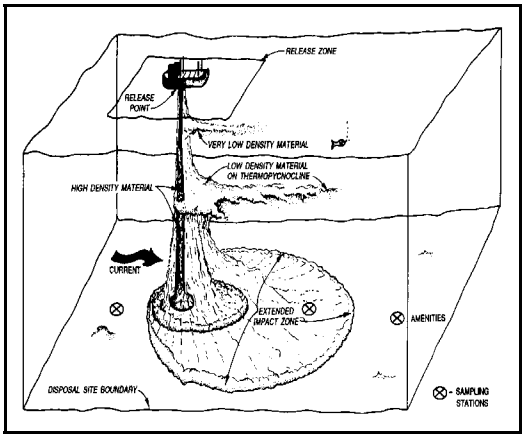
NOVEMBER 2007

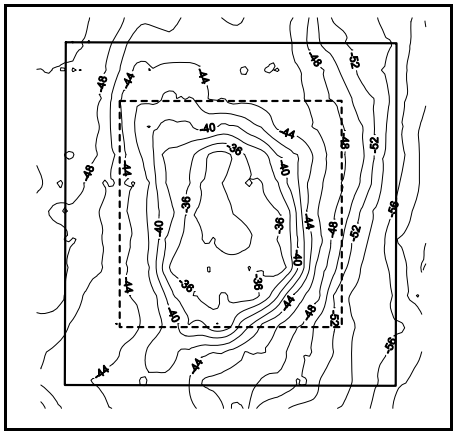
EPA

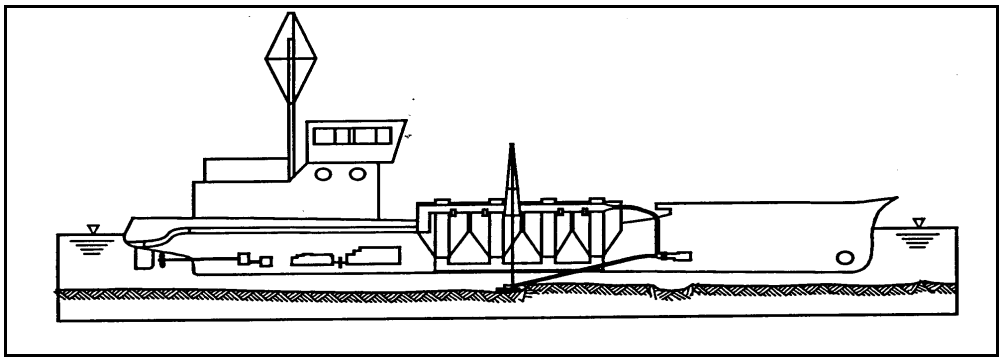
U.S. Army Corps of Engineers

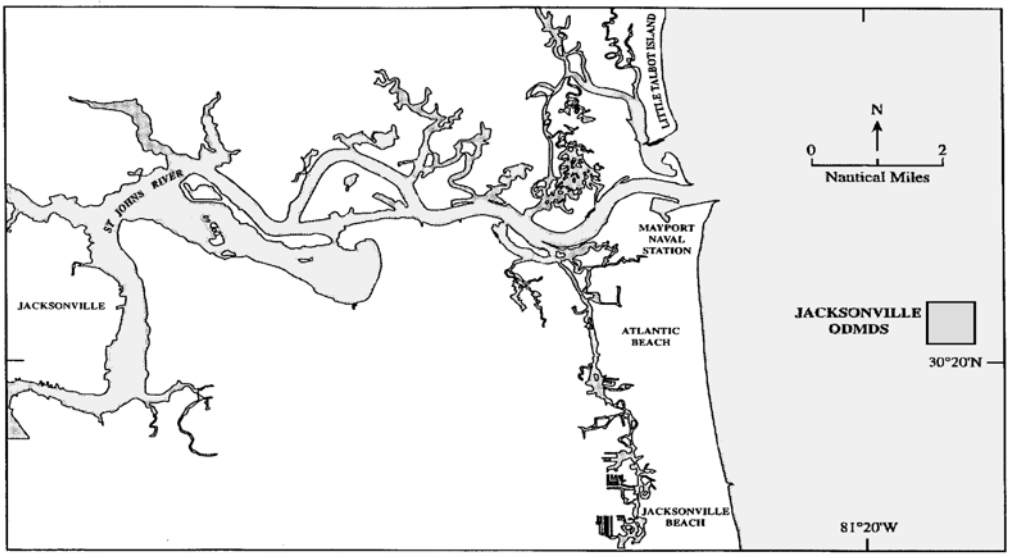
JACKSONVILLE OCEAN DREDGED MATERIAL DISPOSAL SITE

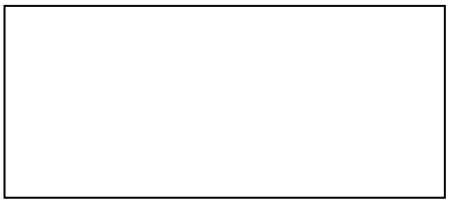
SITE MANAGEMENT AND MONITORING PLAN



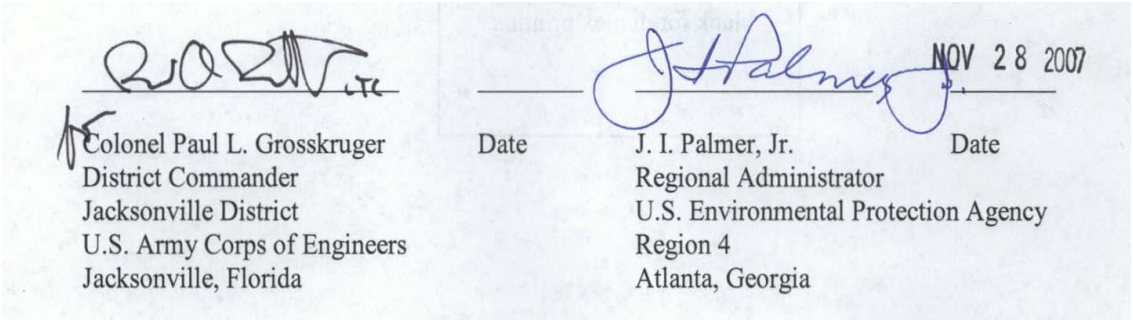








The following Site Management and Monitoring Plan for the Jacksonville ODMDS has been developed and agreed to pursuant to the Water Resources Development Act Amendments of 1992 (WRDA 92) to the Marine Protection, Research, and Sanctuaries Act of 1972 for the management and monitoring of ocean disposal activities, as resources allow, by the U.S. Environmental Protection Agency and the U.S. Army Corps of Engineers.



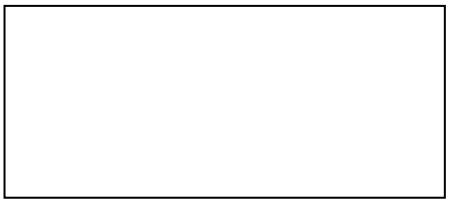
Colonel Paul L. Grosskruger
District Commander
Jacksonville District
U.S. Army Corps of Engineers
Jacksonville, Florida

Date

J. I. Palmer, Jr.
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 site indicate a need for revision.



JACKSONVILLE OCEAN DREDGED MATERIAL DISPOSAL SITE (ODMDS) SITE MANAGEMENT AND MONITORING PLAN

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

APPENDICES

Jacksonville ODMDS
Site Management and Monitoring Plan

1.0 INTRODUCTION

It is the responsibility of the U.S. Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (USACE) under the Marine Protection, Research, and Sanctuaries Act (MPRSA) of 1972 to manage and monitor each of the Ocean Dredged Material Disposal Sites (ODMDSs) designated by the EPA pursuant to Section 102 of MPRSA. Section 102(c)(3) of the MPRSA requires development of a Site Management and Monitoring Plan (SMMP) for each ODMDS and review and revision of the SMMP not less frequently than every 10 years. The 1996 document, *Guidance Document for Development of Site Management Plans for Ocean Dredged Material Disposal Sites* (EPA/USACE, 1996) and the EPA, Region 4 and USACE South Atlantic Division Memorandum of Understanding (EPA/USACE, 2007) have been used as guidance in developing this SMMP.

A SMMP was first developed for the Jacksonville ODMDS in June 1997. This revision to the Jacksonville ODMDS SMMP supersedes the 1997 SMMP. Upon finalization of this revised SMMP, the SMMP provisions shall be requirements for all dredged material disposal activities at the site. All Section 103 (MPRSA) ocean disposal permits or contract specifications shall be conditioned as necessary to assure consistency with the SMMP.

