Supplemental Norfolk Harbor Navigation Improvements Project – Thimble Shoal Channel, Chesapeake Bay Bridge Tunnel – Protective Rock Blanket Project

Virginia Beach, Virginia

Appendix C: Federal Consistency Determination, Clean Air Act General Conformity Rule Record of Non-Applicability, and Clean Water Act Section 404(b)(1) Determination

January 2021

Prepared By:
U.S. Army Corps of Engineers
Operations Branch
803 Front Street
Norfolk, Virginia 23510

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

Reply to
Attention of

January 28, 2021

Operations Branch

Ms. Janine Howard
EIR Program Manager
Office of Environmental Impact Review
P.O. Box 1105
Richmond, VA 23218

Dear Ms. Howard:

I have enclosed the Norfolk District, U.S. Army Corps of Engineers Draft Supplemental Environmental Assessment (SEA) for the Norfolk Harbor Navigation Improvements Project, Thimble Shoal Channel, Chesapeake Bay Bridge Tunnel (CBBT) – Protective Rock Blanket (PRB) Project. The scope of the SEA includes updated means and methods for the Norfolk Harbor Navigation Improvements Project – Thimble Shoal Channel, CBBT – PRB Project, Virginia Beach, Virginia. The updated scope of the Supplemental CBBT – PRB Project consists of the following actions:

- Construction of a water injection dredging (WID) trench, east of the CBBT - PRB site, via conventional dredging (i.e. clamshell bucket and/or hopper) to a maximum depth of -70 feet (ft) mean lower low water (MLLW), 1,200 ft long and 525 ft wide, removing approximately 250,000 cubic yards;
- Transport and placement of suitable WID trench material at the Dam Neck Ocean Disposal Site;
- Water injection dredging of the existing CBBT cover material to -61 ft MLLW of an area that is 150 ft wide by 1,200 ft long;
- Placement of the CBBT cover material through WID methods into the WID trench.

In accordance with the 02 October 2015 letter from Dave Paylor concerning the "Regulation of Dredging and Aquatic Resources Restoration Activities Conducted by the U.S. Army Corps of Engineers in Commonwealth of Virginia Waters," the USACE is requesting coordination and concurrence from the Virginia Department of Environmental Quality, including CWA Section 401 Water Quality Certification through the enclosed Coastal Zone Management Act, Federal Consistency Determination in Appendix C of the SEA for dredged material discharges resulting from the project elements described.

To assist in the evaluation of the project, please submit any comments you may have by April 03, 2021. Please address all comments to Mrs. Javier Wright, Norfolk District,

U.S. Army Corps of Engineers, 803 Front Street, Norfolk, VA 23510 or email to JavierAnn.F.Wright@usace.army.mil.

Should you have any questions or require further information on this submittal, please contact Javier Wright of my staff via email or 757-201-7890. Thank you for your assistance.

Sincerely,

Keith B. Lockwood

Keith B. Lockwood
Chief, Water Resources Division
Norfolk District, U.S. Army Corps of Engineers

Coastal Zone Management Act (CZMA) Federal Consistency Determination (FCD)
For the Norfolk Harbor Navigation Improvements Project,
Thimble Shoal Channel, Chesapeake Bay Bridge Tunnel (CBBT) – Protective Rock Blanket (PRB)
Project located in Virginia Beach, Virginia

The U.S. Army Corps of Engineers (USACE) provides the Commonwealth of Virginia with this USACE, Norfolk District's Federal Consistency Determination (FCD) under CZMA section 307(c)(1) and 15 CFR Part 930, sub-part C, for the CBBT PRB Project within the TSC in Virginia Beach, Virginia. The information in this FCD is provided pursuant to 15 CFR Section 930.39 and being submitted for coordination and concurrence from the Virginia Department of Environmental Quality (VDEQ). In accordance with the 02 October 2015 letter from Dave Paylor concerning the "Regulation of Dredging and Aquatic Resources Restoration Activities Conducted by the U.S. Army Corps of Engineers in Commonwealth of Virginia Waters," the USACE is requesting CWA Section 401 Water Quality Certification through this determination for dredged material discharges resulting from the project elements described below.

This FCD supplements the 2018 Norfolk Harbor Navigation Improvements Project General Reevaluation Report/Environmental Assessment (GRR/EA), Appendix G CZMA FCD. The 2018 GRR/EA analyzed conventional dredging methods (e.g. mechanical and hopper) to remove the CBBT cover material. During subsequent preconstruction engineering and design efforts, concerns about risk to the tunnel structure were raised. Through the alternatives analysis in Section 3 of the Supplemental Environmental Assessment (SEA), Water Injection Dredging (WID) was identified as a safer dredging method to reduce risk to the existing CBBT structure and was selected as the Preferred Alternative to remove the CBBT cover material. The WID method will require additional new work dredging by conventional dredging methods (e.g. mechanical or hopper dredging) in a limited area adjacent to and east of the CBBT cover area within the Thimble Shoal Channel (TSC) to construct a receiving trench for the WID dredged material. The WID Trench will act as the permanent placement site for the CBBT cover material. The Proposed Action also includes transport of suitable new work dredged material from construction of the WID trench for placement at Dam Neck Ocean Disposal Site (DNODS) located in federal waters.

