DEPARTMENT OF THE ARMY
U. S. ARMY ENGINEER DISTRICT, HONOLULU
FORT SHAFTER, HAWAII 96858-5440

REPLY TO
ATTENTION OF

SPECIAL JOINT PUBLIC NOTICE
SITE MANAGEMENT PLAN (SMP) FOR
THE HAWAII OCEAN DREDGED MATERIAL DISPOSAL SITES

The U.S. Army Corps of Engineers, Honolulu Engineer District (Corps) and the U.S. Environmental Protection Agency, Region IX (EPA) have prepared a Site Management Plan for the five Hawaii Ocean Dredged Material Disposal Sites (ODMDS's).

As required by the Water Resources Development Act of 1992 (WRDA 92), the Plan establishes a coordinated approach by EPA and the Corps for management of the five Hawaii ODMDS's. The Management Plan was prepared in accordance with 40 CFR, Part 228 - Criteria for the Management of Disposal Sites for Ocean Dumping and with Sections 102 and 103 of the Marine Protection, Research and Sanctuaries Act (MPRSA) of 1972.

The Site Management Plan is attached for your information and use. Further information may be obtained from Ms. Kathleen A. Dadey, Environmental Engineer, (808) 438-9258, extension 15 or Mr. Allan Ota, Environmental Scientist, (415) 744-1980.

U. S. Army Corps of Engineers
Honolulu Engineer District
Attn: CEPOD-ET-PO (K. Dadey)
Building 230
Fort Shafter, Hawaii, 96858-5440

U.S. Environmental Protection Agency Region IX
75 Hawthorne Street (W-3-3)
San Francisco, CA 94105-3901

SITE MANAGEMENT PLAN (SMP) FOR THE HAWAII OCEAN DREDGED MATERIAL DISPOSAL SITES

I. INTRODUCTION

The Marine Protection, Research and Sanctuaries Act (MPRSA) of 1972 (33 USC Section 1401 *et seq.*, as amended) is the primary legislative authority regulating the disposal of dredged material into ocean waters. The MPRSA prohibits disposal activities that would unreasonably degrade or endanger human health or the marine environment. Under the Act, the U.S. Environmental Protection Agency, Region IX (EPA) and the U.S. Army Corps of Engineers, Honolulu Engineer District (Corps) have joint authority for regulating ocean disposal of dredged material and for managing ocean dredged material disposal sites (ODMDS's) in the Hawaiian Islands. Management of an ocean disposal site consists of: (a) regulation of the quantities and types of materials disposed, times, rates, and methods of disposal; (b) development and maintenance of an effective monitoring program for the site; (c) recommendations concerning changes in site use, disposal amounts, or designation for a limited time based on periodic evaluation of site monitoring results; and (d) enforcement of permit conditions.

Section 506 of the Water Resources Development Act of 1992 (WRDA 1992) amends Section 102(c) of the MPRSA. The amendments require, in part, that a site management plan be developed for each designated ocean disposal site. A site management plan consists of six components and is required to include:

- a baseline assessment of conditions at the site;
- special management conditions or practices to be implemented at the site that are necessary for protection of the environment;
- consideration of the quantity of the material to be disposed of at the site, and the presence, nature, and bioavailability of the contaminants in the material;
- a program for monitoring the site;
- consideration of the anticipated use of the site over the long term, including any need for management of the site after the closure; and
- a schedule for review and revision of the plan.

(Note that the order of the components has been changed from that contained in WRDA 1992 so as to address them in a logical sequence).

Section 506 of the WRDA 1992 further requires that, after January 1, 1995, a site management plan must be developed and approved before any ODMDS receives final

designation. After January 1, 1997, no permit for disposal of dredged material may be issued under Section 103 of the MPRSA at a site unless the site has received final designation and has a management plan in place.

Five ODMDS's in the Hawaiian Islands (Hilo, Kahului, South Oahu, Nawiliwili, and Port Allen) received final designation following a Final EIS published by the U.S. EPA in 1980. Thus, a site management plan (SMP) is required to be developed and approved, pursuant to the WRDA 1992, for each of the designated sites.

Two key parts of an effective site management plan are the flexibility to accommodate unforeseen needs, and the ability to revise the plan as changes are identified. The primary goal of site management is to ensure adequate environmental protection and regulatory compliance. To this end, the SMP for the five Hawaiian ocean dredged material disposal sites will be reviewed periodically by EPA and the Corps. As needed, agency representatives will meet to review site operations, to discuss potential problems at each ODMDS, and to address any public comment regarding site management. Any changes must meet the approval of both agencies. Resolution of management and monitoring issues and public concerns will be a joint effort of both agencies.

II. SITE MANAGEMENT PLAN

A. General

As noted above, the purpose of the SMP is to avoid unacceptable adverse impacts to the environment associated with disposal of dredged material. Because all five Hawaii ODMDS's are in similar environments, a generic SMP has been developed for all five sites. This SMP addresses the six components required by WRDA 1992 (Sections B through G, below). Special management actions necessary above and beyond what is specified in this document may be undertaken on a case-by-case basis.

