



STATE OF DELAWARE  
DEPARTMENT OF NATURAL RESOURCES  
AND ENVIRONMENTAL CONTROL

89 KINGS HIGHWAY

DOVER, DELAWARE 19901

Secretary's Order No. 2013-A-0008

OFFICE OF THE  
SECRETARY

PHONE: (302) 739-9000

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**Re: Application of Delaware City Refining Company, LLC, for Air Pollution Control Permits to Restart the Olefins Plant Equipment at the Delaware City Refinery, Delaware City, New Castle County**

Date of Issuance: March 7, 2013

Effective Date: March 7, 2013

This Order considers the attached Hearing Officer's Report (Report) on Delaware City Refining Company, LLC's (Applicant) October 25, 2012 application for a permit under Regulation 1102 of the Department's *Regulations Governing the Control of Air Pollution, 7 DE Admin. Code 1102*. Applicant seeks to restart its Olefins Plant equipment at its petroleum refinery at 4550 Wrangle Hill Road, Delaware City, New Castle County (Facility). The Report recommends issuance of the permits drafted by the Department's Division of Air Quality (DAQ).

On January 15, 2013, the Department held a public hearing on the application. The Report reviews the public comments and the Department's Division of Air Quality's (DAQ) technical analysis prepared by Ravi Rangan, P.E., DAQ's technical expert responsible for regulating the Facility's air emissions. I adopt the Report and its record and find and conclude that the Department should issue the Applicant the permits drafted by DAQ.

The public comments raised several issues. DAQ prepared a response to most of them and the Report also reviews and addresses the public comments. One issue raised was whether the Department should also require Applicant to obtain a permit under the

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Coastal Zone Act. 7 Del. C. Ch. 70. The Department finds that the Olefins Restart does not require a Coastal Zone Act permit because there was no Order approving any abandonment of the Olefins Plant's manufacturing use as an existing approved nonconforming manufacturing use. The public comments also requested action on the pending National Pollutant Discharge Elimination System (NPDES) water discharge permit. The Department determines that the administratively extended NPDES permit is planned for update this year and separate from this air quality permit application. As indicated in the record, the Olefins Plant's equipment will not impact the Facility's NPDES permit's regulation of surface water discharges.

The permits to be issued by this Order will allow the Applicant to restart the Facility's Olefins Plant equipment, which will meet all the applicable air quality requirements. The restart of the Olefins Plant also will benefit the Delaware economy by resuming manufacturing production capacity that has been idle since 2001. The restart also will result in improvement to the safety of the equipment with the reconditioning of the equipment and improvement to the safety of the storage tanks. Thus, the restart is appropriate under the safeguards provided by the permit conditions and the Department's ongoing regulation of the equipment and its operation, including the release of air emissions.

Accordingly, the record supports issuance of the permits and the Department finds as follows:

- 1.) The Department has jurisdiction under its statutory authority to issue the air pollution control permits in this proceeding;

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

3.) The Department held a public hearing in a manner required by the law and regulations;

4.) The Department considered all timely and relevant public comments in making its determination;

5.) The Department has considered all the factors that the law and regulations require to be considered and determines that the air pollution control permits should be issued to the Applicant for the Facility based upon the draft permits, as attached to the Report, that include reasonable conditions to protect the environment and public health consistent with the Department's statutory responsibilities; and

6.) The Department shall publish this Order on its web page and shall provide such other public notice as may be required by its law and regulations.



Collin P. O'Mara  
Secretary

## HEARING OFFICER'S REPORT

TO: The Honorable Collin P. O'Mara  
Secretary, Department of Natural Resources and Environmental Control

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

RE: Application of Delaware City Refining Company, LLC for Air Pollution Control  
Permits for the Olefins Unit 34 Restart Project in Delaware City, New Castle  
County

DATE: March 5, 2013

### I. PROCEDURAL HISTORY

This Report makes recommendations to the Secretary of the Department of Natural Resources and Environmental Control (Department) on Delaware City Refining Company, LLC's (Applicant) October 22, 2012 permit application. DNREC Ex. 1. Applicant seeks permits to recondition equipment and ancillary construction restart its Olefins Unit<sup>1</sup> within Applicant's petroleum refinery (Facility) located at 4550 Wrangle Hill Road, Delaware City, New Castle County. Unit 34 last operated in May 2001.

The Department published public notice of the application on November 18, 2012 in the *News Journal* and *Delaware State News*. DNREC Ex. 4. In a December 3, 2012 email, Amy Roe, Ph. D., Conservation Chair of the Delaware Chapter of the Sierra Club, requested a public hearing on the application and provided comments on the application. DNREC Ex. 2. On December 16, 2012, the Department published public notice of a January 15, 2013 public hearing on the application in the *News Journal* and the *Delaware State News*. DNREC Ex. 5. On January 15, 2013, DAQ sent Dr. Roe an email indicating the public hearing would be held that night. DNREC Ex. 3.

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<sup>1</sup> Olefins Unit also is described at Unit 34 of the Facility's many processes. Olefins is a product made from gasoline.

I presided over the public hearing held January 15, 2013 at the DAQ's New Castle office at 715 Grantham Lane. Ms. Roe requested a two week extension of the public comment period or a re-scheduled hearing because of the Department's failure to include the public notice of the hearing in its email notification system. Applicant opposed the two week extension based upon the urgency of the project, and I ruled to allow the public comment period to remain open until January 22, 2013 for written comments. Once the record was closed, I requested the Applicant to respond to the public comments, and Applicant provided a response on XXX DAQ's Ravi Rangan, P.E., prepared the attached technical response memorandum (TRM) dated February 26, 2013 along with its recommended draft permits should the Secretary decide to issue the permits. I consider the record complete for decision based upon the information currently in the record, as reviewed below.

## **II. SUMMARY OF THE RECORD<sup>2</sup>**

The record includes the transcript of the public hearing, the documents included as exhibits at the public hearing, and the documents identified herein.

At the public hearing, DAQ's representative Ravi Rangan, P.E., an Engineer with DAQ's Engineering and Compliance Branch, and Paul Foster, P.E., Program Manager of DAQ's Engineering and Compliance Branch made introductory comments and provided for the record Department exhibits,<sup>3</sup> which were identified above.

The Applicant's representatives present at the public hearing were Tom Godlewski, Environmental Engineer, Bob Muche, Environmental Supervisor, Andy Woerner from Applicant's environmental consultant, Environmental Resources Management (ERM), and Colin

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<sup>2</sup> This is a recommended record insofar as the Secretary may determine different information should be in it.

