

Permit with introductory note

Pollution Prevention and Control Regulations 2000

**AMG Resources Ltd.
Nevill's Dock,
Llanelli,
Carmarthenshire
SA15 2HD**

Permit number
BM2381

Contents

Introductory note	iii
Permit	1
Conditions	2
1 The permitted installation	2
2 Operational Matters	5
3 Records	13
4 Reporting	14
5 Notifications	15
6 Emissions	17
7 Transfer to effluent treatment plant	26
8 Off site conditions	27
9 Improvement programme	28
10 Interpretation	32
11 Written agreement to changes	35
Schedule 1	36
Schedule 2	38
Schedule 3	42
END OF PERMIT	42

Introductory note

This introductory note does not form a part of the Permit

The following Permit is issued under Regulation 10 of the Pollution Prevention and Control Regulations 2000 (S.I.2000 No.1973) ("the PPC Regulations") to operate an installation carrying out one or more of the activities listed in Part 1 to Schedule 1 of those Regulations, to the extent authorised by the Permit.

The Permit includes conditions that have to be complied with. It should be noted that aspects of the operation of the installation which are not regulated by those conditions are subject to the condition implied by Regulation 12(10) of the PPC Regulations, that the Operator shall use the best available techniques for preventing or, where that is not practicable, reducing emissions from the installation.

Techniques include both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned.

Brief description of the installation regulated by this permit

This is an existing process where the company carries out the detinning of scrap tins by a chemical process and the recovery of the tin from the liquors used via an electrochemical operation.

Tinplate feedstock, either from scrap or returned used steel cans, is shredded and magnetically separated from non-ferrous material from which the aluminium content is later recovered. The ferrous material is then conveyed through a series of thirteen tanks fitted with screw conveyors where the chemical leaching of the tin is undertaken.

The first nine of these tanks contain a hot sodium hydroxide and sodium nitrite solution that progressively strips the tin from the steel. This process produces steam which carries most of the evolved ammonia and nitrogen out through roof vents. The shredded tinplate and chemical solution flows counter currently resulting in stripped steel, which is then rinsed in the last four tanks and then baled ready for subsequent sale to a steelworks.

The chemical solution, containing sodium stannate, is then filtered. This tin rich liquor then passes to the electrochemical stage where the tin is deposited on the cathodes. These are then lifted out, washed, dried and then dipped in a bath of molten tin to melt off the plated tin. This tin is then either cast into ingots or recovered as a powder for sale.

As a consequence of this process significant quantities of steel and aluminium are also recovered which are sent for recycling elsewhere.

Other PPC Permits relating to this installation

Permit holder	Permit Number	Date of Issue
None	-	-

Superseded Licences/Consents/Authorisations relating to this installation

Holder	Reference Number	Date of Issue
AMG Resources Ltd.	IPC Authorisation AS7639	01/05/1996
AMG Resources Ltd	IPC Variation Notice BD2543	25/11/1998
AMG Resources Ltd.	IPC Variation Notice BG3368	07/10/1999
AMG Resources Ltd.	IPC Variation Notice BI9294	28/03/2001

Talking to us

If you contact the Agency about this Permit please quote the Permit Number.

The Operator should use the Emergency Hotline telephone number (0800 80 70 60) or any other number notified to it to give a notification under condition 5.1.1.

Confidentiality

The Permit requires the Operator to provide information to the Agency. The Agency will place the information onto the public registers in accordance with the requirements of the PPC Regulations. If the Operator considers that any information provided is commercially confidential, it may apply to the Agency to have such information withheld from the register as provided in the PPC Regulations. To enable the Agency to determine whether the information is commercially confidential, the Operator should clearly identify the information in question and should specify clear and precise reasons.

Variations to the permit

This Permit may be varied in the future. The Status Log within the Introductory Note to any such variation will include summary details of this Permit, variations issued up to that point in time and state whether a consolidated version of the Permit has been issued.

Surrender of the permit

Before this Permit can be wholly or partially surrendered, an application to surrender the Permit has to be made. For the applicant to be successful, they would have to be able to demonstrate to the Agency, in accordance with Regulation 19 of the PPC Regulations, that there is no pollution risk and that no further steps are required to return the site to a satisfactory state.

Transfer of the permit or part of the permit

Before the Permit can be wholly or partially transferred to another person, a joint application to transfer the Permit has to be made by both the existing and proposed holders, in accordance with Regulation 18 of the PPC Regulations. A transfer will be allowed unless the Agency considers that the proposed holder will not be the person who will have control over the operation of the installation or will not ensure compliance with the conditions of the transferred Permit. If the Permit authorises the carrying out of a specified waste management activity, then there is a further requirement that the transferee is considered to be a "fit and proper person" to carry out that activity.

Status Log

Detail	Date	Comment
Application BM 2381	Received 28/12/01	Duly Made 28/12/01
1 st Schedule 4 Notice request for information	Request issued 08/03/02	Response received 19/04/02
Request by Agency to extend determination to 23/05/02	Request dated 25/04/02	Request accepted 07/05/02
Request by Agency to extend determination to 28/07/02	Request dated 24/05/02	Request accepted 11/06/02
2 nd Schedule 4 Notice request for information	Request issued 22/07/02	Response received 13/09/02
Request by Agency to extend determination to 15/11/02	Request dated 16/09/02	Request accepted 19/09/02
Request by Agency to extend determination to 17/01/03	Request dated 08/11/02	Request accepted 11/11/02
Request by Agency to extend determination to 04/04/03	Request dated 10/01/03	Request accepted 13/01/03
Request by Agency to extend determination to 14/05/03	Request dated 01/04/03	Request accepted 03/04/03
Request by Agency to extend determination to 14/07/03	Request dated 12/05/03	Request accepted 13/05/03
Request by Agency to extend determination to 14/10/03	Request dated 03/07/03	Request accepted 07/07/03
Request by Agency to extend determination to 14/11/03	Request dated 03/10/03	Request accepted 07/10/03
Permit BM2381	Determined 11/11/03	

End of introductory note.



Permit

Permit number
BM 2381

The Environment Agency (the Agency) in exercise of its powers under Regulation 10 of the Pollution Prevention and Control Regulations 2000 (S.I. 2000 No. 1973), hereby authorises

AMG Resources Ltd. ("the Operator"),

Company registration number **1515585**

whose Registered Office is
**29 Lower Trinity Street,
Birmingham
B9 4AG**

to operate an Installation at
**Nevill's Dock,
Llanelli,
Carmarthenshire
SA15 2HD**

to the extent authorised by and subject to the conditions of this Permit.

