Ocean Dumping Report for Calendar Year 1983

DREDGED MATERIAL
The following Summary Report contains 90 International Maritime Organization (IMO) reports. These reports were prepared by numerous Corps of Engineers employees in 20 Corps districts and divisions which have coastal boundaries. There are 40 reports which represent the CY 1983 permitted dredged material ocean disposal activities conducted under authority of Section 103 of the Marine Protection Research and Sanctuaries Act of 1972. The remaining 50 reports represent the CY 1983 Corps of Engineers dredged material disposal activities authorized by the United States Congress.
UNCLASSIFIED TITLE
OCEAN DUMPING REPORT FOR CALENDAR YEAR 1983. DREDGED MATERIAL.

ABSTRACT
(U) THE FOLLOWING SUMMARY REPORT CONTAINS 80 INTERNATIONAL MARITIME ORGANIZATION (IMO) REPORTS. THESE REPORTS WERE PREPARED BY NUMEROUS CORPS OF ENGINEERS EMPLOYEES IN 20 CORPS DISTRICTS AND DIVISIONS WHICH HAVE COASTAL BOUNDARIES. THERE ARE 40 REPORTS WHICH REPRESENT THE CY 1983 PERMITTED DREDGED MATERIAL OCEAN DISPOSAL ACTIVITIES CONDUCTED UNDER AUTHORITY OF SECTION 103 OF THE MARINE PROTECTION RESEARCH AND SANCTUARIES ACT OF 1972. THE REMAINING 50 REPORTS REPRESENT THE CY 1983 CORPS OF ENGINEERS DREDGED MATERIAL DISPOSAL ACTIVITIES AS AUTHORIZED BY THE UNITED STATES CONGRESS.

POSTING TERMS ASSIGNED

COASTAL BOUNDARIES
USE BOUNDARIES
COASTAL REGIONS
DREDGED MATERIAL
USE DREDGED MATERIALS
OCEAN DUMPING
USE OCEAN WASTE DISPOSAL

CORPS OF ENGINEERS EMPLOYEES
USE ARMY CORPS OF ENGINEERS
PERSONNEL
MARINE PROTECTION RESEARCH
USE OCEANOGRAPHY
PROTECTION
UNITED STATES CONGRESS
USE CONGRESS
UNITED STATES

PHRASES NOT FOUND DURING LEXICAL DICTIONARY MATCH PROCESS

ACT OF 1972
1983 CORPS
40 REPORTS
90 INTERNATIONAL MARITIME ORGANIZATION
SECTION 103
20 CORPS DISTRICTS
50 REPORTS

UNCLASSIFIED
UNITED STATES OF AMERICA

OCEAN DUMPING

REPORT FOR

CALENDAR YEAR

1983

DREDGED MATERIAL

Prepared by the U. S. Army Corps of Engineers

Water Resources Support Center

Casey Building

Ft. Belvoir, VA 22060-5586

July 1984

Summary Report 84-SR-4
Copies may be purchased from:
National Technical Information Service
U. S. Department of Commerce
Springfield, Virginia 22151

This report is not to be construed as necessarily representing the views of the Federal Government nor of the U. S. Army Corps of Engineers.
Background

Under the authority of the International Maritime Organization (IMO), the United States and all other contracting nations to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter are required to submit an annual report for each ocean disposal operation. The U. S. Army Corps of Engineers has been tasked with preparing the dredged material portion of these IMO Ocean Dumping Reports.

Reports Numbering System

The following microfiche contain all 90 U. S. prepared CY 1983 IMO dredging Material Ocean Disposal Reports. They are numbered as follows:

(1) Reports P-1 through P-40 represent the 40 CY 1983 permitted dredged material ocean disposal activities conducted under authority of Section 103 of the Marine Protection Research and Sanctuaries Act of 1972.

(2) Reports C-1 through C-50 represent the 50 CY 1983 Corps of Engineers dredge material ocean disposal activities as authorized by the United States Congress.

Summary of Data

During CY 1983, the U. S. ocean disposed 44,265,978 cubic meters of dredged material of which: 2,990,609 cubic meters were disposed under Section 103 authority, and 41,275,369 cubic meters were disposed under Corps project authority.

Geographical distribution of the U. S. CY 1983 ocean disposal dredged material was as follows:

<table>
<thead>
<tr>
<th>Area</th>
<th>Cubic Meters</th>
<th>IMO Report References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlantic Ocean</td>
<td>9,579,127</td>
<td>P-1 through P-30, C-1 through C-21</td>
</tr>
<tr>
<td>Gulf of Mexico</td>
<td>28,667,442</td>
<td>C-22 through C-35</td>
</tr>
<tr>
<td>Pacific Ocean</td>
<td>6,019,409</td>
<td>P-31 through P-40, C-36 through C-50</td>
</tr>
</tbody>
</table>

Authorship

The enclosed 90 IMO Ocean Dumping Reports were prepared by numerous Corps of Engineers employees in 20 Corps districts and divisions which have coastal boundaries. For additional information concerning this report, the central point of contact in the United States Government is:

Water Resources Support Center (WRSC-D)
Corps of Engineers
Casey Building
Ft. Belvoir, VA 22060-5586
| C-31 | Calcasieu River and Pass, LA (Gulf Approach Channel) |
| C-32 | Gulf Intracoastal Water - Trib. Ch. to Port Mansfield, TX |
| C-33 | Freeport Harbor, TX |
| C-34 | Sabine-Neches Waterway, TX |
| C-35 | Brazos Island Harbor, TX |
| C-36 | San Francisco Harbor, Main Ship Channel |
| C-37 | Humboldt Harbor, Bar & Entrance Channel |
| C-38 | Humboldt Harbor, Bar & Entrance Channel |
| C-39 | Humboldt Harbor, Interior Channels |
| C-40 | Crescent City Harbor, Inner Channel |
| C-41 | Chetco River, OR |
| C-42 | Coos Bay, OR |
| C-43 | Coquille River, OR |
| C-44 | Columbia River at Mouth, OR & WA |
| C-45 | Rogue River, OR |
| C-46 | Siuslaw River, OR |
| C-47 | Umpqua River, OR |
| C-48 | Yaquina Bay & Hrb, OR |
| C-49 | Nome, AK |
| C-50 | Nawiliwili Harbor, Kauai, HI, Maint. |
1. Issuing Authority:
   Division ________New England____ District _______N/A_____

2. Permit start date/expire date:
   Permittee: _______Bath Iron Works__________________________
   Date issued: __7_July_1982__ Permit No. __82-228________
   Start Date: __7_July_1982__ Expiry Date: __31_Dec._1985__

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Portland Harbor, Maine

4. Specification of dredged material and process from which derived:
   a. Description: Dark-gray to black organic mud; very fine brownish gray sandy mud, shell & organic material; glacial-fluvial clay interbedded with silts & sands mostly gray with some brown coloration.
   b. Mode of dredging: Clamshell-Bucket
   c. Mode of transportation: Scow

5. Form in which dredged material is presented for disposal:
   Saturated cohesive & non-cohesive material

6. Total quantity (cubic meters): 91,400m$^3$

7. Expected frequency of dumping (for reporting period):
   a. Twice daily, seven days a week
   b. Actual start: __1_Jan._1983_
   c. Actual completion: __4_Feb._1983_
8. Chemical composition: Average: 9 stations at top, middle, b

<table>
<thead>
<tr>
<th>Metals (ppm)</th>
<th>Organics</th>
<th>Metals (ppm, dry wt.)</th>
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</thead>
<tbody>
<tr>
<td>As &lt; 0.05</td>
<td>PCB 5 (ppb)</td>
<td>As 2.71</td>
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<tr>
<td>V &lt; 0.01</td>
<td>Oil &amp; Grease 2%</td>
<td>Cd 1.82</td>
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<tr>
<td>Cd &lt; 0.006</td>
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<td>Cr 25.10</td>
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<tr>
<td>Cr &lt; 0.01</td>
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<td>Cu 132</td>
</tr>
<tr>
<td>Cu &lt; 0.01</td>
<td></td>
<td>Hg 0.66</td>
</tr>
<tr>
<td>Pb &lt; 0.05</td>
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<td>Ni 25.6</td>
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<tr>
<td>Hg &lt; 0.0002</td>
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<td>Pb 159</td>
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<tr>
<td>Ni &lt; 0.01</td>
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<td>Zn 321</td>
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<td>Zn &lt; 0.23</td>
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<td></td>
</tr>
</tbody>
</table>

9. Properties of dredged material:
   a. Solubility (% water)
   b. Density (gm/cc)
   c. pH
   d. % sand ______ % silt ______ % clay ______

10. Method of packaging:

11. Method of release: The scow releases the dredged material through hydraulically operated doors upon coming to a halt at the dumping point.

12. Procedure and site for tank washing: Normally, scows are washed down at either the dredge or dump site.
13. Approved dumping site: Portland Disposal Area

   a. Geographical position (latitude and longitude):
      \[43^\circ\ 34.1'\ N\]
      \[-70^\circ\ 02.0'\ W\]

   b. Depth of Water (meters): \(50\)m

   c. Distance from nearest coast (kilometers): \(14\)km

14. Additional information: No significant effect indicated by bioassay or bioaccumulation tests.

   This dumpsite is subject to monitoring studies under the disposal area monitoring system (DAMOS) program. The program is designed to identify and evaluate impacts resulting from the disposal of dredged materials at designated dump sites. The DAMOS program continually contributes to the development of new monitoring methodologies that reflect on the efficiency of field observations and logistics, as well as time.

   This program is designated to comply with sections 228.9 and 228.10 of the ocean dumping act relative to dump site monitoring and the evaluation of disposal.
1. Issuing Authority:
   Division __New England__ District __N/A__

2. Permit start date/expire date:
   Permittee: __Roger Hale__
   Date issued: __5_April_1982__ Permit No. __82-104__
   Start Date: __5_April_1982__ Expiry Date: __31_Dec._1982__

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Portland Harbor, Maine

4. Specification of dredged material and process from which derived:
   a. Description: Clay & gravel
   b. Mode of dredging: Clamshell
   c. Mode of transportation: Scow

5. Form in which dredged material is presented for disposal:
   Cohesive & non-cohesive saturated material

6. Total quantity (cubic meters): 574m³

7. Expected frequency of dumping (for reporting period):
   a. 1 load
   b. Actual start: __27_March_1983__
   c. Actual completion: __27_March_1983__
8. Chemical composition:

**Liquid Phase Test Results**

**Bulk Chemical Analysis**

<table>
<thead>
<tr>
<th>None</th>
<th>Metals (mg/kg)</th>
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<tbody>
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<td></td>
<td>East Side</td>
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<tr>
<td></td>
<td>Cadmium</td>
</tr>
<tr>
<td></td>
<td>Lead</td>
</tr>
<tr>
<td></td>
<td>Zinc</td>
</tr>
<tr>
<td></td>
<td>Copper</td>
</tr>
<tr>
<td></td>
<td>Mercury</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Organics</th>
<th>% Oil &amp; Grease</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.00137</td>
</tr>
</tbody>
</table>

9. Properties of dredged material: N/A

a. Solubility (% water)
b. Density (gm/cc)
c. pH
d. % sand _____  % silt _____  % clay _____

10. Method of packaging: See 4c

11. Method of release: Six bottom doors operated hydraulically, material is released intermittently while the scow is held at a complete hault.

12. Procedure and site for tank washing: The washing of scow is done either at dredge or disposal site.
13. Approved dumping site: Portland Disposal Area

a. **Geographical position (latitude and longitude):**
   - 43° 34' 6.8" N
   - 70° 01' 54.7" W

b. **Depth of Water (meters):** ___50m____

c. **Distance from nearest coast (kilometers):** ___14km____

14. Additional information: No significant effect indicated by bioassay or bioaccumulation tests.

This dumpsite is subject to monitoring studies under the disposal area monitoring system (DAMOS) program. The program is designed to identify and evaluate impacts resulting from the disposal of dredged materials at designated dump sites. The DAMOS program continually contributes to the development of new monitoring methodologies that reflect on the efficiency of field observations and logistics, as well as time.

This program was designated to comply with sections 228.9 and 228.10 of the Ocean Dumping Act relative to dump site monitoring and the evaluation of disposal impacts.
LONDON DUMPING CONVENTION


1. Issuing Authority:
   Division: New England District: N/A

2. Permit start date/expire date:
   Permittee: Merrill Industries, Inc.
   Date issued: 13 May 1981
   Permit No.: 81-157
   Start Date: 13 May 1981
   Expire Date: 31 Dec. 1984

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Portland Harbor, Maine

4. Specification of dredged material and process from which derived:
   a. Description: Primarily gray organic sandy silt. Some clay
   b. Mode of dredging: Clamshell
   c. Mode of transportation: Scow

5. Form in which dredged material is presented for disposal:
   Saturated cohesive & non-cohesive material

6. Total quantity (cubic meters): 30,000m³

7. Expected frequency of dumping (for reporting period):
   a. 2 loads per day
   b. Actual start: 27 June 1983
   c. Actual completion: 28 October 1983
3. Chemical composition:

**Bulk Chemical Analysis**

Metals (mg/kg)

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<tr>
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<th>Jan 1980</th>
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<td>Pb</td>
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<tr>
<td>Hg</td>
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<tr>
<td>V</td>
<td>22.2</td>
<td>72.5</td>
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</table>

Organics

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>% Oil &amp; Grease</td>
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<tr>
<td>% Vol. Solids</td>
<td>0.7</td>
<td>3.2</td>
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</table>

9. Properties of dredged material:

a. Solubility (% water): 24%

b. Density (gm/cc)

c. pH: 18% Fines

d. % sand ---------- % silt ---------- % clay -------

10. Method of packaging:

11. Method of release: Six bottom doors operated hydraulically. Material is released intermittently while scow is held at complete halt.

12. Procedure and site for tank washing: Normally, scows are washed down at either the disposal or dredge site.
Approved dumping site: Portland Disposal Site

a. Geographical position (latitude and longitude):  
   43° 34.1'N  
   70° 1.8'W

b. Depth of Water (meters): 50m

c. Distance from nearest coast (kilometers): 14km


This dumpsite is subject to monitoring studies under the disposal area monitoring system (DAMOS) program. The program is designated to identify and evaluate impacts resulting from the disposal of dredged materials at the designated dump sites. The DAMOS program continually contributes to the development of new monitoring methodologies that reflect on the efficiency of field observations and logistics, as well as time.

This program was designated to comply with sections 228.9 and 228.10 of the Ocean Dumping Act relative to dump site monitoring and the evaluation of disposal impacts.
LONDON DUMPING CONVENTION


1. Issuing Authority:
   Division: New England District: N/A

2. Permit start date/expire date:
   Permittee: Antonio DiMillo
   Date issued: 4 Aug. 1981 Permit No. 81-275
   Start Date: 4 Aug. 1981 Expire Date: 31 Dec. 1984

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Portland, Maine

4. Specification of dredged material and process from which derived:
   a. Description: Primarily organic silty sand, some clay
   b. Mode of dredging: Clamshell
   c. Mode of transportation: Scow

5. Form in which dredged material is presented for disposal: Saturated cohesive & non-cohesive material

6. Total quantity (cubic meters): 1900m³

7. Expected frequency of dumping (for reporting period):
   a. 1 load per day
   b. Actual start: 31 Mar 1983
   c. Actual completion: 13 May 1983
3. Chemical composition:

**Bulk Chemical Analysis (mg/kg)**

<table>
<thead>
<tr>
<th>Element</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Cd</td>
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<tr>
<td>Pb</td>
<td>615</td>
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<td>527</td>
</tr>
<tr>
<td>Cu</td>
<td>126</td>
</tr>
<tr>
<td>Hg</td>
<td>0.16</td>
</tr>
</tbody>
</table>

**Oil & Grease** 987

9. Properties of dredged material: N/A
   a. Solubility (% water)
   b. Density (gm/cc)
   c. pH
   d. % sand _______ % silt _______ % clay _______

10. Method of packaging:

11. Method of release: Six bottom doors operated hydraulically. Material is released intermittently while scows held at a complete halt.

12. Procedure and site for tank washing: Scows are washed either at the dredge or disposal site.
13. Approved dumping site: Portland Disposal Site

   a. Geographical position (latitude and longitude):

      \[43^\circ 34.1' N\]
      \[70^\circ 1.8' W\]

   b. Depth of Water (meters): \[50M\]

   c. Distance from nearest coast (kilometers): \[14km\]


   This dumpsite is subject to monitoring studies under the disposal area monitoring system (DAMOS) program. The program is designed to identify and evaluate impacts resulting from the disposal of dredged materials at designated dump sites. The DAMOS program continually contributes to the development of new monitoring methodologies that reflect on the efficiency of field observations and logistics, as well as time.

   This program was designated to comply with sections 228.9 and 228.10 of the Ocean Dumping Act relative to dump site monitoring and the evaluation of disposal impacts.
LONDON DUMPING CONVENTION


1. Issuing Authority:
   Division: New England District: N/A

2. Permit start date/expire date:
   Permittee: City of Portland
   Date issued: 8 March 1982
   Permit No.: 92-066
   Start Date: 8 March 1982
   Expire Date: 31 Dec. 1985

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Portland Harbor, Maine

4. Specification of dredged material and process from which derived:
   a. Description: Organic mud, silty clay & sand
   b. Mode of dredging: Clamshell and/or dragline equipment
   c. Mode of transportation: Scow

5. Form in which dredged material is presented for disposal:
   Saturated cohesive & non-cohesive material

6. Total quantity (cubic meters): 72,700 m³

7. Expected frequency of dumping (for reporting period):
   a. 1 load per day
   b. Actual start: 2 Jan. 1983
   c. Actual completion: 27 June 1983
8. Chemical composition:

**Elutriate Data (mg/l)**

<table>
<thead>
<tr>
<th>Metals</th>
<th>Site A</th>
<th>Site B</th>
</tr>
</thead>
<tbody>
<tr>
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<td>&lt;0.006</td>
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<td>&lt;0.02</td>
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<td>Pb</td>
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<td>0.05</td>
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<tr>
<td>Hg</td>
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<td>&lt;0.0002</td>
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<tr>
<td>Ni</td>
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<td>V</td>
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<td>&lt;0.01</td>
</tr>
</tbody>
</table>

**Organics**

| Oil & Grease | 6.86 | 15.07 |

**Bulk Chemical Test**

<table>
<thead>
<tr>
<th>Metals</th>
<th>Site A</th>
<th>Site B</th>
</tr>
</thead>
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<td>As</td>
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<td>63.5</td>
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<tr>
<td>V</td>
<td>51.8</td>
<td>54.2</td>
</tr>
</tbody>
</table>

**Organics**

| Oil & Grease | 0.24% | 0.22% |

All concentrations are average values in ppm.

9. Properties of dredged material: N/A

a. Solubility (% water)

b. Density (gm/cc)

c. pH

d. % sand _____ % silt _____ % clay _____

14
10. Method of packaging:

11. Method of release: Six bottom doors operated hydraulically. Material is released intermittently while scow is held at a complete halt.

12. Procedure and site for tank washing: Normally, scows are washed down at dredge or disposal site.

13. Approved dumping site: Portland Disposal Site

   a. Geographical position (latitude and longitude):

   43°34.1′N
   70°1.8′W

   b. Depth of Water (meters): 50m

   c. Distance from nearest coast (kilometers): 14km

14. Additional information: This project utilized results of Federal project data from Portland (piggyback).

   Additional testing information may be obtained by looking at Federal project in Portland, Maine.

   This dumpsite is subject to monitoring studies under the disposal area monitoring system (DAMOS) program. The program is designed to identify and evaluate impacts resulting from the disposal of dredged materials at designated dump sites. The DAMOS program continually contributes to the development of new monitoring methodologies that reflect on the efficiency of field observations and logistics, as well as time.

   This program was designated to comply with sections 228.9 and 228.10 of the Ocean Dumping Act relative to dump site monitoring and the evaluation of disposal impacts.
LONDON DUMPING CONVENTION

1. Issuing Authority:
   Division New England District N/A

2. Permit start date/expire date:
   Permittee: Maine DOT
   Date issued: 9 March 1983 Permit No. 83-042
   Start Date: 9 March 1983 Expire Date: 31 Dec. 1986

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Stonington, Maine

4. Specification of dredged material and process from which derived:
   a. Description: Silty sand
   b. Mode of dredging: Clamshell
   c. Mode of transportation: Scow

5. Form in which dredged material is presented for disposal:
   Saturated cohesive & non-cohesive material

6. Total quantity (cubic meters): 19,000m$^3$

7. Expected frequency of dumping (for reporting period):
   a. 1 load per day
   b. Actual start: 26 June 1983
   c. Actual completion: 9 Sept. 1983
8. Chemical composition:

Project utilized Federal project test data

9. Properties of dredged material: N/A

a. Solubility (% water)
b. Density (gm/cc)
c. pH
d. % sand _______ % silt _______ % clay _______

10. Method of packaging:

11. Method of release: Six bottom doors operated hydraulically. Material is released intermittently while scow is at a complete halt.

12. Procedure and site for tank washing: Hoppers are washed at an authorized disposal site.
13. Approved dumping site: St. Helena Island

   a. Geographical position (latitude and longitude):
      \[44^\circ 08.1' N\]
      \[-68^\circ 39.1' W\]

   b. Depth of Water (meters): 20m

   c. Distance from nearest coast (kilometers): 2km

14. Additional information:

   Liquid Phase Bioassay: Significant mortality one species; however, LPC not exceeded.

   Suspend Particulate Phase Bioassay: Significant mortality one species; however LPC not exceeded.

   Solid Phase Bioassay: No significant effect

   Bioaccumulation: Significant uptake of Cd one species

1. Issuing Authority:
   Division                  New England District                  N/A

2. Permit start date/expire date:
   Permittee:                Curtis Meanwell
   Date issued: 24 Jan. 1983
   Permit No. 97-020
   Start Date: 24 Jan. 1983
   Expire Date: 31 Dec. 1983

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Deer Island, Maine

4. Specification of dredged material and process from which derived:
   a. Description: Silts & sand
   b. Mode of dredging: Clamshell
   c. Mode of transportation: Scow

5. Form in which dredged material is presented for disposal:
   Saturated cohesive & non-cohesive material

6. Total quantity (cubic meters): 1721 m³

7. Expected frequency of dumping (for reporting period):
   a. 1 load per day
   b. Actual start: March 1983
   c. Actual completion: ________
8. Chemical composition:

**Bulk Chemical Test**

**Metals**

<table>
<thead>
<tr>
<th>Element</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arsenic</td>
<td>5.23</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.386</td>
</tr>
<tr>
<td>Chromium</td>
<td>24.1</td>
</tr>
<tr>
<td>Copper</td>
<td>8.65</td>
</tr>
<tr>
<td>Lead</td>
<td>17.1</td>
</tr>
<tr>
<td>Mercury (ug/g dry wt.)</td>
<td>&lt;0.5</td>
</tr>
<tr>
<td>Nickel</td>
<td>10.1</td>
</tr>
<tr>
<td>Vanadium</td>
<td>14.1</td>
</tr>
<tr>
<td>Zinc</td>
<td>36.2</td>
</tr>
</tbody>
</table>

**Organics**

<table>
<thead>
<tr>
<th>Component</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil &amp; Grease total</td>
<td>0.013 %</td>
</tr>
<tr>
<td>Total solid, wt.</td>
<td>75.3 %</td>
</tr>
<tr>
<td>Total volatile solids</td>
<td>2.2 %</td>
</tr>
</tbody>
</table>

9. Properties of dredged material:

   a. Solubility (% water)
   b. Density (gm/cc)
   c. pH
   d. % sand   % silt  % clay

10. Method of packaging:

11. Method of release: Six bottom doors open hydraulically. Material is released intermittently while scow is held at a complete halt.

12. Procedure and site for tank washing: The washing of scows is done either at dredge or disposal site.
13. Approved dumping site:

   a. Geographical position (latitude and longitude):
      - \(44^\circ\ 08.1'\ N\)
      - \(69^\circ\ 39.1'\ W\)

   b. Depth of Water (meters): \(10m\)

   c. Distance from nearest coast (kilometers): \(2km\)

14. Additional information: Exempt from biological testing due to clean nature of the material.
LONDON DUMPING CONVENTION


1. Issuing Authority:
   Division  _New England_  District  _N/A_

2. Permit start date/expire date:
   Permittee:  _Boston Edison Company_
   Date issued:  _27 Aug 1982_  Permit No.  _82-280_
   Start Date:  _27 Aug 1982_  Expire Date:  _31 Dec, 1985_

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Everett, Massachusetts

4. Specification of dredged material and process from which derived:
   a. Description: Primarily sand, some silt, clay & gravel
   b. Mode of dredging: Clamshell
   c. Mode of transportation: Scow

5. Form in which dredged material is presented for disposal:
   Saturated cohesive & non-cohesive material

6. Total quantity (cubic meters):  65,375m³

7. Expected frequency of dumping (for reporting period):
   a. 1 load per day
   b. Actual start:  _11 Feb 83_
   c. Actual completion:  _4 May '83_

22
8. Chemical composition:

**Bulk Chemical Analysis**

Metals (mg/kg)

<table>
<thead>
<tr>
<th></th>
<th>1976 PE-6 PE-6</th>
<th>1978 GEB-2 PE-6</th>
<th>1980 PE-6 Surface 0.0-0.25</th>
<th>1980 PE-6 1.35'-1.60'</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hg ppm</td>
<td>1.24</td>
<td>1.4</td>
<td>1.3</td>
<td>0.7</td>
</tr>
<tr>
<td>Cd</td>
<td>7.3</td>
<td>10.9</td>
<td>6.0</td>
<td>12.0</td>
</tr>
<tr>
<td>Pb</td>
<td>249</td>
<td>555.1</td>
<td>137</td>
<td>111</td>
</tr>
<tr>
<td>As</td>
<td>23</td>
<td>26.5</td>
<td>22</td>
<td>31</td>
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<tr>
<td>Cr</td>
<td>234</td>
<td>277.5</td>
<td>70</td>
<td>66</td>
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<tr>
<td>Cu</td>
<td>244</td>
<td>446.5</td>
<td>116</td>
<td>30</td>
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<tr>
<td>Ni</td>
<td>78</td>
<td>132.7</td>
<td>27</td>
<td>37</td>
</tr>
<tr>
<td>Zn</td>
<td>436</td>
<td>711.2</td>
<td>224</td>
<td>257</td>
</tr>
</tbody>
</table>

9. Properties of dredged material: N/A

a. Solubility (% water)

b. Density (gm/cc)

c. pH

d. % sand _______ % silt _______ % clay _______

10. Method of packaging:

11. Method of release: Six bottom doors operated hydraulically. Material is released intermittently while the scow is held at a complete halt.

12. Procedure and site for tank washing: Hopper is washed at an authorized disposal area.
13. Approved dumping site:
   a. **Geographical position (latitude and longitude):**
      \[ 42^\circ 25.7' N \quad 70^\circ 34.0' W \]
   b. **Depth of Water (meters):** \[ 77m \]
   c. **Distance from nearest coast (kilometers):** \[ 18.3km \]

14. Additional information: No significant effect as indicated by bioassay or bioaccumulation tests performed for Mystic River Federal project.

This dumpsite is subject to monitoring studies under the disposal area monitoring system (DAMOS) program. The program is designed to identify and evaluate impacts resulting from the disposal of dredged materials at designated dump sites. The DAMOS program continually contributes to the development of new monitoring methodologies that reflect on the efficiency of field observations and logistics, as well as time.

This program was designated to comply with sections 228.9 and 228.10 of the Ocean Dumping Act relative to dump site monitoring and the evaluation of disposal impacts.
LONDON DUMPING CONVENTION

Report of Ocean Dumping Permits - CY ____1983____

1. Issuing Authority:
   Division: New England District: N/A

2. Permit start date/expire date:
   Permittee: DEOE
   Date issued: 15 Dec. 1982 Permit No. 82-371
   Start Date: 15 Dec. 1982 Expire Date: 31 Dec. 1985

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Neponset River

4. Specification of dredged material and process from which derived:
   a. Description: Silty sand
   b. Mode of dredging: Clamshell
   c. Mode of transportation: Scow

5. Form in which dredged material is presented for disposal:
   Saturated cohesive & non-cohesive material

6. Total quantity (cubic meters): 24,350m³

7. Expected frequency of dumping (for reporting period):
   a. 1 trip per day
   b. Actual start: 10 Sept. 1983
   c. Actual completion: 9 Dec. 1983
B. Chemical composition:

<table>
<thead>
<tr>
<th></th>
<th>Station 1</th>
<th>Station 2</th>
<th>Station 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ELUTRIATE (mg/l)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Nutrients:</strong>*</td>
<td></td>
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<tr>
<td>TKN</td>
<td>2.35</td>
<td>2.48</td>
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<tr>
<td>COD</td>
<td>190.3</td>
<td>202.6</td>
<td>310.3</td>
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<tr>
<td><strong>Metals:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cd</td>
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<td>0.006</td>
<td>0.006</td>
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<tr>
<td>Cr</td>
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<td>0.02</td>
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<tr>
<td>Cu</td>
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<td>0.01</td>
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<tr>
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<tr>
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<tr>
<td>Pb</td>
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<td>0.05</td>
<td>0.05</td>
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<tr>
<td>V</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
</tr>
<tr>
<td>As</td>
<td>0.035</td>
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<td>Ni</td>
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<td>0.02</td>
<td>0.02</td>
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<tr>
<td><strong>Organics</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oil and Grease</td>
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<td>72.0</td>
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<tr>
<td>% Vol. Solids</td>
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<td>17.9</td>
<td>18.1</td>
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<tr>
<td>Chlorinated Hydro-</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>carbon Pesticides</td>
<td>5 ug/kg</td>
<td>5 ug/kg</td>
<td>5 ug/kg</td>
</tr>
<tr>
<td>pcb</td>
<td>3 ug/kg</td>
<td>3 ug/kg</td>
<td>3 ug/kg</td>
</tr>
<tr>
<td><strong>BULK SEDIMENT (mg/kg)</strong></td>
<td></td>
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<tr>
<td><strong>Metals:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<tr>
<td>Hg (ug/kg)</td>
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<td>Ni</td>
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<td><strong>Organics</strong></td>
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<tr>
<td>Oil and Grease</td>
<td>10,839.04</td>
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<td>200,553.0</td>
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<td>PCB's</td>
<td>3(ug/kg)</td>
<td>3 (ug/kg)</td>
<td>3 (ug/kg)</td>
</tr>
<tr>
<td>Chlorinated Hydro-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>carbon Pesticides</td>
<td>5 (ug/kg)</td>
<td>5 (ug/kg)</td>
<td>3 (ug/kg)</td>
</tr>
<tr>
<td><strong>Other</strong></td>
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<td></td>
<td></td>
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<tr>
<td>% Solids</td>
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<td>36.92</td>
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<tr>
<td>TKN</td>
<td>4502.7</td>
<td>3807.5</td>
<td>4502.7</td>
</tr>
</tbody>
</table>

26
9. Properties of dredged material:
   a. Solubility (% water)
   b. Density (gm/cc)
   c. pH
   d. % sand ___ % silt ___ % clay ___

10. Method of packaging:

11. Method of release: Six bottom doors open hydraulically. Material is released intermittently while scow is held at a complete halt.

12. Procedure and site for tank washing: Hopper is washed at an authorized disposal area.

13. Approved dumping site:
   a. Geographical position (latitude and longitude):
      -42°25.7'N
      -70°34.0'W
   b. Depth of Water (meters): 77m
   c. Distance from nearest coast (kilometers): 18.3km

14. Additional information: No significant effect indicated by bioassay or bioaccumulation tests.

This dumpsite is subject to monitoring studies under the disposal area monitoring system (DAMOS) program. The program is designed to identify and evaluate impacts resulting from the disposal of dredged materials at designated dump sites. The DAMOS program continually contributes to the development of new monitoring methodologies that reflect on the efficiency of field observations and logistics, as well as time.

