



STATE OF DELAWARE
**DEPARTMENT OF NATURAL RESOURCES AND
ENVIRONMENTAL CONTROL**

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SECRETARY

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Secretary's Order No.: 2022-A-0008

RE: Delaware City Refining Company ("DCRC") Title V Permit Renewal for the Delaware City Refinery ("DCR"), located on a 5,000-acre tract between U.S. Route 13 and Delaware Route 9, at 4550 Wrangle Hill Road, Delaware City, Delaware

Date of Issuance: May 16, 2022

Effective Date: May 16, 2022

Under the authority vested in the Secretary of the Department of Natural Resources and Environmental Control ("Department" or "DNREC"), pursuant to 7 *Del.C.* §§6003, 6004, 6006, Title V of the *Clean Air Act Amendments* (1990) (CAA §§501-507; U.S.C. 7661-7661[f]), Delaware's *Title V State Operating Program* (7 DE Admin. Code 1130), and all other relevant statutory authority, the Department of Natural Resources and Environmental Control ("Department" or "DNREC") issues this Order, approving the Title V Permit Renewal Application of Delaware City Refining Company ("DCRC" or "Applicant"), pursuant to 7 DE Admin. Code 1130, Section 7, for the Operating Permit No. AQM-003/00016 – Part 1 (Renewal 3), Part 2 (Renewal 2), and Part 3 (Renewal 3), for the Delaware City Refinery ("DCR"), located on a 5,000-acre tract between U.S. Route 13 and Delaware Route 9, at 4550 Wrangle Hill Road, Delaware City, Delaware ("Application").

The proposed permit renewal incorporates (1) applicable requirements of the 7 DE Admin. Code 1102 permits for the Ethanol Marketing Project; (2) elimination of the maximum data capture requirements from the Crude nitrogen oxides (“NOx”) Continuous Emission Monitoring Systems (“CEMS”); (3) incorporation of requirements contained in the Consent Decree arising from *United States of American, et al., v. Motiva Enterprises, LLC, No. H-01-0978*; (4) replacement of the U.S. Environmental Protection Agency (“EPA”) Tanks 4.09 requirement with the Tanks ESP Pro Version; (5) modification of short-term NOx limits per the DCRC’s July 2019 Settlement Agreement; and (6) correction of typographical errors and various reformatting.

Background, Procedural History and Findings of Fact

This Application is for renewal of the DCR’s Title V Permit, which is a federal operating permit program implemented at the state level. Title V of the *Clean Air Act Amendments* (1990) (CAA §§501-507; U.S.C. § 7661-7661[f]) required the EPA to promulgate regulations that, in turn, required states to establish new operating permit programs. Accordingly, the Department promulgated 7 DE Admin. Code 1130, Delaware’s *Title V State Operating Permit Program* (“Title V Program”), to comply with the requirements of the aforementioned *Clean Air Act* (“CAA”). Delaware’s Title V Program applies to all major sources of air pollutants, such as volatile organic compounds (“VOCs”), NOx, carbon monoxide (“CO”), particulate matter (“PM”), hazardous air pollutants (“HAPs”), and sulfur dioxide (“SO₂”).

The DCR has the potential to emit greater than 25 tons per year of NOx and VOCs, greater than 100 tons per year of CO and SO₂, and greater than 25 tons per year of HAPs, as listed in Section 112(b) of the CCA. As is the case with most heavy industrial facilities in the United States, the DCR is considered to be a major source of the aforementioned air pollutants, and is, therefore, subject to various state and federal regulatory requirements, including, but not limited to, Delaware’s *Air Quality Regulations*, specifically, as set forth under 7 DE Admin. Code 1130 and the Title V Program, and as provided for under Delaware law in 7 *Del.C.* Ch. 60.

All major source facilities in the State of Delaware are required to apply for and have a Title V Permit. It is well established that the fundamental purpose of the Title V Program is to consolidate into one single document all applicable requirements from federal, state, and local air quality regulations, as well as all applicable requirements from all pre-approved operating air permits for any given facility.

The DCR's Title V Permit incorporates more than 90-plus permits authorized by the Department (under 7 DE Admin. Code 1102) into a three-part permit that is over 400 pages long (inclusive of attachments following the body of the permit). The Title V Permit includes operational limitations, emission limits, compliance methods, monitoring and testing requirements, reporting requirements, and certification requirements for each process used at the plant. Pursuant to 7 DE Admin. Code 1130, Title V Permits must be renewed every five years.

