



STATE OF DELAWARE  
DEPARTMENT OF NATURAL RESOURCES  
AND ENVIRONMENTAL CONTROL

OFFICE OF THE  
SECRETARY

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**Secretary's Order No. 2009-W-0042**

**Re: APPLICATION OF PREMCOR REFINING GROUP, INC. TO DREDGE PORTIONS OF THE DELAWARE RIVER AND CEDAR CREEK NEAR DELAWARE CITY, NEW CASTLE COUNTY**

**Date of Issuance: November 2, 2009**

**Effective Date: November 2, 2009**

Under the authority granted the Secretary of the Department of Natural Resources and Environmental Control (Department), the following findings, reasons and conclusions are entered as an interim Order of the Secretary. This Order considers Premcor Refining Group, Inc's (Applicant) application<sup>1</sup> submitted to the Department's Division of Water Resources, Wetlands and Subaqueous Lands Section (WSLS), for approval to dredge portions of Cedar Creek and the Delaware River near Delaware City, New Castle County (Project) for the operation of Applicant's oil refinery located at 4550 Wrangle Hill Road, Delaware City, New Castle County (Facility).

**Background**

The Project proposes dredging two separate, non-contiguous areas. One area is in a waterway known as Cedar Creek, but over the years has been named the cooling water intake channel. The sole purpose of this dredging is to allow the Facility to receive water

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<sup>1</sup> The Department uses a combined form for the Subaqueous Lands Act permit and the Water Quality Certification. Thus, Applicant submitted only one application for both approvals. The water quality certification authority is needed for the dewatering of the dredged material, or spoils, in the proposed confined dredge area on Applicant's property.

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for use as non-contact cooling water.<sup>2</sup> The proposed dredging would run approximately one mile from Cedar Creek's mouth at the Delaware River westward to the Facility's water intake structure on Cedar Creek. The proposed area to be dredged is the same area and to the same depth as the Department previously has approved and the same dredge material storage area would be used. Indeed, Cedar Creek has been dredged and used for the Facility's industrial processes since 1956, and over the years, Cedar Creek has been channelized and has become essentially a conduit to moving water from the Delaware River to the water intake structure on Cedar Creek. The dredging is to maintain sufficient water flows in Cedar Creek when natural sedimentation impedes the flow of water to the cooling water intake.

Applicant proposes to dredge Cedar Creek to a depth of 12 feet below Mean Low Water (MLW). The Department has authorized the dredging of Cedar Creek in a series of permits over the years, including last year, based upon similar claims that low water conditions threatened the Facility's operations.

The second area that Applicant's application proposes to dredge is in public subaqueous lands in the Delaware River from the Delaware River's Main Channel<sup>3</sup> to a berthing facility on the Delaware River. The sole purpose of this dredging is for ships to deliver unrefined oil to the Facility. Applicant requires maintenance dredging because of sedimentation and shoaling in the Delaware River. The Department previously has approved maintenance dredging, which the Facility generally requires dredging every three years. Applicant requests to dredge in the same area as previous permits, but seeks to deepen the navigational channel and turning basin from 32 to 37 feet MLW and the

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<sup>2</sup> Applicant has an allocation for use of water from the Delaware River up to daily average of 452 million gallons per day.

<sup>3</sup> The Main Channel is a designated navigation area.

berthing area from 37 to 40 feet MLW.<sup>4</sup> Applicant seeks to dredge deeper than in the past because the deeper depths will allow larger ships to use the berthing area, which will avoid an estimated 16 lightering operations a year.<sup>5</sup>

The application was required under *The Subaqueous Lands Act, 7 Del. C. Chap. 72, (SLA), 7 Del. C. Chap. 60, Section 401* of the federal *Clean Water Act* and Department regulations under these statutory authorities.<sup>6</sup> On September 22, 2008, the Department held a duly noticed public hearing on the application, and the public comment period was closed.

On September 29, 2008, the Department issued Secretary's Order No. 2008-W-0052, which approved interim dredging of Cedar Creek through March 31, 2009 based on Applicant's September 4, 2008 letter notifying the Department of a possible impending low water condition. This was an interim order to allow dredging of Cedar Creek through March 31, 2009 because of its low water conditions that threatened receipt of the cooling water needed to operate the Facility safely and in compliance with the Department's regulations. The Department did not decide on the merits of any dredging beyond the limited dredging in Cedar Creek needed to maintain cooling water to the Facility.

Secretary's Order No. 2008-W-0052 also directed Applicant to submit within 45 days a proposed mitigation plan, which would offset the Project's adverse impacts. The Department also re-opened the record for 90 days to allow the public the opportunity to

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<sup>4</sup> The berthing area would be deeper than the other area to account for tidal changes occurring during the unloading of the crude oil

<sup>5</sup> 'Lightering' is the offshore transfer of crude oil from a larger ship to a smaller ship, which is able to navigate in shallower waters

<sup>6</sup> The Department administers this federal authority under a delegation from the United States Environmental Protection Agency ("EPA") pursuant to the federal Water Pollution Control Act.

comment on the new information. On November 13, 2008, Applicant submitted a proposed plan to WSLs, which WSLs determined in a November 18, 2008 letter to be deficient because it did not address the Project's full environmental harm, including harm to aquatic life from the intake. The Applicant disputed WSLs' determination that the intake's harms should be considered in any mitigation plan for the Project. The Applicant conducted the dredging as authorized through March 31, 2009, but to date the Department has not approved any mitigation plan.

In an October 20, 2009 letter, Applicant seeks to conduct "emergency maintenance dredging" for the Cooling Water Intake Channel and noted a current depth of less than 4 feet below MLW, which is claimed to jeopardize the vital cooling water supply to the Facility during abnormal tidal and weather conditions.