Signed

[Signature box]

P. Jordan

Authorised to sign on behalf of the Environment Agency

Date

11th November 2003

Conditions

1 The permitted installation

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

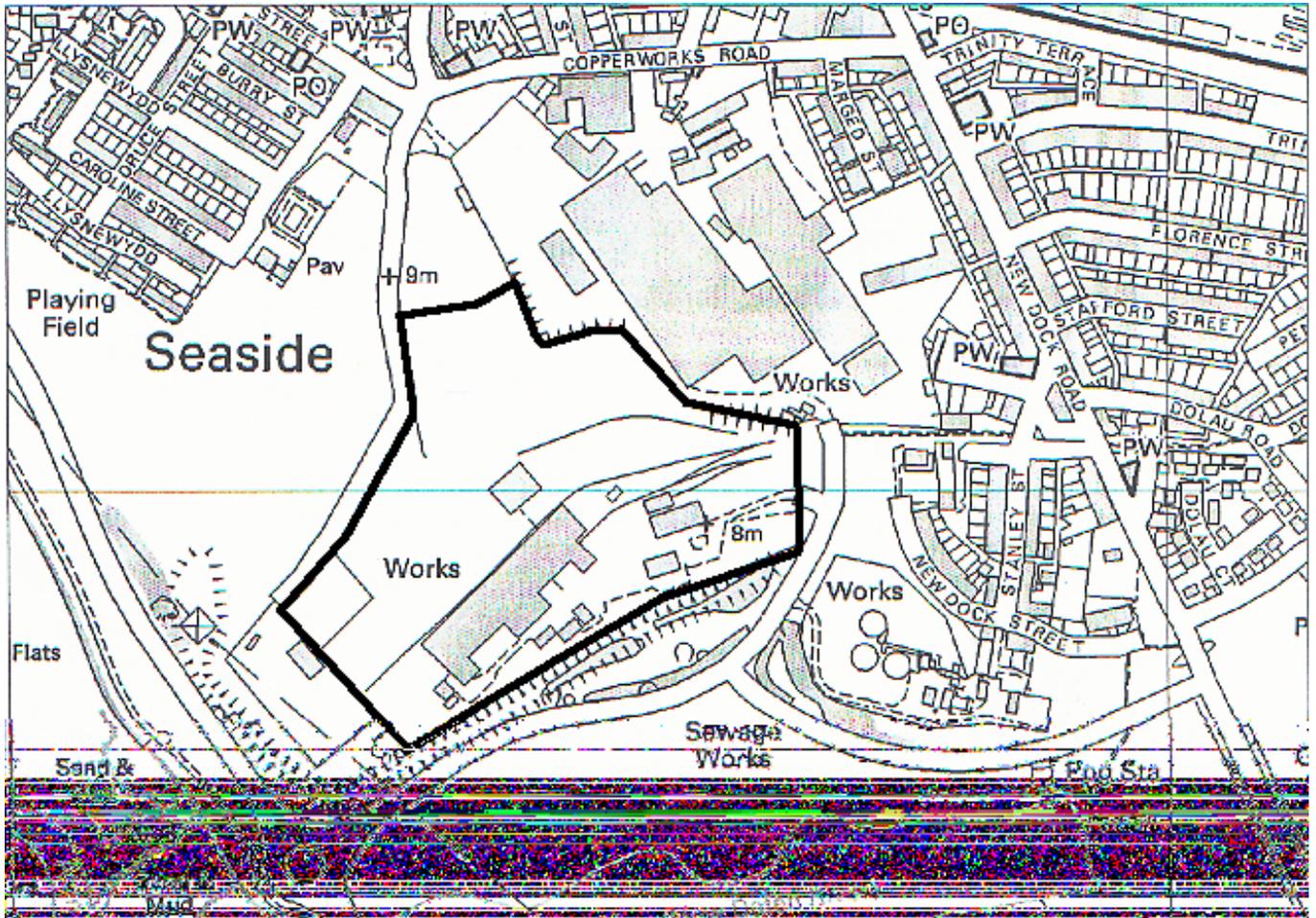
Table 1.1.1

Activity under Schedule 1 of the Regulations/ Associated Activity	Description of specified activity	Schedule 1 Activity Reference (if applicable)	Limits of specified activity
Storage and handling of raw materials	Raw material storage, handling, sorting and preparation including the hammer mills, magnetic separators, shredders, oils, chemicals and the Aluminium recovery plant.	Directly associated activity	Receipt of raw materials to transfer to chemical treatment or usage onsite
Site generated energy supply for process	Generation of heat, steam etc.	Directly associated activity	The boiler that provides energy for the Installation.
Producing non-ferrous metals from secondary raw materials by metallurgical, chemical or electrolytic activities	Chemical treatment of scrap metal and cans and electrolytic recovery of Tin from the chemical liquors.	2.2 A(1)(a)	From chemicals added to shredded metal to the recovery of Tin following electrolysis.
Processing of the product	Cathode melting, furnace melting and casting of Tin.	Directly associated activity	Production of the solid Tin and the final product storage areas
Handling and storage of solid wastes	From the generation of solid wastes to determination of their fate and transfer offsite	Directly associated activity	Point of production of any solid wastes to their collection, storage, and transfer offsite

The permitted installation

Handling and storage of liquid wastes	Spent process liquors, wash waters, other effluents	Directly associated activity	Point of production of any liquid wastes to their collection, treatment and transfer offsite
The operation and control of emission abatement systems	Operation of abatement systems for air emissions and effluent treatment	Directly associated activity	To ensure the efficient and effective operation of emission abatement plant

- 1.1.2 The activities authorised under condition 1.1.1 shall not extend beyond the Site, being the area shown edged in **BOLD** on the plan below



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- 1.1.3 There are no pre-operation conditions

2 Operational Matters

2.1 Management techniques and control

2.1.1 The Permitted 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

Description	Parts	Date Received
Application	The response to question 2.1 given in B.2.1 of the application	28/12/01
Response to 2 nd Schedule 4 Part 1 Notice (22/07/02)	Response to questions 20 – 26	13/09/02

2.1.2 All plant, equipment and technical means used in operating the Permitted Installation shall be maintained in good operating condition.

2.1.3 The Permitted Installation shall be supervised by staff who are suitably trained and fully conversant with the requirements of this Permit.

2.1.4 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.

2.1.5 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.

2.2 Raw materials (including water)

2.2.1 The Operator shall, subject to the conditions of this Permit, use raw materials (including water) as described in the documentation specified in Table 2.2.1, or as otherwise agreed in writing by the Agency.

