



## Variation Notice with introductory note

Environmental Permitting (England & Wales) Regulations 2007

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**Minosus Ltd  
Jack Lane  
Bostock  
Middlewich  
Cheshire  
CW10 9JQ**

Variation notice number  
EA/EPR/BJ8499IA/V003

Permit number  
BJ8499IA

# Minosus Limited

## Permit Number BJ8499IA

### Introductory note

***This introductory note does not form a part of the permit***

The following notice, which is issued pursuant to regulation 20 and Part 1 of Schedule 5 of the Environmental Permitting (England and Wales) Regulations S.I.2007 No. 3538 (the Regulations), gives notice of the variation of an environmental permit to operate a regulated facility

Schedule 1 of this notice lists any deleted conditions, Schedule 2 lists any amended conditions and Schedule 3 lists any conditions that have been added.

The effect of this variation is to delete all the existing conditions attached to the permit and replace these with a new set of conditions. The new conditions amend the permitted waste types by the inclusion of additional wastes into Schedule 4a of the permit.

There are no substantial changes to the installation as a result of this variation.

The non technical description of the installation from the original permit is repeated below.

Winsford Rock Salt Mine is located approximately 3 kilometres to the north-east of Winsford, Cheshire. The IPPC permit application comprises two separate areas of the facility linked by a mineshaft and underground vehicle route.

Surface facilities for waste reception and handling are located at Number 4 shaft, which is located at Jack Lane, Bostock, approximately 700 metres to the south-east of the village of Moulton. Access to No. 4 shaft is from Jack Lane, which lies to the east of the site and is now a No through Road.

The underground storage area is located at Bostock 5 Panel, which comprises some 49 hectares of worked out salt mine at the eastern end of the Winsford Rock Salt Mine. The total area of the installation is 49.81 hectares. Access to Bostock 5 Panel is via defined underground routes from the base of Number 4 shaft along defined travelling routes.

The surrounding land adjoining the waste reception facility is agricultural grazing land. The nearest properties include a farmhouse at Addashaw Farm, which is located approximately 150m south-east of the waste reception area, and a residential property, Willow House, on the corner of Jack Lane and Brick Kiln Lane, approximately 200m to the north of the site.

Salt mining began at Winsford 155 years ago and this activity has resulted in the formation of an extensive network of caverns, some 140 to 220 metres below ground. Mining takes place by the room and pillar method, which creates caverns some 20 metres wide and 7.5 metres high, separated by solid pillars of salt up to 24 metres square retained for support.

Bostock 5 Panel was chosen for the waste storage area as it has natural boundaries provided by gentle folds to the north and south and the King Street fault to the east. There is no possibility of future mining activity taking place above or beneath it. The existing production panels lie to the north of the proposed storage area and salt mining activities will be unaffected by the proposals. The remaining rock salt reserves are extensive and active production is anticipated to continue for a further 50 – 70 years at present production rates, well beyond the operational life of the proposed facility.

The geology of the site comprises Cheshire salt beds and associated sedimentary rock sequence that were laid down approximately 200 million years ago during the Triassic period. As a result, the Mercia Mudstone (Keuper Marl) Group underlies the whole of the mine. The mine is situated on a faulted block of the Northwich Halite Formation, which is bounded to the west and east by two major faults trending in a NNW direction. At the surface, a varied thickness of Quaternary sands, gravels and boulder clay are present to a thickness up to about 60 metres. Beneath the superficial cover of glacial silts and sands, a solution of salt within the middle mudstone creates 'wet' rock-head conditions.

Within the Northwich Halite Formation, halite is the dominant mineral with silt inclusions also occurring as beds up to 10 metres thick. The current mine workings and proposed waste disposal facility are in Zone B near the base of the formation. The Mercia Mudstone group is considered to be an aquitard (a mineral which restricts the flow of groundwater), and where groundwater is present, it is generally highly mineralised.

In the immediate vicinity of the Bostock 5 Panel, it is indicated that 'wet' rock head conditions predominate and middle marl overlying the rock salt is expected to be brecciated. The movement of brine and its replacement with fresh water and consequent solution is a very slow process. The saturated brine layer, known as 'wet' rock head, is essentially stagnant and effectively protects the underlying salt from further solution.

The salt workings at Winsford are dry and there are no natural flows into the mine workings. Small remnant 'damp patterns' of brine are occasionally encountered lying totally within the halite. A small quantity of water from a shallow source above the seal in Number 1 shaft is drained into the mine via a controlled system and then pumped to the surface.

The main source of water within the mine is the condensation appearing in 'dewatering' tunnels from ventilation air. This is only noticeable during summer months when the intake air is relatively warm and moist. Condensation is most apparent near Number 4 downcast shaft resulting in shallow pools of water on the floor in the immediate vicinity of the shaft and minor 'smoothing' of tunnel sides.

Potential groundwater flow pathways from the superficial faults and 'wet' rock head into the mine have been identified as via major faults, mineshafts and exploratory boreholes. However, grouting has successfully treated water inflow from behind the shaft linings at shallow depths and there are no reported shaft inflows from the marls and salt beds of the Northwich Halite formation.

Exploratory drilling of the King Street fault proved the fault plane to be dry. Drilling and mining has occurred through gentle folds in the strata within the mine area. During mining, the risk of unexpected groundwater flow is eliminated by a combination of in-seam seismic surveys and forward drilling procedures, which prove the hydrogeological integrity of the deposit some 250 metres ahead of the workings. Since 1969, pillars of unworked salt of 37.5 metres radius have been left around the 6 inch diameter boreholes sunk to prove the salt deposits.

#### **Leachate Management**

The waste acceptance procedures are designed to ensure that no leachate is generated in the underground disposal facility. Therefore no leachate collection system is required.

#### **Landfill Gas Management**

The waste types to be disposed of, the acceptance criteria and procedures are all such that generation of landfill gas is very unlikely, and therefore no landfill gas collection system is proposed. However, the mine atmosphere is already monitored on a regular basis and existing atmospheric monitoring procedures operated by Salt Union will continue during the working life of the waste disposal facility and beyond

**Groundwater Monitoring**

The regulation 15 assessment highlights that, due to the unique nature and location of the facility, the pathway for migration of the deposited material to useable groundwater resource is not considered credible. Therefore it is considered that there is little practical benefit in monitoring groundwater quality.

**Status Log of the permit**

Detail	Date	Response Date
Application BJ8499IA (EPR Reference EA/EPR/BJ8499IA/A001)	09/10/2003	-
Response to request for information	16/01/2001	20/03/2003
Response to request for information	30/08/2002	09/11/2002 & 30/11/2002
Permit BJ8499IA determined (EPR Reference EA/EPR/BJ8499IA/A001)	20/08/2004	
Variation PP3535MG (EPR Reference EA/EPR/BJ8499IA/V002)	Received 11/09/2006	-
Letter requesting H1 assessment	27/11/2006	18/12/2006
Request for SPMP	5/12/2006	13/12/2006
Variation PP3535MG determined (EPR Reference EA/EPR/BJ8499IA/V002)	5/02/2007	-
Variation EA/EPR/BJ8499IA/V003 (PPC Reference QP3031XB)	Received 09/05/2008	-
Response to request for information	21/05/2008	22/05/2008
Variation notice EA/EPR/BJ8499IA/V003 determined (PPC Reference QP3031XB )	29/07/2008	-

End of Introductory Note

**Notice of variation**

Environmental Permitting  
(England and Wales) Regulations 2007

Permit number

**BJ8499IA**

The Environment Agency in exercise of its powers under Regulation 20 of the Environmental Permitting (England and Wales) Regulations 2007 (SI 2000 No 3538) varies the permit as set out below.

***Minosus Limited*** (“the operator”),

**Whose registered office is**

Jack Lane,  
Bostock,  
Middlewich,  
Cheshire,  
CW10 9JQ

Company registration number **3473042**

Holds a permit to operate a regulated facility at

**Winsford Rock Salt Mine Waste Disposal Facility**

**Jack Lane,  
Bostock,  
Middlewich,  
Cheshire,  
CW10 9JQ**

and that permit is varied to the extent set out in Schedules 1 to 3 of this notice.

The notice shall take effect from 29<sup>th</sup> July 2008

Name	Date

**Catherine Shaw**

Authorised on behalf of the Agency

**Schedule 1 – conditions to be deleted**

1. All conditions and schedules are deleted.

**Schedule 2 – conditions to be amended**

2. None

**Schedule 3 – conditions to be added**

3. The following conditions are added to the permit.

# Conditions

1

## The Permitted Activities

### Authorised activities

1.1.1

The Operator is only authorised to carry out the activities and/or the associated activities specified in Table 1.1.1.

**Table 1.1.1**

<b>Activity under Schedule 1 of the EP Regulations/ Associated Activity</b>	<b>Description of specified activity</b>	<b>Limits of specified activity</b>
Disposal of waste by landfill (Schedule 1, Chapter 5, s5.2 of EP Regulations 2007): Specifically permanent storage of waste (disposal classification D12 under Annex IIA of Waste Framework Directive)	Permanent storage facility for hazardous waste (landfill classification under Article 4 of the Landfill Directive)	Receipt, handling and permanent storage of hazardous wastes, consisting of the types and quantities specified in condition 2.2.1, as an integral part of landfilling.  Only on or in the areas identified for this purpose on Figure A.4 of the IPPC Landfill Permit Application
Schedule 1, Chapter 5, s5.3A(1)(a) of the EP Regulations 2007	D14 Repackaging prior to submission to any of the operations numbered D01 to D13	Repackaging of hazardous wastes specified in condition 2.2.23 in Warehouse B as shown on drawing Min100

**Directly associated activities**

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Discharges to controlled waters

Discharge of surface water from the surface waste reception facilities.