<sup>3</sup> The Department does not have an obligation to develop the record at the public hearing, but provides certain documents to assist the public in making comments on the application.

McGroarty of ERM. Mr. Godlewski made a power point presentation and it was included as a document exhibit. DCRC Ex. 1.

Mr. Godlewski explained that the Olefins Unit has been out of operation since 2001, but the Unit has remained in the Facility's emissions inventory and in the Title V operating permit. Mr. Godlewski described how the Olefins Unit would use polymerized gasoline to remove olefins for sale as a separate product. He indicated that the restart project would: 1) restore the four distillation columns used to separate olefins from gasoline, 2) replace the burners in a process heater (134-H-101), 3) recondition three capacity product storage tanks, 4) install a feed surge drum, 5) recommission a loading rack for placing the product in trucks, and 5) install the piping needed to connect the loading rack with the storage tanks.

Mr. Godlewski indicated that the process heater would have a 35 million BTU an hour capacity, and would be fueled by refinery fuel. This unit would have NOx emissions of 0.060 pounds per million BTU, and the application's sulfur dioxide emissions were conservatively estimated based upon the maximum expected sulfur content in the refinery gas. He stated that the particulate matter, carbon monoxide and volatile organic compound emissions were based upon the burner manufacturer's specifications.

He elaborated on the three storage tanks, which he said each tank would have a 1,500 barrel per day throughput capacity that he considered was a conservative estimate. The tanks' estimated emissions were calculated by using the required United States Environmental Protection Agency's Tanks program. Tank 580 has an external floating roof to minimize emissions and Tanks 582 and 583 have internal floating roof tanks. All three tanks will receive double bottoms to bring them into compliance with the current leak prevention standards in Delaware.

The loading rack was described as the equipment used to load the product into either truck or rail transportation. Mr. Godelewski said the equipment had been used for the methanol process, and that the vapors from the product transfer would be captured and controlled by either returning to the refinery or burning. He indicated that the vapors would be low sulfur and that the treatment of the vapors is estimated to be greater than 98 percent.

The final equipment Mr. Godlewski described was the 2,500 component of piping that would be installed, which would be incorporated into the Facility's ongoing leak detection and repair program.

He concluded his presentation by stating that the two units with air emissions, namely, the process heater and the tanks, already were in the Title V permit and hence Applicant was not proposing any new permit conditions, but just to reactivate the equipment. He noted that the existing permit also required the use of the process heater 42-H-1, 2 and 3 to control the emissions of VOCs from the transfer of the product for transportation.

The first person from the public to speak was Dr. Roe, who complained about DAQ's lack of email notice of the hearing and the "creepy" hearing location that also had limited space for parking and no signs. She commented on the application as restarting something that has not been used for a long time and that the application described the tanks as having light rust. She commented on the Facility's history of tank failures, particularly in 2001. She commented on the proposed production of olefins as a hazardous substance and that the manufacturing process will emit more air pollutants in fine particulates, VOCs, sulfur dioxide, sulfuric acid, lead and greenhouse gases. She commented on the series of permit being processed and that there was no thorough health-based air monitoring program to evaluate the impact on the local community. She requested that any permit be contingent upon such a program. She commented on the leak detection program and her review of reports indicated numerous leaks occurring. She

commented on the Coastal Zone Act and questioned why the Applicant had not sought a permit under the Coastal Zone Act because the production of Olefins was being resumed after more than two years. She also commented on the lack of any emission offsets for the air emissions to occur if the project is approved. Her final comment was on the use of cooling water and that the cooling water permit expired in 2002 and that a new NPDES permit was needed.

Mr. Godelewski responded to the comment on the cooling water by saying that the restart project would not use any cooling water. He also responded to the comment on the air monitoring by stating that the Facility conducts approximately 160,000 monitoring inspections of air emissions annually.

The next person to speak was Rich Lober with Waste Master Solutions, who commented in support of the application based upon his business that has the Facility as its largest industrial customer and responsible for approximately 20% of his business. He commented how the Facility works with his business as an environmental steward to increase recycling and that the Facility recycles approximately 100,000 pounds annually with his business.

Tony Papili spoke next as the business manager of Pipers local 74, which he said represents approximately 1,000 men. He supported the application because it would provide approximately 140 building trade members with work. He complimented the new owners of the Facility in making the Facility a safe place to work and reaching out to the community.

The next person to speak was Andrew Groff with the Green Party of Delaware, who commented on Facility's operation and the rehabilitation of old equipment that has had problems over the years. He commented on the cancer rates being higher near the Facility than the national average and that the externalities of continued operation of the Facility outweigh the jobs to be created. He commented on the state 'sacrificing' over 100 million dollars to support a 'dinosaur industry' and that the state made a poor investment.

Mark Martell provided comments as the President of the Delaware Audubon Society, a resident in a development near the Facility, and a member of the Facility's Citizen Advisory Panel. He commented that the air permit is tangential to the Audubon Society's concern with the cooling water fish impingement and sought the Applicant to make a greater investment in the expansion of the closed loop cooling system.

Post-hearing written comments were received from the following: Alan Shores' emails dated January 17, 2013 and January 22, 2013 to Mr. Foster. These commented that the Applicant should be required to follow the same rules as everyone else and that the manufacture of nonene would be a new source of emissions and that the Olefins restart should have a Coastal Zone Act permit under Section 7003 since more than two years have passed since the process was stopped. The emails will be marked as Shores Ex. 1.

Philip Barnes commented in a January 21, 2013 email (Barnes Ex. 1) to Mr. Foster that no permit should be issued until there is an ambient air monitoring program to assess the impacts of air emission of pollutants on the local community. He also requested no permit be issued until the NPDES permit is issued that would eliminate the fish kills from the current intake. Finally, he commented on the January 16, 2013 release of 3,000 lbs. of SO<sub>2</sub> that he called an assault on public health. He considered that the Facility was a chronic violator and the Department should treat the Facility as one, and the Department's failure to treat as a chronic violator shows a level of negligence by the Department toward protecting the environment.

Doris Grant commented in a January 22, 2013 email (Grant Ex. 1) to Mr. Foster that Governor Markell used the refinery as an example to get re-elected, but that someone must do the right thing and adopt the position of the Sierra Club.

The Applicant also submitted comments to Sierra Club's comments on the need for a Coastal Zone Act permit that referred to the CZA Section 7003 that places a two year limit on the operations of a basic steel manufacturing.