In an October 26, 2009 Hearing Officer's Report (Report), the presiding hearing officer, Robert P. Haynes, recommends granting the requested permit, but only if it include the proposed permit conditions, as WSLs prepared in its Technical Response Memorandum (TRM) attached to the Report, a copy of which is attached hereto as Appendix A. The permit conditions include that Applicant must submit a mitigation plan that is acceptable to the Department. The Report rejects the Applicant's contention that the Project is not connected to the water intake in Cedar Creek or otherwise causes harm to aquatic life from the water intake used to receive cooling water. The Report, based upon the public comments and the Department's experts' analysis, recommends that a mitigation plan be approved before any dredging. The Report specifically recommends a finding that the Project will directly and indirectly cause harm to aquatic life in the Delaware River, including harm from use of the water intake. The Report does not

recommend adopting any permit condition, as advocated by some public comments, that the Department should direct the Applicant to eliminate the water intake. The Report recommends that the Department direct the Applicant to set forth its proposed detailed timetable of all changes that would be needed to eliminate the use of the intake.

### **Findings and Reasons**

First, I adopt the Report to the extent it is consistent with this Order. This Order changes the recommendation of approval the Project, subject to a permit condition requiring an acceptable mitigation plan from the Applicant. Instead, I find that the Department should act once again in an interim Order pending the approval of an acceptable mitigation plan. This approval will provide Applicant limited authority to dredge in Cedar Creek to avoid the low water conditions that now threaten the Facility's operations. The Department will also allow the Department more time to decide on the appropriate mitigation plan. As part of the process, the Department directs the Applicant to submit a mitigation plan for all the direct and secondary harm from the Project, including harm to aquatic life from the continued use of the cooling water intake structure that is the sole purpose of the proposed Cedar Creek dredging.

As part of this decision to defer any final decision, I shall have the Department re-open the public hearing record to allow for additional public comments on an acceptable mitigation plan, as WSLs determines. Once WSLs determines that an acceptable mitigation plan has been submitted, then the Department will provide public notice of the proposed plan that will also re-opened the record for public written comments on the proposed mitigation plan. Applicant's proposed plan may be subject to change based upon a record developed by the hearing officer, including written public comments.

Consequently, the Department directs the Applicant to submit within two weeks of this Order its proposed mitigation plan that is consistent with this Order. It should consider the Project's harm to the environment, including from the continued use of the water intake structure. The Department's experts have provided the Applicant with some guidance on the types of acceptable mitigation plans, as attached to the Report. The mitigation plans presented in the record from the Department's experts provide a wide range of options for the Applicant to select as its proposed plan or it may submit an alternative. The experts' plans include monetary compensation for the estimated significant cost to restore certain species that the Project will cause to be harmed in one year. It also offers plans to restore aquatic habitat within the Delaware River watershed and thereby would improve aquatic life of the Delaware River. I prefer for the Applicant to first submit a proposed plan after it has considered these plans and then to have the Department's experts determine whether the Applicant's proposed plan is acceptable before providing an opportunity for public comment. The Department will re-open the record by a public notice to seek public comments before making a final decision to approve a mitigation plan.

This interim action is unfortunate, but it is only taken because Applicant has refused to provide the Department with an acceptable mitigation plan that recognizes the Project's harm. I find that the low water conditions exist again as they did last year when interim action was taken, but the delay since last year is largely due to Applicant's unwillingness to provide the Department with a mitigation plan that meets the Department's approval. The interim Order will allow Applicant to dredge once to 12 feet below MLW in Cedar Creek. Consequently, I remand this to the hearing officer to

determine when a public notice should occur of an acceptable mitigation plan, based upon WSLs' determination that Applicant has provided an acceptable plan.

Finally, I also have considered the public comments on the construction of alternatives to the cooling water intake structure. I agree with the Report that the development of best available technology determination is best decided in the regulatory context of a National Pollution Discharge Elimination System (NPDES) permit. Nevertheless, this Order shall provide some guidance and direction to Department in the drafting of the NPDES draft permit. The draft NPDES permit should consider measures to reasonably reduce the intake's harm to aquatic life in the Delaware River. The Report directs Applicant to provide a timetable for its efforts, but I reject this recommendation in this proceeding because I believe it will be more effectively addressed in the NPDES permit proceeding, which should be subject of public notice in the near future. However, by this Order I direct DWR to provide notice of a draft NPDES permit as soon as practicable, and that the draft permit should include a determination of Best Available Technology.

### **Conclusions**

In sum, I adopt and direct the following as the final order of the Department:

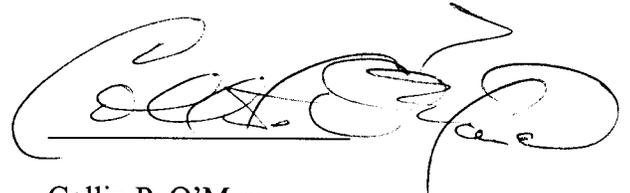
1. The Department has jurisdiction under its statutory authority to make an interim determination in this proceeding under its state and delegated federal authority;
2. The Department provided adequate public notice of the application and the public hearing, and held the public hearing in a manner required by the law and its regulations;

3. The Department considered all timely and relevant public comments in making this interim determination and has documented a record to support its decision as identified herein and in the Report;

4. That the Applicant shall, within two weeks from the date of this Order, submit to WSLs a proposed mitigation plan, which shall provide mitigation for the Project consistent with this Order, including mitigation of the environmental harm from the water intake;

5. Based upon receipt of a proposed mitigation plan the Department's experts determine is acceptable, the Department shall provide public notice of a public comment period in order to receive written public comments on the Applicant's proposed mitigation plan for consideration in a final Department determination; and

6. The Department shall publish this Interim Order on its web site and provide such notice of it in a manner required by the law and the Department regulations.

A handwritten signature in black ink, appearing to read 'Collin P. O'Mara', written over a horizontal line. The signature is highly stylized and cursive.

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 Premcor Refining Group, Inc. to Dredge Portions of the Delaware River and Cedar Creek, Near Delaware City, New Castle County.

