. The Title V permit (Part 3) contains emission limits as a combined total for Boilers 1, 2 and 3 and the combined cycle units (CCUs) that reflect the increased utilization of Boiler 2. In addition, the permit contains individual emission limits for Boiler 2 based on its planned greater utilization. The permit currently does not specify individual emission limits for Boilers 1 and 3 (EU 80-1 and 80-3) and the CCUs (EU 84-1 and 84-2) because these are currently in the process of being developed. Once the revised capacity factors for these units are developed, the permit will be modified to reflect the emissions of these individual units based on their expected lower utilization. (Also see response above and response to Comment 7 of Specific Comments from Premcor)

…on page 24 Section 4 SO2 emissions states SO2 levels of 3,827 TPY combined from EU 84-2 & 84-1 and 80-1, 80-2, 80-3. Is this based on levels from APC 90/0289? Does this exclude boiler 80-4? Yes, the 3827 TPY SO_2 emissions are based on Permit APC: 90/0289 and is a combined interim emission limit Boilers 1, 2 and 3. It does not include the SO_2 emissions from Boiler 4.

What will be the reduction of the 3,827 TPY once there is reduced capacity? The facility is currently in the process of developing the reduced capacity factors for Boilers 1 and 3 and the CCUs. A reduction is anticipated as discussed in the above responses to this comment and once developed, the total SO_2 emission limit of 3,827 tpy will be adjusted accordingly.

B. states that after modification boiler 80-2 can not emit SO2 in excess of 84.7 TPY. Why is the emission limit specified for 80-2 after modification, but not the others? The same questions for NOX, CO, VOC, Sulfuric Acid Mist & PM 10. The Title V permit requires the facility to submit a permit application proposing the individual limits for Boilers 1 and 3 and the CCUs. Although these individual emission limits were required to have been prepared by now, there have been startup problems with the repowering project that have prevented sustained operation. The facility has requested an extension until

March 31, 2005 to submit these limits. DNREC finds this request for an extension to be reasonable. Once developed, these limits will be included in the Title V permit.

Comment: Comment 3) Page 25 NOX and CO emissions monitoring-iii. Compliance Method. A mandates compliance with CEMS. B states that "Compliance with a less stringent (higher) emission limit shall be based on compliance with a more stringent limit." What exactly does B. mean? This statement is vague and contradictory.

Response: The purpose of this condition is to simply point out that if more than one emission limit applies, e.g., a NOx limit of 0.20 lb/MMBtu from the Regulation No. 2 permit and 0.25 lb/MMBtu from Regulation No. 12, Section 3.2(a), then compliance with the more stringent (i.e., lower) limit of 0.20 lb/MMBtu would automatically mean compliance with the 0.25 lb/MMBtu limit.

Comment: Comment 4) Pg. 31 & 32. There is mention of an Acid Rain Permit for Boiler 4-phase II permit application dated 3/2/00. Has this been approved? 11. i.A.1 states that each affected source and unit at the affected source shall submit a complete Acid Rain permit application. What exactly are the other Affected Sources & Units here? Are they boilers 80-1, 80-2, 80-3 and EU84-1 & 84-2? If so, will this change the emissions stipulated for these units for SOX and NOX? If there is no existing permit for Boiler 4, just an application submitted 3/2/00, then are SOX and NOX being monitored for Boiler 4?

Response:
Pg. 31 & 32. There is mention of an Acid Rain Permit for Boiler 4-phase II permit application dated 3/2/00. Has this been approved? The facility has applied for an Acid Rain Permit pursuant to the U.S. EPA Acid Rain Program that is under review.

11. i.A.1 states that each affected source and unit at the affected source shall submit a complete Acid Rain permit application. What exactly are the other Affected Sources & Units here? Are they boilers 80-1, 80-2, 80-3 and EU84-1 & 84-2? If so, will this change the emissions stipulated for these units for SOX and NOX? The language included in the Title V permit has been taken directly from the regulation. The only unit at the facility subject to the Acid Rain program is Boiler 4. Other units are not affected units as defined by this program and their permitted emission limits are not affected.

If there is no existing permit for Boiler 4, just an application submitted 3/2/00, then are SOX and NOX being monitored for Boiler 4? The pollutants regulated under the Acid Rain Program are SO_2 and NOx, and their emissions from Boiler 4 are monitored. The emissions of SO_2 are monitored to determine whether sufficient allowances are available within the units compliance subaccount, and the NOx emissions are monitored pursuant to the NOx RACT program.

