May 16, 2013

Via US Mail and Email
Collin P. O’Mara, Secretary
Delaware Department of Natural Resources & Environmental Control
Office of the Secretary
89 Kings Highway
Dover, DE 19901

Re: Delaware City Refinery NPDES Permit Application

Dear Secretary O’Mara:

Please accept this letter on behalf of Delaware Riverkeeper Network, New Jersey Sierra Club, Eastern Environmental Law Center, New Jersey Environmental Federation, Delaware Audubon Society, Delaware Sierra Club, Coalition for Peace and Justice, and American Littoral Society. We write to express our concerns regarding the Delaware Department of Natural Resources & Environmental Control’s (“DNREC”) unlawful and unwarranted delay in failing to make a final decision on the pending application for a National Pollutant Discharge Elimination System (“NPDES”) permit for the Delaware City Refinery (“Refinery”).

DNREC must expeditiously issue a final NPDES permit for the Refinery. This final NPDES permit should require the installation of closed-cycle recirculating cooling systems (“CCRS”) for the Refinery as determined to be the Best Technology Available (“BTA”) in the pre-notice draft NPDES permit issued in June 2011. While the United States Environmental Protection Agency (“EPA”) is scheduled to issue its final rule on Cooling Water Intake Structures (“CWIS”) for existing facilities in June 2013, because the Refinery has held an expired but administratively extended NPDES permit for over ten years DNREC must act immediately to issue the Refinery’s permit now, prior to EPA’s final rule, because:

- the fish impingement and entrainment caused by the Refinery’s once-through cooling (“OTC”) system has devastating impacts on aquatic life;
- the Refinery has been utilizing a 1950s-era CWIS under a permit that has been expired for over ten years — more than twice as long as an individual NPDES permit is even valid for;
- DNREC’s own studies have recognized that CCRS is the BTA for the Refinery; and
• EPA has empowered Delaware to use its Best Professional Judgment for ensuring compliance with section 316(b) of the Clean Water Act thereby negating any reason or need to await final EPA regulations which may or may not be issued in the near future and withstand legal challenge thereafter.

**The Delaware Estuary is an Important Environmental and Recreational Resource**

The Delaware River Basin encompasses 13,539 square miles, including parts of Pennsylvania, New Jersey, New York, and Delaware. The main stem Delaware River flows 330 miles from Hancock, New York to the mouth of the Delaware Bay. More than three-quarters of the non-tidal portion of the River is included in the National Wild and Scenic Rivers Program.

The Delaware Estuary is the tidally influenced portion of the Delaware River Basin, and is one of the largest estuaries of the U.S. Atlantic Coast.\(^1\) The estuary extends 133 miles, from the falls at Trenton, New Jersey, to the mouth of the Delaware Bay and is a vital ecosystem.

The Delaware Estuary creates habitat for more than 130 species of finfish, is home to the largest population of spawning horseshoe crabs in the world, and is a host to the second largest concentration of migrating shorebirds in the western hemisphere. Numerous other species of plants and animals, such as oysters, crabs, diamondback terrapins, duck and humpback whales thrive on the Estuary’s highly productive ecosystem. The Estuary is also home to two species of sturgeon, the Atlantic and shorthorn, both of which are listed as endangered. The Estuary’s abundant natural resources have sustained human populations for thousands of years and today approximately 8 million people live within the estuary’s watershed.\(^2\)

There are a number of National Wildlife Refuges, a special class of parkland set aside specifically to protect animal and plant habitats, within the Delaware Estuary. Bombay Hook National Wildlife Refuge encompasses 15,000 acres in the Delaware Estuary.\(^3\) This refuge connects parts of the Atlantic Flyway, an avian migratory route of global ecological importance. It provides an important resting point and breeding ground for a variety of species including migrating waterfowl, bald eagles, Canada geese, and several species of duck.\(^4\) Bombay Hook is an important home to white-tailed deer, woodchucks, horseshoe crabs, bullfrogs, and tulip trees.\(^5\) Prime Hook, a 10,000 acre sanctuary for migrating birds, is another National Wildlife Refuge located on the western shore of Delaware Estuary. Its outstanding wetlands provide rare habitat for many species of birds and other wildlife, including threatened and endangered species.\(^6\)

