APPENDIX G

COMMENTS ON THE DRAFT TAMPA BAY EIS

AND EPA's RESPONSES TO THOSE COMMENTS

SEPTEMBER, 1983

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The Draft EIS (DEIS) was released November, 1982. This Appendix includes copies of written comments received by EPA on the DEIS. Responses to comments were addressed in one of three ways:

- Acknowledgement of comments for those requiring no response.
- Correction or addition of information incorporated into text as noted.
- Specific comments not requiring text changes but requiring a response are numbered in the margins of letters with responses following.

EPA appreciates the time and effort taken by those who offered their comments on the DEIS. Comments, criticisms, and additional information offered were carefully considered in preparation of the Final EIS.

81119833G

FLORIDA DEPARTMENT OF STATE
George Firestone
Secretary of State
DIVISION OF ARCHIVES,
HISTORY AND RECORDS MANAGEMENT
The Capitol, Tallahassee, Florida 32301
(904) 488-1480

RECEIVED DEC 8 1982

November 30, 1982

In Reply Refer To:

Mr. Frederick P. Gaske
Historic Sites Specialist
(904)487-2333

Mr. Walter O. Kolb
Division of State Planning
Department of Administration
Office of the Governor
The Capitol
Tallahassee, Florida 32301

Re: Your Memorandum and Attachment of November 19, 1982
Cultural Resource Assessment Request
Draft Environmental Impact Statement for Tampa Harbor
Ocean Dredged Material Disposal Site Designation,
Hillsborough County, Florida

Dear Mr. Kolb:

In accordance with the procedures contained in 36 C.F.R., Part 800 ("Procedures for the Protection of Historic and Cultural Properties"), we have reviewed the above referenced project for possible impact to archaeological and historical sites or properties listed, or eligible for listing, in the National Register of Historic Places. The authorities for these procedures are the National Historic Preservation Act of 1966 (Public Law 89-665) as amended by P.L. 91-243, P.L. 93-54, P.L. 94-422, P.L. 94-458 and P.L. 96-515, and Presidential Executive Order 11593 ("Protection and Enhancement of the Cultural Environment").

A review of the Florida Master Site File indicates that no inundated cultural resources are recorded within Shallow-Water
1-1 Alternative Site 4. Furthermore, use of the area for disposal of ocean dredged material is deemed unlikely to affect any cultural resources which may be present. Therefore, it is the opinion of this office that the proposed project will have no effect on sites listed, or eligible for listing, in the National Register of Historic Places, or otherwise of national, state or local significance.

If you have any questions concerning our comments, please do not hesitate to contact us.

Your interest and cooperation in helping to protect Florida's archaeological and historical resources are appreciated.

Sincerely,

George W. Percy
Deputy State Historic
Preservation Officer

GWP:Geb

cc: U. S. Environmental Protection
Agency

3

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Atlanta GA 30333
(404) 452-4095
December 3, 1982

Criteria and Standards Division (WH-585)
Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460

Gentlemen:

We have reviewed the Draft Environmental Impact Statement (EIS) for Tampa Harbor, Florida, Ocean Dredged Material Disposal Site Designation. We are responding on behalf of the Public Health Service.

We have reviewed this document for possible health effects and find that the proposed alternatives have been adequately addressed. We trust that
2-1 both the existing site and the proposed disposal site will be monitored for dispersion of dumped materials and also for adverse impacts on the local
2-2 fauna which could cause long-term food-chain effects.

Thank you for the opportunity of reviewing this Draft EIS. Please send us a copy of the final document when it becomes available.

Sincerely yours,

Frank S. Lisella, Ph.D.
Chief, Environmental Affairs Group
Environmental Health Services Division
Center for Environmental Health

TAMPA PORT AUTHORITY

Serving America's Seventh Largest Port

December 6, 1982

Mr. T. A. Wastler, Chief
Marine Protection Branch (WH-585)
Environmental Protection Agency
Washington, D.C. 20460

Reference: 40 CFR Part 228
(OW-FRL 2234-8)
Proposed Designation of Ocean Disposal Site; Tampa Harbor

Dear Mr. Wastler:

I am writing in response to the public notice which appeared in the 8 November 1982 Federal Register concerning proposed designation of a permanent disposal site for dredged material from the Tampa Harbor Project. I have reviewed the Draft Environmental Impact Statement issued by your agency in regard to this proposed action on 29 October 1982. In addition, I have reviewed all of the ancillary and background material regarding this and other alternative sites which is referenced in that document.

3-1 In general, we support the proposed designation proposed in the 8 November 1982 public notice. We agree with the conclusion expressed in the notice and the DEIS that current interim Disposal Sites A and B may not be the best locations for the disposal of dredged material due to the presence of sensitive hard-bottom communities to the west and north of these areas. Based on the limited information presented in the DEIS and supporting documents, we agree that alternative Site 4 appears to be a more acceptable site for the disposal of dredged material.

3-2 However, we are concerned that there has not been presented sufficient evidence to confirm that all of alternative Site 4 is acceptable for dredged material disposal. The television camera inspection presented by EPA covers only a small portion of the 4 sq. mile-site. In addition, the numerous sediment and biological samples collected during the EPA survey appear to have been conducted using surface-deployed sampling devices. The use of such devices does not afford information regarding the possible presence of viable hard-bottom communities in those areas sampled.

cont...

GEORGE B. HOWELL MARITIME CENTER
POST OFFICE BOX 2192 • 811 WYNKOOP ROAD • TAMPA, FLORIDA 33601 • 813/248-1924 • TELEX 52441
AN EQUAL OPPORTUNITY EMPLOYER

It would be our recommendation that,prior to final designation and use of this site,additional inspections of the area be conducted utilizing either divers or the television camera to confirm the absence or limited presence of hard-bottom communities and predominance of sandy substrates cited in the DEIS for the entire area included in the proposed action. We are concerned that in the absence of such information this designation, and any dredging contract conducted pursuant thereto, may be open to the same challenge and delays which have been experienced in regard to the use of interim Sites A and B. Delays which might result from such challenges would have a severe economic impact on the Port of Tampa since the recently proposed work in Section 3B of the Tampa Harbor Project is the last work necessary for completion of the present phase of that project.

Respectfully,

William K. Fehring

William K. Fehring, Ph.D.
Director of Environmental Affairs

WKF:bw

TAMPA PORT AUTHORITY

Serving America's Seventh Largest Port

December 6, 1982

Criteria and Standards Division (WH-585)
401 M Street, Southwest
Environmental Protection Agency
Washington, D.C. 20460

Reference: Draft Environmental Impact Statement
Ocean Dredged Material Disposal Site Designation
Tampa Harbor, Florida

Gentlemen:

4-1 I have reviewed the Draft Environmental Impact Statement published by your agency on 29 October 1982 in regard to the proposed permanent designation of a site for the disposal of dredged material from the Tampa Harbor Project. In addition, I have reviewed the supporting documents, video tapes, studies, and reports which have been presented by your agency to support this DEIS.

4-2 In general, this Authority can support the proposed designation of Site 4 for dredged material disposal as described in the DEIS. We agree with the conclusion expressed in the DEIS that interim sites A and B which are currently being utilized may not be the most appropriate sites for long-term disposal of dredged material due to the presence of sensitive hard-bottom communities near those areas. Based on the limited information contained in the DEIS and associated documents, we agree that alternative Site 4 appears to be more appropriate for use as a long-term dredged material disposal site.

However, we are concerned that the DEIS and the accompanying documentation do not contain sufficient evidence to confirm that all of alternative Site 4 is appropriate for the proposed use. We note that the video tape of Site 4 covers only a very small portion of the 4 sq. mile-proposed site While the sediment and infaunal analyses described in the DEIS and attached documentation is certainly complete, the apparent use of surface-deployed sampling devices makes this data of little use in determining the presence or absence of sensitive hard-bottom communities within the proposed site.

cont...

GEORGE B. HOWELL MARITIME CENTER

POST OFFICE BOX 2192 • 811 WYNKOOP ROAD • TAMPA, FLORIDA 33601 • 813/248-1924 • TELEX 52441

AN EQUAL OPPORTUNITY EMPLOYER

We would strongly recommend that additional visual inspections of the proposed disposal site be conducted utilizing either local divers or the camera equipment utilized previously. We believe that it may be important to confirm the absence of hard-bottom communities and the predominance of sandy substrates cited in the DEIS. We are concerned that in the absence of such additional observations, this designation may be subject to the same challenges which have been experienced with regard to the use of interim disposal Sites A and B.

Such challenges may result in delays to the final contract of the Tampa Harbor Deepening Project and thus may have significant economic cost to this Authority and to the Port of Tampa.

Should the decision be made to conduct the additional inspections by divers which we have recommended, I would offer my personal assistance to such efforts.

Respectfully,

William K. Fehring

William K. Fehring, Ph.D.
Director of Environmental Affairs

WKF:bw

State of Florida

DEPARTMENT OF NATURAL RESOURCES

DR. ELTON J. GISSENDANNER
Executive Director

3900 COMMONWEALTH BOULEVARD / TALLAHASSEE 32303

BOB GRAHAM
Governor
GEORGE FIRESTONE
Secretary of State
JIM SMITH
Attorney General
GERALD A. LEWIS
Comptroller
BILL GUNTER
Treasurer
DOYLE CONNER
Commissioner of Agriculture
RALPH D. TURLINGTON
Commissioner of Education

December 8, 1982

United States Environmental Protection Agency
Criteria and Standards Division (WH-585)
401 M Street Southwest
Washington, D.C. 20460

Dear Sirs:

The Florida Department of Natural Resources thanks you for the opportunity to comment on the Draft Environmental Impact Statement for Tampa Harbor, Florida Ocean Dredged Material Disposal Site Designation.

5-1 Department testimony presented at the Army Corps of Engineers Public Hearing June 30, 1982 called for the immediate cessation of dumping at current Interim Site A. The Department continues to be of that opinion. Further, the Department reiterates its concern regarding any dredged material disposal offshore and its support for land-based alternatives.

5-2 In regards to the current Draft Environmental Impact Statement, staff review (attached) has shown it to be a fragmented, poorly developed document which is both redundant and contradictory. The document is inadequate for the purposes proposed as it does not explore all alternatives; it does not present a thorough environmental review; and it proposes a new interim site (Site 4) without adequate survey or investigation of the site.

5-3 It is the Department's request that the Environmental Protection Agency withdraw this draft and schedule full public hearings to receive necessary public and private input to the document and any subsequent designations.

Sincerely,

Elton J. Gissendanner

EJG:ghh

Attachment

cc: Governor Bob Graham
Florida Legislative delegation
Manatee County Commission
Edwin A. Joyce, Jr.
Karen A. Steidinger
George E. Henderson
Walter Jaap

Florida Department of Natural Resources
Comments on Draft environmental Impact Statement
for Tampa Harbor, Florida Ocean Dredged Material
Disposal Site Designation

These comments are referenced by page and line for ease in following the critique. Since review time was short it can be expected that some additional comments could be made or expanded especially regarding physical oceanography and hydrology.

5-4 Page x. You have not included certain existing diked dredged disposal islands that could be used for the ongoing projects. In many cases they are closer to the dredge projects than offshore disposal sites. In fact, consideration is only to offshore Gulf sites.

5-5 Page xii, line 4. Should be 82°55'06"W not 83°55'06"W.

5-6 Page xiii, line 15. Change hard bottom to "live bottom." Refer to CFR 1978, "Live bottom areas are defined as those areas which contain biological assemblages consisting of such sessile invertebrates as sea fans, sea whips, hydroids, anemones, ascidians, sponges, bryozoans, or corals living upon and attached to naturally occurring hard or rocky formations with rough, broken, or smooth topography or whose lithotope favors the accumulation of turtles and fishes."

5-7 Page xiii, lines 19-22. The conclusion that site 4 does not contain live bottom communities is not based on adequate field reconnaissance. The survey relied on incomplete remote data acquisition and box coring using a symetrical station pattern. Patchy distribution of live bottom requires intensive in situ observations to insure that the total site of surrounding areas are sand or sedimentary facies.

5-8 Page xv, item 9. The benthic community is composed of two components. First, infaunal communities in the sediments and secondly, live bottom communities superimposed on rock. This includes sessile attached algae, sponges, corals, bryopzoans, tunicates and mobile invertebrates and demersal fish populations. Both infaunal and live bottom communities are composed of subtropical-tropical and temperate species.

5-9 Page xvi, lines 25-29. Note that the studies referred to are confined to "Sandy bottom habitats." Here we are dealing with sandy and live bottom habitats. Recolonization of a sedimentary habitat cannot be extrapolated to equate to recolonization of live bottom habitats that occur offshore of Tampa Bay.

5-10 Page xvii, line 4. Your statement of "will provide 4 nmi of sand bottom" is made on the basis of symetrical sampling stations, using a box core, and discarding any sample that contained <15 cm of material. This is a poor technique for reconnaissance of an area suspected to contain contagious distribution of live bottom. The statement that the alternative site is "safe" is an unsubstantiated hypothesis at best.

5-11 Page xvii, line 22. "Most of the living corals are found shoreward of the 10 m isobath, although some exist to 60 m." Most reef Scleractinian, Octocorallian, and Milleporarian corals are found in 10 to 40 m, very few are found in depths <10 m. Beyond 50 m, many ahermatypic corals are found, see Cairns (1979).

5-12 Page xviii, line 28. The most common fish associated with the live bottom habitat includes red grouper, white grunt, mangrove snapper, triggerfish, and belted sand fish.

5-13 Page xix, line 4. Hard bottom (live bottom) areas are inhabited by algae, sponge, corals, bryozoans, tunicates, and a diverse motile fauna of crustaceans, polychaetes, molluscs, echinoderms, and fish.

5-14 Page xix, line 8. Recreational activities are important to the economy, they generate a great amount of money through attendant service industries: dive shops, marinas, ice, fuel, bait, and boating accessories all are significant.

5-15 Page xix, line 26-27. Again, similar habitats are not being compared. The impact of dredge spoil on a sedimentary habitat cannot be extrapolated to a live bottom community.

5-16 Page xx, lines 18-22. Sea turtles, especially loggerheads, often remain on the same outcrop or live bottom site. Burial of the site may be significant to individuals. This is important during breeding periods since turtles tend to use the same areas to mate and nest. During internesting intervals, sea turtles remain in the immediate nearshore vicinity. Degrading the offshore environment may disrupt reproduction success.

5-17 Page xx, lines 27 and 28. Your conclusion that long term adverse biological effects will not occur from contaminants is not supported.

5-18 Page xxi, line 3-5. Other resources lost due to disposal would include any live bottom habitat that dredge spoil was dumped on, loss of fish and other renewable resources from the site.

Page xxi, lines 4 and 5. If you cite the benefits of marine commerce you should also cite the negative aspects of these activities. For example the the accidents and loss of life (Blackthorn-Capricorn, Summet Venture vs the Skyway Bridge), numerous other accidents; two barges hit the bridge in November, one was the dredge contractors. Commerce also has other
5-19 undesirable attributes i.e., oil spills and resultant environmental degradation.

Page xxi, line 22-26. The studies to date are insufficient to document
5-20 that there is less hard bottom (live bottom) in the site 4 area.

Page 1-7, lines 11 and 12. To date, EPA and the Corps studies are not
5-21 adequate to select or designate a most suitable site.

Page 2-1. You do not evaluate the existing bulkhead spoil disposal islands in Tampa Bay. Also, abandoned phosphate pits east of Tampa are potential
5-22 disposal sites. Only gulf sites are considered.

Page 2-2, line 4. Mid-shelf areas are not any more environmentally
5-23 sensitive than areas near to shore.

Page 2-3, line 11. It would be better to consistently use Lyons and
5-24 Collard (1974) terminology for benthic community distribution. The Collard and D'Asaro (1973) interpretation is not as accurate for offshore areas.

Page 2-3, lines 12 and 13. Chapter 3 of this draft indicates low average
5-25 winds and seas at the nearshore sites. Lyons and Collard (1974) characterization referred to the area as the shallow shelf 10-30 m (30-100 ft). Temperature and substrate are the physical-geological controls. Occasional severe storms place stress on this area, but it is not a consistent influence. Freshwater runoff, with the exception of hurricane generated rains, has little influence on bottom communities 13 to 17 nmi off the mouth of Tampa Bay.

5-26 Page 2-5. Land-based disposal. Why were the spoil islands in Tampa Bay eliminated from consideration?

5-27 Page 2-6, line 22. What are the technical and environmental reasons for concluding that ocean disposal of sediments is the most practical method of disposal? Your site specific studies are inadequate to show that disposal is not harmful to the adjacent live bottom communities.

5-28 Page 2-11, lines 11 and 12. Previous characterization on page xvi, line 3 states "(currents) are generally less than 1 kn." Furthermore, the cited reference (Holliday 1978) is not relevant, there is nothing in this report dealing with currents off Tampa Bay.

5-29 Page 2-11. In reference to animal species found in the region, one should refer to the many Hourglass monographs. Jaap (in prep.) identified 16 species of stony corals. There is no attempt to characterize dominant live bottom flora or fauna in this EIS.

5-30 Page 2-13, line 10-12. Was there a rational reason why the May 1982 site specific survey did not sample live bottom? There is admission that live bottom does exist, but failure to sample or study its biota.

5-31 Page 2-14, lines 5 and 6. What evidence do you cite to state that "animals of a shallow-water area must be adapted to periodic burial--."? You fail to cite the range of what "shallow water" is; define your terms. The area in 16-30 m depth is not a region of high energy. Your contention that disposal at a mid-shelf site would have longer adverse effect on the biota is inadequately supported. The community type is important when considering sites. There is more live bottom in the nearshore 10-30 m depths than in 70 m depth off Tampa Bay.

5-32 Page 2-15, line 1. Long line fishing does occur in this area.

5-33 Page 2-16, lines 22-24. The Hirsch et al. (1978) statement is irrelevant to the area off Tampa Bay in depths of 16-30 m. Live bottom communities are not unstable and are not sedimentary.

5-34 Page 2-17, lines 1-3. The lack of addressing the effect of fine silt-like sediment chronically deposited over a long period of time on live bottom habitat is of more concern than mixing different types of sediments.

5-35 Page 2-19, lines 9 and 10. Interim site A had a considerable amount of live bottom.

5-36 Page 2-19, lines 20-24. The video tape was only a small portion of the entire site. No side scan sonar or seismic survey of the area was made. Symetrical sampling with box cores is inadequate to discover live bottom.

5-37 Page 2-21. Amenity Areas. Egmont Key and Passage Key, at the mouth of Tampa Bay, are National Wildlife Refuges with nesting sites for endangered species (Loggerhead turtle) and species protected by statute (brown pelican). Least terns, black skimmers and laughing gulls also nest on these islands.

5-38 Page 2-21, lines 18 and 19. U.S. Fish and Wildlife Service 1982 identifies reef (live bottom) areas in the area, with red grouper, cobia, grunts, gag grouper, and sea bass.

5-39 Page 2-22, line 2. The survey was inadequate to confirm that major live bottom areas do not occur within the site.

5-40 Page 2-24, paragraph 2. What is the source for this information?

5-41 Page 2-24, paragraph 3. Site A has received 4.4 million yd^3, Site B received its volume over 5 years and the total was 1,020,000 yd^3. There is no evidence to insure that the mound at Site A won't remain. Some of the material is rock 1 ft or more in diameter. It will take very dynamic seas to move it.

5-42 Page 2-25, paragraph 2. The dredge disposal sites are in 40 ft depth or greater. This is not a "high energy environment" with the exception of a hurricane passing closeby.

5-43 Page 2-25, paragraph 3. It is not valid to compare eastern Gulf sites containing live bottom communities with a sedimentary site off Galveston, Texas. Furthermore, Taylor's (1982) work was largely restricted to soft-bottom infaunal recovery; he did not quantitatively look at live bottom or hard bottom communities. The nine-year temporal parameter is not a valid figure for the live bottom situation. Experience in coral reefs may be extrapolated for time estimates. Grigg and Maragos (1974) reported a time period of 20 to 50 years for recovery following lava flows. Pearson (1981) reported in reference to reef recovery "The situation is not clear, following man-made disturbances, where the environment may have undergone permanent change." Pearson reported that following natural disturbance, coral communities reguire several decades to recover.

5-44 Page 2-25, paragraph 4. What research substantiates the claim that "no major differences in finfish and shellfish species or numbers have been found between stations within the affected site and control stations."? The 1979b cited report is a EIS for port and crude oil distribution in Galveston, Texas. It is irrelevant to the Tampa Bay disposal sites.

5-45 Page 2-27, last paragraph. Many of the studies cited are not applicable, they are restricted to Tampa Bay and not the nearshore Gulf (Saloman 1973); others are not included in the references (Saloman and Saloman et al. 1968). The Smith et al. (1975), Dawes and van Breedveld (1969), through Huff and Cobb (1979) are not ecological studies of the area in question. Smith et al. (1975) is a study of Florida Middle Ground fish and Cairns (1977) is a taxonomic-systematic account of Caryophyllid-Dendrophyllid Scleractinia from the Hourglass Cruises.

5-46 Page 2-28, paragraph 2. The area also contains live bottom communities. It is not a high energy environment. The Holliday 1978 report does not contain any data about Tampa Bay nearshore environments.

5-47 Page 2-29, conclusion 4. The studies were insufficient to insure that major live bottom assemblages do not occur in the Site 4 area.

5-48 Page 2-32, line 14. This 1980 survey must be a typo; this is the first mention of it, and it is not in the references. Monitoring guidelines fail to address live bottom biota. This is the most sensitive community. Both Courtney et al. (1974) and Griffin (1974) have guidelines for monitoring and protecting reef type habitats in and around dredging operations that should be used here.

5-49 Page 2-33, line 15. The statement "--(hard and soft corals) are expected to occur, only to a limited extent, in the selected site; a survey to assess these species need not be made." is wrong. First, on the basis of your cursory field study, you have no idea of coral abundance within the area. Secondly, to write them off is a poor and indefensible option. Florida statute (370.114) and proposed federal fishery management plan regulations (Gulf of Mexico and South Atlantic Fishery Management Councils) make it illegal to harvest, sell, or destroy stony corals (orders Milleporina and Scleractinia) and the sea fan Gorgonia. It would seem rational that your guidelines reflect Florida law and the Fishery Management Councils concern regarding the value of coral and its intrinsic habitat value.

5-50 Page 2-34, lines 16, 17. Benthic sessile epifauna is more sensitive than the infauna. Attached epifauna is unable to leave the area.

5-51 Page 2-34, lines 17, 18. The numerically abundant organisms on live bottoms can be observed and censused in situ and monitored for change as well as infaunal populations.

5-52 Page 2-35, paragraph 1. It would appear that several macroinvertebrates are found in the area that could serve for trace metal accumulation study. The arc Noetia ponderosa, starfish Astropectin, and Echinaster, and several Holothurian species are common and remove nutrients from the sediments or sediment water interface.

5-53 Page 3-8, paragraph 4. Sediments of Tampa Bay are from previous time, the bay at present is not creating any appreciable sediments (Brooks, 1973 and Doyle and Sparks 1980).

5-54 Page 3-30, third line from the bottom. Sessile epibenthic organisms are better indicators than infauna.

Page 3-29 follows page 3-30.

5-55 Page 3-32. Change Gymnodinium breve to Ptychodiscus brevis, see Steidinger (1979).

5-56 Page 3-43, line 3. The corals are colonial and solitary. These outcrops also support a diverse assemblage of sponges, bryozoans, tunicates, all of which are sessile and provide habitat for many mobile organisms.

5-57 Page 3-43, line 27. The corals Cladocora arbuscola and Solenastreas hyades are not Alcyonarians, they are Scleractinians.

5-58 Page 3-47, paragraph 1. You should include information on the economics of bait, gas, boats, supplies, ice, diving, and other service industries that are fishing and boating related.

5-59 Page 3-47, paragraph 2. Spotted sea trout is not a fish found in the dredge spoil area.

5-60 Page 3-48. Landing statistics for shrimp are misleading, Tampa-St. Pete landings include harvest from Tortugas, Ft. Meyers, Texas, and at one time Mexico. Vessels fish many areas far from these ports.

5-61 Page 3-51, paragraph 3. Egmont Key and Passage Key are U.S. Fish and Wildlife Service Wildlife Refuges.

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tampa bay regional planning council

9455 Koger Boulevard
St Petersburg, FL 33702
(813) 577-5151/Tampa 224-9380

December 13, 1982

Mr. Jonathon Amson
U. S. Environmental Protection Agency
Criteria and Standards Division (WH-585)
401 M Street, S.W.
Washington, D. C. 20460

Dear Mr. Amson:

Subject: TBRPC A-95 Clearinghouse Review #218-82; Draft Environmental Impact Statement (DEIS) for Tampa Harbor, Florida, Ocean Dredged Material Disposal Site Designation, Hillsborough, Manatee and Pinellas Counties

Pursuant to OMB Circular A-95, the Tampa Bay Regional Planning Council is conducting a review of the above referenced DEIS and, based upon the December 13, 1982 required response date, submits the following preliminary comments as related to the document's specific recommendations regarding the designation of Alternative Site 4:

6-1 • The DEIS lacks sufficiently detailed evaluation and comparisons of all possible alternatives including diked disposal islands and upland disposal areas.

6-2 • The designation of Alternative Site 4 for disposal of dredged material from the Tampa Bay Area should be based on more detailed studies of this area. The DEIS lacks site specific studies evaluating the impacts on marine environment and economy of the region. The results of the studies done in other locations cannot serve as the base for evaluating the impacts of the proposed dumping of dredged material on the proposed site.

6-3 • The environmental consequences of dumping dredged sediments on sand-substate habitats also cannot be predicted based on the results of the studies from other locations. The ecosystem of shallow-waters in central-southwest Florida is different from the continental U. S. waters.

6-4 • Information pertaining to tidal currents is needed based on records obtained from the tide guage station located in Egmont Key.

6-5 • The monitoring program has not been specifically designed to determine whether disposal at the selected site significantly affects areas outside the site and to detect long term effects occurring in or around the site. It is stated in the DEIS that a monitoring program may be established to supplement historical data. Details on what the monitoring program will entail must be included.

Chairman Jan K. Platt
Commissioner, Hillsborough County

Vice-Chairman George McGough
Mayor, City of Largo

Secretary/Treasurer Saundra Rahn
Councilwoman, City of Bradenton

W.A. Ockunzzi
Executive Director

Bradenton • Clearwater • Dade City • Dunedin • Gulfport • Hillsborough County • Largo • Manatee County • New Port Richey • Oldsmar • Palmetto • Pasco County • Pinellas County • Pinellas Park • Safety Harbor • St. Petersburg • St. Petersburg Beach • Sarasota • Tampa • Tarpon Springs

6-6 • The recreational and commercial fishing values of the surrounding area should be identified as well as the impacts of ocean disposal on migratory fishing.

6-7 • It is stated that dispersion of disposal material outside the site boundaries will be over time and in thin layers, and that such dispersion is not expected to have unacceptable adverse environmental impacts. Specific studies need to be completed to determine whether the thin layer of siltation adversely impacts the surrounding hard bottoms (corals).

It is the opinion of the Council staff that the DEIS is inadequate in detail on the above issues and should be sufficiently documented prior to designating the most environmentally and economically acceptable location for disposal of large volumes of dredged material. The amendments should include the feasibility of other possible alternatives, including diked disposal islands and upland disposal areas. The Council staff does not support the identified ocean disposal areas located offshore due to the potential destruction of wetlands. If the revised studies of viable alternatives prove that Alternative Site 4 is the most environmentally and economically acceptable location, both in the ocean and on land, then it is the opinion of the Council staff that a very stringent monitoring program should be established to trace the future changes caused by the disposal action.

6-8

In conclusion, the final recommendation of the DEIS for Tampa Harbor which designates Shallow-Water Alternative Site 4 as the Tampa Harbor ocean dredged material disposal site is not consistent with the Council's adopted policy to support the maintenance of Class III Waters, including bays, rivers, lakes, estuaries and open waters of the territorial sea, at a quality sufficient to allow body-contact water sports and propagation of fish and wildlife. (Future of the Region, 2.402)

6-9

The above comments by the staff of the Tampa Bay Regional Planning Council are preliminary and are subject to approval by the Council's Clearinghouse Review Committee and final approval by the Council's full policy board. Additional local and regional comments will be forthcoming upon the January 3, 1982 meeting of the Council's Clearinghouse Review Committee. As discussed, the copy of the draft Clearinghouse report will be submitted to you prior to the meeting. This format is necessary because, as noted in our November 19, 1982 letter to you, TBRPC was not included, as required by OMB Circular A-95, on EPA's initial request for comments, and therefore, did not obtain a copy of the document until November 22, 1982. Finally, any local comments received from interested parties in the Tampa Bay Region will be forwarded to EPA immediately upon our receipt.

We appreciate the opportunity to review this important DEIS and hope our comments are helpful to you in preparing the final EIS for the Tampa Harbor

Disposal Site Designation. Should additional clarification be necessary, please contact Ms. Margaret Guy of the Council's staff.

Sincerely,

William A. Ockunzzi
Executive Director

WAO/jls

cc: Walt Kolb
Jesse Carr
Westwood Fletcher
Jan Platt

Jonathan 24

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

OFFICE OF THE ADMINISTRATOR

December 16, 1982

Environmental Protection Agency
Criteria and Standards Division (WH-585)
401 M Street, SW, Room 2824
Washington, D.C. 20460

Dear Sir:

This is in reference to your draft environmental impact statement entitled "Tampa Harbor, Florida, Ocean Dredged Material Disposal Site Designation." Enclosed are additional comments from the National Oceanic and Atmospheric Administration.

Thank you for giving us an opportunity to provide comments.

Sincerely,

Joyce M. Wood

Joyce M. Wood
Chief
Ecology and Conservation Division

Enclosure

25

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
OFFICE OF MARINE POLLUTION ASSESSMENT
Rockville, Maryland 20852

To: PP/EC - Joyce Wood

From: RD/MP - R. Lawrence Swanson

Subject: DEIS 8211.02 - Tampa Harbor, Florida, Ocean Dredged Material Disposal Site Designation

This DEIS appears to be adequate to support the proposed ocean disposal of dredged material. The material to be dredged is not severely contaminated and should not cause any major disruption of the shelf ecosystem beyond that due to turbidity and burial. The monitoring program outlined on pp 2-31 to 2-35 is a good one and should be continued for a least several years after disposal begins. It should include con-
7-1 tinued sampling of the dredged material itself to insure that there is no major change in constituents. On a more general level, there should be extensive coordination within and among the various COE Districts to insure intercomparibility of monitoring results. The relative suitability of the many present ocean disposal sites now being designated could then be assessed, and the results used in the planning of future disposal actions.

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301-8241

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

December 17, 1982

RECEIVED
DEC 17 1982

Mr. Walt Kolb
Senior Governmental Analyst
Office of Planning and Budgeting
Office of the Governor
415 Carlton Building
Tallahassee, Florida 32301

Dear Walt:

Re: Draft Environmental Impact Statement, Tampa Harbor, Florida, Ocean Dredged Material Disposal Site Designation

We have reviewed the referenced document and offer the following comments.

8-1 Essentially, the selection of a preferred alternative was based upon the tangible considerations of distance from shore (transport costs) and prevalence of hard bottoms. Most of the potential ecological impacts, particularly long-term effects, are not weighed as strongly since they are less quantifiable and less studied. Further, the conclusions presented in the text are based upon information contained in appendices which were not included with the DEIS.