Comment: Comment 5) How does the NOX limit of .2 lb/mmBtu (rolling 24 hr average) relate to the NOX emissions granted under the Acid Rain permit for boiler 4? Is this limit in addition to or included in the limits specified in the Boiler 4 Acid Rain permit?

Ref. E page 26. Also how do the NOX emission under the Acid Rain permit factor into the NOX allowance deductions under permit AQM 003/00016-1 and Regulation 39 section 2(a)?

Response:
How does the NOX limit of .2 lb/mmBtu (rolling 24 hr average) relate to the NOX emissions granted under the Acid Rain permit for boiler 4? Is this limit in addition to or included in the limits specified in the Boiler 4 Acid Rain permit? NO_x emissions are limited in accordance with specific regulations and by the type of fuel combusted. The NO_x RACT (Regulation 12) emission limit 0.20 lb/MMBtu applies for gas combustion. Boiler 4 is allowed to burn low sulfur No. 2 oil during periods of natural gas curtailment. During oil combustion, the NOx RACT limit of 0.25 lb/MMBtu applies (also see response above and response to Comment 12 of Specific Comments from Premcor). In either case, these limits cannot be directly compared to the acid rain program because it does not specify lb/MMBtu limits for NOx for gas and oil combustion. Only coal-fired units are covered under the NOx portion of the acid rain program. For example, for a dry-bottom wall-fired boiler (i.e., a unit like Boiler 4), the current NOx limit for coal combustion is 0.46 lb/MMBtu under the acid rain program. However, as mentioned above, this limit cannot be directly compared with the 0.20 or 0.25 lb/MMBtu NOx RACT limits for Boiler 4 because these limits apply to different fuels.

Also how do the NOX emission under the Acid Rain permit factor into the NOX allowance deductions under permit AQM 003/00016-1 and Regulation 39 section 2(a)? The NOx Budget Trading Program (Permit Number AQM 003/00016-I and Regulation No. 39, Section 2(a)) is not related to the Acid Rain Program. While both programs have been designed to reduce overall NOx emissions, there are key differences in these programs. For example, the Acid Rain Program specifies a short term NOx emissions limit (in terms of lb/MMBtu) that cannot be exceeded, while the NOx Budget Trading Program is a cap-and-trade program which specifies that the unit must hold sufficient allowances in its account (or acquire such allowances by trading) to cover the actual tons of NOx emitted during the ozone season (May through September). The acid rain program does not contain any annual NOx allowance provisions. The acid rain program only applies to Boiler 4 at the facility, while several units at the facility (including all four boilers) are subject to the NOx Budget Trading Program. The facility is required to comply with both programs independently of each other

Comment: Comment 6) Why are there are no CO, PM 10, VOC & Sulfuric Acid Mist emissions limits for Boiler 4?

Response: The Boiler 4 does not have these limits because it is a grandfathered unit under the Clean Air Act. However, in order to provide some level of certainty in estimating emissions from this unit, DNREC is including the boiler's design capacity as an applicable requirement in the permit. Please see further discussion in a response under "General Comments from MAELC."

Comment: Comment 7) Why are there no lead emissions specified for boilers 80-2 and 80-4 on page 30?

Response: Boiler 2 burns gas (refinery fuel gas and natural gas), which is a clean burning fuel. Test results for this boiler have not detected any lead emissions. Therefore, no lead emission limit is included in the permit. For Boiler 4, see response above.

Comment: Comment 8) Why are there no fugitive emissions standards specified for the four boilers and the combined cycle gas turbines?

Response: The boilers and the CCUs at the facility are not considered to be in VOC service. Therefore, they are not subject to 40 CFR 60 Subpart VV requirements.

Comment: Comment 9) The DNREC technical memo references insignificant activities that per Title V do not need to be included in the emissions but do need to be mentioned in the permit. However, we cannot locate these insignificant activities anywhere in either document. What activities are included? Where are these activities covered in the draft permit?