Table 2.2.1 : Raw materials (including water)

Description	Parts	Date Received
Application	The response to question 2.2 given in section B2.2 of the application	28/12/01
Response to 1 st Schedule 4 Part 1 Notice (08/03/02)	Response to questions 2 – 4	19/04/02
Response to 2 nd Schedule 4 Part 1 Notice (22/07/02)	Response to questions 27 – 30	13/09/02

2.2.2 The Sulphur content of the gas oil used as a secondary fuel in the boiler providing steam and heat to the installation shall not exceed 0.2% w/v until 31st December 2007 and shall not exceed 0.1% w/v thereafter.

2.2.3 The Operator shall maintain a record of the frequency and duration of firing on gas oil including integrity testing. The record shall be forwarded to the Agency by 31st January of the following year.

2.2.4 The Operator shall ensure that that any tinsplate scrap or used cans are not held on site for longer than a year.

2.3 Operating Techniques

2.3.1 The Permitted Installation shall, subject to the conditions of this Permit, be operated using the techniques and in the manner described in the documentation specified in Table 2.3.1, or as otherwise agreed in writing by the Agency.

Table 2.3.1: Operating techniques

Description	Parts	Date Received
Application	The response to questions 2.3 given in section B2.3 of the application	28/12/01
Response to 1 st Schedule 4 Part 1 Notice (08/03/02)	Response to questions 1, 5 – 8	19/04/02
Response to 2 nd Schedule 4 Part 1 Notice (22/07/02)	Response to questions 31 – 38	13/09/02

2.4 Groundwater protection

2.4.1 The Permitted Installation shall, subject to the conditions of this Permit, be controlled as described in the documentation specified in Table 2.4.1, or as otherwise agreed in writing by the Agency.

Table 2.4.1: Groundwater protection

Description	Parts	Date Received
Application	The response to questions 2.4 given in section B2.4 of the application	28/12/01
Response to 1 st Schedule 4 Part 1 Notice (08/03/02)	Response to questions 5 - 8	19/04/02
Response to 2 nd Schedule 4 Part 1 Notice (22/07/02)	Response to questions 34 - 36	13/09/02

2.5 Waste handling and storage

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

Table 2.5.1: Waste handling and storage

Description	Parts	Date Received
Application	The response to question 2.5. given in section B2.5 of the application	28/12/01
Response to 1 st Schedule 4 Part 1 Notice (08/03/02)	Response to questions 12 & 13	19/04/02

2.5.2 Waste materials specified in Table 2.5.2 shall only be stored on the site in the location and manner specified in that Table.

Table 2.5.2: Waste stored on site

Description of Waste	Location of Storage on Site	Manner of Storage	Storage Conditions
Tank Bottoms & Muds (Special Waste)	L1	Segregated Area with: Tank bottoms, as a solid waste in skips Muds, as a liquid slurry in tank	Covered, impermeable hard standing which is bunded such that it would contain at least 110% of the contents of the largest single container
Magnetic Separator Waste	L2	Stockpile, for use as feedstock in Aluminium recovery plant	Covered, impermeable hard standing
Used can contraries	L3	Stockpile, for use as feedstock in Aluminium recovery plant	Impermeable hard standing
De-tinning solution (bleed off)	L4	Storage tank(s)	Bunded area such that it would contain at least 110% on the contents of the largest single container or 25% of the total capacity whichever is the greater
Tin Dross	L5	Drums	Covered, impermeable hard standing
Tin Skimmings	L6	Drums	Covered, impermeable hard standing
Aluminium recovery plant waste	-	Skips	Covered, impermeable hard standing
Waste wood	-	Designated area	-
Cardboard	-	Skips in Designated area	Covered, impermeable hard standing

2.5.3

The Operator shall implement and maintain measures to control and monitor the escape of litter from the confines of the Installation. The Operator shall record the actions taken to ensure that loose waste or waste that is likely to become airborne is contained and retrieved on site.

2.6 Waste recovery and disposal

2.6.1 The Operator shall, subject to the conditions of this Permit, recover and dispose of waste as described in the documentation specified in Table 2.6.1, or as otherwise agreed in writing by the Agency.

Table 2.6.1: Waste recovery and disposal

Description	Parts	Date Received
Application	The response to question 2.6 given in section B2.5 & B2.6 of the application	28/12/01
Response to 1 st Schedule 4 Part 1 Notice (08/03/02)	Response to questions 12 & 13	19/04/02

2.7 Energy Efficiency

2.7.1 The Operator shall, subject to the conditions of this Permit, use energy as described in the documentation specified in Table 2.7.1, or as otherwise agreed in writing by the Agency.

Table 2.7 1: Energy efficiency

Description	Parts	Date Received
Application	The response to question 2.7 given in section B2.7 of the application	28/12/01
Response to 2 nd Schedule 4 Part 1 Notice (22/07/02)	Response to questions 39 – 42	13/09/02

2.7.2 The Operator shall produce a report annually on the energy consumption of the installation. This report shall be submitted to the Agency at the Reporting Address by 31st March each year and shall be incorporated in any programme brought about by the requirement reference 9.7 in Table 9.1.1.

2.7.3 The Operator shall have an energy efficiency plan which shall be updated annually.

2.8 Accident prevention and control

2.8.1 The Operator shall, subject to the conditions of this Permit, prevent and limit the consequences of accidents as described in the documentation specified in Table 2.8.1, or as otherwise agreed in writing by the Agency.

Table 2.8.1 : Accident prevention and control

Description	Parts	Date Received
Application	The response to question 2.8 given in section B2.8 of the application	28/12/01
Response to 2 nd Schedule 4 Part 1 Notice (22/07/02)	Response to question 43	13/09/02

2.9 Noise and vibration

2.9.1 The Operator shall, subject to the conditions of this Permit, control noise and vibration as described in the documentation specified in Table 2.9.1, or as otherwise agreed in writing by the Agency.