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\(^1\) EPA’s Delaware Estuary Watershed Case Study available here: [http://water.epa.gov/lawsregs/lawsguidance/cwa/316b/phase2/casestudy_index.cfm](http://water.epa.gov/lawsregs/lawsguidance/cwa/316b/phase2/casestudy_index.cfm)

\(^2\) According to EPA, see [http://www.epa.gov/reg3wapd/estuaries/de_estuary.htm](http://www.epa.gov/reg3wapd/estuaries/de_estuary.htm)


\(^4\) Id.

\(^5\) Id.

THE REFINERY’S ONCE-THROUGH COOLING SYSTEM CAUSES SEVERE AND UNNECESSARY DAMAGE TO THE DELAWARE ESTUARY

The Refinery is a major consumer of Delaware River water -- taking in an average of 452 million gallons of water from the Delaware River each day (“mgd”). By the DNREC’s own estimations, the current OTC system at the Refinery destroys over a billion organisms per year through entrainment and impingement impacts. Entrainment occurs when aquatic life, mostly early life stage fish eggs and larvae, are pulled into and through the cooling system. Impingement occurs as many juvenile and mature fish are trapped against the cooling system’s intake screens. Among those killed are upwards of 46 million striped bass, white perch, bay anchovy, and weakfish. Over 53 species of fish have been found killed through the operations of the Delaware City Refinery Cooling operations and so the death of the millions of fish counted in these research efforts is but a mere sampling of the total fish kills that happen at the Delaware City Refinery.

The Refinery kills approximately 7.7% of all weakfish in the Delaware Estuary. DNREC’s own study warns that weakfish mortality “is of special concern, since weakfish have declined throughout their range coastwide. The Delaware Bay stock has seen one of the earliest and steepest declines.” According to National Marine Fisheries Service estimates, the recreational catch of weakfish has declined almost by nearly two orders of magnitude in the past decade with the declines expected to continue at a steady rate into the future. As a result, the Refinery’s impact on adult weakfish populations will become more significant as the adult population continues to shrink.

The Refinery also kills 27% of all the striped bass and 19% of the bay anchovy in the entire Delaware Estuary. Like weakfish, striped bass harvest levels in the Delaware Estuary have been declining over time. Kills to the total bay anchovy stock in the Bay and River indicate[] that the refinery could be having a noticeable impact on the total productivity of the Bay and River for the production of desirable predator species as well as reducing the attraction of adult predators.

When the fish kills of the Delaware City Refinery are combined with those of the Salem Nuclear Generating Station across the River it has been determined that just these two facilities

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7 Delaware Department of Natural Resources & Environmental Control, Fact Sheet, Attachment A – BTA Determination (2011). However, pursuant to the agreement Delaware City Refining Company entered into with DNREC to reopen the Refinery, the Refinery should be reducing its cooling water intake to 303 mgd by December 31, 2013. See Agreement Governing the Acquisition and Operation of Delaware City Refinery, ¶ 50 (May 31, 2010). A reduction in cooling water intake to 303 mgd is still quite a ways from BTA compliance at 45.2 mgd.

8 NPDES Fact Sheet, Attachment A – BTA Determination p. 7

9 Delaware Department of Natural Resources & Environmental Control, Fact Sheet, Attachment A – BTA Determination at 25 (2011).

10 Id.

11 Id. at 47.

12 Id. at 11.

13 Id. at 44, 47.

14 Id. at 47.

15 Id.
combined kill more than half of the striped bass population of the Delaware River – a shocking 56%. Of the Weakfish population, the two facilities combined kill up to 23% of all the weakfish found in the River.\(^\text{16}\) When viewed together, “the Refinery and the Salem Generating Station is certainly taking a significant part of the forage base of Delaware Bay.”\(^\text{17}\)

The Refinery’s fish kills could be reduced by 90%\(^\text{18}\) with a change in technology; a change that should be mandated under the law, and a technology that currently exists and is being used by existing facilities all over the country.