Response: DNREC thanks the commenter for pointing out this discrepancy in the review memorandum. The memorandum has been revised to remove the reference to insignificant activities. Appendix "A" of Regulation 30 lists all the insignificant activities. The Company's application listed the activities defined in Appendix "A" under 2 categories, i.e., "Group 1" insignificant activities by specific activity type such as air conditioning systems, lawn mowers, welding equipment etc. and "Group 2" insignificant activities that include emission units for which an applicable requirement has not yet been promulgated, are not elsewhere listed as insignificant activities and which have the potential to emit in the aggregate the following air contaminants at less than the specified rates:

VOC	25 TPY in New Castle or Kent Counties or 50 TPY in Sussex County
Particulate	40 TPY
PM-10	15 TPY
SO_2	40 TPY
NO_x	25 TPY in New Castle or Kent Counties or 100 TPY in Sussex County

DNREC had addressed the "Group 1"insignificant activities in the technical memorandum accompanying Part 1 of this Title V permit issued in 2001. In this memorandum DNREC had also indicated that the "Group 2" insignificant activities would be addressed upon completion of the subsequent part of the Title V permit. DNREC intends including the "Group 2" insignificant activities when Part 2 of the permit is completed.

5.0 Comments from U.S. EPA

Comment: After discussion with Ravi Rangan I now understand now where to look when the permit refers to "See "Conditions Applicable to Multiple Pollutants in this Table" but I think that this is unclear to the reader as written. To make it clearer I suggest the following wording - "See Conditions Applicable to Multiple Pollutants in this Table - Emission Unit 80, 82, 83 and 84 were appropriate or mention the subparagraph for each. Please explain or correct the permit.

Response: The proposed permit identifies the applicable Emissions Unit ID when referring to "Conditions Applicable to Multiple Pollutants in this Table."

Comment: Condition 3 Table 1, Emission Unit 82 paragraph (b)(1)(i) refers to 40 CFR 60, Subpart VV under the record keeping and reporting requirements in addition to what is listed in the permit should ther permit also indicated that the facility need to do record keeping and reporting according to 40 CFR 60, Subpart VV. Please explain or correct the permit.

Response: DNREC agrees. The permit has been revised to indicate that the recordkeeping and reporting must be performed in accordance with the requirements of 40 CFR 60 Subpart VV and Delaware Regulation No. 24, Section 29.

Comment: Under Condition 3 Table 1(b)(1)(i)(A) the permit indicated the 40 CFR 60, Subpart VV but this is not indicated on the checklist. Please correct.

Response: The checklist is a list of applicable regulations prepared by DNREC to facilitate EPA's review of the draft permit. The checklist has been updated to indicate the applicability of 40 CFR 60 Subpart VV.

Comment: Under Condition 3 Table 1(d)(1)(ii) the acronym LSDF should be spelled out when using for the first time in the permit, i.e., Low Sulfur Diesel Fuel (LSDF). Please explain or correct.

Response: DNREC concurs. LSDF has been spelled out in the proposed permit where it is used for the first time.

Comment: Under Condition 3 Table l(e)(2) Odor - since odor is enforced by the State only, the permit should indicated that Odor is State Enforceable Only.

Response: The odor requirement is indeed enforced by the State only. The draft permit identified this requirement as State Enforceable Only.

6.0 Comments from Green Delaware

Comment: What are the total emissions from the facility?

Response: The estimate of the total emissions from the facility, based on the most recent emissions inventory are for the year 2002 which are presented in the table below. The Department anticipates receiving the inventory figures for 2003 by the end of October 2004. The facility is required to submit annual emissions inventories, which are available for review at DNREC's Air Quality Management Offices at New Castle and Dover.

Pollutant	2002 Emissions (tons/year)	Average Emissions, 1994-2002 (tons/year)
SO2	34,096	40,378
CO	3,857	8,490
NO2	3,533	5,461
TSP	1,602	1,811
PM10	1,193	1,348
VOC	665	1,245

Comment: What are the consequences of these air pollutant emissions?

Response: As part of the permitting of the repowering project, the facility had performed a dispersion modeling analysis to calculate cumulative impacts from all sources at the facility. The modeling was performed in accordance with the State and Federal guidelines and was designed to calculate the maximum pollutant impacts in areas surrounding the facility. The modeling analysis demonstrated compliance with the applicable primary and secondary National Ambient Air Quality Standards, thereby indicating that the impacts were within acceptable levels and not detrimental to public health and the environment.

Comment: Incorporating Sierra Club's comments by reference.