Table 2.9.1 : Noise and vibration

Description	Parts	Date Received
Application	The response to question 2.9 given in section B2.9 of the application	28/12/01
Response to 1 st Schedule 4 Part 1 Notice (08/03/02)	Response to questions 14 - 19	19/04/02
Response to 2 nd Schedule 4 Part 1 Notice (22/07/02)	Response to questions 44 - 45	13/09/02

2.10 Monitoring

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

Table 2.10.1 : Monitoring

Description	Parts	Date Received
Application	The response to question 2.10 given in section B2.10 of the application	28/12/01
Response to 1 st Schedule 4 Part 1 Notice (08/03/02)	Response to question 9	19/04/02

- 2.10.2 Where requested in writing by the Agency, the Operator shall provide at least 14 days advance notice of undertaking monitoring/spot sampling.
- 2.10.3 There shall be provided:
- a safe and permanent means of access to enable sampling/monitoring to be carried out in relation to the emission 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.
- 2.10.4 The Operator shall use US EPA method number 29 and closed system digestion for the determination of the concentration of metals specified in Table 6.1.3 until such time as a CEN method is available.
- 2.10.5 Measurements for the determination of concentrations of substances specified in this permit shall be carried out representatively. Where the activity giving rise to the substances measured is operated on a batch basis, extractive sampling shall be carried out to include the period of peak emissions and exclude periods outside the batch cycle.
- 2.10.6 Methods for extractive sampling and automated, continuous, measurement systems, including calibration, shall be carried out as specified by the appropriate CEN-standards. If CEN standards are not available, ISO standards, national or international standards which will ensure the provision of data of an equivalent scientific quality, as agreed in writing with the Agency, shall apply. The reference measurements used shall be agreed in writing with the Agency. The results of any calibration assessment shall be submitted to the Agency, in writing, at the end of that reporting period.

2.11 Decommissioning

- 2.11.1 The Operator shall, subject to the conditions of this Permit, make provision for decommissioning the installation as described in the documentation specified in Table 2.11.1, or as otherwise agreed in writing by the Agency.

Table 2.11.1 : Decommissioning

Description	Parts	Date Received
Application	The response to question 2.11 given in section B2.11 & B1.3 of the application	28/12/01
Response to 1 st Schedule 4 Part 1 Notice (08/03/02)	Response to questions 2 – 11	19/04/02
Response to 2 nd Schedule 4 Part 1 Notice (23/07/02)	Response to questions 27 – 30	13/09/02

2.12 Multi-operator installations

- 2.12.1 This is not a multi-operator installation

3 Records

- 3.1.1 A record (a "Specified Record") shall be made of:-
- a any malfunction, breakdown or failure of plant, equipment or techniques (including down time and any short term and long term remedial measures) that may have, 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 all monitoring and sampling taken or carried out in accordance with the conditions of this permit and any assessment or evaluation made on the basis of such data.
- 3.1.2 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 the operation of the Permitted Installation ("Other Records").
- 3.1.3 A copy of any Specified or Other Records shall be supplied to the Agency on demand and without charge.
- 3.1.4 Specified Records and Other Records shall:-
- a be legible;
 - b be made as soon as reasonably practicable; and
 - c indicate any amendments which have been made and shall include the original record wherever possible.
- 3.1.5 Specified Records and Other Records shall be retained for a minimum period of 4 years from the date when the records were made at AMG Resources Ltd., Nevill's Dock, Llanelli, Carmarthenshire.
- 3.1.6 For all waste received as raw material or produced from the Permitted Installation, the Operator shall record (and shall retain such records for a minimum of 4 years)
- a its composition, or as appropriate, description;
 - b the best estimate of the quantity produced;
 - c its disposal routes; and
 - d the best estimate of the quantity sent for recovery.
- 3.1.7 A record shall be made at the Permitted Installation of 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 any investigation and the results of such investigation. Such records shall be made in a log kept for this purpose.

4 Reporting

- 4.1.1 All reports and notifications required by this Permit, or by Regulation 16 of the PPC Regulations, shall be sent to the Environment Agency at the address notified in writing to the Operator by the Agency.
- 4.1.2 The Operator shall report the parameters listed in Table S2 to Schedule 2 as follows:
- a in respects of the emission points specified;
 - b for the reporting periods specified in Table S2 to Schedule 2 and using the forms specified in Table S3 to Schedule 3;
 - c giving the information from such results and assessments as may be required by the forms specified in those Tables; and
 - d sending the report to the Agency within 28 days of the end of the reporting period.
- 4.1.3 The Operator shall, within 36 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. The methodologies used should be based on those given in Agency guidance note IPPC H1 (Environmental Assessment and Appraisal of BAT) and should justify, against the Best Available Techniques criteria, where potential improvements are not planned to be implemented. As part of their management system the Operator shall submit an updated report every 36 months.
- 4.1.4 Fugitive emissions shall be reviewed on an annual basis and a summary report on this review shall be sent to the Agency by 31st March each year detailing such releases and the measures taken to reduce them.

5 Notifications

- 5.1.1 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 the detection of any fugitive emission which has caused or may cause pollution unless the quantity emitted is so trivial that it would be incapable of causing pollution;
 - c the detection of any malfunction, breakdown or failure of plant or techniques which has caused or may have the potential to cause pollution; and
 - d any accident which has caused or may have the potential to cause pollution.
- 5.1.2 The Operator shall submit written confirmation to the Agency of any notification under condition 5.1.1 of this Permit by sending:-
- a the information listed in Part A of Schedule 1 to this Permit within 24 hours of such notification; and
 - b the more detailed information listed in Part B of that Schedule as soon as practicable thereafter;
- and such information shall be in accordance with that Schedule.
- 5.1.3 The Operator shall give written notification as soon as practicable, of any of the following:
- a permanent cessation of the operation of any part of or all of the Permitted Installation;
 - b cessation of the operation of any part of or all of the Permitted Installation for a period, likely to exceed 1 year; and
 - c resumption of the operation of any part of or all of the Permitted Installation after a cessation notified under 5.1.3(b).
- 5.1.4 The Operator shall notify the following matters to the Agency, in writing, within 14 days of their occurrence:
- i any change in the Operator's trading name, registered name or registered office address;
 - ii 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);
 - iii any steps taken with a view to the Operator going into administration, entering into a company voluntary arrangement or being wound up.

- 5.1.5 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.
- 5.1.6 Where the Operator has entered into the Emissions Trading Scheme by taking on a voluntary target with a financial incentive, the Operator shall, within 14 days, notify the Agency, in writing, of either:
- a** a decision by the Operator to withdraw from the Scheme; or
 - b** failure to comply with the Emissions Trading Scheme at the end of the 5 year period covered by the Scheme.

6 Emissions

6.1 Emissions into air

6.1.1 Emissions to air from the emission point(s) specified in Table 6.1.1 shall only arise from the source(s) specified in that Table.

Table 6.1.1: Emission points into air

Emission point reference / description	Source	Location of emission point
A1	Used can dust plant At a height of 4.65 metres	Point A1 on site plan ES 1303/Section 3.1/001
A2	Tin melt recovery plant At a height of 2.65 metres	Point A2 on site plan ES 1303/Section 3.1/001
A3	Boiler (usually gas fired) (steam and heat generation) At a height of 8.40 metres	Point A3 on site plan ES 1303/Section 3.1/001

6.1.2 The limits for emissions into air for the parameter(s) and emission point(s) set out in Table 6.1.3 shall not be exceeded.

