This report has been cleared for submission to the OCLR Director by Senior Inspector B. Meaney
Signed [signature] Date 20/10/2010

Environmental Protection Agency
An Ghníomhaireacht um Chaomhnú Comhshaoil

LICENSING & RESOURCE USE

MEMO ON TECHNICAL AMENDMENT OF A WASTE LICENCE

To:	Laura Burke, Director	
FROM:	Marian Doyle	Environmental Licensing Programme
C.C:		
DATE:	20th October 2010	
RE:	Application for a Technical Amendment of a Waste Licence from **Eco-Safe Systems Limited**, Unit 1A, Allied Industrial Estate, Kylemore Road, Ballyfermot, Dublin 10. **(Reg. No. W0054-02)**.	

1. Introduction
This memo deals with a request by Eco-Safe Systems Limited for a technical amendment of their waste licence Reg. No. W0054-02 and relates to emissions to sewer.

Eco-Safe Systems Ltd was granted a waste licence (Reg. No. W54-1) on 21st December 1999 to accept and sterilise healthcare risk waste. Following an application for a review, waste licence W0054-02 was granted on 01st August 2003. The revised licence allowed the company to operate a waste transfer station (primarily for hazardous waste), to sterilise additional waste types, to sterilise obsolete mechanical equipment in a new static autoclave, to shred tyres and to provide a confidential data destruction service. A technical amendment (Amendment A) of W0054-02 was issued on 20th October 2005 to bring the licence into conformity with the provisions and requirements of Council Directive 96/61/EC concerning Integrated Pollution Prevention and Control.

2. Technical Amendment Request and Assessment
Eco-Safe Systems Ltd submitted a technical amendment request on 30th October 2009. This was accompanied by correspondence from Dublin City Council addressed to the licensee (dated 11th August 2009) detailing revised emission limits to sewer. Eco-Safe Systems Ltd was requested by the Agency to submit additional information relating to the technical amendment request. Additional information was received on 18th February 2010. A notification under Section 52 of the Waste Management Act 1996-2010 was issued to Dublin City Council (DCC) to formally request their consent to the emissions to sewer and a response consenting to the emission was received on 17th June 2010.

i) Source of Emissions to Sewer
The current source of emission to sewer is from the Rotoclave Sterilisation Process at the facility. Healthcare risk wastes are sterilised in two Rotoclaves (steam autoclaves), with the use of steam under pressure in a batch process. The process softens plastics, disintegrates paper and fibrous material, cleans bottles and metal objects and removes labels. It reduces the waste volume by c.60%. After 'cooking' the steam flow is stopped and the pressure is vented via a condenser. The condensate is discharged to sewer and is conveyed to Ringsend Waste Water Treatment Plant. Under W0054-02 the maximum discharge volume is $15m^3$/day and there are daily mean concentration (mg/l) and mass loading (kg/day) limits for BOD, COD, suspended solids and sulphates (as SO_4).

ii) Emission Limits to Sewer

The existing licence limits and those specified in the recent Section 52 consent from DCC are shown in Table 1 below. For both BOD and COD the consent specifies higher concentration limits. Eco-Safe Systems Ltd has acknowledged that they were in breach of their existing licence limits based on monitoring from 2007 to 2009. The quantity of material processed is said to have reduced over the last few years but the sources of material have remained the same. The higher concentration limits requested are 5,000mg/l BOD and 15,000mg/l COD. For sulphates and suspended solids no change in concentration limits is proposed.

The Section 52 consent specifies a maximum flow of $25m^3$/day compared to the existing $15m^3$/day. The reason provided is to cater for effluent from a proposed modification of the sterilisation process called '*Biosystems*'. This is described as re-usable medical sharps container washing facility. The sharps are emptied and the containers are placed on a processing line, passed through a two stage washing system, and dried for re-issue to customers. The sewer discharge from the Biosystems proposal is $9.4m^3$ per week, based on the tanks being emptied 3 times per week. The Biosystems proposal was approved by OEE on 20th May 2009 subject to all water washes being directed to sewer and that emissions comply with the limits in W0054-02.