Response: Please see responses to Sierra Club's comments elsewhere in this document.

MEMORANDUM

TO: Robert Haynes

THROUGH: John B. Blevins

Ali Mirzakhalili, P.E.

Robert J. Taggart

FROM: Ravi Rangan, P.E.

SUBJECT: **Second Response Document Developed by the Air Quality Management (AQM) Section for the Public Hearing Held on August 18, 2004 for the Title V – Part 3 Draft Permit for The Premcor Refining Group, Inc.**

DATE: December17, 2004

A public hearing was held on August 18th, 2004 to receive comment on The Premcor Refining Group, Inc.'s (Premcor's) Title V – Part 3 draft permit. The Air Quality Management (AQM) Section of the Department of Natural Resources and Environmental Control submitted its first response document on September 24, 2004. On September 8, 2004, the Secretary granted the public's request for an additional comment period that began on October 1, 2004 and ended on October 22, 2004. During this second comment period, the only additional comments received by the Department were all made by Premcor. Therefore, this second response document provides AQM's responses to only those comments. In addition, AQM is submitting a proposed Title V -Part 3 permit with a supporting review memorandum.

Part 3 of Premcor's Title V application addresses the company's power plant and repowering project, located at the Delaware City Refinery and includes the gasifiers, combustion turbines, a flare, power plant boilers, a cooling tower and other components.

Your patience in awaiting receipt of these responses is appreciated. I hope this information will assist you in reviewing the issues and making your recommendation to the Secretary.

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pc: Dover Title V File
Bruce A. Steltzer
Malay Jindal - Mactec

Responses to Public Comments
(Supplement)

Title V (Part 3) Operating Permit
Delaware City Power Plant / Premcor Refinery

December 2004

Prepared for

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TABLE OF CONTENTS

1.0 Introduction 1

2.0 Comments from Premcor 2

1.0 Introduction

This document contains responses prepared by the Air Quality Management Section of the Department of Natural Resources and Environmental Control (DNREC). These responses correspond to the comments received on the Draft Title V (Part 3) Operating Permit for the Delaware City Power Plant at the Premcor Refinery located at 4550 Wrangle Hill Road, Delaware City, Delaware 19706. The comments to which DNREC is responding in this document were received from the Premcor Refinery during the second public comment period of October 1, 2004 through October 22, 2004 for this permit. No other comments were received from any party during the second public comment period.

Note that the first public comment period for this permit concluded on June 11, 2004. A public hearing was held for this permit on August 18, 2004. In September 2004, DNREC had prepared responses to all comments received during the first comment period and during the public hearing. Those responses were made available to the public during the second comment period. The responses presented in this document have been prepared as a supplement to the earlier responses prepared by DNREC in September 2004.

2.0 Comments from Premcor

2.1 Department Responses to General Comments from Premcor

Comment: Comment 3: Condition 5 Compliance Schedule.
Premcor's Response: The Department states that the AQM-1001Z forms submitted by Premcor are either not valid or incomplete. Premcor respectfully disagrees. The Department has acknowledged that only one test run showed compliance and the remainder showed "*marginal non-compliance*" for PM-10. The Department offers no factual support for its position. Premcor believes that remedies for this "marginal non-compliance" may be more problematic than the Department anticipates, and that a compliance schedule would allow Premcor time to resolve any non-compliance issues in an efficient and timely manner. Premcor submitted a proposed compliance schedule in its permit application, and understands that the Department disagrees with certain details of that compliance schedule. Premcor wishes to work with the Department to reach agreement on a satisfactory schedule and provide further detail as necessary to resolve the "marginal non-compliance" issue that exists with respect to Boiler 1 and Boiler 3. Compliance testing for Boiler 2 will be provided to the Department when available.