8-2 The alternatives evaluations are understandably sensitive to the presence of hard bottoms, but this is not the only important component of live bottoms. Soft live bottoms are viable and vulnerable components of the ecosystem, too. The characterizations on p. 2-19 do not discuss the biological characteristics of the Site 4 bottoms. The only information given is geophysical, primarily noting fewer areas of hard bottom lithotype than alternative sites.

8-3 While the DEIS asserts that recovery for soft bottoms is certain, many qualifications must modify these expectations. This is a relatively unstudied topic with wide variability in results and predictions. One of the main factors repeatedly mentioned as a facilitator of recolonization by non-opportunistic species is the similarity between the disposed material and bottom sediments. The dredged material proposed for disposal is a finer material than the recipient bottoms of Site 4.

The distribution of a discharge plume at sea is unpredictable. It is not unrealistic to consider the possibility of a several mile impact distance (p. 2-26). Entrainment of pollutants is even less predictable. Some of these pollutants will be anthropogenic with a greater probability for persistence in the environment. Dissolution may result in or contribute
8-4 to localized high nutrient concentrations, one of the assumed preconditions for red tide blooms (p. 4-8). Dissolved contaminants may also effect chronic, sublethal damages to biological populations through interference with chemoreception.

The pile formed on the ocean floor may also spread and slough onto adjacent bottoms. During the period that affected bottoms are devoid of
8-5 benthic organisms, their contributions to water quality, habitat and bottom stability are lost.

The combined results of all these potential effects of the proposed disposal will operate on fishery resources dependent upon an intact
8-6 ecosystem. Again, the full extent of these effects cannot be quantified (p. 4-22).

It is a reflection of the complexity of the marine environment that many of the above impacts are difficult to assess with fixed numbers. It is also a reflection of the sensitivity of this delicately balanced ecosystem that some degree of all these impacts can be expected to result from a perterbation such as dredged material disposal. A difficulty in quantifying
8-7 effects should encourage a cautious approach to the use of Gulf coastal waters for dumping grounds. Also, this activity would only be one of many degrading influences operating on area environmental quality. It is myopic to continue to expect infinite capacity out of a finite waterbody. Dilution does not solve environmental contamination.

Another long-term consequence of the proposed dumping is the waste of the material itself. We continually lose upland and nearshore sediments to erosion to the extent that we should not discard useable material. We recognize the magnitude and complexity of dredged material disposal,
8-8 but cheaper and quicker options are not always better economically or environmentally. Planning for port development, expansion and maintenance should include consideration of appropriate, conservative disposal methodologies. Upland disposal and recycling of previously used sites should be given the highest priority.

On November 5, 1982, we advised the EPA of the state's concerns for proceeding with site designation and rule-making without benefit of the
8-9 federal consistency review prescribed by the Coastal Zone Management Act. (see attached correspondence.) To date, we have received no reply

or submission of consistency findings. We reiterate our request for attention to these federal requirements as soon as possible.

Cordially,

Lynn F. Griffin

Lynn F. Griffin
Environmental Specialist
Intergovernmental Programs
Review Section

LFG/jb

cc: Dave Worley
Terry Cole
Steve Fox
Ann Berger-Blundon
Elton Gissendanner

November 5, 1982

Mr. T. A. Wastler, Chief
Marine Protection Branch (WH-585)
Environmental Protection Agency
Washington, D.C. 20460

Dear Mr. Wastler:

Re: Proposed Rule for Ocean Dumping, Gulf of Mexico

On review of the Federal Register (Vol. 47, No. 194), we note that the EPA is proposing certain dredged material disposal site designations pursuant to 40 CFR Part 228. Specifically, the proposed rule would extend the interim designation of Site A, which is currently being used for the Corps of Engineers' Tampa Harbor Project, Section 2C materials. Additionally, interim approval of a new site, Site 4, is proposed, which would accommodate the remaining dredged materials from this project. A permanent ocean disposal site, not necessarily one of these, will be designated through an Environmental Impact Statement review.

Adoption and implementation of the proposed rule enables an activity to be conducted in an area in and surrounded by abundant marine resources of significant importance to recreational and commercial enterprises in Florida. Under the federal Coastal Zone Management Act, federal activities directly affecting the coastal zone of a state must be conducted in a manner consistent to the maximum extent practicable with the approved state coastal management program. The EPA is required under 15 CFR Section 930.33(c) to evaluate the full extent of these direct effects and, subsequently, prepare a federal consistency determination for the state's review and comment.

We, therefore, request that these findings be submitted to the Florida Department of Environmental Regulation and/or the Governor's Office of Planning and Budgeting, Natural Resources Policy Unit as soon as possible. As appropriate, we expect the federal consistency review to precede

final adoption of the proposed rule as specified in Section 930.34 of the federal regulation. We understand that ample time is available under the rulemaking and NEPA processes to accommodate this compliance requirement.

Sincerely,

Terry Cole
Assistant Secretary

TC/lgb
cc: William Matuszeski
Ann Berger-Blundon
David Worley
Elton Gissendanner
Tom Herndon

tampa bay regional planning council

9455 Koger Boulevard
St. Petersburg, FL 33702
(813) 577-5151/Tampa 224-9380

December 22, 1982

Mr. Jonathon Amson
U.S. Environmental Protection Agency
Criteria and Standards Division (WH-585)
401 M Street, S.W.
Washington, D.C. 20460

Dear Mr. Amson:

Subject: Tampa Bay Regional Planning Council A-95 Clearinghouse Review No. 218-82; Draft Environmental Impact Statement (DEIS) for Tampa Harbor, Florida, Ocean Dredged Material Disposal Site Designation, Hillsborough, Pinellas and Manatee Counties

As referenced in my December 13, 1982 correspondence, enclosed for your information is a copy of our draft Clearinghouse report and recommendations concerning the above referenced project. The Tampa Bay Regional Planning Council's Clearinghouse Review Committee will consider this report at its January 3, 1983 meeting.

Should additional clarification be necessary, please contact me.

Sincerely,

Michael R. McKinley

Michael R. McKinley
Director of Planning

MRM/kh

Enclosure

Chairman Jan K. Platt
Commissioner, Hillsborough County

Vice-Chairman George McGough
Mayor, City of Largo

Secretary/Treasurer Saundra Rahn
Councilwoman, City of Bradenton

W.A. Ockunzzi
Executive Director

Bradenton • Clearwater • Dade City • Dunedin • Gulfport • Hillsborough County • Largo • Manatee County • New Port Richey • Oldsmar • Palmetto • Pasco County • Pinellas County • Pinellas Park • Safety Harbor • St. Petersburg • St. Petersburg Beach • Sarasota • Tampa • Tarpon Springs

A-95 #218-82; Draft Environmental Impact Statement (DEIS) for Tampa Harbor, Florida, Ocean Dredged Material Disposal Site Designation, Hillsborough, Pinellas and Manatee Counties

CLEARINGHOUSE REVIEW

The U.S. Environmental Protection Agency (EPA) has requested review and comment on the draft Environmental Impact Statement (EIS) for Tampa Harbor, Florida which presents information necessary for the designation of a new Tampa Harbor Dredged Material Disposal Site. The purpose of the action is to provide the most environmentally and economically acceptable ocean location for the disposal of material dredged from the Tampa Bay area. Based on recent surveys of four Shallow-Water Alternative Sites, EPA has determined that Shallow-Water Alternative Site 4 is the alternative with the fewest hard-bottom areas which may be affected by the disposal of dredged material. It is the recommendation of the DEIS that Alternative Site 4 be designated as the disposal site location for dredged material from the Tampa Bay area. Agency - EPA; Location - Hillsborough, Pinellas and Manatee Counties.

Local Comments Received From:

Hillsborough County Environmental Protection Commission: See attached letter dated December 5, 1982.

Hillsborough County Department of Development Coordination: See attached memorandum dated December 3, 1982.

Pinellas County Planning Department: No comment received as of December 30, 1982.

City of St. Petersburg Planning Department: See attached letter dated December 16, 1982.

Manatee County Board of County Commissioners: See attached letter dated December 13,1982

Mote Marine Laboratory: See attached letter dated December 9, 1982.

Gulf of Mexico Fishery Management Council: See attached letter dated December 10, 1982.

Office of the Governor: See attached letter dated December 22, 1982.

Council Comments and Recommendations

This project has been reviewed for consistency with the Council's Areawide Water Quality Management Plan and the Council's adopted growth policy, the Future of the Region. The proposal has not been found to be consistent with Council policy that a standard of water quality should be achieved that allows for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the waters in the region.

This project is regionally significant and the following local and regional concerns have been raised during the review:

- The staff of the Tampa Bay Regional Planning Council has reviewed the Draft Environmental Impact Statement (DEIS) for Tampa Harbor Ocean Dredged Material Disposal Site Designation and offers the following comments:

General Comments

9-1 1. The DEIS lacks sufficiently detailed evaluation and comparisons of all possible alternatives including diked disposal islands and upland disposal areas.

9-2 2. The designation of Alternative Site 4 for disposal of dredged material from the Tampa Bay Area should be based on more detailed studies of this area. The DEIS lacks site specific studies evaluating the impacts on marine environment and economy of the region. The results of the studies done in other locations cannot serve as the base for evaluating the impacts of the proposed dumping of dredged material on the proposed site.

9-3 3. The environmental consequences of dumping dredged sediments on sand-substate habitats also cannot be predicted based on the results of the studies from other locations. The ecosystem of shallow-waters in central-southwest Florida is different from the continental U.S. waters.

9-4 4. Information pertaining to tidal currents is needed based on records obtained from the tide guage station located in Egmont Key.

9-5 5. The monitoring program has not been specifically designed to determine whether disposal at the selected site significantly affects areas outside the site and to detect long term effects occurring in or around the site. It is stated in the DEIS that a monitoring program may be established to supplement historical data. Details on what the monitoring program will entail must be included.

9-6 6. The recreational and commercial fishing values of the surrounding area should be identified as well as the impacts of ocean disposal on migratory fishing.

9-7 7. It is stated that dispersion of disposal material outside the site boundaries will be over time and in thin layers, and that such dispersion is not expected to have unacceptable adverse environmental impacts. Specific studies need to be completed to determine whether the thin layer of siltation adversely impacts the surrounding hard bottoms (corals).

Specific Comments

9-8 1. Statements that there are no hard-bottom habitats within or in proximity to Site 4 are not well-documented. More extensive inspection of areas both within and around the site is necessary before it can be known what types of organisms and communities will be

adversely affected by dumping. In-depth surveys to determine the nature and extent of live, hard-bottom habitats in or near the site should be further conducted.

9-9 2. It is stated in DEIS that results of dredged material disposal at the Tampa Harbor alternative sites are anticipated to be similar to the results of disposal operations at Galveston, Texas (page 2-28). However, the West Florida Shelf cannot be compared with other areas which have no hard-bottom communities. The conclusions that disposal will not result in any detectable changes in ecology of the area are inappropriate.

9-10 3. An assessment of the siltation and turbidity caused by resuspension of fine particles by waves, storms and tides has not been completed, as well as the expected impacts of the siltation on live-bottom habitats.

9-11 4. The long-term effects from the continual resuspension of spoil material throughout the water column have not been adequately studied nor documented. The amount and frequency of siltation, the direction of sediment transport based on site-specific ocean current information, and the environmental consequences of long-term turbidity should be estimated before final recommendations are made.

9-12 5. It is stated in the DEIS that Site 4 is removed from areas of recreational use, and has no known significant commercial fishery use (page 2-27). This statement is not based on the detailed survey of commercial and recreational fishing activities of this area. Relevant studies should be completed based on public testimony whether the proposed action affects the recreational activities of the region and commercial fishing.

9-13 6. Cost-benefit analysis, taking into account the direct and indirect economic benefits generated by the recreational use of this part of the Gulf of Mexico have not been done at this time.

9-14 7. A public hearing should be scheduled to allow full and fair public comment in the draft EIS and the overall suitability of dumping in the Eastern Gulf of Mexico.

- The Manatee County Board of County Commissioners has provided extensive comments which already have been forwarded to EPA and are summarized below (see attached letter dated December 13, 1982) regarding the Draft EIS for a permanent ocean disposal site for Tampa Harbor:

9-15 1. The EPA survey upon which the EIS relies to recommend Site 4 for permanent designation, used survey methodologies that are inadequate for determining the nature and extent of live, hard-bottom habitats in or near the site; yet, the entire EIS rests on the unproven assumption that there are no hard-bottom habitats within or in proximity to Site 4. This is critical because of the well-documented importance of live-bottom habitats to both commercial and recreational fishery resources.

2. Although the EIS notes that significant damage that can occur to hard-bottom habitats from siltation and turbidity, it completely fails to describe or assess the siltation and turbidity that will be caused by resuspension of fine particles by waves, storms, tides, and combinations thereof, and it fails to quantify the resulting siltation problem and its expected impacts to corals, sponges, algaes, and the like. 9-16

3. The EIS recommendation of Site 4 is based on erroneous and understated information concerning the use of the area in and around the site, which is actually located in an area that is heavily used by commercial and recreational fishermen, sport divers, and others. 9-17

4. The Site-Designation EIS presumes that ocean dumping is appropriate in this part of the Gulf of Mexico, disregarding as a general matter the high potential for damage from burial and siltation to the hard-bottom habitats and organisms found scattered throughout this part of the Gulf, and inadequately considering the possibility of using uplands or diked disposal areas on a short-term basis pending thorough investigation of the suitability of ocean dumping. 9-18

5. The EIS also relies on erroneous cost estimates for transporting the dredged material to various alternative sites, and there is no comparison of the environmental "pros and cons" of each alternative site relative to the economic costs. 9-19

6. Finally, with respect to the EIS's cost analyses, the EIS fails to take any account of the direct or indirect economic benefits generated by the recreational use of this part of the Gulf of Mexico, thereby placing too-heavy emphasis on the immediate costs of spoil transportation. 9-20

Therefore, in light of the many deficiencies of the Draft EIS, including reliance on erroneous assumptions, inadequate surveys, and incorrect infomation, the Board of County Commissioners of Manatee County requests that a public hearing be scheduled to discuss the Draft EIS and proposed site designation, or, in the alternative, that the Draft EIS be withdrawn and subsequently resubmitted for public comment. 9-21

- The staff of the Hillsborough County Environmental Protection Commission has reviewed the Draft Environmental Impact Statement (EIS) for Tampa Harbor: Ocean Dredged Material Disposal Site Designation and submits the following comments and recommendations:

  It is recommended that <u>all</u> disposal at the Existing Site A be stopped because it is too close to shore, too close to productive reef areas, and within easy reach of divers and small boat users. 9-22

  Site 4 is in 85 to 95 feet of water and is not as likely to be used for recreational purposes such as diving and fishing. All material should go to this site until some long range solution is found. 9-23

9-24 Site 4 has no hard-bottom outcrops and would therefore have the least impact on fish and other types of life.

- The City of St. Petersburg Planning Department has reviewed the Draft EIS for Tampa Harbor: Ocean Dredged Material Disposal Site Designation and recommends the following additions to the above referenced EIS:

  > Incorporation of any appropriate review criteria which may be forthcoming from the pending litigation related to offshore dumping initiated by Manatee County;
  >
  > Analysis of upland dumping sites;
  >
  > Further analysis of Site 4. It appears that Appendix C. (referenced on Page 2-13 of study) may provide additional data to substantiate minimal adverse environmental impacts.

- The Office of the Governor has submitted the following comments and recommendations regarding the Draft EIS:

  > An interagency review of the statement has found that the proposed action would smother the benthos within the designated area and alter habitat within the site. The document recognizes that these adverse impacts at the site are unavoidable. Our reviewing agencies report that the EIS statement is inadequate and lacks the necessary information to be of sufficient value as a decision-making document (see attachments).
  >
  > We have concerns with this designated site and EPA's proposed rule for ocean dumping without a Federal Coastal Zone Management Consistency Evaluation. Recognizing our concerns, the impact of this designation and its effect on the Tampa Harbor project, we request that your agency participate in an interagency meeting at your earliest convenience to afford us the opportunity to discuss issues of concern to the State of Florida. It is our desire to use this initial meeting as a step toward resolving our concerns.

Based on the review of this document, it is the opinion of the Tampa Bay Regional Planning Council that no ocean dumping should be performed until it is demonstrated that ocean dumping in this part of the Gulf of Mexico is appropriate and that it is the most suitable method of disposal. That demonstration should include an actual determination of the
9-25 nature and extent of hard-bottom habitats and fishery resources in site 4 and in surrounding areas. This determination should be based on further, site-specific surveys, including the direction, amount, frequency, and distance of sediment transport and siltation, and a specific quantification of the damage that will result therefrom. Also, a de-

tailed, careful balancing of the economic versus environmental concerns for each alternative method should be performed, including consideration of the many commercial aspects of recreational fishing and diving and development of a thorough monitoring program to assess the impacts of any dumping on a long-term basis.

In conclusion, the final recommendation of the DEIS for Tampa Harbor which designates Shallow-Water Alternative Site 4 as the Tampa Harbor ocean dredged material disposal site is not consistent with the Council's adopted policy to support the maintenance of Class III waters, including bays, rivers, lakes, estuaries and open waters of the territorial sea, at a quality sufficient to allow body-contact water sports and propagation of fish and wildlife. (Future of the Region, 2.402)

9-26 It is recommended that Alternative Site 4 not be used as an interim dumping site, and that all concerned parties meet to resolve identified concerns.

It is therefore recommended that the above local and regional concerns and recommendations be addressed in the final EIS for Tampa Harbor. Further, it is recommended that any additional comments addressing local concern be considered prior to issuance or approval of the final EIS.

Committee adopted January 3, 1983.

George C McGough

Mayor George McGough, Chairman
Clearinghouse Review Committee

Please note: Unless otherwise notified, action by Clearinghouse Review Committee is final. Append copy to application to indicate compliance with clearinghouse requirements. Comments constitute compliance with OMB Circular A-95 only.

35

PEEPLES, EARL, REYNOLDS & BLANK

PROFESSIONAL ASSOCIATION
ATTORNEYS AT LAW

L. GRANT PEEPLES
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TALLAHASSEE, FLORIDA 32302
(904) 222-2156

REPLY TO:

Miami

December 14, 1982

Joseph Freedman, Esquire
Office of the General Counsel
U.S. Environmental Protection Agency
Rm. 538, West Tower
401 M. Street, S.W.
Washington, D.C. 20460

Re: Comments on Draft EIS for Tampa Harbor Site Designation

Dear Joe:

This will confirm that you have agreed to a one day extension within which Manatee County can provide comments to EPA's Draft EIS for a permanent ocean dump site desigation outside Tampa Harbor, Florida. Therefore, Manatee County will file the comments with EPA on December 14, 1982. I have enclosed a copy of Manatee County's comments for your convenience.

Thank you very much for your cooperation.

Yours very truly,

PEEPLES, EARL, REYNOLDS & BLANK

William F. Tarr
For the Firm

WFT/yp
cc: Mr. T. A. Wastler

36

PEEPLES, EARL, REYNOLDS & BLANK
PROFESSIONAL ASSOCIATION
ATTORNEYS AT LAW

L. GRANT PEEPLES
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REPLY TO:

Miami

December 13, 1982

Mr. T. A. Wastler
Chief, Marine Protection
Branch (WH-585)
Environmental Protection Agency
401 M. Street S.W., Room 2709
Washington, D.C. 20460

Re: Comments on Draft EIS No. 820697, Tampa Harbor Ocean Dump Site Designation; Request for Public Hearing and for Withdrawal of EIS.

Dear Mr. Wastler:

This letter is furnished on behalf and under express authority of the Board of County Commissioners of Manatee County, Florida, to provide comments to the Environmental Protection Agency (EPA) on its Draft Site-Designation EIS for a permanent ocean dump site outside Tampa Harbor. This letter is also provided to request a public hearing concerning the EIS and the site-designation and, because of the many deficiencies in the EIS, to suggest that it be withdrawn and resubmitted after development of more accurate information.

Because of the County's proximity to the dump sites proposed in the EIS and the heavy use of the Gulf of Mexico by its citizens and tourists, Manatee County is vitally interested in assuring that the most suitable ocean dump site is selected (if dumping in this part of the Gulf is, in fact, appropriate) in order to protect commercial and recreational activities in the marine environment and the public health, safety, and welfare.

In pursuit of those goals, Manatee County recently filed a lawsuit against EPA and the Army Corps of Engineers, which was joined in by the cities of Anna Maria and Holmes Beach, seeking to enjoin the use of the existing Gulf dump site approximately thirteen miles offshore. An order from the Court in this lawsuit, styled Manatee County et al. v. Gorsuch et al., Case No.

82-248-Civ-T-GC (M.D. Fla.), is expected in the very near future. As a result of that litigation, a great deal of information has been developed that reveals numerous deficiencies in the Draft EIS and militates in favor of withdrawing it for further consideration. As you know from the taking of your deposition in June of 1982, the federal government at all times had at least four attorneys working on the case, and the same four people (including Joseph Freedman, Esq., of EPA) were actively involved all the way through trial. It is suggested that you consult with your legal counsel to take advantage of their knowledge of these matters.

To summarize what is amply demonstrated by the below-enumerated specific comments, the Draft Site-Designation EIS is either wrong or inadequate in at least six general respects:

(1) The EPA survey upon which the EIS relies to recommend Site 4 for permanent designation, used survey methodologies that are inadequate for determining the nature and extent of live, hard-bottom habitats in or near the site; yet, the entire EIS rests on the unproven assumption that there are no hard-bottom
10-1 habitats within or in proximity to Site 4. This is critical because of the well-documented importance of live-bottom habitats to both commercial and recreational fishery resources.

(2) Although the EIS notes that significant damage that can occur to hard-bottom habitats from siltation and turbidity, it completely fails to describe or assess the siltation and turbidity that will be caused by resuspension of fine particles by waves, storms, tides, and combinations thereof, and it fails
10-2 to quantify the resulting siltation problem and its expected impacts to corals, sponges, algaes, and the like.

(3) The EIS recommendation of Site 4 is based on erroneous and understated information concerning the use of the area in and around the Site, which is actually located in an area that is heavily used by commercial and recreational fishermen, sport
10-3 divers, and others.

(4) The Site-Designation EIS presumes that ocean dumping is appropriate in this part of the Gulf of Mexico, disregarding as a general matter the high potential for damage from burial and siltation to the hard-bottom habitats and organisms found scattered throughout this part of the Gulf, and inadequately considering the possibility of using uplands or diked disposal
10-4 areas on a short-term basis pending thorough investigation of the suitability of ocean dumping.

(5) The EIS also relies on erroneous cost estimates for transporting the dredged material to various alternative sites, and there is no comparison of the environmental "pros and cons" of each alternative site relative to the economic costs. 10-5

(6) Finally, with respect to the EIS's cost analyses, the EIS fails to take any account of the direct or indirect economic benefits generated by the recreational use of this part of the Gulf of Mexico, thereby placing too-heavy emphasis on the immediate costs of spoil transportation. 10-6

Therefore, in light of the many deficiencies of the Draft EIS, including reliance on erroneous assumptions, inadequate surveys, and incorrect information, the Board of County Commissioners of Manatee County requests that a public hearing be scheduled to discuss the Draft EIS and proposed site designation, or, in the alternative, that the Draft EIS be withdrawn and subsequently resubmitted for public comment.

The following comments are directed toward specific portions of the EIS:

COMMENT No. 1 -- page x, ¶ 1:

> Non-ocean disposal methods were considered by the U.S. Army Corps of Engineers (C.E., 1974) (while evalutating the need for ocean disposal) to be less desirable than disposal in the ocean because of the quantity of sediments to be dredged, the limited receiving capacity of land disposal sites, and economic and environmental concerns.

That statement is erroneous. In fact, the Corps of Engineers expressly and unequivocally rejected ocean dumping as an alternative: 10-7

> 6.05 Consideration was given to disposal in the Gulf of Mexico. This would entail covering 6.1 square miles of Gulf bottom with an average of ten feet of fill. This plan produced the highest costs of all alternatives considered. (Final EIS at 142).
>
> * * * *
>
> Gulf disposal was ruled out because of prohibitive costs. (Final EIS at page v).

The statement in EPA's Draft EIS implies that the Corps of Engineers carefully examined several types of dumping but choose ocean dumping. That clearly was not the case. In addition, the
10-8 adequacy of the Corps's discussion of alternatives is now subject to challenge in the above-described lawsuit. Further comment in this regard is provided below.

COMMENT No. 2 -- page 2-3, ¶ 2:

> However, using Shallow-Water Alternative Sites one or four would add only 4-5 nmi to the present round-trip distance to the Outer Existing Site . . . .

The round trip calculation has apparently been cut in half through a clerical or typographical error. Testimony by the Corps at trial indicated that the additional distance to Site 4 (above and beyond Site A) was 5.6 nmi one way, so the round trip
10-9 distance would actually be approximately 11 nmi.

COMMENT No. 3 -- page 2-4, ¶ 2:

> By taking no action, the present ODMDS's would not receive permanent designation, nor would an alternate ocean disposal site be permanently designated. Therefore, the CE would be required to: (1) justify an acceptable alternative disposal method (e.g., land-based); (2) develop information sufficient to select an acceptable site for disposal in the ocean; or (3) modify or cancel a proposed dredging project that depends on disposal in the ocean as the only feasible method for the disposal of dredged material.

The next sentence of the Draft EIS then summarily states that the "No-Action Alternative" in therefore unacceptable. No analysis of the reasoning used to discount the three cited factors is provided, and this passage suggests that the Corps should not be burdened with environmental considerations. Please explain why it is unreasonable for the Corps to "justify an
10-10 acceptable alternative disposal method (e.g., land-based)," which would present less environmental damage than that caused to sensitive marine habitats from burial and siltation. Equally important, explain how it would be unacceptable to ask the Corps "to develop information sufficient to select an acceptable site"

for ocean dumping. Finally, please clarify why the proposed dredging project (apparently Section 3B) depends on ocean dumping as "the only feasible method," when testimony as trial clearly demonstrated that the diked disposal areas in upper Hillsborough Bay are closer to Section 3B than the Gulf dump sites; that the use of the diked disposal areas would not have unacceptable adverse impacts to the environment, in stark contrast to dumping in the ocean; that the diked disposal areas have ample capacity for handling the dumping from Section 3B and other projects; and that the cost of disposing materials at the diked disposal areas would be approximately the same as the costs of ocean dumping.

COMMENT No. 4 -- pages 2-5 to 2-6:

[See Block-indented quotation of Corps of Engineers concerning land-based disposal, dated 1974.]

Reliance on this passage from the Corps of Engineers' Final EIS for the Tampa Harbor Project is flawed for several reasons. First, the Corps quotation was dated 1974, fully eight years ago, and conditions may well have changed drastically since that time. Please specifically reexamine the feasibility of upland disposal
10-11 as of today, describe potential upland sites (and other locations) in the area, and explain why each is less appropriate than ocean dumping.

Second, the 1974 decision regarding land-based disposal was based on the dumping of 72.8 million cubic yards of material to be dredged from the Tampa Harbor Deepening Project. Nothing in EPA's Draft EIS suggests that like-quantities are proposed for dumping in the near future, so that the feasibility of the use of uplands, diked disposal areas, etc., in the near future should be reconsidered. Please describe the location of all possible upland disposal areas and assess the costs and enviromental
10-12 benefits of transporting dredged materials to each upland location versus ocean sites and the diked disposal areas. Also, please discuss currently proposed dredging projects in the Tampa area and their current, projected scheduling so the actual need for ocean dumping can be better determined in the EIS.

Finally, as noted above, two diked disposal areas exist in upper Hillsborough Bay that are stated by the Corps of Engineers to contain 15 million cubic yards of capacity. Although they are purportedly slated to be used for dumping from maintenance
10-13 dredging over the next twenty-five to fifty years, please explain why they could not be used on a short-term basis as an alternative to ocean dumping pending completion of complete and careful studies of the feasibility and suitability of particular ocean dump sites or other methods of disposal.

COMMENT No. 5 -- page 2-8, ¶ 1:

> It was determined during the initial screening that areas immediately north and west of the Existing Sites should be eliminated from consideration because of the presence of hard-bottom areas and artificial reefs.

That statement is misleading and inaccurate. As a result of its September/October 1979 and January 1980 surveys, Interstate Electronics Corporation actually "strongly recommend[ed] that the Existing Sites not be used or designated." Nevertheless, the Corps and EPA authorized the dumping of several million cubic yards of dredged spoils at Site A in spite of the express recommendation of EPA's contractor to the contrary. Please
10-14 furnish the documentation showing that IEC recommended that the areas north and west of the existing sites, as opposed to the existing sites themselves, should be eliminated. Most important explain why the Corps and EPA used Site A in spite of IEC's recommendation against it.

COMMENT No. 6 -- page 2-8, ¶ 2, 2nd circle:

> At this point, based on evalutation of the historical and survey data and information, it was concluded that:
>
> * * * *
>
> Suggested Shallow-Water Site 2 and the Existing Sites are the most economical; however, Shallow-Water Alternative Sites 1 and 3 are probably more environmentally acceptable locations for dredged material disposal.

That block-indented material is similarly erroneous and demonstrates a misunderstanding of the factual history of EPA's own site-designation process. The quoted material refers to
10-15 IEC's 1979/1980 survey, but states that conclusions were made at that time concerning Alternative Sites 1, 2, and 3. IEC, however, did not even survey Sites 1 through 3 at that time: the first survey of those sites did not occur until the Reconaissance Survey of October, 1981.

COMMENT No. 7 -- page 2-9, ¶ 3 (last line) and ¶ 4:

> Alternative Site 3 appeared to be sandy-bottomed over its entire area.

Based on results of the Reconaissance Survey, more in-depth surveys were planned.

Please explain the difference in the results of the Reconaissance Survey in October of 1981 and the EPA Survey of Site 4 in May of 1982. During the Reconaissance Survey, actual diver observations were made, which is (from a scientific standpoint) the most appropriate way of identifying the nature and extent of hard-bottom areas at a particular site. In the May 1982 survey of Site 4, however, no diver observations were made; rather, one videotaped transect and two otter trawls were run across the site, along with nine box cores, all of which are
10-16 incapable of accurately determining whether or not hard-bottom habitats exist in or near the Site. Since in-depth surveys were planned to follow up the Reconaissance Survey of 1981, please explain why an in-depth survey is not now planned to follow up the preliminary survey that has been performed of Site 4.

COMMENT No. 8 -- page 2-10, ¶ 3:

> Examination of the videotape of Alternative Site 3 revealed much more hard-bottom areas than was revealed by the results of the Reconaissance Survey of October, 1981. These new results led to the elimination of Alternative Site 3 from further detailed consideration.

Actually, the Reconaissance Survey report described Site 3 as being mostly sandy bottomed but having sparce hard-bottom communities appearing at five out of ten stations at the site. That description of Site 3, based on diver observations, does not appear to differ significantly from the description now provided as a result of the EPA's 1982 videotape. Please explain this
10-17 perceived discrepancy between the two surveys and the differing conclusions reached as a result of different methodologies.

COMMENT No. 9 -- page 2-12, ¶ 2:

> Disposal of large quantities of additional dredged material may result in an adverse impact due to burial or siltation of nearby hard-bottoms and artificial reefs. However, these possibilites are dependent on the amount of material and on the ultimate direction of mass transport of dumped material. The limited knowledge of water current phenomena

in this region suggest that . . . .

This passage highlights a striking omission from the Draft EIS. Although the EIS expressly recognizes the adverse impacts from burial and, importantly, siltation, it stops short of quantifying such damage because of a lack of information concerning water currents. This, it seems, is precisely the purpose of an environmental impact statement. Since knowledge of water current phenomona is "limited," and siltation is a widely recognized threat to hard-bottom habitats, please explain why EPA has yet to perform an ocean current survey to determine current direction and speed at Site 4 in order to accurately predict the amount of siltation that will occur and the distance from the
10-18 Site that it will cause problems. Also, please explain why the Environmental Protection Agency is proposing permanent ocean dumping in the face of admitted environmental damage, especially when EPA has yet to assess the extent of that damage.