DATE: October 26, 2009

### I. PROCEDURAL HISTORY

This Report makes recommendations to the Secretary of the Department of Natural Resources and Environmental Control (Department) on Premcor Refining Group, Inc.'s<sup>1</sup> (Applicant) application submitted January 15, 2008 to the Department's Division of Water Resources (DWR), Wetlands and Subaqueous Lands Section (WSLS). The application seeks authority under the Subaqueous Lands Act<sup>2</sup> (SLA) and the Department regulation over water quality<sup>3</sup> to dredge (Project) portions of Cedar Creek and the Delaware River near Delaware City, New Castle County for Applicant's Delaware City oil refinery (Facility or DCR).

On June 4, 2008, the Department published public notice of the Project. In a June 10, 2008 letter, William F. Moyer submitted comments and requested a public hearing. On August 31, 2008, the Department published public notice<sup>4</sup> of a September 22, 2008 public hearing to receive public comments on the Project. I was assigned to preside over the hearing and to

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<sup>1</sup> Applicant is a wholly owned subsidiary of Valero Energy

<sup>2</sup> 7 Del. C. Chap. 72.

<sup>3</sup> Section 5.1 of the Department *Regulations Governing the Control of Water Pollution*, 7 DE Admin Code 7201, which the Department administers under the federal *Water Pollution Control Act* (Clean Water Act), 33 U.S.C 1251 *et seq.*

<sup>4</sup> This notice was a corrected notice to include the water quality certification component of the consolidated application on the Department's approved form.

prepare a report of recommendations for the Secretary of the Department, who will make the Department's final decision.

In a September 4, 2008 letter, Applicant requested emergency authority to conduct maintenance dredging of the cooling water intake channel in Cedar Creek because of potential problems with continuing to operate DCR if no cooling water was available from Cedar Creek due to insufficient water depth caused by natural sedimentation without the periodic maintenance dredging.

The public hearing was held and a public hearing record developed. At the conclusion of the hearing, I closed the public comment period despite several requests from the public that it be kept open. I indicated that Applicant's pending emergency request to dredge Cedar Creek in order to maintain DCR's operations required that the record be closed in order to allow the Department an opportunity to consider Applicant's request.

In Secretary's Order No. 2008-W-0052, issued September 29, 2008, the Department granted Applicant's request to dredge Cedar Creek, but also indicated that its action was interim and was solely to allow Applicant to conduct emergency maintenance dredging through March 31, 2009. The limited approval did not involve any ruling on the merits of the Project, which remained pending. The Department's action was taken based upon the possible adverse public health and environmental impacts if DCR did not receive an adequate amount of cooling water due to low water conditions in Cedar Creek.

Secretary's Order No. 2008-W-0052 also required the Applicant to submit a proposed mitigation plan for the Project causing the loss to the public of a substantial resource. This proposed plan was to be submitted to the Department for approval within 45 days. The Order

also re-opened the public comment period for 90 days, which was to allow the public to comment on Applicant's proposed mitigation plan.

On November 13, 2008, Applicant submitted its proposed mitigation plan, which indicated that its mitigation plan would be to comply with the water certification and other existing permit requirements for the actual dredging activities. WSLs reviewed this proposed plan, but found it insufficient in a November 18, 2008 letter to the Applicant. The letter indicated that a proposed mitigation plan should address the environmental harm on aquatic life from Project's dredging, including the harm to aquatic life from the impingement of aquatic life on the intake's fish screens and the entrainment within the cooling system if the aquatic life is small enough to pass through the intake's screens. In a November 26, 2008 letter, Applicant provided a supplement to the proposed mitigation plan, which essentially restated its prior position that no mitigation for impingement and entrainment was necessary because the water intake, and not the proposed dredging, causes the impingement and entrainment. The Department also received public comments in the extended public comment period.

I requested the technical assistance of the experts in WSLs, which prepared two memoranda and a draft permit. In addition, experts in the Coastal Zone Management Program within the Division of Soil and Water Conservation and the Fisheries Management Section with the Division of Fish and Wildlife also provided technical advice. These memoranda are attached as Appendix A to this Report and incorporated herein.

## **II. SUMMARY OF THE RECOMMENDED RECORD**

I recommend that the Department find that the record contains: 1) the 97 page verbatim transcript of the September 22, 2008 public hearing, and 2) the documents introduced as exhibits at the hearing, as indentified in the transcript, and all timely submitted comments submitted during the re-opened public comment period.

The Department's hearing exhibits included the application, the public notices and the other relevant public comment and correspondence sent and received prior to the public hearing. At the hearing Laura Herr, Section Manager of WSLs, and Joanne Lee, WSLs's environmental scientist responsible for reviewing the application, spoke about the purpose of the hearing and that the Department's position is neutral on the merits of the application until after the Department has received all the public comments, at which time the Department investigates and makes a final decision in a Secretary's Order.

Joe Greenfield, Applicant's senior environmental engineer for the DCR, made a presentation in which he set forth that the dredging is necessary in the Delaware River for navigation of vessels to and from the berthing area at DCR, which is located along the Delaware River. He noted that the berthing area, the navigational channel and vessel turning basin are subject to sedimentation and shoaling, which means that dredging is necessary approximately every three years to maintain adequate depth for this activity. He indicated that the navigational channel is a spur that goes from the Delaware River Main Channel, which the United States Corps of Engineers maintains and dredges, to DCR's docking area. He said that the Applicant seeks to dredge: 1) the navigational channel from the prior permit's 32 feet below mean low water (MLW) depth to 37 feet below MLW, 2) the ship berthing area from its current permit's 37 feet below MLW to 40 feet below MLW, and 3) the cooling water intake channel in Cedar Creek

to the current permit's 12 feet below MLW. There would be no change in the dredging footprint for any of the proposed dredging from the areas the Department previously has approved.

Mr. Greenfield indicated that the Cedar Creek cooling water intake channel needed to be dredged to maintain sufficient water levels to supply DCR with cooling water critical to its operations. He also stated that the dredged materials, or spoils, will be placed at the areas already approved and used for past dredging. He said the reason to deepen the channel for navigation would be to optimize ship traffic to DCR, which he claimed would reduce the risk of environmental harm and eliminate 16 lightering operations.<sup>5</sup> He indicated that the Department had a sampling analysis of the proposed dredge areas, which Rick Greene in the Division of Water Resources' Watershed Assessment Section reviewed and had concluded that the aquatic environment would be improved if the proposed dredged material containing harmful pollutants were properly removed from the Delaware River and proper placed in a confined dredge storage area.