DNREC Response: This comment pertains to the forms AQM-1001Z submitted with Revision 8 of the Title V permit application in February 2004 presenting the proposed compliance plans for Boilers 1, 2 and 3. The facility had requested that a compliance plan be included in the permit. It should be noted that no details were provided in the AQM-1001Z forms submitted by the facility with the exception of a requested compliance date of December 30, 2006 and that the facility will apply for a change in the permitted emission standard. Currently, DNREC does not intend to entertain a request for a change in the permitted PM-10 emission standard of 0.005 lb/MMBtu when burning gaseous fuel. This limit was issued in a Regulation 2 permit and DNREC believes that it can be achieved by means of minor adjustments in operating parameters and by implementing good engineering operating practices to minimize emissions. In its previous response in September 2004, DNREC had presented factual stack test data to support its claim that the Boilers 1 and 3 only showed marginal non-compliance. If Premcor believes that this emission limit cannot be met, then Premcor should come forward with the exact nature of the problem and a specific detailed plan to address that problem along with a timeline for all intermediate steps necessary to achieve compliance. Premcor has not provided such detailed information to DNREC which is necessary to support a compliance plan even though Premcor has been aware of this marginal non-compliance for more than a year. If all Premcor intends to do is request a change in the permitted emission standard, then DNREC questions the need for a compliance achievement date of December 30, 2006, which is more than two years from the date of this response-to-comments document. Based on the information currently available, DNREC does not intend to release Premcor from its obligation to comply with this limit and disagrees that a compliance plan for these boilers should be included in the permit. It is DNREC's position

that any non-compliance with this limit would be better handled in an enforcement context rather than a permitting context.

Comment: Comment 4: Merging of the Quarterly Reporting and the Semiannual Deviation Reporting Requirements

Premcor's Response: The Department rejects Premcor's request to simplify the reporting requirements by changing from quarterly reporting to semi-annual reporting and to simplify these reports by allowing Premcor to maintain a file of the raw data and logbooks in situ instead of routinely submitting copies to the Department.

Premcor respectfully asks the Department to reconsider its requirement for quarterly reporting because Title V requires only semi-annual reporting, and because there have not been a significant number of non-compliance events to warrant quarterly reporting frequency.

The Department also expresses the view that because the repowering plant is operating sporadically, copies of operating and instrument logbooks can help demonstrate overall compliance. Premcor disagrees. Raw data and logbooks are kept at the operating unit and can be easily provided for review upon request, thereby avoiding unnecessary time and expense, both in assembling and copying the documents, and in the Department's review of those documents. Moreover, raw, unqualified (non-QA), data provides no additional information demonstrating either compliance or non-compliance. The Department has provided no evidence that this unduly burdensome requirement will produce any meaningful benefit, and in the interest of reducing paperwork, energy, and storage requirements for these documents and data, Premcor asks the Department to reconsider the need for handwritten and unqualified information.

DNREC Response: DNREC reiterates its earlier response prepared in September 2004. The quarterly reports have enabled DNREC to maintain an up to date status of the repowering project. This reporting condition will not increase the reporting requirements under existing permits. Furthermore, DNREC believes that each of these reports, and the associated data collection and documentation, serve a unique purpose in the overall demonstration of continued compliance with the permit terms and conditions, and are therefore essential elements of the Title V permit. DNREC does not intend to change the reporting or the data collection requirements of the permit.

Comment: Comment 5: Permit Shield

Premcor's Response: Premcor is gratified to know that the Department is not opposed to providing a Permit shield. Nevertheless, since the Department has chosen to issue Premcor a segmented Title V permit, withholding the permit shield until all three parts of the permit are issued puts Premcor at unnecessary risk within the regulated community in Delaware, and treats Premcor less favorably than all other facilities that received their entire Title V permit in one piece. The Department has not explained why it is not feasible to issue a permit shield for this part of the Title V permit. Premcor is willing to work with the Department to identify information already provided, or provide additional information, to allow Premcor to obtain a permit shield for this part of the Title V permit in a timely manner.

DNREC Response: DNREC reiterates that it is not opposed to providing a permit shield for the facility's Title V permit. However, as mentioned in DNREC's earlier response, the Title V permit for this facility is being issued in three parts (owing to the complexity of this facility) and therefore it is not feasible to include a permit shield at the present time. It should be noted that Motiva (Premcor's predecessor) had supported the issuance of this permit in three parts and had raised no such objections when the Part 1 of the permit was issued in 2001. While DNREC is currently denying a permit shield, it is envisioned that when all parts of the permit have been completed and the permit is combined into a single permit document, a permit shield would then be feasible. At such time, DNREC will be in a position to consider an application by the facility to grant a permit shield.

