



STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL

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OFFICE OF THE
SECRETARY

Secretary's Order No. 2013-A-0020

Re: Application of Delaware City Refining Company, LLC, to amend Air Pollution Control Permit 95/0471 for the Marine Vapor Recovery System (Unit 15) at the Delaware City Refinery, Delaware City, New Castle County

Date of Issuance: May 31, 2013

Effective Date: May 31, 2013

This Order considers the attached Hearing Officer's Report (Report) on Delaware City Refining Company, LLC's (Applicant) March 21, 2013 application submitted to the Department of Natural Resources and Environmental Control's (Department) Division of Air Quality (DAQ), Engineering and Compliance Section. Applicant seeks an amendment to Air Pollution Control permit 95/0471 for the Marine Vapor Recovery System (MVRS) (Unit 15) at its petroleum refinery and docking facility located at 4550 Wrangle Hill Road, Delaware City, New Castle County (Facility). The purpose of the amendment is to allow crude oil to be loaded onto vessels at its Delaware River docking facility.

The permit amendment would require the existing MVRS to be modified. MVRS is air pollution control equipment to control air emissions during the transfer of petroleum goods to vessels (ships and barges). The MVRS uses a vapor collection system, a gas enrichment system, and two vapor combustion units to reduce air emissions

Delaware's Good Nature depends on you!

from hazardous air pollutants. The petroleum vapors that otherwise would be released during the loading of vessels are collected by MVRS and burned in the two combustion units.

DAQ's experts prepared a draft permit amendment, which went on public notice along with the application and a public hearing. The public hearing was held on May 8, 2013 at the Delaware City Public Library.

The attached Report recommends issuance of the permit amendment, as drafted by the experts in DAQ. The Report is adopted to the extent it is consistent with this Order. The Department finds and concludes that the Department should issue the Applicant the permit amendment consistent with the draft permit amendment prepared by DAQ.

The Report reviews the public comments received through the end of the public comment period on May 22, 2013. The comments on air quality issues were addressed by DAQ's expert, Ravi Rangan, P.E., who prepared DAQ's technical response memorandum (TRM) attached to the Report. The TRM concludes that DAQ's draft permit amendment should be issued to protect the environment from any undue risk of harm from the proposed oil transfer.

The permit amendment will result in modifications to the MVRS in order to comply with the new requirement that 99% of the hazardous air pollutants released during the proposed oil transfer will be captured and eliminated by the MVRS. This improved air pollution control equipment will reduce the annual release of volatile organic compounds (VOCs) by almost 50%, or from the current permit's authorized 151 tons to the amended permit's 75.5 tons. Applicant's proposed oil transfer also will

release annually 11.5 tons of carbon monoxide (CO), but no change to the current permit is required since Applicant did not seek any amendment to increase to the current permit's annual limit of 55.7 tons, which means that the permit's limit will be unchanged by this amendment. The oil transfer also will increase the sulfur dioxide (SO₂) annual emissions by 21.3 tons, but this increase will not trigger the more stringent requirements for a new source review (NSR), and is otherwise within the acceptable emission limits.

The Report discusses the applicability of the Coastal Zone Act (CZA), which was raised in public comments, most notably from the Delaware Chapter of the Sierra Club. The comments seek to have the Department review the proposed oil transfers under the CZA. The Report found that the Facility is an existing nonconforming use under the CZA, and that the record supports finding that the proposed use of the docks to transfer oil is consistent with the docks' nonconforming use prior to the effective date of the CZA.

The Report's review of the record finds that the Department first considered the CZA issue as part of its internal procedure, which reviews any permit application that may impact a manufacturing facility or a bulk transfer facility within the CZA defined area of the 'Coastal Zone.' The Facility is within the Coastal Zone, and has been in operation since approximately 1956, which is well before the CZA's effective date of June 28, 1971. The Report discusses how the Facility's pre-CZA uses included two non-conforming uses, namely, the "heavy industrial use" (petroleum refinery and all integrated facilities including docks and tanks), and the "bulk products transfer facility" (BPTF), which includes the docks and shipping facilities and related shore pipelines and

storage tanks). Further, the CZA's definition of BPTF also includes an exemption for a BPTF that is a non-conforming use in the Coastal Zone.

The Department further investigated the CZA issue based upon the public comments. The Department finds based upon the record that the Facility's docks were in operation on June 28, 1971, integrated into the operations of the refinery, and are not proposed to have any change in the docking facility footprint, which means that the docks are an allowed nonconforming use. The exemption can be based upon the CZA's definitions of a "nonconforming use," "heavy industry use[s]," and "bulk product transfer facility." The Report notes that the treatment under the CZA is determined by whether the docks were used as an existing nonconforming use. Applicant stated on the record that the proposed use would be consistent with the past use and that the activity would be limited to the transfer of North American-produced crude oil from the Facility's docks onto barges to be transported up the Delaware River to Applicant's sister company refinery in Paulsboro, New Jersey, also owned by PBF Energy.

The Report also provides guidance that the CZA would allow exporting petroleum consistent with the grandfathered status because such use would not change the exterior appearance of any existing equipment and poses no risk of any significant harm to the environment, particularly with the improvements to the MVRS pollution controls. The Report also indicates that improvements to the MVRS may be exempt under CZA Regulations as an installation or modification of pollution control equipment.

The Report further finds that the MVRS changes will not result in any change or expansion of the existing refinery/docking facility footprint. The Report finds that the shipment of crude is not part of any expansion of the manufacturing process. Instead, the

shipment uses the existing BPTF that already is used to transfer petroleum, albeit from ships to shore and to transfer refined products from shore to ships. The Report finds that the direction of the transfer does not change the nature of the use. The CZA contemplated a legally existing nonconforming BPTF attached to a refinery use being used to both ship and receive bulk products.

The Department finds, based upon this record, that the proposed use to transfer crude to ships is not a change of use under the CZA. The Report finds that it is not the type of change that requires a CZA permit since the use pre-existed the CZA, the docking facility footprint is unchanged, the only construction is pollution controls, the use does not expand industrial development within the Coastal Zone, and the transfer is allowable. This determination may be subject to change should the Department determine that the proposed usage has changed or that the information in this record is incorrect or incomplete.