The DAQ's TRM responded to the Sierra Club technical comments on the following five points: 1) the dangers of nonene as a hazardous substance; 2) the projected emissions from the Olefins process was not accurate or complete and the emissions are released without adequate controls for the an air quality non-attainment area; 3) the air quality from the Facility's emissions needs to be monitored; 4) the safe condition of the three storage tanks to be reconditioned needs to be determined by the Department; and 5) the need for offsets for the proposed emissions as a new source or major modification of an existing source. DAQ's comment on Sierra Club's issue 1 was that nonene poses any risk from its low vapor pressure because Applicant will use a closed vent system that will capture all of the vapors released during a transfer. On Sierra Club's comment 2, DAQ agrees that the Facility is located in a severe non-attainment area for ozone, but indicates that the NOx emissions from the restart are below the Facility-wide NOx cap established in Section I.A.5 of the DNREC-DCRC Agreement Governing the Acquisition and Operation of the Delaware City Refinery. DAQ states that the NOx emissions are below the cap means that the Clean Air Act's regulatory requirements are not triggered for either a non-attainment new source review or the prevention of significant deterioration. DAQ's response to the Sierra Club's comment 3 was that there was air monitoring conducted by DAQ at its Delaware City monitoring station and that the monitoring results have not found any evidence of adverse impacts to public health from the 38 organic compounds collected at six day intervals. DAQ's response to Sierra Club comment 4 was that Applicant confirmed that the tanks would be inspected to ensure their integrity. DAQ's response to the Sierra Club comment 5 was that there was no regulatory requirement to provide an offset for the emissions since offsets are only

required for a major new source review or a major modification to an existing source, and the restart emissions are below the threshold for these regulatory requirements.

### **III. DISCUSSION AND REASONS**

The application seeks to amend two permits pursuant to Department Regulation 1102 within the *Delaware Regulations Governing the Control of Air Pollution* (Air Regulation). 7 *Del. Admin. Code* 1102. DAQ has responded to the public comments in the attached TRM, and recommends the Secretary approve the issuance of the two permit amendments that its experts prepared, namely, APC-81/0822-Operation (Amendment 2) for the Olefins Plant, Storage Tanks and Truck Loading Rack, and APC-81/0808-Operation (Amendment 1) for the Process Heater 134-H-101. In addition, DAQ provided its technical analysis of the draft permits' various regulatory requirements to support its recommendation to issue the draft permits.

I have considered all the public comments timely submitted and agree with DAQ's analysis and recommended draft permits. I will address the issues raised by the Sierra Club and other public commentators concerning the application of the Coastal Zone Act, 7 *Del. C. Ch. 70*. I agree with Applicant's response to the public comments on this issue that questioned why there was no permit application for the proposed restart considering fact that the Olefins Plant has not operated since 2001. Applicant cites Section 7003 of the CZA in which the plain meaning of the CZA clearly does not apply to any shutdown of operation of the Olefins Plant or any other manufacturing line at the Facility. The temporary shutdown not to exceed two years applies only to basic steel manufacturing, and the Facility has never had any basic steel manufacturing. The only other support for a CZA authority over the Olefins Plant would be if the Department had issued an Order determining that there had been an abandonment of manufacturing, which is a procedure authorized under Section 12 of the CZA Regulations. Again, there has been no Department Order determining that an abandonment of manufacturing had occurred. Indeed, the

fact that the equipment remained in place and continued to be referenced in the applicable Department permits warrants that an abandonment of any future manufacturing under the CZA would have been opposed by the Facility's owners. In addition, I find that the Olefins Plant's restart will not be any expansion of an authorized use given the equipment that will be used and the production will be the same. DAQ's TRM indicates that the restart is expected to produce 4,000 barrels a day of nonene and that largely existing equipment would be used, albeit reconditioned and improved as needed. Thus, I determine that no CZA permit is needed before the Olefins Plant may be restarted, and reject the position in the public comments that seek to impose this regulatory requirement.

The public comments also raised the issue of the Clean Water Act regulation under the National Pollutant Discharge Elimination System permit. This obviously does not apply to the air permit, and there is a current NPDES permit in effect on administrative extension. Applicant's prior owner properly submitted a timely application for renewal of the NPDES permit and under the federally mandated procedures the Department is to issue a draft permit for public comment as the next step and that is where the delay is. Often NPDES permits are administratively extended and the Department is aware of the issues with fish impingement and entrainment from the continued use of an open loop cooling water system. The Applicant has sought approval to recondition the cooling water tower as part of its effort to reduce the amount of cooling water intake from the Delaware River.

I find that DAQ's response to the technical comments provide support for the draft permits and adopt the response set forth in Attachment A to the DAQ TRM attached hereto. The only issue to elaborate on the response is that the Department regulates tanks by its Division of Waste and Hazardous Substances. Consequently, the tanks will be subject of ongoing regulation by the Department to ensure that the tanks will operate and be maintained properly and safely.

The record also shows that the current owner has made improvement to the safety of the Facility's operation and should not be judged by the actions or inaction of prior owners.

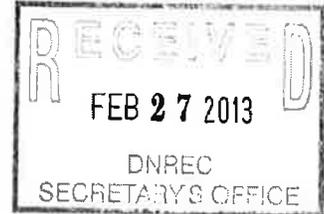
#### **IV. CONCLUSION**

I find and conclude that the record supports approval of the DAQ drafted permits for operation of equipment in the application. A draft order is attached hereto.



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Robert P. Haynes, Esquire  
Senior Hearing Officer



**MEMORANDUM**

TO: Robert Haynes,  
Hearing Officer

THROUGH: Ali Mirzakhallili, P.E. *AM*  
Division Director

Paul Foster, P.E. *PF*  
Program Manager

FROM: Ravi Rangan, P.E. *RR*

SUBJECT: **Response Document Developed by the Division of Air Quality (DAQ) for the Public Hearing Held on January 15, 2013 for The Delaware City Refining Company (DCRC) to Restart the Olefins Plant at the Delaware City Refinery.**

DATE: February 26, 2013

A public hearing was held on January 15, 2013 to receive comment on The Delaware City Refining Company's (DCRC's) application to restart the Olefins Plant at the Delaware City Refinery.

