



# **A Green Paper on Spill Containment in Extreme Weather Conditions**

## **November 2010**

# **EXTREME WEATHER SPILL INCIDENTS**

## **SUMMARY**

No matter how well prepared a site is for a spill incident, everything changes in extreme weather conditions. Basic spill equipment is rendered virtually useless during periods of heavy rain, snow and ice. If you can't find a drain because it's covered with snow and ice, or heavy rain washes away drain mats and spill berms, how can you protect your site and the environment?

## **SPILL CONTAINMENT IN EXTREME WEATHER CONDITIONS**

As the recent Climate-change summit in Copenhagen proved, there is still widespread debate about who or what is responsible for climate change, and in what measures can and should be taken to combat its effect. However, what is virtually universally accepted is that climate change itself is a fact of the future. That factor must therefore be taken into account when companies are implementing or updating their emergency containment procedures to comply with new European Directives.

The spate of Arctic conditions which swept across most of the UK and Northern Europe in early 2009 and early 2010, brought with it a series of major difficulties for companies attempting to deploy conventional spill and pollution control apparatus such as drain mats and plugs. Even the most diligently prepared emergency teams struggled to locate drains under inches of snow. However, locating the drain is only the first of many problems, some dangerous rather than just time consuming. Attempting to chip away ice from a frozen manhole cover with a shovel or blowtorch is obviously not a good idea on a site with stored Petrochemicals or above a sewer with potentially explosive gases. Extreme weather or a major accident will quickly turn theory to practice and expose flaws in a sites emergency equipment and health and safety procedures. As anyone who has had a recent ISO14001 annual audit will attest to, complacency isn't an option.

The risk of equipment failure is greatly increased with extreme weather conditions, and with frozen pipes and inaccessible drains the control of spills became a huge new challenge for many businesses. Farmers who are by nature, a hardy bunch who pride themselves on working in all weathers faced extra challenges due to the severity of the recent freeze. With deliveries and collections disrupted, many found themselves having to dispose of unwanted milk, a costly and potentially environmentally damaging exercise.

A comprehensive search of the internet surprisingly unearths virtually nothing on spill containment in extreme weather conditions. Either it's an area which hasn't really been given the attention it deserves or there is a perception that effective containment simply isn't possible in icy conditions.

Thankfully trying to find a spill or firewater containment system which works in all weather conditions is no longer a problem. Environmental Innovations Limited, a UK based designer, manufacturer and installer, provide semi or permanent Drainstopper™ systems housed below ground within the drain itself. Thereby converting the drainage system into a large capacity containment vessel for the spill. Buying invaluable time to organise the safe extraction of the spill from the drain, without the need for staff to put themselves at risk by entering potentially slippery areas to try and mop up the potentially hazardous spill. Once installed, this embedded technology with its auto-safety maintenance checking facility and auto deployment capabilities is untroubled by extreme weather conditions as everything is controlled from above ground. Apart from initial installation and periodic routine maintenance there is no need to access the drain. David Cole, EIL's Managing Director said "We are proud that our regular courtesy calls to our clients, have recently resulted in the same response we get all year, the system is working. Many haven't even considered the difficulties they would be facing if they still had standard spill equipment." The very nature of a spill is that it's not possible for it to happen at a 'convenient' time, so planning is everything. The system is designed for repeated use, unlike standard spill kits which require careful and specialist disposal of the contaminated mats and the additional cost of replacement after use.

Apart from the basic moral responsibility to protect the environment that any decent business has, the new legal requirements have empowered the authorities to forensically trace pollution back to its source. The new stringent Polluter Pays Principle at the heart of the new European Directive (ELD

2004/35/EC) makes no allowance for ignorance or extreme weather when it comes to instigating fines or allocating potentially massive remuneration costs. So it's vital that when choosing a pre-emptive emergency containment system, companies ensure that it will work in all circumstances and in all weather conditions.

## **FURTHER ESSENTIAL READING**

### **The Full DEFRA Guidance on the New Environmental Civil Sanctions :**

The EA intends to start to use these new powers on 4th January 2011.

“<http://www.defra.gov.uk/environment/policy/enforcement/pdf/defra-wag-guidance.pdf>”

### **PPG7 : Refuelling Facilities :**

Advice on how to protect the environment through the safe delivery, storage and dispensing of fuels.