The geographic characteristics of the five ODMDS's which have received final designation from EPA in Hawaii are as follows (maps attached):

1) Hilo
a) Depth range from 330 to 340 meters
b) Location (center point): Latitude 19°48'30"N; Longitude 154°58'30"W
c) Circular with a radius of 920 meters.

2) Kahului
a) Depth range from 345 to 365 meters
b) Location (center point): Latitude 21°04'42"N; Longitude 156°29'00"W
c) Circular with a radius of 920 meters.

3) South Oahu
a) Depth range from 400 to 475 meters
b) Location (center point): Latitude 21°15'10"N; Longitude 157°56'50"W
c) Rectangular with dimensions of 2 kilometers wide and 2.6 kilometers long.

4) Nawiliwili
a) Depth range from 840 to 1,120 meters
b) Location (center point): Latitude 21°55'00"N; Longitude 159°17'00"W
c) Circular with a radius of 920 meters

5) Port Allen
a) Depth range from 1,460 to 1,610 meters
b) Location (center point): Latitude 21°50'00"N; Longitude 159°35'00"W
c) Circular with a radius of 920 meters

B. Baseline Assessment

Baseline conditions at the five Hawaii ODMDS's were assessed during the site designation process. Details of baseline conditions are included in the site designation Environmental Impact Statement (EPA, 1980). The Hawaii ODMDS's are in relatively stable, deep water marine environments. This has been confirmed by recent intensive monitoring studies (including seafloor mapping of the dredged material deposits) undertaken in the vicinity of the South Oahu site. These studies indicate that the majority of dredged material remains where it is dumped and is not subject to significant remobilization and transport.

EPA Region IX and the Corps have determined that there is no need for additional confirmatory (seafloor mapping) surveys at the shallow ODMDS's located off Kahului and Hilo. This decision is based on the fact that only minimal volumes of dredged material are disposed at the two sites. The Hilo site has received only approximately 134,000 cubic yards of material since 1977 (two disposal events). About 99,000 cubic yards of material have been disposed at the Kahului site since 1973 (three disposal events). However, the Corps and EPA Region IX retain the authority to require additional surveys prior to disposal at either of these two shallow sites in the event that the proposed disposal volume at any one time is greater than 100,000 cubic yards.

The two deeper ODMDS's located off Port Allen and Nawiliwili are significantly different from the two shallow sites off Hilo and Kahului. First, they receive significantly greater volumes of dredged material than the two shallow sites. Second, because these sites are located in much deeper water than any of the other Hawaii ODMDS's, conclusions regarding the fate of dredged material generated by studies at the South Oahu site may not be completely applicable. Third, there are potential resource concerns existing at these deep sites that do not presently exist at the shallow sites. Consequently, EPA Region IX and the Corps are undertaking confirmatory baseline surveys (seafloor mapping of dredged material deposits) of the two Kauai ODMDS's.

No other management activities related to characterizing baseline conditions are necessary at this time. The need for additional information regarding baseline conditions will be reassessed during review and revision of the SMP.

C. Special Management Conditions or Practices

National Marine Fisheries Service, as well as other Federal, state and local resource agencies were consulted during preparation of the site designation EIS (EPA, 1980). At that

time, only two special management conditions or practices, both related to the timing of disposal, were determined applicable. The EIS recommended that disposal not occur during periods when the Federally-listed humpback whale frequents the waters surrounding the islands (November to April) and during fish spawning season (estimated, in 1980, to occur during summer months). Because of the infrequency of dredging and ocean disposal in Hawaii, these considerations are taken into account on a project-specific basis. No harassment or "takings" of whales or other marine mammals are known to have occurred. Similarly, no evidence exists that dredged material disposal has adversely impacted any fish spawning activities.

Regulatory management decisions intended to reduce or mitigate potential adverse environmental impacts may include (1) denial of ocean disposal for the proposed dredged sediments, (2) full denial of dredged material proposed for ocean disposal, and/or (3) restrictions on ocean disposal of the proposed material. EPA has the opportunity to approve, disapprove, or propose additional special conditions, for any ocean disposal proposed activity.

The following conditions will be included by the Corps in all Department of the Army (DA) permits for transportation of dredged material for the purpose of ocean disposal. Identical conditions will be imposed on the Corps for ocean disposal activities associated with civil works activities.

1. Transportation of dredged material to the ODMDS's shall be allowed only when weather and sea state conditions will not interfere with safe transportation and will not create risk of spillage, leak or other loss of dredged material in transit to the ODMDS. No disposal vessel trips shall be initiated when the National Weather Service or U.S. Coast Guard marine forecasts have predicted combined seas in excess of eighteen feet or have issued a gale warning for local waters during the time period necessary for the disposal vessel to complete dumping operations. If, during transit to the ODMDS, combined seas build to greater than eighteen feet, then the transport vessel captain must use his/her discretion to proceed to the disposal site or return to port.