2.2 Department Responses to Specific Comments from Premcor

Comment: Comment 2: Design Capacity Limits in the Draft Permit

Premcor's Response: Premcor disagrees with the Department's decision to include the design capacity of Boiler 4 as a Title V permit condition. No existing Premcor permit contains such a design capacity permit. Moreover, Title V reads, in part, "The operating permit regulations do not provide for the establishment of any new substantive control requirements." Reg. 30, Section 1. Thus, Title V does not authorize the Department to apply design capacity as a new limit in the Title V permitting process, especially after the conclusion of the public hearing.

DNREC Response: DNREC has further evaluated the need to include design capacities of boilers in the permit. Section 1.5 of Regulation 2 clearly states that "Any approval granted by the Department pursuant to this Regulation, and any exemption from the requirements of this Regulation provided for in Section 2.2 shall not relieve an owner or operator of the responsibility of complying with applicable local, State, and Federal laws and regulations." Section 11.8(c) of Regulation 2 is applicable to the facility and requires that any unit's emission limit does not exceed that unit's potential to emit. Given that the Regulation 2 permit for Boiler 4 does not specify any numerical emission limits, the only mechanism by which the emissions of this boiler

can be quantified is by using its design capacity, in terms of MMBtu/hr, together with data on fuel use and hours of operation. Based on this regulatory requirement to specify the unit's potential to emit, and DNREC's concurrence with the comments received from the Mid-Atlantic Environmental Law Center, the Sierra Club and Green Delaware on the draft permit, DNREC believes the inclusion of the design capacity is relevant and necessary for determining compliance.

With respect to the CCUs and Boilers 1, 2 and 3, DNREC is not specifying their design capacities as permit limits. Boiler 2 has unit-specific numerical emission limits in the permit that are based on its potential to emit and therefore there is no need to include design capacity as a limit for this boiler. For CCUs and Boilers 1 and 3, the facility is required to submit unit-specific rolling twelve (12) month emission limits by March 31, 2005 which should also eliminate the need to specify design capacities as permit limits. DNREC is currently awaiting receipt of these limits from the facility. However, if a complete permit application specifying these unit-specific emission limits is not received by March 31, 2005, DNREC reserves the right to impose design capacities as permit limits for CCUs and Boilers 1 and 3.

Comment: Comment 5: Condition 3.c.2.i [16]: Reporting

Premcor's Response: Premcor does not agree with the Department's position with respect to the date when Premcor's initial semi-annual monitoring report is due. The issue is not limited to the monitoring report alone, but includes requirements that Premcor create checklists and logs, and train operators for new tasks. As evidenced by this document, the final permit conditions are still changing and may not be finalized until the date of final issuance. Absent a reasonable period of time to prepare and perform these tasks after the permit is finalized, there is an unnecessary risk that Premcor may be unable comply with all existing and new requirements immediately upon issuing the permit. For these reasons, Premcor requests that the permit effective date be at least 60 days after the date it is issued so as to provide Premcor a reasonable amount of time to perform these essential tasks.

DNREC Response: DNREC reiterates its position discussed in the earlier response prepared in September 2004. This reporting requirement is not new to the facility. The draft Part 3 permit was made available to Premcor on May 7, 2004, i.e., more than six months ago. Furthermore, additional time will elapse before this permit will be issued as a final permit. DNREC believes that Premcor has had ample time to develop the reports required by Condition 3.c.2.i. in the draft Part 3 permit.

With respect to the effective date of the permit, DNREC does not agree with the request to delay the effective date of the permit by 60 days after issuance. There is no justification for this delay. The permit will be effective on the date it is issued as a final permit as has been the case with all the Title V permits DNREC has issued.

Comment: Comment 10: Condition 3 Tbl 1.a.2.vi [22]
Premcor's Response: Premcor disagrees for the reasons stated in its earlier comments, but has no further comment.

DNREC Response: DNREC does not agree that this requirement should be removed. It is important to recognize that the purpose of the consent decree (CD) was "to resolve potential compliance issues while simultaneously advancing the goals of the Clean Air Act and that projects undertaken pursuant to the CD are for the purpose of abating or controlling atmospheric pollution or contamination by removing, reducing or preventing the creation or emission of pollutants…" The CD does not sanction increases in emissions that could result from burning No. 6 fuel oil in the future. Allowing combustion of No. 6 fuel oil in the future would represent a regression that is contrary to the principles of the CD. Therefore, DNREC is mandating the CD requirements in the permit and fully expects Premcor to comply with these requirements. By doing so, the compliance dates become enforceable independent of the CD. This is necessary to ensure the timing of the emission reductions and to ensure that the reductions are permanent.