From surface water management system to point of entry to controlled waters

Location of discharge points of proposed water emissions and waste storage locations as shown on Figure A.8 of the IPPC Landfill Permit Application

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1.2 **Site**

1.2.1 The activities authorised under condition 1.1.1 shall not extend beyond the Site, being the area shown edged in red on the plan reference Drawing Number CD/M/1-rev1 attached to this permit as Schedule 5.

1.3 **Overarching Management Condition**

1.3.1 Without prejudice to the other conditions of this Permit, the Operator shall implement and maintain a written (paper or electronic) management system and organisational structure and allocate resources that are sufficient to achieve compliance with the limits and conditions of this Permit. Access to the management system shall be granted to any authorised officer of the Agency on request.

1.4 **Pre-Operational Conditions**

1.4.1 No disposal of waste shall take place at the Permitted Installation until all pre-operational conditions specified in conditions 1.4.2 – 1.4.9 have been met.

1.4.2 At least 4 weeks prior to the commencement and/or preparation of the surface facility, the Operator shall submit to the Agency in writing the detailed design, material specifications and the construction quality assurance (CQA) programme for the pre-operational engineering of the surface facility, which shall include;

- leak detection system
- pipework for foul drainage system
- surface water drainage system
- construction of impermeable surfaces
- below ground structures e.g. interceptor, sealed tank



Written agreement shall be obtained from the Agency that

- a. these are in conformance with any specifications agreed in writing with the Agency; and
- b. the Agency has inspected the surface facility to ensure that it complies with the conditions of the Permit and it has no objection to the surface facility becoming operational.

- 1.4.3 Prior to waste acceptance on site, a sample point shall be constructed which will allow representative sampling of all site surface water from the surface facilities. The sample point location shall be agreed in writing by the Agency.
- 1.4.4 Background conditions shall be established by pre-operational monitoring of the parameters listed in Schedule 2 attached to this Permit, using methods as required in condition 1.4.7. The results shall be submitted to the Agency. Written agreement shall be obtained from the Agency that it is satisfied that background levels have been established.
- 1.4.5 Subject to condition 1.4.9 and prior to the commencement of waste deposit, an appropriate threshold for Relative Humidity shall be determined and agreed in writing by the Agency. This shall include a Risk Assessment of the impact of absorption or loss of water. The risk of deliquescence, shrinkage or swelling of the waste shall be considered. The risk of an increase in mine humidity and determination of an acceptable increase in humidity in Bostock 5 panel shall be included. The Risk Assessment shall look at the potential impact under current mine conditions and after closure.
- 1.4.6 Subject to condition 1.4.9 and prior to the commencement of waste deposit, appropriate test methods and thresholds for substances likely to generate toxic or flammable gases shall be agreed in writing by the Agency. This shall take into account the wastes ability to generate levels that may exceed lowest lethal concentrations (LCLo) under mine storage conditions in a sealed cell or 25% of the lower explosive limit.
- 1.4.7 Prior to waste acceptance on site, the Operator shall provide the Agency details of monitoring which shall be agreed in writing by the Agency and shall include the following:
  - a. Methods and equipment utilised for monitoring emissions within the installation together with their detection limits.
  - b. Plan of fixed monitoring points within the installation
  - c. Action plan if established background levels are exceeded.
  - d. Frequency of monitoring
  - e. Details of calibration of monitoring equipment
- 1.4.8 Prior to waste acceptance on site, the Operator shall provide the following information which shall be agreed in writing with Agency, subject to condition 1.4.9:
  - a. Proposed regime for on site checking of waste including test methods
  - b. Details of laboratory facilities on site
  - c. Frequency of waste sampling and analysis

d. Details of laboratory staff qualifications and experience

- 1.4.9 In the event of the Operator not satisfying the Agency that proposed test methods and/or thresholds are suitable for all potential waste types, the Agency may give written agreement that specified waste may be accepted where the suitability for those wastes has been demonstrated.
- 1.4.10 Prior to bulk waste receipt, a report shall be sent to the Agency giving details of construction and commissioning of silos and bagging plant equipment to demonstrate that all appropriate measures are in place to prevent dust emissions from the installation. This report should include, but not be limited to the following:
- Material used for filters and design efficiency;
  - Filter performance and measures for performance monitoring and management;
  - Pressure rating for silos and confirmation that factors of safety have been considered and are appropriate for this application;
  - Design of pressure valves and demonstration that these are suitable in this application;
  - Inspection and maintenance schedule for relevant equipment
- 1.5 **Minor Operational changes**
- 1.5.1 Except where another statutory regulatory authority requires a minor operational change (in which case the Operator shall forthwith notify the Agency in writing of that change) the operator shall seek the Agency's written agreement to any minor operational changes under condition 2.1.1 of this Permit by sending to the Agency:
- a. written notice of the details of the proposed change including an assessment of its possible effects (including waste production) on risks to the environment from the Permitted Installation;
  - b. any relevant supporting assessments and drawings; and
  - c. the proposed implementation date.
- 1.5.2 Any such change shall not be implemented until agreed in writing by the Agency. As from the agreed implementation date, the Operator shall operate the Permitted Installation in accordance with that change, and relevant provisions in the Application shall be deemed to be amended.
- 1.5.3 When the qualification "or as otherwise agreed in writing" is used elsewhere in this Permit, the Operator shall seek such agreement by sending to the Agency written notice of the details of the proposed method(s) or techniques.

1.5.4 Any such method(s) or techniques shall not be implemented until agreed in writing by the Agency. As from the agreed implementation date, the Operator shall operate the Permitted Installation using that method or technique, and relevant provisions in the Application shall be deemed to be amended.

## 1.6 Improvement programme

1.6.1 The Operator shall complete the requirements specified in Table 1.6.1 by the date specified in that Table, and shall send written notification of the date of completion of each requirement to the Agency, at the Reporting Address, within 14 days of the completion of each such requirement.

**Table 1.6.1: Improvement programme requirements**

Reference	Requirement	Date
1.6.1.1	<p>In accordance with condition 2.2.1, no waste listed in Schedule 4b attached to this permit shall be accepted for deposit at the installation unless all the following criteria are satisfied for the waste and this has been agreed in writing by the Agency:</p> <ul style="list-style-type: none"><li>a) Specific characterisation and definition of each waste arising on Schedule 4b is carried out.</li><li>b) Each waste arising is reviewed against the Decision Tree in Chapter 4 of the working plan dated June 2004 and the appropriateness of the Decision Tree and the suitability of the waste for deposit is demonstrated. Any additional measures required are identified.</li><li>c) Any additional monitoring requirements are reviewed and implemented as necessary.</li><li>d) Any changes to the Decision Tree and monitoring requirements are agreed in writing by the Agency.</li></ul>	Prior to acceptance of any wastes listed on Schedule 4b

## 2 Operational Matters

### 2.1 Management techniques and control

2.1.1 The Installation shall, subject to the conditions of this Permit, be managed and controlled as described in the documentation specified in Table 2.1.1, or as otherwise agreed in writing by the Agency.

**Table 2.1.1 : Management and control**

<b>Description</b>	<b>Parts</b>	<b>Date Received</b>
Application	The response to question B2.1 given in Hours of operation, Working Plan Chapter 1 (Site Description) Section 1.43 Minimum Staffing and Supervision, Working Plan Chapter 1 (Site Description) Sections 1.44 – 1.58 Management Structure – Figure A.9 of IPPC Landfill Permit Application.	20/09/01
Application	Response to question B2.11 given in Appendix 1 of the working plan – ‘baseline geology and hydrogeology report’	20/09/2001
Environmental Statement of Further Information	The response to question B2.9 given in Chapter 5 and Appendix 4	20/09/2001
Letter from Minosus dated 05/12/2003	Specifically in relation to the use of timber pallets and stoppings. This will replace any other reference to the use of timber pallets and stoppings in the application	05/12/2003
QRA1 v3.0 Long term safety assessment of the Minosus proposal for an underground hazardous waste disposal facility – assessment requirements, scope and scenarios	The response to questions B2.4, B2.8 and B2.11 given in Chapters 2 to 10	30/09/2002
QRA working document 1 Long term assessment modelling outline for the Minosus proposal	The response to questions B2.4, B2.8 and B2.11 given in Chapters 2 to 5	30/09/2002
Air Quality risk assessment	The response to question B2.8 given in Chapters 1 to 5	10/10/2002
Safety Case	The response to questions B2.3, B2.8 and B2.11 given in Chapters 2 to 7	October 2002
QRA2 – Quantitative long term safety assessment of the Minosus proposal for an underground hazardous waste disposal facility	The response to questions B2.4, B2.8 and B2.11 given in Chapters 2 to 8	10/10/2002
Schedule 4 notice dated 30/08/2002	The response to questions B2.3, B2.4, B2.8 and B2.11 given in the Response to Environment Agency's Schedule 4 Notices document	November 2002
Letter from Minosus dated	Amendment to total annual tonnage.	25/05/2004

