BAT DOCUMENT

Unit 145, Elm Drive, Hartlebury Trading Estate, DY10 4JB

Chloros Environmental Ltd

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Oaktree Environmental Ltd

Waste, Planning & Environmental Consultants

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1.0	18/9/2018	RD		Initial draft
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Site Information & Contacts List

Site Address:	Unit 145, Elm Drive, Hartlebury Trading Estate, DY10 4JB		
Postcode:	DY10 4JB	**National Grid Ref:**	SO 85832 69556

CONTACT	**Description**	**Office Hours**	**Out of Hours**
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	Accident & Emergency (A&E)	*01905 763 333*	*999*
	NHS 111	*111*	*111*
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Kidderminster Police Station	*Local Police Non-Emergency*	*101*	
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Worcestershire County Council	*General Enquiries*	*01905 765765*	*01905 763763*
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	Electricity Provider		
Severn Trent Water	*Local Water Supplier / Sewerage Provider*	*024 7771 5000*	
	Gas Company	*NO GAS ON SITE*	
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1 General Considerations

1.1 Site operator/permit holder

1.1.1 Chloros Environmental Ltd are applying for a permit for a transfer station with treatment for a wide range of hazardous and non-hazardous wastes at Unit 145, Elm Drive Hartlebury Trading Estate, Hartlebury, Worcestershire DY10 4JB, hereinafter referred to as "Unit 145".

1.1.2 This document summarises the best available techniques specific to the Chloros Environmental Ltd Hazardous Waste Facility at Unit 145. This document should be read in conjunction with the Environmental Management System (EMS) Ref No. 2385/3922/EMS (v 1.1), the Fire Prevention Plan (FPP) Ref No. 2385/3922/FPP, and Layout and Fire Plan Drawing No. 2385/3922/03.

1.1.3 The following areas have been considered under the Technical Guidance produced by the Environment Agency. The following best available techniques (BAT) have been considered to show how the facility addresses the aspects detailed in the aforementioned guidance to include and therefore to ensure protection of the environment:

- Pre-acceptance of waste procedures
- Acceptance waste procedures
- Waste storage
- Waste treatment
- Fugitive emissions to surface water, sewer and groundwater
- Fugitive emissions to air (Dust, litter, odour, pests and vermin)
- Point source emissions to air
- Accidents and incidents

1.2 Site location/details

1.2.1 The location of facility is well situated with respect to sensitive receptors, housing, access and adjacent commercial/industrial premises.

1.2.2 The Installation activity will be carried out on a long-established industrial estate utilising an existing warehouse building, outbuilding and associated external yard areas. The external yard areas will be upgraded to provide fully-contained unloading, loading, storage and treatment areas. Therefore, the site has been designed to utilise and upgrade the existing infrastructure on site.

1.2.3 All measures necessary to achieve a high level of protection of the environment and to ensure that the installation is operated in accordance with the various management systems and permit conditions which will be strictly adhered to.

1.2.4 Chloros Environmental Ltd (Chloros) are applying for and will hold and operate the Environmental Permit for their site to accept a wide range of hazardous and non-hazardous wastes. The company specialises in small volume, difficult-to-handle waste streams.

1.2.5 The proposed waste operation is a relocation of Chloros' existing operation which is based at their current site in Droitwich which specialises in the importation storage and bulking of low-volume difficult-to-handle wastes.

1.2.6 The primary purpose of the site is to ensure that difficult-to-handle waste streams are handled correctly and that they are recovered, recycled or disposed of in the most environmentally friendly and economic way.

1.2.7 The main operations on site are assembling bulk loads for onward transport to suitably permitted facilities. This can mean assembling materials in their original containers or bulking into larger containers dependent on the types and quantity of wastes.

