1st EcoPorts workshop on waste reception facilities

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THE PORT OF PIRAEUS (PPA)
Nearly 18 mil. Passengers per annum.

More than 2 mil cruise passengers.

Approximately 0.5mil cars with more than 70% destined for other Mediterranean countries.

More than 3 mil. containers (TEU) at two terminals - main hub for major container shipping lines.
BUSINESS ACTIVITIES

1. COASTAL SECTOR
2. CRUISE SECTOR
3. CAR TERMINAL
4. CONTAINER TERMINAL
SHIP GENERATED WASTE RECEPTION FACILITIES IN PORT OF PIRAEUS

Provided Services:

- Annexes I, II, IV, V, VI of MARPOL 73/78 Convention
- Collection
- Treatment (oily waste)
- Final disposal
- Designated Waste Collectors/Contractors of PPA
<table>
<thead>
<tr>
<th>ANNEX</th>
<th>WASTE DESCRIPTION</th>
<th>CONTRACTOR</th>
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</table>
| I     | Fuel oil residues (Sludge)  
         Used engine oil  
         Oily bilge water  
         Oily tank washings  
         Dirty Ballast water | HELLENIC ENVIRONMENTAL CENTER SA |
| II    | Noxious liquid substances | HELLENIC ENVIRONMENTAL CENTER SA |
| IV    | Sewage | HELLENIC ENVIRONMENTAL CENTER SA |
| V     | A. Plastics  
         B. Food Wastes  
         C. Domestic Wastes  
         D. Cooking Oil  
         E. Incinerator ashes  
         F. Operational wastes  
         G. Cargo residues  
         H. Animal Carcass(es)  
         I. Fishing Gear | ANTIPOLLUTION SA |
| VI    | Solid waste (eg cargo associated waste) of ozone  
         depleting substances | ANTIPOLLUTION SA |
WASTE MANAGEMENT PLAN

- Assessment of the reception facilities adequacy according to the type and quantities of waste and ships’ type and calls

- Description of type and capacity of port reception facilities

- Procedures for the collection, treatment and final disposal or re-use of ship-generated waste and cargo residues

- Charge system

- Procedures for reporting inadequacies

- Description of the pre-treatment equipment and processes

- Procedures for ongoing consultations with port users, waste contractors, terminal operators and other interested parties
**Applied charge system:**

- **Ships with scheduled traffic, frequent and regular calls**
- **Delivery, treatment and final disposal of a maximum permitted quantity of waste**
- **Contributory fee**
- **Additional charge for excessive amounts of waste**
- **Depends on the ship type**
**Ships without scheduled traffic**

Delivery to Port Reception facilities = discount of 80% on the fixed fee

Fixed Fee per call

Additional charge for delivered waste quantities

Depends on the Gross Tonnage or Passenger Capacity of the Ship
Infrastructure and equipment:

- Mobile equipment (no stationary facility)
- Floating reception facilities
- Barges or barge craft (self propelled or towed)
- Floating Separator for Oily waste
- Land reception facilities
- Trucks, vehicles
- Containers, skip containers
- Garbage receptacles
Procedures:

INVOLVED PARTS:

- Facilities Office -PPA
- Ship/Ship’s Owner/Ship Agents
- Designated Collectors
- Port State Control
- Ministry of Mercantile Marine
Arrival Notification

Ship's Waste Notification

Fees payment to PPA's Office

Receipt for fees payment

Delivery notification to the contractors

Waste delivery

Waste delivery receipt signed from ship and contractor
<table>
<thead>
<tr>
<th>Collection Equipment</th>
<th>Annex I</th>
<th>Annex IV</th>
<th>Annex V</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>BARGE</td>
<td>BARGE</td>
<td>CONTAINERS</td>
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<td></td>
<td>TRUCK</td>
<td>TRUCK</td>
<td>SKIP CONTAINERS</td>
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<td></td>
<td>SEPARATOR</td>
<td>SEWAGE FIXED NET FOR CRUISE TERMINAL</td>
<td>RECEPTACLES</td>
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<td>SEPARATOR</td>
<td>BARGES</td>
</tr>
<tr>
<td>Treatment &amp; Final Disposal</td>
<td>FLOATING SEPARATOR</td>
<td>SEWAGE BIOLOGICAL TREATMENT PLANT</td>
<td>LANDFILL</td>
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<td>SPECIAL WASTE: DESIGNATED PLANTS FOR TREATMENT OR FINAL DISPOSAL</td>
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Floating separator
Users Information System:

- Port Ship Generated Waste Facilities Office

- PPA’s Website: [www.olp.gr](http://www.olp.gr)
Available Information to the Users for Port Reception Facilities

- Port Reception Facilities Regulation
- Port Reception Facilities Charge System Guide
- Procedure for applying exemptions or reduced fees
- Notification Forms
- Forms for Reporting of Port Reception facilities inadequacy
Permanent sewage reception network:

- Location: Cruise Terminal area
- Total length: 3 km
- Adequate facilities for cruise ships with capacity of 25,000 passengers
- Connection between ship-network according to MARPOL 73/78 specifications
- Connection spots through manholes on pier in order to avoid environmental impacts
Benefits of permanent sewage network:

- Reduce the waste reception time by 50%
- Limitation of the environmental impacts
  - Air emissions
  - Fuel consumption
  - Traffic congestion
- Avoidance of marine pollution incidents due to sewage leakage
PPA-WASTE DELIVERIES (m³) 2013

- ANNEX V: 29%
- ANNEX IV: 2%
- ANNEX III: 0%
- ANNEX I: 69%
Thank you for your attention