24/05/2004	Change of figure reference in relation to Chapter 5 of the Working Plan.	
Letter from Minosus dated 02/04/2003	Amendments and supporting information in response to questions B2.5 and B2.9: Application, non-technical summary, B2.9 – noise and vibration. Application, Chapter 4, s4.4 – area of deposit. Working Plan, Chapter 1, s1.43 – duration of waste deposit and transport of waste to defined area. Working plan, Chapter 5, s5.72 – change figure reference in text.	03/04/2003
Letter from Minosus dated 06/12/2002	In response to question B2.10 letter details amendments to Working Plan, Chapter 6, s6.14-6.17 – atmospheric monitoring within the mine.	10/12/2002
Letter from Minosus dated 28th May 2004	In response to question B2.6, clarification of surface water drainage from the surface facilities. All references to a septic tank in the application are superceded by reference to a cesspool or sealed tank in this letter.	02/06/2004
Letter from Minosus dated 1st June 2004	In response to question B2.5, letter includes revised Chapter 4 of the working plan dated June 2004. This revision of Chapter 4 of the working plan overrides all previous revisions.	01/06/2004
Correspondence from Minosus dated 24 June 2004	In response to question B2.10, further information regarding the atmospheric monitoring strategy	24/06/2004
Correspondence dated 31/01/2005 re. improvement condition 1.6.1 (1.1) (EMS)	All parts	01/02/2005
Correspondence dated February 2005 re. improvement condition 1.6.1 (1.3) (nuisance & health RA)	All parts	18/02/2005
Variation application dated 1 September 2006	All parts	1/09/2005
Correspondence dated August 2007 re condition 2.14.1 (SPMP submission)	All parts	06/08/2007
Correspondence dated 20/09/2007 re. improvement condition 1.6.1.2 (noise management plan)	All parts	20/09/2007

Variation application dated 30/04/2008	All parts	09/05/2008
Response to request for additional information dated 21/05/2008	All parts	22/05/2008

- 2.1.2 Where any condition of this Permit refers to the whole or parts of different documents, in the event of any conflict between the wording of such documents, the wording of the document(s) with the most recent date shall prevail to the extent of such conflict.
- 2.1.3 All plant, equipment and engineered measures used in operating the Permitted Installation shall be maintained in good operating condition.
- 2.1.4 The Operator of the installation shall be responsible for all the measures required under these conditions, within the limits set out in the documentation specified in Table 2.1.2.

**Table 2.1.2: Measures operated by other than the landfill operator**

Description	Parts	Date Received
Application	The response to question 2.12 given in Chapter 2 – B.2.1 of document reference IPPC Landfill Permit application  Chapter 1 – subsections 1.44 – 1.58 of the working plan dated September 2001.	20/09/01

***Training***

- 2.1.5 The Permitted Installation shall be supervised by staff who are suitably trained and fully conversant with the requirements of this Permit.
- 2.1.6 A copy of this Permit and those parts of the application referred to in this Permit shall be available, at all times, for reference by all staff carrying out work subject to the requirements of the Permit.
- 2.1.7 All staff shall be fully conversant with those aspects of the Permit conditions, which are relevant to their duties and shall be provided with appropriate training and written operating instructions to enable them to carry out their duties.
- 2.1.8 The Operator shall maintain a record of the skills and training requirements for all staff whose tasks in relation to the Permitted Installation may have an impact on the environment and shall keep records of all relevant training.

***Fit and Proper Person***

- 2.1.9 The following requirements shall be complied with:

- a. Any changes in technically competent management and the name of any incoming person together with evidence that such person has the required technical competence shall be submitted to the Agency in writing within 5 working days of the change in management. Technically competent management and technical competence shall be as prescribed under Schedule 1A of the Waste Management Licensing Regulations 1994 (as amended).
- b. In the event of the Operator and/or any relevant person being convicted of any relevant offence, which is in addition to any already notified to the Agency, then full details shall be provided to the Agency within 14 days of conviction, whether or not the conviction is subsequently appealed. Such details shall include , in respect of each relevant person (as defined in section 74(7) of the Environmental Protection Act 1990 or any subsequent amendments to that section), the nature of the offence, the place and date of conviction, any sentence, and any fine or other penalty imposed; and
- c. In the event that the Operator and/or any relevant person lodges an appeal against any such conviction, the permit holder shall notify the Agency of this within 14 days of the lodging. The Operator shall notify the Agency of the results of that appeal, within 14 days of the appeal being decided; and
- d. The Operator shall put in place financial provision pursuant to the Performance Agreement between the Operator and the Agency, dated 20 August 2004, prior to the acceptance of any waste on the site pursuant to the Permit, and shall maintain it throughout the subsistence of this Permit and the Operator shall produce evidence of such provision whenever required by the Agency.

### ***Incidents and Complaints***

- 2.1.10 The Operator shall maintain and implement written procedures for:
- a. taking prompt remedial action, investigating and reporting actual or potential non-compliance with operating procedures or emission limits and if such event should occur;
  - b. investigating incidents, (including any malfunction, breakdown or failure of plant, equipment or techniques, downtime, any short term and long term remedial measures and near misses) and prompt implementation of appropriate actions; and
  - c. ensuring that detailed records are made of all such actions and investigations.
- 2.1.11 The Operator shall record and investigate complaints concerning the Permitted Installations effects or alleged effects on the environment. The record shall give the date and nature of complaint (if given), a summary of any investigation and the results of any such investigation and any actions taken.

## 2.2 **Materials inputs**

### ***Waste for Disposal***

- 2.2.1 Subject to the conditions of this Permit, wastes shall only be accepted on the site if they are:
- a. hazardous; and
  - b. compatible with the site-specific safety assessment and compliant with the provisions of Appendix A of Council Decision 2003/33/EC establishing criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 of and Annex II to Directive 1999/31/EC on the landfill of waste; and
  - c. stable, non-explosive, non-volatile, non-deliquescent, non-radioactive, non-flammable, non-biodegradable, do not support combustion and do not react upon exposure to air, salt or moisture conditions within the mine; and
  - d. listed in the defined types of waste in Schedule 4a attached to this permit; or listed in the defined types of waste in Schedule 4b attached to this permit and the requirements of condition 1.6.1.1 have been complied with; and
  - e. not listed in Table 2.2.2 as an excluded waste; and
  - f. satisfy any limits or restriction specified in the response to question B2.5 given in the Working Plan dated September 2001, Chapter 1 – sections 1.38 - 1.42, and Working Plan Chapter 4 dated June 2004.
- 2.2.2 Wastes with a Total Organic Carbon (TOC) above 3%w/w may only be accepted if the Operator has demonstrated that the waste is not biodegradable and has provided written evidence to that effect to the Agency and the Agency has given written agreement. To demonstrate this, an appropriate test method shall be employed, subject to condition 1.4.9, which is suitable for the assessment of the ability of the waste to degrade and produce noxious gases in the short and long term.



**Table 2.2.2: Waste types excluded from disposal**

a.	Liquid waste Pumpable sludges Wastes with a moisture content in excess of 60% w/w.
b.	Waste which, in the conditions of landfill, is explosive, corrosive, oxidising, highly flammable or flammable.
c.	Hospital and other clinical wastes arising from medical or veterinary establishments, which are infectious
d.	Used tyres
e.	Wastes which have not been treated, except where: <ul style="list-style-type: none"> <li>• treatment is not technically feasible; or</li> <li>• treatment would not reduce their quantity or the hazards that they pose to human health or the environment.</li> </ul>
f.	Hazardous wastes that exhibit total contents or leachability of potentially hazardous components that are high enough to constitute a short-term occupational or environmental risk or to prevent sufficient waste stabilisation within the projected lifetime of the landfill.
g.	Chemical substances from research and development or teaching activities, for example laboratory residues, which are unidentified and/or which are new and whose effects on man and/or the environment are unknown.
h.	Waste which has been diluted or mixed solely to meet the relevant waste acceptance criteria.
i.	No waste shall be accepted with a relative humidity outside the threshold agreed in accordance with condition 1.4.5.
j.	No wastes shall be accepted containing sulphide, cyanide, phosphide, ammonia or any other substance that has the ability to generate toxic or flammable gases above the thresholds agreed in accordance with condition 1.4.6.
k.	No wastes shall be accepted containing compounds identified by VOC and sVOC analysis, the sum of which exceeds 0.025%w/w, or wastes which have the ability to generate VOC's at levels which exceed Short Term Exposure Limits within a sealed cell or compromise other limits set in accordance with Health and Safety guidance contained in EH40, whichever is the lowest.
l.	No wastes shall be accepted which support combustion when tested, in accordance with condition 2.2.4

**Waste Acceptance procedures**

2.2.3

No waste shall be accepted unless it has been fully characterised to identify its composition, properties and variability in compliance with Council Decision 2003/33/EC establishing criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 of and Annex II to Directive 1999/31/EC on the landfill of waste.

