

DOCKET NO. D-1996-052-3

DELAWARE RIVER BASIN COMMISSION

**Monroe Energy, LLC - Trainer Refinery
Surface Water Withdrawal
Borough of Trainer, Delaware County, Pennsylvania**

PROCEEDINGS

This docket is issued in response to an Application submitted to the Delaware River Basin Commission (DRBC or Commission) on May 11, 2022 for renewal of an allocation of surface water and review of a surface water withdrawal project (Application).

The Application was reviewed for approval under Section 3.8 of the *Delaware River Basin Compact*. The Delaware County Planning Commission has been notified of pending action on this docket. A public hearing on this project was held by the DRBC on November 9, 2022.

A. DESCRIPTION

1. Purpose. The purpose of this docket is to renew the approval to withdraw up to 1,705 million gallons per month (mgm) of surface water from the docket holders existing Delaware River surface water intake. Water is used for industrial cooling, hydrostatic testing, and fire suppression. The allocation provided in this docket is a reduction from the previously approved allocation of 4,701.667 mgm.

2. Location. The Trainer refinery is located along the west bank of the Delaware River in the Borough of Trainer, Delaware County, Pennsylvania and is bordered by Marcus Hook and Stoney Creeks. The project intake is located at River Mile 80.64 in Delaware River Water Quality Zone 4. The Delaware River at the project site is designated by the (PADEP) as supporting Warm Water Fishes / migratory fishes (WWF/MF).

Specific location information has been withheld for security reasons.

3. Area Served The project intake will continue to serve only the docket holder's Trainer Refinery as outlined on a map entitled "Site Location Map" submitted with the Application. For the purpose of defining Area Served, the Application is incorporated herein by reference consistent with conditions contained in the DECISION section of this docket.

4. Design Criteria. The docket holder produces finished petroleum products from crude oil. Approximately 99 percent of the water withdrawn from the Delaware River intake is used for once-through non-contact cooling purposes. After use this water is cycled through a guard basin and discharged to an outfall on the tidal reach Marcus Hook Creek. The remainder of the surface water is used for industrial processes including pump cooling and service water. This portion of the flow is treated at the existing onsite industrial wastewater treatment plant (IWTP) prior to discharge to Marcus Hook Creek.

The present average and maximum daily demand of surface water use at the facility are 41.0 million gallons per day (mgd) and 55 mgd, respectively. These rates include periodic fire water system use and hydrostatic testing, which are completed as needed. The docket holder has projected a 10-year future average and maximum daily demand of surface water will be 15 mgd and 15 mgd, respectively. The reduction in surface water demand is due to the installation of three new cooling towers and closed loop cooling system which will replace the majority of the existing once through cooling system. The first cooling tower was installed in 2018. The second and third towers are scheduled to be installed and operational by the end of 2023 and 2028, respectively.

The docket holder also purchases water from the Chester Water Authority (CWA) for use as boiler water, refinery process water, cooling, and potable supply. Presently, an average of 4.8 mgd is purchased for these purposes. Because the proposed cooling towers will utilize water from CWA, the 10-year demand of CWA sourced water is projected to increase to an average of 6.0 mgd. After various process uses, water from CWA not consumed is treated at the docket holder's IWTP and discharged to Marcus Hook Creek. Presently an average of 1.7 mgd of CWA water is treated and discharged from the facility. All of CWA's water is imported into the basin from the Susquehanna River basin.

Consumptive loss of surface water from the Delaware River is primarily due to evaporation in the cooling process. Based on 2021 data, the annual consumptive water loss averaged approximately 0.540 mgd or approximately 1.3 percent of the total water withdrawn from the Delaware River.

