

**MARYLAND DEPARTMENT OF
TRANSPORTATION**

MARYLAND PORT ADMINISTRATION



**DREDGED MATERIAL PLACEMENT
RIGHT OF ENTRY APPLICATION**

**Maryland Department of Transportation
Maryland Port Administration, Office of Harbor Development
The World Trade Center Baltimore
401 East Pratt Street – Suite 1900
Phone: (410) 385-4419**

OVERVIEW

MARYLAND DEPARTMENT OF TRANSPORTATION MARYLAND PORT ADMINISTRATION DREDGED MATERIAL PLACEMENT AT MDOT MPA FACILITIES RIGHT OF ENTRY APPLICATION

1. GENERAL APPLICABILITY

All persons, associations, corporations, municipalities, government bodies, government agencies, entities, or agents thereof, desiring to place dredged material onto Maryland Department of Transportation Maryland Port Administration (MDOT MPA) property, or into an MDOT MPA site are required to obtain a Right of Entry from MDOT MPA which authorizes such action. Applications for a placement Right of Entry will be made in writing to:

Maryland Department of Transportation
Maryland Port Administration
Office of Harbor Development
The World Trade Center Baltimore
401 East Pratt Street-Suite 1900
Baltimore, Maryland 21202

Entities requesting to use a site are required to provide any documentation specified by MDOT MPA. This documentation will include, but is not limited to, the items identified in Table 1 (Page 2).

Applicant is advised that placement fees will be levied on each cubic yard (cy) of dredged material placed, and that an initial payment of 60% of the Initial Volume Calculation will be required prior to material being placed. Calculation of the quantity of dredged material placed will be conducted using methods and surveys as identified in Attachments E and F (Pages 13 and 14). The fee will be subject to change without notice as economic conditions warrant. Responsibility for payment of the fees is that of the Applicant, and this responsibility may not be passed on to an agent of the Applicant.

2. APPLICATION FOR RIGHT OF ENTRY

Applications shall be prepared in accordance with the criteria set forth below. Rights of Entry will be granted solely at the discretion of the MDOT MPA. Applications for Rights of Entry shall be accompanied by sufficient information to enable the MDOT MPA to review the proposed dredging and placement project.

The Notice to Applicants (Page 1) outlines the Application steps, provides an approximate timeline, and provides a checklist for the Applicant. Information requirements may vary from project to project. Therefore, should information additional to that in the checklist be required, the Applicant, upon request of MDOT MPA, shall supply such information in a form acceptable to MDOT MPA. Each project will be reviewed in order to determine if the project is consistent with the intended purpose of the placement area,

whether or not its implementation would be a public health and/or safety issue, whether or not it would interfere with site operations, and whether or not it would interfere with maintenance of the federally authorized navigation channels.

The placement site itself operates under stringent effluent water quality standards. Therefore, the incoming material may require implementation of treatment processes which will result in an effluent of the required quality. Operations such as material placement within the site and the degree of treatment may be determined by the nature of the material to be placed.

3. INFORMATION REQUIRED

The following information must be submitted to the MDOT MPA along with the application for a Right of Entry to use an MDOT MPA dredged material placement site.

A Sampling and Analysis Plan (SAP) to be reviewed and approved by the MDOT MPA prior to collection and testing of the proposed dredged material. The SAP will provide: a description of the project; the quantity of material for dredging and placement; the locations including coordinates and depths of samples to be collected; the composite samples to be tested; and the name and certifications of the analytical laboratory proposed to conduct the testing, the testing methods, and the laboratory methods detection limits (MDLs) and reporting limits (RLs).

Included in the SAP must be surveys and records of soil/sediment borings and gradation analyses in sufficient detail to estimate quantities of each size and type of material to be delivered to the site. Included shall be a boring location plan including boring coordinates and boring log descriptions.

The following information must be submitted to the MDOT MPA once the applicant's SAP has been reviewed and approved by MDOT MPA.

Detailed results of chemical analyses with the concentrations of specified constituents in the dredged material.

- 1) Tests shall be performed in accordance with Environmental Protection Agency (EPA) 1995 document titled [*QA/QC Guidance for Sampling and Analysis of Sediments, Water & Tissues for Dredged Material Evaluations*](#) and any subsequent updates to this document or equivalent requirements established by the Maryland Department of the Environment (MDE).
- 2) Because sediments placed at certain MDOT MPA facilities may be reclaimed for future innovative reuse, tests shall also be performed in accordance with [*MDE's Innovative Reuse and Beneficial Use of Dredged Material Guidance Document*](#).
- 3) Other information may be requested by the MDOT MPA.

4. SUSPENSION OR REVOCATION OF RIGHTS OF ENTRY

Rights of Entry may be suspended or revoked by the MDOT MPA whenever, in its judgment, conditions occur which may constitute a hazard to public health; a hazard to the environment; interfere with normal operations of the placement area and/or dike construction, repairs, and rehabilitation; interfere with maintenance of the federally authorized navigation channels; information submitted by the applicant is incorrect; or when failure to comply with any of the provisions of the Right of Entry occurs. A written notice of suspension or revocation will be issued by the MDOT MPA to the Right of Entry holder.



**MARYLAND DEPARTMENT OF TRANSPORTATION
MARYLAND PORT ADMINISTRATION**

**DREDGED MATERIAL PLACEMENT
RIGHT OF ENTRY APPLICATION**

TABLE OF CONTENTS

1. NOTICE TO APPLICANTS 1

2. PLACEMENT REQUEST LETTER.....4

3. DREDGED MATERIAL PLACEMENT RIGHT OF ENTRY APPLICATION 5

ATTACHMENT A - MDOT MPA PLACEMENT SITES 6

ATTACHMENT B - LIST OF REQUIRED PERMITS 7

ATTACHMENT C - ANALYSIS OF MATERIAL TO BE DREDGED..... 8

ATTACHMENT D - PROJECT DESCRIPTION..... 12

ATTACHMENT E - VOLUME CALCULATIONS 13

ATTACHMENT F - ACKNOWLEDGEMENT OF UNDERSTANDING HYDROGRAPHIC SURVEYS..... 14

ATTACHMENT G - ACKNOWLEDGEMENT OF UNDERSTANDING SITE STANDARDS AND PROCEDURES..... 15

 ATTACHMENT G, APPENDIX 1 - MASONVILLE STANDARDS AND PROCEDURES.....G1-1

 ATTACHMENT G, APPENDIX 2 - COX CREEK STANDARDS AND PROCEDURES.....G2-1

1. NOTICE TO APPLICANTS

MARYLAND DEPARTMENT OF TRANSPORTATION

MARYLAND PORT ADMINISTRATION

DREDGED MATERIAL PLACEMENT RIGHT OF ENTRY APPLICATION

1. PLACEMENT RIGHTS OF ENTRY

- 1.1 MDOT MPA requires Rights of Entry for placement of dredged material at MDOT MPA sites to:
 - a. Allow efficient management of capacity at the several sites owned by the MDOT MPA (sites listed in Attachment A).
 - b. Estimate material quantities for collection of placement fees.
 - c. Ensure no hazardous waste is placed in any MDOT MPA facilities.
- 1.2 MDOT MPA will not accept volumes of dredged material that vary significantly from the Initial Volume Calculation as defined in Attachment E.
- 1.3 The MDOT MPA *Right of Entry* is required in addition to permits applied for by submitting the [“Joint Federal/State Application for the Alteration of Any Tidal Wetland in Maryland” \(Joint Application\)](#).

2. SUBMITTAL AND APPROVAL CHECKLIST AND TIMELINE

- 2.1 At this time, MDOT MPA is only accepting dredged material from maintenance projects. It is the responsibility of the applicant for a Right of Entry to demonstrate that their dredging is in fact maintenance and not new work dredging. Maintenance dredging may be demonstrated through previous MDE or U.S. Army Corps of Engineers permits or Maryland Board of Public Works (MD BPW) Tidal Wetlands Licenses or historical National Oceanic Atmosphere Administration (NOAA) charts, provided the charts are adequately detailed, or previous After Dredging (AD) surveys signed by a surveyor licensed in Maryland. Other forms of proof may be submitted for consideration.
- 2.2 Table 1 lists the required submittals and approvals necessary for obtaining a Right of Entry to place material at MDOT MPA’s site(s) and may be used as a checklist by the Applicant. The MDOT MPA reserves the right to request further information. The overall timeline for completion of the MDOT MPA approval process ranges (on average) from 3 months to 6 months and will be dependent on the Applicant’s timeliness and completeness in submitting the required information to the MDOT MPA.

TABLE 1 – REQUIRED SUBMITTAL AND APPROVAL CHECKLIST

PHASE	STEP	ACTIVITY	PAGE	COMPLETE?
Initiation	1a	Applicant submits Placement Request Letter to MDOT MPA	4	
	1b	MPA reviews Letter and approves, enabling the process to move forward		
	2	Applicant submits Joint Permit Application to regulators, including MPA placement approval letter		
Sampling Plan and Analysis	3a	Applicant submits completed and signed Right of Entry (ROE) Application to MPA for review	5	
		Include form on page 5		
		Include SAP (see Attachment C); no sampling may occur until MPA approves	8	
		Include surveys and records of soil/sediment borings and gradation analyses, boring location plan with coordinates, and boring log descriptions		
	3b	MPA provides comment/approval		
	4a	Applicant executes sampling and analysis plan		
	4b	Applicant submits sampling results to MPA for review (minimum 30-day MPA review)		
	4c	MPA provides comment or approval in Material Suitability Letter		
Documentation	5a	Applicant obtains regulatory permits		
	5b	Applicant submits copies of regulatory permits to MPA (minimum 30-day MPA review)	7	
	6	Applicant submits Operations Plan & completed Attachment D to MPA (minimum 30-day MPA review)	12	
		Include before dredging survey and information used to calculate dredging volume (Attachment E) (maximum 90 days before dredging)	13	
		Include Acknowledgement of Understanding of Hydrographic Survey (Attachment F)	14	
	7	Applicant submits Acknowledgement of Understanding of Site Standards and Procedures (Attachment G)	15	
	8a	MPA sends ROE to applicant for signature		
	8b	Applicant returns signed ROE to MPA		
	8c	MPA Executes ROE		
	9a	MPA issues invoice to applicant for 60% of anticipated inflow volume		
	9b	Applicant pays invoice		
	10a	Applicant and MPA attend pre-placement meeting		
	10b	MPA issues Notice to Proceed to applicant		
Dredging and Post-dredging	11	Applicant dredges material and places at MPA site		
	12	Applicant submits results of after dredging survey to MPA for final volume and final tipping fee calculation (within 30 days of dredging completion)	13	
	13	Applicant pays remainder of tipping fee based on final volume determination		

NOTE [Steps 6-10 may occur concurrently](#)

3. CONTACT INFORMATION

3.1 The required information and documents are to be submitted via email to:

Maryland Department of Transportation
Maryland Port Administration
Office of Harbor Development
The World Trade Center Baltimore
401 East Pratt Street – Suite 1900
Baltimore, MD 21202
dbibo@marylandports.com

3.2 Additional information and assistance are available by contacting the Office of Harbor Development:

Phone: (410) 385-4419
Or via Email: dbibo@marylandports.com

2. PLACEMENT REQUEST LETTER

A plan for placement must be identified in the [Joint Federal/State Application for the Alteration of Any Tidal Wetland in Maryland](#) for any project including dredging. MDOT MPA must receive and approve a letter requesting placement capacity prior to any MDOT MPA site being listed as the placement location for dredged material in the *Joint Application*. To satisfy this requirement, the Applicant must submit a letter to MDOT MPA requesting to place dredged material at an MDOT MPA site. The letter shall state the location of the dredging, the estimated in situ volume of material and the Applicant's preferred start and stop dates for the placement operation.

MDOT MPA will review the request letter and provide the Applicant with a response indicating that MDOT MPA will or will not accept a formal Right of Entry application. Through MDOT MPA's willingness to accept an application, the Applicant may assume that sufficient capacity exists at MDOT MPA sites, and the Applicant may list desired MDOT MPA sites in the *Joint Application*. MDOT MPA's willingness to accept a formal application does not guarantee that an Applicant may place dredged material at an MDOT MPA site. The Applicant must complete all submittals, application requirements, and requests from MDOT MPA for additional information. The overall timeline for completion of the MPA approval process ranges (on average) from 3 months to 6 months and will be dependent on the Applicant's timeliness and completeness in submitting the required information to the MDOT MPA.

3. DREDGED MATERIAL PLACEMENT RIGHT OF ENTRY APPLICATION MARYLAND PORT ADMINISTRATION

1. APPLICANT

NAME		DATE
STREET ADDRESS		
CITY	STATE	ZIP

2. CONTACT PERSON

NAME		
STREET ADDRESS		
CITY	STATE	ZIP
TELEPHONE	MOBILE PHONE	E-MAIL

3. APPLICANT'S AGENT/ENGINEER

NAME & ORGANIZATION		
STREET ADDRESS		
CITY	STATE	ZIP
TELEPHONE	MOBILE PHONE	E-MAIL

4. QUANTITY & SCHEDULE

ESTIMATED QUANTITY OF MATERIAL (C.Y.)	PLANNED START DATE	PLANNED COMPLETION DATE
---------------------------------------	--------------------	-------------------------

5. RIGHT OF ENTRY CERTIFICATION

The undersigned being a duly authorized agent for the Applicant certifies that the information contained in documents associated with this application are complete and correct.

SIGNATURE _____
DATE

PRINTED NAME _____
TITLE

RETURN APPLICATION TO:

Maryland Department of Transportation Maryland Port Administration – Office of Harbor Development
The World Trade Center Baltimore
401 East Pratt Street – Suite 1900
Baltimore, Maryland 21202
dbibo@marylandports.com

ATTACHMENT A - MDOT MPA PLACEMENT SITES

MDOT MPA owned placement sites identified below are operated by the Maryland Environmental Service (MES), which is responsible for site operations and maintenance.

Placement Site	Location	Facility Status
Cox Creek	Anne Arundel County	Available
Masonville	Baltimore City	Available

Additional details regarding site characteristics are available from the Office of Harbor Development (410) 385-4419.

ATTACHMENT B - LIST OF REQUIRED PERMITS

The Applicant is required to provide MDOT MPA with copies of all permits, licenses and certifications required for the dredging and placement project. Those to be provided may include, but are not limited to the following:

U.S. Army Corps of Engineers Section 404 Permit

U.S. Army Corps of Engineers
Baltimore District, Operations Division
P. O. Box 1715
Baltimore, MD 21203-1715
(410) 962-4646

Coastal Zone Consistency Certification

Maryland Department of Natural Resources
Coastal Zone Management Program
Coastal Resources Division
Annapolis, MD 21401
(410) 260-8732

Maryland Wetlands License

Maryland Department of the Environment
Water Management Administration
Tidal Wetlands Division
1800 Washington Boulevard
Baltimore, MD 21230
(410) 537-3837

Notification of Project to the U.S. Coast Guard

U.S. Coast Guard
Waterways Management Section Chief
431 Crawford Street
Portsmouth, VA 23704-5004
(757) 398-6360

The *Right of Entry* must be signed and approved by the MDOT MPA (address below) and the Applicant prior to the Applicant placing material on MDOT MPA property.

Maryland Department of Transportation
Maryland Port Administration
Office of Harbor Development
The World Trade Center Baltimore
401 East Pratt Street
Baltimore, MD 21202
(410) 385-4419

ATTACHMENT C - ANALYSIS OF MATERIAL TO BE DREDGED

Physical and chemical characterization of the material to be dredged must be performed for the MDOT MPA to evaluate the impacts to the site(s) to be utilized. An electronic file and three (3) hard copies of the analytical results must be received by the MDOT MPA for review before the MDOT MPA will execute a *Right of Entry* allowing site use. A Sampling and Analysis Plan (SAP) including the Applicant's intended sampling locations/coordinates, depths, and methods (boring, core, grab, etc.) for sampling of material shall be provided to the MDOT MPA for review. The sampling depth shall be representative of the material proposed for dredging. The SAP shall also include the testing methods, the achievable detection limits (method detection limits (MDLs) and laboratory reporting limits (RLs)) for the proposed analytical testing laboratory. The analytical laboratory must be certified by the National Environmental Laboratory Accreditation Program (NELAP). The MDOT MPA's approval of the SAP must be obtained prior to execution of the sampling plan. Where existing information is available on *in-situ* sediment quality and is determined to be sufficient and acceptable by the MDOT MPA, this information may be used in lieu of new samples and borings. It should be noted that data will be considered acceptable for project review for a 3-year period from the date of collection. The validity and usability of data greater than 3 years old will be evaluated on a case-by-case basis by the MDOT MPA. It should also be noted that collection of grab samples or borings may require a permit from MDE. The Applicant shall consult with MDE regarding requirements and timeframe for attaining the necessary permits.

Physical Characteristics

Samples are to be taken as specified in the approved SAP and the following physical tests (or MDOT MPA approved substitutes) will be used to determine the physical characteristics of the material to be dredged.

