RULES and REGULATIONS

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 228

[FRL-3266-8]

Designation of Site for Ocean Dumping; Atlantic Ocean Offshore Portland, ME

Thursday, September 24, 1987

***35914** AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: EPA is designating a site located offshore of Portland, Maine for the disposal of dredged material. This action is necessary to provide an acceptable ocean dumping site for the current and future disposal of dredged material. This final site designation is for an indefinite period of time but is subject to continued monitoring in order to insure that unacceptable adverse environmental impacts do not occur.

DATE: This designation shall become effective October 26, 1987.

ADDRESSES: U.S. Environmental Protection Agency—Region 1, JFK Federal Building—WQE-1900, Boston, MA 02203.

The file supporting this designation and the letters of comment are available for public inspection at the above location.

FOR FURTHER INFORMATION CONTACT:Kymberlee Keckler, (617) 565-4432.

SUPPLEMENTARY INFORMATION:

A. Background

Section 102(c) of the Marine Protection, Research, and Sanctuaries Act of 1972, as amended, 33 U.S.C. 140 et seq. (“the Act”), gives the Administrator of EPA the authority to designate sites where ocean dumping may be permitted. On December 23, 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 site designation is being made pursuant to that authority. The EPA Ocean Dumping Regulations (40 CFR Chapter I, Subchapter H, § 228.4) state that ocean dumping sites will be designated by publication in Part 228. This site designation is being published as final rulemaking in accordance with § 228.4(e) of the Ocean Dumping Regulations, which permits the designation of ocean disposal sites for dredged material.

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 Environmental Impact Statements (EISs) on proposals for major Federal actions significantly affecting the quality of the human environment. The object of NEPA is to incorporate careful consideration of all environmental aspects of proposed actions into the decision-making process. While NEPA does not apply to EPA activities of this type, EPA has voluntarily committed to prepare EISs for ocean dumping site designations under the MPRSA [39 FR 16186 (May 7, 1974)]. The EPA has prepared a Final EIS entitled Environmental Impact Statement (EIS) for Portland, Maine Dredged Material Disposal Site Designation. On April 1, 1983 a notice of availability of the EIS for public review and comment was published in the Federal Register [48 FR 14037]. Anyone desiring a copy of the EIS may obtain one from the address given previously. The comment period closed on May 2, 1983. One comment was received on the Final EIS which favored giving final designation to the site. The action discussed in the EIS is destination for continuing use of an ocean disposal site 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 permit-issuing process for ocean disposal. The EIS discusses the need for the action and examines ocean disposal sites and alternatives to the proposed action. As explained in the EIS, land-based disposal alternatives were rejected based on the lack of information on possible construction of marshlands, increased costs, and the lack of available land area near the disposal activities. A more detailed analysis of land-based alternatives will be performed as part of any application for a permit to use the site.

Alternative ocean sites which include previously used nearshore sites, were rejected from consideration. Disposing of dredged material in those sites would not significantly ameliorate any adverse effects on the environment and might conflict with commercial fisheries. Alternative deepwater sites on the Continental Slope beyond the Gulf of Maine were rejected from consideration because the greater distance from shore (240 nautical miles) increases the potential for short dumping owing to possible emergencies during adverse weather conditions. Furthermore, greater water depth (over 200 meters) would result in the deposition of dredged materials over a larger area than projected for the site, and cost to transport the dredged material would be excessive.

***35915** The Wilkinson Basin, an alternative site located 21 nautical miles southeast of Portland Harbor in the Gulf of Maine, was also considered. It is not seaward of the true East Coast Continental Shelf. However, it does fulfill some of the same environmental conditions of deep water (i.e., low energy and low biomass). The Wilkinson Basin has not been used previously for dredged material disposal, and the potential adverse effects of dredged sediment on indigenous organisms and resources are presently unknown.