5. Facilities. The intake facilities consist of a pump house near the west bank of the Delaware River which houses eight circulating water pumps. A bulkheaded channel extends approximately 250 feet into the Delaware River from the rip-rap covered river bank. From the rip-rapped riverbank to the pump house, the flume extends another 415 feet. Two removable screens are located in sequence in the channel to collect debris. The screens are constructed of 1/8-inch woven wire; the upstream screen has 3/4-inch square mesh openings, and the downstream screen has 1/2-inch square mesh openings. The 19-foot-wide intake channel is constructed of rolled steel sheet piling. Water depth in the channel is approximately 15.5 feet at mean tide. The average open channel intake velocity is less than 0.5 feet per second. Water depth at the intake is approximately 20.5 feet. The intake opening at the end of the channel is a steel sheet pile bulkhead covered with a fixed two-inch steel grating which covers the inlet to the channel. The screens are periodically cleaned manually by lifting and backwashing.

The existing project intake has the following characteristics:

INTAKE NO.	WITHDRAWAL WATER BODY	PUMP CAPACITY	7Q10 FLOW AT INTAKE (CFS)	YEAR CONSTRUCTED
Delaware River Intake	Delaware River	147,917 gpm (213 mgd)	Tidal	1946

The intake is metered using a calculation estimate method as described in the Findings Section.

Portions of the project including the Delaware River pump house are located within the FEMA 100-year floodplain. However, the project is located in the tidal portion of the Delaware River where the Commission’s Flood Plain Regulations do not apply

Surface water is not treated prior to use.

The facility is interconnected with Chester Water Authority.

6. Other. Once-through non-contact cooling water is cycled through the Marcus Hook Guard Basin and discharged to the tidal Marcus Hook Creek which was most recently approved by DRBC Docket No. D-1986-041-3 on June 12, 2019. Industrial process wastewater is treated at the refinery’s IWTP and discharged to Marcus Hook Creek which was also approved by DRBC Docket No. D-1986-041-3. The discharges are approved by PADEP NPDES Permit No. PA0012637. The treatment facility has adequate capacity to continue to receive wastewater from the project.

Sanitary wastewater from the Trainer Refinery is conveyed to the DELCORA WWTP most recently approved by DRBC Docket No. D-1992-018 CP-2 on September 21, 2011. Both treatment facilities have adequate capacity to receive wastewater from the project.

B. FINDINGS

1. Drought Management and Contingency Plans (DMCPs) for Water Withdrawal greater than 1 mgd

Section 2.3.5.1 C. of the Commission's *Rules of Practice and Procedure (RPP)*, requires industrial and commercial water withdrawals in excess of one million gallons per day to develop a contingency plan including emergency conservation measures to be instituted in the event of a Commission declared drought or other water shortage. Resolution No. 83-14 amended the Commission's *Water Code* (Section 2.1.4) to include the conservation goal of a 15 percent reduction in depletive use during drought conditions. The docket holder submitted a DMCP dated May 1, 2013, revised May 6, 2022 as part of the application. The DMCP indicates that conservation measures are in place including the reuse of treated water from the IWTP for service water and that condensate is recovered and reused as much as possible. It is reported that a 35 percent water curtailment would result in the crude feed rate would be reduced to the minimum threshold with all refinery units operational.

2. Metering

Withdrawals from the Delaware River Intake are calculated based on meter readings at the guard basin outfalls and the IWTP effluent outfall minus the contribution from city water and stormwater discharges.

3. Surface Water Charges

The docket holder shall pay for surface water use in accordance with Basin Regulations-Water Supply Charges 18 C.F.R. Part 420. See Section C. DECISION condition C.3.

4. Other Findings

The requested allocation of 1,705 mgm (55 mgd) of surface water is sufficient to meet the current demands of the facility. The docket holder is implementing a cooling tower project that will transition the facility from its existing once through cooling system to a closed loop system. The final cooling tower is scheduled to be installed and operational by the end of 2028 and reduce surface water demands to 465 mgm (15 mgd). Typically, allocations approved in DRBC dockets are based on the 10-year demands. Because completion of the cooling tower project and reduction in water withdrawals will occur near the end of the docket cycle, staff recommend approval of the requested rate. The allocation will be evaluated upon renewal of the docket and reduced appropriately based on the demands of the facility.

The project withdrawals, used for the purpose of industrial non-contact cooling and processes at the refinery, result in a consumptive use of 1.5 percent of the total water use. The DRBC definition of consumptive use is defined in Basin Regulations-Water Supply Charges 18 C.F.R. 420.1(d).