- | | |
|---|-------------|
| a. Particle size analysis of soil | ASTM D 422 |
| b. Liquid limit of soils | ASTM D 423 |
| c. Plastic limit and plasticity index of soils | ASTM D 424 |
| d. Specific gravity of soils | ASTM D 854 |
| e. Water (moisture) content of soil, rock and soil aggregate mixtures | ASTM D 2216 |

Chemical Characteristics

Chemical composition of bulk sediment analyses [(dry weight concentration, reported as mg/kg (metals) or ug/kg (organics)] are to be provided as concentrations based on composite samples of cores, or samples as specified in the approved SAP. Composite samples shall be prepared by mixing equal parts (by weight or volume) of samples collected from discrete locations. The number of discrete samples collected, and composites created will be specified and/or approved by the MDOT MPA during review of the SAP. A minimum of two composite samples must be submitted for physical and chemical testing; additional samples may be required at the discretion of the MDOT MPA. Each composite sample must consist of material from three discrete sampling locations. Sufficient sample volume shall be collected to perform all specified physical and chemical analyses on each composite sample. Analysis of the parameters (page 10) shall be conducted using standard EPA analysis methods and procedures.

In addition, the analysis shall meet the EPA 1995 [QA/QC Guidance of Sampling and Analysis of Sediments, Water and Tissues for Dredged Material Evaluations. Phase I – Chemical Evaluations](#) (including any subsequent updates to this document), specifically for target detection limits (TDLs) and quality assurance (QA) and quality control (QC) requirements. QA/QC requirements include testing of one Matrix Spike (MS) and one Matrix Spike Duplicate (MSD) per 20 samples analyzed. **If laboratory results do not meet the referenced EPA guidance (analytical methods or target detection limits), the applicant may be required to conduct additional sampling/testing at their expense.** The data shall be reported to the laboratory reporting limit. Constituent concentrations detected between the method detection limit and the laboratory reporting limit shall be “J-qualified” as estimated. Sediments contain a high moisture content; therefore, the sample weight may require adjustment prior to analysis in order to achieve the target detection limits.

The laboratory report(s), in their entirety, including the results for the method blanks, laboratory control samples (if applicable), and MS/MSD analyses, shall be included in the Right of Entry application submission. In addition, the Applicant must provide the analytical data in a laboratory-generated electronic data deliverable (EDD). The EDD shall be provided in spreadsheet format. The minimum data fields to be included in the EDD (and their definitions) are provided at the following [link](#).

In addition to the laboratory data report, the Applicant shall provide the date and the actual sampling locations (coordinates) where the samples were collected.

Outfalls

The Applicant must identify in the SAP the locations of outfalls which may serve as a source of chemical constituents to the material proposed for dredging. The Applicant must provide descriptions of any chemical constituents released from those outfalls.

ANALYTICAL TESTING REQUIREMENTS AND METHODS

PHYSICAL CHARACTERISTICS

- Particle size analysis of soil (ASTM D 422)
- Liquid limit of soils (ASTM D 423)
- Plastic limit and plasticity index of soils (ASTM D 424)
- Specific gravity of soils (ASTM D 854)
- Water (moisture) content of soil, rock, and soil aggregate mixtures (ASTM D 2216)

METALS (SW846 6010A/6020A/7471B)

NUTRIENTS AND GENERAL CHEMISTRY

- Total Kjeldahl Nitrogen (TKN) (EPA 351.2)
- Nitrate/Nitrite (EPA 353.2)
- Ammonia (EPA 350.1)
- pH (EPA 9045D)
- Total Phosphorus (EPA 365.4)
- Total Sulfide (SW846 9030B/9034)
- Cyanide (SW486 9012/9014)
- Total Organic Carbon (Lloyd Khan)

ORGANIC CHEMICALS

- Oil and Grease (SW846 9071B)
- Total Petroleum Hydrocarbons (SW846 8015D) - gasoline range (C6-C10)
 - diesel range (C10-C34)
 - oil range (C22-C32)
- Priority Pollutant Volatiles (SW846 8260C)
- Priority Pollutant Semi-Volatiles and PAHs (SW846 8270D LL)
- Priority Pollutant Pesticides (SW846 8081B LL)
- PCB Congeners (SW846 8082A)

OTHER

- Tributyltin (Unger or Krone method)
- Toxicity Characteristic Leaching Procedure (TCLP) (SW846) – full suite of metals and organics 40 C.F.R. § 261.24 2011

Notes:

- 1) See provided links for holding times, analytical methods, preservation techniques, and required target detection limits (TDLs) ([link](#)), and QA/QC requirements ([link](#)).
- 2) A sample Chain of Custody is provided [here](#) that should be used when submitting samples to the chosen lab. It is recommended that the sampler contact the lab after sample delivery to ensure the proper analysis is being performed.

- 3) Alternative analytical methods may be proposed and/or substituted for methods listed above if they are EPA-approved and specified in the SAP.

ATTACHMENT D - PROJECT DESCRIPTION

Complete the form below. The information requested in this attachment is intended to provide the MDOT MPA with an understanding of the dredging operation to be performed, the type of equipment to be used, and the rate at which the material will be placed at the MDOT MPA site. This information shall be furnished at the time of application, if known. If this information is not available at the time of application, it shall be furnished at the earliest possible date but a minimum of 2 weeks prior to the commencement of placement activity. A Pre-Construction Meeting with MDOT MPA and MES site operations staff is also required prior to commencement of placement activity. Additional meetings may be required at the MDOT MPA's discretion.

An **Operations Plan** must be submitted in addition to this attachment. The plan shall describe the proposed method of operations for materials handling, transport, and placement. The plan shall include the proposed commencement date, hours of operations, material unloading and handling equipment and sizes, production rates, storage requirements, equipment and vehicles to be used on site, the Recirculation Plan (see Attachment G) and other pertinent procedures relating to material placement. A sediment erosion control plan may be required.

1. Estimated total quantity of material to be dredged (in-situ) _____ C.Y.

2. Scheduled period of dredging _____
START DATE COMPLETION DATE

3. Placement rate of material at the site _____

4. Type and size of dredge(s) Hydraulic
 Clamshell
 Other

5. Type of Barge(s):

BARGE TYPE	LENGTH	WIDTH	DRAFT (LOADED)	CAPACITY (C.Y.)
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

6. Unloading Equipment Type & Size: _____

7. Description of the worksite:
 The description is to include the location and extent of the dredging to be undertaken. Also, to be included is a location map and detailed site plan showing dredging locations and depths (*Joint Application* drawings may be acceptable).

ATTACHMENT E - VOLUME CALCULATIONS

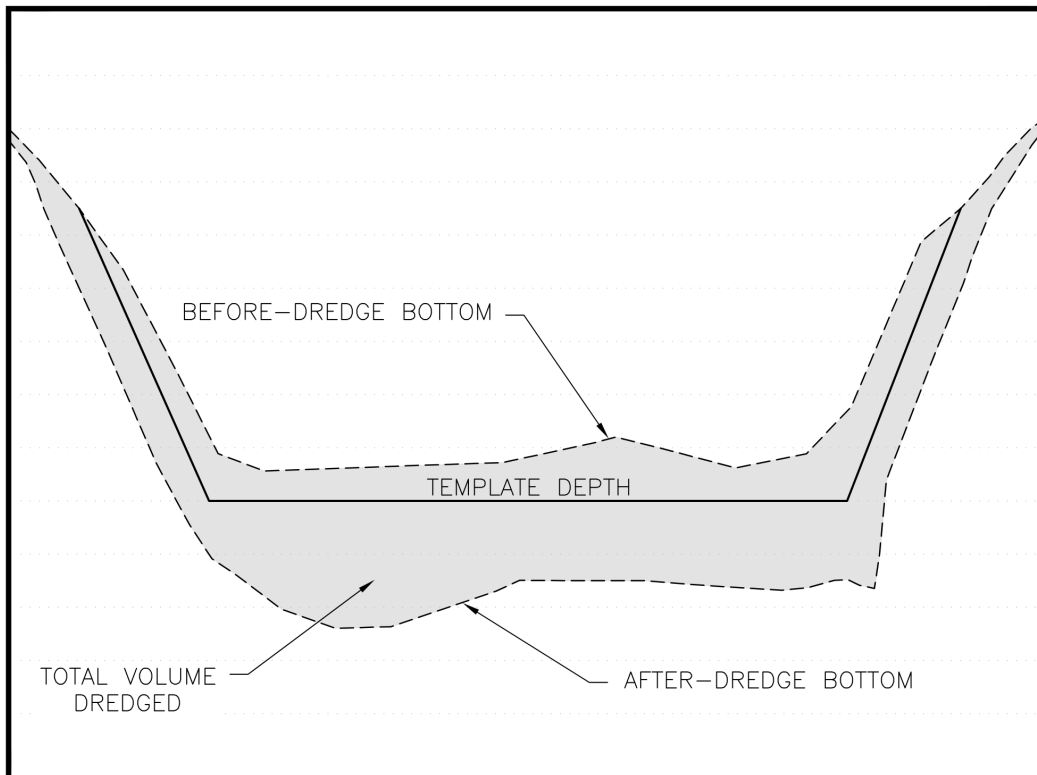
Volume calculations must be performed both prior to and following completion of the dredging activity.

Initial Volume Calculation

This calculation must be performed to provide the anticipated volume of dredged material to be placed at the MDOT MPA site(s). The information utilized in producing the calculation and total volume estimate, including template and any overdepth dredging, must be provided to the MDOT MPA. The calculation must provide an estimate of the quantity of material to be placed at the MDOT MPA site(s) that is deemed reasonable by the MDOT MPA. For this reason, the volume calculation must be repeatable from the information provided to the MDOT MPA as part of this application.

Payment Volume Calculations

The tipping fee will be applied to the final quantity of dredged material placed at the MDOT MPA site(s), calculated from Before Dredging (BD) and After Dredging (AD) surveys as described in Attachment F. The final quantity placed at the MDOT MPA DMCF is calculated from the total volume dredged and may differ from dredging template volume. The BD and AD surveys must be provided for the MDOT MPA to verify the quantity of material placed at the MDOT MPA placement site(s).



ATTACHMENT F - ACKNOWLEDGEMENT OF UNDERSTANDING HYDROGRAPHIC SURVEYS

As identified in the Right of Entry Application (page 6 of 14), the MDOT MPA requires the Applicant to provide survey information adequate for determining the “cut volume” of material placed within an MDOT MPA site. The MDOT MPA defines adequate survey information as Before Dredging (BD) and After Dredging (AD) surveys conducted and presented in a form approved by the MDOT MPA. The MDOT MPA requirements for approved survey methods and presentation of survey data are as follows:

- 1) Hydrographic Survey Method Requirements:
 - a. Hydrographic surveys shall be conducted to meet or exceed requirements outlined in the [Corps of Engineers Hydrographic Survey Manual](#) (EM1110-2-1003, dated November 2013). Hydrographic surveys shall be conducted to meet standards outlined for navigation and dredging support surveys for soft or hard bottom material as applicable and outlined in the referenced manual.
 - b. Hydrographic surveys may be conducted to differing standards if deemed acceptable by MDOT MPA in writing prior to the survey being conducted.
 - c. The goal of the BD and AD surveys is to capture the volume of material removed through dredging. Unless approval for deviation from the following windows is given by MDOT MPA, BD survey events must be conducted no earlier than 3 months prior to the start of the dredging job, and AD survey events must be conducted no later than 1 month following completion of the placement activities.
- 2) Presentation of Hydrographic Survey Data
 - a. Survey information shall be submitted in electronic and hard-copy formats. The electronic files may be emailed to dbibo@marylandports.com.
 - b. Required items:
 - i. Plan view drawings with soundings (bathymetry plot), channel lines, features, and other structures at 1 in = 50 ft scale [submitted in electronic (AutoCAD) and hard copy formats]
 - ii. Channel (or dredging area) cross-sections for every 100 ft showing BD and AD surfaces and the design dredging template [submitted in electronic (AutoCAD) and hard copy formats]
 - iii. Processed BD and AD survey data [electronic (ASCII XYZ) format]
 - c. The survey date, horizontal datum, and the vertical datum for the surveys must be provided with the survey data.

The undersigned being a duly authorized agent for the Applicant certifies that the above requirements for surveys have been read and are understood.

APPLICANT SIGNATURE

DATE

PRINTED NAME

TITLE

ATTACHMENT G - ACKNOWLEDGEMENT OF UNDERSTANDING SITE STANDARDS AND PROCEDURES

The undersigned being a duly authorized agent for the Grantee certifies that the Grantee understands and will fully comply with the Site Standards and Procedures for the MDOT MPA site(s) to be utilized. (See Appendix 1 – Masonville Standards and Procedures and Appendix 2 – Cox Creek Standards and Procedures)

Note: The Grantee shall provide the dredging contractor with a copy of the Standards and Procedures for the applicable site(s). Grantee shall obtain written acknowledgement of receipt of the Standards and Procedures from the dredging contractor and provide a signed copy of the acknowledgement to MDOT MPA.

APPLICANT SIGNATURE

DATE

PRINTED NAME

TITLE

Pre-Inflow Checklist

The pre-inflow checklist is not required to be completed and submitted to MDOT MPA. It is included for informational purposes only.

No.	Item	Standards & Procedures Section # Reference	Status
1	MPA Right of Entry	2.0-A and 2.0-B	
2	USACE permit / MDE permit	2.0-B	
3	Placement Operations plan - Hours of operation / commencement & completion dates	2.0-D and 4.0-A	
3a	- Fuel Spill Plan	4.0-A-9	
3b	- Dust Control Plan	2.0-P and 4.0-A-10	
3c	- Truck Haul Route (if applicable)	4.0-A-11	
3d	- Traffic Management Plan (if applicable)	4.0-A-12	
3e	- Dredged Material Spillage Control Plan	4.0-A-13	
3f	- Final Grading Plan	4.0-A-14	
4	Contractor Safety Plan (injuries & fuel spills)	4.0-A-9	
5	Contractor Quality Control System	2.0-I	
6	Mooring Arrangements / Breasting Barge / No Transmitted Forces	4.0-A-6 / 7.0-E / 8.0-A-6	
7	Pre-work inspection by MES	2.0-E and 2.0-T	
8	UXO / DMM Plan	2.0-V	
9	Unloader Area Pre- and Post-Dredging Hydrographic surveys	4.0-C	
10	Recirculation Plan	4.0-B	
11	Authorization to Proceed	5.0	
12	Dredged Material Containment Facility Site Requirements		
12a	- Other contractors on site	6.0-C	
12b	- Inflow point	6.0-E	
12c	- Pipeline	4.0-A-8, 7.0-A	
12d	- Shoaling	4.0-C and 7.0-F	
12e	- Debris	2.0-R and 6.0-F	
12f	- Damages	2.0-F, 2.0-K, 2.0-U, and	
12g	- Spills	2.0-O, 4.0-A-3, 4.0-A-9, 4.0-A-13, and 8.0-C	
12h	- Marking of pipe and equipment	7.0-C	
13	Scow certifications	4.0-A-3	
14	Daily Inflow/Recirculation Report	4.0-D	

No.	Item	Standards & Procedures Reference Section #	Status
15	Dredged Material Containment Facility Daily Operations		
15a	- Areas of Operations	2.0-M	
15b	- Access, Storage, Work Areas	3.0	
15c	- Roadways / Crossings	2.0-O, 7.0-C, and 8.0-B	
15d	- Dikes	2.0-U and 8.0-B	
15e	- Storage area	2.0-M and 4.0-A-5	
15f	- Lighting	2.0-E	
16	Pre-Construction Meeting	6.0-D	
17	Develop list of contacts (on site, contracting, emergency, & safety)		
17a	- COE (if applicable)		
17b	- MES		
17c	- Contractor	4.4-A-7	
17d	- Subcontractors		
18	Establish routine progress meetings - weekly, bi-weekly, monthly	6.0-A	



ATTACHMENT G - APPENDIX 1

MASONVILLE STANDARDS AND PROCEDURES

STANDARDS AND PROCEDURES FOR PLACEMENT OF DREDGED MATERIAL

MASONVILLE
Dredged Material Containment Facility
Standards and Procedures for Placement of Dredged Material

1.0 STATEMENT OF PURPOSE

The Maryland Department of Transportation Maryland Port Administration (MDOT MPA) is the owner of the Masonville Dredged Material Containment Facility (DMCF), with full authority to authorize or deny use of the DMCF and to determine priorities among placement operations competing for the use of the DMCF, and to issue Rights of Entry for such use. The MDOT MPA has contracted with the Maryland Environmental Service (The Service) for the operation and maintenance of this DMCF. The Standards and Procedures listed herein shall be applied to applications for permission to place dredged material at the DMCF. All provisions of these Standards and Procedures apply equally to all Grantees and the Grantees' contractors, as well as to successful bidders of MDOT MPA and U.S. Army Corps of Engineers dredging projects. The term "Applicant" as used below applies to all such parties.

2.0 GENERAL PROVISIONS

- A. Application: In accordance with COMAR 11.05.06, a person (the "Applicant") shall apply to the MDOT MPA for approval to place dredged material at the DMCF and shall use such application forms and procedures as provided by the MDOT MPA.
- B. Permits: The Applicant shall obtain all necessary federal, state and local permits and approvals, and shall submit copies of these permits and approvals to the MDOT MPA.
- C. Indemnification: The Grantee shall indemnify and hold the MDOT MPA and The Service harmless from and against any and all claims, actions, causes of action, demands, rights, damages, and costs whatsoever arising from any breach or default in the performance of any obligation on the Grantee's part, or arising from any act or omission of the Grantee or any of its agents, contractors or employees, and from and against all costs, attorney's fees, expenses, and liabilities incurred in the defense or resolution of any such claims, causes of action, demands, rights, damages, and costs whatsoever of any action or proceeding brought thereon.
- D. Placement Operations Plan: Prior to any operation at the DMCF, the Grantee shall submit to MDOT MPA and The Service a Placement Operations Plan for materials handling and placement as described in Attachment D of this document. Authorization to Proceed will not be granted until the Placement Operations Plan has been approved by MDOT MPA and/or The Service.
- E. Inspections: The work to be conducted by the Grantee at the DMCF shall be under the general direction of The Service and shall be subject to inspection by the Site Supervisor assigned by The Service, or their designated inspectors, or third-party inspectors retained by The Service or MDOT MPA to ensure strict compliance with the regulations and the operating criteria of the DMCF.