6.1.3 The Operator shall carry out monitoring of the parameters listed in Table 6.1.3, from the emission points and at least at the frequencies specified in that Table.

Table 6.1.3: Emission limits into air

Parameters	Emission Point		
	A1	A2	A3
Particulate mg m ⁻³			
Extractive sample (min 4 hour)	10	10	25
Frequency of monitoring	Twice a year	Twice a year	Twice a year
Minimum interval between extractive monitoring	4 months	4 months	4 months
Dioxins (ITEQ) ng m ⁻³	-	0.1	-
Frequency of monitoring	-	Annual	-
Minimum interval between monitoring	-	10 months	-
Copper, lead, zinc and their compounds taken together (as metal) mg m ⁻³	-	2.0	-
Frequency of monitoring	-	Twice a year	-
Minimum interval between monitoring	-	4 months	-
Cadmium, arsenic, nickel and their compounds taken together (as elements) mg m ⁻³	-	0.2	-
Frequency of monitoring	-	Twice a year	-
Minimum interval between monitoring	-	4 months	-
Tin and its compounds (as Sn) mg m ⁻³	-	2.0	-
Frequency of monitoring	-	Twice a year	-
Minimum interval between monitoring	-	4 months	-

Notes

- Metals include both gaseous, vapour and solid phases as well as their compounds (expressed as the metal or total as specified).

6.2 Emissions to land

6.2.1 There shall be no emission to land from the Permitted Installation.

6.3 Emissions to water [other than emissions to sewer]

6.3.1 Emissions to water from the emission point specified in Table 6.3.1 shall only arise from the source specified in that Table.

Table 6.3.1: Emission points to water

Emission Point Reference	Source	Receiving Water
W1 (on site plan ES1303/Schedule4.02A)	Site surface water drainage	Outfall to River Lledi, Loughor Estuary.

6.3.2 The Operator shall carry out surface water monitoring of the parameters listed in Table 6.3.2, and at least at the frequencies listed in that Table.

Table 6.3.2: Surface water sampling parameters and monitoring frequencies

Parameters	W1 Surface water monitoring frequency
Temperature °C	Monthly
pH	Monthly
Conductivity at 20°C $\mu\text{S cm}^{-1}$	Monthly
Biochemical Oxygen Demand (BOD) mg l^{-1}	Monthly
Suspended Solids mg l^{-1}	Monthly
Ammoniacal Nitrogen as N mg l^{-1}	Monthly
Nitrite as N mg l^{-1}	Monthly
Total Oxidised Nitrogen (TON) as N mg l^{-1}	Monthly
Chloride ion as Cl ⁻ mg l^{-1}	Monthly
Aluminium and its compounds (as Al) mg l^{-1}	Monthly
Arsenic and its compounds (as As) mg l^{-1}	Monthly
Boron and its compounds (as B) mg l^{-1}	Monthly
Cadmium and its compounds (as Cd) mg l^{-1}	Monthly
Chromium and its compounds (as Cr) mg l^{-1}	Monthly
Copper and its compounds (as Cu) mg l^{-1}	Monthly
Iron and its compounds (as Fe) mg l^{-1}	Monthly
Lead and its compounds (as Pb) mg l^{-1}	Monthly
Manganese and its compounds (as Mn) mg l^{-1}	Monthly
Mercury and its compounds (as Hg) mg l^{-1}	Monthly
Nickel and its compounds (as Ni) mg l^{-1}	Monthly
Selenium and its compounds (as Se) mg l^{-1}	Monthly
Sodium and its compounds (as Na) mg l^{-1}	Monthly
Tin and its compounds (as Sn) mg l^{-1}	Monthly
Zinc and its compounds (as Zn) mg l^{-1}	Monthly
Total hydrocarbon oil mg l^{-1}	Monthly

6.3.3 Surface water monitoring shall be carried out at or around low tide.

6.3.4 The Operator shall carry out groundwater monitoring at the sampling points listed in Table 6.3.4

Table 6.3.4: Groundwater monitoring points / locations

Sampling Point	Location	Depth of borehole (m)	Plan Identification
G1	Borehole 1	5.5	Point Bh 1 on site plan ES1303:10
G2	Borehole 2	5.0	Point Bh 2 on site plan ES1303:10
G3	Borehole 3	5.0	Point Bh 3 on site plan ES1303:10
G4	Borehole 4	5.5	Point Bh 4 on site plan ES1303:10
G5	Borehole 5	5.0	Point Bh 5 on site plan ES1303:10
G6	Borehole 6	4.7	Point Bh 6 on site plan ES1303:10
G7	Borehole 7	5.5	Point Bh 7 on site plan ES1303:10

6.3.5 The Operator shall carry out groundwater monitoring of the parameters listed in Table 6.3.5, and at least at the frequencies specified in that Table.

Table 6.3.4: Groundwater sampling parameters and monitoring frequencies

Parameters	Groundwater monitoring frequency						
	G1	G2	G3	G4	G5	G6	G7
Depth to Groundwater (m)	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year
Minimum interval between monitoring 4 months							
Groundwater level (m AOD)	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year
Minimum interval between monitoring 4 months							
Temperature °C	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year
Minimum interval between monitoring 4 months							
pH	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year
Minimum interval between monitoring 4 months							
Conductivity at 20°C µS cm⁻¹	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year
Minimum interval between monitoring 4 months							
Suspended Solids mg l⁻¹	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year
Minimum interval between monitoring 4 months							
Ammoniacal Nitrogen as N mg l⁻¹	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year
Minimum interval between monitoring 4 months							
Nitrite as mg l⁻¹	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year
Minimum interval between monitoring 4 months							
Total Oxidised Nitrogen (TON) as mg l⁻¹	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year
Minimum interval between monitoring 4 months							
Chloride ion as Cl⁻ mg l⁻¹	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year
Minimum interval between monitoring 4 months							
Aluminium and its compounds (as Al) mg l⁻¹	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year
Minimum interval between monitoring 4 months							
Arsenic and its compounds (as As) mg l⁻¹	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year
Minimum interval between monitoring 4 months							
Boron and its compounds (as B) mg l⁻¹	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year
Minimum interval between monitoring 4 months							
Cadmium and its compounds (as Cd) mg l⁻¹	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year
Minimum interval between monitoring 4 months							
Chromium and its compounds (as Cr) mg l⁻¹	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year
Minimum interval between monitoring 4 months							
Copper and its compounds (as Cu) mg l⁻¹	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year
Minimum interval between monitoring 4 months							
Iron and its compounds (as Fe) mg l⁻¹	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year
Minimum interval between monitoring 4 months							
Lead and its compounds (as Pb) mg l⁻¹	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year
Minimum interval between monitoring 4 months							
Manganese and its compounds (as Mn) mg l⁻¹	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year
Minimum interval between monitoring 4 months							
Mercury and its compounds (as Hg) mg l⁻¹	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year
Minimum interval between monitoring 4 months							
Nickel and its compounds (as Ni) mg l⁻¹	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year
Minimum interval between monitoring 4 months							

