

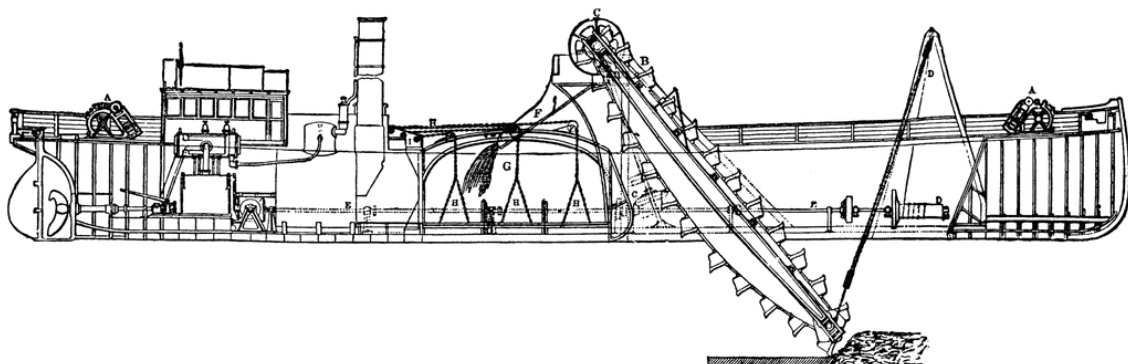
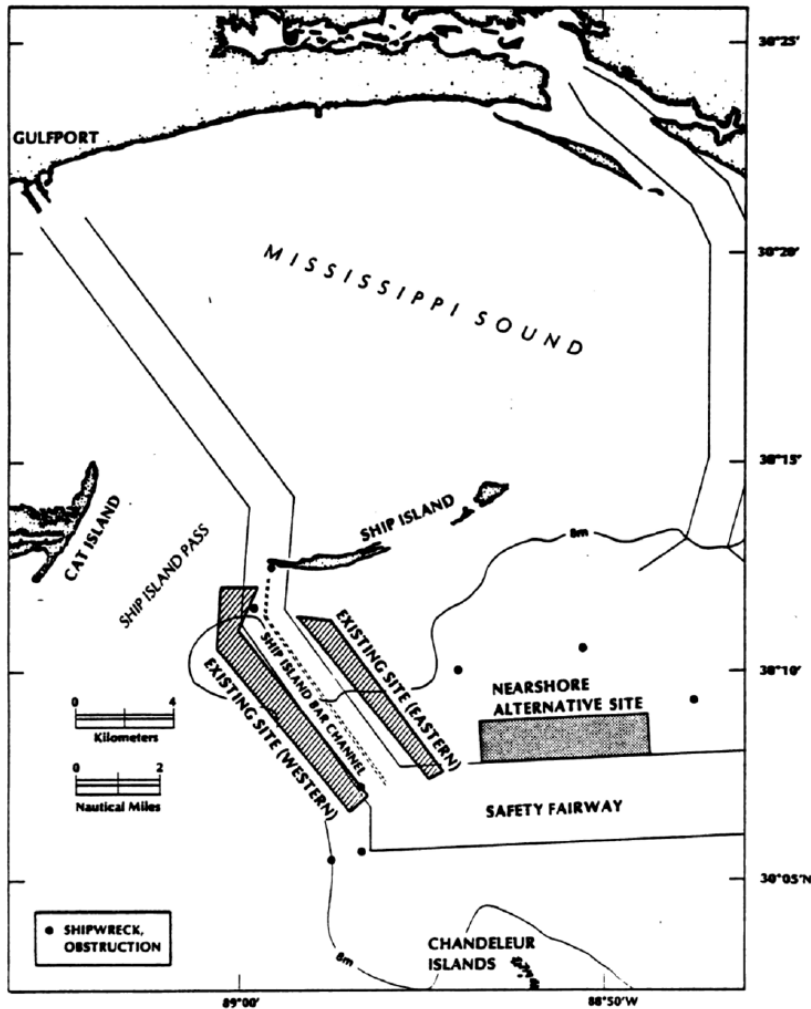


# Gulfport OCEAN DREDGED MATERIAL DISPOSAL SITE(S)



U.S. Army Corps  
of Engineers

# SITE MANAGEMENT AND MONITORING PLAN



The following Site Management and Monitoring Plan (SMMP) for the Gulfport Ocean Dredged Material Disposal Site(s) (ODMDSs) has been developed and agreed to pursuant to the Water Resources Development Act (WRDA) Amendments of 1992 to the Marine Protection, Research, and Sanctuaries Act (MPRSA) of 1972 for the management and monitoring of ocean disposal activities, as resources allow, by the U.S. Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (USACE).

---

Sebastian P. Joly  
Colonel, U.S. Army  
District Commander  
Mobile, Alabama

Date

---

Mary S. Walker  
Regional Administrator  
U.S. Environmental Protection Agency  
Region 4  
Atlanta, Georgia

Date

This plan is effective from the date of signature for a period not to exceed 10 years. The plan shall be reviewed and revised more frequently if site use and conditions at the site indicate a need for revision.

# **GULFPORT OCEAN DREDGED MATERIAL DISPOSAL SITE(s)**

## **SITE MANAGEMENT and MONITORING PLAN**

### **TABLE OF CONTENTS**

<b>1.0 INTRODUCTION</b> .....	1
1.1 Site Management and Monitoring Plan Team.....	1
<b>2.0 SITE MANAGEMENT</b> .....	2
2.1 Disposal Site Characteristics .....	3
2.2 Management Objectives.....	5
2.3 Disposal History and Dredged Material Volumes.....	5
2.4 Material Suitability.....	7
2.5 Timing of Disposal .....	7
2.6 Disposal Techniques .....	8
2.7 Disposal Location .....	8
2.8 Permit and Contract Conditions.....	8
2.9 Permit Process.....	9
2.10 Information Management of Dredged Material Placement Activities .....	9
<b>3.0 SITE MONITORING</b> .....	9
3.1 Baseline Monitoring.....	10
3.2 Disposal Monitoring.....	11
3.3 Post-Disposal Monitoring.....	11
3.4 Material Tracking and Disposal Effects Monitoring .....	12
3.4.1 Summary of Results of Past Monitoring Surveys.....	12
3.4.2 Future Monitoring Surveys.....	12
3.5 Reporting and Data Formatting.....	14
<b>4.0 ANTICIPATED SITE USE</b> .....	15
<b>5.0 MODIFICATION OF THE GULFPORT ODMDS SMMP</b> .....	15
<b>6.0 IMPLEMENTATION OF THE GULFPORT ODMDS SMMP</b> .....	15
<b>7.0 REFERENCES</b> .....	16

**LIST OF FIGURES**

Figure No.	Title
Figure 1	Gulfport ODMDS(s) Vicinity Map

**LIST OF TABLES**

Table No.	Title
Table 1	Dredged material placement at the Gulfport ODMDS(s)
Table 2	Summary of Permit and Contract Conditions
Table 3	Surveys and Studies Conducted at the Gulfport ODMDS(s)
Table 4	Gulfport ODMDS(s) Monitoring Strategies and Thresholds for Action

**LIST OF APPENDICES**

Appendix	Title
Appendix A	Water Column Evaluation Numerical Model (STFATE) Input Parameters
Appendix B	Generic Special Conditions for MPRSA Section 103 Permits, Gulfport ODMDS
Appendix C	Typical Contract Language for Implementing the Gulfport SMMP Requirements

# GULFPORT OCEAN DREDGED MATERIAL DISPOSAL SITE(S)

## SITE MANAGEMENT and MONITORING PLAN

**1.0 INTRODUCTION.** It is the responsibility of the EPA and USACE under the MPRSA of 1972 to manage and monitor ODMDS(s) designated by EPA pursuant to Section 102 of the MPRSA. The goal of this management is to ensure ocean dredged material disposal activities will not unreasonably degrade the marine environment or endanger human health or economic potential.

As part of this responsibility, a SMMP was originally developed as part of the designation process and was published in 1987 as part of the *Final Environmental Impact Statement for the Pensacola, Florida, Mobile, Alabama, and Gulfport, Mississippi Dredged Material Disposal Site Designation*, and was most recently revised in 2009 to comply with provisions of the Water Resources Development Act (WRDA) of 1992. This document serves as a revision to and supersedes the 2009 SMMP. This plan will include past monitoring results and will comply with provisions in WRDA of 1992 and the most recent Memorandum of Understanding (MOU) between EPA, Region 4 and USACE, South Atlantic Division (SAD). Upon finalization of this SMMP, these provisions shall be requirements for all dredged material disposal activities at the Gulfport ODMDS(s). **All Section 103 (MPRSA) ocean disposal permits and concurrences shall be conditioned as necessary to assure consistency with the SMMP.**

This SMMP has been prepared in accordance with the *Guidance Document for Development of Site Management Plans for Ocean Dredged Material Disposal Sites* (EPA and USACE, 1996). This document provides a framework for the development of SMMPs required by MPRSA and WRDA of 1992. The SMMP may be modified if it is determined that such changes are warranted as a result of information obtained during the monitoring process. The SMMP will be reviewed and revised as needed or every 10 years, whichever time period is shorter.