The EIS presents the information needed to evaluate the suitability of ocean disposal areas for final designation and is 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. This final rulemaking notice fills the same role as the Record of Decision required under regulations promulgated by the Council on Evironmental Quality for agencies subject to NEPA.

C. Site Designation

On July 23, 1987 EPA proposed designation of this site for the continuing disposal of dredged materials. The public comment period on this proposed action closed September 8, 1987. No significant comments was received.

This site is located approximately 6.8 miles offshore of Portland, Maine and occupies an area about one square

nautical mile. Water depths within the area average 50 meters. The coordinates of the site are as follows:

43° 33' 36"N, 70° 02' 42"W;

43° 33' 36"N, 70° 01' 18"W;

43° 34' 36"N, 70° 02' 42"W;

42° 34' 36"N, 70° 01' 18"W.

If at any time disposal operations at the site cause unacceptable adverse impacts, further use of the site will be restricted or terminated.

D. Regulatory Requirements

Five general criteria are used in the selection and approval of ocean disposal sites for continuing use. Site selection assures that interference with other marine activities is minimized, any temporary perturbations from the dumping causing impacts outside the disposal site are prevented, effective monitoring to detect any adverse impacts at an early stage is permitted. Where feasible, locations off the Continental Shelf are chosen. If at any time disposal operations at an interim 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 eleven specific factors used in evaluating a disposal site to assure that the general criteria are met. The site as discussed below under the eleven specific factors, is acceptable under the five general criteria. Based on the information presented in the Final EIS, EPA has determined 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 stated in this action. Historical use at the site has not resulted in substantial adverse effects to living resources of the ocean or to other uses of the marine environment. Although no records are on file with the Corps of Engineers, the site has probably been used since 1946 or 1947 for the ocean disposal of about one million cubic yards of dredged material. Additional dredging, with volumes up to an additional 200,000 cubic yards, is expected depending upon the requirements of the Portland Harbor channel system. The characteristics of the site are reviewed below in terms of the eleven factors.

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

The site's corner coordinates, size, and distance from shore are listed under Part C, Proposed Site Designation. Water depths at the site range from 39 to 64 meters, with an average of 50 meters. Bottom topography is characterized by rough, irregular rocky outcrops with topographic relief on the order of 20 meters. A fine-grained sand and silt-covered basin approximately 600 meters square at the center of the site has been used for the point disposal location for dredged material. Because of its depth (64 meters), the basin is not significantly affected by waves and currents and is a low-energy environment. Consequently, disposed dredged material is likely to remain in the immediate area.

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)].

Areas for breeding, spawning, nursery and/or passage of commercially and recreationally important finfish and shellfish species occur on a seasonal basis across the western shelf of the Gulf of Marine. Past disposal of dredged material at the site has not caused detectable, significant or irreversible adverse impacts on living re-

sources.

The major amenity areas in the vicinity of the site are the shallow inshore waters (less than 200 meters). Lobsters migrate into these shallow areas during the spawning season, from late spring to midsummer. It is unlikely that dredged material disposal at the site (averaging 50 meters in depth) will directly interfere with lobster spawning because bottom depths and current speed and direction should prevent the transport of dredged material from the site towards the shallower, inshore areas. Although some lobster larvae may be affected by disposal activities, this impact should not significantly affect the population because disposal will occur irregularly and affect a small area relative to the total spawning grounds.

Impacts of dredged material disposal on demersal fish at the site will probably be restricted to temporary changes in abundance, numbers of species, mean size, and food preferences. It is unlikely that disposal activities will interfere with commercially valuable fish because of their mobility. Two species of commercial fish that lay demersal eggs are not expected to be adversely affected since the substrate and offshore locale of the site are not preferred spwaning areas for these fish.

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

The site is 6.8 nautical miles from the nearest beach. Distance from shore, water depth, configuration of the basin, and net southwest transport will decrease the possibility of dredged material reaching beaches or other amenity areas. Studies reported in the EIS indicate that most of the dredged material disposed at the site has been shown to remain within the disposal area.