- 2.2.4 For EWC codes 19 02 05\*, 19 03 04\* and 19 03 06\* to be treated as wastes that are regularly generated in the same process the operator must be familiar with the installation and process and be satisfied that the input materials to the process and the process itself are well defined. The operator shall give to the Agency notice in writing of each such process from which the operator intends to accept waste at least seven days prior to acceptance. The operator shall maintain written records of the information provided by the producer, to include the following:
- a. the process inputs detailing all characteristics which may be significant for acceptance at the mine
  - b. the chemical and physical changes involved in the process
  - c. the specification including the compositional range and variability of the outputs including the mine acceptance criteria
  - d. the quality control procedures
- 2.2.5 All wastes shall be tested for their ability to support combustion and/or auto-ignite. Assessment of combustibility and/or flammability in waste shall use the methods defined in the Annex to Commission Directive 92/69/EEC. The acceptability criteria for wastes which do not support combustion, to be applied for the purposes of this Permit, is that combustion does not propagate further once the heat source is removed. Prior to carrying out the test the waste shall be free from moisture.
- 2.2.6 All waste streams shall be tested for relative humidity to establish its potential loss or gain of water under mine conditions, and the results of testing including any changes in weight recorded.
- 2.2.7 The waste producer shall be required to provide relevant information regarding the process of production and composition and variability of the waste.
- 2.2.8 Subject to the conditions of this Permit, controls shall include measures described in Table 2.2.4

**Table 2.2.4: Minimum standards for waste acceptance procedures and criteria**

Description	Parts
Application	The response to question B2.5 given in Chapter 4 of the Working Plan dated June 2004.

- 2.2.9 Information from the characterisation of the waste shall be technically assessed by suitably qualified and experienced nominated person(s) to ensure that only waste which is suitable and environmentally safe in the mine environment is accepted. Written records for all waste testing and assessment by the nominated person shall be maintained.

- 2.2.10 Every reasonable effort shall be made to ensure the background information shall be reviewed if the waste process changes. In any event the information shall be reviewed and appropriate checks made to confirm its accuracy not less than annually.
- 2.2.11 For each individual waste stream a sufficient number of samples shall be taken for testing which are representative of the waste type. Appropriate preparation of the samples shall be employed and the most appropriate test methodology utilised, in order to fully characterise and show the compositional range of the waste. Samples taken for testing shall be retained on site for at least one month.
- 2.2.12 All wastes shall be pre-booked to ensure there is sufficient capacity at the surface facility and within the disposal area.
- 2.2.13 All incoming wastes shall be kept in the dedicated waste reception building until it has been confirmed for acceptance at the site.
- 2.2.14 Records of waste receipt shall be kept in accordance with 2.13.2
- 2.2.15 Prior to the acceptance of waste for deposit, every waste package arriving at the reception facility shall be inspected immediately upon receipt, by suitably qualified and trained staff, to confirm the waste appearance matches the accompanying description.
- 2.2.16 Secure labelling of each waste package shall be carried out immediately upon receipt, in a manner to clearly define the following:
- a Producer of the waste
  - b Waste stream
  - c Date and time of arrival on site
  - d Hazard(s)
  - e Unique package number
- 2.2.17 After acceptance for underground storage and prior to dispatch the labels shall indicate the relevant disposal zone.
- 2.2.18 On placement of the waste underground, the precise location of the deposit shall be referenced to the unique numbering system.
- 2.2.19 Waste may only be deposited in the mine in suitable packaging in sound condition.  
For packaging and bulk tankers to be considered suitable they must;
- a permit inspection and sampling; and
  - b be robust enough to resist damage during handling and prevent leakage
- additionally, suitable packaging including FIBC's must;
- c facilitate stable handling; and
  - d retain its integrity under the weight of waste stacked above; and
  - e enable wastes to be safely retrieved during the operational life of the facility in the event of any unforeseen problems.

- 2.2.20 Effective on-site verification testing for critical parameters shall be carried out to ensure that all waste accepted is suitable and safe for deposit. A sampling and testing regime and suitably equipped and staffed laboratory facilities shall be provided on site to carry out on-site verification of wastes in accordance with condition 1.4.8.

***Waste Quantities***

- 2.2.21 Subject to condition 2.2.21, the total quantity of waste that shall be deposited in the landfill per day shall not exceed 600 tonnes.
- 2.2.22 The quantity of waste that is deposited in the landfill shall not exceed 100,000 tonnes in any year.

***Raw materials (including water)***

- 2.2.23 The Operator shall, subject to the conditions of this Permit, use raw materials (including water) as described in the documentation specified in Table 2.2.6, or as otherwise agreed in writing by the Agency.

**Table 2.2.6 : Raw materials (including water)**

Description	Parts	Date Received
Application	The response to question B2.2 given in Chapter 2 subsection B2.2 (materials input) of IPPC Landfill Permit Application	20/09/01

***Waste types permitted for bulk receipt and repackaging***

- 2.2.24 Unless otherwise agreed in writing by the Agency, waste type(s) to be accepted in bulk at the facility and processed in the bagging plant are detailed in Table 2.2.3.

**Table 2.2.3: Waste types permitted for bulk receipt and repackaging**

EWC code	Description
	<b>Wastes from incineration or pyrolysis of waste</b>
19 01 07*	Solid wastes from gas treatment

**2.3 Operating Techniques**

***Preparation of engineering and infrastructure for permanent waste storage areas***

- 2.3.1 The Installation shall be designed, operated, and closed using all appropriate preventative measures to ensure that no significant pollution is caused.
- 2.3.2 The Installation shall be designed and operated to a standard sufficient to meet the criteria specified below and to meet the overall requirements specified in Table 2.3.1, unless otherwise agreed in writing by the Agency.

- a. the facility shall be operated in such a manner to ensure that there is no unacceptable risk of a pathway developing between the wastes and the biosphere
- b. operational measures shall be put in place to ensure that there are no unacceptable risks affecting the operation of the facility, which may cause pollution of the environment, harm to human health or serious detriment to amenity.

**Table 2.3.1: Design standards for engineering and infrastructure**

**Table 2.3.1.a: Geological Barriers/Standards**

<b>Engineering and infrastructure:</b>	<b>Design standard:</b>
Overall Requirements	The geological barrier shall be determined by geological and hydrogeological conditions below and in the vicinity of the site providing sufficient attenuation capacity to prevent a potential risk to soil and groundwater.
Geological barrier of underground storage area for hazardous waste	<p>The host rock surrounding the waste together with the underlying rock strata shall provide a geological barrier to prevent groundwater from entering the disposal area and to prevent liquids escaping from the disposal area.</p> <p>The load bearing capacity of the cavity for waste disposal shall be sufficient to prevent its collapse during the operational life of the mine.</p> <p>The deposited waste must have the necessary stability compatible with the geomechanical properties of the host rock.</p>

**Table 2.3.1.b: Final sealing**

<b>Engineering and infrastructure:</b>	<b>Design standard:</b>
Sealing rooms within the disposal area	Rooms utilised for the disposal of waste shall be sealed using non-combustible, fire retardant materials.
Final Closure & Decommissioning	Upon permanent cessation of waste disposal, the waste storage area of the facility shall be sealed by the installation of bulkheads, in accordance with chapter 8, and Appendix 8 (28/04/00) of the working plan dated September 2001.

2.3.3 The engineering and infrastructure shall, subject to the conditions of this Permit, be designed, constructed and subjected to Construction Quality Assurance, and thereafter inspected and maintained as described in the documentation specified in Table 2.3.2, or as otherwise agreed in writing by the Agency.

2.3.4 The results of a programme of monitoring of the integrity of the geological barrier including means of measurement of settlement and convergence of the barrier shall be provided to the Agency on an annual basis.

2.3.5 No disposal of wastes shall take place in the relevant areas of the landfill until: engineering and infrastructure has been completed and validated in accordance with the documented procedures specified in Table 2.3.2, and; the Agency has been notified in writing of this and has confirmed in writing that it has no objection to that area becoming operational.

**Table 2.3.2: Design, construction, CQA, inspection and maintenance of engineering**

**Table 2.3.2.a: Barriers and liners, including geological barrier**

Description	Parts	Date Received
Application	The response to question B2.3 of the permit application given in the following sections of the working plan dated September 2001  Chapter 2:  sections 2.1–2.4 Site Engineering sections 2.5-2.7 Surface facilities sections 2.8- 2.20 Phase 1 sections 2.21- 2.22 Phase 2 and B sections 2.24 – 2.31 Sub-surface works  Chapter 8 – Post-operation closure sections 8.1 – 8.7	20/09/01

**Table 2.3.2.b: Leachate management system engineered components**

Description	Parts	Date Received
Application	The response to question B2.3 of the permit application given in the following sections of the working plan dated September 2001  Chapter 6 – Pollution control and monitoring sections 6.1-6.4 sections 6.11-6.12	20/09/01

**Table 2.3.2.c: Gas management system engineered components**

Description	Parts	Date Received
Application	The response to question B2.3 of the permit application given in the following sections of the working plan dated September 2001  Chapter 6 – sections 6.13 – 6.17 and in accordance with condition 2.1.1	20/09/01

**Table 2.3.2.d: Surface water management system & Impermeable surfaces**

Description	Parts	Date Received
Application	The response to question B2.3 of the permit application given in the following sections:  IPPC landfill permit application Chapter 2, B2.3.2 sections 2.63-2.65  Working Plan Chapter 6 – Pollution Control and Monitoring 6.7-6.10 – Surface Water Management	20/09/01

**Table 2.3.2.e: Site Infrastructure**

Description	Parts	Date Received
Application	The response to question B2.3 in of the permit application given in chapter 3 of the working plan dated September 2001	20/09/01

2.3.6 Subject to the conditions of this Permit, the following measures shall be provided and operated using the techniques and in the manner described in the documentation specified in Table 2.3.3, or as otherwise agreed in writing by the Agency.