This program was designated to comply with sections 228.9 and 228.10 of the Ocean Dumping Act relative to dump site monitoring and the evaluation of disposal impacts.
LONDON DUMPING CONVENTION


1. Issuing Authority:
   Division __New_England__ District __N/A___

2. Permit start date/expire date:
   Permittee: __Pittston_Petroleum_Inc.__
   Date issued: __29_Sep. 1982__ Permit No. __82-308__
   Start Date: __29_Sep. 1982__ Expire Date: __31_Dec. 1985__

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Mystic River, Chelsea, Mass.

4. Specification of dredged material and process from which derived:
   a. Description: Silty clayey material
   b. Mode of dredging: Clamshell
   c. Mode of transportation: Scow

5. Form in which dredged material is presented for disposal:
   Saturated cohesive & non-cohesive material

6. Total quantity (cubic meters): 10,557m³

7. Expected frequency of dumping (for reporting period):
   a. 1 load per day
   b. Actual start: __21_Sep. 1983__
   c. Actual completion: __31_Dec. 1985__

28
8. Chemical composition:

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cd</td>
<td>485</td>
<td>22.5</td>
<td>7.0</td>
<td>0.5</td>
<td>75</td>
</tr>
<tr>
<td>Cu</td>
<td>250</td>
<td>260</td>
<td>80</td>
<td>47</td>
<td></td>
</tr>
<tr>
<td>Pb</td>
<td>1,100</td>
<td>400</td>
<td>54</td>
<td>1,200</td>
<td>450</td>
</tr>
<tr>
<td>Hg</td>
<td>1960</td>
<td>3160</td>
<td>263</td>
<td>5760</td>
<td>1,140</td>
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<td>Ni</td>
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<td>35.5</td>
<td>16.5</td>
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<td>7.5</td>
<td>465</td>
<td>175</td>
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<tr>
<td>As</td>
<td>3.0</td>
<td>1.3</td>
<td>1.25</td>
<td>1.6</td>
<td>1.1</td>
</tr>
</tbody>
</table>

Organics:

- Oil and Grease: 10.382 %
- % Vol. Solids: 3.115
- PCB's: 880
- 542.3
- 31.44

Other:

- % Moisture: 12.74
- 4.88
- 7.31
- 3.14
- 2.09

- % Solid: 0.5
- 0.5
- 0.5
- 0.5

Kjeldahl: 4.620
- 4060
- 3920
- 4760
- 3920

C.O.D.: 165.700
- 68.900
- 92.500
- 25.500
- 34.000

9. Properties of dredged material:

a. Solubility (% water)

b. Density (gm/cc)

c. pH

d. % sand % silt % clay

10. Method of packaging:

11. Method of release: Six bottom doors open hydraulically. Material is released intermittently while scow is held at a complete halt.

12. Procedure and site for tank washing: The washing of scows is done either at dredge or disposal site.
13. Approved dumping site: Foul area

   a. Geographical position (latitude and longitude):
      - 42° 25.7' N
      - 70° 34.0' W

   b. Depth of water (meters): 77m

   c. Distance from nearest coast (kilometers): 18.3km

14. Additional information:

   Liquid Phase Bioassay: Significant mortality one species; however, LPC not exceeded.

   Suspended Particulate Phase Bioassay: Significant mortality one species; however, LPC not exceeded.

   Solid Phase Bioassay: No analysis needed (96.7% for treatment survival vs. 95.3% survival for reference)

   Bioaccumulation: Significant uptake of Petroleum Hydrocarbon two species.

This dumpsite is subject to monitoring studies under the disposal area monitoring system (DAMOS) program. The program is designed to identify and evaluate impacts resulting from the disposal of dredged materials at designated dump sites. The DAMOS program continually contributes to the development of new monitoring methodologies that reflect on the efficiency of field observations and logistics, as well as time.

This program was designated to comply with sections 228.9 and 228.10 of the Ocean Dumping Act relative to dump site monitoring and the evaluation of disposal impacts.
LONDON DUMPING CONVENTION

Report of Ocean Dumping Permits - CY 83

1. Issuing Authority:
Division North Atlantic District New York

2. Permit start date/expire date:
Permittee: Port Authority of New York & New Jersey
Date issued: 22 Apr 75 Permit No. 9232
Start Date: 22 Apr 75 Expiry Date 22 Apr 85

3. Country of origin of wastes and port of loading:
a. United States of America
b. Newark Bay, New Jersey

4. Specification of dredged material and process from which derived:
a. Description: silty clay
b. Mode of dredging: clamshell dredge; Great Lakes Dredge & Dock
c. Mode of transportation: towed barge; 4,000 cy capacity

5. Form in which dredged material is presented for disposal: slurry-noncohesive character.

6. Total quantity (cubic meters): 163,500 cy = 125,000 m$^3$

7. Expected frequency of dumping (for reporting period):
a. 2 trips/day
b. Actual start: 25 Jan 83 c. Actual completion: 23 Sep 83
8. Chemical composition:

<table>
<thead>
<tr>
<th></th>
<th>Site Water (S.D.)</th>
<th>Elutriate (S.D.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petrol. Hydro.</td>
<td>&lt; 200.0 (-)</td>
<td>&lt; 200.0 (-)</td>
</tr>
<tr>
<td>PCB</td>
<td>&lt; 0.01 (-)</td>
<td>&lt; 0.01 (-)</td>
</tr>
<tr>
<td>Hg</td>
<td>&lt; 0.2 (-)</td>
<td>&lt; 0.2 (-)</td>
</tr>
<tr>
<td>Cd</td>
<td>&lt; 0.1 (-)</td>
<td>&lt; 0.01 (-)</td>
</tr>
<tr>
<td>DDT</td>
<td>&lt; 0.05 (-)</td>
<td>&lt; 0.05 (-)</td>
</tr>
</tbody>
</table>

9. Properties of dredged material:
   a. Solubility (% water) 66.5
   b. Density (gm/cc) Not Available
   c. pH Not Available
   d. % sand 15.75 % silt 66.02 % clay 18.23

10. Method of packing: None


13. Approved dumping site:
   a. Geographical position (latitude and longitude): 40° 22'N; 73° 51'W
   b. Depth of water (meters): 20 m.
   c. Distance from nearest coast (kilometers): 9 Km.

Bioassays and Bioassessment Evaluations

a. Liquid Phase Bioassay (EC50 or LC50 per test species) @ 96 hrs.
   - Skeletonema costatum: >100%
   - Mysidopsis bahia: >100%
   - Menidia menidia: >100%

b. Suspended Particulate Phase Bioassay (EC50 or LC50 per test species) @ 96 hrs.
   - Skeletonema costatum: 43%
   - Mysidopsis bahia: >100%
   - Menidia menidia: >100%

c. Solid Phase Bioassay (% mortality difference with respect to control)
   - Palamometes sp.: -1.0 (Negative indicates greater mortality in Control)
   - Mercenaria mercenaria: 3.0
   - Nereis virens: 4.0

(* statistical significance, 95% confidence level)

10-day Bioaccumulation Test Data:

- Petrol. Hydro. were statistically significant in Palamometes sp. (0.14 ppm), Mercenaria sp. (0.25 ppm) and Nereis sp. (0.31 ppm).
- PCB's were statistically significant in Mercenaria sp. (0.05 ppm).
LONDON DUMPING CONVENTION

Report of Ocean Dumping Permits - CY 83

1. Issuing Authority:
   Division North Atlantic
   District New York

2. Permit start date/expire date:
   Permittee: Mobil Oil Corp.
   Date issued: 6 Dec 82
   Permit No. 12697
   Start Date: 6 Dec 82
   Expiry Date 6 Dec 85

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Arthur Kill, New York

4. Specification of dredged material and process from which derived:
   a. Description: silty clay
   b. Mode of dredging: clamshell dredge; Great Lakes Dredge & Dock
   c. Mode of transportation: towed barge; 4,000 cy capacity

5. Form in which dredged material is presented for disposal: slurry-noncohesive character.

6. Total quantity (cubic meters): 3,600 cy = 2,800 m³

7. Expected frequency of dumping (for reporting period):
   a. 2 trips/day
   b. Actual start: 1 Mar 83
   c. Actual completion: 1 Mar 83
8. Chemical composition: in ppb

<table>
<thead>
<tr>
<th></th>
<th>Site Water (S.D.)&lt;br&gt;50.0 (-)</th>
<th>Elutriate (S.D.)&lt;br&gt;&lt;50.0 (-)</th>
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</thead>
<tbody>
<tr>
<td>Petrol. Hydro.</td>
<td>0.1 (-)</td>
<td>&lt; 0.1 (-)</td>
</tr>
<tr>
<td>PCB</td>
<td>0.2 (-)</td>
<td>&lt; 0.2 (-)</td>
</tr>
<tr>
<td>Hg</td>
<td>0.1 (-)</td>
<td>&lt; 0.1 (-)</td>
</tr>
<tr>
<td>Cd</td>
<td>0.05 (-)</td>
<td>&lt; 0.05 (-)</td>
</tr>
<tr>
<td>DDT</td>
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<td></td>
</tr>
</tbody>
</table>

9. Properties of dredged material:
   a. Solubility (% water) 39.9
   b. Density (gm/cc) Not Available
   c. pH Not Available
   d. % sand 47.6 % silt 32.6 % clay 19.8

10. Method of packing: None


13. Approved dumping site:
   a. Geographical position (latitude and longitude): 40° 22'N; 73° 51'W
   b. Depth of water (meters): 20 m.
   c. Distance from nearest coast (kilometers): 9 Km.

Bioassays and Bioassessment Evaluations

a. **Liquid Phase Bioassay** (EC50 or LC50 for each test species)@ 96 hrs.
   
<table>
<thead>
<tr>
<th>Species</th>
<th>Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Skeletonema costatum</em></td>
<td>12.8%</td>
</tr>
<tr>
<td><em>Mysidopsis bahia</em></td>
<td>48.0%</td>
</tr>
<tr>
<td><em>Menidia menidia</em></td>
<td>&gt; 100.0%</td>
</tr>
</tbody>
</table>

b. **Suspended Particulate Phase Bioassay** (EC50 or LC50 per test species)@ 96 hrs.
   
<table>
<thead>
<tr>
<th>Species</th>
<th>Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Acartia tonsa</em></td>
<td>70.0%</td>
</tr>
<tr>
<td><em>Mysidopsis bahia</em></td>
<td>57.0%</td>
</tr>
<tr>
<td><em>Menidia menidia</em></td>
<td>55.0%</td>
</tr>
</tbody>
</table>

c. **Solid Phase Bioassay** (% mortality difference with respect to control)
   
<table>
<thead>
<tr>
<th>Species</th>
<th>Mortality</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Palamonetes sp.</em></td>
<td>2.70</td>
<td>Negative indicates greater mortality</td>
</tr>
<tr>
<td><em>Mercenaria mercenaria</em></td>
<td>1.00</td>
<td>mortality in control.</td>
</tr>
<tr>
<td><em>Nereis virens</em></td>
<td>-4.00</td>
<td>(*) statistical significance, 95%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>confidence level</td>
</tr>
</tbody>
</table>

10-day Bioaccumulation Test Data:

Petrol. Hydro. were statistically significant in *Mercenaria* sp. (0.33 ppm) and *Nereis* sp. (0.24 ppm).
1. Issuing Authority:
   Division North Atlantic
   District New York

2. Permit start date/expire date:
   Permittee: B. P. Oil Co.
   Date issued: 11 Dec 81
   Permit No. 12200
   Start Date: 11 Dec 81
   Expiry Date: 11 Dec 84

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Arthur Kill, New Jersey

4. Specification of dredged material and process from which derived:
   a. Description: silty clay
   b. Mode of dredging: clamshell dredge; Great Lakes Dredge & Dock
   c. Mode of transportation: towed barge; 4,000 cy capacity

5. Form in which dredged material is presented for disposal: slurry-noncohesive character.

6. Total quantity (cubic meters): 10,800 cy = 8,300 m³

7. Expected frequency of dumping (for reporting period):
   a. 1 trip/day
   b. Actual start: 24 Feb 83
   c. Actual completion: 1 Mar 83

<table>
<thead>
<tr>
<th></th>
<th>Site Water (S.D.)</th>
<th>Elutriate (S.D.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petro1. Hydro.</td>
<td>Not Available</td>
<td>&lt; 50.0 (-)</td>
</tr>
<tr>
<td>PCB</td>
<td>&lt; 0.1 (-)</td>
<td></td>
</tr>
<tr>
<td>Hg</td>
<td>&lt; 0.2 (-)</td>
<td></td>
</tr>
<tr>
<td>Cd</td>
<td>&lt; 0.1 (-)</td>
<td></td>
</tr>
<tr>
<td>DDT</td>
<td>&lt; 0.05 (-)</td>
<td></td>
</tr>
</tbody>
</table>

9. Properties of dredged material:
   a. Solubility (% water) 40.2
   b. Density (gm/cc)      Not Available
   c. pH                   Not Available
   d. % sand 46.7 % silt 33.7 % clay 40.2

10. Method of packing: None


13. Approved dumping site:
   a. Geographical position (latitude and longitude): 40° 22'N; 73° 51'W
   b. Depth of water (meters): 20 m.
   c. Distance from nearest coast (kilometers): 9 Km.

Bioassays and Bioassessment Evaluations

a. Liquid Phase Bioassay (EC50 or LC50 or each test species)@ 96 hrs.

<table>
<thead>
<tr>
<th>Species</th>
<th>Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skeletonema costatum</td>
<td>13.0%</td>
</tr>
<tr>
<td>Mysidopsis bahia</td>
<td>&gt; 100.0%</td>
</tr>
<tr>
<td>Menidia menidia</td>
<td>&gt; 100.0%</td>
</tr>
</tbody>
</table>

b. Suspended Particulate Phase Bioassay (EC50 or LC 50 per test species)@ 96 hrs.

<table>
<thead>
<tr>
<th>Species</th>
<th>Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acartia tonsa</td>
<td>28.0%</td>
</tr>
<tr>
<td>Mysidopsis bahia</td>
<td>&gt; 100.0</td>
</tr>
<tr>
<td>Menidia menidia</td>
<td>&gt; 100.0%</td>
</tr>
</tbody>
</table>

c. Solid Phase Bioassay (% mortality difference with respect to control)

<table>
<thead>
<tr>
<th>Species</th>
<th>Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palamonetes sp.</td>
<td>0</td>
</tr>
<tr>
<td>Mercenaria mercenaria</td>
<td>1.0</td>
</tr>
<tr>
<td>Nereis virens</td>
<td>-2.0</td>
</tr>
</tbody>
</table>

Positive indicates greater mortality in treatment.
Negative indicates greater mortality in control.

(*) statistical significance, 95% confidence level.

10-day Bioaccumulation Test Data:

Petrol. Hydro. were statistically significant in *Nereis* sp. (1.275 ppm).
LONDON DUMPING CONVENTION

Report of Ocean Dumping Permits - CY 83

1. Issuing Authority:
   Division North Atlantic  District New York

2. Permit start date/expire date:
   Permittee: Port Authority of New York & New Jersey
   Date issued: 13 Aug 75  Permit No. 9372
   Start Date: 13 Aug 75  Expiry Date: 13 Aug 85

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Hudson River, New York

4. Specification of dredged material and process from which derived:
   a. Description: silty clay
   b. Mode of dredging: clamshell dredge; Great Lakes Dredge & Dock
   c. Mode of transportation: towed barge; 4,000 cy capacity

5. Form in which dredged material is presented for disposal: slurry-noncohesive character.

6. Total quantity (cubic meters): 269,000 cy = 205,700 m³

7. Expected frequency of dumping (for reporting period):
   a. 3 trips/day
   b. Actual start: 5 Mar 83  c. Actual completion: 7 Oct 83
8. Chemical composition:  

<table>
<thead>
<tr>
<th>Component</th>
<th>Water (S.D.)</th>
<th>Elutriate (S.D.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DDT</td>
<td>N. Available</td>
<td>&lt; 0.05 (-)</td>
</tr>
<tr>
<td>PCB</td>
<td>&lt; 0.1 (-)</td>
<td></td>
</tr>
<tr>
<td>Hg</td>
<td>&lt; 0.2 (-)</td>
<td></td>
</tr>
<tr>
<td>Cd</td>
<td>&lt; 0.1 (-)</td>
<td></td>
</tr>
</tbody>
</table>

9. Properties of dredged material:  
   a. Solubility (% water) 63.8  
   b. Density (gm/cc) Not Available  
   c. pH Not Available  
   d. % sand 11.26 % silt 63.03 % clay 25.71  

10. Method of packing: None  


12. Procedure and site for tank washing: Hoppers flushed at authorized disposal sit  

13. Approved dumping site:  
   a. Geographical position (latitude and longitude): 40° 22'N; 73° 51'W  
   b. Depth of water (meters): 20 m.  
   c. Distance from nearest coast (kilometers): 9 Km.  

Bioassays and Bioassessment Evaluations

a. **Liquid Phase Bioassay** (EC50 or LC50 for each test species)@ 96 hrs.

- **Skeletonema costatum** > 100%
- **Mysidopsis bahia** > 100%
- **Menidia menidia** 87%

b. **Suspended Particulate Phase Bioassay** (EC50 or LC50 per test species)@ 96 hrs.

- **Acartia tonsa** 27%
- **Mysidopsis bahia** > 100%
- **Menidia menidia** > 100%

c. **Solid Phase Bioassay** (% mortality difference with respect to control)

- **Palamonetes sp.** -0.5 Negative indicates greater mortality in control
- **Mercenaria mercenaria** -1.0 mortality in control
- **Nereis virens** 2.0

(* statistical significance, 95% confidence level)

10-day Bioaccumulation Test Data:

- Petro. Hydro. were statistically significant in **Mercenaria sp.** (0.27 ppm), **Palaemonetes sp.** (0.27 ppm) and **Nereis sp.** (0.23 ppm).

- PCB's were statistically significant in **Mercenaria sp.** (0.09 ppm).
LONDON DUMPING INVENTION
Report of Ocean Dumping

1. Issuing Authority:
   Division North Atlantic  District New York

2. Permit start date/expire date:
   Permittee: Perth Amboy Dry Dock
   Date issued: 5 June 81  Permit No. 11945
   Start Date: 5 June 81  Expiry Date 5 June 84

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Arthur Kill, New Jersey

4. Specification of dredged material and process from which derived:
   a. Description: silty clay
   b. Mode of dredging: clamshell dredge; Warren Disch Contractor
   c. Mode of transportation: towed barge; 2000 cy capacity

5. Form in which dredged material is presented for disposal: slurry-noncohesive character.

6. Total quantity (cubic meters): 38,000 cy = 29,100 m³

7. Expected frequency of dumping (for reporting period):
   a. 1 trip/day
   b. Actual start: 4 Apr 83  c. Actual completion: 14 May 83
8. Chemical composition:

<table>
<thead>
<tr>
<th></th>
<th>Site Water (S.D.)</th>
<th>Elutriate (S.D.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petrol. Hydro.</td>
<td>&lt; 100.0 ((-))</td>
<td>&lt; 100.0 ((-))</td>
</tr>
<tr>
<td>PCB</td>
<td>&lt; 0.1 ((-))</td>
<td>&lt; 0.1 ((-))</td>
</tr>
<tr>
<td>Hg</td>
<td>&lt; 0.2 ((-))</td>
<td>&lt; 0.2 ((-))</td>
</tr>
<tr>
<td>Cd</td>
<td>&lt; 0.1 ((-))</td>
<td>&lt; 0.1 ((-))</td>
</tr>
<tr>
<td>DDT</td>
<td>&lt; 0.05 ((-))</td>
<td>&lt; 0.05 ((-))</td>
</tr>
</tbody>
</table>

9. Properties of dredged material:

a. Solubility (% water) 64.2
b. Density (gm/cc)       Not Available
c. pH                   Not Available
d. % sand 44.2 % silt 40.8 % clay 15.0

10. Method of packing: None


13. Approved dumping site:

a. Geographical position (latitude and longitude): 40° 22'N; 73° 51'W
b. Depth of water (meters):                  20 m.
c. Distance from nearest coast (kilometers): 9 Km.

Bioassays and Bioassessment Evaluations

a. **Liquid Phase Bioassay** (EC50 or LC50 for each test species)@ 96 hrs.
   - *Skeletonema costatum* 82%
   - *Mysidopsis bahia* > 100%
   - *Menidia menidia* > 100%

b. **Suspended Particulate Phase Bioassay** (EC50 or LC50 per test species)@ 96 hrs.
   - *Acartia tonsa* 34%
   - *Mysidopsis bahia* > 100%
   - *Menidia menidia* > 100%

c. **Solid Phase Bioassay** (% mortality difference with respect to control)
   - *Palamonetes sp.* 4.0
   - *Mercenaria mercenaria* 1.0
   - *Nereis virens* 1.0

(*statistical significance, 95% confidence level)

10-day Bioaccumulation Test Data:

Petro. Hydro. were statistically significant in *Nereis sp.* (1.98 ppm).
1. Issuing Authority:

Division North Atlantic District New York

2. Permit start date/expire date:

Permittee: NYC Department of Ports and Terminals
Date issued: 2 Apr 83 Permit No. 12843
Start Date: 2 Apr 83 Expiry Date: 2 Apr 86

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. East River, New York

4. Specification of dredged material and process from which derived:
   a. Description: silty clay
   b. Mode of dredging: clamshell dredge; Weeks Dredging Company
   c. Mode of transportation: towed barges; 4000 and 2000cy capacity

5. Form in which dredged material is presented for disposal: slurry-noncohesive character.

6. Total quantity (cubic meters): 8000cy = 6100 m³

7. Expected frequency of dumping (for reporting period):
   a. 1 trip/day
   b. Actual start: 14 Apr 83 c. Actual completion: 26 Apr 83

8. Chemical composition:
   Site Water (S.D.) Elutriate (S.D.)
   in ppb
   Petrol. Hydro. < 0.1 (-) < 50.0 (-)
   PCB < 0.1 (-) < 0.1 (-)
   Hg < 0.1 (-) < 0.2 (-)
   Cd < 0.1 (-) < 0.1 (-)
   DDT < 0.1 (-) < 0.05 (-)
9. Properties of dredged material:
   a. Solubility (% water) 47.04
   b. Density (gm/cc)  No Available
   c. pH  No Available
   d. % sand 55.35  % silt 30.63  % clay 14.02

10. Method of packing: None


13. Approved dumping site:
   a. Geographical position (latitude and longitude): 40° 22'N; 73° 51'W
   b. Depth of water (meters): 20 m.
   c. Distance from nearest coast (kilometers): 9 Km.

Bioassays and Bioassessment Evaluations

a. Liquid Phase Bioassay (EC50 or LC50 for each test species)@ 96 hrs.

- **Skeletonema costatum** > 100%
- **Mysidopsis bahia** > 100%
- **Menidia menidia** > 100%

b. Suspended Particulate Phase Bioassay (EC50 or LC 50 per test species)@ 96 hrs.

- **Acartia tonsa** 37%
- **Mysidopsis bahia** 31%
- **Menidia menidia** 43%

c. Solid Phase Bioassay (% mortality difference with respect to control)

- **Palamonetes sp.** 4.0 Negative indicates greater
- **Mercenaria mercenaria** -1.0 mortality in control.
- **Nereis virens** 4.0

(* statistical significance, 95% confidence level)

10-day Bioaccumulation Test Data: There was no statistically significant bioaccumulation of contaminants in any test species.

NOTE: All Bioassay and Bioaccumulation Data is that for sediment at the Port Authority of NY and NJ project, Permit #9466. Due to the close proximity of the projects and the chemical similarity of the sediment, this data was used to characterize the Ports and Terminals sediment.
1. Issuing Authority:
   Division North Atlantic District New York

2. Permit start date/expire date:
   Permittee: Port Authority of NY and NJ
   Date issued: 15 Oct 75 Permit No. 9466
   Start Date: 15 Oct 75 Expiry Date 15 Oct 85

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Gowanus Bay, NY

4. Specification of dredged material and process from which derived:
   a. Description: silty clay
   b. Mode of dredging: clamshell dredge; Great Lakes Dredge and Dock
   c. Mode of transportation: towed barge; 4000cy capacity

5. Form in which dredged material is presented for disposal: slurry-noncohesive character.

6. Total quantity (cubic meters): 154,840cy = 118,400 m³

7. Expected frequency of dumping (for reporting period):
   a. 3 trips/day
   b. Actual start: 1 Jun 83
   c. Actual completion: 10 Oct 83

   in ppb
   Petrol. Hydro. 300.0 (0) 500.0 (0)*
   PCB < 0.1 (-) < 0.1 (-)
   Hg 0.27 (0.12) 0.53 (0.29)
   Cd < 0.1 (-) < 0.1 (-)
   DDT < 0.05 (-) < 0.05 (-)

(* statistical significance, 95% confidence lev
9. Properties of dredged material:
   a. Solubility (% water) 60.9%
   b. Density (gm/cc) Not Available
   c. pH Not Available
   d. % sand 25.7 % silt 44.7 % clay 29.6

10. Method of packing: None


13. Approved dumping site:
   a. Geographical position (latitude and longitude): 40° 22'N; 73° 51'W
   b. Depth of water (meters): 20 m.
   c. Distance from nearest coast (kilometers): 9 Km.

Bioassays and Bioassessment Evaluations

a. **Liquid Phase Bioassay** (EC50 or LC50 for each test species)@ 96 hrs.

<table>
<thead>
<tr>
<th>Species</th>
<th>EC50/LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skeletonema costatum</td>
<td>&gt; 1.0</td>
</tr>
<tr>
<td>Mysis bahia</td>
<td>&gt; 1.0</td>
</tr>
<tr>
<td>Menidia menidia</td>
<td>&gt; 1.0</td>
</tr>
</tbody>
</table>

b. **Suspended Particulate Phase Bioassay** (EC50 or LC50 per test species)@ 96 hrs.

<table>
<thead>
<tr>
<th>Species</th>
<th>EC50/LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acartia tonsa</td>
<td>37</td>
</tr>
<tr>
<td>Mysis bahia</td>
<td>31</td>
</tr>
<tr>
<td>Menidia menidia</td>
<td>43</td>
</tr>
</tbody>
</table>

c. **Solid Phase Bioassay** (% mortality difference with respect to control)

<table>
<thead>
<tr>
<th>Species</th>
<th>% Mortality Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palamonetes sp.</td>
<td>4.0</td>
</tr>
<tr>
<td>Mercenaria mercenaria</td>
<td>-1.0 Negative indicates greater mortality</td>
</tr>
<tr>
<td>Nereis virens</td>
<td>4.0</td>
</tr>
</tbody>
</table>

(* statistical significance, 95% confidence level

10-day Bioaccumulation Test Data: There was no statistically significant bioaccumulation of contaminants in any test species.
LONDON DUMPING CONVENTION
Report of Ocean Dumping Permits - CY 83

1. Issuing Authority:
   Division North Atlantic District New York

2. Permit start date/expire date:
   Permittee: NYC Dept. of Sanitation
   Date issued: 9 Mar 83 Permit No. 12807
   Start Date: 9 Mar 83 Expire Date: 9 Mar 86

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Arthur Kill (Fresh Kills), NY

4. Specification of dredged material and process from which derived:
   a. Description: silty clay
   b. Mode of dredging: clamshell dredge; Great Lakes Dredge & Dock
   c. Mode of transportation: towed barge; 4,000 cy capacity

5. Form in which dredged material is presented for disposal: slurry-
   noncohesive character.

6. Total quantity (cubic meters): 248,400 cy = 190,000 m³

7. Expected frequency of dumping (for reporting period):
   a. 2 trips/day
8. Chemical composition: in ppb

<table>
<thead>
<tr>
<th></th>
<th>Site Water (S.D.)</th>
<th>Elutriate (S.D.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petrol. Hydro.</td>
<td>&lt; 0.0 (-)</td>
<td>&lt; 50.0 (-)</td>
</tr>
<tr>
<td>PCB</td>
<td>&lt; 0.1 (-)</td>
<td>&lt; 0.1 (-)</td>
</tr>
<tr>
<td>Hg</td>
<td>&lt; 0.2 (-)</td>
<td>&lt; 0.2 (-)</td>
</tr>
<tr>
<td>Cd</td>
<td>&lt; 0.1 (-)</td>
<td>&lt; 0.1 (-)</td>
</tr>
<tr>
<td>DDT</td>
<td>&lt; 0.05 (-)</td>
<td>&lt; 0.05 (-)</td>
</tr>
</tbody>
</table>

9. Properties of dredged material:
   a. Solubility (% water) 28.0
   b. Density (gm/cc)      Not Available
   c. pH                   Not Available
   d. % sand 79.9 % silt 10.7 % clay 9.4

10. Method of packing: None


13. Approved dumping site:
   a. Geographical position (latitude and longitude): 40° 22'N; 73° 51'W
   b. Depth of water (meters): 20 m.
   c. Distance from nearest coast (kilometers): 9 Km.

Bioassays and Bioassessment Evaluations

a. **Liquid Phase Bioassay** (EC50 or LC50 for each test species) @ 96 hrs.

- *Skeletonema costatum* > 100%
- *Mysidopsis bahia* > 77%
- *Menidia menidia* > 100%

b. **Suspended Particulate Phase Bioassay** (EC50 or LC 50 per test species) @ 96 hrs.

- *Acartia tonsa* > 100%
- *Mysidopsis bahia* > 100%
- *Menidia menidia* > 100%

c. **Solid Phase Bioassay** (% mortality difference with respect to control)

- *Palamonetes sp.* 5.6
- *Mercenaria mercenaria* 2.0
- *Nereis virens* 0.0

(* statistical significance, 95% confidence level)

10-day Bioaccumulation Test Data: Petroleum Hydro. were statistically significant in *Nereis sp.* (0.879 ppm).
LONDON DUMPING CONVENTION

Report of Ocean Dumping Permits - CY 83

1. Issuing Authority:
   Division  North Atlantic  District  New York

2. Permit start date/expire date:
   Permittee: Exxon Corporation - Pier 6, North
   Date issued: 2 Jun 83  Permit No. 12908*
   Start Date: 2 Jun 83  Expiry Date 2 Jun 86

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Kill Van Kull, NJ

4. Specification of dredged material and process from which derived:
   a. Description: sandy silt
   b. Mode of dredging: clamshell dredge; Great Lakes Dredge & Dock
   c. Mode of transportation: towed barge; 4,000 cy capacity

5. Form in which dredged material is presented for disposal: slurry-
   noncohesive character.

6. Total quantity (cubic meters): 115,602 cy = 88,400 m³*
   * Note: The volume shown for this pier is the total volume dredged under
   this permit number for all piers. The work under this permit is divided
   into 4 pier areas, each of which is represented by separate testing and
   is shown in a separate London Dumping Convention Report.

7. Expected frequency of dumping (for reporting period):
   a. 2 trips/day
   b. Actual start: 1 Aug 83  c. Actual completion: 7 Oct 83
8. Chemical composition:  

<table>
<thead>
<tr>
<th></th>
<th>Site Water (S.D.)</th>
<th>Elutriate (S.D.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petrol. Hydro.</td>
<td>900.0 (-)</td>
<td>&lt; 50.0 (-)</td>
</tr>
<tr>
<td>PCB</td>
<td>&lt; 0.1 (-)</td>
<td>&lt; 0.1 (-)</td>
</tr>
<tr>
<td>Hg</td>
<td>&lt; 0.2 (-)</td>
<td>&lt; 0.2 (-)</td>
</tr>
<tr>
<td>Cd</td>
<td>&lt; 0.1 (-)</td>
<td>&lt; 0.1 (-)</td>
</tr>
</tbody>
</table>

9. Properties of dredged material:  
   a. Solubility (% water) 67.8%  
   b. Density (gm/cc) Not Available  
   c. pH Not Available  
   d. % sand 25.4  
     % silt 58.6  
     % clay 16.0

10. Method of packing: None


13. Approved dumping site:  
   a. Geographical position (latitude and longitude): 40° 22'N; 73° 51'W  
   b. Depth of water (meters): 20 m.  
   c. Distance from nearest coast (kilometers): 9 Km.

