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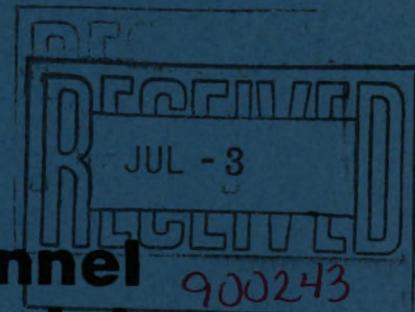
EPA 906/07-90-007
July 1990

EPA

ENVIRONMENTAL IMPACT STATEMENT

FINAL

Matagorda Ship Channel Ocean Dredged Material Disposal Site Designation



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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TEXAS 75202-2733

JUN 28 1990

TO INTERESTED AGENCIES, OFFICIALS, PUBLIC GROUPS AND INDIVIDUALS:

Enclosed is a copy of the Final Environmental Impact Statement (EIS) concerning the Environmental Protection Agency's (EPA's) designation of an ocean disposal site for material dredged from the Matagorda Ship Channel. The National Environmental Policy Act does not apply to EPA activities of this type. EPA has voluntarily committed to prepare EISs in connection with its ocean disposal site designation program.

Because changes from the Draft EIS are minor, the Final EIS incorporates the Draft EIS by reference and includes the following: 1) a revised summary; 2) comments received on the Draft EIS and EPA's responses; 3) modifications and corrections to the Draft EIS; and 4) EPA's proposed action.

Written comments or inquiries on this Final EIS should be mailed to Norm Thomas, Chief, Federal Activities Branch, at the above address by the date stamped on the cover sheet following this letter.

Sincerely yours,

Robert E. Layton Jr.
Robert E. Layton Jr., P.E.
Regional Administrator

Enclosure

**FINAL ENVIRONMENTAL IMPACT STATEMENT
MATAGORDA SHIP CHANNEL ENTRANCE
OCEAN DREDGED MATERIAL DISPOSAL SITE (ODMDS) DESIGNATION**

RESPONSIBLE AGENCY: U.S. Environmental Protection Agency, Region 6

ADMINISTRATIVE ACTION: The purpose of the action is to comply with the Marine Protection, Research and Sanctuaries Act of 1972 by providing an environmentally acceptable ODMDS in compliance with the Ocean Dumping Regulations (40 CFR Parts 220-229).

EPA CONTACT: Norm Thomas (6E-F)
U.S. Environmental Protection Agency
First Interstate Bank Tower
1445 Ross Avenue
Dallas, Texas 75202-2733

ABSTRACT: The proposed action is the designation of an ocean disposal site for 795,000 cu yd of material removed from the Matagorda Ship Channel Entrance during annual maintenance dredging by the U.S. Army Engineer District, Galveston, Texas. The major adverse environmental impact of disposal at the site is the burial and high mortality of the benthic infaunal community within the disposal site boundary.

COMMENTS ON THE FINAL EIS DUE: AUG 13 1990

RESPONSIBLE OFFICIAL:


Robert E. Layton, Jr.
Robert E. Layton, Jr., P.E.
Regional Administrator

TABLE OF CONTENTS

PREFACE	iv
PART I. SUMMARY OF THE DRAFT AND FINAL EIS	I-1
A. Background	I-1
B. Alternatives	I-2
C. Affected Environment	I-7
D. Environmental Consequences	I-11
E. Proposed Action	I-11
PART II. CONSULTATION AND COORDINATION	II-1
A. Public Review Process	II-1
B. Comments and Responses	II-1
PART III. MODIFICATIONS AND CORRECTIONS TO THE DRAFT EIS	III-1
PART IV. EPA'S PROPOSED ACTION	IV-1

LIST OF FIGURES

FIGURE I-1. MATAGORDA AREA SHOWING LOCATIONS OF THE INTERIM-DESIGNATED ODMDS AND THE PREFERRED SITE	I-6
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LIST OF TABLES

TABLE I-1. SUMMARY OF THE GENERAL CRITERIA AS APPLIED TO THE PREFERRED DISPOSAL SITE	I-12
TABLE I-2. SUMMARY OF THE SPECIFIC CRITERIA AS APPLIED TO THE PREFERRED DISPOSAL SITE	I-14

PREFACE

The Draft Environmental Impact Statement (DEIS) for the Matagorda Ship Channel Ocean Dredged Material Disposal Site (ODMDS) Designation was issued by the U.S. Environmental Protection Agency (EPA) in July of 1989. The DEIS was distributed to approximately 30 Federal, State, and local agencies and interested individuals. Eight comment letters were received by EPA during the public review period.

This Final Environmental Impact Statement (FEIS) consists of four sections, which are (1) a summary of the disposal alternatives considered, the proposed action, and an evaluation of the environmental impacts of the proposed action; (2) the comments received and EPA's responses; (3) modifications or corrections to the DEIS; and (4) EPA's proposed action. A complete environmental analysis of the proposed action is provided by the DEIS and FEIS together.

The FEIS was prepared with the assistance of Battelle Memorial Institute - Duxbury Operations.

PART I. SUMMARY OF THE DRAFT AND FINAL EIS

A. BACKGROUND

The purpose of this Final Environmental Impact Statement (FEIS) is to identify an environmentally acceptable ocean site for the disposal of material dredged during maintenance of the Matagorda Ship Channel on the north-central Texas coast. Channel maintenance is the responsibility of the Galveston District U.S. Army Corps of Engineers (COE) and the work is classified as a Federal project, which means that the dredging is performed directly by the COE. To maintain safe navigability of the entrance channel, approximately 795,000 cubic yards (cu yd) of sediment is annually dredged from the channel.

The deep-draft ship channel between Matagorda Bay and the Gulf of Mexico was authorized by the Rivers and Harbors Act of 1958 (House Document 388, 84th Congress, Second Session) and opened in 1961. The entire channel is 22 miles (statute) long and leads from the Gulf through Matagorda and Lavaca Bays to a turning basin near the Aluminum Company of America (ALCOA) plant at Point Comfort. The channel intersects with other channels that are maintained within the bays, including the Gulf Intracoastal Waterway. This EIS concerns only the disposal of material that will be dredged during maintenance of the entrance channel. Maintenance dredging of the entire Matagorda Ship Channel is evaluated in an EIS prepared by the COE in 1974.

The entrance channel is 3.2 miles long, 300 ft wide, and maintained to a mean-low-water depth of 38 ft. Since 1977, material dredged during channel maintenance has been disposed of at the interim-designated ODMDS, which is south of and parallel to the outer half of the entrance channel.

In 1972, the Marine Protection, Research, and Sanctuaries Act (MPRSA), Public Law 92-532, empowered the U.S. Environmental Protection Agency (EPA) to issue regulations for ocean disposal of dredged material and assigned the COE as the permitting authority for dredging operations. EPA's Ocean Dumping Regulations, revised in January 1977 (40 CFR §§ 220-229), establish terms and procedures for designating and managing ODMDSs. Pursuant to these regulations, in 1977 existing ODMDSs were designated as interim sites until a final ODMDS designation could be made. The COE has requested that EPA designate a final ODMDS to receive maintenance material in compliance with the MPRSA.

B. ALTERNATIVES

EPA's proposed action is to designate a final ODMDS for the disposal of dredged material from the entrance portion of the Matagorda Ship Channel. Disposal alternatives that were considered are no action, land-based disposal, and ocean disposal at near-shore, midshelf, and continental shelf sites.

No Action

The no-action alternative, under which a disposal site for Matagorda Ship Channel maintenance material would not be selected, is a violation of the intent of the MPRSA, as expressed in 40 CFR § 228.12. The purpose of designating interim disposal sites in 1977 was to allow sufficient time to objectively assess environmental impacts and designate final disposal sites. This process was created so that disposal operations that are important to the regional economy and are not creating obvious detrimental impacts to the environment could continue until baseline or trend assessment surveys were performed and appropriate management actions could be recommended. The interim-designated sites, such as the Matagorda Ship Channel ODMDS, were usually designated at historically used disposal sites. It was never the intention of the MPRSA for the *interim* designation to remain permanently in effect.

Land-Based Disposal

Non ocean-disposal alternatives that were considered in this EIS include upland disposal and beach nourishment. Upland sites that are available for disposal of Matagorda Ship Channel maintenance material are too small, far away, and/or in environmentally sensitive and productive habitats such as shallow bays and wetlands. A 100-acre site was considered that could be used as a temporary alternative, but within a few years it would be filled to capacity and other sites would have to be located or ocean disposal would have to be resumed. The costs of overland transport of dredged material are also very high. The costs can include purchases of property, easements, heavy equipment, and pumps. The limited capacity of the one available site and the cost of using it and other more inland sites make upland disposal an unfavorable alternative.

In addition to dramatically higher disposal costs, upland dredged material disposal is difficult to implement and carries more environmental risk. Dredged material that undergoes upland disposal, even very clean material such as that from the Matagorda Ship Channel,

must often be dewatered, diked, and either covered, or vegetated with terrestrial plants to prevent erosion. Erosion is already a problem at upland areas that receive dredged material from other dredging projects along the Texas coastline. Arid climate conditions lead to hypersaline conditions in the land-disposed material; vegetation cannot take root and wind-driven dust and erosion become significant problems.

The intent of the MPRSA is to *minimize* impacts to the marine environment, not to transfer impacts to terrestrial sites. At the present time, the environmental impacts of disposal at land-based sites are greater than those at responsibly managed ODMDSs. The costs associated with land-based disposal can be prohibitive as well, especially for maintenance dredging that is required at frequent intervals.

Beach nourishment was also considered as an alternative disposal method. Direct disposal of dredged material onto the beach front is not recommended for this area of Texas because of the high potential for turbidity in the nearshore area, navigation hazards from disposal operation equipment, and the overall high cost. There are also technical problems related to the use of hopper dredges, which are necessary in the unprotected waters of the entrance channel. Most hopper dredges do not have pumpout capabilities. However, the COE is performing some pilot beach-nourishment studies with dredged material along the Texas coast that may prove adaptable for Matagorda Ship Channel material in the future.

Ocean Disposal

Ocean disposal at the mid-continental shelf, continental slope, and near shore was considered. These alternatives are evaluated below.

Offshore Sites

The midshelf and continental slope areas are 30 - 35 and 70 miles, respectively, from the entrance of the Matagorda Ship Channel. The sediments dredged from the Matagorda Ship Channel have significantly different chemical and physical properties than do sediments at deepwater coastal sites. Offshore benthic communities are inherently less adapted to perturbations that might occur during dredged material disposal than are shallow-water organisms. Shallow-water communities frequently experience high water turbidity and occasional burial from storm events and are more likely to quickly recover from physical disruption.