COMMENT No. 10 -- pag 2-13, ¶ 1:

> A distance of several miles between a disposal site and a potentially affected area will provide for extensive dilution of a turbidity plume and dispersion of deposited materials transported away from a Site by water currents. Thus, artificial reefs (5 nmi NE) are less likely to be adversely affected, but hard-bottom areas within one mile of the Outer Existing Site may be adversely affected.

Please provide site-specific data concerning the rates of dilution of the turbidity plume and the distance the deposited materials will be tranported from the site by water currents. In addition, please specifically address the siltation that will be caused by resuspension of the dredged material throughout the water column by subsequent wave, storm, and tidal action. Finally, once those amounts of turbidity and siltation have been
10-19 quantified, please provide documented information describing the specific effects of expected siltation and turbidity on hard-bottom organisms such as corals, sponges, and algaes. If such environmental damage to these important marine habitats can not be quantified, please explain EPA's rationale in authorizing long-term dumping in this area instead of actively searching for less-environmentally damaging methods of disposal.

COMMENT No. 11 -- page 2-13, ¶ 3:

> No dumping has occurred and no environmental studies have been conducted at this [Mid-Shelf Alternative] site . . . .

If no environmental studies have been performed regarding the Mid-Shelf Alternative Site, please explain how EPA has balanced the environmental pros and cons of dumping at that site relative to the economic costs of transporting the materials that far in the ocean. In addition, please explain why the site proposed for the mid-shelf, which runs from 25 to 75 nmi offshore (see page x), was selected at the most distant portion of the mid-shelf (i.e., 70 miles offshore), as opposed to the closer side (e.g., 25 or 30 miles offshore). Obviously, selection of a potential alternative mid-shelf site 30 miles offshore would be much less expensive than one 70 miles offshore. Since no environmental studies were performed of the seventy-mile Mid-Shelf site, the selection of that particular site for inclusion in the EIS would seem arbitrary and capricious in the absence of a specific rationale for such selection.

10-20

COMMENT No. 12 -- page 2-14, ¶ 1:

> According to Oliver et al, (1977) shallow-water, high-energy benthic communities recover more quickly from disturbances, such as the disposal of dredged material, than communities in deeper water.

This conclusion from Oliver's report has been taken out of context and is quite misleading. It is certainly not true that Oliver recommended ocean dumping in hard-bottom habitat areas rather than deep water areas. Instead, any reliance on Oliver's report must be restricted to discussion of ocean dumping on soft-bottom organisms that are actually adaptable to periodic burial. On the other hand, in comparing the adverse impacts from burial and siltation on shallow-water, hard-bottom organisms vis-a-vis the relatively sparce populations of organisms at deep water sites, it is clear that Oliver's work would not apply. Please discuss the Oliver report in more detail and carefully examine the applicability of his findings to hard-bottom areas such as those found off the coast of Manatee County.

10-21

COMMENT No. 13 -- page 2-14, ¶ 2:

> It is estimated that the increased distance

> would add approximately $.15/ cubic yard/mi to disposal operations (J. Hendry, personal communication), or $102,600.00 per hopper vessel load.

The quoted cost figure is erroneous. Testimony at trial by Mr. Hendry and others revealed a lower cost figure, which, by Court Order and agreement of the parties, is to be kept confidential. Nevertheless, because the Draft EIS relies on the higher, incorrect cost estimate, all of its cost estimates are exaggerated. If the real cost figures are not used in the Draft EIS, it should be made clear that all cost figures are hypothetical and used merely for comparison. 10-22

In addition, the MPRSA regulations require a quantitative analysis of the percentage of a resource lost, reduction in user days of recreational areas, dollars lost in commercial fishery profits, and the profitability of other commercial enterprises. See 33 C.F.R. § 227.19. Because Site 4 is in an area of high commercial and recreational activity, any consideration of the economic disadvantages of using the Mid-Shelf Site in comparison with Site 4 must include balancing a consideration of the environmental and commercial advantages of using the Mid-Shelf Site vis-a-vis Site 4. This is especially so in light of the inappropriatness of relying on the Oliver study to determine the environmental consequences of dumping in mid-shelf areas as opposed to hard-bottom habitat areas. Please provide a detailed assessment comparing the economic costs of going to the Mid-Shelf Site with the commercial and environmental advantages of not going to the heavily used Site 4 area. Also, describe how that assessment would change if a Mid-Shelf Site closer to shore (say, 30 to 35 miles offshore) were chosen instead of one 70 miles offshore. 10-23

Lastly, it must be noted that ocean dump sites much farther out than that proposed for the Mid-Shelf Alternative Site have been established for receipt of disposal materials. For example, on NOAA Chart No. 13003, a dump site used for the disposal of industrial wastes has been designated approximately 125 miles from nearest landfall, with center coordinates at approximately 72° 15' W and 38° 45' N. There are also two dump sites about 40 and 50 miles offshore of Cape May, New Jersey, respectively. Please explain why it is economically feasible to use a dump site 125 miles off the coast of New York but it is infeasible to use a dump site 30 to 75 miles off the coast of Florida. 10-24

COMMENT No. 14 -- page 2-16, ¶ 2:

> Although the Deep Water Alternative Site supports a lower density of organisms, these organisms would be more sensitive to adverse effects from disposal.

Please identify the study that specifically quantifies the adverse effects from both burial and siltation to hard-bottom organisms such as corals, algaes, and sponges. If there is no such study that specifically describes the nature and extent of damage to hard-bottom organisms from particular amounts and frequencies of burial and siltation, explain how you arrived at the conclusion that deep water organisms would be more sensitive to dumping than shallow-water organisms, especially in light of
10-25 the fact that EPA conducted no environmental studies of the deep water site and ostensibly does not know what organisms exist as the site.

Additionally, please consider the comments and questions posed regarding the Mid-Shelf Site and explain in each instance how your response would differ with respect to the Deep Water
10-26 Site.

COMMENT No. 15 -- page 2-16, ¶ 2:

> According to Slobodkin and Saunders (1969) a perturbation (such as dredged material disposal) which would have a small effect on groups of organisms in stressful environments (e.g., a shallow-water environment) "may be catastrophic when applied" to groups of organisms in relatively constant environment, e.g., a deep water environment.

First, please clarify the meaning of the term "small effect" in relation to the impacts to hard-bottom organisms in and around a dump site from burial and siltation caused by dumping. If EPA
10-27 cannot quantify the effects to hard-bottom habitats from burial, siltation, resuspension, etc., how can comparisons such as that in the above passage be made?

Second, once again, the findings of the report relied on in the EIS have been taken out of context. (See discussion of Oliver above.) Please explain, with specific textual references, how
10-28 the Slobodkin and Saunders report can be meaningfully applied to the long-term dumping of massive quantities of dredged spoils

(and the associated sediment transport and siltation) at an ocean dump site in or near productive hard-bottom areas.

COMMENT No. 16 -- page 2-16, ¶ 3:

> Shallow-water, high-energy communities recover more quickly from disturbances, such as the disposal of dredged material, than communities in deep water (Oliver et al. 1977).

The passage is extremely misleading and totally disregards the recovery potential for hard-bottom habitats and organisms. Although a soft-bottom community may recolonize a site soon after dumping, hard-bottom communities will be killed by dumping and will not be capable of recolonizing the dump site until all the dumped spoils have been transported away from the site leaving a hard substrate. Even after a hard substrate reappears, scientific literature clearly demonstrates that the hard-bottom communities themselves will not recover to their pre-dumping
10-29 state for 25 to 50 years. In light of these facts, please explain your conclusion that the communities discussed in the EIS will "recover more quickly" than deep water communities. Further, please compare the amount of environmental damage at shallow-water versus deep-water sites (i.e., will as much be damaged by dumping in deep water?).

COMMENT No. 17 -- page 2-17, ¶ 1:

> Thus, dredged material sediments are likely to differ from Deep Water Disposal Site sediments, and this difference increases the adverse effects of disposal on deep water benthos.

The quoted material, along with other portions of the EIS, erroneously implies that the dredged spoils being dumped outside Tampa Harbor are in fact similar to the sediments found naturally in and around Site 4. The evidence at trial, including I.E.C. findings and expert testimony, showed that natural silt in this
10-30 area off Tampa-Bay ranges from 1% to possibly 10%. However, the evidence also showed that materials that have actually been dumped from Tampa Harbor to date have averaged almost 60% silt and have sometimes contained as much as 100% silt. Thus, these two sets of sediments cannot be considered similar. In light of such differences, please explain whether the "increase[d] adverse

effects of disposal on deep water benthos" would likewise be applicable to dumping at Site 4.

COMMENT No. 18 -- page 2-17, ¶ 2:

[Paragraph regarding the additional costs of transporting to the Deep Water Site.]

With regard to the Deep Water Site, please address the same considerations noted in Comment No. 13, above, concerning the
10-31 mid-shelf alternative site.

COMMENT No. 19 -- page 2-19, ¶ 4:

> Shallow-Water Alternative Site 4 has never been used for dredged material disposal and is devoid of major typographic features. A videotape taken of this area revealed no rock or hard-bottom outcroppings and low vertical relief. A recent EPA survey determined that the site is predominately characterized by the presence of fine sands and coarse silts and plains of shell hash.

This entire passage highlights the unfounded assumptions that run throughout the Draft EIS, i.e., that Site 4 and surrounding areas contain no hard-bottom habitats and are unimportant to commercial and recreational activities. As is clear from discussion with several scientists, however, the methodologies used in the EPA survey of Site 4 in May of 1982 were completely inadequate for identifying the nature and extent of hard-bottom habitats both within and without the Site. The survey consisted
10-32 solely of one videotape run across part or possibly all of the site, two otter trawls that did not run across the whole site, and nine box cores. No diver observations were made. Based on that survey, it cannot be known what exists in the unseen and unstudies 95% or more of the Site. Equally important, EPA cannot possibly know what exists anywhere outside the boundaries of the site because those areas were not studied (except for the four small box core locations). Thus, the survey of Site 4 can be considered preliminary at best, and a more extensive inspection of areas both within and without the Site is necessary before it can be known what types of organisms and communities in the area will be adversely affected by dumping. Actually, observation by divers and fisherman with many, many years of experience in this part of the Gulf demonstrates that Site 4 itself contains hard bottoms and possibly ledges (and EPA found live-bottom

communities at the Site); and that the areas surrounding Site 4 contain hard-bottom habitats, ledges, wrecked vessels, and valuable shrimping and fishing grounds.

EPA's unfounded assumption is rendered all the more questionable by the high likelihood of encountering hard-bottom habitats in this general area of the Gulf of Mexico. Sites 1, 2, and 3 all were found to contain productive hard-bottom habitats, and I.E.C. recommended against using or designating Sites A and B in 1980 because of the existence of such hard-bottom areas. This highlights the need for further study of Site 4 before it can be reasonably recommended as a permanent Site for ocean dumping.

10-33

COMMENT No. 20 -- page 2-21, ¶ 1:

> Use of Shallow-Water Alternative Site 4 is not anticipated to affect any biologically unique habitats or interfere with spawning or migration activities. The site was selected on the basis of its remoteness from known hard-bottoms. A recent EPA survey determined that this site apparently contains fewer hard-bottom areas than any of the other shallow-water alternative sites.

The reliability of those conclusions is extremely questionable because they are based solely on the preliminary EPA survey of May 1982. (Refer to preceding comment.) Actually, local divers and fishermen have stated unequivocally that Site 4 is not remote from known hard bottoms and have countless Loran numbers demonstrating the presence of hard bottoms, ledges, and the like. Additionally, Site 4 is in an area that is heavily relied on for shrimping, recreational fishing, by charter boats, party boats, and individuals, and scuba divers.

10-34

In light of the above, it would appear Site 4 does not meet the second of the eleven factors found in EPA's Criteria. Please reevaluate Site 4 for the suitability of its use "in relation to breeding, spawning" grounds under 40 C.F.R. § 228.6(a)(2).

COMMENT No. 21 -- page 2-21, ¶ 4:

> Recreational fishing and diving may occur anywhere in the near shore waters. However, most of these activities are limited to high-relief hard-bottom areas, artificial reefs, and sunken vessels, all of which are removed

> from the site. Some scuba diving and fishing activities may occur in the site vicinty, although these activities are probably less frequent in similar use in the vicinty of the existing sites.

With the exception of the first sentence and part of the third, the above passages are mistaken and misleading. As stated above, Site 4 is located in an area of the Gulf that is heavily used for shrimping, recreational fishing, and scuba diving, and the Site is not far removed from hard-bottom areas, artificial reefs, and sunken vessels; in fact, the "gunsmoke" is a 65 foot vessel approximately one mile to the north of Site 4 that is very
10-35 important to fishing and diving interests. Further, scuba diving and fishing activities are actually more frequent around Site 4 than around the existing sites, because the dumping at the existing sites has ruined those areas by burial and recurrent siltation.

Therefore, Site 4 fails to meet the requirements concerning its location relative to beaches and other amenity areas under 40 C.F.R. § 228.6(a)(3).

COMMENT No. 22 -- pages 2-23 to 2-24:

> [Dispersal, horizontal transport, and vertical mixing characteristics of the area including prevailing current direction and velocity, if any.]

This entire discussion in the Draft EIS is too speculative. Testimony of two experts at trial demonstrated that the direction and ultimate distance of sediment transport could not be predicted accurately without a site-specific ocean current study, and that combinations of tides, wave action, storms, and bottom currents create variable current directions and velocities. No
10-36 investigation of the currents at Site 4 has been performed. Therefore, please explain how the Site-Designation EIS has satisfied the requirements of 40 C.F.R. § 228.6(a)(6) concerning movement of the dredged spoils.

COMMENT No. 23 -- page 2-25, ¶ 3:

> Although dredged material disposal causes some localized decreases in the abundance of benthic fauna, fairly rapid recollinization has been observed at similarly affected areas

> within three months after disposal operations ceased. At the Galveston, Texas ODMDS, organisms which colonized the affected areas were members of the surrounding unaffected areas and no nuisance species were recruited.

The implication that the Galveston dump site is analogous to the sites off Tampa Harbor is erroneous because it disregards the numerous hard-bottom areas found off the coast of Florida that
10-37 are not found off the coast of Texas. Thus, recolonization of soft bottom organisms at Texas would be quite different from recolonization by corals, sponges, and algae.

COMMENT No. 24 -- page 2-26, ¶ 1:

> [U]nacceptable adverse effects could result within several miles of the disposal site due to deposition of suspended particulate matter and dispersion of accumulated sediments following disposal operations.

The passage is undeniably true, but the EIS consistently fails to adequately address resuspension of particulate matter and to quantify both the amount and frequency of re-suspension and the impacts to hard-bottom habitats and organisms. Because, as was demonstrated at trial, hydrodynamic energies in this part of the Gulf of Mexico are sufficient to continually resuspend
10-38 fine materials, siltation and turbidity are problems that must be described before a permanent dump site should be designated. Please quantify these impacts with specific reference to Site 4, and include ocean current data relied on in such quantifications. In the absence of such information, the requirements of 40 C.F.R. § 228.6(a)(7) cannot be considered to have been fulfilled.

COMMENT No. 25 -- page 2-27, ¶ 3:

> This site is removed from areas of recreational use, and has no known significant commercial fishery use.

As stated above in several comments, that conclusion concerning Site 4 is plainly incorrect. Site 4 is located within
10-39 an area that is heavily used for both commercial and recreational use, including sport fishing, shrimping, party and charter boat fishing, and scuba diving. Therefore, Site 4 also fails to meet the requirements of 40 C.F.R. § 228.6(a)(8).

COMMENT No. 26 -- page 2-28 ¶ 3:

[Reference dumping operations in other regions].

Because the numerous hard-bottom habitats scattered throughout this part of the Gulf of Mexico make this a unique area, reliance upon studies of dumping operations near Texas and other dissimiliar areas is inadequate. Adequate site-specific
10-40 studies of Site 4 and of the effects of burial and siltation on hard-bottom habitats is necessary before ocean dumping off the coast of Manatee County can be reasonably authorized.

COMMENT No. -- page 2-29, conclusion no. 1:

> A limestone shelf is believed to occur 0.5 nmi northwest of the outer existing site, and small outcrops are suspected to occur within the site. An artificial reef has been constructed within 3 NMI of the inner existing site.

The quoted passage, which is relied on to recommend the use of Site 4, fails to note the existence of numerous hard-bottom areas and ledges in proximity to Site 4 and the wreck of the "Gunsmoke" one mile to the north of the site. The existence of
10-41 these would militate against the use of Site 4 for permanent ocean dumping.

COMMENT No. 28 -- page 2-29, conclusion no. 4:

> These surveys indicated that disposal of dredged material at alternate Site 4 would affect the fewest hard bottoms since this area is sandy bottomed.

For the reasons indicated in comments above, the preliminary nature of the EPA survey of Site 4 in May of 1982 makes it unreasonably speculative to presume that there are no hard-
10-42 bottoms, ledges, or other important habitat areas within or near Site 4.

COMMENT No. 29 -- page 2-30, ¶ 2:

> All dredged material scheduled for disposal must comply with the Ocean Dumping Regulations' elutriate, bioassay, and bioaccumulation test procedures. Disposal of

> this material should not cause unacceptable and adverse effects outside the designated dump site nor should this material cause long-term adverse/chronic effects at a site.

The first sentence of that paragraph fails to mention that bioassay tests are regularly performed on worms, clams, and fish,
10-43 rather than on corals, sponges, and algaes. Please explain how elutriate, bioassay, and bioaccumulation testing accurately predicts the impact of burial and siltation on such hard-bottom organisms.

In addition, the second sentence of the passage disregards the impact to hard-bottom organisms from siltation and continual resuspension of the dredged spoils throughout the water column. Because this resuspension will occur on a continual basis for as
10-44 long as the dump site is being used (permanently), these impacts will be long-term and, as stated in the EIS, adverse.

COMMENT No. 30 -- page 2-33, ¶ 3:

> However, in the event that the selected site is determined to have hard-bottom outcrops within 0.5 nmi, pollution-sensitive species outside the site should be surveyed.

That passage emphasizes the importance of identifying the nature and extent of hard-bottom outcrops both in and near the dump site, which was not adequately accomplished by the EPA 1982 survey. The sentence preceding the quoted passage once again erroneously presumes that hard and soft corals do not occur near
10-45 the site. In light of the admitted importance of monitoring for pollution-sensitive species within one-half mile of the site, please explain why it is unnecessary to conduct an examination of Site 4 that better identifies hard and soft corals in and near the site.

COMMENT No. 31 -- pages 3-47 to 3-48:

[Re: Recreational and commercial fisheries]

As stated above in numerous other comments the EIS's findings regarding commercial and recreational fishing in the area of Site 4 are inaccurate. In light of the EIS's reliance on a study that
10-46 is nearly 20 years old (see Figure 3(18)), this error is understandable. The drafters of the EIS should discuss the current, actual use of the area around Site 4 with local

governmental agencies and interested persons. After such discussions and resort to more recent studies, please report the findings and reevaluate the EIS's conclusions.

COMMENT No. 32 -- page 4-4 ¶ 4:

[Re: characteristics of dumping after release into the water]

The EIS has failed to mention the fourth characteristic of post-release dumping, i.e., the resuspension of find particle by wave action, tides, storms, and ocean currents. Please describe
10-47 these characteristics with specific reference to data collected from Site 4 and identify the potential impacts to hard-bottom habitats and organisms in and near Site 4.

COMMENT No. 33 -- page 4-8 ¶ 1:

[Discusses the short-term turbidity effects on coral-type organisms.]

Although the severe adverse impacts from short-term turbidity are described, the EIS makes no attempt to quantify the long-term effects from the continual resuspension of the material throughout the water column. Please quantify the amount and
10-48 frequency of siltation, the direction of sediment transport based on site-specific ocean current information, and the environmental consequences of long-term turbidity.

COMMENT NO. 34 -- page 4-19 ¶ 4:

> Short-term avoidance of locally high turbidity may be the only significant environmental effect on fisheries.

The paragraph is erroneous. Testimony by a scientist with the National Marine Fisheries Service clearly demonstrated that high turbidity will cause significant adverse impacts to live, hard-bottom habitats and resulting adverse impacts to fishery
10-49 resources. Please explain the discrepancy between the statements in the EIS and those of the NMFS scientist regarding the adverse impacts on fisheries due to turbidity and siltation, especially in light of the unquestionable relationship between hard-bottom habitats and fishery resources.

COMMENT No. 35 -- page 4-21, ¶ 4:

[Reference to lack of recreational fishing and diving activities at Site 4, and to nature of the bottom.]

The paragraph is incorrect for the reasons stated several times previously.

COMMENT No. 36 -- pages 4-21 to 4-22:

[Discussion regarding effects on economics.]

This entire section fails to take account of the commercial aspects of recreational fishing, which are clearly recognized under the MPRSA regulations. See 40 C.F.R. § 227.19. In fact, the EIS notes that the "full extent to which fisheries may be
10-50 affected, including damage to spawning grounds or juvenile fish, is unknown." In light of the admitted lack of knowledge concerning impacts to fisheries in the area, the necessity of further study is obvious. Please explain the rationale underlying EPA's recommendation of designating an ocean dump site on a permanent basis in the absence of knowledge concerning impacts to fisheries.

COMMENT No. 37 -- page 4-22, ¶ 3:

> Disposal of dredged material will result in a turbid plume that will reduce water cleary at the site. Because all sites are located at least 9 nmi offshore adverse impacts on visual aesthetics from shore will be non-existent.

The quotes passage ignores two important factors: (1) It unreasonably ignores the effects of turbidity on sport diving, the enjoyment of which is substantially dependent upon visibility
10-51 and aesthetics. (2) It fails to take account of the fact that there will be continual resuspension of the materials as tides, storms, etc., act on the dredged spoils.

The above comments make it pellucidly clear that the Draft Site-Designation EIS is critically flawed. It should be withdrawn and substantially revised for further public comment. Because of the extreme significance of the marine habitats and
10-52 fishery resources in this part of the Gulf of Mexico to the people of Manatee County and the general area, EPA should schedule a public hearing to allow full and fair public comment on the revised EIS and the overall suitability of dumping in the eastern Gulf of Mexico.

In addition, the Environmental Protection Agency must not
10-53 allow further ocean dumping and the concommitant damages to the environment and natural resources unitl it has been affirmatively

demonstrated that ocean dumping in this part of the Gulf of Mexico is appropriate and that it is the most suitable method of disposal. That demonstration should include an actual determination of the nature and extent of hard-bottom habitats and fishery resources in Site 4 and in surrounding areas, which must be based on further, site-specific surveys; a determination of the direction, amount, frequency, and distance of sediment transport and siltation and a specific quantification of the damage that will result therefrom; a detailed, careful balancing of the economic versus environmental concerns involved in using each alternative method and location for dumping, including consideration of the many commercial aspects of recreational fishing and diving; and development of a thorough monitoring program to assess the impacts of any dumping on a long-term basis.

Pending completion of necessary studies, no ocean dumping should be allowed -- especially on another "interim" basis. Any consequential delays in important dredging projects can be avoided by using the massive diked disposal areas in Hillsborough Bay in the meantime.

Yours faithfully,

William F. Tarr
On behalf and under
authority of the Board of
County Commissioners of
Manatee County, Florida

WFT/yp
cc: Honorable Charlotte Long, Holmes Beach, Fla.
Honorable Ernest Cagnina, Anna Maria, Fla.
Gulf of Mexico Fishery Management Council
Dr. Elton Gissendanner, Florida DNR
National Marine Fisheries Service, Reg'l Dir.
U.S. Fish and Wildlife Service, Reg'l Dir.
Col. Alfred Devereaux, District Engineer
Florida DER
Tampa Bay Regional Planning Council
Joseph Freedman, Esquire

GULF OF MEXICO FISHERY MANAGEMENT COUNCIL
Lincoln Center, Suite 881 • 5401 W. Kennedy Blvd.
Tampa, Florida 33609 • Phone: 813/228-2815

December 10, 1982

00.DEC.82*002229

Environmental Protection Agency
Criteria and Standards Division (WH-585)
401 M Street, S.W.
Washington, D.C. 20460

Dear Sir:

The Gulf Council has reviewed the DEIS for Tampa Harbor Ocean Dredged Material Disposal Site Designation. I would like to take this opportunity to express the Council's position with the following comments and recommendations:

GENERAL COMMENTS

The Council is a federally funded entity charged with insuring that the United States obtains the best possible use of fishery resources in the Fishery Conservation Zone (FCZ), out to the 200 miles offshore. Fishery management plans developed by the Council for shrimp, reef fish, and coral reef resources place great importance on habitat protection. Spoil disposal in or near productive hard-bottom habitat is a significant threat to fisheries dependent on these habitats. This threat is not adequately analyzed in the DEIS nor are alternative
11-1 disposal sites adequately explored. We find the DEIS to have serious deficiencies in content and scope. Our comments of June 4, 1982 (copy attached), have not been addressed. The survey of offshore sites and disposal impacts is totally inadequate. The DEIS does not seriously address disposal alternatives other than the Gulf, nor does it consider the economic and social cost to recreational and commercial fishermen dependent on fishery populations in and near the dump sites. We are particularly concerned that offshore disposal of maintenance material on a continuing basis (1.1 million cubic yards per year, DEIS page 1-6) will permanently destroy or degrade hard-bottom communities and associated fishery values for several miles surrounding the site.

SPECIFIC COMMENTS

1. The site survey on which designation of disposal site 4 is based is inadequate. Although the site survey is not clearly described in the DEIS, our staff has obtained additional documents which detail the survey. It consisted of one transect with an underwater camera approximately one-half way across site 4, two otter
11-2 trawl samples of unknown duration in or near the site and an unspecified, but apparently small number of box cores and sediment samples. This is not an adequate base on which to conclude that a

site of approximately 3,000 acres contains no hard-bottom communities or that the thousands of acres immediately surrounding the site are equally barren. According to published information there are two artificial reefs nearby, one less than one mile north of site 4 (loran coordinates 14138.5, 44789.6 and 14143.6, 44762.4). Personal communications from divers and fishermen that use these areas indicate that there are several areas of hard-bottom habitat within site 4, including at least one ledge. In addition, hard-bottom areas with ledges have been found on the northwest, northeast, and southeast corners of the site. There is a large concentration of hard bottom within 1.5 miles of the southern boundary of the site, a large concentration of ledges approximately one mile east of the site, a ledge one-half mile south of the site, and another area with several ledges less than one mile north of the site.

The DEIS states that site 4 is removed from areas of recreational and commercial use (page 2-27). This is in error. The artificial reefs and hard-bottom areas surrounding the site are well known and very popular with divers and recreational fishermen and are a
11-3 major fishing ground for the charter and head boat fleet operating out of Manatee County.

The EPA field survey conducted to look for alternative disposal sites consisted of two camera transects, one from site 2 approximately six miles to the southwest and another west from site A through site 3, approximately ten miles. It is difficult for us
11-4 to understand how this could be considered an adequate search or survey.

2) DEIS does not consider the long-term, essentially permanent effect of siltation resulting from disposal of maintenance material. The DEIS indicates that a total maintenance budget of 1.0 million cubic yards per year. An earlier document indicated 0.5 million cubic yards per year would be disposed of off-shore. This material will be primarily soft, silty sediments, highly susceptible to movement by current and wave action. It is anticipated that this material will spread out in a thin layer for many miles
11-5 surrounding the site, as indicated in the DEIS, pages XV11 and 2-11. This recurring, essentially permanent siltation can be expected to severely stress hard-bottom communities, decrease the habitat's ability to support valuable fish stocks and their aesthetic value for scuba divers.

The DEIS suggests on page 2-28 that disposal will not result in any detectable changes in ecology of the area. However, the
11-6 studies used to back up this conclusion were all from areas which have no hard-bottom communities. The animal and plant communities

in those areas are already adapted to soft sediments, high siltation and turbidity. Those studies are totally inappropriate to use in making conclusions about the west Florida shelf. This area is characterized by low freshwater inflow, clear water, high light levels, and low levels of silt and turbidity. Personal reports from divers indicate substantial changes in hard-bottom habitat since offshore disposal began. Many species, including basket sponges and spiny oysters, have disappeared from ledges in and around the present disposal site. The Council regards the permanent stress resulting from maintenance disposal siltation to be a very serious threat to the offshore habitat and human activities dependent on it.

3. The DEIS does not make any attempt to analyze the effect which the proposed disposal will have on fisheries and the economic damage which will result in the Florida economy. Recreational and commercial fishing is a multibillion dollar business in Florida. A large fraction of this value is derived from the west Florida
11-7 shelf and will be directly affected by degradation of the habitat on which these fishery resources are dependent. The values given in the DEIS are very much out of date and grossly underestimate the actual value of this activity.

4. The DEIS does not seriously consider alternatives to open Gulf disposal. Upland disposal is mentioned but rejected because condemnation proceedings by the sponsor will be necessary. However, it is the legal responsibility of the sponsor to find environmentally acceptable sites. Condemnation is a viable alternative and is not a particularly lengthy process. As an example, the Alabama
11-8 State Docks recently used condemnation to acquire an industrial site for port expansion.

An environmentally acceptable alternative exists which has not been addressed. Two diked enclosures exist today in upper Hillsborough Bay which have tremendous capacity. These sites are not mentioned in the DEIS. Although no official estimates were available to our staff, the diagrams in the 1977 Supplemental EIS for the Tampa Harbor Project indicate a capacity of roughly 39
11-9 million cubic yards, assuming a six foot elevation. If existing dewatering technology was used and the dikes increased in height, the capacity could be increased many fold. This appears to us to be sufficient to hold all material scheduled for offshore disposal for many years to come.

5. The DEIS considers the possible adverse affects of heavy metals and other toxic substances which may be contained in dredged spoil. It cites bioassay testing by Jones, Edmonds and Associates, to support a conclusion that no human health hazards
11-10 are indicated. We have examined sworn affidavits by two former

employees of that firm which allege that some sediment samples failed bioassay tests. However, only favorable results were reported. This casts serious doubt on the reliability of any conclusions based on the Jones, Edmonds and Associates report. Another study by Mote Marine Laboratory found extremely high levels of heavy metals at the existing disposal site. This information indicates to us that dangerously contaminated sediments were dumped offshore and may be dumped again as a result of maintenance dredging activity.

6. The DEIS ignores the fact that spoil is being dumped outside the site. Several individuals have observed dumping outside the site. A large pile of spoil material was found by a member of our staff one mile outside the site. Dr. Blake Edwards of the University of
11-11 South Florida observed five disposal trips. In two of the five trips, disposal occurred outside the site. This dumping greatly increases the area affected and the potential damage to U.S. fisheries.

The Council would like to make the following requests and recommendations:

1) Immediately cease all offshore disposal until the following is completed -

a. Adequate studies are made of the offshore environment. This should include a well planned series of transects with an underwater camera or high resolution fathometer. Transects
11-12 should be run from near shore to beyond 100-foot depths. Transects should be spaced no more than one-half mile apart. The area of coverage should extend from at least 15 miles south of the harbor entrance to ten miles north of it.

b. A careful study is made of the present disposal site and surrounding area to determine how far the material already dumped has spread and what effect siltation is having on hard-
11-13 bottom communities. Observations from local divers indicate that siltation from the present disposal site has spread at least seven to eight miles beyond the site. This should be confirmed and its effect determined.