1.1 Site Management and Monitoring Plan Team. An interagency SMMP team was established to assist EPA and USACE in developing the 1997 Jacksonville ODMDS SMMP. The team consisted of the following agencies and their respective representatives:

- Jacksonville District Corps of Engineers
- State of Florida (Coastal Zone Management Office)
- EPA Region 4
- U.S. Navy (Naval Station Mayport)
- Port of Jacksonville
- National Marine Fisheries Service (NMFS)
- U.S. Coast Guard

These agencies will continue to be consulted in revisions to the Jacksonville ODMDS SMMP. The team will assist EPA and USACE on deciding on appropriate disposal practices, appropriate monitoring techniques, the level of monitoring, the significance of results and potential management options.

Specific responsibilities of EPA and the Jacksonville District Corps of Engineers are:

> EPA: EPA is responsible for designating/dedesignating MPRSA Section 102 Ocean Dredged Material Disposal Sites, for evaluating environmental effects of disposal dredged material at these sites and for reviewing and concurring on dredged material suitability determinations.

USACE: The USACE is responsible for evaluating dredged material suitability, issuing MPRSA Section 103 permits, regulating site use and developing and implementing disposal monitoring programs.

2.0 SITE MANAGEMENT

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."

2.1 Disposal Site Characteristics

The designation of the Jacksonville ODMDS can be found in 40 CFR 228.15(h)(9). The Jacksonville ODMDS is a 1 nautical mile (nmi) by 1 nmi square area centered at the coordinates 30° 21.00'N latitude and 81°18.00'W longitude (NAD 27) or state plane coordinates 2,187,428.7 ft N and 561,602.6 ft E (NAD83). The site coordinates are as follows:

	Geographic (NAD27)		Geographic (NAD83)		State Plane (FL East 0901 Ft NAD83)	
Center	30°21.00'N	81°18.00'W	30°21.02'N	81°17.99'W	2187429 N	561603 E
NW Corner	30°21.50'N	81°18.57'W	30°21.52'N	81°18.56'W	2190467 N	558614 E
NE Corner	30°21.50'N	81°17.43'W	30°21.52'N	81°17.42'W	2190451 N	564609 E
SW Corner	30°20.50'N	81°18.57'W	30°20.52'N	81°18.56'W	2184406 N	558597 E
SE Corner	30°20.50'N	81°17.43'W	30°20.52'N	81°17.42'W	2184390 N	564592 E

The site is 4.5 nmi offshore with an area of 1 nmi^2. As of 2007, it had a depth range of 10 to18 meters (32 to 60 feet), with an average depth of 14 meters (46 feet).

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

- Protection of the marine environment;
- Documentation of disposal activities and compliance; and
- Maintenance of a long term disposal alternative for dredged material generated in the Jacksonville, Florida vicinity

The following sections provide the framework for meeting these objectives to the extent possible.

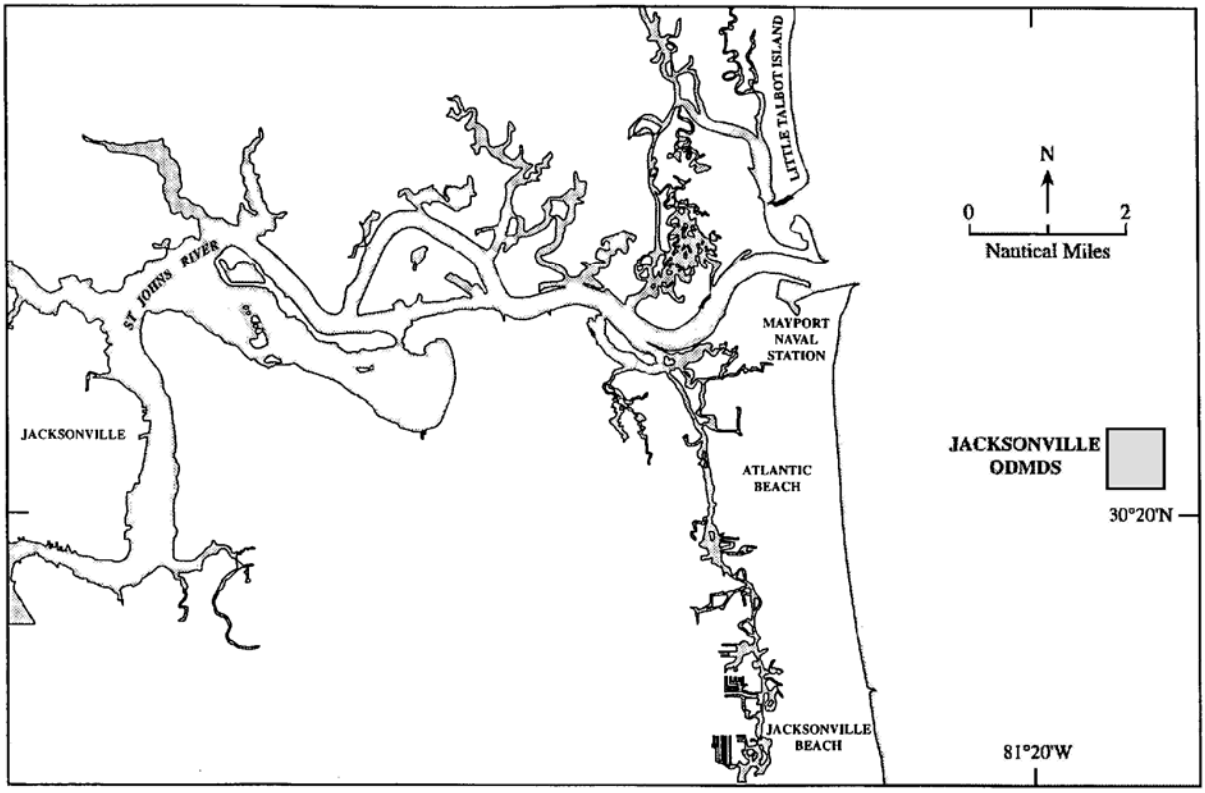


Figure 1. Jacksonville ODMDS Location Map

2.3 Disposal History and Dredged Material Volumes. The Jacksonville ODMDS and vicinity has been used for the ocean disposal of dredged material since 1952. Material disposed prior to 1970 and in the early 1970's was disposed in an area 0.5 nautical miles east of the Jacksonville ODMDS. In the late 1970's material was disposed south of the site. Table 1 outlines the history of disposal of material.

Table 1. Volume of Dredged Material Placed in the Jacksonville ODMDS

1952-1970[1]	4,461,594	3,992,997		8,454,591
1971-1980[1]	2,652,407	3,048,844		5,707,851
1985[2]	15,800			15,800
1986[2]			109,700	109,700
1987[2]	82,200		26,500	108,700
1988[2]	210,500			210,500
1996[3]		659,623		659,623
1997[3]		439,748		439,748
2000[3]		887,284		887,284
2001[4]		174,832		174,832
2002[3]		225,200		225,200
2003[3]	560,446	905,328		1,465,774
2005[3]		59,667		59,667
2006[3]		888,134		888,134
Total 1996-2006	560,446	4,239,816		4,800,262

[1]Data from Jacksonville ODMDS EIS (EPA, 1983)
[2]Data from the USACE Ocean Disposal Database.
[3]Data from the Jacksonville District Dredge Information System – paid *in situ* volumes
[4]Data from the Jacksonville District Post Disposal Monitoring Reports

Since 1995, Naval Station Mayport has utilized the Jacksonville ODMDS on a biannual basis for the disposal of maintenance material. This material typically consists of silts, soft clays and sand mixtures. The Jacksonville Harbor Federal Navigation Project has used the site for disposal of coarse material not suitable for beach placement from the entrance channel. It is expected that the Naval Station Mayport will continue to utilize the ODMDS at existing levels and the Jacksonville Harbor Federal Navigation Project will also continue to utilize the ODMDS for non-beach compatible material in the entrance channel. As upland disposal alternatives become limited the volumes from the Jacksonville Harbor Federal Navigation Project may increase and

additional permitted projects may identify a need for ocean disposal. In addition, the U.S. Fleet Force Command (Navy) has begun the process of preparing an Environmental Impact Statement (EIS) for the proposed Homeporting of Additional Surface Ships at Naval Station Mayport. Some alternatives could include the generation of up to 5.7 million cubic yards of dredged material. It is expected that the Jacksonville ODMDS will be considered an alternative for some or all of the material.

