Application for an environmental permit – Part C2 general – varying a bespoke permit

Permit number: EPR/NP3099FS

Document number 2: 3d EMS

Harp International Limited Environmental Permit Management System

Revision Index

Date	Issue No.	Comments	EA notified	Signature
January 2013	1	Management system created	Copy emailed 27/02/2013	CJH
08/01/2014	1	No changes required	No	CJH
19/12/2014	2	Introduction modified to include a statement explaining that we don't come under IED. WAMITAB qualifications updated.	Yes	CJH
03/06/2015	3	Introduction modified as now classed as coming under IED but for storage only. Sections added for energy efficiency, raw materials & fuels and BAT.	Yes	CJH
28/01/2016	4	EA changed to NRW, number of staff changed under point 10, site closure added (point 13).	Yes	CJH
04/03/2016	5	WAMITAB certificates updated & site closure expanded.	Yes	CJH
09/05/2016	6	Proposed changes added to relevant sections with regards to varying our permit by adding the acceptance of waste oil for storage pending recycling.	Yes	CJH

Environmental permit management system

1. Introduction

Harp International Limited first gained a licence to dispose of waste refrigerant in 1991. This became Waste Management Licence 3/91/24 in 1999 and at the end of 2012 this was modernised to Environmental Permit number EPR/NP3099FS.

Harp International have been accredited to BS EN ISO 14001 since June 2000 and the mature management system in place will be used in conjunction with this system to ensure we identify and minimise all risks to the environment from our operations and demonstrate continuous improvement.

Waste refrigerant is returned from customers in barcoded yellow top cylinders along with hazardous waste consignment notes. Every cylinder is weighed and analysed. Product is pooled by refrigerant type and bulked into one tonne drums. These drums are processed in the reclaim plant where oil, water and non-condensable gases are removed. When the holding pot is approved as virgin rated material, a transfer to bulk storage is carried out. At this point, the product ceases to be classed as waste and is ready for packaging and for resale.

A database holds all relevant information on each cylinder received, as well as its historical data. This includes the consignment note number, the date received, the producer of the waste, the weight returned and the refrigerant identity.

We are permitted to accept up to 2,600 tonnes of the following waste types each year.

14 06 01*	Chlorofluorocarbons, HCFC, HFC
16 05 04*	Gases in pressure containers (including halons) containing dangerous substances
16 05 05	Gases in pressure containers other than those mentioned in 16 05 04
16 05 08*	Discarded organic chemicals consisting of or containing dangerous substances
16 05 09	Discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08

There are no emission limits or associated monitoring requirements listed within our permit and there is no reporting requirement under schedule 4.

Harp International come under the Industrial Emissions Directive as we have the capacity to store more than 50 tonnes of waste at any one time and we are therefore classed as a newly prescribed activity. However, we recover less than 10 tonnes per day via the reclaim plant so this element of our process does not come under the regulations.

A hard copy of the permit is held in the Q&E office. It is also available on the company intranet (P-drive).

Harp International would now like to vary the permit in order to accept waste oils from the refrigeration sector and add the EWC code 13 08 99*.

2. Environmental risk assessment

Aspects of our activities, products and services that can have a significant impact on the environment have been considered within our ISO 14001 management system. See relevant documents. These are reviewed on an annual basis and added to as any new aspects are identified.
An environmental risk assessment has also been documented. See RA 52. A medium risk classification has been assigned and the assessment will therefore be reviewed every three years unless an incident occurs, when an earlier review would become necessary.

3. Site operations

Site operations are detailed in our Working Plan. A business continuity plan is also in place.

Our main environmental risk is the release of ozone depleting and global warming gases into the atmosphere and this is prevented as follows.

