

United States
Environmental Protection
Agency

Region 6
1445 Ross Ave.
Dallas, TX 75202

EPA 906/01-90-001
January 1990



Environmental Impact Statement

Freeport Harbor (45-Foot Project) Ocean Dredged Material Disposal Site Designation



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6

1445 ROSS AVENUE, SUITE 1200

DALLAS, TEXAS 75202

DEC 28 1989

TO INTERESTED AGENCIES, OFFICIALS, PUBLIC GROUPS AND INDIVIDUALS:

Enclosed is a copy of the Final Environmental Impact Statement (EIS) concerning the U.S. Environmental Protection Agency's (EPA) designation of two ocean disposal sites for material dredged from the Freeport Harbor and Jetty Channels in conjunction with the Galveston District Corps of Engineer's 45-Foot Project at Freeport Harbor, Texas.

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

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

Sincerely yours,

A handwritten signature in cursive script, reading "Robert E. Layton Jr.", is positioned above the typed name.

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

Enclosure

**FINAL ENVIRONMENTAL IMPACT STATEMENT
FREEPORT HARBOR (45-FOOT PROJECT)
OCEAN DREDGED MATERIAL DISPOSAL SITE (ODMDS) DESIGNATION**

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

ADMINISTRATIVE ACTION: The purpose of this action is to comply with the Marine Protection, Research, and Sanctuaries Act of 1972 by providing an environmentally acceptable ODMDS(s) 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 two ocean disposal sites. One site is for the one-time disposal of 5.1 million cubic yards (mcy) of construction material; the other site is for the disposal of 2.1 mcy of future maintenance material dredged annually from the Freeport Harbor and Jetty Channels in conjunction with the U.S. Army Engineer District, Galveston, 45-Foot Project at Freeport Harbor, Texas. The major adverse environmental impact of dredged material disposal is the burial and high mortality of the benthic infaunal community within the disposal sites.

COMMENTS ON THE FINAL EIS ARE DUE: FEB 12 1990

RESPONSIBLE OFFICIAL:

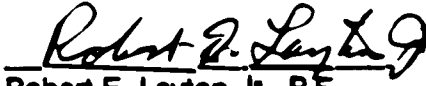

Robert E. Layton Jr., P.E.
Regional Administrator

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PREFACE

The Draft Environmental Impact Statement (EIS) for the Freeport Harbor (45-Foot Project) Ocean Dredged Material Disposal Site Designation was issued by the U.S. Environmental Protection Agency in January 1989. The Draft EIS was distributed to approximately 30 Federal, State, and local agencies and interested individuals. Ten comment letters were received by EPA during the public review period.

This Final EIS consists of four sections, which are (1) a summary of the 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 Draft EIS; and (4) EPA's proposed action. A complete environmental analysis of the proposed action is provided by the Draft EIS and Final EIS together.

The Final EIS was prepared with the assistance of Battelle Ocean Sciences of Duxbury, Massachusetts.

PART I. SUMMARY OF THE DRAFT AND FINAL EIS

A. BACKGROUND

The existing Freeport Harbor Project was authorized by the River and Harbor Acts of May 1950 and July 1958. These acts provided for construction of entrance and jetty channels to allow access to Freeport Harbor from the Gulf of Mexico. Authorized entrance channel dimensions were 38 ft deep by 300 ft wide, with jetty channel dimensions 36 ft deep by 200 ft wide, including an upper turning basin. Enlargement and relocation of the channels were authorized by Congress in 1970 (Section 101 of the River and Harbor Act of 1970, PL 91-611; House Document 289, 93rd Congress - 2nd Session, 31 Dec 1975) and by the President in 1974. These authorizations allowed the jetty channel to be deepened to 45 ft and widened to 400 ft by relocating the North Jetty northward. The relocated entrance channel was authorized to be deepened to 45 ft and widened to 400 ft; it will extend 4.6 miles into the Gulf.

Total project construction activities are expected to generate 9.7 million cubic yards (mcy) of dredged material for disposal. Of this, 600,000 cy of sand will be placed on beaches north of the North Jetty, and 4 mcy of material dredged from the inner channel will be placed at available upland disposal sites, leaving 5.1 mcy of dredged material for ocean disposal (CE 1978). The purpose of this EIS is to evaluate and designate environmentally acceptable ocean disposal sites for the 5.1 mcy of material to be dredged during expansion of the outer channel and for the subsequent maintenance material, which is expected to accumulate at a rate of approximately 2.1 mcy per year. A disposal site designated on an interim basis in 1977 has been used for ocean disposal of materials dredged from the Freeport Harbor channels.

Section 102(c) of the Marine Protection, Research, and Sanctuaries Act (MPRSA) authorizes the U.S. Environmental Protection Agency (EPA) to designate ocean disposal sites for dumping of dredged materials. The Galveston District of the U.S. Army Corps of Engineers (CE) is responsible for maintaining the Freeport Harbor entrance and jetty channels to their authorized size through dredging and disposal operations. The CE has requested that EPA permanently designate ocean dredged material disposal sites (ODMDS) for the material dredged from Freeport Harbor (45-Foot Project).

B. ALTERNATIVES

EPA's proposed action is the designation of two ODMDs for the disposal of construction and maintenance materials dredged from the Freeport Harbor entrance and jetty channels. The disposal alternatives that were considered include no action, upland disposal, and ocean disposal at near-shore, mid-shelf and continental slope sites.

Under the no-action alternative, EPA would not designate a disposal site. This would increase navigational and safety hazards for shipping traffic and result in the eventual closure of the channel, causing severe and unnecessary economic impacts. Continued use of the interim disposal site is not feasible for two reasons: (1) the site is not large enough to accommodate 5.1 mcy of construction material and the subsequent 2.1 mcy of maintenance material to be dredged annually, and (2) the interim disposal site was designated based on historical use and not on the general and specific criteria for site selection as described in the Ocean Dumping Regulations [40 CFR Part 228.5 and 228.6(a)]. In addition, EPA's failure to designate a disposal site would prevent the CE from fulfilling their statutory responsibility for maintaining the nation's navigable waterways. For these reasons, the no-action alternative was not considered viable.

Non ocean-disposal alternatives that were considered include upland disposal and beach nourishment. Sufficient upland sites are not available for disposing the large volume of dredged material generated by construction and maintenance of the channels. Designation of new upland sites would be costly and would result in the loss of valuable wetland areas. Beach nourishment was not viable because the grain size of the dredged material is not compatible with the beach environment. For these reasons, upland disposal and beach nourishment were excluded from further consideration.

Five ocean disposal sites were evaluated including one mid-shelf site, one continental-slope site, and three nearshore sites. The mid-shelf and continental-slope sites were determined to be unacceptable for several reasons. The benthic community at these deep water sites is not as well adapted to survival under conditions of temporary burial as are their shallow-water counterparts which commonly experience sediment resuspension caused by wave action and storms. Increasing the distance to the disposal site would increase costs and time, as well as the safety hazards associated with disposal. In addition, the feasibility of required monitoring and surveillance of the disposal site decreases with

increased distance offshore. Further, there are no data to indicate that the deepwater sites offer any environmental benefits over nearshore sites. Because of these considerations, the mid-shelf and continental-slope sites were eliminated from further investigation.

Appropriate nearshore alternative sites were identified by using the Zone of Siting Feasibility (ZSF) approach. This approach identifies a large area within which an ODMDS could be located, based primarily on physical and geographical constraints. Unacceptable areas within the ZSF are then eliminated, based on the five general and eleven specific criteria identified in 40 CFR Parts 228.5 and 228.6(a) of the Ocean Dumping Regulations. The nonexcluded areas within the ZSF are the areas suitable for location of an ODMDS.

Data relevant to the project area were collected through a computerized literature search. Because there were no significant reasons to locate the site farther offshore, a 10-mile radius from the intersection of Freeport Harbor Channel and the beach line was chosen as the boundary of the ZSF. Monitoring and surveillance activities are feasible within all regions of the ZSF, and dimensions of the ZSF are not affected by political boundaries. The enclosed area is approximately 157 square miles, and all areas outside the ZSF were eliminated from further consideration.

A computer model was used to predict the fate of the dredged material after discharge into the disposal area. The program models the initial behavior and final deposition of the material based on the effects of gravity and currents. The approximate height and area of the mound that would result from disposal operations is predicted, and this information is used to determine the appropriate size of the buffer zones. Buffer zones were excluded from the ZSF to protect biologically sensitive areas, navigation channels, recreational areas and beaches, cultural or historical resources, environmental quality, and living and nonliving resources. All locations northeast of the Freeport Harbor Channel were eliminated from the ZSF based on natural sediment transport patterns that would carry the dredged material back into the channel.

The model was also used to determine the necessary size of the ODMDSs. For virgin construction material, the required ODMDS should be 7280 ft in a direction parallel to the Channel and 13,380 ft in a perpendicular direction. For the maintenance material, the ODMDS should be 4500 ft parallel to the Channel and 12,500 ft perpendicular.

Finally, preferred sites were located within the nonexcluded areas of the ZSF. The Ocean Dumping Regulations state that preference will be given to historically used sites if

these sites meet with all other criteria [40 CFR 228.5(e)]. However, part of the interim-designated Freeport Harbor ODMDS falls within excluded areas of the ZSF. The preferred sites were identified based on minimizing impacts on the biological community and locating the site in appropriate sediments as near as possible to the area historically impacted by dredged material disposal. The preferred sites are shown in Figure 1 and are bounded by the following coordinates.