**THE REFINERY’S NPDES PERMITS**

Congress enacted the Clean Water Act (“CWA”) to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”\(^\text{19}\) To achieve this objective, the CWA requires a permit for any discharges of a pollutant from a point source into a navigable water.\(^\text{20}\) The Refinery is subject to additional CWA requirements as well. In particular, Section 316(b) requires “that the location, design, construction, and capacity of the cooling water intake structure reflect the best technology available for minimizing adverse environmental impact.”\(^\text{21}\)

The EPA has delegated its authority to administer the federal NPDES permit program in Delaware to the State of Delaware.\(^\text{22}\) While all permits are issued for a fixed term not to exceed five years, an expired permit may be administratively extended if the DNREC is unable to issue a new permit before the expiration date of the previous permit.\(^\text{23}\) However, an administrative extension is not meant to be indefinite and a permit renewal application should be granted within a reasonable period of time.\(^\text{24}\)

Problematically, the Refinery is currently operating under a permit that expired in 2002 and that has been administratively extended for over ten years. DNREC’s lengthy extension runs counter to the Clean Water Act’s policy and goals that permitting, in its various iterations, be a process by which environmental controls are progressively tightened to meet the goals of the CWA.

\(^{16}\) Desmond M. Kahn, Ph.D, Delaware Division of Fish and Wildlife Fisheries Section, *Impacts of Impingement and Entrainment Mortality by the Delaware City Refinery on Fish Stocks and Fisheries in the Delaware River and Bay*, at 8 (Oct. 9, 2008).

\(^{17}\) Id.

\(^{18}\) Provided the Refinery reduces its cooling water intake to 303 mgd, the Refinery’s fish kills could be reduced by 85% through a reduction in cooling water intake to 45.2 mgd.

\(^{19}\) 33 U.S.C. § 1251(a)

\(^{20}\) See 33 U.S.C. § 1311(a); see also 33 U.S.C § 1362(12)(defining “discharge of pollutant”).

\(^{21}\) 33 U.S.C. § 1326(b)

\(^{22}\) EPA approved Delaware’s NPDES permit program on 04/01/2013 and approved Delaware’s General Permits Program on 10/23/1992. Nonetheless, EPA maintains oversight authority over delegated state permitting programs, retaining the right to withdraw EPA approval of state program that fails to comply with CWA requirements. See 40 CFR § 123.63.

\(^{23}\) Delaware Dept. of Natural Resources and Envtl. Control, Division of Water, *Regulations Governing the Control of Water Pollution §§ 6.21a and 6.21b1.*

\(^{24}\) See *Upper Blackstone Water Pollution Abatement Dist. v. EPA*, 690 F.3d 9, 22 (1st Cir. 2012)
The Delaware City Refinery was constructed in 1956 by Getty Oil Company. Although ownership of the Refinery has changed hands several times since the 1950s, the cooling water intake structures remain the same as those originally installed fifty-seven years ago. The Refinery was issued NPDES permit numbers DE000256 and DE0005601—collectively discussed here as the “permit”—to authorize water intake structure operations and the discharge of wastewater in July 1997 and July 2002 respectively. The then-current owner of the Refinery submitted an application for reissuance of the permit, but rather than spark agency action, the application has remained pending before DNREC since 2002.

In 2009, the Refinery owner ceased operations at the facility, citing poor market conditions. However, new owners purchased the Refinery and restarted operations in October 2011. As part of the acquisition, the Delaware City Refining Company, LLC (“DCRC”), the new owner and subsidiary of PBF Energy, obtained the administratively extended permits and entered into an agreement with DNREC to supply an updated reapplication by December 2010. DCRC complied with this requirement. In June 2011, DNREC issued a pre-notice draft of the updated NPDES permit, as well as a preliminary BTA determination for cooling water intake and discharge and a factsheet on the economic viability of the Refinery. Yet, DNREC continues to fail to fulfill its legal obligations to make a final decision on this permit application.

