Appendix

MARYLAND DEPARTMENT OF THE ENVIRONMENT
1800 Washington Boulevard • Baltimore MD 21230
410-537-3000 • 1-800-633-6101 • www.mde.maryland.gov

Martin O'Malley
Governor

Anthony G. Brown
Lieutenant Governor

Robert M. Summers, Ph.D.
Secretary

October 21, 2013

Anthony J. DePasquale, P.E.
Chief, Operations Division
Philadelphia District, Corps of Engineers
Wanamaker Building, 100 Penn Square East
Philadelphia PA 19107-3390

Subject: Pearce Creek Dredge Material Containment Area
Preliminary Comments on the Final Groundwater Model Report

Dear Mr. DePasquale:

The Maryland Department of the Environment ("Department") has completed its review of several reports and diagrams concerning the U.S. Army Corps of Engineer, Philadelphia District's ("Corps") proposal to mitigate against further groundwater degradation at the Pearce Creek Dredge Material Containment Area (DMCA). The purpose of this letter is to transmit our comments and concerns regarding the proposed mitigation plan. The plan was described to include the installation of a low permeability liner over the southwest portion of the DMCA and the installation of a deep slurry wall adjacent to the lined area and extending along part of the southern boundary to the east and extending along the northwestern boundary all the way to the outlet of Pearce Creek. No wall is proposed along the east side of the DMCA and no wall is proposed along the eastern half of the south side of the DMCA. A diagram of the proposal is found in figure 6.20 from the May 2013 "Final Groundwater Model Report, Pearce Creek Dredge Material Containment Area, Cecil County, Maryland."

The Department's significant comments are described below:

1) The modeled hydraulic response to the use of the slurry wall shows elevated groundwater heads within the slurry wall that significantly exceed groundwater elevation outside of the DMCA (Compare Figures 6.21 and 4.18). It is anticipated that this will cause contaminated groundwater to move away from the DMCA including areas to the south of the DMCA, which is not protected by the slurry wall. In addition, groundwater will ultimately move through the Upper Confining Unit under the DCMA into the shallow water bearing zone of the Upper Patapsco aquifer. The direction of groundwater movement in the shallow Upper Patapsco aquifer is shown to include a migration pathway toward West View Shores (see Figures 6.24 and 6.25 of above referenced report).

2) The Department has little confidence in the full integrity and continuity of the Upper Confining Unit as a barrier to flow within the areas bounded by the slurry wall of the DMCA. The fluvial nature of the deposition represented by silt and sand grains and fine-grained lenses observed within some clay intervals of the Upper Confining Unit are also potential zones of preferential flow pathways that may contribute to the transport of contamination from the upper (Magothy) to lower (Upper Patapsco) aquifers. The heterogeneity of the upper clayey units makes it apparent that there are lenses of deposition and not a contiguous layer of a confining unit. We cannot foresee complete assurance that there will be a continuous connection of the slurry wall to the upper confining unit.

3) MDE has permitted the use of a slurry wall to prevent off-site migration of groundwater contaminated from past activities at other locations. However, these slurry wall applications have included a system that removes and treats excess groundwater that otherwise would build-up behind the wall. Your proposal does not include a mechanism for dealing with the ongoing generation of the highly contaminated leachate that would be developed from the dewatering of the dredged material and infiltration of precipitation through dredged materials.

4) The long-term results of adopting the Corps' proposal will result in continued generation of high TDS, high iron, low pH, high sulfate, high manganese, high aluminum leachate, with associated trace metals that will also mobilize naturally occurring radionuclides above drinking water standards, that will not be fully contained or controlled within the site boundaries, which is not acceptable.

5) The Department will require that the Corps select a remedy for providing a safe and adequate water supply for the homes already impacted and likely to be impacted by the off-site migration of contaminated groundwater. The remedy should not rely on direct homeowner maintenance of a treatment system. The Department requests that you submit a scope of work to complete an alternatives analysis for review and approval before the end of November, 2013. It should be clear to all parties at this time that there is no potential for a future water quality certification for the Pearce Creek DCMA without addressing the water supply needs of the existing impacted homeowners in a manner acceptable to the Department.