The project is designed to conform to the requirements of the *Water Code (WC)* and *Water Quality Regulations (WQR)* of the DRBC.

The project does not conflict with the Comprehensive Plan and is designed to prevent substantial adverse impact on the water resources related environment, while sustaining the current and future water uses and development of the water resources of the Basin.

C. DECISION

Effective on the approval date for Docket No. D-1996-052-3 below, Docket No. D-1996-052-2 is terminated and replaced by Docket No. D-1996-052-3. The project and appurtenant facilities as described in in Section A.4. (Design Criteria) and A.5. (Facilities) are approved subject to the following conditions, pursuant to Section 3.8 of the *Compact*:

Monitoring and Reporting

1. The docket holder shall continue to report to the PADEP all surface and groundwater sources described in this docket in accordance with the Pennsylvania Regulations (Title 25 - Environmental Protection, [25 PA. CODE CH. 110], Water Resources Planning).

2. The project withdrawals shall be metered by means of an automatic continuous recording device, flow meter, or other method, and shall be measured to within 5 percent of actual flow. An exception to the 5 percent performance standard, but no greater than 10 percent, may be granted for surface water withdrawals by the designated agency (PADEP) if maintenance of the 5 percent performance is not technically feasible or economically practicable. Meters or other methods of measurement shall be subject to approval and inspection by the PADEP as to the type, method, installation, maintenance, calibration, reading and accuracy. A record of daily withdrawals shall be maintained, and monthly totals shall be reported to the PADEP annually and shall be available at any time to the Commission if requested by the Executive Director.

3. The docket holder shall pay for surface water use in accordance with Basin Regulations – Water Supply Charges 18 C.F.R. Part 420.

4. The docket holder shall implement to the satisfaction of the PADEP, a continuous program to encourage water conservation in all types of use within the facilities served by this docket approval. The docket holder will report to the PADEP, on the actions taken pursuant to this program and the impact of those actions as requested by the PADEP.

Other Conditions

5. The intake shall not be pumped above the maximum rate and monthly allocation as indicated below:

INTAKE	MAXIMUM RATE (GPM)*	MONTHLY ALLOCATION (MGM)
Delaware River Intake	147,917 gpm	1,705

* Based on a 24-Hour Average

6. Section 2.3.10 of the Commission’s Rules of Practice and Procedure (18 C.F.R. 401.41), limiting the Commission’s approval to three years in the absence of an expenditure of substantial funds by the project sponsor in reliance on the approval, is hereby waived for good cause shown in accordance with Section 2.9.3 (18 C.F.R. 401.123) of the same regulations. This approval shall expire on the expiration date set forth below unless prior thereto the docket holder has applied to the Commission to renew or extend this approval.

7. The docket holder is responsible for timely submittal to the DRBC of a docket renewal application on the appropriate application form including the appropriate docket application filing fee (see 18 C.F.R. 401.43) at least 6 months in advance of the docket expiration date set forth below. The docket holder will be subject to late filed renewal surcharges in the event of untimely submittal of its renewal application, whether or not DRBC issues a reminder notice in advance of the deadline or the docket holder receives such notice. If a timely and complete application for renewal has been submitted and the DRBC is unable, through no fault of the docket holder, to reissue the docket before the expiration date below, the terms and conditions of the current docket will remain fully effective and enforceable pending the grant or denial of the application for docket approval.

8. The intake and operational records shall be available at all times for inspection by the DRBC.

9. The intake shall be operated at all times to comply with the requirements of the *WC* and *WQR* of the DRBC.

10. No water service connections shall be made to newly constructed premises with plumbing fixtures and fittings that do not comply with water conservation performance standards contained in Resolution No. 88-2 (Revision 2).

11. The docket holder shall implement to the satisfaction of the PADEP, a drought or other water supply emergency plan.

12. No new water service connections shall be made to premises connected to sewerage systems which are not in compliance with all applicable effluent limits contained in State permits and the *Water Quality Regulations* of the Commission.