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)].

Dredged material released at approved sites must conform to the EPA criteria in the ocean dumping regulations (40 CFR Part 227). Sediments presently being dredged from the Portland Harbor area are composed of fine sand, silt and clay, and are similar in grain size to natural sediments in the central basin of the disposal site. The dredged material is transported in bulk by a barge equipped with a bottom dump mechanism. Approximately one million cubic yards of material have been disposed of at the site to date. Future dredging volumes may contribute an additional amount of 200,000 cubic ***35916** yards depending upon the requirements of the Portland Harbor channel system.

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

The U.S. Army Corps of Engineers currently conducts on-board surveillance to confirm that disposal operations occur at the proper location. Monitoring by EPA and the Corps of Engineers will continue for as long as the site is active. In order to detect any transport of dredged material outside the site, the sediment will be monitored at the site and along transects of possible transport. If movement of material appears to impact known resources, analysis of the specific resource will occur. Benthic communities will be monitored to detect changes that extend beyond the site.

Periodic bioaccumulation analyses of benthic invertebrates and fishes collected from the disposal site and bioassays will indicate if the dredged material will adversely affect the marine biota. If evidence of significant adverse environmental effects is found, EPA will take appropriate steps to limit or terminate dumping at the site.

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)].

Current velocities range from 0 to 16 centimeters per second at the site. Currents are influenced by tides in a rotational manner, but net water movement is to the southwest. The Corps of Engineers reported that Portland Harbor dredged material (primarily fine sand, silt, and clay) is cohesive; therefore, rapid settling of the released sediments should occur. Minimal horizontal mixing or vertical stratification of disposal materials should occur, resulting in low suspended sediment concentrations.

Previous studies have demonstrated the relative immobility of dredged material at the site. A major portion of the material will remain within the site boundaries and most likely within the basin at the center of 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)].

Several industrial and municipal discharges are located in Portland Harbor. Although these discharges are 11 nautical miles from the site, they represent the closest point source discharges of pollutants. Because of the distance involved and dilution factors associated with mixing, discharges in Portland Harbor are not expected to have a measurable effect on the site.

Previous dredged material disposal at the site has not produced any significant adverse effects on the water quality. Changes in water quality as a result of disposal operations have been of short duration (minutes) and have been confined to relatively small areas. No major differences in finfish and/or shellfish species or numbers were found in recent surveys within and adjacent to the site.

In 1943, the War Department established the area of the site for the disposal of dredged material from Portland Harbor. Major dredging projects were authorized for Portland Harbor at that time, and it is presumed in the absence of actual records that the site was used for dredged material disposal between 1943 and 1946. No pre- or post-disposal data were collected in the vicinity of the site during the 1940's to 1960's. Recent disposal of dredged material has produced localized, minor and reversible impacts of mounding, smothering of the benthos, and possible temporary impacts on demersal fish.

Sediment collected by EPA from the disposal area during 1979 and 1980 contain higher levels of mercury, cadmium, lead, and saturated and aromatic hydrocarbons than do sediments at control stations near the site and on Georges Bank. These higher trace metal and hydrocarbon concentrations probably reflect contaminants present in dredged material disposed at the site. However, concentrations of trace metals from the site and control stations were generally lower than levels present in Portland Harbor sediments. In addition, bioassays indicate that discharges of dredged material would be ecologically acceptable according to ocean dumping criteria.

Mussels monitored at the site and at a control station on Bulwark Shoals indicated that tissue concentrations of cadmium, chromium, cobalt, copper, iron, mercury, nickel, and zinc were five to fifty-five percent higher at the site than at the control station. While high cadmium concentrations may be associated with naturally occurring upwelling, high zinc levels are probably associated with anthropogenic inputs. Trace metal concentrations in tissues of crustaceans and other benthic organisms collected at the site were well below FDA action levels. In addition, the bioaccumulation tests performed indicate a low potential for toxic constituents to accumulate in the human food chain.

