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Statutory guidance

SR2008 No 24 generic risk assessment for transfer of healthcare waste

Published **DRAFT**

The Environment Agency produces the generic risk assessments for all standard rules permits. These list the potential risks and how to manage them.

Check this generic risk assessment to understand:

* the potential risks of the transfer of healthcare waste
* if your proposed activity has the same risks and you can apply for the standard rules permit
* how to manage the risks effectively

Each risk comprises:

* information about the source, pathway and receptor – and the potential harm to that receptor
* a judgement of the level of risk and justification of that judgement
* actions for managing the risk (through permitting) and a residual risk rating after managing it

Risk management involves breaking or limiting the source-pathway-receptor linkage to reduce the risk. If we set minimum distances we explain the basis of the distance, for example by modelling.

We will control the residual risk (after risk management) when we assess compliance.

If you need to check the meaning of any terms we have used (in the context of this risk assessment), see the explanation of terms.

1. **Risks to people living in close proximity to the site**
   1. **Dust and bio-aerosols**

Dust and bio-aerosols travel through the air. We have assessed the potential harm as follows:

* general worsening of air quality
* nuisance and harm to human health
* respiratory irritation and illness
* loss of amenity

We have judged the:

* likelihood of the hazard affecting the receptor as medium
* the overall severity of potential consequences as high
* overall risk rating as high

The reasons for giving the activity this rating is because of the type of waste being stored.

To manage the risk:

* waste is only accepted in bags or containers
* reusable containers are disinfected before leaving site
* site surfaces and static containers are disinfected
* the amount of hazardous waste is restricted to 10 tonnes at any one time
* wastes are stored securely and for no more than 14 days
* waste is not compacted
* waste is not transferred, removed or separated from its primary packaging
* we may require an emissions management plan

Taking this action will control the risk and rate it as ‘low’.

* 1. **Odour**

Odour travels through the air. We have assessed the potential harm as follows:

* nuisance
* loss of amenity

We have judged the:

* likelihood of the hazard affecting the receptor as high
* the overall severity of potential consequences as high
* overall risk rating as high

The reasons for giving the activity this rating is because of the type of waste being stored.

To manage the risk:

* waste is only accepted in bags or containers
* reusable containers are disinfected before leaving site
* site surfaces and static containers are disinfected
* the amount of hazardous waste is restricted to 10 tonnes at any one time
* wastes are stored securely and for no more than 14 days
* waste is not compacted
* waste is not transferred, removed or separated from its primary packaging
* we may require an odour management plan

Taking this action will control the risk and rate it as ‘low’.

* 1. **Noise and vibration**

Noise and vibration travels through the air and through the ground. We have assessed the potential harm as follows:

* nuisance
* loss of amenity
* loss of sleep

We have judged the:

* likelihood of the hazard affecting the receptor as low
* the overall severity of potential consequences as low
* overall risk rating as low

The reasons for giving the activity this rating is because only transfer is allowed, no treatment.

To manage the risk we may require a noise and vibration management plan. Taking this action will control the risk and rate it as ‘low’.

* 1. **Litter**

Litter travels through the air. We have assessed the potential harm as follows:

* nuisance
* loss of amenity
* harm to animal health

We have judged the:

* likelihood of the hazard affecting the receptor as low
* the overall severity of potential consequences as low
* overall risk rating as low

The reasons for giving the activity this rating is because only transfer is allowed, no treatment.

To manage the risk we may require an emissions management plan.

Taking this action will control the risk and rate it as ‘low’.

* 1. **Waste, litter and mud on local roads**

Vehicle movements can cause waste, litter and mud on local roads. We have assessed the potential harm as follows:

* nuisance
* loss of amenity

We have judged the:

* likelihood of the hazard affecting the receptor as low
* the overall severity of potential consequences as low
* overall risk rating as low

The reasons for giving the activity this rating is because:

* the activity is unlikely to cause mud
* wastes are securely stored in vehicles

To manage the risk we may require an emissions management plan. Taking this action will control the risk and rate it as ‘low’.

* 1. **Pests like flies or scavengers**

Pests like flies or scavengers can travel through the air or over land. We have assessed the potential harm as follows:

* nuisance
* loss of amenity

We have judged the:

* likelihood of the hazard affecting the receptor as medium
* the overall severity of potential consequences as high
* overall risk rating as high

The reasons for giving the activity this rating is because of the type of waste being stored.

To manage the risk:

* waste is only accepted in bags or containers
* reusable containers are disinfected before leaving site
* site surfaces and static containers are disinfected
* the amount of hazardous waste is restricted to 10 tonnes at any one time
* wastes are stored securely and for no more than 14 days
* waste is not compacted
* waste is not transferred, removed or separated from its primary packaging
* we may require a pests management plan

Taking this action will control the risk and rate it as ‘low’.

* 1. **Flooding of the site**

Flood waters can flood the site.

We have assessed the potential harm as follows:

* waste could contaminate neighbouring and downstream premises

We have judged the:

* likelihood of the hazard affecting the receptor as low
* the overall severity of potential consequences as high
* overall risk rating as medium

The reasons for giving the activity this rating is because of the type of waste being stored.