2. No dredged material is permitted to leak or spill from the transport vessel during transit to the ODMDS. Transport vessels shall not be loaded above a level that could be expected to result in spillage in transit under anticipated sea state conditions.

3. The transport vessel must use a navigational system with a minimum accuracy and precision of 30 meters for disposal operations. If the positioning system fails, all disposal operations must cease until the navigational capabilities are restored.

4. When dredged material is discharged, the transport vessel must be within 300 meters of the center of the ODMDS (see Section II.A. 1-5).

5. The permittee must maintain daily records of dredging operations, transport schedules, volumes disposed, locations and times of disposal, weather reports, and a record of wind and sea observations at disposal start and end times. These records must be submitted to the Corps on a weekly basis during disposal operations.

designation, as identified under the Federal Endangered Species Act, nor may they destroy or adversely modify the critical habitat of such species.

7. The permittee must report any deviations from permit conditions to the Chief of Operations, Honolulu District Corps of Engineers, and the Chief of the EPA Region IX Monitoring and Assessment Office within 24 hours. This includes apparent violations of any standard and/or project-specific permit conditions. The Corps and EPA will determine if a violation has occurred and may recommend changes to operations. In the event of a violation, the permittee must take all necessary actions required to bring dredging and/or disposal operations into compliance before being permitted to make another trip to the ODMDS.

Evaluations and possible revisions to these conditions will occur as needed. Additional conditions may be added on a case-by-case basis during the permit review process.

D. Dredged Material Quantity and Quality

The Hawaii ODMDS's are large in comparison to the volume of dredged material disposed. Therefore, no capacity limitations have been established. However, on a project by project basis, alternatives to ocean disposal (including beneficial uses) will be considered to ensure that the minimum necessary volume of dredged material is disposed at any ODMDS.

The suitability of all dredged material proposed for ocean disposal is evaluated by the Corps and concurred with by EPA. The presence, nature, and bioavailability of contaminants in the material are evaluated in accordance with 40 CFR 227. National guidance on dredged material testing is provided in the EPA/USACE (1991) Evaluation of Dredged Material Proposed for Ocean Disposal Testing Manual (the Green Book). The Corps and EPA have also developed regional guidance for sediment testing, the Regional Implementation Manual (Corps/EPA, 1996) which should be used in concert with the Green Book. These guidance documents may be updated by EPA and the Corps as testing and/or evaluation protocols are updated.

Permit applicants (as well as the Corps in undertaking its civil works mission) proposing to dispose at an ODMDS must develop a sampling and testing plan determined by the Corps and EPA to be adequate to characterize the material to be dredged. Material will be judged suitable for ocean disposal only if, after consideration of any appropriate management restrictions, EPA and the Corps determine that it meets the environmental impact criteria at 40 CFR Subpart B. Please note that nothing contained within this SMP is intended to prevent applicants from invoking economic impact as a means for requesting a waiver of the criteria.

E. Monitoring Program

Monitoring of an ODMDS is intended to evaluate the potential impacts of ocean disposal of dredged material on resources or amenities of concern (Fredette et al., 1990). Any resources or amenities of concern should be identified during the ODMDS designation process (EPA/USACE, 1984; Pequegnat et al., 1990). For the Hawaii ODMDS's, the only such resources identified were Federally-listed humpback whales, possible fish spawning grounds and a potential deep sea shrimp fishery. There is no evidence that dredged material disposal at any of

the Hawaii ODMDS's has adversely affected known or potential resources. However, the Corps and EPA will continue to consider any new information that may become available in the future and will make site management actions as they deem necessary.

The Corps, EPA and the U.S. Geological Survey initiated an interagency survey/monitoring effort in the area of the South Oahu ODMDS in anticipation of and in support of the development of this SMP. This area was specifically chosen because it has experienced the greatest anthropogenic inputs (including, but not limited to, disposal of dredged material).

Side-scan sonar data, bottom photography, and visual descriptions of core samples indicate that most dredged material remains where it was originally disposed, and apparently little is resuspended and transported by bottom currents. Thus, dredged material deposited within the disposal site tends to stay within the site. The results of this interagency study clearly indicates that the impacts associated with dredged material disposal are more confined and that the disposal results in less widespread impacts than had originally been determined acceptable in the site designation EIS.

Based on the apparent lack of adverse impacts resulting from disposal at the most heavily used site (South Oahu), no additional monitoring is warranted at this time. Confirmatory baseline surveys at the other four Hawaii ODMDS will be conducted to confirm that similar conditions exist at the other sites. In addition, permittees will be monitored to ensure compliance with permit conditions 1 - 8 listed in Section II.C.