Table 6.3.4 (cont.): Groundwater sampling parameters and monitoring frequencies

Parameters	Groundwater monitoring frequency						
	G1	G2	G3	G4	G5	G6	G7
Selenium and its compounds (as Se) mg l⁻¹ Minimum interval between monitoring 4 months	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year
Sodium and its compounds (as Na) mg l⁻¹ Minimum interval between monitoring 4 months	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year
Tin and its compounds (as Sn) mg l⁻¹ Minimum interval between monitoring 4 months	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year
Zinc and its compounds (as Zn) mg l⁻¹ Minimum interval between monitoring 4 months	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year
Total hydrocarbon oil mg l⁻¹ Minimum interval between monitoring 4 months	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year	Twice a year

6.3.6 Groundwater monitoring shall be carried out at or around low tide.

6.4 Emissions to sewer

6.4.1 No process emission shall be made into any sewer from the Permitted Installation

6.5 Emissions of heat

6.5.1 There are no conditions proposed for the emission of heat.

6.6 Emissions of noise and vibration

6.6.1 There are no conditions proposed for emissions of noise and vibration.

7 Transfer to effluent treatment plant

- 7.1.1 No transfer from the Permitted Installation shall be made to effluent treatment plant.

8 Off site conditions

8.1.1 There are no off site conditions.

9 Improvement programme

- 9.1.1 The Operator shall complete the requirements specified in Table 9.1.1 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 9.1.1: Improvement programme requirements

Reference	Requirement	Date
9.1	A report shall be sent to the Agency on establishing an Environmental Management System having regard to section 2.1 of the relevant IPPC Sector or other Technical Guidance. The report shall include proposals and a timetable to implement such a system by 01/07/05.	01/04/04
9.2	The Operator shall submit a report on the fate and environmental impact of hazardous materials used at the Installation. If the report identifies improvements that represent BAT, it shall include an assessment of the alternatives and also contain a timetable for implementing those improvements by 01/01/05.	01/04/04
9.3	The Operator shall review the procedure for optimising the strength of working solutions used and also submit a procedure for the regular review of new developments in raw materials and a programme for the implementation of suitable alternatives that are less hazardous.	01/04/04
9.4	The Operator shall undertake a waste minimisation audit having regard to section 2.2.2 of the relevant IPPC Sector or other Technical Guidance and submit the report to the Agency together with an action plan to implement improvements. If the report identifies improvements that represent BAT, it shall contain a timetable for implementing those improvements by 01/10/05.	01/01/05
9.5	The Operator shall provide sub-metering on site to enable the energy and water consumption of the Installation to be accurately measured and reported. The Operator shall submit a report to the Agency detailing the type and location of the meters to be fitted along with a timetable for installation by 01/01/05.	01/10/04
9.6	The Operator shall undertake a water efficiency audit having regard to section 2.2.3 of the relevant IPPC Sector or other Technical Guidance and submit a report to the Agency. If the report identifies improvements that represent BAT, it shall contain a timetable for implementing those improvements by ¼/06.	01/04/05
9.7	The Operator shall submit a report to the Agency detailing an energy efficiency plan having regard to the requirements of section 2.7 of the relevant IPPC Sector and H2 IPPC guidance. If the report identifies improvements that represent BAT, it shall contain a timetable for implementing those improvements by 01/07/05.	01/07/04

Table 9.1.1 (cont): Improvement programme requirements

Reference	Requirement	Date
9.8	The Operator shall develop a structured accident management plan having regard to section 2.8 of the relevant IPPC Sector or other Technical Guidance and submit a report to the Agency. If the report identifies improvements that represent BAT, it shall contain a timetable for implementing those improvements by 01/10/05.	01/10/04
9.9	The Operator shall submit a noise management report having regard to section 2.9 of the IPPC Sector Guidance and H3 IPPC guidance. The report shall indicate how BAT is demonstrated for each of the identified noise sources. If the report identifies improvements that represent BAT, it shall contain a timetable for implementing those improvements by 01/07/05.	01/07/04
9.10	The Operator shall submit a noise monitoring programme to the Agency for approval prior to implementation, to establish the noise levels at noise sensitive receptors, being representative of any process cycles and represent daytime (07.00-23.00 hrs.) and night time operations. The monitoring plan shall detail how the contribution of each noise source to the overall receptor level is to be established. In considering process cycles regard must be paid to abnormal operations.	01/04/04
9.11	The noise monitoring programme, as agreed above in Improvement Condition 9.10, shall be repeated following completion of abatement improvements identified in improvement condition 9.9 and the noise management plan reviewed and submitted to the Agency.	01/10/05
9.12	The Operator shall submit a report to the Agency on the potential concentration and mass release of dioxins and furans into air, water and land from the permitted Installation. The report shall also contain a timetable for reducing by 01/10/05 emissions of dioxins and furans if the techniques for reduction represent BAT.	01/01/05
9.13	The operator shall submit a report to the Agency which identifies and quantifies point source and fugitive air emissions from the permitted Installation. The report shall describe the environmental impact of these releases having regard to sections 2.3 and 3 of the relevant IPPC Sector and H1 IPPC guidance and their significance.	01/04/04
9.14	The Operator shall submit a report specifying a timetable for implementation by 01/10/05 of measures representing BAT to prevent or, where that is not practicable, reduce the point source and fugitive air emissions from the permitted Installation.	01/10/04