**1.1 Site Management and Monitoring Plan Team.** An interagency SMMP team has been established to assist the EPA and USACE in managing this SMMP. The team consists of the following agencies and their respective representatives:

USACE, Mobile District  
Ms. Jennifer Jacobson  
Ms. Lekesha Reynolds  
Ms. Caree Kovacevich

Mississippi State Port Authority  
Mr. Jonathan Daniels

Mississippi Department of Environmental Quality  
Ms. Florance Bass

EPA Region 4  
Ms. Lena Weiss

Mississippi Department of Marine Resources  
Mr. Jan Boyd  
Mr. Joe Spraggins

Mississippi Secretary of State,  
Land Division  
Ms. Sharon Hodge

National Oceanic and Atmospheric Administration  
Fisheries  
Dr. Roy E. Crabtree  
Mr. David Bernhart

U.S. Coast Guard  
District Commander  
Eighth District  
Rear Admiral Paul F. Thomas

Other agencies, such as the U.S. Fish and Wildlife Service (USFWS), will be asked to participate where appropriate. The SMMP team will assist EPA and USACE in evaluating existing monitoring data, type of disposal (i.e., operations and maintenance (O&M) vs. new work), quality of material (i.e., sand vs. mud vs. silt/clay), location of disposal within the Gulfport ODMDS(s), and quantity of material. The team will assist EPA and USACE on deciding appropriate monitoring techniques, level of monitoring, significance of results, and potential management options.

Specific responsibilities of EPA and USACE, Mobile District are:

**EPA:** EPA is responsible for designating and/or de-designating MPRSA Section 102 ODMDSs, for evaluating environmental effects from disposal of dredged material at these sites and for reviewing and concurring on dredged material suitability determinations.

**USACE:** USACE is responsible for evaluating dredged material suitability, issuing MPRSA Section 103 permits, regulating site use, and developing and implementing disposal monitoring programs. All of the above activities are handled by the Planning and Environmental Division of the Mobile District. The exception to this is Regulatory Division, Mobile District is responsible for: issuing MPRSA Section 103 permits, evaluating dredged material suitability and submitting Section 103 Evaluation Reports for Regulatory projects.

**2.0 SITE MANAGEMENT.** Management of the ODMDS involves a broad range of activities including regulating schedule of use, quantity, and physical/chemical characteristics of dredged material placed at the site. It also involves establishing disposal controls, conditions and requirements to avoid and minimize potential impacts to the marine environment. Finally, ODMDS management involves monitoring site environs to verify unanticipated or significant adverse effects are not occurring from past or continued use of the site and that permit/concurrence conditions are met.

Section 228.3 of the Ocean Dumping Regulations (40 CFR §220 - 229) states "management of a site consists of regulating times, rates, and methods of disposal and quantities and types of materials disposed of; developing and maintaining effective ambient monitoring programs for the site; conducting disposal site evaluation studies; and recommending modifications in site use and/or designation". The plan may be modified if it is determined that such changes are warranted as a result of information obtained through the monitoring process. MPRSA, as amended by WRDA of 1992, provides SMMPs shall include but not be limited to:

- A baseline assessment of conditions at the site;
- A program for site monitoring;
- Special management conditions or practices to be implemented at each site necessary for the protection of the environment;
- Consideration of the quantity and physical/chemical characteristics of dredged materials placed at the site;
- Consideration of anticipated site use over the long-term; and
- A schedule for review and revision of the plan.

**2.1 Disposal Site Characteristics.** The Gulfport ODMDS(s) are located in the Gulf of Mexico stretching from approximately 14 to 20 miles south of the Port of Gulfport (see Figure 1). The eastern and western site(s) cover a 2.47 and 5.2 square nautical mile area, respectively, with an average depth of approximately 27 feet (ft). They were designated by EPA, Region 4 for fine-grained dredged material that meets ocean placement criteria. The boundary coordinates of the Gulfport ODMDS(s) are North American Datum (NAD) 83:

<b>West ODMDS</b>		<b>East ODMDS</b>	
30°12'00" N	89°00'30" W	30°11'10" N	88°58'24" W
30°12'00" N	88°59'30" W	30°11'12" N	88°57'30" W
30°11'00" N	89°00'00" W	30°07'36" N	88°54'24" W
30°07'00" N	88°56'30" W	30°07'24" N	88°54'48" W
30°06'36" N	88°57'00" W		
30°10'30" N	89°00'36" W		

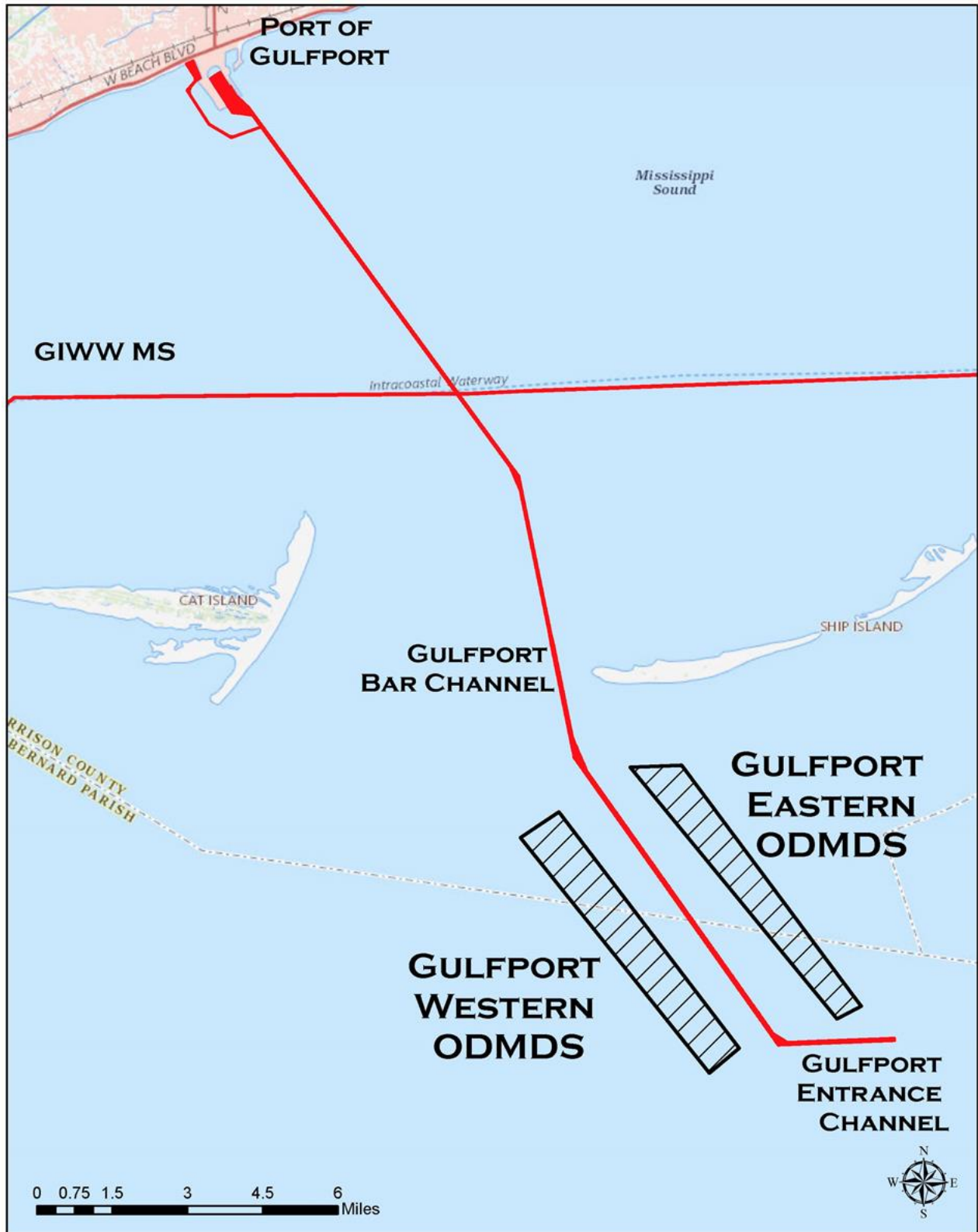
**State Plane 2301 Mississippi East**

30.2000000°	-089.0083333°	30.18611111111°	-088.97333333333°
30.2000000°	-088.9916667°	30.18666666667°	-088.95833333333°
30.1833333°	-089.0000000°	30.12666666667°	-088.90666666667°
30.1166667°	-088.9416667°	30.12333333333°	-088.91333333333°
30.1100000°	-088.9500000°		
30.1750000°	-089.0100000°		

Note that the northern portion of the Western ODMDS is no longer available for use. Depths at the northern portion of the Western ODMDS are less than 25 feet. Hopper dredges typically require a minimum depth of 25 feet to safely dispose of dredged material; therefore, USACE no longer utilizes the northern portion of this site.

It is intended that the Gulfport ODMDS(s) will be utilized for all maintenance material from the Gulfport Bar Federal Navigation Channel. Minor amounts of new work material may also be included from the navigation channel. Physical and biological conditions at the Gulfport ODMDS(s) are described in the *Final Environmental Impact Statement for the Pensacola, Florida, Mobile, Alabama, and Gulfport Harbor, Mississippi Dredged Material Disposal Site Designation* (EPA, 1987) and the *Final Gulfport Bar Federal Navigation Channel Project MPRSA Section 103 Evaluation*.

Historically, Gulfport Bar Channel sediments have been maintained to the authorized depths and placed primarily in the Gulfport ODMDS(s) approximately on a yearly basis, depending on need (based on shoaling rates) and funding availability. Disposal history can also be found at the Ocean Disposal Database maintained by the Engineer Research and Development Center (ERDC) ([https:// odd.el.erd.c.dren.mil/ ODMDS Search. cfm](https://odd.el.erd.c.dren.mil/ODMDS_Search.cfm)).



**Figure 1:** Gulfport ODMDS(s) Vicinity Map



**2.2 Management Objectives.** Appropriate management of an ODMDS is aimed at assuring disposal activities will not unreasonably degrade or endanger human health, welfare, the marine environment or economic potentialities (MPRSA §103(a)). There are three primary objectives in managing the Gulfport ODMDS(s):

- Protection of the marine environment, living resources, and human health and welfare;
- Documentation of disposal activities at the Gulfport ODMDS(s) and provision of information which is useful in managing dredged material disposal activities; and
- Provide for beneficial use of dredged material whenever practical.