DCRC submitted an application on October 22, 2012 to restart the Olefins Plant which has been out of service since May 2001. As a result of the Olefins Plant being restarted, a 35 mmBtu/hour existing heater (134-H-101) will be restarted, and 3 product storage tanks (580-TF-10, 582-TF-4 and 583-TF-4) and a feed surge drum (43-D-204) will be returned to service. Product olefins will be loaded into trucks using the existing methanol unit loading rack. The application indicates project related emissions will not exceed 9.2 TPY NO<sub>x</sub>, 3.7 TPY SO<sub>2</sub>, 1.2 TPY CO, 5.4 TPY VOCs, 0.8 TPY PM<sub>10</sub>/PM<sub>2.5</sub>, 0.1 TPY H<sub>2</sub>SO<sub>4</sub>, 0.0001 TPY Pb and 18,716 TPY CO<sub>2e</sub>. In response to requests for a public hearing from the Delaware Chapter of the Sierra Club, the Department scheduled and held a hearing on this application on January 15, 2013.

Appendix "A" of this memorandum provides DAQ's responses to comments made by concerned citizens at the above referenced hearing. Appendix "B" is the Technical Support Document and draft permits for DCRC's Olefins Plant. I hope this information will assist you in reviewing the issues and making your recommendation to the Secretary. Your patience in awaiting receipt of these responses is appreciated. If you have any questions, please call me at (302) 323-4542.

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## **Appendix "A"**

There were 6 attendees from the public at this hearing, including representatives from the Delaware Audubon Society, the Delaware Chapter of the Sierra Club, Waste Master Solutions, Pipers Local 74 and the Green Party of Delaware. Five speakers submitted written and/or oral comments. With the exception of the Delaware Chapter of the Sierra Club there were no comments that were directly relevant to the air permitting action for restarting the Olefins Plant. Therefore, in the remaining portion of this memorandum, DAQ will restrict its analysis and responses to those comments as they pertain to the air program.

The DE chapter of the Sierra Club raised several comments in an e-mail letter dated December 3, 2012. Given below in each instance is the specific comment restated followed by DAQ's response as it relates to the air program.

**Sierra Club Comment # 1:** The material safety data sheet for nonene describes it as a hazardous substance with serious potential health effects from inhalation. As an "aspiration hazard," short term exposure to nonene causes irritation, dizziness and unconsciousness. There is no information available on the health impacts of long term exposure to this chemical. Pollution emissions and toxic fugitive vapors from this process, particularly in the truck transfer station, present a public health risk to nearby residents who are already impacted by air pollution and toxic vapors.

**DAQ Response:** DAQ disagrees with the Sierra Club. Nonene's low vapor pressure of 5.4 mm Hg at 25 deg C. would suggest minimal risk to public health of nearby residents as a result of truck loading operations. Furthermore, DCRC's application states displaced vapors from truck loading operations will be captured by a closed vent system and routed to a control device. By definition, a closed vent system captures 100 % of displaced vapors. The proposed control device is the reformer heater 42-H-1,2,3 which has a design heat input of 353 mmBtu/hour which will achieve a destruction efficiency of greater than 98 %.

**Sierra Club Comment # 2:** The application described projected air emissions from the refinery fuel gas fired olefins heater, product storage tanks, product loading rack emissions, and fugitive emissions. Emissions from these sources are estimated to total 9.2 TPY of nitrogen oxides, 3.7 TPY of sulfur dioxide, 1.2 TPY of carbon monoxide, 5.4 TPY of volatile organic compounds, 0.8 TPY of particulates, 0.8 TPY of fine particulates, 0.1 TPY of sulfuric acid, 0.0001 TPY of lead and 18,716 TPY of carbon dioxide equivalent.

Fine particulates are assumed to be equivalent to large particulates in the permit application (p. 10). Yet the applicant does not provide any evidence of the validity of this assumption that PM10 and PM2.5 emissions will be equal. We therefore assert that

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### Response Document for Public Hearing held on January 15, 2013 DCRC – Olefins Plant Restart Project

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the applicant has not provided an adequate estimate of PM<sub>2.5</sub> emissions from the project, rendering this application incomplete.

Furthermore, the refinery is located in an area of severe nonattainment for ozone and PM<sub>2.5</sub> emissions. The introductions of new emissions that are known to impact public health and to compromise lung function are of concern, particularly for of new sources for VOC and PM<sub>2.5</sub> emissions, especially in proximity to the Delaware City community that has already documented alarmingly high levels of VOCs and PM<sub>2.5</sub> in residential neighborhoods in March 2012.

The olefins heater, which will operate on refinery fuel gas at a usage rate of 0.031 MMscf/hr, does not have scrubbers or control devices on the equipment, and the process equipment vents directly to the atmosphere. The chemical composition and potential hazardous air pollutants from the refinery fuel gas is not described in the permit application, making it difficult to determine the health risks posed from the local combustion of this fuel in a scrubberless stack. However, best practices for emissions reduction from the stack, including scrubbers and control devices, should be required for any new permits issued by the department.

**DAQ Response:** Particulate emissions from the process heater in question are the result of combusting natural gas and/or refinery fuel gas. Particulate matter thus formed typically has an aerodynamic diameter less than 1 micron. EPA's compilation of emissions factors for External Combustion Sources (AP-42, 5<sup>th</sup> Edition) uses this very basis to consider the published emission factors of 5.6 lb condensable PM/1.0 E +06 scf of fuel gas and 1.9 lb filterable PM/1.0 E +06 scf of fuel gas combusted to be the same for assessing PM, PM<sub>10</sub> and PM<sub>2.5</sub> emissions.

DAQ concurs with the Sierra Club that the DCR is located in a severe non-attainment area for ozone. NO<sub>x</sub> emissions from the DCR are subject to a plant-wide applicability limit (i.e., the NO<sub>x</sub> Cap) established pursuant to Section I.A.5 of the DNREC-DCRC Agreement Governing the Acquisition and Operation of the Delaware City Refinery. Because the Olefins Plant restart project does not seek an increase in the NO<sub>x</sub> Cap, neither NA NSR nor PSD applicability are triggered. With regard to the classification for PM<sub>2.5</sub>, although presently still classified as being in non-attainment, New Castle County meets both the old annual standard of 15 ug/m<sup>3</sup> as well as the new 12 ug/m<sup>3</sup>. Finally, DAQ disagrees with the Sierra Club with respect to its comment requiring a scrubber or other control device to control emissions from this 35 mmBtu/hour process heater. Typically, gas-fired heaters of this size range are equipped with low-NO<sub>x</sub> burners to control NO<sub>x</sub> emissions. DCRC's application indicates the Callidus burners on this heater will achieve NO<sub>x</sub> emissions of 0.06 lb/mmBtu which DAQ finds to be consistent with other minor-NSR BACT determinations.