Hauling dredged material to offshore sites will increase the project time and require additional fuel, manpower, and closer surveillance to guard against short dumps. Presently,

annual maintenance dredging of the Matagorda Ship Channel requires the use of a single 3700-cu-yd hopper-dredge for 36 days; the same work would require 429 hopper-dredge days to complete if material were deposited at a continental shelf site. Therefore, disposal at a continental shelf site would require at least two dredges working over 7 months each year to maintain the channel. Fuel consumption increases from 241,000 gal at a nearshore site to over 2.8 million gallons at a continental shelf site. Fuel combustion introduces a range of contaminants into the environment, increasing the overall impact of disposal at an offshore site.

Deep-water disposal sites are also more difficult to monitor for baseline conditions and postdisposal impacts. Whereas grab samplers and SCUBA divers can be used to monitor shallow sites, more sophisticated sampling devices, submersibles, and larger research vessels are necessary to monitor deep-water sites. Working farther offshore also carries greater safety risks during both the disposal and monitoring operations.

For these reasons, the midshelf and continental-slope sites were eliminated from further consideration.

Nearshore Sites

Nearshore areas that are suitable for the establishment of ODMDSs were identified by using the Zone of Siting Feasibility (ZSF) approach. This approach involves identification of a large area within which an ODMDS could be located, based primarily on physical and geographical constraints. Subareas within the ZSF are then excluded from ODMDS siting, based on the locations of biologically sensitive areas, beaches and recreational areas, cultural and historical areas, and living and nonliving resources. These areas are excluded from the ZSF based on the interpretation of 5 general and 11 specific criteria described in 40 CFR §§ 228.5 and 228.6(a) of the Ocean Dumping Regulations.

The boundaries of the Matagorda ZSF are defined by a 10-mile radius from the intersection of the entrance channel and the beach line. Monitoring and surveillance are feasible within all regions of the ZSF, and the ZSF does not intersect any political boundaries. The enclosed area is approximately 157 square miles, and all areas outside the ZSF were eliminated from further consideration.

ODMDS Size and Location

A computer model developed by the COE Waterways Experiment Station was used to predict the transport of dredged material through the water column and subsequent benthic

deposition after discharge from a hopper barge. This information was used to calculate the size of a nearshore ODMDS so that dredged material discharged in the center of the site will settle to the bottom inside the site's boundaries. The model used a water depth of 52 ft and predicted an elliptical dispersion pattern. The mound would have a maximum height of 6 in. and be approximately 700 ft long in the downcurrent direction and 400 ft wide in the crosscurrent direction (the boundary is defined as where the thickness of the dredged material is 0.6 in.). The model also predicted a detectable accumulation of material to 2600 ft downcurrent from the center of the mound. This information was used to determine the necessary size of the ODMDS and the buffer zone distances between the ODMDS and the numerous recreational, cultural, historical, and living and nonliving resources within the ZSF.

The determination of ODMDS size and location was also based on the analysis of the daily number of discharges expected during dredging operations and location restrictions discussed above. Other important siting considerations include cost and the regulatory requirements that ODMDS sites shall be as small as possible to contain and monitor any future impacts [40 CFR § 228.5(d)] and that historical disposal sites shall be used whenever feasible [40 CFR § 228.5(e)]. Therefore, EPA recommends siting the Matagorda ODMDS within the following coordinates (see Figure 1).

28° 24' 10" N, 96° 18' 23" W; 28° 23' 33" N, 96° 17' 45" W
28° 23' 05" N, 96° 18' 15" W; 28° 23' 43" N, 96° 18' 54" W

The northwest half of the interim-designated ODMDS is located within areas excluded from the ZSF. The preferred ODMDS overlaps approximately half the nonexcluded portion of the interim site and is slightly larger (0.74 vs 0.71 square mile). The preferred site is within the ZSF and outside the excluded areas as suggested by EPA's guidance for site evaluation and selection.

It should be noted that the designation of an ODMDS does not permit disposal of toxic or otherwise hazardous dredged material at the site. By law (40 CFR §§ 220-229), dredged material must meet stringent toxicity and bioaccumulation criteria before it may be disposed at a designated ODMDS. Analyses of dredged material from the Matagorda Ship Channel indicate that it has historically met all criteria for ocean disposal. Additionally, no significant impacts have been recorded at the interim-designated ODMDS other than a shift in the benthic-faunal assemblage. This is because the disposed material is of a slightly different grain size than the natural sediments in the area, as discussed below.

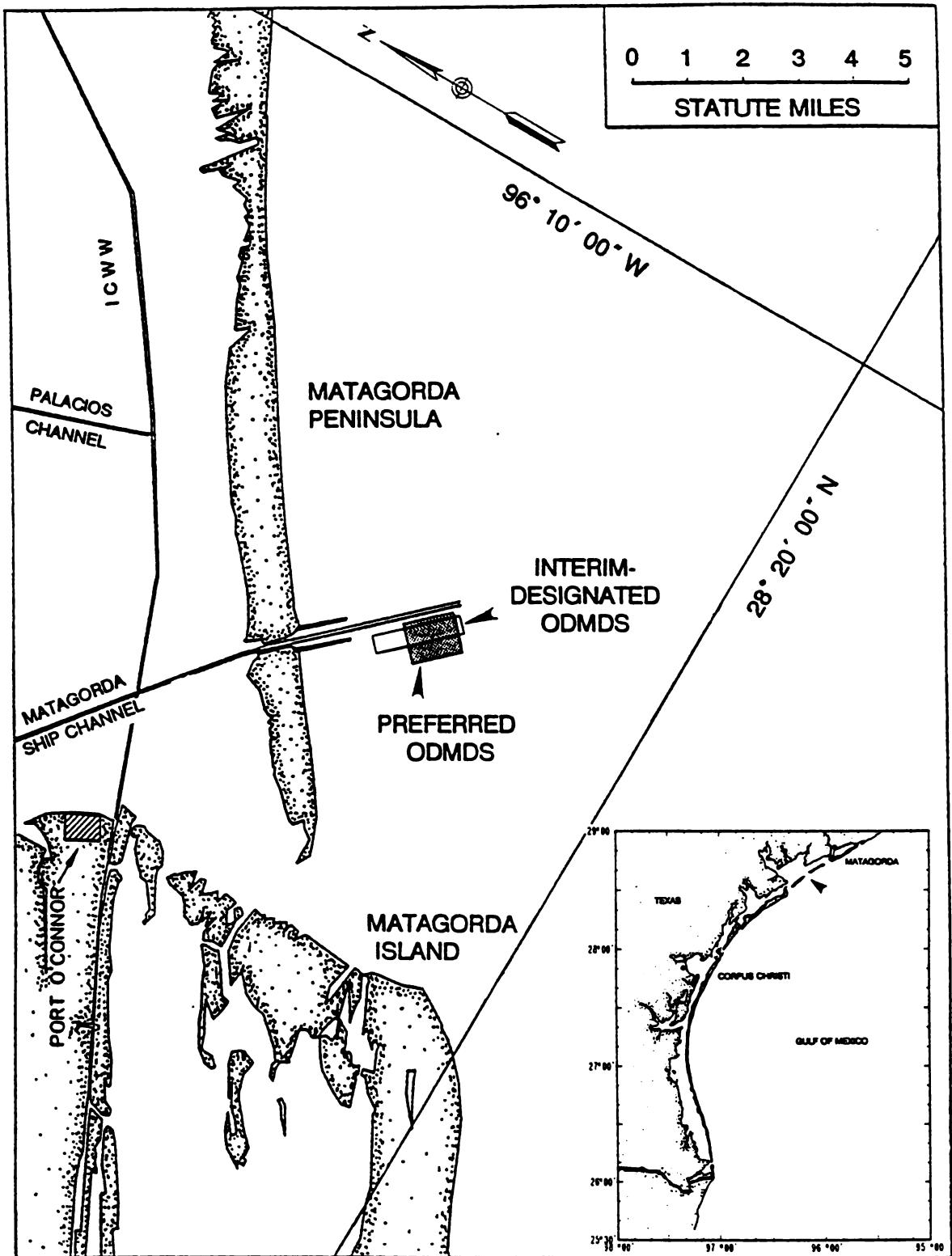


FIGURE I-1. MATAGORDA AREA SHOWING LOCATIONS OF THE INTERIM-DESIGNATED ODMDS AND THE PREFERRED SITE

To ensure that long-term detrimental impacts are prevented at and around the newly designated preferred site, EPA will establish a monitoring and surveillance program for the preferred ODMDS. The program will consist of

- Assessment of the water column and sediment quality of the ODMDS
- Assessment of the health of the biological community of the ODMDS and immediately downcurrent of the site
- Elutriate testing of the disposal site sediment for toxicity and bioaccumulation
- Replicate sampling of macrobenthic organisms at three sites within and three sites outside of the ODMDS

C. AFFECTED ENVIRONMENT

Physical Environment

The Matagorda Ship Channel and the entrance through Matagorda Island are on the Central Texas Coastal Plain in a semitropical marine environment controlled by the Gulf of Mexico. Water circulation in the area is the result of a complex interaction of lunar tides, prevailing wind and storms, freshwater inflow, and Coreolis acceleration. Tidal range in the area is 2 to 4 ft. Bottom currents are predominantly to the north, but vary on a seasonal basis with the migration and convergence of the Loop Currents in the Gulf of Mexico.

Storm events in the area are relatively frequent and often completely obscure tidal fluctuations. Annually, there is a 41%, 30%, and 9% chance of a tropical storm, hurricane, and extreme hurricane, respectively, striking the central Texas coast. Matagorda Bay is typical of Texas bays and is responsive to a wide range of meteorological forcing. High- and low-pressure systems acting on the bays create net water inflow or discharge through the passes of the barrier islands, including Matagorda Ship Channel. The combined result of water movement in the Gulf, the bays, and through the channel, causes sediment transport and shoaling of the entrance channel at approximately 795,000 cu yd per year.

Mean low-water depth at the preferred ODMDS is approximately 30 ft. The benthic topography in the project area is flat and relatively featureless, with an average slope of 3 ft per nmi.

Analysis of Matagorda Ship Channel Dredged Material and ODMDS Conditions

Sediment and water quality in and near the interim-designated ODMDS are within EPA standards. In one sample, the concentration of copper exceeded EPA water quality criteria in elutriate tests of the material in the channel, but the contaminant was calculated to be within acceptable levels following initial mixing. Similarly, bioassay and bioaccumulation studies of the dredged material have shown that the dredged material meets the criteria specified in the regulations (40 CFR § 227). In conclusion, no toxic or hazardous effects have been shown from historical use of the interim-designated ODMDS and none is predicted for future disposal of Matagorda Ship Channel dredged material at the preferred site.

