RULES and REGULATIONS

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 228

[FRL-3357-5]

Ocean Dumping; Designation of Site

Thursday, March 31, 1988

***10382** AGENCY: U.S. Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: EPA today designates the alternative dredged material disposal site located offshore of Virginia Beach, Virginia as an approved ocean dumping site for the dumping of dredged material. The Dam Neck Ocean Disposal Site (DNODS) is located approximately 3 nautical miles (nm) due east of the Dam Neck/Virginia Beach Section of the Virginia coast and is approximately 7 nm south of the mouth of the Chesapeake Bay. This action is necessary to provide an accepatable ocean dumping site for the current and future disposal of this material. This final site designation is for an indefinite period of time, but the site is subject to continued site management and monitoring to insure that unacceptable adverse environmental impacts do not occur.

DATE: This designation shall become effective on March 31, 1988.

ADDRESSES: The file supporting this proposed designation is available for public inspection at the following locations:

EPA Public Information Reference Unit (PIRU) Room 2904 (rear), 401 M Street, SW., Washington, DC

EPA Region III, 841 Chestnut Bldg., Philadelphia, PA 19107.

FOR FURTHER INFORMATION CONTACT: William C. Muir, 215/597-2541.

SUPPLEMENTARY INFORMATION:

A. Background

Section 102(c) of the Marine Protection, Research, and Sanctuaries Act of 1972, as amended, 33 U.S.C. 1401 et seq. (“the Act”), gives the Administrator of EPA the authority to designate sites where ocean dumping may be permitted. On October 1, 1986, the Administrator delegated the authority to designate ocean dumping sites to the Regional Administrator of the Region in which the site is located. This proposed site designation is within Region III and is being made pursuant to that authority.

The EPA Ocean Dumping Regulations (40 CFR Chapter 1, Subchapter H, § 228.4) state that ocean dumping

sites will be designated by publication in Part 228. A list of “Approved Interim and Final Ocean Dumping Sites” was published on January 11, 1977 (42 FR 2461 et. seq.) and was last extended on August 19, 1985 (50 FR 33338). The list included this site which has been in use for approximately 20 years.

B. EIS Development

Section 102(c) of the National Environmental Policy Act of 1969, 42 U.S.C. 4321 et. seq. (“NEPA”) requires that Federal agencies prepare an Environmental Impact Statement (EIS) on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment. The object of NEPA is to build into the Agency decision-making process careful consideration of all environmental aspects of proposed actions. While NEPA does not apply to EPA activities of this type, EPA has voluntarily committed to prepare EIS's in connection with ocean dumping site designations such as this. [See 39 FR 16186 (May 7, 1974).]

The Corps of Engineers prepared a draft and final supplement to the Final Environmental Impact Statement (EIS) entitled “Final Supplement 1 to the Final Environmental Impact Statement and Appendix: Dam Neck Ocean Disposal Site and Site Evaluation Study, Norfolk Harbor and Channels, Virginia, Deepening and Disposal.”On April 3, 1981, the Final EIS for the Norfolk Harbor and Channels, Virginia, Deepening and Disposal was filed with EPA. A Draft Supplement to the Final EIS, which documents the use and proposed final designation of the expanded DNODS, was filed with EPA on December 14, 1984. The closing date for comments on the Draft EIS was January 28, 1985.

The Final Supplement was filed with EPA on June 7, 1985. A copy of these documents may be obtained from U.S. Army Engineer District, Norfolk, 803 Front Street, Norfolk, Virginia 23510-1096.

By letter of 19 February 1985, the State of North Carolina concurred with EPA's conclusion that this site designation, as proposed, would not affect coastal resources in North Carolina. The Virginia Council on the Environment was given opportunity to comment on the draft SFEIS and Site Designation Document. Since no comments were received, EPA assumed concurrence and consistency with Virginia's Coastal Zone Management plan.

The National Marine Fisheries Service (NMFS) has concurred with EPA's assessment that sea turtles are unlikely to be adversely affected by designation of the DNODS to receive materials meeting the ocean disposal criteria.