Bioassays and Bioassessment Evaluations

a. Liquid Phase Bioassay (EC50 or LC50 per test species)@ 96 hrs.
   - Skeletonema costatum
   - Mysidopsis bahia
   - Menidia menidia

b. Suspended Particulate Phase Bioassay (EC50 or LC 50 per test species) @ 96 hrs.
   - Acartia tonsa >100%
   - Mysidopsis bahia 75%
   - Menidia menidia 75%

c. Solid Phase Bioassay (% mortality difference with respect to control)
   - Palamometes sp. 1.0
   - Mercenaria mercenaria 0.0
   - Nereis virens 4.0

   (* statistical significance, 95% confidence level)

10-day Bioaccumulation Test Data: Petro Hydro were statistically significant in Nereis sp. (0.906 ppm).
LONDON DUMPING CONVENTION
Report of Ocean Dumping Permits - CY 83

1. Issuing Authority:
   Division North Atlantic                 District New York

2. Permit start date/expire date:
   Permittee: Exxon Corporation - Pier 7
   Date issued: 2 Jun 83                   Permit No. 12908*
   Start Date: 2 Jun 83                    Expiry Date 2 Jun 86

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Kill van Kull, NJ

4. Specification of dredged material and process from which derived:
   a. Description: sand
   h. Mode of dredging: clamshell dredge; Great Lakes Dredge and Dock
   c. Mode of transportation: towed barge; 4,000cy capacity

5. Form in which dredged material is presented for disposal: slurry-
   noncohesive character.

6. Total quantity (cubic meters): 115,602cy = 88,400 m³*

   *Note: The volume shown for this pier is the total volume dredged under this
   permit number for all piers. The work under this permit is divided into 4
   pier areas, each of which is represented by separate testing and is shown in a

7. Expected frequency of dumping (for reporting period):
   a. 2 trips/day
   b. Actual start: 1 Aug 83                Actual completion: 7 Oct 83
8. Chemical composition:

<table>
<thead>
<tr>
<th></th>
<th>Site W (S.D.)</th>
<th>Elutriate (S.D.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petrol. Hydro.</td>
<td>233.3 (317.5)</td>
<td>&lt; 50.0 (-)</td>
</tr>
<tr>
<td>PCB</td>
<td>&lt; 0.1 (-)</td>
<td>&lt; 0.1 (-)</td>
</tr>
<tr>
<td>Hg</td>
<td>&lt; 0.2 (-)</td>
<td>&lt; 0.2 (-)</td>
</tr>
<tr>
<td>Cd</td>
<td>&lt; 0.1 (-)</td>
<td>&lt; 0.1 (-)</td>
</tr>
</tbody>
</table>

9. Properties of dredged material:
   a. Solubility (% water) 44.5
   b. Density (gm/cc) Not Available
   c. pH Not Available
   d. % sand 58.9 % silt 28.2 % clay 12.9

10. Method of packing: None


13. Approved dumping site:
   a. Geographical position (latitude and longitude): 40° 22'N; 73° 51'W
   b. Depth of water (meters): 20 m.
   c. Distance from nearest coast (kilometers): 9 Km.

Bioassays and Bioassessment Evaluations

a. Liquid Phase Bioassay (EC50 or LC50 for each test species) @ 96 hrs.

- *Skeletonema costatum* > 100%
- *Mysis bahia* > 100%
- *Menidia menidia* > 100%

b. Suspended Particulate Phase Bioassay (EC50 or LC50 per test species) @ 96 hrs.

- *Acartia tonsa* > 100%
- *Mysis bahia* > 100%
- *Menidia menidia* > 100%

c. Solid Phase Bioassay (% mortality difference with respect to control)

- *Palamonetes* sp. 3.0
- *Mercenaria mercenaria* 1.0
- *Nereis virens* 3.0*

(* statistical significance, 95% confidence level)

10-day Bioaccumulation Test Data: Petro. Hydro were statistically significant in *Nereis* sp. (1.50 ppm).
1. Issuing Authority:
   Division North Atlantic District New York

2. Permit start date/expire date:
   Permittee: Exxon Corporation - Pier, South
   Date issued: 2 Jun 83 Permit No. 12908*
   Start Date: 2 Jun 83 Expiry Date 2 Jun 86

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Kill van Kull, NJ

4. Specification of dredged material and process from which derived:
   a. Description: sand
   b. Mode of dredging: clamshell dredge; Great Lakes Dredge and Dock
   c. Mode of transportation: towed barge; 4,000cy capacity

5. Form in which dredged material is presented for disposal: slurry-
   noncohesive character.

6. Total quantity (cubic meters): 115,602cy = 88,400 m³*

   *Note: The volume shown for this pier is the total volume dredged under this
   permit number for all piers. The work under this permit is divided into 4
   pier areas, each of which is represented by separate testing and is shown in a

7. Expected frequency of dumping (for reporting period):
   a. 2 trips/day
   b. Actual start: 1 Aug 83          c. Actual completion: 7 Oct 83
8. Chemical composition:

<table>
<thead>
<tr>
<th></th>
<th>Site Water (S.D.)</th>
<th>Elutriate (S.D.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petrol. Hydro.</td>
<td>&lt; 50.0 (≤)</td>
<td>&lt; 50.0 (≤)</td>
</tr>
<tr>
<td>PCB</td>
<td>&lt; 0.1 (≤)</td>
<td>&lt; 0.1 (≤)</td>
</tr>
<tr>
<td>Hg</td>
<td>&lt; 0.2 (≤)</td>
<td>&lt; 0.2 (≤)</td>
</tr>
<tr>
<td>Cd</td>
<td>&lt; 0.1 (≤)</td>
<td>&lt; 0.1 (≤)</td>
</tr>
</tbody>
</table>

9. Properties of dredged material:
   a. Solubility (% water) 33.91
   b. Density (gm/cc) Not Available
   c. pH Not Available
   d. % sand 74.05
   % silt 17.21
   % clay 8.74

10. Method of packing: None


13. Approved dumping site:
   a. Geographical position (latitude and longitude): 40° 22'N; 73° 51'W
   b. Depth of water (meters): 20 m.
   c. Distance from nearest coast (kilometers): 9 Km.

Bioassays and Bioassessment Evaluations

a. Liquid Phase Bioassay (EC50 or LC50 for each test species) @ 96 hrs.

- Skeletonema costatum: 12%
- Mysidopsis bahia: >100%
- Menidia menidia: >100%

b. Suspended Particulate Phase Bioassay (EC50 or LC50 per test species) @ 96 hrs.

- Acartia tonsa: >100%
- Mysidopsis bahia: >100%
- Menidia menidia: >100%

c. Solid Phase Bioassay (% mortality difference with respect to control)

- Palamonetes sp.: 1.0
- Mercenaria mercenaria: 1.0
- Nereis virens: 6.0* (*statistical significance, 95% confidence level)

10-day Bioaccumulation Test Data: Petro. Hydro were statistically significant in Mercenaria sp. (1.215 ppm) and Nereis sp. (1.353 ppm).
1. Issuing Authority:
   Division **North Atlantic** District **New York**

2. Permit start date/expire date:
   Permittee: Exxon Corp. - Pier 1
   Date issued: 2 Jun 83 Permit No. 12908*
   Start Date: 2 Jun 83 Expiry Date 2 Jun 86

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Kill Van Kull, NJ

4. Specification of dredged material and process from which derived:
   a. Description: sandy silt
   b. Mode of dredging: clamshell dredge; Great Lakes Dredge & Dock
   c. Mode of transportation: towed barge; 4,000 cy capacity

5. Form in which dredged material is presented for disposal: slurry-noncohesive character.

6. Total quantity (cubic meters): 115,602 cy = 88,400 m³*
   * Note: The volume shown for this pier is the total volume dredged under this permit number for all piers. The work under this permit is divided into 4 pier areas, each of which is represented by separate testing and is shown in a separate London Dumping Convention Report.

7. Expected frequency of dumping (for reporting period):
   a. 2 trips/day
   b. Actual start: 1 Aug 83 . Actual completion: 7 Oct 83
8. Chemical composition: in ppb

<table>
<thead>
<tr>
<th></th>
<th>Site Water (S.D.)</th>
<th>Elutriate (S.D.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petrol. Hydro.</td>
<td>&lt;50 (0) (-)</td>
<td>&lt;50.0 (-)</td>
</tr>
<tr>
<td>PCB</td>
<td>&lt; 50.0 (-)</td>
<td>&lt; 50.0 (-)</td>
</tr>
<tr>
<td>Hg</td>
<td>&lt; 0.1 (-)</td>
<td>&lt; 0.2 (-)</td>
</tr>
<tr>
<td>Cd</td>
<td>&lt; 0.1 (-)</td>
<td>&lt; 0.1 (-)</td>
</tr>
</tbody>
</table>

9. Properties of dredged material:
   a. Solubility (% water) 6
   b. Density (gm/cc) Not Available
   c. pH Not Available
   d. % sand 41.4 % silt 45.1 % clay 13.5

10. Method of packing: None


13. Approved dumping site:
   a. Geographical position (latitude and longitude): 40° 22'N, 73° 51'W
   b. Depth of water (meters): 20 m.
   c. Distance from nearest coast (kilometers): 9 Km.

Bioassays and Bioassessment Evaluations

a. **Liquid Phase Bioassay** (EC50 or LC50 for each test species) @ 96 hrs.

- *Skeletonema costatum* > 100%
- *Mysidopsis bahia* > 100%
- *Menidia menidia* > 100%

b. **Suspended Particulate Phase Bioassay** (EC50 or LC50 per test species) @ 96 hrs.

- *Acartia tonsa* > 100%
- *Mysidopsis bahia* > 100%
- *Menidia menidia* > 100%

c. **Solid Phase Bioassay** (% mortality difference with respect to control)

- *Palamonetes sp.* 2.0
- *Mercenaria mercenaria* 3.0
- *Nereis virens* 2.0

(* statistical significance, 95% confidence level)

10-day Bioaccumulation Test Data: There was no statistically significant bioaccumulation of contaminants in any test species.
LONDON DUMPING CONVENTION

Report of Ocean Dumping Permits - CY 83

1. Issuing Authority:
   Division North Atlantic District New York

2. Permit start date/expire date:
   Permittee: NYC Department of Sanitation
   Date issued: 2 Aug 83 Permit No. 12976
   Start Date: 2 Aug 83 Expiry Date 2 Aug 86

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. New York Harbor, NY

4. Specification of dredged material and process from which derived:
   a. Description: sand
   b. Mode of dredging: clamshell dredge; Great Lakes Dredge and Dock
   c. Mode of transportation: towed barge; 4,000cy capacity

5. Form in which dredged material is presented for disposal: slurry-nong cohesive character.

6. Total quantity (cubic meters): 14,400cy = 11,000 m³

7. Expected frequency of dumping (for reporting period):
   a. 1 trip/day
   b. Actual start: 5 Aug 83       c. Actual completion: 26 Aug 83

8. Chemical composition:
   Site Water (S.D.)    Elutriate (S.D.)
   in ppb
   Petrol. Hydro.       < 50.0 (-)          51.7 (2.9)
   PCB                  < 0.1 (-)            < 0.1 (-)
   Hg                   < 0.2 (-)            < 0.2 (-)
   Cd                   < 0.1 (-)            < 0.1 (-)
9. Properties of dredged material:
   a. Solubility (% water) 48.3%
   b. Density (gm/cc) Not Available
   c. pH Not Available
   d. % sand 60.0 % silt 11.3 % clay 28.7

10. Method of packing: None


13. Approved dumping site:
   a. Geographical position (latitude and longitude): 40° 22'N; 73° 51'W
   b. Depth of water (meters): 20 m.
   c. Distance from nearest coast (kilometers): 9 Km.

Bioassays and Bioassessment Evaluations

a. **Liquid Phase Bioassay** (EC50 or LC50 per each test species) @ 96 hrs.
   - *Skeletonema costatum*: 18%
   - *Mysidopsis bahia*: 100%
   - *Menidia menidia*: > 100%

b. **Suspended Particulate Phase Bioassay** (EC50 or LC50 per test species)@ 96 hrs.
   - *Acartia tonsa*: 29%
   - *Mysidopsis bahia*: > 100%
   - *Menidia menidia*: > 100%

c. **Solid Phase Bioassay** (% mortality difference with respect to control)
   - *Palamonetes sp.*: 0 Negative indicates greater
   - *Mercenaria mercenaria*: 0 mortality in control.
   - *Nereis virens*: -3.0
     
     (* statistical significance, 95% confidence level)

10-day Bioaccumulation Test Data: There was no statistically significant bioaccumulation of contaminants in any test species.
LONDON DUMPING CONVENTION  
Report of Ocean Dumping Permits - CY 83

1. Issuing Authority:
   Division North Atlantic
   District New York

2. Permit start date/expire date:
   Permittee: Exxon Co., USA
   Date issued: 5 May 83
   Permit No. 12883
   Start Date: 5 May 83
   Expiry Date 5 May 86

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Arthur Kill, NJ

4. Specification of dredged material and process from which derived:
   a. silt
   b. Mode of dredging: clamshell dredge; Weeks Dredging Co.
   c. Mode of transportation: towed barge; 4,000cy capacity

5. Form in which dredged material is presented for disposal: slurry-noncohesive character.

6. Total quantity (cubic meters): 12,000cy = 9,200 m³

7. Expected frequency of dumping (for reporting period):
   a. 1 trip/day
   b. Actual start: 17 Aug 83
   c. Actual completion: 19 Aug 83

8. Chemical composition:
   Site Water (S.D.)  Elutriate (S.D.)
   Petrol. Hydro.  < 50.0  < 50.0 (-)
   PCB  < 0.1  < 0.1 (-)
   Hg  15.13 (16)  5.60 (0.38)
   Cd  < 0.1  < 0.1 (-)

9. Properties of dredged material:
   a. Solubility (% water)  71.2
   b. Density (gm/cc) Not Available
c. pH Not Available

d. % sand 11.0 % silt 4.0 % clay 14.7

10. Method of packing: None


13. Approved dumping site:
   a. Geographical position (latitude and longitude): 40° 22' N; 73° 51' W
   b. Depth of water (meters): 20 m.
   c. Distance from nearest coast (kilometers): 9 km.

Bioassays and Bioassessment Evaluations

a. **Liquid Phase Bioassay** (EC50 or LC50 for each test species) @ 96 hrs.

- *Skeletonema costatum* > 100%
- *Mysidopsis bahia* > 100%
- *Menidia menidia* > 100%

b. **Suspended Particulate Phase Bioassay** (EC50 or LC 50 per test species) @ 96 hrs.

- *Acartia tonsa* 54%
- *Mysidopsis bahia* > 100%
- *Menidia menidia* > 100%

c. **Solid Phase Bioassay** (% mortality difference with respect to control)

- *Palamonetes sp.* -0.7 Negative indicates greater
- *Mercenaria mercenaria* 0.0 mortality in control.
- *Nereis virens* 2.0

(* statistical significance, 95% confidence level)

10-day Bioaccumulation Test Data: There was no statistically significant bioaccumulation of contaminants in any test species.
LONDON DUMPING CONVENTION

Report of Ocean Dumping Permits - CY 83

1. Issuing Authority:
   Division North Atlantic
   District New York

2. Permit start date/expire date:
   Permittee: Celanese Chemical Company
   Date issued: 30 Dec 74
   Permit No. 9118
   Start Date: 30 Dec 74
   Expiry Date: 30 Dec 84

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Passaic River, NJ

4. Specification of dredged material and process from which derived:
   a. Description: silt
   b. Mode of dredging: clamshell dredge; Weeks Dredging Company
   c. Mode of transportation: towed barge; 4,000cy capacity

5. Form in which dredged material is presented for disposal: slurry-noncohesive character.

6. Total quantity (cubic meters): 23,100cy = 17,700 m³

7. Expected frequency of dumping (for reporting period):
   a. 2 trips/day
   b. Actual start: 25 Aug 83
   c. Actual completion: 27 Aug 83

8. Chemical composition:
<table>
<thead>
<tr>
<th>Site Water (S.D.)</th>
<th>Elutriate (S.D.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DDT</td>
<td>Not Available</td>
</tr>
<tr>
<td>PCB</td>
<td></td>
</tr>
<tr>
<td>Hg</td>
<td></td>
</tr>
<tr>
<td>Cd</td>
<td></td>
</tr>
</tbody>
</table>
9. Properties of dredged material:
   a. Solubility (% water) 54.0%
   b. Density (gm/cc) Not Available
   c. pH Not Available
   d. % sand 5.2 % silt 68.7 % clay 26.1

10. Method of packing: None


13. Approved dumping site:
   a. Geographical position (latitude and longitude): 40° 22'N; 73° 51'W
   b. Depth of water (meters): 20 m.
   c. Distance from nearest coast (kilometers): 9 Km.

Bioassays and Bioassessment Evaluations

a. **Liquid Phase Bioassay** (EC50 or LC50 for each test species) @ 96 hrs.

<table>
<thead>
<tr>
<th>Species</th>
<th>EC50 or LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skeletonema costatum</td>
<td>84</td>
</tr>
<tr>
<td>Mysidopsis bahia</td>
<td>&gt;100</td>
</tr>
<tr>
<td>Menidia menidia</td>
<td>&gt;100</td>
</tr>
</tbody>
</table>

b. **Suspended Particulate Phase Bioassay** (EC50 or LC50 per test species) @ 96 hrs.

<table>
<thead>
<tr>
<th>Species</th>
<th>EC50 or LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acartia tonsa</td>
<td>64</td>
</tr>
<tr>
<td>Mysidopsis bahia</td>
<td>94</td>
</tr>
<tr>
<td>Menidia menidia</td>
<td>&gt;100</td>
</tr>
</tbody>
</table>

(c. **Solid Phase Bioassay** (% mortality difference with respect to control)

<table>
<thead>
<tr>
<th>Species</th>
<th>Mortality Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palamometes sp.</td>
<td>0.0</td>
</tr>
<tr>
<td>Mercenaria mercenaria</td>
<td>0.0</td>
</tr>
<tr>
<td>Nereis virens</td>
<td>0.0</td>
</tr>
</tbody>
</table>

(*) statistical significance, 95% confidence level)

10-day Bioaccumulation Test Data: Petrol. Hydro. were statistically significant in Palamometes sp. (1.49 ppm), Mercenaria sp. (0.27 ppm), Nereis sp. (4.63 ppm). PCB's were statistically significant in Nereis sp. (0.24 ppm).
1. Issuing Authority:
Division North Atlantic District New York

2. Permit start date/expire date:
Permittee: Getty Refining & Marketing Co.
Date issued: 12 Sept 83 Permit No. 13013
Start Date: 12 Sept 83 Expiry Date 12 Sept 86

3. Country of origin of wastes and port of loading:
a. United States of America
b. Passaic River, New Jersey

4. Specification of dredged material and process from which derived:
a. Description: silty clay
b. Mode of dredging: clamshell dredge; Weeks Dredging Co.
c. Mode of transportation: towed barge; 4,000 cy capacity

5. Form in which dredged material is presented for disposal: slurry noncohesive character.

6. Total quantity (cubic meters): 23,100 cy = 17,700 m$^3$

7. Expected frequency of dumping (for reporting period):
a. 2 trips/day
b. Actual start: 4 Oct 83 Actual completion: 6 Oct 83
8. Chemical composition: Site Water (S.D.) #lutriate (S.D.)
in ppb

<table>
<thead>
<tr>
<th></th>
<th>Site Water (S.D.)</th>
<th>#lutriate (S.D.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petrol. Hydro.</td>
<td>&lt; 50.0</td>
<td>&lt; 50.0 (-)</td>
</tr>
<tr>
<td>PCB</td>
<td>&lt; 0.1</td>
<td>&lt; 0.1 (-)</td>
</tr>
<tr>
<td>Hg</td>
<td>&lt; 0.2</td>
<td>&lt; 0.2 (-)</td>
</tr>
<tr>
<td>Cd</td>
<td>&lt; 0.1</td>
<td>&lt; 0.1 (-)</td>
</tr>
</tbody>
</table>

9. Properties of dredged material:
   a. Solubility (% water) 9
   b. Density (gm/cc) Not Available
   c. pH Not Available
   d. % sand 11.5 % silt 61.7 % clay 26.8

10. Method of packing: None


13. Approved dumping site:
   a. Geographical position (latitude and longitude): 40° 22'N; 73° 51'W
   b. Depth of water (meters): 20 m.
   c. Distance from nearest coast (kilometers): 9 Km.

Bioassays and Bioassessment Evaluations

a. Liquid Phase Bioassay (EC50 or LC50 for each test species) @ 96 hrs.

- Skeletonema costatum 10%
- Mysidopsis bahia 48%
- Menidia menidia 75%

b. Suspended Particulate Phase Bioassay (EC50 or LC50 per test species) @ 96 hrs.

- Acartia tonsa 86%
- Mysidopsis bahia 25%
- Menidia menidia > 100%

c. Solid Phase Bioassay (% mortality difference with respect to control)

- Palamonetes sp. 1.0 Negative indicates greater mortality in control.
- Mercenaria mercenaria 1.0
- Nereis virens -1.0

(* statistical significance, 95% confidence level)

10-day Bioaccumulation Test Data:

Petrol. Hydro. were statistically significant in Palamonetes sp. (0.31 ppm), Mercenaria sp. (0.72 ppm) and Nereis sp. (2.24 ppm).
LONDON DUMPING CONVENTION


1. Issuing Authority:
   Division North Atlantic   District New York

2. Permit start date/expire date:
   Permittee: Amoco Oil Co.
   Date issued: 13 Oct 83   Permit No. 13036
   Start Date: 13 Oct 83   Expiry Date 13 Oct 86

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Arthur Kill, New Jersey

4. Specification of dredged material and process from which derived:
   a. Description: silty clay
   b. Mode of dredging: clamshell dredge; Weeks Dredging Co.
   c. Mode of transportation: towed barge; 4,000 cy capacity

5. Form in which dredged material is presented for disposal: slurry-noncohesive character.

6. Total quantity (cubic meters): 18,000 cy = 13,800 m³

7. Expected frequency of dumping (for reporting period):
   a. 1 trip/day
8. Chemical composition: 

<table>
<thead>
<tr>
<th></th>
<th>Site Water (S.D.)</th>
<th>Elutriate (S.D.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petrol. Hydro.</td>
<td>&lt; 50.0 (-)</td>
<td>&lt; 50.0 (-)</td>
</tr>
<tr>
<td>PCB</td>
<td>&lt; 0.1 (-)</td>
<td>&lt; 0.1 (-)</td>
</tr>
<tr>
<td>Hg</td>
<td>&lt; 0.2 (-)</td>
<td>&lt; 0.2 (-)</td>
</tr>
<tr>
<td>Cd</td>
<td>&lt; 0.1 (-)</td>
<td>&lt; 0.1 (-)</td>
</tr>
</tbody>
</table>

9. Properties of dredged material:
   a. Solubility (% water) 65.5
   b. Density (gm/cc) Not Available
   c. pH Not Available
   d. % sand 30.7  % silt 26.0  % clay 43.3

10. Method of packing: None


13. Approved dumping site:
   a. Geographical position (latitude and longitude): 40° 22'N; 73° 51'W
   b. Depth of water (meters): 20 m.
   c. Distance from nearest coast (kilometers): 9 Km.

Bioassays and Bioassessment Evaluations

a. Liquid Phase Bioassay (EC50 or LC50 for each test species) @ 96 hrs.

- *Skeletonema costatum* 22%
- *Mysidopsis bahia* > 100%
- *Menidia menidia* > 100%

b. Suspended Particulate Phase Bioassay (EC50 or LC 50 per test species)@ 96 hrs.

- *Acartia tonsa* 68%
- *Mysidopsis bahia* > 100%
- *Menidia menidia* > 100%

c. Solid Phase Bioassay (% mortality difference with respect to control)

- *Palamonetes sp.* 0.0
- Mercenaria mercenaria 2.0
- Nereis virens 0.0

(* statistical significance, 95% confidence level

10-day Bioaccumulation Test Data:

Petrol. Hydro. were statistically significant in *Palamonetes* sp. (1.05 ppm) and *Nereis* sp. (0.41 ppm).
1. Issuing Authority:
   Division North Atlantic
   District New York

2. Permit start date/expire date:
   Permittee: Coastal Dry Dock and Repair Co. - Pier G
   Date issued: 17 Jun 81
   Permit No. 11969*
   Start Date: 17 Jun 81
   Expiry Date: 17 Jun 84

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. East River, New York

4. Specification of dredged material and process from which derived:
   a. Description: silt
   b. Mode of dredging: clamshell dredge; Great Lakes Dredge & Dock
   c. Mode of transportation: towed barge; 4,000 cy capacity

5. Form in which dredged material is presented for disposal: slurry-noncohesive character.

6. Total quantity (cubic meters): 108,000 cy = 82,600 m³*
   *Note: The volume shown for this area is the total volume dredged from all areas under this permit number. The work under this permit is divided into 3 areas, each of which is represented by separate testing and is shown in a separate London Dumping Convention Report.

7. Expected frequency of dumping (for reporting period):
   a. 4 trips/day
   b. Actual start: 3 Nov 83
      Actual completion: 15 Dec 83
8. Chemical composition:

<table>
<thead>
<tr>
<th></th>
<th>Site Water (S.D.)</th>
<th>Elutriate (S.D.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DDT</td>
<td>&lt; 0.05 (&lt;)</td>
<td>&lt; 0.05 (—)</td>
</tr>
<tr>
<td>PCB</td>
<td>&lt; 0.1 (0)</td>
<td>0.15 (0.03)*</td>
</tr>
<tr>
<td>Hg</td>
<td>0.37 (0.06)</td>
<td>0.2 (0)</td>
</tr>
<tr>
<td>Cd</td>
<td>7.80 (0.39)</td>
<td>3.17 (0.29)</td>
</tr>
</tbody>
</table>

(* statistical significance - 95% level)

9. Properties of dredged material:
   a. Solubility (% water) 56.
   b. Density (gm/cc) Not Available
   c. pH Not Available
   d. % sand 5.3 % silt 68.5 % clay 27.2

10. Method of packing: None


13. Approved dumping site:
   a. Geographical position (latitude and longitude): 40° 22'N; 73° 51'W
   b. Depth of water (meters): 20 m.
   c. Distance from nearest coast (kilometers): 9 Km.

Bioassays and Bioassessment Evaluations

a. **Liquid Phase Bioassay** (EC50 or LC50 for each test species) @ 96 hrs.

<table>
<thead>
<tr>
<th>Species</th>
<th>Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skeletonema costatum</td>
<td>63%</td>
</tr>
<tr>
<td>Mysidopsis bahia</td>
<td>&gt; 100%</td>
</tr>
<tr>
<td>Menidia menidia</td>
<td>&gt; 100%</td>
</tr>
</tbody>
</table>

b. **Suspended Particulate Phase Bioassay** (EC50 or LC 50 per test species) @ 96 hrs.

<table>
<thead>
<tr>
<th>Species</th>
<th>Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Artia tonsa</td>
<td>40%</td>
</tr>
<tr>
<td>Mysidopsis bahia</td>
<td>68%</td>
</tr>
<tr>
<td>Menidia menidia</td>
<td>&gt; 100%</td>
</tr>
</tbody>
</table>

c. **Solid Phase Bioassay** (% mortality difference with respect to control)

<table>
<thead>
<tr>
<th>Species</th>
<th>Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palamoneetes sp.</td>
<td>2.0</td>
</tr>
<tr>
<td>Mercenaria mercenaria</td>
<td>1.0</td>
</tr>
<tr>
<td>Nereis virens</td>
<td>1.0</td>
</tr>
</tbody>
</table>

(* statistical significance, 95% confidence level)

10-day Bioaccumulation Test Data:

Petrol. Hydro were statistically significant in *Palaemonetes* sp. (12.77 ppm), *Mercenaria* sp. (1.49 ppm) and *Nereis* sp. (30.35 ppm).

PCB's were statistically significant in *Nereis* sp. (0.39 ppm).
1. Issuing Authority:
   Division North Atlantic District New York

2. Permit start date/expire date:
   Permittee: Coastal Dry Dock and Repair Co. - Pier J
   Date issued: 17 Jun 81 Permit No. 11969*
   Start Date: 17 Jun 81 Expiry Date 17 Jun 84

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. East River, New York

4. Specification of dredged material and process from which derived:
   a. Description: silt

   b. Mode of dredging: clamshell dredge; Great Lakes Dredge & Dock

   c. Mode of transportation: towed barge; 4,000 cy capacity

5. Form in which dredged material is presented for disposal: slurry-
   noncohesive character.

6. Total quantity (cubic meters): 108,000 cy = 82,600 m³

   * Note: The volume shown for this area is the total volume dredged from
   all areas under this permit number. The work under this permit is divided
   into 3 areas, each of which is represented by separate testing and is shown in
   a separate London dumping Convention Report.

7. Expected frequency of dumping (for reporting period):
   a. 4 trips/day

   b. Actual start: 3 Nov 83

   c. Actual completion: 15 Dec 83
8. Chemical composition: in ppb

<table>
<thead>
<tr>
<th></th>
<th>Site Water (S.D.)</th>
<th>Elutriate (S.D.)</th>
</tr>
</thead>
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<tr>
<td>DDT</td>
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<td>&lt; 0.05 (-)</td>
</tr>
<tr>
<td>PCB</td>
<td>0.14 (0.02)</td>
<td>0.18 (0.02)</td>
</tr>
<tr>
<td>Hg</td>
<td>0.43 (0.06)</td>
<td>0.3 (0.0)</td>
</tr>
<tr>
<td>Cd</td>
<td>7.80 (0.17)</td>
<td>2.73 (0.06)</td>
</tr>
</tbody>
</table>

9. Properties of dredged material:
   a. Solubility (% water) 61.0
   b. Density (gm/cc) Not Available
   c. pH Not Available
   d. % sand 9.0 % silt 62.0 % clay 29.0

10. Method of packing: None


13. Approved dumping site:
   a. Geographical position (latitude and longitude): 40° 22'N; 73° 51'W
   b. Depth of water (meters): 20 m.
   c. Distance from nearest coast (kilometers): 9 Km.

Bioassays and Bioassessment Evaluations

a. **Liquid Phase Bioassay** (EC50 or LC50 per test species) @ 96 hrs.

- *Skeletonema costatum* 74%
- *Mysis baha*b 70%
- *Menidia menidia* 100%

b. **Suspended Particulate Phase Bioassay** (EC50 or LC50 per test species) @ 96 hrs.

- *Acartia tonsa* 51%
- *Mysis baha*b 100%
- *Menidia menidia* 100%

c. **Solid Phase Bioassay** (% mortality difference with respect to control)

- *Palamonete sp.* 1.0
- *Mercenaria mercenaria* 3.0 *
- *Nereis virens* 0.0

(* statistical significance, 95% confidence level)

10-day Bioaccumulation Test Data:

Petrol Hydro were statistically significant in *Palamonetes* sp. (2.51 ppm), *Mercenaria* sp. (0.39 ppm) and *Nereis* sp. (11.90 ppm).

PCB's were statistically significant in *Nereis* sp. (0.18 ppm).
1. Issuing Authority:
   Division North Atlantic   District New York

2. Permit start date/expire date:
   Permittee: Coastal Dry Dock & Repair Co. - Site D
   Date issued: 17 Jun 83   Permit No. 11969*
   Start Date: 17 Jun 83   Expiry Date 17 Jun 84

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. East River, New York

4. Specification of dredged material and process from which derived:
   a. Description: silt
   b. Mode of dredging: clamshell dredge; Great Lakes Dredge & Dock
   c. Mode of transportation: towed barge; 4,000 cy capacity

5. Form in which dredged material is presented for disposal: slurry-
   noncohesive character.

* Note: The volume shown for this area is the total volume dredged from all
areas under this permit number. The work under this permit is divided into 3
areas, each of which is represented by separate testing and is shown in a

6. Total quantity (cubic meters): 109,040 m$^3$ 82,600 m$^3$*

7. Expected frequency of dumping (for operating period):
   a. 4 trips/day
   b. Actual start: 1 Nov 83   Actual completion: 15 Dec 83
8. Chemical composition: 

<table>
<thead>
<tr>
<th>Site Water (S.D.)</th>
<th>Elutriate (S.D.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCB</td>
<td></td>
</tr>
<tr>
<td>Hg</td>
<td></td>
</tr>
<tr>
<td>Cd</td>
<td></td>
</tr>
</tbody>
</table>

9. Properties of dredged material:
   b. Density (gm/cc) Not Available
   c. pH Not Available
   d. % sand 6.5  % silt 67.2  % clay 26.3

10. Method of packing: None


13. Approved dumping site:
   a. Geographical position (latitude and longitude): 40° 22'N; 73° 51'W
   b. Depth of water (meters): 20 m.
   c. Distance from nearest coast (kilometers): 9 Km.