To manage the risk:

* waste is only accepted in bags or containers
* the amount of hazardous waste is restricted to 10 tonnes at any one time
* we may require management system improvements.

Taking this action will control the risk and rate it as ‘low’.

1. **Risks to local human population and local environment**
   1. **Fire by arson, vandalism or accidental fire**

Fire can cause smoke to travel through the air and contaminated water to run-off over land.

We have assessed the potential harm of smoke as follows:

* respiratory irritation, illness and nuisance
* injury to staff or fire fighters
* impact on air quality

Contaminated run-off could cause:

* pollution of the ground
* pollution of groundwater and surface water

We have judged the:

* likelihood of the hazard affecting the receptor as low
* the overall severity of potential consequences as low
* overall risk rating as low

The reasons for giving the activity this rating is because:

* all waste is be kept secure
* the amount of hazardous waste is restricted to 10 tonnes at any one time
* there is a requirement for an impermeable surface and a sealed drainage system

To manage the risk we may request fire prevention plan improvements. Taking this action will control the risk and rate it as ‘low’.

1. **Risk to surface waters**

These risks relate to surface waters close to and downstream of the site.

* 1. **Liquid spills and contaminated rainwater run-off**

This risk could cause water quality to deteriorate through:

* run-off from the site across the ground
* surface water drains and ditches
* run-off through the soil

We have judged the:

* likelihood of the hazard affecting the receptor as low
* the overall severity of potential consequences as medium
* overall risk rating as medium

The reasons for giving the activity this rating is because of the type of waste being stored some of which may be liquids.

To manage the risk:

* all waste must be kept secure
* the amount of hazardous waste is restricted to 10 tonnes at any one time
* there is a requirement for an impermeable surface and a sealed drainage system
* only storage is allowed, no treatment

To manage the risk we may require an emissions management plan. Taking this action will control the risk and rate it as ‘low’.

1. **Risk to groundwater from liquid spills and contaminated rainwater run-off**

Liquid spills and contaminated rainwater run-off can travel through soil and groundwater. The water could then be abstracted from a borehole.

We have assessed the potential harm as follows:

* contamination of public or private water supplies – this would require treating the water or closing the borehole

We have judged the:

* likelihood of the hazard affecting the receptor as low
* the overall severity of potential consequences as medium
* overall risk rating as medium

The reasons for giving the activity this rating is because of the type of waste being stored.

To manage the risk:

* all waste must be kept secure
* the amount of hazardous waste is restricted to 10 tonnes at any one time
* there is a requirement for an impermeable surface and a sealed drainage system
* only storage is allowed, no treatment
* sites cannot be located within a Source Protection Zone 1 or within 50 metres of wells or borehole
* we may require an emissions management plan.

Taking this action will control the risk and rate it as ‘low’.

1. **Risk to protected sites**

Protected sites include:

* European sites
* Ramsar wetland sites
* Sites of Special Scientific Interest
* Marine Conservation Zones

There can be a risk to protected sites from any source and by any pathway.

We have assessed the potential harm to protected sites, they include (but are not limited to) the following:

* toxic contamination
* nutrient enrichment
* smothering
* disturbance
* predation

We have judged the:

* likelihood of the hazard affecting the receptor as low
* the overall severity of potential consequences as low
* overall risk rating as low

The reasons for giving the activity this rating is because:

* the permit’s exclusion distances do not allow sites within a minimum distance of these receptors
* dust and drainage controls are required as set out in other risks

To manage the risk we may require an emissions management plan. Taking this action will control the risk and rate it as ‘low’.

1. **Explanation of terms**
   1. **Receptor**

The things at risk and that need protecting.

Receptors considered include: atmosphere, land, surface waters, groundwater, humans, wildlife and their habitats.

A single receptor may be at risk from several different sources and all must be addressed.

* 1. **Source**

The agent or process that has the potential to cause harm.

A contaminant or pollutant (a hazard) that has the potential to cause harm. For example, the activity or operation taking place for which a particular hazard may arise.

* 1. **Harm**

The harmful consequence to the receptor if the hazard is realised.

* 1. **Pathways**

The route or means by which a defined hazard may affect a receptor.

* 1. **Source-pathway-receptor linkage**

There has to be a link between the source, pathway and receptor for there to be a risk.

* 1. **Likelihood of exposure**

This is the likelihood of the receptors being exposed to the hazard. The meaning of the definitions are:

* high – exposure is probable – direct exposure is likely with no or few barriers between the hazard source and the receptor
* medium – exposure is fairly probable - feasible exposure is possible as the barriers to exposure are less controllable
* low – exposure is unlikely – several barriers exist between the hazard source and receptor to reduce exposure
* very low – exposure is very unlikely – effective, multiple barriers are in place to reduce exposure
  1. **Overall magnitude of potential consequence**

This is the severity of the consequence if the hazard is realised and may cause actual or potential harm.

This will have a high, medium, low or very low rating using attributes and scaling to consider ‘harm’.

* 1. **Risk rating**

We work out the risk rating by combining the likelihood of exposure with the magnitude of the potential consequences.

We assign these ratings:

* high risk – requires additional assessment and active management
* medium risk – requires additional assessment and may need active management and, or monitoring (or both)
* low and very low risks will require a periodic review