Environmental Protection Agency
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Mr Gareth Kelly
Director
Enva Ireland Limited
Clonminam Industrial Estate
Portlaoise
Co. Laois

26 January 2016 Licence register number W0184-01

Notice under sections 87(1)(b) and 90(7) of the Environmental Protection Agency Act 1992 as amended

Dear Mr Kelly

Section 87(1)(b)

I am to advise in accordance with section 87(1)(b) of the Environmental Protection Agency Act 1992 as amended that the Agency intends initiating a review of your existing Industrial Emissions licence, register number W0184-01, for an installation located at Clonminam Industrial Estate, Portlaoise.

The review is being initiated in accordance with the provisions of sections 90(4) and 98A of the EPA Act 1992 as amended for the following reasons:

- emissions from the activity to which the licence relates are, or are likely to be, of such significance that the existing emission limit values, or equivalent parameters or technical measures specified in the licence need to be reviewed or new such values, parameters or measures, as the case may be, need to be specified in the licence [s90(4)(a)(i)];
- evidence, which was not available when the licence was granted, has become available relating to the contents or nature of emissions from the installation or the effects of emissions on the environment [s90(4)(b)(iii)]; and
- the Agency has received notice and has become aware of an alteration, reconstruction or extension, in the form of a proposal to install a regenerative thermal oxidiser for the purpose of treating existing emissions to air, which would increase or change emissions from the Industrial Emissions activity or cause significant new emissions therefrom or otherwise constitute substantial change [s98A(3)].

You should note that it will be the entire licence and all licensed activities that will be subject to the review and your submissions to the Agency should be prepared on this basis.

Section 90(7)

In accordance with section 90(7) of the EPA Act 1992 as amended, you are required for the purposes of the licence review to submit the information set out in the numbered items below. You are required to submit this information within 16 weeks of the date of this notice, i.e. by 17 May 2016.

Please ensure that individual items in your response, including associated documents and attachments, are numbered and clearly related to the items below.

1. Provide a non-technical summary of the activity and associated emissions, existing and proposed. This should present a summary of the information required to address the following items and any other relevant matters.
2. Provide a set of up to date drawings and maps that illustrate clearly:
    a) The installation boundary;
    b) The licensee's site ownership boundary in or around the location of the installation, if different to the installation boundary;
    c) The location of all buildings, tanks and major pieces of equipment;
    d) The location of all unit processes employed at the installation;
    e) The location of all emission points and monitoring points specified in the licence or otherwise employed by the licensee;
    f) The location of all oil storage and treatment tanks including waste oil, processed fuel oil, blended oil and virgin oil storage and treatment tanks, with a legend or other notation indicating:
        - the current use and purpose of each tank;
        - whether it is heated; and
        - its typical operating temperature.
3. By reference to the licensed activities at the installation, as listed in the Section 76A(11) amendment dated 30/12/2013, provide a brief description of the class 11 activities carried out under each of the listed activities. State whether any of the listed activities are no longer relevant.
4. By reference to your existing Industrial Emissions licence, what licensed activities, specifically mentioned in the licence, have not commenced or have ceased and indicate whether it is your desire that they remain as licensed activities in the licence? Provide justification for retaining in the licence any activities that have not commenced or have ceased.
5. In relation to new activities, not currently authorised, if any, that you wish to be authorised to commence, state what additional List of Waste (LoW) codes are sought and their associated treatment processes. Please include information on these new activities and LoW codes, to the extent that they are relevant there, in your responses to the items 6, 7 and 8 below.
6. Provide a list of all unit processes employed for waste treatment at the installation. Describe all unit processes in terms of the waste treated, the objective of the treatment, emissions from the treatment and the material outputs from the treatment. The information should be provided in the following format or an equivalent alternative format:

Unit process	Waste(s) treated (by list of waste (LoW) code)	Objective of treatment	Emissions from treatment	Material outputs from treatment	Fate of material outputs

7. In relation to the following waste treatment activities in particular:
   a) treatment of waste oils, and
   b) treatment of contaminated soil,

   and as elaboration on the summary information to be provided under item 6 above, please provide a detailed description of the processes undertaken. Provide schematic and flow diagrams, as appropriate, to illustrate the treatment steps.