Nevertheless, the Department shall use this permit amendment to establish the limits of the Facility's shipment of crude from piers 2 & 3 for purposes of determining the nonconforming use going forward. This will allow the Department and others to measure any future changes or expansions of the use. The permit amendment conditions address the critical concerns with air quality monitoring that should ensure that the air quality is consistent with all applicable standards and limits.

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

1. With respect to the usage of the docks, the air permit shall condition usage to no more than an average of 7,000 barrels per hour on a daily basis and 16,425,000

barrels on a rolling 12 month basis (45,000 barrels per day average) for outgoing crude shipments.

2. With respect to the applicability of the CZA, the Department finds, based on the current record, that the proposed activity is allowable and does not require a

Coastal Zone permit, because:

- a. The proposed use is an existing non-conforming use: The applicant will make use of an existing non-conforming dock facility that is an integrated part of the operations of the non-conforming Delaware City Refinery complex. The non-conforming dock facility was in existence and in active use prior to the CZA and before which the same products and materials traversed the dock (7 Del. Admin. Code 101-5.9).
- b. There is no physical expansion of the existing non-conforming use facility: The same dock facility footprint will be used with new construction limited to pollution control instrumentation (7 Del. Admin. Code 101-5.16).
- c. There is no expansion of the nonconforming heavy industry use: The Facility does not increase throughput of heavy manufacturing process of the refinery (same barrel per day refining limits) and does not increase industrial development within the Coastal Zone.

The Department's findings related to the Coastal Zone were made based upon these factors, the current use of the Facility, and the record presented. A change in these factors or the use of the Facility may result in a different determination. As such, the

Applicant should request a Coastal Zone Status Decision if future physical or operational changes are intended or implemented.

3.) The Department has jurisdiction under its statutory authority to issue the air pollution control permit amendment in this proceeding;

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

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

6.) The Department considered all timely and relevant public comments in making its determination even if not specifically addressed herein;

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

8.) 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, to amend Air Pollution Control Permit 95/0471 for the Marine Vapor Recovery System (Unit 15) at the Delaware City Refinery, Delaware City, New Castle County

DATE: May 29, 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) March 21, 2013 application submitted to the Division of Air Quality, Engineering and Compliance Section (DAQ), to amend Air Pollution Control Permit 95/0471, which regulates emissions from the Marine Vapor Recovery System (MVRS). MVRS is pollution control equipment used at Applicant's docking facilities (docks) along the Delaware River. The docks are used to transfer of unrefined and refined petroleum products for Applicant's petroleum refinery located at 4550 Wrangle Hill Road, Delaware City, New Castle County (Facility). DNREC Ex. 1. The amendment would allow MVRS to reduce the emissions from vapors from the loading of unrefined oil on to marine vessels berthed at Piers 2 and 3, based upon an 45,000 barrels per day on average and a rate of 7,000 barrels an hour.

The Department published public notice of the March 20, 2013 application on April 8, 2013 *News Journal* and *Delaware State News*. DNREC Ex. 3 Included in the public notice was the opportunity to comment on DAQ's draft permit, which DAQ's experts prepared along with a supporting technical memorandum, DNREC Ex. 2.

I presided over the public hearing held May 8, 2013 at the Delaware City Public Library in Delaware City. At the request of the counsel for the Department of Justice, the public comment period was kept open for two weeks, or until May 22, 2013. The Applicant also was requested to provide a response to the public comments received at the hearing by the same time and provided a response. Applicant's supporters also provided several hundred letters and emails in support of the proposed amendment.

DAQ provided the attached technical response memorandum (TRM) prepared by Mr. Rangan. No changes were made to the prior draft permit should the Secretary decide to issue the permit. I consider the record complete for decision based upon the information in this Report and the record, as reviewed below.

II. SUMMARY OF THE RECORD¹

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,² which were identified above.

The Applicant's representative who spoke at the public hearing was Tom Godlewski, Applicant's Environmental Engineer. Mr. Godlewski made a power point presentation and it was included as a document exhibit. Applicant Ex. 1.

Mr. Godlewski explained that the project was being undertaken to allow the transfer of up to 45,000 barrels of oil a day on an annual average from the shore to marine vessels moored at

¹ This is a recommended record insofar as the Secretary may determine different information should be in it.

² 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.

Piers 2 & 3. He noted that the MVRS will require some minor piping modification and some electrical work to handle the capture and collection of vapors from loading the crude oil. He described how the vapors would be burned in two natural gas fired units. The emissions also included the calculated emissions that may be released by the transportation from the railyard to the docks. He described the onshore storage tank as having an external floating roof that EPA considers as consistent with Lowest Achievable Emission Rate (LAER). He also described the need to offset the emissions, which Applicant would be using 19.5 tons of credits held by the Applicant.

The first person to speak was Robert Carl on behalf of Harry Gravell, who is president of the Building and Construction Trades Council of Delaware. Mr. Carl complimented the current owner of the Facility, PBF, and indicated how the proposed shipment of oil would allow oil to be used in the PBF sister plant in Paulsboro New Jersey refinery would reduce the dependence on oil from outside of North America. He cited the closure of the Facility by its prior owner and how six other refineries have closed and only two have re-opened in the past six years. He cited the 150 jobs created by the railyard and the 300 construction jobs created.

The next person to speak was Martin Willis who supported the permit application as a boilermaker who said the export of oil will help keep the refinery open.

Ken Gomeringer, President of USW Local 4898, spoke in support of the permit application and also indicated how good the current owner was, and how the transfer of oil to Paulsboro, New Jersey would reduce the dependence on foreign oil.

Bernie August spoke in opposition to the permit application. He asked when the MVRS was installed and Mr. Rangan answered that it was installed in late 1995 or early 1996. Mr. August asked if the MVRS was able to be used for other products, and Mr. Godlewski answered that it had been used for methanol, toluene and gasoline components. Mr. Godlewski was asked

about the type of crude that would be shipped and he indicated it would be the oil from the Bakken area that has less sulfur in it and that the Applicant would monitor the sulfur reading in the barge to meet a low sulfur limit. Mr. August also disagreed with the transfer of oil being consistent with making this country energy independent because the oil would be produced in Canada from “some of the dirtiest methods of the face of the earth.” He opposed encouraging any increased use of crude oil because of the danger from climate change.