- a. Handling of incoming wastes, including waste discharge and emplacement
- b. Control of emissions of dusts and gases to air
- c. Odour management
- d. Spillage control

**Table 2.3.3: Operating techniques**

**Table 2.3.3.a: Handling of incoming wastes, including discharge and emplacement**

Description	Parts	Date Received
Application	<p>The response to question B2.5 of the permit application given in the following sections:</p> <p>IPPC Permit Application dated September 2001: B2.3 sections 14-17</p> <p>Working Plan Chapter 4 – Waste Acceptance Criteria &amp; Placement:</p> <p>Chapter 5 – Site Operations, sections: 5.1-5.5 – General Site Management 5.11-5.19 – Transit Capsules Drawing reference – figure 2.5 5.20 – Drum Lining 5.21-5.24 – Waste acceptance Control Systems and Procedures. 5.25-5.28 – Waste Acceptance at Enquiry Stage. 5.29-5.35 – Waste Acceptance Procedures at Reception Area. 5.60 – 5.64 – Operating Time Limits 5.65 – 5.75 – Transfer Underground 5.76 – 5.86 – Waste Emplacement and in accordance with condition 2.1.1 5.87-5.92 – Contingency Plans</p>	<p>20/09/01</p> <p>June 2004</p> <p>20/09/2001</p>



**Table 2.3.3.b Control of emissions of dusts and gases to air**

<b>Description</b>	<b>Parts</b>	<b>Date Received</b>
Application	The response to question B2.10 of the permit application given in the following sections:  IPPC Permit Application dated September 2001: Chapter 2, B2.3.3 sections 2.68-2.70  Working Plan dated September 2001: Chapter 6, sections: 6.21-6.30 Ambient Dust Monitoring 6.31-6.35 – Monitoring of Dust, Fibres and Particulates in Operational Areas 6.36-6.38 – Records	20/09/01

**Table 2.3.3.c: Odour management**

<b>Description</b>	<b>Parts</b>	<b>Date Received</b>
Application	The response to question B2.3 given in chapter 2 section B2.3.5 of IPPC Landfill Permit Application together with Chapter 4, step 10, of the Working Plan dated June 2004	20/09/01

**Table 2.3.3.c: Spillage Control**

<b>Description</b>	<b>Parts</b>	<b>Date Received</b>
Application	The response to question B2.10 of the permit application given in section Chapter 5 of the working plan sections 5.93-5.95	20/09/01

- 2.3.7 The operator shall use all appropriate measures so as to prevent, or where that is not practicable, to reduce emissions of litter from the Permitted Installation provided always that techniques used by the operator shall be no less effective than those described in the application, where relevant.
- 2.3.8 The operator shall use all appropriate measures so as to prevent, or where that is not practicable, to reduce mud and debris escaping from the Permitted Installation provided always that techniques used by the operator shall be no less effective than those described in the application, where relevant.
- 2.3.9 Wastes shall only be stored on the site in the location and manner specified in Table 2.3.4.

**Table 2.3.4: Waste stored on site**

<b>Description of Waste</b>	<b>Location of Storage on Site</b>	<b>Manner of Storage</b>	<b>Storage Conditions</b>
Waste Acceptance above ground	Specified on site plan reference Figure 2.1 of the working plan	Response to question B2.3 given in: Chapter 3 of Working Plan dated September 2001 – subsections 3.20-3.21.  Chapter 5 of Working Plan dated September 2001 – subsections 5.1-5.5, 5.11-5.19, 5.21-5.24, 5.29-5.35.	Waste shall only be stored within the building specified in the non-technical summary, B2.3, section 14 of IPPC Permit Application  Waste to be moved to the permanent disposal area or rejected and removed from site within 1 week
Waste Acceptance below ground	Specified on site plan reference CD/M/1 or any subsequent amendments agreed in writing with the Agency	Chapter 5 of Working Plan dated September 2001 – subsections 5.1-5.5, 5.11-5.19, 5.65-5.75, 5.76-5.86.	The transfer and emplacement of waste underground shall be undertaken in accordance with chapter 5 of the working plan dated September 2001.

2.3.10 Wastes shall be emplaced in each area in such a way as to ensure stability and to avoid slippage of the mass of waste and damage to the associated engineering and infrastructure for that area.

2.4 **Groundwater protection**

2.4.1 There shall be no contamination of groundwater from activities at this Installation.

2.5 **Handling and storage of outgoing wastes**

2.5.1 The Operator shall, subject to the conditions of this Permit, handle and store waste generated by the site as described in the documentation specified in Table 2.5.1, or as otherwise agreed in writing by the Agency.

2.5.2 Waste for off site disposal shall only be stored on the site in the location and manner specified in Table 2.5.2.

**Table 2.5.1: Handling and storage of outgoing wastes including rejected wastes**

Description	Parts	Date Received
Application	The response to question B2.6 of the permit application given in Chapter 3 – 3.20 & Chapter 5, subsections 5.56 – 5.59 of the working plan dated September 2001 together with IPPC Permit Application B2.5 subsections 2.77-2.86	20/09/01

**Table 2.5.2: Storage Of waste for off site disposal**

Description of Waste	Location of Storage on Site	Manner of Storage	Storage Conditions
Material for off site disposal	As detailed in Chapter 5, subsection 5.58 of the working plan dated September 2001 and IPPC Landfill Permit Application B2.5 subsection 2.78	Segregated area	Impermeable pavement

## 2.6 Waste recovery and disposal

- 2.6.1 The Operator shall, subject to the conditions of this Permit, recycle and recover waste produced at the Permitted Installation unless technically and/or economically impossible as described in the documentation specified in Table 2.6.1.
- 2.6.2 The Operator shall maintain and implement a system which ensures that a record is made of the quantity, composition, origin, destination (including whether this is a recovery or disposal operation) and where relevant removal date of any waste that is produced at the Permitted Installation.

**Table 2.6.1: Waste recovery and disposal**

Description	Parts	Date Received
Application	The response to question B2.6 given in chapter 2, section B.2.6 subsection 2.87 and non-technical summary subsections 22-24 of the IPPC Landfill Permit Application	20/09/01

## 2.7 **Energy Efficiency**

2.7.1 The operator shall:

- (a) take appropriate measures to ensure that energy is used efficiently in the activities;
- (b) review and record at least every 4 years whether there are suitable opportunities to improve the energy efficiency of the activities; and
- (c) take any further appropriate measures by a review.

## 2.8 **Accident prevention, fires, site security and waste segregation**

2.8.1 The operator shall:

- a. maintain and implement an accident management plan;
- b. review and record at least every 4 years or as soon as practicable after an accident, (whichever is the earlier) whether changes to the plan should be made;
- c. make any appropriate changes to the plan identified by a review.
- d. make accident prevention plans and plans for the prevention and control of fires available for the Agency to inspect.

2.8.2 The Installation shall be secured to prevent unauthorised access to the site. The gates shall be locked outside of operating hours. Temporary repairs to site security shall be carried out within 48 hours with permanent repairs carried out within 7 days.

2.8.3 The Operator shall provide the Agency with a written review of the zoning and segregation of wastes within Bostock 5 panel every six months. This will commence from the first deposit of waste and will include any revision to relevant drawings. Any revision to the zoning of the wastes within Bostock 5 panel shall be previously agreed in writing by the Agency.

2.8.4 All necessary action shall be taken to protect environmental safety at the Installation, and this may include the removal of waste from the facility if these wastes are subsequently discovered to be unsuitable for disposal.

## 2.9 Noise and vibration

2.9.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause annoyance outside the site, as perceived by an authorised officer of the Agency, unless the operator has used appropriate measures to prevent or where that is not practicable to minimise the noise and vibration.

2.9.2 Subject to the conditions of this permit, the Operator shall control noise and vibration as described in the documentation specified in Table 2.9.1, or as otherwise agreed with the Agency.

Table 2.9.1 : Noise and vibration

Description	Parts	Date Received
Application	The response to question 2.9 Chapter 2, section B2.9 subsections 2.117-2.125 of the IPPC Permit Application document	20/09/01
Application	Appendix 2 of the working plan – Noise Impact Assessment	20/09/01

## 2.10 Monitoring and sampling

2.10.1 The Operator shall, subject to the conditions of this Permit, carry out, evaluate and assess monitoring in accordance with the following monitoring plans, as described in the documentation specified in Table 2.10.1, or as otherwise agreed in writing by the Agency.

- a. Monitoring and sampling quality control plan
- b. Gas monitoring plan
- c. Meteorological monitoring plan
- d. Surface water monitoring plan
- e. Site topography monitoring plan
- f. Monitoring plan for fugitive aerial emissions, including dust

2.10.2 An annual report shall be sent to the Agency detailing the management of and any changes in ventilated airflow within Bostock 5 Panel.