The capacity of the Jacksonville ODMDS has yet to be determined. A capacity study has been initiated by EPA Region 4 and the USACE (see Section 3.5). Until the study is completed, use of the ODMDS will continue to be temporarily restricted to 2 million cubic yards per year as established in the 1997 SMMP. This restriction is based on maximum historical uses of the ODMDS. Upon completion of the capacity study, the study results will be provided to the SMMP team members for review prior to modification of the site volume limits.

Priority for ODMDS use within the capacity constraints will be given to maintenance projects from the Naval Station Mayport and the Jacksonville Harbor Federal Navigation Project. Approval for new work projects or maintenance material from non-federal projects will be dependent on a consideration of site capacity and long-term (ie.10 years) maintenance needs from the aforementioned maintenance projects.

2.4 Dredged Material Characteristics. The composition of dredged material dumped at the Jacksonville ODMDS has been extremely variable. The majority of the dredged material destined for disposal in the ODMDS is expected to be composed of silt (10 percent to 60 percent) and clay (10 percent to 30 percent). Disposal of gravel and rock has occurred in association with the Jacksonville Harbor Deepening Project, completed in 1977. Coarse material such as shell hash from the entrance channel not suitable for beneficial use has also been disposed in the ODMDS. Sediments dredged to maintain the Entrance Channel and certain reaches of the St. Johns River downstream from Jacksonville are predominantly fine- to medium-grained sands and are consequently typically used for beach renourishment projects and not disposed in the Jacksonville ODMDS. Sediments from Mayport Harbor are predominantly silts and clays.

The disposition of any significant quantities of beach compatible sand from future projects will be determined during permitting activities for any such projects. It is expected that the State of Florida will exercise its authority and responsibility, regarding beach nourishment, to the full extent during any future permitting activities. Utilization of any significant quantities of beach compatible dredged material for beach nourishment is strongly encouraged and supported by EPA. Disposal 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. Disposal of coarser material, such as rubble, should be coordinated with the State of Florida and EPA to avoid unintended impacts in

the ODMDS and to promote possible beneficial uses of the material. The suitability of dredged material for ocean disposal must be verified by the USACE and agreed to (concurred) by EPA prior to disposal. Verification will be valid for three years from the time last verified. Verification will involve: 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 that the non-excluded, tested material is suitable for ocean disposal.

Documentation of suitability will be completed prior to use of the site. Documentation will be in the form of a MPRSA Section 103 Evaluation. The Evaluation and any testing will follow the procedures outlined in the 1991 EPA/USACE Dredged Material Testing Manual and 1993 Regional Implementation Manual (RIM) or the 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 B of the RIM. Water Quality Compliance determinations will be made using the STFATE (ADDAMS) model and the input parameters provided in Appendix A. The U.S. Navy, EPA Region 4, the State of Florida, and the USACE developed an agreement (EPA XL/ Department of Defense ENNVEST) for the testing and permitting of maintenance dredged material from Naval Station Mayport for ocean disposal at the Jacksonville ODMDS. This agreement available at http://www.epa.gov/projctxl/mayport/index.htm incorporates the requirements described above but outlines specific timelines for permits and testing strategies. Only material determined to be suitable through the verification process by the USACE and EPA, Region 4 will be placed at the Jacksonville ODMDS.

2.5 Time of disposal. At present no restrictions have been determined to be necessary for disposal related to seasonal variations in ocean current or biotic activity. Dredging is typically restricted to the winter months due to sea turtle restrictions. As monitoring results are compiled, should any such restrictions appear necessary, disposal activities will be scheduled so as to avoid adverse impacts. During the winter, precautions necessary to protect whales, as described in the next paragraph, are required. Additionally, if new information indicates that endangered or threatened species are being adversely impacted, restrictions may be incurred.

2.6 Disposal Technique. No specific disposal technique is required for this site. However, in order to protect North Atlantic right whales, disposal vessel (either hopper dredge or tug and scow) speed and operation will be restricted in accordance with the most recent USACE South Atlantic Division Endangered Species Act Section 7 Consultation Regional Biological Opinion for Dredging of Channels and Borrow Areas in the Southeastern United States. In addition, the disposal vessel's captain should be aware of the vessel approach restrictions in 50 CFR §224.103 which at the time of this SMMP prohibits approach within 500 yards of a right whale by vessel, aircraft, or any other means.

2.7 Disposal Location. Based on the results of the bathymetry surveys, the disposal zone radius can be increased from 1,500 feet specified in the 1997 SMMP to 2,000 feet. The surveys to date have indicated that this size zone is adequate for maintaining the disposal mound within the ODMDS boundaries (see Section 3.4). For operational reasons, the zone has been changed from a circle to a rectangle. The disposal zone coordinates are as follows:

	Geographic (NAD83)		State Plane (FL East 0901 Ft NAD83)	
Center	30°21.01'N	81°17.99'W	2,187,429 N	561,603 E
NW Corner	30°21.34'N	81°18.37'W	2,189,428 N	559,602 E
NE Corner	30°21.35'N	81°17.61'W	2,189,430 N	563,602 E
SW Corner	30°20.68'N	81°18.37'W	2,185,428 N	559,604 E
SE Corner	30°20.69'N	81°17.61'W	2,185,430 N	563,604 E

Disposal should be initiated within the disposal zone. Project specific release zones can be defined within this disposal zone in order to better distribute dredged material throughout the ODMDS and to avoid shallow areas within the ODMDS.

2.8 Permit and Contract Conditions. The disposal monitoring and post-disposal monitoring requirements described under Site Monitoring will be included with the management requirements described in this section 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 is listed in Table 2. Template language that can be used is included in appendices (see Appendix B and C).

Table 2. Summary of Permit and Contract Conditions

Dredged Material Suitability and Term of Verification	Jacksonville ODMDS SMMP page 5 Regional Implementation Manual
Disposal Zone	Jacksonville ODMDS SMMP page 7
Right Whale Avoidance	Jacksonville ODMDS SMMP page 6 50 CFR 224.103
Pre and Post Bathymetric Surveys	Jacksonville ODMDS SMMP page 9 and 13
Disposal Monitoring	Jacksonville ODMDS SMMP page 13
Reporting Requirements	Jacksonville ODMDS SMMP page 17 and 20

2.9 Permit Process. All disposal of dredged material in the ocean, with the exception of Federal Civil Works projects, requires an ocean dumping permit issued by the USACE pursuant to Section 103 of the MPRSA. A summary of the permitting process can be found at: http://www.epa.gov/region4/water/oceans/Dredged_Material_Permit_Process.htm.

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 Jacksonville ODMDS and effects of disposal is required from many sources. 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 dredged material dredged correctly? disposed correctly?
- What will happen to the environment at the disposal site?

In an attempt to streamline datasharing, EPA Region 4 and USACE South Atlantic Division have agreed on an eXtensible Markup Language (XML) standard for sharing of disposal monitoring data (see also Section 3.6). Additional standards will continue to be investigated for sharing of other disposal site related information (e.g. environmental monitoring data, testing data, etc.).

3.0 SITE MONITORING

The MPRSA establishes the need for including a monitoring program as part of the Site Management Plan. Site monitoring is conducted to ensure the environmental integrity of a disposal site and the areas surrounding the site and to verify compliance with the site designation criteria, any special management conditions, and with permit requirements. Monitoring programs should be flexible, cost effective, and based on scientifically sound procedures and methods to meet site-specific monitoring needs. The intent of the program is to provide the following:

(1) Information indicating whether the disposal activities are occurring in compliance with the permit and site restrictions;

(2) Information indicating the short-term and long-term fate of materials disposed of in the marine environment.

(3) Information concerning the short-term and long-term environmental impacts of the disposal;

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

3.1 Baseline Monitoring. Disposal has occurred at the present site since 1952. Therefore, no true baseline information has been or can be collected. The results of investigations presented in the designation EIS and subsequent surveys listed in Table 3 will serve as the main body of data for the monitoring of the impacts associated with the use of the Jacksonville ODMDS.