## **Appendix "A"**

### **Response Document for Public Hearing held on January 15, 2013**

#### **DCRC – Olefins Plant Restart Project**

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**Sierra Club Comment # 3:** The produced nonene will be loaded onto trucks from an existing Unit 41 Methanol loading rack that has been out of service since early 2001. The permit application describes a vapor recovery system that will be used to capture and control vapors from the loading rack, and the incorporation of all new components into the refinery's existing leak detection and repair (LDAR) program. Yet the vapor recovery systems utilized at the refinery are problematic. Utilizing the Freedom of Information Act, I have obtained a copy of the Delaware City Refinery's LDAR report for 2011 (the most recent data available). This report shows numerous leaks are occurring at the refinery across all of their reported systems. Leaking vapors from the Refinery present a public health risk to surrounding communities that is not monitored by the refinery or the State of Delaware. On October 25, 2012 I spoke with Heather Shelpot, the Refinery's health, safety and environmental manager, in response to our request for air monitoring data for volatile organic compounds and air toxics by the refinery. Ms. Shelpot assured us that no such monitoring exists, and that they do not test for air quality at the facility.

Without a refinery-based or state monitoring program for air toxics at the facility or in surrounding communities, the State is unable to evaluate the local impact that leaks at the facility are having on public health. We therefore ask that DNREC not approve any additional permit applications that introduce new air emissions without first insuring that appropriate and comprehensive air quality monitoring at the fence line of the refinery is put in place to protect public health in surrounding communities. We also ask that the need for air quality monitoring for air toxics at the fence line and in surrounding communities be discussed in a public hearing for this project.

**DAQ Response:** See DAQ's response to Sierra Club Comment # 1 regarding the closed vent system that is used to capture and control displaced truck loading nonene emissions. With regard to Sierra Club's comment on the monitoring program for air toxics at the fence line of the refinery, DAQ notes that already has a monitoring station at DE City for determining ambient SO<sub>2</sub> and CO concentrations. Additionally, DAQ monitors air toxics of 38 organic compounds collected at 6-day intervals at its DE City monitoring station and has found no evidence of adverse impacts to public health.

**Sierra club Comment # 4:** The permit application describes the condition of the three storage tanks that will be used: Tank 580-TF-10 holds 420,000 gallons, Tank 582-TF-4 holds 168,000 gallons, and Tank 583-TF-4 holds 168,000 gallons. All three tanks have an internal shell condition of light rust. Yet, the permit application states that "there are no plans to modify the tanks" (p. 23). The Delaware City Refinery has a history of tank failures, including the an explosion on July 17, 2001 that released 1.1 million gallons of sulfuric acid, 99,000 gallons of which reached the Delaware River, killing fish and other aquatic life. One refinery worker was killed and eight others were injured in this explosion. A thorough review of tank conditions is essential to insuring

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**Response Document for Public Hearing held on January 15, 2013  
DCRC – Olefins Plant Restart Project**

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worker, public and environmental safety in the reapplication of storage tanks to a new purpose holding a highly flammable product.

**DAQ Response:** DCRC confirmed at the hearing that it has already thoroughly inspected the tanks to ensure their integrity. DAQ finds this response to be satisfactory.

**Sierra Club Comment # 5:** The application does not appear to claim the need for offsets for this project, even though air pollution and greenhouse gases will increase. We question why offsets were excluded from this permit application, even though the project will be a new source of emissions in the coastal zone. This is a subject that should also be discussed during a public hearing.

**DAQ Response:** A source is required to provide offsets for emissions increases as one of the requirements as a result of triggering Non-attainment New Source Review (NANSR) by a major new source or a major modification to an existing source. DCRC's restarting the olefins plant has not triggered NANSR for any pollutants and thus no offsets are necessary.

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## **Appendix "B"**

### **Response Document for Public Hearing held on January 15, 2013**

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VOC emission factor: 0.0049 lb/mmBtu

CO emission factor: 0.008 lb/mmBtu

SO<sub>2</sub> to H<sub>2</sub>SO<sub>4</sub> conversion %: 2 %

Annual emissions based on the above emissions factors are:

NO<sub>x</sub>: 9.2 TPY

SO<sub>2</sub>: 3.7 TPY

CO: 1.2 TPY

PM<sub>10</sub>/PM<sub>2.5</sub>: 0.8 TPY

H<sub>2</sub>SO<sub>4</sub>: 0.1 TPY

VOC: 0.8 TPY

#### **Fugitive Emissions:**

Fugitive emissions were estimated for 1120 new valves, 12 PRVs, 1,340 connectors, 20 pump seals and 3 sampling connections using EPA guidance correlations (EPA-453/R-95-017). Based on this methodology fugitive emissions are estimated to be 4.2 TPY.

#### **Tank Working and Breathing Losses:**

Storage Tank emissions were calculated using EPA's Tanks 4.09d for external floating roof and verified as being 0.4 TPY.

#### **Loading Rack Emissions:**

Loading rack emissions were verified as being 0.1 TPY based on nonene having a vapor pressure of 0.22 psia @ 68 deg F, 500 GPM loading rate for up to 2 hours per day and a destruction efficiency of 98 % in the 42-H-1,2,3 control device.

Total project related emissions are as follows:

NO<sub>x</sub>: 9.2 TPY

SO<sub>2</sub>: 3.7 TPY

CO: 1.2 TPY

VOC: 5.4 TPY

PM<sub>10</sub>/PM<sub>2.5</sub>: 0.8 TPY

H<sub>2</sub>SO<sub>4</sub>: 0.1 TPY

Pb: 1.0 E -04 TPY

CO<sub>2e</sub>: 18.716 TPY

The project does not trigger NA NSR for NO<sub>x</sub> emissions increases because NO<sub>x</sub> emissions from the DCR are subject to a plant-wide applicability limit (i.e., the NO<sub>x</sub>

## **APPENDIX "B"** **Technical Support Document**

### **Background and Discussion:**

Delaware City Refining Company, LLC (DCRC) owns and operates a petroleum refinery in Delaware City, Delaware. DCRC proposes to restart the Unit 34 Olefins Unit (Olefins Unit), which has been out of service since May 2001. The Olefins Unit will use a feedstock of poly gasoline from the refinery's Polymerization Unit that is currently sent into the refinery's gasoline blending pool at a rate of 4,000 barrels per day (BPD). The Olefins Unit will separate out olefins from this poly gasoline stream using a series of four separation columns. The remainder of this poly gasoline stream will continue to be routed to gasoline blending. The main source of heat for the process is the 134-H-101 Heater, a refinery fuel gas fired heater that heats a thermal transfer oil in a closed system to provide heat to three of the four separation columns.