DNREC’s 2011 BTA Determination found that BTA for the Refinery is a closed-cycle cooling water intake structure. DNREC noted that the current intake structure kills millions of fish, indirectly causes air and water environmental impacts, and has been the cause of numerous NPDES permit violations. What is more, the unusual configuration of the current intake structure within a 4,673-foot-long channel inland from the River results in added fish kills, uneven water intake and refinery shutdowns, and maintenance dredging requirements.

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26 Desmond M. Kahn, Ph.D, Delaware Division of Fish and Wildlife Fisheries Section, Impacts of Impingement and Entrainment Mortality by the Delaware City Refinery on Fish Stocks and Fisheries in the Delaware River and Bay, at 8 (Oct. 9, 2008).
27 DNREC Pre-Notice Draft National Pollutant Discharge Elimination System Permit Number DE 0000256, at 36 (Jun. 21, 2011). The two permits stem from when the facility had split ownership, and it is currently proposed that the two permits be consolidated into one, bearing the number DE 0000256. Id.; Delaware City Refinery Presentation to Community Advisory Panel, at 4 (Feb. 2012). The permits are thus discussed collectively as a single permit in this letter.
28 Agreement Governing the Acquisition and Operation of Delaware City Refinery, ¶ 44 (May 31, 2010).
30 Id.
31 Agreement Governing the Acquisition and Operation of Delaware City Refinery, at ¶ 46 (May 31, 2010).
32 Delaware City Refinery Presentation to Community Advisory Panel, at 5 (Feb. 2012).
33 DNREC Pre-Notice Draft National Pollutant Discharge Elimination System Permit Number DE 0000256, at 36 (Jun. 21, 2011); Delaware Department of Natural Resources & Environmental Control, Fact Sheet, Attachment A – BTA Determination (2011); Delaware Department of Natural Resources & Environmental Control, Fact Sheet, Attachment B BTA Determination – Baseline Economic Viability of Delaware City Refinery and Power Plant (DCR) (2011).
34 Delaware Department of Natural Resources & Environmental Control, Fact Sheet, Attachment A – BTA Determination at 3.
35 Id.
36 Id. at 15-16.
contrast, a closed-cycle cooling water intake would reduce water intake by 90%, would avoid intake problems from variable river and weather conditions, and would reduce fish mortality in direct proportion to the reduction in intake.\textsuperscript{37} Thus, the pre-notice draft NPDES permit requires installation of a closed-cycle cooling system or achievement of the results expected from such an installation by other means.\textsuperscript{38}

The Refinery is to have six months from the issuance of the final permit to analyze alternatives to the BTA determination, and the Refinery may submit a proposed alternative fifty-four months after the permit effective date.\textsuperscript{39} Despite decades of technical, environmental, and economic problems with the once-through cooling system and more than ten years of operation under an expired permit, the Refinery need not commence construction of the BTA until five years following the permit effective date.\textsuperscript{40} As such, under the current draft of the permit, the Refinery will not be required to even begin construction of BTA on its cooling water intake structure—whether closed cycle cooling or an alternative that achieves like results—until the new NPDES permit is out of date. Moreover, greater delay in the implementation of the BTA is expected as the Refinery need not complete construction until ten years after the effective date of the new permit.\textsuperscript{41} And because the agency has failed to pursue its draft permit, the public has not had any opportunity to provide input for DNREC consideration, nor does it have a final permit that it could seek to challenge in court—because the process continues in stasis, the public is denied any legal pathway for input or remedy to finally resolve the matter.

While the pre-notice draft permit was an encouraging step in the right direction in that it recognizes CCRS as BTA for the Refinery, it does not negate the more than ten years of operation under an expired permit, and it does not fulfill DNREC’s duty to engage in an open public process which in an appropriate time frame will conclude with issuance of a final decision on the Refinery’s updated permit application that can be accepted by all or challenged by those aggrieved.