Table 9.1.1 (cont): Improvement programme requirements

Reference	Requirement	Date
9.15	The Operator shall submit a report to the Agency reviewing the effectiveness of bag filtration plant performance monitoring. If the report identifies improvements that represent BAT, the report shall contain a timetable for implementing by 01/07/05 the improvements to bag plant performance monitoring.	01/07/04
9.16	The Operator shall submit a report to the Agency reviewing the options for reducing the emissions of Particulates so they shall not exceed the 5 mg m ⁻³ limit at standard conditions for emission points A1 & A2 for an extractive sample. If one of the options represents BAT the report shall contain a timetable for implementing that option by 01/07/05.	01/07/04
9.17	The Operator shall submit a report to the Agency which identifies and quantifies point source and fugitive liquid emissions from the permitted Installation. The report shall describe the environmental impact of these releases having regard to sections 2.3 and 3 of the relevant IPPC Sector and H1 IPPC guidance and their significance.	01/04/04
9.18	The Operator shall submit a report to the Agency specifying a timetable for implementation by 01/10/05 of measures representing BAT to prevent or, where that is not practicable, reduce the emissions to water from the permitted Installation.	01/10/04
9.19	The Operator shall submit a report to the Agency reviewing the raw material and waste management procedures covering all areas where these are held and waste is generated on site. This should include a review of handling and storage methods, the appropriateness of the individual storage areas provided, security and bunding, procedures for damaged and/or leaking containers, signage etc.. The report shall have regard to sections 2.3 and 2.5 of the relevant IPPC Sector or other Technical Guidance. If the report identifies improvements that represent BAT, it shall contain a timetable for implementing those improvements by 01/10/05.	01/10/04
9.20	The Operator shall store all de-tinned steel scrap on an impermeable hardstanding where drainage is directed back into the process.	01/06/04

10 Interpretation

10.1.1 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.

“BAT”

means ‘best available techniques’ as defined in Regulation 3 and Schedule 2 of The Pollution Prevention & Control (England & Wales) Regulations 2000 (SI 2000 No. 1973)

“CEN”

means the European Committee for Standardisation (Comité Européen de Normalisation).

“Dioxins”

means polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans.

For the determination of the toxic equivalence (ITEQ) value stated as a release limit the mass concentrations of the following dioxins and furans have to be multiplied with their equivalence factors before summing.

Equivalence factor

2,3,7,8 Tetrachlordibenzodioxin (TCDD)	1
1,2,3,7,8 Pentachlordibenzodioxin (PeCDD)	0.5
1,2,3,4,7,8 Hexachlordibenzodioxin (HxCDD)	0.1
1,2,3,7,8,9 Hexachlordibenzodioxin (HxCDD)	0.1
1,2,3,6,7,8 Hexachlordibenzodioxin (HxCDD)	0.1
1,2,3,4,6,7,8 Heptachlordibenzodioxin (HpCDD)	0.01
Octachlordibenzodioxin (OCDD)	0.001
2,3,7,8 Tetrachlorodibenzofuran (TCDF)	0.1
2,3,4,7,8 Pentachlorodibenzofuran (PeCDF)	0.5
1,2,3,7,8 Pentachlorodibenzofuran (PeCDF)	0.05
1,2,3,4,7,8 Hexachlorodibenzofuran (HxCDF)	0.1
1,2,3,7,8,9 Hexachlorodibenzofuran (HxCDF)	0.1
1,2,3,6,7,8 Hexachlorodibenzofuran (HxCDF)	0.1
2,3,4,6,7,8 Hexachlorodibenzofuran (HxCDF)	0.1
1,2,3,4,6,7,8 Heptachlorodibenzofuran (HpCDF)	0.01
1,2,3,4,7,8,9 Heptachlorodibenzofuran (HpCDF)	0.01
Octachlorodibenzofuran (OCDF)	0.001

“Fugitive emission”

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

“H1”

means the Agency’s IPPC Horizontal Guidance Note H1 Environmental Assessment and Appraisal of BAT.

“H2”

means the Agency’s IPPC Horizontal Guidance Note H2 Energy Efficiency.

“H3”

means the Agency’s IPPC Horizontal Guidance Note H3 for Noise, Parts 1 and 2.

“ISO”

means International Standards Organisation.

“ITEQ”

means International Toxicity Equivalents.

“Low tide”

means time of low tide prediction at Llanelli North Dock. (Datum of prediction is 3.66m/12.00 feet below Ordnance Datum (Newlyn)).

“Monitoring”

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

“Monthly”

means each calendar month.

“Permitted Installation”

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

“PPC Regulations”

means the Pollution Prevention and Control Regulations 2000 (S.I. 2000 No. 1973) and words and expressions defined in the PPC Regulations shall have the same meanings when used in this Permit.

“Quarterly”

means each three calendar month period ending on the 31st March, 30th June, 30th September and 31st December.

“Staff”

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

“Substances prescribed for water”

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

“US EPA”

means United States Environment Protection Agency.

“Year”

means calendar year ending 31st December.

10.1.2 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.

10.1.3 Unless otherwise stated, any references in this Permit to concentrations of substances in emissions into air means;

- a in relation to gases from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid and gaseous fuels, 6% dry for solid fuels; and/or
- b in relation to gases from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content.

11 Written agreement to changes

- 11.1.1 When the qualification “or as otherwise agreed in writing” is used in a condition of this Permit, the Operator shall seek such agreement in the following manner:
- a the Operator shall give the Agency written notice of the details of the proposed change, indicating the relevant part(s) of this Permit; and
 - b such notice shall include an assessment of the possible effects of the proposed change (including waste production) on risks to the environment from the Permitted Installation.
- 11.1.2 Any change proposed according to condition 11.1.1 and agreed in writing by the Agency, shall not be implemented until the Operator has given the Agency prior written notice of the implementation date for the change. As from that date, the Operator shall operate the Permitted Installation in accordance with that change, and any relevant documentation referred to in this Permit shall be deemed to be amended.

Schedule 1

Confirmation of condition 5.1.1 notifications, in accordance with condition 5.1.2

This Schedule outlines the information that the Operator must provide to the Agency to satisfy condition 5.1.2 of this Permit.

Units of measurement used in information supplied under Part A and B requirements must 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 PPC Regulations.

Returns should contain:

Part A

- Name of Operator.

- Permit Number

- Location of Installation.

- Date information provided.

- Time, date and location of the emission.

- Identity and details of the substance[s] emitted to include:-
 - Best estimate of the quantity or the rate of emission, and the time during which the emission took place.

 - Environmental medium into which the emission took place.

 - Measures taken, or intended to be taken, to stop the emission.

Part B

- Date and time of emission

- Any more accurate information on the matters notified 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 or harm which has been or may be caused by the emission.

- The dates of any Part A notifications within in the previous 24 months.

- Name Post.....

- Signature Date

- Statement that signatory is authorised to sign on behalf of AMG Resources Ltd.

Schedule 2

Reporting of monitoring data

Parameters for which reports shall be made, in accordance with conditions 4.1.2 of this Permit, are listed below.