The action discussed in the FEIS is designation for continuing use of the ocean disposal site identified as DNODS for dredged material. The purpose of the designation is to provide an environmentally acceptable location for ocean disposal. The appropriateness for ocean disposal is determined on a case-by-case basis as part of the process of issuing permits for ocean disposal.

The Final Supplement to the EIS presented the information needed to evaluate the suitablility of ocean disposal areas for final designation and was based on a disposal site environmental study. The study and final designation process are being conducted in accordance with the Act, the Ocean Dumping Regulations, and other applicable Federal environmental legislation.

C. Site Designation

The Dam Neck Ocean Disposal Site is the primary disposal site for three Federal navigation channels; the Atlantic Ocean Channel, the Cape Henry Channel, and the Thimble Shoal Channel. These channels provide en-

trance to the ports of the Hampton Roads and Baltimore. Combined, these ports provide the largest export tonnage in the country. Maintenance of these ports for navigation is vital to the economy of the United States. Further, the channels provide entrance to the largest naval port in the world, the Norfolk Naval Shipyard, which is vital to national defense.

Boundary coordinates for the DNODS are as follows:

36° 51' 24.1" N., 75° 54' 41.4" W.;

36° 51' 24.1" N., 75° 53' 02.9" W.;

36° 50' 52.0" N., 75° 52' 49.0" W.;

36° 46' 27.4" N., 75° 51' 39.2" W.;

36° 46' 27.5" N., 75° 54' 19.0" W.;

36° 50' 05.0" N., 75° 54' 19.0" W.

On August 21, 1987, EPA proposed this final site designation in the Federal Register [52 FR 31636 (August 21, 1987)]. The preamble to this proposed rule presented the characteristics of the site in terms of the eleven specific factors identified in Section 228.5 of the Ocean Dumping Regulations which, taken together, constitute an assessment of the site's suitability as a repository for dredged material. That assessment concludes that this site is appropriate for final designation.

Three letters of comment were received on the proposed rule. Comments were received from the U.S. Army Corps of Engineers, the Hampton Roads Sanitation District, and the ***10383** National Marine Fisheries Service. The Corps of Engineers requested a slight modification of the boundary coordinates based upon their latest navigational survey. The boundary coordinates listed in this section are so modified. The National Marine Fisheries Service raised the issue of impacts to marine turtles which is addressed in Section “D”, “Regulatory Requirements”. The Hampton Roads Sanitation District presented concerns over sediment toxicity, monitoring, and the location of marker buoys designating the location of dumping. All three issues are addressed in Section “D”—“Regulatory Requirements”.

If at any time disposal operations at the site cause unacceptable adverse impacts, further use of the site will be restricted or terminated as per 40 CFR Part 228.7-10.

D. Regulatory Requirements

Five general criteria are used in the selection and approval of ocean disposal sites for continuing use. Sites are selected so as to minimize interference with other marine activities, to keep any temporary perturbations from the dumping from causing impacts outside the disposal site, and to permit effective monitoring to detect any adverse impacts at an early stage. Where feasible, locations off the Continental Shelf are preferred. If at any time disposal operations at a site cause unacceptable adverse impacts, the use of that site will be terminated as soon as suitable alternate disposal sites can be designated. The general criteria are given in § 228.5 of the EPA Ocean Dumping Regulations, and § 228.6 lists 11 specific factors used in evaluating a proposed disposal site to assure that the general criteria are met.

The proposed site conforms to the five general criteria. However, there are no existing historically used sites beyond the edge of the Continental Shelf in this area. EPA has determined, based on the information presented in the FS-EIS that a site off the Continental Shelf is not feasible and that no environmental benefit would be obtained by selecting such a site instead of that proposed in this action. Further, historical use at the existing site has not resulted in substantial adverse effects to living resources of the ocean or to other uses of the marine environment.

The characteristics of the proposed site are reviewed below in terms of the 11 specific criteria for site selection.

1. Geographical position, depth of water, bottom topography and distance from coast. [40 CFR 228.6(a)(2).]

The boundary coordinates of the site are given above. The landward boundary of the Dam Neck Site is about 3 nm from the coastline and parallel to Virginia Beach, Virginia. Water depths in the area are generally between 9.5 and 15 meters and an area of 8 square nm. A small portion of the site is characterized by a disposal impression which is the result of the COE depositing dredged material. With the exception of this impression, the bottom near the DNODS has no significant features. Topography is typical of the inner Continental Shelf, with a smooth bottom and a gradual seaward slope.