Mr. Greenfield explained that dredging for the cooling water was required twice a year to maintain sufficient water. The requested depth was 12 feet MLW and that the sedimentation had caused depth reading in some area of only 4.5 feet MLW, which historically has caused incidents at DCR due to extreme low tides, 'blow-out' weather, and wind direction. The cooling water intake issue he recognized was a subject of public concern, particularly the adverse impact on aquatic life from the impingement in the intake screens and entrainment within the cooling water system. He said that the Applicant was working with DWR's Surface Water Discharge Section as part of the surface water discharge permit required under the federal Water Pollution Control

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<sup>5</sup> Lightering is the offshore transfer of oil from larger ships to smaller ships capable of navigating in shallower waters.

Act (Clean Water Act) and its National Pollutant Discharge Elimination System (NPDES) permit that the Department administers. This effort was moving to reduce DCR's intake of Delaware River water for cooling purposes by increased use of cooling towers and other steps that would reduce its water intake by 33%, or from 452 to 303 million gallons daily annual average, as set forth in Applicant's filing with the Delaware River Basin Commission. He noted that DCR has three cooling towers, but that many changes would be needed to achieve this reduced reliance on the intake for the cooling water requirements and the changes would take place over five or more years. He spoke of the significant infrastructure changes needed to move to a cooling water system that did not rely on the intake.

Mr. Moyer spoke and submitted his comments in written form as part of 18 documents he identified. Mr. Moyer requested to be recognized as an expert based upon his education and work experience, including as the Department's immediate past manager of WSLs. He also requested that all applicable laws and regulations be admitted into the public record.<sup>6</sup> He also recommended denial of the application as incomplete. He questioned the Department's lack of written procedures for hearings and whether time limits could be imposed for public speakers. He stated that the application did not comply with Section 3.01A of the Subaqueous Land Regulations on the public impacts from the Project. He also questioned the application's compliance with Section 3.01B in that the information on the sediment was not included at the time the application was noticed, but only provided in Applicant's June 4, 2008 submission. He commented on the harm from Applicant's frequent dredging of Cedar Creek. He also addressed

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<sup>6</sup> I hereby deny this request because technically laws and regulations may always be cited and they do not need to be exhibits in the record, but the Department exhibits did include some of the applicable laws and regulations to benefit the public's participation at the hearing.

a concern with the fish screen manual operation and how the dead fish were dumped back into the water via a concrete sluice. He stated his opinion that the intake structure reflected the technology from when it built in 1956. He chronicled the long regulatory history and Department concern with the intake and fishkills that result from it. He commented on the lack of a new NPDES permit, based upon the current permit's expiration August 31, 2002.<sup>7</sup>

He noted the fishkill levels as reported in the studies performed by the Division of Fish and Wildlife, which reported 31,706 finfish killed in a 24 hour period in July 1978, which he commented would be higher today given the improved water quality conditions in the Delaware River. He described his tour of Cedar Creek, but stated that he was not allowed to observe the intake structure. He also mentioned the Department's emergency permits to dredge issued in 1993 and in 2004. He expressed his opinion how the intake structure's harm to fish is hidden from public view, and if the public observed the harm then there would be more public outcry over the loss of aquatic life. He concluded that the Department should not wait for federal authority to take action, but that it should rely on its state authority and that the Department should follow the House Concurrent Resolution that supports moving to a closed loop cooling system for all such industrial users in Delaware. He said that the intake structure should be changed and that it should not take 5 years to take action. He requested the record to remain open for 30 days and noted that there was no coastal zone consistency authority for the dredging as a basis for keeping the record open.

Richard Schneider presented comments that dredging destroys the creek bottom and kills aquatic life. He commented that ordering Applicant to use cooling towers would allow a 90%

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<sup>7</sup> This permit remains in effect until renewed or revoked

reduction in the intake of Delaware River water and would reduce the frequency of dredging to once every 10-15 years. He mentioned a report on fishkills between April 1999 through March 1999, and over this time period 53 species of fish were killed by the intake, including 39,000 striped bass, 219,000 white perch, 1.5 million bay anchovy, and 29,000 weakfish. He described the intake as 'one giant aquatic death machine' because whatever enters it dies. He considered that any fish screens were useless to mitigate this harm. He commented on a 2002 EPA study's finding that the intake killed 775,000 lbs. of weakfish, compared to 16,000 lbs caught by in Delaware by recreational fishing. He said the report calculated that the intake killed 662,000 lbs of striped bass, which was four times the amount caught by Delaware's recreational fishermen. He said the striped bass fishing industry was closed when the Atlantic Fisheries Commission banned commercial fishing from 1985 through 1989. He mentioned a study of the intake at Conectiv's Edge Moor power plant for its adverse impact on aquatic life and that the 'best available technology' should be required in the form of cooling towers in order to prevent such an adverse impact. He provided five exhibits for the record.

John Flaherty spoke briefly and supported Mr. Moyer's comments and requested the Department order the Applicant to install cooling towers and use a closed loop cooling system.

Kenneth Kristl, Esquire, a Professor with the Widener University School of Law's Environmental Law Clinic provided a written statement into the record, which contended that the Subaqueous Lands Act and the Department regulations promulgated thereunder provide the Department with legal authority to address the secondary impacts from the proposed dredging of Cedar Creek, including the water intake's impingement and entrainment of aquatic life. The comments request that the Department impose permit conditions to ensure that the direct and indirect impacts from the proposed dredging will not result in undue environmental harm,

including the requirement that Applicant reduce its water usage and/or move to a closed loop cooling system. He also inquired why the application requested greater depth at the berthing area than requested for the navigational channel and was informed that tide changes warranted the greater depth while ships were in the berthing area. Mr. Greenfield also commented that the Applicant was committed to moving to a closed loop system in the future.