11-14 c. A good economic analysis of potential damage to fisheries is produced.

d. A detailed analysis is made on how the capacity of the existing diked disposal areas could be increased. We suspect
11-15 that a carefully planned program of de-watering, increasing dike height, and reusing spoil material could extend the life of existing site far into the future, perhaps permanently.

2) Until the above are accomplished, the existing diked disposal areas should be used for disposal of material proposed to be dumped in the Gulf.

3) We request that a public hearing be held to allow full and complete public comment. As indicated above, our preliminary review of this project indica-
11-16 tes that it is a serious threat to fishery resources for which the Council is responsible. It may also represent a serious health hazard to the human population in the area.

Sincerely,

John M Green by

John M. Green
Chairman

JMG:JCD:lod

Attachments

cc: Gulf Council
Director, Florida DNR
Secretary, Florida DER
District Engineer, Jacksonville COE
Regional Director, National Marine Fisheries Service
Regional Administrator, Fish & Wildlife Service
Staff

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1600 CITY ISLAND PARK
SARASOTA, FLORIDA 33577
PHONE: (813) 388-4441

WILLIAM R. MOTE
CHAIRMAN OF THE BOARD

WILLIAM H. TAFT, Ph.D.
PRESIDENT

December 9, 1982

Mr. Michael R. McKinley
Director of Planning
Tampa Bay Regional Planning Council
9455 Koger Boulevard
St. Petersburg, FL 33702

Dear Mr. McKinley:

Enclosed please find a copy of the Mote Marine Laboratory's comments on the Draft EIS for Tampa Harbor, Florida Ocean Dredged Material Disposal Site Designation, dated November 1982. These same comments have been sent to the EPA Criteria and Standards Division.

I hope that these comments are of use to you in evaluating the offshore dumping issue as it relates to the plans and goals of your organization.

Sincerely,

Stanley A. Rice

Stanley A. Rice, Ph.D.
Staff Scientist

SAR:lef
Enclosure

1600 CITY ISLAND PARK
SARASOTA, FLORIDA 33577
PHONE: (813) 388-4441

WILLIAM R. MOTE
CHAIRMAN OF THE BOARD

WILLIAM H. TAFT, Ph.D.
PRESIDENT

Comments on the Draft Environmental Impact Statement
For Tampa harbor, Florida
Ocean Dredged Material Disposal Site Designation.
Dated November, 1982

I have thoroughly reviewed the above draft EIS and the associated appendices and would like to register the following comments.

12-1 The proposal to designate Site 4 (located 18 n mi southwest of the mouth of Tampa Bay) as a permanent disposal site for dredged material is unjustified for two major reasons. First, insufficient information is available concerning the physical and biological characteristics of Site 4 and the surrounding area to predict the impact of ocean disposal of dredged material. Second, site specific monitoring studies of post-disposal impacts have been incomplete and insufficient to evaluate the impact of ongoing disposal operations on the nearshore Gulf of Mexico environment. Attempts are made in the EIS to draw conclusions about potential impacts at Site 4 based upon studies conducted in other parts of the U.S. and under very different environmental conditions. The Gulf of Mexico off Tampa Bay constitutes a unique ecological system containing hard-bottom as well as soft-bottom habitats, tropical and subtropical species, and productive commercial and recreational resources. For these reasons, site specific studies are essential to any evaluation or prediction of disposal impacts within this area.

12-2 A review of environmental studies conducted in the Gulf of Mexico near Tampa Bay as part of the EIS process reveals that Site 4 has only recently been considered and that little more is known about Site 4 than was known about Site A when it was first designated as an interim disposal site. Of the eight major site-specific environmental studies that have been conducted since 1979 (Taylor, 1979; IEC, 1979; IEC, 1980; MML, 1981; EPA, 1981; CCI, 1982; Taylor, 1982; EPA, 1982), only the last study considered Site 4. The latest EPA survey (Appendix C of EIS) collected certain physical, chemical and biological information from Sites A, B, 3 and 4. In this study, the sediment grain size analyses, sediment chemical analyses and water column chemistry would appear to be sufficient to characterize the existing and proposed sites; however, the biological sampling, habitat descriptions and tissue chemical analyses fall far short of being adequate.

Biological sampling during the EPA, 1982 survey was carried out with a box core and an otter trawl. As stated on page A-4 of EIS Appendix C, with reference to box core samples, "All samples obtained with less than 15 cm penetration depth were rejected." This type of sampling methodology would automatically exclude any samples collected from hard-bottom habitats since a box core would not penetrate 15 cm into
12-2 hard substratum. Since no hard-bottom habitat samples were retained or analyzed and since no record is given on the number of times that box core samples were rejected, absolutely no conclusions can be drawn from these benthic samples with regard to presence or absence of hard-bottom habitats and organisms.

The only other data from the Site 4 study that might be used to estimate bottom habitat coverage are the video tape records mentioned on page 2-10 of the EIS. These videotapes, however, represent only
12-3 one partial transect of the site and do not cover enough terrain to justify conclusions about the entire site or surrounding area.

Local fishermen and divers frequent the area within and around Site 4 and hard-bottom habitats are known to exist within the site. Unless more detailed habitat studies are completed at Site 4, the EPA will be running the risk of repeating the same mistake it made with regard to
12-4 Site A, that is, designating an environmentally unacceptable site for dredged material disposal because of inadequate site-specific studies.

Since insufficient data presently exists with regard to benthic habitats within and around Site 4, several conclusions in the EIS cannot be substantiated since they are based upon the assumption that hard-bottom habitats are rare or non-existent at Site 4. These conclusions include:
12-5 EIS page 2-21, first paragraph; page 4-18, second paragraph; page 4-19, third paragraph; page 4-21, fourth paragraph.

Table S-1 on pages xiv-xv of the EIS lists eleven specific criteria to be considered in selection of an offshore disposal site and compares the existing sites with Site 4. In light of the above discussion
12-6 criteria #1, 3, 8, and 9 cannot be adequately evaluated with respect to Site 4 due to insufficient environmental characterization of that site.

The prediction of environmental impacts due to dredged material disposal and the success of environmental monitoring programs rests heavily upon having a thorough knowledge of the composition of potentially affected habitats. The Gulf of Mexico off Tampa Bay is unique in
12-7 that it contains highly productive and diverse hard-bottom habitats interspersed among sandy substrata. With the exception of studies by Jaap (1981), Mote Marine Laboratory (1981) and scattered observations by Taylor (1982), no studies have considered the impact of dredged material disposal upon hard-bottom attached organisms. The importance of these hard-bottom habitats and their associated flora and fauna has been adequately stressed in the literature (see EIS for OCS Sale #65, 1978; and Fed. Regist. Vol. 45, No. 194, pg. 65946) and even the present EIS states on page 2-25,

"To further minimize adverse impacts, disruption of hard-bottom communities should be avoided to the greatest extent possible." Hard-bottom communities have been identified within all of the existing and shallow water alternative sites yet no studies have been undertaken to determine the sensitivity of these organisms to disposal operations. The effects of disposal operations upon soft-bottom communities are not transferable to hard-bottoms.

In order to predict potential short-term impacts upon hard-bottom communities, it will be necessary to determine: (1) the species composition of site-specific hard-bottom habitats; (2) the sensitivity of selected representative hard-bottom organisms to siltation and burial; and (3) the potential for bioaccumulation or biomagnification of toxic chemicals in hard-bottom organisms and food webs. In addition, long-term monitoring programs should include studies on colonization, growth, and
12-8 reproduction of attached hard-bottom organisms in the vicinity of any active dump site. At the present time, none of the above information is available for the existing or alternative sites and thus no predictions can be substantiated with regard to acute nor chronic impacts upon hard-bottom habitats.

In addition to the above comments, the Draft EIS is incomplete with respect to the following points:

1) Bacteriological studies reported in EIS Appendix C considered only total and fecal coliform with no tests made for vibrio-type bacteria
12-9 that have been identified in Tampa Bay sediments and pose a human health threat.

2) Data contained within the EIS and Appendices indicate that Tampa Bay sediments are not compatible or comparable to dump site sediments. For example: Table 3-5 on page 3-30 and Table 4-2 on page 4-5 report very low background values for heavy metals like cadmium, lead, and mercury, yet Tampa Bay sediments contain significantly higher concentrations of these metals. How can these sediments be assumed to have no
12-10 significant impact? Sediment grain size analyses reported for Site A and vicinity prior to disposal operations (Appendix A, page A-14) indicated a silt/clay fraction of less than 2%, whereas post disposal samples reported silt/clay fractions as high as 11-42% at the same site (Appendix C, page A-33). These are obviously not similar sediments and would definitely be expected to cause a significant impact upon endemic organisms.

3) The EIS sections concerning endangered species (pages 3-46 and 4-19) fail to consider any of the invertebrate species that are listed as threatened or endangered by the State of Florida Game and
12-11 Freshwater Fish Commission and that have been reported in the vicinity of the dump sites.

12-12 4) Site-specific studies are lacking which address the potential for toxic chemical release from dumped sediments in spite of the fact that potentially toxic concentrations of heavy metals have been found in Site A post-disposal sediments (EIS Appendix C, page A-54; Appendix E, page 17) and tissue samples (Appendix C, page A-68).

12-13 5) Bioassay studies conducted by Jones, Edmunds and Associates, Inc. (1979) (EIS page 2-25) on pre-disposal sediments did not employ endemic species and are further invalidated by pre-exposure of test organisms to significantly high concentrations of toxic chemicals in control water. Thus, these studies have no predictive value.

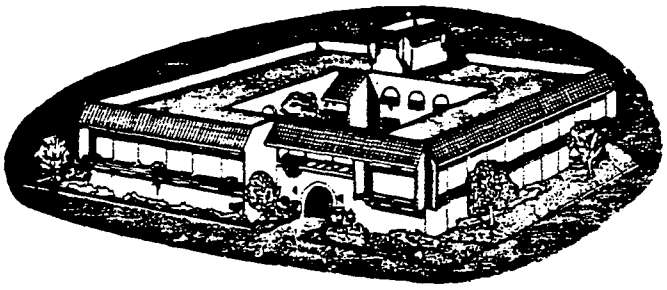
12-14 6) The possibility and economic feasibility of other than ocean disposal has not been adequately treated in the EIS. Serious consideration should be given to using diked disposal areas within Hillsborough Bay, at least until a suitable permanent disposal area can be found. Further studies, as listed above, are needed before the impact of ocean disposal in the Gulf of Mexico can be predicted or evaluated. These studies must be designed, executed and reviewed by competent scientists to ensure that reliable information is obtained and that the results address the appropriate concerns. Additional studies should be undertaken immediately at Site 4 (as suggested in EIS Appendix C, page A-163) to ensure that another inappropriate disposal site is not authorized prematurely.

Stanley A. Rice

Stanley A. Rice, Ph.D.
Staff Scientist

67

HILLSBOROUGH COUNTY
ENVIRONMENTAL PROTECTION
COMMISSION
FRED A. ANDERSON
JERRY M. BOWMER
FRAN DAVIN
JOE KOTVAS
JAN KAMINIS PLATT



ROGER P. STEWART
DIRECTOR
1900 - 9th AVE.
TAMPA, FLORIDA 33605
TELEPHONE (813) 272-5960

December 5, 1982

Ms. Margaret Guy
A-95 Coordinator
Tampa Bay Regional Planning Council
9455 Koger Boulevard
St. Petersburg, FL 33702

Dear Ms. Guy:

The staff of the Environmental Protection Commission has reviewed the Environmental Impact Statement for Tampa Harbor, Florida: Ocean Dredged Material Disposal Site Designation. The attached memo defines our concerns and recommendations of the project.

If you have any questions concerning our comments, please contact me.

Sincerely,

Michael Heerschap

Michael Heerschap
Environmental Specialist
Hillsborough County Environmental
Protection Commission

MH/rr
w/Attachment

An Affirmative Action - Equal Opportunity Employer

COUNTY OF HILLSBOROUGH

MEMORANDUM

Date November 18, 1982

To Mike Heerschap, Assessment

From Tom Cardinale, Laboratory T.C.

Subject: EIS - Ocean Dredged Disposal Site

14-1 I would recommend that all disposal at the Existing Site A be stopped because it is too close to shore, too close to productive reef areas, and within easy reach of divers and small boat users.

14-2 Site 4 is in 85 to 95 feet of water and is not as likely to be used for recreational purposes such as diving and fishing. All material should go to this site until some long range solution is found.

14-2 Site 4 has no hard-bottom outcrops and would therefore have the least impact on fish and other types of life.

69 MG
MN
BC

COUNTY OF HILLSBOROUGH

MEMORANDUM

Date December 3, 1982

To Margaret F. Guy, A-95 Coordinator, TBRPC

From Christy Supp, Senior Planner, Department of Development Coordination

Subject: TBRPC A-95 Clearinghouse Review No. 218-82; Draft Environmental Impact Statement for Tampa Harbor, Florida, Ocean Dredged Material Disposal Site Designation, Hillsborough, Manatee and Pinellas Counties

We have no comment on the above-stated project proposal. Offshore impacts related to water quality are within the jurisdiction of the Environmental Protection Commission. It is understood that you have already sent, under
15-1 separate cover, a copy of the Draft to the Environmental Protection Commission and the Planning Commission for review and comment as appropriate.

Thank you for informing us of the project.

CS:pkh

STATE OF FLORIDA

Office of the Governor

THE CAPITOL

TALLAHASSEE 32301

BOB GRAHAM
GOVERNOR

December 22, 1982

Mr. Chris Schilling
U.S. Environmental Protection Agency
Criteria and Standards Division (WH-585)
401 North Street, Southwest
Washington, D.C. 20460

Dear Mr. Schilling:

This Office reviewed and coordinated a state agency review of your Draft Environmental Impact Statement for Tampa Harbor Florida, Ocean Dredged Material Disposal Site Designation for Hillsborough, Manatee and Pinellas Counties.

The document describes a proposed action designating a dredge material disposal site for Tampa Harbor. The site will be managed by the U.S. Environmental Protection Agency, Region IV. The proposed recommended site is approximately 18 miles southwest of the mouth of Tampa Bay and covers a four-mile area. It is intended that the site be permanently designated for the disposal of dredge material resulting from the dredging of the Tampa Harbor area.

An interagency review of the statement has found that the proposed action would smother the benthos within the designated area and alter habitat within the site. The document recognizes that these adverse impacts at the site are unavoid-
16-1 able. Our reviewing agencies report that the EIS statement is inadequate and lacks the necessary information to be of sufficient value as a decision-making document (see attachments).

We have concerns with this designated site and EPA's proposed rule for ocean dumping without a Federal Coastal Zone Management Consistency Evaluation. Recognizing our concerns, the impact of this designation and its effect on the Tampa Harbor project, we request that your agency participate in an interagency meeting at your earliest convenience to afford us the opportunity to discuss issues of concern to the State of Florida. It is our desire to use this initial meeting as a step toward resolving our concerns.

Please contact Walt Kolb of my office at (904) 488-5551 concerning arrangements for this meeting. Thank you for your cooperation.

Sincerely,

for: John T. Herndon, Director
Office of Planning and Budgeting

JTH/mkq

cc: Ms. Victoria Tschinkel
Dr. Elton Gissendanner
Mr. L. Ross Morrell
Mr. William A. Ockunzzie

Jonathan P1. of 3
72

Avery H. Gould
9907 Spoonbill Road East
Flamingo Cay
Bradenton, FL 33529

U.S. Environmental Protection Agency
Criterion and Standards Division
Washington, D.C. 20460

12/11/82
Subject: Environmental Impact Statement. Tampa Bay Fla of Nov. 1982

Gentlemen,

I am a resident of Manatee County and I fish and swim in the Bays and off the gulf beaches. I am an officer of several citizens groups and in this capacity I have taken time to follow the progress of the law-suits against your Agency and have carefully reviewed (but not entirely digested) the draft EIS which you were kind enough to send me.

1-1 There is so much involved and so many questions which need answering that we lay people can only address those things which seem obviously wrong and which will have a serious impact on our health, happiness and welfare.

First, for a personal observation of the probable result of the dumping. During my half-mile daily swim off Holmes Beach for the past ten years I have controlled my depth and direction by watching the depth and striation of the bottom below me at 4 to 5 ft. of water. Up to the last year or two, even in midsummer and with moderately choppy seas, there was no problem and I enjoyed seeing the occasional flounder or crab on the bottom below. (no sting-rays thank-you!) Now, even on a calm day, I can barely see the bottom except at 2 to 3 ft and can't tell a clam shell from a crab. I used to snorkel at the Holmes Beach pier and peer in at the grouper, pin fish & occasional shark below. That is now past history. Recently my nephew, at my urging, put on the mask. I was embarrassed when he said he could see only occasional shadows. We can only conclude that the change was caused by the dumping which continues at the interim site. Can you blame us?!

1-2 Getting back to the E.I.S. On page 1-2 your staff made no bones about the fact that they had made a decision to use Site 4, and then set out to prove-in the site. Is this not an unusual way to approach a problem and does it not put the cart before the horse? For instance they describe a super-
1-3 ficial N.E to S.W. video bottom survey where nothing was seen

Avery H. Gould
9907 Spoonbill Road East
Flamingo Cay
Bradenton, FL 33529

but some soft corals. It may have been a pleasant boat-trip but assuming a maximum camera scan of 40°×190° radius for the 2.9 mile traverse the observers only saw about 6/000 of the 45 sq mi. area. The crossing took about one hour. (Did someone get sea-sick?!) This brief observation apparently led to inconsistencies in the description of the bottom. P. XIII and P XVII say the bottom is sandy, the conclusion on p. XXI says the site has the fewest hard bottom areas which may be affected, and p 3-1 says the site is in an area of primarily sandy bottom with few rock outcrops in its vicinity. Your staff unfortunately made short shrift (2 pages of 190+ pgs) of consideration of upland, or any other than ocean disposal. As I

7-4 recall, this is contrary to regulations (or guidelines). Assuredly diking the Tampa Bay shore areas, which would destroy the mangroves, is not an alternative environmentally. However spoil islands have been useful in the past and contribute protective habitat in the long

7-5 run. We know Col. Deveraux of the Corps states that spoil islands would not be feasible for the unstable "goo" from Bayboro Harbor and would not stay in place. However the Corps is concerned right now with the 2.6 million cu yds which reportedly would be ideally suited for this use. Another thing: Has anyone since 1972 approached our Federal authorities, state the serious problem with which we are confronted, and sought permission to place this fine fill material on the McDill Air Base property? That would be the best solution and would receive strong support in Washington from all parties concerned.

But to get back to Site 4. It is indeed about 18 miles from Egmont Key but that puts it south and west of the existing

7-6 interim dump site and would give no relief to Ana Maria and Long Beach beaches.

Pages 2-24, 2-25 and 2-26, when studied carefully, prove that the dredged material, wherever dumped, will ruin the immediate

7-7 area, and much of it will drift several miles in all directions energized by tide and normal wind and wave action, and often driven "hither and yon" by intense storm action. This always means further destruction of our marine habitat, and esthetic and indeed health problems with our inshore Gulf waters.

7-8 Page 3-4 outlines the economic importance of our

P. 3 & 3 74

Avery H. Gould
9907 Spoonbill Road East
Flamingo Cay
Bradenton, FL 33529

recreational and commercial fishing. Do we dare jeapordize this further by continued dumping?

7-8 All of us who have experienced "red tide" periods know what this does to us and to our area tourist trade, to say nothing about property values of beach and bay homes. We cannot accept the inference on page 3-32 that the

7-9 dredged material is not likely to have caused the "tide". Tampa Bay Harbor and Bay have been subject to phosphorous and other heavy metal runoffs and "wash-offs" for years. Recent bio-essay tests of channel bottom areas have been reported as "suspect". We cannot assume that the continued dumping of these materials in the Gulf will not set off a bloom of "gym breve" to end all blooms. Why chance such a disaster?!

In conclusion - we appreciate your technical and political problems in trying to keep everybody happy. However lets try to get the Corps to reach into its voluminous pockets and find the money to dump the remaining Bayboro Harbor "crud" out in the mid-ocean area! In the meantime lets get busy on the spoil island and McDill Air Base alternatives! The 2.6 million additional cu/yds has been reported to consist largely of good "fill" material. It is a shame to pay at least $6 a cu/yd just to throw it away.

And lets forget about any more dumping into our in-shore waters!

Sincerely yours,

Avery H. Gould

P.S. We would greatly appreciate your comments regarding our questions and suggestions

C.C. Honorable Lawton Chiles
Honorable Paula Hawkins

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NATIONAL SCIENCE FOUNDATION
WASHINGTON, D.C. 20550

October 28, 1982

OFFICE OF THE
ASSISTANT DIRECTOR
FOR ASTRONOMICAL,
ATMOSPHERIC, EARTH,
AND OCEAN SCIENCES

Environmental Protection Agency
Criteria and Standards Division (WH-585)
401 M Street, SW
Washington, DC 20460

Dear Sir:

19-1 The National Science Foundation has no comment on the DEIS for Tampa Harbor, Florida Ocean Dredged Material Disposal Site Designation.

Sincerely yours,

Barbara E. Onestak

Barbara E. Onestak
Acting Chairman
Committee on Environmental
Matters

In its attempt to stop all ocean dumping, the county has tried to show in the trial that no matter where you dump the material, it will move and destroy hard bottoms. It hopes the judge will make the feds dump the material at existing diked spoil islands.

75

Dec. 1, 1982

Sir:

It's incredible to me that dumping dredged waste from Tampa Bay into sites so adjacent to our lovely waters off Anna Maria Island could even be considered. It should be dumped in the existing diked spoil islands.

All too often actions taken by the Army Corps of Engineers undertakes changes - environmentally - and the results and lands are changed - detrimentally - forever.

With a proven area (diked islands) for dumping) why not use it?

Mrs. R. Bailey

Bradenton, Fla. 33529 6862-8th Ave. W.

18-1

FLORIDA COOPERATIVE EXTENSION SERVICE
UNIVERSITY OF FLORIDA
FOR SEA GRANT PROGRAM OF STATE UNIVERSITY SYSTEM OF FLORIDA

MARINE ADVISORY PROGRAM
REPLY TO 1303 17th St. W.
Palmetto, Fl. 33561 2998
(813) 722-4524

November 29, 1982

Criteria and Standards Division
401 M Sheet SW
Environmental Protection Agency
Washington, D.C. 20460

I have reviewed the draft Environmental Impact Statement for Tampa Harbor, Florida Ocean Dredged Material Disposal Site Selection, and have some questions and comments.

1. In the report it is clearly and repeatedly stated that existing dump sites are located near areas of hard bottom and charter boat operations. Also, that since this area is a "high energy" environment there is the possibilty that dredge material could drift back into the Tampa Bay channel entrance (approx.
20-1 1.25 nm south of the existing sites). To me this suggests that the orginal site selection was conducted in a hasty and arbitary matter.

I applaud the efforts to find a more suitable disposal site but question whether damage has already occoured. It will soon
20-2 be six years since the initial dump site selection. To me the information presented would argue against permitting any additional dumping 1.e. 1.7 million cubic yards at the present dump location.

2. On page 4-7 the report states: "Dilution and dispersion will reduce suspended particulate levels relatively quickly".
20-3 What does "relatively quickly" mean, (hours, days, weeks,?).

3. On page 4-19 the report states: "Short-term avoidence of locally high turbidity may be the only significant environmental effects on fisheries". If this short term avoidence were to occur concurrently with the short-term seasonal migrations of mackerel
20-4 and mullet, the effect would be greatly increased. Therefore it would seem to be advisable to consider seasonal restrictions on dumping activity.

4. On page 4-22 the report indicates that since the sites are
20-5 a least 9 nmi from shore, a turbid plume would have non-existent adverse impacts on visual aesthetics from shore. What about for sport diving?

EQUAL OPPORTUNITY EMPLOYER

COOPERATIVE EXTENSION WORK IN AGRICULTURE, HOME ECONOMICS AND MARINE SCIENCES, STATE OF FLORIDA,
U. S. DEPARTMENT OF AGRICULTURE, U. S. DEPARTMENT OF COMMERCE, AND BOARDS OF COUNTY COMMISSIONERS, COOPERATING

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

3 NOV. 1982

OFFICE OF
WATER

Mr. Richard E. Pease, President
Florida Skin Divers Association
3901 Lynwood Avenue
Tampa, Florida 33611

Dear Mr. Pease:

Thank you for your letter of November 1, 1982, containing comments on the Draft Environmental Impact Statement (DEIS) for the Tampa Harbor Ocean Dredged Material Disposal Site Designation. Comments on this DEIS should be addressed to Mr. W. C. Shilling, Criteria and Standards Division (WH-585), EPA, Washington, DC, 20460. I have taken the liberty of forwarding your comments to Mr. Shilling.

The notice of availability of this DEIS was published in the Federal Register on Friday, October 29; the comment period does n ot close until December 13.

Sincerely yours,

T. A. Wastler, Chief
Marine Protection Branch (WH-585)

Florida Skin Divers Association Inc.

November 1, 1982

Mr. T. A. Wastler
Chief, Marine Protection Branch
(WH 585) EPA
Washington, D.C. 20460

Dear Mr. Wastler

As a representative of the Florida Skin Divers Association, I would like to submit the following comments on the DEIS for the Tampa Ocean Disposal Site Designation.

We have not been afforded an adequate opportunity to comment. We recieved a copy of the document on October 29, 23 days after the beginning of the comment period. After allowing time for our comments to reach you by mail, we had less than 72 hours in which to review and draft comments. Therefore please understand that this letter does not contain all of our objections. There appear to be many errors in the text which we have not had time to analyze. Your agency is very strict in requiring other branches of government to provide DEISs to reviewers on or before the beginning of the comment period. Are you exempt from your own rules?

The document addresses only offshore disposal, claiming that a previous study by the Corps of Engineers had determined that offshore disposal was preferable to upland or within bay disposal. However, previous studies by the Corps have never
21-1 made any significant attempt to compare the environmental and economic effects of offshore disposal with other sites. Without such a comprehensive treatment of the disposal problem, both EPA and the Corps remain in violation of the spirit and letter of NEPA.

The document strongly suggests that impacts of dumping are limited to the site and areas immediately adjacent to it and that turbidity and siltation effects disappear after a few hours or days. The experiance of our members indicates that this is false. Since large scale dumping began at the present site, we have experianced tubidity and siltation problems over a very wide and steadily increasing area. These problems became severe
21-2 during 1981 and 1982. During the summer of 1982 and continuing up to the present in an area extending for at least 10 miles south of the site, a thin layer of silt has been present. Sponges and soft corals in this area are frequently coated with this material. It does not take a coral biologist to know that this is not a healthy situation. Visibility in this area has

been greatly reduced, reducing penetration of light and productivity of the bottom community. As a side effect, it has become impossible to dive in much of this area, and greatly reduced the receational value of the rest. In our experiance, turbidity and siltation from dumping continue to disrupt the system for months or years, not days.

The DEIS Does not differeniate between the likely environmental effects of spoil from harbor deepening versus maintenance. In our opinion, the difference will be radical. Large grain material, rock, sand,etc from channel deepening will probably stay within the site. Longterm adverse impacts outside the site
21-3 may not be too serious. Maintenance dreding will produce primarily silt and other fine grain material. This material will inevitably be distributed for miles surrounding the site. If the effects of the material are evident for months or years, and maintenance dreding is conducted annually or bi-annually, we have a permanent problem. longterm chronic damage to thousands of acres of coral habitat is likely. The DEIS gives no suggestion that this problem might exist.

The DEIS ignores the effect on the human environment. There has already been and will continue to be a sustantial loss of esthetic value to divers. This will inevitably translate into economic loss for diving related businesses. The same is true
21-4 for recreational and charter fishing. The values for recreational fishing given in the document are ridiculously understated and 8 years out of date. Economic value of diving is not even mentioned. Recreational fishing and diving is a multi-billion dollar industry in Florida.

The DEIS ignores the effect of illegal dumping outside the site. As you are aware, from previous correspondence with us, dumping is now occuring outside the site. A spoil pile can be found at loran coordinates 14168.2, 44327.5. This is about one mile east
21-5 of the present site. When found, it was obviously fresh, with little growth on the rocks. Some of our members have reported other instances where hopper dredges appeared to be dumping outside the site. This may be a common occurance. If so, it's environmental effects should be considered.

FSDA is strongly opposed to offshore disposal of spoil, particularly maintenance material. We reccommend that dumping
21-6 cease, at least until the following is completed:

1. The DEIS should be modified to fully examine all disposal alternatives, including upland disposal. Economic values for fishery and recreational losses should be included.

Proper management of existing disposal sites could solve most or
21-7 all of our problems and eliminate the need for offshore disposal. Most material from channel deepening is good quality

fill, for which there is a ready market in this area. Presently available techiques for de-watering and compacting soft material could greatly expand the capacity of existing sites in upper Hillsborough Bay.

22-8 2. If offshore disposal is inevitable, a serious study of the offshore area should be completed. Work to date has been piece meal and totally inadequate. A complete mapping study of the entire area is needed along with current and wave energy studies to determine exactly where spoil material will end up.

Thank you for this opportunity to comment.

Sincerely

Dick Pease

Richard E. Pease, President
Florida Skin Divers Association

Captain L. F. Borden
5301 35th Avenue West
Bradenton, Florida 33529
December 8, 1982

Criteria and Standards Division (WH-585)
401 M Street, S.W.
Environmental Protection Agency
Washington, D. C. 20460

RE: Draft Environmental Impact Statement 11/82

Dear Sirs:

Page 10 of the summary. The Corps stated that non-ocean disposal methods were considered in 1974. We see nothing in the 1982 draft that compares the cost benefit ratio of offshore dumping with any other alternatives such as upland disposal of dredged material. The Federal Register 40CFR, Subpart C227.15, Paragraph C states that in the factors considered, the need for dumping will be determined by evaluating the relative environmental risk impact and cost for
22-1 ocean dumping as opposed to other feasible alternatives; including, but not limited to, landfill, well injection, consideration of spreading the material over open ground, recycling material, storage, etc. Again, the Corps has not dealt with the cost-ratio benefits between ocean dumping and upland containment as they must according to EPA's Federal Register.

Page 13, paragraph 4. States "the shallow water Alternative Site 4 will provide a sandy bottom environment that is further removed from the hard bottom areas and of sufficient size to permit the disposal of dredge material without unacceptable adverse affects."
22-2 There is quite a lot of sand in Site 4. However, this site also contains many highly productive, low relif, hard bottom areas. Therefore Site 4 is not an entirely sand bottom as so specified.

Page 16, first paragraph. States "the tropical storms and hurricanes produce strong bottom currents of 3 to 4 knots which can profoundly affect dumped material." This is true, however, every northwestern blow that commonly occurs with the
22-3 winter fronts causes considerable drifting of the dumped material. These prevailing winds will disperse the material towards the southeast, a very sensitive area located off Sarasota.

Page 16, paragraph 2. EPA states "dispersal of dumped sediments, particularly the large volume projects from the Tampa Bay Harbor Deepening Project may adversely affect hard bottom outcrops near the existing site". Again they are
22-4 stating that migitation of the silt is probable. "Relocation of the disposal site to an area containing fewer or no hard bottom outcrops will present less conflict with the environmental characteristics of the area and the commercial fishing, diving and recreational use of the area." One mile north of Alternative Site 4 lies one of the best dove areas in the West Coast of Florida; the wreck

of the Gunsmoke in 80 feet of water. The Gunsmoke is a 65-70 foot fishing vessel sunk some 6-7 years ago. Without a doubt the siltation will affect that dive site. The Draft goes on to say "in addition continued use of existing sites or use of Alternative Site 2 may result in repositioning of dump sediments into the entrance of the channel". Again they are stating that migration is probable. The last portion of that paragraph states that shallow water Alternative Site 4 will provide a large sandy bottom area for disposal of dredged material. Again, they stated that is is all sandy bottom. It is not.