The objective of the SMMP is to provide guidelines in making management decisions necessary to fulfill mandated responsibilities to protect the marine environment as discussed previously. Risk-free decision-making is an impossible goal; however, an appropriate SMMP can narrow the uncertainty. The following sections provide the framework for meeting these objectives.

**2.3 Disposal History and Dredged Material Volumes.** It is intended that the Gulfport ODMDS(s) will be used for disposal of dredged material (both maintenance and/or new work material) from the Gulfport Harbor and vicinity. The two primary users of the ODMDS(s) will be the Mississippi State Port Authority and USACE, Mobile District for maintenance of the Gulfport Harbor Federal navigation project.

Historically, the Gulfport ODMDS(s) have been used to place dredged material from the area since the 1970s. Between 1977 and 2017, approximately 31.8 million cubic yards (cys) of dredged material has been placed in the Gulfport ODMDS(s) (both West and East sites) (**Table 1**). The Gulfport East ODMDS site is typically no longer utilized due to lack of capacity and extensive transport of material back into the channel. The Gulfport East ODMDS site was last utilized in 2005. Routine maintenance material from the Gulfport Bar Federal Navigation Channel is typically placed in the Gulfport ODMDS(s) on an annual or biennial basis, averaging 1 million cys for each dredging event. Disposal history can also be found at the Ocean Disposal Database maintained by the ERDC (<https://odd.el.erdcdren.mil/>).

**Table 1.** Dredged material placement at the Gulfport ODMDS(s) (East and West)

<b>Year</b>	<b>Volume (cys)</b>	<b>Disposal Site</b>
1977	2,924,400	East ODMDS
1979	728,300	East ODMDS
1981	1,801,000	East ODMDS
1982	101,200	West ODMDS
1984	996,900	West ODMDS
1985	885,500	East ODMDS
1987	909,000	East ODMDS
1989	469,700	West ODMDS
1992	6,431,100	East ODMDS
1993	3,158,900	West ODMDS
1996	623,000	East ODMDS
1997	1,067,000	West ODMDS
1998	1,300,000	West ODMDS
2002	943,000	West ODMDS
2003	542,800	West ODMDS
2004	1,391,000	West ODMDS
2005	1,000,000	East ODMDS
2005	390,000	West ODMDS
2011	400,000	West ODMDS
2013	400,000	West ODMDS
2014	1,194,898	West ODMDS
2015	369,821	West ODMDS
2017	3,049,229	West ODMDS

Future volumes and rates of placement, predominantly from Federal interests, are expected to be approximately 1,000,000 cys per year. Civil works maintenance projects for Gulfport Harbor are anticipated to account for the majority of the total volume of material to be placed at the Gulfport ODMDS(s).

The Gulfport ODMDS(s) have been determined to be dispersive site(s), particularly during hurricane season. However, the dispersiveness of the site(s), and consequently the ultimate capacity of the ODMDS(s) are subject to unpredictable variability. Previous capacity studies have indicated that the capacity of the ODMDS(s) should be restricted to 1 million cys of dredged material per year for the site(s). Future monitoring will be incorporated to address this issue, should mounding or effects outside the disposal site boundaries be observed. The East site will likely no longer be used due to extensive transport of the placed material back into the channel.

**2.4 Material Suitability.** Maintenance and new work dredged material is expected to be placed at the site(s). This material will consist of mixtures of silts, clays, and sands in varying percentages. Sediments dredged from navigation channels in Gulfport Harbor include mainly ocean and estuarine sources (sandy, littoral materials). Shoals occur where specific physical factors promote deposition or movement of sediments. These factors may vary spatially and temporally.

USACE Beneficial Use of Dredged Material Engineer Manual (EM) 1110-2-5026 requires dredged material be maximized within the coastal system. The disposition of any significant quantities of beach compatible sand from future projects will be determined on a project-by-project basis. Utilization of any significant quantities of beach compatible dredged material for beach nourishment is strongly encouraged and supported by USACE and EPA. In fact, USACE manages dredged material under its Regional Sediment Management (RSM) initiative to be used beneficially and remain within the natural sediment budget. As part of this management tool, dredging and disposal operations are evaluated based upon the entirety of the coastal system rather than individually. Disposition of non-beach quality sand should be planned to allow the material to be placed so that it will be within or accessible to the sand-sharing system, to the maximum extent practical, and following the provisions of the Clean Water Act.

There is no general restriction regarding the type of material that may be placed at the site. However, the suitability of dredged material for ocean disposal must be verified by USACE and agreed to by EPA prior to disposal. Verification will be valid for three years from the time last verified. Verification will involve the following:

- 1) A case-specific evaluation against the exclusion criteria (40 CFR 227.13(b));
- 2) A determination of the necessity for testing including bioassay (toxicity and bioaccumulation) testing for non-excluded material based on the potential for contamination of the sediment since last tested; and
- 3) Carrying out the testing (where needed) and determining if the non-excluded, tested material is suitable for ocean disposal based on the Ocean Dumping Criteria (40 CFR §227).

Documentation of suitability and EPA concurrence will be completed prior to use of the ODMDS(s). Documentation will be in the form of a MPRSA Section 103 Evaluation. Testing and evaluation will follow procedures outlined in the 1991 EPA/USACE Dredged Material Testing Manual (Green Book) and 2008 Southeast Regional Implementation Manual (SERIM) or appropriate updated versions. This includes how dredging projects will be subdivided into project segments for sampling and analysis. The MPRSA Section 103 Evaluation will be in the form outlined in Appendix C of the SERIM. Water Quality Compliance determinations will be made using the short-term fate of dredged material (STFATE-ADDAMS) model. Only material determined to be suitable and in compliance with Ocean Dumping Criteria (40 CFR §227) through the verification process by USACE and EPA, Region 4 can be disposed in the ODMDS(s).

**2.5 Timing of Disposal.** At present, no restrictions have been determined necessary for disposal related to seasonal variations in ocean current or biota activity. As monitoring results are compiled, should any such restriction appear necessary, disposal activities will be scheduled so as to avoid adverse impacts. Monitoring and precautions necessary to protect sea turtles, Gulf sturgeon, and the giant manta ray, as described in *Section 2.6*, are required on hopper dredges. Additionally, if new information indicates that endangered or threatened species are being adversely impacted, additional restrictions may be imposed.

**2.6 Disposal Techniques.** To protect sea turtles and Gulf sturgeon, the NMFS requires monitoring according to guidance outlined in the *Final Regional Biological Opinion for Hopper Dredging of Channels and Sand Mining Areas in the Gulf of Mexico by Galveston, New Orleans, Mobile, and Jacksonville Districts* (NMFS, 2003, amended 2005 and 2007). The habitat requirements between the smalltooth sawfish and manta ray are similar, therefore, it is expected that impacts related to dredging would be consistent between the two species. Therefore, it is expected that users of the ODMDS will also implement NMFS’s *Sea Turtle and Smalltooth Sawfish Construction Conditions*, which will reduce the risk of impacts to the giant manta ray as well as sea turtles. In addition, standard surveillance and evasive measures to protect sea turtles, Gulf sturgeon and marine mammals shall be employed during all placement operations at the ODMDS.

**2.7 Disposal Location.** Disposal shall occur no less than 330 feet (100 meters) inside the site boundaries to comply with 40 CFR §227.28. Placement methods that promote mounding are beneficial for creating relief on the ocean floor for habitat; however, USACE will prevent mounded dredged material from becoming an unacceptable navigation hazard. Dredged material shall be placed so that at no point will depths less than -25 feet mean lower low water (MLLW) occur (i.e., a clearance of 25 feet above the bottom will be maintained). To maximize ODMDS capacity, the placement shall be in specific disposal areas identified by USACE in consultation with the EPA, Region 4. Due to the existing shallow conditions (less than -25 feet MLLW) in the northern portion of the West ODMDS, all material will be placed south of northing 240000. Depths at the time of placement will be monitored to detect if adjustments of disposal methods are needed to prevent unacceptable mounding (navigation hazards). The physical removal or leveling of material above -25 feet MLLW is a management alternative should mounds greater than those elevations occur.

**2.8 Permit and Contract Conditions.** Pre and post-disposal monitoring requirements described under *Section 3.0 Site Monitoring* will be included as permit conditions on all MPRSA Section 103 permits and will be incorporated in the contract language for all Federal projects. A summary of the management and monitoring requirements to be included are listed in **Table 3**. Appendix B contains a template for standard permit conditions for MPRSA 103 permits for the Gulfport ODMDS(s) and Appendix C contains a template for standard contract conditions for Civil Works project use of the ODMDS(s).

**Table 2.** Summary of Permit and Contract Conditions

Condition	Reference
Dredged Material Suitability and Term of Verification	Gulfport ODMDS SMMP Section 2.4
Disposal within Appropriate Zones	Gulfport ODMDS SMMP Section 2.7
Disposal Monitoring and Recording of Disposal Locations	Gulfport ODMDS SMMP Section 3.2
Post Bathymetric Surveys within 30 days of Project Completion	Gulfport ODMDS SMMP Section 3.3
Reporting Requirements: Daily and Monthly Operations Reports and Disposal Summary Reports within 90 Days of Project Completion	Gulfport ODMDS SMMP Section 3.5

**2.9 Permit Process.** All ocean placement of dredged material, with exception of Federal Civil Works projects, requires an ocean dumping permit issued by USACE pursuant to Section 103 of the MPRSA. A summary of the permitting process can be found in 33 CFR § 320-325.