14. Additional information:

   Note: Chemical, bioassay and bioaccumulation testing done for the other areas covered by this permit were used as being representative of this area.
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS 1963 A
LONDON DUMPING CONVENTION
Report of Ocean Dumping Permits - CY 83

1. Issuing Authority:
   Division: South Atlantic
   District: Savannah

2. Permit start date/expire date:
   Permittee: Latex Construction Company
   Date Issued: 23 April 1980
   Permit No.: 074 OYN 004072
   Start Date: 23 February 1983
   Expire Date: 28 February 1983

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Thunderbolt Marina, Wilmington River, (Atlantic Intracoastal Waterway Mile 5), Chatham County, Georgia.

4. Specification of dredged material and process from which derived:
   a. Description: silt.
   b. Mode of Dredging: Clam bucket.
   c. Mode of Transportation: Bottom dump scow.

5. Form in which dredged material is presented for disposal: Slurry

6. Total quantity (cubic meters): 1,440 CY

7. Expected frequency of dumping (for reporting period):
   a. 1 load/day - 4 days total.
   b. Actual start: 23 February 1983
   c. Actual completion: 27 February 1983

8. Chemical composition: N/A

9. Properties of dredged material:
   a. Solubility (% water): N/A
   b. Density (gm/cc): 1.8 gm/cc
   c. pH: N/A
   d. % sand N/A  % silt N/A  % clay N/A

90


12. Procedure and site for tank washing: At site.

   a. Geographical position (latitude and longitude): 31°56'54" N
      80°45'34" W
   b. Depth of water (meters): -10.7 to -12.2m (-35 to -40 feet) at mlw.
   c. Distance from nearest coast (kilometers): 6.9km (3.75 nmi)

14. Additional information: N/A
1. Issuing Authority:
   Division: SOUTH ATLANTIC       District: JACKSONVILLE

2. Permit start date/expire date:
   Permitee: U.S. Navy
   Date issued: 8 Feb 74       Permit No. 738-1538
   Start Date: 8 Feb 74       Expiry Date: 31 Dec 83

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Mayport, FL

4. Specification of dredged material and process from which derived:
   a. Description: Gray and black organic, silty and clay sizes
   b. Mode of dredging: Hopper Dredge - Suction
   c. Mode of transportation: Hopper Dredge

5. Form in which dredged material is presented for disposal: Slurry, non-cohesive

6. Total quantity (cubic meters): 84,528.8

7. Expected frequency of dumping (for reporting period):
   a. Daily
   b. Actual start: 12 Aug 83       c. Actual completion: 19 Aug 83

92
8. Chemical composition:

See attached

9. Properties of dredged material:
   a. Solubility (% water): Not available
   b. Density (gm/cc): 2600 (Absolute)
   c. pH: Not available
   d. % sand: ___  % silt: ___  % clay: ___
      Not available

10. Method of packaging: Not applicable
11. Method of release: Bottom Dump
12. Procedure and site for tank washing: Hoppers flushed at disposal site
13. Approved dumping site:
   a. Geographical position (latitude and longitude):
      30°21'30", 81°17'26", 30°20'30", 81°17'26"
      30°20'30", 81°18'34", 30°21'30", 81°18'34"
   b. Depth of water (meters): 15
   c. Distance from nearest coast (kilometers): 9
14. Additional information:
**U. S. ARMY ENGINEER DIVISION LABORATORY, SOUTH ATLANTIC**  
**CORPS OF ENGINEERS**  
**MARIETTA, GEORGIA**

**GENERAL TEST REPORT**  
(SEDIMENT)

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>Sediment Samples</th>
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<tbody>
<tr>
<td>SOURCE</td>
<td></td>
</tr>
<tr>
<td>FOR USE AS:</td>
<td></td>
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<tr>
<td>TESTED FOR:</td>
<td>Chemical Analysis (See below)</td>
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<tr>
<th>Lab. No.</th>
<th>N/A</th>
<th>MEETS SPECIFICATIONS</th>
<th>FAILS SPECIFICATIONS (See below)</th>
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<td>3S 309</td>
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<tr>
<td>Vanadium</td>
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<td>0.0039</td>
<td>0.0036</td>
</tr>
</tbody>
</table>

**REMARKS:**

**REPORTED BY:**  
☐ PHONE  ☐ WIRE

**TESTED BY:**  
JL, JH

**CHECKED BY:**  
DW

**SAMPLED BY:**  

---
<table>
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<th>Lab. No.</th>
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<tr>
<td>Total Organic Carbon</td>
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<tr>
<td>Nitrogen, Kjeldahl</td>
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<tr>
<td>Ammonia Nitrogen as NH₃</td>
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<tr>
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<td>0.001</td>
<td>0.001</td>
<td>0.001</td>
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</table>
LONDON DUMPING CONVENTION
Report of Ocean Dumping Permits - CY 83

1. Issuing Authority:
Division SOUTH ATLANTIC  District JACKSONVILLE

2. Permit start date/expire date:
Permittee: U.S. Navy
Date issued: 8 Feb 74  Permit No. 738-1538
Start Date: 8 Feb 74  Expiry Date: 31 Dec 83

3. Country of origin of wastes and port of loading:
a. United States of America
b. Mayport, FL

4. Specification of dredged material and process from which derived:
a. Description: Gray and black organic, silty and clay sizes
b. Mode of dredging: Hopper Dredge - Suction
c. Mode of transportation: Hopper Dredge

5. Form in which dredged material is presented for disposal: Slurry, non-cohesive

6. Total quantity (cubic meters): 49,197.6

7. Expected frequency of dumping (for reporting period):
a. Daily
b. Actual start: 11 Nov 83  c. Actual completion: 16 Nov 83
8. Chemical composition:

See attached

9. Properties of dredged material:
   a. Solubility (% water) Not available
   b. Density (gm/cc) 2600 (Absolute)
   c. pH Not available
   d. % sand % silt % clay

Not available

10. Method of packaging: Not applicable

11. Method of release: Bottom Dump

12. Procedure and site for tank washing: Hoppers flushed at disposal site

13. Approved dumping site:
   a. Geographical position (latitude and longitude):
      30°21'30", 81°17'26", 30°20'30", 81°17'26"
      30°20'30", 81°18'34", 30°21'30", 81°18'34"
   b. Depth of water (meters): 15
   c. Distance from nearest coast (kilometers): 9

14. Additional information:
**GENERAL TEST REPORT**  
*Sediment Sample*

**DESCRIPTION**  
Sediment Samples

**SOURCE**  
MARIETTA, GEORGIA

**FOR USE AS:**  
Chemical Analysis (See below)

**LAB NO.**  
See below

**DATE SAMPLE RECEIVED**  
28 January 1977

**TESTED FOR:**  
Chemical Analysis (See below)

**SPECIFICATIONS**  
N/A

**FAILS**  
SPECIFICATIONS (See below)

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<th></th>
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</thead>
<tbody>
<tr>
<td>3S 308</td>
<td>Mayport 1</td>
<td>8.14</td>
<td>16.84</td>
<td>1.24</td>
<td>7.28</td>
<td>0.212</td>
<td>0.008</td>
<td>0.00014</td>
<td>0.00012</td>
<td>0.20</td>
<td>0.0014</td>
<td>0.0030</td>
<td>&lt;0.00002</td>
<td>&lt;0.00010</td>
<td>0.00008</td>
<td>1.2</td>
<td>0.00008</td>
<td>0.00038</td>
<td>0.0020</td>
<td>0.0012</td>
<td>0.0065</td>
<td>0.00007</td>
<td>&lt;0.00001</td>
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<td>3S 309</td>
<td>Mayport 2</td>
<td>17.17</td>
<td>16.84</td>
<td>3.00</td>
<td>15.84</td>
<td>0.578</td>
<td>0.022</td>
<td>0.000022</td>
<td>0.00041</td>
<td>0.36</td>
<td>0.0026</td>
<td>0.0052</td>
<td>&lt;0.00002</td>
<td>&lt;0.00023</td>
<td>0.00023</td>
<td>2.0</td>
<td>0.00010</td>
<td>0.00080</td>
<td>0.0025</td>
<td>0.0019</td>
<td>0.0092</td>
<td>0.00011</td>
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<td>0.0039</td>
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<td>3S 310</td>
<td>Mayport 3</td>
<td>13.52</td>
<td>14.60</td>
<td>2.62</td>
<td>13.55</td>
<td>0.318</td>
<td>0.020</td>
<td>0.000022</td>
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<td>0.0070</td>
<td>0.0152</td>
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<td>&lt;0.00032</td>
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<td>0.00016</td>
<td>0.00040</td>
<td>0.0045</td>
<td>0.0019</td>
<td>0.0036</td>
<td>0.00010</td>
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<td>3S 311</td>
<td>Mayport 4</td>
<td>0.37</td>
<td>1.44</td>
<td>0.10</td>
<td>0.12</td>
<td>0.014</td>
<td>0.002</td>
<td>0.00002</td>
<td>0.00001</td>
<td>0.06</td>
<td>0.0004</td>
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**REMARKS:**

**DATE:**
98
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<th>Lab. No.</th>
<th>33-993</th>
<th>34-994</th>
<th>35-995</th>
<th>36-996</th>
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<td>Field Sample No.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<td>Time</td>
<td>0924</td>
<td>0999</td>
<td>0940</td>
<td>0900</td>
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<td>Volatile Solids</td>
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<td>T.V.S. Formula EC</td>
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<td>14.71</td>
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<td>14.71</td>
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<td>3.44</td>
<td>2.11</td>
<td>3.44</td>
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<td>E.C.D.</td>
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<td>13.66</td>
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<td>13.66</td>
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<td>Nitrogen, Kjeldahl</td>
<td>0.130</td>
<td>0.626</td>
<td>0.205</td>
<td>0.626</td>
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<td>Ammonia Nitrogen as NH₃</td>
<td>0.0490</td>
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<td>Nitrite Nitrogen as NO₂</td>
<td>0.000010</td>
<td>0.000004</td>
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<td>Nitrate Nitrogen as NO₃</td>
<td>0.0002</td>
<td>0.00006</td>
<td>0.00008</td>
<td>0.00006</td>
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<tr>
<td>Oil and Grease</td>
<td>0.0061</td>
<td>0.00021</td>
<td>0.00201</td>
<td>0.00021</td>
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<td>Lead</td>
<td>0.032</td>
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<td>Zine</td>
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<td>&lt;0.000002</td>
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<tr>
<td>Mercury</td>
<td>&lt;0.000002</td>
<td>&lt;0.000002</td>
<td>&lt;0.000002</td>
<td>&lt;0.000002</td>
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<tr>
<td>Soluble Phosphorus as PO₄</td>
<td>0.0103</td>
<td>0.0962</td>
<td>0.0217</td>
<td>0.0962</td>
</tr>
<tr>
<td>Total Phosphorus as PO₄</td>
<td>0.423</td>
<td>0.17</td>
<td>0.39</td>
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</tr>
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<td>Iron</td>
<td>3.4</td>
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<td>3.4</td>
<td>1.9</td>
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<tr>
<td>Cadmium</td>
<td>0.00005</td>
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<td>&lt;0.000005</td>
<td>&lt;0.000005</td>
</tr>
<tr>
<td>Arsenic</td>
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<td>Chromium</td>
<td>0.00115</td>
<td>0.00315</td>
<td>0.00415</td>
<td>0.00315</td>
</tr>
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<td>Nickel</td>
<td>0.0007</td>
<td>0.0010</td>
<td>0.0012</td>
<td>0.0012</td>
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<tr>
<td>Copper</td>
<td>0.00059</td>
<td>0.00280</td>
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<td>0.00280</td>
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<td>Beryllium</td>
<td>0.00007</td>
<td>0.00015</td>
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<td>0.00015</td>
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<td>Selenium</td>
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<td>&lt;0.000005</td>
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<td>Vanadium</td>
<td>0.0011</td>
<td>0.0010</td>
<td>0.0015</td>
<td>0.0010</td>
</tr>
</tbody>
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1. Issuing Authority:
   Division: SOUTH ATLANTIC  District: JACKSONVILLE

2. Permit start date/expire date:
   Permittee: JACKSONVILLE SHIPYARDS, INC.
   Date issued: 14 August 1980  Permit No. 80H-1161
   Start Date: 14 August 1980  Expiry Date: 14 August 1986

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. East Bay Terminal, St. John's River, Jacksonville, Florida

4. Specification of dredged material and process from which:
   a. Description: River Silt
   b. Mode of dredging: Bucket
   c. Mode of transportation: Bottom Dump Barge

5. Form in which dredged material is presented for disposal:
   Material as dredged, not treated

6. Total quantity (cubic meters): 110,020 m³ (144,000 cy)

7. Expected frequency of dumping (for reporting period):
   a. twice annually
   b. Actual start: Jan 83  c. Actual completion: Dec 83
      Jan-June 83 and Dec 1-Dec 30 83
9. Properties of dredged material:
   a. Solubility (% water) Not applicable
   b. Density (gm/cc)
   c. pH
   d. % sand _____ % silt _____ % clay _____

10. Method of packaging: not applicable
11. Method of release: Bottom dump barge
12. Procedure and site for tank washing:
13. Approved dumping site: Off Jacksonville Harbor
   a. Geographical position (latitude and longitude):
      30 21 45 N
      81 18 00 W
   b. Depth of water (meters): 16 meters
   c. Distance from nearest coast (kilometers): 4.2 nautical miles
14. Additional information:
TABLE 34. Results of chemical analyses of sediments collected from the proximity of an Atlantic Ocean disposal site (reference site) and dredged material collected from three stations of Jacksonville Shipyard, Jacksonville, FL.

<table>
<thead>
<tr>
<th>Chemical constituent</th>
<th>Reference site sediment</th>
<th>Station 1</th>
<th>Station 2</th>
<th>Station 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cadmium</td>
<td>&lt;0.56</td>
<td>1.2</td>
<td>1.8</td>
<td>2.0</td>
</tr>
<tr>
<td>Lead</td>
<td>&lt;0.01</td>
<td>0.16</td>
<td>0.33</td>
<td>1.3</td>
</tr>
<tr>
<td>Mercury</td>
<td>0.06</td>
<td>0.33</td>
<td>0.22</td>
<td>0.15</td>
</tr>
<tr>
<td>Zinc</td>
<td>&lt;4.8</td>
<td>710</td>
<td>1,600</td>
<td>6,100</td>
</tr>
<tr>
<td>Petroleum hydrocarbons:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fraction 1, aliphatics</td>
<td>&lt;0.2</td>
<td>&lt;0.4</td>
<td>11.0</td>
<td>&lt;0.4</td>
</tr>
<tr>
<td>Fraction 2, aromatics</td>
<td>&lt;0.3</td>
<td>&lt;1.2</td>
<td>&lt;1.1</td>
<td>&lt;0.8</td>
</tr>
<tr>
<td>Polychlorinated biphenyls (as Aroclor 1254)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aldrin</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>Lindane</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>Heptachlor</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>p,p'DDE</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>o,p'DDE</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>p,p'DDT</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>Chlordane</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>Dieldrin</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>Endrin</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>Toxaphene</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>Mirex</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>Methoxychlor</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
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</table>
LONDON DUMPING CONVENTION

Report of Ocean Dumping Permits - CY 83

1. Issuing Authority:
   Division SOUTH ATLANTIC
   District JACKSONVILLE

2. Permit start date/expire date:
   Permittee: Jacksonville Shipyard, Inc.
   Date issued: 14 August 1980
   Start Date: 14 August 1980
   Permit No. 80H-1162
   Expire Date: 14 August 1986

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Bellinger Shipyards, Atlantic Intercoastal Waterway, Jacksonville, Florida

4. Specification of dredged material and process from which derived:
   a. Description: Silt
   b. Mode of dredging: Bucket
   c. Mode of transportation: Bottom Dump Barge

5. Form in which dredged material is presented for disposal: As dredged

6. Total quantity (cubic meters): 7646 m³ (10,000 cy)

7. Expected frequency of dumping (for reporting period):
   a. one time annually

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9. Properties of dredged material:
   a. Solubility (% water) NOT APPLICABLE
   b. Density (gm/cc)
   c. pH
   d. % sand     % silt     % clay

10. Method of packaging: NOT APPLICABLE

11. Method of release: BOTTOM DUMP

12. Procedure and site for tank washing:

13. Approved dumping site: OFF JACKSONVILLE HARBOR
   a. Geographical position (latitude and longitude):
      30 21 45 N
      81 18 00 W
   b. Depth of water (meters): 16 meters
   c. Distance from nearest coast (kilometers): 4.2 nautical miles

14. Additional information:
TABLE 34. Results of chemical analyses of sediments collected from the proximity of an Atlantic Ocean disposal site (reference site) and dredged material collected from three stations of Jacksonville Shipyard, Jacksonville, FL.

<table>
<thead>
<tr>
<th>Chemical constituent</th>
<th>Concentration; mg/l (ppm)</th>
<th>Reference site sediments</th>
<th>Station 1</th>
<th>Station 2</th>
<th>Station 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cadmium</td>
<td>&lt;0.56</td>
<td>1.2</td>
<td>1.8</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>&lt;0.01</td>
<td>0.16</td>
<td>0.33</td>
<td>1.3</td>
<td></td>
</tr>
<tr>
<td>Mercury</td>
<td>0.06</td>
<td>0.33</td>
<td>0.22</td>
<td>0.15</td>
<td></td>
</tr>
<tr>
<td>Zinc</td>
<td>&lt;4.8</td>
<td>710</td>
<td>1,600</td>
<td>6,100</td>
<td></td>
</tr>
<tr>
<td>Petroleum hydrocarbons:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fraction 1, aliphatics</td>
<td>&lt;0.2</td>
<td>&lt;0.4</td>
<td>11.0</td>
<td>&lt;0.4</td>
<td></td>
</tr>
<tr>
<td>Fraction 2, aromatics</td>
<td>&lt;0.3</td>
<td>&lt;1.2</td>
<td>&lt;1.1</td>
<td>&lt;0.8</td>
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<td>Polychlorinated biphrenyls (as Aroclor 1254)</td>
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<td>Pesticides:</td>
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<td>Aldrin</td>
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<td>&lt;0.05</td>
<td>&lt;0.05</td>
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<td>Lindane</td>
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<td>&lt;0.05</td>
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<td>Heptachlor</td>
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<td>&lt;0.05</td>
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<td>&lt;0.05</td>
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<td>&lt;0.05</td>
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<tr>
<td>Chlordane</td>
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<td>&lt;0.05</td>
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<td>Dieldrin</td>
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<td>&lt;0.05</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
<td></td>
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<tr>
<td>Endrin</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
<td></td>
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<tr>
<td>Toxaphene</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
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<tr>
<td>Mirex</td>
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<tr>
<td>Methoxychlor</td>
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<td>&lt;0.05</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
<td></td>
</tr>
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</table>
LONDON DUMPING TION

1. Issuing Authority:
   Division South Pacific District Los Angeles

2. Permit start date/expire date:
   Permittee: Atkinson Marine Corporation
   Date issued: 19 May 1983 Permit No. 82-88-RA
   Start Date: 19 May 1983 Expiry Date: 19 May 1986

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. San Diego Harbor, California

4. Specification of dredged material and process from which derived:
   a. Description: Silt, Sand
   b. Mode of dredging: Clamshell
   c. Mode of transportation: Barge

5. Form in which dredged material is presented for disposal: Slurry

6. Total quantity (cubic meters): 680,664 cubic yards

7. Expected frequency of dumping (for reporting period):
   a. Daily during maintenance dredging
   b. Actual start: ___________________ Actual completion: ___________________
8. Chemical composition:
   Copper
   Lead
   Zinc
   Cadmium
   Silver

9. Properties of dredged material:
   a. Solubility (% water)
   b. Density (gm/cc)
   c. pH
   d. % sand______  % silt_______  % clay__________

10. Method of packaging:
11. Method of release: Bottom Dumping from Barge
12. Procedure and site for tank washing: Hosing down at approved site
13. Approved dumping site: LA-5
    a. Geographical position (latitide and longitude): 32°3′50″N, 117°20′40″W
    b. Depth of water (meters): 100 fathoms
    c. Distance from nearest coast (kilometers): 7.7 nautical miles from shore
14. Additional information:
1. Issuing Authority:
   Division South Pacific   District Los Angeles

2. Permit start date/expire date:
   Permittee: City of Newport Beach
   Date issued: 28 January 1983   Permit No. 82-112-RA
   Start Date: 28 January 1983   Expiry Date: 28 January 1986

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Newport Harbor, California

4. Specification of dredged material and process from which derived:
   a. Description: Silt, Sand
   b. Mode of dredging: Suction
   c. Mode of transportation: Barge

5. Form in which dredged material is presented for disposal: Slurry

6. Total quantity (cubic meters): 20,000 cubic yards

7. Expected frequency of dumping (for reporting period):
   a. Daily during maintenance dredging
   b. Actual start: 28 March 1983   Actual completion: __________
8. Chemical composition:

Cadmium
Copper
Mercury

9. Properties of dredged material:

a. Solubility (% water)

b. Density (gm/cc)

c. pH

d. % sand 60   % silt 35   % clay 5

10. Method of packaging:

11. Method of release: Bottom Dumping from Barge

12. Procedure and site for tank washing: Hosing down at approved site

13. Approved dumping site: LA-3

   a. Geographical position (latitude and longitude): 33°31'42"N, 117°54'48"W

   b. Depth of water (meters): 250 fathoms

   c. Distance from nearest coast (kilometers): 4.0 nautical miles from harbor mouth

14. Additional information:
1. Issuing Authority:
   Division South Pacific  District Los Angeles

2. Permit start date/expire date:
   Permittee: National Steel and Shipbuilding Company
   Date issued: 4 March 1983  Permit No. 82-193-RA
   Start Date: 4 March 1983  Expiry Date: 4 March 1986

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. San Diego Harbor, California

4. Specification of dredged material and process from which derived:
   a. Description: Silt, Sand
   b. Mode of dredging: Clamshell
   c. Mode of transportation: Barge

5. Form in which dredged material is presented for disposal: Slurry

6. Total quantity (cubic meters): 300,001 cubic yards

7. Expected frequency of dumping (for reporting period):
   a. Daily during maintenance dredging
   b. Actual start: 4 April 1983  Actual completion: 1 May 1983
8. Chemical composition:
   Cadmium  
   Lead  
   Chromium  
   Zinc  
   Copper  
   Petroleum hydro-carbons  
   Mercury  

9. Properties of dredged material:
   a. Solubility (% water)  
   b. Density (gm/cc)  
   c. pH  
   d. % sand 23  % silt 70  % clay 7  

10. Method of packaging: 
11. Method of release: Bottom Dumping from Barge 
12. Procedure and site for tank washing: Hosing down at approved site 
13. Approved dumping site: LA-5 
   a. Geographical position (latitude and longitude): 32°36'50"N, 117°29'40"W  
   b. Depth of water (meters): 100 fathoms  
   c. Distance from nearest coast (kilometers): 7.7 nautical miles from shore  
14. Additional information:
1. Issuing Authority:
   Division South Pacific District Los Angeles

2. Permit start date/expire date:
   Permittee: National Steel and Shipbuilding Company
   Date issued: 20 April 1983 Permit No. 82-167-RA
   Start Date: 20 April 1983 Expiry Date: 20 April 1986

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. San Diego Harbor, California

4. Specification of dredged material and process from which derived:
   a. Description: Silt, Sand

   b. Mode of dredging: Clamshell

   c. Mode of transportation: Barge

5. Form in which dredged material is presented for disposal: Slurry

6. Total quantity (cubic meters): 17,000 cubic yards

7. Expected frequency of dumping (for reporting period):
   a. Daily during maintenance dredging
   b. Actual start: 26 April 1983 Actual completion: 10 Jan 1984
8. Chemical composition:
   - Cadmium
   - Mercury
   - Lead
   - Chromium
   - Zinc
   - Copper
   - Petroleum hydrocarbons

9. Properties of dredged material:
   a. Solubility (% water)
   b. Density (gm/cc)
   c. pH
   d. % sand 12  % silt 76  % clay 12

10. Method of packaging:

11. Method of release: Bottom Dumping from Barge

12. Procedure and site for tank washing: Hosing down at approved site

13. Approved dumping site: LA-5
   a. Geographical position (latitude and longitude): 32°36'50"N, 117°20'40"W
   b. Depth of water (meters): 100 fathoms
   c. Distance from nearest coast (kilometers): 7.7 nautical miles from shore

14. Additional information:
REPORT OF OCEAN DUMPING PERMITS:

1. Issuing Authority:
   Division: South Pacific
   District: Los Angeles

2. Permit start date/expire date:
   Permittee: U.S. Naval Facilities Engineering Command
   Date issued: 10 December 1982
   Permit No.: 82-139-RA
   Start Date: 10 December 1982
   Expiry Date: 10 December 1985

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. San Diego Harbor, California

4. Specification of dredged material and process from which derived:
   a. Description: Silt, Sand
   b. Mode of dredging: Clamshell
   c. Mode of transportation: Barge

5. Form in which dredged material is presented for disposal: Slurry

6. Total quantity (cubic meters): 355,610 cubic yards

7. Expected frequency of dumping (for reporting period):
   a. Daily during maintenance dredging
   b. Actual start: 14 May 1983
   Actual completion: 5 July 1983
8. Chemical composition:
Cadmium
Chromium
Copper
Mercury

9. Properties of dredged material:
   a. Solubility (% water)
   b. Density (gm/cc)
   c. pH
   d. % sand _______ % silt _______ % clay _______

34% Silt/Clay (Sediment type: Fine Sand)
76% Silt/Clay (Sediment type: Sand-Silt-Clay)

10. Method of packaging:

11. Method of release. Bottom Dumping from Barge

12. Procedure and site for tank washing: Hosing down at approved site

13. Approved dumping site: LA-5
   a. Geographical position (latitude and longitude): 34°50'N, 117°20'40"W
   b. Depth of water (meters): 100 fathoms
   c. Distance from nearest coast (kilometers): 7.7 nautical miles from shore

14. Additional information:
1. Issuing Authority:
   Division South Pacific  District Los Angeles

2. Permit start date/expire date:
   Permittee: Southwest Marine, Inc.
   Date issued: 20 May 1983  Permit No. 82-197-RA
   Start Date: 20 May 1983  Expiry Date: 20 May 1986

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. San Diego Harbor, California

4. Specification of dredged material and process from which derived:
   a. Description: Silt, Sand
   b. Mode of dredging: Clamshell
   c. Mode of transportation: Barge

5. Form in which dredged material is presented for disposal: Slurry

6. Total quantity (cubic meters): 410,000 cubic yards

7. Expected frequency of dumping (for reporting period):
   a. Daily during maintenance dredging
   b. Actual start: 24 May 1983  Actual completion: 30 May 1984
8. Chemical composition:
   Lead
   Copper

9. Properties of dredged material:
   a. Solubility (% water)
   b. Density (gm/cc)
   c. pH
   d. % sand 24  % silt 69  % clay 7

10. Method of packaging:
11. Method of release: Bottom Dumping from Barge
12. Procedure and site for tank washing: Hosing down at approved site
13. Approved dumping site: LA-5
   a. Geographical position (latitude and longitude): 32°36'50"N, 117°20'40"W
   b. Depth of water (meters): 100 fathoms
   c. Distance from nearest coast (kilometers): 7.7 nautical miles from shore
14. Additional information:
1. Issuing Authority:
   Division South Pacific District Los Angeles
2. Permit start date/expire date:
   Permittee: San Diego Unified Port District
   Date issued: 26 January 1983 Permit No. 80-253-RA
   Start Date: 26 January 1983 Expiry Date: 26 January 1986
3. Country of origin of wastes and port of loading:
   a. United States of America
   b. San Diego Harbor, California
4. Specification of dredged material and process from which derived:
   a. Description: Silt, Sand
      b. Mode of dredging: Clamshell
      c. Mode of transportation: Barge
5. Form in which dredged material is presented for disposal: Slurry
6. Total quantity (cubic meters): 28,700 cubic yards
7. Expected frequency of dumping (for reporting period):
   a. Daily during maintenance dredging
3. Chemical composition:
   Copper

9. Properties of dredged material:
   a. Solubility (% water)
   b. Density (gm/cc)
   c. pH

<table>
<thead>
<tr>
<th>Site</th>
<th>% sand</th>
<th>% silt</th>
<th>% clay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awlter Creek</td>
<td>20</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>West Basin</td>
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<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Faith Ave. Marina</td>
<td>35</td>
<td>15</td>
<td>30</td>
</tr>
</tbody>
</table>

10. Method of packaging:

11. Method of release: Bottom Dumping from Barge

12. Procedure and site for tank washing: Hosing down at approved site

13. Approved dumping site: NA
   a. Geographical position (latitude and longitude): 45°40'50"N, 117°56'40"W
   b. Depth of water (meters): 100 fathoms
   c. Distance from nearest coast (kilometers): 7.7 nautical miles

14. Additional information:
LONDON DUMPING CONVENTION

1. Issuing Authority:
Division South Pacific  District Los Angeles

2. Permit start date/expire date:
Permittee: San Diego Unified Port District
Date issued: 4 February 1983  Permit No. 81-55-RA
Start Date: 4 February 1983  Expiry Date: 4 February 1986

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. San Diego Harbor, California

4. Specification of dredged material and process from which derived:
   a. Description: Silt, Sand
   b. Mode of dredging: Clamshell
   c. Mode of transportation: Barge

5. Form in which dredged material is presented for disposal: Slurry

6. Total quantity (cubic meters): 71,140 cubic yards

7. Expected frequency of dumping (for reporting period):
   a. Daily during maintenance dredging
8. Chemical composition:
   Copper

9. Properties of dredged material:
   a. Solubility (% water)
   b. Density (gm/cc)
   c. pH

<table>
<thead>
<tr>
<th>area</th>
<th>% sand</th>
<th>% silt</th>
<th>% clay</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>10</td>
<td>55</td>
<td>35</td>
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<tr>
<td>G</td>
<td>15</td>
<td>45</td>
<td>40</td>
</tr>
<tr>
<td>H</td>
<td>20</td>
<td>45</td>
<td>35</td>
</tr>
</tbody>
</table>

10. Method of packaging:
11. Method of release: Bottom Dumping from Barge
12. Procedure and site for tank washing: Hosing down at approved site
13. Approved dumping site: LA-5
   a. Geographical position (latitude and longitude): 32°36'50"N, 117°20'40"W
   b. Depth of water (meters): 100 fathoms
   c. Distance from nearest coast (kilometers): 7.7 nautical miles from shore

14. Additional information:
LONDON DUMPING INVENTION


1. Issuing Authority:
   Division South Pacific  District Los Angeles

2. Permit start date/expire date:
   Permittee: Port of Los Angeles
   Date issued: 27 October 1982  Permit No. 82-111-AA
   Start Date: 27 October 1982  Expiry Date: 27 October 1985

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Los Angeles Harbor, California

4. Specification of dredged material and process from which derived:
   a. Description: Silt, Sand
   b. Mode of dredging: Clamshell
   c. Mode of transportation: Barge

5. Form in which dredged material is presented for disposal: Slurry

6. Total quantity (cubic meters): 800 cubic yards

7. Expected frequency of dumping (for reporting period):
   a. Daily during maintenance dredging
8. Chemical composition:
   Cadmium
   Copper
   Lead
   Mercury