Virgin Material ODMDS (Coordinates are revised from Draft EIS based on comments from the National Ocean Service. See page II-9.)

28° 50' 51" N, 95° 13' 54" W, 28° 51' 44" N, 95° 14' 49" W;
28° 50' 15" N, 95° 16' 40" W, 28° 49' 22" N, 95° 15' 45" W.

Maintenance Material ODMDS

28° 54' 00" N, 95° 15' 49" W, 28° 53' 28" N, 95° 15' 16" W;
28° 52' 00" N, 95° 16' 59" W, 28° 52' 32" N, 95° 17' 32" W.

While the Ocean Dumping Regulations do not specifically require monitoring and surveillance of ODMDSs, general consensus among the regulatory community is that such a program should be developed as part of the site-designation process. Therefore, monitoring programs are proposed for both disposal sites.

Because a large volume of construction material will be disposed over a short period of time, monitoring of the Virgin Material ODMDS is focused on mounding. To prevent excessive mounding, a disposal pattern array has been designed. Compliance with this pattern should be verified through documentation of each discharge location. Regular bathymetric scans are also recommended to monitor mounding and prevent navigational problems. In addition, several representative stations should be sampled routinely for environmental analyses, including grain size and chemical and biological characterization.

Based on historical data, no long-term detrimental impacts outside the Maintenance Material ODMDS are expected. Therefore, a limited monitoring program is recommended, consisting of toxicological and chemical analyses of channel-sediment samples and chemical analyses of ODMDS sediment and elutriate samples.

EPA's proposed alternative is the final designation of two preferred sites as the Freeport Harbor (45-Foot Project) Virgin Construction Material and Maintenance Material ODMDSs.

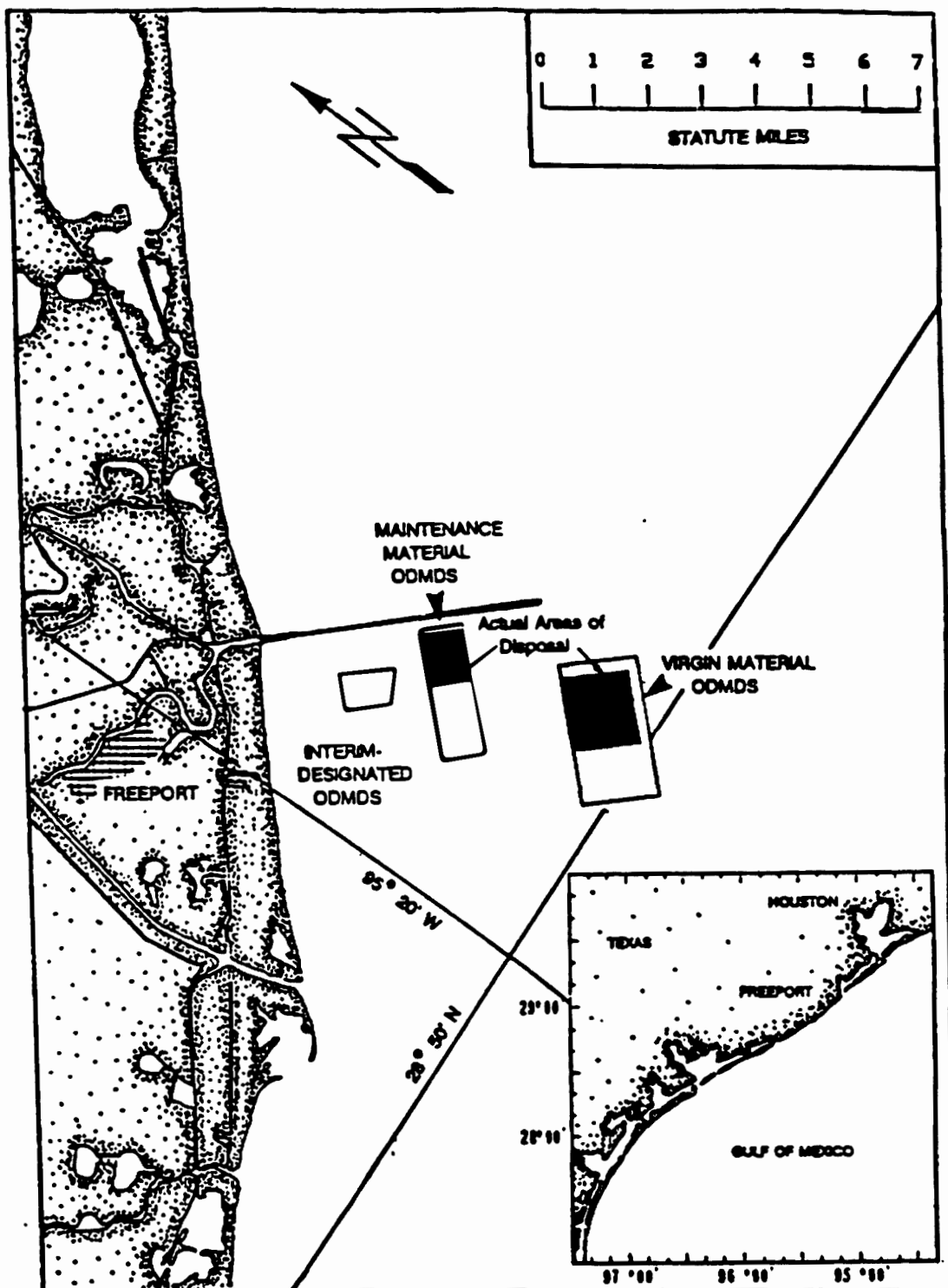


FIGURE I-1. FREEPORT HARBOR AREA SHOWING LOCATIONS OF THE INTERIM-DESIGNATED ODMDS AND THE TWO PREFERRED SITES

C. AFFECTED ENVIRONMENT

Freeport is situated on the Upper Texas Coastal Plain in a semitropical marine environment dominated by the Gulf of Mexico. The Gulf acts as an air mass source region, and there is a persistent onshore flow of Gulf air deep into the state. This flow can be interrupted by westerly winds in the winter and by tropical easterly winds in later summer, both of which carry disturbances into the region. Average air temperatures in January and July are 54°F and 83°F, respectively, with average monthly rainfalls for January, May, July, and September of 3.4, 3.7, 5.0, and 6.5 in., respectively.

The hydrodynamic regime in the northwestern Gulf area is largely affected by the complex interaction of meteorological forces, tides, freshwater inflows, and Coriolis acceleration. The most significant climatological effects on hydrographics result from seasonal precipitation distributions and wind systems that affect circulation and wave motion. The bays along the Texas coast are extremely responsive to meteorological forcing associated with the passing of frontal systems. Meteorological forcing occurs when onshore winds force water in through the passes and elevate water levels in the bays. This trend is reversed when the frontal system passes. Inland pressure increases and winds shift, depressing water levels and causing water to be forced back into the Gulf.

The astronomical tides in the Gulf are generally small, varying from diurnal to semidiurnal, with a typical diurnal range of 2 to 4 ft. Circulation in the eastern Gulf is dominated by the Loop Current, which is a continuation of the Yucatan Current. There are also two significant semipermanent currents present. One circulates clockwise in the southwestern Gulf, and the other circulates counterclockwise in the northwestern Gulf. The latter causes a net surface current component to the south in the project area. The zone of convergence of these two currents occurs southwest of Freeport and typically has no impact on currents in the project area, even during the summer when the convergence zone migrates northward. Surface currents average 0.5 kt with high variability due to wind forces. The currents diminish with depth to approximately one-half the surface velocity, and the bottom currents are often in the opposite direction.

The bathymetry of the Freeport Area is similar to other sections of the Texas Gulf coast, with a vertical:horizontal gradient of approximately 5:1000 from the beach to 3300 ft

offshore. Beyond this the Continental Shelf begins with a more gradual vertical to horizontal gradient of 5:10,000.

The CE performed chemical analyses of water samples collected from Freeport Harbor, the interim-designated disposal site, and an undisturbed area northeast of the channel. The results were compared to established EPA Water Quality Criteria and were found acceptable for all parameters except copper, which exceeded the limit in 1973, 1976, 1980, and 1984. However, calculations show that the concentrations are reduced to acceptable levels following initial mixing.

Chemical analyses of virgin sediments and elutriates from the Freeport Harbor entrance and jetty channels in 1974 and 1976 indicated no sediment-quality concerns for the virgin material. Elutriate analyses for copper may have exceeded the Water Quality Criteria, but this cannot be determined because the detection limit for copper is higher than the criterion. As stated previously, initial mixing would lower the concentration to an acceptable level. Bioassay and bioaccumulation studies have not been performed on Freeport Harbor virgin sediments, but similar studies conducted in nearby Galveston Channel have shown no evidence of sediment contamination in the area.

Chemical and biological analyses were performed on Freeport Harbor Channel maintenance sediments and elutriates made from those sediments. These analyses show no particular pollution or toxicological problems associated with the sediments, which indicates that the channel sediments are acceptable for ocean disposal.

Analysis of sediments not impacted by dredging and disposal activities indicates that the Freeport Harbor area has no sediment-quality problems that would affect the site selection process. Bioassays on unimpacted sediments showed high survival of test organisms, and species studied for bioaccumulation did not exhibit significant increases in contaminant concentrations. These results further indicate that the Freeport Harbor area has no sediment-quality problems.

Sediment grain size was also determined for the Freeport Harbor area. The surficial sediment provinces tend to parallel the beach with nearshore sand to the northeast and southwest of the Freeport Harbor Channel. The nearshore Freeport area is silty-sand, with silty-clay predominant further offshore. Sediments in the deeper waters within the study area display a sand-silt-clay composition. The virgin construction materials are most similar to the

outer silt-clay regime, whereas the maintenance materials are a mixture of sand, silt, and clay.

The beaches along the coast near Freeport Harbor are in a general state of sediment deposition. Sediment dispersal on the Texas Continental Shelf results primarily from meteorological events (winds and storms), with tidal events having a lesser impact. The predominant southeasterly winds combined with the counterclockwise current regime in the northwestern Gulf generate a net longshore drift in a southwesterly direction at Freeport. While temporary mounding is expected at both ODMDs as a result of dredged material disposal, natural sediment dispersion in the area will prevent any long-term effects.

Diatoms are the dominant phytoplankton species in the Freeport Harbor area, with copepods among the most abundant zooplankton species. Surveys of nearshore and offshore benthos show a greater variety of taxonomic groups present at nearshore sites, while offshore benthos consist primarily of polychaetes. Marine fishes in the project area are largely dominated by members of the croaker family (Sciaenidae). Tropical fauna, including grunts (Pomadasysidae) and mojarras (Gerreidae) are more abundant farther offshore, although their young often migrate into nearshore areas during summer. In addition to fishes, penaeid shrimp and various other crustaceans inhabit the offshore area to varying degrees, depending on their life stage and the season.

The National Marine Fisheries Service has identified 10 species of aquatic vertebrates considered endangered or threatened and that may inhabit the Texas Gulf area.^{*} Eight species of aquatic and terrestrial vertebrates considered endangered or threatened are listed by the U.S. Fish and Wildlife Service (50 CFR 17).^{**} In addition, the Texas Organization for Endangered Species has identified seven species as threatened,^{***} and the loggerhead turtle as endangered. Of the four endangered cetacean species known to occur off the coast of

^{*} 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.

^{**} The sperm whale, finback whale, blue whale, black right whale, brown pelican, Atlantic leatherback and Atlantic Ridley turtles, and the West Indian manatee.

^{***} The streambeaked whale, goose-beaked whale, pygmy sperm whale, dwarf sperm whale, pygmy killer whale, and diamondback terrapin.

Texas, the sperm whale is the most common. This species prefers deep water and approaches only shores that have a rapid dropoff in depth, unlike the gradual slope of the Texas continental shelf. The West Indian Manatee is extremely rare, and has been recorded only four times on the Texas coastline. The five federally protected species of turtles that occur in the Gulf area are the leatherback, Kemp's ridley, hawksbill, green, and loggerhead. Very few data are available on the frequency of occurrence of these turtles in the vicinity of Freeport Harbor. Brown pelicans are typically found farther south but may occasionally cross Freeport Harbor.

There are no marine sanctuaries near Freeport, although two unnamed reefs and one fish haven/obstruction have been reported. The most important commercial fishery in the project area is the penaeid shrimp fishery. In 1975, the shrimp catch in Freeport Harbor was valued at \$18.3 million. Other commercially valuable species include black drum, flounder, cobia, snapper and unclassified food fish. At least 11 other species are caught in the area by recreational fishermen. Surf fishing is common at Quintana, Surfside, and Bryan beaches, which are located near Freeport.

Other considerations impacting site selection include the presence of several oil and gas platforms in the Freeport Harbor area. In order to avoid impacts to two existing platforms, the virgin material disposal site has been moved approximately 3000 feet shoreward from its previous location. This relocation is based on comments from the National Ocean Service on the Draft EIS. One large gas pipeline and four smaller pipelines also impact the project area.

Freeport Harbor is an active port. Chemical transport represents the majority of shipping tonnage. Petroleum, petroleum products, and grains are significant to the shipping industry as well.

D. ENVIRONMENTAL CONSEQUENCES

The preferred sites have been evaluated by using the five general and eleven specific criteria listed in the Ocean Dumping Regulations. This evaluation is summarized in Tables I-1 and I-2.

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

Specific Criteria as Listed in 40 CFR §228.6(a)	Preferred Disposal Site
1. Geographical position, depth of water, bottom topography, and distance from the coast.	Water depth at the preferred site for virgin material disposal ranges from 54 to 63 ft in an area where the bottom topography is flat and the point closest to shore is 6 miles from the coast. Water depth at the preferred site for maintenance material is 31 to 38 ft with the closest point three miles from shore.
2. Location in relation to breeding, spawning, nursery, feeding, or passage areas of living resources in adult or juvenile phases.	Fish havens and buffer zones around these features were excluded from the ZSF, as were nonsubmerged shipwrecks, which improve fishing. At the southeast border, a white shrimp breeding area was excluded.
3. Location in relation to beaches or other amenity areas.	The preferred sites for virgin and maintenance materials are 6 and 3 miles from beaches or other amenity areas.
4. Types and quantities of wastes proposed to be disposed of, and proposed methods of release including methods of packaging the waste, if any.	5.1 mcy total of virgin construction material and 2.1 mcy of maintenance material annually will be disposed at their respective sites. Based on chemical and biological analyses of these materials, no special location or precautions are necessary for their disposal, excepting selection of compatible grain-size regimes.
5. Feasibility of surveillance and monitoring.	Monitoring and surveillance is feasible at the preferred sites because of their proximity to shore and reasonable depth which facilitates sampling. Proposed monitoring at the virgin material ODMDS includes a method of recording the location of each discharge, bathymetric surveys, grain-size analyses, sediment chemical characterization and benthic infaunal analyses. Monitoring at the maintenance material ODMDS includes water, sediment and elutriate chemistry, bioassay and bioaccumulation studies, as well as benthic infaunal analyses.

TABLE I-1. (Continued)

Specific Criteria as Listed in 40 CFR §228.6(a)	Preferred Disposal Site
6. Dispersal, horizontal-transport, and vertical-mixing characteristics of the area, including prevailing current direction and velocity, if any.	Both sites were sized with consideration of these parameters. Historically, steady longshore transport to the southwest and occasional storms have removed the material from the disposal site, resulting in no long-term effects.
7. Existence and effects of current and previous discharges and dumping in the area (including cumulative effects).	Chemical and bioassay testing have shown no water- or sediment-quality problems within the ZSF. Analyses of disposal material indicate that sediment from the Freeport Harbor entrance and jetty channels is acceptable for ocean disposal. Studies of the benthos at the interim-designated ODMDS and nearby areas do not indicate any significant decrease or change in species composition at the ODMDS.
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.	Items from this list that are applicable to selection of the Freeport Harbor ODMDSs are shipping, mineral extraction, fishing, recreational areas, and historic sites. Areas that would interfere with these uses were excluded whenever possible, and the preferred sites were located accordingly.
9. Existing water quality and ecology of the site as determined by available data or by trend assessment of baseline surveys.	Monitoring studies have shown that only short-term water-column perturbations, turbidity and possibly COD result from disposal operations. Water and sediment quality within the ZSF are good, including sediments at the existing ODMDS, which indicates no long-term disposal impacts.
10. Potentiality for the development or recruitment of nuisance species in the disposal site.	Nuisance species have not developed at the interim-designated site, and there is no reason to anticipate such a problem at the proposed ODMDSs.
11. Existence at or in close proximity to the site of any significant natural or cultural features of historical importance.	There are sites of historical importance approximately 0.5 and 1.2 miles from the virgin and maintenance material sites, respectively. However, both historical sites are crosscurrent from the proposed ODMDSs, and disposal should have no impact on either.

TABLE 1-2 SUMMARY OF THE GENERAL CRITERIA AS APPLIED TO THE PREFERRED DISPOSAL SITES

General Criteria as Listed in 40 CFR §228.5	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 shellfisheries and regions of heavy commercial or recreational navigation.	The preferred sites were selected to avoid sport and commercial fishing activities, as well as other areas of biological sensitivity. The preferred sites are outside the channel, including the navigation channel buffer zone, and they avoid known navigational obstructions.
(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 within 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 shellfishery.	Chemical analyses and toxicity studies indicate that material dredged in the past has been acceptable for ocean disposal. Both ODMSs and buffer zones were sized to ensure that perturbations caused by disposal would be reduced to ambient levels at the boundaries of the sites.
(c) If at any time during or after disposal site-evaluation studies it is determined that existing disposal sites presently approved 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.	If the proposed monitoring and surveillance program at either site indicates the potential for problems and site redesignation is required, there are other nonexcluded areas in the ZSF that are available and suitable for use as an ODMS.
(d) The sizes of ocean disposal sites will be limited in order to localize for 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 sizes of the sites are the minimum size sufficient to meet the requirements of 40 CFR 228.5 and 228.6(a). The proposed monitoring programs should provide adequate surveillance to prevent adverse long-term effects.

TABLE I-2. (Continued)

General Criteria as Listed in 40 CFR §228.5	Preferred Disposal Site
(e) EPA will, wherever feasible, designate ocean dumping sites beyond the edge of the continental shelf and other such sites that have been historically used.	Placement of an ODMDS off the continental shelf was precluded by cost, safety and time factors, monitoring and surveillance problems, and adverse environmental impacts on the off-shelf benthic community. The existing interim-designated site was in the excluded area and could not be selected. There are no other historically used sites within the ZSF.

E. PROPOSED ACTION

EPA's proposed action is the final designation of the preferred sites for the disposal of the construction and maintenance materials dredged as part of the Freeport Harbor 45-Foot Project.

PART II. CONSULTATION AND COORDINATION

This section of the Final EIS summarizes the process by which the Draft EIS was reviewed. The comments received during public review and EPA's responses to them are presented.

A. PUBLIC REVIEW PROCESS

The Draft EIS entitled "Freeport Harbor (45-Foot Project) Ocean Dredged Material Disposal Site Designation" was distributed to the public by EPA on January 27, 1989 (EPA 906/01-89-003). The Draft EIS was coordinated with approximately 30 Federal, state, and local agencies and interested individuals. All comment letters received on the Draft EIS are presented in this Final EIS.

B. RESPONSES TO COMMENTS

During the public review process, 10 comment letters concerning the Draft EIS were received from the Federal and state agencies and private industry listed below:

<u>Letter Number</u>	<u>Agency</u>
1	U.S. Department of the Interior, Office of Environmental Project Review, Albuquerque, New Mexico
2	U.S. Department of Health and Human Services, Center for Environmental Health and Injury Control
3	U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service
4	U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Charting and Geodetic Services
5	U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service
6	State of Texas, Texas Historical Commission

- 7 State of Texas, Office of the Governor**
- 8 State of Texas, Parks and Wildlife Department**
- 9 State of Texas, General Land Office**
- 10 Mobil Exploration & Producing U.S. Inc.**

The comment letters received from the sources listed above are reproduced in this section. Each comment within each letter is assigned a number in the left margin. EPA's response to the comment is identified by comment number and is reproduced in the right margin beside the letter.

LETTER NO. 1



United States Department of the Interior

OFFICE OF ENVIRONMENTAL PROJECT REVIEW
POST OFFICE BOX 649
ALBUQUERQUE, NEW MEXICO 87103



April 11, 1988

ER 89/132

RECEIVED

APR 13

6:00

Mr. Norm Thomas
Chief, Federal Activities Branch (6E-F)
U.S. Environmental Protection Agency
1445 Ross Avenue
Dallas, Texas 75202-2733

Dear Mr. Thomas:

1.0 We have reviewed the Draft Environmental Impact Statement for Freeport Harbor (45-Foot Project) Ocean Dredged Material Disposal Site Designation and find that it adequately addresses the concerns of this Department.

1.0 No response required.

Thank you for providing us an opportunity to comment on this proposal.

Sincerely,

Raymond P. Churan
Regional Environmental Officer

113



U.S. ENVIRONMENTAL PROTECTION AGENCY

Public Health Service

Center for Disease Control
Atlanta GA 30333

March 29, 1988

RECEIVED

APR 3

6 ES

Mr. Norm Thomas (SE-F)
U.S. Environmental Protection Agency
Region VI
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

Dear Mr. Thomas:

We have reviewed the Draft Environmental Impact Statement (DEIS) for the Freeport Harbor and Jetty Channel Ocean Dredged Material Disposal Site (ODMDS) Designation. We are responding on behalf of the U.S. Public Health Service. We noted that the this DEIS considers alternatives for ocean disposal of maintenance material dredged from the expanded and relocated Freeport Harbor entrance and Jetty Channels. Our major concern with this project, from a public health standpoint, is the potential toxic contamination of dredged materials. In our review of this DEIS, we found that the maintenance material proposed for disposal has little apparent toxicity or bioaccumulation potential. 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 this DEIS. Please include us on your mailing list for the Final EIS for this project as well other NEPA-related documents on any future BLM projects with potential human health hazards.

Sincerely yours,

David E. Clapp

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

2-1 EPA concurs

LETTER NO. 3



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

Office of the Chief Scientist

March 22, 1989

RECEIVED
MAR 22
6 ES

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

Dear Mr. Thomas:

3.0 Enclosed are additional comments on your Draft Environmental Impact Statement on Freeport Harbor (45-Foot Project), Texas, Ocean Dredged Material Disposal Site Designation.

Sincerely,

David Cottingham
Director
Ecology and Environmental
Conservation Office

Enclosure

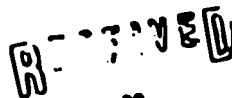
3.0 See the following pages for EPA's responses to specific comments.





UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Regional Office
9450 Roger Boulevard
St. Petersburg, FL 33702

March 17, 1989



MAR 28

6 ES

LETTER NO. 3 (continued)

Mr. Norm Thomas, Chief
Federal Activities Branch
U.S. Environmental Protection Agency
Region IV
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202

Dear Mr. Thomas:

The National Marine Fisheries Service (NMFS) has reviewed the Environmental Protection Agency's (EPA) Draft Environmental Impact Statement (DEIS) for the Freeport Harbor (45-Foot Project) Ocean Dredged Material Disposal Site Designation off of Freeport, Texas, in Brazoria County. We have the following comments to offer for your consideration.

General Comments

An alternative of depositing the new dredged material along the shoreline to reduce shoreline erosion should be addressed. The DEIS also has not utilized some of the pertinent environmental information developed off of Freeport in conjunction with the brine discharge facilities for the Department of Energy's Strategic Petroleum Reserve site at Bryan Mound.

Specific Comments

CHAPTER 2

ALTERNATIVES

2.2 UPLAND DISPOSAL. Pages 2-1 and 2 and

2.3 OCEAN DISPOSAL. Page 2-3.

3-1

The Final Environmental Impact Statement (FEIS) should address another alternative, i.e., Shoreline Disposal with the discussion being placed between UPLAND and OCEAN DISPOSAL in the FEIS. Severe shoreline erosion has resulted along the Gulf beaches near Freeport. A few miles to the west of this project the Gulf beach from Cedar Lakes to Sargent has eroded so close to the Gulf Intracoastal Waterway (GIWW) that suggestions have recently been made to relocate the GIWW farther inland. Since such a major relocation would result in much tidal marsh habitat destruction,



3-1 An ES for the total Freeport Harbor Project was prepared by the CE in 1978 to determine the appropriate methods of disposal for the dredged material. Upland sites and beach nourishment have been utilized as specified in section 1-A of this document. The purpose of this ES is to designate environmentally acceptable ocean locations for disposal of a portion of the material dredged from the Freeport Harbor channels. EPA's designation of ODOMS does not preclude future consideration of alternative beneficial uses of the material.

this FEIS should include a discussion of using the newly dredged material from the Freeport Harbor 45-Foot Project for beach stabilization and nourishment as an alternative to GIWW relocation. A comparison of the environmental as well as monetary costs of implementing this alternative in lieu of GIWW relocation also should be presented to appropriately address some cumulative impacts.

2.3.4 DEVELOPMENT OF ALTERNATIVE SITES USING THE SCREENING TECHNIQUE.

2.3.4.1 BUFFER ZONE ASSIGNMENT.

2.3.4.1.1 BIOLOGICALLY SENSITIVE AREAS. Pages 2-17 to 19.

3-2 The environmental information developed for the Bryan Mound Strategic Petroleum Reserve brine discharge also should be utilized in determining the Zone of Siting Feasibility, especially the shrimp spawning site survey performed by Galloway and Reitsma (1981).

Sincerely yours,



Andreas Mager, Jr.
Acting Assistant Regional Director
Habitat Conservation Division

3-2 Data from Galloway and Reitsma's 1981 shrimp spawning site survey have been reviewed. Although their study found that (1) white shrimp in spawning condition appeared to have a patchy distribution and (2) there were variables that correlated well with the occurrence of white shrimp in spawning condition, they succinctly state, "this analysis provided no evidence supporting the concept of 'spawning sites' per se." Additionally, the ~~numbers~~ one-third of the Freeport grid encompassed 75 square miles, of which the ODMOS is only 2 square miles and less than one-half of that is the actual discharge area. Based on this review, we recognize that minor impacts to shrimp spawning may occur within the site.

¹Galloway, B. J. and L. A. Reitsma. 1981. Shrimp spawning site survey. Vol. III. In: Jackson, W. B. and E. P. Wilkens (eds.). Shrimp and redfish studies: Bryan Mound brine disposal site off Freeport, Texas, 1979-1981. NOAA Technical Memorandum NMFS-SEFPC-67, 84 p. Available from: NTIS, Springfield, Virginia.



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Washington, D.C. 20238
Office of the Chief Scientist

March 21, 1989

RECEIVED

MAR 24

UES

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

Dear Mr. Thomas:

4.0 This is in reference to your Draft Environmental Impact Statement on Freeport Harbor (45-Foot Project), Texas, Ocean Dredged Material Disposal Site Designation.

We hope our comments will assist you. Thank you for giving us an opportunity to review the document.

Sincerely,

David Cottingham
Director
Ecology and Environmental
Conservation Office

Enclosure

4.0 See the following page for EPA's response.





UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
OFFICE OF CHARTING AND GEODETIC SERVICES
ROCKVILLE, MARYLAND 20852

MEMORANDUM FOR: David Cottingham
Ecology and Environmental Conservation Office
Office of the Chief Scientist *[Signature]*
FROM: *[Signature]* Rear Admiral Wesley V. Hull, NOAA
Director, Charting and Geodetic Services
SUBJECT: DEIS 8902.07 - Freeport Harbor, Texas, Ocean
Dredged Material Disposal Site (45-Foot Project)

The subject statement has been reviewed within the areas of Charting and Geodetic Services' (C&GS) responsibility and expertise. Since safety of navigation is one of C&GS' primary missions, this proposal was examined with that in mind. C&GS considers the maintenance of navigational projects to be extremely important and encourages such activities.

From a navigation point of view, it is never desirable to place materials in the open ocean in the vicinity of ports, harbors, and channels. Sites on shore or in deep water would be preferable. While C&GS has no objections to the designated preferred sites, it should be mentioned that the proposed area includes development platforms "SFX-GA-310L-2 & 3." C&GS had the impression that the preferred area would be clear of platforms.

This area is covered on NOS nautical chart 11321. Any changes occurring as a result of this project would be reflected on these charts. If appropriate, the information would be disseminated through chartlets, Notices to Mariners, or both.

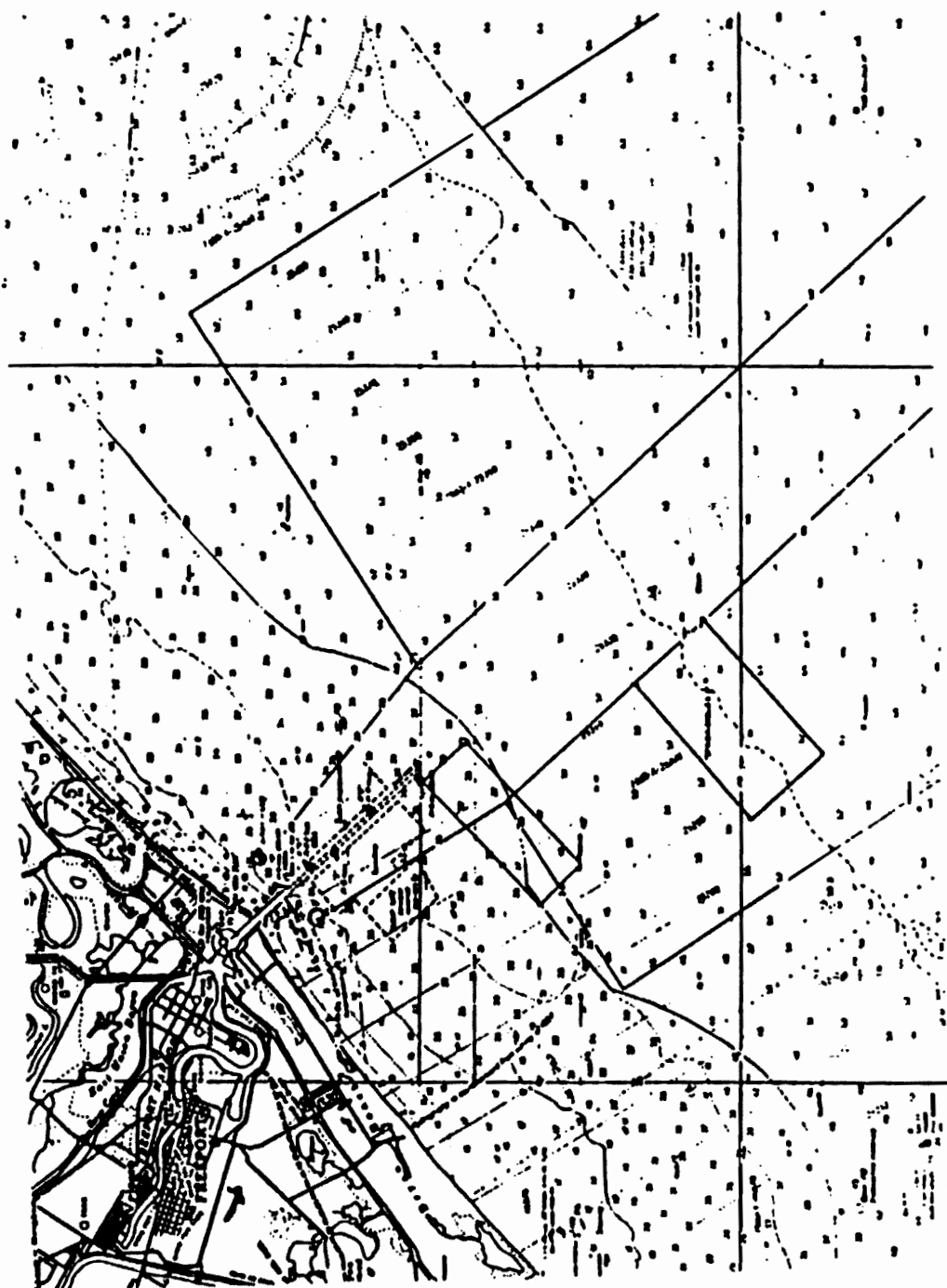
Should there be any need for further information about this response, please contact Mr. Erich Frey, Mapping and Charting Branch, W/CG22x2, WSC1, room 804, Nautical Charting Division, NOAA, Rockville, Maryland 20852, telephone 301-443-8742.

cc:
W/CG1x32 - Cohen
W/CG17 - Spencer
W/CG22x2 - Frey

MAR 21 1993



LETTER NO. 4 (continued)





UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Regional Office
9450 Koger Boulevard
St. Petersburg, FL 33702

February 15, 1989 /SER23:TAM:td

Ms. Pamela K. Mints, Chief
Federal Assistance Section
U.S. Environmental Protection Agency
Region VI
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202

RECEIVED
FEB 22 1989

6 ES

Dear Ms. Mints:

This responds to your February 8, 1989, letter regarding the proposed designation of two ocean dredged material disposal sites offshore Freeport, Texas. A Biological Assessment (BA) was transmitted pursuant to Section 7 of the Endangered Species Act of 1973 (ESA). We have reviewed the BA and concur with your determination that populations of endangered/threatened species under our purview would not be adversely affected by the proposed action.

Although we have no objection to the proposed designations, I would like to point out the fact that your site selection process may be flawed, because it incorporates the cost of transporting dredged materials to the disposal site assuming that hopper dredges will be used. The National Marine Fisheries Service (NOAA Fisheries) opposes the use of hopper dredges in channels where turtles are known to occur. The take of endangered and threatened sea turtles by hopper dredges has been well documented in Cape Canaveral, Florida, and more recently in Kings Bay, Georgia. Therefore, your inclusion of transportation costs in the site selection equation may be inappropriate, because NOAA Fisheries has not consulted with the U.S. Army Corps of Engineers regarding the method of dredging. Should we determine that use of hopper dredges for this project constitutes a jeopardy to listed sea turtles, our recommended alternative would be the use of some other type dredge.

This concludes consultation responsibilities under Section 7 of the ESA. However, consultation should be reinitiated if new information reveals impacts of the identified activity that may affect listed species or their critical habitat, a new species is listed, the identified activity is subsequently modified or critical habitat determined that may be affected by the proposed activity.

5-1 Comment noted.

11-11

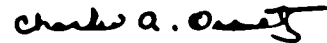
5-1



LETTER NO. 5 (~~continued~~)

If you have any questions, please contact Dr. Terry Marwood,
Fishery Biologist at FTS 826-3366.

Sincerely yours,



Charles A. Gravets, Chief
Protected Species Management Branch

cc: F/PR2
F/SER1



RECEIVED
APR 6
6 ES

TEXAS HISTORICAL COMMISSION
P.O. BOX 12276 AUSTIN, TEXAS 78711 (512)463-4100
April 3, 1989

Mr. Norm Thomas
Chief, Federal Activities Branch
Environmental Protection Agency
1445 Ross Avenue
Suite 1200
Dallas, Texas 75202

Re: Freeport Harbor Ocean Dredged Material Disposal
Brazoria County, Texas (EPA, A2, A3, A5)

Dear Mr. Thomas:

This office is in receipt of the Draft Environmental Impact Statement for the above referenced undertaking. We have reviewed the document and note that there is a Memorandum of Agreement for the undertaking. The Agreement is with the Corps of Engineers, Galveston District and has been in force for several years. We would recommend that this document note the Agreement and that compliance with Section 106 of the National Historic Preservation Act of 1966 will be met through the stipulations of that document (copy enclosed).

Thank you for the opportunity to comment. If you have further questions, please contact Nancy Keamstra (512/463-6096).

Sincerely,
Nancy Adel Keamstra
James E. Braseth, Ph.D.
Deputy State Historic Preservation Officer

NK/TEB/jkm

cc: Ms. Carolyn Good, COE-Galveston

6-1 EPA's site designation action is not covered in the referenced agreement, nor is EPA a party to this agreement. Therefore, we do not consider this agreement appropriate for notation as requested. Protection of historic sites is discussed in Table F-1 as part of the eleven specific criteria listed in 40 CFR §228.6(a). All sites of historical significance were excluded from the ZSF.

Advisory
Council On
Historic
Preservation.

LETTER NO. 6 (continued)

1571 K Street NW
Washington D.C.
20005

MEMORANDUM OF AGREEMENT

WHEREAS, the Galveston District, Corps of Engineers, proposes to implement the following ongoing construction projects: Mouth of Colorado River, (Freeport Harbor, Taylors Bayou, Highland Bayou, Buffalo Bayou and Tributaries, Corpus Christi Ship Channel, Texas; and,

WHEREAS, the Galveston District, in consultation with the Texas State Historic Preservation Officer (SHPO), has determined that this undertaking as proposed may have an adverse effect upon cultural properties which may be eligible for the National Register of Historic Places; and,

WHEREAS, pursuant to Section 106 of the National Historic Preservation Act of 1966 (16 U.S.C. Sec. 470f, as amended, 90 Stat. 1320) and Section 800.4(d) of the regulations of the Advisory Council on Historic Preservation (Council), "Protection of Historic and Cultural Properties" (36 CFR Part 800), the Galveston District has requested the comments of the Council; and,

WHEREAS, pursuant to Section 800.6 of the Council's regulations, representatives of the Council, the Galveston District, and the Texas SHPO have consulted and reviewed the undertaking to consider feasible and prudent alternatives to avoid or satisfactorily mitigate the adverse effect;

NOW, THEREFORE, it is mutually agreed that the undertaking will be implemented in accordance with the following stipulations:

Stipulations

The Galveston District will comply with the following procedures in implementing further actions on the below listed six authorized, ongoing construction projects:

Mouth of Colorado River, Texas;
Freeport Harbor, Texas (45-Foot Navigation Project)
Taylors Bayou, Texas;
Highland Bayou, Texas;
Buffalo Bayou and Tributaries, Texas;
Corpus Christi Ship Channel, Texas (45-Foot Navigation Project;

hcl 1

LETTER NO. 6 (continued)

1. Prior to any land disturbing activities the Galveston District will complete a cultural resources survey designed in accordance with guidelines established in consultation with the SHPO to identify historic and cultural properties included in or eligible for inclusion in the National Register of Historic Places that may be affected by the undertaking. The Galveston District shall provide the Council with a copy of the guidelines established.
 - A. Cultural resource surveys will be administered by the Galveston District staff archeologist.
 - B. Copies of survey reports will be provided to the Texas SHPO.
 - C. All historic and cultural properties identified by the surveys will be evaluated in consultation with the Texas SHPO to identify those properties that appear to meet National Register criteria. For those properties that appear to meet the criteria, the Galveston District will seek determinations of eligibility from the Secretary of the Interior in accordance with National Register procedures (36 CFR Sec. 63.3).
 - D. For those sites included in or found to be eligible for inclusion in the National Register, the Galveston District will evaluate, in consultation with the Texas SHPO, the proposed undertaking to determine effect pursuant to 36 CFR Sec. 800.4(b). If "no effect" is found through such consultation, the undertaking may proceed.
 - E. Upon finding that the undertaking will affect a property included in or eligible for the National Register, the Galveston District will develop a set of alternatives that would result in avoidance, or mitigation of adverse effects. In consultation with the Texas SHPO, the most prudent and feasible alternative will be selected.
 1. If the selected alternative results in avoidance, the Galveston District will document a determination of no effect and retain it in its files; the project may proceed.
 2. If the selected alternative would result in preservation of the cultural property and not create an adverse effect, the Galveston District will document this finding and forward a copy of the documentation to the Council and afford the

Council the opportunity to object pursuant to 36 CFR Sec. 800.6(a), before proceeding with the project.

2. Where it is not prudent and feasible to avoid or to preserve historic and cultural properties included in or eligible for inclusion in the National Register, the Galveston District will consult with the Texas SHPO and,
 - A. If it is determined that the affected historic or cultural property is included in or eligible for inclusion in the National Register primarily because it may be likely to yield information important in prehistory or history, and meets the criteria detailed in Part I of the "Guidelines for Making 'Adverse Effect' and 'No Adverse Effect' Determinations for Archeological Resources in Accordance with 36 CFR Part 800" (Guidelines), the Galveston District will institute a data recovery program in consultation with the Texas SHPO, in accordance with Part 2 of the Guidelines and the Department of the Interior's "Recovery of Scientific, Prehistoric, Historic, and Archeological Data: Methods, Standards, and Reporting Requirements" (36 CFR Part 66). (Copies of the Guidelines and 36 CFR Part 66 are attached.)
 - B. If it is determined that the affected historic or cultural property is listed in or eligible for inclusion in the National Register primarily for criteria other than the criterion that it is likely to yield information important in the prehistory or history of the area, but is not a National Historic Landmark or National Historic Site, and it is not known to have historic or cultural significance to any community or social or ethnic group, the Galveston District will develop measures acceptable to the Texas SHPO to mitigate the impact of the proposed action.
 - C. The Galveston District shall provide the Council with documentation supporting the agreements reached with the Texas SHPO under the provisions of A and B of this section and shall afford the Council an opportunity to object within 30 days after receipt of adequate documentation before undertaking data recovery program or proposed mitigative measures.
 - D. If it is determined that the affected historic or cultural property is a National Historic Landmark, National Historic Site, or is known to have significance to any community or social or ethnic group, or agreement cannot be reached between the Galveston

LETTER NO. 6 (amendment)

District and the Texas SHPO on satisfactory mitigation measures, or if the Council objects to the measures agreed upon, the comments of the Council will be requested in accordance with 36 CFR Part 800.

3. During construction activities covered by the Agreement and after the cultural resource surveys required by Stipulation 1 have been completed, should previously unknown historic or cultural properties be discovered, the Galveston District will cause potentially damaging activities to be delayed until it has had an opportunity to consult with the Texas SHPO and has complied with 36 CFR Sec., 800.7 of the Council's regulations.
4. The Galveston District may request that this Agreement be amended at any time to cover additional authorized construction projects by submitting a formal request to the Council with a preliminary case report concurred in by the Texas SHPO. The Council will review the documentation provided and advise the Galveston District of its concurrence or objection. If the Council objects, consultation with the Galveston District will continue until an amendment acceptable to all parties is agreed upon.
5. Failure to carry out the terms of this Agreement requires that the Galveston District again request the Council's comments in accordance with 36 CFR Part 800. If the Galveston District cannot carry out the terms of the Agreement, it shall not take or sanction any action or make any irreversible commitment that would result in an adverse effect with respect to National Register or eligible properties covered by the Agreement or would foreclose the Council's consideration of modifications or alternatives to the ongoing construction projects that could avoid or mitigate the adverse effect until the commenting process has been completed.
6. If any of the signatories to this Agreement determine that the terms of the Agreement cannot be met or believes a change is necessary, that signatory shall immediately request the consulting parties to consider an amendment or addendum to the Agreement. Such an amendment or addendum shall be executed in the same manner as the original Agreement.

11-17

1/30/80
(date)

Deputy *Robert H. [Signature]*
Executive Director
Advisory Council on Historic Preservation

Memorandum of Agreement
Corps of Engineers

[Signature] (date) 2-1-80
District Engineer
Corps of Engineers, Galveston District
[Signature] (date) 3-12-8
Texas State Historic Preservation Officer

LETTER NO. 6 (continued)

[Signature] (date) 4/7/80
Chairman
Advisory Council on Historic Preservation



STATE OF TEXAS
OFFICE OF THE GOVERNOR
AUSTIN, TEXAS 78711

WILLIAM P. CLEMENTS, JR.
GOVERNOR

March 28, 1989

RECEIVED

APR 3

6 ES

LETTER NO. 7

Darlene Coulson
U. S. Environmental Protection Agency
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202

RE: TX-R-89-02-15-0010-90-00
FREEPORT HARBOR OCEAN DREDGED MATERIAL DISPOSAL

Dear Applicant:

7.0 Your environmental impact statement for the project referenced above has been reviewed. No substantive comments were received.

7.0 No response required.

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

Sincerely,

T.C. Adams, State Single Point of Contact

TCA/rb/pon



STATE OF TEXAS
OFFICE OF THE GOVERNOR
AUSTIN, TEXAS 78711

WILLIAM P. CLEMENTS, JR.
GOVERNOR

April 20, 1989

RECEIVED

APR 26

6 ES

LETTER NO. 8

Ms. Darlene Coulson
U.S. Environmental Protection Agency
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202

RE: TX-R-89-02-15-0010-50
Freeport Harbor Ocean Dredged Material Disposal

Dear Ms. Coulson:

Attached are subsequent comments received on the above
captioned proposal.

If we can be of further assistance, please let me know.

Sincerely,

T. C. Adams
State Single Point of Contact

TCA/poa

Enclosure

80 No response required.

11-20



TEXAS
PARKS AND WILDLIFE DEPARTMENT
600 South Second Road Austin, Texas 78704

RECEIVED
APR 11 1989
GOVERNMENT BUDGET OFFICE
CHARLES D. TRAVIS
Executive Director

LETTER NO. 8 (continued)

CC 1000

CHUCK NASH
Chairman San Antonio
RICHARD A. WILSON
Rep-Chairman
Clear Lake City

BOB ARMSTRONG
Austin

HENRY C. BECK III
Dallas

GEORGE A. BULL
Houston

DELO H. CASPARY
Austin

WILL L. GIBSON
Austin

DEATRICE CARR PIERCE
Austin

AL (TOM) SANDOZ JR.
Lubbock

April 10, 1989

Mr. T.C. Adams
State Single Point of Contact
Governor's Office of Budget and Planning
P.O. Box 12428
Austin, Texas 78711

Dear Mr. Adams:

The Draft Environmental Impact Statement by the Environmental Protection Agency on the Freeport Harbor (45-Foot Project) Ocean Dredged Material Disposal Site Designation has been reviewed. The proposal includes designation of two ocean disposal sites for material from the Freeport Harbor Project. Disposal of 5.1 million cubic yards of virgin material is proposed at a site about five miles offshore. Disposal of 2.1 million cubic yards of maintenance material (annually) is proposed at a site about 2.5 miles offshore.

Offshore disposal of these materials is a suitable alternative. The EIS discusses various limitations on locations for disposal sites, including impacts to biological resources. Curiously, however, the EIS uses biological data from the Seadock studies of the early 1970s, but omits any references to biological data from more recent studies for the Bryan Mound Strategic Petroleum Reserves Project. These latter data should be included in the final EIS and analyzed along with data already included for any further refinements in delineation of offshore disposal areas.

See response to comment 3-2.

Thank you for the opportunity to comment on this document.

Sincerely,

Charles D. Travis
Charles D. Travis
Executive Director

CUT:LER

Gerry Moore
Commissioner
General Land Office

LETTER NO. 9



March 14, 1989

Mr. Mark Thomas (68-7)
Chief, Federal Activities Branch, EPA
1445 Ross Avenue
Dallas, Texas 75202-2733

Re: Draft Environmental Impact Statement for Freeport Harbor (45-Foot
Project) Ocean Dredged Material Disposal Site (ODMS) Designation

Dear Mr. Thomas:

As is authorized by the Constitution of the State of Texas, the Texas General Land Office manages state-owned Permanent School Fund lands, including surface and mineral estates of submerged lands in the Gulf of Mexico from the gulf shoreline waterward for three marine leagues.

The creation of anchorages, fairways, and dredged material disposal sites in the Gulf of Mexico waters has placed significant restrictions on the numbers and locations of surface drilling sites needed for continued development of state-owned mineral resources.

This office has been working with the U.S. Coast Guard and Amoco Oil Company since 1985 on a proposal to relocate portions of the southern Freeport Harbor Anchorage Area to improve access to state-owned mineral resources. Significant hydrocarbon reserves are known to exist in this area, and the current two nautical mile spacing provision has significantly limited the state's ability to develop these resources for the benefit of the Public School Fund.

The General Land Office is concerned, therefore, that creation of the two ODMS proposed in the above referenced document without full consideration of surface location needs of the state will further complicate ongoing negotiations, and will limit future exploration and development efforts.

We believe that coordination of an acceptable solution for all parties is possible, as demonstrated by an agreement reached in waters off the Alabama shoreline (see article attached).

Stephen F. Austin Building
500 North Congress Avenue
Austin, Texas 78701
(512) 463-2222

Environmental Protection Agency
March 14, 1989
Page 2

In summary, this office desires:

- 9-1 1. A detailed explanation of any limitations which would be imposed on the placement of structure within the proposed disposal sites.
- 9-2 2. An opportunity to meet with representatives of the Environmental Protection Agency, the Corps of Engineers, and the Coast Guard to discuss the issue of limitations on structures within anchorages, fairways, and disposal sites.
- 9-3 3. A full evaluation of these state concerns in the Final Environmental Impact Statement.

We appreciate this opportunity to comment on the proposed work, and look forward to working with you to develop an equitable solution to the concerns voiced above.

Sincerely,

Sally S. Davenport
Sally S. Davenport
Director, Coastal Division

SCB/CBB

9-1 According to the Galveston CE, the placement of structures within disposal sites is prohibited. However, the virgin construction material site is needed for the one-time disposal of construction material, and will be available for other uses in the future.

9-2,3 By letter dated September 29, 1988, EPA requested your office to provide its detailed concerns relating specifically to EPA's site designation action. To date no further information has been received. We are hopeful that this issue can be resolved through coordination of this Final ES.

economics based on current prices, there is a perception among operators that gas prices have started to recover. That's likely to further encourage the large upfront capital outlays required to play the Nophlet trend.

Another incentive to explore and develop Nophlet prospects is the approaching expiration of leases this year.

Operators expect activity in the region to continue building in the coming years, having a plunge in gas prices.

What's been done. Activity in the Nophlet trend slowed after the 1986 oil and gas price collapse as companies revamped strategies in an area where dry hole costs are \$13-16 million/well and completed well costs \$25 million.

There have been only seven Nophlet wells drilled off Alabama and Mississippi since 1986, compared with 13 in the peak year 1985 and nine in 1984.

Some operators pulled out of the trend. Phillips Petroleum Co., for example, sold all of its Nophlet acreage to partners.

Operators that stayed, however, say they now are ready to move forward in the trend. Two Nophlet wells are under way off Mississippi and Alabama, and another is about to be spudded, compared with only three for all of last year.

One reason for the renewed activity is that operators have adjusted to lower prices. In addition, their confidence in the economic viability of Nophlet projects has been supported by successful operations at the trend's only producing field: Mary Ann field, which went on stream last year (OGJ, July 18, 1988, p. 181).

More than 1 million ft of hole has been drilled in the search for offshore Nophlet reserves.

Nophlet success rate. Of the 39 Nophlet tests drilled off Alabama and Mississippi, one was junked when drillpipe was dropped into the hole, two were drilled as relief wells after the dropped pipe caused a blowout, and five were dry holes.

The remaining 31 are listed as successful Nophlet wells by government agencies, representing a phenomenal 79% success rate in the trend.

Exxon, with 13, has thus far drilled the most Nophlet tests as operator off Alabama and Mississippi. Mobil is second with 11 and Chevron third with five.

Chevron is drilling a Nophlet hole in 23,500 ft measured depth (MD) on Mississippi Tract 56. Mobil is below 20,000 ft MD on Mobile Block 823, and Texaco to 22,833 ft MD on Mobile Block 869.

Texaco and its partners, with the support of the Interior Department and the state of Alabama, persuaded the U.S. Coast Guard to adjust a portion of the shipping fairway so it could have a surface location on Block 869 from which to drill. The block previously was entirely in the fairway.

If the well is successful, Texaco may make a decision late this year to move ahead with development.

Exxon last week was awaiting the arrival of a rig to spud a 23,050 ft MD Nophlet test on Alabama Tract 63 with bottomhole location on neighboring Alabama Tract 78.

Exxon is the region's biggest player in terms of reserves. Its Nophlet reserve position today is about 2.8 tcf, based on its discoveries of Bon Secour Bay, North Central, and Northwest Gulf fields.

The company once was the region's largest lessee in terms of net acres, but it currently is fourth after dropping some leases it considered marginal.

The region's currently largest lessee is Union Exploration Partners Ltd., which holds about 100,000 net acres in the trend. Union is followed by Amoco Production Co., Conoco Inc., and then Exxon.

Mobil's activity. C.D. Sabathier, Mobil's Mobile area project manager, said his company has launched a three phase, 5 year development program of its Nophlet trend acreage.

The first phase involves utilizing Mary Ann's current infrastructure to full capability.

Three of Mary Ann's six Nophlet wells are producing. One of the field's two Miocene wells is on stream. The field's gas treatment plant has a design capacity of 80 MMcfd. Production at Mary Ann currently is 40 MMcfd.

Expansion of the field involves completing one of the wells previously drilled, drilling one additional well, and installing more offshore production facilities.

In conjunction with Mary Ann expansion, said Sabathier, Mobil has begun development of its Mobile Block 823 discovery. The current well being drilled on the block is an offset to the discovery. Mobil's partners in the field are Texaco, Conoco, Exxon, and Agip Petroleum Co. Inc.

Mobil anticipates a four well program to initially develop Block 823. Design engineering has begun on an offshore facility that basically will be a separator and dehydration facility for corrosion treatment, a pipeline bundle, and a major gas treatment plant to be built next to the Mary Ann treatment plant onshore.

Mobil plans to have both projects on stream in 1991.

Another phase of Mobil's development plan is a major expansion in heavy sour gas treating capacity which is planned to occur in 2 yr. This phase will potentially include Mobil's development of West Caphin Island field and another area near the island, where gas is 5% hydrogen sulfide.

Other development plans. Exxon plans to begin deliveries from Nophlet fields in 1992.

Its plans include a 300 MMcfd treatment plant that can be expanded 600 MMcfd to bring as many as wells on stream (see map, OGJ, N 10, 1986, p. 40).

In federal waters, Exxon has utilized Mobile Blocks 866, 867, 8911, 912, and 913 as part of development plan.

Shell, meanwhile, is moving ahead with evaluation of its Fairway 4 under Alabama Tracts 113 and 132 has drilled Nophlet discoveries both ways.

"We have not announced any plans yet, but obviously we are very encouraged by our discoveries," said E. Voiland, production manager Shell's coastal division.

Shell has no immediate plans drill on its recently acquired acreage off Dauphin Island, preferring first to gather technical data and work on other leases in the area.

Shell, Exxon, and Mobil have begun the lengthy process of obtaining state and federal permits for development operations off Alabama. It currently requires about 3 years.

New metallurgy needed. Elsewhere, Chevron has asked MMS allow a delay in a field delineation program on Mobile Blocks 860, 86 and 862 for lack of metallurgy technology (OGJ, Nov. 21, 1988, p. 3).

The company encountered down hole pressures greater than 18,000 psi with Nophlet wells on blocks 81 and 862. Chevron is attempting develop a safety valve that can operate at more than 250° F. in the presence of elemental sulfur with as much as 20,000 psi pressure.

Chevron has formed a unit involving the three blocks. It plans to retest and test the Block 862 well on appropriate metallurgy has been developed, which might occur later this year.

To the south of Block 861, Union has utilized Mobile Blocks 904, 90448, and 949. Union's well on Block 904 was not flow tested, but the company is working under the assumption that it encountered the same high pressure zone Chevron found in its Block 861 well. Log analysis of the Union well showed more than 100 of net pay in the Nophlet.

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Mobil Exploration & Producing U.S. Inc.

LETTER NO. 10

April 20, 1989

NEW ORLEANS DIVISION
1975 POWERHOUSE BUILDING
NEW ORLEANS, LOUISIANA 70139

U. S. Environmental Protection Agency
1445 Ross Ave.
Dallas, Texas 75202-2733

Attention: Norm Thomas
Chief, Federal Activities
Branch (6E-F)

7.06.05.00
EPA Proposed Ocean Dumping Site
Offshore Freeport Harbor, Texas
Dredged Material Disposal

Gentlemen:

Mobil Exploration & Producing U. S. Inc. (MEPUS) as agent for Mobil Producing Texas & New Mexico Inc. (MPTM) appreciates the opportunity to comment on the proposed ocean dumping sites offshore Freeport, Texas, designated for one time disposal of construction material and annual disposal of maintenance material dredged for the expanded and relocated Freeport Harbor Entrance and Jetty Channels, as further described in the Federal Register, Vol. 54, No. 47, dated Monday, March 13, 1989, pages 10386-10389.

While MEPUS has no objection to the concept of offshore disposal of dredged materials, we do however object to the close proximity of the maintenance material disposal site to our existing producing operations in Brazos Block 386-S. Our producing platform, BA 386-S "A", located at Latitude 28 52'03"N and Longitude 95 17'00"W, is approximately 200 - 300 ft. southwest of the proposed annual maintenance disposal area (see attached drawing). The predominant longshore current and transport in this area is southwesterly and will therefore deposit material dumped in the proposed site onto our platform location. While there are currently no regulations requiring the sampling of bottom sediments at the time of platform removal or lease abandonment, it is not unlikely that some type of sampling and analysis of bottom sediments may become a future requirement to secure site clearance approval. The impact to sediment quality at BA 386-S "A", due to the annual deposition of 2.1 million cubic yards of dredged material for an indefinite period of time, has the potential of making Mobil liable for the quality of discharges over which we have no control.

10-1 The area within the maintenance material site where discharge will occur is shown in Figure I-1. No impact is expected outside the site boundaries.

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LETTER NO. 10 (~~CONFIDENTIAL~~)

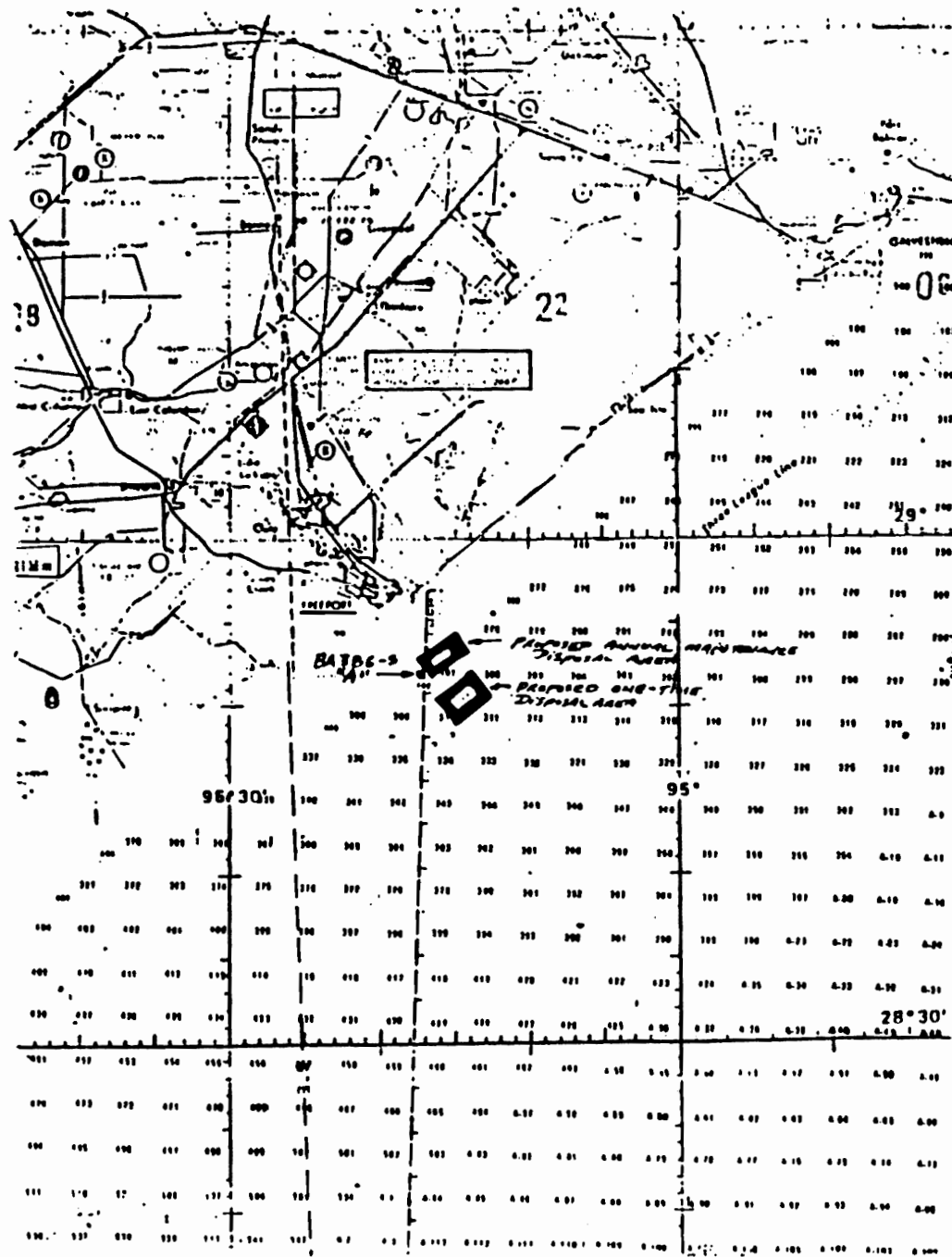
Again, we thank you for this opportunity to comment on this proposal. Should you have any questions or require further information on these comments, please contact D. C. Forbes, Environmental and Regulatory Affairs Manager, at (504) 566-5296.

Yours very truly,

A handwritten signature in dark ink, appearing to read "J. T. Sneed", written over a horizontal line.

by J. T. Sneed
Producing Manager

LETTER NO. 10 (continued)



11-27

PART III. MODIFICATIONS AND CORRECTIONS TO THE DRAFT EIS

The Freeport Harbor (45-Foot Project) ODMDS Designation Draft EIS was reviewed by the public and internally by EPA. This section of the Final EIS presents minor revisions to the Draft EIS based on errors identified during the review process. For each correction, the page, paragraph, and line of the Draft EIS requiring revision is noted, the necessary correction is specified, and the corrected text is presented in boldface.

Page 2-1, paragraph 2, lines 2 and 3. Remove "ocean disposal" from the list of non-ocean disposal alternatives.

Page 3-40, paragraph 3, line 5. Replace "Caribbean" manatee with West Indian manatee.

Page 4-4, section 4.1.2.3, paragraph 4, line 2. Replace "2.5 miles" with 3.0 miles.

PART IV. EPA'S PROPOSED ACTION

EPA's proposed action is the final designation of two preferred sites for the disposal of virgin construction and maintenance materials to be dredged from the Freeport Harbor entrance and jetty channels. The preferred sites were determined based on environmental, feasibility, and cost considerations.

The Freeport Harbor channels provide access for large vessels to Freeport and the surrounding areas. 5.1 mcy of new construction material appropriate for ocean disposal will be generated, with shoaling of the enlarged outer channel expected to occur at an annual rate of approximately 2.1 mcy. The Army Corps of Engineers is responsible for maintaining the Freeport Harbor entrance and jetty channels and has requested that EPA permanently designate an ocean dredged material disposal site(s) for the construction and maintenance material dredged as part of the Freeport Harbor 45-Foot Project.

The no-action alternative is not acceptable because failure to designate a disposal site would result in accumulation of material in the channels and their eventual closure to ship traffic. Upland sites for disposal of the dredged material are not available. Mid-shelf and continental-slope ocean disposal sites were determined to be unsuitable because of significant impacts on the benthic community and increased cost and safety risks. Near-shore sites were determined to be the most acceptable.

The Zone of Siting Feasibility approach resulted in exclusion of the Interim-designated ODMDS. The preferred sites should have minimal environmental impacts. Both are located in a bottom-sediment province with compatible grain-size distributions. The sites are not in the safety fairway and avoid areas of recreational importance or biological sensitivity. They are located in water deep enough to avoid causing navigational problems, yet reasonably nearshore to reduce transportation costs and allow for efficient monitoring and surveillance activities at the sites.

EPA has determined, after reviewing the alternatives, that the preferred sites are acceptable for the disposal of dredged materials from the construction and maintenance of the enlarged Freeport Harbor entrance and jetty channels. The primary environmental impact associated with disposal is the burial and consequent mortality of the benthic infaunal community in the discharge portion of the sites.