Procedure	Method
Weighing cylinders	Cylinders are placed on weighing scales, the weight recorded and then transferred into a numbered cage. The valve is opened briefly to take a vapour sample by syringe for analysis by the lab.
Pooling product	Dedicated deheeling stations allow six cylinders at a time to be connected via hoses to a pump, compressor and drum. Cylinders are emptied into the drum with no release to atmosphere.
Reclaim plant start up	Drums are connected to the plant prior to start up with all valves closed. Valves are then opened to begin the reclaim process.
Reclaim plant shut down	All valves are closed prior to shut down.
Changing a drum on the plant	Valves are closed to isolate the plant prior to disconnecting the drum. The drum valve will also be closed.
Reclaim plant not running	All valves are closed ensuring no release to atmosphere.
Reclaim plant change over	In order to change to a different refrigerant type, the plant is “pulled down” and evacuated. Any residual gas in the plant is collected into a drum which is added back to the plant on the next run of that refrigerant type.
Variation in materials	Cylinders provided to customers are designed for compressed gases only and are only supplied to the refrigerant engineer market. The plant is also designed to reclaim compressed gases to a certain pressure. The laboratory confirms that waste received is suitable for processing.
Breakdown	In the event of a breakdown, the plant would be isolated and “pulled down” if this was necessary to correct the problem. Numerous compressors and pumps are on site which could be borrowed if required. Maintenance personnel would be called. Product waiting processing would be stored safely in drums until the plant was back up and running.
Enforced shutdown	All compressors and pumps would be stopped, valves closed and checks made to ensure there were no leaks.
Changes in normal operations	The reclaim process is an important and valuable part of the business and management would ensure the effect on this process would be minimised in the event of any change to normal operations.

The acceptance of waste refrigerant oils would add the additional environmental risk of ground and water pollution. We propose to prevent this in the following way.

Procedure	Method
Provision of dedicated containers	Barcoded 10 and 20 litre HDPE containers will be provided to refrigeration engineers for collecting oil from their cooling systems. A maximum fill line will be clearly demarcated.
Receipt of waste oil	Upon receipt of the waste oil containers, they will be segregated, scanned and placed into a cage.
Storage of waste oil	The cage will be stored on a bunded pallet while the containers are awaiting weighing.
Transfer of waste oil	A 2000 litre double skinned storage tank will be purchased and located within our dedicated oil bund. A pump will be purchased to allow easy transfer of waste from container to tank.
Collection of waste oil	When full, a request will be made to a local contractor to empty the tank and the oil will be taken for recycling. The company has a fleet of waste oil collection tankers and the contents of our tank will be pumped directly into their tanker.
Spillages	Spill kits and drain blockers are located throughout the site. It can be assumed that any spillage would be small and it would be contained quickly. The use of bunding as far as possible should also contain and prevent spillages on the yard.

The following are not considered an issue on our site.

- Dust, mud and litter
- Fine particulate and fumes
- Volatile organic compounds
- Odour
- Noise and vibration

A professional pest controller is employed by Harp.

4. Disposal of waste

Two waste streams arise from the reclaim process. It is not possible to prevent the creation of this waste as it is a by-product of reclaiming the refrigerant. Generally when refrigerant has been removed from a refrigeration system it is contaminated with oil from the refrigerant compressor and water at part per million levels.

The waste hierarchy is used to dispose of these wastes. Attempts at regenerating molecular sieve on site for reuse have been unsuccessful and it is therefore sent to a contractor for recycling. Oil is collected by a contractor for reprocessing. See IMS Procedure No.6 Waste Management.

Waste type	Waste production	Quantity	Storage vessel	Storage location	Frequency of collection
Oil	Boiler is drained approximately once a month	Average 1500 kg / year	205 litre drum	Oil bund	Quarterly
Molecular sieve	Drying towers are emptied approximately once every six months	Typically 2 x 205 litre drum of waste / year	205 litre drum	Oil bund	6 monthly

Note: The amount of waste produced will vary depending on the nature of the waste refrigerant received on site and cannot be predicted. This will also have an impact on the frequency of draining the boiler and emptying the drying towers. Both operations are only carried out when required.

If the permit variation is allowed, an increase in the handling of waste oil will be experienced. As stated above, a 2000 litre double skinned tank will be purchased and located in our existing oil bund. The oil drained from the reclaim plant will be mixed with the direct oil waste received.

5. Maintenance plan

Harp International has a database which details all items of plant and equipment, its location, the supplier and the servicing and calibration requirements. Each month a report is printed from the plant register which details the requirements for that month. If the servicing cannot be carried out in-house, a contractor is brought in or the equipment is sent away. Following servicing, the database is updated and the next service date entered.

Any unplanned failures which could lead to environmental harm are risk assessed and corrected in the most efficient manner with the aim of minimising product loss and pollution.

6. Accident plan

Potential accidents, incidents or events that may result in pollution have been considered within our IMS No.10 Emergency Preparedness and Response procedure as well as our Emergency Plan and our Business Continuity Plan. In summary,

Potential incident:	Leak	Spillage	Fire
Measures to minimise	All pressure receptacles and hoses are regularly tested to BS standards. Routine maintenance. Pressure relief valves.	All liquids stored in a bund or on a bunded pallet. Pumps used on trays. Bunds checked during monthly factory audit.	Not a COMAH site. Flammable materials stored in locked compounds. No smoking or mobile phones on site.
Likelihood of event	Small leaks can happen if pressure relief valves blow or valves are incorrectly operated by mistake.	Small oil spillages are common, major spillages are rare.	Harp has never experienced a fire since its conception in 1991.