9. Properties of dredged material:
   a. Solubility (% water)
   b. Density (gm/cc)
   c. pH
   d. % sand 84  % silt 12  % clay 4

10. Method of packaging:

11. Method of release: Bottom Dumping from Barge

12. Procedure and site for tank washing: Hosing down at approved site

13. Approved dumping site: LA-2
   a. Geographical position (latitude and longitude): 33°37'06"N, 118°17'24"
   b. Depth of water (meters): 100 fathoms
   c. Distance from nearest coast (kilometers): 5.3 nautical miles

14. Additional information:
Dredging of Magazine Loch  
Pearl Harbor, Hawaii

LONDON DUMPING CONVENTION

1. Issuing Authority:
   Division Pacific Ocean  
   District Honolulu

2. Permit start date/expire date:
   Permittee: U. S. Navy
   Date issued: 15 June 1982
   Permit No. PODCO-O 1657-D
   Start Date: 31 Dec 84

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Pearl Harbor, Hawaii

4. Specification of dredged material and process from which derived:
   a. Description: Silt, Sand, Coral
   b. Mode of dredging: Clamshell
   c. Mode of transportation: Barge

5. Form in which dredged material is presented for disposal: Crushed

6. Total quantity (cubic meters): 54,668 m³

7. Expected frequency of dumping (for reporting period):
   a. 674 m³/day
   b. Actual start: Aug 82  
      Actual completion: May 83
8. Chemical composition: N/A

9. Properties of dredged material:
   a. Solubility (% water) 64 percent
   b. Density (gm/cc) N/A
   c. pH N/A
   d. % sand _____ % silt _____ % clay _______

10. Method of packaging: N/A

11. Method of release: Bottom Dump

12. Procedure and site for tank washing:

13. Approved dumping site: Mamala Bay
   a. Geographical position (latitude and longitude): 21° 15' 10" N
      157° 56' 50" W
   b. Depth of water (meters): 100 m
   c. Distance from nearest coast (kilometers): 7.4 m

14. Additional information:

   An environmental assessment and ecological assessment (bioassay testing) was completed in February 1982 by AECOS, Inc., for the Pacific Division, Naval Facilities Engineering Command. The February 1982 states:

   "The proposed action is not anticipated to have a significant environmental impact nor be environmentally controversial. Bioassay testing on test sediment from three sites within the proposed dredged area showed no evidence of toxic effects. Dredging will occur within Pearl Harbor in an area entirely under U. S. Navy control. Environmental conditions in this part of the Harbor are not conducive to high biological productivity or diversity. Disposal will occur at an offshore site designated by EPA."
1. Issuing Authority:
   Division: New England District: N/A

2. Permit start date/expire date:
   Date issued: N/A Permit No. N/A
   Start Date: N/A Expire Date: April 1983

3. Country of origin of wastes and port of loading:
   a. United States of America

4. Specification of dredged material and process from which derived:
   a. Description: Clayey organic silt
   b. Mode of dredging: Clamshell
   c. Mode of transportation: Scow

5. Form in which dredged material is presented for disposal:
   Saturated cohesive & non-cohesive material

6. Total quantity (cubic meters): 114,750 m³

7. Expected frequency of dumping (1 or more reporting period):
   a. 2-3 loads per day
   b. Actual start: January 1983
   c. Actual completion: April 1983
### Chemical Composition:

#### Nutrients:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Sample A</th>
<th>Sample B</th>
<th>Sample C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrite Nitrogen ppm</td>
<td>0.005</td>
<td>0.005</td>
<td>0.005</td>
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<tr>
<td>Nitrate Nitrogen ppm</td>
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<td>0.02</td>
<td>0.03</td>
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<td>Ammonia Nitrogen ppm</td>
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<td>Sulfate (SO4) ppm</td>
<td>2790</td>
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<td>Ortho, ppm</td>
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<tr>
<td>total, ppm</td>
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<td>0.44</td>
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#### Metals:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Sample A</th>
<th>Sample B</th>
<th>Sample C</th>
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<tbody>
<tr>
<td>Mercury ppb</td>
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<td>Lead ppb</td>
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<tr>
<td>Zinc ppb</td>
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<td>&lt;4</td>
<td>&lt;4</td>
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<tr>
<td>Arsenic ppb</td>
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<td>&lt;4</td>
<td>&lt;4</td>
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<td>Copper ppb</td>
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<tr>
<td>Nickel ppb</td>
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<tr>
<td>Silver ppb</td>
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<td>13</td>
<td>8</td>
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<tr>
<td>Vanadium ppb</td>
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<td>&lt;40</td>
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<td>Cadmium ionic ppm</td>
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<td>3.4</td>
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#### Organics:

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<tr>
<th>Parameter</th>
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<tbody>
<tr>
<td>Oil &amp; Grease</td>
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<td>&lt;0.8</td>
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<tr>
<td>Total PCB ppb</td>
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<tr>
<td>Total DDT ppb</td>
<td>&lt;0.001</td>
<td>----</td>
<td>----</td>
</tr>
</tbody>
</table>

#### Properties of Dredged Material:

a. Solubility (% water)

b. Density (gm/cc)

c. pH

d. % sand _____ % silt _____ % clay _____

#### Method of Packaging:

#### Method of Release:

Six bottom doors open hydraulically. Material is released intermittently while scow is held at a complete halt.

#### Procedure and Site for Tank Washing:

The washing of scow is done either at dredge or disposal site.
11. **Approach shipping site:**

   a. **Geographical position (latitude and longitude):**
      
      \[ 12^\circ 25.7'N \]
      \[ 79^\circ 24.0'W \]

   b. **Depth of Water (meters):**  

   c. **Distance from nearest coast (kilometers):** 13.7 km

14. **Additional information:**

   **Liquid Phase Bioassay:** LFC not exceeded

   **Suspend Particulate Phase Bioassay:** LFC not exceeded

   **Solid Phase Bioassay:** LFC not exceeded

   **Bioaccumulation:** No significant effect. Elevated levels of Hg and PHC in mercenaria.

   This dumpsite is subject to monitoring studies under the disposal area monitoring system (DAMCS) program. The program is designed to identify and evaluate impacts resulting from the disposal of dredged materials at designated dump sites. The DAMCS program continually contributes to the development of new monitoring methodologies that reflect on the efficiency of field observations and logistics, as well as time.

   This program was designated to comply with sections 228.9 and 228.10 of the Ocean Dumping Act relative to dump site monitoring and the evaluation of disposal impacts.
1. Issuing Authority:
Division: New England  District: N/A

2. Permit start date/expire date:
Permittee: Weymouth/Braintree
Date issued: N/A  Permit No.
Start Date:  expire Date: 

3. Country of origin of wastes and port of loading:
a. United States of America

4. Specification of dredged material and process from which derived:
a. Description: Primarily silt
b. Mode of dredging: Clamshell
c. Mode of transportation: Scow

5. Form in which dredged material is presented for disposal:
Saturated cohesive & non-cohesive material

6. Total quantity (cubic meters): 1300

7. Expected frequency of dumping (for reporting period):
a. 1 load
b. Actual start: June 1983
c. Actual completion: June 1983
## Chemical composition:

### ELUTRIATE ANALYSIS

#### Constituents:

#### Nutrients:

<table>
<thead>
<tr>
<th>Constituent</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrate (N) ng/l</td>
<td>0.024</td>
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<tr>
<td>Nitrate (No) mg/l</td>
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<tr>
<td>Sulfate (SO₄) mg/l</td>
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<td>Phosphorus (P)</td>
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<tr>
<td>Ortho mg/l</td>
<td>0.135</td>
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<tr>
<td>Total mg/l</td>
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#### Metals:

<table>
<thead>
<tr>
<th>Constituent</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury (Hg) ug/l</td>
<td>&lt;0.5</td>
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<tr>
<td>Lead (Pb) ug/l</td>
<td>0.123</td>
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<tr>
<td>Zinc (Zn) mg/l</td>
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<tr>
<td>Arsenic (As) mg/l</td>
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<td>Cadmium (Cd) mg/l</td>
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<td>Chromium (Cr) mg/l</td>
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<td>Copper (Cu) mg/l</td>
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<td>Nickel (Ni) mg/l</td>
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<td>Vanadium (V) mg/l</td>
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<td>Total PCB ug/l</td>
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<tr>
<td>Total DDT ug/l</td>
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### Bulk Sediment Analysis

#### Metals:

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<td>1.2</td>
<td>1.3</td>
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<tr>
<td>ppm Lead</td>
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<td>129.0</td>
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<td>ppm Zinc</td>
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<td>304.0</td>
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<td>ppm Arsenic</td>
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<td>11.0</td>
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<td>100.0</td>
<td>99.0</td>
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<tr>
<td>ppm Copper</td>
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<td>144.0</td>
<td>125.0</td>
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<td>ppm Nickel</td>
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<td>44.0</td>
<td>70.0</td>
<td>73.0</td>
<td>63.0</td>
<td>46.0</td>
</tr>
<tr>
<td>ppm Vanadium</td>
<td>260.0</td>
<td>140.0</td>
<td>350.0</td>
<td>210.0</td>
<td>100.0</td>
<td>170.0</td>
</tr>
</tbody>
</table>

#### Organic:

| ppm Oil & Grease | 4800.0 | 598.0 | 4680.0 | 2800.0 | 2990.0 | 5750.0 |

---

130
7. Properties of dredged material:
   a. Solubility (% water)
   b. Density (gm/cc)
   c. pH
   d. % sand = _____ % silt = _____ % clay = ______

10. Method of packaging:

11. Method of release: Six bottom doors open hydraulically. Material is released intermittently while scow is held at a complete halt.

12. Procedure and site for tank washing: Hopper is rinsed at either the approved dredge or disposal site.

13. Approved dumping site: Foul area
   a. Geographical position (latitude and longitude):
      __42° 25.7’N
      __70° 34.0’W
   b. Depth of Water (meters): __77m__
   c. Distance from nearest coast (kilometers): __18.3km__

14. Additional information: No significant effect indicated by bioassay or bioaccumulation tests.

This dumpsite is subject to monitoring studies under the disposal area monitoring system (DAMOS) program. The program is designed to identify and evaluate impacts resulting from the disposal of dredged materials at designated dump sites. The DAMOS program continually contributes to the development of new monitoring methodologies that reflect on the efficiency of field observations and logistics, as well as time.

This program was designated to comply with sections 228.9 and 228.10 of the Ocean Dumping Act relative to dump site monitoring and the evaluation of disposal impacts.
LONDON DUMPING CONVENTION

Report of Ocean Dumping Permits - CY 83

1. Issuing Authority:
   Division North Atlantic          District New York

2. Permit start date/expire date:
   Permittee: New York District
   Adopted 1933
   Date issued: Permit 18 Jun 81    Permit No. Fed Proj #63; NY & NJ Channels
   Start Date: 8 Jun 81             Expiry Date: completed

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Perth Amboy Anchorage, NJ

4. Specification of dredged material and process from which derived:
   a. Description: silty clay
   b. Mode of dredging: clamshell dredge; Great Lakes Dredge & Dock
   c. Mode of transportation: towed barge; 4000cy capacity

5. Form in which dredged material is presented for disposal: slurry-noncohesive character.

6. Total quantity (cubic meters): 120,900cy = 92,400 m³

7. Expected frequency of dumping (for reporting period):
   a. 2 trips/day
   b. Actual start: 3 Jan 83         Actual completion: 12 Jan 83

8. Chemical composition:
   in ppb
<table>
<thead>
<tr>
<th></th>
<th>Site Water (S.D.)</th>
<th>Elutriate (S.D.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petrol. Hydro.</td>
<td>&lt; 20 (&lt; 0)</td>
<td>&lt; 200.0 (-)</td>
</tr>
<tr>
<td>PCB</td>
<td>&lt; 0.1 (-)</td>
<td>&lt; 0.1 (-)</td>
</tr>
<tr>
<td>Hg</td>
<td>&lt; 0.2 (-)</td>
<td>&lt; 0.2 (-)</td>
</tr>
<tr>
<td>Cd</td>
<td>&lt; 0.1 (-)</td>
<td>&lt; 0.1 (-)</td>
</tr>
<tr>
<td>DDT</td>
<td>&lt; 0.05 (-)</td>
<td>&lt; 0.05 (-)</td>
</tr>
<tr>
<td>Pb</td>
<td>&lt; 10 (-)</td>
<td>&lt; 10.0 (-)</td>
</tr>
</tbody>
</table>

132
9. Properties of dredged material:
   a. Solubility (% water) N Available
   b. Density (gm/cc) N Available
   c. pH N Available
   d. % sand 22.8 % silt % clay 38.4

10. Method of packing: None


13. Approved dumping site:
   a. Geographical position (latitude and longitude): 40° 22'N; 73° 51'W
   b. Depth of water (meters): 20 m.
   c. Distance from nearest coast (kilometers): 9 Km.

Bioassays and Bioassessment Evaluations

a. **Liquid Phase Bioassay** (EC50 or LC50 for each test species)@ 96 hrs.
   - *Skeletonema costatum* > 100%
   - *Mysisdopsis bahia* > 100%
   - *Menidia menidia* > 100%

b. **Suspended Particulate Phase Bioassay** (EC50 or LC 50 per test species)@ 96 hrs.
   - *Acartia tonsa* > 100%
   - *Mysisdopsis bahia* > 100%
   - *Menidia menidia* > 100%

c. **Solid Phase Bioassay** (% mortality difference with respect to control)
   - *Palamonetes sp.* 0
   - *Mercenaria mercenaria* 0 negative number indicates
   - *Nereis virens* -4.0 greater mortality in control

(* statistical significance, 95% confidence level)

10-day Bioaccumulation Test Data: There was no statistically significant bioaccumulation of contaminants in any of the test species shown for the Solid Phase Bioassay.
LONDON DUMPING CONVENTION

Report of Ocean Dumping Permits - CY 83

1. Issuing Authority:
   Division North Atlantic    District New York

2. Permit start date/expire date:
   Permittee: New York District
   Adapted 1922
   Date issued: Permit - 14 Mar 83  Permit No.: Newark Bay, Hackensack and Passaic Rivers
   Start Date: 14 Mar 83  Expiry Date: Completed

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Port Newark Pierhead Channel, NJ

4. Specification of dredged material and process from which derived:
   a. Description: silty clay
   b. Mode of dredging: clamshell dredge; Weeks Dredging Co.
   c. Mode of transportation: towed barge; 4,000 cy capacity

5. Form in which dredged material is presented for disposal: slurry-noncohesive character.

6. Total quantity (cubic meters): 468,400cy = 356,100 m³

7. Expected frequency of dumping (for reporting period):
   a. 2 trips/day
   b. Actual start: 24 May 83  c. Actual completion: 15 Jul 83

8. Chemical composition:
   in ppb
<table>
<thead>
<tr>
<th></th>
<th>Site Water (S.D.)</th>
<th>Elutriate (S.D.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petrol. Hydro.</td>
<td>&lt; 50.0 (-)</td>
<td>&lt; 50.0 (-)</td>
</tr>
<tr>
<td>PCB</td>
<td>&lt; 0.1 (-)</td>
<td>&lt; 0.1 (-)</td>
</tr>
<tr>
<td>Hg</td>
<td>&lt; 0.2 (-)</td>
<td>&lt; 0.2 (-)</td>
</tr>
<tr>
<td>Cd</td>
<td>&lt; 0.2 (-)</td>
<td>&lt; 0.2 (-)</td>
</tr>
</tbody>
</table>
9. Properties of dredged material:
   a. Solubility (% water) 31.1
   b. Density (gm/cc) Not Available
   c. pH Not Available
   d. % sand 15.8 % silt 37.6 % clay 42.8

10. Method of packing: None


13. Approved dumping site:
   a. Geographical position (latitude and longitude): 40° 22'N; 73° 51'W
   b. Depth of water (meters): 20 m.
   c. Distance from nearest coast (kilometers): 9 Km.


   NOTE: This project was "capped" with material from the Passaic River Project (see pp. 7-9) and the Red Hook Anchorage Project (see pp. 10-12).
Bioassays and Bioassessment Evaluations

a. **Liquid Phase Bioassay** (EC50 or LC50 for each test species)@ 96 hrs.

   - *Skeletonema costatum* 9.6%
   - *Mysidopsis bahia* 55.0%
   - *Menidia menidia* 67.0%

b. **Suspended Particulate Phase Bioassay** (EC50 or LC50 per test species)@ 96 hrs.

   - *Acartia tonsa* 100.0%
   - *Mysidopsis bahia* 98.0%
   - *Menidia menidia* > 100.0%

c. **Solid Phase Bioassay** (% mortality difference with respect to control)

   - *Palamonetes sp.* 11.3*
   - *Mercenaria mercenaria* 0.0
   - *Nereis virens* 4.3

   (* statistical significance, 95% confidence level

10-day Bioaccumulation Test Data: Petroleum Hydrocarbons were statistically significant in *Mercenaria* sp. (.695 ppm) and *Nereis* sp. (.733 ppm).

   NOTE: Solid Phase Data is "blocked" data for an original set of testing and a final set which was divided into 3 sections.
LONDON DUMPING CONVENTION
Report of Ocean Dumping Permits - CY 83

1. Issuing Authority:
   Division: North Atlantic
   District: New York

2. Permit start date/expire date:
   Permittee: New York District
   Adopted 1907
   Date issued: Permit: 3 Aug 82 Permit No.: Fed. Proj. # 64, Passaic River
   Start Date: 3 Aug 82 Expiry Date: Completed

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Passaic River, New Jersey

4. Specification of dredged material and process from which derived:
   a. Description: silty clay
   b. Mode of dredging: clamshell dredge; Weeks Dredging Co.
   c. Mode of transportation: towed barge; 4000 cy capacity

5. Form in which dredged material is presented for disposal: slurry-noncohesive character.

6. Total quantity (cubic meters): 702,400 cy = 537,100 m³

7. Expected frequency of dumping (for reporting period):
   a. 3 trips/day
   b. Actual start: 15 Jul 83
   c. Actual completion: 14 Oct 83

8. Chemical composition:
   in ppb
   Site Water (S.D.)
   Elutriate (S.D.)
   Pb 10.0 (-) 10.0 (-)
   PCB 0.01 (-) 0.01 (-)
   Hg 0.2 (-) 0.2 (-)
   Cd 0.1 (-) 0.1 (-)
   DDT 0.5 (-) 0.05 (-)
9. Properties of dredged material:
   a. Solubility (% water) Not Available
   b. Density (gm/cc) Not Available
   c. pH Not Available
   d. % sand 8.7% silt 56.3% clay 35.0

   NOTE: Grain size data is from 17 Aug 1978 data.

10. Method of packing: None


13. Approved dumping site:
   a. Geographical position (latitude and longitude): 40° 22'N; 73° 51'W
   b. Depth of water (meters): 20 m.
   c. Distance from nearest coast (kilometers): 9 Km.

Bioassays and Bioassessment Evaluations

a. Liquid Phase Bioassay (EC50 or LC50 for each test species)@ 96 hrs.
   - Skeletonema costatum: 33.0%
   - Mysidopsis bahia: 40.0%
   - Menidia menidia: 52.0%

b. Suspended Particulate Phase Bioassay (EC50 or LC50 per test species)@ 96 hrs.
   - Acartia tonsa: 26.0%
   - Mysidopsis bahia: 35.0%
   - Menidia menidia: 28.0%

c. Solid Phase Bioassay (% mortality difference with respect to control)
   - Palamnetes sp.: 2.0 Negative Number indicates greater mortality in control
   - Mercenaria mercenaria: 0.0
   - Nereis virens: -1.0

(* statistical significance, 95% confidence level)

10-day Bioaccumulation Test Data:

Petroleum Hydrocarbons were statistically significant in Mercenaria sp. (.65 ppm) and Nereis sp. (.75 ppm).

PCB's were statistically significant in Mercenaria sp. (.11 ppm) and Nereis sp. (.12 ppm).
LONDON DUMPING CONVENTION

Report of Ocean Dumping Permits - CY 83

1. Issuing Authority:
   Division North Atlantic
   District New York

2. Permit start date/expire date:
   Permittee: New York District
   Adopted 1965
   Date issued: Permit 9 Apr 81
   Permit No. Fed. Proj. #62; NY Harbor
   Start Date: 9 Apr 81
   Expiry Date: Completed

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Red Hook Anchorage, NY

4. Specification of dredged material and process from which derived:
   a. Description: silty clay
   b. Mode of dredging: clamshell dredge; Great Lakes Dredge & Dock
   c. Mode of transportation: towed barges; 4000 & 2000 cy capacity

5. Form in which dredged material is presented for disposal: slurry-noncohesive character.

6. Total quantity (cubic meters): 749,000cy = 572,700 m³

7. Expected frequency of dumping (for reporting period):
   a. 4 trips/day
   b. Actual start: 10 Oct 83
   c. Actual completion: 20 Dec 83

8. Chemical composition:
   Site Water (S.D.) Elutriate (S.D.)
   in ppb
   Petrol. Hydro. < 50.0 (-) < 50.0 (-)
   PCB < 0.1 (-) < 0.1 (-)
   Hg < 0.2 (-) < 0.2 (-)
   Cd < 0.1 (-) < 0.1 (-)
9. Properties of dredged material:
   a. Solubility (% water)  72.0
   b. Density (gm/cc)     Not Available
   c. pH                  Not Available
   d. % sand 56.8 % silt 27.8 % clay 15.4

10. Method of packing: None


13. Approved dumping site:
   a. Geographical position (latitude and longitude): 40° 22' N; 73° 51' W
   b. Depth of water (meters): 20 m.
   c. Distance from nearest coast (kilometers): 9 km.

Bioassays and Bioassessment Evaluations

a. Liquid Phase Bioassay (EC50 or LC50 per each test species) @ 96 h.s.

<table>
<thead>
<tr>
<th>Species</th>
<th>Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skeletonema costatum</td>
<td>71.0%</td>
</tr>
<tr>
<td>Mysidopsis bahia</td>
<td>&gt; 100.0%</td>
</tr>
<tr>
<td>Menidia menidia</td>
<td>91.0%</td>
</tr>
</tbody>
</table>

b. Suspended Particulate Phase Bioassay (EC50 or LC 50 per test species) @ 96 hrs.

<table>
<thead>
<tr>
<th>Species</th>
<th>Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acartia tonsa</td>
<td>71.0%</td>
</tr>
<tr>
<td>Mysidopsis bahia</td>
<td>&gt; 100.0%</td>
</tr>
<tr>
<td>Menidia menidia</td>
<td>&gt; 100.0%</td>
</tr>
</tbody>
</table>

c. Solid Phase Bioassay (% mortality difference with respect to control)

<table>
<thead>
<tr>
<th>Species</th>
<th>Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palamonetes sp.</td>
<td>1.0</td>
</tr>
<tr>
<td>Mercenaria mercenaria</td>
<td>-1.0</td>
</tr>
<tr>
<td>Nereis virens</td>
<td>-1.0</td>
</tr>
</tbody>
</table>

(* statistical significance, 95% confidence level)

10-day Bioaccumulation Test Data: Petro. Hydro. were statistically significant in Mercenaria sp. (.722 ppm) and Nereis sp. (1.721 ppm).
LONDON DUMPING : VENTION

Report of Ocean Dumping Permits - CY 83

1. Issuing Authority:
   Division North Atlantic                 District New York

2. Permit start date/expire date:
   Permittee: New York District
   Adopted 1962 Fed. Proj. #9, Flushing Bay
   Date issued: Permit- 4 Aug 81 Permit No: & Creek
   Start Date: 4 Aug 81                      Expiry Date: Completed in Jan 84

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Flushing Bay, NY

4. Specification of dredged material and process from which derived:
   a. Description: silty clay
   b. Mode of dredging: clamshell dredge; Weeks Dredging Company
   c. Mode of transportation: towed barge; 4000cy capacity

5. Form in which dredged material is presented for disposal: slurry-noncohesive character.

6. Total quantity (cubic meters): 910,800 & 696,400 m³

7. Expected frequency of dumping (for reporting period):
   a. 4 trips/day
   b. Actual start: 26 Oct 83          c. Actual completion: 28 Dec 83

                           in ppb
     petrol. hydro.       < 200.0 (-)       < 200.0 (-)
     PCB                 < 0.1 (-)          < 0.1 (-)
     Hg                  < 0.2 (-)          < 0.2 (-)
     Cd                  < 0.1 (-)          < 10.0 (-)
     Pb                   (-)                 < 0.05 (-)
     DDT                  (-)                 < 0.05 (-)
9. Properties of dredged material:
   a. Solubility (% water) 63.2
   b. Density (gm/cc) Not Available
   c. pH Not Available
   d. % sand 7.33  % silt 6.50  % clay 44.17

10. Method of packing: None


13. Approved dumping site:
   a. Geographical position (latitude and longitude: 40° 22'N; 73° 51'W
   b. Depth of water (meters): 20 m.
   c. Distance from nearest coast (kilometers): 9 Km.

Bioassays and Bioassessment Evaluations

a. **Liquid Phase Bioassay** (EC50 or LC50 for each test species) @ 96 hrs.

<table>
<thead>
<tr>
<th>Species</th>
<th>EC50/LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skeletonema costatum</td>
<td>&gt; 100.0</td>
</tr>
<tr>
<td>Mysidopsis bahia</td>
<td>&gt; 100.0</td>
</tr>
<tr>
<td>Menidia menidia</td>
<td>48.0</td>
</tr>
</tbody>
</table>

b. **Suspended Particulate Phase Bioassay** (EC50 or LC50 per test species) @ 96 hrs.

<table>
<thead>
<tr>
<th>Species</th>
<th>EC50/LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acartia tonsa</td>
<td>&gt; 100.0</td>
</tr>
<tr>
<td>Mysidopsis bahia</td>
<td>&gt; 100.0</td>
</tr>
<tr>
<td>Menidia menidia</td>
<td>42.0</td>
</tr>
</tbody>
</table>

c. **Solid Phase Bioassay** (% mortality difference with respect to control)

<table>
<thead>
<tr>
<th>Species</th>
<th>Mortality Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palamnetes sp.</td>
<td>1.0</td>
</tr>
<tr>
<td>Mercenaria mercenaria</td>
<td>-1.0</td>
</tr>
<tr>
<td>Nereis virens</td>
<td>-1.0</td>
</tr>
</tbody>
</table>

Negative number indicates greater mortality in control.

(* statistical significance, 95% confidence level)

10-day Bioaccumulation Test Data: Petroleum hydrocarbons were statistically significant in *Mytilus* sp. (4.12 ppm). PCB's were statistically significant in *Nereis* sp. (0.05 ppm).
LONDON DUMPING CONVENTION
Report of Ocean Dump Permits - CY 83

1. Issuing Authority:
Division North Atlantic District Norfolk

2. Permit start date/expire date: NA
Permittee: NA, Federal Project
Date issued: NA Permit No. NA
Start Date: NA Expiry Date: NA

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Chincoteague, Virginia

4. Specification of dredged material and process from which derived:
   a. Description: Clean, medium sand
   b. Mode of dredging: Cutter Suction Dredge
   c. Mode of transportation: Pipeline

5. Form in which dredged material is presented for disposal: slurry,
   12 % sand, 88 % water

6. Total quantity (cubic meters): 50,600

7. Expected frequency of dumping (for reporting period):
   a. 14 hours per day
   b. Actual start: 7 August
   c. Actual completion: 26 September

8. Chemical composition: NA

9. Properties of dredged material:
   a. Solubility (% water) NA
   b. Density (gm/cc) NA

147
c. pH NA

d. % sand 99 % silt 1 % clay 0

10. Method of packaging: NA

11. Method of release: NA

12. Procedure and site for tank washing: NA

13. Approved dumping site:
   a. Geographical position (latitude and longitude): 37°51'30"N, 75°25'30"W
   b. Depth of water (meters): 6
   c. Distance from nearest coast (kilometers): 1

14. Additional information: NA

WANG 0337r/fh
LONDON DUMPING CONVENTION
Report of Ocean Dumping Permits - CY 83

1. Issuing Authority:
   Division South Atlantic        District Wilmington

2. Permit start date/expire dates:
   Permittees: Non-Permit Wilmington District
   Date issued:  Permit No.  
   Start Date:   Expiry Date:  

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Morehead City Harbor

4. Specification of dredged material and process from which derived:
   a. Description: Sand, water slurry
      Maintenance Dredged Material
   b. Mode of dredging: Hopper
   c. Mode of transportation: Hopper

5. Form in which dredged material is presented for disposal: Slurry

6. Total quantity (cubic meters): 649,094 cu m

7. Expected frequency of dumping (for reporting period):
   a. 14 loads per day
   b. Actual start: 8 June 1983  c. Actual completion: 30 August 1983
9. Properties of dredged material:
   a. Solubility (% water)
   b. Density (gm/cc) * 1900
   c. pH - Unknown
   d. % sand  95  % silt  3  % clay  2

10. Method of packaging:
11. Method of release: Bottom dump hopper dredge
12. Procedure and site for tank washing:
13. Approved dumping site:
   a. Geographical position (latitude and longitude):
      34°37.2'N  76°43.0'W
   b. Depth of water (meters): 13 m
   c. Distance from nearest coast (kilometers): 4.9 km
14. Additional information:
LONDON DUMPING CONVENTION

Report of Ocean Dumping Permits - CY 83

1. Issuing Authority:
   Division South Atlantic
   District Wilmington

2. Permit start date/expire date:
   Permit: Non Permit
   Date issued: Permit No.
   Start Date: Expiry Date:

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Wilmington, NC

4. Specification of dredged material and process from which derived:
   a. Description: Sand, silt, clay slurry
   b. Mode of dredging: Hopper Dredge
   c. Mode of transportation: Hopper Dredge

5. Form in which dredged material is presented for disposal: Slurry

6. Total quantity (cubic meters): 779,005 cu m

7. Expected frequency of dumping (for reporting period):
   a. 17 loads per day; 16,500 cu m/day
8. Chemical composition:

9. Properties of dredged material:
   a. Solubility (% water) Unknown
   b. Density (g/cm³): 1500 to 1950
   c. pH: Unknown
   d. % sand 45  % silt 35  % clay 20

10. Method of packaging:

11. Method of release: Bottom dump Hopper Dredge

12. Procedure and site for tank washing:

13. Approved dumping site:
   a. Geographical position (latitude and longitude):
      33°48'30"N
      78°02'56"W

   b. Depth of water (meters):
      13 m

   c. Distance from nearest coast (kilometers):
      5 km

14. Additional information:
LONDON DUMPING CONVENTION

Report of Ocean Dumping Permits - CT 1983

1. Issuing Authority:
   Division SOUTH ATLANTIC District CHARLESTON

2. Permit start date/expire date:
   Permittee: None required for US Army Corps of Engineers
   Date issued: N/A Permit No. N/A
   Start Date: N/A Expiry Date: N/A

3. Country of origin of wastes and port of loading:
   a. United States of America, South Carolina
   b. Charleston, SC

4. Specification of dredged material and process from which derived:
   a. Description: Primarily calcium carbonate shell-rich quartz with small amounts of sandy clayey silt poor in calcium carbonate.
   b. Mode of dredging: Hopper Dredge
   c. Mode of transportation: Hopper Dredge (SUGAR ISLAND)

5. Form in which dredged material is presented for disposal: Slurry, non-cohesive

6. Total quantity (cubic meters): 397092 m³

7. Expected frequency of dumping (for reporting period):
   a. Average 20 loads daily, seven days per week
   b. Actual start: 1 Nov 83 c. Actual completion: 14 Dec 83
8. Chemical composition:

See attached, Figure 1, Table A-7, and Table A-8.