6) The Department believes that any acceptable plan for using the Pearce Creek DCMA must incorporate a method to prevent the generation of leachate from dredged materials already present at the site and the generation of leachate from newly placed materials. Such a plan should incorporate the design and installation of an impermeable liner prior to the acceptance of any new dredged materials. The Department is prepared to discuss this issue in greater detail in the very near future.

The Department appreciates the compilation and provision of the multiple studies concerning the groundwater and subsurface conditions at the Pearce Creek facility. If you would like to discuss the above comments in more detail with us please let us know. If you have any questions please contact me at 410 537-3567 or by email at jay.sakai@maryland.gov.

Sincerely,

Jay G. Sakai, Director
Water Management Administration
Maryland Department of the Environment

cc: Robert M. Summers, Secretary, Maryland Department of the Environment
Frank Hammonds, Maryland Port Administration
Horacio Tablada, MDE, Land Management Administration
Elder Ghigiarelli, MDE, Water Management Administration
Saeid Kasraei, MDE, Water Management Administration

jgs

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Martin O'Malley
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Secretary

December 19, 2014

Re: Notice of Decision
Application for Water Quality Certification
Water Quality Certification Number: 14-WQC-02

Dear Property Owner, Public Official, or Interested Person:

After examination and consideration of the documents received and evidence in the application file and record for the proposal by the Philadelphia District, U.S. Army Corps of Engineers to maintenance dredge the Chesapeake and Delaware (C&D) Canal and its approach channel and place the dredged material at the Pearce Creek Dredged Material Containment Facility, the Water Management Administration has determined that the application meets the statutory and regulatory criteria necessary for issuance of a Water Quality Certification (WQC) pursuant to Section 401 of the federal Clean Water Act and applicable Maryland statutes and regulations. Copies of the Notice of Decision, the Summary of the Basis for Decision, and the WQC are enclosed with this decision.

Any person aggrieved by the Department's decision to issue a water quality certification may submit a request to the Department for a hearing on the matter. Under Code of Maryland Regulations (COMAR) 26.08.02.10F(4), the request must (1) be in writing; (2) include a detailed description of the requester's specific legal right, duty, privilege or interest which may be adversely affected by the Department's decision and which is different from those interests held by the general public; and (3) include a detailed description of why the Department's decision should be reconsidered. The written request must be sent to: Robert M. Summers, Ph.D., Secretary, Maryland Department of the Environment, 1800 Washington Boulevard, Baltimore, MD 21230. The request must be received by January 20, 2015.

If you have any questions or need any additional information, please do not hesitate to contact me at 410-537-3763.

Sincerely,

Elder A. Ghigiarelli, Jr.
Deputy Program Administrator
Wetlands and Waterways Program

/EAG, Jr.

Enclosures

STATE OF MARYLAND
DEPARTMENT OF THE ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

NOTICE OF DECISION

In the Matter of: Philadelphia District, U.S. Army Corps of Engineers
Maintenance Dredging of the C&D Canal
Water Quality Certification
Application Number: 14-WQC-02

Hearing Date: September 27, 2014

Hearing Location: Cecilton Elementary School
251 West Main Street
Cecilton, Cecil County, Maryland 21913

Decision: Approval

The review of the application for a Water Quality Certification in the above-referenced matter has been governed by criteria set forth under Title 9, Subtitle 3,Environment Article, Annotated Code of Maryland and Maryland water quality standards pursuant to COMAR Title 26, Subtitle 08, Chapter 02, Water Quality.

After examination of all documents and evidence in the above-referenced matter, I have determined that:

1. There is a demonstrated purpose and need for the project;
2. There is no practicable alternative for the proposed action/activities;
3. Potential impacts to jurisdictional wetlands and waterways have been avoided and minimized to the extent practicable;
4. The project is consistent with State water quality requirements; and
5. Public notice and public informational hearing requirements have been satisfied.