Consequences	Atmospheric pollution in the form of ozone depletion or global warming.	Oil entering the drains and polluting the river Taff.	Atmospheric pollution in the form of black smoke and toxic decomposition products.
Steps to minimise impact	Emergency stop buttons and alarms.	Spill kits and drain blockers located throughout the site. Spillage training. Spillage procedure (WI38). Booms used to contain, drain blockers, Freddy available to suck up spillages.	Fire brigade respond automatically to an alarm. Fire drills held every six months. Regular checks on fire extinguishers, fire alarms, emergency lighting etc. See Fire Log. Cylinders, drums and tanks would be kept cool by spraying with water.

If permitted and waste oil is accepted on site, it is envisaged that the above spillage measures will remain suitable and appropriate. As it would be a completely new part of the business, the quantities of waste oil likely to be returned is currently an unknown. Volumes are not expected to be large however.

A site plan and drainage plans are located in the Emergency Plan. The file is collected from the reception area in the event of an incident. A copy is also available next to the fire alarm panel in the main entrance. The plan includes the Environment Agency incident hotline number, relevant local community phone numbers and advice for the public.

Environmental incidents are recorded on document number 69. This includes details of the incident and corrective and preventative action taken. Incidents are discussed at safety meetings or shop floor operation meetings and include the effectiveness of remedial action. Procedures are reviewed following any incidents and updated if necessary. Natural Resources Wales will be notified in the event of a significant incident and the notification document in schedule 5 of the permit will be completed.

General enquiries: 03000 653000
Incident hotline: 0800 80 70 60

7. Energy efficiency

Harp International does not participate in a Climate Change Agreement or the Emissions Trading Scheme. We have been accredited to BS EN ISO 14001:2004 since June 2000 and therefore have a mature environmental management system in place. This includes an environmental policy, a specific energy policy, the identification of the environmental aspects and impacts of our activities, and the setting of objectives and targets for improvement.

Energy use by the whole site is regularly monitored and we have successfully managed to reduce our consumption over previous years (6% in 2013, 2% in 2014, 4% in 2015). We have introduced routine compressed air leak checks, purchased variable speed drive compressors, provided awareness training to operators, modified ducting on compressors so heat produced can be diverted into the

production area during winter months rather than being expelled outside, replaced outside lighting with LEDs, replaced an old air conditioning system, installed LEDs in the lab and one production bay and investigated solar panels for the factory roof.

The Carbon Trust carried out a carbon survey in October 2011 and an Air Conditioning Inspection Report was carried out by MacWhirter in November 2011 under the Energy Performance of Buildings (Certificates and Inspections) (England and Wales) Regulations 2007.

The storing of hazardous waste does not require or use any energy.

The reclaim plant uses electricity but does not have a sub-meter to determine its own usage. The power for the whole pant is supplied through the control unit. A compressor to transfer product into the plant has a separate power supply as does the purger which removes non-condensable gases. This does not come under the IED regulations however.

8. Raw materials and fuels

No raw materials or fuels are used in the process of storing waste on site. This also applies to the reclaim plant. Water is not used in the storing or processing of waste on site.

9. Best Available Techniques

The reclaim plant at Harp International is the largest standalone unit in the UK and is considered a best available technique for reclaiming refrigerants. However, as this part of our process does not come under IED, it is not relevant. Waste refrigerant is stored in transportable pressure receptacles, which, again, is classed as BAT.

10. Training

Harp International employ 45 members of staff in total. This includes three Directors, eight Managers, three Team Leaders, two administration staff, three laboratory assistants, two maintenance personnel, four Warehousemen and fourteen Production Operators.

Waste operations involve the Warehouse to receive and book in waste, Production to weigh and reclaim the waste, the Laboratory to analyse the waste at the various stages of reclamation and Management to oversee operations and produce reports. Job descriptions are available on P-drive under 'Training'. Our current staffing level is deemed suitable to manage and operate our site.

All new members of staff receive an induction which is recorded on document number 61 and includes environmental awareness. They are then provided with a Company Handbook which includes all policies and further information on the environment and pollution.