A bathymetric survey will be conducted by the USACE or site user within three (3) months prior to dredging cycle or project disposal. Bathymetric surveys will be used to monitor the disposal mound to insure a navigation hazard is not produced, to assist in verification of material placement, to monitor bathymetry changes and trends and to insure that the site capacity is not exceeded, ie., the mound does not exceed the site boundaries. Surveys will conform to the minimum performance standards for Corps of Engineers Hydrographic Surveys for "Other General Surveys & Studies" as described in the USACE Engineering Manual, EM1110-2-1003, *Hydrographic Surveying* dated January 1, 2002 [http://www.usace.army.mil/publications/eng-manuals/em1110-2-1003/toc.htm]. The number and length of transects required will be sufficient to encompass the ODMDS and a 500 foot wide area around the site. The surveys will be taken along lines spaced at 500-foot intervals or less. The minimum performance standards from table 3-1 *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 NOAA Mean Lower Low Water (MLLW) datum. The horizontal datum should be referenced to the local State Plane Coordinate System (SPCS) for that area or in Geographical Coordinates (latitude-longitude). The horizontal reference datum should be the North American Datum of 1983 (NAD 83). No additional pre-disposal monitoring at this site is required.

Table 3. Surveys Conducted at the Jacksonville ODMDS

Environmental Investigation of a Dredge Spoil Disposal Site near Mayport, Florida	Naval Oceanographic Office	1972-1973	Evaluation of environmental effects of disposal of dredged material with elevated levels of metals.	No permanent impairment of the benthic biological community when relative abundance and diversity of benthic macro fauna in the ODMDS are compared to control stations.
Environmental Investigation of a Dredged Material Disposal Site Near Mayport, Florida	Naval Oceanographic Office	1977-1978	Effects (sediment chemistry, bathymetry) of disposal of material from Mayport Harbor.	Significant change in bathymetry (depth decreased from 43 feet to 34 feet), noticed movement of material to the south, and significant difference found in heavy metal concentration in sediments inside the site than outside.
Disposal Site Monitoring at the Jacksonville ODMDS	U.S. EPA	1986	Benthic infaunal survey.	No significant benthic infaunal difference between control and disposal stations.
Jacksonville ODMDS Sidescan Sonar Survey	U.S. EPA Region 4	March, 1995	Look for presence of natural resources and presence of man made obstructions on the bottom.	No natural resources found; significant amounts of man made obstructions in north half of site and to the north of the site.
Areal Mapping of Sediment Chemistry at the Jacksonville ODMDS	U.S. EPA Region 4 and Center for Applied Isotope Studies	March, 1995	Conduct sediment mapping of site to determine location of dredged material and to provide baseline for future surveys.	Two primary areas containing fine-grained sand associated with dredged material were found: one in the east-central sector of the ODMDS and the other along the southernmost portion of the survey area (½ mi south of the site). One area of coarse grained dredged material was found consisting of a defined mound within the ODMDS boundaries.

Table 3 (Continued). Surveys Conducted at the Jacksonville ODMDS

Status & Trends Survey of the Jacksonville	U.S. EPA Region 4 and Barry Vittor and Associates	July, 1995	Baseline for future surveys *ODMDS* (Includes assessment of the macroinfaunal communities within and outside of the ODMDS, sediment grain size, sediment chemistry and water quality)	Comparisons of the stations mean densities and mean number of taxa showed that the only significant differences observed are more likely to be related to the grain size distribution differences seen and not related to the presence or absence of disposed dredged material. Benthic community indices showed that all stations were extremely diverse with an equitable distribution of taxa when compared to known infaunal assemblages from the same general coastal region. In general, metal concentrations (especially lead, copper and zinc) were higher within than outside the ODMDS. Concentrations were lower in 1995 than in 1978. Organics, Pesticides, and PCBs were not detected.
Post Disposal Areal Mapping of Sediment Chemistry at the Jacksonville ODMDS	U.S. EPA Region 4 and Center for Applied Isotope Studies	March, 1997	Determine location and any migration of dredged material	General indication of increase in surfacial fines especially in the western portion of the site as indicated by slurry densities and aluminum concentrations.
Post Disposal Status & Trends Survey of the Jacksonville ODMDS	EPA Region 4 and and Barry Vittor and Associates	June, 1998	Monitor for any adverse effects following re-initiation of site use. (Includes assessment of the macroinfaunal communities within and outside of the ODMDS, sediment grain size, sediment chemistry and water quality)	In general, all stations were extremely diverse with an equitable distribution of taxa relative to other benthic infaunal assemblages in the region. There was no predictable pattern in community indices or biomass between stations within and outside the ODMDS. Copper and zinc concentrations remain elevated within the ODMDS, but to a leaser degree than in 1995. Dissolved oxygen levels throughout the water column were lower (3-5mg/l) in 1998 than in 1995 (6mg/l).
Pre-disposal Bathymetry Survey	USACE-Jacksonville	Sept. 2001	Monitor bathymetric trends	Depth maintained at greater than 35 feet throughout the ODMDS.

Survey Title				
Post-disposal Bathymetry Survey	USACE-Jacksonville	Nov. 2001	Monitor bathymetric trends	Depth maintained at greater than 34 feet throughout the ODMDS.
Pre-disposal Bathymetry Survey	USACE-Jacksonville	Oct. 2002	Monitor bathymetric trends	Depth maintained at greater than 35 feet throughout the ODMDS.
Pre/Post-disposal Bathymetry Survey	USACE-Jacksonville	April 2003	Monitor bathymetric trends	Depth maintained at greater than 34 feet throughout the ODMDS.
Post-disposal Bathymetry Survey	USACE-Jacksonville	Sept. 2004	Monitor bathymetric trends	Accretions of 2 to 8 feet of material within the disposal zone since 2002. No measurable change in depth outside of the ODMDS boundaries. Depth maintained at greater than 32 feet throughout the ODMDS.
Pre/Post-disposal Bathymetry Survey	USACE-Jacksonville	June 2007	Monitor bathymetric trends	Accretions of material to the south of the disposal zone since 2004. No measurable change in depth outside of the ODMDS boundaries. Depth maintained at greater than 32 feet throughout the ODMDS.

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 (nearest 0.5 foot) of the disposal vessel (ie. hopper dredge or disposal scow) from the point of dredging to the disposal site, and return to the point of dredging. Data shall be collected at least every 500 feet during travel to and from the ODMDS and every minute or every 200 feet of travel, whichever is smaller, while approaching within 1,000 feet and within the ODMDS. 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 (e.g. scow)
c. Tow Vessel Name (if applicable)
d. Captain of Disposal or Tow Vessel
e. Estimated volume of Load
f. Description of Material Disposed
g. Source of Dredged Material
h. Date, Time and Location at Start at Initiation and Completion of Disposal Event

It is expected that disposal monitoring will be conducted utilizing the Silent Inspector (SI) system for Civil Works projects [see http://si.usace.army.mil]. Disposal monitoring and ETS data will be reported to EPA Region 4 on a weekly basis utilizing the eXtensible Markup Language (XML) specification and protocol per Section 3.6. EPA Region 4 and the USACE District shall be notified within 24 hours if disposal occurs outside of the ODMDS or specified disposal zone or if excessive leakage occurs.

3.3 Post Discharge Monitoring. As a follow-up to the pre-disposal bathymetric survey, the USACE or other site user will conduct a bathymetric survey within 60 days after disposal project completion. The number of transects required will be the same as in the pre-disposal survey. Bathymetric survey results will be used to insure that unacceptable mounding is not occurring and to aid in environmental effects monitoring.

3.4 Summary of Results of Past Monitoring Surveys. Surveys conducted at the Jacksonville ODMDS are listed in Table 3. Monitoring activities during the 1970's indicated significant mounding occurring at the site and that a small amount of dredged material had been transported to the south, as demonstrated by bathymetric, physical, and chemical analyses of sediments. Since re-initiation of disposal activities at the ODMDS, mounding has increased (see figure 2). These bathymetric trends indicate that the site is not dispersive and a significant amount of disposed material remains on site. Both the1978 study of the site and the 1995 and 1998 sediment mapping surveys indicated the presence of fine grained dredged material south of the site boundaries. Predominant currents in the area flow southwest in the fall and winter and

northeast during spring and summer. Larger waves in the area are predominantly from the east and occur in the winter. It is possible that some southerly transport of dredged material occurs in the fall and winter due to wave induced resuspension.

Sediment analysis in the late 1970's showed higher concentrations of certain heavy metals (Ni, Cu, Zu, Pb, and Cr), Kjeldahl nitrogen and organic carbon in sediments within the disposal site versus outside the site. This is to be expected as material high in metal concentrations, requiring a waiver of EPA's criteria was disposed at the ODMDS. Sediment analysis as part of the 1995 benthic survey showed that in general metal concentrations within the ODMDS remain elevated compared to outside of the ODMDS. However, concentrations within the ODMDS have decreased since 1978 and based on the 1998 study continue to decrease. The average percentage of silts and clays at stations within the ODMDS exceeds that of stations outside the ODMDS, but has decreased both inside and outside of the ODMDS since 1978. Figure 3 shows that metal concentrations within the site have increased following significant ODMDS use in 1972 and 1978 followed by decreases.