22-5 Page 17, paragraph 2. States "dispersal of material outside the site boundaries will be over time and in thin layers. Such dispersion is not expected to have unacceptable adverse environmental affects." It is my belief that a thin layer over a period of time is what is doing the damage to the limestone ledge formations, particularly the low relief hard bottom outcrops in the Gulf of Mexico. This thin layer that the draft is discussing unnaturally resuspends and smothers every little section of outcropping in the area, destroying the chain of life.

22-6 Page 19, summary Environmental Consequences. EPA states "previous disposal of dredged materials at existing sites has not been monitored to determine specific environmental effects". It goes on to say that "studies of dredged material disposal in other operations conducted in other areas of the continental waters had determined no significant long term adverse affects resulted in the dumping of dredged material on sandy bottoms". The West Coast of Florida is not like other locations throughout the continental U.S.A. The flushing patterns are completely different than the East Coast of Florida or the northeast coast of the continent. Flushing patterns and dispersal patterns cannot be compared to other areas of the United States. Again, they have stated in the summary that dispersal is evident. The problem is that it does not collect on the sandy areas, it collects in the limestone pockets, the habitat for the fish.

22-7 Page 20. States "that mounds of dredged material may persist several months. The physical characteristics of the dredged sediment may be dissimilar to the existing sediments resulting in changes to the bathynic biological characteristics of the affected site." The Draft summary states "the marine organisms are not adapatable for burial or the high level of silt, therefore the dredged material and disposal at the existing site may result in a more significant environmental consequence than at an alternative site, such as Site 4." The problem with this statement is that the quality of the water is much better at Site 4 in 80 feet of water. The corals are in better shape, the spiny oysters are surviving and the general quality of the water is much better and much clearer. Therefore there would be more environmental consequences due to the siltation at Site 4.

22-8 Page 20, paragraph 2. States that "based on analysis of the samples, certain trace elements would be released in the water during disposal. Some of these materials contain heavy metals, organic compounds, nitrogen compounds, and phosphorous compounds. It states however the estimated volume release and calculated dilution of this mater indicated that there would be reduced background levels after the permitted 4 hour period of initial dilution. The problem seems to be that the samples and the 4 hour periods of initial dilution are not actual paramenters, but in fact samples. Samples of silt removed from the actual dump site.

22-9 Page 20, paragraph 3. States "the proposed action is expected to have minimal

impact on threatened and endangered species occuring in the region." Turtles inhabiting the area are predominantly loggerhead. The last portion of that paragraph states "that the general area of the site under consideration, Site 4, do not contain unique feeding or breeding grounds for any specie of turtle and the site used is not anticipated to affect their survival." Perhaps the bottom within Site 4 is not unique in that it does not have the high relief that the loggerheads seem to stay around and feed, however the scope of the siltation will affect the loggerhead feeding. Silt migration is evident to other areas that the loggerhead will be feeding and living. There are loggerheads in the area of Site 4. I feel that siltation will definitely affect the feeding pattern and perhaps the breeding pattern as well.

Page 21, paragraph 1. States that "disposal operations on Alternative Site 4 would not interfere with long term use of the resource". I disagree with that. It goes on to say that, adverse environmental effects of the proposed action include smothering of the bottom within the designated site to possible habitat alteration of the site and states adverse impacts within the site are unavoid-
22-10 able, but the disposal operations will be regulated to prevent unacceptable and environmental degration outside the boundaries". Regulation seems to be the key would here. The EPA has proven to the residents of Manatee County that it does not intend to abide by it's own regulations set up in the Federal Register.

Page 21, paragraph 2. States "the CE District Engineer or EPA may establish a monitoring program to supplement historical data. The primary purpose of the monitoring program is to determine whether disposal at the selected site significantly affects areas outside the site, and to detect long-term effects occurring in or around the site." This monitoring plan will no doubt be as incomplete as
22-11 Mr. Amson's site survey of Site 4. Retrospective monitoring serves no purpose after the damage is done and the habitat is destroyed. As in the case of Site A, Bataymetric studies must be conducted before the ocean disposal if adverse impacts are expected.

Captain L. F. Borden

cc: Alfred B. Devereaux, Jr.
Charles Hunsicker
Bob Reynolds.

DEPARTMENT OF THE ARMY
WATER RESOURCES SUPPORT CENTER, CORPS OF ENGINEERS
KINGMAN BUILDING
FORT BELVOIR, VIRGINIA 22060

REPLY TO
ATTENTION OF:

WRSC-D

9 DEC 1982

Mr. Jonathan Amson
Criteria and Standards Division
U. S. Environmental Protection Agency
401 M Street, S. W.
Washington, D. C. 20460

Dear Mr. Amson:

The Draft Environmental Impact Statement for the Tampa Harbor, Florida, Ocean Dredged Material Disposal Site Designation, dated November, 1982, has been reviewed by the U. S. Army Corps of Engineers. The Corps' general and specific comments are inclosed, Incl 1.

23-1 The Corps concurs with EPA's recommendation that the ocean site at center coordinates 27° 31' 27"N, 83° 04' 54"W, is environmentally acceptable for the ocean disposal of dredged material and should receive permanent designation for the disposal of dredged materials from the Tampa Bay area that are in compliance with the criteria and requirements of EPA and Corps regulations.

Sincerely,

W. R. MURDEN, P. E.
Chief, Dredging Division

1 Incl
As stated

P7

D-R

1 December 1982

SAD Comments on EPA DEIS (November 1982)
for Tampa Ocean Dredged Material Disposal Site Designation

1. General.

a. While the EIS recommends the designation of a new ocean disposal site, it does not clearly show the trade-offs involved in changing sites. That is, the additional economic costs of utilizing Site 4 are not weighed against the environmental damages to the existing site and adjacent areas. Furthermore, the significance of the hard bottom areas in Site A to the hard bottom in the geographic region is not discussed or demonstrated.

b. The EIS should clarify the concept that previous studies "showed no significant environmental degradation outside Site A, and, in EPA's best professional judgment, the balance of the dredged material from Section 2C (portion) will remain within the site without causing unacceptable adverse impact beyond the site boundary." (Federal Register, October 6, 1982). The EIS does not appear to be totally consistent with the concept as indicated by paragraph 1, page 2-26 and paragraph 1, page 4-2.

c. Recovery of Site A after completion of disposal should be discussed.

2. Page VI, first sentence, item (2). "possible" should be deleted.

3. Pages X, 10th line and 2-4, 11th line. "justify an acceptable"... suggest replace "justify" with "develop," and method needs to be pluralized.

4. Page 1-6. The second paragraph needs to be revised to reflect the completion of recent maintenance dredging of St. Petersburg Harbor and Port Tampa Channel. St. Petersburg Harbor dredging was completed on May 1981; 362,652 cubic years of dredged material was taken from St. Petersburg Harbor and deposited in the Gulf d/a (Site A). Dredging at Port Tampa Channel (Cut G) was completed on March 1982; 662,897 cubic yards of dredged material from the Port Tampa Channel was deposited at the Gulf d/a (Site A).

5. Page 2-3, first full paragraph. Freshwater runoff from upland is not considered a significant influence at the subject disposal areas. It is recommended that "freshwater runoff" should be deleted.

6. Page 2-3, last paragraph. Site 4 is 5.6 statute miles farther hauling distance than existing site. A round trip would therefore be 11.2 statute miles (9.7 nautical miles).

7. Page 2-5. A total land-based operation is not expressed on this page. The alternative should be identified as a land and water-based disposal area. In addition, the mention of dike locations is confusing. During successive dredging operations, dredged material will be placed landward of temporary dike structures located above the waterline. This will confine unconsolidated material and control the runoff from the disposal area.

Incl. 1

Jonathan 88

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Washington, D.C. 20235
OFFICE OF THE ADMINISTRATOR

December 13, 1982

Environmental Protection Agency
Criteria and Standards Division (WH-585)
401 M Street, SW, Room 2824
Washington, D.C. 20460

Dear Sir:

This is in reference to your draft environmental impact statement entitled "Tampa Harbor, Florida, Ocean Dredged Material Disposal Site Designation." The enclosed comments from the National Oceanic and Atmospheric Administration are forwarded for your consideration.

24-1 Thank you for giving us an opportunity to provide comments. We would appreciate receiving four copies of the final environmental impact statement.

Sincerely,

Joyce M. Wood

Joyce M. Wood
Chief
Ecology and Conservation Division

Enclosure

10TH ANNIVERSARY 1970-1980
National Oceanic and Atmospheric Administration
A young agency with a historic
tradition of service to the Nation

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

Rec'd 11/8/82
PP:EC

November 4, 1982

TO: PP/EC - Dave Cottingham

FROM: F/SER64 - Andreas Mager, Jr.

SUBJECT: Review of the November 1982 Draft Environmental Impact Statement for Tampa Harbor, Florida Ocean Dredged Material Disposal Site Designation by the United States Environmental Protection Agency

The subject DEIS has been received for review by the Marine Mammals and Endangered Species Branch of the National Marine Fisheries Service, Southeast Region.

The statement has been reviewed relative to information provided on marine mammals and endangered species. The following comments are offered for your consideration.

3 Affected Environments
Rare and Endangered Species (Page 3-46)

The information provided regarding whales should be revised. No data is available on the life histories of the six whale species discussed. Accordingly, it cannot be unequivocally stated that the Gulf serves as a winter feeding, mating, and calving ground, or that most whales stay beyond the continental shelf. The following information on whales should be considered. This information was obtained from Schmidly, D.J. 1981. Marine Mammals of the Southeastern United States Coast and the Gulf of Mexico. U.S. Fish and Wildlife Service, Office of Biological Services, Washington, D.C. FWS/OBS - 80/41 163p.

Sei Whale (Balaenoptera borealis) - These whales are known from the Gulf of Mexico based on three strandings; one at Gulfport Harbor, Mississippi, one near Fort Bayou, Louisiana, and one at Campeche, Mexico. Three stocks are believed to exist, one of these may be a Caribbean/Gulf of Mexico stock. These whales are distributed inshore as well as offshore. No data is available on life history in the Gulf of Mexico.

Fin Whale (Balaenoptera physalus) - These whales are known from the Gulf of Mexico based on four sightings and six strandings. They are present in the Gulf of Mexico apparently throughout the year, possibly indicating an isolated stock. Two sightings have occurred inshore; one in Florida Bay near Boot Key and the other off Destin, Florida. Accordingly, an inshore as well as offshore distribution is indicated. No life history data is available for fin whales in the Gulf of Mexico.

Blue Whale (Balaenoptera musculus) - Blue whales are known from the Gulf of Mexico based only on two strandings. The identification of one of these strandings may be suspect. No other data is available for this species in the Gulf of Mexico, but blue whales seem to prefer cold water and avoid warm waters.

Humpback Whale (Megaptera novaeangliae) - This species is known from the Gulf of Mexico based mainly on three sightings, one of these was off the mouth of Tampa Bay within 40 miles of the coast. Captures are also reported from the Gulf of Mexico. Humpback whales are a coastal species and are likely to be found inshore. Breeding and calving are known to occur in Caribbean waters from January to March, but no life history data is available for the species in the Gulf of Mexico.

Right Whale (Eubalaena glacialis) - One sighting and one stranding of this species are reported from the Gulf of Mexico. The sighting occurred off New Pass, Manatee County, Florida. These whales are primarily coastal, occurring very close to shore. Therefore, they are threatened by pollution, habitat destruction, and ship traffic, especially since they are near extinction. No life history data is available for the right whale in the Gulf of Mexico.

Sperm Whale (Physeter catodon) - A number of captures, strandings, and sightings have been reported for this species in the Gulf of Mexico. Sperm whales occur primarily in deep water off the continental shelf. The sperm whale was once numerous in the Gulf, but is now considered to be uncommon. No life history data is available in the Gulf of Mexico.

The information in the DEIS on sea turtles is also not accurate. Specifically, we disagree that the five endangered turtles migrate from the Caribbean to nest along the Gulf coast of Florida and that the turtles range from Cedar Keys south to the Dry Tortugas. Moreover, the loggerhead sea turtle is listed as threatened, not endangered.

The five species of sea turtles mentioned are distributed throughout the Gulf of Mexico and not only from the Cedar Keys to the Dry Tortugas. Also, the reference used to document that sea turtles migrate from the Caribbean to the Gulf of Mexico should be provided. The loggerhead is the only sea turtle that nests with any frequency along the Gulf coast of Florida. Nesting here by other sea turtles would be very rare to non-existent.

In view of the above, the information in the DEIS on sea turtles and marine mammals should be upgraded. Also, the discussion of project impacts on endangered and threatened species (page 4-40) should be re-examined in the light of new information obtained.

The DEIS would also be more complete if it contained the results of the Section 7 Consultation required by the Endangered Species Act. This could perhaps be included in Chapter 5 - Coordination.

tampa bay regional planning council

9455 Koger Boulevard
St. Petersburg, FL 33702
(813) 577-5151/Tampa 224-9380

December 17, 1982

Mr. T. A. Wastler
Chief, Marine Protection Branch (WH-585)
Environmental Protection Agency
402 M Street S.W.,
Washington, D.C. 20460

Dear Mr. Wastler:

Subject: Capacity of an Ocean Disposal Site to Contain Dredged Material with Special Reference to Outer Site A, Tampa, Florida

The staff of the Tampa Bay Regional Planning Council has reviewed the above referenced report prepared to support the extended area of Site A for the disposal of dredged material from the Army Corps of Engineers Tampa Harbor Deepening Project. Based on the limited information in the report and minimal review time frame, a determination cannot be made until detailed evaluation of the proposed action on the human health, welfare, amenities, marine environment, ecological system, and economic potentialities are completed and public hearing is held.

The report contains some valuable scientific information assessing the impact of disposing dredged material on sites located on the Atlantic Continental Shelf. However, as it is stated in this report, the number of conducted studies is relatively small and there is not yet a generalized model that is widely accepted and available to describe all the relevant processes.

Further disposal of dredged material at Site A may result in more significant environmental consequences than at other locations. Since May
25-1 1981, about 4.68 million cubic yards of dredged sediment have been discharged at Site A; about 59 percent of this material was mud, 39 percent was sand, and 2 percent was rock. The additional dumping may cause irreversible negative impacts on the marine environment.

Therefore, the Council staff recommends that a public hearing be held to evaluate the impact of the continued disposal of dredged material of the
25-2 designated site. The public hearing should be held in order to receive this public testimony on the following issues:

Chairman Jan K. Platt
Commissioner, Hillsborough County

Vice-Chairman George McGough
Mayor, City of Largo

Secretary/Treasurer Saundra Rahn
Councilwoman, City of Bradenton

W.A. Ockunzzi
Executive Director

Bradenton • Clearwater • Dade City • Dunedin • Gulfport • Hillsborough County • Largo • Manatee County • New Port Richey • Oldsmar • Palmetto • Pasco County • Pinellas County • Pinellas Park • Safety Harbor • St. Petersburg • St. Petersburg Beach • Sarasota • Tampa • Tarpon Springs

25-3 o Evaluate other alternatives than ocean disposal like diked disposal islands and upland disposal areas.

25-4 o Evaluate the impacts of the proposed action on marine environment and economy of the region.

25-5 o To further review the EPA proposal for extension of Site A for the disposal.

25-6 o Determine whether the proposed action affects the recreational activities of the region and commercial fishing.

25-7 o The possible impact on migratory fishing should be identified.

25-8 o Contribute to the knowledge of the environmental features of this area based on the previous activities in/around the site.

25-9 o Determine what studies and monitoring should be done in this area in order to detect long term adverse impacts.

We appreciate the opportunity to review this important project and hope the above comments are helpful to you in reaching a decision on a public hearing. Should additional clarification be necessary, please contact me or Mr. Michael McKinley of the Council's staff.

Sincerely,

William A. Ockunzzi
Executive Director

WAO/rbm

cc: Jan Platt
Westwood Fletcher
Jesse Carr

Florida Skin Divers Association, Inc.

December 9, 1982

Environmental Protection Agency
Criteria and Standards Division (WH-585)
401 M Street, S.W.
Washington, D.C. 20460

Dear Sir:

As a representative of the Florida Skin Divers Association, I would like to add to our previous comments on the DEIS for Tampa Harbor Ocean Dredged Material Disposal Site Designation.

The data base of the DEIS is badly flawed. The "survey" used to define site 4 was unbelievably inadequate. It consisted of towing an underwater camera along a straight line track for a
26-1 total of two hours. According to the distances given in the log of the survey supervisor, the camera track only extended about half way across the site.

The DEIS concludes that site 4 is "sandy bottomed" and is "removed from areas of recreational diving". It further states that there are no wreaks or artificial reefs near the site. All of these statements are false. Two very popular wreaks are located just north of the site. One, the Gunsmoke, is less than one mile from the site and is plainly marked on navigational charts. There are numerous productive fishing and diving areas in and around site 4. To our knowledge, three productive areas exist within the site, including one ledge. At least three
26-2 other ledges can be found within one third mile of the site and dozens, if not hundreds, of ledges lie within two or three miles. Numerous hard bottom areas can be found within and on all sides of the site. All of these areas are popular and productive diving and fishing areas. We can provide exact loran coordinates for these areas if the EPA or some other agency is willing to conduct a comprehensive and unbiased study.

The DEIS is legally insufficient, because all alternatives are not considered. The DEIS implies that it was not necessary to consider non-ocean disposal because the Corps of Engineers had previously compared those alternatives to ocean disposal. However, we examined the 1974 FEIS and the 1977 supplemental EIS
26-3 and found no significant analysis of potential damage to offshore habitats, no studies of offshore sites, no estimates of damage to fishing and diving values , either economic or social. We conclude that the previous analysis by the Corps was not sufficient to assess the relative merits of ocean versus other

types of disposal alternatives.

A practical, environmentally safe alternative to offshore disposal does exist. Two diked disposal areas are available in upper Hillsborough Bay. These areas cover several square miles and have tremendous capacity. That capacity could be
26-4 sustantially increased by increasing dike heights and de-watering the spoil material. There is no need for any offshore disposal for many years to come, probably never. Failure to consider this alternative is a serious legal deficiency in the DEIS.

We request that a public hearing be held in the Tampa Bay area to allow full and complete public comment on this issue.

Please be aware that we are considering legal action against the
26-5 EPA and Corps of Engineers if offshore disposal continues.

Thank you for this opportunity to comment.

Sincerely

Dick Pease

Richard E. Pease, President
Florida Skin Divers Association
3901 Lynwood Ave.
Tampa, FL 33611

tampa bay regional planning council

9455 Koger Boulevard
St Petersburg FL 33702
(813) 577-5151/Tampa 224-9380

January 14, 1983

Mr. Jonathon Amson
U.S. Environmental Protection Agency
Criteria and Standards Division (WH-585)
401 M Street, S.W.
Washington, D.C. 20460

Dear Mr. Amson:

Subject: Tampa Bay Regional Planning Council A-95 Clearinghouse Review No. 218-82; Draft Environmental Impact Statement (DEIS) for Tampa Harbor, Florida, Ocean Dredged Material Disposal Site Designation, Hillsborough, Pinellas and Manatee Counties

27-1 Enclosed please find a copy of the Council's Clearinghouse Review report for the above referenced project adopted by the full Council on January 14, 1983.

Should additional clarification be needed, please feel free to contact me. We appreciate the opportunity to review the proposal.

Sincerely,

Jan K. Platt

Jan K. Platt
Chairman - TBRPC
Hillsborough County Commissioner

MRM/kh

Enclosure

cc: Walt O. Kolb, Governor's Office
Westwood Fletcher, TBRPC
Jesse Carr, TBRPC

Chairman Jan K. Platt
Commissioner, Hillsborough County

Vice-Chairman George McGough
Vice-Mayor, City of Largo

Secretary/Treasurer Saundra Rahn
Councilwoman, City of Bradenton

W.A. Ockunzzi
Executive Director

Bradenton • Clearwater • Dade City • Dunedin • Gulfport • Hillsborough County • Largo • Manatee County • New Port Richey • Oldsmar • Palmetto • Pasco County • Pinellas County • Pinellas Park • Safety Harbor • St. Petersburg • St. Petersburg Beach • Sarasota • Tampa • Tarpon Springs

Agenda Item #11A 97
1/14/83

A-95 #218-82; Draft Environmental Impact Statement (DEIS) for Tampa Harbor, Florida, Ocean Dredged Material Disposal Site Designation, Hillsborough, Pinellas and Manatee Counties

CLEARINGHOUSE REVIEW

The U.S. Environmental Protection Agency (EPA) has requested review and comment on the draft Environmental Impact Statement (EIS) for Tampa Harbor, Florida which presents information necessary for the designation of a new Tampa Harbor Dredged Material Disposal Site. The purpose of the action is to provide the most environmentally and economically acceptable ocean location for the disposal of material dredged from the Tampa Bay area. Based on recent surveys of four Shallow-Water Alternative Sites, EPA has determined that Shallow-Water Alternative Site 4 is the alternative with the fewest hard-bottom areas which may be affected by the disposal of dredged material. It is the recommendation of the DEIS that Alternative Site 4 be designated as the disposal site location for dredged material from the Tampa Bay area. Agency - EPA; Location - Hillsborough, Pinellas and Manatee Counties.

Local Comments Received From:

Hillsborough County Environmental Protection Commission: See attached letter dated December 5, 1982.

Hillsborough County Department of Development Coordination: See attached memorandum dated December 3, 1982.

Pinellas County Planning Department: No comment received as of December 30, 1982.

City of St. Petersburg Planning Department: See attached letter dated December 16, 1982.

Manatee County Board of County Commissioners: See attached letter dated December 13,1982

Mote Marine Laboratory: See attached letter dated December 9, 1982.

Gulf of Mexico Fishery Management Council: See attached letter dated December 10, 1982.

Office of the Governor: See attached letter dated December 22, 1982.

Council Comments and Recommendations

This project has been reviewed for consistency with the Council's Areawide Water Quality Management Plan and the Council's adopted growth policy, the Future of the Region. The proposal has not been found to be consistent with Council policy that a standard of water quality should be achieved that allows for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the waters in the region.

This project is regionally significant and the following local and regional concerns have been raised during the review:

- The staff of the Tampa Bay Regional Planning Council has reviewed the Draft Environmental Impact Statement (DEIS) for Tampa Harbor Ocean Dredged Material Disposal Site Designation and offers the following comments:

General Comments

1. The DEIS lacks sufficiently detailed evaluation and comparisons of all possible alternatives including diked disposal islands and upland disposal areas.

2. The designation of Alternative Site 4 for disposal of dredged material from the Tampa Bay Area should be based on more detailed studies of this area. The DEIS lacks site specific studies evaluating the impacts on marine environment and economy of the region. The results of the studies done in other locations cannot serve as the base for evaluating the impacts of the proposed dumping of dredged material on the proposed site.

3. The environmental consequences of dumping dredged sediments on sand-substate habitats also cannot be predicted based on the results of the studies from other locations. The ecosystem of shallow-waters in central-southwest Florida is different from the continental U.S. waters.

4. Information pertaining to tidal currents is needed based on records obtained from the tide guage station located in Egmont Key.

5. The monitoring program has not been specifically designed to determine whether disposal at the selected site significantly affects areas outside the site and to detect long term effects occurring in or around the site. It is stated in the DEIS that a monitoring program may be established to supplement historical data. Details on what the monitoring program will entail must be included.

6. The recreational and commercial fishing values of the surrounding area should be identified as well as the impacts of ocean disposal on migratory fishing.

7. It is stated that dispersion of disposal material outside the site boundaries will be over time and in thin layers, and that such dispersion is not expected to have unacceptable adverse environmental impacts. Specific studies need to be completed to determine whether the thin layer of siltation adversely impacts the surrounding hard bottoms (corals).

Specific Comments

1. Statements that there are no hard-bottom habitats within or in proximity to Site 4 are not well-documented. More extensive inspection of areas both within and around the site is necessary before it can be known what types of organisms and communities will be

adversely affected by dumping. In-depth surveys to determine the nature and extent of live, hard-bottom habitats in or near the site should be further conducted.

2. It is stated in DEIS that results of dredged material disposal at the Tampa Harbor alternative sites are anticipated to be similar to the results of disposal operations at Galveston, Texas (page 2-28). However, the West Florida Shelf cannot be compared with other areas which have no hard-bottom communities. The conclusions that disposal will not result in any detectable changes in ecology of the area are inappropriate.

3. An assessment of the siltation and turbidity caused by resuspension of fine particles by waves, storms and tides has not been completed, as well as the expected impacts of the siltation on live-bottom habitats.

4. The long-term effects from the continual resuspension of spoil material throughout the water column have not been adequately studied nor documented. The amount and frequency of siltation, the direction of sediment transport based on site-specific ocean current information, and the environmental consequences of long-term turbidity should be estimated before final recommendations are made.

5. It is stated in the DEIS that Site 4 is removed from areas of recreational use, and has no known significant commercial fishery use (page 2-27). This statement is not based on the detailed survey of commercial and recreational fishing activities of this area. Relevant studies should be completed based on public testimony whether the proposed action affects the recreational activities of the region and commercial fishing.

6. Cost-benefit analysis, taking into account the direct and indirect economic benefits generated by the recreational use of this part of the Gulf of Mexico have not been done at this time.

7. A public hearing should be scheduled to allow full and fair public comment in the draft EIS and the overall suitability of dumping in the Eastern Gulf of Mexico.

- The Manatee County Board of County Commissioners has provided extensive comments which already have been forwarded to EPA and are summarized below (see attached letter dated December 13, 1982) regarding the Draft EIS for a permanent ocean disposal site for Tampa Harbor:

1. The EPA survey upon which the EIS relies to recommend Site 4 for permanent designation, used survey methodologies that are inadequate for determining the nature and extent of live, hard-bottom habitats in or near the site; yet, the entire EIS rests on the unproven assumption that there are no hard-bottom habitats within or in proximity to Site 4. This is critical because of the well-documented importance of live-bottom habitats to both commercial and recreational fishery resources.

2. Although the EIS notes that significant damage that can occur to hard-bottom habitats from siltation and turbidity, it completely fails to describe or assess the siltation and turbidity that will be caused by resuspension of fine particles by waves, storms, tides, and combinations thereof, and it fails to quantify the resulting siltation problem and its expected impacts to corals, sponges, algaes, and the like.

3. The EIS recommendation of Site 4 is based on erroneous and understated information concerning the use of the area in and around the site, which is actually located in an area that is heavily used by commercial and recreational fishermen, sport divers, and others.

4. The Site-Designation EIS presumes that ocean dumping is appropriate in this part of the Gulf of Mexico, disregarding as a general matter the high potential for damage from burial and siltation to the hard-bottom habitats and organisms found scattered throughout this part of the Gulf, and inadequately considering the possibility of using uplands or diked disposal areas on a short-term basis pending thorough investigation of the suitability of ocean dumping.

5. The EIS also relies on erroneous cost estimates for transporting the dredged material to various alternative sites, and there is no comparison of the environmental "pros and cons" of each alternative site relative to the economic costs.

6. Finally, with respect to the EIS's cost analyses, the EIS fails to take any account of the direct or indirect economic benefits generated by the recreational use of this part of the Gulf of Mexico, thereby placing too-heavy emphasis on the immediate costs of spoil transportation.

Therefore, in light of the many deficiencies of the Draft EIS, including reliance on erroneous assumptions, inadequate surveys, and incorrect infomation, the Board of County Commissioners of Manatee County requests that a public hearing be scheduled to discuss the Draft EIS and proposed site designation, or, in the alternative, that the Draft EIS be withdrawn and subsequently resubmitted for public comment.

- The staff of the Hillsborough County Environmental Protection Commission has reviewed the Draft Environmental Impact Statement (EIS) for Tampa Harbor: Ocean Dredged Material Disposal Site Designation and submits the following comments and recommendations:

  It is recommended that <u>all</u> disposal at the Existing Site A be stopped because it is too close to shore, too close to productive reef areas, and within easy reach of divers and small boat users.

  Site 4 is in 85 to 95 feet of water and is not as likely to be used for recreational purposes such as diving and fishing. All material should go to this site until some long range solution is found.

Site 4 has no hard-bottom outcrops and would therefore have the least impact on fish and other types of life.

- The City of St. Petersburg Planning Department has reviewed the Draft EIS for Tampa Harbor: Ocean Dredged Material Disposal Site Designation and recommends the following additions to the above referenced EIS:

  > Incorporation of any appropriate review criteria which may be forthcoming from the pending litigation related to offshore dumping initiated by Manatee County;
  >
  > Analysis of upland dumping sites;
  >
  > Further analysis of Site 4. It appears that Appendix C. (referenced on Page 2-13 of study) may provide additional data to substantiate minimal adverse environmental impacts.

- The Office of the Governor has submitted the following comments and recommendations regarding the Draft EIS:

  > An interagency review of the statement has found that the proposed action would smother the benthos within the designated area and alter habitat within the site. The document recognizes that these adverse impacts at the site are unavoidable. Our reviewing agencies report that the EIS statement is inadequate and lacks the necessary information to be of sufficient value as a decision-making document (see attachments).
  >
  > We have concerns with this designated site and EPA's proposed rule for ocean dumping without a Federal Coastal Zone Management Consistency Evaluation. Recognizing our concerns, the impact of this designation and its effect on the Tampa Harbor project, we request that your agency participate in an interagency meeting at your earliest convenience to afford us the opportunity to discuss issues of concern to the State of Florida. It is our desire to use this initial meeting as a step toward resolving our concerns.

Based on the review of this document, it is the opinion of the Tampa Bay Regional Planning Council that no ocean dumping should be performed until it is demonstrated that ocean dumping in this part of the Gulf of Mexico is appropriate and that it is the most suitable method of disposal. That demonstration should include an actual determination of the nature and extent of hard-bottom habitats and fishery resources in site 4 and in surrounding areas. This determination should be based on further, site-specific surveys, including the direction, amount, frequency, and distance of sediment transport and siltation, and a specific quantification of the damage that will result therefrom. Also, a de-

tailed, careful balancing of the economic versus environmental concerns for each alternative method should be performed, including consideration of the many commercial aspects of recreational fishing and diving and development of a thorough monitoring program to assess the impacts of any dumping on a long-term basis.

In conclusion, the final recommendation of the DEIS for Tampa Harbor which designates Shallow-Water Alternative Site 4 as the Tampa Harbor ocean dredged material disposal site is not consistent with the Council's adopted policy to support the maintenance of Class III waters, including bays, rivers, lakes, estuaries and open waters of the territorial sea, at a quality sufficient to allow body-contact water sports and propagation of fish and wildlife. (Future of the Region, 2.402)

It is recommended that Alternative Site 4 not be used as an interim dumping site, and that all concerned parties meet to resolve identified concerns.

It is therefore recommended that the above local and regional concerns and recommendations be addressed in the final EIS for Tampa Harbor. Further, it is recommended that any additional comments addressing local concern be considered prior to issuance or approval of the final EIS.

Committee adopted January 3, 1983.

George C McGough

Mayor George McGough, Chairman
Clearinghouse Review Committee

Council adopted January 14, 1983.

Jan K. Platt

Jan K. Platt, Chairman
Tampa Bay Regional Planning Council

Please note: Unless otherwise notified, action by Clearinghouse Review Committee is final. Append copy to application to indicate compliance with clearinghouse requirements. Comments constitute compliance with OMB Circular A-95 only.