2 Waste acceptance

2.1 Procedures for the pre-acceptance of waste

2.1.1 Pre acceptance procedures in place a site chemist checks and tests wastes prior to their acceptance. These checks and procedures include:

- Nature of the process producing the waste, including the expected quantity and variability of the waste.
- The composition of the waste – representative sample(s) of the waste are taken and checked for suitability.
- For each new waste enquiry, a comprehensive characterisation of the waste is carried out (including all hazardous properties, physical appearance, odour risk)
- Checking there is sufficient and suitable storage available on the site.
- Production of all relevant paperwork raised including hazardous waste consignment notes.

2.1.2 A waste tracking system exists which begins at the pre-acceptance stage. A record is made of each enquiry and given a unique reference number. The booking-in system ensures that Chloros only considers material which is deemed suitable for their hazardous waste facility and that the site has the capacity to accept the material and that the material will be delivered within the site's operational hours. The unique booking-in system follows the waste during acceptance, checking stage/sampling, storage (using a unique bay reference numbering system), treatment (i.e. bulking) and removal off-site.

2.1.3 All records relating to pre-acceptance are maintained on site for cross-reference and verification and kept for a minimum of 3 years.

2.1.4 Waste will not be accepted if there is insufficient capacity on site to handle the load.

2.1.5 Chloros are committed to ensuring all wastes accepted on the site are (by preference) sent for recycling and/or recovery prior to disposal, in accordance with the Waste Hierarchy.

2.2 On-site waste acceptance procedures

2.2.1 Validation monitoring is carried out to ensure compliance with the waste acceptance criteria set at the pre-acceptance stage, the level of which will depend on the degree of variation of the waste being received. All Duty of Care/Hazardous Waste Consignment procedures will be followed in accordance with the appropriate regulations and documentation provided.

2.2.2 All waste will be visually inspected on arrival at site, where possible prior to unloading, to ensure it complies with the site's acceptance criteria and the hazardous waste consignment notes and transfer documentation will be fully checked to ensure the waste matches the pre-acceptance information received. A further visual inspection will be carried out in the dedicated acceptance bays and assessed against the stated acceptance criteria by staff trained in the waste acceptance criteria.

2.2.3 Site staff are fully trained to understand the differing characteristics of the feedstock. All waste will be received under the supervision of a suitably qualified person.

2.2.4 The level and frequency of testing is risk-based. Accepted feedstocks with a low degree of variability will be subject to less extensive pre-acceptance checks and on-site inspections.

2.2.5 The bulk of analysis is carried out by on-site laboratory. After on-site analysis, if any doubts arise as to the specific nature of a waste stream it will be subject to analysis carried out by UKAS accredited laboratory.

2.3 Tracking and traceability of waste

2.3.1 All information is recorded and referenced to the waste stream for traceability based on a batch referencing system where each consignment of waste being deposited into designated bays will be assigned a unique reference number to match it to the storage bay. Each bay is clearly labelled with its unique reference number.

2.3.2 The recording system is capable of providing the following data:

- total quantity of waste present on site at any one time;
- waste inputs to the site by waste types;
- composition of each batch by waste type and quantity;
- breakdown of waste quantities being stored;
- breakdown of waste into hazardous or non hazardous) awaiting onward transfer;
- location of where the waste is being stored in relation to the site layout (i.e. bay number);
- a comparison of the quantity of waste on site against the permitted allowance;
- a comparison between the time the waste has been on site against its permitted duration; and,
- tracking system which identifies where a specific waste was received from (waste producer).

2.3.3 If the waste has been mixed with other similar batches then the new batch of wastes will be given a reference number to maintain a clear audit trail. Hazardous waste will not be mixed with non hazardous waste. These records for the traceability and tracking are available at all times on site as part of Chloros' operational procedures.

2.4 Control of non conformity

2.4.1 Although unlikely due to the strict pre-acceptance and acceptance procedures undertaken by the operator, if non-conforming waste is discovered on site after it has been deposited it shall be removed from site within 5 days from delivery. There are clear procedures in place for non-conforming waste which will include traceability through the use of the tracking system and details of the customer/waste producer. The Environment Agency will be contacted if the incident is considered to pose a risk to the environment or there has been a serious breach of regulations.