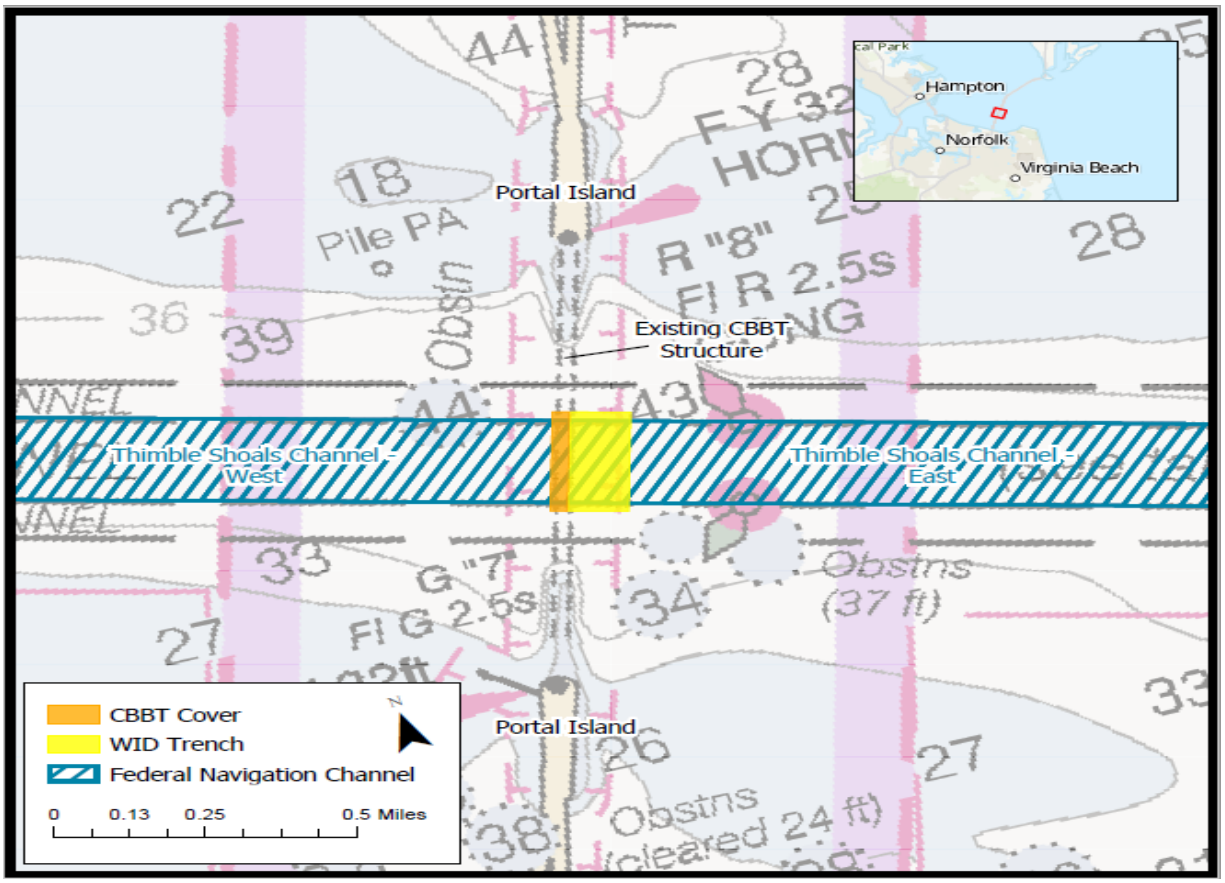
The new work conventional dredging (including mechanical and hopper) methods of the Norfolk Harbor Channels including the CBBT PRB project were specifically addressed in the 2018 GRR/EA CZMA FCD that found the "Norfolk Harbor Navigation Improvements Project is consistent, to the maximum extent practicable, with the enforceable policies of the Virginia Coastal Zone Management Program." Additional new work dredging by means of conventional dredges will be required for the construction of the WID receiving trench (as part of the WID method). However, since the additional conventional dredging will be conducted within the previously coordinated Action Area as part of the same project and in the same manner as coordinated in the 2018 GRR/EA CZMA FCD, USACE Norfolk District has determined that the conventional new work dredging portion of the proposed alternative is covered in the 2018 GRR/EA FCD finalized on 20 March 2018. Therefore, this FCD mainly focuses on the impacts associated with the WID methodology.

Proposed Federal Agency Activity

The proposed Federal action includes the removal of the CBBT cover material utilizing the WID method and new work conventional dredging (e.g. mechanical or hopper dredging) in a limited adjacent channel area east of the CBBT cover to construct a receiving trench for the displaced WID material (Figure 1). The Proposed

Action also includes the transport of suitable new work dredged material from construction of the WID trench to the DNODS located east off the coast of the City of Virginia Beach in Federal waters of the Atlantic Ocean.

Figure 1. Project Location



Background

The Thimble Shoal tunnel is the southernmost tunnel of the CBBT and resides underneath the Thimble Shoal Channel. The CBBT crossing within the Thimble Shoal Channel is located in the southern part of the Chesapeake Bay, north of the shoreline of the City of Virginia Beach. Throughout this FCD, the Thimble Shoal Tunnel will be referred to as the CBBT. This tunnel was constructed in 1960 using an immersed-tube construction method which consists of a cut and cover technique where sections of the tunnel were floated to the site, placed, and joined within a dredged trench. The CBBT is protected with a rock armor layer over portions of the tunnel structure primarily on the side slopes of the channel up to the portal islands. The existing CBBT cover material between the toes of the Thimble Shoal Channel consists of a combination of a medium to course-grained mix of sandy gravel hydraulic backfill that was placed following tunnel construction and natural sands and fine-grained sediments that have deposited since completion of tunnel construction.

The original design of the CBBT accounted for a maintained channel depth of -50 feet mean lower low water (MLLW) and included 3 feet of over-dredge/advance maintenance allowance that would allow 10 feet of cover over the tunnel structure. Based on existing record drawings, the shallowest point of the tunnel structure within the footprint of the Federal project, is the 'top of tunnel' flange/bulkhead elevation, which varies with a shallowest elevation of -63 feet MLLW. The tunnel itself is approximately 1.5 feet below the flange/bulkhead (CBBT, 1960). In the year 1985, the Norfolk Harbor Navigation Improvements Project was authorized under

Section 201 of the Water Resources Development Act (WRDA) of 1985 (Public Law 99-662) which authorized deepening from -45 to -55 feet MLLW within most of the project area of the Norfolk Harbor and Channels in Virginia, and to a required depth of -56 feet MLLW in the Thimble Shoal Channel. The project authorization also provides for the installation of the PRB over the CBBT to mitigate future reduced cover depth over the structure as a result of the planned channel deepening.

The 2018 GRR/EA for the Norfolk Harbor Navigation Improvements cited studies that determined the most feasible method to allow for a deeper channel over the CBBT (USACE, 1986 and Transystems 2002). Both studies concluded the most feasible alternative to protect the tunnel and to accommodate a maintained channel depth of -56 MLLW would be to provide a minimum of 5 feet of protective cover, including a minimum of 3 feet of that protective cover to be rock armor. In order to install the protective rock cover, the first phase will require the removal of the existing CBBT cover material to -61 feet MLLW, in preparation for the placement of the rock armor.

