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CESAM-PD-FP

Ulrich/4315/tc/5 June 1990

MEMORANDUM THRU PD-F

PD-W

OP-74

FOR OP-ON *Wendell W*

SUBJECT: Post Authorization Change Report for Long Term Dredged Material Disposal from Mobile Bay, Alabama.

1. Enclosed is a Plan of Study for the Long Term Dredged Material Disposal Post Authorization Change Report and a list of alternatives which will be investigated. This effort has been coordinated with OP-ON (Mr. Wendell Mears) and PD-EC (Mr. Dewayne Imsand).

John K. Graham

JOHN K. GRAHAM
Chief, Plan Development

Encls

- CF:
- PD-F
- PD-EC
- OP-ON
- OP-OM

JWG
6/11/90

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WDM*

MOBILE BAY, ALABAMA
LONG TERM DREDGED MATERIAL DISPOSAL
POST AUTHORIZATION CHANGE REPORT

PLAN OF STUDY

1. Purpose. - The purpose of the study is to identify and evaluate economically and operationally feasible and environmentally acceptable alternatives to the present gulf disposal of maintenance dredged material from the Mobile Harbor Ship Channel within Mobile Bay. A post authorization change report will be prepared to present the selected dredge disposal alternative for approval.

2. Location and Description of Existing Project. Mobile Harbor, Alabama is located in southwest Alabama where the Mobile River empties into Mobile Bay. Most of the port facilities are located on the west bank of the Mobile river, near its mouth, at the City of Mobile. The existing Federal project serving the Port of Mobile consists primarily of a 47 x 700-foot channel from the 47-foot depth contour in the Gulf of Mexico for a distance of about 7.4 miles to a point in Mobile Bay near the eastern end of Dauphin Island; a 45 x 400-foot channel the length of Mobile Bay for a distance of 27 miles between the northern end of the gulf entrance channel and a point about 3.6 miles south of the Interstate Highway 10 tunnels. An anchorage area 500 feet, 30-40 feet deep and 4,000 feet long on the east side of the main channel and immediately south of a new 30 foot deep turning basin is currently under study to meet a FY 93 new construction start.

3. Project Authorization. - The Mobile Harbor Deepening project was authorized by the Energy and Water Development Appropriations Act (P.L. 99-88), approved on 15 August 1985, and modified by the Water Resources Development Act (WRDA) of 1986 (P.L. 99-662), approved 17 November 1986. The WRDA of 1986 specifies the disposal as follows: "...except that, for reasons of environmental quality, dredged material from such project shall be disposed of in open water in the Gulf of Mexico in accordance with all provisions of Federal law."

4. Proposed Change to the Authorized Project. - The proposed change to the authorized project concerns the method of dredged material disposal from maintenance operations of the Mobile Bay Channel.

5. Schedule. -

<u>Milestones</u>	<u>Completion Date</u>
Alternative Disposal Methods List	May 1990
Mechanically filled Barge Overflow Test and Open Water Disposal Test Final Reports Available	June 1990
Future Operation and Maintenance Scenarios (Timing, Channel Sections, Ranges of Dredged Material Quantities, and Associated Frequencies)	29 June 1990
Initial Alternative Disposal Method Evaluation Completed (Operational Feasibility, Cost Analysis, and Environmental Feasibility)	27 July 1990
Alternative Plans Developed	15 August 1990
Complete Alternative Disposal Plans Evaluation (Operation Feasibility, Cost Analysis, and Environmental Feasibility)	14 September 1990
Draft Study Report and Supplemental EIS (Begin 45 day Comment Period)	29 October 1990
Public Workshop	28 November 1990
End of 45 day Comment Period	14 December 1990
Complete Study Report and Supplemental EIS and Submit to SAD	February 1991

6. Estimated Study Cost By Organization. -

<u>Organization</u>	<u>Amount</u>	<u>Work Required</u>
PD-EC	40,000	Alternative Evaluations, Contouring of Bathymetric Survey, and Historical Comparison of Bathymetric Surveys, Preparation of Supplemental EIS.
OP-OM	35,000	Alternative Evaluations, Dredging and Disposal Cost Estimates.
PD-FP	45,000	Study Management, Coordination, Plan Formulation, Report Preparation.

Subtotal	\$ 120,000	
Contingency	20,000	

Total	\$ 140,000	

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ALTERNATIVES

Hydraulic pipeline dredge discharging into several diked upland disposal areas through floating pipeline systems with centrifugal booster stations.

Hydraulic pipeline dredge discharging into dump scows with no overflow for towing to the Gulf of Mexico disposal area.

Hydraulic pipeline dredge discharging into dump scows with overflow for towing to the Gulf of Mexico disposal area.

Hydraulic pipeline dredge discharging into a submerged pipeline extending throughout Mobile Bay to the Gulf of Mexico disposal area, with one platform mounted positive displacement pumping station and a series of 13 centrifugal booster stations.

Hydraulic pipeline dredge discharging to a submerged pipeline system to the Theodore Disposal Island for offloading and dewatering and subsequent transport by barge to the Gulf of Mexico disposal area.

Hydraulic pipeline dredge discharging to barges with no overflow for transport to the Theodore Disposal Island for offloading and dewatering and subsequent transport by barge to the Gulf of Mexico disposal area.

Hydraulic pipeline dredge discharging to barges with overflow for transport to the Theodore Disposal Island for offloading and dewatering and subsequent transport by barge to the Gulf of Mexico disposal area.

Hydraulic pipeline dredges discharging into several new diked or bulkheaded disposal areas within Mobile Bay.

Hydraulic pipeline dredge discharging to several new unconfined disposal areas within Mobile Bay.

Hydraulic pipeline dredge discharging to a series of rehandling stations to the Gulf of Mexico.

Hydraulic pipeline dredge discharging from a new impoundment or impoundments.

Hydraulic pipeline dredge discharging to open water sites.

Hopper dredge with no overflow and transport of material to the Gulf of Mexico disposal area.

Hopper dredge with overflow and transport of material to the Gulf of Mexico disposal area.

Hopper dredge pumping into scows with no overflow for transport to the Gulf of Mexico disposal area.

Hopper dredge pumping into scows with overflow for transport to the Gulf of Mexico disposal area.

Hopper dredge with no overflow and with pump-out into the Theodore Disposal Island for dewatering and subsequent transport by barge to the Gulf of Mexico disposal area.

Hopper dredge with overflow and with pump-out into the Theodore Disposal Island for dewatering and subsequent transport by barge to the Gulf of Mexico disposal area.

Hopper dredge with no overflow and with pump-out into several new diked or bulkhead disposal areas in Mobile Bay.

Hopper dredge with overflow and with pump-out into several new diked or bulkhead disposal areas in Mobile Bay.

Hopper dredge with side casting.

Dipper/clamshell dredge filling barges with no overflow for direct haul to the Gulf of Mexico disposal area.

Dipper/clamshell dredge filling barges with overflow for direct haul to the Gulf of Mexico disposal area.

Dipper/clamshell dredge filling barges with no overflow for transport to Theodore Disposal Island for offloading and dewatering and subsequent transport by barge to the Gulf of Mexico disposal area.

Dipper/clamshell dredge filling barges with overflow for transport to Theodore Disposal Island for offloading and dewatering and subsequent transport by barge to the Gulf of Mexico disposal area.

Dipper/clamshell dredge filling barges with no overflow for transport to one or more upland diked disposal areas.

Dipper/clamshell dredge filling barges with overflow for transport to one or more upland diked disposal areas.

Dipper/clamshell dredging from a series of rehandling stations to the Gulf of Mexico.

Dipper/clamshell dredge disposing to an impoundment basin or basins.

Dipper/clamshell dredge disposing to open water sites.

Continuance of existing open-water disposal practices alongside the Mobile Ship Channel.

Pipeline to Gulf of Mexico.