**2.10 Information Management of Dredged Material Placement Activities.** As discussed in the following sections, a substantial amount of diverse data regarding use of the Gulfport ODMDs(s) and the effects of disposal is required from many sources (EPA, USACE, and Mississippi State Port Authority). If this information is readily available and in a useable format, it can be used to answer many questions typically asked about a disposal site:

- What is being dredged?
- How much is being dredged?
- Where did the dredged material come from?
- Where was the dredged material placed?
- Was material dredged correctly? Placed correctly?
- What will happen to the environment at the disposal site?

As part of site management, the EPA and USACE will investigate alternatives for appropriate data management. USACE has an Ocean Disposal Database maintained by ERDC. This database provides quantities placed at the Gulfport ODMDs(s) along with chemical, physical, and biological information, and whether the project is civil works or a privately permitted action.

The Mobile District Spatial Data Branch (CESAM-OP-J) has created an online Sediment Sampling Mapping Module that has capacity to organize and access all data relating to core borings and sediment testing activity. This application will allow users to retrieve detailed sediment sample properties (e.g. X, Y locations, harbor bottom elevations, top of rock elevation, or material characteristics) correlating with all relevant sediment testing (chemical, biological, or physical) results, and link related documents such as core borings, gradation curves or sediment testing reports. In an attempt to streamline data sharing, EPA Region 4 and USACE, SAD has agreed on an eXtensible Markup Language (XML) standard for sharing of disposal monitoring data (see also *Section 3.5*).

**3.0 SITE MONITORING.** The MPRSA establishes the need for including a monitoring program as part of the SMMP. Site monitoring is conducted to ensure the environmental integrity of a disposal site and the surrounding areas are unharmed and to verify compliance with site designation criteria, any special management conditions, and with permit/concurrence requirements. Monitoring programs should be flexible, cost effective, and based on scientifically sound procedures and methods to meet site-specific monitoring needs. A monitoring program should have the ability to detect environmental change as a result of disposal activities and assist in determining compliance. The intent of the program is to provide the following:

- (1) Information indicating whether the disposal activities are occurring in compliance with permit and site restrictions,
- (2) Information concerning short-term and long-term environmental impacts of disposal; and/or
- (3) Information indicating short-term and long-term fate of materials placed in the marine environment.

The main purpose of a disposal site monitoring program is to determine whether dredged material site management practices, including disposal operations need to be changed to avoid significant adverse impacts.

**3.1 Baseline Monitoring.** Disposal has occurred at the ODMDS site(s) since the 1970s and predates any data gathering at the site. Therefore, no true baseline information has or can be collected. The results of investigations presented in the ODMDS designation EIS and subsequent surveys listed in Table 4 will serve as the main body of data for the monitoring of impacts associated with the of the Gulfport ODMDS(s).

**Table 3.** Surveys and Studies Conducted at the Gulfport ODMDS(s)

<b>Survey/Study Title</b>	<b>Conducted By:</b>	<b>Date</b>	<b>Purpose</b>	<b>Results</b>
<i>Analysis and Synthesis of Oceanic Conditions in the Mississippi Sound Offshore Region</i>	USACE	March 1984	Determine the direction and amount of sediment transport from a dredged material disposal site.	Circulation patterns within the site are controlled by astronomical tides, winds, and freshwater discharges.
Field Survey of the Gulfport ODMDS(s) ( <i>Analysis and Synthesis of Oceanic Conditions in the Mississippi Sound Offshore Region</i> )	USACE	March 1984	Video, Bathymetry, Hydrography, Water Quality, Sediment Benthic Survey, Tissue Analysis	Baseline Survey
Sediment Mapping	UGA Center for Applied Isotopes for EPA	February 1985	Characterization of bottom sediments using gamma spectrometry	Baseline Survey
Gulfport ODMDS(s) Benthic Communities Study	USACE	1986	Benthic community characterization	Baseline analysis
Bathymetric Surveys	USACE	Before and After Event	Monitor bathymetry changes	Baseline analysis
Disposal Monitoring	USACE	During each Event	Compliance	Database
Benthic Community Assessment	EPA	1999	Benthic community characterization	Database; no significant changes observed
Status and Trends Assessment (40 CFR §228.13)	EPA	2012	To determine the physical, chemical, geological, and biological structure of the ODMDS	No significant difference between mean and median taxa richness among the Gulfport ODMDS East, the Gulfport ODMDS West and the Gulfport ODMDS Reference areas.

**3.2 Disposal Monitoring.** For all disposal activities, an electronic tracking system (ETS) must be utilized. The ETS will provide surveillance of the transportation and disposal of dredged material. The ETS will be maintained and operated to continuously track the horizontal location and draft condition (accuracy  $\pm 0.1$  foot) of the disposal vessel (i.e. hopper or scow) from the point of dredging to the disposal site and return to the point of dredging. Data shall be collected at least every 0.25 nautical miles or every 4 minutes during travel to and from the ODMDS and every twelve seconds or every 30 feet of travel, whichever is smaller, while the hull status is open within the ODMDS. In addition to the continuous tracking data, the following trip information shall be electronically recorded for each dredging and disposal cycle:

- a. Load Number
- b. Disposal Vessel Name and Type (e.g. hopper, scow)
- c. Estimated volume of Load
- d. Description of Material Placed
- e. Source of Dredged Material
- f. Date, Time and Location at Initiation and Completion of Disposal Event

It is expected that disposal monitoring will be conducted utilizing the Dredging Quality Management (DQM) system for Civil Works projects [see <http://dqm.usace.army.mil/Specifications/Index.aspx>], although other systems are acceptable. Disposal monitoring and ETS data will be reported to EPA Region 4 on a weekly basis utilizing the XML specification and protocol per Section 3.5. EPA Region 4 and USACE, Mobile District shall be notified within 24 hours if disposal outside of the ODMDS specified disposal zone or if any apparent leaking or spilling of dredged material occurs as indicated by a loss of disposal vessel draft. The draft change threshold for notification will be determined at the time of project authorization under Section 103 of the MPRSA.

**3.3 Post-Disposal Monitoring.** USACE or other site user will conduct a bathymetric survey within 30 days after disposal project completion. Surveys will not be required for projects less than 50,000 cys. Surveys will conform to the minimum performance standards for Corps of Engineers Hydrographic Surveys as described in USACE Engineering Manual, EM1110-2-1003, *Hydrographic Surveying*, dated November 30, 2013 [[http://www.publications.usace.army.mil/Portals/76/Publications/EngineerManuals/EM\\_1110-2-1003.pdf](http://www.publications.usace.army.mil/Portals/76/Publications/EngineerManuals/EM_1110-2-1003.pdf)] or updates. Surveys will be taken along lines spaced at 500-foot intervals or less. The minimum performance standards from Table 3-1 in *Hydrographic Surveying* shall be followed. Horizontal location of the survey lines and depth sounding points will be determined by an automated positioning system utilizing a differential global positioning system. The vertical datum will be referenced to prescribed MLLW datum. The horizontal datum should be referenced to the local State Plane Coordinate System (SPCS) for the Gulfport area (zone 0901 Florida East) or in Geographical Coordinates (latitude-longitude). The horizontal reference datum should be the NAD 1983.

The number and length of transects required will be sufficient to encompass the Gulfport ODMDS and a 500-foot wide area around the disposal zone. The survey area may be reduced on a case-by-case basis if disposal zones are specified and adhered to.

Bathymetric surveys will be used to monitor the disposal mound to ensure a navigational hazard is not produced, to assist in verification of material placement, to monitor bathymetric changes and trends, to aid in environmental effects monitoring, and to ensure that the site capacity is not exceeded (i.e. that the mound does not exceed the site boundaries). Copies of these surveys shall be provided to EPA, Region 4 and USACE within 90 days of project completion as part of the Disposal Summary Report.

**3.4 Material Tracking and Disposal Effects Monitoring.** Surveys can be used to address possible changes in bathymetric, sedimentological, chemical, and biological aspects of the Gulfport ODMDS(s) and surrounding area as a result of placement of dredged material at the site.

**3.4.1 *Summary of Results of Past Monitoring Surveys.*** The surveys/studies listed in **Table 4** have indicated that the ODMDSs are dispersive sites for fine-grained material and as a result dredged material may extend beyond the designated site boundaries. Indicators of dredged material (from the sediment mapping and bathymetric surveys) appear within the ODMDS and to the northwest. Placement of dredged material in the northern portion of the Western ODMDS has resulted in this portion of the disposal site being too shallow for continued use. Placement of material in the Eastern ODMDS has resulted in dredged material being transported back into the channel.

**3.4.2 *Future Monitoring Surveys.*** Based on the type and volume of material placed and impacts of concern, various monitoring surveys can be used to examine if, and the direction, placed dredged material is moving, and what environmental effect the material is having on the site and adjacent areas.

Within 30 days of completion of a disposal event, detailed bathymetric surveys of the disposal area will be completed. The interagency team will meet, if necessary, to review the results of these efforts and determine the need for additional information. This need will be based on observance of any anomalies (i.e. potential cultural resources) or potential adverse impacts associated with a specific event. If the results of the bathymetric surveys do not indicate any anomalies or adverse impacts, no additional monitoring will be required for the disposal event. Reassessment of the site will be undertaken in accordance with 40 CFR §228.13 approximately every 10 years. Status and trend assessments include characterization of water quality, benthic communities, and sediment size/chemistry allowing for identification and interpretation of changes in community structure. Additional surveys for water quality, sediment mapping, or the use of remote sensing equipment may also be required.