2.10.3 Background conditions established by condition 1.4.4 shall be reviewed annually. Background levels may only be amended by agreement in writing by the Agency if the Agency is satisfied that changes are not due to emissions from waste.

**Table 2.10.1: Monitoring and sampling**

**Table 2.10.1.a: Monitoring and sampling quality control plan**

Description	Parts	Date Received
Application	The response given to question B2.10 of the permit application given in:  Chapter 6, sections 6.1-6.4, 6.36-6.38 of the working plan dated September 2001.	20/09/01

**Table 2.10.1.b: Meteorological monitoring plan**

Description	Parts	Date Received
Application	The response to question B2.10 of the permit application given in Chapter 6 sections 6.5 – 6.6 of the working plan dated September 2001.	20/09/01

**Table 2.10.1.c: Surface water monitoring plan**

Description	Parts	Date Received
Application	The response to question B2.10 of the permit application given in chapter 6 sections 6.7 – 6.10 of the working plan dated September 2001.	20/09/01

**Table 2.10.1.d: Monitoring plan for dust and aerosol emissions to air**

Description	Parts	Date Received
Application	The response to question B2.10 of the permit application given in chapter 6 sections 6.21 – 6.35 of the working plan dated September 2001.	20/09/01

**Table 2.10.1e.: Gas and atmospheric monitoring plan**

Description	Parts	Date Received
Application	The response to question B2.10 of the permit application given in Chapter 6 sections 6.13- 6.17 of the working plan dated September 2001 and in accordance with condition 2.1.1	20/09/01

**Table 2.10.1f.: Site topography body monitoring plan**

Description	Parts	Date Received
Application	The response to question B2.10 of the permit application given in Chapter 6 sections 6.19- 6.20 Of the working plan dated September 2001	20/09/01

2.10.4 Where requested in writing, the Operator shall provide the Agency at least 14 days advance notice of undertaking monitoring/spot sampling.

2.10.5 There shall be provided:

- a. safe and permanent means of access to enable sampling/monitoring to be carried out in relation to the monitoring points specified in Schedule 2, unless otherwise specified in that Schedule; and
- b. safe means of access to other sampling/monitoring points when required by the Agency.

2.11 **Closure, aftercare and decommissioning**

***Temporary cessation of operations pre-closure***

2.11.1 In the event of temporary cessation of operation of the site, the Operator shall inform the Agency in writing of the reason and duration of the closure and any action taken to ensure the safety of the Installation.

***Closure***

2.11.2 The Operator shall, subject to the conditions of this Permit, close the landfill as described in the documentation specified in Table 2.11.1, or as otherwise agreed in writing by the Agency.

**Table 2.11.1 : Closure**

Description	Parts	Date Received
Application	The response to question B2.11 of the permit application given in Chapter 8 of the working plan dated September 2001.	20/09/01

2.11.3 The Operator shall, subject to the conditions of this Permit, carry out post-closure aftercare and restoration of the landfill as described in the documentation specified in Table 2.11.2, or as otherwise agreed in writing by the Agency.

**Table 2.11.2 : Post-closure Aftercare and Restoration**

Description	Parts	Date Received
Application	The response to question B2.11 of the permit application given in Chapter 8 & Appendix 8 of the working plan dated September 2001.	20/09/01

**Decommissioning of the landfill prior to surrender of the permit**

2.11.4 The Operator shall, subject to the conditions of this Permit, decommission the landfill as described in the documentation specified in Table 2.11.3, or as otherwise agreed in writing by the Agency.

**Table 2.11.3 : Decommissioning**

Description	Parts	Date Received
Application	The response to question B2.11 of the permit application given in Chapter 8 and appendix 8 of the working plan dated September 2001.	20/09/01

2.12 **Multi-operator landfills**

This is not a multi-Operator installation.

2.13 **Site protection and monitoring programme**

2.13.1 The operator shall implement and maintain the site protection and monitoring programme and shall carry out and record a review of it at least every 4 years commencing from the date the Site Protection and Monitoring programme was received.

2.14 **Control of Odours**

2.14.1 Emissions from the activities shall be free from odour at levels likely to cause annoyance outside the site, as perceived by an authorised officer of the Agency, unless the operator has used appropriate measures to prevent or where that is not practicable to minimise the odour.

2.15 **Fugitive emissions**

2.15.1 Fugitive emissions of substances (excluding odour, noise and vibration) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures have been taken to prevent or where that is not practicable, to minimise, those emissions.



## 3 Emissions

### 3.1 Emissions into air

#### ***Aerial emissions of dust***

- 3.1.1 There shall be no point source emissions to air from the installation.
- 3.1.2 Environmental dust monitoring scheme at the surface facility shall be continued at the site boundary locations specified in Chapter 6 of the working plan if the data from monitoring specified in Chapter 6 of the working plan shows an increase from pre-waste acceptance levels. Dust monitoring will only cease with written agreement from the Agency.

#### ***Gaseous emissions in underground waste storage areas***

- 3.1.3 The operator shall carry out monitoring of the parameters at the specified monitoring points listed in Schedule 2 attached to this Permit.
- 3.1.4 Monitoring required by condition 3.1.3 shall be carried out with suitable methods and equipment and a monitoring frequency agreed in writing by the Agency, in accordance with condition 1.4.7.

### 3.2 Emissions to land

- 3.2.1 There shall be no point source emission to land from the Permitted Installation other than permitted wastes deposited in accordance with this permit.
- 3.2.2 The Operator shall notify the Agency, as soon as practicable, of any information concerning the state of the site which affects or updates that provided to the Agency as part of the Site Report submitted with the application for this Permit.

### 3.3 Emissions to controlled waters [other than emissions to sewer]

#### ***Emissions to surface water***

- 3.3.1 Point source emissions to surface water shall only arise from the emission points and sources specified in Table 3.3.1.
- 3.3.2 Only clean, uncontaminated surface water from the site reception facilities, identified on Figure 2.1 of the working plan, to be discharged via interceptor to the surface water sewer.

**Table 3.3.1: Point source emissions into surface water**

Emission point reference/description	Source	Location of emission point
Discharge from site surface water interceptor	Site drainage from the surface water management system.	Sample point agreed with the Agency in accordance with improvement condition 1.4.3 dated 24/06/2005

***Emissions to groundwater***

3.3.3 There shall be no point source emissions to groundwater from the Installation.

**3.4 Contained Drainage**

3.4.1 Contaminated drainage from the surface facilities identified on Figure 2.1 of the working plan, comprising of domestic effluent and discharges from the laboratory facility, shall discharge to a sealed tank. The sealed tank, identified in additional information provided in accordance with condition 2.1.1, shall be checked daily to ensure capacity is not exceeded, maintained to ensure its integrity and emptied as necessary for lawful disposal off site. A record of these activities shall be kept at the site and shall be available for inspection by the Agency at any reasonable time.

**3.5 Off site conditions**

3.5.1 There are no off site conditions.

## 4 Records

- 4.1.1 A record (a "Specified Record") shall be made of:-
- a. any malfunction, breakdown or failure of plant, equipment, engineered provisions or techniques (including down time and any short term and long term remedial measures) that has had or might have had an effect on the environmental performance of the Permitted Installation. These records shall be kept in a log maintained for that purpose;
  - b. any complaints concerning the Installation's effect or alleged effect on the environment. The record shall give the date of complaint, time of complaint, a summary of the complaint and of any investigation and the results of such investigation. Such records shall be made in a log kept for this purpose;
  - c. all monitoring, sampling and analysis taken or carried out in accordance with the conditions of this Permit, and any assessment or evaluation made on the basis of such data;
  - d. the times on and off site of the designated technically competent manager(s). These records shall be kept in a log maintained for that purpose.
- 4.1.2 A record (a "Specified Record") shall be maintained of wastes such that an audit trail of waste transfers to, from and within the site is maintained enabling the progress of all waste to be tracked through the site from pre-acceptance to final disposal including the following:
- a. the identity and quantities of all waste deposited, indicating origin, pre-treatment to which the waste has been subject prior to delivery, date and time of delivery, identity of the producer, the precise location on the site and the unique reference number for each waste package. These records shall be kept in a register maintained for that purpose;
  - b. the quantities and types of all wastes that are not accepted at the facility, including origin, identity of the producer, date of delivery and reason for rejection. These records shall be kept in a log maintained for that purpose
  - c. the quantities and types of all wastes which are produced at the Permitted Installation, including its composition, or as appropriate, description; the best estimate of the quantity produced; its disposal routes; and the best estimate of the quantity sent for recovery. These records shall be kept in a log maintained for that purpose;
- 4.1.3 There shall be made available for inspection by the Agency at any reasonable time:
- a. Specified Records;
  - b. any other records made by the Operator in relation to, or having relevance to the operation and environmental performance of the Permitted Installation ("Other Records")

- 4.1.4 A copy of any Specified or Other Records shall be supplied to the Agency on demand without delay and without charge
- 4.1.5 Specified Records and Other Records shall:-
- a. be legible;
  - b. be made as soon as reasonably practicable;
  - c. indicate any amendments which have been made and shall include the original record wherever possible.
- 4.1.6 Specified Records and Other Records shall be retained until the Permit is surrendered unless agreed in writing with the Agency. Records shall be kept on site and made available for inspection by the Agency when requested.

- 5 Reporting**
- 5.1.1 All reports and notifications required by this Permit shall be sent to the Environment Agency at the address notified in writing to the Operator by the Agency.
- 5.1.2 The results of all monitoring required by this permit shall be submitted to the Agency on an annual basis. This shall include an interpretative report assessing the significance of the results against background conditions and any appropriate levels or limits set by the HSE for occupational protection or by the Agency or other Government Body for environmental protection or specified elsewhere in this Permit. The report shall be sent to the Agency within 28 days of the end of the reporting period.
- 5.1.3 The Operator shall report wastes received and disposed of at the site and wastes produced at and removed from the site, using the 'Waste Return' form specified in Table S3 to Schedule 3, and reporting the data specified in that form quarterly.
- 5.1.4 The Operator shall, within 12 months of the issue of this Permit, submit a report on potential environmental improvements to the Permitted Installation. For each of the subject areas identified in Section 2 of the appropriate technical guidance, the report shall assess the costs and benefits of alternative techniques that may provide environmental improvement. This shall include, but not be limited to, those techniques listed in guidance. As part of their management system the Operator shall submit an updated report *every 12 months*.
- 5.1.5 Where the Operator has a formal environmental management system applying to the Permitted Installation which encompasses annual improvement targets the Operator shall, not later than 31 January in each year, provide a summary report of the previous year's progress against such targets.
- 5.1.6 Fugitive emissions shall be reviewed on an annual basis and a summary report on this review shall be sent to the Agency detailing such releases and the measures taken to reduce them.
- 5.1.7 The results of reviews and any changes made to the site protection and monitoring programme shall be reported to the Agency, within 1 month of the review or change

## 6 Notifications

- 6.1.1 The Operator shall notify the Agency without delay of:-
- a. the detection of an emission of any substance which exceeds any limit or criteria in this Permit specified in relation to the substance;
  - b. any results of monitoring showing any increase above established or background levels;
  - c. the detection of any malfunction, breakdown or failure of plant or engineered methods or techniques which has caused or may have the potential to cause pollution;
  - d. any accident which has caused or may have the potential to cause pollution;
  - e. the refusal or rejection of incoming waste;
  - f. the detection of any significant adverse environmental effects
- 6.1.2 The Operator shall submit written confirmation to the Agency of any notification under condition 6.1.1 in accordance with Schedule 1 to this Permit, by sending the information listed in Part A of Schedule 1 to this Permit within 24 hours of such notification. The Operator shall send the more detailed information listed in Part B of that Schedule as soon as practicable thereafter;
- 6.1.3 The Operator shall give prior written notification to the Agency of the following events and in the specified timescales;
- a. as soon as practicable prior to the permanent cessation of the landfill disposal operations authorised under condition 1.1.1;
  - b. as soon as practicable prior to the cessation of the operation of the landfill disposal operations authorised under condition 1.1.1, for a period likely to exceed *1 month*; and
  - c. the resumption of disposal operations authorised under condition 1.1.1, after a cessation, at least 14 days prior to resumption.
- 6.1.4 The Operator shall notify the following matters to the Agency, in writing, within 14 days of their occurrence:
- where the Operator is a registered company:
- a. any change in the Operator's trading name, registered name or registered office address;
  - b. a change to any particulars of the Operator's ultimate holding company (including details of an ultimate holding company where the Operator has become a subsidiary);
  - c. any steps taken with a view to the Operator going into administration, entering into a company voluntary arrangement or being wound up.

7

## Interpretation

7.1.1 In this Permit, the following expressions shall have the following meanings:

*“Authorised Officer”*

means any person authorised by the Agency under section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, powers specified in Section 108(4) of that Act.

*“background concentration”*

means the same as “background quantity” as defined in paragraph 11 to Part 2 to Schedule 1 of the PPC Regulations.

*“EP Regulations”*

Means the Environmental Permitting (England and Wales) Regulations SI 2007 No 3538 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

*“fugitive emission”*

means an emission from any point other than those specified in the Tables in part 6 of this Permit.

*“impermeable pavement”*

means an engineered surface which is designed, constructed and maintained to contain surface water and other liquids and to prevent them leaking or spilling onto or into the ground.

*“monitoring”*

includes the taking and analysis of samples, instrumental measurements (periodic and continual), calibrations, examinations, tests and surveys.

*“Permitted Landfill”*

means the activities and the limits to those activities described in Table 1.1.1 of this Permit.

*“Staff”*

includes employees, directors or other officers of the Operator, and any other person, including contractors, under the Operator’s direct or indirect control.

*“substances prescribed for water”*

means those substances mentioned in paragraph 13 of Part 2 of Schedule 1 to the PPC Regulations.

*“surface water management system”*

means all the elements relating to collection of rain water or surface water from individual landfill phases and the landfill as a whole, and incorporating methods of water collection, containment and the subsequent treatment and/or disposal system, either on or off the landfill.

*“ treatment”*

means the physical, thermal, chemical or biological processes, including sorting, that change the characteristics of the waste in order to reduce its volume or hazardous nature, facilitate its handling or enhance recovery.

*“ year”*

means calendar year ending 31 December.

*“ financial year”*

means financial year ending 31 March.

- 7.1.2 Where a minimum limit is set for any emission parameter, references to exceeding the limit shall mean that the parameter shall not be less than that limit.



## Schedule 1 - Notifications

This page outlines the information that the operator must provide.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

If any information is considered commercially confidential, it should be separated from non-confidential information, supplied on a separate sheet and accompanied by an application for commercial confidentiality under the provisions of the EP Regulations.

### Part A

Permit Number	BJ8499IA
Name of operator	Minosus Ltd
Location of Installation	Jack Lane Bostock Middlewich Cheshire CW10 9JQ
Time and date of the detection	

(a) Notification requirements for any malfunction, breakdown or failure of equipment or techniques, accident, or fugitive emission which has caused, is causing or may cause significant pollution	
To be notified within 24 hours of detection	
Date and Time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

Time periods for notification following detection of a breach of a limit	
Parameter	Notification period

(c) Notification requirements for the detection of any significant adverse environmental effect	
To be notified within 24 hours of detection	
Description of where the effect on the environment was detected	
Substances(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

Part B to be supplied as soon as practicable

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission	
The dates of any unauthorised emissions from the installation in the preceding 24 months.	

Name*	
Post	
Signature	
Date	

\* authorised to sign on behalf of Minosus Ltd

## **Schedule 2 - Reporting of Monitoring Data**

### **Reporting of monitoring data**

Parameters, for which reports shall be made, in accordance with conditions 1.4.4 and 5.1.2 of this Permit, are listed below.

**Table S2: Reporting of monitoring data**

<b>Parameter (and reporting units)</b>	<b>Monitoring point</b>	<b>Reporting period Period begins from issue date of this Permit</b>
<i>Carbon Monoxide (ppm)</i>	<i>Intake air to Bostock 5 panel; Return air from Bostock 5 panel: Operational rooms Bostock 5 panel</i>	<i>Annually</i>
<i>Oxygen (% )</i>	<i>Intake air to Bostock 5 panel; Return air from Bostock 5 panel: Operational rooms Bostock 5 panel</i>	<i>Annually</i>
<i>Oxides of nitrogen (ppm)</i>	<i>Intake air to Bostock 5 panel; Return air from Bostock 5 panel: Operational rooms Bostock 5 panel</i>	<i>Annually</i>
<i>Methane (% with reporting limit of 0.01%)</i>	<i>Intake air to Bostock 5 panel; Return air from Bostock 5 panel: Operational rooms Bostock 5 panel</i>	<i>Annually</i>
<i>Temperature (°C)</i>	<i>Intake air to Bostock 5 panel; Return air from Bostock 5 panel: Operational rooms in Bostock 5 panel</i>	<i>Annually</i>
<i>Humidity Levels (%)</i>	<i>Intake air to Bostock 5 panel; Return air from Bostock 5 panel: Operational rooms in Bostock 5 panel</i>	<i>Annually</i>
<i>Air flow (m<sup>3</sup>/s)</i>	<i>Intake air to Bostock 5 panel; Return air from Bostock 5 panel: Bostock 5 panel</i>	<i>Annually</i>
<i>Particulates (µg/m<sup>3</sup>)</i>	<i>Intake air to Bostock 5 panel; Return air from Bostock 5 panel: Bostock 5 panel:</i>	<i>Annually</i>
<i>Total flammable gases (% with reporting limit of 0.01% and calibrated with reference to methane)</i>	<i>Intake air to Bostock 5 panel; Return air from Bostock 5 panel: Operational rooms in Bostock 5 panel</i>	<i>Annually</i>
<i>Toxic gases to include: Sulphide Cyanide Phosphide Ammonia Sulphur Dioxide Unless otherwise agreed in writing by the Agency (ppm)</i>	<i>Intake air to Bostock 5 panel; Return air from Bostock 5 panel: Operational rooms in Bostock 5 panel</i>	<i>Annually</i>

### Schedule 3 - Reporting Forms

#### Forms to be used

Unless otherwise agreed in writing between Agency and the Operator, the following Agency forms are to be used for reports submitted to Agency.