It is considered that the proposed changes to the emission limits could be accommodated by way of a technical amendment to the licence, unless the increase is considered likely to have an impact on the municipal WWTP discharge (Ringsend WWTP) or on the receiving waters.

Table 1. Emission Limit Values for Emissions to Sewer

Parameter		Grab Sample (mg/l)	Daily Mean Concentration (mg/l)	Daily Mean Loading (kg/day)
BOD	- existing	1,000	800	12
	- proposed	5,000	4,000	100 (1,667p.e.)
COD	- existing	3,000	2,400	24
	- proposed	15,000	12,000	300
Sulphates	- existing	1,000	1,000	1
(as SO_4)	- proposed	as above	as above	25
Susp. Solids	- existing	500	400	0.4
	- proposed	as above	as above	10
pH		6 - 10		
Temperature		42°C		
Flow	- existing	$15m^3$/day		
	- proposed	$25m^3$/day		

iii) Monitoring of Emissions to Sewer

In *Schedule D.2* of the existing licence all parameters with an ELV, with the exception of temperature, are required to be monitored quarterly. Temperature monitoring is not required. In their consent DCC have specified an increase in monitoring frequency to 'Two Monthly' (fortnightly) for pH, BOD, COD, suspended solids and sulphates and temperature.

Total coliforms, faecal coliforms, faecal streptococci and culturable enteroviruses are required to be monitored quarterly in W0054-02. In the consent DCC has increased the monitoring frequency to 'Bi Monthly' (every two months) for total coliforms, faecal coliforms and faecal streptococci. DCC in their consent do not require monitoring for Culturable enteroviruses. The licensee clarified by letter to the Agency (received 08th February 2010) that analysis of culturable enteroviruses was carried out in the UK up to 2008, but that this was no longer available. It is considered that the proposed changes to monitoring can be accommodated by way of a technical amendment to the licence.

iv) Flow Monitoring

In W0054-02, monitoring of the volume emitted to sewer is 'Quarterly'. In the DCC consent no frequency of flow monitoring is specified. The licensee refers to flow monitoring having been upgraded at the facility. It is recommended that the licensee be required to install a continuous flow monitor within three months, unless an alternative method of monitoring is agreed by the Agency. It is considered that this can be accommodated by way of a technical amendment to the licence.

v) General Consent Conditions

It is considered that the requirements of the Section 52 consent can be accommodated by way of a technical amendment to the licence, unless the increase is likely to have an impact on the municipal WWTP discharge or receiving waters.

The consent specifies fifteen general conditions. The majority are already contained in the existing Condition 6.5 Emissions to Sewer. Other Conditions are already contained elsewhere in the licence (Condition 6.1 and Condition 8.1). It is recommended for clarity that in the technical amendment the entire Condition 6.5 Emissions to Sewer, replace the Condition 6.5 of the existing licence. Also Condition 6.5.2 on interpretation of emission limits to sewer is to be amended to allow for continuous monitoring of flow.

Condition 6.5.12. of the existing licence requires that no radioactive material be discharged to sewer. In their consent DCC include a Condition that *'Radioactive liquids discharged to sewer (as referenced by RPII Licence) shall be itemised and quantified by the licensee. A report shall be submitted to the Agency and to the Water Services Authority on an annual basis, detailing radioisotopes discharged to sewer.* Eco-Safe Systems Ltd has a licence from the Radiological Protection Institute of Ireland (Ref. No. 2002-1786-09) to carry on the practices of 'custody, disposal, handling, holding, storage, transportation' of the radioactive substances/nuclear devices/irradiating apparatus listed in Schedule 2 of their (RPII) licence. It is recommended that the above would replace the existing Condition 6.5.12.