Grain-size analyses of the dredged material and of the sediments in the ZSF show that the composition of the dredged material closely matches that of the sediments within the interim ODMDS, but not that of the sediments outside the interim ODMDS, whose sand content is considerably lower. Ship-channel sediments average 80% sand and are over 90% sand in the western portion of the channel. The sediments near- and off-shore from the interim ODMDS are comprised of sand plus silt and sand plus clay fractions, respectively. It is therefore concluded that historical discharge of sandy sediments dredged from the channel has, over time, altered the natural sediment composition at the disposal site. This conclusion supports the rationale for designating the final ODMDS as close as possible to the historically used disposal site.

Beaches in the area are generally in a state of erosion. Net beach and shoreline loss along the Matagorda Peninsula averages 3.0 ft/year. The peninsula south of the entrance channel annually loses about 8 ft of shoreline. Northeast of the channel however, the beaches are building up annually at the rate of 2 to 5 ft/year. This area of accretion is indicative of the prevailing southwesterly currents in the area. This supports the decision to locate the ODMDS south of the channel.

Biological Environment

The dominant phytoplankton in Pass Cavallo, a few miles south of the project site, are diatoms. The heaviest concentrations occur near shore. Peaks in abundance occur in the spring and summer for nearshore communities. The concentration of offshore phytoplankton is fairly static throughout the year and is comparable to other areas off the Texas coast. Zooplankton in the area are dominated by copepods with a spring/summer peak of abundance that corresponds to the phytoplankton abundance.

Macrofauna in and around the Matagorda interim-designated ODMDS include polychaetes, gastropods, echinoderms, bivalves, and amphipods. Three distinct habitat groups were described in the area. Two of the groups were located within the boundaries of the ODMDS and the third was represented at all of the stations sampled outside the site. The habitat differences between inside and outside the ODMDS have been attributed to differences in sediment grain sizes. Presumably, past disposal at the ODMDS of material that was sandier than the natural sediments in the area created a significant, but not necessarily detrimental, habitat alteration at the site. However, to avoid habitat alteration at other sites, the decision was made to locate the final Matagorda ODMDS as close as possible to the interim site.

The largest fraction of marine fishes in the immediate project area includes members of the croaker family (Sciaenidae). Farther offshore, tropical fish species are more abundant and some of the juvenile stages migrate into the nearshore areas for part of their life cycle. Additionally, numerous crustaceans, including penaeid shrimp, inhabit the waters offshore from the Matagorda Ship Channel. None of these species is expected to be significantly affected by the proposed use of the preferred Matagorda ODMDS.

The National Marine Fisheries Service has identified 10 species of aquatic vertebrates considered endangered or threatened that may inhabit the Texas Gulf area.¹ Eleven species of aquatic and terrestrial vertebrates considered endangered or threatened are also listed by the U.S. Fish and Wildlife Service (50 CFR § 17) and the Texas Parks and Wildlife Department. In addition, the Texas Organization for Endangered Species lists 13 species for the region.

The available data on sea-turtle species in the coastal Texas area indicate that most turtles inhabit an area 150 miles south of Matagorda Bay. Juvenile green turtles are known to inhabit the Laguna Madre; loggerhead turtle strandings have been recorded on the lower Texas coast and two loggerhead nests were documented on South Padre Island. Six nests of Kemp's Ridley sea turtle have also been recorded on South Padre Island. The leatherback and hawksbill turtles are extremely rare. None of the above areas is located near the project area. EPA's designation of the Matagorda ODMDS is not expected to adversely impact endangered or threatened turtle species.

¹ The fin whale, humpback whale, right whale, sei whale, sperm whale, green sea turtle, hawksbill sea turtle, Kemp's Ridley sea turtle, leatherback sea turtle, and loggerhead sea turtle.

Only four listed cetacean species are known to occur off the Texas coast — the sperm whale, blue whale, black right whale, and the finback. The sperm whale is the most common, but no whales are known to regularly inhabit nearshore Texas waters and are not expected to be affected by the designation of the Matagorda ODMDS.

There are no marine sanctuaries, reefs, fish-havens, or obstructions in the project area. Spawning activity for penaeid shrimp occurs over wide areas and depth ranges that might include the project area. The impact of disposal at the preferred ODMDS on the shrimp population is expected to be extremely small owing to the size of the disposal site relative to the available habitat. Both the Matagorda Ship Channel and Pass Cavallo are migratory routes for shrimp and other estuarine-dependent species.

Socioeconomic Elements

Matagorda Ship Channel serves as passage for both commercial and recreation fishing vessels. The preferred ODMDS is within Gulf of Mexico grid-area 19, a 75-mile portion of the Gulf Coast that encompasses the project area. The dollar value of catches within Grid 19 has historically ranked high as compared to other Gulf of Mexico grid catches and the annual quantities caught within Grid 19 have remained relatively constant. No measurable effects have been attributed to the disposal at the interim-designated site and, because no disposal changes are anticipated for the operation at the preferred site, no impacts are expected to either commercial or recreational catches in the area.

By tonnage, the largest user of the Matagorda Ship Channel is the Aluminum Company of America (ALCOA) Plant. Between 1967 and 1985, aluminum ore accounted for 97% of the imports passing through the channel. Other major users of the channel include the local petroleum industry and fishing vessels. Maintenance of the entrance channel will allow for continued safe ship movement between the Gulf of Mexico and the docking facilities in the bays. Channel maintenance will also protect the surrounding estuarine and marine ecosystem from damage resulting from potential vessel accidents and spills.

Numerous economically important beaches and recreational areas are located near the Matagorda Ship Channel. All of Matagorda Island is designated as an undeveloped coastal barrier island and national wildlife refuge. Fishing facilities are maintained at Lavaca Bay, Chocolate Bay, and San Antonio Bay. The Aransas National Wildlife Refuge is located southwest of the channel in Calhoun and Aransas Counties. The nearest National Audubon Society Bird Sanctuary is the Sundown Island Sanctuary located near the intersection of the

ship channel and the Gulf Intracoastal Waterway. None of these areas is expected to be impacted by the designation and use of the Matagorda Ship Channel ODMDS.

Mineral extraction activities in the Matagorda Ship Channel area are offshore oil and gas operations. Several platforms and two undersea pipelines are located 10 to 12 miles from the ship channel. These structures are both obstructions and fishery resource areas, but will not impact or be impacted by disposal operations at the preferred ODMDS. Similarly, there are sites of cultural and historical interest in the project area. The data bank of the Texas Antiquities Committee was reviewed for the location of all known shipwrecks and the 40 identified locations were excluded during the siting process for the ODMDS. The buffer zones between the ODMDS and the identified locations are adequate in all cases.

There are no military restrictions or political boundaries near the Matagorda Ship Channel that would affect ODMDS site designation. U.S. territory extends 200 miles offshore from Port O'Connor.

D. ENVIRONMENTAL CONSEQUENCES

The preferred Matagorda Ship Channel ODMDS has been evaluated according to five general and 11 specific criteria in the Ocean Dumping Regulations [40 CFR §§ 228.5 and 228.6(a)]. This evaluation is summarized in Tables I-1 and I-2.

E. PROPOSED ACTION

EPA's proposed action is the final designation of the preferred site for the future disposal of material dredged during maintenance of the Matagorda Ship Channel.

TABLE I-1. SUMMARY OF GENERAL CRITERIA AS APPLIED TO THE PREFERRED DISPOSAL SITE

General Criteria as Listed in 40 CFR § 228.5(a-e)	Preferred Disposal Site
(a) The dumping of materials into the ocean will be permitted only at sites or in areas selected to minimize the interference of disposal activities in the marine environment, particularly avoiding areas of existing fisheries or shelffisheries and regions of heavy commercial or recreational navigation.	The preferred ODMDS was selected to avoid sport and commercial fishing activities, as well as other areas of biological sensitivity such as Pass Cavallo. The site does not include any known navigational obstructions and is outside the buffer zones for beaches, historic sites and shipwrecks, the navigational channel, and structures such as oil platforms. The buffer zones were determined from modeling the physical movement of the disposal material after analyses concluded that the quality of the material proposed for discharge meets the criteria of 40 CFR § 227.
(b) Locations and boundaries of disposal sites will be so chosen that temporary perturbations in water quality or other environmental conditions during initial mixing caused by disposal operations anywhere in the site can be expected to be reduced to normal ambient seawater levels or to undetectable contaminant concentrations or effects before reaching any beach, shoreline, marine sanctuary, or known geographically limited fishery or shelffishery.	Chemical analyses and toxicity studies indicate that the material dredged in the past has been acceptable for ocean disposal under 40 CFR § 227. The biota in the ZSF is healthy, indicating no significant adverse impacts from historical disposal operations in the area. The size and location of the preferred ODMDS and the buffer zones were determined through analyses of sediment transport rate and the physical oceanographic characteristics of the entrance channel area. The analyses were conservative to ensure that any perturbations caused by the disposal operations would be contained within the boundaries of the site.
(c) If at any time during or after disposal site-evaluation studies it is determined that existing disposal sites presently approved or on an interim basis for ocean dumping do not meet the criteria for site selection set forth in §§ 228.5-228.6, the use of such sites will be terminated as soon as suitable alternate disposal sites can be designated.	Should the proposed monitoring and surveillance program indicate that dredged material disposal at the preferred site is unsuitable and that the site should be redesignated, there are other nonexcluded areas in the ZSF that are available and suitable for use as an ODMDS.

TABLE I-1. SUMMARY OF GENERAL CRITERIA AS APPLIED TO THE PREFERRED DISPOSAL SITE (continued)

General Criteria as Listed in 40 CFR § 228.5(e)	Preferred Disposal Site
(d) The sizes of ocean disposal sites will be limited in order to localize the identification and control any immediate adverse impacts and to permit the implementation of effective monitoring and surveillance programs to prevent adverse long-range impacts. The size, configuration, and location of any disposal site will be determined as a part of the disposal site evaluation or designation study.	The site is of minimum size to sufficiently meet the requirements of 40 CFR §§ 228.5 and 228.6(a). The size of the interim site is 0.71 square mile. The preferred site is slightly larger with 0.74 square mile of area to allow for the effects of disposal operations to be dispersed to background levels within the boundaries of the site. The proposed monitoring program should provide adequate surveillance to identify any potential adverse impacts within the boundaries of the ODMDS.
(e) EPA will, whenever feasible, designate ocean dumping sites beyond the edge of the continental shelf and other such sites that have been historically used.	No significant advantages, but many disadvantages were found for the establishment of an ODMDS off the continental shelf. An offshore ODMDS for material dredged from the Matagorda Ship Channel would complicate monitoring efforts, expand the project time, and result in dramatically higher costs and safety risks than would disposal at the preferred site that is nearer to the source of the dredged material. The grain-size composition of the dredged material is very different from that of the continental shelf off Matagorda. Compared to inshore communities, deep-water benthic communities are also less resilient to perturbations that may result from disposal operations.