Should impacts to resources or amenities associated with dredged material disposal be identified in the future, monitoring appropriate to the site, disposal, and resource or amenity will be required or undertaken by EPA and the Corps. Any such intensive site monitoring will follow the step-wise procedure below (Fredette et al., 1990):

- Step 1: Identification of resource(s)/amenity(s) which may be affected by dredged material disposal

- Step 2: Development of threshold criteria for resource/amenity response(s) to specific environmental alteration(s) at the ODMDS and development of testable hypotheses based on unacceptable threshold criteria

- Step 3: Development of sampling design and methods to address threshold criteria

- Step 4: Remedial management actions for unacceptable alterations (i.e., exceedance of threshold criteria)

F. Long-term Anticipated Use

The five Hawaii ODMDS's are large; no unacceptable adverse impacts resulting from previous disposal are known to have occurred; relatively small volumes of material are disposed at infrequent intervals. Therefore, it is anticipated that use of the sites will continue indefinitely.

G. SMP Review Schedule

In accordance with WRDA 1992, this SMP will be reviewed and revised, if necessary, not less frequently than ten years after adoption and every ten years thereafter. Any substantive revisions to the SMP will be made by the Corps and EPA following appropriate opportunity for public comment.

Effective Date

This Site Management Plan shall become effective upon the date of the later of the signatures below.

7 Apr 97

RALPH H. GRAVES
Lieutenant Colonel, U.S. Army
District Engineer
Honolulu Engineer District
U.S. Army Corps of Engineers

19 Dec 96

ALEXIS STRAUSS
Acting Director, Water Division
Region IX
U.S. Environmental Protection Agency

III. REFERENCES

Dadey, K.A., Torresan, M. and Ota, A. 1996. An integrated, coordinated study of the effects of dredged material on the marine environment - Mamala Bay example. Water Quality '96, Proceedings of the 11th Seminar, 26 February - 1 March, Seattle, Washington.

Fredette, T.J., Nelson, D.A., Clausner, J.E., and Anders, F.J. 1990. Guidelines for physical and biological monitoring of aquatic dredged material disposal sites. Technical Report D-90-12.

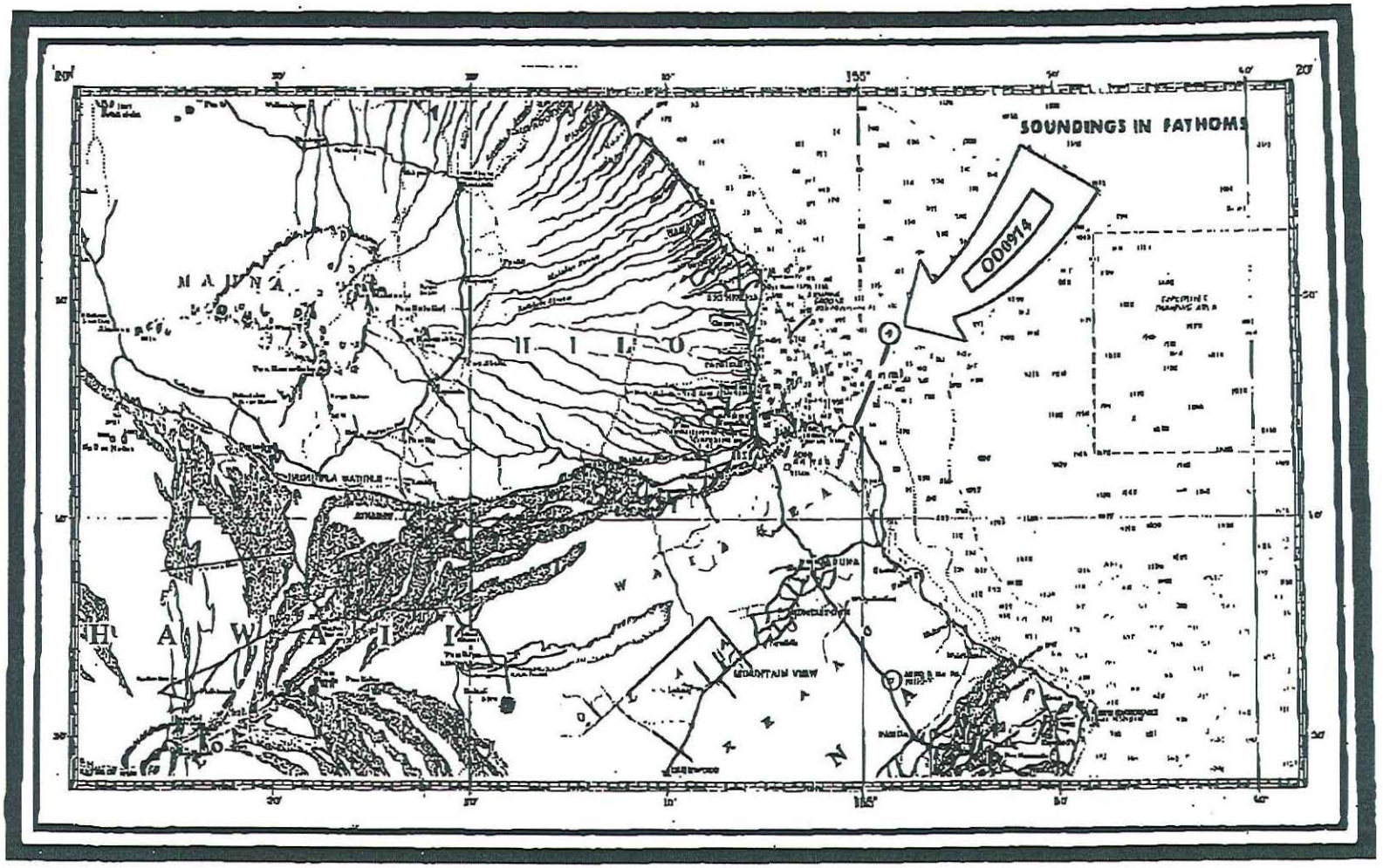
Pequegnat, W.E., Gallaway, B.J. and Wright, T.D. 1990. Revised procedural guide for designation surveys of ocean dredged material disposal sites. Technical Report D-90-8.