DCC has included two new conditions not in the existing licence, these require that results of the microbiological screening programme are to be reported to the Water Services Authority annually and a log is to be maintained for boiler and cooling water treatment chemicals used on-site.

vi) Previous approvals by Dublin City Council

Eco-Safe Systems Ltd acknowledged that they had been in breach of the emission limit values (ELVs) in their licence based on monitoring results in 2005 and 2006. They requested a technical amendment on 09th January 2006. A letter from Dublin City Council dated 19th December 2005 consented to the higher emission limits. This letter was provided as part of the current request. The licensee also submitted a copy of a request to the Agency (OEE) dated 28th May 2007 requesting an increase in flow to $25m^3$/day. This was accompanied by correspondence from DCC stating that they had no objection to such an increase. The reason provided for the requested increase was that, from internal monitoring, exceedances of the flow limit ($15m^3$/day) were noted on occasion when additional batches were processed. The licence W0054-02 was not technically amended on either occasion.

vii) Other issues identified by Dublin City Council

The correspondence from DCC accompanying the Section 52 consent (received 17th June 2010) referred to a site visit to Eco-Safe Systems Ltd. It was noticed by DCC that vehicles were being washed in an open area that drains to surface water and also that cooling water effluent containing biocides was discharging to surface water drains. The letter stated that Eco-Safe Systems Ltd. *'has agreed to cease washing vehicles on-site and has agreed to connect the cooling water discharge to the foul drainage system'.* This information was not provided by the licensee. It was confirmed verbally by DCC that the site visit was carried out by Imelda Averill (DCC, Central Laboratory).

It is recommended that a new Condition 6.5.16 be included in the amendment requiring that 'No effluent, including vehicle washings and cooling water, shall be discharged to surface water drains.'

viii) Waste water discharge authorisation

The wastewater discharge to sewer is conveyed to Ringsend WWTP. Dublin City Council was issued a wastewater discharge authorisation by the Agency on 27th July 2010 for the agglomeration of the Greater Dublin Area (Reg. D0034-01). From the Inspectors Report (30th June 2010) Ringsend WWTP is receiving a loading of c1.79 million p.e., which is in excess of its design capacity of c. 1.64 million p.e. The licence requires the plant to be upgraded by December 2015. It is considered that the requested increase in loading by Eco-Safe Systems Ltd, $25m^3$/day (c. 1,667p.e) represents a very small proportion of the total loading to Ringsend WWTP. Therefore the impact on the agglomeration is expected to be insignificant.

3. Consultation with the Office of Environmental Enforcement (OEE)

I have consulted with the OEE inspector for the facility who has advised (in a Memo dated 10th December 2009) that the proposed changes cannot be accommodated under the existing licence.

4. Compliance

The most recent audit of the facility was carried out on 22/12/2009 (audit report dated 19/01/2010). One observation related to flow emissions to sewer. *'The flow rate to sewer for the date on which grab samples are collected for analysis is recorded and sent to the receiving laboratory by e-mail to allow calculation of mass emissions. A record of the flow rate should be maintained onsite with the monitoring results and be available for inspection.'*

5. Conclusions

Having assessed the request for a technical amendment and supporting documentation, it is considered that the changes proposed are not significant and can be accommodated by way of a technical amendment to the licence (Reg. No W0054-02).

Accordingly *Schedule C.1* and *Schedule D.2* of the licence shall be amended to replace the existing *Schedule C.1* and *Schedule D.2*. In *Schedule D.2* of the technical amendment the licensee shall install a continuous flow monitor within three months, unless an alternative monitoring method is agreed by the Agency. Condition 6.5 Emissions to Sewer of the licence shall also be amended to incorporate the Section 52 consent from Dublin City Council and the requirement for continuous flow monitoring.

In the correspondence from DCC dated 11th August 2009 they state that '*As the flow rate has now been increased I would request that you send monthly discharged flow readings to this office.*' A new Condition 8.9 is proposed requiring records of the volumes discharged to sewer to be submitted to the Water Services Authority on a monthly basis unless otherwise agreed by the Agency. A new Condition 8.10 requires the licensee to maintain a water meter on all water supplies serving the facility. Records of water usage shall be maintained on site and a summary records report shall be submitted annually as part of the AER.

Recommendation

I recommend that the Technical Amendment (Amendment B) be issued under 42B(1) of the Waste Management Acts 1996 to 2010, subject to the conditions and for the reasons as drafted.

Marian Doyle

Marian Doyle
Inspector
Environmental Licensing Programme