The preferred site encompasses much of the historically used interim-designated site. However, the interim site was found to be partially in the excluded area and could not be selected in its entirety. There are no other historically used sites within the ZSF.

TABLE I-2. SUMMARY OF SPECIFIC CRITERIA AS APPLIED TO THE PREFERRED DISPOSAL SITE

Specific Criteria as Listed in 40 CFR § 228.6(a)(1-11)	Preferred Disposal Site
(1) Geographical position, depth of water, bottom topography, and distance from the coast.	The boundary coordinates of the site are given on page I-5. The mean low-water depth at the preferred site ranges from 25 to 40 ft. The benthic topography of the site is flat, and the closest point to shore is 1.5 miles from the coast.
(2) Location in relation to breeding, spawning, nursery, feeding, or passage areas of living resources in adult or juvenile phases.	The Pass Cavallo, the channel entrance and their respective 1-mile buffer zones have been excluded as areas of biological sensitivity. The oil and gas platforms and the shipwrecks in the area, both of which enhance fishing resources, have also been excluded with their respective buffer areas.
(3) Location in relation to beaches or other amenity areas.	The preferred site is greater than 1.5 mi. from the nearest beach and other amenity areas such as the Aransas National Wildlife Refuge.
(4) Types and quantities of wastes proposed to be disposed of, and proposed methods or release including methods of packaging the wastes, if any.	Only maintenance material dredged from the entrance of the Matagorda Ship Channel will be disposed at the preferred site. Approximately 795,000 cu yd of material is dredged annually from the entrance channel. The material is presently transported to the interim site by hopper dredges, but other means of transportation could be used.
(5) Feasibility of surveillance and monitoring.	The preferred site is amenable to surveillance and monitoring, because of its proximity to the numerous port facilities with channel access to the ship channel and the site's relatively shallow depths. These factors facilitate site accessibility and reduce sampling costs and safety risks. The proposed surveillance and monitoring program for the Matagorda Ship Channel ODMDS consists of water, sediment, and elutriate chemistry; bioassays; bioaccumulation studies; and benthic faunal analyses.

TABLE I-2. SUMMARY OF SPECIFIC CRITERIA AS APPLIED TO THE PREFERRED DISPOSAL SITE (continued)

Specific Criteria as Listed in 40 CFR § 228.6(a)(1-11)	Preferred Disposal Site
<p>(6) Dispersal, horizontal-transport, and vertical mixing characteristics of the area, including prevailing current direction and velocity, if any.</p>	<p>Sediment dispersal, horizontal transport, water column currents, and vertical mixing in the region of the ODMDS were analyzed to (1) develop the necessary buffer zones for the exclusion analysis, and (2) determine the minimum size of the preferred site. The predominant longshore currents are toward the southwest with near-bottom velocities between 0.02 and 0.88 kn. No long-term mounding has been recorded at the interim ODMDS, which has received dredged material from the channel since about 1960. However, the interim site does have significantly sandier sediment than the surrounding benthic area. This indicates that at least some of the dredged material disposed at the site in the past has remained in the area. Presumably, longshore water circulation and storm events, including occasional hurricanes, level the benthic topography to that of the surrounding area but do not transport all of the heavy sandy material out of the site.</p>
<p>(7) Existence and effects of current and previous discharges and dumping in the area (including cumulative effects).</p>	<p>Chemical and bioassay testing has shown no water- or sediment-quality problems in the ZSF or in the preferred site. Testing of past maintenance dredged material indicates that it was acceptable for ocean disposal under 40 CFR § 227. However, studies have shown that the interim site has sediments that are significantly different from the sediments in nearby areas. The sediments within the site are much coarser and support different benthic communities than the outside sediments. The assumption is that historical disposal of coarser channel sediments at the interim site has changed the natural benthic environment. Therefore, the preferred site (1) was placed as near to shore as possible – near the coarser shore sediments, and (2) in as much of the interim site as possible to minimize alterations of natural sediment.</p>

TABLE I-2. SUMMARY OF SPECIFIC CRITERIA AS APPLIED TO THE PREFERRED DISPOSAL SITE (continued)

Specific Criteria as Listed in 40 CFR § 228.6(a)(1-11)	Preferred Disposal Site
<p>(8) Interference with shipping, fishing, recreation, mineral extraction, desalination, fish and shellfish culture, areas of special scientific importance, and other legitimate uses of the ocean.</p>	<p>Items from this list that are pertinent to the Matagorda Ship Channel ODMDS are shipping, mineral extraction, commercial and recreational fishing, and recreational and historical sites. The preferred site will not interfere with other legitimate uses of the ocean because the site-selection process was expressly designed and conducted to avoid interferences and minimize impacts. Past disposal operations at the interim site have not interfered with other uses, and no changes are expected at the preferred site that would alter the <i>status quo</i>.</p>
<p>(9) Existing water quality and ecology of the site as determined by available data or by trend assessment of baseline surveys.</p>	<p>Monitoring studies at other ODMDS off the Texas coast have shown that short-term water-column turbidity perturbations, and sometimes increased chemical oxygen demand (COD), result from disposal operations. No short-term sediment-quality perturbations were correlated to disposal operations. Similar short-term impacts probably occur during disposal operations at the Matagorda Ship Channel ODMDS.</p>
<p>(10) Potentiality for the development or recruitment of nuisance species in the disposal site.</p>	<p>Available data show that both water and sediment quality are high within the interim site and throughout the ZSF. This suggests that present disposal operations at the site cause no long-term water-column or benthic impacts. Correspondingly, minimal environmental impacts are predicted during disposal operations at the preferred site.</p> <p>When dredged material is disposed, the material is recolonized first by opportunistic species. However, these species are not nuisance species in the sense that they interfere with legitimate uses of the ocean or that they are human pathogens. The disposal of maintenance material has not been shown to, nor is the disposal of future maintenance material expected to, promote the development of nuisance species at the Matagorda Ship Channel ODMDS.</p>

TABLE I-2. SUMMARY OF SPECIFIC CRITERIA AS APPLIED TO THE PREFERRED DISPOSAL SITE (continued)

Specific Criteria as Listed in 40 CFR § 228.6(a)(1-11)	Preferred Disposal Site
(11) Existence at or in close proximity to the site of any significant natural or cultural features of historical importance.	Forty shipwrecks of historical importance have been identified in the ZSF. None of the wrecks is within the immediate project area. The nearest site of historical importance is northeast of the channel and upcurrent of the preferred site. A cluster of historical sites is situated about 1 mile west of the site. At these distances, disposal operations at the preferred ODMDS should have no impact.

PART II. CONSULTATION AND COORDINATION

This section of the FEIS summarizes the process by which the DEIS was reviewed. All comment letters received during the public review process and EPA's responses to them are presented.

A. PUBLIC REVIEW PROCESS

The DEIS, *Matagorda Ship Channel, Ocean Dredged Material Disposal Site Designation* was distributed to the public by EPA in July 1989 (EPA 906/07-89-008). Distribution included approximately 30 Federal, State and local agencies, environmental groups, and interested individuals. Comments on the DEIS were due August 28, 1989. All comments received on the DEIS, as well as on the FEIS, are considered by EPA when making a final determination on ODMDS designation.

B. RESPONSES TO COMMENTS

During the public review process, eight comment letters were received from the Federal and State agencies and organizations listed below:

Letter Number	Agency
1	U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Washington, DC
2	U.S. Department of the Interior, Office of Environmental Project Review, Albuquerque, NM
3	U.S. Department of Transportation, United States Coast Guard, New Orleans, LA
4	U.S. Department of Health and Human Services, Centers for Disease Control, Atlanta, GA
5	State of Texas, Office of the Governor, Austin, TX
6	State of Texas, Texas Historical Commission, Austin, TX

Letter Number	Agency
7	State of Texas, Parks and Wildlife Department, Austin, TX
8	F. Hermann Rudenburg, Sierra Club, Lone Star Chapter Coastal Affairs Committee, Galveston, TX

The above comment letters are reproduced in this section. Each comment within each letter is assigned a number in the left margin. EPA's responses to the comments are in the right margin and are identified by the comment number.

Some of the letters contain comments on other ODMDS EISs. Only the comments pertaining to the Matagorda Ship Channel ODMDS DEIS are addressed in this document. EPA's responses to the other comments are presented in the respective FEISs for the other ODMDSs.



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Washington, D.C. 20230

Office of the Chief Scientist

LETTER NO. 1

August 23, 1989

HFCG:mtl

SEP 5 1989

6E-F

Mr. Norm Thomas
Federal Activities Branch
EPA Region 6
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202

Dear Mr. Thomas:

This is in reference to your Draft Environmental Impact Statement on the Port Mansfield, the Brazos Island Harbor and the Matagorda Ship Channel Ocean Dredged Material Disposal Site Designation, Texas.

- 1-0 We hope our enclosed comments will assist you. Thank you for giving us an opportunity to review the documents.
- 1-0 See the following pages for EPA's responses to specific comments.

Sincerely,

David C. Nottingham

David Nottingham
Director
Ecology and Environmental
Conservation Office

Enclosure



Southeast Regional Office
9450 Roger Boulevard
St. Petersburg, FL 33702

August 22, 1989

Mr. Norm Thomas, Chief (6E-F)
Federal Activities Branch
EPA Region 6
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202

5/1989

6E-F

Dear Mr. Thomas:

The National Marine Fisheries Service (NMFS) has reviewed the Environmental Protection Agency's (EPA) Draft Environmental Impact Statements (DEIS) for the Port Mansfield Ocean Dredged Material Disposal Site Designation (ODMDS) off of Port Mansfield, Texas, in Willacy County; the Brazos Island Harbor ODMDS near Port Isabel, Texas, in Cameron County and the Matagorda Ship Channel ODMDS near Port O'Connor, Texas, in Matagorda County. We have the following comments to offer for your consideration.