2.5 Emergency events / waste acceptance

2.5.1 As detailed above all relevant information e.g, nature of waste, EWC code is required before waste is accepted by Chloros. Upon arrival it will be unloaded into one of the dedicated reception bays for assessment. Where a non-conformity has an

environmental aspect or has resulted in an emergency situation that has an environmental impact, this will be dealt with in accordance with Chloros' Emergency Response Procedure. Where a system fault is identified which results in necessitating changes to the documented procedures, the pre-acceptance and acceptance procedures will be updated accordingly. Where the deficiency did not result from a defect in the system, other actions will be taken e.g. re-training of staff, briefing of staff, disciplinary action and/or contract review with customers.

3 Waste Storage and treatment

3.1 Storage and treatment of waste

3.1.1 A visual inspection will be carried out immediately after unloading the waste into the reception bays. These bays act as a holding area where representative samples are taken and sent to the on-site laboratory for testing where any anomalies will then be further checked by an accredited laboratory. The bays are constructed from concrete panels which can also act as fire walls with an impermeable floor and are located within sealed containment area.

3.1.2 All waste received on site has been subject to pre-acceptance testing and is checked against those tests when received on site.

3.1.3 If the test results/checks confirm the material is as per the pre-acceptance information it will be directed to the allocated holding bay/area as part of the acceptance procedure.

3.1.4 Chloros aim to remove the waste off site as soon as practicable in order to free up the bays for new consignments of waste.

3.1.5 The table below sets out the hazardous waste treatment and storage operations which are carried out on site treatment options are referenced in the waste types document 2385/3922/WAS.

Table 1 Treatment and storage options for hazardous wastes

Treatment options	Treatment type	Limits on operations	On impermeable pavement with sealed drainage
A	Storage of hazardous wastes for disposal including pesticides	All enclosed Areas total capacity 1265t	Y
B	Storage of hazardous wastes requiring specific controls or enclosures e.g. Flammables or spontaneously combustible	Area 1 Flammable waste 300 cu. m Area 3Z Hazmat 4.3 - water-proof cabinet 4 cu. m Area 4C Hazmat 4.2 - specialist container 2 cu. m Area 4F Gas cylinder cage 4cu. m	Y
C	Treatment of hazardous waste for disposal including pesticides	Bulking and blending within LEV cabinets or within Area 2 of the building max 150 t per day. Bulking into road tankers Area 4G 54t/day	Y
E	Storage of hazardous waste oils for disposal or recovery	All enclosed Areas if compatible 800t	Y
F	treatment of hazardous waste oils for the purpose of disposal, recovery or recycling	Bulking and blending within LEV cabinets or bulking shredding and compaction within Area 2 of the building max 150 t per day	Y
G	Storage of hazardous waste for the purpose of recovery	All enclosed areas total capacity 1265t	Y
H	Storage of non-hazardous waste for the purpose of disposal.	All enclosed Areas if compatible Area 4B external yard total daily limit 50 tonnes total capacity 1265t	Y
J	Storage of hazardous and non-hazardous waste for the purpose of recovery.	All enclosed Areas if compatible total capacity 1265t	Y
	Washing empty used containers	Area 4D Bunded area all wash water contained and transferred to an IBC for removal off-site.	Y

4 Infrastructure

4.1 Impermeable/paved surfaces

4.1.1 All storage and treatment areas are provided with an impermeable surface with sealed contained drainage to prevent any potentially contaminated surface water run-off escaping from the site. Details of the dedicated and engineered drainage system including the newly installed holding tank provided at the site are shown on Drawing No 2385/3922/03 in the EMS.

4.1.2 External loading and unloading areas are provided with switchable drainage systems which have penstock valves to seal the unloading areas when they are in use.

4.1.3 All infrastructure is checked daily in accordance with the operator's maintenance and inspection procedures. The yard area will be regularly swept (daily) to prevent the build-up of potentially dusty residues. Bays will be swept when they are empty in readiness for the next delivery of waste.