U.S. Environmental Protection Agency, 1980. Final environmental impact statement (EIS) for the Hawaii dredged material disposal sites designation.

U.S. Environmental Protection Agency and U.S. Army Corps of Engineers. 1991. Evaluation of dredged material proposed for ocean disposal, testing manual. EPA Report 503/8-91/001. Prepared by EPA Office of Marine and Estuarine Protection, Washington, DC.

U.S. Environmental Protection Agency and U.S. Army Corps of Engineers. 1994. Evaluation of dredged material proposed for discharge in waters of the U.S., testing manual (Draft). EPA Report 823-B-94-002. Prepared by EPA Office of Marine and Estuarine Protection, Washington, DC.

U.S. Army Corps of Engineers/Environmental Protection Agency, Region IX. 1996. Dredged material ocean disposal regional implementation testing manual.

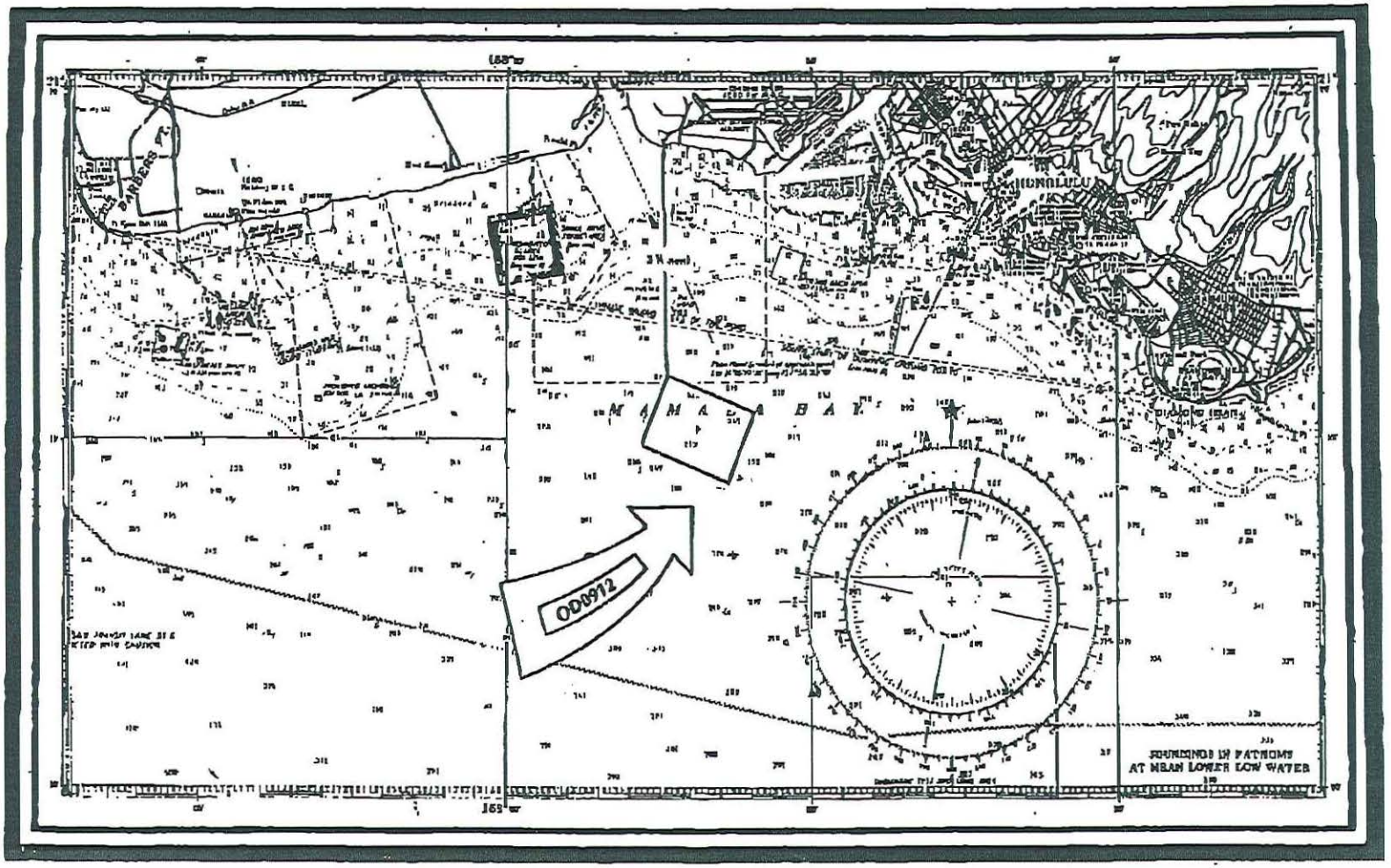


Boundary Coordinates ..... 1,000-Yard Radius
Center Coordinates ..... 19°48'30"N., 154°58'30"W.

Navigation Chart No. ..... NOS 19320
Area ..... 0.76 Square Nautical Mile
Local Navigational Aids ..... Loran C, Omega, RDF, Radar
Material Type ..... Dredged Material

OD0914
Hawaii/Hilo, HI

September 1980

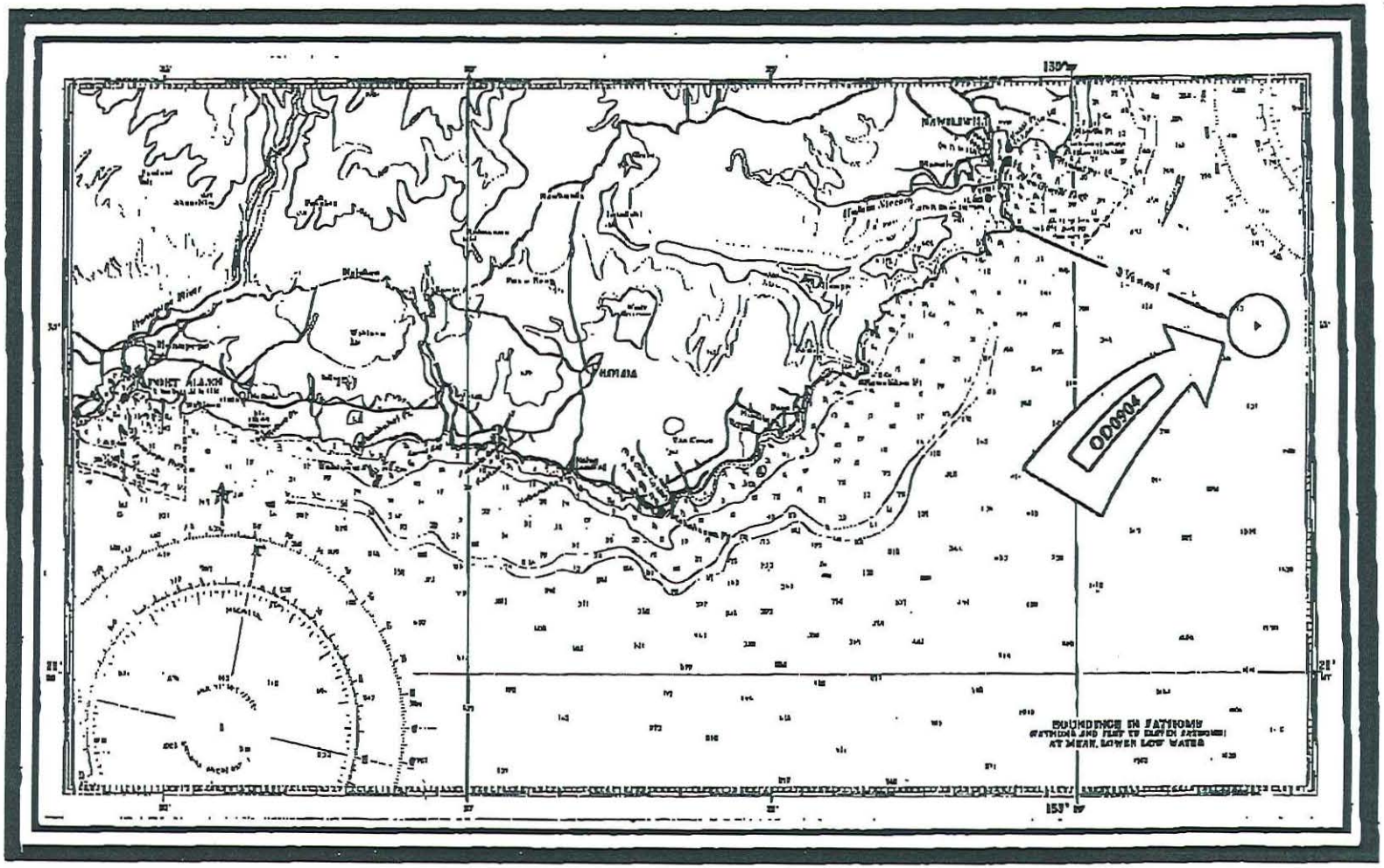


Boundary Coordinates ..... 21°15'58"N., 157°37'20"W.
21°13'21"N., 157°35'58"W.
21°14'55"N., 157°37'48"W.
21°14'24"N., 157°36'22"W.
Center Coordinates ..... 21°15'10"N., 157°36'30"W.