General Comments

- II-4
- An alternative to disposing the new dredged material along the shoreline for beach restoration and/or shoreline protection should be addressed, especially since the dredged material consists of approximately 80% sand for Port Mansfield and the Matagorda Ship Channel, and 90% sand for Brazos Island Harbor. Each of the three DEIS' mentions beach nourishment as an alternative (CHAPTER 2, ALTERNATIVES, 2.2 UPLAND DISPOSAL), but there is no further discussion of it in the rest of the document. Such a discussion should be included or the rationale provided as to why this alternative is not being actively pursued.
- For mechanical reasons related to dredge operation, beach nourishment cannot be used exclusively for disposal of maintenance material from the entrance channel. It is, however, being utilized by the COE to the fullest extent possible (see discussion, Section I-B).
- The purpose of this ES is to identify an environmentally acceptable ocean disposal site for the material dredged from the Port Mansfield Channel. EPA's proposed designation of this ODMDS does not preclude future consideration of alternative disposal options or beneficial uses of the material.
- Hopper dredges must be used to perform the maintenance dredging for the Gulf portion of the Port Mansfield entrance channel because the work is in open, unprotected waters. This presents technical obstacles for the transfer of dredged material from the dredge to the beach front because most hopper dredges do not have pumpout capabilities. Whenever possible, a pipeline dredge is used in the calmer waters between the jetties, and the material is used for beach nourishment.
- It is not necessary to restrict upland disposal to one large site.
- Upland disposal is preferable to ocean disposal from the viewpoint of fishery resources and habitat. Therefore, we believe that this option, as discussed in Section 2.2 of the three DEIS', should be reanalyzed; especially since the rationale used to defer this option is based largely on conclusions reached by the Corps of Engineers in 1974. Better disposal area management techniques have been developed. It is also unclear why one large disposal area instead of several smaller ones is necessary and why the EPA believes that alteration of inshore wetlands must be connected with the upland alternatives. Accordingly, from the information presented, we do not believe it can be concluded that, "A land-based alternative would, therefore, offer no environmental benefit to ocean disposal." This statement would be incorrect even if no upland sites are found.
- Upland disposal is connected to the alteration of inland wetlands because all land areas that are sufficiently large enough for disposal sites in the Port Mansfield area contain a significant amount of wetlands.
- This statement has been clarified in Section I-B and is noted in Part III of this document.

Specific Comments**Port Mansfield ODMDS DEIS****CHAPTER 2****ALTERNATIVES****2.3 OCEAN DISPOSAL.**

2.3.1 Mid-Shelf and Continental Slope Alternatives. Pages 2-2 thru 2-4

Most of the arguments against mid-shelf and continental slope ODMDS sites may not be valid. For example, the statement that, "The benthos at this depth would rarely be disturbed by sediment resuspension and therefore would not be expected to be as resilient as would benthic communities (Oliver, et al. 1977) living in the nearshore, high-energy environments," should be reconsidered. Shallow-water and deep-water benthic communities would have similar problems of survival if large volumes of dredged materials were dumped on them.

CHAPTER 3**AFFECTED ENVIRONMENT****1.2 PHYSICAL ENVIRONMENT.****1.2.5 Sediments.**

1.2.5.1 Sediment quality and characteristics. Pages 3-18 thru 3-22

This section should include grain size data for the sediments at each sample station. There also are no data presented to support statements such as, "...the offshore stations comprised a habitat group distinct from inshore stations" and "...the grain size of the material to be discharged is more similar to that of the inshore stations..." In addition, sample station locations should be indicated on Figure 3-4 on Page 3-21.

1.3 BIOLOGICAL ENVIRONMENT.**1.3.2 Benthos.** Pages 3-26 thru 3-32

This section is confusing and should be revised because the data presented do not support the site specific conclusions that were drawn. For example, Table J-10 on Page 3-28 represents a compilation of data added from all of the stations. Therefore, it can only be presumed that there are five distinct species groups in the sample area. This section, at a minimum, should include dendograms and two-way tables showing species and station groups. Each station also should include water quality measurements such as dissolved oxygen and salinity; grain size data for sediments; and the number of major taxa, species, and individuals.

The first sentence of the second paragraph on Page 3-32 states, "There was a general trend of increased species diversity, density of individuals, and biomass with increased depth and percent sand content." However, the sediment data indicate that percent sand decreased as depth increased. This should be clarified.

3.4 SOCIOECONOMIC ENVIRONMENT. 3.4.1 Commercial and Recreational Fisheries. Pages 3-35 thru 3-38

The third and fourth paragraphs on Page 3-36 (starting on line 10) should be moved to the discussion in Section 3.3.3 Nekton. The Atlantic threadfin, tidewater silversides, striped killifish, etc. are not commercially or recreationally important. Rather, they are forage species that support marine fishery species.

CHAPTER 4

ENVIRONMENTAL CONSEQUENCES

4.1 REGULATORY CHARACTERIZATION.

4.1.1 Five General Criteria.

4.1.1.5 40 CFR 228.5(e). Page 4-3

There is no data presented which demonstrates that the near-shore benthic community is more resilient than the off-shelf benthic community when large volumes of dredge material are dumped on them. The DEIS should indicate whether having particle sizes that more closely resemble inshore sediments, will alter the naturally occurring benthic communities, and how much of the communities would be eliminated in each area.

4.1.2 Eleven Specific Factors.

4.1.2.7 40 CFR 228.6(a)(7). Page 4-5

Data presented in the DEIS on benthos is insufficient to support or to rebut the statement that, "studies of the benthos at the interim-designated OMDS (No. 14) and nearby areas have not indicated any significant decrease or change in composition of the benthos at the OMDS." Therefore, that statement should be substantiated by much more than one set of samples or it should be removed.

4.2 ENVIRONMENTAL CHARACTERIZATION.

4.2.2 Biological Environment.

4.2.2.2 Benthos. Page 4-10

See comments for Sections 2.3.1, 3.3.2, 4.1.1.5 and 4.1.2.7.

CHAPTER 2**ALTERNATIVES****2.3 OCEAN DISPOSAL.**
2.3.1 Mid-Shelf and Continental Slope Alternatives. Pages 2-2 thru 2-4

Comments under Section 2.3.1 for the Port Mansfield ODMDS DEIS also apply here.

The DEIS states that, "There are also no data to indicate that such sites (deep water) would offer any environmental benefit over a nearshore site." The converse also is true.

CHAPTER 3**AFFECTED ENVIRONMENT****3.2 PHYSICAL ENVIRONMENT.****3.2.5 Sediments.**
3.2.5.1 Sediment Quality and Characteristics. Pages 3-21 thru 3-25

This section should include grain size data for the sediments at each sample station. There are no data presented to support the contention that there are two distinct communities in the two habitat types. In addition, sample station locations should be indicated on Figure 3-4 on Page 3-24.

3.3 BIOLOGICAL ENVIRONMENT.**3.3.2 Benthos.** Pages 3-29 thru 3-33

Comments under this section for the Port Mansfield ODMDS also apply here. If possible, the first paragraph on Page 3-31 should include an explanation as to why the nearshore community was observed to be under "severe stress" and the offshore community was not. It should be clarified as to whether the EPA 1985 sampling locations on Figure 3-5 are the same as the Science Applications 1984 stations; and whether the Elsta (1981) study also indicated that there were four taxonomic communities.

3.4 SOCIOECONOMIC ENVIRONMENT.**3.4.1 Commercial and Recreational Fisheries.** Pages 3-36 thru 3-39

The last paragraph on Page 3-37 is exactly the same paragraph as on Page 3-33 under the Nekton section. It should be deleted here. Additionally, the first two paragraphs on Page 3-38 would be more appropriate, if they were placed in Section 3.3.3 Nekton.

CHAPTER 4
ENVIRONMENTAL CONSEQUENCES

4.1 REGULATORY CHARACTERIZATION.

4.1.1 Five General Criteria.

4.1.1.5 40 CFR 228.5(e). Page 4-3

There is no data presented which demonstrates that the near-shore benthic community is more resilient than the off-shelf benthic community when large volumes of dredge material are dumped on them. The EPA should explain what difference it makes if particle sizes more closely resemble inshore sediments, if the end result in both areas is elimination of naturally occurring communities. Also, a discussion of the deep-ocean sediments off of Freeport would not appear to apply to those off the Port Isabel area.

4.1.2 Eleven Specific Factors.

4.1.2.7 40 CFR 228.6(a)(7). Page 4-5

There are no data presented on benthos that can be utilized to support or to rebut the conclusions in this section. Therefore, either adequate supporting data should be provided or the conclusions removed.

4.2 ENVIRONMENTAL CHARACTERIZATION.

4.2.2 Biological Environment.

4.2.2.2 Benthos. Page 4-10

See comments for Sections 2.3.1, 3.3.2, 4.1.1.5 and 4.1.2.7.

Hatagorda Ship Channel ODMDS DEIS

CHAPTER 2

ALTERNATIVES

2.1 OCEAN DISPOSAL.

2.1.1 Mid-Shelf and Continental Slope Alternatives. Pages 2-2 thru 2-4

Comments under this section for the previous DEIS' also apply here. 1-6 This DEIS even states on Page 4-10 that, "The benthic community at the interim-designated ODMDS was found to be significantly different from that in the natural bottom sediments near the existing site (SNI, 1989)." This apparently implies that naturally occurring benthic populations have been extirpated by disposal of dredged materials. It is probable that benthic communities will be destroyed or adversely impacted regardless of where dredged materials are dumped, therefore, the EPA argument in favor of nearshore disposal should be better documented.

- 1-6 The EIS notes that because the benthic community at the Interim site has already been altered, it is a logical area, environmentally, to place the preferred site, if some other concern does not preclude the use of the Interim site. This is the rationale of the second part of 40 CFR § 228.5(e). Without designation of a new site, disposal of acceptable dredged material would continue at the Interim site indefinitely.

The EIS has identified that the benthos at the Interim ODMDS has been altered by past disposal of coarse sediments on top of the fine-grain natural sediments of the area. This alteration has led to the existence of a significantly different habitat for benthic organisms. Presumably, the former inhabitants have been eliminated and new species have recolonized the substrate. This change in the benthos is not detrimental to the environment.

Other environmental concerns precluded the continued use of the entire Interim ODMDS, but as much of it as possible was included in the preferred alternative site. Farther offshore, the benthic community has not been altered by past disposal activities, the grain-size distribution differs even more from that of the maintenance material, and the organisms are less adapted to periodic burial. The organisms living in the frequently used Interim site must be either adapted to periodic burial or opportunistic species able to reestablish quickly after a disturbance.

CHAPTER 3

AFFECTED ENVIRONMENT

2.1.2. PHYSICAL ENVIRONMENTAL.

2.1.2.5. SEDIMENT.

2.1.2.5.1. Sediment Quality and Characteristics. Pages 3-19 thru 3-23

This section should include grain size data for the sediments at each sample station. In addition, sample station locations should be indicated on Figure 3-4 on Page 3-21.