9. Properties of dredged material:

a. Solubility (% water)  Has not been determined

b. Density (gm/cc)  Specific gravity = 1.67

c. pH  7.0 - 7.3

d. % sand  % silt  % clay

(see attached table 86 & Figure 2)

10. Method of packaging:  N/A

11. Method of release:  Direct release from Hopper into water.

12. Procedure and site for tank washing:  N/A

13. Approved dumping site:


b. Depth of water (meters):  9.80 - 1520 Meters

c. Distance from nearest coast (kilometers):  6.95 Kilometers

14. Additional information:

See attached "Summary and Conclusions"
PART I. SUMMARY AND CONCLUSIONS

1. Sediments from four sites (Fig. 1) in the entrance to Charleston Harbor, South Carolina, were bioassayed following Federal guidelines as outlined in the EPA/CE Manual*. All four sediments fully comply with regulations for safe ocean disposal.

2. Suspended particulate and liquid phases meet all bioassay and dilution criteria. No limiting permissible concentration (LPC) would be approached during this disposal.

3. There were no indications of toxicity in any of the solid phase bioassays.

4. Chemical analyses of the liquid phase found no constituents to be greatly elevated over seawater controls, and no LPC would be approached except that for cadmium. Seawater and the liquid phases had the same cadmium content, but the seawater content is fourteen times the limiting permissible concentration. No pesticides or PCB's were detectable in any of the samples.

5. Laboratory experiments found no tendencies for any bioaccumulation of petroleum hydrocarbons, chlorinated hydrocarbons, mercury or cadmium from any of the test sediments.

6. The disposal vessel, traveling at 1.5 m/sec, will require 800 seconds to empty a full capacity load of 1600 m³. The median water depth at the disposal site is 12.5 m (10-15 m). These figures yield a calculated dilution factor of 0.00032 or 0.032% after the four-hour initial mixing period.

Table A-7

Metals and Nutrients Analysis of Liquid Phase Samples
(Values are in milligrams per litre except as noted.)

<table>
<thead>
<tr>
<th>Constituent</th>
<th>Disp. Site A</th>
<th>C-14</th>
<th>C-15</th>
<th>C-16</th>
<th>C-17</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO$_2$-N$^1$</td>
<td>&lt; 0.01</td>
<td>0.23</td>
<td>0.01</td>
<td>0.04</td>
<td>1.1</td>
</tr>
<tr>
<td>NO$_3$-N$^1$</td>
<td>&lt; 0.05</td>
<td>&lt; .05</td>
<td>&lt; .05</td>
<td>&lt; .05</td>
<td>&lt; .05</td>
</tr>
<tr>
<td>NH$_3$-N$^1$</td>
<td>&lt; 0.1</td>
<td>5.6</td>
<td>7.4</td>
<td>4.9</td>
<td>3.4</td>
</tr>
<tr>
<td>TKN-N$^1$</td>
<td>0.56</td>
<td>6.5</td>
<td>9.6</td>
<td>6.8</td>
<td>4.5</td>
</tr>
<tr>
<td>OP-PO$_4$$^1$</td>
<td>&lt; 0.2</td>
<td>&lt; 0.2</td>
<td>0.84</td>
<td>&lt; 0.2</td>
<td>0.21</td>
</tr>
<tr>
<td>TP-PO$_4$$^1$</td>
<td>&lt; 0.77</td>
<td>0.77</td>
<td>1.4</td>
<td>0.90</td>
<td>1.0</td>
</tr>
<tr>
<td>TOC-C$^2$</td>
<td>10</td>
<td>7.5</td>
<td>18</td>
<td>12</td>
<td>7.5</td>
</tr>
<tr>
<td>Oil and Grease$^2$</td>
<td>13</td>
<td>14</td>
<td>13</td>
<td>11</td>
<td>69</td>
</tr>
<tr>
<td>As$^1$</td>
<td>&lt; .03</td>
<td>&lt; .03</td>
<td>0.08</td>
<td>&lt; .03</td>
<td>&lt; .03</td>
</tr>
<tr>
<td>Be$^1$</td>
<td>&lt; 0.3</td>
<td>&lt; 0.3</td>
<td>&lt; 0.3</td>
<td>&lt; 0.3</td>
<td>&lt; 0.3</td>
</tr>
<tr>
<td>Cd$^3$</td>
<td>&lt; 0.07</td>
<td>&lt; 0.06</td>
<td>0.07</td>
<td>0.07</td>
<td>0.07</td>
</tr>
<tr>
<td>Cr$^1$</td>
<td>&lt; 0.3</td>
<td>&lt; 0.3</td>
<td>&lt; 0.3</td>
<td>&lt; 0.3</td>
<td>&lt; 0.3</td>
</tr>
<tr>
<td>Cu$^4$</td>
<td>0.09</td>
<td>0.07</td>
<td>0.06</td>
<td>0.07</td>
<td>0.07</td>
</tr>
<tr>
<td>Hg$^5$ micrograms per litre</td>
<td>&lt; 0.1</td>
<td>&lt; 0.1</td>
<td>&lt; 0.1</td>
<td>&lt; 0.1</td>
<td>&lt; 0.1</td>
</tr>
<tr>
<td>Ni$^6$</td>
<td>0.42</td>
<td>0.40</td>
<td>0.40</td>
<td>0.40</td>
<td>0.43</td>
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<tr>
<td>Pb$^6$</td>
<td>0.50</td>
<td>0.57</td>
<td>0.52</td>
<td>0.53</td>
<td>0.69</td>
</tr>
<tr>
<td>Se$^6$ micrograms per litre</td>
<td>&lt; 2</td>
<td>&lt; 2</td>
<td>&lt; 2</td>
<td>&lt; 2</td>
<td>&lt; 2</td>
</tr>
<tr>
<td>Zn$^6$</td>
<td>0.13</td>
<td>0.17</td>
<td>0.15</td>
<td>0.11</td>
<td>0.17</td>
</tr>
</tbody>
</table>

Marine standards suggested by U.S. EPA 1976 Quality Standard for Water (EPA-440/9/76/023) are: $^1$none suggested; $^2$0.01 times the 96 hour LC$_{50}$ in flowing water bioassays; $^3$5.0 µg/litre; $^4$0.1 times the 96 hour LC$_{50}$; $^5$0.10 µg/litre; $^6$0.01 times the 96 hour LC$_{50}$. 

A25
<table>
<thead>
<tr>
<th>Constituent</th>
<th>Site Water</th>
<th>C-14</th>
<th>C-15</th>
<th>C-16</th>
<th>C-17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salinity PPT</td>
<td>29.8</td>
<td>29.9</td>
<td>29.9</td>
<td>30.0</td>
<td>30.8</td>
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<tr>
<td>pH</td>
<td>7.5</td>
<td>7.2</td>
<td>7.2</td>
<td>7.3</td>
<td>7.0</td>
</tr>
</tbody>
</table>

No pesticides or PCB's were detectable in any of the samples. Detection limits in micrograms per litre (= ppb) are:

- PCB's (as Arochlor 1254) < 1
- Heptachlor < .05
- DDE < .05
- DDD < 0.2
- DDT < 0.2
- Endrin < 0.2
- Dieldrin < 0.1
- BHC < 0.05
- Mitrex < 0.3
- Methoxychlor < 1
- Chlordane < 0.5
- Toxaphene < 5
Fig. 2. Location of stations sampled for near-bottom sediments in the Charleston Entrance Channel and Charleston Harbor Disposal Area.
Table 66. Bottom sediment composition and quartz grain size distributions for Charleston Entrance Channel samples.

<table>
<thead>
<tr>
<th>STATION</th>
<th>% Coarse</th>
<th>% Shell</th>
<th>% Silt</th>
<th>% Clay</th>
<th>Mean</th>
<th>SD</th>
<th>TOTAL DISTRIBUTION</th>
<th>Mean</th>
<th>SD</th>
<th>% of Sample</th>
<th>Mean</th>
<th>SD</th>
<th>% of Sample</th>
<th>Mean</th>
<th>SD</th>
<th>% of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20</td>
<td>22</td>
<td>44</td>
<td>-183</td>
<td>2.16</td>
<td>.515</td>
<td>- .311</td>
<td>1.880</td>
<td>.25</td>
<td>1.88</td>
<td>.62</td>
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<td></td>
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<tr>
<td>11</td>
<td>21</td>
<td>29</td>
<td>44</td>
<td>-183</td>
<td>2.91</td>
<td>.482</td>
<td>- .560</td>
<td>2.797</td>
<td>.11</td>
<td>2.82</td>
<td>.94</td>
<td>502</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>13</td>
<td>25</td>
<td>25</td>
<td>44</td>
<td>-183</td>
<td>2.96</td>
<td>.617</td>
<td>- .701</td>
<td>2.798</td>
<td>.14</td>
<td>2.72</td>
<td>.80</td>
<td>502</td>
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</tr>
<tr>
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<td>30</td>
<td>25</td>
<td>44</td>
<td>-183</td>
<td>2.96</td>
<td>.617</td>
<td>- .701</td>
<td>2.798</td>
<td>.14</td>
<td>2.72</td>
<td>.80</td>
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<td>44</td>
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<td>2.96</td>
<td>.617</td>
<td>- .701</td>
<td>2.798</td>
<td>.14</td>
<td>2.72</td>
<td>.80</td>
<td>502</td>
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<tr>
<td>16</td>
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<td>25</td>
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<td>-183</td>
<td>2.96</td>
<td>.617</td>
<td>- .701</td>
<td>2.798</td>
<td>.14</td>
<td>2.72</td>
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<tr>
<td>17</td>
<td>45</td>
<td>25</td>
<td>44</td>
<td>-183</td>
<td>2.96</td>
<td>.617</td>
<td>- .701</td>
<td>2.798</td>
<td>.14</td>
<td>2.72</td>
<td>.80</td>
<td>502</td>
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<tr>
<td>18</td>
<td>50</td>
<td>25</td>
<td>44</td>
<td>-183</td>
<td>2.96</td>
<td>.617</td>
<td>- .701</td>
<td>2.798</td>
<td>.14</td>
<td>2.72</td>
<td>.80</td>
<td>502</td>
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<td></td>
</tr>
</tbody>
</table>

*1 0.00 abnormally low standard deviation
<table>
<thead>
<tr>
<th>Approved Dumping Site</th>
<th>Geographical Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charleston Harbor</td>
<td>Lat. 32°40'42&quot;N  Lat. 32°38'06&quot;N</td>
</tr>
<tr>
<td></td>
<td>Long 79°47'30&quot;W  Long. 79°41'57&quot;W</td>
</tr>
<tr>
<td></td>
<td>Lat. 32°39'04&quot;N  Lat. 32°36'28&quot;N</td>
</tr>
<tr>
<td></td>
<td>Long 79°49'21&quot;W  Long. 79°43'48&quot;W</td>
</tr>
<tr>
<td>Georgetown Harbor</td>
<td>Lat. 33°11'18&quot;N  Lat. 33°11'18&quot;N</td>
</tr>
<tr>
<td></td>
<td>Long. 79°07'20&quot;W Long. 79°05'23&quot;W</td>
</tr>
<tr>
<td></td>
<td>Lat. 33°10'38&quot;N  Lat. 33°10'38&quot;N</td>
</tr>
<tr>
<td></td>
<td>Long. 79°07'21&quot;W Long. 79°05'24&quot;W</td>
</tr>
<tr>
<td>Port Royal</td>
<td>Lat. 32°10'10&quot;N  Lat. 32°08'41&quot;N</td>
</tr>
<tr>
<td></td>
<td>Long. 80°36'00&quot;W Long. 80°35'49&quot;W</td>
</tr>
<tr>
<td></td>
<td>Lat. 32°10'06&quot;N  Lat. 32°08'38&quot;N</td>
</tr>
<tr>
<td></td>
<td>Long. 80°36'35&quot;W Long. 80°36'23&quot;W</td>
</tr>
</tbody>
</table>
LONDON DUMPING CONVENTION
Report of Ocean Dumping Permits - CY 83

1. Issuing Authority:
   Division: South Atlantic
   District: Savannah

2. Permit start date/expire date:
   Permittee: U.S. Army Engineer District, (Brunswick Harbor), Savannah
   Date Issued: - Permit No.: (DACW21-83-C-0069)
   Start Date: - Expire Date: -

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Brunswick Harbor

4. Specification of dredged material and process from which derived:
   a. Description: sand, predominantly.
   b. Mode of Dredging: Trailing hopper dredge (horized Federal navigation channel maintenance).
   c. Mode of Transportation: Hooper Dredge "DODGE ISLAND"

5. Form in which dredged material is presented for disposal:

6. Total quantity (cubic meters): 531.78 m³ (695,502 CY)

7. Expected frequency of dumping (for reporting period):
   a. 10 loads/day - 7 days/week for 36 days.

8. Chemical composition: N/A

9. Properties of dredged material:
   a. Solubility (% water): N/A
   b. Density (gm/cc): 1.8 gm/cc
   c. pH: N/A
   d. % sand N/A % silt N/A % clay N/A

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12. Procedure and site for tank washing: At site.

13. Approved dumping site: For Brunswick Harbor.
   a. Geographical position (latitude and longitude): 31°01'33" N 81°17'05" W
   b. Depth of water (meters): -8.5 tp -12/2m (-28 to -40 feet) at mlw.
   c. Distance from nearest coast (kilometers): 10.65 km (5.75 nmi)

14. Additional information: N/A
LONDON DUMPING CONVENTION
Report of Ocean Dumping Permits - CY 83

1. Issuing Authority:
   Division: South Atlantic  
   District: Savannah

2. Permit start date/expire date:
   Permittee: U.S. Army Engineer District, Savannah  
   (DACW21-83-C-0006)
   Date Issued: —  
   Permit No.: (DACW21-83-C-0091)
   Start Date: —  
   Expire Date: —

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Savannah Harbor

4. Specification of dredged material and process from which derived:
   a. Description: sand and silt.
   b. Mode of Dredging: Trailing hopper dredge (authorized Federal navigation channel maintenance).
   c. Mode of Transportation: Hooper Dredge "DODGE ISLAND"

5. Form in which dredged material is presented for disposal: Slurry and sand

6. Total quantity (cubic meters): 1,096,967m³ (1,434,694 CY)

7. Expected frequency of dumping (for reporting period):
   a. 11 labor days - 7 days/week for 17 + 30 days.
   b. Actual start: 20 April 1983  
   c. Actual completion: 6 June 1983
   d. Actual start: 10 November 1983  
   e. Actual completion: 9 December 1983

8. Chemical composition: N/A

9. Properties of dredged material:
   a. Solubility (% water): N/A
   b. Density (g/cc): N/A
   c. pH: N/A
   d. % sand 0  
   % silt 100  
   % clay 0

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12. Procedure and site for tank washing: Sea water pump, at site.

   a. Geographical position (latitude and longitude): 31°56'54" N
      80°45'34" W
   b. Depth of water (meters): -10.7 to -12.2 m (-35 to -40 feet) at mlw.
   c. Distance from nearest coast (kilometers): 6.9 km (3.75 nmi)

14. Additional information: N/A
1. Issuing Authority:
   Division SOUTH ATLANTIC District JACKSONVILLE

2. Permit start date/expire date:
   Permittee: U.S. Army Corps of Engineers
   Date issued: November 1984 Permit No. 05-22308
   Start Date: 30 Nov 1984 Expiry Date: 1 Feb 1985

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Canaveral Harbor, Florida

4. Specification of dredged material and process from which derived:
   a. Description: Material is poorly graded sand with a trace of gravel size shell fragments.
   b. Mode of dredging: Hopper Dredge - Suction
   c. Mode of transportation: Hopper Dredge

5. Form in which dredged material is presented for disposal: Slurry, non-cohesive

6. Total quantity (cubic meters): 165,477

7. Expected frequency of dumping (for reporting period):
   a. Daily
8. Chemical composition:
   a. Elutriate test results:
      (1) Nutrients: mg/l Range
          NH4-N------------------0.47 - 4.77
          O-P04, P-----------------<0.005 - 0.40
      (2) Metals: mg/l Range
          Pb------------------1.1 - 2.8
          Zn------------------18 - 77
          Fe------------------1.6 - 16
     (2) Continued:
          Ni------------------1.0 - 2
          Cu------------------1.2
          Mn------------------0.5
          Ag------------------<0.5
          Hg------------------<0.5 - 0.1
          Se------------------<5
      (3) Organics: Oil & Grease 0.2
          PCB's mg/l = 2

9. Properties of dredged material:
   a. Solubility (% water) Not available
   b. Density (gm/cc) .2514 (Absolute)
   c. pH Not available
   d. % sand ----- % silt ----- % clay ----- 
      Not available

10. Method of packaging: Not applicable

11. Method of release: Bottom dump

12. Procedure and site for tank washing: Hopper flushed at disposal site

13. Approved dumping site:
   a. Geographical position (latitude and longitude):
      28°19'53", 80°31'08", 28°18'50", 80°29'40"
      28°17'35", 80°30'52", 28°18'38", 80°32'20"
   b. Depth of water (meters): 12
   c. Distance from nearest coast (kilometers): 6.7

14. Additional information:
LONDON DUMPING CONVENTION

Report of Ocean Dumping Permits - CY 83

1. Issuing Authority:
   Division SOUTH ATLANTIC District JACKSONVILLE

2. Permit start date/expire date:
   Permittee: U.S. Army Corps of Engineers
   Date issued: Nov 82 Permit No. 05-22308
   Start Date: 30 Nov 82 Expiry Date: 1 Feb 85

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Canaveral Harbor, Florida

4. Specification of dredged material and process from which derived:
   a. Description: Material is poorly graded sand with a trace of gravel
      size shell fragments.
   b. Mode of dredging: Hopper Dredge - Suction
   c. Mode of transportation: Hopper Dredge

5. Form in which dredged material is presented for disposal: Slurry, non-cohesive

6. Total quantity (cubic meters): 300,797.5

7. Expected frequency of dumping (for reporting period):
   a. Daily
   b. Actual start: 31 March 83 c. Actual completion: 9 May 83
6. Chemical composition:
   a. Elutriate test results:
      (1) Nutrients: mg/l
         Mn-------------------0.5 - 7
         NH4-N-----------------0.47 - 4.77
         O-P04, P-------------<0.005 - 0.40
      (2) Metals: mg/l
         Pb-------------------1.1 - 2.8
         Zn--------------------18 - 77
         Fe--------------------1.6 - 16
         Ni--------------------1.0 - 2.7
         Cu--------------------1.2 - 25
   (2) Continued
         Ag--------------------<0.5
         Hg--------------------<0.5 - 5.0
         Se--------------------<5
   (3) Organics:
         Oil & Grease 0.2 - 9.4
         PCB's mg/l <2

9. Properties of dredged material:
   a. Solubility (% water) Not available
   b. Density (gm/cc): 2.514 (Absolute)
   c. pH Not available
   d. % sand % silt % clay
      Not available

10. Method of packaging: Not applicable
11. Method of release: Bottom dump
12. Procedure and site for tank washing: Hoppers flushed at disposal site
13. Approved dumping site:
   a. Geographical position (latitude and longitude):
      28°19'53", 80°31'08", 28°18'50", 80°29'40"
      28°17'35", 80°30'52", 28°18'38", 80°32'20"
   b. Depth of water (meters):
      12
   c. Distance from nearest coast (kilometers):
      6.7
14. Additional information:
LONDON DUMPING CONVENTION

Report of Ocean Dumping Permits - CY 83

1. Issuing Authority:
   Division  SOUTH ATLANTIC  District  JACKSONVILLE

2. Permit start date/expire date:
   Permittee:  U.S. Army Corps of Engineers
   Date issued:  July 1982  Permit No.:  560391089
   Start Date:  9 July 1982  Expiry Date:  25 June 1987

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Fort Pierce Harbor, FL

4. Specification of dredged material and process from which derived:
   a. Description:  Sand and shell
   b. Mode of dredging:  Barge with Dragline
   c. Mode of transportation:  Scows

5. Form in which dredged material is presented for disposal:

6. Total quantity (cubic meters):  80,914.6

7. Expected frequency of dumping (for reporting period):
   a. Daily
   b. Actual start:  1 Jan 83  c. Actual completion:  22 Apr 83
8. Chemical composition: none obtained

9. Properties of dredged material:
   a. Solubility (% water) not available
   b. Density (gm/cc) 2720 (Absolute)
   c. pH Not available
   d. % sand ______ % silt ______ % clay ______
      Not available

10. Method of packaging: Not applicable


12. Procedure and site for tank washing: Flushed at disposal site.

13. Approved dumping site:
   a. Geographical position (latitude and longitude):
      27°28'30", 80°12'33", 27°28'30", 80°11'37"
      27°28'30", 80°11'27", 27°27'30", 80°12'33"
   b. Depth of water (meters): 15.2
   c. Distance from nearest coast (kilometers): 6.4

14. Additional information:

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1. Issuing Authority:
   Division SOUTH ATLANTIC  District JACKSONVILLE

2. Permit start date/expire date:
   Permittee: U.S. A. Corps of Engineers
   Date issued: May 80  Permit No. 50-30390
   Start Date: 9 May 80  Expiry Date: May 85

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Palm Beach Harbor, FL

4. Specification of dredged material and process from which derived:
   a. Description: Fine to course, clean quartz sand, shell fragments, and limestone pebbles.
   b. Mode of dredging: Hopper Dredge - SUCTION
   c. Mode of transportation: Hopper Dredge

5. Form in which dredged material is presented for disposal: Slurry, non-cohesive

6. Total quantity (cubic meters): 140,736.1

7. Expected frequency of dumping (for reporting period):
   a. Daily
   b. Actual start: Mar 83  c. Actual completion: 22 Apr 83
8. **Chemical composition:** None obtained

9. **Properties of dredged material:**
   a. **Solubility (% water):** Not Available
   b. **Density (g/m³):** 2.710 (absolute)
   c. **pH:** Not Available
   d. **% sand, % silt, % clay:** Not available

10. **Method of packaging:** Not Applicable
11. **Method of release:** Bottom dump
12. **Procedure and site for tank washing:** Hoppers flushed at disposal site.
13. **Approved dumping site:**
    a. **Geographical position (latitude and longitude):**
       - 26°46'00", 79°58'55"
       - 26°45'00", 79°57'47"
    b. **Depth of water (meters):** 160
    c. **Distance from nearest coast (kilometers):** 5.4
14. **Additional information:**
LONDON DUMPING CONVENTION

Report of Ocean Dumping Permits - CY 83

1. Issuing Authority:
   Division   SOUTH ATLANTIC   District   JACKSONVILLE

2. Permit start date/expire date:
   Permittee: U. S. Army Corps of Engineers
   Date issued: 9 Jul 82   Permit No. 450389679
   Start Date: 9 Jul 82   Expiry Date: 25 Jun 87

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Fernandina Harbor, FL

4. Specification of dredged material and process from which derived:
   a. Description: Gray and black organic - silty and clay sizes
   b. Mode of dredging: Hopper Dredge - Suction
   c. Mode of transportation: Hopper Dredge

5. Form in which dredged material is presented for disposal: Slurry, non-cohesive

6. Total quantity (cubic meters): 116,300.2

7. Expected frequency of dumping (for reporting period):
   a. Daily
   b. Actual start: 17 May 83   c. Actual completion: 24 May 83
8. Chemical composition:
   a. Elutriate test results:
      (1) Nutrients: mg/l
         NH4-N-----------------0.25 - 0.26
         Ortho-P-----------------0.04 - 0.08
      (2) Metals:
         Hg-----------------<0.0001
         Mn------------------0.0008 - 0.0080
         Pb------------------<0.0002
         Zn------------------0.035 - 0.061
         Fe------------------0.0080 - 0.0180
   b. Organics:
      Oil & Grease 0.2 - 0.6
      PCG - None detected

9. Properties of dredged material:
   a. Solubility (% water) Not available
   b. Density (gm/cc) .2590 (Absolute)
   c. pH Not available
   d. % sand _____ % silt _______ % clay _______
      Not available

10. Method of packaging: Not applicable
11. Method of release: Bottom dump
12. Procedure and site for tank washing: Hoppers flushed at disposal site.
13. Approved dumping site:
   a. Geographical position (latitude and longitude):
      30°42'00", 81°19'05", 30°42'00", 81°17'55"  
      30°41'00", 81°17'55", 30°41'00", 81°19'05"
   b. Depth of water (meter "): 10.7
   c. Distance from nearest coast (kilometers): 10.5

14. Additional information:
LONDON DUMPING CONVENTION

Report of Ocean Dumping Permits - CT 83

1. Issuing Authority:
   Division: SOUTH ATLANTIC
   District: JACKSONVILLE

2. Permit start date/expire date:
   Permittee: U.S. Army Corps of Engineers
   Date issued: 30 Nov 82
   Permit No.: 05-22308
   Start Date: 30 Nov 82
   Expiry Date: 01 Feb 85

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Canaveral Harbor, FL

4. Specification of dredged material and process from which derived:
   a. Description: Material is poorly graded sand with a trace of gravel size shell fragments
   b. Mode of dredging: Hopper Dredge - Suction
   c. Mode of transportation: Hopper Dredge

5. Form in which dredged material is presented for disposal: Slurry, non-cohesive

6. Total quantity (cubic meters): 698,894.9

7. Expected frequency of dumping (for reporting period):
   a. Daily
   b. Actual start: 19 Aug 83
   c. Actual completion: 14 Oct 83
8. Chemical composition:
   a. Elutriate test results:
      (1) Nutrients: mg/l
          Range
          \[\text{NH}_4-N\] \(-0.47 - 4.77\)
          \[\text{PO}_4\] \(-0.005 - 0.40\)
      (2) Metals: (mg/l)
          Range
          \[\text{Zn}\] \(-18 - 77\)
          \[\text{Fe}\] \(-1.6 - 16\)
          \[\text{Ni}\] \(-1.0 - 2.7\)

9. Properties of dredged material:
   a. Solubility (% water) Not available
   b. Density (gm/cc) 2.514 (Absolute
   c. pH Not available
   d. % sand \(\ldots\) % silt \(\ldots\) % clay \(\ldots\)

   Not available

10. Method of packaging: Not applicable
11. Method of release: Bottom dump
12. Procedure and site for tank washing: Hoppers flushed at disposal site
13. Approved dumping site:
   a. Geographical position (latitude and longitude):
      \[28^\circ 19'53", 80^\circ 03'08", 28^\circ 18'50", 80^\circ 29'40"
      28^\circ 17'35", 80^\circ 30'52", 28^\circ 18'38", 80^\circ 32'20"
   b. Depth of water (meters): 12
   c. Distance from nearest coast (kilometers): 6.7
14. Additional information:
1. Issuing Authority:
   Division SOUTH ATLANTIC District JACKSONVILLE

2. Permit start date/expire date:
   Permittee: U.S. Army Corps of Engineers
   Date issued: 9 Jul 82 Permit No. 450389679
   Start Date: 9 Jul 82 Expiry Date: 25 Jun 87

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Fernandina Harbor, FL

4. Specification of dredged material and process from which derived:
   a. Description: Gray and black organic with silty and clay sizes
   b. Mode of dredging: Hopper Dredge - Suction
   c. Mode of transportation: Hopper Dredge

5. Form in which dredged material is presented for disposal: Slurry, non-cohesive

6. Total quantity (cubic meters): 475,492.5

7. Expected frequency of dumping (for reporting period):
   a. Daily
   b. Actual start: 14 Oct 83 c. Actual completion: 30 Nov 83
8. Chemical composition:
a. Elutriate test results:
(1) Nutrients: mg/l Range
NH4-N------------------0.25 - 0.26
Ortho-P-----------------0.04 - 0.08

(2) Metals:
Hg-----------------<0.0001
Mn-----------------0.0008 - 0.0080

9. Properties of dredged material:
a. Solubility (% water) Not Available
b. Density (gm/cc) 2.710 (Absolute)
c. pH Not Available
d. % sand % silt % clay
   Not Available

10. Method of packaging: Not applicable
11. Method of release: Bottom dump
12. Procedure and site for tank washing: Hoppers flushed at disposal site
13. Approved dumping site:
a. Geographical position (latitude and longitude):
   30°42'00", 81°19'05", 30°42'00", 81°17'55"
   30°41'00", 81°17'55", 30°41'00", 81°19'05"

b. Depth of water (meters): 10.7

c. Distance from nearest coast (kilometers): 10.5

14. Additional information:

180
1. Issuing Authority:
Division SOUTH ATLANTIC District JACKSONVILLE

2. Permit start date/expire dates:
Permittee: U.S. Army Corps of Engineers
Date issued: 11 Jul 80 Permit No. 16-27215
Start Date: 11 Jul 80 Expiry Date: 1 Jul 85

3. Country or origin of wastes and port of loading:
   a. United States of America
   b. Jacksonville Harbor, FL

4. Specification of dredged material and process from which derived:
   a. Description: Sand with some shell and silt
   b. Mode of dredging: Hopper Dredge - Suction
   c. Mode of transportation: Hopper Dredge

5. Form in which dredged material is presented for disposal: Slurry, non-cohesive

6. Total quantity (cubic meters): 181,702.6

7. Expected frequency of dumping (for reporting period):
   a. Daily
   b. Actual start: 10 Nov 83; 30 Nov 83 c. Actual completion: 18 Dec 83

181
8. Chemical composition:
   a. Elutriate test results:

   (1) Nutrients:

<table>
<thead>
<tr>
<th>Receiving Water</th>
<th>Elutriate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen, Ammonia, ppm</td>
<td>0.13-0.16</td>
</tr>
<tr>
<td>Soluble Orthophosphate, ppm</td>
<td>0.02-0.04</td>
</tr>
<tr>
<td>Total phosphorus, mg/l</td>
<td>0.08-0.13</td>
</tr>
</tbody>
</table>

   (2) Metals:

<table>
<thead>
<tr>
<th>Receiving Water</th>
<th>Elutriate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury, mg/l</td>
<td>0.0002-0.0004</td>
</tr>
<tr>
<td>Manganese, mg/l</td>
<td>0.0095-0.017</td>
</tr>
<tr>
<td>Lead, mg/l</td>
<td>0.002-0.018</td>
</tr>
<tr>
<td>Zinc, mg/l</td>
<td>0.016-0.018</td>
</tr>
<tr>
<td>Iron, mg/l</td>
<td>0.222-0.302</td>
</tr>
<tr>
<td>Copper, mg/l</td>
<td>0.020-0.080</td>
</tr>
<tr>
<td>Nickel, mg/l</td>
<td>0.020-0.080</td>
</tr>
<tr>
<td>Selenium, mg/l</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Silver, mg/l</td>
<td>0.0045-0.0084</td>
</tr>
</tbody>
</table>

9. Properties of dredged material:
   a. Solubility (% water) Not available
   b. Density (gm/cc) 2500 (Absolute)
   c. pH Not available
   d. % sand % silt % clay

   Not available

10. Method of packaging: Not applicable

11. Method of release: Bottom dump

12. Procedure and site for tank washing: Hoppers flushed at disposal site

13. Approved dumping site:
   a. Geographical position (latitude and longitude):
      30°21'30", 81°17'26", 30°20'30", 81°17'26"
      30°20'30", 81°18'34", 30°21'30", 81°18'34"
   b. Depth of water (meters): 15
   c. Distance from nearest coast (kilometers): 9

14. Additional information: 182
1. Issuing Authority:
   Division South Atlantic       District Mobile

2. Permit start date/expire date:
   Permittee: Corps of Engineers (Not 103)
   Date issued: 11 Jan 77  Permit No. 40 CFR 228.12 (A) (III) (H)
   Start Date: 11 Jan 77  Expiry Date: 31 Jan 85

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Mobile Harbor, Alabama - Bar Channel

4. Specification of dredged material and process from which derived:
   a. Description: Maintenance dredged material, sand.
   b. Mode of dredging: Hopper, Dragarms, Suction
   c. Mode of transportation: Hopper on board dredge

5. Form in which dredged material is presented for disposal: Liquid

6. Total quantity (cubic meters): 100,856

7. Expected frequency of dumping (for reporting period):
   a. 20 times daily
   b. Actual start: 1 Jan 83  c. Actual completion: 7 Jan 83
9. Properties of dredged material:
   a. Solubility (% water) Not available
   b. Density (g/cc) 1.983
   c. pH not obtained
   d. Sand 80  Silt 9  Clay 5

10. Method of packaging: Not packaged
11. Method of release: Bottom dump
12. Procedure and site for tank washing: Dredge hopper is flushed at authorized disposal site.
13. Approved dumping site:
    a. Geographical position (latitude and longitude): \(30^\circ 09'\ N, 88^\circ 07'\ W\)
    b. Depth of water (meters): 10
    c. Distance from nearest coast (kilometers): 6.7
14. Additional information:
### BULK ANALYSES OF ENTRANCE CHANNEL SEDIMENT SAMPLES COLLECTED FROM PENSACOLA HARBOR, FLORIDA

<table>
<thead>
<tr>
<th>Sample Number</th>
<th>TPC (mg/kg P)</th>
<th>Total Phosphate (mg/kg P)</th>
<th>Ammonia Nitrogen (mg/kg N)</th>
<th>Oil and Grease (mg/kg)</th>
<th>Trace Metals (mg/kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PB-1</td>
<td>1.66</td>
<td>67.00</td>
<td>9.0</td>
<td>0.41</td>
<td>0.12, 0.5, 4.9, 128.4, &lt;0.1, &lt;0.5, &lt;0.5, 343.5, &lt;0.3</td>
</tr>
<tr>
<td>PB-2</td>
<td>0.36</td>
<td>7.00</td>
<td>27.4</td>
<td>0.36</td>
<td>0.10, 0.5, &lt;0.3, 1.0, &lt;0.1, &lt;0.5, 1.0, &lt;0.3</td>
</tr>
<tr>
<td>PB-3</td>
<td>1.44</td>
<td>11.25</td>
<td>75.00</td>
<td>0.31</td>
<td>0.18, 1.1, &lt;0.3, 32.4, &lt;0.1, &lt;0.5, 4.7, 5.9, &lt;0.3</td>
</tr>
</tbody>
</table>

Note: Stations located from inner portion of channel near Santa Rosa Island (PB-3) to outer portion (seaward) of channel (PB-1); mg/kg = ppm

### ELUTRIATE ANALYSES OF SEDIMENT AND WATER SAMPLES FOR CHEMICAL AND HEAVY METALS CONSTITUENTS COLLECTED FROM PENSACOLA HARBOR, FLORIDA

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Dilution</th>
<th>Standard Elutriate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total organic carbon (ppm)</td>
<td>11.2</td>
<td>20.6</td>
</tr>
<tr>
<td>Ammonia nitrogen (ppm)</td>
<td>1.08</td>
<td>0.21</td>
</tr>
<tr>
<td>Phosphorus (ppm)</td>
<td>0.025</td>
<td>0.123</td>
</tr>
<tr>
<td>pH</td>
<td>8.28</td>
<td>8.13</td>
</tr>
<tr>
<td>Mercury (ppb)</td>
<td>&lt; 0.3</td>
<td>&lt; 0.3</td>
</tr>
<tr>
<td>Arsenic (ppb)</td>
<td>21.0</td>
<td>21.0</td>
</tr>
<tr>
<td>Copper (ppb)</td>
<td>&lt; 0.2</td>
<td>&lt; 0.2</td>
</tr>
<tr>
<td>Zinc (ppb)</td>
<td>32.0</td>
<td>40.0</td>
</tr>
<tr>
<td>Cadmium (ppb)</td>
<td>0.2</td>
<td>&lt; 0.2</td>
</tr>
<tr>
<td>Lead (ppb)</td>
<td>&lt; 0.5</td>
<td>&lt; 0.5</td>
</tr>
<tr>
<td>Nickel (ppb)</td>
<td>&lt; 0.5</td>
<td>&lt; 0.5</td>
</tr>
<tr>
<td>Chromium (ppb)</td>
<td>&lt; 0.5</td>
<td>&lt; 0.5</td>
</tr>
<tr>
<td>Iron (ppb)</td>
<td>&lt;10.0</td>
<td>&lt;10.0</td>
</tr>
</tbody>
</table>

ppm = mg/liter
ppb = μg/liter

Note: Sediment sample number: PB-2; Water sample number: PB-2; Collected: 21 August 1974
OCEAN DUMPING REPORT FOR CALENDAR YEAR 1983 DREDGED MATERIAL (U) CORPS OF ENGINEERS FORT BELVOIR VA WATER RESOURCES SUPPORT CENTER JUL 84 WRSC-83-SR-1
1. Issuing Authority:
   Division South Atlantic  District Mobile

2. Permit start date/expire date:
   Permittee: Corps of Engineers (Not 103).
   Date issued: 11 Jan 77  Permit No. 40 CFR 228.12 (A) (III) (H)
   Start Date: 11 Jan 77  Expiry Date: 31 Jan 85

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Pascagoula Harbor, Mississippi - Bar Channel

4. Specification of dredged material and process from which derived:
   a. Description: Maintenance dredged material, sand.
   c. Mode of transportation: Hopper on board dredge.