2. Location in relation to breeding, spawning, nursery, feeding, or passage areas of living resources in adult or juvenile phases. [40 CFR 228.6(a)(2).]

The DNODS is situated on the near shore Continental Shelf, surrounded by productive marine waters usually associated with shallow coastal areas. The dominant factor influencing the biological makeup of the study area is its position adjacent to the mouth of the Chesapeake Bay. The Bay “plume” contributes nutrients and detrital materials, resulting in enhanced primary production compared to areas farther from the Bay mouth.

Breeding, spawning, nursery, and passage activities of commercially important finfish and shellfish occur on a seasonal basis in the vicinity of the dump site. However, the most extensive breeding, spawning, and nursery activities occur either in offshore waters or in the adjacent Chesapeake Bay estuarine waters that is offshore or inshore of the dredged material disposal site. In addition, the total area of the disposal site represents only a small portion of the total breeding, spawning, and nursery areas along the mid-Atlantic coast for these species. The disposal site is within passage areas for anadromous adult fish and larval finfish and shellfish migrating from the ocean to the Chesapeake Bay. However, these passage areas are not confined or geographically limited to areas coinciding with the DNODS. The intensity of passage activities varies seasonally with peaks in spring and early fall for most important finfish and shellfish species.

The most important shellfish species to the lower Chesapeake Bay and to the DNODS is the blue crab Callinectes sapidus. Studies by EPA, the COE and others identified in the FS EIS showed that during larvae development a significant fraction of the blue crab reside in the Chesapeake Bay plume, only a fraction of which includes the DNODS. Therefore, the potential impacts would be very small, especially since the crab larvae are primarily in the surface waters.

The DNODS supports a productive benthic faunal population which is typical of the mid-Atlantic inner Continental Shelf. However, no commercial quantities of any shellfish were identified in the DNODS. A small conch fishery (Busycon sp. and Strombus sp.) occur inshore of the site and the surf clam (spisula solidissima) and sea scallop (Placopecten magillanicus) are found offshore of the site. The impact of dumping on breeding, spawning, nursery, and passage activities is therefore likely to be minimal for the reasons stated above. In addition,

due to the mobility of adult finfish, it is unlikely that dumping will have a significant impact on either anadromous or pelagic species. In general, increases in suspended sediment concentrations following dumping are localized and are not expected to cause adverse long-term impacts. Consequently, interference of suspended sediments on the respiratory structures of fish are minimal. Some entrainment of larval fish and crabs within the disposal plume may occur, causing a minor detrimental effect within the disposal site. However, the population will not be adversely affected.

Studies indicate the migration of thousands of the loggerhead and ridley turtles into the Chesapeake Bay. However, there is little evidence that a significant number of turtles would in fact traverse the dump site during the migratory April-June period. During EPA's surveys over a four-year period, no turtles were sighted nor were any recovered from extensive benthic trawls at the site. This may be due to the colder water, 8 to 10 °C at the dump/ site during the period of May through June as opposed to the near shore waters where temperatures reach 20 °C, the temperature at which the turtles begin to migrate. Further, in conjunction with EPA, the COE has developed a site management plan which segments the site, thereby, only a two-square mile area would be impacted at any time. In view of the above, any impacts to the sea turtles would be infrequent and localized and, therefore, not a significant threat especially given the mobility of the turtles and the short-term water column effects. The impact on benthic communities will be localized to an area which is only a small portion of the total bottom area over which the migrating turtles pass. The turtles, being opportunistic feeders, should have no difficulty in finding adequate adjacent food resources to sustain their winter migration. The jellyfish, which both the loggerhead and ridley forage on near the ***10384** Bay mouth, should in no way be adversely impacted by disposal at Dam Neck Disposal Site, 10 miles away.