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United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

ER-82/1689

JAN 5 1983

Mr. T. A. Wastler, Chief
Marine Protection Branch (WH-585)
Environmental Protection Agency
Washington, D.C. 20460

Dear Mr. Wastler:

We have reviewed the draft environmental statement for Tampa Harbor, Florida, Ocean Dredge Material Disposal Site Designation, and have the following general and specific comments.

General Comment

It is our understanding that present and alternate Tampa Bay disposal sites have been selected without the benefit of intensive and thorough underwater surveys. A fairly comprehensive analysis of impacts at Site A disclosed that severe environmental damage
28-1 was occurring. However, the same degree of analysis was not devoted to any of the alternate spoil sites suggested. The preferred alternative (Site 4) may not have highly productive or unique bottom communities, but this document does not provide the information to make that choice.

Specific Comments

Page 2-2, 203: The so-called "11 criteria analysis" has been restricted just to the two existing spoil disposal sites and Site 4. It would seem appropriate to consider the same
28-2 factors for Site 3, the mid-shelf site, and any other alternative which is not infeasible.

Page 2-4: In considering the no action alternative, it is stated that the Corps would be required to: 1) justify an acceptable alternative disposal method; 2) develop information sufficient to select an acceptable site for ocean disposal; or 3) modify or cancel a proposed dredging project that depends on disposal in the ocean. Apparently each of
28-3 these is considered an unacceptable alternative to the proposed action. The EIS fails to explain how Alternative 2 (developing information sufficient to select an acceptable site for disposal in the ocean) is unacceptable. In fact, this is the major problem with the spoil disposal sites which have been proposed to date and with the draft EIS itself. It is apparent that no source has developed sufficient information for selecting an acceptable site for ocean disposal. Even proposed Site 4 is supported only with minimal data: a single photographic transect did not disclose large quantities of productive hard bottom. It is fully possible that Site 4 may indeed be an ideal spoil disposal site, but this environmental impact statement does not offer sufficient evidence for a rational selection.

28-4 Page 2-5: A Corps of Engineers 1974 document is used to explain the review of land-based spoil disposal alternatives. The EIS does not describe how the construction of spoil retention berms in shallow waters of Tampa Bay and backfilling of wetlands can be considered a "land-based" scheme. If this "CE proposal" is to be described in the final document, it should simply be considered another form of open water disposal.

28-5 Page 2-19: It appears that the entire justification for selection of site 4 is stated in two sentences: 1) "A video tape taken of this area revealed no rock or hard bottom outcroppings and low vertical relief." and 2) "A recent EPA survey determined that the site is predominately characterized by the presence of fine sands and coarse silts and plains of shell hash." Considering the number of alternative sites that have been proposed by various parties, and their later rejection upon the finding that they contained environmentally sensitive areas, the reader surely must question whether those two statements are sufficient to justify the permanent designation of four square miles of shallow ocean bottom to receive millions of cubic yards of silt and other materials both during this project and annually for maintenance dredging.

28-6 Page 3-21: The analysis of Site 4 is further detailed on this page. A camera was towed across part of the spoil site and noted "flat, featureless sandy bottom". A "few" soft coral communities were noted during the video tape transect, but no hard corals. Presuming that this transect consisted of a single 2.8 mile line, and the width of bottom scanned was about 50 feet, then this analysis was based upon examining about one-half of one percent of the area proposed for spoil. The document should state whether this is statistically valid or significant.

28-7 Page 3-29: The EIS provides few bits of data which are directly comparable between the existing and proposed spoil site. However, here it is stated that dissolved oxygen levels in the area currently receiving spoil are lower than dissolved oxygen levels over proposed spoil Site 4. In fact, dissolved oxygen levels actually dip below minimum State standards in area currently receiving spoil. The EIS should explain the significance of these data, if any.

28-8 Page 4-13: The EIS states "a stress reaction or death may have greater environmental consequences to the surrounding benthic community than to the organism in question." The average reviewer may find it difficult to conceive of circumstances in which death would not be considered a primary or major consequence to an organism. Additional information should be provided.

Concluding Comment

It is our opinion that the draft environmental statement contains insufficient information and impact analyses to support a decision to designate the proposed ocean dredge material disposal sites.

Sincerely,

Bruce Blanchard, Director
Environmental Project Review

Department of Natural Resources Interoffice Memorandum

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DATED: 6 October 1981

TO: Bill Lyons THIS COPY FOR
George Henderson

FROM: Walter C. Jaap

SUBJECT: CRUISE REPORT R/V Hernan Cortez, 28 September-2 October 1981

Scientific Party:

Walter Jaap
Jennifer Lowry
John Halas-FDNR Park Service
Richard Conant-USNPS
Richard Defenbaugh-BLM
Tom Burns-RSMAS-USNPS

Vessel departed Bayboro Harbor 1630 EDT, 28 September. Steamed to Florida Middle Ground (14131.16, 45741.12). On station at 0800, 29 September. Entire Scientific Party dove on a large relief bank 78 ft(23 m) deep. A second dive was made at 1305 on the same site. At 1500 29 September, vessel moved to another bank (14127.45, 45734.01). Dive made to 90 ft(27.4 m).

Inclement weather precluded a fourth dive on the second Middle Ground bank. On 30 September at 0900, vessel weighed anchor and steamed to a station of Bayport (14312.40, 45149.41) arriving at 1745. A ledge community in ~~30~~ 35 ft (~~9.1~~ 10.7 m) was sampled.

On 1 October we weighed anchor and steamed to the Blackthorn artificial reef (14181.74, 44942.61). At 1545 we dove the site for 40 minutes. After completing this survey we steamed to a 60 ft(18.3 m) ledge (14168.63, 44798.00). We dove this site for a short period for examination. Following this dive we steamed to the "dump site" ledge off Tampa Bay (14164.05, 44754.00). On 2 October we made a sampling dive on the ledge. We returned to the dock at 1315, 2 October 1981.

During the course of the cruise, six stations were sampled, 38 dives, or 23.1 hours of underwater observations were accomplished. A census of 56 one meter square plots was taken; a total of 551 colonies, 15 species, and 14 genera were encountered.

Specific details of the sampling are included in accompanying tables.

cc: Captain Alan Nelson
J. Lowry
R. Defenbaugh
R. Conant
T. Burns
J. Halas

WCJ/wem

#5

-recycled paper-

STATION DATA R/V HERNAN CORTEZ CRUISE 28 SEPT-2 OCT 1981

	LORAC	LAT.	LONG.	DEPTH (m)	EJ no.	TEMP. SURFACE (°C)		REMARKS
t.	14131.16 45741.12	28°34.5'N	84°16.5'W	23.7 (78 ft)	81-84	28°	Florida Middle Ground	2 dives 9:18, 13:05
t.	14127.45 45734.01	28°35'N	84°16'W	27.4 (90 ft)	81-85	28°		1 dive 17:15
t.	14312.40 45149.41	28°30'N	83°02'W	10.7 (35 ft)	81-86	28°	Bayport	1 dive 18:00
.	14181.74 44942.61	27°53'N	83°11'W	10.7-22.9 (35-75 ft)	81-87	28°	Blackthorn wreck	1 dive 15:45
.	14168.63 44798.00	27°39'N	83° 2'W	18.3 (60 ft)	81-88	28°	Tampa Bay	1 dive 18:10
.	14164.05 44754.00	27°37.5'N	83°01'W	16.8 (55 ft)	81-89	28°	Tampa Bay dump site ledge	1 dive 09:00

Diving: 38 dives, 23.1 hours of divers time underwater.

s: W. Jaap DNRMRL R. Conant USNPS
J. Lowry DNRMRL R. Defenbaugh BLM
T. Burns RSMAS-USNPS J. Halas DNRPS

BAYPORT DENSITY SAMPLING 28°30'N 83°02'W, 10.7 m

	Plot number																								
ies	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Total
trea radians	9	8	5	1	4	4	3	2	2	4	5	7	8	2	6	11	9	5	12	4	2	7		1	121
a areolata		1					1				1														3
ra arbuscula		5	4	2	2	2	3			3	12		4	4	2	4	4	3	3		5	5	4	13	87
a robusta		1				1				1															3
strea hyades					1		1					1					1	1		1					6
ngia americana											1														1
Genera	1	4	2	2	3	3	4	1	2	3	4	2	2	2	2	2	3	3	2	2	2	2	1	2	6
Species	1	4	2	2	3	3	4	1	2	3	4	2	2	2	2	2	3	3	2	2	2	2	1	2	6
Colonies	9	15	9	3	7	7	8	2	5	8	19	8	12	6	8	15	14	9	15	5	7	12	4	14	221

Density (m^2)	$\bar{x}$	s	range
Genera	2.33	0.87	1-4
Species	2.33	0.87	1-4
Colonies	9.21	4.38	2-19

FLORIDA MIDDLE GROUND DENSITY SAMPLING 27°37.5'N 83°01'N, 16.8 m

	Site I 28°34.5'N, 84°16.5'N, 23.7 m									Site II 28°35'N, 84°16'W, 27.4 m								
es Plot number	1	2	3	4	5	6	7	8		9	10	11	12	13	14	15	16	
ora alcicornis	1	3		2	7				13	1	4	2				32	1	40
is decactis	3		2						5	1	3			2			2	8
es porites divaricata				1					1	1		1	2					4
a diffusa		1							1	1		2						3
coenia stellaris	1	3				3	1		8	3	5	3	4	2	1			18
nocoenia michelinii							1		1									
coenia stokesii								1	1									
nia lacera														3				3
strea radians																	2	2
									tot									
umber Genera	3	3	1	2	1	1	2	1	6	5	3	4	2	3	1	1	3	7
Species	3	3	1	2	1	1	2	1	7	5	3	4	2	3	1	1	3	7
Colonies	5	7	2	3	7	3	2	1	30	7	12	8	6	7	1	32	5	78

Density (m^2)	$\bar{x}$	s	range	$\bar{x}$	s	range
Genera	1.75	0.89	1-3	2.75	1.39	1-5
Species	1.75	0.89	1-3	2.75	1.39	1-5
Colonies	3.75	2.31	1-7	9.75	9.50	1-32

TAMPA BAY DENSITY SAMPLING 27°37.5'N 83°01'N, 16.8 m

	Plot number 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total
ocoenia michelinii		1			2			1				1		2			7
trea radians	4	5	1	2	3	4	2	9				2	1	4	3	1	41
a areolata	3	8	5	3	3	5		5		3		3	6	2	6	1	53
ra arbuscula	8	1	9	2	5	7	3	3	4	7	12	4	8	8	9	12	102
trea hyades			1										1				2
a lacera			1		1	1		2				3			1		9
lia sinuosa					2	1		1									4
ra alcicornis									2	1							3
gia americana													1				1
Total Genera	3	4	5	3	6	5	2	6	2	3	1	5	5	4	4	3	9
Species	3	4	5	3	6	5	2	6	2	3	1	5	5	4	4	3	9
Colonies	15	15	17	7	16	18	5	21	6	11	12	13	17	16	19	14	222

Density (m^2)	$\bar{x}$	s	range
Genera	3.81	1.47	1-6
Species	3.81	1.4	1-6
Colonies	13.88	4.66	5-21

TO: GEORGE HENDERSON
THRU: WILLIAM LYONS
FROM: JENNIFER LOWRY
DATE: 7 OCTOBER 1981
SUBJECT: Gulf of Mexico Cruise 28 Sept - 2 Oct 1981
REF: 15-2-4

Six dives were made to record density and species composition data to supplement Hourglass octocoral collections. Identification of vouchers of all specimens are incomplete; however most are accurate in situ identifications.

Site I, Florida Middle Ground, 2 dives, 80-90 ft. Densities of Muricea ?laxa (the most abundant gorgonian) were up to 26 colonies/m^2. Usually no other species were recorded within the square meter. Other species collected include: Eunicea knighti, Eunicea calyculata, Plexaurella fusifera, Pseudoplexaura sp., Lophogorgia cardinalis, Pseudopterogorgia ?acerosa , and Pterogorgia guadalupensis.

Site II. Florida Middle Ground, 1 dive 90 ft. Gorgonian species composition the same as for site I; area dominated by Millepora. Drop off observed from about 85-125 ft. Proposed dive on drop off had to be aborted due to rough weather.

Site III. Off Bayport. 1 dive, about 60 ft. Low relief ledge. Average of 9.5 gorgonians/m^2 recorded. Six species occurred in plot sampling; most to least abundant were Plexaurella fusifera, Eunicea knighti, Pseudoplexaura ?porosa, Pterogorgia guadalupensis, Eunicea calyculata, Leptogorgia virgulata. Lophogorgia hebes and Muricea elongata were also collected from this site.

Site IV. Blackthorn wreck off Tampa Bay. 1 dive, 75 ft. No gorgonians were observed colonizing the wreck structure. Surrounding bottom was hard but devoid of gorgonians at first glance. Closer observations provided five species: Lophogorgia hebes, Leptogorgia virgulata, Eunicea calyculata, Plexaurella sp. and Muricea elongata. With exception of the single whip noted, L. virgulata, no colonies were taller than 10 cm. Muricea was most abundant; however, no colony taller than 7 cm was observed. Time limits disallowed collection of specific density data. I can only surmise that debris (tire bundles) in the area or the sinking of the Blackthorn itself perhaps scoured or otherwise damaged the surrounding bottom; therefore resulting in only small gorgonians being present.

Site V. Dump site for Tampa Bay dredge spoil off Tampa Bay. 1 dive, 55 ft. Moderate relief ledge. Gorgonians were abundant up on the ledge proper and on parts of the surrounding bottom. Densities of Muricea elongata were up to 30 colonies/m^2, with addition of 1 or 2 other species occasionally. Other species collected include: Eunicea calyculata, Plexaurella fusifera, Lophogorgia hebes, Leptogorgia virgulata, Pterogorgia guadalupensis. This area supports an incalculable monospecific population of ophiuroid. Every attached benthic sponge and gorgonian supports numerous animals. One small (13 cm) Muricea was collected with 11 animals mostly as large as 1.3 cm disc diameter but some as small as 2 mm diameter. The same number were noted on a previous dive on this ledge last June. They are probably Ophiothrix. I collected these samples to send to Gordon Hendler at the Smithsonian (who Maureen Downey recommended).

cc: Steidinger
Lyons
Jaap
Halas
Conant and Burns
Archives

Subject: ~~Observations~~ R/V Hernan Cortez Cruise, Dec. 1, 2, 1980; Reconnaissance of interim ocean dredge spoil disposal area.

Dive I - Duration 17 minutes. Lat - 27°37.2'N, Loran C 14163.39; Long - 82°59.9'W, Loran C 44747.33; depth - 50-55 ft (15-17 m)

Bottom Character - rock overlaid with a (2-5 cm) veneer of sediments. Windrows of fossil gastropods noted on surface of sediment waves.

Organisms noted: Caulerpa sp., Siderastrea radians, Solenastrea hyades, Phyllangia americana, Petrogorgia citrina, Lytechinus variegatus, Echinaster sp., Cassis sp.

Dive II - Duration 11 minutes. Lat - 27°37.6'N, Loran C 14164.05; Long - 83°01.5'W, Loran C 44754.00; depth - 45 feet (14 m)

Bottom Character - a mosaic of rocky substrate with pockets of sediments overlying the rock in some places. Octocorals visually dominant. A very diverse benthic community, with corals, echinoderms, polychaetes, mollusks, and sponges. The height (1 ft) of some Solenastrea hyades heads would imply long term community stability.

Organisms noted: Eunicea sp., Stephanocoenia michelinii, Siderastrea radians, Millepora alcicornis, Cladocora arbuscula, Solenastrea hyades, Isophyllia sinuosa, Manicina areolata, Scolymia lacera, Phyllangia americana, Ophiothrix suensoni, Echinaster sp., Diadema antillarum, sponges unidentified, holothurians unidentified.

Dive III - Duration 20 minutes. Lat - 27°37.6'N, Loran C 14164.05; Long - 83°01.5'W, Loran C 44754.00; depth - 50 ft. (15 m)

Bottom Character - ledge line with up to 1 m relief. Vertical, horizontal interface with Millepora alcicornis colonies. Some slumping of overhanging under cut ledges noted. While few large fish were observed, black grouper

Department of Natural Resources Interoffice Memorandum

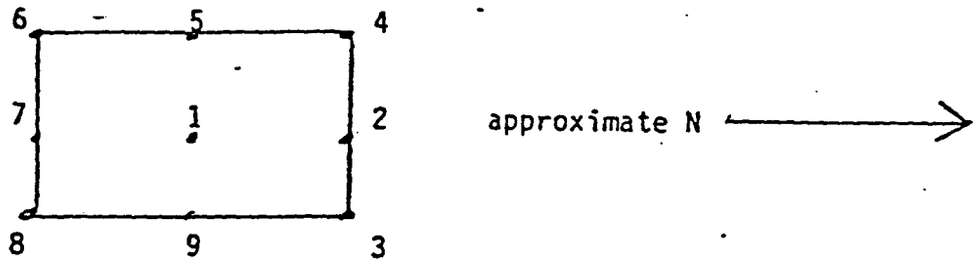
DATE: 10 May 1982

TO: Bill Lyons George Henderson Karen Steidinger

FROM: Walt Gaap

SUBJECT: Observations from May 6 diving on dredge spoil disposal site off Tampa Bay

Nine stations were sampled. Dr. Taylor took 4 benthic plug samples at each station. Samples were sieved and preserved in rose bengal for later sorting and identification. Each station took ca. 5 minutes of bottom time to sample, hence my observations are not in great detail. Stations were located near the corners, middle of the area, and one midway between each corner.



The following summarizes observations by station.

1. 27°37'N, 82°59.7'W, 38 ft.
   Bottom strewn with large boulders and silt. Evidence of recent disposal. No macro epibenthos seen.

2. 27°37.3'N, 82°59.7'W, 44 ft.
   Bottom uniformly covered with an ooze that had the consistency of pudding. No macro epibenthos seen.

3. 27°37.4'N, 82°59.5'W, 45 ft.
   Same as station 2. A few sand perch, Diplectrum formosum were observed.

4. 27°37.3'N, 83°00'W, 50 ft.
   A small ledge with no more than one to two feet of relief. A "live" bottom community was seen. Algae included Halimeda and Udotea; Sponges, stony corals: Cladocora arbuscula, Manicina areolata, Solenastrea hyades, Phyllangia americana, and Siderastrea radians; Octocorals with ophioroids in their branches. Black urchin Diadema antillarum? or Arbacia punctulata? Red and black grouper and numerous small tropical fishes were seen. Little or no sign of dredge impact.

5. 27°37'N, 83°00'W, 50 ft.
   Hard packed sediment. Some piles of consolidated (clay like) dredge spoil. One small colony of C. arbuscula seen.

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Rocks and sand some sl[illegible] mu[illegible] [illegible] sediments. Sand perch observed.

7. 27°36.75'N, 82°59.7'W, 55 ft.
   Hard firm sand, no macro epibenthos seen.

8. 27°36.8'N, 82°59.5'W, 48 ft.
   Hard sand. Piles of clay-like mud, very black in color. No macro epibenthos.

9. 27°37.3'N, 82°59.5'W, 40 ft.
   Large cable on bottom. Slimy ooze, no macro epibenthos observed.

Only station 4 seemed to have escaped impact. The remaining stations all had received some impact, 1, 2, 3, and 9 appear to have received the greatest insult.

WCJ/wm

DRAFT - DR GEORGE HENDERSON

Subject: ~~Observations~~ R/V Hernan Cortez Cruise, Dec. 1, 2, 1980; Reconnaissance of interim ocean dredge spoil disposal area.

Dive I - Duration 17 minutes. Lat - 27°37.2'N, Loran C 14163.39; Long - 82°59.9'W, Loran C 44747.33; depth - 50-55 ft (15-17 m)

Bottom Character - rock overlaid with a (2-5 cm) veneer of sediments. Windrows of fossil gastropods noted on surface of sediment waves.

Organisms noted: Caulerpa sp., Siderastrea radians, Solenastrea hyades, Phyllangia americana, Petrogorgia citrina, Lytechinus variegatus, Echinaster sp., Cassis sp.

Dive II - Duration 11 minutes. Lat - 27°37.6'N, Loran C 14164.05; Long - 83°01.5'W, Loran C 44754.00; depth - 45 feet (14 m)

Bottom Character - a mosaic of rocky substrate with pockets of sediments overlying the rock in some places. Octocorals visually dominant. A very diverse benthic community, with corals, echinoderms, polychaetes, mollusks, and sponges. The height (1 ft) of some Solenastrea hyades heads would imply long term community stability.

Organisms noted: Eunicea sp., Stephanocoenia michelinii, Siderastrea radians, Millepora alcicornis, Cladocora arbuscula, Solenastrea hyades, Isophyllia sinuosa, Manicina areolata, Scolymia lacera, Phyllangia americana, Ophiothrix suensoni, Echinaster sp., Diadema antillarum, sponges unidentified, holothurians unidentified.

Dive III - Duration 20 minutes. Lat - 27°37.6'N, Loran C 14164.05; Long - 83°01.5'W, Loran C 44754.00; depth - 50 ft. (15 m)

Bottom Character - ledge line with up to 1 m relief. Vertical, horizontal interface with Millepora alcicornis colonies. Some slumping of overhanging under cut ledges noted. While few large fish were observed, black grouper

State of Florida

Department of Natural Resources Interoffice Memorandum

DATE: 8 June 1981

TO: George Henderson

THRU: Bill Lyons

FROM: Walt Jaap
Jenni Lowry

SUBJECT: 4 June Cruise to Bayboro Harbor Dredge Spoil Disposal Site

We met Scott Sobel and his cameraman, Lynn Rabren, at Captain Warren Sturgess' boat, the Proposition, on Madeira Beach. Using R/V Hernan Cortez Loran coordinates from the December cruise, three short dives were made.

Site 1, 14164.3-4, 44747.1, depth 45 ft, bottom: coarse sediments with fossil freshwater mollusk (gastropod) shells. No visual evidence of spoil disposal impact. This area is estimated to be less than 1 km inshore of the second site, the mid-disposal area which was visited in December.

Site 2 (mid-disposal area visited in December) 14163.8-7, 44748.2, depth 50 ft, bottom a hardpan veneered with a thin layer of sediments. Bottom benthos included numerous octocorals, stony corals, anemones, sponges and numerous brittle stars (possibly Ophiothrix svensoni) entwined in the octocoral branches. No visible evidence of impact was observed. Low relief anemones and stony corals were not suffering from burial and had not expelled zooxanthellae. Conditions appeared similar to December observations.

Site 3 (ledge system just seaward of the northwest boundary of the disposal site) 14164.5-6, 44754.4. Ledge outcrop, high diversity, hard substrate, benthic community with sponges, anemones, octocorals, stony corals, molluscs, crustaceans and an abundant ichthyofauna including triggerfish, grunts, jacks, grouper, snapper, butterflies, and high hats. Again, there was no visible evidence of dredge disposal. The stake established here in December was found, hence we are certain of being on station.

#2

-recycled paper-

and French angelfish were common.

Organisms noted: Stephanocoenia michelinii, Siderastrea radians, Cladocora arbuscula, Solenastrea hyades, Phyllangia americana, Millepora alcicornis, Condylactis gigantea, Rhodactis sanctihomae?, Panulirus argus, Ophiothrix suensoni, Diadema antillarum.

Photographs were taken of representative community elements with a Nikonos camera, 15 mm lens and flash. Film at RoMo for development. The ledge was marked with a copper clad survey marker to establish reference.

cc: Cary Burns
Ken Haddad
Bill Lyons
Roy Williams
Terry Leary, GMFMC
Robin Lewis

Dumping impact was either very localized or the material dispersed so fast that it did not have an effect on the three sites. It is most probable that the impact was greater on the inshore side of the disposal area. The contractor probably made his dumps in this area.

WCJ:dg

tampa bay
regional
planning
council

9455 Kiger Boulevard
St. Petersburg, Fl. 33702
(813) 577-5151 Tampa 224-9380

January 5, 1983

Mr. Jonathon Amson
U.S. Environmental Protection Agency
Criteria and Standards Division (WH-585)
401 M Street, S.W.
Washington, D.C. 20460

Dear Mr. Amson:

30-1 Subject: Tampa Bay Regional Planning Council A-95 Clearinghouse Review No. 218-82; Draft Environmental Impact Statement (DEIS) for Tampa Harbor, Florida, Ocean Dredged Material Disposal Site Designation, Hillsborough, Pinellas and Manatee Counties

Enclosed please find a copy of the Council's Clearinghouse Review report for the above referenced project adopted by the Council's Clearinghouse Review Committee on January 3, 1983.

Should additional clarification be needed, please feel free to contact me. We appreciate the opportunity to review the proposal.

Sincerely,

Michael R. McKinley

Michael R. McKinley
Director of Planning

MRM/kh

Enclosure

Chairman Jan K. Platt
Commissioner, Hillsborough County

Vice-Chairman George McGough
Mayor, City of Largo

Secretary-Treasurer Saundra Bann
Councilwoman, City of Bradenton

N.A. Lakunzzi
Executive Director

Bradenton • Clearwater • Dade City • Dunedin • Gulfport • Hillsborough County • Largo • Manatee County • New Port Richey • Oldsmar • Palmetto • Pasco County • Pinellas County • Pinellas Park • Safety Harbor • St. Petersburg • St. Petersburg Beach • Sarasota • Tampa • Tarpon Springs

A-95 #218-82; Draft Environmental Impact Statement (DEIS) for Tampa Harbor, Florida, Ocean Dredged Material Disposal Site Designation, Hillsborough, Pinellas and Manatee Counties

CLEARINGHOUSE REVIEW

The U.S. Environmental Protection Agency (EPA) has requested review and comment on the draft Environmental Impact Statement (EIS) for Tampa Harbor, Florida which presents information necessary for the designation of a new Tampa Harbor Dredged Material Disposal Site. The purpose of the action is to provide the most environmentally and economically acceptable ocean location for the disposal of material dredged from the Tampa Bay area. Based on recent surveys of four Shallow-Water Alternative Sites, EPA has determined that Shallow-Water Alternative Site 4 is the alternative with the fewest hard-bottom areas which may be affected by the disposal of dredged material. It is the recommendation of the DEIS that Alternative Site 4 be designated as the disposal site location for dredged material from the Tampa Bay area. Agency - EPA; Location - Hillsborough, Pinellas and Manatee Counties.

Local Comments Received From:

Hillsborough County Environmental Protection Commission: See attached letter dated December 5, 1982.

Hillsborough County Department of Development Coordination: See attached memorandum dated December 3, 1982.

Pinellas County Planning Department: No comment received as of December 30, 1982.

City of St. Petersburg Planning Department: See attached letter dated December 16, 1982.

Manatee County Board of County Commissioners: See attached letter dated December 13,1982

Mote Marine Laboratory: See attached letter dated December 9, 1982.

Gulf of Mexico Fishery Management Council: See attached letter dated December 10, 1982.

Office of the Governor: See attached letter dated December 22, 1982.

Council Comments and Recommendations

This project has been reviewed for consistency with the Council's Areawide Water Quality Management Plan and the Council's adopted growth policy, the Future of the Region. The proposal has not been found to be consistent with Council policy that a standard of water quality should be achieved that allows for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the waters in the region.

A-95 #218-82; Draft Environmental Impact Statement (DEIS) for Tampa Harbor, Florida, Ocean Dredged Material Disposal Site Designation, Hillsborough, Pinellas and Manatee Counties

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CLEARINGHOUSE REVIEW

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This project is regionally significant and the following local and regional concerns have been raised during the review:

- The staff of the Tampa Bay Regional Planning Council has reviewed the Draft Environmental Impact Statement (DEIS) for Tampa Harbor Ocean Dredged Material Disposal Site Designation and offers the following comments:

General Comments

1. The DEIS lacks sufficiently detailed evaluation and comparisons of all possible alternatives including diked disposal islands and upland disposal areas.

2. The designation of Alternative Site 4 for disposal of dredged material from the Tampa Bay Area should be based on more detailed studies of this area. The DEIS lacks site specific studies evaluating the impacts on marine environment and economy of the region. The results of the studies done in other locations cannot serve as the base for evaluating the impacts of the proposed dumping of dredged material on the proposed site.

3. The environmental consequences of dumping dredged sediments on sand-substate habitats also cannot be predicted based on the results of the studies from other locations. The ecosystem of shallow-waters in central-southwest Florida is different from the continental U.S. waters.

4. Information pertaining to tidal currents is needed based on records obtained from the tide guage station located in Egmont Key.

5. The monitoring program has not been specifically designed to determine whether disposal at the selected site significantly affects areas outside the site and to detect long term effects occurring in or around the site. It is stated in the DEIS that a monitoring program may be established to supplement historical data. Details on what the monitoring program will entail must be included.

6. The recreational and commercial fishing values of the surrounding area should be identified as well as the impacts of ocean disposal on migratory fishing.

7. It is stated that dispersion of disposal material outside the site boundaries will be over time and in thin layers, and that such dispersion is not expected to have unacceptable adverse environmental impacts. Specific studies need to be completed to determine whether the thin layer of siltation adversely impacts the surrounding hard bottoms (corals).

Specific Comments

1. Statements that there are no hard-bottom habitats within or in proximity to Site 4 are not well-documented. More extensive inspection of areas both within and around the site is necessary before it can be known what types of organisms and communities will be

adversely affected by dumping. In-depth surveys to determine the nature and extent of live, hard-bottom habitats in or near the site should be further conducted.

2. It is stated in DEIS that results of dredged material disposal at the Tampa Harbor alternative sites are anticipated to be similar to the results of disposal operations at Galveston, Texas (page 2-28). However, the West Florida Shelf cannot be compared with other areas which have no hard-bottom communities. The conclusions that disposal will not result in any detectable changes in ecology of the area are inappropriate.

3. An assessment of the siltation and turbidity caused by resuspension of fine particles by waves, storms and tides has not been completed, as well as the expected impacts of the siltation on live-bottom habitats.

4. The long-term effects from the continual resuspension of spoil material throughout the water column have not been adequately studied nor documented. The amount and frequency of siltation, the direction of sediment transport based on site-specific ocean current information, and the environmental consequences of long-term turbidity should be estimated before final recommendations are made.

5. It is stated in the DEIS that Site 4 is removed from areas of recreational use, and has no known significant commercial fishery use (page 2-27). This statement is not based on the detailed survey of commercial and recreational fishing activities of this area. Relevant studies should be completed based on public testimony whether the proposed action affects the recreational activities of the region and commercial fishing.

6. Cost-benefit analysis, taking into account the direct and indirect economic benefits generated by the recreational use of this part of the Gulf of Mexico have not been done at this time.

7. A public hearing should be scheduled to allow full and fair public comment in the draft EIS and the overall suitability of dumping in the Eastern Gulf of Mexico.

- The Manatee County Board of County Commissioners has provided extensive comments which already have been forwarded to EPA and are summarized below (see attached letter dated December 13, 1982) regarding the Draft EIS for a permanent ocean disposal site for Tampa Harbor:

1. The EPA survey upon which the EIS relies to recommend Site 4 for permanent designation, used survey methodologies that are inadequate for determining the nature and extent of live, hard-bottom habitats in or near the site; yet, the entire EIS rests on the unproven assumption that there are no hard-bottom habitats within or in proximity to Site 4. This is critical because of the well-documented importance of live-bottom habitats to both commercial and recreational fishery resources.

2. Although the EIS notes that significant damage that can occur to hard-bottom habitats from siltation and turbidity, it completely fails to describe or assess the siltation and turbidity that will be caused by resuspension of fine particles by waves, storms, tides, and combinations thereof, and it fails to quantify the resulting siltation problem and its expected impacts to corals, sponges, algaes, and the like.

3. The EIS recommendation of Site 4 is based on erroneous and understated information concerning the use of the area in and around the site, which is actually located in an area that is heavily used by commercial and recreational fishermen, sport divers, and others.

4. The Site-Designation EIS presumes that ocean dumping is appropriate in this part of the Gulf of Mexico, disregarding as a general matter the high potential for damage from burial and siltation to the hard-bottom habitats and organisms found scattered throughout this part of the Gulf, and inadequately considering the possibility of using uplands or diked disposal areas on a short-term basis pending thorough investigation of the suitability of ocean dumping.

5. The EIS also relies on erroneous cost estimates for transporting the dredged material to various alternative sites, and there is no comparison of the environmental "pros and cons" of each alternative site relative to the economic costs.

6. Finally, with respect to the EIS's cost analyses, the EIS fails to take any account of the direct or indirect economic benefits generated by the recreational use of this part of the Gulf of Mexico, thereby placing too-heavy emphasis on the immediate costs of spoil transportation.

Therefore, in light of the many deficiencies of the Draft EIS, including reliance on erroneous assumptions, inadequate surveys, and incorrect infomation, the Board of County Commissioners of Manatee County requests that a public hearing be scheduled to discuss the Draft EIS and proposed site designation, or, in the alternative, that the Draft EIS be withdrawn and subsequently resubmitted for public comment.

- The staff of the Hillsborough County Environmental Protection Commission has reviewed the Draft Environmental Impact Statement (EIS) for Tampa Harbor: Ocean Dredged Material Disposal Site Designation and submits the following comments and recommendations:

  It is recommended that <u>all</u> disposal at the Existing Site A be stopped because it is too close to shore, too close to productive reef areas, and within easy reach of divers and small boat users.

  Site 4 is in 85 to 95 feet of water and is not as likely to be used for recreational purposes such as diving and fishing. All material should go to this site until some long range solution is found.

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Site 4 has no hard-bottom outcrops and would therefore have the least impact on fish and other types of life.

- The City of St. Petersburg Planning Department has reviewed the Draft EIS for Tampa Harbor: Ocean Dredged Material Disposal Site Designation and recommends the following additions to the above referenced EIS:

  > Incorporation of any appropriate review criteria which may be forthcoming from the pending litigation related to offshore dumping initiated by Manatee County;
  >
  > Analysis of upland dumping sites;
  >
  > Further analysis of Site 4. It appears that Appendix C. (referenced on Page 2-13 of study) may provide additional data to substantiate minimal adverse environmental impacts.

- The Office of the Governor has submitted the following comments and recommendations regarding the Draft EIS:

  > An interagency review of the statement has found that the proposed action would smother the benthos within the designated area and alter habitat within the site. The document recognizes that these adverse impacts at the site are unavoidable. Our reviewing agencies report that the EIS statement is inadequate and lacks the necessary information to be of sufficient value as a decision-making document (see attachments).
  >
  > We have concerns with this designated site and EPA's proposed rule for ocean dumping without a Federal Coastal Zone Management Consistency Evaluation. Recognizing our concerns, the impact of this designation and its effect on the Tampa Harbor project, we request that your agency participate in an interagency meeting at your earliest convenience to afford us the opportunity to discuss issues of concern to the State of Florida. It is our desire to use this initial meeting as a step toward resolving our concerns.

Based on the review of this document, it is the opinion of the Tampa Bay Regional Planning Council that no ocean dumping should be performed until it is demonstrated that ocean dumping in this part of the Gulf of Mexico is appropriate and that it is the most suitable method of disposal. That demonstration should include an actual determination of the nature and extent of hard-bottom habitats and fishery resources in site 4 and in surrounding areas. This determination should be based on further, site-specific surveys, including the direction, amount, frequency, and distance of sediment transport and siltation, and a specific quantification of the damage that will result therefrom. Also, a de-

tailed, careful balancing of the economic versus environmental concerns for each alternative method should be performed, including consideration of the many commercial aspects of recreational fishing and diving and development of a thorough monitoring program to assess the impacts of any dumping on a long-term basis.

In conclusion, the final recommendation of the DEIS for Tampa Harbor which designates Shallow-Water Alternative Site 4 as the Tampa Harbor ocean dredged material disposal site is not consistent with the Council's adopted policy to support the maintenance of Class III waters, including bays, rivers, lakes, estuaries and open waters of the territorial sea, at a quality sufficient to allow body-contact water sports and propagation of fish and wildlife. (Future of the Region, 2.402)

It is recommended that Alternative Site 4 not be used as an interim dumping site, and that all concerned parties meet to resolve identified concerns.

It is therefore recommended that the above local and regional concerns and recommendations be addressed in the final EIS for Tampa Harbor. Further, it is recommended that any additional comments addressing local concern be considered prior to issuance or approval of the final EIS.

Committee adopted January 3, 1983.

George C McGough

Mayor George McGough, Chairman
Clearinghouse Review Committee

Please note: Unless otherwise notified, action by Clearinghouse Review Committee is final. Append copy to application to indicate compliance with clearinghouse requirements. Comments constitute compliance with OMB Circular A-95 only.

Responses to Comments

1-1 EPA appreciates the review and comments on the DEIS provided by the Florida Department of State, Division of Archives, History and Records Management, and acknowledges the response that the proposed action is "...unlikely to affect any cultural resources...."

2-1 EPA appreciates the review and comments on the DEIS provided by the Public Health Service, Department of Health and Human Services, and acknowledges that possible health effects of the proposed alternatives have been adequately addressed.

2-2 A monitoring program will be initiated for Shallow-Water Alternative Site 4 to document any potential unacceptable adverse environmental impacts caused by the disposal of dredged material. Extensive baseline data and information has been collected in preparation of this EIS (see DEIS, p. 2-31).

3-1 EPA thanks the Tampa Port Authority for their review and comments and continued interest in the preparation of the FEIS.

3-2 Extensive video camera observation of the bottom characteristics of Site 4 as well as other areas has been completed during EPA's February, March, and April 1983 extensive surveys. More than 80 miles and over 50 hours of video camera observation have been recorded on videotape to document the physical characteristics of the ocean floor and the presence of hard bottom and associated flora and fauna.

4-1 EPA acknowledges that the Tampa Port Authority agrees that Site 4 may be a more acceptable long-term dredged material disposal site than Site A.

4-2 Intensive surveys conducted during February, March, and April 1983 using an underwater video camera afforded extensive characterization of the ocean floor.

5-1 EPA acknowledges DER's concern regarding disposal of dredged material offshore and its support for land-based alternatives.

5-2 The purpose of the document "...is to provide an environmentally and economically acceptable ocean location for the disposal of dredged material, which complies with the environmental impact criteria of the Ocean Dumping Regulations (40 CFR 220-229)." Preliminary survey work was followed-up by intensive surveys during February, March, and April 1983. This work included sediment cores, water quality samples, fathometer and side-scan sonar tracings, fish tissue analysis and more than 50 hours of video camera recordings of the bottom in the area.

5-3 Full public involvement has been evident through the DEIS and site designation process; 32 comments have been received in response to the public notices of the availability of the two documents.

5-4 Non-ocean disposal of dredged material from the Tampa Bay Project including upland and diked disposal areas has been considered. According to the Corps of Engineers (letter from Harrison D. Ford, to Joseph Freedman, EPA Attorney, July 14, 1983), upland disposal areas which must be obtained by the local sponsor are not available at a reasonable cost. Although disposal of dredged material on existing or proposed diked disposal islands was considered a viable alternative, this alternative was later found to be economically and environmentally unacceptable for disposal of dredged material from the construction phase of the Tampa Harbor Project. Existing diked disposal islands do not have sufficient capacity to receive the construction phase dredged material. In addition, the costs associated with diked disposal islands are greater than originally thought because of the presence of rocks in the material to be dredged. The dredged material would be placed in a barge where the heavier rocks would settle to the bottom. These rocks would be dropped to the bottom in the area to be retrieved mechanically later and deposited on the diked disposal island. After removal of the rocks, the finer silt could then be pumped from the barge onto the diked disposal area. This double handling of dredged material for diked disposal alternative would result in increased costs. In addition, the use of diked disposal islands could result in adverse environmental effects including: increased turbidity during construction, increased turbidity from post-construction erosion, changes in circulation and flushing characteristics, reduction in aquatic productivity, destruction of benthic organisms, and possible increased levels of pollutants in the water column. In summary, both upland disposal and diked disposal island alternatives have been found to be economically and environmentally unacceptable, because of increased costs and adverse environmental impacts.

5-5 Acknowledged; correction made in text.

5-6 Hard bottom is more appropriate terminology here, because fine or coarse sand and shell hash also have a living biotic component. The biological assemblages cited are associated with hard substrate; therefore, it is more appropriate to differentiate between "hard" substrate types and "soft" substrate types.

5-7 Intensive surveys conducted by EPA in February, March, and April 1983 in the area of Site 4 supported the conclusion that there is little hard- bottom habitat in this area. Less than 17% of the site was found to have hard-bottom, and less than 1% is densely populated hard-bottom.

5-8 Acknowledged. Description of existing site has been expanded.

5-9 Existing bottom at and in the vicinity of Site 4 is composed primarily of fine and coarse sands, coarse sand and gravel, and coarse sand and shell hash, as evidenced by recent February, March, and April 1983 surveys. Since the area consists primarily of these types of sand bottom, the Dredged Material Research Project (DMRP) studies are applicable to the area of consideration.

5-10 Recent February, March, and April 1983 surveys address this issue. A large percentage (83%) of the area is "soft" bottom.

5-11 The coralline species noted in this area were seen in depths between 35 and 90 feet of water during the February, March, and April 1983 surveys.

5-12 The three fish species found most often during the February, March, and April 1983 surveys in the study area were the Caesar grunt, cusk eel, and sand perch.

5-13 The small, scattered patches of hard bottom consist of algae, sponges, corals, bryozoans, tunicates, and a motile fauna of crustaceans, polychaetes, molluscs, echinoderms and fish.

5-14 Little evidence of commercially or recreationally important uses of the area of Site 4 was seen during EPA surveys. The Corps of Engineers conducted an aerial surveillance of Site 4 between March 19 and June 5, 1983. During the twelve survey flights over twelve weeks of observation, no commercial activity was observed and no vessels were observed in the Site 4 area, with the exception of one dive boat on June 1. No other source has provided any reliable information concerning the commercial or recreational uses of Site 4 or its vicinity.

5-15 Since a large percentage of Site 4 is sedimentary habitat (approximately 83%), comparisons can be made to evaluate the impact of dredged material on the site. (See also Comment 5-9).

5-16 No sea turtles were observed during any of the EPA or Corps surveys. Turtles lay their eggs on beach areas; therefore, no effect on turtle breeding success is anticipated by the disposal of dredged material at Site 4 (see DEIS, p. xx, para. 3).

5-17 The conclusion is supported by analysis of liquid phase elutriate samples discussed in DEIS page xx, paras. 2 and 4. In addition, monitoring will be conducted at Site 4 to detect long-term effects occurring at or near the site.

5-18 Adverse environmental effects of the action include "smothering of the benthos within a designated site" which would include minimal hard bottom and fish habitats.

5-19 The hazards of marine commerce are far outweighed by the benefits expected from the Tampa Harbor Project. Moreover, substantial civil penalties may be assessed against those responsible for oil spills or other accidents, which should encourage caution. Costs incurred in clean-up may also be recovered by the Government.

5-20 Results from intensive surveys during February, March, and April 1983, indicate that Site 4 has less than 17% hard bottom and less than 1% of the site is densely populated.

5-21 The intensive surveys discussed above and additional Corps work are sufficient to select and designate an acceptable disposal site.

5-22 Existing dredged material disposal islands were eliminated from consideration for disposal because of the nature of the dredged material. Rocks would necessitate double handling (see response to Comment 5-4). Abandoned phosphate pits were considered and found to have insufficient capacity (CE, 1976).

5-23 Dredged material disposal at a mid-Shelf site is considered to be more likely to have long-term adverse effects on the benthos than disposal at a shallow water site, because shallow water, high-energy benthic communities recover more quickly from such adverse impacts according to Oliver et al., (1977).

5-24 Collard and D'Asaro's terminology is adequate for the discussion of the alternative site under consideration.

5-25 The statement referred to is that the "Shallow-Shelf Alternative Sites are in a high-energy environment influenced by wave action, freshwater and storms." The magnitude or duration of that influence is not discussed. The fact that there are low average winds and seas at the nearshore sites has little bearing on the influence of periods of high winds and seas on the Shallow-Shelf marine environment.

5-26 The purpose of the EIS is to determine an acceptable disposal site. The Corps of Engineers considered land-based alternatives and found them economically and environmentally unacceptable (see response to Comment 5-4).

5-27 See DEIS, p. 2-5, para. 2, continuing to p. 2-6.

5-28 Even if "currents are generally less than 1 Kn," this does not preclude the effect of periodic strong currents. The cited reference refers to the effect of strong currents on resuspension of sediment, which is relevant to the study area.

5-29 Dominant live bottom flora and fauna are discussed in the DEIS (see pp. 3-30 through 3-46, especially p. 3-43, para. 4).

5-30 See DEIS, Appendix C. See also February, March, and April 1983 surveys, Appendix F of the FEIS.

5-31 a. Benthic communities in shallower waters are adapted to periodic stresses and therefore likely to recover more rapidly from burial than a community in a deeper, more stable, low energy environment (Oliver et al., 1977).

b. Shallow-waters are defined as depths less than 30m, and located within 25nmi of shore; mid-Shelf waters are defined as depths from 30 to 200m, from 25 to 75nmi offshore; deepwater Slope waters are defined as depths greater than 200m, approximately 105nmi offshore (DEIS, p. x).

c. Areas in depths of 16-30m are considered areas of higher energy, because wind-driven currents affect bottom characteristics and maintain a dynamic environment.

d. Because the mid-Shelf site is an area of lower energy, the dredged material could be expected to remain in place for a longer period of time, and therefore, would have a longer adverse effect on benthos.

e. Both shallow water (depths less than 30m), and mid-Shelf (30 to 200m), have characteristic benthic communities, either of which will be impacted by dredged material disposal.

5-32 This is discussed in DEIS, p. 3-50 Marine Recreation (see also response to Comment 5-14).

5-33 Hard bottom communities are not termed unstable or sedimentary; rather, the statement describes the bottom and sediment characteristics of a shifting, dynamic environment, to which nearshore biota have adapted.

5-34 These are two different issues. The deposition of dredged material over time will preclude complete recolonization of the site. Only on cessation of disposal at the site would complete recolonization occur, and this would depend on the mix of disposed and in situ sediments in the area.

5-35 There were indications (hard bottom remnants on the fringes of Site A) that there may have been hard bottom areas located within Site A.

5-36 Extensive video camera work, side-scan sonar, and supporting physical, chemical, and biological sampling was conducted during EPA's February, March, and April 1983 surveys.

5-37 Disposal of dredged material at Site 4, 18 nmi seaward of these amenity areas, will not impact any of these species, because of the distance involved.

5-38 Hard bottom habitat within the area studied are not true coral reefs; however, grunts are often found in hard bottom areas.

5-39 The February, March, and April 1983 EPA surveys provided extensive data to adequately characterize the bottom habitat in the vicinity of Site 4. Less than 17% of the site is hard bottom, and less than 1% is densely populated.

5-40 Technical Report: Rice, Patton, and Mahadevan, 1981, p. 18; see Appendix E of DEIS.

5-41 The mounds at disposal sites will disperse at a rate based on the volume and composition of the disposed material. Larger rocks will remain longer than the finer sands and silts; however, they make up only a small percentage of the composition of the disposal material. The rocks remaining will also provide hard substrate to encourage recolonization of the site. Further, there is no evidence of any mound remaining at Site B, despite the deposition of over 1 million yds^3 at that site.

5-42 Storm- and wind-generated currents do contribute to the high energy environment in these depths, and thereby resuspend and disperse sediments at depths of 40 feet (Ichiye *et al.*, 1973).

5-43 It is more appropriate to compare sandy bottom recovery to the current and proposed sites, because the high ratio of sandy bottom to hard bottom habitat. Comparison with recovery from lava flows has no validity to a dredged material disposal site.

5-44 Construction and maintenance of a multipurpose, deepwater port requires dredging with subsequent disposal of dredged material; this is the environmental impact being evaluated, and therefore, should have bearing on the Tampa Bay disposal sites.

5-45 References cited refer to the "region containing the alternative sites", and are not presented as site-specific water quality studies.

5-46 See lines 4-8 of the cited paragraph. The Holliday report discusses the general processes affecting the fate of dredged material; such processes apply in the Tampa Bay area.

5-47 Video camera transects in the Site 4 area during the February, March, and April 1983 surveys revealed that less than 17% is hard bottom and less than 1% is densely populated.

5-48 Monitoring guidelines to be established by EPA will address effects of disposal on hard bottom biota. Both Courtney *et al.*, (1974) and Griffin (1974) guidelines will be considered. For further guidelines, see pp. 2-31 through 2-35 of the DEIS.

5-49 The February, March, and April 1983 EPA Surveys address these issues. The disposal of dredged material is not expected to destroy stony corals or sea fans within the area of Florida's jurisdiction, and is expected to have a minimal impact on hard bottom communities in general.

5-50 The predominant substrate in the area is sand, occasionally intermixed with shell hash; this substrate has a benthic infaunal component. With the sporadic occurrence of sessile benthic epifauna, the infauna remain the better organisms to monitor changes at the site.

5-51 Although organisms on hard bottom can be observed in situ and monitored for change, only a relatively small area could be covered practically by use of this method.

5-52 Although these species are not reported to be common to the proposed site, they will be considered if the study of trace metals is included in the monitoring plan. Indications from EPA analyses are that trace metal levels in the vicinity of Site 4 are extremely low.

5-53 The creation of sediment is not being discussed here, but rather, the redistribution of existing sediments by tidal currents.

5-54 Sessile epibenthic organisms may be better indicators in some areas. However, because of the sparse and sporadic occurrence of epibenthic organisms in and near the Site 4, the more uniformly distributed infaunal organisms are a better choice of indicator organisms.

5-55 The change has been effected.

5-56 Corals are predominantly colonial and solitary within the study area (see DEIS, p. 3-43, para. 4).

5-57 The change has been effected.

5-58 Information on the economics of fishing and boating are included in the DEIS, p. 3-50, Marine Recreation (see also response to Comment 5-14).

5-59 The spotted sea trout is reported to occur in association with rock outcrops and artificial reefs located offshore and approximately 3 nmi. north of Sites A and B.

5-60 Paragraph 2, line 3, has been changed to read as follows: "Pink and rock shrimp comprised 97% of the total shellfish tonnage (2,066 tons) and represented 96% of the commercial value. Some of the landings at the Tampa-St. Petersburg area were reported taken from waters outside the immediate area" (letter from Florida Department of Natural Resources to EPA, December 10, 1982).

5-61 The change has been effected.

6-1 Non-ocean alternatives were considered by the U.S. Army Corps of Engineers (CE, 1976). However, non-ocean alternatives were found to be economically and environmentally unacceptable (see response to Comment 5-4). The EPA is responsible for evaluating alternative ocean disposal sites based on the five general and eleven specific criteria of 40 CFR 228.5 and 228.6 (see DEIS, pp. 2-5 and 2-6).

6-2 Data from intensive site specific surveys conducted by EPA during February, March, and April 1983, provide a basis for evaluating the impacts of the proposed dredged material site designation.

6-3 The comparison of similar environments allows a degree of predictive judgment for evaluating potential impacts on sandy-substrate habitats off the coast of Florida.

6-4 See DEIS, p. 3-4, para. 4, "Currents". Information is based on appropriate tide gauge stations in the region.

6-5 A detailed monitoring program will be established at Site 4 by EPA with input from members of State and local technical and scientific staffs.

6-6 No significant impacts on migratory fish are expected, since fish are mobile and will avoid areas of temporary turbidity (see DEIS, pp. 3-47 through 3-50).

6-7 Sufficient baseline information is available to evaluate the potential impacts of the long-term dispersion of disposed material, outside the site boundaries. Designation of the release zone can minimize the dispersion of dredged material outside the boundaries of the site.

6-8 The area in the vicinity of Site 4 is not a wetland, but open sea. A comprehensive monitoring program will be initiated following the site designation.

6-9 Designation of Site 4 as a dredged material disposal site will not preclude maintenance of Class III Waters to allow body-contact water sports and propagation of fish and wildlife. In any event, Site 4 is not within the territorial sea.

7-1 Acknowledged. We thank the U.S. Department of Commerce, National Oceanic and Atmospheric Administration for their comments. Suggestions are well-taken, and are incorporated in the Final EIS.

8-1 No significant ecological impacts including long-term effects are expected, because of the characteristics of the dredged material

and the lack of densely populated hard bottom within Site 4 (less than 1%). The appendices were distributed with the DEIS.

8-2 Many organisms adapted to soft bottoms are capable of recovering from burial following disposal operations, and are capable of recolonization of the site. Biological components of the Site 4 bottom habitat are discussed in the DEIS, pp. 3-37 through 3-46.

8-3 The time required for recolonization of a dredged material site following the termination of dredging operations depends in part on the similarity in composition of the original site sediment with that of the dredged material. Existing bottom sediments at Site 4 contain some of the geological components common to the dredged material, which makes recovery of Site 4 more probable within a reasonable period of time.

8-4 Although distribution of an ocean discharge at sea cannot be specified with 100% accuracy, a reasonable prediction based on prevailing currents can provide a sound basis for evaluating potential impacts. Continued site-specific studies will allow more accurate distribution predictions. In most cases, dredged material planned for disposal at sea must pass the Ocean Dumping Regulations' elutriate, bioassay, and bioaccumulation test procedures, found at 40 CFR Section 227. Anthropogenic contaminants in harmful levels are not anticipated; however, monitoring of the dredged material and the dredged material site will be conducted. Disposal operations are not expected to promote red tide blooms, or to cause damage to biological populations outside the site through chemoreception interferences, because of the character of the dredged material and dilution factors.

8-5 No unacceptable adverse environmental long-term effects are expected inside or outside the designated site. Short-term impacts to non-motile benthic organisms may occur from smothering and burial within the site.

8-6 The combined results of all the potential effects of the proposed disposal are not expected to have any significant effect on the ecosystem or on fishery resources. Estuarine spawning and nursery areas, none of which are at Site 4, are more susceptible to damage. Adults can avoid areas of high turbidity, whereas eggs and fry often may not survive.

8-7 In satisfying the five general and eleven specific criteria for selecting sites for disposal of dredged material found at 40 CFR Sections 228.5 and 228.6, all of the factors discussed must be taken into account and carefully evaluated. That was done in this case.

8-8 The Corps considered in detail the use of upland disposal and diked disposal areas (CE, 1976) but later found these alternatives

to be economically and environmentally unacceptable for disposal of dredged material from the construction phase of the Tampa Harbor Project (see response to Comment 5-4).

8-9 EPA has determined that the site designation will have no appreciable direct effect on the coastal zone. Nevertheless, a consistency determination has been completed and submitted to the State of Florida. In addition, under 40 CFR 222.3, State agencies responsible for the Coastal Zone Management Act are to receive notice of applications for ocean dumping permits.

9-1 through 9-7 Identical to Comments 6-1 through 6-7.

9-8 Intensive surveys conducted during February, March, and April 1983 were specifically designed to determine the nature and extent of bottom habitats within and near the site. The paucity of hard bottoms at the site was confirmed, with less than 17% hard bottom and less than 1% densely populated hard bottom found at Site 4.

9-9 The low incidence of hard bottom in the Site 4 area (estimated at less than 17% of the bottom) makes comparisons allowable with other, essentially soft bottom habitats.

9-10 Dr. Henry Bokuniewicz of the State University of New York Marine Sciences Research Center discussed siltation and turbidity caused by resuspension of fine particles by waves, storms and tides (Bokuniewicz, 1982) as it pertains to the Tampa Bay area. He concluded that between 3 and 10% of the material would be dispersed from a site, depending on long-term erosion of sediment. Material leaving the site will most likely be widely dispersed and diluted. In addition, the Corps of Engineers Waterways Experiment Station is conducting a site-specific study of Site 4 to determine the probable fate of dredged material disposed of at Site 4 and the distribution of resuspended sediments. It is expected to be completed in November 1983. This baseline data will provide information for the direction of the monitoring program.

9-11 Resuspension of disposal material will cause temporary, localized turbidity in the immediate area of disposal until the material is dispersed. The EPA Ocean Dumping Regulations and Criteria do not require quantification of the amount and frequency of siltation, or the direction of sediment transport based on site-specific ocean information; however, a study being conducted by the Corps of Engineers will address many of these concerns (see response to Comment 9-10 above).

9-12 The proposed action is not expected to cause unacceptable adverse effects on fisheries of the region. Based on the paucity of hard bottom habitat within the Site 4 area (estimated at less than 17% of the area, with less than 1% densely populated), the commercial and recreational value of Site 4 is negligible. DEIS, p. 3-47:

"Fisheries (Recreational and Commercial)". See also response to Comment 5-14.

9-13 EPA has no evidence indicating that Site 4 is a significant marine recreational area. See also response to Comment 5-14.

9-14 EPA believes that the public has had adequate opportunity to comment on the proposed site designation.

9-15 through 9-24 We have responded specifically to the Manatee County and Hillsborough County Environmental Protection Commission comments (see response to Comments 10, 13, 14, and 15.

10-1 The February, March, and April 1983, intensive EPA surveys address this issue comprehensively. Over 50 hours of video camera observation were conducted on Site 4. While no area will be completely devoid of life or even hard bottom habitat, Site 4 has less hard bottom habitat than any other site studied in this area. The hard bottom in this area is characterized by low relief flora and fauna. The widely scattered hard bottom habitats within Site 4 may support some corals, sponges and algae; however, few colonies attain heights over six inches. The characteristic biota in this area does not indicate a highly productive ecosystem. It is estimated that the widely scattered hard-bottom habitat represents less than 17% of the bottom area on Site 4 and less than 1% is densely populated.

10-2 See response to Comment 9-10. See also DEIS, pp. 2-24, 4-7, and 4-17 for descriptions and assessment of siltation and turbidity. Precise quantification of the siltation is not feasible and is not necessary for the designation of a dump site.

10-3 Available information does not indicate that the Site 4 area is heavily used by commercial or recreational fishermen, or sport divers. An aerial survey by the Corps of Engineers indicates that use of the area is minimal (see response to Comment 5-14).

10-4 Burial and smothering of benthic populations by dredged material disposal were considered carefully (see DEIS, pp. 4-17 through 4-19).

10-5 The Corps developed an estimate of 15¢/cu. yd. as average for transporting the dredged material (letter from J. Wall to J. Amson, August 19, 1983). Comparison of sites based on economic and environmental criteria are found in the DEIS.

10-6 The direct and indirect economic benefits generated by the recreational use of Site 4 are negligible based on available information (see response to Comment 5-14). See also DEIS, p. 4-21: "Effects on Recreations, Economics and Aesthetics."

10-7 The Corps of Engineers did not "expressly and unequivocally" reject ocean dumping as an alternative. They stated that "This plan [ocean disposal] produced the highest costs of all alternatives considered." Lack of sufficient suitable land for disposal and the unsuitability of the dredged material for diked disposal areas lead to the ocean disposal alternative (see recponse to Comment 5-4). In any event, the availability of land-based alternatives must be considered by the Corps in each authorization for disposal.

10-8 The Corps of Engineers considered several types of dumping in detail, including in-Bay disposal, upland disposal, and dredged material island disposal (CE, 1976). See also response to Comment 5-4.

10-9 Acknowledged; the EIS has been corrected. The actual distance is approximately 18nmi.

10-10 The primary reason that the "No-Action Alternative" is unacceptable is the adverse economic impacts to the area. The Port of Tampa is one of the leading ports in the United States, ranking seventh in total tonnage and third in export tonnage. The Tampa Port Authority has estimated that about 36,000 persons were directly or indirectly employed in port industries through the Tampa Bay region (DEIS, p. 1-5). The Corps is required to consider both economic and environmentally feasible alternatives of accomplishing the proposed objective. The Corps has found non-ocean disposal alternatives not to be economically or environmentally feasible (see response to Comment 5-4). Therefore, EPA, in cooperation with the Corps, initiated the necessary studies required by 40 CFR 228.4(e) to select, evaluate, and designate (if feasible) acceptable site(s) for the ocean disposal of dredged material.

10-11 It is EPA's responsibility to designate an environmentally acceptable ocean dredged material disposal site. The Corps of Engineers examined upland disposal in detail (CE, 1976). This alternative proved to be economically unacceptable (see response to Comment 5-4). Presumably, land is even less available and more expensive today than in 1977, making upland disposal even less feasible economically. However, the Corps must consider non-ocean disposal alternatives before authorizing ocean disposal at Site 4.

10-12 The site designated is for disposal of dredged material from the Tampa Harbor Project, which is described in detail in the Corps of Engineers Final EIS (CE, 1976).

10-13 Rocks in the dredged material cause unexpected problems making this alternative economically and environmentally unacceptable (see response to Comment 5-4). The recent February, March, and

April 1983, intensive EPA surveys address the feasibility and suitability of the designated site.

10-14 The fact that an EPA contractor recommended a course of action does not mean the Agency is bound to follow that course. In fact, the contractor's recommendation was based on limited data, which EPA later supplemented by re-investigating the existing and alternative disposal sites, and found that Site 3 was environmentally unacceptable for dredged material disposal.

10-15 Note the final conclusion: "Further studies should be conducted to validate the preliminary findings." Note also that the wording of the statement in question states that "...Sites 1 and 3 are probably more environmentally acceptable..."

10-16 Diver observations can be an effective site-specific method to characterize small localized areas; however, they are a very ineffective tool for characterizing large areas, such as Site 4. In fact, the divers found little evidence of hard bottom habitat at Site 3; however, EPA's May 1982 survey found considerable evidence of hard bottom. Thus, videotape transects are capable of more accurately determining the presence of hard bottom habitats. An in-depth videocamera survey of Site 4 has been completed, recording approximately 80nm of bottom during the February, March, and April 1983 EPA surveys.

10-17 Divers observations are limited to a small localized area at each station. Videocamera transects cover a much larger area in a continuous line, thereby giving far more conclusive evidence as to the extent of hard-bottom communities. In fact, EPA's initial reconaissance survey of Site 3 (where divers were used extensively) first indicated a potentially suitable disposal site; this was later proved to be an invalid assumption, based upon extensive videocamera observation and sample collection.

10-18 The assessment of impact does not require a quantification of all factors. EPA must make a determination on site designation based on reasonably available information. Further, the natural marine environment is dynamic; currents are not static either in direction or speed. A site-specific study, expected to be completed by November 1983, is being conducted by the Corps to assess currents and sediment transport to provide additional baseline data. The site designation will be for 3 years. See also response to Comment 9-10.

10-19 Detailed quantification of the rates of dilution of the turbidity plume and the distance the deposited materials will be transported are not required for site designation. Examination of available facts and information using best professional judgment is sufficient to determine whether a site is suitable for designation as an ocean disposal site. Site 4 is 4nmi square, and no movement

of sediment is expected from the site that will cause significant adverse environmental harm. See also response to Comment 9-10.

10-20 There are two reasons the Mid-Shelf was not considered feasible: 1) the Corps indicated that sites located in excess of 18nmi were not economically feasible; and 2) a Mid-Shelf site, considered a low energy environment, is likely to sustain more severe environmental impacts of longer duration from dredged material disposal than alternative higher energy sites. The most distant portion of the Mid-Shelf (i.e., 70 miles offshore) was selected as the alternative Mid-Shelf site, because this was the area recommended by the State of Florida.