At the current time, no nearby biological resources have been identified that are of concern for potential impact. The Gulfport ODMDS(s) are at least one nautical mile from all known fish havens and artificial reefs. The site(s) have been designated as dispersive. This means that it is expected that material will be moved outside the site boundaries. It is also expected that this material will not move in distinct mounds, but instead will blend with the surrounding environment causing a progressive transition to sediments containing a higher percentage of silt and clay. Changes in sediment composition will likely alter the benthic community structure. However, based on previous benthic studies, it is unlikely that permanent or long-term adverse impacts will result due to changes in sediment composition.

Future surveys, as outlined in **Table 4**, will focus on determining the rate and direction of placed dredge material dispersal and the capacity of the ODMDS. Should future placement at the ODMDS result in unacceptable adverse impacts, further studies may be required to determine persistence of these impacts, extent of the impacts within the marine system, and/or possible means of mitigation. In addition, the management plan presented may require revision based on the outcome of any monitoring program.



**Table 4: Gulfport ODMDS(s) Monitoring Strategies and Thresholds for Action**

Goal	Technique	Sponsor	Rationale	Frequency	Threshold for Action	Management Options	
						Threshold Not Exceeded	Threshold Exceeded
Monitor Bathymetric Trends	Bathymetry	Site User	Determine the extent of the disposal mound and major bathymetric changes	Post disposal	Disposal mound occurs outside ODMDS boundaries	Continue Monitoring	-Modify disposal method/placement -Restrict disposal volumes
Benthic Effects Monitoring	Sediment Mapping (Gamma/CS <sup>3</sup> )	EPA	Determine aerial influence of dredged material	Completed	Communities under the influence of dredged material outside the site have significant differences in diversity/richness/biomass from those not under dredged material influence after one-year recovery period.	Discontinue monitoring unless disposal quantities, type of material or frequency of use significantly changes	-Limit quantity of dredged material to prevent impacts outside boundaries -Create berms to retard dredged material movement -Cease site use
	Benthic Monitoring	EPA	Determine whether there are adverse changes in the benthic populations outside of the site and evaluate recovery rates.	Implement if disposal footprint extends beyond the site boundaries or if Trend Assessment results warrant	Adverse changes observed outside the site that may endanger the marine environment.		
Long-Term Fate	Modeling	EPA/USACE	Determine dispersiveness of site and aerial extent of impact	As resources allow	Aerial extent of impact reaches resources of concern and/or increases over time.	Continue to use site without restrictions	-Restrict disposal volumes -Create berms to retard dredged material transport -Cease site use
	Current Meter and Wave Gauge	EPA/USACE/Site Users					
	Erosional Analysis	EPA/USACE					
	Precision Bathymetry and Sidescan	USACE/EPA					
	Regional Grain Size Analysis	USACE/Site Users					
Site Capacity	Information from Long Term Fate	EPA/USACE/Site Users	Determine dispersiveness of site and long and short term capacity	-As resources allow -Prior to any project in excess of 2 million cubic yards	New work volumes exceed estimated capacity	Continue to use site without restrictions	-Enlarge site or designate additional site for new work
					Maintenance volumes exceed estimated capacity	Continue to use site without restrictions	-Enlarge site or designate additional site for new work

Ensure Safe Navigation Depth	Bathymetry	Site User	Determine height of mound and any excessive mounding	Post disposal	Mound height > -30 feet mean lower low water (MLLW)	Continue Monitoring	-Modify disposal method/placement -Restrict disposal volumes - Direct disposal operators to avoid areas shallower than 30 feet
					Mound height > -25 feet MLLW	Continue Monitoring	- Physically level material shallower than 25 feet - Notify mariners of mound location and depth - Further restrict disposal volumes
Compliance	Disposal Site Use Records in EPA Region 4's XML format	Site User	-Ensure management requirements are being met -To assist in site monitoring	Weekly during the project	Disposal records required by SMMP are not submitted or are incomplete	Continue Monitoring	-Restrict site use until requirements are met
					Review of records indicates a dump occurred outside ODMDS boundary	Continue Monitoring	-Notify EPA Region 4/USACE, and investigate why egregious dump(s) occurred. Take appropriate enforcement action.
					Review of records indicates a dump occurred in the ODMDS but not in target area	Continue Monitoring	-Direct placement to occur as specified.

**3.5 Reporting and Data Formatting.**

**3.5.1 Project Initiation and Violation Reporting.** USACE or other site user shall notify EPA 15 days prior to the beginning of a dredging cycle or project disposal. The user is also required to notify USACE and the EPA within 24 hours if a violation of the permit and/or contract conditions related to MPRSA Section 103 or SMMP requirements occur during disposal operations.

**3.5.2 Disposal Monitoring Data.** Disposal monitoring data shall be provided electronically by USACE Project Manager to EPA Region 4 on a weekly basis. Data shall be provided per the EPA Region 4 XML format and delivered as an attachment to: DisposalData.R4@epa.gov. The XML format is available from EPA Region 4.

**3.5.3 Post Disposal Monitoring Reports.** A Post Disposal Summary Report shall be provided to EPA within 90 days after project completion. These reports should include: dredging project title, permit number and expiration date (if applicable); contract number; name of contractor (s) conducting the work, name and type of vessel(s) disposing material in the ODMDS; disposal timeframes for each vessel; volume disposed of (as paid *in situ* volume, total paid and unpaid *in situ* volume, and gross volume reported by the dredging contractor), number of loads completed, type of material disposed; identification by load number of any misplaced material; dates of pre- and post- disposal bathymetric surveys of the ODMDS; and a narrative discussing any violation(s) of the 103 concurrency and/or permit (if applicable). The narrative should include a description of the violation, indicate the time it occurred and when it was reported to the EPA and USACE, discuss the circumstances surrounding the violation, and identify specific measures taken to prevent reoccurrence. The Post Disposal Summary Report shall be accompanied by the bathymetric survey results (plot and X, Y, Z ASCII file), a summary scatter plot of all disposal start locations, and a summary table of the trip information required in Section 3.2 with the exception of the disposal completion data. If all data is provided in the required XML format, scatter plots and summary tables will not be necessary.

**4.0 ANTICIPATED SITE USE.** It is anticipated that there will be a need for use of the Gulfport ODMDS(s) for many years. The site will be utilized for dredged material placement of approximately 1,000,000 cys of dredged material per year (not including tentative actions). This projection is based on shoaling rates, past dredging records, currently available dredged material placement options, and USACE planning documents.

**5.0 MODIFICATION OF THE GULFPORT ODMDS SMMP.** If results of monitoring surveys or validation reports from other sources indicate continued use of the Gulfport ODMDS(s) would lead to unacceptable effects, then ODMDS management will be modified to mitigate those effects. The SMMP will be reviewed and updated at least every 10 years or more frequently if necessary due to significant use changes. For example, the SMMP will be reviewed if the quantity or type of dredged material placed on site changes significantly or if conditions at the site indicate a need for revision. The plan should be updated in conjunction with activities authorizing use of the site.

**6.0 IMPLEMENTATION OF THE GULFPORT ODMDS SMMP.** This plan shall be effective from date of signature for a period not to exceed 10 years. The plan shall be reviewed and revised more frequently if site use and conditions at the site indicates a need for revision. The EPA and USACE shall share responsibility for implementation of the SMMP. Site users may be required to undertake monitoring activities as a condition of their permit. USACE will be responsible for implementation of the SMMP for Federal new work and maintenance projects.

## 7.0 REFERENCES.

Center for Applied Isotope Studies, 1996. Postdisposal Areal Mapping of Sediment Chemistry at the Gulfport, Mississippi ODMDS. EPA Contract No. 68-C2-0134, April 8, 1996.

Fredette, Thomas J., Nelson, David A., Clausner, James E., and Anders, Fred J. 1990. *Guidelines for Physical and Biological Monitoring of Aquatic Dredged Material Disposal Sites*, Technical Report D-90-12, US Army Engineer Waterways Experiment Station, Vicksburg, MS.

National Marine Fisheries Service (NMFS). 2003. Regional Biological Opinion for Dredging of Gulf of Mexico Navigation Channels and Sand Mining ("Borrow") Areas Using Hopper Dredging by COE Galveston, New Orleans, Mobile, and Jacksonville Districts (Consultation Number F/SER/2000/01287), NOAA, NMFS, Southeast Regional Office, Protected Resources Division, St. Petersburg, FL, 121 pp.

Pequegnat, Willis E., Gallaway, Benny J., and Wright, Thomas D., 1990. *Revised Procedural Guide for Designation Surveys of Ocean Dredged Material Disposal Sites*, Technical Report D-90-8, US Army Engineer Waterways Experiment Station, Vicksburg, MS.

U.S. Army Corps of Engineers (USACE). 1994. *Hydrographic Surveying*. Engineering Manual 1110-2-1003, Department of the Army, Washington D.C.

USACE. 2012. Final Sediment Quality Characterization of the Gulfport Harbor Federal Navigation Channel, Gulfport, MS. U.S. Army of Corps of Engineers, Mobile District. Mobile, AL.

U.S. Environmental Protection Agency and U.S. Army Corps of Engineers, 1991. *Evaluation of Dredged Material Proposed for Ocean Disposal (Testing Manual)*, February 1991. Prepared by Environmental Protection Agency Office of Marine and Estuarine Protection and Department of Army United States Army Corps of Engineers under EPA Contract No. 68-C8-0105.

U.S. Environmental Protection Agency and U.S. Army Corps of Engineers, 1996. *Guidance Document for Development of Site Management Plans for Ocean Dredged Material Disposal Sites*, February 1996. Prepared by Environmental Protection Agency Office of Water and Department of Army United States Army Corps of Engineers.