Water Quality Certification application # 14-WQC-02 meets the criteria set forth in statute and regulation governing impacts to regulated resources and water quality. Water Quality Certification # 14-WQC-02 is hereby issued by the Water Management Administration to authorize the Philadelphia District, Corps of Engineers to maintenance dredge the Chesapeake and Delaware Canal and its approach channel and place the dredged material at the Pearce Creek Dredged Material Containment Facility.

A brief explanation of the rationale for this decision is contained in the attached Summary of the Basis for Decision.

Elder A. Ghigiarelli, Jr.
Deputy Program Administrator
Wetlands and Waterways Program

December 19, 2014
Date

SUMMARY OF THE BASIS FOR DECISION TO ISSUE WATER QUALITY CERTIFICATION # 14-WQC-02

Name of Applicant: Operations Division
Philadelphia District,
U.S. Army Corps of
Engineers

Application Number: 14-WQC-02

Project Manager: Elder A. Ghigiarelli, Jr.

Date of Decision: December 19, 2014

In the case of the proposed maintenance dredging of the Chesapeake and Delaware (C&D) Canal and its approach channel and placement of the dredged material at the Pearce Creek Dredged Material Containment Facility (DMCF) by the Corps of Engineers (Corps), the question for the Department to address is whether or not the proposed project impacts are acceptable under the regulations as they pertain to the proposed project activities.

PUBLIC NOTICE

Adjoining property owners, local government officials and other interested persons must be notified of an application for a water quality certification. In addition, an opportunity to comment and request a public informational hearing must be provided via a local newspaper. The initial public notice on this application was published in the Cecil Whig and the Cecil Guardian on September 18, 2014. The public notice was also posted on the Department's website.

A public informational hearing on the application was held on September 27, 2014 at Cecilton Elementary School, 251 West Main Street, Cecilton, Maryland. At the public hearing, the Corps announced its intention to modify its application by retaining the existing sluice box/discharge location on Pearce Creek, as opposed to relocating the discharge to the Elk River. A second public notice, announcing on modification to the application, was issued on October 9, 2014. It was also published in the same local newspapers and posted on the Department's website. Comments raised at the public informational hearing are addressed in the Public Comments section, below.

PROJECT PURPOSE AND NEED

The purpose of the project is to maintain the federally-authorized depths of the C&D Canal and its approach channel, and to provide a placement site for the dredged material generated during the calendar years 2015 – 2016 and beyond.

The Port of Baltimore is a major economic engine for the State of Maryland. The C&D Canal is an import transit route to and from the Port of Baltimore. Maintenance dredging of the C&D Canal and its approach channel, including a site for the placement of the dredged material, is necessary to maintain the federally-authorized depth of these channels at 35 feet.

Historically, the Pearce Creek DMCF was an important upland site for the placement of dredged material from the C&D Canal and its approach channel. Approximately 260 acres in size, the site has sufficient capacity to handle years of maintenance dredging of the Canal. However, the site has not been authorized for the placement of dredged material since the mid-1990's when groundwater deterioration was detected in public drinking water wells in the nearby communities of West View Shores and Bay View Estates. A recent independent study conducted by the U.S. Geological Survey concluded that the historic placement of dredged material at the DMCF was a source of the groundwater deterioration in the vicinity of the site.

During the interim period, when the Pearce Creek DMCF was not authorized to accept dredged material, the Corps placed dredged material at the Pooles Island open water placement site(s) and, intermittently, at the Courthouse Point DMCF. Due to the closure of the Pooles Island site(s) in 2010, there is a need to reactivate the Pearce Creek DMCF (see Alternatives Analysis section, below).

ALTERNATIVES ANALYSIS

Alternatives are considered by the Department to demonstrate that a proposed activity has no practicable alternative. With regard to the placement of the dredged material, the Department considered alternatives to the placement of the dredged material at the Pearce Creek DMCF.