To serve as background history on this Applicant, the DCR was owned by Star Enterprises at the time the initial Title V Permit Application was submitted to the Department on December 27, 1996. On July 1, 1998, Shell Oil Products, Saudi Refining, Inc., and Texaco Inc., formed Motiva, LLC, combining the major elements of Shell Oil Products and Star Enterprises' eastern and southern refining and marketing businesses. The ownership of Star Enterprise was transferred to Motiva, LLC in October of 1998. In October 2001, Texaco Inc. divested itself of its share in the business. Motiva, LLC sold the DCR to The Premcor Refining Group, Inc., on May 1, 2004. On September 1, 2005, The Premcor Refining Group was acquired as a wholly owned subsidiary by The Valero Energy Corporation. The DCRC, a subsidiary of PBF Energy, acquired the DCR from The Valero Energy Corporation on May 31, 2010.

The Applicant was issued a Title V Permit for the DCR facility by the Department, pursuant to 7 DE Admin. Code 1130. This permit was issued in three parts. On November 14, 2001, and November 10, 2005, the Applicant was issued Part 1 and Part 3, respectively, of the DCR's Title V Permit. On May 27, 2008, the Department issued Part 2 of this Title V Permit, simultaneously with the renewals of both Part 1 and Part 3.

The DCR's Title V Permit was subsequently renewed by the Department on May 28, 2015, for an additional five (5) years and was set to expire on May 27, 2020. The Applicant submitted a timely Application for the DCR's Title V Permit and has been able to operate under an application shield pending issuance of the Title V Permit Renewal. The Draft Title V Permit Renewal (hereinafter referred to as "Draft Permit") has undergone several revisions to incorporate permit actions that have occurred at the DCR, as well as federal requirements as they have become applicable, and to address issues that have been raised throughout this public hearing process. Upon the signing of this Order, the *revised final* Draft Permit prepared by the Department's Division of Air Quality ("DAQ") is then submitted to the EPA for final approval.

The Department's DAQ issued public notice that a Draft Permit had been developed for the DCR's Title V Renewal and effectuated publication of the same in both the *Sunday News Journal* and the *Delaware State News* on April 26, 2020. Thereafter, a virtual public hearing was requested and held by the Department on July 14, 2020.

Department staff, representatives of the DCRC, and members of the public attended the virtual public hearing on July 14, 2020. The Record remained open for receipt of comment through July 31, 2020. It should be noted that comments were received from the public during both the pre- and post-hearing phases of this matter, all of which were posted on the DNREC hearing web page dedicated to this matter. Proper notice of the hearing was provided as required by law.

Following the close of the public comment period as noted above, and at the request of Hearing Officer Lisa A. Vest, the technical experts in the Department's DAQ provided a Technical Response Memorandum ("TRM"), to (1) specifically address the concerns associated with this Application, as set forth in the public comments received by the Department; and (2) offer conclusions and recommendations regarding this pending permitting matter for the benefit of the Record. The TRM, dated March 30, 2021, provides a summary of the public comments received by the Department in this matter, and offers detailed responses to the same.

Subsequent to the receipt of the Department's TRM, Hearing Officer Vest prepared her Hearing Officer's Report ("Report"), dated March 10, 2022, which expressly incorporated the DAQ's TRM therein. Ms. Vest's Report set forth the procedural history, summarized and established the record of information ("Record") relied on in the Report, and provided findings of fact, reasons, and conclusions that recommend the Department approve the Application for the DCR's Title V Permit Renewal, subject to the conditions set forth in the *revised final* Draft Permit prepared by the DAQ. The Report is incorporated herein by reference. The Report also addressed the public comments received in this matter and concluded that the same did not warrant the Department's denial of the Applicant's pending Title V Permit Renewal, nor the delay of the permit decision to receive any additional information.

Reasons and Conclusions

As set forth previously herein, the Record generated in this matter indicates that numerous members of the public offered written comments regarding the Application for the DCR's Title V Permit Renewal. The comments voiced concerns including, but not limited to, the Applicant's past compliance issues and enforcement actions, Environmental Justice considerations, and the potential environmental and public health impacts of the Applicant's operations at the DCR in Delaware. Comments were also received voicing concerns that the Draft Permit purportedly allows the Department to excuse noncompliance during periods of unplanned shutdowns of the refinery's Fluid Coking Unit ("FCU"), the Fluidized Catalytic Cracking Unit ("FCCU"), or their pollution controls.