The DCRC Olefins Restart Project will require piping modifications to transfer olefin products to storage tanks and to route olefin products to the repurposed Methanol Unit loading rack. Three storage tanks (Storage Tanks 580-TF-10, 582-TF-4, and 583 TF 4) that were formerly used for the shutdown Unit 41 Methanol Unit will also be returned to service as part of the project. DCRC also plans to load the products from the Olefins Unit onto trucks using the former Unit 41 Methanol Unit loading rack.

The DCRC Olefins Restart Project will allow for the separation of olefin products from the existing gasoline pool. Figure 2-1 below shows an overall process flow diagram for the DCRC Olefins Restart Project. Though the Olefins Unit is capable of producing a mix of olefin products, the unit is being restarted for the purposes of producing nonene.

This project will allow DCRC to remove/separate olefin products for sale from an existing poly gasoline stream. Components of this project include:

- Installing piping connections that are necessary to route olefin products to storage tanks and to route olefin products to the product loading rack;
- Repurposing currently out of service storage tanks 580-TF-10, 582-TF-4, and 583-TF-4 into olefin service;
- Replacing burners in the 134-H-101 Heater;
- Repurposing a drum (pressure vessel) from the currently out of service Ether Plant (43 D 204) to serve as a feed surge tank/drum for the Olefins Unit (in lieu of the formerly used Tank 390); and
- Repurposing the former Unit 41 Methanol loading rack for olefin product loading.

### **Emissions Calculations for 134-H-101:**

Heat input: 35.1 mmBtu/hr

Fuel heat content: 1117 Btu/scf

SO<sub>2</sub> emissions factor: 0.0241 lb/mmBtu based on NSPS limit of 162 ppmv H<sub>2</sub>S in RFG

NO<sub>x</sub> emission factor: 0.06 lb/mmBtu

PM<sub>10</sub>/PM<sub>2.5</sub> emission factor: 0.005 lb/mmBtu

**Appendix "B"**

**Response Document for Public Hearing held on January 15, 2013**

**DCRC – Olefins Plant Restart Project**

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Cap) established pursuant to Section I.A.5 of the DNREC-DCRC Agreement Governing the Acquisition and Operation of the Delaware City Refinery.

The 5.4 TPY project related increase in VOC emissions also does not trigger NA NSR because the net increase of 23.6 TPY (inclusive of 18.2 TPY contemporaneous changes over the 5-year look back period of 2009 through 2013) are less than 25 TPY.

The attached permits incorporate these emission limits. Additionally, because all other requirements are already incorporated in the existing Title V permit for the facility, the applicable requirements in these permits have been cross referenced to the applicable conditions in the facility's Title V permit.

## Appendix "B"

### Response Document for Public Hearing held on January 15, 2013

#### DCRC – Olefins Plant Restart Project

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Source	Regulatory Citation	Description	Applicability
Unit 34 Olefins Unit	Regulation No. 1102	Permits	This regulation is applicable to the proposed project since these activities involve a new unit that could affect air emissions.
	Regulation No. 1103	Ambient Air Quality Standards	This regulation applies to the DSCR as a whole, not to any specific process or emissions unit.
	Regulation No. 1104	Particulate Emissions from Fuel Burning Equipment	This regulation applies to the olefins unit heater. The PM emissions from the olefins unit heater will be limited to an emission rate less than 0.3 lb/MMBtu.
	Regulation No. 1106	Particulate Emissions from Construction and Materials Handling	Sections 2 and 3 of this regulation are potentially applicable to the olefins unit during the construction phase of the project.
	Regulation No. 1108	Sulfur Dioxide Emissions from Fuel Burning Equipment	Regulation No. 1108 is applicable. DCRC will ensure compliance with this regulation by limiting fuels combusted to desulfurized refinery fuel gas or natural gas.
	Regulation No. 1112	Control of Nitrogen Oxide Emissions	This regulation is applicable to the DCRC Olefins Restart Project. As described in this application, NO <sub>x</sub> emissions will be subject to the facility-wide NO <sub>2</sub> PAL and NO <sub>x</sub> cap. Annual tune ups will be performed by qualified personnel.
Unit 34 Olefins Unit	Regulation No. 1114	Visible Emissions	This regulation is applicable to the DCRC Olefins Restart Project.
	Regulation No. 1117	Source Monitoring, Recordkeeping and Reporting	The DCRC Olefins Restart Project will not affect the applicability of, or DCRC's compliance with the requirements of Regulation No. 1117.
	Regulation No. 1119	Control of Odorous Air Contaminants	This regulation applies.
	Regulation No. 1120	New Source Performance Standards	This regulation was applicable to the DCRC Olefins Plant and continues to be applicable to the Restart Project.
	Regulation No. 1124	Control of Volatile Organic Compound Emissions	This regulation is applicable to the DCRC Olefins Restart Project. Specifically, Sections 28 and 29 are applicable.

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**Response Document for Public Hearing held on January 15, 2013**

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Source	Regulatory Citation	Description	Applicability
	Regulation No. 1125	Requirements for Preconstruction Review	This regulation is potentially applicable to the emissions associated with the DCRC Olefins Restart Project. Because of the complexity of Regulation No. 1125, a comprehensive regulatory analysis has been included in the application showing that neither NA NSR nor PSD NSR applicability has been triggered.
	40 CFR 60 Subpart A	General Provisions	The NSPS general provisions codified at 40 CFR 60, Subpart A are applicable to stationary sources with facilities subject to any standard promulgated under Part 60.
	40 CFR 60 Subpart Ka	Standards Of Performance For Storage Vessels For Petroleum Liquids For Which Construction, Reconstruction, Or Modification Commenced After May 18, 1978, And Prior To July 23, 1984	40 CFR 60 Subpart Ka is applicable.
Unit 34 Olefins Unit	40 CFR 60 Subpart J	Standards of Performance for Petroleum Refineries	The DCRC Olefins Restart Project will be subject to Subpart J specifically the 134-H-101 Heater. The proposed project will satisfy the hydrogen sulfide (H <sub>2</sub> S) limits and compliance requirements of Subpart J
	40 CFR 60 Subpart VVa	Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry	Subpart VVa is applicable.