A benthic infaunal survey was conducted in 1986. Results of the macro infaunal community analysis indicated no difference between disposal and control stations and no difference could be found which could be related to active disposal. A second benthic infaunal survey was conducted in 1995. The sampling stations were composed primarily of sand, with silt/clay content of less than 10%. Station 4, in the center of the disposal pile, had the highest silt/clay fraction, and interestingly also had the highest gravel fraction (@ 21 %). Comparisons of the stations' mean densities and mean number of taxa showed that the only significant differences observed are more likely to be related to the grain size distribution differences seen and not related to the presence or absence of disposed dredged material. Benthic community indices showed that all stations were extremely diverse with an equitable distribution of taxa when compared to known infaunal assemblages from the same general coastal region. Numerical classification of the 12 stations tended to group the stations relative to the coarser grain size fractions. The 1998 study showed that communities remain diverse and no significant changes were observed either temporally or spatially.

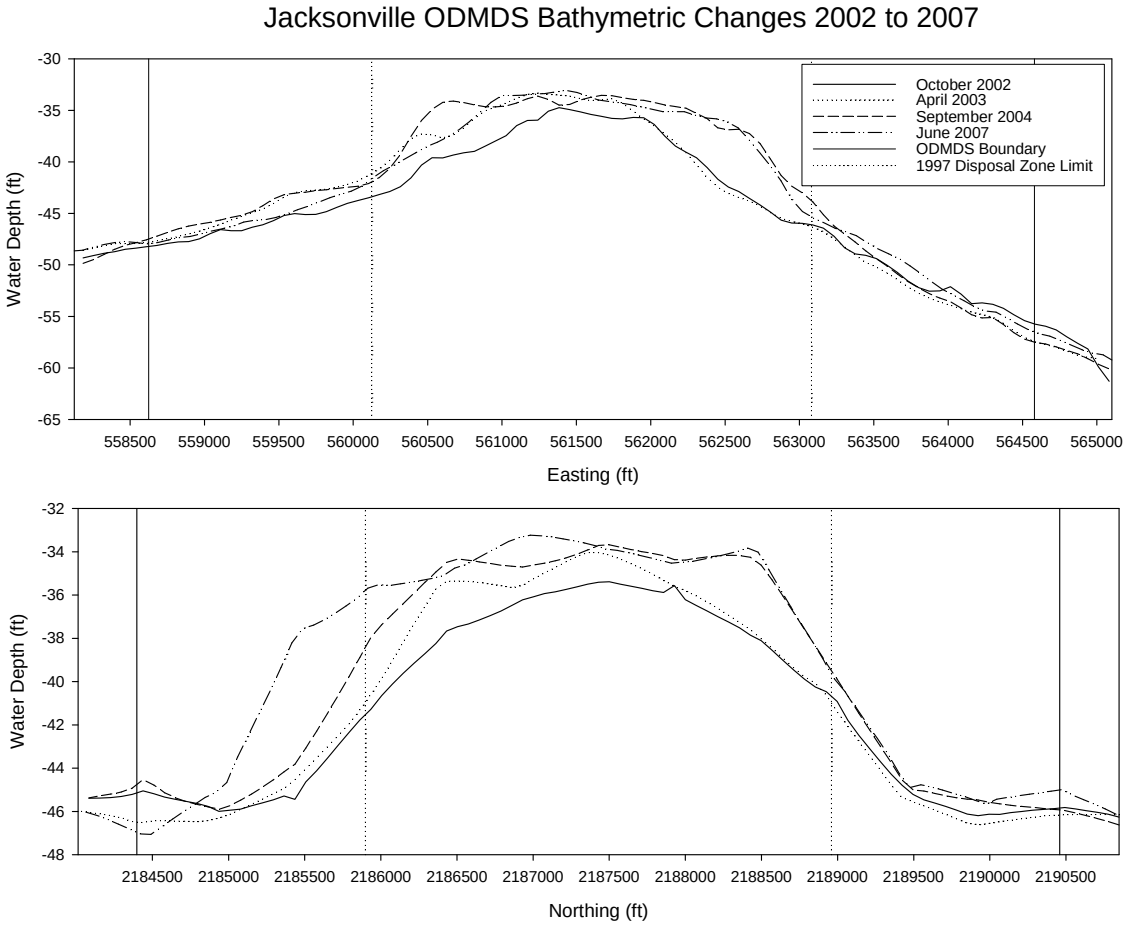


Figure 2: Bathymetric Trends at the Jacksonville ODMDS

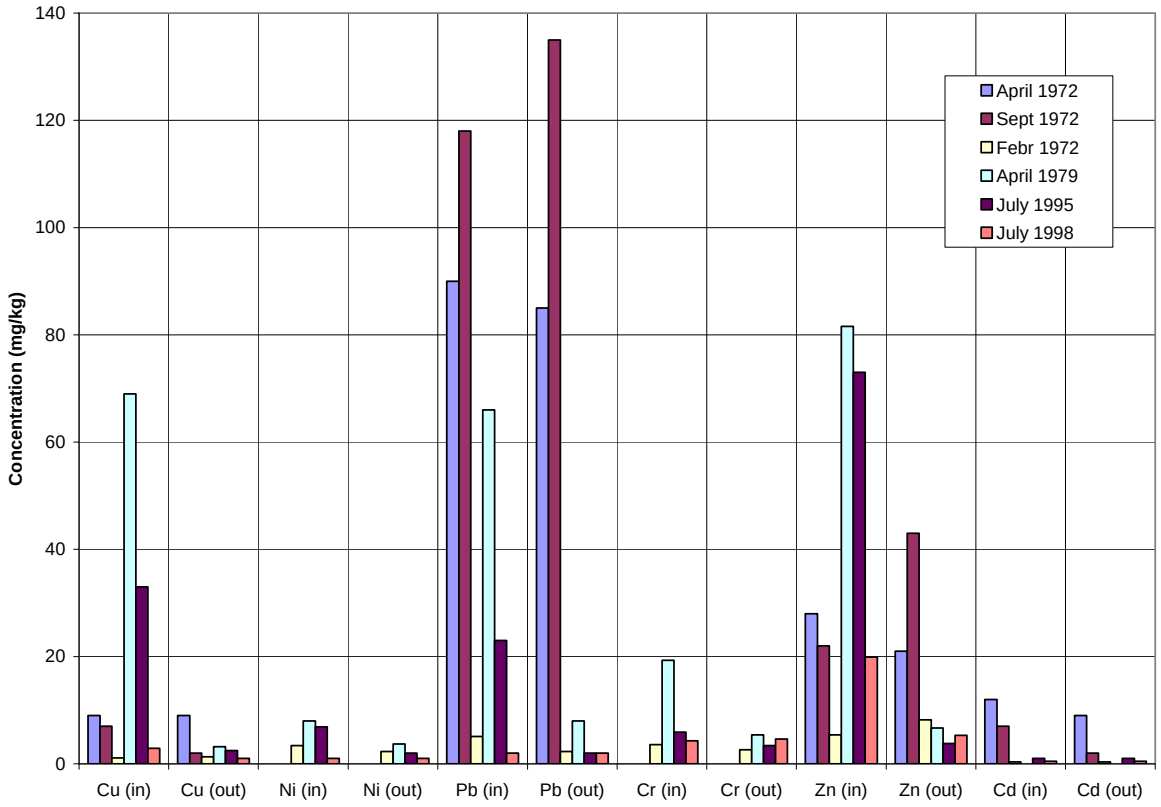


Figure 3. Jacksonville ODMDS Sediment Chemistry Trends. (in) represents stations within the ODMDS and (out) represents stations outside of the ODMDS.

A sidescan survey was conducted in March, 1995. Results of the survey showed the site and the area north of the site to be cluttered with various types of debris and artificial reef material. This is consistent with historical uses of the area. Although not designated as such, this site has historically been used as a disposal location in rough weather for artificial reef material destined for artificial reefs further offshore. Subsequent reconnaissance by divers identified biological resources near the center of the site. Based on visual observations these resources are associated with past disposal of construction material. A video survey was attempted at the site, but due to poor water clarity no data was collected.

3.5 Future Monitoring Surveys. Based on the type and volume of material disposed and impacts of concern, various monitoring surveys can be used to determine if and where the disposed material is moving, and what environmental effect the material is having on the site and adjacent areas.