3. Location in relation to beaches and other amenity areas. [40 CFR 228.6(a)(3)]

The DNODS is located offshore of Virginia Beach. The 3.3 nm of coastline between Rudee Inlet and 49th Street in Virginia Beach are highly developed ocean resort areas—the largest in Virginia. It includes an extensive tourist and resort trade. The dunes have been removed and developed. South of Rudee Inlet the shoreline is backed by sand dunes with residential development, a military installation and further south, a National Wildlife Refuge.

The DNODS is within 3 nm of the adjacent beach. Longshore, tidal, and storm generated currents may disperse the dredged materials dumped at the site. The center of the site is approximately 2 nm seaward of the active littoral drift zone with respect to the nearshore bottom profile. The mean annual current vectors for bottom circulation are toward shore along Virginia Beach. However, the vectors were of weak magnitude and the FS EIS predicted minimal material movement from the site by wave induced and tidal currents.

Sediment transport at the DNODS, while minimal, would become part of the littoral drift zone and incorporated into the natural beach process with minimal adverse environmental impacts. The majority of the sediments released would be expected to sink to the bottom and remain in place.

In addition, after 20 years of use, no apparent adverse impacts to beaches have been associated with the previous dredged material disposal at this site. Thus, use of the site should not adversely affect recreation, coastal development or other uses of the shoreline. Further, there are public amenities in the vicinity of the DNODS which are incompatible with continuing use of the disposal site.

4. Types and quantities of wastes proposed to be disposed of, and proposed methods of release, including methods of packing the waste, if any. (40 CFR 228.6(a)(4))

All dredged material dumped in ocean disposal sites must satisfy the criteria for ocean dumping permits specified in EPA's Ocean Dumping Regulations [40 CFR Part 227].

The types of dredged material to be dumped at DNODS and method of release will be typical of previous dredging operations in the lower Chesapeake Bay channels that involved ocean disposal since 1967. The dredged materials will consist of uncontaminated sediments removed from the existing Thimble Shoal and Cape Henry Channels and the planned Atlantic Ocean Channel.

Thimble Shoal Channel is approximately 12 nm long and is maintained 45 feet deep and 1,000 feet wide. The channel extends between deep water just to the east of Hampton Roads and deep water at the Chesapeake Bay mouth. West of the Chesapeake Bay Bridge Tunnel the channel sediments are clays and silts (50-75%), but fine to medium sands are present (75-90%), within the eastern end of the channel. The planned deepening to 55 feet would result in approximately 23.5 million cubic yards for disposal with maintenance expected to average about 900,000 cubic yards every 5 years. The project is projected to be phased with approximately 3.6 million cubic yards to be disposed from the outboard Thimble Shoal Channel to 50 feet for 1987 and 1988.

Cape Henry Channel is about 2.5 nm long and is maintained to 42 feet deep and 1,000 feet wide. The channel is at the Chesapeake Bay mouth and is the start of the route north to Baltimore. The channel sediments are predominately fine sand (80-90%) with some silt, clay and shell. The planned deepening will require approximately 3.2 million cubic yards to be disposed with maintenance expected to average about 1,000,000 cubic yards every 4 years.

The Atlantic Ocean Channel is in the vicinity of the present southeast sea lanes. The planned deepening to 57 feet and 1,000 feet wide will involve dredging of about 10 million cubic yards of fine sand (80-90%) with silt, some clay, and some gravel. Maintenance dredging is predicted to average 1,000,000 cubic yards to material every 5 years.

The dredging and release of dredged material will be removed from the channels by self-propelled trailing suction hopper dredges and transported to the DNODS by these same seagoing vessels. The materials will be released at the site by bottom dumping. Split hopper dredges accomplish this by opening the hull.

The dredged material from the Hampton Roads is a finer grained material which often contains contaminants. As a result, all inner harbor dredge disposal will occur in the Craney Island contained disposal area.