Navigation Chart No. ..... NOS 19357
Area ..... 1.51 Square Nautical Miles
Local Navigational Aids ..... Loran C, Omega, ADF, Radar
Material Type ..... Dredged Material

OD0912
South Oahu Site, HI

September 1980

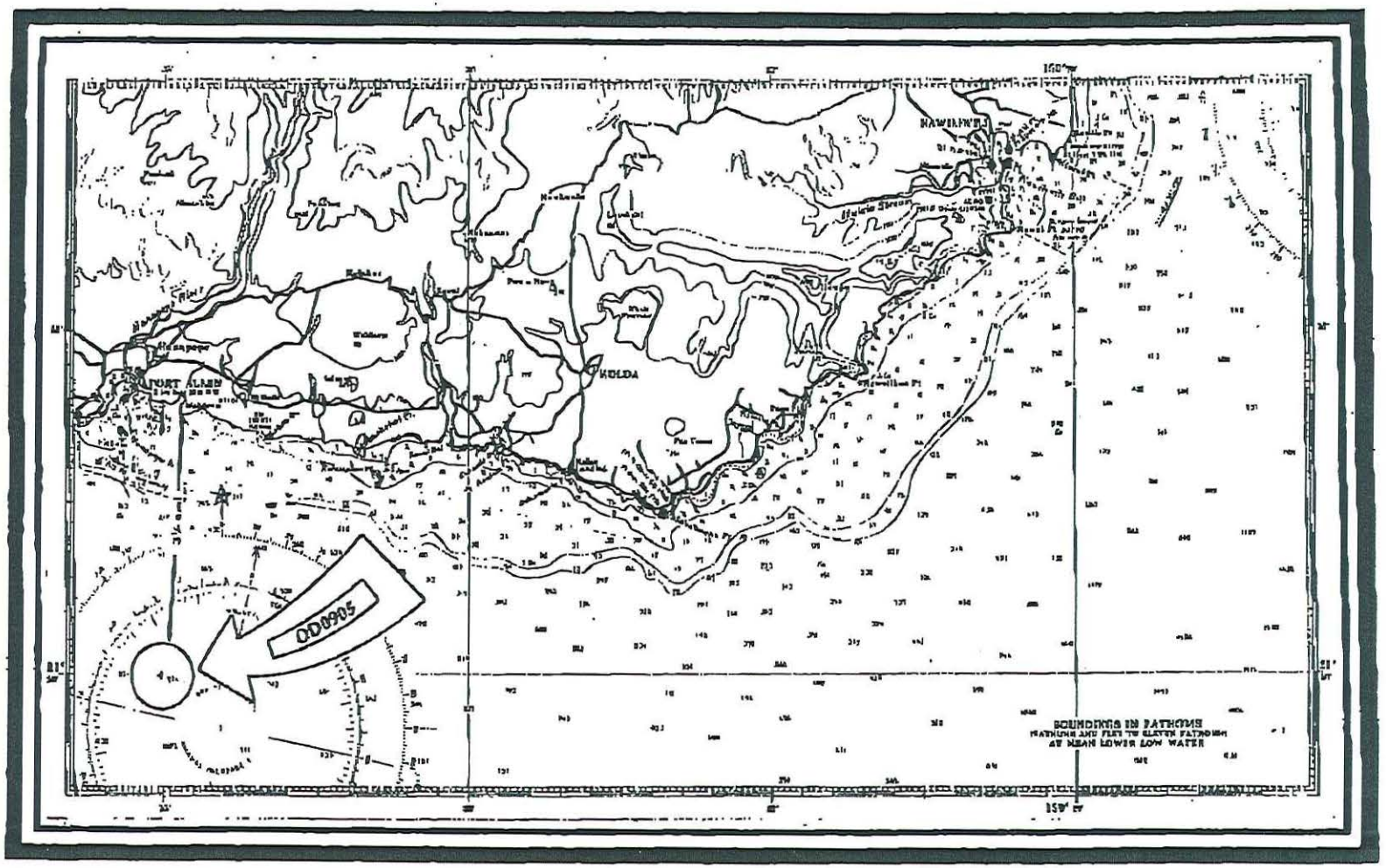


Boundary Coordinates ..... 1,000-Yard Radius
Center Coordinates ..... 21°53'00"N., 159°07'00"W.