Scope of Dredging

The tunnel cover area proposed for removal is approximately 150 feet wide by 1,200 feet long area (Figure 1) in the Thimble Shoal Channel over the existing CBBT. Dredging of the CBBT cover area will be performed by WID means and methods to a maximum depth of -61 feet MLLW displacing up to 43,000 cubic yards (CY) of material for a single dredging cycle into the adjacent WID trench. The construction of the WID trench will be required in order to facilitate the displacement of the CBBT cover material through a downgradient density current, and to act as a depository for the dredged material. The dredging depths of the receiving trench will vary along the down-sloping gravity density gradient to a maximum dredging depth of -70 feet MLLW to accommodate the CBBT cover material. The proposed depth of the WID trench is also necessary to effectively contain the CBBT cover dredged material below the maximum authorized dredging prism of the Thimble Shoal Channel. The receiving trench will be rectangular in shape, up to 1,200 feet long and 525 feet wide, approximately 15 acres in size and contiguous with the CBBT cover area. Construction of the WID trench will require the removal of approximately 250,000 cy of dredged material within the channel footprint.

The WID trench will be dredged by a mechanical or hopper dredge and placed onto ocean-going vessel/scow for dredged material transport to the DNODS (Figure 2). Dredging of the WID trench and CBBT cover area is expected to commence in June/July 2022 and be completed within approximately 180 to 270 days.

CBBT Cover Material Placement at the WID Trench

The CBBT cover area was tested to determine dredged material suitability for placement in Waters of the U.S. in accordance to Section 404 of the Clean Water Act (CWA) of 1977 (Public Law 95-217). Section 404 requires discharge sites be specified through the application of the Section 404(b)(1) Guidelines developed by EPA in conjunction with the USACE.

The joint EPA and USACE manual "Evaluation of Dredged Material For Discharge in Waters of the U.S.-Inland Testing Manual" (USEPA, 1998) normally referred to as the Inland Testing Manual (ITM), provides testing procedures through a tiered approach (I-IV) that are applicable to determining the potential for contaminant-related environmental impacts associated with the discharge of dredged material. The ITM is used as a procedural guide to evaluate dredged material to satisfy all other applicable requirements of 40 CFR 230-232, 33 CFR 320-330, and 33 CFR 335-338 in order to comply with the Guidelines and to be authorized for discharge under the CWA. The CBBT cover material was tested following the procedures in

the ITM to determine Section 401 State water quality standards compliance, as well as compliance with CWA Section 404 toxicity requirements. A detailed summary of the approach used and dredged material evaluation to determine compliance can be found in Section 4.3.2 of the SEA as well as in Appendix H of the SEA.

The Norfolk District determined that the dredged material from the CBBT cover area, proposed for WID and WID trench placement, complies with the Section 404(b)(1) Guidelines of the Clean Water Act through the ITM decision framework described in Section 4.3.2 of the SEA and Appendix H. USACE is requesting State water quality 401 certification through coordination of this NEPA and CZMA document for the dredged material discharges associated with the CBBT cover material removal and placement in the WID trench. The Final Evaluation of 404(b)(1) Guidelines is included in this FCD document (Attachment A).

Dam Neck Ocean Disposal Site (DNODS)

The WID trench dredged material will be transported to the DNODS site for the purpose of ocean disposal in accordance with Section 103 of the Marine Protection, Research, and Sanctuaries Act (MPRSA). The USACE has MPRSA Section 103 permitting authority for the transport of dredged material for ocean disposal. MPRSA requires EPA concurrence that the dredged material is suitable and complies with the limiting permissible concentration criteria. The material within the WID trench dredging footprint has been tested in accordance with Section 103 of the MPRSA, and the Norfolk District has informally determined that the dredged material from the WID trench complies with the MPRSA criteria for ocean placement. The preliminary characterization data generated and presented in the Technical Memorandum; Appendix H of the SEA were in accordance with MPRSA testing protocols with the intent to inform the appropriate management of the project's dredged material. The Norfolk District will be re-evaluating the WID trench dredged material under an EPA-approved sampling program to obtain EPA independent evaluation and concurrence for placement at the DNODS.

The DNODS has an area of about 9-square nautical miles that is located off the coast of Virginia Beach, Virginia (Figure 2). Approximately 20 nautical miles away from the proposed project site. The DNODS boundary coordinates are asfollows:

36° 51' 24.1" N., 75° 54' 41.4" W.,
36° 51' 24.1" N., 75° 53' 02.9"W.,
36° 46' 27.4" N., 75° 51' 39.2" W.,
36° 46' 27.5" N., 75° 54' 19.0" W.,
36° 50' 05.0" N. 75° 54' 19.0" W.

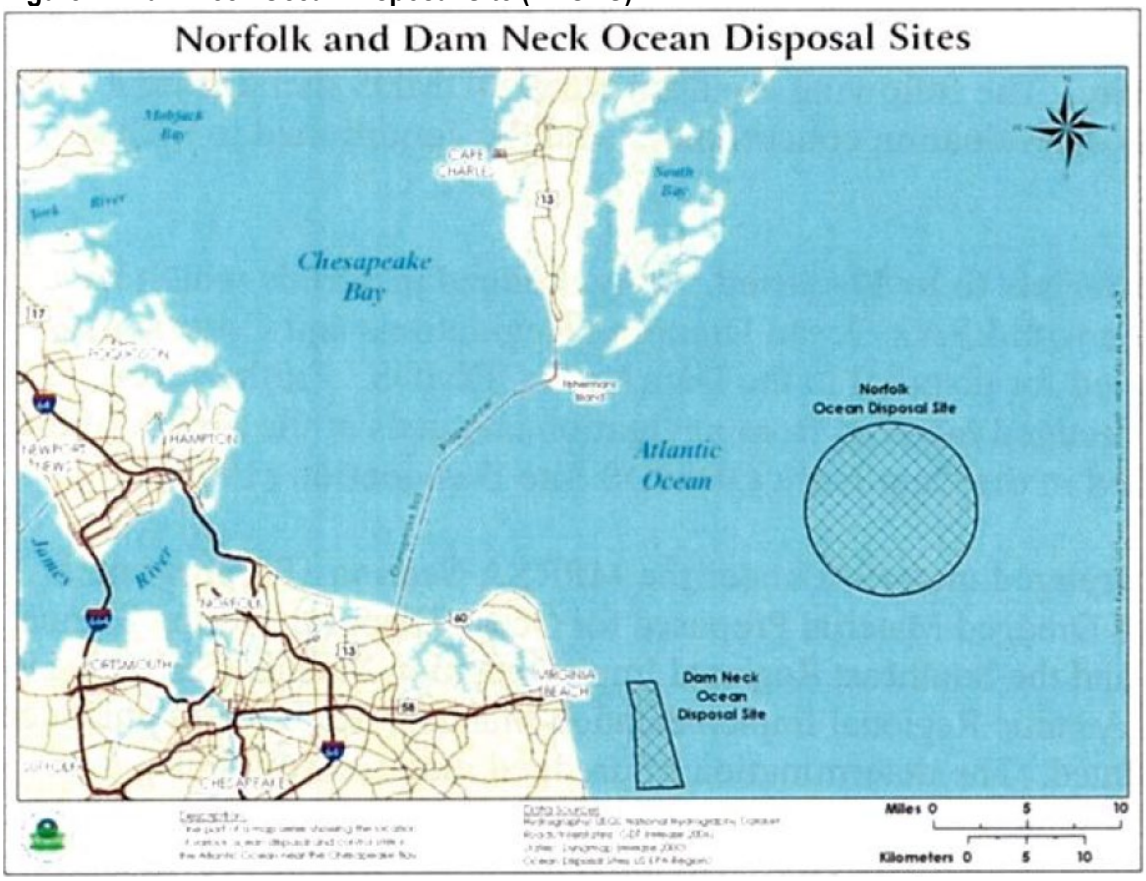
Water depth within the disposal site averages about 40 feet. The bathymetry at the DNODS is typical of the inner continental shelf, with a smooth bottom and a gradual seaward slope (less than 1 foot per 1,000 feet).