Chemical and biochemical studies conducted on the channels proposed for ocean disposal at DNODS were shown to meet EPA criteria. Further, suspended solid phase bioassays conducted on sediments from the Thimble Shoals and Cape Henry Channels indicated that sediments exhibited low levels of acute toxicity for the grass shrimp, Palaemonetes pugio and the blue mussel, Mytilus edulis. In all cases, the mortalities of test organisms exposed to the various elutriate concentrations was not significantly different from that exhibited by the controls. The solid phase bioassay experiments also indicated a low degree of toxicity for sediments from Thimble Shoals and Cape Henry Channels. Osmoregulation studies on suspended solid phase bioassays indicated that materials did not produce significant sublethal effects. Elutriates of sediments did not affect the ability of P. pugio to hyperregulate at low salinities or hyporegulate at high salinities.

5. Feasibility of surveillance and monitoring. (40 CFR 228.6(a)(5))

The Dam Neck Site does not currently have surveillance by the U.S. Coast Guard. Instead, the COE employs

qualified personnel for contractor surveillance on the dredge. To assist in assurance that all disposal takes place in the proper location, the U.S. Coast Guard has placed two special buoys to mark the location of actual discharge within the dump site. The Coast Guard will monitor these buoys periodically.

The Corps of Engineers conducts bathymetric survey monitoring of the channels and dumpsite. Surveys are conducted on a minimum annual basis and more frequently as needed during the channel construction phase, pre- and post-dump surveys for each major segment of the project. Also included in the monitoring of transport, the EPA with the assistance of the Corps has placed sediment traps around the site to assure no significant transport toward the beach. Traps will be monitored semi-annually.

EPA has a continuing monitoring program at the site for annual assessment of benthic communities, chemical characterization and biological changes near the site. This program will continue through the construction phase of the project. In addition, in conjunction with the National Marine Fisheries Service, EPA will conduct a two-year study to assess the actual sea turtle migration through the site during the spring migration.

Water quality monitoring will continue by both the EPA and Corps to assure no changes in water quality due to ocean disposal during the critical summer periods.

Bioassays and bioaccumulation analyses and appropriate monitoring of the site sediments and dredged materials will be determined on a case-by-case basis by EPA and the Corps as necessary. Should evidence of ***10385** significant adverse environmental effects occur, EPA will take appropriate steps as provided in 40 CFR Part 228.

Last, EPA and the Corps of Engineers are entering into a Memorandum of Understanding for a joint site management and monitoring plan. Anyone interested or wishing to comment on the monitoring program can request copies from EPA.

6. Dispersal, horizontal transport and vertical mixing characteristics of the area, including prevailing current direction and velocity, if any. (40 CFR 228.6(a)(6)).

The physical oceanographic characteristics of the DNODS are typical of the inner continental shelf circulation seaward of the littoral zone. The inner shelf circulation seaward of the 10 meter contour is generally aligned with the bathymetric contours, with a negligible onshore-offshore component. The dispersal, horizontal transport, and vertical mixing characteristics of the DNODS are influenced by a net southward oceanic circulation rather than the nearshore littoral forces.

Near surface currents in the vicinity of the site range from 5 to 9 cm/s during the summer, and 4 to 6 cm/s during the fall. Bottom currents during those periods averaged 0 to 2 cm/s during summer and between 1 to 3 cm/s during the fall. Bottom currents are oriented north-south at 3 to 12 cm/s during the presence of moderate wave action. The threshold for transport of medium grained sand is taken at 20 cm/s and it is therefore concluded that wave induced sediment movement is oscillatory and should produce no net translation of sediment. However, as noted in the previous section, monitoring will be conducted to assure no impacts to amenities due to sediment transport.

Immediate dispersal and horizontal transport of the dredged material are influenced primarily by the method of placement, type of dredged material, and depth of water at the disposal site. The material is expected to be released by bottom dumping hopper dredges at depths of 6 to 9 meters below the water surface and rapidly descend to the bottom at depths of about 10 to 15 meters. Noncohesive materials such as sand and shell would des-

cend as high density flow, whereas cohesive sediments would descend as a cohesive mass of material. The sediments that are proposed for disposal vary from cohesive to non-cohesive material. The length of the bottom impact zone depends on the speed of the dredge and time required to release the load and is typically less than 1,500 feet for a split hull dredge and less than 3,000 feet for a conventional bottom door dredge. Deposition of the dredged material typically occurs no more than 500 feet laterally from the path of the hopper dredge. Field studies show losses at the site as less than one percent.