5. Form in which dredged material is presented for disposal: Liquid


7. Expected frequency of dumping (for reporting period):
   a. 17 times daily
   b. Actual start: 9 Nov 83  c. Actual completion: 10 Dec 83
9. Properties of dredged material:
   a. Solubility (% water): Not obtained
   b. Density (gm/cc): Not obtained
   c. pH: Not obtained
   d. % sand: 60  % silt: 20  % clay: 10


11. Method of release: Bottom Dump

12. Procedure and site for tank washing: Dredge hopper is flushed at authorized disposal site.

13. Approved dumping site:
   a. Geographical position (latitude and longitude): 30° 11' N, 88° 30' W
   b. Depth of water (meters): 12
   c. Distance from nearest coast (kilometers): 16.6

14. Additional information:
### CHEMICAL COMPOSITION

**BULK SEDIMENT ANALYSES**

PASCAGOULA HARBOR, BAR CHANNEL, JULY 1974

(U.S. Corps of Engineers, 1975)

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>RANGE OF VALUES</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NUTRIENTS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOC</td>
<td>1.78 - 12.6</td>
<td>mg/Kg x 10^3</td>
</tr>
<tr>
<td>Oil &amp; Grease</td>
<td>45 - 615</td>
<td>mg/Kg</td>
</tr>
<tr>
<td>Total Phosphorus</td>
<td>10.5 - 59.2</td>
<td>mg/Kg as P</td>
</tr>
<tr>
<td>TKN</td>
<td>151 - 1305</td>
<td>mg/Kg as N</td>
</tr>
<tr>
<td>Ammonia Nitrogen</td>
<td>23.5 - 89.6</td>
<td>mg/Kg as N</td>
</tr>
<tr>
<td><strong>HEAVY METALS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arsenic</td>
<td>0.7 - 1.0</td>
<td>mg/Kg</td>
</tr>
<tr>
<td>Cadmium</td>
<td>&lt;0.1 - 0.77</td>
<td>mg/Kg</td>
</tr>
<tr>
<td>Chromium</td>
<td>11.1 - 761.7</td>
<td>mg/Kg</td>
</tr>
<tr>
<td>Copper</td>
<td>&lt;0.3 - 4.8</td>
<td>mg/Kg</td>
</tr>
<tr>
<td>Iron (Fe^2+)</td>
<td>&lt;0.3</td>
<td>mg/Kg</td>
</tr>
<tr>
<td>Lead</td>
<td>&lt;0.5 - 36.5</td>
<td>mg/Kg</td>
</tr>
<tr>
<td>Mercury</td>
<td>0.03 - 0.46</td>
<td>mg/Kg</td>
</tr>
<tr>
<td>Nickel</td>
<td>&lt;0.5 - 34.2</td>
<td>mg/Kg</td>
</tr>
<tr>
<td>Zinc</td>
<td>12.4 - 109.7</td>
<td>mg/Kg</td>
</tr>
<tr>
<td><strong>Pesticides/PCB's</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dieldrin</td>
<td>0.996</td>
<td>ppb</td>
</tr>
<tr>
<td>DDT/DDDE/DDD</td>
<td>N.D.</td>
<td>ppb</td>
</tr>
<tr>
<td>PCB Isomers</td>
<td>N.D. - 12.097</td>
<td>ppb</td>
</tr>
</tbody>
</table>

1. Dry Weight Basis

2. Other pesticides which were analyzed but were consistently below detectable limits: Aldrin, Chlordane, Endrin, Heptachlor, Heptachlor Epoxide, Lindane, Methoxychlor, Mirex, Toxaphene, Diazinon, Guthion, Malathion, Methyl Parathion, Parathion

3. Non-Detectable
LONDON DUMPING CONVENTION
Report of Ocean Dumping Permits - CT 1983

1. Issuing Authority:
   Division  South Atlantic  District  Mobile

2. Permit start date/expire date:
   Permittee:  Corps of Engineers (Not 103)
   Date issued:  Jan 11, 1977  Permit No. 40 CFR 228.12(A)(III)(H)
   Start Date:  Jan 11, 1977  Expiry Date:  Jan 31, 1985

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Pensacola Harbor, Florida, Entrance Channel

4. Specification of dredged material and process from which derived:
   a. Description: Maintenance dredged material, sand.
   b. Mode of dredging: Hopper, Dragarms, Suction
   c. Mode of transportation: Hopper on board dredge

5. Form in which dredged material is presented for disposal: Liquid

6. Total quantity (cubic meters): 87,189

7. Expected frequency of dumping (for reporting period):
   a. 19 times daily
   b. Actual start: 13 Dec 83  c. Actual completion: 23 Dec 83
8. Chemical composition: See Attached

9. Properties of dredged material:
   a. Solubility (% water) not obtained
   b. Density (gm/cc) not obtained
   c. pH not obtained
   d. % sand 93  % silt 3  % clay 4

10. Method of packaging: Not packaged
11. Method of release: Bottom dump
12. Procedure and site for tank washing: Dredge hopper is flushed at authorized disposal site
13. Approved dumping site:
   a. Geographical position (latitude and longitude): 30°16'N, 87°19'W
   b. Depth of water (meters): 9.5
   c. Distance from nearest coast (kilometers): 4.6

14. Additional information:
### 8. Chemical Composition

**BULK ANALYSES OF ENTRANCE CHANNEL SEDIMENT SAMPLES COLLECTED FROM MOBILE HARBOR, ALABAMA**

<table>
<thead>
<tr>
<th>Sample Number</th>
<th>TOC (mg/g)</th>
<th>Total Phosphate (mg/kg P)</th>
<th>Ammonia Nitrogen (mg/kg N)</th>
<th>Oil and Grease (mg/g)</th>
<th>Trace Metals (mg/kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MB-1</td>
<td>0.76</td>
<td>18.25</td>
<td>39.8</td>
<td>0.44</td>
<td>Hg: 0.24, Ag: 0.8, Cu: 4.5, Zn: 14.2, Cd: &lt;0.1, Pb: &lt;0.5, Ni: 5.4, Cr: 4.5, Fe: 1.0</td>
</tr>
<tr>
<td>MB-2</td>
<td>1.18</td>
<td>60.00</td>
<td>33.6</td>
<td>0.51</td>
<td>Hg: 1.1, Ag: 1.3, Cu: 2.6, Zn: 1.1, Cd: &lt;0.1, Pb: &lt;0.5, Ni: 5.3, Cr: 2.7, Fe: &lt;0.3</td>
</tr>
<tr>
<td>MB-3</td>
<td>8.61</td>
<td>34.50</td>
<td>44.8</td>
<td>0.74</td>
<td>Hg: 0.31, Ag: 1.8, Cu: 7.0, Zn: 5.5, Cd: &lt;0.1, Pb: &lt;0.5, Ni: 4.0, Cr: 17.0, Fe: 1.0</td>
</tr>
</tbody>
</table>

Note: Stations located from inner portion of channel within Mobile Bay (MB-3) to outer portion (seaward) of channel (MB-1); mg/kg = ppm

**ELUTRIATE ANALYSES OF SEDIMENT AND WATER SAMPLES FOR CHEMICAL AND HEAVY METALS CONSTITUENTS COLLECTED FROM MOBILE HARBOR, ALABAMA**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Dilution Water</th>
<th>Standard Elutriate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Organic carbon (ppm)</td>
<td>7.2</td>
<td>16.5</td>
</tr>
<tr>
<td>Ammonia nitrogen (ppm)</td>
<td>0.04</td>
<td>1.05</td>
</tr>
<tr>
<td>Phosphorus (ppm)</td>
<td>0.085</td>
<td>0.340</td>
</tr>
<tr>
<td>pH</td>
<td>7.50</td>
<td>7.82</td>
</tr>
<tr>
<td>Mercury (ppb)</td>
<td>&lt;0.3</td>
<td>&lt;0.3</td>
</tr>
<tr>
<td>Arsenic (ppb)</td>
<td>&lt;10.0</td>
<td>10.0</td>
</tr>
<tr>
<td>Copper (ppb)</td>
<td>0.9</td>
<td>1.0</td>
</tr>
<tr>
<td>Zinc (ppb)</td>
<td>25.1</td>
<td>22.4</td>
</tr>
<tr>
<td>Cadmium (ppb)</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Lead (ppb)</td>
<td>2.9</td>
<td>2.3</td>
</tr>
<tr>
<td>Nickel (ppb)</td>
<td>2.8</td>
<td>3.1</td>
</tr>
<tr>
<td>Chromium (ppb)</td>
<td>&lt;0.5</td>
<td>&lt;0.5</td>
</tr>
<tr>
<td>Iron (ppb)</td>
<td>22.0</td>
<td>22.0</td>
</tr>
</tbody>
</table>

ppm = mg/liter
ppb = ug/liter

Note: Sediment sample number: MB-2; water sample number: MB-2; collected 28 July 1974
1. Issuing Authority:
   
   Division Lower Miss. Valley District New Orleans

2. Permit start date/expire date:
   
   Permittee: New Orleans District, Corps of Engineers
   
   Date issued: 15 December 82
   Permit No.
   Start Date: 23 Jan 83
   Expiry Date: 18 June 83

3. Country of origin of wastes and port of loading:
   
   a. United States of America
   
   b. Mississippi River, Baton Rouge to the Gulf of Mexico, La. (Southwest Pass)

4. Specification of dredged material and process from which derived:
   
   a. Description: Medium to fine grain sand, silt and clay.
   
   b. Mode of dredging: Hopper dredge
   
   c. Mode of transportation: Hopper dredge

5. Form in which dredged material is presented for disposal: Noncohesive slurry

6. Total quantity (cubic meters): 6,409,136M³

7. Expected frequency of dumping (for reporting period):
   
   a. 12 dumps per day, 7 days per week
   
   b. Actual start: 23 Jan 83
   
   c. Actual completion: 18 June 83

8. Chemical composition: (Elutriates)
   
   a. Nutrients: (mg/l)
      
      Nitrogen (KJ10) .4
      Nitrogen (NH₄ dissolved) 2.2
   
   b. Metals: (ug/l)
      
      As 3.0
      Cr 12.0
      Mn 2,200
      Ni 3.0
      Zn 20.0
      Hg .01

   c. Organics: (ug/l)
      
      Phenols 1.0
      Diazinon 0.002
      2, 4-D 0.01
8. Chemical composition: (Sediments)

   a. Metals: (ug/l)  
      As  9.0  Ni  15.0  
      Cr 10.0  Zn  45.0  
      Cu 15.0  
      Pb 20.0  
      Mn 500.0  
      Hg 0.05

   b. Organic: (ug/l)  
      Phenols 5.0

   c. Other: (mg/kg)  
      Cad 32,000  
      Oil and Grease .0

9. Properties of dredged material:  

   a. Solubility (% water)  60
   b. Density (gm/cc)  1.651
   c. pH  Not measured
   d. % sand  70  % silt  15  % clay  15

10. Method of packaging:  N/A

11. Method of release:  Bottom dump

12. Procedure and site for tank washing:  Hopper flushed with seawater twice daily at disposal site.

13. Approved dumping site:  
   a. Geographical position (latitude and longitude):  
      28° 53' 15" N, 89° 26' 30" W
   b. Depth of water (meters):  18
   c. Distance from nearest coast (kilometers):  7.5

14. Additional information:  
   a. Liquid Phase Bioassay:  No effect
   b. Suspended Particulate Phase Bioassay:  No effect
   c. Solid Phase Bioassay:  No effect
1. Issuing Authority:
   Division: Lower Miss. Valley
   District: New Orleans

2. Permit start date/expire date:
   Permittee: New Orleans District, Corps of Engineers
   Date issued: 14 Apr 83
   Start Date: 30 Jan 83
   Expiry Date: 6 May 83

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Mississippi River-Gulf Outlet, La. (Gulf Approach Channel)

4. Specification of dredged material and process from which derived:
   a. Description: Medium to fine grain sand and silt
   b. Mode of dredging: Hopper dredge
   c. Mode of transportation: Hopper dredge

5. Form in which dredged material is presented for disposal: Noncohesive slurry

6. Total quantity (cubic meters): 5,450,062 m³

7. Expected frequency of dumping (for reporting period):
   a. 10 dumps per day, 7 days per week
   b. Actual start: 30 Jan 83
   c. Actual completion: 6 May 83

8. Chemical composition: (Elutriates)
   a. Nutrients: (mg/l)
      K₂O: 3.8
      NH₄: 3.7
      COD: 630
   b. Organics: (ug/l)
      Diazinon: 0.17
      2, 4-D: 0.02
   c. Metals: (ug/l)
      As: 3.0
      Cd: 1.0
      Hg: 0.1
      Mn: 690
      Zn: 20.0
      \[194\]
8. Chemical composition: (Sediments)
   a. Metals: (ug/l)  
      - As: 6.0  
      - Cr: 9.0  
      - Cu: 14.0  
      - Pb: 20.0  
      - Mn: 570  
      - Hg: 0.03  
      - Ni: 16.0  
      - Zn: 40.0  
   b. Organics: (mg/kg)  
      - KJD 4810  
      - Oil and Grease: 0.0  
      - Chlorodane: 10.0  
      - PCB: 3.0  
   c. Other: None

9. Properties of dredged material:
   a. Solubility (% water): 80  
   b. Density (gm/cc): 1.543  
   c. pH: Not measured  
   d. % sand: 85  
      % silt: 7  
      % clay: 8

10. Method of packaging: N/A

11. Method of release: Bottom dump

12. Procedure and site for tank washing: Wash with seawater at disposal site once each day.

13. Approved dumping site:
   a. Geographical position (latitude and longitude):  
      29° 24' 55" N, 88° 59' 30" W
   b. Depth of water (meters): 12
   c. Distance from nearest coast (kilometers): 27

14. Additional information:
   a. Liquid Phase Bioassay: No effect
   b. Suspend Particulate Phase Bioassay: No effect
   c. Solid Phase Bioassay: No effect
LONDON DUMPING CONVENTION
Report of Ocean Dumping Permits - CY 83

1. Issuing Authority:
   Division Lower Miss. Valley  
   District New Orleans

2. Permit start date/expire date:
   Permitee: New Orleans District, Corps of Engineers
   Date issued: 9 Feb 83  
   Permit No. 
   Start Date: 26 Jun 83  
   Expiry Date: 11 Jul 83

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Mississippi River Outlets, Venice, La. (Tiger Pass)

4. Specification of dredged material and process from which derived:
   a. Description: Medium to fine grain sand, silt and clay
   b. Mode of dredging: Hydraulic cutterhead dredge
   c. Mode of transportation: Floating pipeline

5. Form in which dredged material is presented for disposal: Noncohesive slurry

6. Total quantity (cubic meters): 422,652 m³

7. Expected frequency of dumping (for reporting period):
   a. Continuous, averaging approximately 22 hours per day, 7 days per week
   b. Actual start: 26 June 83  
   c. Actual completion: 11 July 83

8. Chemical composition: (Elutriates)
   a. Nutrients:  
      Nitrogen (Kjeldahl) < 100 mg/l
   b. Metals: (µg/l)
      As < 12.0  
      Cd < 0.5  
      Cr < 10.0  
      Ni 75.0  
      Pb < 1.0  
      Zn 107.0
   c. Organics: (µg/l)
      ABHC < 0.01  
      BBHC < 0.01  
      HPT < 0.02  
      CLD < 0.05  
      DDE < 0.02  
      DFL < 0.02  
      DDD < 0.02  
      END < 0.02  
      HOC < 0.1  
      TOX < 0.1  
      PCB < 0.1  
      DDT < 0.02  
      MHC < 0.01  
      MOC < 0.03
d. Chemical composition: (Sediments)

<table>
<thead>
<tr>
<th></th>
<th>Metals: (mg/kg)</th>
<th>Organics: (ug/kg)</th>
<th>Other: (mg/kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>As</td>
<td>20.0</td>
<td>aBHC &lt; 0.1</td>
<td>END &lt; 0.5</td>
</tr>
<tr>
<td>Cd</td>
<td>&lt; 0.5</td>
<td>bBHC &lt; 0.1</td>
<td>DDT &lt; 0.5</td>
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<td>Cr</td>
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<td>MIX &lt; 0.5</td>
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<tr>
<td>Zn</td>
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9. Properties of dredged material:

a. Solubility (% water): 80
b. Density (gm/cc): 1.6
c. pH: Not measured
d. % sand: 70, % silt: 15, % clay: 15

10. Method of packaging: N/A

11. Method of release: Floating pipeline

12. Procedure and site for tank washing: N/A

13. Approved dumping site:

a. Geographical position (latitude and longitude):
   29° 08' 15" N, 89° 26' 22" W
b. Depth of water (meters): 15
c. Distance from nearest coast (kilometers): 5

14. Additional information:

a. Liquid Phase Bioassay: No effect
b. Suspended Particulate Phase Bioassay: No effect
c. Solid Phase Bioassay: No effect
LONDON DUMPING CONVENTION


1. Issuing Authority:

Division Lower Miss. Valley District New Orleans

2. Permit start date/expire date:

| Permittee: New Orleans District, Corps of Engineers |
| Date issued: 25 May 83 Permit No. |
| Start Date: 4 August 83 Expiry Date: 11 October 83 |

3. Country of origin of wastes and port of loading:

a. United States of America
b. Barataria Bay Waterway, La. (Gulf Approach Channel)

4. Specification of dredged material and process from which derived:

a. Description: Medium to fine grain sand, silt and clay
b. Mode of dredging: Hydraulic cutterhead dredge
c. Mode of transportation: Floating pipeline

5. Form in which dredged material is presented for disposal: Noncohesive slurry

6. Total quantity (cubic meters): 706,795 m³

7. Expected frequency of dumping (for reporting period):

a. Continuous, averaging approximately 22 hours per day, 7 days per week.
b. Actual start: 4 August 83 c. Actual completion: 11 October 83

8. Chemical composition: (Elutriates)

<table>
<thead>
<tr>
<th>Nutrients:</th>
<th>Organics: (μg/l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen (Kjeldahl) 2.530 μg/l</td>
<td>Chlordane &lt; .05</td>
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<tr>
<td>Dieldrin &lt; .02</td>
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<td>DDT &lt; .02</td>
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<tr>
<td>Lindane &lt; .02</td>
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<td>Dieldrin &lt; .02</td>
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<tr>
<td>Endrin &lt; .02</td>
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<tr>
<td>Heptachlor &lt; .02</td>
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<tr>
<td>Methoxychlor &lt; .04</td>
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<td>Mirex &lt; .01</td>
<td>Toxaphene &lt; .10</td>
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<tr>
<td>DDE &lt; .02</td>
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</tr>
<tr>
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</tr>
<tr>
<td>PCB &lt; .10</td>
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</tr>
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<td>As 3.0 Pb 7.0</td>
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<tr>
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</tr>
<tr>
<td>Cr &lt; 10.0 Ni 61.0</td>
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</tr>
<tr>
<td>Cu &lt; 1.0 Zn 8.0</td>
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</table>
6. Chemical composition: (Sediments)

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<tr>
<th>Element</th>
<th>ug/g</th>
<th>(ug/kg)</th>
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<td>DDT</td>
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<td>Heptachlor</td>
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</tr>
<tr>
<td>Methoxychlor</td>
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<tr>
<td>Mirex</td>
<td>&lt; 0.5</td>
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<tr>
<td>Toxaphene</td>
<td>&lt; 1.0</td>
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<tr>
<td>Dieldrin</td>
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<td></td>
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<tr>
<td>Endrin</td>
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<tr>
<td>PCB</td>
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<tr>
<td>Oil and Grease</td>
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9. Properties of dredged material:

a. Solubility (% water): 80

b. Density (gm/cc): 1.5

c. pH: Not measured

d. % sand: 50  % silt: 30   % clay: 20

10. Method of packaging: N/A

11. Method of release: Floating pipeline

12. Procedure and site for tank washing: N/A

13. Approved dumping site:

a. Geographical position (latitude and longitude): 29° 15' 26" N, 89° 55' 24" W

b. Depth of water (meters): 18

c. Distance from nearest coast (kilometers): 6

14. Additional information:

a. Liquid Phase Bioassay: No effect

b. Suspended Particulate Phase Bioassay: No effect

c. Solid Phase Bioassay: No effect
1. Issuing Authority:
Division: Lower Miss. Valley
District: New Orleans

2. Permit start date/expire date:
Permittee: New Orleans District, Corps of Engineers
Date issued: 18 May 83
Start Date: 7 July 83
Permit No. 
Expiry Date: 20 August 83

3. Country of origin of wastes and port of loading:
a. United States of America
b. Houma Navigation Canal, La. (Cat Island Pass)

4. Specification of dredged material and process from which derived:
a. Description: Medium to fine sand, silt and clay
b. Mode of dredging: Hydraulic cutterhead dredge
c. Mode of transportation: Floating pipeline

5. Form in which dredged material is presented for disposal: Noncohesive slurry

6. Total quantity (cubic meters): 581,096 m³

7. Expected frequency of dumping (for reporting period):
a. Continuous, averaging approximately 22 hours per day, 7 days per week
b. Actual start: 7 July 83
c. Actual completion: 20 August 83

8. Chemical composition: (Elutriates)
a. Nutrients: (mg/l)
   Nitrogen (KJD) 1.1
   Nitrogen (Dissolved NH₄) .84
b. Metals: (ug/l)
   As .0
   Cd .0
   Cr .0
   Mn 50
   Hg .2
c. Organics: (ug/l)
   Phenols 6.0
   2,4-D .0
   200
8. Chemical composition: (Sediments)
   a. Metals: (mg/kg)  
      - As 5.0  
      - Cd 1.0  
      - Cr 6.0  
      - Cu 12.0  
      - Pb 20.0  
   b. Organics: (mg/kg)  
      - Phenols .0  
   c. Other: (mg/kg)  
      - COD 14,000  
      - Oil and Grease 1.0

9. Properties of dredged material:
   a. Solubility (% water): 80  
   b. Density (gm/cc): 1.8  
   c. pH: Not measured  
   d. % sand: 95  
      % silt: 2  
      % clay: 3

10. Method of packaging: N/A  
11. Method of release: Floating pipeline  
12. Procedure and site for tank washing: N/A  
13. Approved dumping site:
   a. Geographical position (latitude and longitude): 29° 02' 45" N, 90° 34' 40" W  
   b. Depth of water (meters): 6  
   c. Distance from nearest coast (kilometers): 18

14. Additional information:
   a. Liquid Phase Bioassay: No effect  
   b. Suspended Particulate Phase Bioassay: No effect  
   c. Solid Phase Bioassay: No effect
1. Issuing Authority:
   Division: Lower Miss. Valley
   District: New Orleans

2. Permit start date/expire date:
   Permittee: New Orleans District, Corps of Engineers
   Date issued: 17 March 83
   Permit No.:
   Start Date: 5 Aug 83
   Expiry Date: 1 Nov 83

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Atchafalaya River, Bayous Chene, Boeuf and Black, La. (Bar Channel)

4. Specification of dredged material and process from which derived:
   a. Description: Medium to fine grain sand and silt.
   b. Mode of dredging: Hydraulic cutterhead dredge
   c. Mode of transportation: Floating pipeline

5. Form in which dredged material is presented for disposal: Noncohesive slurry

6. Total quantity (cubic meters): 8,161,771 m³

7. Expected frequency of dumping (for reporting period):
   a. Continuous, averaging approximately 22 hours per day, 7 days per week
   b. Actual start: 5 Aug 83
   c. Actual completion: 1 Nov 83

8. Chemical composition: (Elutriates)
   a. Nutrients: (mg/l)
      Nitrogen (Kjeldahl): 2.8
      Nitrogen (dissolved NH₄): 2.3
   c. Organics: (ug/l)
      Phenols: 3.0
      Diazinon: 0.02
      PCB: 0.1
      2,4-D: 0.01
   b. Metals: (ug/l)
      As: 3.0
      Cr: 4.0
      Cu: 1.0
      Mn: 1,200

202
3. Chemical composition: (Sediments)
   a. Metals: (ug/l)         b. Organics: (ug/kg)   c. Other: (Mg/kg)
      As 10  Zn 50  DDD 0.4  Carbon (tot. organic) 3.0
      Cr  4           PCB  3.0  COD  47,000
      Cu 13                       Oil and Grease  0
      Pb  15
      Mn 450
      Hg 0.05
      Ni 15

   b. Organics:
      DDD 0.4
      PCB 3.0
      COD 47,000
      Oil and Grease 0

9. Properties of dredged material:
   a. Solubility (% water) 80
   b. Density (gm/cc) 1.45
   c. pH Not measured
   d. % sand 10  % silt 45  % clay 45

10. Method of packaging: N/A

11. Method of release: Floating pipeline

12. Procedure and site for tank washing: N/A

13. Approved dumping site:
   a. Geographical position (latitude and longitude):
      $29^\circ 16' 06'' N, 91^\circ 27' 49'' W$
   b. Depth of water (meters): 5
   c. Distance from nearest coast (kilometers): 10

14. Additional information:
   a. Liquid Phase Bioassay: no effect
   b. Suspend Particulate Phase Bioassay: no effect
   c. Solid Phase Bioassay: no effect
1. Issuing Authority:
   Division Lower Miss. Valley  District New Orleans

2. Permit start date/expire date:
   Permittee: New Orleans District, Corps of Engineers
   Date issued: 31 Jan 83  Permit No. 
   Start Date: 23 Mar 83  Expiry Date: 24 May 83

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Calcasieu River and Pass La. (Gulf Approach Channel)

4. Specification of dredged material and process from which derived:
   a. Description: Fine grain sand, silt and organic material
   b. Mode of dredging: Hopper dredge
   c. Mode of transportation: Hopper dredge

5. Form in which dredged material is presented for disposal: Noncohesive slurry

6. Total quantity (cubic meters): 4,252,055M³

7. Expected frequency of dumping (for reporting period):
   a. Continuous agitation and/or 10 dumps per day, 7 days per week
   b. Actual start: 23 Mar 83  c. Actual completion: 24 May 83

8. Chemical composition: (Elutriates)
   a. Nutrients: (mg/l)
      Nitrogen (dissolved NH₄) 1.1
      Nitrogen (KJH) 1.8
   b. Organics: (ug/l)
      Dinitizion 0.04
      2,4-D 0.9
   b. Metals: (mg/l)
      As 5.0
      Cd 1.0
      Cr 2.0
      Mn 540
      Hg 0.1
6. Chemical composition: (Sediments)

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<table>
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<tbody>
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<th>Other</th>
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<tr>
<td>Carbon (tot. organic)</td>
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<td>COD</td>
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<tr>
<td>Nitrogen (KJD)</td>
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<tr>
<td>Phosphorus (tot. PO₄)</td>
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</table>

9. Properties of dredged material:

a. Solubility (% water): 50

b. Density (gm/cc): 1.1

c. pH: Not measured

d. % sand: 65, % silt: 15, % clay: 20

10. Method of packaging: N/A


12. Procedure and site for tank washing: Hopper flushed twice daily with seawater at disposal site.

13. Approved dumping site:

a. Geographical position (latitude and longitude):

29° 42' 06" N, 93° 20' 19" W

b. Depth of water (meters):

8

c. Distance from nearest coast (kilometers):

5

1. Issuing Authority:
   Division Southwestern
   District Galveston

2. Permit start date/expire date:
   Permitee: ___________________________
   Date issued: 11 Apr 83
   Start Date: 10 May 83
   Permit No. __________________________
   Expiry Date: 5 July 83