The DNODS was designed by EPA pursuant to Section 102(c) of the MPRSA of 1972 as suitable for ocean disposal of dredged material from three federal navigation channels: the Atlantic Ocean Channel, the Cape Henry Channel, and the Thimble Shoal Channel. The final rule was promulgated by EPA on March 31, 1988 (FR. Vol. 53 No. 62), effective March 31, 1988. Current use of the DNODS is for maintenance and new work dredging of the three federal navigation channels mentioned, approximately 1.2 million cubic yards (MCY) of dredged maintenance material in the site every two years (on average). Improvements of federal navigation channels (i.e. deepening and/or widening projects) may result in approximately 5 MCY per year during

construction. The DNODS is estimated to have a remaining capacity of approximately 60 MCY. Future evaluation and management could increase this quantity.

Management of the DNODS and dredged material placement operations at DNODS are conducted in accordance with the Site Management and Monitoring Plan (SMMP). The SMMP for the DNODS site establishes specific requirements for use of the site (USEPA, 2019). The SMMP provides that only dredged material that has been evaluated in accordance the Marine Protection, Research, and Sanctuaries Act (MPRSA) Section 103 regulations may be placed at the site. The SMMP does not specify specific methods of placement, but does require an ocean disposal verification plan, such as the USACE Dredge Quality Management system. This plan must be implemented by all dredged material placement operations at the designated site to prevent unacceptable mounding and becoming a hazard to navigation.

Figure 2. Dam Neck Ocean Disposal Site (DNODS)



Benefitial Uses of Dredged Material

It is possible that portions of the dredged material from the WID trench and the CBBT cover material within the WID trench after displacement may be suitable for beneficial use projects. The Craney Island Eastward Expansion (CIEE) project and the Craney Island Dredged Material Management Area (CIDMMA) as well as beach nourishment projects in the City of Virginia Beach and the City of Norfolk will be considered for beneficial use of dredged material as an alternative of the dredged material placement. The CIEE project is a 522-acre open water site on the eastern side of CIDMMA that will provide additional capacity for dredged material as well as a suitable foundation for the construction of a container handling terminal. The dredged

material discussed could be used for the dike construction for the CIDMMA and CIEE project or used for beach nourishment projects placed landward of the depth of closure if the local sponsor is willing and able to pay the additional incremental costs for that placement over and beyond the costs of the Federal Standard.

Beach nourishment is a possible alternative for the dredged material placement based on physical characteristics of the sediments. Materials in some areas of the WID trench may be similar in geological make-up to the existing sediments of the native beach materials. Nourishment materials should have a low percentage of fine-grained sediments. The goal for typical local beach nourishment (Cities of Norfolk and Virginia Beach) material is a D50 grain size of greater than 0.2mm. Sandy dredged material may also be placed within the beach system landward of the depth of closure to add to the sediment budget within the littoral system of the Chesapeake Bay.

Beneficial use of suitable material will continue to be considered throughout the planning and construction phases if any local sponsors are able to partner to accept the material and cover any incremental costs over and beyond the costs of the federal standard. Beneficial use sites are subject to Section 207 of WRDA 1996, as amended whereby reuse represent a least costs disposal method and are reasonable in relation to the environmental benefits achieved. Any beneficial use not identified in the future as part of the base plan would need to be cost shared under a separate authority.

Enforceable Policies

The Virginia Coastal Resources Management Program (VCP) contains the below enforceable policies (A-I).

A. Fisheries Management

This program stresses the conservation and enhancement of finfish and shellfish resources and the promotion of commercial and recreational fisheries to maximize food production and recreational opportunities. This program is administered by the Marine Resources Commission (VMRC) (Virginia Code §28.2-200 through §28.2-713) and the DGIF (Virginia Code §29.1-100 through §29.1-570).

The proposed project may result in minor, adverse impacts on fishery resources through localized negative effects on water quality which may include decreases in Dissolved Oxygen, increased turbidity, and Total Suspended Solids in the water column. Potential impacts to fisheries management will include temporary disturbance to feeding and localized movement patterns for species that may be within the project area. Mobile species would move out of the area and return once dredging has been completed. There would be a temporary loss of prey for benthic species but would soon repopulate once dredging has been completed. Additionally, resources could become injured during dredged material placement. However, these impacts would be minor and would not be anticipated to impact any fishery populations.

VMRC mapping does not indicate presence of private oyster leases, pending private oyster leases, or public clamming grounds located within the project area. Therefore, no further coordination is required for subaqueous beds located within the CBBT cover and WID trench area.