Material handling and unloading equipment, scows, pipelines, and all other pertinent features of the operation are subject to inspection by the Site Supervisor or the designated inspectors. Adequate lighting for thorough inspection of material unloading operations shall be provided by the Grantee for night operations.

F. Revocations: The MDOT MPA and/or The Service acting on behalf of MDOT MPA may immediately revoke its Right of Entry to place dredged material at the DMCF in the event the Grantee:

1. refuses or fails to comply with operating requirements of the DMCF or these Standards and Procedures;
2. refuses or fails to comply with the conditions of any approval given by MDOT MPA or The Service to place dredged material at the DMCF;
3. violates any law or permit related to its activities at the DMCF; or
4. causes damage to the DMCF.

In such cases, a written letter of revocation of the Right of Entry to place dredged material at the facility shall be provided by the MDOT MPA or The Service to the Grantee's on-site representative. All placement of dredged material must cease immediately, and action must be initiated immediately to vacate the facility and to remove all equipment, pipelines, etc. from the DMCF.

G. Suspension: The Site Supervisor assigned by The Service, or their designated inspector, may suspend placement activities at any time the Site Supervisor, in their sole discretion, believes any regulatory requirement affecting the DMCF may be violated by continued operations, or if the Grantee:

1. refuses or fails to comply with operating requirements of the DMCF or these Standards and Procedures;
2. refuses or fails to comply with the conditions of any approval given by MDOT MPA or The Service to place dredged material at the DMCF;
3. violates any law or permit related to its activities at the DMCF;
4. does not immediately correct a safety hazard which, in the sole and complete discretion of The Service, may endanger persons or property, or cause damage to the DMCF or its surrounding waters; or
5. causes damage to the DMCF.

H. Order to Suspend Operations: The Service shall deliver a written order to suspend operations to the Grantee's on-site representative. Such suspension shall remain in effect until such time as the Grantee, at the sole discretion of The Service, has made satisfactory progress toward correcting the hazard or violation, which was cited in the Order to Suspend Operations or until The Service is satisfied, in its sole discretion that the DMCF is able to be operated within regulatory requirements. Refusal or failure by the Grantee to respond to the Order by immediately suspending operations may result in revocation by the MDOT MPA or The Service of the Grantee's Right of Entry to place dredged material at the DMCF.

I. Quality Control System: The Grantee shall maintain an adequate quality control system and employ such measures as will assure that the work performed is in full accordance

with the operating requirements of the DMCF, and within the permits and approvals issued for the work.

- J. Vegetation: The Grantee shall preserve and protect all existing vegetation at the DMCF, such as trees, grass and the like, which is not to be removed and which does not unreasonably interfere with the work. Care will be taken to avoid damage to vegetation which remains in place.
- K. Existing Structures and Utilities: The Grantee shall protect from damage all existing improvements and utilities at or near the DMCF and will immediately report any damage to the Service. The Grantee will repair or restore any damage to such improvements or utilities. If the Grantee fails or refuses to repair any such damage promptly, The Service may have the necessary work performed and the Grantee shall immediately reimburse The Service for the full costs incurred by The Service.
- L. Existing Erosion and Sediment Control (ESC) features: All existing site ESC features including drainage swales, inlet/outlet structures, silt fence, and super silt fence must remain in full permit compliance at all times. Any impacts, modifications or breaches to ESC features must be pre-approved by the Service and comply with MDE standards and details. Any impacts or modifications to ESC features must be restored to original condition at the completion of work. The Grantee is advised that any proposed ESC modifications may require navigating a permit approval or permit modifications process; the duration and ultimate outcome of this process is outside the control of the Owner.
- M. Areas of Operations: All operations of the Grantee (including storage of materials) at the DMCF shall be confined to areas identified in their Placement Operations Plan and authorized or approved by The Service. **Masonville Exhibit A** provides a map of Masonville DMCF showing the location of the area where unloading generally takes place.
- N. Temporary Buildings: Storage sheds, shops, offices, and other temporary buildings may be erected by the Grantee only with the approval of The Service, and shall be built with labor and materials furnished solely by the Grantee without expense to The Service or the MDOT MPA. Such temporary buildings and utilities shall remain the property of the Grantee, or the Grantee's agents or representatives, and shall be removed at their expense upon the completion of the work unless, with the written consent of the MDOT MPA, such buildings and utilities are abandoned to become the property of the MDOT MPA.
- O. Roadways: The Grantee shall use only established roadways or shall construct and use such temporary roadways as may be authorized by The Service. Where materials are transported in the prosecution of the work, vehicles shall be specified to transport high water content material and must not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by The Service. Vehicles hauling dredged material shall have sealed or covered beds that prevent spillage of dredged material during hauling to the designated placement area. Any spilled material must be cleaned up immediately. Failure to observe this requirement will result in suspension of operations. The Grantee shall obey all posted speed limits and adhere to the specified access and egress to the DMCF. All traffic must further reduce speeds in the vicinity of any Service or contractor's activity in the area.

- P. Dust Control: The Grantee shall submit a Dust Control Plan for approval by The Service as a part of the Placement Operations Plan prior to mobilization to the DMCF.

- Q. Decontamination of Inflow and Dredging Equipment: In the event of a Harmful Algal Bloom in the DMCF, the Grantee shall follow the standards and procedures set forth in **Exhibit B** for decontaminating inflow and dredge equipment.

- R. Site Appearance: The Grantee shall at all times keep the work area, including storage areas used by the Grantee, free from accumulations of waste material or rubbish and shall, prior to completion of the work, remove from the DMCF any rubbish, all tools, scaffolding, equipment, materials and other property of the Grantee. During and upon completion of the placement of dredged material, the Grantee shall leave the DMCF in a clean, neat and workmanlike condition satisfactory to The Service. All Grantee equipment and materials must be completely removed within fifteen (15) calendar days upon completion of contractor's activity within the DMCF.
- S. Safety: In order to provide safety controls for protection to the life and health of employees and other persons; for prevention of damage to property, material, supplies, and equipment; and for the avoidance of work interruptions in the performance of this contract, the Grantee shall comply with pertinent provisions of Corps of Engineers Manual EM 385-1-1, dated November 2014 (or latest approved version), and shall also take or cause to be taken such additional measures as The Service may determine to be reasonably necessary for this purpose. The Grantee must also comply with all other Federal, State and Local regulations.
- T. Joint Inspection: A joint inspection shall be undertaken by The Service and the Grantee prior to the Grantee mobilizing to the DMCF. Any damaged structures or deficiencies shall be noted. At the termination of the Grantee's operation, a joint inspection shall be undertaken with The Service to ascertain damage. Any damage attributed to the Grantee's operation shall be immediately repaired by the Grantee. If repairs are not performed in a timely manner, as determined by The Service, The Service shall cause the repairs to be made and the Grantee shall immediately reimburse The Service for the full costs uncured by The Service.
- U. Dikes: All dikes will be inspected daily by The Service for any signs of erosion on the slopes. The Grantee shall locate and position their pipelines in such a way as to ensure that no backwash areas cause any erosion of the dikes. If erosion is caused by the Grantee, then the Grantee, at its sole cost, shall immediately repair the damaged area. The Service, in its sole discretion, may direct the Grantee to cease placement activities pending the completion of repairs to the dikes. The Grantee shall provide suitable and sufficient equipment to protect the dikes and work areas. If repairs are not performed in a timely manner, or are not properly performed to The Service's satisfaction, The Service shall cause the repairs to be made and the Grantee shall immediately reimburse The Service for the full costs incurred by The Service.
- V. Management of Unexploded Ordnance (UXO) and Discarded Military Munitions (DMM): If the Grantee or their contractor discovers the existence of any UXO or DMM in the course of operations, all activities in the area must be temporarily suspended, The Service Site Supervisor must be contacted immediately and the UXO/DMM will be handled in accordance with the DMCF's Standard Operating Procedure for such materials. The Grantee shall include a UXO/DMM plan as part of their Placement Operations Plan.

3.0 ACCESS, STORAGE, WORK AREAS

- A. The Grantee shall confine their operations at the DMCF to those areas specified by the MDOT MPA or The Service. The Grantee may place only equipment necessary for the

work at the DMCF. They shall not store pipe or equipment on the crown or slopes of the dikes, unless authorized by The Service in writing.

- B. If approved by The Service, the Grantee may utilize areas built up with suitable fill as storage, provided such storage does not interfere with traffic or other operations.
- C. Storage space and work areas will be in use by other contractors. The Grantee shall include their plans for storage space in the Placement Operations Plan and shall confine their storage and work areas to space approved by The Service.
- D. The Grantee shall be responsible for ensuring that mud, dust or other contaminants do not leave the boundaries of the Masonville DMCF on trucks or other equipment. The Grantee will be responsible for costs associated with cleaning roadways, railways, etc. contaminated by construction activities.

4.0 REQUIRED SUBMITTALS/REPORTING

A. Placement Operations Plan

Thirty (30) calendar days prior to mobilization to the Masonville DMCF, the Grantee shall submit a detailed Placement Operations Plan for the placement of dredged material into the Masonville DMCF for approval by the MDOT MPA and/or The Service. Authorization to Proceed will not be granted until the Placement Operations Plan has been approved by MDOT MPA and/or The Service. The Placement Operations Plan shall outline all pertinent procedures relating to material unloading, transportation and placement including, at a minimum, the following details:

1. Proposed Commencement and Completion Dates
2. Proposed Hours of Operation: All operations conducted within the boundaries of the Facility or the designated unloading areas shall be coordinated with The Service. The Grantee shall keep the Site Supervisor fully apprised of the Grantee's activities and work schedule. When the Grantee elects to work on weekends, holidays, or nights, the Grantee shall give notice to the Site Supervisor at least four (4) business days in advance thereof.
3. Detailed Description of Material Unloading and Handling Equipment, including all equipment and vehicles to be used on site: The Grantee shall provide certification to The Service that all barges and scows have been properly inspected and meet all regulatory requirements for the transport of dredged material. The Service may inspect, and must approve, the Grantee's scows and barges prior to their use. Only approved scows and barges will be permitted to haul dredged material to the Facility. Overflow of the material from the scows is prohibited, as is any leakage or spillage of material in the unloading area. One foot (1') of freeboard on any scows and barges is required.
4. Production Rates: The Grantee shall provide The Service with the proposed daily production rates for the duration of the work.
5. Storage Requirements: The Grantee shall provide The Service with the proposed storage requirements for the duration of the work.
6. Proposed Berthing and Mooring Arrangements and Locations: The Grantee shall specify a location within the unloading area for their unloading plant for approval.
7. Key Personnel Names and Contact Information: The Grantee shall provide an on-site representative, designated in writing, who shall be available at all times the

- Grantee is actively working at the Facility or has equipment at the Facility, including the Unloading areas.
8. Pipeline Routing, including inflow point(s) assigned to project: The Grantee, at its sole expense, shall advance or relocate the inflow point(s) as directed by The Service to prevent the settled material from accumulating to an excessive elevation exceeding permit or other requirements.
 9. Fuel Spill Plan: The Grantee shall maintain a Fuel Spill Prevention and Containment Plan. The Contractor shall provide documentation of its Fuel Spill Plan as discussed below. Plan must be acceptable to The Service.
 - a) Spill Responsibility: Immediate containment actions shall be taken as necessary to minimize effect of any spill or leak. Cleanup shall be in accordance with applicable federal, state, and local laws and regulations, at no additional cost to The Service.
 - b) Contractor Reporting Requirements: If a spill occurs on or off the site, the Grantee shall immediately notify The Service, the Maryland Department of the Environment (MDE), and the National Response Center (NRC). Additionally, if a spill occurs onsite at the Facility, the Contractor shall immediately notify Maryland Transport Authority (MDTA) Police at 410.633.1092. The Grantee shall also comply with Code of Maryland Regulations (COMAR) 26.10.08.04. A written follow-up shall be submitted to The Service no later than seven (7) calendar days after the initial report. The written report shall be in narrative form and at a minimum include the following:
 - 1) Description of the material spilled
 - 2) Whether the amount spilled is United States Environmental Protection Service (USEPA)/state reportable and when and to whom it was reported
 - 3) Exact time and location of spill, including description of the area involved.
 - 4) Receiving stream or waters.
 - 5) Cause of incident and equipment and personnel involved.
 - 6) Injuries and property damage
 - 7) Duration of discharge
 - 8) Containment procedures initiated
 - 9) Summary of any communications Grantee has with agencies or Government officials other than The Service
 - 10) Description of cleanup procedures employed or to be employed at the site, including disposal location of spill residue
 10. Dust Control Plan: The Grantee will be responsible for providing immediate dust control measures as required to ensure that no dust leaves the boundaries of the Masonville DMCF. Any dust escaping those boundaries may be cause for immediate termination of activities at the Grantee's expense and risk. The Service will be the final authority on dust control requirements and has clear authority from MDOT MPA to shut the contractor down or direct that specific dust control measures be implemented immediately. Mist and spray from the discharge pipeline must be confined to the limits of the DMCF.
 11. Truck Haul Routes: If applicable, due to the mechanical unloading of dredged material. Include measures for ensuring that mud and other contaminants do not leave the boundaries of the DMCF on trucks or other equipment.
 12. Traffic Management Plan: If applicable, due to the mechanical unloading of dredged material or concurrent use of the site by multiple contractors.

13. Dredged Material Spillage Control Plan: The Grantee shall provide a plan that details steps to prevent spills of dredged material, as well as methods to be used for the containment and clean-up of dredged material that is spilled during unloading activities.
14. Final Grading Plan: The Grantee shall return the site to the conditions that were existing prior to unloading activities. This includes the removal of temporary roadways and pipeline crossing ramps.

B. Recirculation Plan

Thirty (30) days prior to mobilization to the Masonville DMCF, the Grantee shall submit a detailed Recirculation Plan which includes a design and plan of operations for recirculation of the slurry make-up water from within the Masonville DMCF for approval by the MDOT MPA and/or The Service. Mobilization to the Masonville DMCF shall not begin until the Recirculation plan is approved. Approval of the Recirculation Plan by the MDOT MPA and/or The Service does not excuse the Grantee from fully complying with all recirculation requirements. The recirculation system shall be in place and operational prior to the placement of dredged material and in addition to ensuring that no recirculation water is spilled outside of the Masonville DMCF, shall include the following details:

1. Flow Rate: Gallons per minute required to support the unloader make-up water system.
2. Piping Schematic and Plans: Including all piping, valves, connections, intakes and intake structures proposed to be utilized by the Grantee
3. Requested Modifications to the Masonville DMCF: To be performed by the Grantee pending MDOT MPA/Service approval.
4. Pump Details: Including size, horsepower, location, etc.
5. Operational Requirements or Special Needs: For example, head required over the recirculation pipe intake, etc.
6. Photos and Video Records: Required for documentation of the initial conditions, modifications and post-use condition of any modifications to the Masonville DMCF.

C. Unloader Area Pre/Post Hydrographic Surveys

After approval of the Placement Operations Plan and prior to a Grantee uses the unloading site(s), a hydrographic survey shall be taken at the Grantee's sole expense to determine existing conditions. Immediately following completion of all unloading activities another hydrographic survey shall be taken at the Grantee's sole expense to determine if any material spillage occurred during the unloading period. These surveys shall extend a minimum of 100 Feet from all Material Unloading and Handling Equipment. A minimum of electronic single beam cross sections on 25-foot station intervals shall be used. All surveys will utilize recognized engineering survey practices to establish elevations, lines, and levels. The Grantee shall use a surveyor licensed in the State of Maryland.

D. Daily Inflow/Recirculation Reports

For every workday during unloading events, the Grantee shall submit a Daily report to The Service. A workday for reporting purposes shall be from midnight to midnight for a given calendar day. The submittal shall be by email or other electronic method as designated by The Service. The report must be completely filled out with all required information and submitted to The Service by 11:00 a.m. local time each day for the previous day's work. The Daily Inflow/Recirculation Reports shall include the following information:

1. Estimated quantity of dredged material in each scow.
2. Whether harbor water or recirculation is being used for slurry make-up water.
 - a) Record of request and permission to use harbor water for slurry make-up water.
3. Inflow and recirculation pipe flow rates for each unloading cycle.
4. Start and Stop times for pump out of each scow.
5. Estimated payload for each scow unloaded.
6. Cumulative inflow for the project.
7. Description of material unloaded from each scow.
8. Inflow location.
9. Description of any situation where dredged material or recirculated water is leaked or spilled into the Patapsco River or around DMCF.
10. Any additional information requested by The Service following review of the Grantee's Placement Operations Plan.