Alternatives considered by the Department included the following: (1) No Action; (2) Pooles Island Open Water Placement site(s); (3) Poplar Island Environmental Restoration Project; (4) Courthouse Point DMCF; and (5) Chesapeake City and Bethel DMCFs. These alternatives are briefly discussed below.

No Action Alternative. This alternative would consist of no proposed maintenance dredging of the Canal and its approach channel and, therefore, no need for a dredged material placement site. The Department determined that the no action alternative does not meet the demonstrated purpose and need for the project.

Pooles Island Open Water Placement Site(s). Under State law, the Pooles Island Open Water Placement Site(s) were prohibited from receiving the placement of dredged material after December 31, 2010. Thus, this alternative is no longer a viable option for the open water placement of dredged material from the C&D Canal and its approach channel.

Poplar Island Environmental Restoration Project. For several years, dredged material from the approach channel to the Canal was transported and placed at the Poplar Island Environmental Restoration Project in Talbot County. However, the Department has determined that this alternative is not economically feasible as a long-term option for the placement of dredged

material from the C&D Canal and its approach channel due to the placement site's distance from the proposed dredging and the additional costs associated with transporting the material.

Courthouse Point DMCF. The Courthouse Point DMCF in Cecil County is another upland site historically used for the placement of dredged material from the Canal and its approach channel. Based on recent data/information provided by the Corps, this facility may also be contributing to groundwater deterioration beneath the site. Recognizing that the Pearce Creek DMCF will ultimately be needed for the placement of dredged material, the Corps has chosen to address the issues associated with reactivating the Pearce Creek site at this time. In addition, reactivation of the Pearce Creek DMCF at this time will result in the additional benefit of providing a new water system to residents of those communities which have been negatively impacted by the past placement of dredged material at the site.

Chesapeake City and Bethel DMCFs. These upland placement sites are small and are traditionally reserved for the placement of dredged material from the interior portions of the C&D Canal within Maryland. The Department has determined these sites, due to their limited capacity and purpose, are not an option for the placement of dredged material from the approach channel to the C&D Canal.

Based on these considerations, MDE has determined that the reactivation of the Pearce Creek DMCF is the most practicable alternative for the placement of dredged material from the proposed project.

APPLICATION REVIEW

The Department's consideration of this application to reactivate the Pearce Creek DMCF for the placement of dredged material from the C&D Canal and its approach channel was based on the following key considerations: (1) the avoidance of any future contamination/deterioration of groundwater resources from the placement of additional dredged material at the site; and (2) the provision of a new potable water supply system for those communities/residents whose drinking water wells have been adversely impacted by the historic placement of dredged material at the Pearce Creek DMCF.

To avoid impacts from the future placement of dredged material, the Department is requiring that a liner be installed at the Pearce Creek DMCF to ensure that dredged material does not impact groundwater in the area. The final design plans for the liner must be reviewed and approved by MDE prior to the commencement of any construction/installation activities associated with the liner. In addition, all construction activity at the site must comply with the State's erosion and sediment control, and stormwater management requirements.

Regarding the water supply issue, the Department believes that the communities/residents in the vicinity of the Pearce Creek DMCF have been adversely impacted by the historic placement of dredged material at the facility. A recent study conducted by the U.S. Geological Survey identified the Pearce Creek DMCF as the likely source of groundwater contamination that has been found in drinking water wells in the area. The Maryland Port Administration, a major

stakeholder in this project, has initiated a project to address these impacts by extending public water service from the Town of Cecilton to the affected communities.

Regarding the operational discharges from the DMCF, the Corps initially proposed relocating the sluice box/discharge location to the Elk River from the preexisting discharge location to Pearce Creek. Subsequently, the Corps modified its application to maintain the existing sluice box location which discharges to Pearce Creek. Regardless of the discharge location, the Department is requiring the Corps to monitor operational discharges from the facility. If the surface water discharge monitoring results indicate any violation of the State's water quality standards, discharges will cease and treatment measures will be required by the Department prior to further discharges from the facility.