Ron Tudor of Wastemasters Solution spoke in support and echoed the prior comments from union members.

Amy Roe spoke on behalf of the Delaware Chapter of the Sierra Club and read from a prepared statement that was marked at Sierra Club Ex. 1. Her comments opposed the permit and its release of “alarmingly high levels of hazardous contaminants.” She said the release would put public health at risk and would not provide any oil for use at the refinery. She commented on the release of emissions during start up and shut down and how the permit exempts releases during these periods, which she said had the most emissions. She also commented on the monitoring of air emissions and how the permit did not include any monitoring. She questioned the permit’s reliance on public reporting of air pollution. She advocated the installation of monitoring stations that would be designated, operated and maintained by independent and qualified environmental firms as selected in a public process. She wanted the air monitoring results posted in a public manner of the web. She commented on the draft permit’s test procedures in Section 4.8 and indicated that there should be testing for fugitive emissions and more frequent testing. She also commented that the permit would authorize a new bulk products transfer in the Coastal Zone without any Coastal Zone Act permit.

Matthew Lintner, Deputy Attorney General, spoke and requested that the public comment period remain open for fourteen days, and this request was granted.

Gerald Robbins spoke and asked about the air emissions from the unloading of the railcars and Mr. Foster informed him that each siding of approximately 100 tank cars would release less than 10 pounds of emissions, which was authorized in a permit. Mr Robbins asked why the oil was not transported by rail directly to New Jersey and Applicant could not answer that. He asked about a response in the event of a spill, particularly in light of the difficulty in cleaning up the oil that would be shipped.

Andrew Groff spoke as a member of the Green Party of Delaware and asked whether the crude would be heated during the transfer and how the bitumen was heavier than water and would sink, which makes any clean up in water difficult as occurred in Mayflower, Arkansas and in Kalamazoo, Michigan. Mr. Godlewski indicated that the transfer would be the lighter, sweet crude based upon the permit application.

The public hearing adjourned and the public comment period was kept open for written public comments until May 22, 2013. Numerous public comments were received in support of the permit application, which will be in the record and the untimely received comments will not be in the record.

III. DISCUSSION AND REASONS

The application is reviewed under *Delaware Regulations Governing the Control of Air Pollution* (Air Regulations). *7 Del. Admin. Code 1101 et seq.* I find that the Applicant has complied with the regulatory requirement of the Air Regulations and satisfied met the air quality standards required by the Air Regulations. DAQ's technical support for the draft permit and DAQ's response to the public comments on the air quality issues in the attached TRM provides support for issuance of the permit amendment. I have considered all the timely public comments, including the comments received during the extended public comment period. The

post-hearing comments supported issuing the permit. I agree with DAQ's analysis and its recommended draft permit.

DAQ did not address the CZA issue raised by the Sierra Club and other public commentators concerning the Coastal Zone Act, *7 Del. C. Ch. 70 (CZA)*. DAQ did meet with the Department's CZA Program on December 18, 2012 to discuss possible CZA issues with the proposed oil transfers, and the CZA Program provided DAQ with an email explaining that the dock facilities were exempt from CZA regulation because the dock facilities were part of the refinery's operation and would not be considered regulated bulk products transfer facility under the definition of that term in the CZA.

The record also contains Applicant's response to the public comments, including that the proposed use of the docks to transfer crude oil from the shore facilities to maritime vessels is a use consistent with the docks' prior to the CZA's effective date of June 28, 1971.

As a preliminary matter, Applicant did not file an application for a CZA permit or for status decision, which would provide more information on this specific issue. Consequently, this record does not have information other than the CZA Program's internal determination that the docks are exempt and the Applicant's statement that the proposed use is consistent with the pre-CZA use.

First, the pending permit application by itself can be issued without any CZA determination because it entails modifications to pollution control equipment, which are exempt from obtaining a CZA permit under the CZA Regulations. Thus, for the limited purposes of this permit decision on modifying specific existing pollution control equipment and based on this record that has little CZA information in it, I find that the CZA allows the permit to be issued.

Despite this limitation of this record, I will provide my view that the CZA regulates manufacturing uses and bulk products transfer facilities located in the CZA defined land and sea

area called the “Coastal Zone.” The Facility lies in the Coastal Zone. The Facility operates a petroleum refinery that under the CZA is a “heavy industry use” and a “nonconforming use” because its operations began in 1956 and were ongoing prior to the CZA’s effective date of June 28, 1971. The Department’s determination of the footprint of the “nonconforming use” includes the dock facilities that would be used to transfer the oil to maritime vessels.

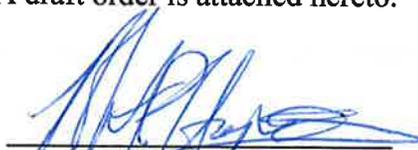
The Facility’s docking facilities also could be classified under the CZA as a separate use from the heavy industrial use because the docks could qualify for a “nonconforming use” as a “bulk product transfer facility,” which the CZA defines as “any port or dock facility, whether an artificial island or attached to shore by any means, for the transfer of bulk quantities of any substance from vessel to onshore facility or vice versa.” The CZA definition of BPTF also could apply to exempt the dock facilities from any CZA regulation if the docks are used “for a single industrial or manufacturing facility for which a permit is granted or which is a nonconforming use.”

The application seeks to transfer crude oil from the shore to maritime vessels. The transfer of crude at the docks now goes from maritime vessels to the shore facilities and there is no limit on any transfer in this direction in any Department permit. Thus, the only change is the direction crude is transferred and I find this within the scope of the nonconforming use since there is no new product and little change to the existing equipment.