5.0 AUTHORIZATION TO PROCEED

- A. The Grantee may not place dredged material at the DMCF prior to receipt of a fully executed Right of Entry from the MDOT MPA.
- B. The Authorization to Proceed shall be contingent upon the agreement of the Grantee to comply with these Standards and Procedures, the approval of all required submittals by The Service and/or the MDOT MPA, and any other conditions required by the MDOT MPA or The Service for the particular placement operations of the Grantee.

6.0 GENERAL UNLOADING OPERATIONS

- A. General: The Grantee shall supply all equipment and labor for the placement of the dredged material. Direct pumping by hydraulic dredge or hopper dredge into the dike placement area will only be permitted if specifically provided for in the approval issued by the MDOT MPA.
- B. Barge Unloading: MDOT MPA anticipates that the barges will be unloaded hydraulically; however, mechanical unloading may be considered for approval in accordance with the restrictions listed herein.
- C. Interference with other Contractors: The Grantee is advised that multiple contracts may be in effect and that the use of unloading areas and storage areas will be as assigned in

the MDOT MPA approval, or scheduled by The Service, when not specified in the MDOT MPA approval. The Grantee shall coordinate their activities with The Service and other contractors to avoid interference with each other's operations.

- D. Coordination with The Service: All operations conducted within the boundaries of the DMCF or the designated unloading areas shall be coordinated with The Service. The Grantee shall attend pre-construction and progress meetings with the Site Supervisor appointed by The Service and at intervals designated by the Site Supervisor. The Grantee shall keep the Site Supervisor fully apprised of the Grantee's activities. When the Grantee elects to work on weekends, holidays, or nights, the Grantee shall give notice to the Site Supervisor at least four (4) days in advance thereof.
- E. Inflow Point: The designated point of material inflow shall be established by the MDOT MPA for all placement operations. The inflow point(s) may require relocation due to the effects on effluent quality or other special circumstances as solely determined by The Service. Relocation of inflow point(s) shall be achieved within 24 hours notification by The Service. Any material that is placed in areas other than those designated or approved by The Service shall be immediately removed by the Grantee at their expense.
- F. Debris: The Grantee shall not place any debris or non-pumpable materials in the DMCF. Any such material deposited in the DMCF by the Grantee shall be immediately removed by the Grantee at their expense.

7.0 HYDRAULIC BARGE UNLOADING

- A. Pipelines: Pipelines from the unloading plant that must cross into the placement area at the unloading area may not unduly restrict access by others to the unloading area. Only sound, leak-free piping shall be used; pipes worn thin or otherwise subject to leaks or failure shall not be allowed,
 1. The Grantee may lay pipelines only within the areas directed by the MDOT MPA or The Service. The Grantee shall restore areas used in laying and maintaining pipeline to the same or as good condition as existed prior to commencement of work.
 2. The Pipeline will be placed so that there is no interference with traffic or access on the existing roadway, roadway markers, liner, wells, pumps, equipment, benchmarks, piezometers or other instrumentation. The portion of the pipeline paralleling the roadway shall be within three feet (3') of the edge of the road surface.
 3. The Grantee shall at all times use all means necessary to protect the containment cell liner. Should the liner be damaged by the Grantee, the Grantee shall immediately notify The Service and at their sole expense have the liner repaired using a qualified contractor approved by the MDOT MPA and The Service. All repairs must be completed to the satisfaction of MDOT MPA and The Service.
- B. Leaks: In the event that a leak occurs anywhere in the pipelines, the Grantee shall immediately discontinue using the pipelines until the leaking section or sections of the pipe are removed and replaced with sound, leak-free piping and the leaks stopped. The Grantee shall recover, at no cost to The Service, any material improperly placed because of leaks in the pipe as well as repair any damage to roads, dikes or other DMCF property.

- C. Road Crossings: Pipeline road crossings may be accomplished by construction of suitable ramps. A minimum of twenty-four inches (24") shall be maintained between any electric service line and any piping installation. Prior to commencing work, the Contractor must contact The Service representative on the site at least forty-eight (48) hours in advance to coordinate the interruption of traffic and to ascertain the location of any utilities or obstructions. The Grantee shall be required to make any necessary repairs immediately. Ramps shall be constructed using GAB, CR-6 or approved alternate materials, maintained and properly marked by the Grantee for safe day and night passage of normal traffic including vehicle, heavy equipment and loaded dump trucks in the area until completion of the work and subsequent removal of the ramps. All labor and materials (stone, etc.) needed to construct pipe crossing ramps will be supplied by the Grantee. The ramps shall be constructed with a minimum width of road surface conforming to the width of the existing roadway. A minimum twenty foot (20') wide flat berm will be centered on the pipeline crossing. The slope approaches to the ramp berm will be no steeper than one vertical on twenty horizontal (1:20). When dredge pipeline crossings are removed after the completion of work, the crossing areas will be restored to the condition existing prior to pipe installation and ramp construction.
- D. Recirculation: The Grantee shall provide the equipment, materials, and labor necessary to re-circulate slurry make-up water from within the Masonville DMCF for use in the dredged material unloading operations in lieu of obtaining such water from the Patapsco River. The MDOT MPA reserves the right to waive this requirement pending evaluation of Masonville DMCF site conditions and the Placement Operations Plan. The Service will control the water surface elevation with the Masonville DMCF and the discharge of water to the Patapsco River. The Grantee will be required to recirculate slurry make-up water from the Masonville DMCF as directed by The Service and when the site water surface elevation and pond water volumes are sufficient to allow recirculation in accordance with the approved design and Recirculation Plan. The Grantee is required to request and obtain permission from The Service to utilize slurry make-up water from the Patapsco River prior to start-up of operations and following the use of recirculation. The Grantee's operations for recirculation must not impede The Service's ability to operate the Masonville DMCF, in particular, operations required for discharge of water. MDOT MPA/The Service's approval of the Recirculation Plan does not excuse the Grantee from fully complying with the recirculation requirements. The Grantee will be responsible for damages to the site during installation, removal, and operation of the recirculation systems. The Grantee shall not dig or excavate into the dike without written approval from The Service.
- E. Unloading Area and Barge Moorings: The Grantee arrangement and location of the Hydraulic Unloader, material scows, pipelines and attendant plant will be subject to approval of The Service. Mooring and spudding areas will be restricted to avoid areas surrounding spillway diffusers, the 48" water main, and navigational channels. No mooring or spudding is permissible west of Station 22+82.84 along the DMCF.

Please refer to **Exhibit A** for recommended unloader mooring areas. Other areas may be considered for approval provided they follow the restrictions listed herein. All moored or anchored equipment must maintain a 100 Foot buffer from the Ferry Bar Channel, and a 150 Foot buffer from the 48" water main and all DMCF spillways. It is the Grantee's responsibility to notify Miss Utility to verify the precise location of all utility,

cable and transportation crossings. Refer to **Exhibit A** as well for data on abandoned BGE cables partially removed in 2007. The unloading areas will not be available for the exclusive use of the Grantee and any mooring plans will be coordinated and approved by The Service.

- F. Shoaling: If any material is found in the Unloader Area and/or Barge Moorings, it will be immediately dredged by the Grantee and placed in the DMCF and the river bottom will be returned to its pre-unloading condition before the Grantee leaves the site.

8.0 MECHANICAL BARGE UNLOADING

- A. General: A pier is not available for the Grantee's use for mechanical unloading of barges. The Grantee may establish a mechanical unloading operation provided the plan of operations is acceptable to The Service and MDOT MPA, and assures that:

1. The material is placed at the designated point of discharge;
2. All access and egress are maintained in satisfactory condition;
3. Adequate dust control measures are in place as outlined above;
4. Spillage of material is prevented both in the unloading area and on the roadway;
5. Interference with traffic and other placement area operations is kept to a minimum;
6. No equipment is moored so as to directly or indirectly transmit forces to any MDOT MPA-owned structure.

- B. Perimeter Dike Roadways: The Grantee is advised that their roadway haul route may require extensive maintenance or reconstruction if subjected to heavy traffic loads. The roadway is to be maintained in satisfactory condition at all times by the Grantee and the Grantee shall promptly repair any damage caused by their operation. The Service may redirect the Grantee's truck/vehicle traffic due to poor or unsafe road conditions as determined solely by The Service. The Grantee will submit their proposed truck haul routes for approval in the Placement Operations Plan.

- C. Spills: In the event that any dredged material being handled by mechanical means spills into the waterways of the Patapsco River, on the exterior face of the dike, or on the dike roadway, the Grantee shall immediately take steps to prevent further occurrence, including shut down of operation if such spillage was due to the need to repair or modify their equipment to prevent such spillage. The Grantee shall recover and place the material into the designated location in the DMCF at no cost to The Service. The Grantee shall also have adequate spill kit materials on-site to minimize the effects of any fuel or oil spills.

9.0 MECHANICAL TRUCK UNLOADING

- A. General: The Grantee may establish a mechanical unloading operation via trucking, provided the plan of operations is acceptable to The Service and MDOT MPA, and assures that:

1. The material is dumped at the designated point of placement;
2. All access and egress are maintained in a satisfactory condition;
3. Adequate dust control measures are in place as outlined above;
4. Spillage of material in the roadway is prevented; and
5. Interference with traffic and other placement area operations is kept to a minimum.

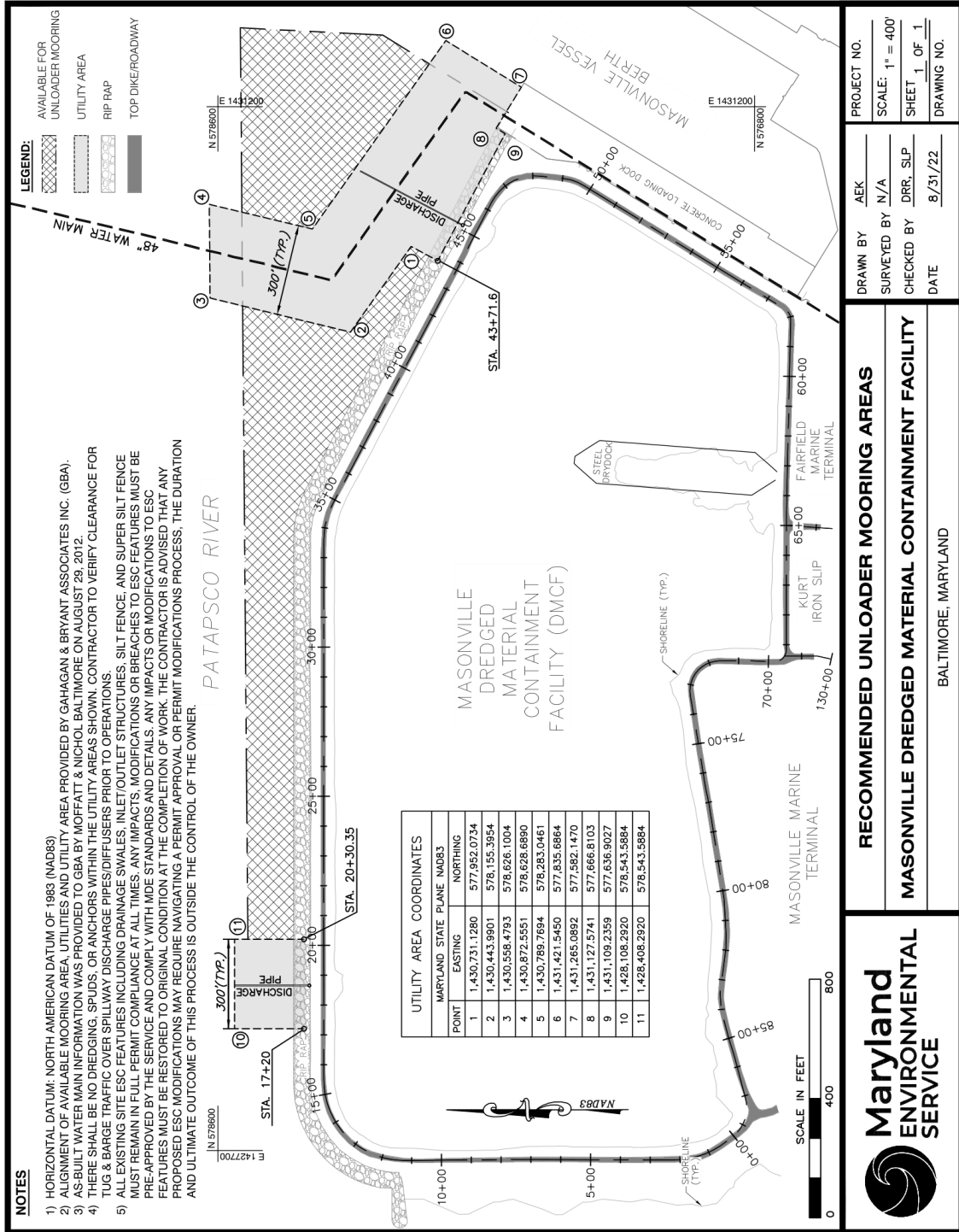
- B. Spills: Trucks hauling the dredged material shall have sealed beds to prevent leakage of dredged material on the roads. The Contractor may be required to use turn buckle locks to ensure a tight seal and prevent leakage of dredged material. In the event that any dredged material being handled by mechanical means spills into the waterways of the Patapsco River, on the exterior face of the dike, or on the dike roadway, the Grantee shall immediately take steps to prevent further occurrence, including shut down of operation if such spillage was due to the need to repair or modify their equipment to prevent such spillage. The Grantee shall recover and place the material into the designated location in the DMCF at no cost to The Service. The Grantee shall also have adequate spill kit materials on-site to minimize the effects of any fuel or oil spills.