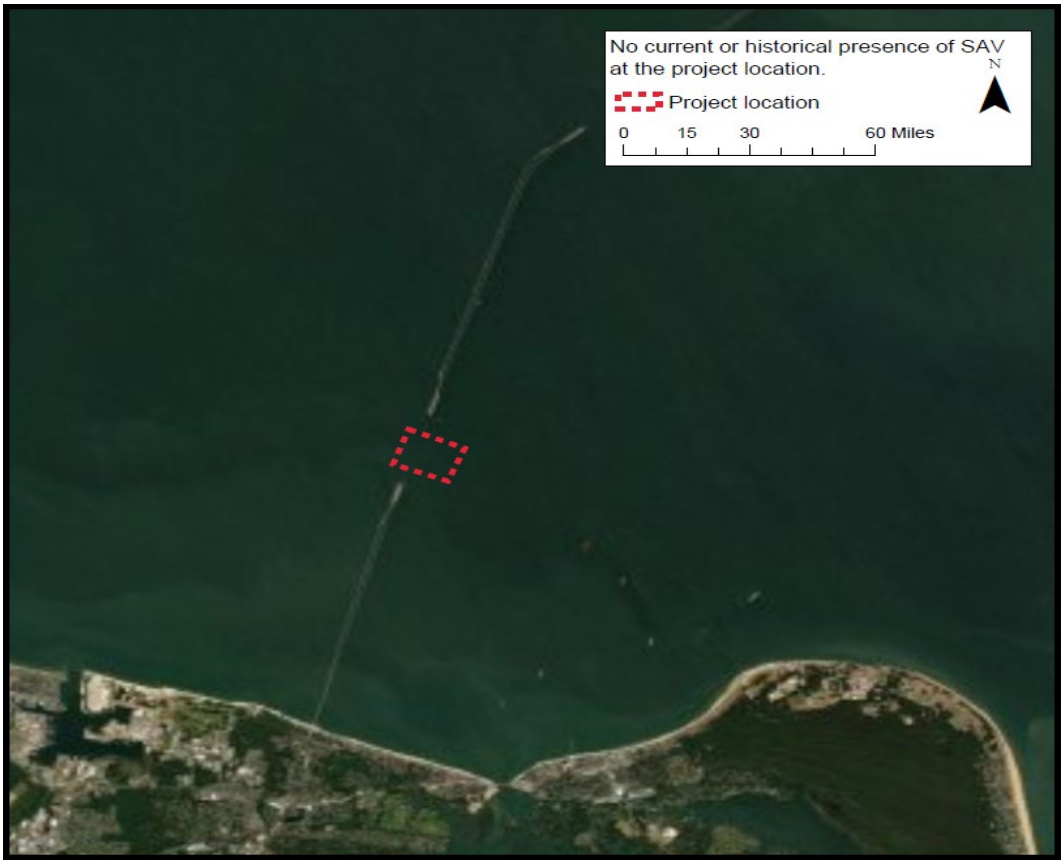
B. Subaqueous Lands Management

This management program for subaqueous lands establishes conditions for granting or denying permits to use state-owned bottomlands based on considerations of potential effects on marine and fisheries resources, wetlands, adjacent or nearby properties, anticipated public and private benefits, and water quality standards established by the Department of Environmental Quality, (DEQ) Water Division. The program is administered by the VMRC (Virginia Code §28.2-1200 through §28.2-1213).

Thimble Shoal Channel is a Federally-maintained navigation channel. Virginia code section 28.3-1203 prohibits use of State-owned lands unless the act is pursuant to a permit issued by the Commission unless the act is necessary for the following: Construction and maintenance of congressionally-approved navigation and flood control projects undertaken by the United State Army Corps of Engineers, United State Coast Guard, or other Federal agency authorized by Congress to regulate navigation, navigable waters, or flood control. State-owned subaqueous lands will not be used for dredged material placement. Dredged material from the WID trench will be transported and placed at the DNODS site under MPRSA Section 103 authority in federal waters. Dredged material from the CBBT cover area through WID methods will be conveyed into the WID trench within the Thimble Shoal Federal Navigation Channel under Section 404 of the Clean Water Act. Therefore, no permit from the VMRC would be required for this project, as the dredging and dredged material placement activities are not within the jurisdiction of the VMRC[1].

The CBBT cover material removal through WID methods would result in localized, temporary impacts to existing resources in the dredging area and placement site. The Virginia Institute of Marine Science (VIMS) submerged aquatic vegetation (SAV) data mapper has not identified SAV in the channel, or in near proximity to the project area (Figure 3). The project is located in deepwater habitat with fine to medium-grained coarse sand and gravel, the effects of this suspension are expected to be temporary in nature and not likely to adversely affect SAV resources.

Figure 3. SAV Areas



[1] If beach nourishment/beneficial placement of dredged material is conducted separately from this project, a permit from VMRC would be required for that respective project.

C. Wetlands Management

The purpose of the wetlands management program is to preserve tidal and non-tidal wetlands, prevent their despoliation, and accommodate economic development in a manner consistent with wetlands preservation.

The USFWS National Wetlands Inventory (NWI) mapper has not identified any wetlands in the channel within a 3.5-mile radius. There would be no direct or indirect impact to jurisdictional wetlands with implementation of this project.

D. Dunes Management

Dune protection is carried out pursuant to the Coastal Primary Sand Dune Protection Act and is intended to prevent destruction or alteration of primary dunes. This program is administered by the Marine Resources Commission (Virginia Code §28.2-1400 through §28.2-1420).

There are no sand dunes located in the project area; therefore, no impacts are anticipated.

E. Non-point Source Pollution Control

Virginia's Erosion and Sediment Control Law requires soil-disturbing projects to be designed to reduce soil erosion and to decrease inputs of chemical nutrients and sediments to the Chesapeake Bay, its tributaries, and other rivers and waters of the Commonwealth. This program is administered by DEQ (Virginia Code §62.1-44.15:51 et seq.).

Project activities will be marine based construction channelward of land areas with no upland soil disturbing activities that may result in soil erosion or require storm water management best management practices.

F. Point Source Pollution Control

The point source program is administered by the State Water Control Board (DEQ) pursuant to Virginia Code §62.1-44.15. Point source pollution control is accomplished through the implementation of the National Pollutant Discharge Elimination System permit program established pursuant to Section §402 of the federal Clean Water Act and administered in Virginia as the Virginia Pollutant Discharge Elimination System permit program. The Water Quality Certification requirements of §401 of the Clean Water Act of 1972 is administered under the Virginia Water Protection Permit program.

This project does not involve point source discharges subject to Section 402 of the Clean Water Act. Dredged material discharges are regulated under Section 404/401 of the Clean Water Act or Section 103 of the MPRSA and are exempt from NPDES regulations in accordance with 40 CFR 122.3. In accordance with the 02 October 2015 letter from Dave Paylor concerning the "Regulation of Dredging and Aquatic Resources Restoration Activities Conducted by the U.S. Army Corps of Engineers in Commonwealth of Virginia Waters," the USACE is requesting CWA Section 401 Water Quality Certification through this coordination for dredged material discharges resulting from removal of the CBBT cover material to the WID trench via WID methodology. The Final Evaluation of 404(b)(1) Guidelines is included in this FCD document (Attachment A).