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Source	Regulatory Citation	Description	Applicability
	40 CFR 60 Subpart QQQ	Standards of Performance for VOC Emissions from Petroleum Refinery Wastewater Systems	Subpart QQQ is applicable.
	40 CFR 63 Subpart A	General Provisions	The NESHAP general provisions codified at 40 CFR 63, Subpart A are applicable.
Unit 34 Olefins Unit	40 CFR 63 Subpart CC	National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries	Subpart CC is applicable.
	40 CFR 63 Subpart DDDDD	National Emission Standards For Hazardous Air Pollutants For Major Sources: Industrial, Commercial, And Institutional Boilers And Process Heaters	Subpart DDDDD applies to new process heaters located at major sources of HAPs. DCRC will conduct a tune up of the affected process heater annually to demonstrate continuous compliance with Subpart DDDDD.

PEF:CRR:slb  
F:\EngAndCompliance\CRR\crr13013.doc

pc: Dover Title V File

## **Draft Permits**

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**Permit: APC-81/0822-OPERATION (Amendment 2)** - Olefins Plant, Storage Tanks and Truck Loading Rack; **And**

**Permit: APC-81/0808-OPERATION (Amendment 1)** - Heater 134-H-101

Delaware City Refining Company  
4550 Wrangle Hill Road  
Delaware City, Delaware 19706

ATTENTION: Herman Seedorf

Dear Mr. Seedorf:

Pursuant to 7 DE Admin. Code 1102, Section 2, approval of the Department of Natural Resources and Environmental Control (the Department) is hereby granted to recommission and restart the Olefins Plant (Unit 34) comprising of the following equipment: Olefins Plant and its ancillary equipment, 3 storage tanks, 580-TF-10, 582-TF-4 and 583-TF-4, process heater 134-H-101, feed surge drum 43-D-204, and the Unit 41 truck Loading Rack at the Delaware City Refinery in Delaware City, Delaware, in accordance with the following documents:

- Application package submitted by the Company dated October 22, 2012, with Form Nos. AQM-1, AQM-2, AQM-3.1, and AQM-5 signed by Herman Seedorf.
- Secretary's Order No. 2012-A-XXXX, dated DATE.

This permit is issued subject to the following conditions:

**1. General Provisions:**

- 1.1 Representatives of the Department may, at any reasonable time, inspect this facility.
- 1.2 This permit may not be transferred to another person, owner, or operator unless the transfer has been approved in advance by the Department. A request for a permit transfer shall be received by the Department at least 30 days before the date of the requested permit transfer. This request shall include:
  - 1.2.1 Signed letters from each person stating the permit transfer is agreeable to each person; and
  - 1.2.2 An Applicant Background Information Questionnaire pursuant to 7 Del. C., Chapter 79 if the person receiving the permit has not been issued any permits by the Department in the previous 5 years.Approval (or disapproval) of the permit transfer will be provided by the Department in writing.
- 1.3 The owner or operator shall not initiate construction, install, or alter any equipment or facility or air contaminant control device which will emit or prevent the emission of an air contaminant prior to submitting an application to the Department pursuant to 7 DE Admin. Code 1102, and, when

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Permit: **APC-81/0808-OPERATION (Amendment 1)**

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applicable 1125, and receiving approval of such application from the Department; except as authorized by this permit or exempted in the Regulations.

- 1.4 The owner or operator shall submit a complete supplement to the Title V permit application pursuant to 7 DE Admin. Code 1130, Section 5(b) within 12 months of the date of issuance of this permit. The application shall address all applicable requirements including those of 40 CFR Part 64 (Compliance Assurance Monitoring) if applicable.

### 2. Emission Limitations:

- 2.1 Air contaminant emission levels from the Olefins Plant Restart Project shall not exceed the following and those specified by **7 DE Admin. Code 1100, et. seq.** and the following<sup>1</sup>:
- 2.1.1 VOC:  
2.1.1.1 0.8 TPY from 134-H-101  
2.1.1.2 4.6 TPY from the storage tanks, loading rack and fugitive emissions
- 2.1.2 NOx:  
NOx emissions from 134-H-101 shall not exceed those prescribed in Condition 3, Table 1jb.1.i of **Permit: AQM-003/00016 – Part 1 (Renewal 1)(Revision 5)** dated April 5, 2011.
- 2.1.3 PM/PM10/PM2.5:  
PM/PM10/PM2.5 emissions from 134-H-101 shall not exceed 0.3 lb/mmBtu (2-hour average) and 0.8 TPY.
- 2.1.4 SO<sub>2</sub>:  
SO<sub>2</sub> emissions from 134-H-101 shall not exceed 3.7 TPY.
- 2.1.5 CO:  
CO emissions from 134-H-101 shall not exceed 1.2 TPY

- 2.2 The Company shall not cause or allow the emission of visible air contaminants and/or smoke from a stationary source, the shade or appearance of which is greater than 20% opacity for an aggregate of more than 3 minutes in any 1 hour or more than 15 minutes in any 24 hour period.

- 2.3 Odors from this source shall not be detectable beyond the plant property line in sufficient quantities such as to cause a condition of air pollution.

### 3. Operational Limitations:

- 3.1 The Company shall comply with the following requirements:  
3.1.1 Tank 580-TF-10 shall be subject to the equipment standards in Condition fb.1 and fc.1 of **Permit: AQM-003/00016 – Part 1 (Ren. 1)(Rev. 5)** and operational limitations in

<sup>1</sup> "Tons per year" shall mean total emissions on a rolling 12-month basis.

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**DCRC – Olefins Plant Restart Project**