Mary Ellen Noble commented on behalf of the Delaware Riverkeeper, Maya van Rossum, and that she supported a permit condition for the dredging that would reduce the secondary impact of the dredging. She spoke on the need to view the application not as a continuation of prior dredging. Instead, she considered that the proposed dredging harms Cedar Creek and was surprised that the application considered that the dredging was a normal condition when it should not be considered a normal condition of the waterway. She wondered how the waterway had been classified as a cooling water intake channel by the Applicant. She questioned the reliance on water quality data taken at Reedy Island six miles away from DCR. She raised an issue with the amount of contaminants to be removed by the dredging and how the contaminants would be managed at the proposed existing dredge spoil areas. She requested the record be left open for four to six weeks and that she adopted Mr. Moyer's comments that the application was incomplete. She also commented on the disposal of the fish that were killed as a possible solid waste issue.

Finally, Al Denio on behalf of the Sierra Club spoke on the need for the Department to do something to reduce the water intake and not wait for another ten years.

The written public comments were from Alan Muller of Green Delaware, who opposed any permit based upon the cooling water intake. He commented on the Department's divided regulatory responsibility over the cooling water intake and requested the record be kept open.

The Department's Division of Fish & Wildlife, Fisheries Program, also commented on the water intake structure as an inefficient, antiquated and obsolete cooling water system that had a 100% fish mortality rate. The comments opposed any permit being issued without a move to construction of best available technology cooling water system. Maya K. van Rossum also provided written comments as the Delaware Riverkeeper, which is an affiliate of the American Littoral Society. The comments opposed the permit based upon the cooling water intake, and requested that the record be kept open for 30 days.

In addition to the documents introduced at the public hearing, I recommend all documents attached to this Report be included in the Department's record if the Department adopts a final Order consistent with this Report's recommendations. I also recommend that Applicant's presentation at the public hearing be included in the record, which I mark for identification as Applicant Ex 1.

At the conclusion of the hearing, the other Department representatives from other programs who were present identified themselves, including representatives from the Coastal Zone Management Program in the Division of Soil and Water Conservation, Solid and Hazardous Waste Management Branch in the Division of Air and Waste Management, and Surface Water Discharge Section in DWR, and Fisheries Management Section in the Division of Fish and Wildlife. I closed the public comment record because of Applicant's pending request to conduct emergency dredging in Cedar Creek by the end of September 2008 due to low water conditions, but I indicated that the Secretary could decide to re-open the public comment period.

As noted above, Secretary's Order No. 2008-W-0052 re-opened the public comment period for ninety days, and Mr. Moyer provided additional written comments, which indicated

that Applicant's mitigation plan was inadequate because it did not address the harm from the intake.

Finally, on October 20, 2009, Applicant submitted a letter that requested dredging for Cedar Creek's Cooling Water Intake Channel because of low water conditions that could threaten DCR's operations and I recommend that this be included in the record as Applicant Ex 2.

### **III. RECOMMENDED FINDINGS AND DISCUSSION**

#### **A. Procedural Issues**

Mr. Moyer's and others' public comments questioned whether the Department's procedures were proper. First, he claimed that the Department's public notice of the application was defective because it failed to mention the water quality certification application. I recommend rejecting any finding that the public notice, as set forth in DNREC Ex. 3, was defective. Moreover, even if the notice was defective, I recommend finding that defect was harmless, not material, and any defect was cured by Department's subsequent public notice of the public hearing.

WSLS' July 23, 2008 memo indicates an administrative error occurred in the advertised heading. My review of the notice finds that it reasonably provided the public with the general information needed to allow the public to comment on the application. First, the application was submitted on the Department's form, which the statute anticipates in Section 7207(b). The use of a combined form for all the many subaqueous lands permit application is a proper method to administer the SLA, which applies to regulate many different activities from large scale dredging to the construction of small private residential docks. The form for the Project included a single application for the SLA authority and the water quality certification for the dewatering of the

dredged material. The fact that the advertisement's heading failed to include the water quality certification component of the combined Project's application was not something that was critical to informing the public the statutory requirements of the Project, which DNREC Ex. 3 did provide. My recommended finding that the public notice of the combined application was adequate even without the specific mention of the water quality component is based upon the law requiring the notice of "the application has been received." The Department received a single application for the Project, which includes many more details than in the notice. The Department should have discretion in its exercise of drafting a reasonably informative public notice based upon the SLA's guiding language. The law requires that a notice should provide a "brief description of the nature of the application" and I recommend finding that DNREC Ex 3 complies with this language because it provided a brief description of the application.

Nevertheless, I recommend a finding that this error in the advertising heading was immaterial and harmless and that there was no defect in the public notice based upon the SLA language and the Department's discretion in its exercise of the SLA's administration to draft a reasonably informative public notice. Moreover, based upon Mr. Moyer's initial comment that the public notice was defective, the Department published notice of the public hearing that included the water quality certification component of the Project. I recommend a finding that any flaw in the Project's initial notice was cured by the notice of the Project's public hearing. The public notice clearly provided adequate notice of the Project involved consistent with the notice and to have them look over the Project's application where the water certification and dredging authority are combined.

Mr. Moyer also questioned as a procedural error the Department's decision to publish the initial public notice before the Department received, in his opinion, a complete application. This

contention is based upon the timing of the Department's receipt of information to supplement Appendix S to the application. I recommend a finding that the application was reasonably complete for purposes of the public notice when the public notice occurred. The receipt of information on the sediment samples did occur after the initial public notice, but I find that the information received would not have changed the public notice. As discussed above on the notice of the water quality certification, an adequate public notice does not include the need to mention all details of an application. Consequently, the public notice did not need to mention the sediment information and the publication of the notice was reasonable based upon the application that was received and before WSLs requested and received more information.

Any possible harm from the delay in receiving the additional information in Appendix S from the Applicant I recommend finding was cured by the notice of a public hearing. This public notice provided the public with another full opportunity to provide comments on the information on the sediment that WSLs had requested the Applicant provide to supplement the application. The Department's decision to publish the public notice was reasonable under the circumstances because WSLs anticipated the receipt of the information from the Applicant and it was received in time to afford the public before the public hearing with a reasonable opportunity to provide comments on it. Due to Applicant's time constraints, WSLs exercised reasonable discretion in publishing the public notice. Thus, the Department did not want to delay the process while it waited to receive Applicant's supplemental information and this decision was reasonable exercise of the Department's discretion to determine when an application is complete enough to provide public notice consistent with the SLA.

The record does not show that the Department's receipt of the supplemental information denied the public an adequate opportunity to review it in order to present public comments. Mr.

Moyer reviewed the information, and relied on the information in his comments. Consequently he was not harmed by the timing of the public notice before the receipt of supplemental information in Appendix S. I agree with Mr. Moyer that ideally the public notice should occur only with a completed application with all information that is needed, but that is not always possible because the decision to publish public notice often is subject to time constraints and must be made before a complete review of an application can be performed by WSLS. WSLS requested additional information and Applicant provided it after the public notice, but this submission did not alter the fact that the public notice remained accurate and in compliance with the SLA when published. This is a timing issue, but I find that no member of the public was harmed by it even if the notice was premature.

Moreover, Mr. Moyer's request for a public hearing eliminated the need to provide new public notice of the completed application. The decision to hold a public hearing provided a new notice and opportunity to be heard, and this notice was based upon receipt of the information that Mr. Moyer contends made the original notice defective. Thus, I recommend finding that WSLS's exercise of its discretion to determine when the Project's application was complete and was reasonable and that its decision to publish a public notice was appropriate and reasonable under the circumstances. Furthermore, I recommend finding that the public was not harmed by any premature notice of an incomplete application when the Department provided a public notice of a public hearing to allow additional comments.

The remaining discussion will be on the substantive merits of the Project, which entails two distinct and non-contiguous areas to be dredged. Applicant submitted the Project as a single permit application package, including the water quality certification, for both areas and presumably this was done for Applicant's convenience. For purposes of this Report, I will

address separately Project's two components, namely, 1) the proposed dredging to allow the ships to navigate to DCR and berth at DCR to unload the crude oil and 2) the proposed dredging of Cedar Creek<sup>8</sup> to allow DCR access to sufficient water to provide the cooling water requirements of DCR for its industrial processes. The proposed dredging of the Delaware River did not generate the same degree of public comments and opposition as did the proposed dredging of Cedar Creek, which was controversial because of its use to facilitate the cooling water intake by DCR.

B. Proposed Dredging of the Delaware River for Ship Navigation and Unloading Ships at DCR

The proposed dredging of the Delaware River was carefully reviewed by the Department's experts, including the sediment samples of the area to be dredged. The Department's review found that the proposed dredging actually has some offsetting benefit to the Delaware River by removing contaminants from the aquatic environment and placing them in a confined dredge spoil area as long as proper protection is taken to prevent any contaminant returning to the aquatic environment. The contaminants in the dredged materials would be placed in a confined disposal area, which was the subject of some public comments because of past violations based upon surface water impacts from dewatering the dredge spoils at the confined areas. WSLs' July 23, 2009 Findings memo stated that the navigational channel is used to facilitate vessels delivering product by vessels to DCR. It also states the Applicant historically has dredged this area and the berthing area once every three years. I recommend the Department find that this proposed dredging be approved, subject to reasonable permit conditions WSLs drafted, because the record supports that such dredging can be conducted consistent with the law

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<sup>8</sup>I shall use Cedar Creek and not the 'Cooling Water Intake Channel' that the Applicant has used in its application.

and regulations. I agree with WSLS's recommendation that there should be adequate mitigation plan for the entire Project, which the Department should approve before any dredging commences. To date there is no such plan, but the Department's experts have provided several measures that would be acceptable to them as a possible means to mitigate the Project's adverse impacts on the environment.

The public comments questioned the safety of the disposal areas and noted past instances when there had been violations of water quality standards. I recommend finding that the proposed permit will protect the environment from any undue risk of harm. If the Applicant violates the permit, then the Department can take the appropriate regulatory enforcement action it determines is necessary at that time. The risk of a permit violation is considered in every permit issued based upon many factors and it is the Department's role to balance the risks in making a decision. I am confident that the Applicant intends to comply with any permit issued. Thus, if the Applicant receives the requested permit, and it contains the permit conditions drafted by WSLS, then I recommend a finding that the environment will be adequately protected from any undue risk of harm and that some harms will be reasonably mitigated consistent with the law and regulations.

I agree with the public comments that expressed concern with the disposal of the dredged materials. The dredged materials will contain contaminants, but the proposed permit WSLS has drafted requires the disposal in a proper manner. The disposal will not merely relocate contaminants in the Delaware River and place them onshore with little environmental protection. I am satisfied that the permit conditions proposed provide, on paper, a sufficient degree of protection, subject to the Department's ongoing monitoring and supervision of the dredging and taking enforcement action when needed.

The WSLs July 23, 2009 Findings memo indicates that the dredging requires a payment of a fee pursuant to state law, which applies to the amount of dredged material actually removed in excess of the prior dredged depths. I recommend adopting the WSLs' method to calculate the fee based upon the best reasonably accurate measurement of the dredged material removed beyond the prior authorized depths.

As noted above, the Department in the Interim Order requested Applicant to provide a mitigation plan. To date, the Applicant has not provided such an acceptable plan. Instead, Applicant essentially has submitted a proposed mitigation plan that states a willingness to follow the permit's conditions. The Department had hoped that Applicant would have submitted a satisfactory plan so that it may have been reflected in the permit as a condition. Thus, the Department is required to develop a mitigation plan in its permit condition and final order without the Applicant's mitigation plan.

I will address the Delaware River dredging mitigation in the discussion of the Cedar Creek proposed dredging. I recommend finding that the Delaware River dredging will reduce air emissions from the 16 fewer lightering operations, but I consider it reasonable to assume that the 16 fewer lighterings will also provide Applicant with financial savings. Thus, I consider it appropriate to factor this financial, albeit not quantified, benefit to the Applicant from the Project as part of the overall balancing of considerations in the Project's approved mitigation plan.