Dredged material related to the construction of the WID trench is proposed for transport to DNODS under MPRSA. The transport of dredged material for the purpose of ocean disposal at DNODS for the WID trench dredged material will be regulated under Section 103 of the MPRSA consistent with 33 CFR 324.3(2) "Federal agencies are not required to obtain and provide certification of compliance with effluent limitations and water quality standards from state or interstate pollution control agencies in connection with activities involving the transport of dredged material for dumping into ocean waters beyond the territorial sea."

G. Shoreline Sanitation

The purpose of this program is to regulate the installation of septic tanks, set standards concerning soil types suitable for septic tanks, and specify minimum distances that tanks must be placed away from streams, rivers, and other waters of the Commonwealth.

The proposed project does not involve septic tanks; therefore, adherence to this program is not applicable to the proposed project.

H. Air Pollution Control

The program implements the Federal Clean Air Act to provide a legally enforceable State Implementation Plan for the attainment and maintenance of the National Ambient Air Quality Standards (NAAQS). This program is administered by the State Air Pollution Control Board (DEQ) (Virginia Code §10.1-1300 through §10.1-1320).

This project will conform to the Virginia's State Implementation Plan (SIP). The project is located within the Hampton Roads Intrastate Air Quality Control Region (AQCR) in Virginia (40 CFR 81.93). The project site is in attainment for all NAAQS. Air emissions due to the dredging and placement activities for this project will be minor and temporary. This project has been analyzed for conformity applicability pursuant to regulations implementing Section 176(c) of the Clean Air Act. The potential direct and indirect emissions from the CBBT PRB project was considered and concluded that the action is entirely outside of and will not cause any direct or indirect emissions in any nonattainment or maintenance area [see 40 CFR 93.153(b)]. Since the impacts to air quality would be negligible, a Record of Non-Applicability (RONA) was prepared in January 2021 (Attachment B).

I. Coastal Lands Management

Coastal Lands Management is a state-local cooperative program administered by DEQ's Water Division and 84 localities in Tidewater, Virginia established pursuant to the Chesapeake Bay Preservation Act (Virginia Code §62.1-44.15:67–62.1-44.15:79) and Chesapeake Bay Preservation Area Designation and Management Regulations (Virginia Administrative Code 9 Virginia Code 25-830-10 et seq.).

There is no Resource Protection Area (RPA) in the area impacted by this project. Therefore, this project would not impact the Chesapeake Bay Preservation Act RPA.

Advisory Policies for Geographic Area of Particular Concern

a. Coastal Natural Resource Areas

Coastal Natural Resource Areas are areas that have been designated as vital to estuarine and marine ecosystems and/or are of great importance to areas immediately inland of the shoreline. These areas receive special attention from the Commonwealth because of their conservation, recreational, ecological, and aesthetic values. These areas include the following resources: wetlands, aquatic spawning, nursing, and feeding grounds, coastal primary sand dunes, barrier islands, significant wildlife habitat areas, public recreation areas, sand gravel resources, and underwater historic sites.

There would be no significant impacts to Coastal Natural Resource Areas as a result of the implementation of the project.

The Magnuson-Stevens Fishery Conservation and Management Act (16 United States Code 1801 et seq.) established a management system for marine fisheries resources in the United States. Congress charged

National Oceanic and Atmospheric Administration (NOAA) Fisheries and fishery management councils, along with other Federal and State/Commonwealth agencies and the fishing community, to identify habitats essential to managed species, which include marine, estuarine, and anadromous finfish, mollusks, and crustaceans. These habitats, referred to as Essential Fish Habitat (EFH), include "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." An EFH Assessment was coordinated with NOAA Fisheries Habitat Conservation Division along with the SEA (Appendix E).

b. Coastal Natural Hazard Areas

This policy covers areas vulnerable to continuing and severe erosion and areas susceptible to potential damage from wind, tidal, and storm related events including flooding. New buildings and other structures should be designed and sited to minimize the potential for property damage due to storms or shoreline erosion. The areas of concern are highly erodible areas and coastal high hazard areas, including flood plains.

The proposed project does not involve construction of buildings or structures in coastal natural hazard areas.

c. Waterfront Development Areas

These areas are vital to the Commonwealth because of the limited number of areas suitable for waterfront activities. The areas of concern are commercial ports, commercial fishing piers, and community waterfronts.

The project area is located entirely in subaqueous land and does not include commercial ports, commercial fishing piers, or community waterfronts.

Advisory Policies for Shorefront Access Planning and Protection

a. Virginia Public Beaches

These public shoreline areas will be maintained to allow public access to recreational resources.

There are no public beaches within the project area; consequently, this project will not affect public access to beaches.

b. Virginia Outdoors Plan (VOP)

The VOP, which is published by Virginia's Department of Conservation and Recreation (DCR), identifies recreational facilities in the Commonwealth that provide recreational access. Prior to initiating any project, consideration should be given to the proximity of the project site to recreational resources identified in the VOP.

There are no recreational facilities located in the project area.

c. Parks, Natural Areas, and Wildlife Management Areas

The recreational values of these areas should be protected and maintained.

There are no parks, natural areas, or wildlife management areas within the project area.

d. Waterfront Recreational Land Acquisition

It is the policy of the Commonwealth to protect areas, properties, lands, or any estate or interest therein, of scenic beauty, recreational utility, historical interest, or unusual features which may be acquired, preserved, and maintained for the citizens of the Commonwealth.

This project does not limit the ability of the Commonwealth in any way to acquire, preserve, or maintain waterfront recreational lands.

e. Waterfront Recreational Facilities

Boat ramps, public landings, and bridges shall be designed, constructed, and maintained to provide points of water access when and where practicable.

This project does not involve the design, construction, or maintenance of any boat ramps, public landings, or bridges.

f. Waterfront Historic Properties

The Commonwealth has a long history of settlement and development, and much of that history has involved both shorelines and near-shore areas. The protection and preservation of historic shorefront properties is primarily the responsibility of the Virginia Department of Historic Resources.

No waterfront historical properties would be affected by this project.

Determination

Based upon the following information, data, and analysis of the CBBT WID project, the U.S. Army Corps of Engineers, Norfolk District, finds that dredging and transport for the purpose of disposal in ocean waters at DNODS and dredged material discharges resulting from removal of the CBBT cover material to the WID trench via WID methodology is consistent to the maximum extent practicable with the enforceable policies of the Virginia Coastal Resources Management Program.