In addition, the Department is requiring the Corps to submit and, based upon MDE's review and approval, implement a plan for monitoring the groundwater in the Magothy and Patapsco aquifers. The purpose of the groundwater monitoring plan is to ensure that the integrity of the liner is maintained and to obtain data/information on the long-term quality of groundwater resources under and in the surrounding areas of the Pearce Creek DMCF. The Department anticipates that the monitoring will indicate a gradual improvement in the quality of groundwater resources over the long term.

PUBLIC COMMENTS

As previously noted, a public hearing was held on the Corps' application on September 27, 2014 at the Cecilton Elementary School in Cecilton, Maryland. The Department's record for the submission of public comments remained open until October 27, 2014.

Testimony at the public hearing and the numerous written comments received on the application generally supported issuance of the WQC with qualifying considerations. Several comments opposed the issuance of the WQC and the provision of a new central water supply system citing cost considerations and the availability of less expensive alternative methods for water treatment. The Department finds that denial of the WQC would not accomplish the demonstrated purpose and need for the project. In addition, a denial would prevent the necessary maintenance of a major transit route to the Port of Baltimore, and prevent or delay action on addressing a water supply issue/problem that has impacted the area for the past 15-20 years.

The major issues raised in the public comments received by the Department included: (1) the timing of the proposed placement of dredged material as related to the completion of the water supply system; (2) the location of the discharge point from the facility; (3) issues associated with the provision of the public water supply; and (4) other issues related to the reactivation of the Pearce Creek DMCF.

Timing of Activities. The major comment received in response to the application is that the Corps should not be allowed to place any dredged material at the Pearce Creek DMCF until completion of the public water supply extension project from Cecilton to the affected communities. The Corps' proposal is to commence construction of the liner in March, 2015, and complete the installation in approximately 6-8 months. This will be followed by the placement

of dredged material in late 2015 through March, 2016. At this point, the estimated date of completion of the public water supply extension project is in the summer of 2017. Thus, according to these schedules, dredged material placement is proposed to take place prior to the completion of the extension of the public water supply system.

Although the Department understands and appreciates the concerns raised in this regard, MDE believes that the placement of dredged material subsequent to the installation of the liner, and compliance of the operational discharges from the site with the State's water quality standards, will not exacerbate the current conditions that exist at the Pearce Creek DMCF. The Department's major concern is that the provision of a new water supply system continue to move forward and be implemented as required by the WQC. If this requirement is not, or cannot be met for any reason, MDE will require that all dredged material placement and discharges from the site be terminated.

Discharge Location. The majority of the comments received on this issue strongly favor the initially proposed discharge to the Elk River, as opposed to discharging to Pearce Creek. Several comments requested that another public hearing be conducted if the Department intended to approve discharges to Pearce Creek. The public notice on the Corps' modification to the application was issued on October 9, 2014, well within the public comment period which closed on October 27, 2014. The Department believes that this provided ample opportunity for the public to comment on the modification. The Department concluded that it was unnecessary to hold a second public hearing, or extend the public comment period.

Concerning the location of the surface water discharge from the facility, it is the Department's position that all surface water discharges, regardless of location, must comply with the State's water quality standards. Discharges from the site will be monitored and if the results indicate any violation of the State's water quality standards, discharges will cease and treatment measures required prior to any further discharges from the facility.

Provision of Public Water Supply. Comments related to the new water supply system included providing bottled water to residents until the new system is in operation; placing the funding for the water supply system in an escrow account to ensure that the funding is not lost or rededicated for other purposes; the inclusion of fire hydrants; and the required capping of existing wells. Regarding the latter, some residents would like to retain their wells for watering and irrigation purposes.

As noted previously, the Department's major concern is that the water supply project continue to move forward to completion in order to rectify/correct the impacts resulting from the past placement of dredged material at the Pearce Creek facility. Although MDE appreciates these comments and concerns, these issues are beyond the scope of the Department's review of the Corps' application for a WQC.