Masonville Exhibit A

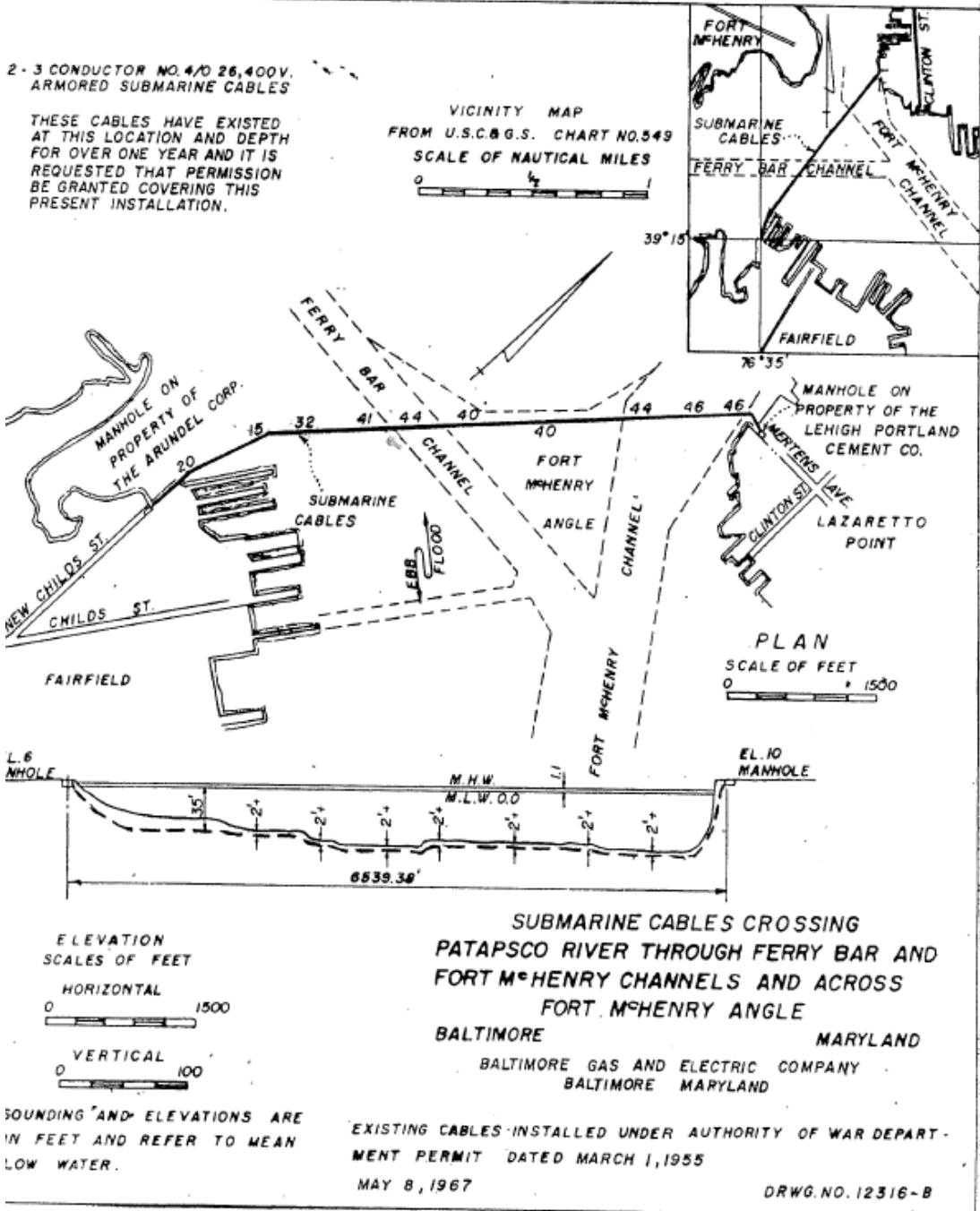
**RECOMMENDED UNLOADER MOORING AREAS AND
BGE CABLES HISTORIC DATA**

MASONVILLE
DREDGED MATERIAL CONTAINMENT FACILITY

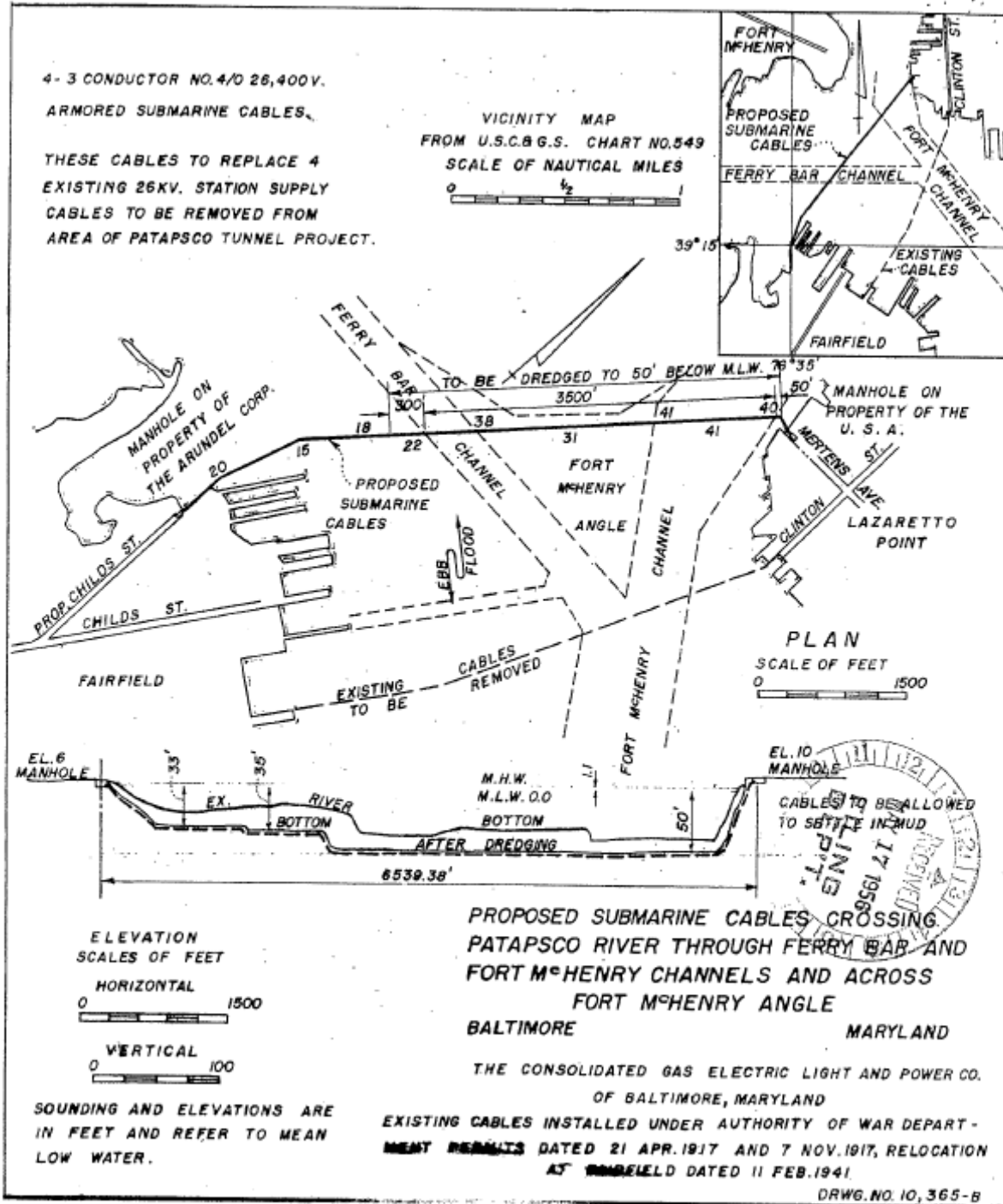
MASONVILLE EXHIBIT A – RECOMMENDED UNLOADER MOORING AREAS (SHEET 1 OF 1)



MASONVILLE EXHIBIT A – BGE CABLES HISTORIC DATA (SHEET 1 OF 4)



MASONVILLE EXHIBIT A – BGE CABLES HISTORIC DATA (SHEET 2 OF 4)



MASONVILLE EXHIBIT A - BGE CABLES HISTORIC DATA (SHEET 3 OF 4)

Page 2

DEPARTMENT OF TRANSPORTATION
 U. S. COAST GUARD
 CG-2554 (Rev. 5-69)

PRIVATE AIDS TO NAVIGATION APPLICATION
 (See attached instructions and copy of Code of Fed. Reg., Title 33, Chap. 1, Part. 66)

Form Approved Budget Bureau
 No. 04-R3014

1. ACTION REQUESTED FOR PRIVATE AIDS TO NAVIGATION: A. ESTABLISH AND MAINTAIN B. DISCONTINUE C. CHANGE D. TRANSFER OWNERSHIP

2. DATE ACTION TO START Upon receipt of approval TO _____

3. AIDS WILL BE OPERATED: A. THROUGHOUT YEAR B. TEMPORARILY UNTIL _____ C. ANNUALLY FROM _____ TO _____

4. NECESSITY FOR AID (Continue in Block 6)
 See B Below
 GENERAL LOCALITY
Patuxent River - Balto Harbor off Fort Mchenry

5. CORPS OF ENGINEERS AUTHORIZED THIS STRUCTURE OR BUOY BY
 PERMIT OR LETTER (file and date)

7. APPLICANT WILL FILL IN APPLICABLE REMAINING COLUMNS

LIGHT LIST NUMBER AND PAGE	NAME OF AID	NO. OR LTR. (72)	LIGHT		POSITION (74)	DEPTH IN FEET OF BLEND ABOVE WATER (75)	STRUCTURE TYPE, COLOR AND HEIGHT ABOVE GROUND (77)	REMARKS (See Instructions) (78)
			PER. (73)	FLASH (76)				
394	Cable Buoy	A			N39 deg. 14'59" $\frac{Z}{Z}$ W76 deg. 35'01" $\frac{Z}{Z}$	20' $\frac{Z}{Z}$ LWD	Int. Or. & WH.VS	
"	"	C			N39 deg. 15' 10 1/2" $\frac{Z}{Z}$ W76 deg. 34' 55 1/2" $\frac{Z}{Z}$	20' $\frac{Z}{Z}$ LWD	Int. Or. & WH.VS	

8. ADDITIONAL COMMENTS
 26 kv submarine cables have been deenergized and abandoned.
 (Installation permits issued 6-15-1955)

9. NAME AND ADDRESS OF PERSON IN DIRECT CHARGE OF AID
 C.B. Bechtel
 PO Box 1475
 Baltimore, Maryland 21203

10. NAME AND ADDRESS OF PERSON OR COMPANY MAINTAINING AID IS
 Baltimore Gas & Electric Company
 PO Box 1475
 Baltimore, Maryland 21203

10a. THE APPLICANT AGREES TO WAIVE THE CONSENT RIGHTS OF THE UNITED STATES GOVERNMENT IN ANY CLAIM FOR DAMAGES THAT MAY RESULT FROM THE ALLEGED NEGLIGENCE OF THE MAINTENANCE OR OPERATION OF THE APPROVED AID(S).

10c. DATE
 2/22/78

10d. SIGNATURE AND TITLE OF OFFICIAL SIGNING
Gerome W. Sader
 General Supr., Project Engineering

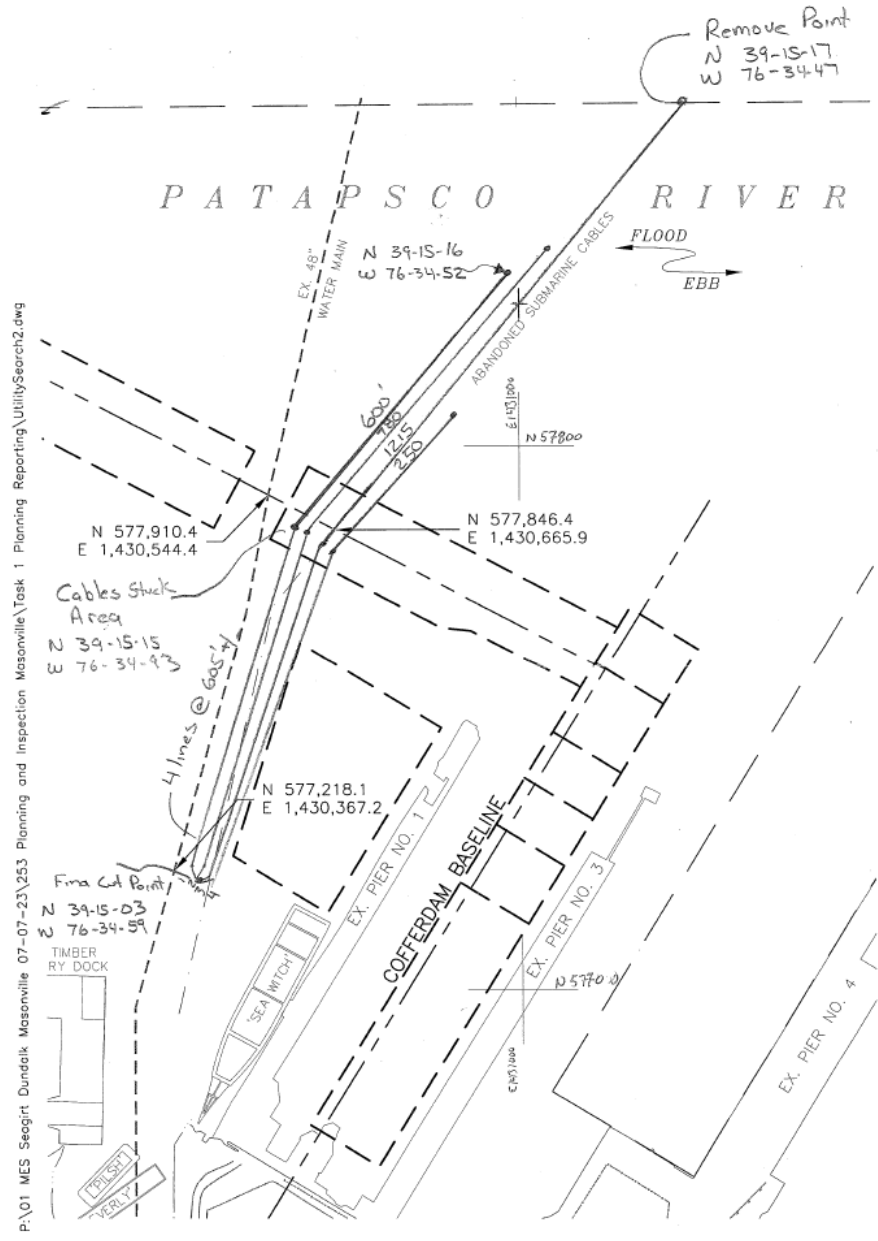
DATE APPROVED BY DISTRICT COMMANDER (Date and Direction)
 3/7/78
Leo V. Donohoe
 LEO V. DONOHOE, CAPT., USCG

10e. TELEPHONE NO.
 1-301-234-5641

FOR USE BY DISTRICT COMMANDER
 SERIAL NO. CLASSIFICATION OF AIDS
 05-04-78 (D) Class I

PRINT 60058 EDITION MAY BE USED

MASONVILLE EXHIBIT A – BGE CABLES HISTORIC DATA (SHEET 4 OF 4)



Line #1	+/-	1205'
Line #2	+/-	1385'
Line #3	+/-	1820'
Line #4	+/-	855'

Total Line Removed
 5265' +/-



MASONVILLE EXHIBIT B

**STANDARD OPERATING PROCEDURES FOR HARMFUL ALGAL BLOOM
DECONTAMINATION OF INFLOW AND DREDGING EQUIPMENT MASONVILLE
DREDGED MATERIAL CONTAINMENT FACILITY**

Standard Operating Procedures for Harmful Algal Bloom Decontamination of Inflow and Dredging Equipment Masonville Dredged Material Containment Facility

2017

1.0 SCOPE AND APPLICATION

The purpose of this Standard Operating Procedure (SOP) is to describe the methods for preventing or limiting contamination of Harmful Algal Blooms (HAB) and any associated toxin to environments exterior of the Masonville Dredged Material Containment Facility (DMCF) due to inappropriate or inadequate equipment decontamination and to provide general guidelines for developing decontamination procedures for inflow and dredging equipment.

The procedures in this SOP may be varied or changed as required, dependent on-site conditions, equipment limitations or other procedural limitations. In all instances, the procedures employed must be documented in a field log book.

2.1 METHOD SUMMARY

Removing or neutralizing HABs from equipment minimizes the possibility of contamination to environments outside of the DMCF and reduces or eliminates transfer of contaminants to clean areas. Some equipment may have specific decontamination procedures that do not follow this SOP. Refer to the user manual for each piece of equipment before utilizing this SOP.

Gross contamination can be removed with non-abrasive methods that include the use of high temperature high pressure water cleaning on the outside of contaminated pipes and low or high pressure rinsing and subsequent flushing of river water through contaminated pipes and scows. Throughout all washing, rinsing, and flushing procedures, at no instance should water be released into the Patapsco River. All high-pressure hot water and Patapsco River water must flow to and be discharged into the Masonville DMCF. The hot water temperature should be the maximum temperature the pressure washer allows (approximately 200°F).

A generalized decontamination procedure is:

1. Hot water high pressure wash of the outside of equipment that was used within the DMCF including pipes, boats, and earth moving equipment
2. Air dry if possible
3. Patapsco River water rinse and flush through inflow and recirculation pipes and scows (if flushing the recirculation pipes is not possible, please follow procedure 1 and 2 for both the outside and inside of the pipe)
4. Air dry if possible

Modifications to the standard procedure are required to be documented in the field log book and subsequent reports. All equipment is required to be decontaminated before leaving the site.

3.0 INTERFERENCES AND POTENTIAL PROBLEMS

When decontaminating equipment when temperatures are below freezing, water may freeze in the pump spray hoses lines, tanks and in buckets/pails, etc. Additionally, equipment will require longer drying times. Make sure that the decontamination station is set up as not to compromise a clean environment.

4.0 EQUIPMENT/APPARATUS

Decontamination equipment is selected based on the type of equipment to be cleaned and anticipated contaminants to be removed. For example, hot water pressure washers such as those provided by Hotsy® would be the appropriate apparatus for rinsing the exterior of inflow and recirculation pipes.

4.1. Decontamination Tools/Supplies:

The following standard materials and equipment are recommended for decontamination activities:

- Hot water pressure washer
- High powered pump
- Electrical cords
- Work lights (if working in the dark)
- Generator (if using a submersible pump or lights)
- Unloader

4.2. Health and Safety Equipment

The use of personal protective equipment (PPE), (i.e. safety glasses, splash shield, Tyvek® suits, nitrile gloves, aprons or coveralls, steel toe boots, etc.), is required. Refer to the site-specific Harmful Algal Bloom (HAB) site safety guidance and the Health and Safety Plan (HASP) for site-specific requirements.

4.3. Waste Disposal

Water waste will flow or be pumped into the Masonville DMCF.

5.0 REAGENTS

This section is not applicable to this SOP.

6.0 PROCEDURES

A decontamination area will be identified by Maryland Environmental Service. Weather conditions (i.e. hot, cold, rain, snow, etc.) play an important role in the decontamination process. Plan accordingly and consider your working conditions prior to decontamination activities.

A decontamination plan needs to be implemented and includes:

- Decontamination equipment
- Selection of appropriate decontamination methods
- Methods of disposal of all investigative derived waste (i.e. PPE, solid and liquid waste, etc.)
- Work practices that minimize contact with potential contaminants
- Protection procedures for monitoring and sampling equipment (i.e. covering with plastic, etc.) which are addressed in the onsite HAB Monitoring SOP 2016
- Considerations related to weather conditions

6.1. Decontamination Methods

All equipment removed from the site must be decontaminated, removing all contamination that may have adhered to the equipment. Various decontamination methods remove contaminants by washing with water.

Decontamination methods are non-abrasive and listed below:

6.1.1 Non-Abrasive Cleaning Methods

Non-abrasive cleaning methods work by forcing the contaminant off a surface with water pressure (i.e. sprayer or pressure washer).

High-Pressure Water

This method consists of the use of a hot temperature high power pressure washer. The hot water temperature should be the maximum temperature the pressure washer allows (approximately 200°F). The operator controls the directional nozzle which is attached to a high-pressure hose. Operating pressure usually ranges from 400 – 600 pounds per square inch (PSI). Scrubbing with large brushes can be used to aid in the decontamination process.

Rinsing and Flushing

Contaminants remaining inside the pipes and scows are removed by thorough rinsing and subsequent flushing with the use of Patapsco River water. The rinsing and flushing are done using a pump, hoses, and dredging unloader equipment.