All staff handling refrigerants have in-house F-Gas training which has been approved by F-Gas Support/Defra. The course is made up of three modules and includes

- An introduction to refrigerants
- Regulations
- Recovery, recycling and reclamation

- Preventing and minimising leaks

A Director and Manager have a WAMITAB Certificate of Technical Competence as well as a Continuing Competence Certificate. This is renewed every two years.

Name	Site attendance	CoTC cert. number	Date awarded	Latest CC certificate	Date awarded	Expiry
Noel Williams	Mon-Fri 8.00am-5.00pm	06727	18/04/05	CCC10851	09/02/16	09/02/18
Caroline Harries	Mon-Fri 9.30am-3.00pm	06592	15/02/05	CCC10998	12/02/16	12/02/18

Individual training records are held on P-drive. In addition, training matrices are maintained for warehouse and production personnel. Work instructions are written for all tasks and are used as part of the in-house training programme. Weekly toolbox talks are also used as a training medium and topics discussed are recorded on document number 38.

Appropriate training will be conducted if we are permitted to accept waste oil on site. We currently use an Environment Agency You-tube video entitled “Pollution Prevention Pays” to assist with spillage training.

11. Records

Waste Returns and Hazardous Waste Consignee Returns are submitted electronically to Natural Resources Wales on a quarterly basis.

All records are held in the Q&E office, with the exception of Consignment Notes which are located in the main office area due to the space requirement. Duty of Care records will be retained for a minimum of two years and all other records will be retained for a minimum of six years from the date the records were made. Any records produced on off-site environmental effects or matters which affect the condition of the land or groundwater will be retained until the permit is surrendered. If amendments are required to any records, the original will also be retained.

Waste oil receipts will be added to the hazardous waste consignee returns if our application to vary our permit is successful. Our quarterly waste returns will also demonstrate an increase in waste oil removed from site.

12. Notifications to Natural Resources Wales

As stated above, NRW will be notified without delay following an environmental incident. It will also be notified within fourteen days following any change to our trading name, registered name or registered office. Should any steps be taken with a view to the company entering administration or being wound up, NRW will also be notified within fourteen days.

Should Harp wish to make a change to the nature or functioning of the operation, or make an extension to current activities which wouldn’t require a variation in permit but could have an impact upon the environment, NRW will be notified at least fourteen days before implementing the change.

13. Site closure

The Harp International building at Pontypridd was purpose built on a green field site in 1991. The majority of the site is made up of impermeable surfaces (concrete) with some peripheral grassy areas. The building and yard is surrounded by a two metre high fence and gates are locked at the end of the working day. Intruder alarms and CCTV are in operation and all internal doors are operated by key fobs. The main business involves compressed gases which are stored in bulk storage tanks and transportable pressure vessels. Pressure relief valves are present on all container types. In the event of a leak, released gases would be emitted to atmosphere. The small quantity of liquid held on site is stored in bunded areas and therefore the risk of ground contamination is very low.

In the event of a decision to close the waste facility, an orderly shutdown of site activities would take place. Waste would stop being accepted and if all the material in storage couldn't be processed it would be sent to an alternative facility or for incineration. Successful closure would be determined as complete when all waste had been removed from site. There are no major contamination sources which present a significant risk to the soil or groundwater and it is therefore envisaged that the site would be able to achieve a clean closure. A restoration or aftercare plan is not deemed necessary as things currently stand. The facility would be in a suitable state for future industrial use and its condition would not pose a risk to public health and safety or the environment.

Natural Resources Wales would be given fourteen days notice before implementation of site closure and a notification would be made to surrender the permit.

As all oil stored on site would be bunded, a change in permitted activities to accept waste oil would not be expected to affect the above site closure plans.

14. Access to permit

Our environmental permit will be provided to contractors if necessary. Before contractors are permitted on site they must provide method statements and other relevant information. A checklist is used to ensure all information is obtained. This is recorded on document number 10 and includes any potential environmental impact of their work.

15. Site security

A security risk assessment has been carried out. See RA 193. Security incidents are monitored. See Management Review minutes.

16. Complaints

To date no complaints have been received from local residents or companies on the industrial estate regarding pollution. A complaints procedure is in place should any arise in the future. A unique number is allocated and an investigation carried out. Corrective and preventative action is put in place where applicable.

17. Review

This management system will be reviewed on an annual basis, however, should any changes to activities or equipment arise, if a permit variation is required, or if there is an accident, a complaint or breach of the permit, it will be reviewed immediately. Natural Resources Wales will be notified of any changes.