U.S. Environmental Protection Agency Region 4 and U.S. Army Corps of Engineers South Atlantic Division, 2008. *Southeast Regional Implementation Manual (SERIM) Requirements and Procedures for Evaluation of the Ocean Disposal of Dredged Material in Southeastern U.S. Atlantic and Gulf Coastal Waters*, August 2008.

U.S. Environmental Protection Agency and U.S. Army Corps of Engineers, 1996. *Guidance Document for Development of Site Management Plans for Ocean Dredged Material Disposal Sites*, February 1996. Prepared by Environmental Protection Agency Office of Water and Department of Army United States Army Corps of Engineers.

U.S. Environmental Protection Agency Region 4 and U.S. Army Corps of Engineers South Atlantic Division, 1993. *Regional Implementation Manual Requirements and Procedures for Evaluation of the Ocean Disposal of Dredged Material in Southeastern Atlantic and Gulf Coastal Waters*, May 1993.

**APPENDIX A**

**WATER COLUMN EVALUATIONS  
NUMERICAL MODEL (STFATE) INPUT PARAMETERS  
GULFPORT ODMDS**

Water Column Evaluations  
Numerical Model (STFATE) Input Parameters  
Gulfport ODMDS

**Site Description**

<b>Parameter</b>	<b>Value</b>	<b>Units</b>
Number of Grid Points (left to right)	45	
Number of Grid Points (top to bottom)	45	
Spacing Between Grid Points (left to right)	300	ft
Spacing Between Grid Points (top to bottom)	600	ft
Constant Water Depth	25	ft
Roughness Height at Bottom of Disposal Site	.005 <sup>1</sup>	ft
Slope of Bottom in X-Direction	0	Deg.
Slope of Bottom in Z-Direction	0	Deg.
Number of Points in Ambient Density Profile Point	2	
Ambient Density at Depth = 6 ft	1.0175	g/cc
Ambient Density at Depth = 25 ft	1.0205	g/cc

**Ambient Velocity Data**

<b>Parameter</b>	<b>Value</b>	<b>Units</b>
Profile	2- Point at constant depth	
X-Direction Velocity at Depth = 10 feet	0.303	ft/sec
Z-Direction Velocity at Depth = 10 feet	0.582	ft/sec
X-Direction Velocity at Depth = 19 feet	0.227	ft/sec
Z-Direction Velocity at Depth = 19 feet	0.436	ft/sec

**Disposal Operation Data**

<b>Parameter</b>	<b>Value</b>	<b>Units</b>
Location of Disposal Point from Top of Grid	13,800 <sup>2</sup>	ft
Location of Disposal Point from Left Edge of Grid	2,700 <sup>2</sup>	ft
Dumping Over Depression	0	

**Input, Execution and Output**

Parameter	Value	Units
Location of the Upper Left Corner of the Disposal Site - Distance from Top Edge	600	ft
Location of the Upper Left Corner of the Disposal Site - Distance from Left Edge	900	ft
Location of the Lower Right Corner of the Disposal Site - Distance from Top Edge	27,000	ft
Location of the Lower Right Corner of the Disposal Site - Distance from Left Edge	4,500	ft
Duration of Simulation	14,400	sec
Long Term Time Step	600	sec

**Coefficients**

Parameter	Keyword	Value
Settling Coefficient	BETA	0.000 <sup>1</sup>
Apparent Mass Coefficient	CM	1.000 <sup>1</sup>
Drag Coefficient	CD	0.500 <sup>1</sup>
Form Drag for Collapsing Cloud	CDRAG	1.000 <sup>1</sup>
Skin Friction for Collapsing Cloud	CFRIC	0.010 <sup>1</sup>
Drag for an Ellipsoidal Wedge	CD3	0.100 <sup>1</sup>
Drag for a Plate	CD4	1.000 <sup>1</sup>
Friction Between Cloud and Bottom	FRICTN	0.010 <sup>1</sup>
4/3 Law Horizontal Diffusion Dissipation Factor	ALAMDA	0.001 <sup>1</sup>
Unstratified Water Vertical Diffusion Coefficient	AKYO	Pritchard Expression
Cloud/Ambient Density Gradient Ratio	GAMA	0.250 <sup>1</sup>
Turbulent Thermal Entrainment	ALPHAO	0.235 <sup>1</sup>
Entrainment in Collapse	ALPHAC	0.100 <sup>1</sup>
Stripping Factor	CSTRIP	0.003 <sup>1</sup>

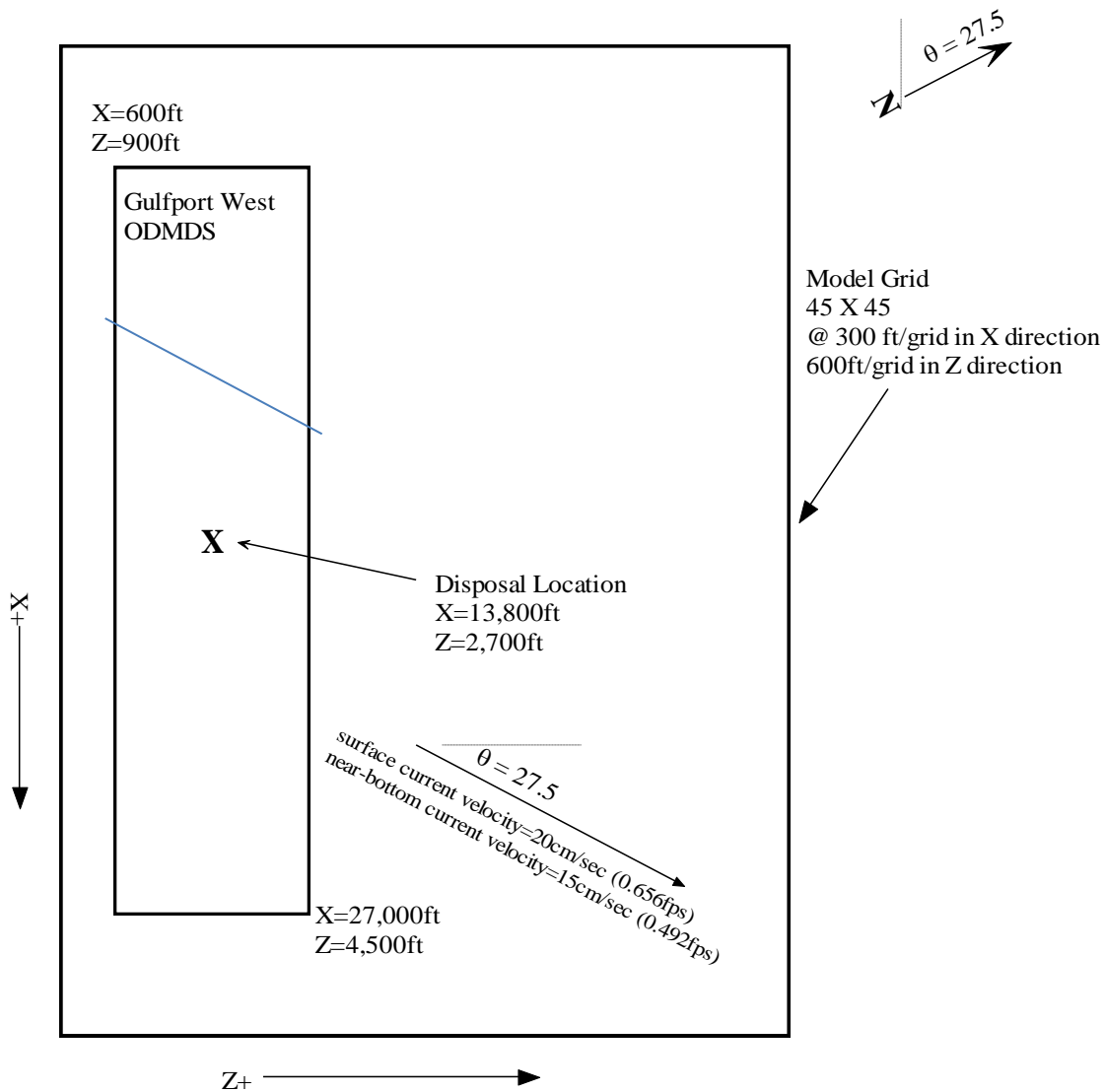
<sup>1</sup>Model default value

<sup>2</sup>Represents center of disposal site. Dredged material requiring disposal in another location in order to meet the dilution criteria must be brought to the attention of EPA and the USACE.

Typical dilution achieved after 4 hours = 1,200:1

Typical dilution achieved at all times outside disposal site = 170:1

# Gulfport West ODMDS STFATE Input Parameters





APPENDIX B

GENERIC SPECIAL CONDITIONS FOR  
MPSA SECTION 103 PERMITS  
GULFPORT ODMDS(S)

I. DISPOSAL OPERATIONS

A. For this permit, the term disposal operations shall mean: navigation of any vessel used in disposal operations, transportation of dredged material from the dredging site to the Gulfport ODMDS(s), proper disposal of dredged material at the disposal area within the Gulfport ODMDS(s), and transportation of the hopper dredge or disposal barge or scow back to the dredging site.