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Port Mansfield, Texas

4. Specification of dredged material and process from which derived:
   a. Description: Sand, silt and clay from channel maintenance
   b. Mode of dredging: Hopper Dredge "MERMENTAU"
   c. Mode of transportation: Hopper Dredge

5. Form in which dredged material is presented for disposal: Slurry - silt, clay and sand in suspension

6. Total quantity (cubic meters): 285,016

7. Expected frequency of dumping (for reporting period):
   a. 25 daily, 7 days/week
   b. Actual start: 10 May 83
   c. Actual completion: 5 Jul 83
8. Chemical composition:

9. Properties of dredged material:
   a. Solubility (% water) 80
   b. Density (gm/cc): 1.8
   c. pH N/A
   d. % sand 54  % silt 17  % clay 29

10. Method of packaging:

11. Method of release: Bottom release


13. Approved dumping site:
   a. Geographical position (latitude and longitude): 26° 34' 07", 97° 15' 35"  (center coordinates)
   b. Depth of water (meters): 13
   c. Distance from nearest coast (kilometers): 4

14. Additional information:
1. Issuing Authority:

Division  Southwestern District  Galveston

2. Permit start date/expire date:

Permittee: ________________________________

Date issued: 16 May 83  Permit No. ________________________________

Start Date: 9 June 83  Expiry Date: 31 July 83

3. Country of origin of wastes and port of loading:

a. United States of America

b. Freeport Harbor, Texas

4. Specification of dredged material and process from which derived:

a. Description: Sand, silt and clay from channel maintenance

b. Mode of dredging: Hopper Dredges "MERMENTAU" & "ATCHAFALAYA" "WHEELER"

c. Mode of transportation: Hopper Dredge

5. Form in which dredged material is presented for disposal: Slurry - silt and clay in suspension

6. Total quantity (cubic meters): 1,003,115

7. Expected frequency of dumping (for reporting period):

a. 25 daily, 7 days/week

b. Actual start: 9 Jun 83  c. Actual completion: 7 Nov 83
8. Chemical composition:

9. Properties of dredged material:
   a. Solubility (% water) 80
   b. Density (gm/cc) 1.5
   c. pH N/A
   d. % sand 13.4  % silt 3.3   % clay 83.3

10. Method of packaging:

11. Method of release: Bottom release

12. Procedure and site for tank washing: Hoppers flushed at authorized disposal site

13. Approved dumping site:
   a. Geographical position (latitude and longitude): 28° 54', 95° 17'
      (center coordinates)
   b. Depth of water (meters): 10
   c. Distance from nearest coast (kilometers): 3.2

14. Additional information:
1. Issuing Authority:
   Division Southwestern District Galveston

2. Permit start date/expire date:
   Permittee: ____________________________
   Date issued: ________________ Permit No. ________________
   Start Date: 24 Jul 83 Expiry Date: ________________

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Sabine-Neches Waterway, Texas

4. Specification of dredged material and process from which derived:
   a. Description: Silt, sand and clay from channel maintenance
   b. Mode of dredging: Hopper Dredge "WHEELER"
   c. Mode of transportation: Hopper Dredge

5. Form in which dredged material is presented for disposal: slurry - silt, clay and sand in suspension

6. Total quantity (cubic meters): 152,920

7. Expected frequency of dumping (for reporting period):
   a. 6 daily, 7 days/week
   b. Actual start: 24 Jul 83  c. Actual completion: 7 Aug 83
8. Chemical composition:

9. Properties of dredged material:
   a. Solubility (% water) 80
   b. Density (gm/cc) 1.5
   c. pH N/A
   d. % sand 6  % silt 23  % clay 71

10. Method of packaging:

11. Method of release: Bottom release


13. Approved dumping site:
   a. Geographical position (latitude and longitude):
      DA 2  29° 29', 93° 45'
      DA 3  29° 33', 93° 47'
      DA 4  29° 36', 93° 49'
      29° 27', 93° 44'  (center coordinates Disposal Area No. 1)
   b. Depth of water (meters): 10
   c. Distance from nearest coast (kilometers): 3.2

14. Additional information:
1. Issuing Authority:
   
   Division: Southwestern         District: Galveston

2. Permit start date/expire date:
   
   Permittee: ____________________
   
   Date issued: 7 Jul 83          Permit No. ____________________
   
   Start Date: 2 Aug 83           Expiry Date: 27 Oct 83

3. Country of origin of wastes and port of loading:
   
   a. United States of America
   b. Brazos Island Harbor, Texas

4. Specification of dredged material and process from which derived:
   
   a. Description: Silty sand from channel maintenance
   b. Mode of dredging: Hopper Dredge "STUYVESANT"
   c. Mode of transportation: Hopper Dredge

5. Form in which dredged material is presented for disposal: Slurry - Sand and silt in suspension

6. Total quantity (cubic meters): 677,698

7. Expected frequency of dumping (for reporting period):
   
   a. 10 daily 7 days/week
   b. Actual start: 2 Aug 83       c. Actual completion: 8 Sep 83
8. Chemical composition:

9. Properties of dredged material:
   a. Solubility (% water): 80
   b. Density (gm/cc): 2.0
   c. pH: N/A
   d. % sand __  % silt __  % clay __

10. Method of packaging:

11. Method of release: Bottom release

12. Procedure and site for tank washing: Hoppers flushed at authorized disposal site

13. Approved dumping site:
   a. Geographical position (latitude and longitude): 26° 04', 97° 07' (center coordinates)
   b. Depth of water (meters): 13
   c. Distance from nearest coast (kilometers): 3.5

14. Additional information:

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LONDON DUMPING CONVENTION

Report of Ocean Dumping Permits - CY 83

1. Issuing Authority:
   Division South Pacific        District San Francisco

2. Permit start date/expire date:
   Permitee: U.S. Army Corps of Engineers
   Date issued: 5 Jan 1983        Permit No. ----
   Start Date: 5 Jan 1984        Expiry Date: 5 Apr 1983

3. Country of origin of wastes and port of loading:
   a. United States of America, California
   b. San Francisco Harbor, Mainship Channel

4. Specification of dredged material and process from which derived:
   a. Description: Fine sand with trace of silt
      Sand 95%
      Silt 5%
   b. Mode of dredging: Trailing Hopper Dredge
   c. Mode of transportation: Hopper Dredge

5. Form in which dredged material is presented for disposal: Settled sand

6. Total quantity (cubic meters): 485,850

7. Expected frequency of dumping (for reporting period):
   a. 10 loads per day
   b. Actual start: 12 Jan 83      c. Actual completion: 25 Mar 83

9. Properties of dredged material:
   a. Solubility (% water) 57%
   b. Density (gm/cc) 1.752
   c. pH Not tested
   d. % sand 95 % silt 05 % clay 00

10. Method of packaging: Free flowing from open Hopper Dredge

11. Method of release: Bottom dump

12. Procedure and site for tank washing: Hoppers flushed at authorized disposal site

13. Approved dumping site:
   a. Geographical position (latitude and longitude): 37° 45' 06" N 122° 35' 49" W
   b. Depth of water (meters): 12.2
   c. Distance from nearest coast (kilometers): 5.2

14. Additional information: None
LONDON DUMPING CONVENTION

Report of Ocean Dumping Permits - CY 83

1. Issuing Authority:
   Division South Pacific District San Francisco

2. Permit start date/expire date:
   Permittee: U.S. Army Corps of Engineers
   Date issued: 29 Mar 1983 Permit No. 
   Start Date: 29 Mar 1983 Expiry Date: 03 May 1983

3. Country of origin of wastes and port of loading:
   a. United States of America, California
   b. Humboldt Harbor, Bar & Entrance Channel

4. Specification of dredged material and process from which derived:
   a. Description: Fine Sand with Trace of Silt
      98% Sand
      02% Silt
   b. Mode of dredging: Trailing Hopper Dredge
   c. Mode of transportation: Hopper Dredge

5. Form in which dredged material is presented for disposal: TREATED SAND

6. Total quantity (cubic meters): 146,000

7. Expected frequency of dumping (for reporting period):
   a. 21 Loads Per Day

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9. Properties of dredged material:
   a. Solubility (% water) 45
   b. Density (gm/cc) 1.938
   c. pH Not Tested
   d. % sand 98  % silt 02  % clay 00

10. Method of packaging: Free flowing from open Hopper Dredge

11. Method of release: Bottom Dump

12. Procedure and site for tank washing: Hopper Flushed at authorized disposal site

13. Approved dumping site:
   a. Geographical position (latitude and longitude): 40° 45' 44" N 124° 15' 42" W
   b. Depth of water (meters): 26.0
   c. Distance from nearest coast (kilometers): 2.6

14. Additional information: None
1. Issuing Authority:
   Division: South Pacific
   District: San Francisco

2. Permit start date/expire date:
   Permittee: U.S. Army Corps of Engineers
   Date issued: 06 July 1983
   Permit No.: ___
   Start Date: 09 July 1983
   Expiry Date: 09 September 1983

3. Country of origin of wastes and port of loading:
   a. United States of America, California
   b. Humboldt Harbor, Bar & Entrance Channel

4. Specification of dredged material and process from which derived:
   a. Description: Fine Sand with Trace of Silt
      98% Sand
      02% Silt
   b. Mode of dredging: Trailing Hopper Dredge
   c. Mode of transportation: Hopper Dredge

5. Form in which dredged material is presented for disposal: Settled Sand

6. Total quantity (cubic meters): 626,100

7. Expected frequency of dumping (for reporting period):
   a. 21 Loads per Day
   b. Actual start: 09 Jul 83
   c. Actual completion: 12 Aug 83

9. Properties of dredged material:
   a. Solubility (% water) 45
   b. Density (gm/cc) 1.938
   c. pH Not Tested
   d. % sand 98 % silt 02 % clay 00

10. Method of packaging: Free flowing from open Hopper Dredge

11. Method of release: Bottom Dump

12. Procedure and site for tank washing: Hopper flushed at authorized disposal site

13. Approved dumping site:
   a. Geographical position (latitude and longitude):
      40° 45' 44"N
      124° 15' 42"W

   b. Depth of water (meters):
      26.0

   c. Distance from nearest coast (kilometers):
      2.6

14. Additional information: None
1. Issuing Authority:
   Division South Pacific   District San Francisco

2. Permit start date/expire date:
   Permittee: U.S. Army Corps of Engineers
   Date issued: 5 Apr 83   Permit No. ---
   Start Date: 7 Apr 83   Expiry Date: 28 Apr 83

3. Country of origin of wastes and port of loading:
   a. United States of America, California
   b. Humboldt Harbor, Interior Channels

4. Specification of dredged material and process from which derived:
   a. Description: Fine sand and gravel
      86% sand
      7% gravel
      7% silt
   b. Mode of dredging: Trailing Hopper Dredge
   c. Mode of transportation: Hopper Dredge

5. Form in which dredged material is presented for disposal: Settled sand

6. Total quantity (cubic meters): 1,450.0

7. Expected frequency of dumping (for reporting period):
   a. 14 loads
   b. Actual start: 7 Apr 83   c. Actual completion: 13 Apr 83
8. Chemical composition: Not tested, meets criteria of section 227.13 (b) (1)
Ocean dumping rules & regulations -- F.R. Vol 24, No. 7, 11 Jan 77

9. Properties of dredged material:
   a. Solubility (% water)  64
   b. Density (gm/cc)  1.619
   c. pH  Not tested
   d. % sand  86  % silt  07  % gravel  07

10. Method of packaging: Free flowing from open Hopper Dredge
11. Method of release: Bottom dump
12. Procedure and site for tank washing: Hopper flushed at authorized disposal Site.
13. Approved dumping site:
   a. Geographical position (latitude and longitude): 40° 45' 44" N
   124° 15' 42" W
   b. Depth of water (meters): 26.0
   c. Distance from nearest coast (kilometers): 2.6
14. Additional information: None
1. Issuing Authority:
   Division South Pacific  District San Francisco

2. Permit start date/expire date:
   Permitee: U.S. Army Corps of Engineers
   Date issued: 11 Aug 1983  Permit No. ---
   Start Date: 15 Aug 1983  Expiry Date: 13 Dec 1983

3. Country of origin of wastes and port of loading:
   a. United States of America, California
   b. Crescent City Harbor, Inner Channel

4. Specification of dredged material and process from which derived:
   a. Description: Silts, loose sands, gravel, shell fragments, sandstone and rock
   b. Mode of dredging: Clamshell
   c. Mode of transportation: Tug with dump barge

5. Form in which dredged material is presented for disposal: Settled sand, silts & rock fragments

6. Total quantity (cubic meters): 42,000 (sand, silt) + 3,800 (rock)

7. Expected frequency of dumping (for reporting period):
   a. 2 loads per day
8. **Chemical composition:** Tested for the following metals: Hg, Cd, Cu, Zn, and Pb. Did not exceed levels in receiving waters nor did these levels exceed state water quality control board criteria.

9. **Properties of dredged material:**
   a. **Solubility (% water)**: Unknown
   b. **Density (gm/cc)**: varies widely (silt to rock)
   c. **pH**: Not tested
   d. % sand _____ % silt _______ % clay _______

   Varies widely (silt to clay)

10. **Method of packaging:** Free flowing from open Hopper Barge

11. **Method of release:** Bottom dump

12. **Procedure and site for tank washing:** Hooper flushed at authorized disposal site.

13. **Approved dumping site:**
   a. **Geographical position (latitude and longitude):**
      
      $40^\circ 43' 15"$ N
      $124^\circ 12' 10"$ W
   
   b. **Depth of water (meters):**
      
      27.0
   
   c. **Distance from nearest coast (kilometers):**
      
      2.09

14. **Additional information:** None

1. Issuing Authority:
   Division  
   District  

2. Permit start date/expire date:
   Permittee: N/A
   Date issued:  
   Permit No.  
   Start Date:  
   Expiry Date:  

3. Country of origin of wastes and port of loading:
   a. United States of America  
   b. Chetco River, Oregon  

4. Specification of dredged material and process from which derived:
   a. Description: Sand (SP) - Entrance Sand & Gravel (GW) - Inside Channel  
   b. Mode of dredging: Hopper Dredge YAQUINA  
   c. Mode of transportation:  

5. Form in which dredged material is presented for disposal:
   Sand & Gravel - Subrounded to Subangular  

6. Total quantity (cubic meters): 41,658 cubic meters  

7. Expected frequency of dumping (for reporting period):
   a. 8 loads daily, 1 dive per week  
   b. Actual start: 3 May 83  
   c. Actual completion: 15 Sep 83
8. Chemical composition:
Nutrients - Meets chemical/biological testing exemption criteria.
Metals - Hg - .0001 mg/l; Pb - .001 mg/l; Cd - .001 mg/l; Zn - .02 mg/l
Organics - None
Other Analyzed -
    Metals - Hg - .0001 mg/l; Pb - .001 mg/l; Cd - .001 mg/l; Zn - .04 mg/l
    Organics - None
Volatile Solids % - 4.2; C.O.D. - 15.4 mg/l; D.O. 6.0 mg/l

9. Properties of dredged material:
   a. Solubility (% water) 36% H₂
   b. Density (gm/cc) 2.06 gm/cc
   c. pH 7.6
   d. % sand 90 % silt 5 % clay 5 % gravel 10

10. Method of packaging:
11. Method of release: Bottom release - Immediate
12. Procedure and site for tank washing:
    Hoppers flushed at authorized disposal site.
13. Approved dumping site:
    a. Geographical position (latitude and longitude):
       42° 02' N (Lat.); 124° 16' W (Long.)
    b. Depth of water (meters):
       21.3 meters
    c. Distance from nearest coast (kilometers):
       1.6 kilometers
14. Additional information:
LONDON DUMPING CONVENTION


1. Issuing Authority:
   Division North Pacific      District Portland

2. Permit start date/expire date:
   Permittee: N/A
   Date issued: Permit No. Start Date: Expiry Date:

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Coos Bay, Oregon

4. Specification of dredged material and process from which derived:
   a. Description: Sand (SP)
   b. Mode of dredging: Contract Hopper Dredges
      MANHATTAN ISLAND and WESTPORT
   c. Mode of transportation: Hopper Dredge

5. Form in which dredged material is presented for disposal:
   Sand - Subrounded to Subangular

6. Total quantity (cubic meters): 701,955 cubic meters

7. Expected frequency of dumping (for reporting period):
   a. 11 loads daily, 7 days per week
   b. Actual start: 18 Sep 83     c. Actual completion: 14 Dec 83

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5. Chemical composition:

Nutrients - T.O.C. - 4.7 Mg/ml
Metals - Cd - 4.3 mg/ml; Zn - 97 mg/ml; Cu - 8.5 mg/ml; Fe - 70 mg/ml;
Mn - 90 mg/ml
Organics - Volatile Solids - 4.4%
Other Analyses - Hg - Pb - 7 mg/g; ... - 1.9 mg/g; Zn - 19 mg/g; Cu - 1.1 mg/g;
Fe - 2500 mg/g; Mn - 45 mg/g

9. Properties of dredged material:

a. Solubility (% water) 37% H₂O
b. Density (gm/cc) 1.94 gm/cc
c. pH 7.1
d. % sand __________ % silt __________ % clay __________

10. Method of packaging:

11. Method of release: Bottom release - Immediate


13. Approved dumping site:

a. Geographical position (latitude and longitude): This project has two authorized disposal sites. Both sites were used in CY 1983 (See # 14 below).
b. Depth of water (meters): See below
c. Distance from nearest coast (kilometers): See below

14. Additional information:

<table>
<thead>
<tr>
<th>Disposal Area</th>
<th>Lat. - Long.</th>
<th>Water Depth</th>
<th>Dist. from Coast</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area E</td>
<td>43° - 21' N 124° - 22' W</td>
<td>17.4 m</td>
<td>2.4 Km</td>
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<tr>
<td>Area F</td>
<td>43° - 22' N 124° - 22' W</td>
<td>24.4 m</td>
<td>2.4 Km</td>
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</table>
1. Issuing Authority:
   Division       North Pacific       District       Portland

2. Permit start date/expire date:
   Permittee:   N/A
   Date issued:   ___________   Permit No.   ___________
   Start Date:   ___________   Expiry Date:   ___________

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Coquille River, Oregon

4. Specification of dredged material and process from which derived:
   a. Description:   Sand (SP)

   b. Mode of dredging:   Hopper Dredge YAQUINA

   c. Mode of transportation:   Hopper Dredge

5. Form in which dredged material is presented for disposal:
   Sand - Subrounded to Subangular

6. Total quantity (cubic meters):   22,957 cubic meters

7. Expected frequency of dumping (for reporting period):
   a. 9 loads daily, 7 days per week
   b. Actual start:   28 May 83   c. Actual completion:   16 Jun 83
3. Chemical composition:
Nutrients - Meets chemical/biological testing criteria,
Metals - Hg, Pb - None; Zn - 0.28; Cd - 0.003
Organics - None
Other Analyses -
Metals - Cd - 0.017 mg/l; Pb = 0.4 mg/kg; Zn - 7.28 mg/kg;
 Cd - 1.4 mg/kg;
Other - C.O.D. mg/l; Volatile Sol. % l - 4.45

9. Properties of dredged material:
   a. Solubility (% water) 37% H_2O
   b. Density (g/m/cm^3) 2.06 g/m/cm^3
   c. pH Unknown
   d. % sand 100 % silt % clay

10. Method of packaging:

11. Method of release: Bottom release - Immediate

12. Procedure and site for tank washing: Hoppers flushed at authorized disposal site

13. Approved dumping site:
   a. Geographical position (latitude and longitude):
      43° - 07' N (Lat.); 124° - 26' W (Long.)
   b. Depth of water (meters): 18.3 meters
   c. Distance from nearest coast (kilometers): 1.6 kilometers

14. Additional information:
LONDON DUMPING CONVENTION


1. Issuing Authority:
   Division North Pacific
   District Portland

2. Permit start date/expire date:
   Permittee: N/A
   Date issued: ____________ Permit No. ____________
   Start Date: ____________ Expiry Date: ____________

3. Country of origin of waste and port of loading:
   a. United States of America
   b. Mouth of Columbia River, Oregon & Washington

4. Specification of dredged material and process from which derived:
   a. Description: Sand (SP)

   b. Mode of dredging: Hopper Dredge ESSAYONS and Contract Hopper Dredge MANHATTAN ISLAND

   c. Mode of transportation: Hopper Dredge

5. Form in which dredged material is presented for disposal:
   Sand - Subrounded to Subangular

6. Total quantity (cubic meters): 1,476,177 cubic meters

7. Expected frequency of dumping (for reporting period):
   a. 11 loads daily, 7 days per week
   b. Actual start: 6 Aug 83 c. Actual completion: 30 Sep 83

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3. Chemical composition:
Nutrients - Meets chemical/biological testing exemption criteria.
Metals - Hg, Pb, Cd - None detected; Zn - 0.19 mg/l
Organics - None
Other Analyses -
Metals - Mg - 0.033 ppm; Pb - 6.4 mg/kg; Cd - 0.64 mg/kg; Zn - 9.0 mg/kg
Volatile Solids % - 0.72; C.O.C. - 1.73 gm/kg

9. Properties of dredged material:
a. Solubility (% water) 40% H₂
b. Density (gm/cc) 1.94 gm/cc
c. pH 7.0
d. % sand ____ % silt ____ % clay ____

10. Method of packaging:

11. Method of release: Bottom release - Immediate

12. Procedure and site for tank washing: Hoppers flushed at authorized disposal site

13. Approved dumping site:

a. Geographical position (latitude and longitude):
   This project has five authorized disposal sites. Three were used in 1983 (See #14 below).

b. Depth of water (meters):
   See below

c. Distance from nearest coast (kilometers):
   See below

14. Additional information:

<table>
<thead>
<tr>
<th>Disposal Area</th>
<th>Lat. - Long</th>
<th>Water Depth</th>
<th>Dist. from Coast</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area A</td>
<td>46° - 12' N</td>
<td>19.8 meters</td>
<td>4.0 kilometers</td>
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<tr>
<td></td>
<td>124° - 06' W</td>
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<td>Area B</td>
<td>46° - 14' N</td>
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<td></td>
<td>124° - 10' W</td>
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<td>Area E</td>
<td>46° - 15' N</td>
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<tr>
<td></td>
<td>124° - 05' W</td>
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</tbody>
</table>
LONDON DUMPING CONVENTION


1. Issuing Authority:
   Division North Pacific  District Portland

2. Permit start date/expire date:
   Permittee: N/A
   Date issued: ____________  Permit No. ____________
   Start Date: ____________  Expiry Date: ____________

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Rogue River, Oregon

4. Specification of dredged material and process from which derived:
   a. Description: Sand (SP)
   b. Mode of dredging: Hopper Dredge YAQUINA
   c. Mode of transportation: Hopper Dredge

5. Form in which dredged material is presented for disposal:
   Sand - Subangular

6. Total quantity (cubic meters): 108,772 cubic meters

7. Expected frequency of dumping (for reporting period):
   a. 12 loads daily, 7 days per week
   b. Actual start: 17 May 83  c. Actual completion: 28 Jul 83

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9. Chemical composition:

- Nutrients: None
- Metals: Hg = 0.001; Pb = 0.001; Cd = 0.002; Zn = 0.012
- Organics: None
- Other Analyses: None
- Oil & Grease: No visible sheen

9. Properties of dredged material:
   a. Solubility (% water): 43% H₂O
   b. Density (gm/cc): 2.01 gm/cc
   c. pH: 7.4
   d. % sand: 100 | % silt | % clay

10. Method of packaging:

11. Method of release: Bottom release - Immediate

12. Procedure and site for tank washing:
    Hopper flushed at authorized disposal site.

13. Approved dumping site:
   a. Geographical position (latitude and longitude):
      42° - 24' N (Lat.); 124° - 27' W (Long.)
   b. Depth of water (meters):
      1.83 meters
   c. Distance from nearest coast (kilometers):
      3.2 kilometers

14. Additional information:
LONDON DUMPING CONVENTION


1. Issuing Authority:
   Division North Pacific    District Portland

2. Permit start date/expire date:
   Permittee: N/A
   Date issued: ___________    Permit No. ___________
   Start Date: ___________    Expiry Date: ___________

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Siuslaw River, Oregon

4. Specification of dredged material and process from which derived:
   a. Description: Sand (SP)
   b. Mode of dredging: Hopper Dredge YAQUINA
   c. Mode of transportation: Hopper Dredge

5. Form in which dredged material is presented for disposal:
   Sand - Subangular to Subrounded

6. Total quantity (cubic meters): 163,108 cubic meters

7. Expected frequency of dumping (for reporting period):
   a. 13 loads daily, 7 days per week
   b. Actual start: 17 Jun 83    c. Actual completion: 8 Sep 83
8. Chemical composition:
Nutrients - TKN - 1.54 mg/l; TPO \( \frac{4}{2} \) - 0.35 mg/l
Metals - Hg - 0.0010 ppm; 0.001 ppm (dry)
Organics - Volatile Solids - 10,000 mg/kg (dry)
C.O.D. - 77.6 mg/l; Suspended Solids - 56 mg/l;
T.S.C. - 1.6 mg/l

9. Properties of dredged material:
a. Solubility (% water) 49% \( H_2O \)
b. Density (gm/cc) 2.01 gm/cc
c. pH 7.0
d. % sand 100 % silt % clay

10. Method of packaging:

11. Method of release: Bottom release - Immediate

12. Procedure and site for tank washing: Hoppers flushed at authorized disposal site

13. Approved dumping site:
   a. Geographical position (latitude and longitude):
      44° - 01' N (Lat.); 124° - 09' W (Long.)
   b. Depth of water (meters): 21.3 meters
   c. Distance from nearest coast (kilometers): 1.9 kilometers

14. Additional information:
LONDON DUMPING CONVENTION


1. Issuing Authority:
   Division North Pacific District Portland

2. Permit start date/expire date:
   Permittee: N/A
   Date issued: __________ Permit No. __________
   Start Date: __________ Expiry Date: __________

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Umpqua River, Oregon

4. Specification of dredged material and process from which derived:
   a. Description: Sand (SP)
   b. Mode of dredging: Hopper Dredge YAQUINA
   c. Mode of transportation: Hopper Dredge

5. Form in which dredged material is presented for disposal:
   Sand - Subrounded to Subangular

6. Total quantity (cubic meters): 103,947 cubic meters

7. Expected frequency of dumping (for reporting period):
   a. 9 loads daily, 7 days per week
   b. Actual start: 3 Jun 83 c. Actual completion: 8 Sep 83

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8. Chemical composition:
Nutrients - Ortho Phosphates - 11-62 ug/l; Phosphate Phosphorus-65-88 ug/l
Metals - Cyanide - 1-3 ug/l
Organics - Volatile Solids - 8500-41,300 mg/ug (dry)

9. Properties of dredged material:
   a. Solubility (% water) 36% H₂O
   b. Density (gm/cc) 2.05 gm/cc
   c. pH 7.1
   d. % sand 100 % silt % clay

10. Method of packaging:

11. Method of release: Bottom release - Immediate

12. Procedure and site for tank washing:
    Hopper flushed at authorized disposal site.

13. Approved dumping site:
   a. Geographical position (latitude and longitude):
      43° - 40' N (Lat.); 124° - 14' W (Long.)
   b. Depth of water (meters):
      27.4 meters
   c. Distance from nearest coast (kilometers):
      0.8 kilometers

14. Additional information:

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LONDON DUMPING CONVENTION

1. Issuing Authority:
   Division North Pacific        District Portland

2. Permit start date/expire date:
   Permittee: N/A
   Date issued: ___________  Permit No. ___________
   Start Date: ___________   Expiry Date: ___________

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Yaquina Bay & Harbor, Oregon

4. Specification of dredged material and process from which derived:
   a. Description: Sand (SP)

   b. Mode of dredging: Hopper Dredge YAQUINA and
      Contract Hopper Dredge WESTPORT

   c. Mode of transportation: Hopper Dredge

5. Form in which dredged material is presented for disposal:
   Sand - Subrounded to Subangular

6. Total quantity (cubic meters): 346,608 cubic meters

7. Expected frequency of dumping (for reporting period):
   a. 13 loads daily, 7 days per week
8. Chemical composition:

Nutrients - TKN - 0.42 mg/l; T\(\frac{3}{4}\) - 0.38 mg/l; Orthophosphate - 0.064 mg/l;

T.O.C. - 3.7 mg/l

Metals - Hg - 0.0 mg/l; Mn - 1.2 mg/l; Cu - 1 mg/l; Cd - 0.38 mg/l;

Pb - 0.0 mg/l; Zn - 1.8 mg/l

Organic - Phenols - 9 mg/l

9. Properties of dredged material:

a. Solubility (% water) H\(_2\) - 26%

b. Density (gm/cc) - 2.04 gm/cc

c. pH - 7.9

d. % sand - 100  % silt -  % clay

10. Method of packaging:

11. Method of release: Bottom release - Immediate


13. Approved dumping site:

a. Geographical position (latitude and longitude):

44° - 36' N (Lat.); 124° - 05' W (Long.)

b. Depth of water (meters): 18.3 meters

c. Distance from nearest coast (kilometers): 1.6 kilometers

14. Additional information:
1. Issuing Authority:
   Division North Pacific       District Alaska

2. Permit start date/expire date:
   Permitee: ____________________________
   Date issued: _______________   Permit No. _______________
   Start Date: _______________   Expiry Date: _______________

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Nome, Alaska

4. Specification of dredged material and process from which derived:
   a. Description: Gravelly, silty, sand
   b. Mode of dredging: Clam shell
   c. Mode of transportation: Barge

5. Form in which dredged material is presented for disposal: Solid

6. Total quantity (cubic meters): 10,940

7. Expected frequency of dumping (for reporting period):
   a. 3 times/day
   b. Actual start: 1 June 83       c. Actual completion: 30 September 83

240
8. Chemical composition: N/A

9. Properties of dredged material:
   a. Solubility (% water) 10%
   b. Density (gm/cc) : 1.6 sm/cc
   c. pH : N/A
   d. % sand 75  % silt 15  % clay 8

10. Method of packaging: Barge loaded
11. Method of release: Washed off of barge
12. Procedure and site for tank washing: N/A
13. Approved dumping site:
   a. Geographical position (latitude and longitude): 64°29'54"N 165°24'41"W
   b. Depth of water (meters): 3-5m
   c. Distance from nearest coast (kilometers): 0.6km
14. Additional information:
    This is an annual Corps of Engineers Maintenance Dredging Project
Periodic Maintenance Dredging
Nawiliwili Harbor, Kauai, Hawaii

LONDON DUMPING CONVENTION


1. Issuing Authority:
   Division Pacific Ocean District Honolulu

2. Permit start date/expire date:
   Permittee: N/A
   Date issued: ____________ Permit No. ____________
   Start Date: ____________ Expiry Date: ____________

3. Country of origin of wastes and port of loading:
   a. United States of America
   b. Nawiliwili Harbor, Kauai

4. Specification of dredged material and process from which derived:
   a. Description: Poorly graded gravelly sand.
   b. Mode of dredging: Hopper dredge "YAQUINA"
   c. Mode of transportation: Hopper dredge "YAQUINA"

5. Form in which dredged material is presented for disposal: Slurry, non-cohesive character

6. Total quantity (cubic meters): 240,000 m³

7. Expected frequency of dumping (for reporting period):
   a. 14 times daily, 6 days per week
   b. Actual start: 16 Feb 83
   c. Actual completion: 24 Mar 83
8. Chemical composition: N/A

9. Properties of dredged material:
   a. Solubility (% water)
   b. Density (gm/cc) 1.71 gm/cc
   c. pH
   d. % sand 95 % silt 5 % clay

10. Method of packaging: N/A

11. Method of release: Bottom release

12. Procedure and site for tank washing: Hopper flushed at authorized disposal site

13. Approved dumping site:
   a. Geographical position (latitude and longitude): 21° 55' N (Lat) 159° 17' W (Long)
   b. Depth of water (meters): 1000 m
   c. Distance from nearest coast (kilometers): 6.5 m

14. Additional information: