Pilkington Asbestos and Clinical Healthcare Waste Removal Services

P.A.R.S Ltd

Generic risk assessment for standard rules sets numbers SR2008No9 v4.0 and SR2008No25 v4.0

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Standard Facility:	Waste Operation: Asbestos, Clinical & Healthcare Waste Transfer Station
Location:	Units 2 & 3 Glan Aber Works, Vale Road Rhyl LL18 2PL
Location of environmentally sensitive sites (km/m):	On or immediately adjacent to the site or greater than 200m (see below)
Risk assessment carried out by:	Derek Pilkington in conjunction with the Natural Resources Wales Guidelines
Date:	5th October 2015

The scope of the permit and associated rules set is defined by the following risk criteria:

Parameter 1 Permitted activities – The storage of waste (D15, D9, R13, and D14)

Parameter 2 Permitted waste types – Asbestos and Clinical & Healthcare waste

Parameter 3 Quantity of waste accepted at the facility asbestos: less than 3,650 tonnes per annum, (not more than 10 tonnes per day of asbestos
Clinical & Healthcare: <75,000 tonnes per annum, including a max 10 tonnes per day of hazardous waste.

Parameter 4 The quantity of either the asbestos waste or hazardous waste stored at the facility shall be less than 10 tonnes.

Parameter 4 Asbestos waste shall be double-bagged and stored within secure lockable containers.

Parameter 5 The treatment of clinical & healthcare waste should take place within a building on an impermeable surface with sealed drainage system.
Asbestos shall be stored on an impermeable surface with sealed drainage.

Parameter 6 The only point source discharges to controlled waters or groundwater , are surface water from roofs of buildings & from areas of the facility not used for the storage of wastes.

Parameter 7 All waste shall be stored in a building or a sealed container.

Parameter 8 The permitted activities shall not be carried out on or immediately adjacent to a European Site (candidate or Special Area of Conservation, proposed or Special Protection Area or Ramstar site) or a Site of Special Scientific Interest (SSSI).

Parameter 9 The activities shall not be carried out within groundwater source Protection Zone 1m, or if a Source Protection Zone has not been defined then within 50m of any well spring or borehole used for the supply of water for human consumption. This must include Private Water Supplies.

Abbreviations: **SR** – Standard Rule

SR (A) – Standard Rule Asbestos – Asbestos is the only permitted hazardous waste and there are several standard rules to manage risk: quantity received shall not exceed 10 tonnes per day; quantity stored shall not exceed 10 tonnes; there shall be no treatment; storage conditions shall be double bagged … within clearly identified, segregated, secure, lockable containers on impermeable surface with a sealed drainage system.

STAATT - State and Territorial Association on Alternative Treatment Technologies

SR (emissions of substances not controlled by emission limits) – emissions of substance … shall not cause pollution …, with appropriate measures: all treatment in a building … on an impermeable surface with sealed drainage system; all storage in a building … or within sealed containers… on an impermeable surface with sealed drainage system; separate storage of cytotoxics, waste medicines, sharps etc.; refrigerated body parts …; etc.

Data and Infromation				Judgement				Action (by permitting)	
Receptor	Source	Harm	Pathway	Probability of exposure	Consequence	Magnitude of risk	Justification for magnitude	Risk management	Residual Risk
What is at risk? What do I wish to protect?	What is the agent or process with potential to cause harm?	What are the harmful consequences if things go wrong?	How might the receptor come into contact with the source?	How likely is this contact?	How severs will the consequences be if this occurs?	What is the overall magnitude of the risk?	Om what did I base my judgement?	How can I best manage the risk to reduce magnitude?	What is the magnitude of the risk after management? (This residual risk will be controlled by Compliance Assessment).
Local human population	Release of particular matter (dusts) and infectious microorganisms (bio aerosols)	Harm to human health – respiratory irritation and illness.	Air transport then inhalation.	High	High	High	Treatment activities are likely to cause releases. There is potential for exposure is anyone is living or working close to the site (apart from the operator and employees)	Waste is only accepted in bags or containers. Reusable containers require disinfection before leaving site. Site surfaces and static containers require periodic disinfection.	Low
Local human population	As above	Nuisance – dust on cars, clothing etc.	Air transport then deposition	Low	Low	Low	Local residence often sensitive to dust.	As above	Very Low
Local human population	Airborne asbestos fibres	Respiratory illness i.e. lung cancer and mesothelioma	Air transport then inhalation.	Low	High	Medium	Potential for exposure is low because of separate health and safety controls to protect employees.	SR (A)	Low
Local human population	Release of particular matter (dusts)	Nuisance – dust on cars, clothing etc.	Air transport then deposition	Low	Low	Low	For the asbestos permitted waste (see above) the only source of	SR – emissions of substances not controlled by emission limits ...	Very Low

							dust is ancillary activities such as vehicle movements. The potential for exposure is low for anyone living or working close to the site (apart from the operator and employees).	SR (if required) – emissions management plan.	
Local human population, livestock and wildlife	Litter	Nuisance, loss of amenity and harm to animal health	Air Transport then deposition	**Medium**	**Medium**	**Medium**	Local residents often sensitive to litter	As above. Appropriate measures could include clearing litter arising from the activities from affected areas outside the site.	Very Low
Local human population	Waste, litter and mud on local roads	Nuisance loss of amenity, road traffic accidents.	Vehicles entering and leaving site	**Low**	**Medium**	**Low**	Road safety, local residents often sensitive to mud on roads.	As above (no appropriate measures defined). Appropriate measures could include clearing waste, litter and mud arising from the activities from affected areas outside the site.	Very Low
Local human population	Odour	Nuisance, loss of amenity	Air transport then inhalation	**High**	**High**	**High**	Local residents often sensitive to odour	SR – emissions shall be free from odour … SR – The operator shall maintain and implement an odour management plan.	Low
Local human population	Noise and vibration	Nuisance, loss of amenity, loss of sleep	Noise through the air and vibration through the ground.	**Medium**	**Medium**	**Medium**	Local residents often sensitive to noise and vibration.	SR – emissions shall be free from noise and vibration … SR (if required) – noise and vibration management plan.	Low

Local human population	Scavenging animals and scavenging birds	Harm to human health from waste carried off site and faeces. Nuisance and loss of amenity.	Air transport and over land.	**Medium**	**High**	**High**	Permitted wastes include infectious materials and may attract scavenging animals and birds.	SR – emissions of substances not controlled by emission limits (including those from scavenging birds and other pests) shall not cause pollution.	Low
Local human population	Pests (e.g. flies)	Harm to human health, nuisance, loss of amenity	Air transport over land	**Medium**	**High**	**High**	Permitted wastes include infectious materials and may attract pests.	As above	Low
Local human population and local environment	Flooding of site	If waste is washed off site it may contaminate buildings/gardens/natural habitats downstream.	Flood waters	**Low**	**Medium**	**Low**	Hazardous wastes washed off site will add to the volume and hazard of the local post-flood clean-up workload.	SR- management system (will include flood risk management). Release of hazardous wastes restricted by SR- maximum 10 tonnes, SR (emission limits) and SR- All liquids shall be provided with secondary containment … (applies to wastes and non-wastes such as fuels).	Very Low
Local human population and/ or livestock after gaining unauthorised entry to waste operation	All on-site hazards: wastes; machinery and vehicles	Bodily injury	Direct physical contact	**Medium**	**Medium**	**Medium**	Although some permitted waste types are hazardous, a medium magnitude risk is estimated.	SR – activities shall be managed and operated in accordance with a management system (will include site security measures to prevent unauthorised access). Access to hazardous wastes restricted by SR- maximum	Low

								hazardous waste storage 10 tonnes, SR (emissions of substances not controlled by emissions limits) and SR – All liquids shall be provided with secondary containment ... (applies to wastes and non-wastes such as fuels).	
Local human population and local environment.	Arson and / or vandalism causing the release of polluting materials to air (smoke or fumes), water or land.	Respiratory irritation, illness and nuisance to local population. Injury to staff or firefighters. Pollution of water and land	Air transport of smoke. Spillages and contaminated firewater by direct run-off from site and via surface water drains and ditches.	**Low**	**Medium**	**Medium**	Although some permitted waste types are hazardous and some are flammable, a medium magnitude risk is estimated.	As above SR – management system (will include fire and spillages).	Low
Local human population and local environment.	Accidental fire causing the release of polluting materials to air (smoke or fumes), water or land.	Respiratory irritation, illness and nuisance to local population. Injury to staff or firefighters. Pollution of water or land.	As above	**Low**	**Medium**	**Low**	Risk of accidental combustion of waste is low.	As above (excluding comments on access to waste). Permitted activities do not include the burning of waste.	Low
All surface waters close to and downstream of site	Spillage of liquids, leachate from waste, contaminated rainwater run-off from waste e.g. containing suspended solids.	Acute effects: oxygen depletion, fish kill and algal blooms	Direct run-off from site across ground surface, via surface water drains, ditches etc.	**Low**	**Medium**	**Low**	Although permitted waste types include some hazardous liquids a low magnitude risk is estimated.	SR – maximum hazardous waste storage 10 tonnes. SR (emissions of substances not controlled by emission limits) all waste is in bags or containers so any spillage is likely to be small and detected quickly. SR – All liquids shall be provided with	Low

								secondary containment ... (applies to wastes and non-wastes such as fuels).	
All surface waters close to and downstream of site.	As above	Chronic effects: deterioration of water quality	As above. Indirect run-off via the soil layer	**Low**	**Medium**	**Low**	Permitted waste types include hazardous liquids so harm may not be temporary and reversible.	As above	Low
Abstraction from watercourse downstream of facility (for agricultural or potable use).	As above	Acute effects, closure of abstraction intakes.	Direct run-off from site across ground surface, via surface water drains, ditches etc. then abstraction.	**Low**	**Medium**	**Low**	All clinical and healthcare waste is in bags or containers. Although permitted waste types include some hazardous liquids a low magnitude risk is estimated. Watercourse must have medium / high flow for abstraction to be permitted, which will dilute contaminated run-off.	As above, also the activities shall not be carried out within Groundwater Source Protection Zone 1, of if a sources Protection Zone has not been defined then within 50m of any well spring or borehole used for the supply of water for human consumption.	Low
Groundwater	As above	Chronic effects: contamination of groundwater, requiring treatment of water or closure of borehole.	Transport through soil/groundwater then extraction at borehole.	**Low**	**Medium**	**Low**	Permitted waste types including hazardous liquids so harm may not be temporary and reversible	As above, also the activities shall not be carried out within Groundwater Source Zone 1, or if a Source Protection Zone has not been defined then within 50m of any well spring or borehole used for the supply of water for human consumption	Low

Local human population	Contaminated waters used for recreational purposes	Harm to human health – skin damage or gastro-intestinal illness.	Direct contact or ingestion	**Low**	**Medium**	**Low**	Unlikely to occur, but might restrict recreational use.	SR – (emissions of substances not controlled by emission limits). SR (if required) – emissions management plan.	Very Low
Protected sites – European sites and SSSIs	Any	Harm to protected site through toxic contamination, nutrient enrichment, smothering, disturbance, predation etc.	Any	**Low**	**Medium**	**Low**	Waste operations May cause harm to and deterioration of nature conservation sites.	SR – emissions of substances not controlled by emission limits … SR – activities shall not be carried out on or immediately adjacent to a European Site or SSSI. (Distance criteria as agreed with Natural England/countryside council for Wales.	Low