The Department's TRM acknowledges the comments received from the public concerning this Application, and thoroughly responds to the same therein. For the purposes of brevity, Ms. Vest's Report defers to the TRM in its entirety for a comprehensive understanding of the concerns raised in the public comments received by the Department in this matter, as well as the DAQ's formal responses to the same. It should be noted that the TRM provided by DAQ was exhaustive in nature (over 120 pages in length).

Rather than attempting to relay each concern voiced by the public in the comments received in this matter, the Report highlights the DAQ's responses to two major areas of public concern: (1) Past compliance and enforcement issues of the DCR; and (2) Potential environmental and public health impacts resulting from the Applicant's operations, including, but not limited to, potential Environmental Justice concerns.

(1) Past Compliance and Enforcement Issues

The Record reflects that some commenters voiced concerns that a compliance schedule determination was not conducted. The Department's TRM notes that the requirements for the inclusion of a compliance schedule in a Title V Permit are described in 7 DE Admin. Code 1130, Section 5.4.8.3.3, and 40 C.F.R. Part 70, *State Operating Permit Programs*, specifically, Part 70.5(i)(iii)(C), which requires that a schedule of compliance be included in a permit application "...for sources that are not in compliance with all applicable requirements at the time of permit issuance."

As part of the Application, the DCRC submitted a compliance certification report that indicated the units affected by requested permit changes were in compliance at the time of the Application. Additionally, the Applicant submits for Department review semi-annual reports that list deviations that occurred during the reporting period. The compliance certification submitted for the renewal did not identify any unresolved compliance issues, with the exception of PM emissions (due to failed stack tests from the Coke Handling Complex), for which a corrective action plan was previously developed and submitted and has since been brought into compliance. This issue was not included in the Application because the Coke Handling Complex was not undergoing permit changes as part of the pending Title V Permit Renewal.

Based on the compliance certification report of units affected by the renewal that was submitted with the Application, and the facility-wide semi-annual compliance certification report submitted prior to the Application, DNREC determined that the Applicant was in compliance at the time of the submission of the Application and is expected to be in compliance at the time of permit issuance. As such, a compliance schedule is not required.

In response to the concerns voiced about the Applicant's past compliance and enforcement issues, the Department's TRM notes that corrective actions for prior release events at the DCR have been conducted promptly upon an incident having occurred. The DAQ further notes that none of the emission release incidents have resulted in an exceedance of unit-specific annual limits or facility-wide annual limits. As stated in the TRM, the purpose of the Applicant's monitoring and reporting conditions is to identify periods and severity of non-compliance. The TRM clarifies that the Applicant's prior violations are not due to a lack of monitoring and reporting conditions. Rather, the number of Notice of Violations ("NOVs") issued to the Applicant by the Department indicate violations as they occur, and the generally short duration of the incidents suggest that the appropriate corrective actions are conducted.

The DAQ's TRM also notes that the improvement of the ambient air quality is prioritized through reduction in air emissions of normal operation. Because these normal operation periods represent the majority of operating time (and therefore the bulk of any emissions), reduction of emissions in those areas represent the greatest potential for improvement in air quality. The DAQ continues to require the DCR to employ control devices, or equivalent methods, to reduce air emissions. The release events are initially addressed by an NOV, and culminate with enforcement actions, including fines and/or improvement projects.

Other comments falling into the category of the Applicant's past compliance and enforcement matters voiced concerns that DAQ's Draft Permit gives DNREC discretion to excuse non-compliance (which would be binding on the EPA or the public) during periods of unplanned shutdowns of the FCU, FCCU, or their controls. In response, the TRM notes that such concerns refer to a provision that is based on EPA's *Policy Regarding Excess Emissions During Malfunctions, Startup, and Shutdown* guidance. That provision requires the DCR to justify emissions caused from unplanned shutdowns of the FCU and/or FCCU control devices and provides EPA's guidance to allow an enforcement discretion approach to excess emissions occurring during startup and shutdown periods.

As the DAQ sets forth in detail in the TRM, enforcement discretion allows a regulatory body to determine whether a specific violation by a source warrants enforcement, and to determine the nature of the remedy to seek for any such violation. Further, the provision must provide that it is the facility's responsibility to demonstrate that emissions were unavoidable, that the impact of the emissions were minimized, that the unit and monitoring systems were operated with good practice standards, and that the appropriate regulatory bodies were notified.