The CZA also requires a permit for “all expansion or extension of nonconforming uses.” The record again does not disclose the nature or scope of how much crude is transferred at the docks under its nonconforming use, but the permit amendment could establish the level based upon the acceptance of the Applicant’s statement that the proposed level is consistent with the nonconforming use.

IV. CONCLUSION

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



Robert P. Haynes, Esquire
Senior Hearing Officer

MEMORANDUM

TO: Robert Haynes
Hearing Officer

THRU: *for* Ali Mirzakhallili, P.E. *RR*
Division Director

for Paul Foster, P.E. *RR*
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 May 8, 2013 for The Delaware City Refining Company's (DCRC's) Vapor Combustion Amendment Project at the Delaware City Refinery**

DATE: May 22, 2013

A public hearing was held on May 8, 2013, to receive comment on The Delaware City Refining Company's (DCRC's) application to amend its unit 15 Marine Vapor Recovery System (MVRS) Vapor Combustion Units at the marine piers at the Delaware City Refinery. DCRC submitted an application on March 21, 2013, to amend this permit to allow for the capture and control of displaced vapors occurring during the loading of crude oil from existing piers 2 or 3 onto marine vessels. The Division of Air Quality's (DAQ's) mission and expertise relate only to only air quality issues. As such, its review of this permit application has been conducted to ensure the requested air quality permit meets the requirements of applicable law related to air quality issues. The Division's decision to proceed with processing this application is based on the premise that the project is exempt from providing proof of zoning and from obtaining a coastal zone permit. The application states that a coastal zone permit is not required and the Department's coastal zone program has confirmed this to be the case. Thus, this response document does not address any comments raised during hearing that relate to the coastal zone program.

Appendix "A" of this memorandum provides DAQ's responses to comments made by concerned citizens at the above referenced hearing. Appendix "B" is the draft permit for DCRC's MVRS. I hope this information will assist you in reviewing the issues and making your recommendation to the Secretary.

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Appendix "A"

There were 22 attendees from the public at this hearing, including representatives from the Delaware Audubon Society, the Delaware Chapter of the Sierra Club, Waste Master Solutions, Insulators and Asbestos Workers of Local 42 of the Building Trades Council, USW Local 4898, 350.Org, the Green Party of Delaware, and the DE Attorney General's Office. Several commenters 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 the amendment to the MVRS. Therefore, in the remaining portion of this memorandum, DAQ will restrict its analysis and responses to their comments that pertain to the air program.

The DE chapter of the Sierra Club submitted several comments as they pertain to the draft air permit. 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:

Air Pollution and Public Health

This new air permit would authorize a significant increase in hazardous air pollutants from the Delaware City Refinery, including pollutants that are known human carcinogens and have been determined by the Environmental Protection Agency to be hazardous to human health.

Sulfur Dioxide emissions from crude oil loading operations would be allowed in the amount of 21.3 tons per year. The Environmental Protection Agency links sulfur dioxide exposure to an "array of adverse respiratory effects including bronchoconstriction and increased asthma symptoms" as well as "increased visits to emergency departments and hospital admissions for respiratory illnesses, particularly in at-risk populations including children, the elderly, and asthmatics."

Volatile Organic Compound emissions would be authorized at 75.5 tons in a 12-month period, including emissions from the barge loading operations and crude oil tank farm. The Environmental Protection Agency links exposure to volatile organic compounds with "eye, nose, and throat irritation; headaches, loss of coordination, nausea; damage to liver, kidney, and central nervous system. Some organics can cause cancer in animals; some are suspected or known to cause cancer in humans."

Carbon Monoxide emissions would be authorized at 55.7 tons per year. The Environmental Protection Agency links exposure to carbon monoxide with "fatigue in healthy people and chest pain in people with heart disease...impaired vision and coordination; headaches; dizziness; confusion; nausea...flu-like symptoms...and reduced brain function."

The intentions of this project are to enable PBF, the owners of the Delaware City Refinery, to offload rail shipments of crude oil to barge for transport up the Delaware River to another refinery owned by this same company. With the substantial impacts that this permit would have on pollution, by authorizing this permit, the State of Delaware would be placing the desires of PBF's New Jersey refinery above Delawareans and their health.

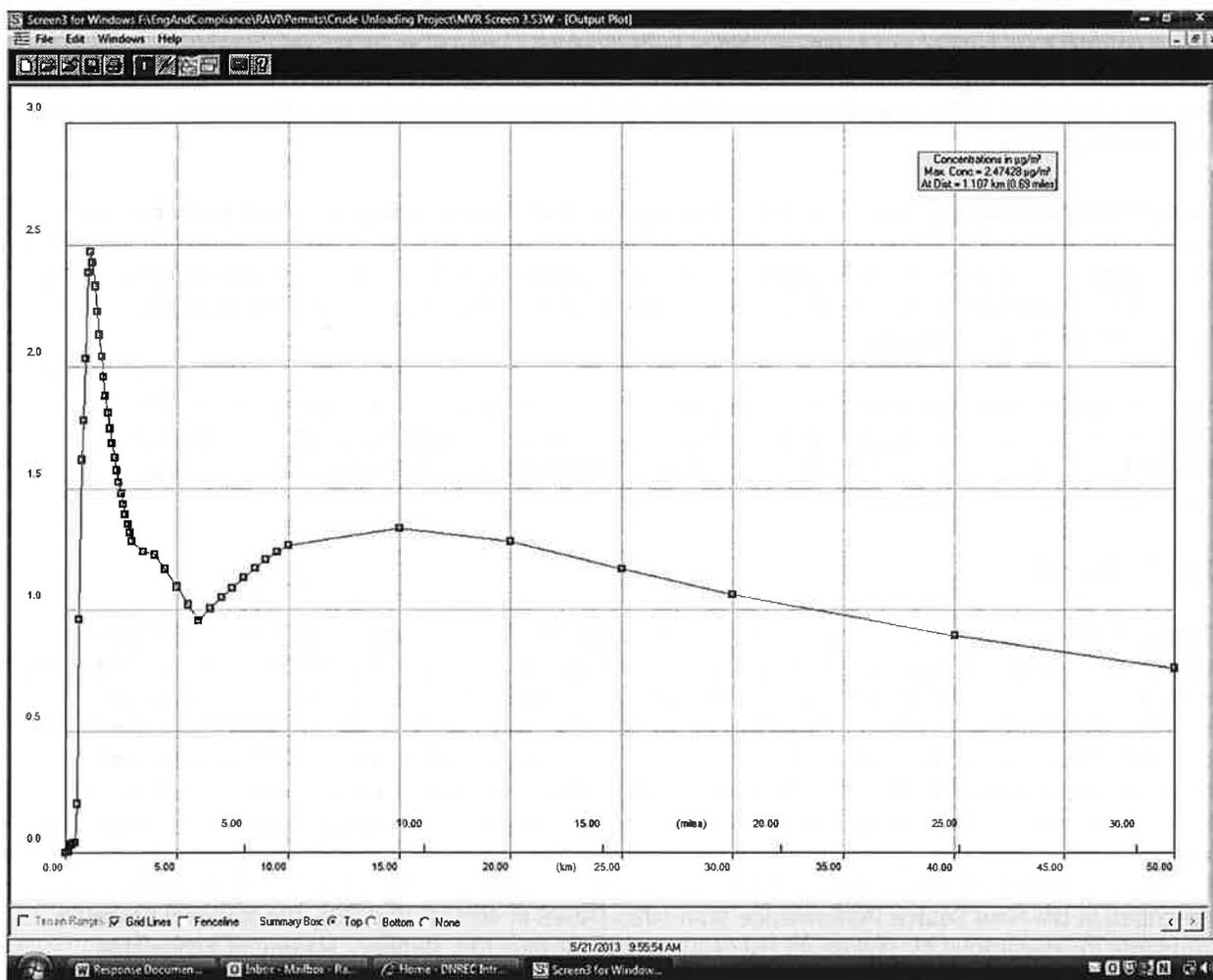
DAQ's Response:

DAQ's responses are in the same order as the Sierra Club's comments.

DAQ disagrees that the new air permit would authorize a significant increase in hazardous air pollutants (HAPS) from the Delaware City Refinery. The term "hazardous air pollutant" means any air pollutant

listed pursuant to subsection (b) of Section 112 of the Clean Air Act Amendments of 1990. While vapors displaced from crude oil loading operations do in fact contain several HAPs, these HAP emissions will be controlled by the operation of the MVRS. The existing permit for the MVRS authorizes the emissions of up to 151 tons per year (TPY) of volatile organic compounds, which is comprised of some HAPs from the Section 112 list based on a 98 % control efficiency of the MVRS. The amended MVRS permit actually increases the required MVRS control efficiency to 99 % thereby lowering the VOC permit limit by nearly one-half to 75 TPY.

DAQ concurs with the Sierra Club that loading crude oil will result in up to 21.2 TPY SO₂ emissions for 2738 hours of annual operation of the MVRS. As explained in the technical Support Document, DCRC's MVR Amendment Project did not trigger NSR applicability for the increase in SO₂ emissions. However, to assess the associated risk with this emission rate, DAQ ran a Screen3 model of this emission rate and determined the maximum downwind concentration of 2.47 ug/m³ at a downwind distance of 1.1 km from the source. The most recent revision of the SO₂ National Ambient Air Quality Standard (NAAQS), establishes a 1-hour standard of 196 ug/m³ which is nearly 80 times higher than the impact projected by this application. Current background level in the area is less than 50 ug/m³ which added to this impact will still be well below the NAAQS.



The Sierra Club has commented that this permit amendment will authorize the emission of 55.7 TPY CO emissions. DAQ's review of the project finds that loading crude oil will result in 11.5 TPY CO emissions

which are subsumed in the existing permit limit of 55.7 TPY, i.e., DCRC is not seeking an increase in the existing permit limit. Therefore, DAQ does not find it necessary to make any change to the CO emission limit in the draft permit.

As mentioned above, the only notable emissions increase from this project are the SO₂ emissions resulting from loading crude oil. All other emissions are at or below the existing permit limits. Therefore, DAQ does not agree with the Sierra Club that offloading rail shipments of crude oil to barge for transport up the Delaware River to another refinery owned by this same company will result in substantial adverse impacts to Delawareans and their health.

Sierra Club Comment # 2:

Visible Emissions

The draft permit describes how emissions from marine tank vessel loading will be combusted through a marine vapor recovery system. Section 2.2 describes how the company must operate vapor recovery systems with no visible emissions except for periods not to exceed a total of 5 minutes during any consecutive hour period.

Title 7 DNREC Regulations 1114 defines visible emissions according to their opacity. Visible emissions are therefore those emissions that can be seen with the eye. However, many of the hazardous contaminants that are anticipated in this permit are not visible to the human eye, including volatile organic compounds and carbon monoxide.

These DNREC Regulations also exempt the start-up and shut-down of equipment, and apply only to continuous operations. It is during this period of start-up and shut-down that visible emissions are often the greatest. Given the numerous times per day that equipment could be starting up or shutting down, which are exempt from air quality regulations, suggests that DNREC does not provide adequate protections for visible emissions.

DNREC's guidelines for the marine vapor recovery system provided in the permit and in DNREC Regulations fail to account for non-visible emissions, exempt the system from start-up and shut-down pollution, and allow bursts of exempted emissions up to five minutes in length. These provisions are inadequate to protect public health.