B. **Gulfport ODMDS Boundary.** The boundary coordinates of the Gulfport ODMDS(s) are North American Datum (NAD) 83 and Mississippi East State Plane 2301:

West ODMDS		East ODMDS	
30°12'00" N	89°00'30" W	30°11'10" N	88°58'24" W
30°12'00" N	88°59'30" W	30°11'12" N	88°57'30" W
30°11'00" N	89°00'00" W	30°07'36" N	88°54'24" W
30°07'00" N	88°56'30" W	30°07'24" N	88°54'48" W
30°06'36" N	88°57'00" W		
30°10'30" N	89°00'36" W		

**State Plane 2301 Mississippi East**

30.2000000°	-089.0083333°	30.18611111111°	-088.9733333333°
30.2000000°	-088.9916667°	30.18666666667°	-088.9583333333°
30.1833333°	-089.0000000°	30.12666666667°	-088.9066666667°
30.1166667°	-088.9416667°	30.12333333333°	-088.9133333333°
30.1100000°	-088.9500000°		
30.1750000°	-089.0100000°		

C. **Disposal Release Zone.** The permittee shall ensure that disposal initiation occurs while the hopper dredge or disposal barge or scow are completely inside the boundaries of the ODMDS. Additionally, disposal shall occur within a specified disposal zone defined (on a project-specific basis) as [DEFINE COORDINATES AND SIZE OF DISPOSAL ZONE]. After disposal initiation, disposal can occur (that is, the vessel can travel) anywhere within the ODMDS boundaries as defined in Special Condition B. However, the Permittee shall ensure the hopper dredge, disposal barge or scow doors or split hull shall be in the closed position and all dredged material has ceased before the disposal vessel leaves the Gulfport ODMDS Boundary.

D. **Disposal Volume Limitations.** No more than [NUMBER] cubic yards of dredged material excavated at the location defined in [REFERENCE LOCATION IN PERMIT] are authorized for disposal at the Gulfport ODMDS(s).

E. **Maximum Placement Elevation.** The permittee shall ensure that dredged material shall be placed such that at no point will depths less than -25 feet MLLW occur (i.e., a clearance of 25 feet above the bottom will be maintained).

**F. Electronic Positioning System.** The permittee shall use an electronic positioning system to navigate to and from the Gulfport ODMDS. For this section of the permit, the electronic positioning system will be defined as a differential global positioning system. If the electronic positioning system fails or navigation problems are detected, all disposal operations shall cease until the failure or navigation problems are corrected.

**G. Certification of Electronic Positioning System.** The permittee shall certify the accuracy of the electronic positioning system proposed for use during disposal operations at the Gulfport ODMDS(s). The certification shall be accomplished by providing current certification documentation from the National DQM Program for scow and hopper dredge instrumentation systems. The National DQM certification is valid for one year from the date of certification.

**H. Leakage/Spillage.** This permit does not authorize leakage or spillage out of barges, dump scows, or hopper dredges of water and/or excavated material while transporting material to the ODMDS. Failure to repair leaks or change the method of operation which is resulting in the leakage or spillage will result in the suspension of dredging operation and require prompt repair or change of operation as prerequisite to the resumption of dredging. Transit to the ODMDS begins as soon as dredged material loading into the disposal vessel is completed and the vessel begins moving to the ODMDS. All appropriate measures to avoid spillage during transit must be taken. Appropriate measures may include but are not limited to: up-to-date U.S. Coast Guard and/or American Bureau of Shipping certification of all disposal-related vessels; maintenance (inspection and/or replacement) of gaskets on barge doors, minimization of excess free liquids in barge loads, pre-transit testing of barge door hydraulics, and pre-transport verification of appropriate weather and sea state conditions. EPA Region 4 and USACE, Mobile District shall be notified within 24 hours if any apparent leaking or spilling of dredged material occurs as indicated by an average loss of draft during transit from the dredging area to the disposal release zone(s) (forward draft loss plus aft draft loss divided by 2) in excess of X.X feet. In addition, the permittee understands that no debris is to be placed in the Gulfport ODMDS(s).

**I. Compliance with Permit.** A disposal operations inspector and/or captain of any tug boat, hopper dredge or other vessel used to transport dredged material to the Gulfport ODMDS(s) shall insure compliance with disposal operation conditions defined in this permit.

1. If the disposal operations inspector or the captain detects a violation, they shall report the violation to the permittee immediately.
2. The permittee shall contact USACE, Mobile District's Regulatory Branch at (251) 690-2658 and EPA Region 4 at (404) 562-9228 to report the violation within twenty-four (24) hours after the violation occurs. A complete written explanation of any permit violation shall be included in the post-dredging report.

**J. Electronic Tracking System.** The permittee shall use an electronic tracking system (ETS) to provide surveillance of the transportation and disposal of dredged material. The ETS will be maintained and operated to continuously track the horizontal location and draft condition (accuracy  $\pm 0.1$  foot) of the disposal vessel (i.e. hopper dredge or disposal scow) from the point of dredging to the Gulfport ODMDS and return to the point of dredging. Data shall be collected at least every 0.25 nautical miles or every 4 minutes during travel to and from the ODMDS and twelve seconds or every 30 feet of travel, while the hull status is open within the ODMDS. The permittee shall use Mississippi State Plane Coordinates or latitude and longitude coordinates (North American Datum 1983). State plane coordinates shall be reported to the nearest foot and latitude and longitude coordinates shall be reported as decimal degrees out to 6 decimals. Westerly longitudes are to be reported as negative. Draft readings shall be recorded in feet out to 2 decimals.

**K. Disposal Record.** The permittee shall record electronically for each load the following information:

- a. Load Number
- b. Disposal Vessel Name and Type (e.g. scow)
- c. Estimated Volume of Load
- d. Description of Material Disposed
- e. Source of Dredged Material
- f. Date, Time, and Location at Initiation and Completion of Disposal Event

**L. Bathymetric Survey.** The permittee shall conduct a bathymetric survey of the Gulfport ODMDS(s) within two months prior to project disposal and within 30 days following project completion.

1. The number and length of the survey transects shall be sufficient to encompass the Gulfport ODMDS(s) and a 1500-foot wide area around the site. Transects shall be spaced at 500-foot intervals or less.
2. Vertical accuracy of the survey shall be  $\pm 0.5$  feet. Horizontal location of the survey lines and depth sounding points will be determined by an automated positioning system utilizing either microwave line of site system or differential global positioning system. The vertical datum shall be mean lower low water (MLLW) and the horizontal datum shall use Mississippi State Plane or latitude and longitude coordinates (North American Datum 1983). State Plane coordinates shall be reported to the nearest 0.10- foot and latitude and longitude coordinates shall be reported as degrees and decimal minutes to the nearest 0.01 minutes.

**M. Regional Biological Opinion.** Enclosed is the Regional Biological Opinion (RBO) dated [INSERT DATE], for swimming sea turtles and sturgeon. The RBO contains mandatory terms and conditions to implement the reasonable and prudent measures that are associated with "incidental take" that is also specified in the RBO. The permittee's authorization under the USACE permit is conditional upon compliance with all of the mandatory terms and conditions associated with the incidental take of the attached RBO, which terms and conditions are incorporated by reference in the permit. Failure to comply with the terms and conditions associated with the incidental take of the RBO, where a take of the listed species occurs, would also constitute non-compliance with USACE permit. However, depending on the affected species, the National Marine Fisheries Service is the appropriate authority to determine compliance with the terms and conditions of its RBO and with the Endangered Species Act (ESA). For further clarification on this point, you should contact the appropriate agency. NMFS will normally enforce the violation of the ESA or refer the matter to the Department of Justice, should NMFS determine that the conditions of the RBO have been violated.

**N. Site Management and Monitoring Plan.** The Permittee shall comply with the conditions of the current Gulfport Site Management and Monitoring Plan (SMMP) and any revisions. The most recent SMMP can be found at the following web address: [insert URL]

The Permittee shall not transport dredged material to the Gulfport ODMDS until concurrence is granted by EPA that the proposed dredged material meets the Ocean Disposal Criteria given in 40 CFR 227.

## II. REPORTING REQUIREMENTS

A. All reports, documentation, and correspondence required by the conditions of this permit shall be submitted to the following addresses: U.S. Army Corps of Engineers - Coastal Environment Team, Post Office Box 2288, Mobile, Alabama 36638 and U.S. Environmental Protection Agency - Region 4's Oceans, Wetlands, and Streams Protection Branch, 61 Forsyth Street SW, Atlanta, Georgia, 30303. The Permittee shall reference this permit number, [INSERT PERMIT NUMBER], on all submittals.

B. At least thirty (30) days before initiating any dredging operations authorized by this permit, the Permittee shall provide to USACE and EPA a written notification of the date of commencement of work authorized by this permit. In addition, the permittee agrees to contact the U.S. Coast Guard (Marine Safety Office) at (251) 441-5674 prior to disposing of any material in the ocean disposal site.

C. Electronic data required by Special Conditions I and J shall be provided to EPA Region 4 and to USACE on a weekly basis. Data shall be submitted as an eXtensible Markup Language (XML) document via Internet email to [DisposalData.R4@epa.gov](mailto:DisposalData.R4@epa.gov). XML data file format specifications are available from EPA Region 4.

D. The permittee shall develop and send one copy of the disposal summary report to the Mobile District's Regulatory Branch and one copy of the disposal summary report to EPA Region 4 documenting compliance with all general and special conditions defined in this permit. The disposal summary report shall be sent within 90 days after completion of the disposal operations authorized by this permit. The disposal summary report shall include the following information:

1. The report shall indicate whether all general and special permit conditions were met. Any violations of the permit shall be explained in detail.
2. The disposal summary report shall include the following information: dredging project title; dates of disposal; permit number and expiration date; name of contractor(s) conducting the work; name and type of vessel(s) disposing material in the ODMDS; disposal timeframes for each vessel; volume disposed at the ODMDS (as paid in situ volume, total pad and unpaid in situ volume, and gross volume reported by dredging contractor), number of loads to ODMDS, type of material disposed at the ODMDS; identification of any misplaced material (outside disposal zone or the ODMDS boundaries); dates of pre and post disposal bathymetric surveys of the ODMDS, and a narrative discussing any violation(s) of the 103 permit. The disposal summary report should be accompanied by the bathymetry survey results (plot and X, Y, Z, ASCII data file).