At the current time, no nearby resources have been identified that are of concern for potential impact. Near shore shrimping grounds are located between the site and the coastline and both natural and artificial reefs are common on the mid-shelf east of the site. Monitoring results indicate that the disposal mound is relatively stable with possible southerly transport of material so that these areas should not be of concern. Sediment composition within the site may be altered as a result of disposal of clay and silty material on otherwise sandy sediments. Progressive transition to sediments containing a higher percentage of silt and clay is inevitable with continued use of the site. 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.

A summary of the monitoring strategies for the Jacksonville ODMDS and thresholds for management actions are presented in Table 4. Currently, the major concern at the Jacksonville ODMDS is capacity. Data collection (waves, currents, dredged material erosive properties) for modeling site capacity has already begun and is scheduled to be completed by the end of 2007. Current data will also be used for development of standard water quality model input parameters.

Should future disposal at the Jacksonville ODMDS result in unacceptable adverse impacts, further studies may be required to determine the persistence of these impacts, the 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.

3.6 Reporting and Data Formatting.

3.6.1 Project Initiation and Violation Reporting. The USACE or other site user should notify EPA 15 days prior to the beginning of a dredging cycle or project disposal. The user is also required to notify the 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.

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

Table 4. Jacksonville ODMDS Monitoring Strategies and Thresholds for Action

						Threshold Not Exceeded	Threshold Exceeded
Site Capacity	Modeling with field verification/ calibration	USACE/ Navy	Determine dispersiveness of the site	Prior to New Work Project (study is underway)	Maintenance Volumes exceed estimated capacity	Continue to use site without further restrictions	-Restrict disposal volumes -Enlarge site or designate additional site
					New Work Volumes exceed estimated capacity	Continue to use site without further restrictions	-Enlarge site or designate additional site for new work
Monitor Bathymetric Trends	Bathymetry	Site User	Determine the extent of the disposal mound and major bathymetric changes	Pre and post disposal	Disposal mound occurs outside ODMDS boundaries	Continue Monitoring	-Modify disposal method/placement -Restrict Disposal Volumes
Environmental Effects Monitoring	Status and Trends Survey (water and sediment quality, benthic community analysis)	U.S. EPA	Periodically evaluate the impact of disposal on the marine environment (40CFR 228.9)	Approximately every 10 years as resources allow.	-Absence from the site of pollution sensitive biota -Progressive non-seasonal changes in water or sediment quality	Continue Monitoring	-Conduct further bioaccumulation studies and more detailed impact study -Review dredged material evaluation procedures -Consider isolating dredged material (capping) -Cease site use
Bioaccumulation Monitoring	Tissue Analysis of in-situ organisms	U.S. EPA	Evaluate extent of impact	As needed based on environmental effects monitoring	-Accumulation of contaminants in marine biota at or near the ODMDS at a level of ecological or human health concern	Cease Monitoring	-Consider isolating dredged material (capping) -Review dredged material evaluation procedures -Cease site use

Table 4 (Continued). Jacksonville ODMDS Monitoring Strategies and Thresholds for Action

						Threshold Not Exceeded	Threshold Exceeded
Insure Safe Navigation Depth	Bathymetry	Site User	Determine height of mound and any excessive mounding	Post disposal	Mound height > -30 feet m.l.l.w.	Continue Monitoring	-Modify disposal method/placement -Direct disposal operators to avoid areas shallower than 30 feet
					Mound height > -25 feet m.l.l.w.	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	-Insure 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. -Withhold payment.

3.6.3 Post Disposal Summary 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 at the ODMDS (as paid *in situ* volume, total paid and un paid *in situ* volume, and gross volume reported by dredging contractor), number of loads to ODMDS, type of material disposed at the ODMDS; 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 should be accompanied by the bathymetry survey results (plot and X,Y,Z ASCII data file), a summary scatter plot of all disposal start locations, and a summary table of the trip information required by 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.

3.6.4 Environmental Monitoring. Material tracking, disposal effects monitoring and any other data collected shall be coordinated with and be provided to SMMP team members and federal and state agencies as appropriate. Data will be provided to other interested parties requesting such data to the extent possible. Data will be provided for all surveys in a report generated by the action agency. The report should indicate how the survey relates to the SMMP and previous surveys at the Jacksonville ODMDS and should provide data interpretations, conclusions, and recommendations, and should project the next phase of the SMMP. Monitoring results will be summarized in subsequent modifications to the SMMP.

4.0 MODIFICATION OF THE JACKSONVILLE ODMDS SMMP

Should the results of the monitoring surveys or reports from other sources indicate that continued use of the ODMDS would lead to unacceptable effects, the ODMDS SMMP will be modified to mitigate the adverse impacts. The SMMP will be reviewed and revised at a minimum of every ten years. The SMMP will be reviewed and updated as necessary if site use changes significantly. For example, the SMMP will be reviewed if the quantity or type of dredged material placed at the site changes significantly or if conditions at the site indicate a need for revision.

5.0 REFERENCES

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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.

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APPENDIX A

STFATE WATER QUALITY MODEL STANDARD INPUT PARAMETERS

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

SITE DESCRIPTION

Parameter	Value	Units
Number of Grid Points (left to right)	45	
Number of Grid Points (top to bottom)	45	
Spacing Between Grid Points (left to right)	350	ft
Spacing Between Grid Points (top to bottom)	350	ft
Constant Water Depth	46	ft
Roughness Height at Bottom of Disposal Site	.005[1]	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 = 0 ft	1.0221[2]	g/cc
Ambient Density at Depth = 46 ft	1.0236[2]	g/cc

AMBIENT VELOCITY DATA

Parameter	Value	Units
Water Depth	46	ft
Profile	2 point	
Vertically Averaged X-Direction Velocity (depth=8.4 feet)	0.56[3]	ft/sec
Vertically Averaged Z-Direction Velocity (depth=8.4 feet)	0.07[3]	ft/sec
Vertically Averaged X-Direction Velocity (depth=39.6 feet)	0.31[3]	ft/sec
Vertically Averaged Z-Direction Velocity (depth=39.6 feet)	0.11[3]	ft/sec

DISPOSAL OPERATION DATA

Parameter	Value	Units
Location of Disposal Point from Top of Grid	5,700	ft
Location of Disposal Point from Left Edge of Grid	7,700	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	2,660	ft
Location of the Upper Left Corner of the Disposal Site - Distance from Left Edge	4,660	ft
Location of the Lower Right Corner of the Disposal Site - Distance from Top Edge	8,740	ft
Location of the Lower Right Corner of the Disposal Site - Distance from Left Edge	10,740	ft
Duration of Simulation	14,400	sec
Long Term Time Step	600	sec

