The management of waste in marine spills

1

Aim

- To highlight the importance of careful waste management during shoreline clean-up, and to introduce the regulations that will apply

2

Outline

- Waste Contingency Planning
- The Waste Management Group
- The Waste Hierarchy
- Storage, treatment and disposal
- The Regulations
- Case study
- The Beachmaster's role
- Questions?

3

Waste contingency planning

National Contingency Plan for Marine Pollution from Shipping and Offshore Installations (NCP)

- Major Incidents (Tier 3)
- National Resources
- Tactical Co-ordination Group (TCG)
  - **Waste Management Group**

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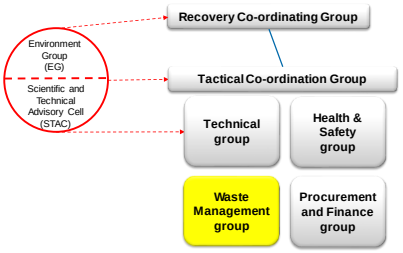
4



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5

The Waste Management Group

Waste Management Role

- Disposal Strategy
- Minimisation and segregation
- Temporary storage plan
- Location and format of Storage
- Comply with Waste Legislation

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6

The Waste Hierarchy

- Reduce
- Re-use
- Recycle
- Recover
- Dispose

7

The waste hierarchy: Reduce

- Most cost-effective option
- Produces as little oily waste as possible
- Can waste be avoided? – reload bulk oil?
- Requires careful action on the ground to avoid cross-contamination of waste materials

8

The waste hierarchy: Re-use

- Make best use of the waste that is produced e.g. as a fuel or a raw material such as road construction
- Again, segregation is vital

9

The waste hierarchy: Recover

- Involves treating the oily waste to recover useful materials or energy
- Washing, thermal treatment (co-incineration), oil/water separation, biological treatments

10

The waste hierarchy: Disposal

- Most expensive, least desirable option
- Hazardous waste landfills require pre-treatment
- No liquid or flammable wastes to landfill
- Very few available sites
- Incineration without energy or
- product recovery

11

12

Storage, treatment and disposal

- Temporary emergency storage at beach-heads
- Medium-term storage prior to treatment
- Transport straight to refinery/co-incinerator for recovery
- Direct to landfill
- When do you need a permit from the Environment Agency?

13

Waste Management Legislation

- The Environmental Permitting (England & Wales) Regulations 2016
  - WM3 Technical guidance-classifying waste
- The Hazardous Waste (England & Wales) Regulations 2005
- The Control of Pollution (Amendment) Act 1989

14

Environmental Permitting Regs (2016)

- Sites where waste is kept, treated or disposed of require an environmental permit
- In an *emergency*, waste can be stored without a permit
- The decision of when an emergency ends will be taken by us
- Exemption - Temporary storage -12 months – place of production only
- Medium and long-term storage sites, all treatment sites will need an environmental permit
- Mobile permit treatment deployments option

15

WM3 – How to Classify Wastes

- WM3 - Technical Guidance
  - Applies European Waste Catalogue
- Hazardous waste(*) versus non-hazardous
- Chapter 1302 – oily wastes as starting point, but consider other chapters as well
- Most oily wastes are absolute hazardous waste*

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16

Hazardous Waste Regulations (2005)

- Moving Hazardous Waste
- Every movement must be accompanied by a Hazardous Waste Consignment Note(3 copies)
  - Producer
  - Carrier
  - Consignee
- Keeping Records of Hazardous waste movements
  - Producer should keep copies for minimum of 3 years
  - Consignee should send back completed Part E section

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17

Environmental Protection Act (1990)

- All carriers of controlled waste must be registered with the Environment Agency
- Check your contractors or you could be breaking the law by giving them your waste
- Check EA public register

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18

Case Study

- *Erika*, Bay of Biscay, 1999
  - Broke in two in severe storms and sank 60 miles offshore
  - All crew rescued
  - 20,000 tonnes of Heavy Fuel Oil spilled
  - Oil beached on Christmas Day, affecting over 400km of the Brittany coast

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19

Case Study

- Oil over 27cm thick in places
- Over 4,000 people working on shoreline clean-up – volunteers, councils, military
- French govt insisted that 100% of oil removed
  - Tourism Industry – public perception
  - State-owned oil company – political pressure
- 250,000 tonnes of waste produced in total
- 10 tonnes of waste for every 1 tonne of oil

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20

21

Case Study

- After initial segregation wastes were then mixed up at storage sites
- It took six months to re-segregate mixed wastes
- Waste took over four years to treat

22

Role of Responders

- Manages waste generated on their site
  - Follows the **Waste Hierarchy** (reduce, re-use, recycle, recover, dispose)
  - Ensures wastes are **segregated** by type and label so everyone can see
  - Takes responsibility for **paperwork**
  - Ensures that **no secondary pollution** is caused

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23

Role of Responders (Ctnd...)

- Paperwork and Checks
  - Keep a **Log** of waste created for Audit purposes

  (Waste type, how much and when)
  - **Waste Transfer Notes**
  - **Hazardous Waste Consignment Notes**

  (List the waste type, quantity / tonnage, destination, etc)
  - **Waste Carriers** – ensure companies transporting waste are registered.

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24

Role of the Beachmaster (Ctnd...)

- Preventing Secondary Pollution
  - Site Security
  - Clear procedures / training
  - Segregation / signs / labelling
  - Containment

25

Summary

- The Environment Agency will provide advice
- Consider the various options for your waste **in advance** of an incident
- Develop and test contingency plans
- Have regard for the regulations that apply
- Proper waste management will save you time and money and protect the environment from further damage
- Getting it wrong could be very expensive

26