Navigation Chart No. ..... NOS 19391
Area ..... 0.76 Square Nautical Mile
Local Navigational Aids ..... Loran C, Omega, RBN, Radar
Material Type ..... Dredged Material

OD0904
Kauai/Nawiliwili, HI

September 1980

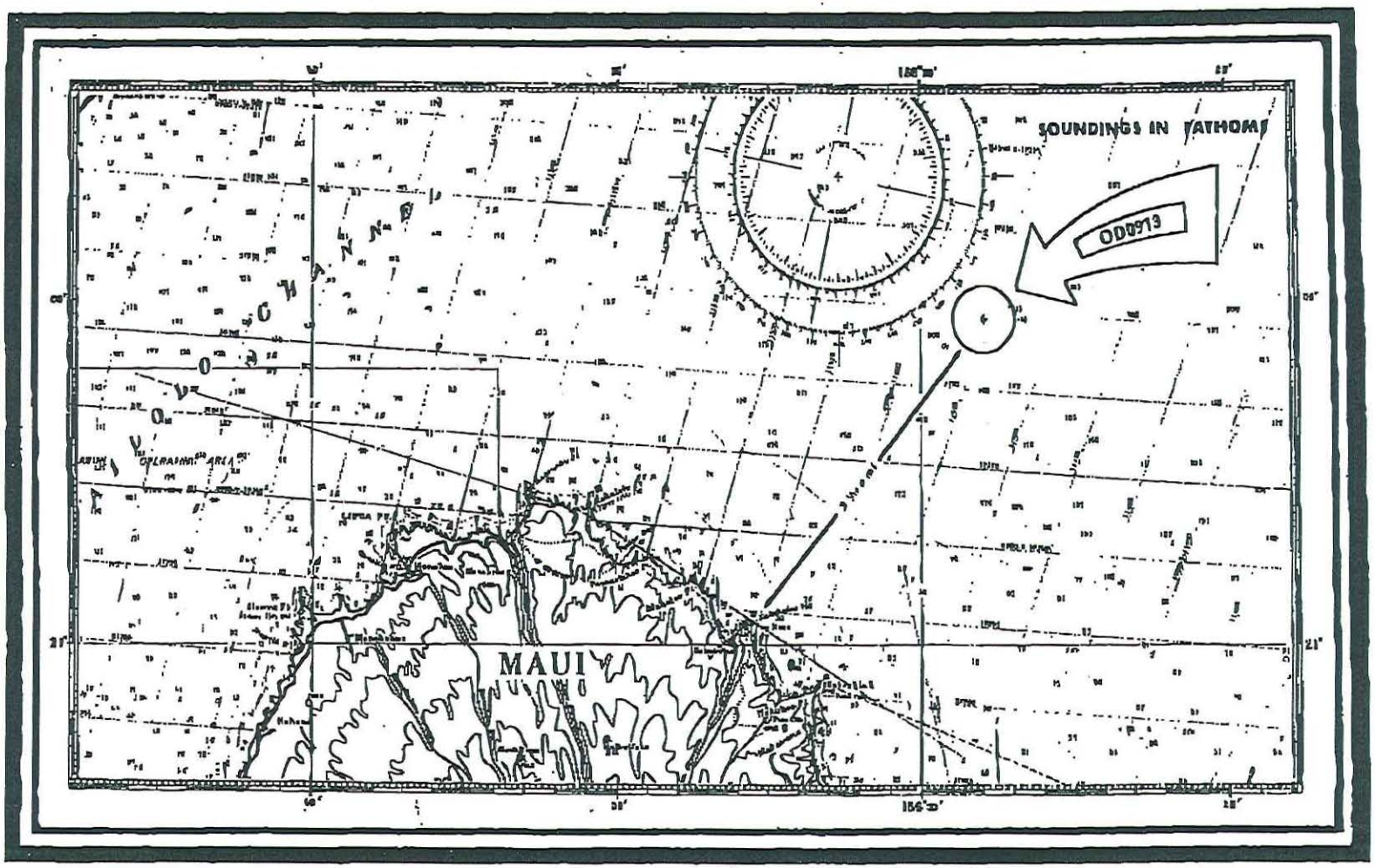


Boundary Coordinates ..... 1,000-Yard Radius
Center Coordinates ..... 21°50'00"N., 159°35'00"W.

Navigation Chart No. ..... NOS 19381
Area ..... 0.75 Square Nautical Mile
Local Navigational Aids ..... Loran C, Omega, RDF, Radar
Material Type ..... Dredged Material

OD0905
Kauai/Port Allen, HI

September 1980



Boundary Coordinates ..... 1,000-Yard Radius
Center Coordinates ..... 21°04'43"N., 156°29'06"W.

Navigation Chart No. ..... NOS 19347
Area ..... 0.76 Square Nautical Mile
Local Navigational Aids ..... Loran C, Omega, RDF, Radar
Material Type ..... Dredged Material

OD0913
Maui/Kahului, HI

September 1980