6.2. Inflow and Dredging Equipment Decontamination Procedures

6.2.1. Decontamination Setup

1. The decontamination area is to be chosen based on appropriate drainage into the Masonville DMCF. Under no circumstances should runoff or back spray end up outside of the DMCF. Work with the On-Site Manager to assign a location for these activities to take place on-site.
2. Stage the appropriate equipment (i.e. hot water pressure washer) within the area chosen that would allow for runoff and spray back to flow into the DMCF.
3. Connect all hoses and fill the pressure washer with fuel.
4. Dress out in the appropriate PPE (refer to the site-specific HAB and HASP). At a minimum, Tyvek®, safety glasses/goggles, splash shield, steel toe boots, and nitrile gloves must be worn when utilizing the pressure washer to remove HAB. If handling any equipment (i.e. drill rods, etc.) work gloves must also be worn to prevent possible injury. For site specific requirements refer to the site-specific HASP.

6.2.2. *Decontamination Procedures*

Decontamination process for Harmful Algal Blooms

1. Place the hot water pressure washer in the chosen decontamination area. Ensure the unit is functioning at the proper water (spray) temperature.
2. Spray the outside of the inflow and recirculation pipes with the pressure washer as they are being removed from the cell.
3. Using a pump within the Patapsco River and unloading equipment rinse, and flush pipes, and scows with river water. If flushing the recirculation pipes is not possible, follow procedure 5 for both the outside and inside of the pipe.
4. Release all water that was used for scow, unloading equipment, and pipe rinsing into the DMCF for containment.
5. Once flushed, rinse the outside of the inflow and recirculation pipes with the pressure washer as they are being removed from the cell.

6.2.3. *Post Decontamination Procedures*

1. Empty the pressure washer filled with water into the DMCF.
2. Ensure that decontaminated equipment does not have further contact with DMCF cell water.
3. Arrange for the pressure washer to be returned to the vendor.
4. Return any additional equipment used to the appropriate storage location.
5. Remove all decontaminated equipment from the site.
6. Dispose of all Personal Protective Equipment (PPE) onsite in plastic bags. Coordination with Maryland Environmental Service for appropriate locations.

6.3. ***Decontamination of Earth Moving Equipment and Accessories***

The decontamination of earth moving equipment and their accessories will require the use of a pressure washer. Finally, a designated area on-site needs to be designated as a decontamination area. Work with the On-Site Manager to assign a location for these activities to take place on-site.

6.3.1. *Decontamination Set-up Procedures:*

1. Move the equipment into the decontamination area.
2. Stage all decontamination equipment and supplies (i.e. Pressure Washer, Hoses, PPE, etc.).
3. Connect all hoses and fill the pressure washer with fuel.
4. Dress out in the appropriate PPE (refer to the site-specific HAB and HASP). At a minimum, Tyvek[®], safety glasses/goggles, splash shield, steel toe boots, and nitrile gloves must be worn. If handling any equipment (i.e. drill rods, etc.) work gloves must also be worn to prevent possible injury. For site specific requirements refer to the site-specific HASP.

6.3.2. *Decontamination Cleaning Procedures:*

1. Physically remove as much of the visible material as possible from the heavy equipment after use. If contaminated material is suspected as determined by visual observations, instrument readings, or other means, collect material in an appropriate waste container.
2. Place the heavy equipment in the decontamination area. Verify that decontamination area will allow for any waste water to flow into the DMCF.
3. Power on the pressure washer and begin cleaning from the top to the bottom. Thoroughly clean parts of the heavy machinery that come into contact with visible material (such as tires, bucket, augers, drill rods, tracks and the back and underneath of the drill rig). Scrub areas with excessive dirt/debris with large bristle brushes. A flat head shovel can be used to aid in the removal of the dirt/debris. Continue cleaning until all visible contamination has been removed.

6.3.3. *Post Decontamination Procedures*

1. Empty the contents of the pressure washer into the DMCF.
2. Ensure that decontaminated equipment does not have further contact with DMCF cell water.

3. Arrange for the pressure washer to be returned to the vendor.
4. Make arrangements for the pressure washer to be removed from the site.
5. Remove all earth moving heavy equipment from the site.

7.0 CALCULATIONS

This section is not applicable to this SOP.

8.0 QUALITY ASSURANCE/QUALITY CONTROL

Documentation of the decontamination process including methods employed, date, time and personnel that conducted the decontamination activities must be recorded in a field logbook. Record manufacturer and lot numbers of the equipment used for the decontamination procedures.

9.0 DOCUMENTATION AND DATA VALIDATION

Documentation verification (completeness checks) must be conducted to ensure that all inputs are present for ensuring the availability of sufficient information. This information is essential to providing an accurate and complete final record.

10.0 HEALTH AND SAFETY

When working with potentially hazardous materials, follow all applicable HASP and HAB Site SOPs.

The decontamination process can pose hazards under certain circumstances. Hazardous substances may be incompatible with decontamination materials. For example, the decontamination solution may react with contaminants to produce heat, explosion, or toxic products. Also, vapors from decontamination solutions may pose a direct health hazard to workers by inhalation, contact, fire, or explosion.

If decontamination materials pose a health hazard, measures are to be taken to protect personnel. Alternatively, substitutions can be made to eliminate the hazard.

11.1 HARMFUL ALGAL BLOOM (HAB) FACT SHEET



Ponded water at the Dredged Material Containment Facilities (DMCFs) and Poplar Island has the potential to contain HABs. All sites, Cox Creek and Masonville DMCFs and Poplar Island, are monitored for the presence of HABs. To date, on Poplar Island and Masonville DMCF, HABs have consisted of the cyanobacteria *Microcystis aeruginosa*, which has the potential to produce microcystin, a hepatotoxin (affecting the liver) that can affect wildlife and human health. The World Health Organization's and state of Maryland's **no contact** threshold for microcystin concentration is 10 ppb ($\mu\text{g/L}$). The Maryland **no contact** bloom level is 40,000 cells/mL.

What does an HAB look like?

- Foam, scum, or mats on the surface of the water (sometimes looks like paint)
- Bluish, bright green, brown, or red color
- Foul smell

Proper personal protective equipment (PPE) includes:

- **No contact if bloom level is above 40,000 cells and/or toxin levels are above 10 ppb**
- Safety glasses
- Nitrile gloves
- Face shield (if near water vapor and/or spray)
- Long sleeves and pants (if near water vapor and/or spray)

Effects of exposure:

- Ingestion of significant levels of toxin can cause liver damage and dysfunction.
- Ingestion or inhalation of water containing dense bloom material may cause nausea, vomiting, and dizziness.
- Contact with skin may cause irritation and rashes.

What to do when working near an HAB:

- No contact if bloom levels are higher than 40,000 cells or toxin levels are above 10 ppb.
- Always wear proper PPE.
- Wash any body area that comes in contact with the water with soap as soon as possible.
- Always wash your hands before eating, drinking, or smoking after contact with the water.



ATTACHMENT G - APPENDIX 2

COX CREEK STANDARDS AND PROCEDURES

STANDARDS AND PROCEDURES FOR PLACEMENT OF DREDGED MATERIAL

COX CREEK
Dredged Material Containment Facility
Standards and Procedures for Placement of Dredged Material

1.0 STATEMENT OF PURPOSE

The Maryland Department of Transportation Maryland Port Administration (MDOT MPA) is the owner of the Cox Creek Dredged Material Containment Facility (DMCF), with full authority to authorize or deny use of the DMCF and to determine priorities among placement operations competing for the use of the DMCF, and to issue Rights of Entry for such use. The MDOT MPA has contracted with the Maryland Environmental Service (The Service) for the operation and maintenance of this DMCF. The Standards and Procedures listed herein shall be applied to applications for permission to place dredged material at the DMCF. All provisions of these Standards and Procedures apply equally to all Grantees and the Grantees' contractors, as well as to successful bidders of MDOT MPA and U.S. Army Corps of Engineers dredging projects. The term "Applicant" as used below applies to all such parties.

2.0 GENERAL PROVISIONS

- A. Application: In accordance with Code of Maryland Regulations (COMAR) 11.05.06, a person (the "Applicant") shall apply to the MDOT MPA for approval to place dredged material at the DMCF and shall use such application forms and procedures as provided by the MDOT MPA.
- B. Permits: The Applicant shall obtain all necessary federal, state and local permits and approvals, and shall submit copies of these permits and approvals to the MDOT MPA.
- C. Indemnification: The Grantee shall indemnify and hold the MDOT MPA and The Service harmless from and against any and all claims, actions, causes of action, demands, rights, damages, and costs whatsoever arising from any breach or default in the performance of any obligation on the Grantee's part, or arising from any act or omission of the Grantee or any of its agents, contractors or employees, and from and against all costs, attorney's fees, expenses, and liabilities incurred in the defense or resolution of any such claims, causes of action, demands, rights, damages, and costs whatsoever of any action or proceeding brought thereon.
- D. Placement Operations Plan: Prior to any operation at the DMCF, the Grantee shall submit to MDOT MPA and The Service a Placement Operations Plan for materials handling and placement as described in this document. Authorization to Proceed will not be granted until the Placement Operations Plan has been approved by MDOT MPA and/or The Service.
- E. Inspections: The work to be conducted by the Grantee at the DMCF shall be under the general direction of The Service and shall be subject to inspection by the Site Supervisor assigned by The Service, or their designated inspectors, or third party inspectors retained by The Service or MDOT MPA to insure strict compliance with the regulations and the operating criteria of the DMCF.

Material handling and unloading equipment, scows, pipelines, and all other pertinent features of the operation are subject to inspection by the Site Supervisor or the designated inspectors. Adequate lighting for thorough inspection of material unloading operations shall be provided by the Grantee for night operations.

F. Revocations: The MDOT MPA and/or The Service acting on behalf of MDOT MPA may immediately revoke its Right of Entry consent to place dredged material at the DMCF in the event the Grantee:

1. refuses or fails to comply with operating requirements of the DMCF or these Standards and Procedures;
2. refuses or fails to comply with the conditions of any approval given by MDOT MPA or The Service to place dredged material at the DMCF;
3. violates any law or permit related to its activities at the DMCF; or
4. causes damage to the DMCF.

In such cases, a written letter of revocation of the Right of Entry to place dredged material at the facility shall be provided by the MDOT MPA or The Service to the Grantee's on-site representative. All placement of dredged material must cease immediately, and action must be initiated immediately to vacate the facility and to remove all equipment, pipelines, etc. from the DMCF.

G. Suspension: The Site Supervisor assigned by The Service, or their designated inspector, may suspend placement activities at any time the Site Supervisor, in their sole discretion, believes any regulatory requirement affecting the DMCF may be violated by continued operations, or if the Grantee:

1. refuses or fails to comply with operating requirements of the DMCF or these Standards and Procedures;
2. refuses or fails to comply with the conditions of any approval given by MDOT MPA or The Service to place dredged material at the DMCF;
3. violates any law or permit related to its activities at the DMCF;
4. does not immediately correct a safety hazard which, in the sole and complete discretion of The Service, may endanger persons or property, or cause damage to the DMCF or its surrounding waters; or
5. causes damage to the DMCF or to the environment.

H. Order to Suspend Operations: The Service shall deliver a written order to suspend operations to the Grantee's on-site representative. Such suspension shall remain in effect until such time as the Grantee, at the sole discretion of The Service, has made satisfactory progress toward correcting the hazard or violation, which was cited in the

Order to Suspend Operations or until The Service is satisfied, in its sole discretion that the DMCF is able to be operated within regulatory requirements. Refusal or failure by the Grantee to respond to the Order by immediately suspending operations may result in revocation by the MDOT MPA or The Service of the Grantee's Right of Entry to place dredged material at the DMCF.

- I. Quality Control System: The Grantee shall maintain an adequate quality control system and employ such measures as will assure that the work performed is in full accordance with the operating requirements of the DMCF, and within the permits and approvals issued for the work.
- J. Vegetation: The Grantee shall preserve and protect all existing vegetation at the DMCF, such as trees, grass and the like, which is not to be removed and which does not unreasonably interfere with the work. Care will be taken to avoid damage to vegetation which remains in place.
- K. Existing Structures and Utilities: The Grantee shall protect from damage all existing improvements and utilities at or near the DMCF and will immediately report any damage to the Service. The Applicant will repair or restore any damage to such improvements or utilities. If the Grantee fails or refuses to repair any such damage promptly, The Service may have the necessary work performed and the Grantee shall immediately reimburse The Service for the full costs incurred by The Service.
- L. Existing Erosion and Sediment Control (ESC) features: All existing site ESC features including drainage swales, inlet/outlet structures, silt fence, and super silt fence must remain in full permit compliance at all times. Any impacts, modifications or breaches to ESC features must be pre-approved by the Service and comply with MDE standards and details. Any impacts or modifications to ESC features must be restored to original condition at the completion of work. The Grantee is advised that any proposed ESC modifications may require navigating a permit approval or permit modifications process; the duration and ultimate outcome of this process is outside the control of the Owner.
- M. Areas of Operations: All operations of the Grantee (including storage of materials) at the DMCF shall be confined to areas identified in their Placement Operations Plan and authorized or approved by The Service. **Cox Creek Exhibit A** provides a map of Cox Creek DMCF showing the location of the pier area where unloading generally takes place.
- N. Temporary Buildings: Storage sheds, shops, offices, and other temporary buildings may be erected by the Grantee only with the approval of The Service, and shall be built with labor and materials furnished solely by the Grantee without expense to The Service or the MDOT MPA. Such temporary buildings and utilities shall remain the property of the Grantee, or the Grantee's agents or representatives, and shall be removed at their expense upon the completion of the work unless, with the written consent of the MDOT MPA, such buildings and utilities are abandoned to become the property of the MDOT MPA.
- O. Roadways: The Grantee shall use only established roadways or shall construct and use such temporary roadways as may be authorized by The Service. Where materials are



transported in the prosecution of the work, vehicles shall be specified to transport high water content material and must not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by The Service. Vehicles hauling dredged material shall have sealed or covered beds that prevent spillage of dredged material during hauling to the designated placement area. Any spilled material must be cleaned up immediately. Failure to observe this requirement will result in suspension of operations. The Grantee shall obey all posted speed limits and adhere to

the specified access and egress to the DMCF. All traffic must further reduce speeds in the vicinity of any Service or contractor's activity in the area.

- P. Dust Control: The Grantee will submit a Dust Control Plan for approval by The Service as a part of the Placement Operations Plan prior to mobilization to the DMCF.
- Q. Decontamination of Inflow and Dredging Equipment: In the event of a Harmful Algal Bloom inside the DMCF (and upon direction of The Service), the Grantee shall follow the standards and procedures set forth in **Cox Creek Exhibit B** when decontaminating inflow and dredge equipment.
- R. Site Appearance: The Grantee shall at all times keep the work area, including storage areas used by the Grantee, free from accumulations of waste material or rubbish and shall, prior to completion of the work, remove from the DMCF any rubbish, all tools, scaffolding, equipment, materials and other property of the Grantee. During and upon completion of the placement of dredged material, the Grantee shall leave the DMCF in a clean, neat and workmanlike condition satisfactory to The Service. All Grantee equipment and materials must be completely removed within fifteen (15) calendar days upon completion of contractor's activity within the DMCF.
- S. Safety: In order to provide safety controls for protection to the life and health of employees and other persons; for prevention of damage to property, material, supplies, and equipment; and for the avoidance of work interruptions in the performance of this contract, the Grantee shall comply with pertinent provisions of Corps of Engineers Manual EM 385-1-1, dated November 2014 (or latest approved version), and shall also take or cause to be taken such additional measures as The Service may determine to be reasonably necessary for this purpose. The Grantee must also comply with all other Federal, State and local regulations.
- T. Joint Inspection: A joint inspection of the facility shall be undertaken by The Service and the Grantee prior to the Grantee mobilizing to the DMCF. Any damaged structures or deficiencies shall be noted. At the termination of the Grantee's operation, a joint inspection shall be undertaken with The Service to ascertain damage. Any damage attributed to the Grantee's operation shall be immediately repaired by the Grantee. If repairs are not performed in a timely manner, as determined by The Service, The Service shall cause the repairs to be made and the Grantee shall immediately reimburse The Service for the full costs uncured by The Service.
- U. Dikes: All dikes will be inspected daily by The Service for any signs of erosion on the slopes. The Grantee shall locate and position their pipelines in such a way as to ensure that no backwash areas cause any erosion of the dikes.

If erosion is caused by the Grantee, then the Grantee, at its sole cost, shall immediately repair the damaged area. The Service, in its sole discretion, may direct the Grantee to cease placement activities pending the completion of repairs to the dikes. The Grantee shall provide suitable and sufficient equipment to protect the dikes and work areas. If repairs are not performed in a timely manner, or are not properly performed to The

Service's satisfaction, The Service shall cause the repairs to be made and the Grantee shall immediately reimburse The Service for the full costs incurred by The Service.

- V. Management of Unexploded Ordnance (UXO) and Discarded Military Munitions (DMM): If the Grantee or their contractor discovers the existence of any UXO or DMM in the course of operations, all activities in the area must be temporarily suspended, The Service Site Supervisor must be contacted immediately and the UXO/DMM will be handled in accordance with the DMCF's Standard Operating Procedure for such materials. The Grantee shall include a UXO/DMM plan as part of their Placement Operations Plan.

3.0 ACCESS, STORAGE, WORK AREAS

- A. The Grantee shall confine their operations at the DMCF to those areas specified by the MDOT MPA or The Service. The Grantee may place only equipment necessary for the work at the DMCF. They shall not store pipe or equipment on the crown or slopes of the dikes, unless authorized by The Service in writing.
- B. If approved by The Service, the Grantee may utilize areas built up with suitable fill as storage, provided such storage does not interfere with traffic or other operations.
- C. Storage space and work areas will be in use by other contractors. The Grantee shall include their plans for storage space in the Placement Operations Plan and shall be confine their storage and work areas to space approved by The Service.
- D. The Grantee shall be responsible for ensuring that mud, dust or other contaminants do not leave the boundaries of the Cox Creek DMCF on trucks or other equipment. The Grantee will be responsible for costs associated with cleaning roadways, railways, etc. contaminated by construction activities.

