

| BAT Reference Number (Equivalent BREF reference No. in brackets) | BAT Statement | Applicability to Installation | Proposed / In Place |
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| 5.1 | <p>Primary Requirements</p> <p>The key environmental issues for the waste transfer stations and materials recovery facilities sector are air emissions and soil contamination (BREF 2004). The following primary measures are considered BAT for the handling and recovery/disposal of waste at a transfer station/materials recovery facility:</p> <p>An EMS that incorporates the following features:</p> <ul style="list-style-type: none"> • Management and Reporting Structure. • Schedule of Environmental Objectives and Targets. • Annual Environmental Report (AER). • Environmental Management Programme (EMP). • Documentation System. • Corrective Action Procedures. • Awareness and Training Programme. • Communications Programme. • Waste acceptance procedure. • Waste management system for all incoming wastes and wastes on-site. • Appropriate storage and handling. • Wastewater management. • For hazardous waste transfer, the use of an extractive vent system linked to abatement equipment where applicable. • The provision of an impermeable surface across all areas of the facility where waste is handled and stored, with kerbing or sloping to protect any adjacent permeable areas. • The minimisation of underground tanks and pipework. | Yes | <p>Summary of Operations:</p> <p>Packaging Laundry Limited (PLL) engage in waste recovery and the storage of used packaging (namely empty IBCs and steel drums) that once contained chemicals. The process involves cleaning trace residue from empty packaging containers before they are dried, pressure tested, checked for defects and returned for re-use to the original owner (Closed Loop Reconditioning) or are sold to a third-party customer for reuse (Open Loop Reconditioning).</p> <p>PLL currently operate under Waste Facility Permit (WFP-WW-18-0043-01) issued by Wicklow County Council in May 2018. The company has a strict waste acceptance procedure in place to ensure that only approved waste types are accepted at the facility.</p> <p>The technology employed at the facility represents the cleanest and safest option for the laundering of used chemical storage vessels. No cleaning agents or chemicals are used in the process. Only clean water is applied under pressure using purpose-built drum wash machines which remove all trace chemical residue over several varying wash cycles.</p> <p>All wastewater generated in the process is held in an above-ground, bunded storage tank on site which is monitored for flow rate, temperature and pH (self-dosing) before the water is discharged to an overflow drainage pipe which discharges to the waste water drainage network. The site is subject to an Irish Water Trade Effluent Discharge Licence (IW-DTS-809938-01) which requires quarterly sampling and analysis.</p> <p>Damaged, empty storage vessels that are not suitable for reconditioning/ refurbishment or that fail the leak test are washed and dried using the same processes as for those undergoing refurbishment, before being cut (IBC's) or crushed (steel drums) in preparation for recycling or recovery at an appropriately authorised waste management facility.</p> |

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| | | | <p>BAT in Place:</p> <p>PLL operates an environmental management system that ensures key environmental issues relating to the industry and their business are addressed. The company is committed to the principles of ISO-9001 and subscribe to the philosophies of business excellence and continuous improvement of their quality management system. The company has a robust Environmental Policy which ensures that they conduct their business in a manner which protects the environment in which they operate. To achieve this, the company adheres to the following guiding principles;</p> <ul style="list-style-type: none"> • Ensure continued compliance with all Irish and EU legislative environmental requirements • Continually assess activities with the specific goal of preventing pollution, minimising and reducing any environmental impact • Ensure that environmental policy and goals have equality with other business goals • Communicate Environmental Policy to employees, suppliers, visitors and interested parties • Maintain an open information policy towards all parties affected, interested and involved in its activities and to issues, which concern the environment • Ensure that employees have the knowledge, resources and authority to implement these guiding principles and communicate environmental issues on a continuous basis among staff at every level. <p>All environmental objectives and targets are communicated through the company's management and reporting structure. Staff awareness and training exercises routinely include the following;</p> <ul style="list-style-type: none"> • Environmental Objectives and Targets • Waste Acceptance Procedure • Use of the Waste Management System • Appropriate Storage and Handling of Waste and Chemicals on site • Wastewater Management • Health and Safety Awareness • Corrective Action Procedures. <p>PPL provide an Annual Report to Irish Water as part of their Trade Effluent Discharge Permit (Ref. No. IW-DTS-809938-01) and an Annual Return is provided to</p> |
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| | | | <p>the National Waste Collection Permit Office (NWCPO) in relation to operation of their Waste Facility Permit. PPL is committed to providing an Annual Environmental Report (AER) to the Agency in line with the reporting requirements of a Waste Licence.</p> <p>All operations are undertaken within a large warehouse and atop an impermeable smooth concrete surface (across all areas of the facility including where waste is handled and stored).</p> |
| 5.2 | <p>Emissions to Air</p> <p>BAT is to carry out the management and control techniques outlined in Section 4.3.2.1. Minimisation of Emissions to Air summarised as follows:</p> <p><u>Dust/Fine Particulates (PM₁₀, PM_{2.5}) and Bioaerosols</u></p> <p><u>Management Techniques:</u> At the EIS and design stage the operator will use the risk assessment process to identify particularly sensitive receptors in the event of dust generation. The same process will also identify high-risk areas that may give rise to dust generation, e.g., site roads, waste types. The operational procedures and the working plan should set out the design and operational considerations and requirements to minimise and control potential nuisance from dust, particulates and bioaerosols.</p> <p>Detailed procedures of the receipt and handling of hazardous dusty waste (including asbestos) should be drawn up and used when the facility will be permitted to accept such waste.</p> <p>The effectiveness of the design and operational provisions should be reviewed as part of the site monitoring; the annual environmental review report and the site's EMS procedures.</p> <p><u>Control Techniques:</u></p> <ul style="list-style-type: none"> High standard of construction, including enclosed waste handling and storage areas for waste with the potential | Yes | <p>BAT in Place:</p> <p>The following best available techniques have been adopted at the facility to minimise air emissions.</p> <p>The PLL Waste Acceptance Procedure stipulates that only waste types permitted under their Waste Facility Permit (WFP-WW-18-0043-01) are accepted at the site. No general wastes or wastes that may contain soils, dusts, fibres etc are accepted at the facility which reduces the likelihood of generating nuisance dusts, particulates or odours from unauthorised waste types.</p> <p>The procedure outlines that all waste consignments must be arranged between the Customer and PLL in advance of a delivery being received at the site (i.e.- the facility does not accept ad hoc, unsolicited waste packaging).</p> <p>PLL provide all their Customers with a "Container Returns for Reconditioning" document which describes the company's Waste Acceptance Criteria and which must be signed by both parties prior to any consignment being accepted at the facility. Failure to comply with these criteria results in the return to origin of any consignments that are not pre-agreed. This further reduces the risk of receiving unauthorised waste types that may potentially cause nuisance dusts or odours.</p> <p>All incoming wastes are inspected upon arrival by the Facilities Manager (or a nominated, suitably qualified and experienced Deputy or Foreman). Any unauthorised waste types are immediately identified and returned. In addition, if waste vessels do not conform to the conditions described in the agreed "Container Returns for Reconditioning" document (i.e.,-the vessel is not empty as practically possible and free of external solidified product residues), the consignment is not accepted at the facility and is returned. In these instances, the Customer is issued with a non-conformance report within 24 hours. Strict adherence to this procedure ensures that no unauthorised waste is accepted at the facility and also ensures than potential odours from excessive chemical residue is minimised.</p> |

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| | <p>to generate dust or particulate emissions, and cleanliness of site roads.</p> <ul style="list-style-type: none"> • Pre-treatment of wastes, e.g., wetting, solidification, encapsulation. • Acceptance of bagged waste only. • Water sprinklers operated in relevant waste handling areas. • Regular sweeping of access roadways and areas of hard-standing and main transfer station area. • Transfer and loading of potentially dusty wastes within a building. • Use dust extraction system to remove dust and particulates from working areas/ buildings, where applicable. <p><u>Odour</u></p> <p><u>Management Techniques</u></p> <ul style="list-style-type: none"> • The location of the facility with regard to off-site receptors should be considered during the design stage. • At the design stage consideration should be given to the requirement for the capture, containment and treatment of odorous air. • The operational procedures, having regard to the waste types being accepted and the waste processing activities at the facility, should seek to minimise the risk of odours. All biodegradable/putrescible wastes should be removed from the premises as soon as practicable and, in any case, within 48 hours of arrival or within 72 hours at public holiday weekends. • Appropriate procedures should be developed for dealing with malodorous waste. <p><u>Control Techniques</u></p> <ul style="list-style-type: none"> • Restrict acceptance of wastes known to be malodorous. • Any handling or treatment of malodorous waste should be carried out in an enclosed area suitable for the capture, containment and treatment of odours. • Use of appropriate odour abatement equipment. | | <p>All waste handling activities and the reconditioning of empty storage vessels are undertaken within the enclosed warehouse. The only activities with the potential to create nuisance dusts are the dismantling of IBCs and crushing of steel drums. These tasks are undertaken at the south-western corner of the warehouse, away from the main site entrance and atop a smooth concrete surface. Storage vessels which undergo dismantling or crushing are first cleaned as per the reconditioning process (thus eliminating the potential for odour emissions during the dismantling process). The high-density polyethylene (HDPE) IBC bottles are manually cut into roughly six equal 1X1m panels using an electrical reciprocating saw. Steel drums are crushed using a fully enclosed FastPak Drum Crusher which reduces the likelihood of metal fragments or dust emissions. The HDPE panels and crushed drums are stored on site awaiting transport to an off-site appropriately authorised recovery/recycling facility.</p> <p>PLL sweep the warehouse floor daily to collect dusts or any offcuts from the dismantling and crushing process. The vehicle access point is also routinely swept to minimise nuisance dusts deposited by delivery trucks. Dust and floor sweepings are bagged and disposed of immediately.</p> <p>PLL strictly adhere to these procedures. There have been no dust or odour related complaints due to on-site activity. Management at PLL routinely review the effectiveness of the facilities procedures and operations.</p> |
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| | <ul style="list-style-type: none"> Conduct regular inspections, monitoring and maintenance of waste handling areas and abatement equipment. Use of odour neutralizing sprays and additives to be considered where odours cannot be prevented. | | |
| 5.3 | Emissions to Water | | |
| 5.3.1 | <p>Discharges to Surface Water</p> <p>BAT is to ensure that:</p> <ul style="list-style-type: none"> only uncontaminated water such as roof-water is appropriate for direct discharge to surface waters. foul water is discharged to surface water following appropriate treatment only. other surface water discharges must be passed through a silt trap and interceptor (I.S. EN 858-2:2003 Part 2). an up to date drainage survey and site drainage system map is retained on-site. | Yes | <p>BAT in Place:</p> <p>PLL operates under a Waste Facility Permit (WFP-WW-18-0043-01) issued by the Wicklow County Council which has strict controls in-place with regards to discharges to surface water as part of their permit requirements.</p> <p>There is no direct discharge to surface water from the site.</p> <p>At the PLL facility, all uncontaminated water (namely rainwater runoff from the warehouse roof and car park) flow into the surface drainage infrastructure of Oldcourt Industrial Estate and combine with the municipal stormwater drains along nearby Boghall Road.</p> <p>All waste handling procedures, the reconditioning of empty storage vessels and storage is undertaken within the enclosed warehouse.</p> <p>PLL retains an up-to-date site drainage drawing.</p> |
| 5.3.2 | <p>Discharges to Sewer/by Tanker to Sewer</p> <p>BAT is to ensure that foul water/final effluent is treated adequately to meet the standards, as set by the Water Services Authority/EPA in relation to the water discharged to the waste water works. The Urban Wastewater Treatment Regulations, S.I. No. 214 of 1994, place specific conditions regarding emission limits from waste water treatment works. They also specify discharge quality conditions on the discharges to sewer to protect the sewer collection systems. The regulations prevent discharges of harmful substances that may be injurious to the health of sewer workers and to the sewer condition.</p> | Yes | <p>BAT in Place:</p> <p>PLL operates under a Waste Facility Permit (WFP-WW-18-0043-01) issued by Wicklow County Council which has strict controls in-place with regards to discharges to sewer as part of their permit requirements.</p> <p>Process water from the drum wash cleaning processes is held in an above-ground, bunded storage tank on site which is monitored for flow rate, temperature and pH (which is self-dosing) before the water is discharged to the municipal foul sewage network.</p> <p>The discharge is regulated under a Water Trade Effluent Discharge Licence issued by Irish Water (Ref. No. IW-DTS-809938-01). This requires quarterly sampling and analysis for a range of parameters and compliance with relevant emission limit values listed below.</p> |

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| | | | <ul style="list-style-type: none"> • Flow 0.5m³/hr or 5m³/day • pH 6.0 - 10.0 pH Units • Temperature 36° Celsius • Toxicity Units 10 TU • BOD 1,000 mg/l or 5 kg/day • COD 3,000 mg/l or 15 kg/day • Total Suspended Solids 1,000 mg/l or 5 kg/day • Fats, Oil & Grease 100 mg/l or 0.5 kg/day • Total Phosphorus (P) 15 mg/l or 0.075 kg/day • Total Ammonia (N) 20 mg/l or 0.1 kg/day • Chloride 1,000 mg/l or 5 kg/day • Sulphate 800 mg/l or 4 kg/day • Detergents (MBAS) 100 mg/l or 0.5 kg/day <p>All kitchen wastewater and effluent from staff toilets is diverted separately to the municipal foul sewage network.</p> |
| <p>5.3.3</p> | <p>Discharges to Groundwater</p> <p>BAT for discharges to groundwater is to:</p> <ul style="list-style-type: none"> • Prohibit direct emissions to groundwater of effluents containing certain hazardous substances (List I), and to have strict controls to prevent indirect emissions of substances scheduled in List II of the Directive. • Maintain an inventory of authorisations given for direct discharge of List II substances to groundwater. • Remove risks of emissions to groundwater through appropriate controls such as containment, bunding, etc., as described in Chapter 4. • Provide groundwater monitoring to enable early detection of any contamination of groundwater that may arise from the facility and the setting of its upper limits. | <p>Yes</p> | <p>BAT in Place:</p> <p>The facility currently operates under a Waste Facility Permit issued by Wicklow County Council which has strict controls in-place with regards to discharges to groundwater as part of their permit requirements.</p> <p>There are no direct discharges to groundwater from the site.</p> <p>Risks to accidental groundwater contamination are minimised by the following:</p> <ul style="list-style-type: none"> • The facility only accepts packaging containers that are considered effectively empty, that is, containing less than 1% internal residue. Containers that are externally soiled or that are not empty are not accepted on the site (see reference to waste acceptance procedure above). • All fluids, including chemical and wastewaters, are stored in leak-tested and certified containers on-site • All fluid and chemical storage containers are placed within bunded areas or bund trays so as to contain any unexpected leaks or breaches in containment. • All washings from the washing processes are drained and stored in an on-site 5,000 litre water storage tank which is monitored for flow rate, temperature and pH (and self-dosing) before the water is discharged to the municipal foul sewage network. This discharge is regulated under the |

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| | | | <p>facilities Irish Water Trade Effluent Discharge Permit (IW-DTS-809938-01) which requires quarterly analysis.</p> <ul style="list-style-type: none"> • Packaging Laundry have a waste acceptance procedure which ensures that only those materials permitted in the Waste License are handled and processed on site. • The processing and refurbishment of packaging materials is relatively straightforward process and generally involves; washing, drying and reconditioning of containers. As such, the complexity and risk of accidents associated with the process is considered relatively low. • The warehouse and yard of the facility is covered with an impermeable concrete hardstand surface. Surface water drainage infrastructure directs all surface water run-off to a mains storm water system. • The facility operates under a good housekeeping policy whereby the yard and warehouse are kept clear of unnecessary amounts of materials and packaging. As such, dust, residues and scrap arising from the processing of packaging materials in the facility are kept to a minimum or are eliminated entirely. • An Accident Prevention Procedure is in-place which addresses the hazards on-site, particularly in relation to the prevention of accidents with a possible impact on the environment • An Emergency Response Procedure is in-place to address an emergency situation which may arise (including the provision for minimising the effects of any emergency on the environment). |
| <p>5.3.4</p> | <p>Noise</p> <p>This Guidance Note does not cover noise emission sources. For guidance on measures in relation to noise, have regard to the EPA Guidance Note for Noise in Relation to Scheduled Activities, 2nd Edition, 2006, and any other guidance on noise issued by the EPA.</p> | <p><i>For inspection purposes only. Consent of copyright owner required for any other use.</i></p> | <p>BAT in Place:</p> <p>In compliance with Condition 2.2 of the waste facility permit, operations (including the use of and machinery and acceptance/dispatch of materials) are strictly limited to weekday business hours (08.00 – 18.00, Monday to Friday). No plant is left running outside of these hours.</p> <ul style="list-style-type: none"> • All equipment and machinery used at the facility are on a preventative maintenance schedule so that they operate at optimum efficiency, reducing noise impact. • Traffic is managed on-site so that vehicles (particularly trucks) are not left idling at the site entrance or access road. • The site is surrounded by walls or structures around its perimeter, and as such, noise from the operation of machinery on the facility is minimised to the surrounding environment. • The facility has been operating under a waste facility permit for the past two years and no noise complaints have been lodged. |