2.1.3. BIOLOGICAL ENVIRONMENT.

2.1.3.2. Benthos. Pages 3-26 thru 3-31

1.7 Comments under this section for the previous DEIS' also apply here.

Table 3-10 on Page 3-29 and the third paragraph of Page 3-31 should change the references from group "4" to group "3", unless there was an additional group identified that has not been discussed.

It should be explained why were there no deep-water samples taken. EPA should have the deep water areas sampled for comparative purposes, or explain why there is no need for taking such samples.

CHAPTER 4

ENVIRONMENTAL CONSEQUENCES

4.1. REGULATORY CHARACTERIZATION.

4.1.1. Five General Criteria.

4.1.1.5. 40 CFR 228.5(a). Page 4-3

1.8 Comments under this section for the previous DEIS' also apply here.

4.2. ENVIRONMENTAL CHARACTERIZATION.

4.2.2. Biological Environment.

4.2.2.2. Benthos. Page 4-10

1.9 See comments for Sections 2.3.1, 3.3.2, 4.1.1.5 and 4.1.2.7.

If you have any questions, please contact Donald Moore or Russell Swafford at FTS 527-6699.

Sincerely yours,

Donald W. Hager Jr.
Donald W. Hager Jr.
Assistant Regional Director
Habitat Conservation Division

1-10 See responses to 1-6, 1-7, and 1-8

LETTER NO. 1 (continued)

1-7 Channel sediment grain-size data are presented by station in Table 3-5. Sample locations and corresponding grain-size data for the offshore sites summarized in Figure 3-4 are given in DOI/MMS 1983.

1-8 In Section 3.3.2, it was noted that SAI (1984) identified several habitat groups along the Gulf coast, most of which were found at all locations. Habitat Group #3 was not identified in any of the samples from the Matagorda entrance channel area.

Both the Matagorda and the Corpus Christi Interim sites are near shore (1.0 and 1.3 nmi, respectively, offshore). Since the primary purpose of SAI (1984) "... was to assess similarities and differences in the benthic environment between ... the two ODMDS sites at Matagorda and Corpus Christi ...", SAI apparently determined no need for data from further offshore. The discussion on page 3-23 of the DEIS demonstrates, based on grain size, the logic of selecting a nearshore site. The discussion on page 3-31, plus the requirements of 40 CFR § 228.5(e), does the same for the use of the interim site.

1-9 One of the most significant determinants of the composition of any benthic community is the distribution of grain size in the sediment. This is why EPA places emphasis on trying, to the extent possible, to locate the preferred ODMDS in an area where the grain-size distribution is similar to that of the dredged material.

Disposal of similar material that is significantly free of contaminants, as is that from the Matagorda entrance channel, is expected to create localized impact at the discharge point owing to benthic burial, but the vast majority of the disposal area is covered by relatively thin layers of material, and in a short while the benthic organisms can migrate vertically and horizontally to recolonize the sediment - water interface. As described previously, because the dredged material has a significantly different grain-size distribution than that naturally occurring at the ODMDS, colonization by species that are adaptable to the sediment has resulted.



United States Department of the Interior
OFFICE OF ENVIRONMENTAL PROJECT REVIEW
POST OFFICE BOX 649
ALBUQUERQUE, NEW MEXICO 87101

FR 89/582

AUG 23 1989

LETTER NO. 2

Mr. Norm Thomas,
U.S. Environmental Protection Agency
First Interstate Bank Tower
1445 Ross Avenue
Dallas, Texas 75202-2733

Dear Mr. Thomas:

This responds to your request to the Director, Office of Environmental Project Review, for our evaluation and comments on the draft environmental impact statement for the Matagorda Ship Channel Dredge Material Disposal Site Designation. The following comments are provided for your consideration.

We see no problem with the disposal site proposed for designation, nor with the biological basis for the documents' conclusion. However, we offer some suggested corrections to the text regarding the status and location of properties, including some in Fish and Wildlife Service ownership.

Specific Comments

Section 3.4.3. Beaches and Recreational Areas, page 3-25. This section of the DEIS contains the following incorrect statement: "The northern two-thirds of Matagorda Island is designated as a national seashore (DOI/MMS, 1986). . . The Aransas National Wildlife Refuge is located to the southwest of the Channel in Aransas County. The nearest National Audubon Society Bird Sanctuary is the Three Islands Sanctuary located inside the barrier islands near the Aransas National Wildlife Refuge (National Audubon Society, 1980)." (Errors underlined). The section should be corrected to read: "All of Matagorda Island is designated an undeveloped coastal barrier and a national wildlife refuge. . . The Aransas National Wildlife Refuge is located southwest of the Channel in Calhoun and Aransas Counties, Texas. The nearest National Audubon Society Bird Sanctuary is the Sandown Island Sanctuary located inside the barrier island near the intersection of the Channel and the Gulf Intracoastal Waterway."

- 2-1 The statement has been corrected in Section I-C, and the error is noted in Part III of this document.
- 2-2 The statement has been corrected in Section I-C, and the error is noted in Part III of this document.
- 2-2 The opportunity to comment on this document is appreciated.

Sincerely,

Raymond P. Churan
Raymond P. Churan
Regional Environmental Officer



LETTER NO. 3

Commander
8th Coast Guard District
Hale Boggs Federal Building
500 Caro Street
New Orleans, LA 70130-3396
Staff Symbol (oan)
Phone (504) 589 6234

16500
31 JUL 1989

U. S. Environmental Protection Agency
First Interstate Bank Tower
1445 Ross Avenue
Dallas, TX 75202-2733

Dear Gentlemen:

After reviewing the draft Environmental Impact Statements for
3-1 Ocean Dredged Material Disposal Sites offshore Port Mansfield,
Matagorda Ship Channel and Brazos Island Harbor Texas, I find no
reason to object to their establishment.

Sincerely,

R. J. Heym
Captain, U. S. Coast Guard
Chief, Aids to Navigation Branch
By direction of the District Commander



Norm Thomas (6E-R)
U.S. Environmental Protection Agency
First Interstate Bank Tower
1445 Ross Avenue
Dallas, TX 75202-2733

Dear Mr. Thomas:

6E-F

This letter consolidates our comments on three (3) Draft Environmental Impact Statements (DEIIS) proposing designation of ocean dredged material disposal sites (ODMS) at three locations in Texas. Since these three DEIIS all originated from your office, and since we did not have significant comments, we have combined our remarks into one response letter. These DEIIS propose ODMS designations at Matagorda Ship Channel, Brazos Island Harbor, and Port Mansfield, Texas. We are responding on behalf of the U.S. Public Health Service. Each of these DEIIS considers alternatives for designation of sites in the open ocean for disposal of maintenance material dredged from ship channels.

From a public health standpoint, our major concern with these projects is the potential toxic contamination of dredged materials. Toward this end, we were pleased to learn that the maintenance material proposed for disposal at all three sites was found to contain only minor quantities of heavy metals. We found no other potential significant public health impacts posed by this project. We recommend close adherence to all applicable occupational safety and health guidelines to minimize any potential hazards which might arise during dredging operations.

Thank you for the opportunity to review these DEIIS. Please insure that we are included on your mailing list to receive NEPA-related documents on other projects with potential human health hazards.

4-1 EPA concurs.

Sincerely yours,

David E. Clapp, Ph.D., P.E., CIH
Environmental Health Scientist
Center for Environment, Health
and Injury Control



RECEI

SEP 15 1987

STATE OF TEXAS
OFFICE OF THE GOVERNOR
AUSTIN, TEXAS 78711

WILLIAM P. CLEMENTS, JR.
GOVERNOR

September 12, 1989

Norm Thomas, Chief
U.S. Environmental Protection Agency
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202

RE: TX-R-89-07-12-0004-50-00 / DRAFT EIS OCEAN DREDGED MATERIAL DISPOSAL SITES

Dear Applicant:

Your environmental impact statement for the project referenced above has been reviewed. The comments received are summarized below and are attached.

The Texas Historical Commission commented that they have no record of properties listed or eligible for listing on the National Register of Historic Places within the project or affected area. However, if cultural materials are encountered during construction, work should cease in that area.

5-1 See response 6-1.

The Texas Parks and Wildlife Department commented that they have no objection to your proposal.

We appreciate the opportunity afforded to review this document. Please let me know if we can be of further assistance.

Sincerely,

A handwritten signature in black ink, appearing to read "T.C. Adams".

T.C. Adams, State Single Point of Contact

TCA/rb/pbn

Enclosures



T E X A S H I S T O R I C A L C O M M I S S I O N
AUSTIN, TEXAS 78711
(512)463-6100

July 27, 1989

Robert E. Layton Jr., P.E.
Regional Administrator
Environmental Protection Agency
Region VI
1415 Ross Avenue, Suite 1200
Dallas, Texas 75202

Re: Matagorda Ship Channel Ocean Dredged
Material Disposal Site Designation
Draft EIS (EPA, A4, A5, D1b)

Dear Mr. Layton:

Thank you for the opportunity to review the project referenced above. Using the information you have provided, we have completed a Level II review and find that we have no record of properties listed or eligible for listing on the National Register of Historic Places within the project or affected area.

- 6-1 The project may continue without further consultation with this office. However, it is possible that buried cultural materials may be present in the project area. If cultural materials are encountered during construction, work should cease in the immediate area; work can continue in the project area where no cultural materials are present. The Secretary of Interior should be contacted. Please also notify the State Historic Preservation Officer (512/463-6846).
- If we may be of further service, please advise.

Sincerely,

Jane E. Bruce
Jane E. Bruce
Deputy State Historic Preservation Officer

WILLIAMS

The State Cemetery for Native Americans

LETTER NO. 7



TEXAS
PARKS AND WILDLIFE DEPARTMENT

120 South School Road Austin, Texas 78714

RECEIVED
JULY 11, 1989
GOVERNOR'S BUDGET OFFICE
CHARLES D. TRAVIS
Executive Director

COMMISSIONERS
CHUCK HORN
CRAVEN, SUE LYNN
GEORGE C. TAYLOR
VERONICA MURKIN
SAN ANTONIO

BOB BROSTROM

August 15, 1989

LELAND E. ROBERTS

11 W. 11th

LELAND E. RECK III

DATES

MR. T. C. ADAMS

State Single Point of Contact

Governor's Office of Budget and Planning

JOHN W. SPENCER

11th Floor

P.O. Box 12428

AUSTIN, TEXAS 78711

APPROPRIATION # Ref: SAI/EIS# TX-R-89-07-12-0004-50-00

LAWRENCE

Dear Mr. Adams:

The Department has reviewed the draft Environmental Impact Statements on ocean dredged material disposal sites for Brazos Island Harbor, Port Mansfield, and Matagorda Ship Entrance Channels. In particular, the documents provide for nearshore deposition so that dredge material will most closely match bottom sediments and cause the least amount of impact to benthos. Also, sand will be maintained in the overall beach sand budget. The Department has no objection to contents of the documents.