4.0 REQUIRED SUBMITTALS/REPORTING

A. Placement Operations Plan

Thirty (30) calendar days prior to mobilization to the Cox Creek DMCF, the Grantee shall submit a detailed Placement Operations Plan for the placement of dredged material into the Cox Creek DMCF for approval by the MDOT MPA and/or The Service. Authorization to Proceed will not be granted until the Placement Operations Plan has been approved by MDOT MPA and/or The Service. The Placement Operations Plan shall outline all pertinent procedures relating to material unloading, transportation and placement including, at a minimum, the following details:

1. Proposed Commencement and Completion Dates: This schedule estimate should also include the total estimated volume of contracted material to be placed.
2. Proposed Hours of Operation: All operations conducted within the boundaries of the Facility or the designated unloading areas shall be coordinated with The Service. The Grantee shall keep the Site Supervisor fully apprised of the Grantee's activities and work schedule. When the Grantee elects to work on

weekends, holidays, or nights, the Grantee shall give notice to the Site Supervisor at least four (4) business days in advance thereof.

3. Detailed Description of Material Unloading and Handling Equipment, including all equipment and vehicles to be used on site: The Grantee shall provide certification to The Service that all barges and scows have been properly inspected and meet all regulatory requirements for the transport of dredged material. The Service may inspect, and must approve, the Grantee's scows and barges prior to their use. Only approved scows and barges will be permitted to haul dredged material to the Facility. Overflow of the material from the scows is prohibited, as is any leakage or spillage of material in the unloading area. One foot (1') of freeboard on any scows and barges is required.
4. Production Rates: The Grantee shall provide The Service with the proposed daily production rates for the duration of the work.
5. Storage Requirements: The Grantee shall provide The Service with the proposed material storage requirements for the duration of the work.
6. Proposed Berthing and Mooring Arrangements and Locations: The Grantee shall specify a location within the unloading area for their unloading plant for approval.
7. Key Personnel Names and Contact Information: The Grantee shall provide an on-site representative, designated in writing, who shall be available at all times the Grantee is actively working at the Facility or has equipment at the Facility, including the Unloading areas.
8. Pipeline Routing, including inflow point(s) assigned to project: The Grantee, at its sole expense, shall advance or relocate the inflow point(s) as directed by The Service to prevent the settled material from accumulating to an excessive elevation exceeding permit or other requirements.
9. Fuel Spill Plan: The Grantee shall maintain a Fuel Spill Prevention and Containment Plan. The Contractor shall provide documentation of its Fuel Spill Plan as discussed below. Plan must be acceptable to The Service.
 - a) Spill Responsibility: Immediate containment actions shall be taken as necessary to minimize effect of any spill or leak. Cleanup shall be in accordance with applicable federal, state, and local laws and regulations, at no additional cost to The Service.
 - b) Contractor Reporting Requirements: If a spill occurs on or off the site, the Grantee shall immediately notify The Service, the Maryland Department of the Environment (MDE), and the National Response Center (NRC). Additionally, if a spill occurs onsite at the Facility, the Contractor shall immediately notify MDTA Police at 410.633.1092. The Grantee shall also comply with Code of Maryland Regulations (COMAR) 26.10.08.04. A written follow-up shall be submitted to The Service no later than seven (7) calendar

days after the initial report. The written report shall be in narrative form and at a minimum include the following:

- 1) Description of the material spilled
 - 2) Whether the amount spilled is United States Environmental Protection Agency (USEPA)/state reportable and when and to whom it was reported
 - 3) Exact time and location of spill, including description of the area involved
 - 4) Receiving stream or waters
 - 5) Cause of incident and equipment and personnel involved.
 - 6) Injuries and property damage
 - 7) Duration of discharge
 - 8) Containment procedures initiated
 - 9) Summary of any communications Grantee has with agencies or Government officials other than The Service
 - 10) Description of cleanup procedures employed or to be employed at the site, including disposal location of spill residue
10. Dust Control Plan: The Grantee will be responsible for providing immediate dust control measures as required to ensure that no dust leaves the boundaries of the Cox Creek DMCF. Any dust escaping those boundaries may be cause for immediate termination of activities at the Grantee's expense and risk. The Service will be the final authority on dust control requirements and has clear authority from MDOT MPA to shut the contractor down or direct that specific dust control measures be implemented immediately. Mist and spray from the discharge pipeline must be confined to the limits of the DMCF.
11. Truck Haul Routes: If applicable, due to the mechanical unloading of dredged material. Include measures for ensuring that mud and other contaminants do not leave the boundaries of the DMCF on trucks or other equipment.
12. Traffic Management Plan: If applicable, due to the mechanical unloading of dredged material or concurrent use of the site by multiple contractors.
13. Dredge Material Spillage Plan: The Grantee shall provide a plan that details steps to prevent spills of dredged material, as well as methods to be used for the containment and clean-up of dredged material that is spilled during unloading activities.
14. Final Grading Plan: The Grantee shall return the site to the conditions that were existing prior to unloading activities. This includes the removal of temporary roadways and pipeline crossing ramps.

B. Recirculation Plan

Thirty (30) days prior to mobilization to the Cox Creek DMCF, the Grantee shall submit a detailed Recirculation Plan which includes a design and plan of operations for recirculation of the slurry make-up water from within the Cox Creek DMCF for approval by the MDOT MPA and/or The Service. Mobilization to the Cox Creek DMCF shall not begin until the Recirculation plan is approved. Approval of the Recirculation Plan by the MDOT MPA and/or The Service does not excuse the Grantee from fully complying with all recirculation requirements. The recirculation system shall be in place and operational prior to the placement of dredged material and in addition to ensuring that no recirculation water is spilled outside of the Cox Creek DMCF, shall include the following details:

1. Flow Rate: Gallons per minute required to support the unloader make-up water system.
2. Piping Schematic and Plans: Including all piping, valves, connections, intakes and intake structures proposed to be utilized by the Grantee.
3. Requested Modifications to the Cox Creek DMCF: To be performed by the Grantee pending MDOT MPA/Service approval.
4. Pump Details: Including size, horsepower, location, etc.
5. Operational Requirements or Special Needs: For example, head required over the recirculation pipe intake, etc.
6. Photos and Video Records: Required for documentation of the initial conditions, modifications and post-use condition of any modifications to the Cox Creek DMCF.

C. Unloader Area Pre/Post Hydrographic Surveys

After approval of the Placement Operations Plan and prior to a Grantee uses the unloading site(s), a hydrographic survey shall be taken at the Grantee's sole expense to determine existing conditions. Immediately following completion of all unloading activities another hydrographic survey shall be taken at the Grantee's sole expense to determine if any material spillage occurred during the unloading period. These surveys shall extend a minimum of 100 Feet from all Material Unloading and Handling Equipment. A minimum of electronic single beam cross sections on 25-foot station intervals shall be used. All surveys will utilize recognized engineering survey practices to establish elevations, lines, and levels. The Grantee shall use a surveyor licensed in the State of Maryland.

D. Daily Inflow/Recirculation Reports

For every workday during unloading events, the Grantee shall submit a Daily Inflow/Recirculation Report to The Service. A workday for reporting purposes shall be from midnight to midnight for a given calendar day. The submittal shall be by email or other electronic method as designated by The Service. The report must be completely filled out with all required information and submitted to The Service by 11:00 a.m. local

time each day for the previous day's work. The Daily Inflow/Recirculation Reports shall include the following information:

1. Estimated quantity of dredged material in each scow unloaded into the DMCF.
2. Whether harbor water or recirculation is being used for slurry make-up water.
 - a) Record of request and permission to use harbor water for slurry make-up water.
3. Inflow and recirculation pipe flow rates for each unloading cycle.
4. Start and Stop times for pump out of each scow.
5. Estimated payload for each scow unloaded.
6. Cumulative inflow for the project.
7. Description of material unloaded from each scow.
8. Inflow location.
9. Description of any situation where dredged material or recirculated water is leaked or spilled into the Patapsco River or around DMCF.
10. Any additional information requested by The Service following review of the Grantee's Placement Operations Plan.

5.0 AUTHORIZATION TO PROCEED

- A. The Grantee may not place dredged material at the DMCF prior to receipt of a fully executed Right of Entry from the MDOT MPA.
- B. The Authorization to Proceed shall be contingent upon the agreement of the Grantee to comply with these Standards and Procedures, the approval of all required submittals by The Service and/or the MDOT MPA, and any other conditions required by the MDOT MPA or The Service for the particular placement operations of the Grantee.

6.0 GENERAL UNLOADING OPERATIONS

- A. General: The Grantee shall supply all equipment and labor for the placement of the dredged material. Direct pumping by hydraulic dredge or hopper dredge into the dike placement area will only be permitted if specifically provided for in the approval issued by the MDOT MPA.
- B. Barge Unloading: The Service anticipates that the barges will be unloaded hydraulically; however, mechanical unloading may be considered for approval in accordance with the

restrictions listed herein. A pier may be available at the Cox Creek DMCF for the Grantee's use for hydraulic and mechanical unloading of barges.

- B. Use of Pier: No scows are to be left unattended overnight or over the weekends/holidays at the pier. Since small vessels are subjected to rough tides which may cause capsizing and damage to the pier area, it is strongly recommended that any small boats be placed on the pier or removed from the area overnight.
- C. Interference with other Contractors: The Grantee is advised that multiple contracts may be in effect and that the use of unloading areas and storage areas will be as assigned in the MDOT MPA approval, or scheduled by The Service, when not specified in the MDOT MPA approval. The Grantee shall coordinate their activities with The Service and other contractors to avoid interference with each other's operations.
- D. Coordination with The Service: All operations conducted within the boundaries of the DMCF or the designated unloading areas shall be coordinated with The Service. The Grantee shall attend pre-construction and progress meetings with the Site Supervisor appointed by The Service and at intervals designated by the Site Supervisor. The Grantee shall keep the Site Supervisor fully apprised of the Grantee's activities. When the Grantee elects to work on weekends, holidays, or nights, the Grantee shall give notice to the Site Supervisor at least four (4) days in advance thereof.
- E. Inflow Point: The designated point of material inflow shall be established by the MDOT MPA for all placement operations. The inflow point(s) may require relocation due to the effects on effluent quality or other special circumstances as solely determined by The Service. Relocation of inflow point(s) shall be achieved within 24 hours notification by The Service. Any material that is placed in areas other than those designated or approved by The Service shall be immediately removed by the Grantee at their expense.
- F. Debris: The Grantee shall not place any debris or non-pumpable materials in the DMCF. Any such material deposited in the DMCF by the Grantee shall be immediately removed by the Grantee at their expense.

7.0 HYDRAULIC BARGE UNLOADING

- A. Pipelines: Pipelines from the unloading plant that must cross into the placement area at the unloading area may not unduly restrict access by others to the unloading area. Only sound, leak-free piping shall be used; pipes worn thin or otherwise subject to leaks or failure shall not be allowed.
 1. The Grantee may lay pipelines only within the areas directed by the MDOT MPA or The Service. The Grantee shall restore areas used in laying and maintaining pipeline to the same or as good condition as existed prior to commencement of work.
 2. The pipeline will be placed so that there is no interference with traffic or access on the existing roadway, roadway markers, wells, pumps, equipment, benchmarks, piezometers or other instrumentation. The portion of the pipeline paralleling the roadway shall be within three feet (3') of the edge of the road surface.

- B. Leaks: In the event that a leak occurs anywhere in the pipelines, the Grantee shall immediately discontinue using the pipelines until the leaking section or sections of the pipe are removed and replaced with sound, leak-free piping and the leaks stopped. The Grantee shall recover, at no cost to The Service, any material improperly placed because of leaks in the pipe as well as repair any damage to roads, dikes or other DMCF property.
- C. Road Crossings: Pipeline road crossings may be accomplished by construction of suitable ramps. A minimum of twenty-four inches (24") shall be maintained between any electric service line and any piping installation. Prior to commencing work, the Contractor must contact The Service representative on the site at least forty-eight (48) hours in advance to coordinate the interruption of traffic and to ascertain the location of any utilities or obstructions. The Grantee shall be required to make any necessary repairs immediately. Ramps shall be constructed using GAB, CR-6 or approved alternate materials, maintained and properly marked by the Grantee for safe day and night passage of normal traffic including vehicle, heavy equipment and loaded dump trucks in the area until completion of the work and subsequent removal of the ramps. All labor and materials (stone, etc.) needed to construct pipe crossing ramps will be supplied by the Grantee. The ramps shall be constructed with a minimum width of road surface conforming to the width of the existing roadway. A minimum twenty foot (20') wide flat berm will be centered on the pipeline crossing. The slope approaches to the ramp berm will be no steeper than one vertical on twenty horizontal (1:20). When dredge pipeline crossings are removed after the completion of work, the crossing areas will be restored to the condition existing prior to pipe installation and ramp construction.
- D. Recirculation: The Grantee shall provide the equipment, materials, and labor necessary to re-circulate slurry make-up water from within the Cox Creek DMCF for use in the dredged material unloading operations in lieu of obtaining such water from the Patapsco River. The MDOT MPA reserves the right to waive this requirement pending evaluation of Cox Creek DMCF site conditions and the Placement Operations Plan.

The Service will control the water surface elevation with the Cox Creek DMCF and the discharge of water to the Patapsco River to the extent possible. The Grantee will be required to recirculate slurry make-up water from the Cox Creek DMCF as directed by The Service and when the site water surface elevation and pond water volumes are sufficient to allow recirculation in accordance with the approved design and Recirculation Plan. The Grantee is required to request and obtain permission from The Service to utilize slurry make-up water from the Patapsco River prior to start-up of operations and following the use of recirculation. The Grantee's operations for recirculation must not impede The Service's ability to operate the Cox Creek DMCF, in particular, operations required for discharge of water. MDOT MPA/The Service's approval of the Recirculation Plan does not excuse the Grantee from fully complying with the recirculation requirements. The Grantee will be responsible for damages to the site during installation, removal, and operation of the recirculation systems. The Grantee shall not dig or excavate into the dike without written approval from The Service.

- E. Unloading Area and Barge Moorings: The Grantee arrangement and location of the hydraulic unloader, material scows, pipelines and attendant plant will be subject to

approval of The Service. Mooring and spudding areas will be restricted to avoid areas surrounding spillway diffusers, and navigational channels.

Mooring to the pier may be permitted for purposes of transferring equipment or construction materials to or from the facility. The pier will not be available for the exclusive use of the Grantee and any mooring plans will be coordinated and approved by The Service. MDOT MPA may require use of a breasting barge for protection of the pier structure. As noted above, **Cox Creek Exhibit A** provides a map of Cox Creek DMCF showing the location of the pier area where unloading generally takes place. Unloader mooring areas may be considered for approval provided they follow the restrictions listed herein.

A specific mooring area has not been identified for the Cox Creek facility. All moored or anchored equipment must maintain a 150 Foot buffer from all DMCF spillways. It is the Grantee's responsibility to notify Miss Utility to verify the precise location of all utility, cable, and transportation crossings.

- F. Shoaling: If any material is found in the Unloader Area and/or Barge Moorings, it will be immediately dredged by the Grantee and placed in the DMCF, and the river bottom will be returned to its pre-unloading condition before the Grantee leaves the site.

8.0 MECHANICAL BARGE UNLOADING

- A. General: The pier will not be available to the Grantee on a full-time basis for mechanical unloading of barges due to the potential use of this pier by other contractors, MDOT MPA or The Service. No excavators, cranes or other heavy equipment will be permitted on the pier. Use of the pier is limited to dump trucks used to transport dredged material and other light vehicles delivering supplies and personnel. Water-based excavators or cranes must be used to offload dredged material into dump trucks on the pier. The Grantee may establish a mechanical unloading operation apart from the pier, provided the plan of operations is acceptable to The Service and MDOT MPA, and assures that:
1. The material is placed at the designated point of discharge;
 2. All access and egress are maintained in satisfactory condition;
 3. Adequate dust control measures are in place as outlined above;
 4. Spillage of material is prevented both in the unloading area and on the roadway;
 5. Interference with traffic and other placement area operations is kept to a minimum;
 6. No equipment is moored so as to directly or indirectly transmit forces to the pier structure or any MDOT MPA-owned structure.
 7. MDOT MPA may require use of a breasting barge for protection of the pier structure.

- B. Perimeter Dike Roadways: The Grantee is advised that their roadway haul route may require extensive maintenance or reconstruction if subjected to heavy traffic loads. The roadway is to be maintained in satisfactory condition at all times by the Grantee and the Grantee shall promptly repair any damage caused by their operation. The Service may redirect the Grantee's truck/vehicle traffic due to poor or unsafe road conditions as determined solely by The Service. The Grantee will submit their proposed truck haul routes for approval in the Placement Operations Plan.
- C. Spills: In the event that any dredged material being handled by mechanical means spills into the waterways of the Patapsco River, on the exterior face of the dike, or on the dike roadway, the Grantee shall immediately take steps to prevent further occurrence, including shut down of operation if such spillage was due to the need to repair or modify their equipment to prevent such spillage. The Grantee shall recover and place the material into the designated location in the DMCF at no cost to The Service. The Grantee shall also have adequate spill kit materials on-site to minimize the effects of any fuel or oil spills.

