

 <p><b>epa</b> Environmental Protection Agency <i>An Ghníomhaireacht um Chaomhnú Comhshaoil</i></p>	<b>OFFICE OF ENVIRONMENTAL SUSTAINABILITY</b>
<b>ENVIRONMENTAL LICENSING PROGRAMME</b>	
<b>TO:</b>	Dr Eimear Cotter, Director
<b>FROM:</b>	Michelle Reddy, Inspector, Environmental Licensing Programme
<b>DATE:</b>	10 January 2019
<b>RE:</b>	Technical Amendment to Industrial Emissions Licence Register Number: W0287-01, held by Ormonde Organics Limited, Ballinalacken, Attanagh, Co. Kilkenny.

The Agency received a request on 7<sup>th</sup> February 2018 from Ormonde Organics Limited, Licence Reg. No. W0287-01 to technically amend their Licence. The request relates to the proposal to change the reference condition for oxygen content to 5%, from the existing 3%, when monitoring emissions to air from the combustion of biogas in the onsite combined heat and power plant (CHP). As per Condition 4.2.2. of Licence W0287-01, the standard conditions for monitoring air emissions from combustion sources are: Temperature 273K, Pressure 101.3kPa, dry gas; 3% oxygen for liquid and gas fuels, 6% oxygen for solid fuels”.

## 1. Background

Ormonde Organics Limited was granted a licence; Reg. No. W0278-01, on 13<sup>th</sup> October 2016 for an installation located at Killowen, Portlaw, County Waterford. The installation is licenced under 11.4 of the First Schedule to the EPA Act 1992 as amended.

Ormonde Organics Limited is authorised to operate a composting and anaerobic digestion installation at Killowen, Portlaw, County Waterford under IE (Industrial Emission) Licence register number W0287-01 and is permitted to accept 40,000 tonnes of non-hazardous biodegradable waste per annum.

## 2. Technical Amendment request

On the 7<sup>th</sup> February 2018, the Agency received a request for a Technical Amendment of IE Licence Reg. No. W0287-01, to change the wording in Condition 4.2.2 in order to allow for the oxygen reference condition for emissions to atmosphere to be increased from 3% to 5%.

Condition 4.2.2 states “From combustion sources: Temperature 273K, Pressure 101.3 kPa, dry gas; 3% oxygen for liquid and gas fuels, 6% oxygen for solid fuels”.

The licensee states the industry norm is 5% in Northern Ireland and UK, and cites a number of EPA licensed sites in the Republic of Ireland in this regard also. (W0077-04 Cavan County Council, Corranure Landfill, W0165-02 Ballynagran Landfill Limited, W0004-04 Arthurstown Landfill, W0156-01 KTK Sand & Gravel Limited, W0201-03 Bord na Mona Plc, Drehid Waste Management Facility, W0146-02 Knockharley Landfill Limited and P0738-03 Vermilion Exploration and Production Ireland Limited.)

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

I have consulted with the OEE Team, in relation to this technical amendment request. The OEE confirmed that the proposed amendment cannot be accommodated under the existing licence. OEE has confirmed that there are no legal proceedings in train in respect of this licence.

### **4. Assessment**

At the installation organic waste and biomass is offloaded and fed via the feeding system to anaerobic digestion (AD) tanks. The contents of the tanks are continuously agitated and maintained at an optimum temperature for the process, which takes approximately 50 days. The outputs from the process are biogas and digestate. The biogas is scrubbed to reduce the levels of ammonia and hydrogen sulphide before it is used as a fuel in two gas engines (AEP-1 and AEP-2) in the (CHP) plant. The heat and electricity generated in the CHP is used on-site or is exported to the national grid.

EPA licences require emissions to atmosphere from combustion sources to be corrected to a standard reference condition for oxygen. In the existing licence W0287-01, reference oxygen conditions are defined according to the type of fuel utilised in the combustion system, i.e. Gas and liquid fuels - 3% reference oxygen; Solid fuels - 6% reference oxygen. Therefore the 3% reference oxygen condition applies to the biogas fuel utilised in the CHP plant by Ormonde Organics Limited.

It is noted that the licensee has breached the licenced emission limit value (ELV) of 1000 mg/m<sup>3</sup> for Total VOCs (incl. CH<sub>4</sub>) at the CHP gas engine air emission point reference No. AEP-2 during monitoring in 2019, including 18/06/2019 and 20/03/2019. The ELV for TVOC at AEP-2 was also breached on several occasions during monitoring in 2018 on the following dates, 20/11/2018 13/09/2018, 27/04/2018 and 12/04/2018. It is also noted from the air monitoring reports that the licensee utilised a 5% reference oxygen condition standard when reporting results. This demonstrates that compliance with the relevant air emission limit values will not be achieved by moving to a 5% reference oxygen condition standard. Furthermore, the Office of Environmental Enforcement has opened a compliance investigation into the consistent breaching of the Total VOC (incl. CH<sub>4</sub>) ELV at CHP emission point No. AEP-2 and has requested the licensee to submit proposals for achieving compliance which consider upgrading or replacing the existing CHP gas engine AEP-2, reducing the use of the engine until compliance can be demonstrated, assessing the suitability of the recently installed carbon abatement system for removing Total VOCs or alternative proposals to achieve compliance with the ELV.

All of the EPA licences referenced in the technical amendment request bar one are for the treatment and the abatement of landfill gas. The standard reference oxygen conditions for each of these licences has been defined according to the type of fuel and combustion system. a ) In the case of landfill gas flare: dry gas at 3% oxygen; and b) In the case of landfill gas combustion plant: dry gas; 5% oxygen.

The final EPA licence referenced uses gas compressor turbines for the combustion of fuels in an installation with a total rated thermal input of 50MW or more. As above the standard reference oxygen conditions have been defined according to type of fuel and combustion system. In the case of combustion gases from a) gas turbines: dry gas 15% oxygen; and b) spark ignition engines (power generators) : dry gas 5% oxygen.

It is noted that the licences referenced by the licensee are not comparable with the activity that takes place at their installation.

## **5. Recommendation**

I recommend that the requested amendment to change the oxygen reference condition to 5% in Condition 4.2.2 of existing licence W0287-01 be refused.

Signed,



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Michelle Reddy  
Inspector  
Environmental Licensing Programme