If you have questions regarding these comments, please contact Mr. Leland E. Roberts, Resource Protection Division, at telephone 512/389-4732.

Sincerely,

Charles D. Travis
Charles D. Travis
Executive Director

CDT:LER

**SIERRA
CLUB**

LONE STAR CHAPTER
COASTAL AFFAIRS COMMITTEE

F. Hermann Rudenberg, Ph.D.

3327 Avenue Q 1/2
Galveston, Texas 77550

24 August, 1989

RECEIVED

AUG 28 1989

U.S. Environmental Protection Agency

First Interstate Bank Tower

1445 Ross Avenue
Dallas, Texas 75202-2733

Dear Mr. Thomas:

These comments pertain to the three draft EIS for Ocean Dredged Material Site Designation at (a) Port Mansfield, (b) Matagorda Ship Channel, and (c) Brazos Island Harbor. Thank you for sending them for me to review. I have reviewed the first in detail and comment specifically on it; the other two are closely similar except as to physical location and other matters which mainly do not affect the evaluation provided here. I have been hard put to evaluate as closely as I would have liked, having read the document only once, and scanned the other two. But there are flaws in these serious enough to warrant that the next version should be a COMPLETE rewrite, not merely a reference to these drafts. The drafts are unacceptable. They show a lack of understanding and a lack of critical review all told. Other portions are sloppily executed for those who have not been involved in this to understand rapidly.

These comments are numbered pertinent to the Port Mansfield DEIS. Fig. 1: define all batching, lines, dots - place in box in lower left corner. Define where it is so as to stand alone. Now comes another figure 1! This one, on page 1-1 is Fig 1-1; it says General PROJECT map but does not show the project! Also, it does not define the terminology for the two sites shown. Section 1.3 at end says future but neither Fig 1-1 or 12 show this. Fig 1-2 shows a site but doesn't label it. As I understand this, other lines are not defined. Both jetties and lines in the water MUST be defined, as must the cross hatching.

Section 2.1, line 3 confuses designation of a disposal site with dredging; these are two separate actions. Further, I was under the impression that the MPRSA forbids ocean dumping?

Section 2.2 continues the confusion between the act of dredging and the act of disposal. Para. 1 talks about it being uneconomical to transport to suitable upland areas; well, destruction of benthos and placing silt in water columns is also uneconomical and comparative numbers are not assigned for review. Further, in Para 1, end of second to last sentence: neither wetland nor bay bottom should even be conceived as being a disposal area! And the last sentence here is CRAP. It shows the author's bias.

Para 2: land-based alternatives offer no environmental or economic advantage over disposal in the ocean. That is not the point; which has a DISadvantage? If the sentence is to stand,

"When we try to pick out anything by itself, we find it linked to everything else in the universe." John Muir

LETTER NO. 8

- 6E-F
- 8-1 The EPA believes that the Draft and the Final EIS adequately present the material needed for responsible decision-making as specified in 40 CFR §§ 220-229.
- 8-1 The EPA believes that the Draft and the Final EIS adequately present the material needed for responsible decision-making as specified in 40 CFR §§ 220-229.
- 8-2 The MPRSA does not forbid ocean dumping. The act establishes procedures to administer regulatory permit programs for the discharge of wastes, including dredged material, into U.S. territorial seas. The act requires that all relevant factors be considered in the permit programs, including socioeconomic factors and land-based alternatives to ocean disposal.
- 8-2 The MPRSA does not forbid ocean dumping. The act establishes procedures to administer regulatory permit programs for the discharge of wastes, including dredged material, into U.S. territorial seas. The act requires that all relevant factors be considered in the permit programs, including socioeconomic factors and land-based alternatives to ocean disposal.

then it provides support for land-based disposal. Do it!

Page 2-8, end of 2.3.4.1.1 "it was demonstrated that neither... was preferable." This shows that it is then faulty reasoning to exclude these here as alternatives. Further, other sites, not mid-shelf, are being excluded summarily, nor is reasoning provided. Costs of increased transport distance are cited in the previous paragraph. The proposed site is further out; but I fail to find a 2.5x number for one to ten miles specific enough. And it's not the dredging time that is increased, the working time for the project is. Perhaps better, alternative methods need be found or used than having hopper vessels which also do the dredging? (see L10.)

Page 2-16, Table 2-1. Column 2: Seconds, not minutes; see Fig 2-5. Silt volume is 14% which does not agree with figures used later. The length of predicted silt plume does not agree with top of page 4-8. The estimate is too low, and from Fig 2-5 appears to be a half time, not full time, for 40=silt.

8-3 Fig 2-5. Does the line start at 16 feet because of the depth of the hopper vessel? In seconds, how long does it take to discharge a load? How many cubic yards is that load? Is it the sum of the total volume in table 2-1 converted to cu yds? How many loads does that require in the three channels? The model may well not apply in any of the three cases. And if gravel and clumps fall to the bottom, 32 feet away, what if there is an endangered turtle in the way? does it receive a concussion?

Page 2-16, first full paragraph, and figure 2-6. Is this for one hopper discharge? or for all? The volumes in the three DEIS's differ. Yet the same figure is used. The fig says "after" WHEN AFTER? after a long enough time for currents to disperse? And on 2-16 what do you mean plot of the FINAL dredged material distribution? I cannot believe that the whole disposal will create a 6 inch mound which is roughly 80 feet by 350 feet. And since maintenance dredging is repetitive (different periods average at the three sites, as well as different disposal volumes) what is the cumulative sounding?

8-4 Page 2-16, 3rd full para. "only generalizations" means you don't know. Unless the Bestian study is site specific, it can only be used as a terrible guess for this site. What is "the period of record"? and, "removal rates MUST approximate." NO WAY!

Next paragraph: Granted that the silt will be over the gravel and thus more easily erodible, offshore currents are not uniform and with storms, or if, close to land and rivers, there is a sudden dump of runoff rain water, currents are unpredictable.

Page 2-18 lines 5 & 6. "assurance" NO SUCH THING. "would also be accurate" Only if the model happens to be right. I vote NO such conclusion is warranted.

2.3.4.3.1 Questions have been asked already regarding time, number of loads, 0.6 inches smoothes benthos as well as 6 inches¹. The parenthetical sentence "(Solid Phase bioassay testing...)" is a Generalization which has not been verified for this disposal and is therefore meaningless. Further, if this refers to the

LETTER NO. 8 (continued)

- 8-3 The 16-ft depth indicated on Figure 2-5 represents the approximate depth of discharge from a hopper dredge. A typical hopper dredge used for the maintenance of the Matagorda entrance channel has a 3700-cu-yd capacity. The Galveston COE estimates that average dredge loads are 50% of the vessel's capacity, or 1850 cu yd of solid material. Figure 2-5 is generated by the discharge model. The model assumes an instantaneous discharge to calculate maximum potential mounding of the dredged material on the benthos. In reality, a barge discharges while moving forward at 2 - 5 kn and takes about 1 min to fully empty, so the actual mounding will be less than predicted.
- The volumes in Table 2-1 may be converted to cubic yards by dividing the values by a factor of 27. Matagorda entrance channel requires annual dredging of approximately 785,000 cu yd, equalling 430 barge loads.
- The downcurrent distance to the centroid of the disposal area, from the point of discharge, is 500 ft for gravel and clumps (Table 2-1, Figure 2-6). The increased risk to the sea turtle population from the ocean disposal of dredged material is very low.
- Figure 2-6 is generated by the model and represents a single hopper discharge of 3700 cu yd of a typical mix of grain sizes. "After" refers to immediately after discharge and settling (minutes) of the dredged material. A single discharge in 52 ft of water will create a 6-in.-high mound. As noted on page 2-13 of the DEIS, the model assumes no removal of the dredged material by currents. Between annual dredging/disposal operations, mounding at the Matagorda interim-designated ODMDs is zero. Similarly, no cumulative mounding is expected at the preferred ODMDs.

elutriate test since it does not assay filter feeders or silt-ingesting species which are prevalent on the benthos, it is non-sensical.
Fig 2-7 Put key in left bottom into a box and define all slash-marked codes.

Page 2-20 top para. line 7-8. See page 3-18 top for net flow. Parenthesis 1, here, is non-sensical. In addition, the beach should be nourished with acceptable material whenever possible to counter the continual degradation of Texas' beaches.
2.3.4.4 Since the longshore drift is predominantly SOUTHWEST to NORTHEAST relate to current toward shore. ALSO PUT NORTH ARROW on figure, at least on FIG 2-8!
 3-5/8

Fig 2-9 Define hatched area by key in box at left bottom.

Fig 2-10 ...unless the current change and come from the south!
Fig 2-11 provide key for hatched area and dots.

Page 2-25, 2.3.4.7 The shrimp know not to go beyond the one mile buffer zone? MURS.

Page 2-27 ah, the hopper is 3,700 cf "in the model". Does this fit what will be used? Now the "sediment to be dredged averages only 6.6% silt, not the 14% of Table 2-1 or the 100% of the Model. And there will be an estimated 12 deliveries per day. But for how many days? WHAT IS THE MOUNDING? later "assumption was made" and an arbitrary safety factor" -- I strongly question the validity of either assumption or adequacy of safety factor. At the bottom we have "the barge", and at the top of the next page significant impacts at the interim site have not been detected. First list the information, then let me decide whether I consider these significant. Then note the other changes; distance off-shore, proximity of channel, likely others. The preferred site selection is inappropriate. It is too close to the dredged area, it is within a fairway (I guess that's what those lines represent -- They are never defined!) The site should be at least 4 miles out from shore.

Page 2-30 , 2.4.2 top para "carries with it the strong probability" That is entirely inadequate, it will never happen I am 100% certain. Para2 Monitoring is after the fact and is too late.

Para 3, end "thoroughly examined" just doesn't happen. Not only don't you look for many hazardous chemicals but you rely on the elutriate test. Last para! New silt is not identical to old silt deposits because there are new chemical industries. A typical example of EPA's inadequacies regarding testing is the failure in the Matagorda DEIS to determine aluminum contamination; the Bay/Harbor is highly contaminated, and 2/3 of the material moving through the Matagorda Ship Channel was aluminum ore--Page 3-12 of Matagorda DEIS- but no Al-compound data!

Page 2-31, NO. 4 is inadequate. No.5 "three stations" is inadequate. AND you're not proposing to check on sounding, and this in a fairway? I have little confidence in this DEIS.