9.0 MECHANICAL TRUCK UNLOADING

- A. General: The Grantee may establish a mechanical unloading operation via trucking, provided the plan of operations is acceptable to The Service and MDOT MPA, and assures that:
1. The material is dumped at the designated point of placement;
 2. All access and egress are maintained in a satisfactory condition;
 3. Adequate dust control measures are in place as outlined above;
 4. Spillage of material in the roadway is prevented; and
 5. Interference with traffic and other placement area operations is kept to a minimum.
- B. Spills: Trucks hauling the dredged material shall have sealed beds to prevent leakage of dredged material on the roads. The Contractor may be required to use turn buckle locks to ensure a tight seal and prevent leakage of dredged material. In the event that any dredged material being handled by mechanical means spills into the waterways of the Patapsco River, on the exterior face of the dike, or on the dike roadway, the Grantee shall immediately take steps to prevent further occurrence, including shut down of operation if such spillage was due to the need to repair or modify their equipment to prevent such spillage. The Grantee shall recover and place the material into the designated location in the DMCF at no cost to The Service. The Grantee shall also have adequate spill kit materials on-site to minimize the effects of any fuel or oil spills.

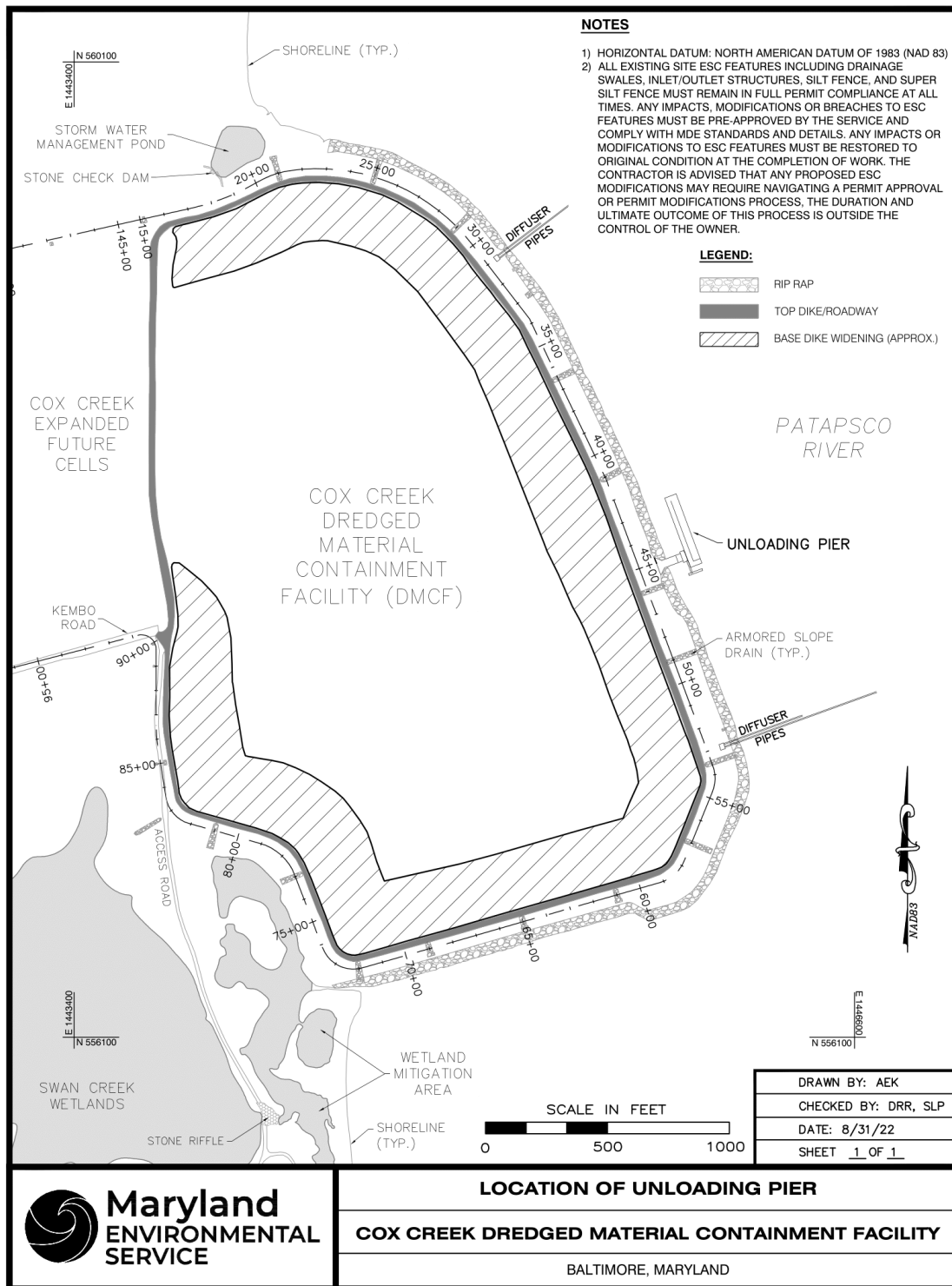




COX CREEK EXHIBIT A

**LOCATION OF UNLOADING PIER COX CREEK
DREDGED MATERIAL CONTAINMENT FACILITY**

COX CREEK EXHIBIT A – LOCATION OF UNLOADER PIER (SHEET 1 OF 1)





COX CREEK EXHIBIT B

**STANDARD OPERATING PROCEDURES FOR
HARMFUL ALGAL BLOOM DECONTAMINATION OF INFLOW AND DREDGING
EQUIPMENT**

**COX CREEK
DREDGED MATERIAL CONTAINMENT FACILITY**

1.0 SCOPE AND APPLICATION

The purpose of this Standard Operating Procedure (SOP) is to describe the methods for preventing or limiting contamination of Harmful Algal Blooms (HAB) and any associated toxin to environments exterior of the Cox Creek Dredged Material Containment Facility (DMCF) due to inappropriate or inadequate equipment decontamination and to provide general guidelines for developing decontamination procedures for inflow and dredging equipment.

The procedures in this SOP may be varied or changed as required, dependent on site conditions, equipment limitations or other procedural limitations. In all instances, the procedures employed must be documented in a field log book.

2.0 METHOD SUMMARY

Removing or neutralizing HABs from equipment minimizes the possibility of contamination to environments outside of the DMCF and reduces or eliminates transfer of contaminants to clean areas. Some equipment may have specific decontamination procedures that do not follow this SOP. Refer to the user manual for each piece of equipment before utilizing this SOP.

Gross contamination can be removed with non-abrasive methods that include the use of high temperature high pressure water cleaning on the outside of contaminated pipes and low or high pressure rinsing and subsequent flushing of river water through contaminated pipes and scows.

Throughout all washing, rinsing, and flushing procedures, at no instance should water be released into the Patapsco River. All high-pressure hot water and Patapsco River water must flow to and be discharged into the Cox Creek DMCF. The hot water temperature should be the maximum temperature the pressure washer allows (approximately 200°F).

A generalized decontamination procedure is:

1. Hot water high pressure wash of the outside of equipment that was used within the DMCF including pipes, boats, and earth moving equipment
2. Air dry if possible
3. Patapsco River water rinse and flush through inflow and recirculation pipes and scows (if flushing the recirculation pipes is not possible, please follow procedure 1 and 2 for both the outside and inside of the pipe)
4. Air dry if possible

Modifications to the standard procedure are required to be documented in the field log book and subsequent reports. All equipment is required to be decontaminated before leaving the site.

3.0 INTERFERENCES AND POTENTIAL PROBLEMS

When decontaminating equipment when temperatures are below freezing, water may freeze in the pump spray hoses lines, tanks and in buckets/pails, etc. Additionally, equipment will require longer drying times. Make sure that the decontamination station is set up as not to compromise a clean environment.

4.0 EQUIPMENT/APPARATUS

Decontamination equipment is selected based on the type of equipment to be cleaned and anticipated contaminants to be removed. For example, hot water pressure washers such as those provided by Hotsy® would be the appropriate apparatus for rinsing the exterior of inflow and recirculation pipes.

4.1. Decontamination Tools/Supplies:

A. The following standard materials and equipment are recommended for decontamination activities:

- Hot water pressure washer
- High powered pump
- Electrical cords
- Work lights (if working in the dark)
- Generator (if using a submersible pump or lights)
- Unloader

4.2. Health and Safety Equipment

The use of personal protective equipment (PPE), (i.e. safety glasses, splash shield, Tyvek® suits, nitrile gloves, aprons or coveralls, steel toe boots, etc.), is required. Refer to the site-specific Harmful Algal Bloom (HAB) site safety guidance and the Health and Safety Plan (HASP) for site-specific requirements.

4.3. Waste Disposal

Water waste will flow or be pumped into the Cox Creek DMCF.

5.0 REAGENTS

This section is not applicable to this SOP.

6.0 PROCEDURES

A decontamination area will be identified by Maryland Environmental Service. Weather conditions (i.e. hot, cold, rain, snow, etc.) play an important role in the decontamination process. Plan accordingly and consider your working conditions prior to decontamination activities.

A decontamination plan needs to be implemented and includes:

- Decontamination equipment
- Selection of appropriate decontamination methods
- Methods of disposal of all investigative derived waste (i.e. PPE, solid and liquid waste, etc.)
- Work practices that minimize contact with potential contaminants
- Protection procedures for monitoring and sampling equipment (i.e. covering with plastic, etc.) which are addressed in the onsite HAB Monitoring SOP 2016
- Considerations related to weather conditions

6.1. Decontamination Methods

All equipment removed from the site must be decontaminated, removing all contamination that may have adhered to the equipment. Various decontamination methods remove contaminants by washing with water.

Decontamination methods are non-abrasive and listed below:

6.1.1 Non-Abrasive Cleaning Methods

Non-abrasive cleaning methods work by forcing the contaminant off a surface with water pressure (i.e. sprayer or pressure washer).

High-Pressure Water

This method consists of the use of a hot temperature high power pressure washer. The hot water temperature should be the maximum temperature the pressure washer allows (approximately 200°F). The operator controls the directional nozzle which is attached to a high-pressure hose. Operating pressure usually ranges from 400 – 600 pounds per square inch (PSI). Scrubbing with large brushes can be used to aid in the decontamination process.

Rinsing and Flushing

Contaminants remaining inside the pipes and scows are removed by thorough rinsing and subsequent flushing with the use of Patapsco River water. The rinsing and flushing are done by the use of a pump, hoses, and dredging unloader equipment.

6.2. Inflow and Dredging Equipment Decontamination Procedures

6.2.1. Decontamination Setup

1. The decontamination area is to be chosen based on appropriate drainage into the Cox Creek DMCF. Under no circumstances should runoff or back spray end up outside of the DMCF. Work with the On-Site Manager to assign a location for these activities to take place on-site.
2. Stage the appropriate equipment (i.e. hot water pressure washer) within the area chosen that would allow for runoff and spray back to flow into the DMCF.
3. Connect all hoses and fill the pressure washer with fuel.
4. Dress out in the appropriate PPE (refer to the site-specific HAB and HASP). At a minimum, Tyvek®, safety glasses/goggles, splash shield, steel toe boots, and nitrile gloves must be worn when utilizing the pressure washer to remove HAB. If handling any equipment (i.e. drill rods, etc.) work gloves must also be worn to prevent possible injury. For site specific requirements refer to the site-specific HASP.

6.2.2. Decontamination Procedures

Decontamination process for Harmful Algal Blooms

1. Place the hot water pressure washer in the chosen decontamination area. Ensure the unit is functioning at the proper water (spray) temperature.
2. Spray the outside of the inflow and recirculation pipes with the pressure washer as they are being removed from the cell.
3. Using a pump within the Patapsco River and unloading equipment rinse, and flush pipes, and scows with River water. If flushing the recirculation pipes is not possible, follow procedure 5 for both the outside and inside of the pipe.

4. Release all water that was used for scow, unloading equipment, and pipe rinsing into the DMCF for containment.
5. Once flushed, rinse the outside of the inflow and recirculation pipes with the pressure washer as they are being removed from the cell.

6.2.3. Post Decontamination Procedures

1. Empty the pressure washer filled with water into the DMCF.
2. Ensure that decontaminated equipment does not have further contact with DMCF cell water.
3. Arrange for the pressure washer to be returned to the vendor.
4. Return any additional equipment used to the appropriate storage location.
5. Remove all decontaminated equipment from the site.
6. Dispose of all PPE onsite in plastic bags. Coordination with Maryland Environmental Service for appropriate locations.

6.3. Decontamination of Earth Moving Equipment and Accessories

The decontamination of earth moving equipment and their accessories will require the use of a pressure washer. Finally, a designated area on-site needs to be designated as a decontamination area. Work with the On-Site Manager to assign a location for these activities to take place on-site.

6.3.1. Decontamination Set-up Procedures:

1. Move the equipment into the decontamination area.
2. Stage all decontamination equipment and supplies (i.e. Pressure Washer, Hoses, PPE, etc.).
3. Connect all hoses and fill the pressure washer with fuel.
4. Dress out in the appropriate PPE (refer to the site-specific HAB and HASP). At a minimum, Tyvek[®], safety glasses/goggles, splash shield, steel toe boots, and nitrile gloves must be worn. If handling any equipment (i.e. drill rods, etc.) work gloves must also be worn to prevent possible injury. For site specific requirements refer to the site-specific HASP.

6.3.2. Decontamination Cleaning Procedures:

1. Physically remove as much of the visible material as possible from the heavy equipment after use. If contaminated material is suspected as determined by visual observations, instrument readings, or other means, collect material in an appropriate waste container.
2. Place the heavy equipment in the decontamination area. Verify that decontamination area will allow for any waste water to flow into the DMCF.
3. Power on the pressure washer and begin cleaning from the top to the bottom. Thoroughly clean parts of the heavy machinery that come into contact with visible material (such as tires, bucket, augers, drill rods, tracks and the back and underneath of the drill rig). Scrub areas with excessive dirt/debris with large bristle brushes. A flat head shovel can be used to aide in the removal of the dirt/debris. Continue cleaning until all visible contamination has been removed.

6.3.3. Post Decontamination Procedures

1. Empty the contents of the pressure washer into the DMCF.
2. Ensure that decontaminated equipment does not have further contact with DMCF cell water.
3. Arrange for the pressure washer to be returned to the vendor.
4. Make arrangements for the pressure washer to be removed from the site.
5. Remove all earth moving heavy equipment from the site.

7.0 CALCULATIONS

This section is not applicable to this SOP.

8.0 QUALITY ASSURANCE/QUALITY CONTROL

Documentation of the decontamination process including methods employed, date, time and personnel that conducted the decontamination activities must be recorded in a field logbook. Record manufacturer and lot numbers of the equipment used for the decontamination procedures.

9.0 DOCUMENTATION AND DATA VALIDATION

Documentation verification (completeness checks) must be conducted to ensure that all inputs are present for ensuring the availability of sufficient information. This information is essential to providing an accurate and complete final record.

10.0 HEALTH AND SAFETY

When working with potentially hazardous materials, follow all applicable HASP and HAB Site SOPs.

The decontamination process can pose hazards under certain circumstances. Hazardous substances may be incompatible with decontamination materials. For example, the decontamination solution may react with contaminants to produce heat, explosion, or toxic products. Also, vapors from decontamination solutions may pose a direct health hazard to workers by inhalation, contact, fire, or explosion. If decontamination materials pose a health hazard, measures are to be taken to protect personnel. Alternatively, substitutions can be made to eliminate the hazard.

11.0 HARMFUL ALGAL BLOOM (HAB) FACT SHEET



Ponded water at the Dredged Material Containment Facilities (DMCFs) and Poplar Island has the potential to contain HABs. All sites, Cox Creek and Masonville DMCFs and Poplar Island, are monitored for the presence of HABs. To date, on Poplar Island and Cox Creek DMCF, HABs have consisted of the cyanobacteria *Microcystis aeruginosa*, which has the potential to produce microcystin, a hepatotoxin (affecting the liver) that can affect wildlife and human health. The World Health Organization's and state of Maryland's **no contact** threshold for microcystin concentration is 10 ppb ($\mu\text{g/L}$). The Maryland **no contact** bloom level is 40,000 cells/mL.

What does an HAB look like?

- Foam, scum, or mats on the surface of the water (sometimes looks like paint)
- Bluish, bright green, brown, or red color
- Foul smell

Proper personal protective equipment (PPE) includes:

- **No contact if bloom level is above 40,000 cells and/or toxin levels are above 10 ppb**
- Safety glasses
- Nitrile gloves
- Face shield (if near water vapor and/or spray)
- Long sleeves and pants (if near water vapor and/or spray)

Effects of exposure:

- Ingestion of significant levels of toxin can cause liver damage and dysfunction.
- Ingestion or inhalation of water containing dense bloom material may cause nausea, vomiting, and dizziness.
- Contact with skin may cause irritation and rashes.

What to do when working near an HAB:

- **No contact if bloom levels are higher than 40,000 cells or toxin levels are above 10 ppb**
- Always wear proper PPE
- Wash any body area that comes in contact with the water with soap as soon as possible.
- Always wash your hands before eating, drinking, or smoking after contact with the water.