Comment: Comment 11: Condition 3 Tbl 1.a.3.iii.a [23]
Premcor's Response: Premcor disagrees for the reasons stated in its earlier comments, but has no further comment.

DNREC Response: DNREC reiterates its previous response, and does not agree that the CCUs and the duct burners should be removed from this paragraph.

Comment: Comment 13: Condition 3 Tbl 1.c.1.i.B [37]: Add the phrase "during periods of process upset and malfunction" after the word "flaring" in line 4, per previous agreement with permit staff.
Premcor's Response: Premcor agrees, provided the Department incorporates, and does not modify, the language Premcor proposed in its earlier comments.

DNREC Response: DNREC reiterates its previous response. The 800-hour limit only applies to flaring of clean syngas and not to raw syngas.

Comment: Comment 17: Condition 3 Tbl 1.d.1.iii.D [42] and 3.d.1.ii.D and 3.d.1.iv.B [43]
Premcor's Response: Premcor disagrees for the reasons stated in its earlier comments, but has no further comment.

DNREC Response: DNREC reiterates its previous response. The facility must submit a complete permit application requesting the removal of the H_2S monitoring requirement of 40 CFR 60 Subpart J (Section 60.104(a)(1)) along with the Administrator's concurrence with the court decision that this regulation is not applicable. Upon receipt of this application, DNREC will initiate an administrative amendment process to revise the permit.

DNREC also reiterates that th```e requirement to monitor the sulfur content of syngas cannot be removed because this is a Regulation 2 permit condition.

Comment: Comment 19: Condition 3 Tbl 1.e.3.iv [54]
Premcor's Response: The Department agrees with Premcor that visual opacity observations do not need to be made for sources that have a COMS. However, the Department asserts that if a COMS is disabled or not operating properly visual opacity observations are required. Premcor disagrees. The QA/QC for a COMS provides standards of operation and outage periods for maintenance and mechanical failure. These standards do not require visual opacity observations. Premcor objects to including additional monitoring requirements beyond those already required by existing regulations or existing COMS QA/QC procedures.

DNREC Response: The requirement to conduct visual opacity observations is a facility-wide requirement that cannot be removed from the permit. DNREC agrees that for sources that have stack opacity monitors (i.e., COMS) the data provided by the COMS satisfies the opacity requirements. It is not DNREC's intent to require additional Reference Method 9 visible emissions evaluations for normal COMS outages such as QA/QC and related maintenance work. However, non-availability of data for an extended period of time is not acceptable and will be addressed in accordance with DNREC's enforcement policy guidelines.

2.3 Department Responses to Comments from Mid-Atlantic Environmental Law Center (MAELC)/Sierra Club

Comment: Comment 1: Compliance Schedule
Premcor's Response: Premcor agrees with the Department's Response Document, and notes that only five of the listed malfunction events, one for opacity and four for NOx and SO_2, involved the Power Plant facilities subject to the Draft Permit. Those events were temporary upsets or malfunctions, and not due to ongoing noncompliance. These temporary malfunction events were corrected and the unit was restored to normal operation.

DNREC Response: No response is necessary.

Comment: Comment 3: Segmentation of the Title V Permit
Premcor's Response: Premcor agrees with the Department's response, except as to the imposition of capacity limits, which were discussed above at Section 2.0, Comment 2.

DNREC Response: No response is necessary. DNREC has addressed the comment regarding design capacity limits in another response above.

Comment: Comment 4: Capacity Limits in the Draft Permit
Premcor's Response: See Section 2.0, Comment 2.

DNREC Response: No response is necessary. DNREC has addressed the comment regarding design capacity limits in another response above.

2.4 Department Responses to Specific Comments from MAELC / Sierra Club as Provided During the Public Hearing on August 18, 2004

Comment: Comment 6) Why are there are no CO, PM 10, VOC & Sulfuric Acid Mist emissions limits for Boiler 4?
Premcor's Response: No further comment, except as set forth above in Section 2.0, Comment 2, regarding capacity limits.

DNREC Response: No response is necessary. DNREC has addressed the comment regarding design capacity limits in another response above.

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pc: Dover Title V File
Bruce A. Steltzer
Malay Jindal - Mactec