Long-term disposal and horizontal transport of dredged material should not be significant at the DNODS due to currents which are insufficient to transport significant amounts of dredged materials. Numerous pre and post-dump bathymetric surveys indicate optimal retention at the site.

7. Existence and effects of current and previous discharges and dumping in the area (including cumulative effects). (40 CFR 228.6(a)(7))

The DNODS has been used for over 20 years with approximately 19 million cubic yards of dredged material being disposed at the site. Based upon studies by EPA, the COE and the Hampton Roads Sanitation District, there appears to be no significant difference in benthos, fisheries, water quality, and sediment quality between the disposal site and adjacent areas which have not been disposed on. Dredging records indicate that most of the materials dumped at the site came from Cape Henry and Thimble Shoal Channel. The lack of any statistically significant difference between the disposal site and adjacent areas tends to indicate that there have been little long-term adverse impacts associated with disposal.

The only detected long-term effects from previous dredged material disposed at the site were limited to physical effects. The materials dumped at the site have been varying mixtures of uncontaminated fine sand, silts, and clays. The immediate effects of disposing of these materials have been restricted to minor short-term increases in water column suspended solids, and the burial of limited bottom areas with a thin layer of dredged material.

Investigations by the U.S. Army Corps of Engineers Waterways Experiment Station have indicated the suspended solids levels typically return to ambient levels shortly after open water disposal operations are completed. Studies have also indicated that bottom areas buried by dredged material are typically repopulated within several months.

The cumulative effects of disposal at this DNODS are limited to bathymetric changes. Operational control of previous disposal and the relatively stable environment have resulted in a measurable buildup of dredged material deposits in the northern end of the DNODS. Studies by EPA have, however, indicated that during the 20-year period of dumping, there may have been some dumping outside the site as evidenced by REMOTS camera photographs. Except for these changes, there were no biological, or chemical effects from previous disposal at the site.

Motile finfish and shellfish generally are capable of escaping from released sediments. No existence of any significant adverse impacts were identified. No fish kills were identified to occur in the vicinity of the site during the 20-year period. No shellfish beds, existing or relic were found in the area. No evidence of any significant adverse impacts on macrofauna or microfauna abundance due to previous dredged material disposal was apparent during site surveys.

The results of bioassay and sediment quality at the Thimble Shoal Channel indicate a relatively uncontaminated sediment and it is unlikely that previous disposal either directly was toxic to marine organisms or contributed

significant amounts of contaminants to the ecosystem.

8. Interference with shipping, fishing, recreation, mineral extraction, desalination, fish and shellfish culture, areas of special scientific importance and other legitimate uses of the ocean. (40 CFR 228.6(a)(8)).

The mouth of the Chesapeake Bay and near shore waters are heavily utilized for shipping, fishing and recreational boating. However, the DNODS is located south and inshore of the shipping lanes and offshore of the primary near shore fishery and inshore of the major sport fishery.

Conch, blue crabs, and menhaden as well as croaker, spot and sea trout are caught in the area. Further, an extensive summer flounder fishery occurs inshore of the site. However, there are restrictions to use of the area as it is near a Navy firing range. While this would not restrict disposal, it does limit commercial trawling operations.

The prime recreational fishing areas are near the mouth of the bay and further off shore, 10 to 15 nm, according to published fishing records. Dredged material disposal will be fairly frequent over the next five years; however, it would not restrict any fishing activity around the site. Further, due to the mounding that will occur, the trawling would be difficult within the site.

Use of the DNODS should not affect the traffic into the Chesapeake Bay or along the coast. Deep draft shipping to and from the ports of Baltimore or Hampton Roads must comply with the Chesapeake Bay Traffic Separation Scheme. The DNODS is located south of these channels. The DNODS is inshore of the deep draft coastal shipping routes. Further, shallow draft commercial fishing and sport boats will not be ***10386** affected since their drafts are typically 15 feet or less.

All considerations for mineral extraction in Virginia waters are in the exploratory stages. The DNODS is not expected to interfere with these uses as it is well inshore of the proposed oil and natural gas drilling lease areas.

