

**INTERSPILL 2000**

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**THE MANAGEMENT OF OILY WASTE**

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**Executive Summary**

The Environment Agency is an independent Government sponsored body, responsible for, amongst other things, the regulation of waste storage, treatment and disposal in England and Wales. European Directives and regulations enforced by the Agency impinge on every stage of the waste management process.

There is a tension between the urgent demand of clean up, the best practicable environment option and the best-priced disposal option.

The Environment Agency will use its regulatory powers to ensure that sustainable waste management is given due regard.

The Environment Agency has clarified its policy on waste regulation, creating a climate where collaboration can take place to develop and evaluate practical waste management options. Collaboration and partnership is essential if a coherent, effective and accepted National Waste Strategy to support the National Contingency Plan is to be put in place.

## **Introduction**

Any shoreline clean up will generate large quantities of waste. The integration of waste management planning into contingency planning is essential. The impact of the waste produced must be included in an assessment of the net environmental benefit of a planned clean up if it is to be complete. At the very least, the management of waste arising must be approached with the principle of sustainability. Recent incidents show that contingency planning has not included waste management.

This paper categorises the waste types resulting from clean up and the different waste management options that fall within the remit of European legislation. The relationship between the operational requirements of the clean up and the discharge of the Environment Agency's waste regulatory role in England and Wales will be explained. Management operations of various waste types will be discussed in terms of legal compliance and some of the difficulties of waste management explored. The key to understanding the Agency's approach to regulation is to consider the broader context of sustainability.

### **The role of the Environment Agency in major oil spills**

The National Contingency Plan for Marine Pollution from Shipping and Offshore Installations details the Agency role. The Environment Agency has a responsibility to prevent the spread of oil inland from estuaries on incoming tides and is preparing action plans to protect wherever feasible, sensitive areas of the coastline and estuaries by booming. The Environment Agency will seek to prevent contamination of sensitive shorelines in preference to mitigating the impact of oil deposited. Agency plans are an aid to facilitate prioritisation and consider the practicality of boom deployment. The Agency's booming capability is under review.

The Environment Agency will provide advice on risks to controlled waters and to ensure that environmental considerations are given appropriate and timely consideration.

The Environment Agency will participate in assessing the impact of the spill and monitoring the clean up. Practical assistance may be available for clean up by our own direct labour organisation, which is normally employed on flood defence work.

The Agency will advise on waste minimisation to reduce the amount of waste requiring disposal and on the location and form of temporary storage and treatment areas. The Agency recognises the need to develop strategic plans for the management of waste and will advise on disposal options.

## **Legislative and Policy Framework**

The Environment Act 1995 created the Environment Agency and also provided its principal aim of contributing towards achieving sustainable development.

In performing its various functions and in choosing between courses of action which include enforcement, the Agency must consider costs and sustainability.

In December 1995 the Government produced a strategy for sustainable waste management entitled **Making Waste Work**, now updated in the draft **A Way With Waste**. This has given us the waste hierarchy. The hierarchy is a set of principles applicable to waste management irrespective of the context.

**Waste Minimisation:** One of the key interests of the Agency will be to ensure that where clean up is required, that the methods generate as little waste as possible.

**Re-use:** Where waste has been generated consideration should be given to re-use to make best use of the waste that is produced, as a fuel, or possibly a raw material in road construction.

**Recover:** Treatment may result in oil recovery for recycling, with the return of cleaned material back to the environment.

**Disposal :** the least favoured option and the last thing the Environment Agency will do is provide the quickest disposal fix for clearance problems. Disposal has been synonymous with landfill.

## **Regulatory Controls**

The European Framework Directive on waste, 91/156/EC provides useful guidance on what constitutes waste and includes any substance that has been spilled, lost or undergone other mishap, including any materials and equipment contaminated as a result of the mishap. The waste arising from oil spill clear up is clearly waste controlled by legislation.

Under Section 33 of the Environment Protection Act 1990 a person shall not treat, keep or dispose of controlled waste unless a waste management licence is in force. To obtain a waste management licence you need permission from the Local Planning Authority and a detailed application to the Agency with specifications, risk assessments and quality assured construction. The facility manager must have a qualification from an Industrial Training Board. A financial provision accessible to the Agency, possibly in the form of a bond. There will be an ongoing liability with subsistence fees.

The waste management licence will set out the conditions under which the site operates, ensuring that no risk to human health, risk of pollution or serious detriment to the amenity of the area results. The waste management licence cannot be surrendered until there is no risk of pollution being caused.