Moreover, the TRM notes that the purpose of a discretionary provision is to encourage the facility to prioritize emissions reductions when responding to an upset event and outlines the DAQ's expectations for an appropriate response in consideration of the environmental impact on Delaware's air quality. The provision is not, as the TRM points out, a discretionary provision that would administratively determine that an occurrence of excess emissions is not a violation. Rather, this provision explicitly recognizes excess emissions as non-compliance. The provision does not provide an automatic exemption from the emission limits, nor does it preemptively waive future penalties, set new standards, revise current limits, or establish new limits.

Continuing the DAQ's TRM response to this area of concern, the Department disagrees that such discretionary provision constitutes exemptions to various emission limits in question through a process contrary to the CCA's process for establishing and revising such limits. Under its most basic definition, an exemption would remove an obligation to meet permitted requirements and remove liability for failure to do so. Instead, the discretionary provision referenced above specifically maintains that DCR is required to meet all applicable permitting requirements and failure to do so could result in enforcement actions.

The DAQ specifically notes that the discretionary provision does not authorize a facility's emission exceedances. Rather, emission limits and operating limitations continue to apply, and any non-compliance events must appear in required documentation and reporting as such. Moreover, the conditions remain enforceable because they place the burden on the facility to demonstrate to the Department's satisfaction that it has responded appropriately, and only generally outlines the Department's expectations for an appropriate response. Furthermore, the DAQ notes that the Department is allowed to use enforcement discretion in its response to non-compliance periods. The provision explicitly identifies that there is no alteration of the compliance status. An emission exceedance is still considered non-compliance, and as such must appear in any documentation and reporting.

In response to concerns that the Draft Permit may "unlawfully relax" federally enforceable limits during planned startup and shutdown of the FCU and FCCU (and when the FCCU's CO boiler is combusting only refinery fuel gas), the TRM notes that different emission limits for different operating scenarios are a normal regulatory measure – this includes emission limits for periods where only refinery fuel gas is being burned. Additionally, the DAQ notes that the normal operation emission limits are largely expressed as rate-based limits, whereas the startup/shutdown limits are expressed as mass-based limits. Furthermore, most of the startup/shutdown limits are less than or equal to the normal operation limits. For pollutants where this is not the case, there is not an applicable federal limit, and thus Delaware is able to establish limits as appropriate.

As stated previously, a much more detailed and thorough response by the Department's DAQ to emission limits concerns (and potential exceedances of the same by the Applicant) can be found by reviewing the TRM, expressly incorporated into the Hearing Officer's Report in its entirety, and attached thereto as Appendix "A."

(2) Potential environmental and public health impacts resulting from the Applicant's operations and Environmental Justice concerns

The Department places great importance on understanding and addressing Environmental Justice concerns raised by communities in the vicinity of the Applicant's property. As such, special considerations are taken by DNREC to incorporate mitigation requirements in permits that are issued that would result in improvements to the local environment and increase recreational opportunities for the residents of neighboring communities. Further, the Department prioritizes improvement of the ambient air quality through reduction in air emissions of normal operation. Because these normal operation periods represent the majority of operating time emissions, reduction of emissions in those areas represent the greatest potential for improvements in air quality.

It should be noted that the DAQ continues to require the DCR to employ control devices, or equivalent methods, to reduce air emissions. Release events are initially addressed by an NOV and culminate with enforcement actions including fines and/or improvement projects, as previously noted. Furthermore, the TRM notes that the exemptions provided during startup, shutdown, or other short-term operation conditions are bounded by an emission limit, often with a defined duration limit, and do not contradict the requirements of federal or state regulatory programs. In fact, many of the normal operating limits are more stringent than those required by state and federal regulations.

Some of the comments received by the Department in this matter suggested that DNREC should "...follow its sister permitting agency in dealing with similarly serious air pollution, health, and environmental justice concerns at refineries in the City of Los Angeles, California (the South Coast Air Quality Management District, also known as "SCAQMD"). Those comments further suggested that the Department should not only "...supplement the permit here to require at least the same real-time fence line monitoring for a list of dangerous pollutants that the SCAQMD requires in Los Angeles, and further strengthen monitoring requirements for flares as the South Coast also requires."

In response, the DAQ's TRM notes that the Applicant's permit relies on measuring compliance at the emission unit by periodic or continuous monitoring rather than by fence line monitoring. Since the emissions from the refinery's major emission sources occur from tall stacks (over 200 feet), a receptor located at the facility's fence line is not the best measure of unit compliance or proper operation. The Department does, however, operate an air monitoring network throughout the State of Delaware, including a station in Delaware City that presently monitors SO₂ and PM_{2.5} pollutant levels. This station meets the siting requirements of the EPA, is in accordance with federal requirements and guidelines, and provides quality assured data.