13. Nothing herein shall be construed to exempt the docket holder from obtaining all necessary permits and/or approvals from other State, Federal or local government agencies having jurisdiction over this project.

14. The docket holder is permitted to provide the water approved in this docket to the areas included in Section A.3. Area Served of this docket. Any expansion beyond those included in Section A.3. Area Served is subject to DRBC review and approval in accordance with Section 3.8 of the *Compact*.

15. The docket holder shall be subject to applicable DRBC regulatory program fees, in accordance with duly adopted DRBC resolutions and/or regulations. (see 18 C.F.R. 401.43).

16. This approval is transferable by request to the DRBC Executive Director provided that the project purpose and area served approved by the Commission in this docket will not be materially altered because of the change in project ownership. The request shall be submitted on the appropriate form and be accompanied by the appropriate fee (see 18 C.F.R. 401.43).

17. The docket holder shall request a name change of the entity to which this approval is issued if the name of the entity to which this approval is issued changes its name. The request for name change shall be submitted on the appropriate form and be accompanied by the appropriate fee (see 18 C.F.R. 401.43).

18. The issuance of this docket approval shall not create any private or proprietary rights in the water of the Basin, and the Commission reserves the rights to amend, alter or rescind any actions taken hereunder to ensure the proper control, use and management of the water resources of the Basin.

19. If the monitoring required herein or any other relevant data or information demonstrates that the operation of this project is interfering with or otherwise impairing existing uses of ground or surface water, or if the docket holder receives a complaint from an existing ground or surface water user within the zone of influence of the withdrawal alleging such interference or impairment, the permit holder shall immediately notify the Executive Director, and unless excused by the Executive Director, shall investigate the demonstrated or alleged impacts. For purposes of this condition, notification shall mean either (a) electronic transmittal of written notice to the Executive Director via email (using addresses posted on the DRBC website); or (b) written notice to the Executive Director and a telephone call to the Project Review Section at 609-883-9500, ext. 216. (Oral notification must always be accompanied by immediate written notification directed to the Executive Director.) In addition, the docket holder shall provide written notice to all potentially affected water users of the docket holder's responsibilities under this condition. **Any well or surface water supply that is impaired as a result of the docket holder's project withdrawal shall be repaired, replaced or mitigated at the docket holder's expense.** The scope of the options to consider for repair, replacement and/or mitigation shall not be limited solely to those that are owned, operated, or controlled by the project sponsor. An investigation report and/or mitigation plan prepared and certified by a licensed professional engineer and/or a licensed professional geologist shall be submitted to the Executive Director as soon as practicable following notice of the demonstrated or alleged impairment consistent with this paragraph. The Executive Director shall make the final determination regarding the scope and sufficiency of the investigation and the extent of any mitigation measures that may be required. Where ground and surface waters are rendered unavailable, unusable, or unsuitable for the pre-existing use, the Executive Director may direct the docket holder to take interim actions to mitigate such impacts, pending completion of the investigative report and any long-term repair, replacement or mitigation.

20. The Executive Director may modify or suspend this approval or any condition thereof, or require mitigating measures pending additional review, if in the Executive Director's judgment such modification or suspension is required to protect the water resources of the Basin.

21. For the duration of any drought emergency declared by either Pennsylvania or the Commission, water service or use by the docket holder pursuant to this approval shall be subject to the prohibition of those nonessential uses specified by the Governor of Pennsylvania, the Pennsylvania Emergency Management Council, PADEP, or the Commonwealth Drought Coordinator to the extent that they may be applicable, and to any other emergency resolutions or orders adopted hereafter by the Commission.

22. Any person who objects to a docket decision by the Commission may request a hearing in accordance with Article 6 of the *Rules of Practice and Procedure*. In accordance with Section 15.1(p) of the *Delaware River Basin Compact*, cases and controversies arising under the *Compact* are reviewable in the United States district courts.

BY THE COMMISSION

APPROVAL DATE: December 7, 2022

EXPIRATION DATE: December 7, 2032