4.1.4 The site's concrete surfacing and sealed bunding both inside the building and in the external yard areas will be inspected daily to ensure there are no potential breaches of containment. Any repairs required will be carried out within 5 days of discovery.

4.2 Plant and equipment

4.2.1 All plant and equipment and company vehicles meet BAT and DSEAR/ATEX requirements if used for handling flammable materials.

4.2.2 All equipment is up to date and maintained to manufacturer's specifications.

4.2.3 Fuel is stored in a tank with secondary containment capable of holding at least 110% of the volume of the tank with any valves located within this containment area. Oils or other hazardous chemicals are stored in drums within a bunded area or on bunded pallets meeting a similar specification.

5 Fugitive emissions

5.1 Surface water from waste delivery, storage or treatment areas

5.1.1 Chloros will ensure the containment areas and all drainage (including subsurface pipework) are constructed and verified prior to operating the site. This will ensure a fully contained, sealable and switchable drainage system is in place for external areas where waste is handled or stored which will be maintained for the life of the permitted operations.

5.1.2 The drainage system (including the retention tanks) are subjected to an inspection and maintenance programme. All inspections and work carried out will be formally documented in the site diary, inspection forms, or similar.

5.1.3 Any potentially contaminated run-off water from the impervious external storage and transfer areas of the site will drain into sealed holding tanks so as to minimise the risk of pollution of surrounding surface waters or groundwater.

5.1.4 The holding tanks will be checked for water level monthly or after every heavy rainfall event or when the tank has been in use to divert water. When a tank has reached one third of capacity a sample will be taken and analysed to determine a suitable use/disposal route. If the water is suitable it will be recycled for dust suppression or it will be removed by tanker or into IBCs for transport to a suitably permitted facility for recovery or disposal.

5.2 Clean surface water

5.2.1 This originates from areas of the site that are not being used in connection with the storage of waste and may be discharged to the existing site drainage system.

5.2.2 The site uses some water for washing empty containers and dust suppression and will explore the viability of utilising water from roof drainage as a supply for these operations.

5.3 Emissions to air

5.3.1 The main releases to air from site operations are potentially:

- Dust
- Odorous compounds

5.3.2 Typical sources of dust arise from the following actions, in the absence of mitigation may include:

- Vehicle movements on surfaced roads and yards
- Dusty wastes not adequately contained.

5.4 Dust mitigation measures

5.4.1 No dusty waste will be accepted or handled unless adequately contained. Bulking of dusty wastes will only be undertaken within an LEV unit.

5.4.2 Chloros have strict traffic management systems in place and undertake regular risk assessments and audits.

5.4.3 The site is connected to a mains water supply and will be used to feed a hose pipe/mobile bowser which will be fitted with a sprinkler system. Site is swept regularly with a roadsweeper.

5.4.4 Site operatives will continuously monitor dust emissions whilst the site is in operation and will report back to the site supervisor for advice if required. The site supervisor will make a formal visual inspection of dust emissions at least twice daily. Results of monitoring will be entered into the site diary / record forms. This requirement will form part of the site's EP compliance regime.

5.4.5 The Complaints Procedure will also be used by site staff and management in the event that a complaint concerning dust emissions is received. The complaint will be

investigated thoroughly and any changes to the dust mitigation measures identified will be actioned immediately.

5.5 Odour

5.5.1 All waste transfer operations where odour could escape are undertaken within the LEV units which have extensive carbon filtration systems and which on the current site have never given rise to any odorous emissions.

5.5.2 The nearest residential property is in excess of 400m from the site. There are commercial premises within 50m.

5.5.3 There is a BAT compliant complaints procedure in place which includes:

- Name, address and telephone number of the complainant;
- Date, time of the complaint;
- Subject of the complaint;
- Operations carried out at the time of the complaint;
- Weather conditions (e.g. temperature, wind direction, rainfall); Operational measures due to the complaint;
- Communication with the complainant. There should follow an immediate reply to the complainant.