#### C. Proposed Cedar Creek Dredging for Use as a Cooling Water Intake Channel for DCR's Cooling Water

The major issue for the Project is whether the Department has the legal authority to consider the water intake structure's harm to aquatic life as a possible harm directly or indirectly caused by the proposed dredging of Cedar Creek. The cooling water intake structure is located

one mile from the Delaware River and the sole purpose of the one mile dredging to the intake is to provide DCR's cooling water requirements, which is up to 452 million gallons on average per day. Over the years Cedar Creek has been channelized and essentially is used solely for moving water from the Delaware River to DCR, where it is used in an open loop cooling system and returned to the Delaware River at much higher than ambient temperatures. Essentially, the Applicant uses Cedar Creek as part of its industrial processes to avoid building a closed loop cooling system to cool and reuse the water that DCR needs to operate.

The dredging is an integral part of this cooling process because presently DCR has no other options in part because DCR has relied on the least expensive option of the open loop system and "free" cooling water from the Delaware River facilitated by the Department's issuance of dredging permits. Based upon the record that supports a finding of the substantial harm to the environment directly related to the dredging, particularly from use of the intake structure, I recommend a finding that the harm from the dredging should include the harm associated with the cooling water intake. Thus, an acceptable mitigation plan should be required to provide some offset for the massive number of fish killed and the other harm to the aquatic environment.

I do not recommend that any mitigation plan be determined at this time, but that it should be approved before any permit is issued as part of a compliance filing to any Order approving dredging. The public could be provided the opportunity to comment on the mitigation plan, but the only legal right to comment is on an application so this opportunity is provided in the exercise of the Secretary's discretion. The public comments and the advice for the Department's experts in WSLs, the Coastal Zone Management, and the Fisheries programs, all provide ample support in the record for certain mitigation requirements. I recommend a finding that this harm

from the water intake is within the proper scope of direct and indirect environmental impacts that would result from approving the Project.

I do not recommend that the Department find that the Applicant should be required to develop any alternatives to eliminating the cooling water intake as part of this permit process. The possible alternatives in the record include the construction of cooling towers to allow the water to be cooled and re-used. The public comments supported the Department to require as part of this permit that Applicant install a more modern cooling water intake, as opposed to continue to use an intake designed and installed when DCR first opened in 1956. I agree with the public comments that a new intake would provide very little relief because impingement and entrainment that occurs with any intake structure. There may be better more environmental locations for the intake than where it is currently located or changing the depth of the dredging may reduce the speed of the water flow to the intake, which is considerable given the daily volumes used for cooling at DCR. DCR also could obtain cooling water without relying on a surface water intake, which is how many industrial users get their water supply for industrial uses. The record is not developed to explore any alternatives and I agree that these alternatives are best explored in the regulatory context of a surface water discharge permit proceeding. I recommend a finding that the Department is constrained by the record for this permit application allowing the continued dredging in order to keep DCR operating, particularly in a safe and environmentally sound manner.

I recommend finding that dredging of Cedar Creek will adversely impact subaqueous lands and the environment based upon the Project's two dredging per year over the next five years. The public comments stated that the Department should not consider dredging to be the permanent natural status quo for Cedar Creek and this is a valid point. Repeatedly dredging

twice a year since 1956 has occurred and the Department has approved such dredging when it began to regulate it. The Department's decision to require an acceptable mitigation plan for this permit recognizes that the dredging has occurred in the past and that the area is heavily industrialized and has been used for industrial purposes since 1956. While the dredging should not be presumed as a natural condition to be continued as part of a status quo, the Department is not holding the Applicant to the same regulatory standard for the Project's harm by assuming it would entail the repeated dredging of a pristine natural area.

I note that the record contains information that the Department has issued emergency permits in the past. This use of emergency procedures may be part of the problem and may have avoided some of the public scrutiny that this Project received. The Applicant again has sought emergency relief and last year's Interim Order also was based upon emergency conditions. I consider the Applicant's emergency claims to really be based upon its refusal to recognize any causal connection between the proposed dredging and the massive environmental harm caused by the purpose of the dredging, namely, the cooling water intake.

I agree with the public comments that public disclosure of the extent of the fishkill at the water intake structure may have prompted an even greater public outcry than the public comments provided. As the comments described, the dredging allows Applicant the continued free use of water from the intake, which was described in public comments as a "giant aquatic killing system." The intake has operated since 1956 with little change to its design or operation. I agree with the public comments that improvement to the intake or more mitigation required before this permit if the intake's harm occurred in an urban and public location. Instead, the killing occurs from any public scrutiny on lands controlled by the Applicant. While the Applicant allowed Mr. Moyer access to parts of the area to be dredged, it denied him the

opportunity to observe the intake. The Department's experts have observed the intake and have validated the harm described by the public comments. I find that public disclosure may be good for the environment because then Delaware's many avid sportsmen and anglers will know about the intake's role in causing the loss of aquatic life in the Delaware River, as reported in this record.

I agree with the legal position advocated in several comments, including from Widener Law School, that the Department has ample legal authority to take action in this permit application to require a mitigation plan that recognizes the harm from the water intake structure in killing of fish and other forms of aquatic life in the Delaware River. The law in *7 Del. C. §7207* states that “[i]f it is determined that granting the permit...will result in loss to the public of a substantial resource, the **permittee may be required to take measures which will offset or mitigate the loss.**” The Secretary made the determination in the Interim Order that determined that this statutory section applied. The Applicant was required to submit a mitigation plan for the Project. WSLS determined that the submission was inadequate because it did not address the harm from the loss of aquatic life at the water intake structure. The water intake structure is the reason for this dredging and the dredging will take place on because the intake needs adequate water depth to maintain access to cooling water. I agree with WSLS that Applicant's proposed plan should be rejected as unacceptable, particularly Applicant's refusal to acknowledge any that the Project's environmental harm includes the harm from continued usage of the water intake. I recommend a factual finding that the Project's environmental harm reasonably includes the harm from continued use of the water intake structure.