8. Provide a detailed analysis of the waste types accepted at the installation in the last 3 years and the treatment process to which they were subjected at the installation. The information should be provided in the following aggregated format, or an equivalently aggregated alternative format:

Year	List of waste (LoW) code	Quantity accepted (identify units)	Treatment process, including transfer without treatment	Treatment output, including LoW code if relevant
2016 (to date)(specify the date)				
2015				
2014				
2013				

9. Complete and provide the following tables which can be found in the Industrial Emissions Activities Licence Application Form available on the EPA website at http://www.epa.ie/pubs/forms/lic/industrial%20emissions/industrialemissionslicenceapplicationform2015.html#.Vp-x3aNFC70:

   - Tables E.1 (i), (ii), (iii), (iv) and (v)
   - Tables E.2 (i) and (ii)
   - Tables E.3 (i) and (ii)
   - Tables E.4 (i) and (ii)
   - Table E.5 (i)
   - Table F.1 (i)
   - Tables F.2 (i) and (ii)

- Tables G.1 (i) and (ii)

10. Provide a summary of environmental emissions made from the installation in the last 3 years. The information should be presented in the following format, or an equivalently aggregated alternative format. The presentation of emissions monitoring and other data should enable a comparison of the operation of the installation with the best available techniques described in the applicable BAT conclusions and with the emission levels associated with the best available techniques.

Emission reference and/or location	**Nature and constituents of emission (from emissions monitoring)**	**BAT or BAT conclusion requirement including BAT-associated emission level**	**Statement of conformity with BAT, BAT conclusion or BAT-associated emission level**

11. For emissions outside the BAT guidance limit or BAT Conclusions levels, provide a full evaluation of the existing abatement/treatment system. Provide a planned programme of improvement towards meeting upgraded standards. This should highlight specific goals and a time scale, together with options for modification, upgrading or replacement as required to bring the emissions within the limits as set out in BAT. In particular describe how it was decided that a regenerative thermal oxidiser was the appropriate technique to employ to abate emissions from the oil drying tanks.

12. In relation to the BREFs published for:

    - Waste Treatments Industries (2006),
    - Emissions from storage (2006), and
    - Energy efficiency (2009),

    download the Agency's tabulations of BAT conclusions in documents at these links (respectively):

    - http://www.epa.ie/pubs/forms/lic/industrial%20emissions/batconwastetreatmentbref.html#.Vp99l6NFC70;
    - http://www.epa.ie/pubs/forms/lic/industrial%20emissions/batconemissionstostoragebref.html#.Vp9-i6NFC70; and
    - http://www.epa.ie/pubs/forms/lic/industrial%20emissions/batc-energyandefficiency.html#.Vp9-o6NFC70.

    Complete the tables contained in these three documents and provide the completed tables to the Agency, along with any associated documents, as part of your response to this notice.

13. State whether there are other BREFs, not mentioned in item 12 above, that are relevant at the installation. In each case, address the relevant BAT conclusions contained in the BREF using one or other of the tables referred to in item 12 as a format guide.

14. Identify all sources or potential sources of volatile organic compounds (VOC), dust, aerosol and odour emissions from the installation. Describe and quantify to the extent possible the emissions from each source or potential source. Describe what is in place or proposed to mitigate the risk of emissions and prevent emissions to the extent possible taking into consideration BAT.

The following is a non-exhaustive list of the sources to be considered and other sources should be identified as necessary:

- oil intake area;
- oil reception tanks;
- oil storage tanks;
- oil heating tanks;
- oil drying tanks (please note that extensive information on emissions from these tanks is sought below that need not be replicated in the response to this item);
- oil filtration plant;
- oil transfer equipment (pumps, pipework);
- tank, tanker and sump cleaning and desludging operations;
- crushing of waste oil filters;
- decanting of waste paints;
- waste water treatment/dosing plant;
- oil water separators (on sewer discharge);
- solvent reception, transfer and storage tanks and equipment;
- soil storage and treatment areas.