<http://publications.environment-agency.gov.uk/epages/eapublications.storefront>

### **PPG18 Managing Fire Water and Major Spillages**

These guidance notes have been drawn up to assist in the identification of the equipment and techniques available to prevent and mitigate damage to the water environment caused by fires and major spillages.

Download full Guidance at

“<http://publications.environment-agency.gov.uk/pdf/PMHO600BBUD-e-e.pdf>”

### **PPG21 : Pollution - Incident Response :**

Good practice guidance to produce incident response plans for dealing with accidents, spillages and fires, to help protect the environment.

<http://publications.environment-agency.gov.uk/epages/eapublications.storefront>

### **PPG22 : Incident Response – Dealing with Spills :**

Advice on how to deal with spillages to avoid pollution.

<http://publications.environment-agency.gov.uk/epages/eapublications.storefront>

## **PPG26 : Safe Storage -**

### **Drums and Intermediate Bulk Containers :**

The regulations apply to: tanks (can be permanent or temporary); drums greater than 200 litres capacity; intermediate bulk containers (IBCs); mobile bowsers.

All above PPGs are available for download at

<http://www.environment-agency.gov.uk/business/topics/pollution/39083.aspx>

## **ENVIRONMENTAL LIABILITY DIRECTIVE 2004/35/EC :**

The Directive establishes a strong framework for environmental liability based on the "polluter pays" principle, with a view to preventing and remedying damage to animals, plants, natural habitats and water resources, and damage affecting the land. Where the polluter is at fault or negligent powers exist to ensure that the costs as well as any fines are allocated, in extreme cases prison sentences can be enforced.

Download full Directive [www.europa.eu](http://www.europa.eu)

## **PPG28 Controlled Burn**

This guidance will help you decide when and how to use a controlled burn as part of a fire fighting strategy to prevent or reduce damage to the environment. You should consider this guidance on a site by site basis when developing an incident response plan for your site.

Download full Guidance at

["http://publications.environment-agency.gov.uk/pdf/PMHO1005BJIT-e-e.pdf"](http://publications.environment-agency.gov.uk/pdf/PMHO1005BJIT-e-e.pdf)

## **Fire Service Manual**

This Fire and Rescue Manual is the first manual within the Fire Service Operations series dedicated to the protection of the environment. This publication provides information and guidance designed to support firefighters, Fire Brigade Service managers, and trainers in their work at operational incidents, training events, and during day-to-day activities.

Download full manual here

["http://www.communities.gov.uk/publications/fire/environmentprotectvol2"](http://www.communities.gov.uk/publications/fire/environmentprotectvol2)

# IS YOUR SITE RIGHT?

Use this Environment Agency 10-point checklist to help you make sure

## *Storing and handling oils, chemicals and other risky materials*

1. Are storage containers fit for purpose, regularly inspected and maintained?
2. Are storage areas and containers sited away from watercourses, drains and unsurfaced areas?
3. Do storage containers have secondary containment, such as a bund, to contain any leaks or spills?
4. Do you have procedures and training for safe delivery and handling of materials?

## *Waste management*

5. Is your storage and handling of waste safe and does it comply with the law?
6. Do you know where your waste goes? Are you sure it's disposed of correctly?
7. Are you reducing and recycling your waste? Do it and save money.

## *Site Drainage*

8. Do you have an up to date drainage plan of your site?
9. Is your site drained correctly?
  - only clean water, such as roof drainage, to surface water drains.

- all contaminated water, such as sewage and trade effluent, to foul drain.

### ***Dealing with pollution emergencies***

10. Do you have a plan, equipment and training to deal with pollution emergencies?

*If you answered 'no' to any question, or are unsure, use the Environment Agency's "Pollution Prevention Pays – getting your site right" guidance available from their website or call us for advice **0800 731 9313***

**If you have any questions about how to make your business safer for your staff and the environment please call**

**0800 731 9313**

**[www.environmental-innovations.biz](http://www.environmental-innovations.biz)**

WARNING: Produced by Environmental Innovations Copyright 2010, Information contained in this Green paper is given in good faith and may represent the views and opinions of others, where information is sourced from third parties, copyright remains vested with those parties, reference are given to sources wherever possible from which readers are invited to seek confirmation of material facts, where we have expressed an opinion this should be treated as such rather than hard facts, therefore Environmental Innovations Limited or its staff can accept no responsibility for any losses consequential or otherwise for any errors, omissions, opinions stated or any other material contained within this document or from any of the embedded linked documents within.