DAQ Response:

The Sierra Club has commented that 7 **DE Admin Code** 1114 defines visible emissions according to their opacity, that visible emissions are therefore those emissions that can be seen with the eye and that many of the hazardous contaminants that are anticipated in this permit are not visible to the human eye, including volatile organic compounds and carbon monoxide. DAQ is cognizant of the fact that the MVRS emissions include pollutants that are not visible to the human eye and believes the Sierra Club has misinterpreted the applicability of 7 **DE Admin Code** 1114 as it applies to visible emissions. DAQ notes that the purpose of 7 **DE Admin Code** 1114 is to prescribe the visible emissions standards for affected sources. It is not meant to and does not prescribe emission standards for hazardous air pollutants, carbon monoxide or for any other pollutant. The regulatory emissions standards for these pollutants are prescribed in the New Source Performance Standards (NSPS in 40 CFR Part 60), the National Emission Standards for Hazardous Air Pollutants (NESHAP in 40 CFR part 61), Refinery Maximum Achievable Control Technology (MACT standards in 40 CFR Part 63) and in other applicable regulations in 7 **DE Admin Code 1100 et seq.**

DAQ disagrees with the Sierra Club that the permit does not provide adequate protection during periods of equipment start up and shut down. On the contrary, Condition 3.11 of the draft permit specifically provides that *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.* Furthermore, the emission limitation in Condition 2.2 requires the Company to operate the vapor recovery systems with no visible emissions except for periods not to exceed a total of 5 minutes during any consecutive 2 hour period. The regulatory basis for this requirement is found in 40 CFR 60.18 for flares. Additionally, the operating history of the MVRS over the last 18 years shows no violations of the visible emissions standard. Neither the regulation nor this proposed permit exempt the facility from complying with the opacity standards during start-up or shut-down.

Therefore, DAQ finds the provisions in the draft permit to be adequately protective of public health.

Sierra Club Comment # 3:

Monitoring of Air Pollution

The permit does not include air monitoring requirements, and instead provides vague and ambiguous language about detectable pollution.

§2.2 of the permit specifies that "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."

§6.1 requires the applicant to report any emissions which exceed the permit or which create a "condition of air pollution" to DNREC. While the permit conditions are defined in this permit, the "condition of air pollution" is not defined, is vague, and is ambiguous.

Given our experience with the process of reporting of pollution incidents in the vicinity of the Delaware City Refinery, which for the public are limited to calling environmental enforcement agents at (800) 662-8802, the language for detectable air pollution is inadequate. The permit places imprecise and undefined responsibilities on the applicant, and inappropriate obligations on the polluted public to enforce the permit's detectable air pollution section. Any complaints that are received would be after-the-fact, and minimum numbers of calls are often required at the call-center to initiate an investigation.

This inadequate system for detectable pollution would be better-remedied with continuously-operating air quality monitors located between the docks and the locations of commercial and residential communities. We therefore ask for an air quality monitoring system to be installed at this site. This system should monitor the air at several locations distributed around the refinery and it should be designed, operated, and maintained by independent and qualified environmental firm(s), the selection of which involves public stakeholders and a process that ensures community needs will be met. The systems' measurements should be automatically reported to and displayed at a publicly available Web set at least every 2 hours, continuously.

DAQ Response:

7 DE Admin. Code 1101 defines air pollution and odor as follows:

"Air pollution" means the presence in the outdoor atmosphere of one or more air contaminants in sufficient quantities and of such characteristics and duration as to be injurious to human, plant, or animal life or to property or which unreasonably interferes with the enjoyment of life and property within the

jurisdiction of the State, excluding all aspects of employer-employee relationships as to health and safety hazards.

"Odor" means that property of an air contaminant that affects the sense of smell.

Furthermore, Section 2.0 of 7 **DE Admin. Code 1119** states:

No person shall cause or allow the emission of an odorous air contaminant such as to cause a condition of air pollution.

Therefore, DAQ finds Condition 2.2 to be consistent with the regulatory definitions and standards in 7 **DE Admin. Code 1101** and 1119.

DAQ also disagrees with the Sierra Club's comment that the permit places imprecise and undefined responsibilities on the applicant, and inappropriate obligations on the polluted public to enforce the permit's datable air pollution section. Condition 6.1 specifically requires that all 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 (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.

These reporting requirements are consistent with all air permits and have been found to adequately protect the health and safety of all citizens in the State of Delaware.

Furthermore, DAQ disagrees with the Sierra Club's comment asking for an air quality monitoring system to be installed at this site. DAQ maintains and operates a permanent ambient air monitoring station at Delaware City as part of its state-wide monitoring strategy. This monitoring station has provided continuous sampling data that meets the rigorous state and federal QA/QC standards. Human olfactometry remains the most sensitive and accurate means of detecting odors. Some compounds have odor thresholds several times below the detection limit of most of today's instruments.

Sierra Club Comment # 4:

Testing Requirements

§4.8 of the draft permit requires that the applicant test crude oil shipments for hydrogen sulfide, fuel usage of the equipment, hourly loading rates at the piers, and stack tests, and provide written reports to DNREC. There are no tests required for fugitive emissions from the equipment, tanks, vessels, pipes, or trains. Testing of fugitive emissions should be a requirement in the permit.

§4.8.5.6 would allow the applicant to petition the Department for less frequent testing than on an annual basis. Given the diverse characteristics of crude-by-rail, which range from sweeter crudes derived from hydro-fracking in the Baaken formation of South Dakota, to synthetic crude tar sands from Canada, and

Appendix "B"
Draft Permit

DATE

Permit: APC-95/0471-CONSTRUCTION/OPERATION (Amendment 3)(LAER)(MACT)(NSPS)
Marine Vapor Recovery System – Piers 2 and 3
Delaware City Refinery

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 for the modification and operation of a Marine Vapor Recovery (MVR) System consisting of a vapor collection system, a gas enrichment system and two (2) John Zink Vapor Combustor Units (VCUs) each with a design heat input of 195 mmbtu/hour to capture and control displaced gasoline and crude oil vapors at Piers 2 and 3 at the Delaware City Refinery in Delaware City, Delaware, in accordance with the following documents:

- Application package submitted by the Company dated March 21, 2013, with Form Nos. AQM-1, AQM-2, AQM-4.1, and AQM-5 for signed by Herman Seedorf.
- Letter dated March 28, 2013 from Alan Levin, Secretary Delaware Economic Development Office to Heather Chelpaty, Vice President, Health, Safety and Environment.
- Secretary's Order No. 2013-A-XXXX, dated

This permit is issued subject to the following conditions:

1. General Provisions:

- 1.1 The MVR VCUs Amendment Project shall be constructed in accordance with the application and this permit. If any changes are necessary, revised plans must be submitted and supplemental approval issued prior to actual construction. Construction authorization expires 3 years after issuance of this permit.
- 1.2 Representatives of the Department may, at any reasonable time, inspect this facility.
- 1.3 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:
 - 1.3.1 Signed letters from each person stating the permit transfer is agreeable to each person; and
 - 1.3.2 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.

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Approval (or disapproval) of the permit transfer will be provided by the Department in writing.

- 1.4 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 applicable 1125, and receiving approval of such application from the Department; except as authorized by this permit or exempted in the Regulations.
- 1.5 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) by DATE. 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 MVR VCU System (Emission Units 15-1 and 15-2) shall not exceed the following and those specified by 7 DE Admin. Code 1100, et. seq. and the following¹:
 - 2.1.1 PM₁₀/PM_{2.5} emissions from crude oil loading operations shall not exceed 0.3 lb/mmBtu and 1.4 TPY.
 - 2.1.2 SO₂ emissions from crude oil loading operations shall not exceed 18.1 lb/hour on a daily average basis and 21.3 TPY
 - 2.1.3 VOC emissions shall not exceed:
 - 2.1.3.1 VOC emissions shall not exceed 75.5 tons in any twelve consecutive months.
 - 2.1.3.2 Vapors displaced during barge loading operations shall be collected and routed through the marine vapor control system and shall be reduced by 99 weight percent or to 500 ppmv of VOC.
 - 2.1.3.3 VOC emissions from the Crude Oil Tank Farm inclusive of 281-TF-200 shall not exceed 27 TPY
 - 2.1.4 H₂S emissions during crude oil loading shall not exceed 0.2 lb/hr on a daily average basis and 0.2 TPY
 - 2.1.5 H₂SO₄ emissions during crude oil loading shall not exceed 0.6 lb/hr on a daily average basis and 0.7 TPY
 - 2.1.6 NO_x emissions shall not exceed those prescribed in Condition 3, Table 1 jb.1.i of **Permit: AQM-003/00016 – Part 1 (Renewal 1)(Revision 5)** dated April 5, 2011.
 - 2.1.7 CO emissions shall not exceed 153.2 lb/hour and 55.7 TPY.
- 2.2 The Company shall operate the MVR VCUs with no visible emissions except for periods not to exceed a total of 5 minutes during any 2 consecutive 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 Barge loading of gasoline products shall not exceed the following rates:
 - 3.1.1 35,000 barrels hour when loading simultaneously at two piers; and

¹ "Tons per year, TPY" shall mean total emissions on a rolling 12-month basis.

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- 3.1.2 25,000 barrels per hour at one pier.
- 3.1.3 The rolling twelve month throughput of gasoline products shall not exceed 25,463,000 barrels.
- 3.2 The throughput of crude oil shall not exceed 7,000 barrels per hour on a daily average basis and 16,425,000 barrels on a rolling twelve month basis.
- 3.3 The vapors collected at one loading berth shall not pass through another loading berth to the atmosphere.
- 3.4 Marine tank vessel loading operations utilizing the MVRS shall be limited to those vessels that are equipped with vapor collection equipment that is compatible with the terminal's vapor collection system.
- 3.5 Marine tank vessel loading operations utilizing the MVRS shall be limited to those vessels that are vapor tight and that are connected to the vapor collection system.
- 3.6 Marine vessel loading operations may be carried out only when the marine vessels have been connected to the loading rack's vapor collection system and which have current vapor tightness certification in accordance with the requirements of 40 CFR 63.563(a)(4) and have been demonstrated to be vapor tight within the preceding (12) months.
- 3.7 Marine vessel loading operations of gasoline products or crude oil shall not be conducted unless the MVR VCUs is/are operating properly. Proper operation is defined as operating the VCUs in accordance with 40 CFR 60.18, and with the continuous presence of a flame at the pilot during the entire loading cycle.
- 3.8 Only natural gas and hydrocarbon vapors displaced from marine vessels being loaded may be combusted in the MVR VCUs.
- 3.9 The H₂S concentration in the barges being loaded with crude oil shall not exceed:
 - 3.9.1 2,778 ppmv on a 12-month rolling average basis
 - 3.9.2 30,000 ppmv on a daily average basis
- 3.10 The Owner/Operator shall comply with the operation and maintenance requirements for air pollution control equipment in accordance with the provisions of 40 CFR 63.562(e).
- 3.11
 - 3.11.1 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.
 - 3.11.2 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 (PM₁₀/PM_{2.5}), 2.1.2 (SO₂), 2.1.3.1 (VOC), 2.1.3.2 (VOC), 2.1.4 (H₂S), 2.1.5 (H₂HO₄) and 2.1.7 (CO) shall be based on the monitoring/testing requirements in this permit.
- 4.2 Compliance with Condition 2.1.3.3 shall be based on compliance with the compliance requirements specified in Condition 3, Table 1, fc.1.iv of **Permit: AQM-003/00016 – Part 1 (Renewal 1)(Revision 5)** dated April 5, 2011.
- 4.3 Compliance with Condition 2.1.6 (NO_x) shall be based on compliance with Condition jb.1.ii in **Permit: AQM-003/00016 – Part 1 (Renewal 1)(Revision 5)** dated April 5, 2011.
- 4.4 Compliance with Condition 2.2 shall be based on compliance with the monitoring/testing requirements in specified in Condition 3, Table 1, b.6.iii of **Permit: AQM-003/00016 – Part 2 (Revision 5)** dated April 5, 2011.
- 4.5 Compliance with Conditions, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7 and 3.10 shall be based on compliance with the Compliance Methods and Monitoring/Testing requirements and Recordkeeping requirements specified in Condition 3, Table 1, b.5.iii, b.5. iv and b.5.v of **Permit: AQM-003/00016 – Part 2 (Revision 5)** dated April 5, 2011.
- 4.6 Compliance with Condition 3.8 shall be based on compliance with the Compliance Methods and Monitoring/Testing requirements and Recordkeeping requirements specified in Condition 3, Table 1, b.1.ii, b.1. iii and b.1.iv of **Permit: AQM-003/00016 – Part 2 (Revision 5)** dated April 5, 2011.
- 4.7 Compliance with Condition 3.9 shall be based on compliance with the Monitoring/Testing requirements in this permit.
- 4.8 Monitoring/Testing Requirements:
 - 4.8.1 The Owner/Operator shall test each crude oil shipment to be loaded into marine vessels by ASTM D5705 Hydrogen Sulfide in Vapor Space to determine hydrogen sulfide concentration in the barge vapor space during crude oil loading. The Owner /Operator shall use this data to demonstrate compliance with the Sulfur Dioxide limitations in this permit.
 - 4.8.2 The Owner/Operator shall monitor the fuel usage of the MVR VCU continuously.
 - 4.8.3 The Owner/Operator shall continuously monitor the hourly loading rate of all crudes at each pier during loading operations.
 - 4.8.4 Except as provided in Condition 4.8.5, the Owner/Operator shall conduct the following stack tests at 5 year intervals unless more frequent testing is required by the Department:
 - 4.8.4.1 EPA Reference Method 5B/202 for PM₁₀/PM_{2.5}, including H₂SO₄
 - 4.8.4.2 EPA Reference Method 25 A for VOC
 - 4.8.4.3 EPA Reference Method 15 for H₂S
 - 4.8.4.4 EPA Reference Method 8 for H₂SO₄

- 4.8.5 Within 90 days after achieving the maximum production rate authorized by this permit at which the facility will be operated, but not later than 180 days after initial startup of such facility, the owner or operator shall conduct performance test(s) and furnish the Department with a written report of the results of such performance test(s) in accordance with the following general provisions:
- 4.8.5.1 One original and 2 copies of the test protocol shall be submitted a minimum of 30 days in advance of the tentative test date to the address in Condition 6.3. The tests shall be conducted in accordance with the State of Delaware and Federal requirements.
- 4.8.5.2 The test protocol shall be approved by the Department prior to initiating any testing. Upon approval of the test protocol, the Company shall schedule the compliance demonstration with the Air Surveillance and Engineering & Compliance Branches. The Department must have the opportunity to observe the test for the results to be considered for acceptance, unless the Department determines in advance, in writing, that the test need not be observed. Further, the Department may in its discretion determine based on its observation of the test that it need not observe the entire test.
- 4.8.5.3 The final results of the testing shall be submitted to the Department within 60 days of the test completion. One original and 2 copies of the test report shall be submitted to the addresses below:
- | | |
|---------------------------------|---------------------------------|
| Original and One Copy to: | One Copy to: |
| Engineering & Compliance Branch | Engineering & Compliance Branch |
| Attn: Assigned Engineer | Attn: Surveillance Engineer |
| 655 S. Bay Road, Suite 5N | 715 Grantham Lane |
| Dover, DE 19901 | New Castle, DE 19720 |
- 4.8.5.4 To be considered valid, the final results report shall include the emissions test report (including raw data from the test) as well as a summary of the results and a statement of compliance or non-compliance with permit conditions signed by a member of the Company's Health, Safety and Environment department.
- 4.8.5.5 The results must demonstrate to the Department's satisfaction that the emission unit is operating in compliance with the applicable regulations and conditions of this permit; if the final report of the test results shows non-compliance the owner or operator shall propose corrective action(s). Failure to demonstrate compliance through the test may result in enforcement action.

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 Records of all ASTM D5705 Hydrogen Sulfide in Vapor Space test results in accordance with Condition 4.8.1.
- 5.2.2 Records for the type of fuel combusted in the MVR VCUs and hourly fuel usage.

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5.2.3 Records for the hourly throughput, type of product, number of piers used and duration of each loading cycle.

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 (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.

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7.2 This permit supersedes **Permit: APC-95/0471-OPERATION (Amendment 2)**
(MACT)(RACT) dated May 3, 2002.

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

Sincerely,

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

PEF:CRR:slb
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pc: Dover Title V File
Dawn Minor

the diversity of ships and trains that would be visiting the Refinery for project, more frequent testing should be a requirement in the permit than that which is provided.

DAQ Response:

DAQ disagrees with the Sierra Club's comment that there are no tests required for fugitive emissions from the equipment, tanks, vessels, pipes, or trains and that testing of fugitive emissions should be a requirement in the permit. Operation of the MVRS is subject to the refinery MACT standards in 40 CFR Part 63, subpart Y. Sections 63.562 and 63.563 specifically address the vapor tightness requirements and Leak detection and Repair requirements for MVR systems. These applicable requirements have been incorporated by reference in Conditions 3.3 through 3.6 and 3.10 and 3.11 of the draft permit. With regard to the adequacy of the testing frequency, DAQ did in fact require more frequent annual testing of the MVRS when it was first constructed. Based on the operating history of the MVRS with a proven track record of 100 % compliance over a decade, the Department approved the 5 year testing frequency in Condition 4.8.4 of the draft permit. Therefore, Condition 4.8.5.6 is rendered moot and can be deleted. Any future adjustment to the required testing frequency will be based on the review of data while considering its variability as discussed by the commenter.

Sierra Club Comment # 5:

Coastal Zone Act

This permit would authorize a new bulk-transfer project in Delaware's Coastal Zone, yet Coastal Zone Review has not been required for the project. This project should be required to apply for a coastal zone permit. The application does not appear to claim the need for offsets for this project, even though air pollution 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. Without a Coastal Zone review, this permit should not be authorized.

The Coastal Zone review should follow the prescriptions described in DNREC's 1999 report entitled "Environmental Goals and Indicators for Delaware's Coastal Zone." These include the use of environmental indicators:

Air Quality Indicators: ambient air quality, affected populations, accidental releases, and atmospheric deposition.

Water Quality Indicators: benthic community, contaminants/toxicity, ambient water quality, watershed pollutant load, affected populations, accidental releases, and non-point source nutrient mass balance.

Habitat/Land Cover Indicators: habitat Change and wetland inventory.

Living Resources Indicators: keystone species, biodiversity, and benthic community.

DAQ Response:

This comment relates to Coastal Zone Act issues which are unrelated to the expertise of the Air Quality Division.