15. In relation to the proposal to install a regenerative thermal oxidiser, provide the following information:

a) Describe in detail the nature of the gas stream to be oxidised. The following details are pertinent:

- constituents and maximum concentration of each constituent in the gas stream, including halogenated constituents;
- water content of the gas stream;
- flowrate of the gas stream;
- calorific value;
- potential for dioxin formation.

b) Describe in detail the operation of the regenerative thermal oxidiser. In particular, state how the operating temperature and residence time will be maintained.

c) Provide evidence that the proposed regenerative thermal oxidiser is designed and sized to have the capacity to process the worst case loading of hydrocarbons and other pollutants in the waste gas. State how many oil tanks will be connected to the regenerative thermal oxidiser and/or operated at any one time and state the relevant design parameters in this regard.

d) State how particulates, should they arise in the gas stream, will affect the operation of the regenerative thermal oxidiser, or outline what measures are to be taken to avoid the passage of particulates to the oxidiser.

e) Describe in detail the nature of the oxidised gas stream. The following details are pertinent:

- constituents and concentration, including oxygen content, dioxins and furans;
- moisture content;
- temperature;
- flowrate.

f) Propose for the Agency's consideration, based on the manufacturer's recommendation or from other sources:

- the emission parameters that should be regulated in the licence;
- appropriate emission limit values;
- minimum release height;
- the facilities provided for sampling of the emitted gas which should comply with the requirements of *Guidance Note on Site Safety Requirements for Air Emissions Monitoring* (AG1), EPA 2010; and
- a programme or frequency for monitoring regulated parameters, taking into account the need, if it exists, for continuous monitoring of emissions for VOC and flowrate.

16. In order to generate the data sought under item 15a above, in relation to emissions from waste oil drying tanks, and in the context of a proposal to install a regenerative thermal oxidiser, a programme of process and emissions monitoring is required. The purpose of this monitoring programme is to demonstrate that the proposed regenerative thermal oxidiser is designed and sized to have the capacity to treat the hydrocarbons and other pollutants in the waste gas and so that the nature of the emissions from the oxidiser can be properly described and regulated.

The following monitoring programme is considered by the Agency to be a minimum requirement. Modification of this programme based on technical constraints or efficiencies may be agreed by the Agency upon receipt of a written submission. Additions to the programme may be carried out without restriction.

a) There shall be at least 5 sampling events within the monitoring programme as a whole.

b) More than one sampling event can be run in parallel in different drying tanks.

c) Each sampling event is to encompass the processing of an entire batch of waste oil in a drying tank. It is understood that each batch might spend up to 4 days or more in a drying tank in a filling, heating, air flow (sparging) and discharge cycle. Each sampling event shall be representative of typical operating conditions and no process changes shall be made for the purpose of the sampling events. The waste oils treated during the sampling events shall represent typical oils, not previously treated, including those with known potential for VOC, odour and other emissions to air. Each sampling event shall, unless otherwise agreed by the Agency, encompass a treatment cycle that takes waste oil to a quality standard in the existing licence.

d) Starting with an empty tank, sampling shall begin when the tank is no more than 25% full.

e) For as long as no air is being pumped into the drying tank, a representative sample of gas in the headspace of the tank shall be taken every 4 hours during the normal working day at the installation (condition 1.5, 7am to 11pm). Gas samples shall be taken no more than 1 metre above the liquid level in the tank. Each of these samples shall be analysed for total volatile organic compounds (VOC) using FID.

f) No earlier than 15 minutes before air is pumped into the tank, a representative sample of oil in the tank shall be taken from the tank and analysed for:

- the parameters listed in Schedules G.1 and G.2 of licence register number W0184-01. These schedules were introduced into the licence by technical amendment B issued on 10/2/2011;
- polyaromatic hydrocarbons (PAHs);
- water content.

A further representative sample of oil shall be taken from the tank no later than 15 minutes after air flow is permanently stopped for that batch of oil and analysed for the same list of parameters.

g) No later than 15 minutes following commencement of air flow into the tank, two hours after commencement of air flow into the tank and every 4 hours thereafter until such time as air flow is permanently stopped for that batch of oil, a representative sample of gas in the headspace of the tank shall be taken and analysed for:

- total VOC;
- speciated hydrocarbons;
- benzene;
- halogenated organic compounds;
- PAHs; and
- heavy metals, including copper.