Presently there are no desalination plants within the study area. EPA is, however, currently investigating the use of reverse osmosis for desalination in the Norfolk area. The location for the pilot facility has not been chosen. It is doubtful that the intake would be in the ocean rather than the bay where salinities are much lower.

Concerning areas of special scientific importance, the area does not contain any unique physical or biological features. However, the area has been studied as part of the Hampton Roads Sanitation District ocean outfall located one mile from the site. Use of the site for disposal should not interfere with the operation of the ocean outfall. A separate monitoring program was established between the U.S. Corps of Engineers and the EPA to assure there are no synergistic effects of dredge material disposal and the ocean outfall.

There are no fish and shellfish mariculture activities in or around the site. Last, the only other known use of the area is by the U.S. Navy military firing range. Since the firing area encompasses the DNODS, the COE and its contractor coordinate with the Navy to schedule disposal operations. The Navy also conducts underwater explosive ordnance in the area which must also be coordinated with the disposal schedule.

9. The existing quality and ecology of the site as determined by available data or by trend assessment or baseline surveys. (40 CFR 228.6(a)(9)).

The existing water quality of the DNODS area has been classified by the State of Virginia as non-degraded, suitable for public water supplies, primary contact recreation, propagation of fish and other beneficial uses. The surface dissolved oxygen concentrations in the area are generally at or near saturation. However, background levels

of dissolved oxygen in the bottom waters of the area are periodically below 5 mg/1. Nitrogen and phosphorus levels are moderate, exhibiting mean concentrations of 0.3 mg N/1 and 0.06 mgP/1. During summer to early fall, a strong thermal-salinity density stratification during winter to spring with significant vertical mixing.

The water quality in the area of the site is primarily affected by discharges from the Hampton Roads Sanitation District which discharges effluent from secondary treatment and filtration facilities and by the DNODS which has been used for the past 20 years. The near coastal waters of the site are also affected by the outflow from Chesapeake Bay which constitutes over 50% of the freshwater inflow to the Continental Shelf of the Mid-Atlantic Bight.

The ecology of the DNODS is greatly influenced by its position adjacent to the mouth of the Chesapeake Bay. The outflow from the Bay enhances primary production by contributing nutrients and detrital material to the inner continental shelf region. Phytoplankton cell concentrations in the Bay plume are significantly higher than in shelf waters outside the plume. Seasonal changes in phytoplankton composition is related to the Bay plume changes in composition, quantity of flow, temperature, and salinity.

The meroplankton in the DNODS area is dominated by the blue crab, bay anchovy, and sand shrimp larvae. The blue crab megalope were found in the center of the area but the zoea were found in greatest numbers offshore and to the north of the site. The DNODS does not appear to represent a major larval transport route for any commercially significant species except for the blue crab. Commercial and sport fishes were found to use the area during migration but no important spawning occurs.

The benthos of the area supports a productive benthic faunal population which is typical of benthos of the mid-Atlantic inner continental shelf. Commercial benthos abundances were found to be low and only species of marginal commercial importance were collected with none in significant numbers. The non-commercial benthic macroinfaunal community was found to be a typical sandy substrate assemblage.

Dumping of dredged material over 20 years has not significantly affected water quality. Therefore, use of the site is not expected to have significant water quality or ecology impacts. The benthic community would have short-term changes due to increased sediment loading. However, due to natural recolonization of the benthos, these impacts are not expected to be significant.

10. Potentiality for the development or recruitment of nuisance species in the disposal site. (40 CFR 228.6(a)(10)).

Dredged material has been placed in the DNODS since the mid-1960's. Monitoring in this area has not detected the development or recruitment of nuisance species. Further, the sediments placed in the site and which will be disposed in the future, meets ocean disposal criteria as specified by the COE and EPA.

Benthic organisms in the disposal area are typical of benthic faunal populations of the inner continental shelf. The open ocean conditions at the DNODS including low bottom temperatures, high salinities, and coarse grained dredged materials with low organic content should not favor microbial activity or proliferation and are not expected to develop as nuisance species. In addition, annual monitoring for potential nuisance species will be conducted by EPA.

11. Existence at or in proximity to the site of any significant natural or cultural features of historical importance. (40 CFR 228.6(a)(11)).