I also recommend finding that the Department has the legal authority to regulate the harm from water intake structure, including to eliminate the structure under the SLA. The legal

authority to regulate and the exercise of the discretionary authority to regulate are two different considerations. I do not recommend that the SLA be used, based on this record, to order the elimination of continued use of the intake structure. Instead, I recommend that the Department find that the Applicant should be required to mitigate the environmental harm by an acceptable mitigation plan. This recommendation to defer to the NPDES permit proceeding will allow better considerations the alternatives to the intake structure or changes to it. Applicant has submitted a renewal application and the NPDES procedures require the Department to draft a permit for public notice. WSLs also indicates its environmental concerns with the dredging, but WSLs does not recommend any intake change or long-term solution in its draft permit. I agree and recommend that the Department should not act on any long-term solution now. Instead, I agree with the Applicant that a long-term solution entails significant steps to implement and may take several years to accomplish even under the best of conditions. Nevertheless, I recommend that the Department in its Order require the Applicant to provide a detailed timetable for all the proposed changes at DCR, as Applicant vaguely set forth at the hearing its intent to undertake. This filing will provide the Department and the public with something more definite than the undefined future set forth in this record. The Department and the public should know exactly what Applicant is proposing as its alternative to reduce or eliminate DCR's reliance on the cooling water intake.

WSLS also proposed several alternatives as possible mitigation plans that it would accept. I recommend finding these alternative would provide certain levels of mitigation. The Department could act to impose on the Applicant one or more of these proposed plans as a permit condition. These alternatives are reasonably related to the Delaware River environment and would offset some of the environmental harm identified as either directly or indirectly

caused by the Project, including from the intake. These proposed plan are proper and reasonable mitigation measures, which would at least provide some mitigation to the Project's environmental harm. DF&W also has proposed that the Department require Applicant to pay for the cost of the fish loss either in replacing fish or creating fish habitat that should produce the same amount of fish killed. I recommend a finding that such a monetary payment is reasonable as a mitigation plan, which could be used to fund the other mitigation plans the Department's experts have proposed. DF&W's calculation of a monetary payment for fish loss reflects an upper limit for any such payment in an approved mitigation plan, although the payment was based only on four fish species for the replacement cost and not on the approximately 50 species that the intake kills. I find this amount is reasonable or any lesser amount as determined appropriate by the Department in its final Order.

I agree with the public comments that the fishkills have been going on too long without any regulatory action. Some mitigation for the great harm done to the environment is overdue. Any notion of "free" water from the Delaware River should be changed to impose an environmental cost for such use based upon the harm to the aquatic life, which is admittedly not easy to quantify. The Department's experts have quantified a monetary value from the fish loss. The range of the monetary value is based upon the value of fish killed either using a habitat replacement cost analysis for four<sup>9</sup> species killed, namely, striped bass, weakfish, white perch and bay anchovy or the estimated hatchery replacement cost for the same four species. This range wide is between \$428,789,940 and \$588,182. I recommend a finding that the lower range is reasonable to use for an appropriate mitigation value. The upper range reflects the enormous

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<sup>9</sup>The record indicates that approximately 53 species of fish may be killed by the intake .

cost to the environment based upon habitat restoration and the remaining plans focus on certain habitat restoration that would be less costly. The fishloss occur each year and the replacement cost of fish could be continued for as long as the intake is used, but I do not recommend such a finding be made at this time. Instead, the Department should defer such action to wait on Applicant's proposed long-term solution to reducing its future reliance on the intake.

This permit process is to determine a reasonable way to allow dredging while still providing sufficient environmental protection with an approved mitigation plan. I find that the record supports continued dredging but only if subject to an adequate mitigation plan as discussed above and that no dredging should be allowed until such a plan is approved. The fact that the intake causes massive environmental harm is well-established in the record. Applicant's contention that there is no secondary impact between dredging Cedar Creek for the intake and the fishkill intake I recommend be rejected. The probable cause is evident in that but for the intake there is no need to dredge Cedar Creek and but for the dredging there is no need for the intake. The intake and the dredging are so intertwined, but if Applicant is serious about there not being a connection, then the Department should not issue the permit to dredge Cedar Creek. Then the causal connection may become more apparent to the Applicant. Nothing to me is more obvious than the connection between the proposed Cedar Creek dredging and the environmental harm resulting from using the intake. Consequently, Applicant's refusal over the past year to provide a mitigation plan that reflects the Project's environmental harm, including from the intake, is the real reason why emergency conditions now exist.

The real issue behind Applicant's resistance to a mitigation plan I find is that it will incur more costs. Applicant's continued use of Delaware River provides the lower cost way to receive cooling water, as opposed to building facilities to reuse water the cooling water. The Project's

continued use of the intake as part of the open loop cooling system will cause the most environmental harm and will impose a reasonably quantifiable cost to the Delaware River's aquatic life that Applicant should be required to mitigate. In sum, I recommend the Department find that the application and the record support the permit application for the dredging and water certification subject to the conditions WSLs has proposed, including requiring Applicant to provide an acceptable mitigation plan as a condition to a permit, as set forth in WSLs' proposed permit.

#### **IV. RECOMMENDED CONCLUSIONS**

Based on the record developed, I recommend that the Department approve the following conclusions:

1. The Department has jurisdiction under its statutory authority to make a determination in this proceeding and to issue the Applicant a permit subject to reasonable conditions reasonably related to the Department's statutory purposes;
2. The Department provided adequate public notice of the proceeding and the public hearing in a manner required by the law and regulations;
3. The Department held a public hearing in a manner required by the law and its regulations;
4. The Department considered all timely and relevant public comments in making its determination;
5. The Department shall issue Applicant a permit for the proposed dredging consistent with the recommendation of WSLs and the proposed reasonable general and specific permit conditions recommended in its proposed permit; and

6. The Department shall publish this Order on its public web site and provide such other service and notice as it determines necessary and appropriate.

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Robert P. Haynes, Esquire  
Senior Hearing Officer