COEFFICIENTS

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

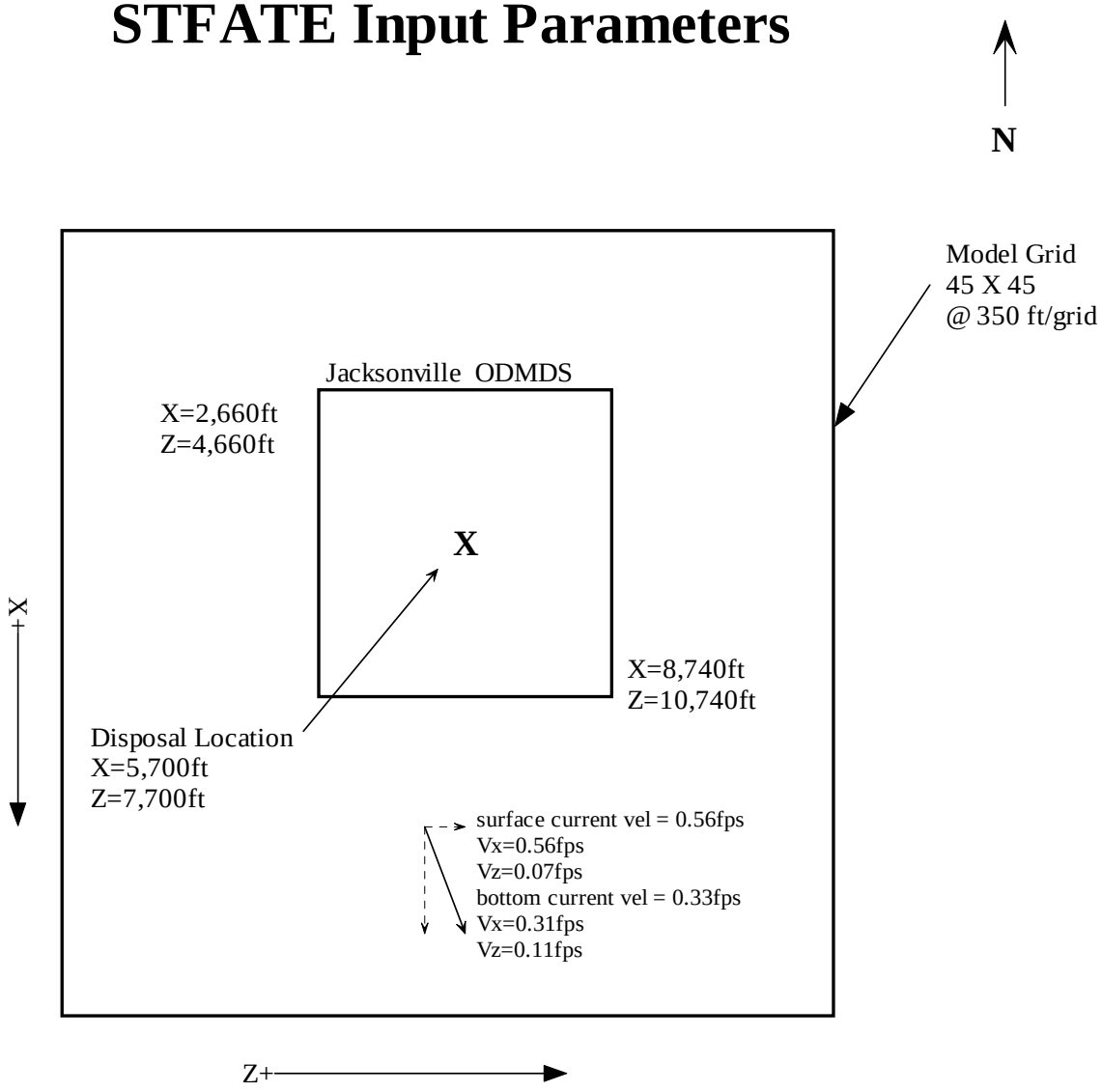
[1]Model Default Value
[2]From surveys in July 1995 and July 1998 (EPA)
[3]From EPA current measurements, August 2006-September 2007 (preliminary results)

Dilution Rates for Generic Material (4,000cy):
Minimum dilution outside disposal site: 350 to 1; Minimum dilution after 4 hours: 1000 to 1

Jacksonville ODMDS Background Water Concentration.	
Chemicals of Concern	**Background Concentration Levels (µg/l)**
Arsenic	1.36 [1]
Cadmium	0.008 [1]
Chromium (VI)	0.025 [2,3,4]
Copper	0.34[1]
Lead	0.5 [3,4]
Mercury	0.1 [2,3,4]
Nickel	0.57 [2]
Selenium	No Data
Silver	0.009[1]
Zinc	2.33[1]
Ammonia	25 [5]
Cyanide	1.0 [3,4]
Tributyltin (TBT)	0.01 [3,4]
Aldrin	0.01 [2,4]
Chlordane	0.015 [2,3,4]
DDT	0.01 [2,4]
Dieldrin	0.01 [2,4]
alpha - Endosulfan	0.01 [2,4]
beta - Endosulfan	0.01 [2,4]
Endrin	0.01 [2,4]
gamma-BHC (Lindane)	0.01 [2,4]
Heptachlor	0.01 [2,4]
Heptachlor Epoxide	0.01 [2,4]
Toxaphene	.015 [2,4]
Parathion	No Data
Pentachlorophenol	No Data

[1] 2007 EPA Status and Trends Survey at the Canaveral ODMDS
[2] Reference Station Water from the 2004 Jacksonville Harbor 103 Evaluation
[3] Reference Station Water from the 2006 Mayport Harbor 103 Evaluation
[4] Analyte not detected. Value based on one half the reporting limit.

Jacksonville ODMDS
STFATE Input Parameters



APPENDIX B

TEMPLATE
GENERIC SPECIAL CONDITIONS
FOR MPRSA SECTION 103 PERMITS

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GENERIC SPECIAL CONDITIONS
FOR MPRSA SECTION 103 PERMITS

I. DISPOSAL OPERATIONS

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

B. The Jacksonville ODMDS is defined as the rectangle with center coordinates of 30° 21.00'N latitude and 81°18.00W longitude (NAD 27) or state plane coordinates 2187428.7 N and 561602.6 E (NAD83). The site coordinates are as follows:

	Geographic (NAD27)		Geographic (NAD83)		State Plane (FL East 0901 Ft NAD83)	
Center	30°21.00'N	81°18.00'W	30°21.02'N	81°17.99'W	2187429 N	561603 E
NW Corner	30°21.50'N	81°18.57'W	30°21.52'N	81°18.56'W	2190467 N	558614 E
NE Corner	30°21.50'N	81°17.43'W	30°21.52'N	81°17.42'W	2190451 N	564609 E
SW Corner	30°20.50'N	81°18.57'W	30°20.52'N	81°18.56'W	2184406 N	558597 E
SE Corner	30°20.50'N	81°17.43'W	30°20.52'N	81°17.42'W	2184390 N	564592 E

C. 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 Jacksonville ODMDS.

D. The permittee shall use an electronic positioning system to navigate to and from the Jacksonville ODMDS. For this section of the permit, the electronic positioning system is defined as: a differential global positioning system or a microwave line of site system. Use of LORAN-C alone is not an acceptable electronic positioning system for disposal operations at the Jacksonville ODMDS. If the electronic positioning system fails or navigation problems are detected, all disposal operations shall cease until the failure or navigation problems are corrected.

E. The permittee shall certify the accuracy of the electronic positioning system proposed for use during disposal operations at the Jacksonville ODMDS. The certification shall be accomplished by direct comparison of the electronic positioning system's accuracy with a known fixed point.

F. The permittee shall not allow any water or dredged material placed in a hopper dredge or disposal barge or scow to flow over the sides or leak from such vessels during transportation to the Jacksonville ODMDS.

G. A disposal operations inspector and/or captain of any tug boat, hopper dredge or other vessel used to transport dredged material to the Jacksonville ODMDS shall insure compliance with disposal operation conditions defined in this permit.

1. If the disposal operations inspector or the captain detects a violation, he shall report the violation to the permittee immediately.

2. The permittee shall contact the U.S. Army Corps of Engineers, Jacksonville District's Regulatory Branch [TELEPHONE NUMBER] and EPA Region 4 at (404) 562-9391 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 disposal summary report.

H. When dredged material is disposed, no portion of the hopper dredge or disposal barge or scow shall be outside of the boundaries of the Jacksonville ODMDS as defined in Special Condition B. Additionally, disposal shall be initiated within the 2,000 foot by 2,000 foot disposal zone defined by the following coordinates:

	Geographic (NAD83)		State Plane (FL East 0901 Ft NAD83)	
Center	30°21.01'N	81°17.99'W	2,187,429 N	561,603 E
NW Corner	30°21.34'N	81°18.37'W	2,189,428 N	559,602 E
NE Corner	30°21.35'N	81°17.61'W	2,189,430 N	563,602 E
SW Corner	30°20.68'N	81°18.37'W	2,185,428 N	559,604 E
SE Corner	30°20.69'N	81°17.61'W	2,185,430 N	563,604 E

I. The permittee shall use an electronic tracking system (ETS) that will continuously track the horizontal location and draft condition of the disposal vessel (hopper dredge or disposal barge or scow) to and from the Jacksonville ODMDS. Data shall be collected at least every 500 feet during travel to and from the ODMDS and every minute or every 200 feet of travel, whichever is smaller, while approaching within 1,000 feet and within the ODMDS. The permittee shall use Florida State Plane 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.

J. The permittee shall record electronically for each load the following information:

a. Load Number
b. Disposal Vessel or Scow Name
c. Tow Vessel Name (if scow used)
d. Captain of Disposal or Tow Vessel
e. Estimated volume of Load
f. Description of Material Disposed
g. Source of Dredged Material
h. Date, Time and Location at Start at Initiation and Completion of Disposal Event
i. The ETS data required by Special Condition I.

K. The permittee shall conduct a bathymetric survey of the Jacksonville ODMDS within 3 months prior to project disposal and within 60 days following project completion.

1. The number and length of the survey transects shall be sufficient to encompass the Jacksonville ODMDS and a 500 foot wide area around the site. The transects shall be spaced at 500-foot intervals or less.