Table S2: Reporting of monitoring data

Parameter	Emission point	Reporting period, to	Monitoring to commence from
Particulate mg m ⁻³	A1, A2, A3	31/12/04, then each year	01/12/03
Dioxins (ITEQ) ng m ⁻³	A2	31/12/04, then each year	01/12/03
Copper, lead, zinc and their compounds taken together (as metal) mg m ⁻³	A2	31/12/04, then each year	01/12/03
Cadmium, arsenic, nickel and their compounds taken together (as elements) mg m ⁻³	A2	31/12/04, then each year	01/12/03
Tin and its compounds (as Sn) mg m ⁻³	A2	31/12/04, then each year	01/12/03
Sampling Time to/since Low Tide hrs.	G1, G2, G3, G4, G5, G6, G7	31/12/04, then each year	01/12/03
	W1	31/03/2004, then Quarterly	01/12/03
Depth to Groundwater m	G1, G2, G3, G4, G5, G6, G7	31/12/04, then each year	01/12/03
Groundwater level m AOD	G1, G2, G3, G4, G5, G6, G7	31/12/04, then each year	01/12/03
Temperature °C	G1, G2, G3, G4, G5, G6, G7	31/12/04, then each year	01/12/03
	W1	31/03/2004, then Quarterly	01/12/03
pH	G1, G2, G3, G4, G5, G6, G7	31/12/04, then each year	01/12/03
	W1	31/03/2004, then Quarterly	01/12/03
Conductivity at 20°C µS cm ⁻¹	G1, G2, G3, G4, G5, G6, G7	31/12/04, then each year	01/12/03
	W1	31/03/2004, then Quarterly	01/12/03
Biochemical Oxygen Demand (BOD) mg l ⁻¹	W1	31/03/2004, then Quarterly	01/12/03
Suspended Solids mg l ⁻¹	G1, G2, G3, G4, G5, G6, G7	31/12/04, then each year	01/12/03
	W1	31/03/2004, then Quarterly	01/12/03

Schedule 2

Ammoniacal Nitrogen as N mg l ⁻¹	G1, G2, G3, G4, G5, G6, G7	31/12/04, then each year	01/12/03
	W1	31/03/2004, then Quarterly	01/12/03
Nitrite as N mg l ⁻¹	G1, G2, G3, G4, G5, G6, G7	31/12/04, then each year	01/12/03
	W1	31/03/2004, then Quarterly	01/12/03
Total Oxidised Nitrogen (TON) as N mg l ⁻¹	G1, G2, G3, G4, G5, G6, G7	31/12/04, then each year	01/12/03
	W1	31/03/2004, then Quarterly	01/12/03
Chloride ion as Cl ⁻ mg l ⁻¹	G1, G2, G3, G4, G5, G6, G7	31/12/04, then each year	01/12/03
	W1	31/03/2004, then Quarterly	01/12/03
Aluminium and its compounds (as Al) mg l ⁻¹	G1, G2, G3, G4, G5, G6, G7	31/12/04, then each year	01/12/03
	W1	31/03/2004, then Quarterly	01/12/03
Arsenic and its compounds (as As) mg l ⁻¹	G1, G2, G3, G4, G5, G6, G7	31/12/04, then each year	01/12/03
	W1	31/03/2004, then Quarterly	01/12/03
Boron and its compounds (as B) mg l ⁻¹	G1, G2, G3, G4, G5, G6, G7	31/12/04, then each year	01/12/03
	W1	31/03/2004, then Quarterly	01/12/03
Cadmium and its compounds (as Cd) mg l ⁻¹	G1, G2, G3, G4, G5, G6, G7	31/12/04, then each year	01/12/03
	W1	31/03/2004, then Quarterly	01/12/03
Chromium and its compounds (as Cr) mg l ⁻¹	G1, G2, G3, G4, G5, G6, G7	31/12/04, then each year	01/12/03
	W1	31/03/2004, then Quarterly	01/12/03
Copper and its compounds (as Cu) mg l ⁻¹	G1, G2, G3, G4, G5, G6, G7	31/12/04, then each year	01/12/03
	W1	31/03/2004, then Quarterly	01/12/03

Permit and introductory note: PPC Regulations 2000

Schedule 2

Iron and its compounds (as Fe) mg l ⁻¹	G1, G2, G3, G4, G5, G6, G7	31/12/04, then each year	01/12/03
	W1	31/03/2004, then Quarterly	01/12/03
Lead and its compounds (as Pb) mg l ⁻¹	G1, G2, G3, G4, G5, G6, G7	31/12/04, then each year	01/12/03
	W1	31/03/2004, then Quarterly	01/12/03
Manganese and its compounds (as Mn) mg l ⁻¹	G1, G2, G3, G4, G5, G6, G7	31/12/04, then each year	01/12/03
	W1	Quarterly	01/12/03
Mercury and its compounds (as Hg) mg l ⁻¹	G1, G2, G3, G4, G5, G6, G7	31/12/04, then each year	01/12/03
	W1	31/03/2004, then Quarterly	01/12/03
Nickel and its compounds (as Ni) mg l ⁻¹	G1, G2, G3, G4, G5, G6, G7	31/12/04, then each year	01/12/03
	W1	31/03/2004, then Quarterly	01/12/03
Selenium and its compounds (as Se) mg l ⁻¹	G1, G2, G3, G4, G5, G6, G7	31/12/04, then each year	01/12/03
	W1	Quarterly	01/12/03
Sodium and its compounds (as Na) mg l ⁻¹	G1, G2, G3, G4, G5, G6, G7	31/12/04, then each year	01/12/03
	W1	31/03/2004, then Quarterly	01/12/03
Tin and its compounds (as Sn) mg l ⁻¹	G1, G2, G3, G4, G5, G6, G7	31/12/04, then each year	01/12/03
	W1	31/03/2004, then Quarterly	01/12/03
Zinc and its compounds (as Zn) mg l ⁻¹	G1, G2, G3, G4, G5, G6, G7	31/12/04, then each year	01/12/03
	W1	31/03/2004, then Quarterly	01/12/03
Total Hydrocarbon Oil mg l ⁻¹	G1, G2, G3, G4, G5, G6, G7	31/12/04, then each year	01/12/03
	W1	31/03/2004, then Quarterly	01/12/03
Energy consumption	-	31/12/04, then each year	01/12/2003
Waste Arisings	-	31/12/04, then each year	01/12/2003

Schedule 3

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
Air	A1	20/10/03
	A2	20/10/03
Groundwater	G1	20/10/03
Surface water	W1	20/10/03
Energy consumption	E1	20/11/03
Waste Arisings	R1	20/10/03

END OF PERMIT