Section 59 of the Environment Protection Act 1990 provides that if any controlled waste is deposited in contravention of Section 33, a notice may be served on the occupier to remove the waste and reduce the consequences.

The Special Waste Regulations 1996 require that a multi-part consignment note must accompany each movement of oily waste from the place of production. These notes must be purchased from the Environment Agency at a cost of £15 each. In an emergency there is provision that the Agency may waive the requirement for three days notification of movement.

The Control of Pollution Amendment Act 1989 requires every carrier of waste must be registered with the Environment Agency.

Directive 1993/31/EC, the Landfill Directive will, amongst other things, require the phasing out of co-disposal of waste. Putting oily waste into a domestic landfill is co-disposal. Throughput is currently limited in most landfill by controlled loading rates. More waste will be produced than the loading rates will allow to be deposited. In future, wastes classified as hazardous according to Directive 91/689/EC, such as oily waste will only be permitted in "hazardous" landfills and may require incineration.

### **Enforcement**

Effective emergency response requires team working between organisations pursuing a common goal. Whilst everyone will wish to minimise further pollution and mitigate the effects of the spill, regulators cannot facilitate action without regard to their statutory responsibilities. Public policy statements govern how law is enforced.

Enforcement policy pre-Agency was guided by Government circular 11/94. This circular stipulated that regulation should be proportionate to the risks involved and the benefits to be obtained. Regulation must be goal based and not be an end in itself.

### **Environment Agency Enforcement Policy**

The Environment Agency has taken these principles forward in its own public Enforcement and Prosecution Policy.

The Environment Agency's aim is to provide a better environment for England and Wales both for the present and the future and it will achieve much of this through education, by providing advice and by regulating the activities of others. Securing compliance with legal regulatory requirements, using enforcement powers including prosecution, is an important part of this aim. Our enforcement policy is a public document available on our web site. For large scale impact and for operating without a relevant permission or licence, there is a presumption to prosecute. Consideration is then given to the following public interest factors:-

1. The magnitude of the environmental effect of the offence.
2. The nature of the offence (where the type of the offence may be so serious in its nature or impact on the Agency's ability to regulate effectively that prosecution may be presumed).

3. the intent of the offender (offences that are committed deliberately, recklessly or for financial gain).
4. Any previous history of offending.
5. The attitude of the offender, particularly with regard to whether Agency advice has been followed and attempts made to minimise or rectify the effects or potential effects of the offence.
6. Deterrent effect (prosecution will normally be pursued if it is likely to be a necessary and effective way of preventing repetition of the offence by the offender).

### **Enforcement and Emergency Response**

Clean up must therefore be viewed from the context of sustainable waste management and clear and consistent regulation. The Agency has now adopted a policy for waste management regulation where the National Contingency Plan has been invoked.

Emergency storage at the beachhead to protect public health benefits from a statutory defence and a waste management licence will not be required. Basic pollution prevention measures would be expected. Once the danger to the public is addressed, this defence would not be available.

The Environment Agency will wish to encourage the sustainable management of wastes arising. The quickest short term best priced disposal option may not be the most sustainable or represent overall net environmental benefit. In the longer term such options may not even be the cheapest. The Agency would want to encourage better decision making. By ensuring the separation of waste types and allowing the provision of intermediate storage, the best practicable management option for each waste type can be considered. If broken metal rake heads are kept separate from the oily sand, or black plastic sacks separate from the seaweed they once contained, options for treatment or disposal are increased. Such stores would probably be illegal but in the context of the overall clean up, the public interest is served by allowing their establishment. By acknowledging the activity as illegal, the Agency would retain control by reserving the ability to serve notice for the waste to be removed and any polluting effects mitigated where circumstances change. Bulk waste storage can make processes economic that might otherwise be unreasonable.

The new policy provides guidance on the Agency's interpretation of the temporary derogation afforded by Article 7 of the Hazardous Waste Directive.

Article 7 of Council Directive 91/689 EEC on Hazardous Waste as amended states that in cases of emergency or grave danger, Member States shall take all necessary steps, including, where appropriate, temporary derogations from this Directive, to ensure that hazardous waste is so dealt with as not to constitute a threat to the population or the environment. The Member State shall inform the Commission of any such derogation.

## **Waste arisings**

The Environment Agency will advise on disposal routes and have developed in partnership with the Maritime and Coastguard Agency a database of licensed waste management facilities. The initial considerations, however, will be the types of waste that have been generated, that the amounts have been minimised and waste types segregated.