Other Issues. Other issues raised in the public comments received included minimizing dust, and moving the staging area along Pond Neck Road closer to the site during construction activities; the provision of landscaping along Pond Neck Road for aesthetic purposes; mosquito control spraying of the site by the Corps; and monitoring of the beaches in the vicinity of the site.

Construction activities associated with installation of the liner must comply with the State's erosion and sediment control, and stormwater management requirements. Aside from issues associated with these requirements, these concerns and comments are beyond the scope of the WQC review and the Department's authority in that regard.

STATE OF MARYLAND
DEPARTMENT OF THE ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

WATER QUALITY CERTIFICATION

CERTIFICATION NUMBER: 14-WQC-02

ISSUED TO: Operations Division
Philadelphia District, Corps of Engineers
Wanamaker Building, 100 Penn Square East
Philadelphia, PA 19107-3391

EFFECTIVE DATE: December 19, 2014

EXPIRATION DATE: March 31, 2016

Description of Certified Project: This Water Quality Certification is issued for the maintenance dredging of the Chesapeake and Delaware (C&D) Canal and its approach channel during the period October 1, 2015 and March 31, 2016 and placement of the dredged material at the Pearce Creek Dredged Material Containment Facility (DMCF). Prior to the placement of dredged material, a liner will be installed at the DMCF and surface water discharges from the facility will be to Pearce Creek. Maintenance dredging will be performed as required to maintain the authorized 35-foot project depth in the following reaches: (1) Pooles Island to Sassafras River – approximately 500,000 cubic yards of material to be removed by bucket, hopper, or hydraulic pipeline dredges; (2) Sassafras River to Courthouse Point – approximately 600,000 cubic yards of material to be removed by bucket, hopper, or hydraulic pipeline dredges; and (3) Courthouse Point to the Maryland State line within the Canal – approximately 200,000 cubic yards of material to be removed by bucket, hopper, or hydraulic pipeline dredges.

This water quality certification is issued under authority of Section 401 of the Federal Clean Water Act and its Amendments, Title 9, Subtitle 3 of the Environment Article, and Code of Maryland Regulations (COMAR) 26.08.02.10. This certification does not relieve the Certification Holder from the responsibility to obtain any other approvals, licenses or permits in accordance with federal, State, or local requirements. The Maryland Department of the Environment ("MDE" or "the Department") has determined from a review of the application file that the project described above will not violate Maryland's water quality standards, provided that the following conditions are satisfied.

The Certification Holder shall comply with the following conditions:

GENERAL CONDITIONS

1. X The proposed project shall be constructed in a manner which will not violate Maryland's Water Quality Standards as set forth in COMAR 26.08.02. The applicant shall notify the Water Management Administration's Compliance Program, at 410-537-3510, ten (l0) days prior to commencement of construction of the liner and ten days prior to the placement of any dredged material at the DMCF.

2. X The proposed project shall be constructed in accordance with the approved final plans as required by this Certification and any approved revisions.

3. X All fill and construction materials not used in the project shall be removed and disposed of in a manner which will prevent their entry into waters of the State.

4. ___ The certification holder shall notify the Water Management Administration, Nontidal Wetlands and Waterways Division, in writing, upon transferring property ownership or responsibility for compliance with these conditions to another person. The new owner/operator shall request, in writing, transfer of this water quality certification to his/her name.

5. X The certification holder shall allow the Water Management Administration or its representative to inspect the project area at reasonable times and to inspect records regarding this project.

SPECIAL CONDITIONS

1. The sediments to be dredged from the C&D Canal and its approach channel shall be tested in accordance with Environmental Protection Agency regulation/guidelines to ensure the suitability for placement of the dredged material at its designated site. The results of the Corps of Engineers' sediment testing shall be provided to the Department for its review prior to commencing any dredging and dredged material placement.

2. Dredging shall not be conducted from April 1 through September 30, inclusive, of any year.

3. The Corps of Engineers shall install a liner that ensures that any dredged material placed at the Pearce Creek DMCF will not result in the deterioration/contamination of groundwater resources. Construction activities shall not commence until the Department has reviewed and approved the final design plans for the liner.

4. The Corps of Engineers shall take all steps necessary to ensure that discharges of sediment or any other pollutants do not occur during construction or at any time that the DMCF is in operation. Prior to the commencement of construction of the liner, the Corps of Engineers shall submit erosion and sediment control and stormwater management plans to MDE to document how discharges will be minimized before, during, and after construction. These plans are subject to MDE's review and approval and the liner shall not be constructed until these plans are approved by MDE.

5. The Corps of Engineers shall provide a plan to MDE for monitoring the groundwater in the Magothy and Patapsco aquifers. The groundwater monitoring plan shall be submitted to MDE for review and approval prior to the commencement of any construction and placement activities at the site.. The plan shall describe the wells to be monitored, the constituents to be monitored at each well, and the frequency of monitoring water levels and constituents for each well. The plan shall include scale map(s) showing the location, well identification #, and aquifer monitored for all monitoring wells. The Corps shall submit an annual report by February 1 of each year containing tabular results of the prior year's monitoring, including water level maps and data trends using previous year's data from each monitoring well. In addition, the Corps of Engineers shall provide to MDE for its review and approval a plan, separate from the groundwater monitoring plan, for properly abandoning and sealing any wells within the Pearce Creek DMCF.

6. The Corps of Engineers acknowledges that the extension of the public water supply system is being undertaken by the State of Maryland to mitigate historical impacts to groundwater resources in the vicinity of the Pearce Creek DMCF. In order to ensure that further impacts to public drinking water supplies are minimized, no dredged material shall be placed at the Pearce Creek DMCF until the commencement of construction of this new public water supply system.

7. The Corps of Engineers shall submit a monitoring plan for all surface water discharges from the Pearce Creek DMCF for the Department's review and approval prior to the placement of any dredged material in the DMCF. The discharge monitoring plan shall include key parameters such as flow volume/discharge rate, total suspended solids, pH, dissolved oxygen, nutrients, and metals. Monitoring results shall be reported to the Department on a monthly basis.

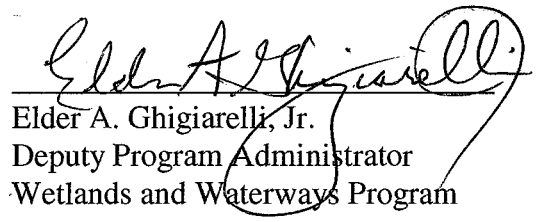
8. The Corps of Engineers shall provide a statement by a professional engineer certifying the structural integrity and stability of the existing dike system at the Pearce Creek DMCF under all modes of operation and weather conditions. The Corps of Engineers shall notify MDE immediately if any structural stability problems are observed at the DMCF.

9. The Corps of Engineers shall notify MDE prior to any proposed modifications of the Pearce Creek DMCF that could impact the quantity or quality of any discharges from the facility, either to surface or groundwater, or any modification that has the potential to alter the structural stability of the dikes. MDE reserves the right to review and approve any new plans to modify the facility prior to construction.

10. Based on the aforementioned conditions, the Department has determined that the proposed dredging and the reactivation of the Pearce Creek DMCF for the placement of the dredged material is consistent with the State's federally-approved Coastal Zone Management Program, as required by Section 307 of the Federal Coastal Zone Management Act of 1972, as amended.

Failure to comply with these conditions shall constitute reason for suspension or revocation of the Water Quality Certification and legal proceedings may be instituted against the certification holder in accordance with the Annotated Code of Maryland. In granting this certification, the Department reserves the right to inspect the operations and records regarding this project at anytime.