Pursuant to 15 CFR Section 930.41, the Virginia Coastal Resources Management Program has 60 days from the receipt of this letter in which to concur with or object to this Federal Consistency Determination, or to request an extension under 15 CFR section 930.41(b). Virginia's concurrence will be presumed if its response is not received by the U.S. Army Corps of Engineers on the 60th day from receipt of this determination.

28 Jan 2021
Date

Keith B. Lockwood
Keith B. Lockwood
Chief, Water Resources Division
Norfolk District, U.S. Army Corps of Engineers

Attachment A:
Evaluation of 404(b)(1) Guidelines

Final Evaluation of 404(b)(1) Guidelines
Contained in Vol. 45 No. 249 of the
Federal Register dated 24 December 1980

Norfolk Harbor Navigation Improvements Project, Thimble Shoal Channel, Chesapeake Bay Bridge Tunnel (CBBT) – Protective Rock Blanket (PRB) Project located in Virginia Beach, Virginia January 2021

1. Technical Evaluation Factors

a. Physical and Chemical Characteristics of the Aquatic Ecosystem (230.20-230.25)(Subpart C)

	N/A	Not Significant	Significant
(1) Substrate impacts	☐	☒	☐
(2) Suspended particulates/turbidity impacts	☐	☒	☐
(3) Water Quality Control	☐	☒	☐
(4) Alteration of current patterns and water circulation	☐	☒	☐
(5) Alteration of normal water fluctuations/hydroperiod	☐	☒	☐
(6) Alteration of salinity gradients	☐	☒	☐

Dredging operations will increase turbidity at the dredging location, as well as the proposed overboard placement area, but this will be minor, short-term impacts that will dissipate once dredging has ceased.

b. Biological Characteristics of the Aquatic Ecosystem(230.30-230.32) (Subpart D)

	N/A	Not Significant	Significant
(1) Effect on threatened/endangered species and their habitat	☐	☒	☐
(2) Effect on the aquatic food web	☐	☒	☐
(3) Effect on other wildlife (mammals, birds, reptiles, and amphibians)	☐	☒	☐

Based on a search of Virginia's endangered species databases and coordination with the U.S. Fish and Wildlife Service, the project will not significantly affect any federally or state listed threatened or endangered species.

c. Special Aquatic Site (230.40-230.45) (Subpart E)

	N/A	Not Significant	Significant
(1) Sanctuaries and refuges	☒	☐	☐
(2) Wetlands	☒	☐	☐
(3) Mud flats	☒	☐	☐

(4) Vegetated shallows	☒	☐	☐
(5) Coral reefs	☒	☐	☐
(6) Riffle and pool complexes	☒	☐	☐

Wetlands are not located near the project area. There are no special aquatic sites located in the project area; therefore, no impacts are anticipated.

d. Human Use Characteristics (230.50-230.54) (Subpart F)

	N/A	Not Significant	Significant
(1) Effects on municipal and private water supplies	☒	☐	☐
(2) Recreational and Commercial fisheries impacts	☐	☒	☐
(3) Effects on water-related recreation	☐	☒	☐
(4) Aesthetic impacts	☒	☐	☐
(5) Effects on parks, national and historical monuments, national seashores, wilderness areas, research sites, and similar preserves	☒	☐	☐

2. Evaluation of Dredged or Fill Material (230.60) (Subpart G)

a. The following information has been considered in evaluating the biological availability of possible contaminants in dredged or fill material. (**Check only those appropriate**)

☒ (1) Physical characteristics
☐ (2) Hydrography in relation to known or anticipated sources of contaminants
☒ (3) Results from previous testing of the material in the vicinity of the project
☐ (4) Known, significant, sources of persistent pesticides from land runoff or percolation
☐ (5) Spill records for petroleum products or designated (Section 311 of CWA) hazardous substances
☐ (6) Other public records of significant introduction of contaminants from industries, municipalities or other sources
☐ (7) Known existence of substantial material deposits of substances which could be released in harmful quantities to the aquatic environment by man-induced discharge
☐ (8) Other sources (specify)

Proposed dredged material was sampled and characterized in August 2020 in accordance to Section 103 of MPRSA (WID trench material) and Section 404(b)(1) of the Clean Water Act (CBBT cover material) to ensure placement site compatibility. There is no reason to suspect contamination (Appendix F).

b. An evaluation of the appropriate information in 2a above indicated that there is reason to believe the proposed dredged or fill material is not a carrier of contaminants, of that levels of contaminants are substantively similar at extraction and disposal sites and not likely to exceed constraints. The material meets the testing exclusion criteria.

YES ☒ NO ☐

3. Disposal Site Delineation (Section 230.11(f))

a. The following factors, as appropriate, have been considered in evaluating the disposal site.

☒ (1) Depth of water at disposal site
☒ (2) Current velocity, direction, and variability at disposal site
☒ (3) Degree of turbulence
☐ (4) Water volume stratification
☐ (5) Discharge vessel speed and direction
☒ (6) Rate of discharge
☒ (7) Dredged material characteristics (constituents, amount, and type of material, settling velocities)
☐ (8) Number of discharges per unit of time
☐ (9) Other factors affecting rates and patterns of mixing (specify)

b. An evaluation of the appropriate factors in 4a above indicates that the disposal site and/or size of mixing zone are acceptable.

YES ☒ NO ☐

4. Actions to Minimize Adverse Effects (Section 230.70-230.77)(Subpart H)

All appropriate and practicable steps have been taken, through application of recommendation of Section 230.70-230.77 to ensure minimal adverse effects of the proposed discharge.

YES ☒ NO ☐

5. Factual Determination (Section 230.11)

A review of appropriate information as identified in items 2-5 above indicates that there is minimal potential for short or long-term environmental effects of the proposed discharge as related to:

☒ a. Physical substrate at the disposal site (review sections 2a, 3, 4, & 5)
☒ b. Water circulation, fluctuation & salinity (review sections 2a 3, 4, & 5)
☒ c. Suspended particulates/turbidity (review sections 2a, 3, 4, & 5)
☒ d. Contaminant availability (review sections 2a, 3, & 4)
☒ e. Aquatic ecosystem structure and function (review sections 2b, c; 3, & 5)
☒ f. Disposal site (review sections 2, 4, & 5)
☒ g. Cumulative impact on the aquatic ecosystem
☒ h. Secondary impacts on the aquatic ecosystem