The area extending from Assateague Island to Fisherman's Island and offshore for 10 nm is on the National Oceanographic and Atmospheric Administration's site evaluation list for consideration as a marine sanctuary. Most of Fisherman's Island, located on the north side of the Bay mouth, is a National Wildlife Refuge known for having a wide variety of birds which are particularly abundant during seasonal migratory periods. The Back Bay National Wildlife Refuge and False Cape State Park are located south of the study area. Neither of these areas would be affected by long-term disposal at the DNODS.

There are 17 known historic vessels that have been lost in the vicinity of the disposal area. Within the site boundaries of the DNODS there are no known wrecks, obstruction, or other significant natural or cultural features. The nearest known wreck is located about 1/4 nm east of the proposed eastern boundary and has been tentatively identified as a 500-ton vessel called Kingston Celonite which sank in June 1942. A second obstruction has been located about 3/4 nm north-northwest of the proposed northwest corner of the site and is listed as wreck, unknown. The disposal of dredged material at the DNODS is not likely to adversely disturb or otherwise impact marine archaeological resources.

E. Action

The designation of the Dam Neck Ocean Disposal Site as an EPA approved Ocean Dumping Site is being published as final rulemaking. Management of this site will be the responsibility of the Regional Administrator of EPA Region III.

It should be emphasized that, when the ocean dumping site is designated, such a site designation does not ***10387** constitute or imply EPA's approval of actual disposal of materials at sea. Before ocean dumping of dredged material at the site may commence, other than that already approved under Section 103 of the Marine Protection, Research, and Sanctuaries Act, the Corps of Engineers must evaluate a permit application according to EPA's ocean dumping criteria. EPA has the right to disapprove the actual dumping, if it determines that environmental concerns under the Act have not been met.

F. Regulatory Assessments

Under the Regulatory Flexibility Act, EPA is required to perform a Regulatory Flexibility Analysis for all rules which may have a significant impact on a substantial impact on a substantial number of small entities. EPA has determined that this action will not have a significant impact on small entities since the site designation will only have the effect of providing a disposal option for dredged material. Consequently, this rule does not necessitate preparation of a Regulatory Flexibility Analysis.

Under Executive Order 12291, EPA must judge whether a regulation is “major” and therefore subject to the requirements of a Regulatory Impact Analysis. This action will not result in an annual effect on the economy of $100 million or more or cause any of the other effects which would result in its being classified by the Executive Order as a “major” rule. Consequently, this rule does not necessitate preparation of a Regulatory Impact Analysis.

This Final Rule does not contain any information collection requirements subject to Office of Management and Budget review under the Paperwork Reduction Act of 1980, 44 U.S.C. 3501 et seq.

List of Subjects in 40 CFR Part 228

Water pollution control.

Dated: March 23, 1988.

James M. Seif,

Regional Administrator for Region III.

In consideration of the foregoing, Subchapter H of Chapter I of Title 40 is amended as set forth below.

PART 228—[AMENDED]1. The authority citation for Part 228 continues to read as follows:

Authority: 33 U.S.C. 1412 and 1418.

40 CFR § 228.12

2. Material Sites Listing in section 228.12 is proposed to be amended by removing the “Dam Neck” site from the Dredged paragraph (a)(3) and by adding paragraph (b)(55) to read as follows:

* * * * *

(b) * * *

(55) Dam Neck, Virginia, Dredged Material Disposal Site—Region III. Location: 36°51'24.1" N., 75°54'41.4" W.; 36°51''24.1" N., 75°53' 02.9" W.; 36°50'52.0" N., 75°52''49.0" W.; 36°46'27.4" N., 75°51' 39.2" W.; 36°46''27.5" N., 75°54'19.0" W.; 36°50'05.0" N., 75°54'' 19.0" W.;

Size: 8 square nautical miles.

Depth: Averages 11 meters.

Primary Use: Dredged material.

Period of Use: Continuing use.

Restriction: Disposal shall be limited to dredged material from the mouth of the Chesapeake Bay.

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53 FR 10382-01, 1988 WL 263900 (F.R.)
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