



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4

ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

MAR 24 2014

Mr. Jason Spinning, Chief
Coastal Section
Jacksonville District Corps of Engineers
P.O. Box 4970
Jacksonville, Florida 32232-0019

Dear Mr. Spinning:

This letter is in regard to your January 17, 2014, request for concurrence on the suitability for ocean disposal of maintenance dredged material from Fort Pierce Harbor, Florida. The final testing report was received by our office on February 5, 2014. The project considered for ocean disposal consists of a turning basin and a western basin extension and west port berths to 28 feet deep. Disposal of the material is proposed for the Fort Pierce Ocean Dredged Material Disposal Site (ODMDS) under an emergency declaration. Total dredging volumes are expected to be 200,000 to 300,000 cubic yards (*in situ*) of sand, silty sands, silts and clays. Two feet of paid allowable overdepth dredging is allowed throughout the project.

The Environmental Protection Agency, Region 4, has completed its review of your Section 103 Evaluation Report and supporting documents and has completed an independent evaluation of the dredged material. The EPA concurs with your determination that the proposed dumping at the Fort Pierce ODMDS will comply with the criteria set forth in 40 CFR Part 227. A brief discussion of the compliance of the material with the criteria is provided below.

1. Exclusion Criteria - 40 CFR § 227.13(b)

Dredged material from the south turning basin meets the criteria set forth in 40 CFR 227.13(b)(1) as this material is composed predominately of sand, gravel, rock, or any other naturally occurring bottom material with particle sizes larger than silt, and the material is found in areas of high current or wave energy such as streams with large bed loads or coastal areas with shifting bars and channels. Four samples were analyzed from this area and the material was classified as sand with less than 10 percent fines. Additionally, currents in this area frequently exceed 30cm/sec. This material is therefore environmentally acceptable for ocean disposal without further testing. The remaining material proposed to be disposed at the Fort Pierce ODMDS does not meet the criteria of paragraph (b) of this section and therefore, further testing was required as discussed below.

2. Water Column and Suspended Phase Determinations - 40 CFR § 227.6(c)(1&2) and § 227.27(a&b)

For these tests, no analytes exceeded the Water Quality Criteria (WQC) prior to any dilution. Therefore, it is not expected that the WQC will be exceeded after four hours at any time outside of the Fort Pierce ODMDS boundaries.

Bioassays on three appropriately sensitive marine organisms were conducted. Water quality modeling was performed to demonstrate that adequate dilution would be achieved to meet the Limiting Permissible Concentration of 0.2 percent after 4 hours and at all times outside the disposal sites. Modeled dilutions exceeded the required dilution of 504 to 1 in all cases. Accordingly, it is concluded that the liquid phase of the material is in compliance with 40 CFR 227.6(c)(1&2) and 227.27(a&b).

3. Benthic Determinations - 40 CFR § 227.6(c)(3) and 227.27(b)

Solid phase toxicity evaluation: Ten-day toxicity tests were conducted using worms (*Neanthes arenaceodentata*) and amphipods (*Ampelisca abdita*). These organisms are appropriately sensitive benthic marine organisms and are good predictors of adverse effects to benthic marine communities. For all dredging units, the amphipod toxicity result was within 20 percent of the reference/control and the worm toxicities were within 10 percent of the reference. These results show that the solid phase of the material is not likely to cause significant mortality and meets the solid phase toxicity criteria of §227.6(c)(3) and 227.27(b).

Solid phase bioaccumulation evaluation: Twenty-eight day bioaccumulation tests were conducted on all project sediments using two appropriately sensitive benthic marine organisms, *Nereis virens* and *Macoma nasuta*. Tissue concentrations were compared to Food and Drug Administration (FDA) Action Levels. None of the contaminants, for which there are FDA Action Levels, exceed such thresholds in the tissues of organisms exposed to project sediments. Concentrations of contaminants in tissues of organisms exposed to project sediments were then compared to concentrations in tissues of organisms exposed to a reference sediment. Lead, chromium, fluoranthene, Phenanthrene, pyrene and organic tins were found to be statistically higher in some samples as compared to the reference. When the bioaccumulation of contaminants in tissues exposed to dredged material exceeds that exposed to reference sediments, general risk-based evaluations must be conducted to evaluate compliance with 227.13(c)(3). The EPA conducted such an evaluation and determined that there is no potential for undesirable effects due to bioaccumulation as a result of the presence of individual chemicals or of the solid phase of the dredged material as a whole. Accordingly, it is concluded that the solid phase of the material proposed for disposal meets the ocean disposal criteria at 40 CFR §227.6(c)(3) and 227.27(b).

Pursuant to Marine Protection, Research and Sanctuaries Act Section 104(a)(4), ocean disposal permits must be conditioned to assure consistency with approved Site Management and Monitoring Plans (SMMP). The Fort Pierce ODMDS has been classified as inactive and is therefore covered by the Southeastern U.S. Inactive ODMDS SMMP. The ODMDS can therefore only be used in an emergency situation. Your request included an Emergency Declaration for Sandy Operation and Maintenance dredging of Fort Pierce Harbor, Florida indicating that Fort Pierce Harbor was adversely impacted by Hurricane Sandy and that significant economic hardship would result if dredging does not occur. This letter of concurrence is conditional upon implementation through contract conditions of the requirements of the SMMP and the enclosed list of conditions. Additionally, per the requirements of the SMMP, a site specific SMMP will need to be developed by Environmental Protection Agency and the Corps of Engineers within one year of the initiation of disposal activities. This determination of compliance is valid for a period of three years from the date of this letter.

If you have any questions regarding this determination or management of the Fort Pierce ODMDS, please contact Mr. Chris McArthur at (404) 562-9391.

Sincerely,

A handwritten signature in black ink that reads "Gail Mitchell, Jr." in a cursive style.

James D. Giattina

Director

Water Protection Division

Enclosure

**Fort Pierce Harbor Maintenance Dredging
Ocean Disposal Conditions**

1. A bathymetry survey of the ODMDS will be conducted within three months prior to initiation of disposal activities.
2. A bathymetry survey of the ODMDS will be conducted within thirty days of completion of disposal activities.
3. Disposal monitoring data will be collected and submitted to EPA on a weekly basis consistent with the requirements of the November 2013 Southeastern U.S. Inactive ODMDS SMMP.
4. A Post-disposal summary report will be submitted to EPA within 90 days of completion of disposal activities.
5. All disposal will be initiated at least 330 feet within the boundaries of the Fort Pierce ODMDS.
6. Material represented by samples E-FP13-1 and E-FP13-2 shall be disposed in that portion of the ODMDS south of $27^{\circ}27.33'N$ and east of $80^{\circ}12.00'W$.