## III. PERMIT LIABILITY

A. The permittee shall be responsible for ensuring compliance with all conditions of this permit.

B. The permittee and all contractors or other third parties who perform an activity authorized by this permit on behalf of the permittee shall be separately liable for a civil penalty of up to \$50,000 for each violation of any term of this permit they commit alone or in concert with the permittee or other parties. This liability shall be individual, rather than joint and several, and shall not be reduced in any fashion to reflect the liability assigned to

and civil penalty assessed against the permittee or any other third party as defined in 33 U.S.C. Section 1415(a).

C. If the permittee or any contractor or other third party knowingly violates any term of this permit (either alone or in concert), the permittee, contractor or other party shall be individually liable for the criminal penalties set forth in 33 U.S.C. Section 1415(b).

**APPENDIX C  
TYPICAL CONTRACT LANGUAGE FOR IMPLEMENTING  
THE GULFPORT SMMP REQUIREMENTS**



**TYPICAL CONTRACT LANGUAGE FOR IMPLEMENTING SMMP REQUIREMENTS**

**DISPOSAL OF DREDGED MATERIAL**

1. General

All material dredged shall be transported to and deposited in the disposal area(s) designated on the drawings. The approximate maximum and average distance to which the material will have to be transported are as follows:

Disposal Area	Maximum Distance Statute Miles	Average Distance Statute Miles
[Insert disposal area]	[XX miles]	[XX miles]

[IF MATERIAL FROM DIFFERENT PROJECT AREAS GO TO DIFFERENT DISPOSAL AREAS, IT COULD BE SPECIFIED HERE]

2. Ocean Disposal Notification

The material excavated shall be transported to and deposited in the Gulfport ODMDS shown on the drawings. When dredged material is disposed, no portion of the hopper dredge or disposal barge or scow shall be outside of the boundaries of the Gulfport ODMDS boundary as shown on the drawings. Additionally, disposal shall be initiated within the disposal release zone defined by the following coordinates.

[insert coordinates for appropriate release zone]

3. Logs

The Contractor shall keep a log for each load placed in the Gulfport ODMDS. The log entry for each load shall include:

- a. Load number
- b. Disposal vessel or Scow Name
- c. Estimated volume of load
- d. Description of material disposed
- e. Source of dredged material
- f. Date, time, and location (coordinates) at start of initiation and completion of disposal event.

At the completion of dredging and at any time upon request, the log(s) shall be submitted in paper and electronic formats to the Contracting Officer for forwarding to the appropriate agencies.

3.1 Spillage/Leakage

Any scow load or hopper dredge load that is released outside the boundaries of the release zone as shown on the plans will be classified as a mis-dump and will result in a suspension of dredging

operations. Re-dredging of such materials will be required as a prerequisite to the resumption of dredging unless the Contracting Officer, at his discretion, determines that re-dredging of such material is not practical. If re-dredging of such material is not required then the quantity of the mis-dumped load shall be deducted from the Contractor's pay quantity. If the quantity for each mis-dumped load to be deducted cannot initially be agreed to by both the Contractor and Contracting Officer, then an average hopper/scow load quantity for the entire contract will be used in the determination. In addition, the Contractor must notify the Contracting Officer within 24 hours of a misplaced dump or any other violation of the Site Monitoring and Management Plan for the Gulfport ODMDS. Corrective actions must be implemented by the next dump and the Contracting Officer must be informed of actions taken.

### 3.2 Vessel Doors

All hopper doors, dump scow doors, or split hull dumping mechanisms shall be closed and sealed prior to exiting the ODMDS as documented by the hull sensors. In the event that a dump vessel exits the ODMDS with open doors, then the Contractor shall notify the COR immediately of the occurrence. Corrective actions must be implemented by the next dump and the Contracting Officer must be informed of actions taken.

[USE LANGUAGE BELOW FOR NON DQM PROJECTS]

#### I. ETS Standards

The Contractor shall provide automated (computer) system and components to perform in accordance with COE EM 1110-1-2909. A copy of the EM can be downloaded from the following web site:

[https://www.publications.usace.army.mil/Portals/76/Publications/EngineerManuals/EM\\_1110-1-2909.pdf](https://www.publications.usace.army.mil/Portals/76/Publications/EngineerManuals/EM_1110-1-2909.pdf)

Horizontal location shall have an accuracy equal to or better than a standard DGPS system, equal to or better than plus/minus 10 feet (horizontal repeatability). Vertical (draft) data shall have an accuracy of plus/minus 0.1 foot. Horizontal location and vertical data shall be collected in sets and each data set shall be referenced in real-time to date and local time (to nearest minute) and shall be referenced to the same state plane coordinate system used for the survey(s) shown in the contract plans. The ETS shall be calibrated, as required, in the presence of the Contracting Officer at the work location before disposal operations have started, and at 30-day intervals while work is in progress. The Contracting Officer shall have access to the ETS to observe its operation. Disposal operations will not commence until the ETS to be used by the Contractor is certified by the Contracting Officer to be operational and within acceptable accuracy. It is the Contractor's responsibility to select a system that will operate properly at the work location. The complete system shall be subject to the Contracting Officer's approval.

#### II. ETS Requirements and Submissions

- a. The ETS for each disposal vessel shall be in operation for all dredging and disposal activities and shall record the full round trip for each loading and disposal cycle. (NOTE: A dredging and disposal cycle constitutes the time from commencement of dredging to complete discharge of the material.) The Contracting Officer shall be notified immediately in the event of ETS failure and all dredging operations for the vessel shall cease until the ETS is fully operational. Any delays resulting from ETS failure shall be at the Contractor's expense.
- b. All data shall be collected and stored on CD-ROM(s) in ASCII format and shall be readable by MS Windows compatible software. Each dredging and disposal cycle shall be a



- separate and distinct ASCII file, labeled by the trip number. More than one file may be stored on the disc(s) or CD-ROM(s).
- c. Data shall be collected at least every 0.25 nautical mile or every 4 minutes during travel to and from the ODMDS and twelve seconds or every 30 feet of travel, while the hull status is open within the ODMDS.
  - d. In addition to the continuous tracking data, the following trip information shall be electronically recorded for each disposal cycle:
    - a. Load Number
    - b. Disposal Vessel Name and Type
    - c. Estimated Volume of Load
    - d. Description of Material Disposed
    - e. Source of Dredged Material
    - f. Date, Times, and Location at Initiation and Completion of Disposal Event
  - e. Pilot Reporting (2 types):
    - a. Tracking Plot - For each disposal event, data collected while the disposal vessel is in the vicinity of the disposal area shall be plotted in chart form, in 200-foot intervals, to show the track and draft of the disposal vessel approaching and traversing the disposal area. The plot shall identify the exact position at which the dump commenced.
    - b. Scatter Plot - Following completion of all disposal events, a single and separate plot will be prepared to show the exact disposal locations of all dumps. Every plotted location shall coincide with the beginning of the respective dump. Each dump shall be labeled with the corresponding Trip Number and shall be at a small but readable scale.
    - c. Summary Table – A spreadsheet which contains all of the information in the log(s) above shall be prepared and shall correspond to the exact dump locations represented on the Scatter Plot.
  - f. ETS data and log data required shall be provided to EPA Region 4 on a weekly or more frequent basis. Data shall be submitted to EPA Region 4 as an eXtensible Markup Language (XML) document via Internet e-mail to DisposalData.R4@epa.gov. XML data file format specifications are available from EPA Region 4. All digital ETS data shall be furnished to the Contracting Officer within 24 hours of collection. The digital plot files should be in an easily readable format such as Adobe Acrobat PDF file, Microstation DGN file, JPEG, BMP, TIFF, or similar. The hard copy of the ETS data and tracking plots shall be both maintained onboard the vessel and submitted to the Contracting Officer on a weekly basis.

[FOR DQM PROJECTS]

See: <http://dqm.usace.army.mil/Specifications/Index.aspx>

For scows, the monitoring profile, TDS profile or Ullage profile shall be used.

1. NATIONAL DREDGING QUALITY MANAGEMENT PROGRAM SYSTEM (HOPPER DREDGES AND SCOWS)  
National Dredging Quality Management Program (NDQMP) System certification is required prior to award. See provision NATIONAL DREDGING QUALITY MANAGEMENT PROGRAM SYSTEM -- HOPPER DREDGES -- SPECIAL STANDARD OF RESPONSIBILITY of Section 00100 INSTRUCTIONS TO OFFERORS in Volume 1.
2. System Requirements  
See Section 35 20 24 NATIONAL DREDGING QUALITY MANAGEMENT PROGRAM SCOW - MONITORING PROFILE and Section 35 20 26 NATIONAL DREDGING QUALITY MANAGEMENT PROGRAM HOPPER DREDGE. However, in the event of NDQMP System

failure (not fully operational), the Contractor shall notify the Contracting Officer and continue tracking using ETS (see paragraph "Electronic Tracking System (ETS) for Ocean Disposal Vessels" below) for up to 48 hours until the NDQMP System is fully operational and in use. If, upon NDQMP System failure, the Contractor cannot use ETS or cannot use the NDQMP System within 48 hours of failure, all dredging operations for the vessel shall cease until the NDQMP System is fully operational. Any delays resulting from failure of the Contractor's DQM hardware or software shall be at the Contractor's expense.

3. All digital ETS data shall be furnished to the Contracting Officer within 24 hours of collection. The digital plot files should be in an easily readable format such as Adobe Acrobat PDF file, Microstation DGN file, JPEG, BMP, TIFF, or similar. The hard copy of the ETS data and tracking plots shall be both maintained onboard the vessel and submitted to the Contracting Officer on a weekly basis.