**DNREC Can No Longer Delay Acting Upon the Refinery’s NPDES Permit**

Even though EPA intends to promulgate a final rule in June 2013 which will guide the NPDES Permit for the Refinery, DNREC cannot await such rulemaking or the resolution of the any legal challenge to that rulemaking before acting on the Refinery’s permit application. EPA’s past attempts to promulgate regulations under section 316(b) have been contentious and its current attempts will likely continue to be met with opposition. In the absence of EPA rulemaking, EPA has been insistent that State NPDES Directors use their best professional judgment on a case-by-case basis to properly implement the requirements of section 316(b).

\textsuperscript{37} Id. at 8, 33.

\textsuperscript{38} DNREC Pre-Notice Draft National Pollutant Discharge Elimination System Permit Number DE 0000256, at 22 (Jun. 21, 2011). The draft permit also required a reduction in cooling water intake from the existing structure from 452 mgd to 303 mgd. Id. The Refinery plans to comply with this requirement by restarting its Unit 43 Ether Plant Cooling Tower that has been out of operation since 2002. Delaware City Refining Company Unit 43 Ether Cooling Tower Restart Application, at 1 (Sept. 21, 2012), available at http://delaware.sierraclub.org/sites/delaware.sierraclub.org/files/documents/2012/10/ether-cooling-tower-restart-application-1.PDF.

\textsuperscript{39} Id. at 22-23.

\textsuperscript{40} Id. at 23.

\textsuperscript{41} Id.
By means of background, the Fourth Circuit remanded the EPA’s first attempt at a regulation under section 316(b) on procedural grounds. After years passed and the EPA had not promulgated a new rule, environmental groups sued and entered into a consent decree, pursuant to which the EPA agreed to promulgate regulations under section 316(b) by specified deadlines. Under the consent decree, EPA divided the section 316(b) rulemaking into three phases. All new facilities except offshore oil and gas exploration facilities were addressed in Phase I in December 2001. Existing large electric-generating facilities with designed intake flows equal to or greater than 50 mgd, which includes the Refinery, were initially addressed in Phase II in February 2004 and small electric-generating facilities and all manufacturing facilities were initially addressed in Phase III in June 2006. However, Phase II and a portion of the Phase III rules were remanded to EPA for reconsideration as a result of legal proceedings. Subsequently, on April 20, 2011 EPA proposed a new rule for existing facilities combining Phase II and Phase III into one rule. The new rule is not yet final, is tentatively expected to be released in June 2013, and is expected to have undergone modifications such that this rule too will be the subject of ongoing litigation.

Regardless of whether EPA promulgates a final rule, DNREC is already obligated to use its best professional judgment to implement the requirements of 316(b). EPA has been quite clear on this point since it began its three-phased rulemaking. Specifically, in December 2001 during promulgation of its Phase I rule for new facilities, EPA reminded State NPDES Directors that “permit writers should continue to apply best professional judgment in making case-by-case section 316(b) determinations for existing facilities.” Again, when the Phase II rules were remanded back to EPA, as result of the Riverkeeper II litigation (of which the Delaware Riverkeeper Network was a part), and before they were formally suspended, EPA issued a memorandum explaining that “[i]n the meantime, all permits for Phase II facilities should include conditions under section 316(b) of the Clean Water Act developed on a Best Professional Judgment basis.” When EPA did provide notice on July 9, 2007 that it was suspending the Phase II rules it provided clear direction that states must continue to proceed with 316(b) permitting on Best Professional basis, stating:

Notably, EPA by this action is not suspending 40 CFR 125.90(b). This retains the requirement that permitting authorities develop BPJ controls for existing facility cooling water intake structures that reflect the best technology available for minimizing adverse environmental impact. This provision directs permitting