8-5 The testing is based on the requirements of the Ocean Dumping Regulations. A large number of chemical constituents are analyzed, and five species of animals have been exposed to the maintenance material according to the bioassay procedure requirements.

Aluminum in seawater is bound with hydroxides and is not bioavailable. Its toxicity has only been observed in highly acidified freshwater ecosystems where the aluminum ion can be liberated. For this reason, neither the State of Texas Water Quality Standards nor EPA Quality Criteria for Water, 1986, have established criteria for aluminum.

Page 3-3 top full paragraph. "Unfortunately" so you make an excuse and an extrapolation. "were considered sufficiently i.e. another assumption. Last para before 3-1.4 "There is no indication of sediment quality problems in the project area. Define problems. Just what did you look for? Is that adequate? "Survival was high" is an unacceptable generalization.

Table 3-2. Identify 1980 as 1 and interim, 1985 as 1A. Where are other PAHs? Certainly for Matagorda, where is Aluminum? Where is tributyltin? Same goes for other tables.

Page 3-8 top line "acute", but where is chronic and where is behavioral testing date? Next para "survival...was greater than 50%" is definitely inadequate. Also since organisms will be chronically exposed, the end of para must comment on this, not just acute/96 hour test -- and were the correct species used? Certainly in the next paragraph where species are listed, the local economic species are not tested (fish and shrimp).

Table 3-6 Explain, state number tested, time of tests, oxygen content of medium. Also cite which are considered control data, or provide them. Also Table 3-7 where at least there is some key. But when were the samples taken with respect to the maintenance dredging cycle?

Page 3-11 just before 3-2.2 "relative sea level reached its present position" For 1910 to 1970 the Corps of Engineers at Galveston has documented a rise at the rate of 2 feet per 100 years. Likely the same has occurred here. Then, document the source of "subsidence" as well as means taken to now stop it (as in Galveston Bay area).

Then you need a section on projected sea level rise. While deepening the water, and allowing longer periods between dredgings, it will flood the port and make it less usable. And then it floods roads and railroads, so that without elevation, this is not adequately beneficial in the long haul. This is a powerful reason for stockpiling dredged material on land when you can get it.

Page 3-16 Show site in question (project) on maps. Show Fig 3-2 by reference as a box on these current maps. Now show currents at depth, not just surface, that is where the deposits are going to be placed and that is where mounding is in question. The same problem is underlined on page 3-17 para 2 "Studies using drift bottles... these measure SURFACE movement only. The last sentence of the next paragraph, "probably" is another assumption and needs elaboration.

Page 3-18, 3-2.4 "no water quality problems" -- tell me what you mean by this since the correct tests have not been done, the full chemical array has not been studied, and the species are not the local species which may be affected.

Table 3-9. Why is the right column higher for As, Cu and Pb? Define other materials represented by Toc. Table 3-8 (sorry) for pesticides why have 7 increased during those 3 years in water samples?

Page 3-22 end of top para, "to ensure that any errors are on the conservative side DOI/MHS... There are two opinions as to MHS validity and correctness.

Page 3-27 Fig 3-5 Why is there a scale change? Why is there no analysis at the preferred site? Note number 7. Go to table 3-11 and note that site 7 has the highest in all but one column, and there it is close. More data are needed. The preferred site would be better if moved further from the shore and entrance channel. It should NOT be in the fairway. I would think 4 miles out may be best, but that puts you at location 7. A more northerly location 3 to 4 miles out should be examined. It is also inappropriate to dispose in anchorage areas.

Page 4-11 end of 4.1.1.1 An 800 foot buffer zone is entirely inadequate.

Page 4-8 top "May found that on a still day the turbidity plume was more than a mile down current. When not still it would be longer, so the plume is at least that long under any circumstances and this must be factored in. Again you start with disposal and then continue with from an active dredge. That is a different process. One is pick up, the other put down or discharge. The next paragraphs again talk about release and elutriates and forgets about filter feeders and ingesters.

Page 4-9, 4.2.1.3 again "no sediment quality problems". You do not show this, you merely conclude it. 4.2.2 and "non-excluded" we are concerned with inside the non-excluded, or outside the excluded areas. That this is "not pertinent" is an error as there are edge effects possible.

Page 4-11 top paragraph. The hazard of dredge disposal on animals swimming under the barge or vessel is probably negligible, but for endangered turtles it cannot be ignored as another threat.

I'm sure with more study, more problems would surface. It is depressing. There are entirely too many assumptions.

Finally, you show that progressive disposal areas are moving further and further offshore, and for good reason. Don't make the same mistake yet another time by not moving sufficiently far away from the mouth of the dredged portion of the channel. Secondly, industries receiving contaminants in each port must be listed for imports, exports and waste discharges and then ALL these materials must be examined for their hazard. Only then will offshore disposal suggest acceptance. And onshore, upland disposal must be evaluated more deeply.

I suggest that you redo these draft documents for another go-round. They are a good beginning, but not adequate to warrant moving to the FEIS stage. Thank you for this opportunity to comment.

F. Hermann Rutherford, Ph.D.
Sierra Club Coastal Committee

PART III. MODIFICATIONS AND CORRECTIONS TO THE DRAFT EIS

The DEIS for Matagorda Ship Channel ODMDS Designation was reviewed by the public and internally by EPA. This section of the FEIS presents revisions to the DEIS, based on errors identified during the review process. For each correction, the page, paragraph, and line of the DEIS is noted, the error is specified, and the corrected text is presented in boldface type.

Generally speaking, the figures provided in the DEIS are not well defined. However, because this does not affect the analytical content of this EIS, the figures will not be revised.

Page 1-4, Figure 1-1:

The unlabeled horizontal rectangles and lines leading to either side of the jetties represent the boundary lines of the fairway anchorages and the safety fairway, respectively.

Page 2-1, paragraph 3, last line:

The sentence, "A land-based alternative would therefore offer no environmental benefit to ocean disposal" should read

"Environmental impacts at land-based disposal sites for entrance-channel dredged material would be significantly greater than those at designated ODMDSs that are operated in compliance with the Ocean Dumping Regulations (40 CFR §§ 220-229)."

Page 2-27, paragraph 2, sentence 3:

"400" should be "200" in the phrase ". . . an examination of Figure 2-6 demonstrates that only the 400-foot wide portion . . ."

Page 2-27, paragraph 2, sentence 6:

"7.4%" is in error. The actual silt concentration in Matagorda Ship Channel dredged material is 7.1%. Refer to Table 3-5, page 3-7, for a full breakdown of grain-size data by channel stations.

Page 3-12, paragraph 4, last sentence:

"In 1972, two-thirds of the material moved through the Matagorda Ship Channel was aluminum ore, indicating the importance of the ALCOA plant at Point Comfort to the local economy." should read

"In 1972, two-thirds of the material that moved through the Matagorda Ship Channel was aluminum ore, indicating the importance of the channel to the ALCOA plant at Point Comfort."

Page 3-27, Table 3-10:

The class "Gastropoda" is not included under the class "Polychaeta" and should not have been indented as it is in the table.

Page 3-35, Section 3.4.3, Beaches and Recreation Areas:

The section has numerous errors in the text and should read:

"The Matagorda Ship Channel cuts through the Matagorda Peninsula roughly four miles northeast of Pass Cavallo. Matagorda Island is to the southwest of the channel and across Pass Cavallo. All of Matagorda Island is designated as an undeveloped coastal barrier island and a national wildlife refuge. State fishing facilities are located in Lavaca Bay, Chocolate Bay, and in San Antonio Bay. The Aransas National Wildlife Refuge is located southwest of the entrance channel in Calhoun and Aransas Counties, Texas. The nearest National Audubon Society Bird Sanctuary is the Sundown Island Sanctuary located inside Matagorda Peninsula near the intersection of the channel and the Gulf Intercoastal Waterway."

Page 4-4, Section 4.1.2.3, 40 CFR 228.6(a)(3):

In the sentence, "The site is roughly 1.5 miles from beaches or any other amenity areas such as the Matagorda Island National Seashore.", "Matagorda Island National Seashore" should read "Aransas National Wildlife Refuge."

Page 4-4, Section 4.1.2.4, 40 CFR 228.6(a)(4):

The sentence, "Only maintenance material from the Matagorda Ship Channel will be disposed.", should read

"Only maintenance material from the entrance of the Matagorda Ship Channel will be disposed."

Page 4-8, paragraph 3, last sentence:

There is a typographical error in the sentence. "... local i pacts . . .", should read "... local impacts . . ."

PART IV. EPA'S PROPOSED ACTION

EPA's proposed action is the final designation of the preferred site for disposal of material dredged from the entrance of the Matagorda Ship Channel. This entrance channel is 3.2 miles long, beginning between the jetties on the south side of Matagorda Island and extending into the Gulf of Mexico. Maintenance of the entrance channel is required for continued access to the Intracoastal Waterway and the ALCOA plant in Port Comfort. The preferred site was identified based on environmental and economic considerations.

Various natural sediment-transport mechanisms cause shoaling of the Matagorda Ship Channel at approximately 795,000 cu yd per year. The U.S. Army Corps of Engineers is responsible for channel maintenance under the MPRSA, and has requested that EPA permanently designate an ODMDS for material dredged from the Matagorda Ship Channel.

The no-action alternative, which is the decision *not* to designate an environmentally acceptable ocean disposal site, is a violation of the intent of the MPRSA. This decision would result in continued disposal at the interim-designated ODMDS. Interim sites were usually designated based on historical usage and were to be used only until monitoring studies could be completed and the most appropriate site could be designated. For these reasons, the no-action alternative is not considered viable.

Sufficient upland sites are not available for the volume of material dredged during each maintenance cycle. Midshelf and continental-slope ocean disposal sites were determined unsuitable because of potential impacts on the benthic community, greatly increased fuel and manpower requirements, and increased safety risks associated with long-distance transport.

The Zone of Siting Feasibility approach resulted in the exclusion of a portion of the interim-designated ODMDS (Refer to Section B., *ODMDS Size and Location*.). Approximately half of the preferred site occupies the nonexcluded portion of the interim site. This site, like the interim ODMDS, is in a highly dispersive environment where no significant cumulative mounding is expected. The site avoids areas of recreational importance and biological sensitivity, and is reasonably nearshore to facilitate site monitoring and surveillance. Further, past dredged material has been tested and determined to be acceptable for ocean disposal.

EPA has determined that the preferred site is acceptable for disposal of future material dredged from the Matagorda Ship Channel. The primary environmental impact associated with disposal is the burial of the benthic community and potential mortality of benthic organisms within the site.