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- Condition fb.2 and fc.2 of **Permit: AQM-003/00016 – Part 1 (Ren. 1)(Rev. 5)** dated April 5, 2011.
- 3.1.2 Tanks 582-TF-40 and 583-TF-4 shall be subject to the equipment standards in Condition fe.1 and ff.1 of **Permit: AQM-003/00016 – Part 1 (Ren. 1)(Rev. 5)** and operational limitations in Condition fe.2 and ff.2 of **Permit: AQM-003/00016 – Part 1 (Ren. 1)(Rev. 5)** dated April 5, 2011.
- 3.1.3 The truck loading rack shall be subject to the Operational Standards in Condition oa.9.i.B, oa.9.i.D, oa.9.i.E and oa.9.i.F of **Permit: AQM-003/00016 – Part 2 (Rev. 5)** dated April 5, 2011.
- 3.2 Only refinery fuel gas desulfurized to comply with NSPS requirements or natural gas may be fired in 134-H-101.
- 3.3
- 3.3.1 At all times, including periods of startup, shutdown, and malfunction, the Company shall, to the extent practicable, maintain and operate the facility including all associated air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions.
- 3.3.2 All structural and mechanical components shall be maintained in proper operating condition.
- 4. Compliance Methodology, Testing and Monitoring Requirements:**
- 4.1 Compliance with Condition 2.1.1.1, 2.1.3 and 2.1.5 shall be based on monitoring the fuel gas usage and fuel quality.
- 4.2 Compliance with Condition 2.1.1.2 shall be based on the following:
- 4.2.1 For Tank 580-TF-10: Compliance methodology in Condition fb.iii and fc.iv in **Permit: AQM-003/00016 – Part 1 (Ren. 1)(Rev. 5)** dated April 5, 2011.
- 4.2.2 For Tanks 582-TF-4 and 583-TF-4: Compliance methodology in Condition fe.iii and ff.vi in **Permit: AQM-003/00016 – Part 1 (Ren. 1)(Rev. 5)** dated April 5, 2011.
- 4.2.3 For the truck loading rack: Compliance methodology in Condition oa.9.ii in **Permit: AQM-003/00016 – Part 2 (Rev. 5)** dated April 5, 2011.
- 4.2 Compliance with Conditions 2.1.2 shall be based on compliance with Condition jb.1.ii in **Permit: AQM-003/00016 – Part 1 (Ren. 1)(Rev. 5)** dated April 5, 2011.
- 4.3 Compliance with Conditions 2.1.4 shall be based on the fuel sulfur content and fuel gas usage.
- 4.4 Compliance with Condition 2.2 shall be based on the monitoring/testing requirements in Condition 3, Table 1.d.4.iii of **Permit: AQM-003/00016 – Part 1 (Ren. 1)(Rev. 5)** dated 04.05.2011.
- 4.5 Compliance with Conditions 2.3 and 3.3 shall be based on information available to the Department concerning the Owner or operator's actions with respect to such events, and shall include the Department's review of all available facts and circumstances including,

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- but not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
- 4.6 Compliance with Conditions 3.1.1 shall be based on compliance with Conditions fb.1.iii and fc.1.iv of **Permit: AQM-003/00016 – Part 1 (Ren. 1)(Rev. 5)** dated April 5, 2011.
- 4.7 Compliance with Conditions 3.1.2 shall be based on compliance with Conditions fe.1.iii and ff.1.iv of **Permit: AQM-003/00016 – Part 1 (Ren. 1)(Rev. 5)** dated April 5, 2011.
- 4.8 Compliance with Conditions 3.1.3 shall be based on compliance with Conditions oa.9.ii of **Permit: AQM-003/00016 – Part 2 (Rev. 5)** dated April 5, 2011.
- 4.9 Compliance with Condition 3.2 shall be based on compliance with Condition d.2.iii of **Permit: AQM-003/00016 – Part 1 (Ren. 1)(Rev. 5)** dated April 5, 2011.
- 5. Record Keeping Requirements:**
- 5.1 The owner or operator shall maintain all records necessary for determining compliance with this permit in a readily accessible location for 5 years and shall make these records available to the Department upon written or verbal request.
- 5.2 The following information shall be recorded:
- 5.2.1 Rolling 12-month fuel usage by 134-H-101.
- 5.2.2 The rolling 12 month total emissions for each pollutant shall be calculated and recorded each month.
- 5.2.3 Storage tank records required by Conditions fc.1.vi and fd.1.vi in **Permit: AQM-003/00016 – Part 1 (Ren. 1)(Rev. 5)** dated April 5, 2011 for Tank 580-TF-10, and Conditions fe.1.v and ff.1.viii in **Permit: AQM-003/00016 – Part 1 (Ren. 1)(Rev. 5)** dated April 5, 2011 for Tanks 582-TF-4 and 583-TF-4.
- 5.2.4 Closed vent system records required by Condition oa.9.iv in **Permit: AQM-003/00016 – Part 2 (Ren. 1)(Rev. 5)** dated April 5, 2011.
- 5.2.5 Visible emissions records required by Condition d4.iv of **Permit: AQM-003/00016 – Part 1 (Re. 1)(Rev. 5)** dated April 5, 2011.
- 6. Reporting Requirements:**
- 6.1 Emissions in excess of any permit condition or emissions which create a condition of air pollution shall be reported to the Department immediately upon discovery and after activating the appropriate site emergency plan, in the following manner:
- 6.1.1 By calling the Department's Environmental Emergency Notification and Complaint number (800) 662-8802, if the emission poses an imminent and substantial danger to public health, safety or to the environment.
- 6.1.2 Other emissions in excess of any permit condition or emissions which create a condition of air pollution may be called in to the Environmental Emergency and Complaint number

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(800) 662-8802 or faxed to (302) 739-2466. The ability to fax in notifications may be revoked upon written notice to the Company by the Department in its sole discretion.

6.2 In addition to complying with Condition 6.1 of this permit, the Owner/Operator shall satisfy any reporting required by the "Reporting of a Discharge of a Pollutant or an Air Contaminant" regulation, within 30 days of becoming aware of an occurrence subject to reporting pursuant to these conditions. All reports submitted to the Department shall be submitted in writing and shall include the following information:

6.2.1 The name and location of the facility;

6.2.2 The subject source(s) that caused the excess emissions;

6.2.3 The time and date of the first observation of the excess emissions;

6.2.4 The cause and expected duration of the excess emissions;

6.2.5 For sources subject to numerical emission limitations, the estimated rate of emissions (expressed in the units of the applicable emission limitation) and the operating data and calculations used in determining the magnitude of the excess emissions;

6.2.6 The proposed corrective actions and schedule to correct the conditions causing the excess emissions.

6.2.7 Emissions on the same day from the same emission unit may be combined into one report. Emissions from the same cause that occur contemporaneously may also be combined into one report.

6.2.8 The Company shall submit an electronic copy of all required reports to the Department's compliance engineer assigned to the Refinery.

6.3 One (1) original and 1 copy of all required reports shall be sent to the address below:  
Division of Air Quality  
Blue Hen Corporate Center  
655 S. Bay Road, Suite 5 N  
Dover, DE 19901

**7. Administrative Conditions:**

7.1 This permit shall be made available on the premises.

7.2 Failure to comply with the provisions of this permit may be grounds for suspension or revocation.

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- 7.3 These permits supersede **Permit: APC-81/0822-OPERATION (Amendment 1)** for the Olefins Plant, Storage Tanks 580-TF-10, 582-TF-4, 583-TF-4 and Unit 41 Truck Loading Rack dated June 17, 1981 and **Permit: APC-81/0808-OPERATION** for Heater 134-H-101 dated June 17, 1981.

Sincerely,

Paul E. Foster, P.E.  
Program Manager  
Engineering & Compliance Branch

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pc: Dover Title V File  
Dawn Minor