Table S3: Reporting Forms		
Media/parameter	Form Number	Date of Form
Waste Return	WMS1	

**Schedule 4a – Permissible Waste Categories**

<b>POTENTIAL WASTE CATEGORIES</b>		
List based on wastes whose physical and chemical properties typically meet generic criteria for disposal at the proposed Minosus facility and which will be subjected to the decision tree acceptance criteria:		
<b>Code:Band</b>	<b>Descriptions</b>	<b>Exclusions</b>
06	<b>WASTES FROM INORGANIC CHEMICAL PROCESSES</b>	
06 03	<b>Wastes from the MFSU of salts and their solutions and metallic oxides</b>	
06 03 13*	Solid salts and solutions containing heavy metals	Solutions
10	<b>WASTES FROM THERMAL PROCESSES</b>	
10 01	<b>Wastes from power stations and other combustion plants (except 19)</b>	
10 01 04*	Oil fly ash and boiler dust	
10 01 13*	Fly ash from emulsified hydrocarbons used as fuel	
10 01 14*	Bottom ash, slag and boiler dust from co-incineration containing dangerous substances	
10 01 16*	Fly ash from co-incineration containing dangerous substances	
10 01 18*	Wastes from gas cleaning containing dangerous substances	
10 02	<b>Wastes from the iron and steel industry</b>	
10 02 07*	Solid wastes from gas treatment containing dangerous substances	
10 02 13*	Sludges and filter cakes from gas treatment containing dangerous substances	Sludges
10 04	<b>Wastes from lead thermal metallurgy</b>	
10 04 01*	Slags from primary and secondary production	
10 04 02*	Dross and skimmings from primary and secondary production	
10 04 04*	Flue-gas dust	
10 04 05*	Other particulates and dust	
10 04 06*	Solid wastes from gas treatment	
10 04 07*	Sludges and filter cakes from gas treatment	Sludges
10 05	<b>Wastes from zinc thermal metallurgy</b>	
10 05 03*	Flue-gas dust	
10 05 05*	Solid waste from gas treatment	
10 05 06*	Sludges and filter cakes from gas treatment	Sludges
10 06	<b>Wastes from copper thermal metallurgy</b>	
10 06 03*	Flue-gas dust	
10 06 06*	Solid wastes from gas treatment	
10 06 07*	Sludges and filter cakes from gas treatment	Sludges
10 08	<b>Wastes from other non-ferrous thermal metallurgy</b>	
10 08 08*	Salt slag from primary and secondary production	
10 08 15*	Flue-gas dust containing dangerous substances	
10 08 17*	Sludges and filter cakes from flue-gas treatment containing dangerous substances	Sludges
10 09	<b>Wastes from casting of ferrous pieces</b>	
10 09 09*	Flue-gas dust containing dangerous substances	
10 10	<b>Wastes from casting of non-ferrous pieces</b>	
10 10 09*	Flue-gas dust containing dangerous substances	
10 11	<b>Wastes from manufacture of glass and glass products</b>	
10 11 09*	Waste preparation mixture before thermal processing, containing dangerous substances	
10 11 11*	Waste glass in small particles and glass powder containing heavy metals (for example from cathode ray tubes)	
10 11 15*	Solid wastes from flue-gas treatment containing dangerous substances	
10 11 17*	Sludges and filter cakes from flue-gas treatment containing dangerous substances	Sludges

<b>POTENTIAL WASTE CATEGORIES</b>		
List based on wastes whose physical and chemical properties typically meet generic criteria for disposal at the proposed Minosus facility and which will be subjected to the decision tree acceptance criteria:		
<b>Code;Band</b>	<b>Descriptions</b>	<b>Exclusions</b>
10 12	<b>Wastes from manufacture of ceramic goods, bricks, tiles and construction</b>	
10 12 09*	Solid wastes from gas treatment containing dangerous substances	
10 12 11*	Wastes from glazing containing heavy metals	
10 13	<b>Wastes from manufacture of cement, lime and plaster and articles and products made from them</b>	
10 13 12*	Solid wastes from gas treatment containing dangerous substances	
12	<b>WASTES FROM SHAPING AND PHYSICAL AND MECHANICAL SURFACE TREATMENT OF METALS AND PLASTICS</b>	
12 01	<b>Wastes from shaping and physical and mechanical surface treatment of metals and plastics</b>	
12 01 16*	Waste blasting material containing dangerous substances	
12 01 20*	Spent grinding bodies and grinding materials containing dangerous substances	
19	<b>WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE</b>	
19 01	<b>Wastes from incineration or pyrolysis of waste</b>	
19 01 05*	Filter cake from gas treatment	
19 01 07*	Solid wastes from gas treatment	
19 01 11*	Bottom ash and slag containing dangerous substances	
19 01 13*	Fly ash containing dangerous substances	
19 01 15*	Boiler dust containing dangerous substances	
19 01 17*	Pyrolysis wastes containing dangerous substances	
19 02	<b>wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation)</b>	
19 02 05*	Sludges from physico/chemical treatment containing dangerous substances	
19 03	<b>stabilised/solidified wastes</b>	
19 03 04*	Wastes marked as hazardous, partly stabilised	
19 03 06*	Wastes marked as hazardous, solidified	
19 04	<b>Vitrified waste and wastes from vitrification</b>	
19 04 02*	Fly ash and other flue-gas treatment wastes	
19 11	<b>Wastes from oil regeneration</b>	
19 11 07*	Wastes from flue-gas cleaning	

**Schedule 4b - Potential Waste Categories permissible only in accordance with  
 condition 2.2.1 and 1.6.1**

POTENTIAL WASTE CATEGORIES		
List based on wastes whose physical and chemical properties typically meet generic criteria for disposal at the proposed Minosus facility and which will be subjected to the decision tree acceptance criteria:		
<u>Code:Band</u>	<u>Descriptions</u>	<u>Exclusions</u>
06	<b>WASTES FROM INORGANIC CHEMICAL PROCESSES</b>	
06 04	<b>Metal-containing wastes other than those mentioned in 06 03</b>	
06 04 04*	Wastes containing mercury	Elemental mercury
06 04 05*	Wastes containing other heavy metals	Antimony
10	<b>WASTES FROM THERMAL PROCESSES</b>	
10 09	<b>Wastes from casting of ferrous pieces</b>	
10 09 05*	Casting cores and moulds which have not undergone pouring containing dangerous substances	
10 09 07*	Casting cores and moulds which have undergone pouring containing dangerous substances	
10 09 11*	Other particulates containing dangerous substances	
10 09 13*	Waste binders containing dangerous substances	Organic binders
10 10	<b>Wastes from casting of non-ferrous pieces</b>	
10 10 05*	Casting cores and moulds which have not undergone pouring, containing dangerous substances	
10 10 07*	Casting cores and moulds which have undergone pouring, containing dangerous substances	
10 10 11*	Other particulates containing dangerous substances	
10 10 13*	Waste binders containing dangerous substances	Organic binders
10 11	<b>Wastes from manufacture of glass and glass products</b>	
10 11 19*	Solid wastes from on-site effluent treatment containing dangerous substances	
16	<b>WASTES NOT OTHERWISE SPECIFIED IN THE LIST</b>	
16 02	<b>Wastes from electrical and electronic equipment</b>	
16 02 15*	Hazardous components removed from discarded equipment	
17	<b>CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES)</b>	
17 01	<b>Concrete, bricks, tiles and ceramics</b>	
17 01 06*	Mixtures of, or separate fractions of concrete, bricks, tiles and ceramics containing dangerous substances	
17 02	<b>Wood, glass and plastic</b>	
17 02 04*	Glass, plastic and wood containing or contaminated with dangerous substances	Plastic, wood
17 04	<b>Metals (including their alloys)</b>	
17 04 09*	Metal waste contaminated with dangerous substances	
17 05	<b>Soil (including excavated soil from contaminated sites), stones and dredging spoil</b>	
17 05 03*	Soil and stones containing dangerous substances	
17 05 05*	Dredging spoil containing dangerous substances	
17 05 07*	Track ballast containing dangerous substances	
17 06	<b>Insulation materials and asbestos-containing construction materials</b>	



<b>POTENTIAL WASTE CATEGORIES</b>		
List based on wastes whose physical and chemical properties typically meet generic criteria for disposal at the proposed Minosus facility and which will be subjected to the decision tree acceptance criteria:		
<b>Code;Band</b>	<b>Descriptions</b>	<b>Exclusions</b>
17 06 03*	Other insulation materials consisting of or containing dangerous substances	Asbestos
17 09	<b>Other construction and demolition wastes</b>	
17 09 01*	Construction and demolition wastes containing mercury	Elemental mercury
17 09 03*	Other construction and demolition wastes (including mixed wastes) containing dangerous substances	
19	<b>WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE</b>	
19 04	<b>Vitrified waste and wastes from vitrification</b>	
19 04 03*	Non-vitrified solid phase	
19 08	<b>Wastes from waste water treatment plants not otherwise specified</b>	
19 08 06*	Saturated or spent ion exchange resins	
19 08 08*	Membrane system waste containing heavy metals	