The Department further notes in its TRM that the SCAQMD did not establish the aforementioned monitoring conditions for the six large refineries in Los Angeles via a permitting action. Rather, SCAQMD Regulation XI (Source Specific Standards), Rule 1180, *Refinery Community and Fenceline Air Monitoring* ([Rule 1180](#)), was developed to satisfy the larger statewide California Assembly Bill No. 1647 ([CA Bill 1647](#)), requiring refineries to maintain fence line monitoring systems, and to develop refinery-related community monitoring sites. Additionally, the refineries in Los Angeles tend to be located near residences at the fence line, whereas, with the exception of traffic along Route 9 and Wrangle Hill Road, the DCR has maintained a buffer zone between its fence line and those of residential neighborhoods and commercial businesses.

As is the case with all DNREC public hearings, the Department values transparency and public engagement regarding proposed permitting actions, such as this present Application, and appreciates all public comments offered for the Secretary's consideration. As a result of the written comments received from the public in this matter, the DAQ has proposed numerous revisions to the original Draft Permit presented at the aforementioned public hearing held by the Department in this matter. The *revised final* Draft Permit, which now includes those revisions, was expressly incorporated into Ms. Vest's Report, and attached thereto as Appendix "B."

The DAQ believes that the *revised final* Draft Permit addresses the technical and regulatory concerns of both the public and the permittee, while fulfilling the Department's mission to protect the public health and the environment. It should be noted that the *revised final* Draft Permit supersedes all other versions of the Draft Permit previously incorporated into the Record by the Department in this matter.

I find that the Applicant is required to obtain this Title V Permit Renewal, for the reasons noted above. I further find that the Applicant's renewal is subject to various state and federal regulatory requirements, including, but not limited to, Delaware's *Air Quality Regulations*, specifically, 7 DE Admin. Code 1130 and the Title V Program, and as provided for under 7 *Del.C.* Ch. 60.

The Record developed in this matter indicates that the Department's DAQ experts have considered all statutes and regulations that govern permits such as the Applicant's Title V Permit Renewal and have recommended approval of the same. I find and conclude that the Applicant has adequately demonstrated compliance with all requirements of the statutes and regulations and is continuing to work with the Department to assure the Applicant's commitments and ongoing compliance requirements are met, as noted herein.

I further find that the Record supports approval of the Application as submitted by the DCRC in this matter. Moreover, I find and conclude that the Record supports the recommendations of the Department's experts in the DAQ, as set forth in the TRM of March 30, 2021, for the reasons noted above.

Accordingly, this Order approves the Application for Title V Permit Renewal for the DCR, and the issuance of the *revised final* Permit for the DCR's facility located at 4550 Wrangle Hill Road, Delaware City, Delaware, consistent with the Record developed in this matter and with appropriate conditions.

Further, the Department concludes and specifically directs the following:

1. The Department has jurisdiction, as provided for under *7 Del.C. Ch. 60*, Delaware's *Air Quality Regulations*, specifically, *7 DE Admin. Code 1130 (Title V State Operating Permit Program)*, and all other relevant statutory authority, to make a final determination on the Application after holding a public hearing, considering the public comments, and all information contained in the Record generated in this matter;
2. The Department provided proper public notice of the Application submitted by DCRC for the DCR's Title V Permit Renewal, and of the public hearing held on July 14, 2020, and held said hearing in a manner required by the law and regulations;
3. The Department considered all timely and relevant public comments in the Record, as established in the DAQ's TRM and *revised final* Draft Permit, which have now been expressly incorporated into the Record generated in this matter;
4. The Department has carefully considered the factors required to be weighed in issuing the DCR's Title V Permit Renewal required by the Application, and finds that the Record supports approval of the same;

5. The Department shall issue to the Applicant the Title V Permit Renewal for the DCR's facility at 4550 Wrangle Hill Road, Delaware City, Delaware, consistent with the Record developed in this matter, pending the EPA's 45-day review period of the same, pursuant to 7 DE Admin. Code 1130, Section 7.1.3. Furthermore, said permit shall include all conditions as set forth in the Department's *revised final* Draft Permit for the DCR (pending EPA approval), to ensure that Delaware's environment and public health will be protected from harm;
6. The Department adopts the Report and its attachments as further support for this decision;
7. The Department has an adequate Record for its decision, and no further public hearing is appropriate or necessary; and
8. The Department shall serve and publish its Order on its internet site.



Shawn M. Garvin
Secretary