6 Other Environmental Considerations

6.1 Litter

6.1.1 Loose packaging and litter can cause a significant impact on loss of amenity for nearby residents and neighbouring businesses.

6.1.2 Due to the strict pre-acceptance procedures which are in place as detailed above, and the nature of the wastes received on site only strictly contained handling of packaging will take place all transfer and treatment will be enclosed as far as is practicable to prevent litter occurring.

6.1.3 The yard area is regularly swept and any light material placed in a secure container to prevent it blowing off site.

6.1.4 Daily inspections are carried out for the presence of any signs of windblown litter and operatives are instructed to collect the litter and place it in a skip for disposal/recovery before the end of each working day. Records of the inspections are recorded as detailed in the EMS.

6.2 Pests/vermin

6.2.1 Due to the nature of the waste handled on site there are unlikely to be any problems with pests or vermin. However, robust housekeeping procedures are in place at the site and spillages will be cleared promptly. Drainage channels are regularly inspected and cleaned to prevent stagnation of water.

6.2.2 The site will be inspected weekly for infestations of pests, vermin and insects. If detected, control will be carried out by a private pest control contractor. Results of any inspections will be noted in the site diary or site inspection form.

6.3 Preventative maintenanc

6.3.1 As part of their company procedures, Chloros have a register of plant infrastructure integral to preventing or limiting pollution of the environment or harm to human health. It includes detailed planned preventative maintenance and a list of critical spares which will be kept in their workshop at Unit 145.

6.4 Accidents and Incidents

6.4.1 The system for the identification of potential accidents, incidents and emergency situations is through risk assessments which are routinely undertaken in accordance with the operator's health and safety policy.

6.4.2 In order to prevent or reduce potential accidents, incidents and emergency situations at the Unit 145 Hazardous waste facility, BAT is using the techniques given below:

- At introduction of new contract/working practices, procedures are established to deal with potential accidents/incidents from specific hazards, identified from experience.
- Risks are assessed on an –ongoing basis and as work proceeds.
- Using the risk assessments identified, Chloros uses its expertise to provide method statements that include recognised emergency procedures which are then briefed to all site staff and any subcontractors.
- If an accident, incident or near-miss occurs, the accident reporting procedure is used to investigate and remedy the cause. Any accident or incident that falls into the RIDDOR category shall be reported accordingly and submitted to HSE within 10 days of the occurrence.
- Senior management meet regularly to review the causes of any accident/ incident and corrective and preventative actions implemented to address them. This may lead to changes in working practices, training and staff information briefings to ensure that the root cause is understood and addressed.
- Investigations are undertaken by company Management.

6.4.3 The manner in which the facility is managed is a critical element in ensuring emissions from the site operations are minimised. Therefore the management of the facility ensures:

- Staff are competent to manage and operate the facility ie fit and proper persons.
- Strict waste pre-acceptance and acceptance are procedures are in place
- Procedures and control techniques in place to minimise potential emissions to air, land and water
- Operational procedures as detailed in the EMS are in place to minimise the risk of dust emissions having regard to the waste types being accepted and the waste processing activities at the facility.
- Operational procedures are in place to minimise the risk of odours having regard to the waste types being accepted and the waste processing activities at the facility.
- Appropriate storage and handling procedures are in place
- Waste despatch procedures are in place
- Provision of impermeable surface with kerbing or sloping to protect any adjacent permeable areas
- Containment bays provided on site for the secure storage of the waste
- Wastewater management procedures in place
- There is an environmental management system in place to ensure standards are maintained, including incidents and complaints management procedures,
- Communication programme in place
- Techniques in place for prevention and minimisation of resource consumption eg Energy efficiency, use of raw materials

6.5 Emergency Planning

6.5.1 The EMS and FPP have detailed Emergency plans and the DSEAR plan also details emergency actions these plans are reviewed at least every two years.

6.5.2 Drills are undertaken regularly at least every 6 months to test emergency procedures and ensure staff are confident of the actions to take in the event of an emergency.

All drills are documented and any problems highlighted are used to review the procedures if necessary.