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)].

Extensive shipping, fishing, recreational activities, and scientific investigations take place in the Gulf of Maine throughout the year. However, previous dredged material disposal operations are not known to have interfered with these activities. The Bureau of Land Management has not announced plans to lease any areas on the nearshore Continental Shelf adjacent to the site for oil and gas exploration. Mineral extraction, desalination, and aquaculture activities do not presently occur near the site.

9. The existing water quality and ecology of the site as determined by available data or by trend assessment or baseline surveys [140 CFR 228.6(a)(9)].

Investigations of dredged material disposal operations at the site have indicated that disposal has had no significant adverse effects on water quality (e.g., dissolved nutrients, trace metals, dissolved oxygen, or pH).

Diatoms and dinoflagellates are the major types of phytoplankton within the coastal areas of the Gulf of Maine, and their population dynamics are closely correlated with annual cycles of nutrients and light energy. Population cycles of zooplankton often are closely correlated with seasonal cycles of phytoplankton since many zooplankters use phytoplankton as food. At the site zooplankton begin to increase in numbers in late March and are dominated by copepods.

The infaunal communities within the site have a high degree of natural variability and an inconsistent pattern of species distribution. The epifaunal community associated with rocky surfaces is dominated by attached suspension feeders. Mobile organisms (crustaceans, asteroids, ophiroids, and demersal fish) are uncommon.

Site surveys have detected no significant differences in water quality or biological characteristics among areas within the site and adjacent areas. Therefore, dredged material disposal at the site does not appear to significantly alter water quality or ecology.

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

There are no known components of this dredged material or consequences of its disposal which would attract or result in recruitment or development of nuisance species to the site. Previous surveys at the site did not detect the development or recruitment of nuisance species, and the similarity of the dredged material with the existing ***35917** sediments suggests that the development or recruitment of nuisance species is unlikely.

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

The State of Maine Department of Archeology reported that no cultural or natural features of historical importance exist at or near the site.

E. Action

The EIS concludes that the site may appropriately be designated for use. The site is compatiable with the general criteria and specific factors used for site evaluation. The designation of the Portland, Maine site as an EPA approved Ocean Dumping Site is being published as final rulemaking. Management of this site has been delegated

to the Regional Administrator of EPA Region 1. However, it is recognized that the Corps New England Division actually manages the site through its Regulatory Program. It should be emphasized that, if an ocean dumping site is designated, such a site designation does not constitute or imply EPA's approval of actual disposal of materials at sea. Before ocean dumping of dredged material at the site may commence, 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 is determined 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 small entities. Since the site designation will only have the effect of providing a disposal option for dredged material, 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 requirement 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: September 16, 1987.

Michael R. Deland,

Regional Administrator for Region 1.

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. sections 1412 and 1418.

40 CFR § 228.12

2. Section 228.12 is amended by removing paragraph (a)(1)(ii)(K), the Portland, Maine, dredged material disposal site, and by adding paragraph (b)(47), an ocean dumping site for Region 1, to read as follows:

40 CFR § 228.12

§ 228.12 Delegation of management authority for interim ocean dumping sites.

* * * * *

(b) * * *

(47) Portland, Maine, Dredged Material Disposal Site—Region 1

Location:

43°33'36" N, 70°02'42" W;

43°33'36" N, 70°01'18" W;

43°34'36" N, 70°02'42" W;

43°34'36" N, 70°01'18" W;

Size: 1 square nautical mile.

Depth: 50 meters.

Primary Use: Dredged material.

Period of Use: Continuing Use.

Restrictions: Disposal shall be limited to dredged material.

[FR Doc. 87-22056 Filed 9-23-87; 8:45 am]

BILLING CODE 6560-50-M

52 FR 35914-02, 1987 WL 149124 (F.R.)
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