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42 See Appalachian Power Co. v. Train, 566 F.2d 451 (4th Cir. 1977)
43 See Cronin v. Browner, 898 F. Supp. 1052, 1064 (S.D.N.Y. 1995) (Pursuant to a settlement agreement among EPA, Plaintiffs in the Cronin, et al. v. EPA, 06 Civ. 314 (LTS) (SDNY), and Plaintiffs in Riverkeeper, et al. v. EPA, 06 Civ. 12987 (PKC) (SDNY), EPA agreed to prose regulations implementing section 316(b) and to take final action with respect to the regulations.)
44 All new offshore oil and gas exploration facilities were later addressed in June 2006 as part of Phase III
45 See Riverkeeper et al. v. EPA, 475 F.3d 83 (2d Cir. 2007) (“Riverkeeper II”) (court remanded numerous provisions of the Phase II Rule to EPA). The Supreme Court reversed only one aspect of Second Circuit’s Riverkeeper II decision finding that section 316(b) authorized EPA to compare costs and benefits. See Entergy Corp. v. Riverkeeper, Inc., 556 U.S. 208 (2009).
46 66 Fed. Reg. 65256 (Dec. 18, 2001)
authorities to establish section 316(b) requirements on a BPJ basis for existing facilities not subject to categorical section 316(b) regulations.48

Thus, for more than a decade DNREC has been given a clear federal directive regarding its obligations under 316(b). As a result, DNREC cannot wait for final EPA regulations before taking action on the Refinery’s permit application.

Furthermore, DNREC’s delay in acting on the Refinery’s permit constitutes an unlawful and unreasonable delay that is legally actionable in the Delaware’s Superior Court. Such delay also runs counter to the intent and purpose of the Clean Water Act that limits NPDES permitting to a five year period so that each permitting cycle provides an opportunity for more environmentally protective NPDES conditions to meet the Act’s goals. The First Circuit has recently underscored this point in Upper Blackstone Water Pollution Abatement Dist. v. EPA, 690 F.3d 9, 22 (1st Cir. 2012). There the court held:

Neither the CWA nor EPA regulations permit the EPA to delay issuance of a new permit indefinitely . . . The five-year term limit requires the EPA or state permitting authority to re-ensure compliance with the Act whenever a permit expires and is renewed. 33 U.S.C. § 1342(a)(3), (b)(1)(B); 40 C.F.R. § 122.46(a), (b). Thus, in regular intervals, the Act requires reevaluation of the relevant factors, and allows for the tightening of discharge conditions. The Act’s goal of “eliminat[ing]” the discharge of pollutants by 1985 underscores the importance of making progress on the available data. 33 U.S.C. § 1251(a)(1).

It has been nearly two years since DNREC issued its pre-notice draft permit and more than ten years since the current permit has been administratively extended. Over that time DNREC has failed to exercise its best professional judgment to issue a permit that complies with the CWA. Such delay has caused millions of unnecessary fish kills, further depleting the nationally significant Delaware Estuary. Additional delay is unacceptable. Given the uncertain nature of the promulgation of EPA’s final rule and its uncertain fate due to the legal challenges that it will likely face, DNREC cannot sit idly by awaiting its promulgation. Rather, the Secretary must act on the Refinery’s permit application and, in exercising his best professional judgment, should require installation of a closed-cycle recirculating cooling system.

CONCLUSION

We respectfully request that DNREC issue a final NPDES permit by a date certain that requires the installation of a CCRS system at the Delaware City Refinery. The permit should include a brisk compliance schedule. The Refinery has too long enjoyed the benefits of administratively extended permits that have allowed it to use 1950s-era cooling technology. The Refinery should be forced to curtail its practice of disrupting the ecosystem, killing millions of fish annually, and wasting ecologically and economically precious environmental resources. We

48 72 Fed. Reg. 37,107, 37,108 (July 9, 2007)
ask that DNREC finally put an end to the Refinery’s prolonged practice of needlessly killing fish as part of its day to day operations and instead be required to put in place a proven and existing technology that will reduce those fish kills by at least 90%. \(^{49}\)

Respectfully submitted,

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\(^{49}\) Again, provided the Refinery reduces its cooling water intake to 303 mgd, as required by its agreement with DNREC to reopen the Refinery, the Refinery’s fish kills could be reduced by 85% through a reduction of cooling water intake in line with the BTA recommended 45.2 mgd.
Also signed by legal counsel representing the participating organizations:

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