As part of the response centre the Agency will be ensuring that sustainable options have been considered. Storage may be necessary to enable options to be properly evaluated. Once all options have been identified, the Best Practicable Environmental Option can be determined for each waste type. The nature of the oil spilt will affect the types and quantities of waste produced. The local onshore contingency plans drawn up in consultation with the Agency should detail the range of solutions available.

For liquid waste such as relatively high percentage oils, emulsion and wash water, beachhead storage may be in fast tanks, skips, tankers or engineered lagoons.

Solid waste may be directly transported to final treatment or disposal sites. Some waste will probably be stored in skips or bins. There will be shoreline material such as sand, pebble and weed generated, along with clean up materials such as pads, wipes, pom-poms, protective equipment and tools. For effective waste management for each of these waste types bulk storage may be required as all these wastes may potentially require distinct treatment.

If due care is exercised by following Agency guidance further contamination will be minimised. The Agency would not require such stores to be licensed, though their illegal status would be recognised. The location of these short term stores can be identified in local plans. Pollution prevention advice and issues such as ground water protection can be included in these plans.

Onshore contingency plans are not complete without addressing this issue of waste management. The Agency needs to work with others, particularly the Institute of Petroleum and Maritime and Coastguard Agency to develop practical guidance on treatment options.

Current Agency policy on the transport of waste is that movement from the shore to the designated emergency store, irrespective of distance, will not require consignment notes. Movements to treatment or disposal facilities will always require consignment. This pragmatic approach will not remove the need to have tracking of waste movements for claim purposes.

## **Disposal Options**

Waste once collected must be separated according to type. The next logical consideration is their fate. Liquid waste may be from the at sea recovery or from the on-shore response. The liquid may go for treatment to recover the oil or be wasted through waste water treatment plant. The Agency would particularly wish to support storage linked to recovery. Licensed liquid waste treatment facilities are not well distributed throughout the United Kingdom.

Solid wastes such as sand and cobble can be washed and returned to the beach but will generate liquid wastes. There are other options for treatment of sand.

Thermal remediation is a process akin to roasting. Unfortunately the sand turns grey aesthetically limiting its reuse.

Stabilisation describes processes of mixing oily sand with binders and includes the re-use in tarmac.

Bioremediation as in landfarming or aerobic decomposition is a long term use of land and requires licensing.

Poor separation at source will limit the potential of some of these processes. With the exception of aerobic decomposition or bioremediation, the Agency would not require licensing of these options.

Incineration with heat recovery of seaweed, plastics and oil contaminated combustible waste is the best environmental option but is expensive and likely to be beyond what can be claimed from insurers, if other legal options are available.

Landfill into licensed sites is an option for all oily waste.

Some treatment processes have set up costs that would render them uneconomic for small operations. Few landfills are capable of receiving oily waste. Waste Management Licences for hazardous waste landfills would typically include a loading rate linked to input of other waste, limiting the daily amount that can be disposed of. Typically waste will be generated at a greater rate than landfills can accept, leading to the creation of interim stores. If the interim stores are kept to the minimum size to maximise disposal to landfill, economies of scale may be lost, that may have led to cheaper and more sustainable treatment options.

Landfill directive 1999/31/EC will shortly phase out co-disposal, and reduce the organic content of landfill. The creation of the oily waste disposal database by the Agency is only part of the necessary strategy for waste management. It is not an endorsement of disposal as a preferred option. Landfills that can accept oily waste will become scarcer, representing a more valuable resource for the landfill of hazardous wastes that cannot be disposed of through other routes.

## **Conclusions and Recommendations**

The shoreline clean up operation should comprise the minimal generation of waste followed by its segregation and short term storage pending direct transport for treatment or disposal, or longer term, large scale storage pending local treatment or detailed option evaluation.

The fate of waste types should be different; oiled protective clothing, seaweed, sand, pebbles and emulsion representing different challenges.

The Directives, Acts and Regulations governing waste management have been described. The Agency policy that has been adopted in England and Wales this Autumn has extended the



Prosecution and Enforcement Policy to address the problem of facilitating clean up while retaining regulatory control in a framework that enables co-operative planning and working.

The acceptability of various waste management options has been described not solely in terms of legislative control, but also in terms of sustainable waste management and the waste hierarchy.

The clarification of Environment Agency policy on waste regulation has created a climate where collaboration can take place to develop and evaluate practical management options. Collaboration and partnership is essential if a coherent, effective and accepted National Waste Strategy to support the National Contingency Plan is to be put in place.