10-21 The sentence clearly does not state or imply that Oliver et al., (1977), recommended ocean dumping in hard bottom areas rather than deep waters. The statement was that "...shallow-water, high energy benthic communities recover more quickly from disturbances, such as the disposal of dredged material, than communities in deeper water." Since about 83% of Site 4 is soft bottom, the basic concept of recovery that Oliver et al., (1977), described applies in this case.

10-22 According to the Corps (letter from J. Wall to J. Amson, August 19, 1983) the average cost to transport dredged material is 15¢/cu. yd. The basic premise here is still logically true; it will cost considerably more to transport dredged material 70nmi than to transport it 18nmi.

10-23 The Agency is unaware of any evidence of that demonstrates that Site 4 is an area of high commercial and recreational activity (see response to Comment 5-14).

10-24 The economic feasibility of a dump site is determined on the basis of project costs. According to the Corps of Engineers, sites in excess of 18nmi from Egmont Key are not economically feasible, based on project costs for the Tampa Bay Harbor Deepening Project. The sites described by the commenter were used for disposal of sewage sludge and industrial waste, not dredged material.

10-25 It is well known that the primary productivity of deep waters is less than that of shallower waters. This is due, in part, to the decreased influx of nutrients and decreased light penetration. Productivity decreases with increasing distance from land, and with increasing depth. Benthic organisms adapted to the relatively constant environment in deeper water are less adaptable to change. Those benthic organisms adapted to the more dynamic inshore waters tend to be more adaptable to environmental changes, either as individuals or as a species (Oliver et al., 1977). Although EPA has not conducted studies in the area of the Mid-Shelf or Deep Water Sites, the Florida Department of Natural Resources did study a site approximately 15nmi to the northwest of these sites during the Hourglass Cruise studies in 1969.

10-26 The Mid-Shelf site is a more dynamic environment than the Deep Water site, and therefore, more resilient to impact from dredged material disposal (see also response to Comment 9-10).

10-27 Precise quantification is not necessary to make a comparison. In addition, the term "small effect" in this context did not refer specifically to hard-bottom organisms.

10-28 The basic point here is that deeper water organisms are less adaptable to perturbations such as dredged material disposal than shallow water, inshore organisms. Therefore, recovery from dredged material disposal would generally be more rapid at a shallow water site than at a deep water site. Immediate impacts would be more severe at the deeper water sites, and recolonization would be slower.

10-29 During the recent February, March, and April 1983 intensive EPA surveys, there was already some evidence of recolonization noted at Sites A and B. We are unaware of "scientific literature" which clearly demonstrates that hard-bottom communities will not recover to their pre-dumping state for 25 to 50 years, even after hard substrate is available. The increased entrainment of water during the descent phase of disposal operations at deep water sites will increase both the amount and duration of turbidity, as well as the distance from the discharge point the material is transported, thus potentially increasing the extent of environmental damage.

10-30 The increased percentage of silt in the dredged material compared to the disposal site sediments can be expected to change the characteristics of the infauna accordingly. The composition of the biota would be expected to shift to those organisms more adapted to these sediments. As these finer sediments disperse, leaving coarser material, the composition of the biota will gradually shift back towards biota that are adapted to the original substrate.

10-31 The same considerations apply to the Deep Water Site as to the Mid-Shelf Site (see response to Comment 10-22). Increased distance increases the costs of transportation.

10-32 Intensive surveys by EPA during February, March, and April 1983 were conducted throughout the area with extremely detailed examination of Site 4. More than 50 hours of underwater video camera work was obtained, to extensively study the character and extent of various bottom types, both inside and outside of Site 4. The video camera technique was found to be an excellent tool for this type of data collection effort, and covered far more area more rapidly with a greater degree of veracity than could be accomplished by divers in the same amount of time.

10-33 See response to Comment 10-32, above.

10-34 See response to Comment 10-32, above for discussion of February, March, and April 1983 EPA surveys. Site 4 is not devoid of hard-bottom habitat; however, less than 17% of the site is estimated to have this type of habitat. This is far less than any other site studied in this area, and therefore less productive. We have no information that Site 4 is an area heavily used for shrimping, recreational fishing, or scuba diving (see response to Comment 5-14).

10-35 Disposal of dredged material at Site 4 is not expected to have unacceptable adverse environmental impacts to beaches, hard bottom areas, artificial reefs, sunken vessels, shrimping, commercial or recreational fishing, or other amenity areas of the region because of the distances from the proposed disposal site. There has been no evidence presented to EPA that Site 4 is an important fishing or diving site (see response to Comment 5-14).

10-36 See DEIS, pp. 3-4 to 3-11 for consideration of storms and currents. A site-specific current and sediment transport study is being conducted by the Corps of Engineers to augment available information, and is scheduled to be completed in November 1983 (see also response to Comment 5-14).

10-37 Since approximately 83% of the bottom at Site 4 is "soft bottom", comparison with other soft bottom areas such as the Galveston dump site is appropriate.

10-38 Quantification of the amount and frequency of resuspension of sediment and impacts to hard bottom habitats and organisms is not specifically required by 40 CFR 228.6(a)(7). However, resuspension of sediment is discussed in response to Comment 9-10 (see DEIS, p. 2-11, para. 3 for discussion of Sites A and B, and pp. 3-4 to 3-11 for discussion of currents).

10-39 Dredged material disposal at Site 4 is not expected to interfere with shipping, fishing, recreation, mineral extraction, desalination, fish and shellfish culture, areas of special scientific importance or other legitimate uses of the ocean. Site 4 may be located in a general area used for sport fishing, shrimping, party and charter boat fishing, and scuba diving; however, Site 4 and its immediate vicinity have not been identified with these uses (see also response to Comment 5-14).

10-40 An intensive site-specific study of Site 4 was conducted by EPA in February, March, and April 1983. A monitoring program will be designed to detect unacceptable adverse environmental effects. If it appears that those effects are or will become unacceptable, EPA will take appropriate steps to limit or halt dumping operations.

10-41 The intensive EPA survey of Site 4 in February, March, and April 1983 revealed a minimum of hard-bottom areas within and

surrounding Site 4, and no ledges in or near the site. No unacceptable adverse environmental effects from disposal operations are anticipated outside the immediate vicinity of the designated disposal site.

10-42 During EPA surveys in February, March, and April 1983, less than 17% of Site 4 was found to contain hard bottom, and less than 1% of the site was found to be densely populated hard bottom.

10-43 Bioassays of dredged material are designed to insure that the material will not cause unreasonable acute or chronic toxicity, or other sublethal adverse effects, or cause accumulation of toxic materials in the human food chain (see 40 CFR §227.27(b)). These tests are not designed to predict direct impacts from burial or siltation on hard-bottom organisms.

10-44 Less than 17% of the site is hard bottom and less than 1% is densely populated, so the impact of dredged material disposal on hard-bottom organisms would be minimal. The site will be designated for a three-year period, and if monitoring detects unacceptable adverse environmental impacts, the Agency will move to halt disposal operations.

10-45 During EPA surveys in February, March, and April 1983, detailed examination of the area of Site 4 was conducted to identify areas of hard-bottom normally associated with this type habitat.

10-46 No evidence has been provided to EPA or the Corps to indicate that Site 4 is a heavily used commercial or recreational fishing site (see response to Comment 5-14).

10-47 Impacts within and immediately surrounding Site 4 from resuspension of fine particles will be negligible (see DEIS, p. 3-2, para. 6, and p. 3-8, para. 3). See also response to Comment 9-10.

10-48 Resuspension of dredged material will cause temporary localized turbidity in the immediate vicinity of the disposal area until the material is dispersed and diluted (see response to Comment 9-10).

10-49 Much of the commercial fishery in the area is dependent on pelagic species, which are not generally associated with or dependent on hard-bottom areas. These species tend to be highly mobile, and avoid areas of high local turbidity. Dumping of dredged material at Site 4 is not expected to significantly affect hard bottoms in any case.

10-50 See response to Comments 5-14 and 10-39.

10-51 See DEIS, pp. 3-47 through 3-51. No spawning or nursery grounds are known to occur in the immediate vicinity of Site 4, and since

there is minimal hard-bottom habitat within Site 4 (estimated at less than 17%), it is unlikely that fish dependent on hard-bottom habitat for spawning and/or nursery areas would be severely impacted by dredged material disposal at this site.

10-52 Sport diving at Site 4 is an unlikely site for sport diving, since there are a minimum of hard-bottom areas at the site, with a concomitant reduction in abundance and diversity of marine species. Resuspension of dredged material during severe storms is unlikely to significantly impact sport diving in the area, since it is too hazardous to attempt diving during such events. Turbidity following storms would be temporary and localized within the immediate vicinity of Site 4.

10-53 EPA believes that the public has had adequate opportunity to comment on the proposed site designation.

10-54 Intensive site-specific surveys conducted during February, March and April 1983 by EPA address many of these concerns, including the extent and nature of hard-bottom habitat in the Site 4 area. Additional site-specific current and sediment transport studies, expected to be completed in November 1983, are currently being conducted by the Corps of Engineers to provide baseline data. A monitoring program will be formulated to assess the impacts of dredged material disposal during the three-year designation.

10-55 After careful evaluation of all factors including intensive site-specific surveys, quantification of the extent of hard-bottom habitats, and consultation on the subject of sediment dispersal during and after disposal operations with experts in the field, we feel that Site 4 is an environmentally acceptable ocean dredged material disposal site and will not result in unacceptable adverse environmental effects (see response to Comment 9-10). Use of diked disposal areas is not preferable, for reasons discussed earlier (see response to Comment 5-4).

11-1 Surveys conducted during February, March, and April 1983, which included approximately 80 hours of video camera observation of the bottom throughout the area, boxcore samples, trawls, side-scan sonar and fathometer tracings, and water samples have provided sufficient data for a site designation. The Corps evaluated upland and other alternatives to ocean disposal (CE, 1976). These alternatives were found to be economically and environmentally unacceptable (see response to Comment 5-4). The economic and recreational resources of the area are discussed in the DEIS, pp. 3-47 through 3-52 (see also response to Comment 5-14). Disposal of maintenance dredged material is not expected to permanently destroy or degrade hard-bottom communities or associated fishery values.

11-2 The additional intensive surveys conducted with the video camera during February, March, and April 1983, confirm that there are few hard-bottom areas within the site, and those observed are sparse and of low relief. Less than 17% of Site 4 is estimated to contain hard- bottom communities and less than 1% is densely populated.

11-3 According to available information (Moe, 1963, see Figure 3-18, DEIS, p. 3-48) and EPA 1983 survey results (see response to Comment 3-2), there are no artificial reefs or concentrations of hard-bottom areas which would attract large numbers of divers or recreational and commercial fisherman to the immediate vicinity of Site 4.

11-4 Intensive surveys utilizing a towed video camera during February, March, and April 1983, provided considerable information for evaluation of potential dredged disposal sites to augment the earlier survey.

11-5 The movement of sediments is not expected to cause long-term unacceptable environmental impacts (see response to Comment 9-10). The planned monitoring program will be designed to detect any unacceptable adverse environmental impacts.

11-6 The majority of Site 4 consists primarily of flat sandy bottoms, and therefore is similar to the referenced study areas. No permanent environmental impacts are expected from disposal at Site 4. There is no evidence that the previously designated disposal site has contributed to "the disappearance" of basket sponges or spiny lobsters from ledges near the site. A number of factors may have contributed to a decrease in lobsters, including overfishing by divers, seasonal changes, and large amounts of natural siltation, as observed in the February, March, and April 1983 EPA surveys. Permanent stress to offshore habitats from maintenance dredged material disposal is not expected to occur.

11-7 According to the Florida Department of Natural Resources (see response to Comment 5-61), the fishery resources indicated in the DEIS may actually be overestimated, as the landings in the Tampa-St. Petersburg area are not all taken from the local coastal area, and therefore the fishery resources may be less than indicated in the DEIS. Only limited, short-term disruption of recreational or commercial fishing is expected to occur, if any, during actual dumping operations (see also response to Comment 5-14).

11-8 The Corps of Engineers examined the upland disposal of dredged material (CE, 1976), and were unable to locate sufficient suitable upland disposal areas (see response to Comment 5-4).

11-9 The Corps considered the diked dredged material disposal island alternative in detail (CE, 1976). However, with further study,

this alternative was found to be economically unacceptable for the disposal of dredged material from the construction phase of the Tampa Harbor Project (see response to Comment 5-4). In addition, diked disposal islands may have unacceptable environmental impacts by reducing circulation in the Bay and increasing turbidity during dredging operations and subsequent erosion of the islands after construction reducing productivity.

11-10 There are many reasons why a sediment sample may "fail" a bioassay. Some of these reasons include high mortality in the control organisms or changes in required test conditions, such as, level of dissolved oxygen. Tests that are invalidated for these reasons are not normally reported. An invalid bioassay does not indicate "failure" of a sediment sample to pass a bioassay for toxicity. Moreover, these allegations concerning the field and laboratory procedures were refuted in court proceedings. The court deferred to Dr. Engler of the Corps, who testified that field surveys were conducted using proper scientific procedures and that bioassays were conducted in strict accordance with EPA and Corps guidelines (Manatee County v. Gorsuch, No. 82-248-CIV-T-GC (M.D. Fla., December 22, 1982) (slip op. at 14 note 12).

11-11 Disposal of dredged material outside any designated site is occasionally a problem. However, the U.S. Coast Guard is charged with monitoring dumping activities, and dumping outside of a designated area is illegal. Further, Site 4 is almost six times larger in area than the previously designated disposal site (Site A), so incidents of dumping outside the site should be substantially reduced.

11-12 Disposal has been halted at Site A. Additional extensive studies have been conducted during February, March, and April 1983. Transects were conducted at 1/4 mile intervals using the video camera. In addition, fathometer and side-scan sonar tracings were taken.

11-13 Evidence collected during the February, March, and April 1983 EPA surveys indicate that siltation occurring in the area may be largely of natural origin because of the uniformity of sediment found throughout the area. Further, a monitoring program will be designed to detect any unacceptable adverse environmental impacts caused by the potential spread of the dredged material.

11-14 No significant impact is expected to fisheries because of the relative small size of the site, and avoidance of the area by fish during disposal operations.

11-15 Diked disposal areas proved to be economically and environmentally unacceptable for the disposal of dredged material from the

construction phase of the Tampa Harbor Project (see response to Comment 5-4).

11-16 Opportunity for full and complete public comment has been afforded through the DEIS and the site designation proposal. Designation of Site 4 is not expected to seriously affect fisheries resources in any way, or cause a serious public health hazard.

12-1 The February, March, and April 1983 EPA surveys provided extensive information to evaluate the site-specific impacts of dredged material disposal (see response to Comment 3-2).

12-2 Recent intensive surveys address most of deficiencies in the biological sampling. The box core is designed to sample infauna on and in the bottom and to provide information on the abundance and diversity of organisms. Video camera observations are a more effective tool for judging the relative abundance of hard-bottom communities.

12-3 Recent intensive surveys in February, March, and April 1983 by EPA employed extensive use of the video camera on site. Preliminary examination of video tape recordings indicate that less than 17% of Site 4 bottom could be classified at hard-bottom, and less than 1% was densely populated.

12-4 The February, March, and April 1983 EPA surveys provided adequate evaluation of the extent of hard-bottom habitats in the area of Site 4.

12-5 The recent 1983 EPA surveys discussed above confirm that hard-bottom habitat is a minor component within the Site 4 area. Less than 17% is hard-bottom, and less than 1% is densely populated.

12-6 Sufficient information is now available from the February, March, and April 1983 EPA surveys to evaluate Site 4 under the five general and eleven specific criteria of the Ocean Dumping Act (40 CFR 220-229).

12-7 Sufficient information from EPA's February, March, and April 1983 surveys (see response to Comment) and information from Bokuniewicz (see response to Comment 9-10) is available to make a predictive evaluation of the impact of dredged material disposal on hard-bottom areas. The monitoring program will be designed to detect unacceptable adverse environmental impacts in which case, EPA will move to halt disposal operations at the site.

12-8 Much of this information is available and is either discussed in the DEIS, or in Appendices C and F. Further, the monitoring program to be established may well include the studies on hard-bottom organisms that are suggested.

12-9 Analyses for vibrio-type bacteria would not provide an indication of a human health threat. Only Vibrio parahaemolyticus has been implicated as a public health hazard, rarely as an opportunistic pathogen infecting wounds, more commonly as a food poisoning organism when allowed to grow uninhibited in contaminated seafood products. Culture and identification of Vibrio parahaemolyticus using an array of biochemical tests still does not positively identify the causative form of Vibrio in cases of acute gastroenteritis, making this test of questionable value.

12-10 See DEIS, p. 4-19, para. 1. "Recolonization of dredged material disposal sites depends [in part] on the disparity between site and dredged sediments...." As the silt/clay ratio returns to pre-dumping conditions, recolonization is expected to accelerate.

12-11 None of the invertebrate species listed by the Florida Game and Freshwater Fish Commission as threatened or endangered, have been identified at Site 4.

12-12 The monitoring program will provide continuous site-specific data on the disposed dredged material to insure the quality does not change. Tissue samples, water column samples and sediment samples may be part of this program. Toxic metal concentrations were not found in Site A post-disposal sediments.

12-13 Use of a non-endemic species in bioassays is a scientifically valid procedure. In fact, it is often more valid to use test organisms of known uniform age and condition then to use endemic species which are often difficult to obtain and often not uniform in age or condition. Test organisms were not pre-exposed to "significantly high concentrations" of toxic chemicals in control water. Moreover, these allegations concerning the field and laboratory data procedures were refuted in court proceedings. The court deferred to Dr. Engler of the Corps, who testified that field surveys were conducted using proper scientific procedures and that bioassays were conducted in strict accordance with EPA and Corps guidelines (Manatee County v. Gorsuch, No. 68-248-CIV-T-GC (M.D. Fla., December 22, 1982) (slip op. at 14 note 12).

12-14 Evaluation of utilization of diked disposal areas has been discussed in detail by the Corps of Engineers (CE, 1976), but were found to be economically and environmentally unacceptable (see response to Comment 5-4). Additional studies were undertaken in May 1982, and in February, March, and April 1983, to ensure that an environmentally appropriate disposal site is designated.

13-1 Acknowledged.

14-1 All disposal of dredged material at Site A was discontinued on December 24, 1982.

14-2 Acknowledged.

14-3 Site 4 has fewer hard-bottom outcrops than any other site examined in the Tampa Bay area, and therefore would have less impact on fish and other organisms. Less than 17% of Site 4 is hard-bottom and less than 1% is densely populated.

15-1 Acknowledged.

16-1 The requested meeting was held in Jacksonville, Florida, on January 26, 1983; representatives from all affected Federal, State, and local agencies were present at that meeting.

17-1 The reduced visibility reported is highly unlikely to have been caused by disposal operations at Site A. It is more probable that the apparent reduction in visibility is caused by activities occurring within the Bay. This could include nonpoint sources such as runoff from construction sites, or agricultural activities; it could also include point sources such as discharges from sewage treatment plants, or industrial wastewater treatment discharges.

17-2 The order of presentation of material in the DEIS does not necessarily reflect the order of the impact assessment. The summary and conclusion, while placed before the actual evaluation, were written after evaluation of all considered alternatives. Site 4 was selected only after careful study showing that the site has few hard bottom areas.

17-3 Additional survey work was conducted in the area with approximately 50 hours of video recordings taken of the bottom. Site 4 was surveyed in 22 runs that were 1/4 nautical mile apart in both NW and SE and SW to NE directions. Analysis of this data reveals that the majority of the site is soft bottom, with scattered, sparse patches of hard bottom.

17-4 The Corps of Engineers (CE, 1976) considered upland disposal sites and found that insufficient suitable land was available for disposal of the dredged material, even on McDill Air Force Base (see response to Comment 5-4). This alternative must be reconsidered by the Corps before individual ocean dumping projects are approved.

17-5 The dredged material islands would be less environmentally acceptable, because of the resultant reduced circulation in the Bay, and increased turbidity caused by disposal operations.

17-6 No impacts are expected on Anna Maria Island or Long Boat Key beaches from disposal of dredged material at Site 4, because of the distance of the site from the shore.

17-7 The DEIS has been reviewed by the National Oceanic and Atmospheric Administration, and the Department of Health and Human Services; both agencies agree that no unacceptable long-term environmental effects or adverse health effects are expected to occur from disposal of dredged material at Site 4.

17-8 No significant adverse environmental effects are expected either on recreational use of the area outside the site, or to the commercial fishing of the area (see also response to Comment 5-14).

17-9 Disposal of dredged material at Site 4 is not expected to cause any proliferation of the "red tide" organism. Further, the primary phosphorus sources in the Tampa Bay area are probably attributable to phosphate industries along the Alafia River (CE, 1976).

18-1 Diked disposal areas were considered in detail by the Corps of Engineers (CE, 1976), however, this alternative was later found to be economically and environmentally unacceptable for the disposal of dredged material from the construction phase of the Tampa Harbor Project (see response to Comment 5-4).

19-1 Acknowledged.

20-1 Hard bottom areas in this region occur only in scattered patchy distributions. As a result, it is difficult, if not impossible, to avoid all hard bottom areas. Those outcroppings with substantial relief offer a more diverse and productive habitat to benthic organisms. It is highly unlikely that dredged material will drift back into the Tampa Bay channel entrance in any significant amount.

20-2 Disposal operations at Site A have been terminated.

20-3 Depending on the composition of the dredged material as well as physical oceanographic conditions, suspended particulate levels could be expected to decline rapidly within hours, with the turbidity levels returning to ambient concentrations within 24-36 hours.

20-4 The short-term avoidance referred to is over a matter of hours, or, at most days, thus it would not affect the seasonal migrations of the cited teleosts.

20-5 The turbidity plume would have temporary, localized adverse effects on any sport diving in the immediate area of disposal.

20-6 Commercial finfishing for pelagic species exists seaward of Sites A and B and the Shallow-Water Alternative Sites.

20-7 There are no confirmed reports that Site 4 is a good shrimping area, nor do any EPA or Corps survey results indicate that this is the case (see response to Comment 5-14).

20-8 A monitoring program will be instituted at the completion of the site designation process and prior to initiation of disposal activities. If serious adverse environmental effects are discovered, the Agency may terminate or limit the use of the site.

21-1 The Corps considered other alternatives to ocean disposal including upland and within Bay disposal (CE, 1976). However, these alternatives were found to be economically and environmentally unacceptable (see response to Comment 5-4). The Environmental Protection Agency is responsible for designation of ocean disposal sites under the five general and eleven specific criteria of the Ocean Dumping Regulations (40 CFR §220-229).

21-2 Dredged material disposal has been discontinued at Site A. Disposal at Site 4 is not expected to cause unacceptable adverse environmental effects, although temporary impacts will occur during disposal operations.

21-3 Impacts from disposal of maintenance dredged material are not expected to cause unacceptable adverse environmental effects. The volume of maintenance operations is less than the initial construction operations. Most impacts are expected to be of short duration, and to not extend beyond the site boundaries.

21-4 The value of the site area to the diving industry is judged to be minimal (see response to Comment 5-14).

21-5 The U.S. Coast Guard monitors disposal activities to prevent this illegal form of dumping which may result in a fine to the parties involved. Persons with knowledge of short-dumping incidents should report such events to their local Coast Guard District.

21-6 Upland disposal alternatives were considered in detail by the Corps of Engineers (CE, 1976), but were found to be economically unacceptable (see response to Comment 5-4). Significant economic losses in fisheries or in recreational uses are not expected to occur (see response to Comment 5-14). Diked disposal areas were considered in detail by the Corps of Engineers (CE, 1976), but were later found to be economically and environmentally unacceptable for disposal of dredged material from the construction phase of the Tampa Harbor Project (see response to Comment 5-4).

21-7 The February, March, and April 1983 intensive surveys by EPA provide adequate baseline data to evaluate projected impacts of dredged material disposal. The Corps of Engineers is currently conducting an on-site current measurement study, expected to be completed by November 1983, to provide additional baseline data.

22-1 The DEIS follows the five general and eleven specific criteria found at 40 CFR §228.5 and §228.6 for management of ocean disposal sites. 40 CFR §227.15 applies to permit applications for ocean dumping, which must be reviewed by the Corps of Engineers in approving disposal projects. Section 227.15 does not require a cost-benefit ratio study.

22-2 Additional surveys conducted during February, March, and April 1983 establish that hard bottom accounts for less than 17% of the site and less than 1% is densely populated. The DEIS does not state that Site 4 is covered entirely by a sandy bottom.

22-3 Drift of dredged material is not expected to extend beyond the boundaries of the site (see response to Comment 9-10).

22-4 Dispersal of dumped sediments is not expected to cause unacceptable adverse environmental impacts to nearby artificial reefs or wrecks because of their distance from the proposed site. It is incorrect to conclude from the statement that "Site 4 will provide a large sandy bottom area" that Site 4 is entirely covered with sandy bottom. Less than 17% of the site is hard bottom; thus, approximately 83% is soft bottom.

22-5 The thin layer of sediment is expected to disperse with time, causing no unacceptable long-term adverse environmental effects. Further, evidence collected during the February, March, and April 1983 EPA surveys indicates that siltation noted in the offshore areas may be largely of natural origin, because of the uniformity of sediment distribution throughout the study area.

22-6 Flushing patterns and predominant bottom characteristics off the west coast of Florida are similar to cited areas where studies have been conducted; thus, it is acceptable to compare this area with these areas.

22-7 Less than 17% of the bottom on Site 4 is estimated to have hard-bottom habitat, and less than 1% is densely populated; the site has less hard bottom habitat than any other area surveyed in the Tampa Bay area (see response to Comment 3-2).

22-8 The parameters established for elutriate testing to determine the amount of trace contaminants released by the dredged material disposal are found at 40 CFR 227.13 and 227.27.

22-9 Turbidity resulting from disposal operations is expected to be of short duration, and not long enough to cause unacceptable adverse environmental effects to the loggerhead turtle's feeding or breeding habits.

22-10 Permit conditions can be stipulated to prevent unacceptable adverse environmental effects. These conditions include, but are

not limited to, designation of the disposal site, limitations on time and rate of disposal, disposal site monitoring, designation of release zones, limited site designation, or termination of designation.

22-11 Complete bathymetric studies were done in the February, March, and April 1983 EPA surveys. The monitoring program will be sufficiently detailed to determine if unacceptable adverse environmental effects are being caused by dredged material disposal.

23-1 EPA thanks the Corps of Engineers for its concurrence with the recommendation of an ocean dredged material disposal site at center coordinates 27° 31' 27"N, 83° 04' 54"W (Site 4).

24-1 EPA thanks the National Oceanic and Atmospheric Administration for their comments and helpful information. The information in the DEIS on whales and turtles has been revised, based on NOAA's suggestions. Consultation with NOAA, pursuant to Section 7 of the Endangered Species Act has been accomplished.

25-1 Dredged material disposal at Site A was discontinued December 24, 1982.

25-2 EPA believes that sufficient opportunity has been provided for public response to the site designation.

25-3 The Corps of Engineers considered in detail non-ocean dredged material disposal (CE, 1976), but later found these alternatives to be economically and environmentally unacceptable for disposal of dredged material from the construction phase of the Tampa Harbor Project (see response to Comment 5-4).

25-4 The proposed action is not expected to have unacceptable adverse environmental impacts to the marine environment. The proposed action will have a beneficial effect on the economy of the region (FEIS, 1983).

25-5 Dredged material disposal at Site A was discontinued on December 24, 1982.

25-6 According to information available, the proposed action will have no significant effect on recreational activities of the region nor commercial fishing (see response to Comment 5-14).

25-7 Impacts on migratory fish are expected to be minimal, because fish will avoid temporary turbidity caused by disposal operations.

25-8 The many studies conducted in the Site 4 vicinity, and in particular, the February, March, and April 1983 EPA surveys, have provided considerable information on the environmental features of this area.

25-9 A monitoring program will be established for Site 4 to detect significant adverse environmental impacts. Should unacceptable adverse environmental effects be noted, EPA will move to halt disposal operations.

26-1 Intensive surveys were conducted by EPA during February, March, and April 1983 to augment the preliminary surveys.

26-2 Designation of a release point within the site may be specified in the site designation. Consequently, the Gunsmoke wreck may be one to two miles from actual dumping operations, and as much as three miles. No unacceptable adverse environmental effects are expected at these distances.

26-3 Non-ocean disposal was considered in detail by the Corps of Engineers, but were found to be economically and environmentally unacceptable for disposal of dredged material from the construction phase of the Tampa Harbor Project (see response to Comment 5-4). The potential impacts of ocean disposal, are presented in the DEIS, Chapter 4, "Environmental Consequences." (See also response to Comment 9-10.)

26-4 The use of diked disposal areas were considered in detail by the Corps of Engineers (CE, 1976), but was later found to be economically and environmentally unacceptable for disposal of dredged material from the construction phase of the Tampa Harbor Project (see response to Comment 5-4).

26-5 EPA believes that sufficient opportunity has been provided for public comment on the site designation.

27-1 Transmittal of Clearinghouse Review. Identical to responses to Comments 9-1 through 10-55, above.

28-1 Intensive surveys conducted by EPA during February, March, and April 1983 included water column sampling, sediment samples (for infauna, grain size analysis, and trace metals), trawls (for fish tissue analyses), extensive video camera observations of the bottom, and side-scan sonar tracings. These surveys provide adequate baseline data for evaluation of environmental impacts.

28-2 According to the Corps of Engineers, mid-Shelf and deepwater sites would not be economically feasible, due to increased transportation costs. Site 3 has been judged environmentally unacceptable for dredged material disposal, due to the presence of hard-bottom areas.

28-3 Intensive surveys conducted during February, March, and April 1983 provides sufficient evidence for designation of Site 4. Less than 17% is hard-bottom, and less than 1% is densely populated.

28-4 Construction of diked dredged material disposal islands could better be described as "a non-ocean alternative" (see response to Comment 5-4).

28-5 The additional studies conducted at Site 4 and vicinity by EPA during February, March, and April 1983, provides data needed for designation of Site 4.

28-6 The video camera observations conducted in February, March, and April 1983 by EPA were transects 1/4 mile apart in both northwest to southeast and southwest to northeast directions. The method enabled detection of any significant areas of hard bottom communities. It was found that less than 17% of Site 4 was hard bottom, with less than 1% densely populated.

28-7 The dissolved oxygen data for the previously designated site and the proposed site are not directly comparable. The percent saturation of dissolved oxygen depends on the ambient temperature. Therefore, the time of year and depth a sample is taken are important factors in evaluating dissolved oxygen data. The data presented, however, does provide baseline data on the Tampa Bay area.

28-8 A stress reaction or death may have a greater environmental consequence to the surrounding benthic community than the loss of the organism in question. Loss of individual organisms is often naturally high, but stresses or deaths which exceed the natural fecundity of a species may lead to a decline in the population. In the complex interrelationship of marine organisms, decline in one species may lead to a decline or an increase in a competing species. This relationship can be partly seen in the simplified food web with potential adverse impact from dredged material disposal, presented in Figure 4-1 of the DEIS, p. 4-15.

28-9 The surveys conducted during February, March, and April 1983, have provided sufficient information to recommend the designation of Site 4 as an ocean dredged material disposal site (see response to Comment 9-10).

29-1 EPA thanks the State of Florida Department of Natural Resources for the site-specific dive reports provided. The June 4, 1981, dive survey by Japp and Lowery supports the conclusion that impacts from disposal operations will cause negligible adverse effects outside the actual site. No visible evidence of impact was observed beyond 1 km inshore of a disposal site.

30-1 Transmittal of Clearinghouse Review. See response to Comment 10-26, above.