2. Vertical accuracy of the survey shall be ±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 (m.l.l.w) and the horizontal datum shall use Florida 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 decimal degrees to 6 decimal points.

L. Enclosed is the Regional Biological Opinion (RBO) dated [INSERT DATE], for swimming sea turtles, whales, 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. Your authorization under the Corps permit is conditional upon your 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 constitute an unauthorized take, and it would also constitute non-compliance with your Corps permit. However, depending on the affected species NMFS 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. Should they determine that the conditions of the RBO have been violated; normally they will enforce the violation of the ESA, or refer the matter to the Department of Justice.

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 (Corps), Regulatory Division, Enforcement Section, P.O. Box 4970, Jacksonville, Florida 32232-0019 and U. S. Environmental Protection Agency (EPA) Region 4's Wetlands, Coastal and Watersheds Branch, 61 Forsyth Street, Atlanta, GA 30303. The Permittee shall reference this permit number, [INSERT PERMIT NUMBER], on all submittals.

B. At least 15 days before initiating any dredging operations authorized by this permit, the Permittee shall provide to the Corps and EPA a written notification of the date of commencement of work authorized by this permit.

C. Electronic data required by Special Conditions I and J shall be provided to EPA Region 4 on a weekly basis. Data shall be submitted 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.

D. The permittee shall send one (1) copy of the disposal summary report to the Jacksonville District's Regulatory Branch and one (1) 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 paid and un paid *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).

APPENDIX C

TYPICAL CONTRACT LANGUAGE FOR IMPEMENTING THE JACKSONVILLE ODMDS SMMP REQUIREMENTS

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TYPICAL CONTRACT LANGUAGE FOR IMPEMENTING SMMP REQUIREMENTS

3.3 DISPOSAL OF DREDGED MATERIAL

3.3.1 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
Jacksonville ODMDS		
[INSERT DISPOSAL AREA 2]	[XX miles]	[XX miles]

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

3.3.2 Ocean Disposal Notification

a. The contractor shall notify EPA Region 4 's Wetlands, Coastal and NonPoint Source Branch (61 Forsyth Street, Atlanta, GA 30303) at least 15 calendar days and the local Coast Guard Captain of the Port at least 5 calendar days prior to the first ocean disposal. The notification will be by certified mail with a copy to the Contracting Officer. The following information shall be included in the notification:
    (1) Project designation; Corps of Engineers' Contracting Officer's name and contract number; and, the Contractor's name, address, and telephone number.
    (2) Port of departure.
    (3) Location of ocean disposal area (and disposal zone if required).
    (4) Schedule for ocean disposal, giving date and time proposed for first ocean disposal.

3.3.3 Ocean Dredged Material Disposal Sites (ODMDS)

The material excavated shall be transported to and deposited in the Jacksonville 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 Jacksonville ODMDS as shown on the drawings. Additionally, disposal shall be initiated within the 2,000 foot by 2,000 foot disposal zone defined by the following coordinates:

	Geographic (NAD83)		State Plane (FL East 0901 Ft NAD83)	
Center	30°21.01'N	81°17.99'W	2,187,429 N	561,603 E
NW Corner	30°21.34'N	81°18.37'W	2,189,428 N	559,602 E
NE Corner	30°21.35'N	81°17.61'W	2,189,430 N	563,602 E
SW Corner	30°20.68'N	81°18.37'W	2,185,428 N	559,604 E
SE Corner	30°20.69'N	81°17.61'W	2,185,430 N	563,604 E

Dredged material shall not be placed higher than elevation -25 feet MLLW in the Jacksonville ODMDS.

3.3.4 Logs

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

a. Load Number
b. Disposal Vessel or Scow Name
c. Tow Vessel Name (if scow used)
d. Captain of Disposal or Tow Vessel
e. Estimated volume of Load
f. Description of Material Disposed
g. Source of Dredged Material
h. 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.

3.3.5 Overflow, Spills and Leaks

Water and dredged materials shall not be permitted to overflow or spill out of barges, hopper dredges, or dump scows during transport to the disposal site(s). Failure to repair leaks or change the method of operation which is resulting in overflow of spillage will result in suspension of dredging operations and require prompt repair or change of operation to prevent overflow or spillage as a prerequisite to the resumption of dredging.

3.3.6 Electronic Tracking System (ETS) for Ocean Disposal Vessels

The Contractor shall furnish an ETS for surveillance of the movement and disposition of dredged material during dredging and ocean disposal. This ETS shall be established, operated and maintained by the Contractor to continuously track in real-time the horizontal location and draft condition of the disposal vessel (hopper dredge or disposal

barge or scow) for the entire dredging cycle, including dredging area and disposal area. The ETS shall be capable of displaying and recording in real-time the disposal vessel's draft and location.

[USE LANGUAGE BELOW FOR NON SI PROJECTS]

3.3.6.1 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: http://www.usace.army.mil/inet/usace-docs'eng-manuals/em.htm. 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 0.5 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 in order 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.

3.3.6.2 ETS Data 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. Data shall be collected, during the dredging and disposal cycle, every 500 feet (at least) during travel to the disposal area, and every minute or every 200 feet, whichever is smaller, while approaching within 1,000 feet and within the disposal area.

b. Plot Reporting (2 types):

(1) 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. A sample Track and Draft Plot Diagram is on the web site indicated in paragraph CONSTRUCTION FORMS AND DETAILS below.

(2) 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. A sample Scatter Plot Diagram is on the web site indicated in paragraph CONSTRUCTION FORMS AND DETAILS below.

(3) Summary Table – A spreadsheet which contains all of the information in the log(s) [Section 3.3.4] above shall be prepared and shall correspond to the exact dump locations represented on the Scatter Plot. A sample Summary Table spreadsheet is on the web site indicated in paragraph CONSTRUCTION FORMS AND DETAILS below.

c. ETS data and log data required by Section 3.3.4 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.

[USE LANGUAGE BELOW FOR SI PROJECTS]

3.3.6.3 Silent Inspector – Special Standard of Responsibility

3.3.6.3.1 General

The Silent Inspector (SI) is an automated dredge contract monitoring system comprised of both hardware and software developed by the Army Corps of Engineers (the Corps). The Corps developed the SI as a low cost, repeatable, impartial system for automated dredge monitoring. The SI systems integrate various automated systems to record digital dredging and disposal activities in real-time on a 24 hour/7 days a week basis. Information is recorded to the on-board computer where it is available to the Corps Quality Assurance Representative (QAR) for examination and for periodic download and transmittal via an automated email service for inclusion in the SI database. The dredging contractor supplies and owns the on-board system and all associated sensors. Additional information about SI and SI specifications can be found at http://si.usace.army.mil.

3.3.6.3.2 Requirement

As authorized by FAR 9.104-2, Contracting Officers may establish special standards of responsibility when necessary. The Contracting Officer has determined that use of the SI is necessary for work performed by hopper dredge and disposal scows. Therefore, in order to be considered responsible for performing this contract, the Offeror must establish prior to contract award that any hopper dredge or disposal scows to be used in performance of this contract has been outfitted with the SI system and the system has been certified by the Engineer Research and Development Center (ERDC) within the last year. Disposal scows shall utilize the monitoring or TDS profile. Questions regarding certification should be addressed to the SI support team at 601-634-2923.

3.3.6.3.3 Data Submissions

Scow data shall be transferred by the contractor automatically to the SI database on intervals not to exceed 24 hours. Hopper dredged data shall be transferred in accordance with the Hopper Dredge Specifications found at http://si.usace.army.mil.

3.3.6.4 Misplaced Materials

Materials deposited outside of the disposal zone specified in 3.3.3 will be classified as misplaced material and will result in a suspension of dredging operations. Redredging of such materials will be required as a prerequisite to the resumption of dredging unless the Contracting Officer, at his discretion, determines that redredging of such material is not practical. If redredging of such material is not required then the quantity of such misplaced material shall be deducted from the Contractor's pay quantity. If the quantity for each misplaced 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. Misplaced loads may also be subject to penalty under the Marine, Protection, Research and Sanctuaries Act. Materials deposited above the maximum indicated elevation or outside of the disposal area template shown will require the redredging or removal of such materials at the Contractor's expense. In addition, the Contractor must notify the Contracting Officer and the Environmental Protection Agency Region 4 's Wetlands, Coastal and NonPoint Source Branch (61 Forsyth Street, Atlanta, GA 30303) within 24 hours of a misplaced dump or any other violation of the Site Management and Monitoring Plan for the Jacksonville ODMDS. Corrective actions must be implemented by the next dump and the Contracting Officer must be informed of actions taken.