CERTIFICATION APPROVED



Elder A. Ghigiarelli, Jr.
Deputy Program Administrator
Wetlands and Waterways Program

TABLE 1. PEARCE CREEK PROJECT EMISSION ESTIMATES										
						NOX			VOC	
						Emission	Emissions		Emission	Emissions
	# of		Load	Total		Factors	(tons)		Factors	(tons)
Equipment	Eng.	HP	Factor	Hours	hp-hr	(g/hp-hr)	907,200		(g/hp-hr)	907,200
LD, FE, WH 2.5 CY Bkt	1	136	0.59	60	4814.4	6.24	0.033		1.06	0.006
LD, BH, WH 1.25 CY Bkt	1	92	0.59	60	3256.8	6.24	0.022		1.06	0.004
TRK, HYW, 8,600 GVW, 4x4 (Suburban)	1	285	0.57	60	9747	3.72	0.040		0.29	0.003
Tractor, Crwlr. (Dozer), 181-250 HP	1	240	0.80	32	6144	3.76	0.025		0.31	0.002
TRK, HYW, 55,000 GVW	1	310	0.57	60	10602	3.72	0.043		0.29	0.003
Small Tools	1	2	0.48	120	115.2	0.91	0.000		62.81	0.008
Chain Saw	1	5	0.70	2439	8536.5	0.91	0.009		62.81	0.591
LD, BH, WH 1.25 CY Bkt	1	92	0.59	90	4885.2	6.24	0.034		1.06	0.006
TRK, HYW, 8,600 GVW, 4x4 (Suburban)	1	285	0.57	2674	434391.3	3.72	1.781		0.29	0.139
Brush Chipper, 6" Dia. Log Size, Trlr Mtd	1	44	0.78	414	14208.48	5.21	0.082		0.35	0.005
Compactor, Vibroplate, 21" x 24"	1	6	0.55	193	636.9	5.21	0.004		0.35	0.0002
Crane, Hyd, Trk mounted, 65 Ton	1	365	0.47	16	2744.8	4.94	0.015		0.29	0.001
Crane, Hyd, Trk mounted, 75 Ton	1	400	0.47	68	12784	4.94	0.070		0.29	0.004
Crane, Mech., Crwlr., Lifting 50T, 30' Bm	1	178	0.47	56	4684.96	4.94	0.026		0.29	0.001
Drill, Hydraulic Auger 14" Dia, 30' Depth	1	58	0.66	24	918.72	5.21	0.005		0.35	0.0004
Hydraulic Excavator, Crwlr, 55,100 LB, 1.9 CY Bkt	1	176	0.53	352	32834.56	3.56	0.129		0.28	0.010
LD, BH, WH 1.25 CY Bkt	1	67	0.59	420	16602.6	6.24	0.114		1.06	0.019
Pump, Water, Diaph, 4" Dia	1	3	0.69	160	331.2	5.21	0.002		0.35	0.0001
Roller, Vib, Towed, SD, Sheep'ft, 13.3 T, 67" W	1	50	0.62	6058	187798	5.21	1.079		0.35	0.072
Scraper, Tandem Pow'd, 34 CY, 4X4	1	450	0.59	10938	2904039	3.76	12.036		0.31	0.992
Tractor, Crwlr. (Dozer), 181-250 HP	1	240	0.80	20324	3902208	3.76	16.173		0.31	1.333
TRK, HYW, 25,000 GVW	1	180	0.57	6814	699116.4	3.72	2.867		0.29	0.223
TRK, HYW, 55,000 GVW	1	310	0.57	1225	216457.5	3.72	0.888		0.29	0.069
Welder, Diesel, 300 Amp, Tralr mounted	1	45	0.68	88	2692.8	5.21	0.015		0.35	0.001
Welder, Diesel, 300 Amp, Skid mounted	1	27	0.68	64	1175.04	5.21	0.007		0.35	0.0005
Concrete Vibrator, 2.5" DIA	1	7.5	0.55	32	132	5.21	0.001		0.35	0.0001
Brush Chipper, 12" Dia. Log Size, Trlr Mtd	1	84	0.78	1220	79934.4	5.21	0.459		0.35	0.031
Rototiller, 21" W x 7" D	1	10	0.71	83	589.3	5.21	0.003		0.35	0.0002
Small Tools	1	2	0.48	9500	9120	0.91	0.009		62.81	0.631
TOTAL EMISSIONS							35.970			4.159