6. Review of Compliance (230.10(a)-(d) (Subpart B)

A review of the permit application indicates that:

a. The discharge represents the least environmentally damaging practicable alternative and if in a special aquatic site, the activity associated with the discharge must have direct access or proximity to, or be located in the aquatic ecosystem to fulfill its basic purpose (if no, see section 2 and information gathered for EA alternative);

YES ☒ NO ☐

b. The activity does not appear to 1) violate applicable state water quality standards or effluent standards prohibited under Section 307 of the CWA; 2) jeopardize the existence of Federally designated marine sanctuary(if no, see section 2b and check responses from resource and water quality certifying agencies;

YES ☒ NO ☐

c. The activity will not cause or contribute to significant degradation of waters of the U.S. including adverse effects on human health, life stages of organisms dependent on the aquatic ecosystem, ecosystem diversity, productivity and stability, and recreational, aesthetic, and economic values (if no, see section 2); YES ☒ NO ☐

d. Appropriate and practicable steps have been taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem (if no, see section 5);

YES ☒ NO ☐

The proposed discharge of fill or dredged material is the least environmentally damaging practicable alternative and meets the Federal Standard.

7. Findings

☒ a. The proposed disposal site for discharge of dredged or fill material complies with the Section 404 (b)(1) guidelines

☐ b. The proposed disposal site for discharge of dredged or fill material complies with the Section 404(b)(1) guidelines with the inclusion of the following conditions:

c. The proposed disposal site for discharge of dredged or fill material does not comply with the Section 404(b)(1) guidelines for the following reason(s):

☐ (1) There is a less damaging practicable alternative

☐ (2) The proposed discharge will result in significant degradation of the aquatic ecosystem

☐ (3) The proposed discharge does not include all practicable and appropriate measures to minimize potential harm to the aquatic ecosystem

27 Jan 2021
DATE

Keith B. Lockwood
Keith B. Lockwood
Chief, Water Resources Division
Norfolk District, U.S. Army Corps of Engineers

Attachment B:
Clean Air Act - General Confirmatory Rule
Record of Non-Applicability

Clean Air Act – General Conformity Rule
Record of Non-Applicability
Norfolk Harbor Navigation Improvements Project,
Thimble Shoal Channel, Chesapeake Bay Bridge Tunnel (CBBT) – Protective Rock Blanket (PRB)
Project located in Virginia Beach, Virginia

Section 176(c) (42 U.S.C. § 7506) of the Clean Air Act (CAA) requires Federal agencies to ensure that emissions from Federal actions will conform to state implementation plans (SIP) designed to maintain an attainment designation for air pollutants as defined by the National Ambient Air Quality Standard (NAAQS). The conformity rule applies to Federal actions which cause emissions in areas designated as nonattainment under Section 107 of the CAA and maintenance areas established under Section 157A of the CAA. The Environmental Protection Agency's General Conformity Regulations also exempt certain categories of actions from the conformity analysis requirement.

The CBBT PRB project is an element of the previously authorized Norfolk Harbor Navigation Improvements Project (NHNIP) to protect the CBBT against vessel strikes and anchor drags as a result of the planned deepening of the Thimble Shoal Federal Navigation Channel. The project area is located at the mouth of the Chesapeake Bay, between the City of Virginia Beach and Northampton County, Virginia.

The 2018 General Reevaluation Report and Environmental Assessment (GRR/EA) for the NHNIP, CBBT – PRB analyzed conventional dredging (e.g. mechanical or hopper dredging) of the CBBT cover removal. However, due to the proximity of the CBBT structure to the depths of dredging and concerns involving the safety of the CBBT structure required an evaluation of different means and methods of dredging to reduce the risk of structural damage to the tunnel. Water injection dredging (WID) method was selected as a lower risk method of dredging and is the Preferred Alternative in accordance to the National Environmental Policy Act of 1969 (NEPA) (42 United States Code [USC] 4331 et seq.), the regulations of the President's Council on Environmental Quality (CEQ) that implement NEPA procedures (40 Code of Federal Regulations [CFR] 1500-1508) as outlined in the CBBT– PRB Supplemental Environmental Assessment (SEA).

The scope of the Proposed Action involves removing the CBBT cover area material via WID method. Included in this method of dredging is the construction of a WID receiving trench adjacent to the CBBT cover material to accept the displaced CBBT cover material. The WID Trench will serve as a one-time-use dredged material placement site. The dredged material resulting from the construction of the WID trench is proposed for transport and placement at the Dam Neck Ocean Disposal Site (DNODS) in federal waters.

Under the No-Action Alternative, the CBBT cover material dredging would not be performed. This alternative would eliminate the first phase of the PRB project, therefore preventing the completion of the project and would result in leaving the CBBT structure unprotected against vessel strikes or vessel anchor drags that may occur. The planned deepening of the Thimble Shoal Federal Navigation Channel will deepen the channel to a maximum maintenance depth of approximately -58 feet MLLW over the CBBT. The CBBT structure within the channel has features that are as shallow as -63 feet MLLW. These shallow features of the tunnel would be more susceptible to damage from conventional dredging activities.

The CBBT within the Thimble Shoal Federal Navigation Channel is located in the Air Quality Control Region (AQCR) known as Hampton Roads Intrastate ACQR in Virginia (40 CFR 81.93). The project area is currently in attainment for all of the NAAQS criteria pollutants.

We have considered the potential direct and indirect emissions from the CBBT PRB project, and reach the following conclusion(s):

[x] The action is entirely outside of and will not cause any direct or indirect emissions in any nonattainment or maintenance area [see 40 CFR 93.153(b)].

[ ] The total direct and indirect emissions are below de minimis levels [40 CFR 93.153(c)(1) for the exemption, but for the applicable levels see 40 CFR 93.153(b)(1) for nonattainment areas or 40 CFR 93.153(b)(2) for maintenance areas].

[ ] The following de minimis exemption to the conformity requirements applies: 40 CFR Part 93.153(c)(2)(ix) "Maintenance dredging and debris disposal where no new depths are required, applicable permits are secured, and disposal will be at an approved disposal site".

[ ] The action is on the agency's "presumed to conform" list at: [EPA regulation describing the "presumed to conform" process see 40 CFR 93.153(f)].

[ ] The facility has a facility-wide emissions budget approved by the State as a part of the SIP, and the emissions from the proposed action are within the budget.

To the best of my knowledge the information provided is correct and accurate. I concur in the finding that the proposed action meets the exemptions stated above and thus will conform to the SIP.

27 Jan 2021
Date

Keith B. Lockwood

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Chief, Water Resources Division
Norfolk District, U.S. Army Corps of Engineers