For the first hour following commencement of air flow into the tank, total VOC shall be monitored continuously using a flame ionisation detector (FID).

h) The following is to be recorded continuously or at the time of each sample:

- date and time of sample;
- liquid level in the tank;
- representative temperature of the contents of the drying tank (not the heating coil);
- heating coil on/off indication; and
- air sparging flow rate (expressed as both on/off and volumetric rate, for example m^3/hour).

All total VOC readings shall be taken using FID.

All gas monitoring shall be completed by an ISO17025 accredited laboratory.

The sampling period for every gas sample shall be 30 minutes unless otherwise agreed by the Agency.

The existing sampling ports in the stacks on the top of the tanks should not be used for gas sampling due to the risk of dilution of the sample with ambient air, especially if windy, and given the very low flow rate of gases out of the tank and the fact that the ports might be more than one metre above the liquid level in the tanks.

You are required to notify the Agency at least one week in advance of the commencement of each sampling event and provide information on the projected schedule for and duration of that event.

The results of monitoring shall be submitted to the EPA after each sampling event. Your overall report on the sampling programme shall be comprehensive, detailed and provided as part of your response to this notice.

17. Provide an air dispersion model to describe the impact of emissions from the proposed regenerative thermal oxidiser on air quality in the vicinity of the installation for the following parameters:

    - NOx;
    - CO;
    - VOC;
    - NMVOC (non-methane VOC); and
    - any other relevant constituent itemised in accordance with item 16 above.

    The model and your air dispersion model report should be prepared in accordance with *Air Dispersion Modelling from Industrial Installations Guidance Note, AG4* (EPA, 2010). Justify the quantification of all values input to the model.

    The sensitive receptors chosen for the model shall include the areas where complainants are located.

18. Soil treatment

    In order to prevent fugitive emissions of dust, VOC and odour from the soil treatment facility, provide reasons, or propose an alternative approach, why the Agency should not require in a revised licence the full enclosure of the soil treatment facility, the application of negative pressure to the building and the treatment of extracted air to remove dust, VOC and odorous emissions, for example by means of a carbon filter.

19. Processed fuel oil

    a) In relation to the processed fuel oil produced at the installation, there are two quality standards included in your existing Industrial Emissions licence. Provide information on:

        - the extent to which each of these quality standards are used (commentary);
        - the approximate quantity of processed fuel oil produced to each quality standard; and
        - the destination (by activity) of each grade of processed fuel oil and the approximate quantity of processed fuel oil dispatched to each activity type.

    Do not submit any information that is deemed confidential for commercial reasons and cannot be published to the EPA's website.

b) Provide a report on the quality of the last 50 samples each (i.e. 100 samples in total) of:

- reprocessed oil with use restricted according to condition 5.3.5 of the existing licence; and
- residual oil equivalent with use restricted according to condition 5.3.6 of the existing licence.

The report should provide a table showing the complete analysis of each of the 100 batches tested. Highlight any exceedences of the quality standard and provide the reason or reasons identified for those individual exceedences. State what actions your procedures require where there is an exceedence of the quality standard.

c) State what virgin fuel oils are displaced by your processed fuel oil.

d) Describe any blending of processed fuel oil with virgin fuel oil.

e) Demonstrate quantitatively that the quality standards in the existing licence remain appropriate to demonstrate that the processed fuel oil is not classified as waste when it leaves the installation. Alternatively, propose new quality standards that enable this quantitative demonstration.

As part of this quantitative demonstration, carry out and report on a detailed comparative analysis, or provide a relevant comparative analysis prepared by others, that shows processed fuel oil contains:

- no more contaminants (of environmental concern), and
- will have no greater environmental impact,

than the virgin fuel oils displaced by processed fuel oil.

The effects of dilution, for example through mixing or blending with virgin fuel oils, should not be considered in your quantitative demonstration.

Alternatively, quantify the emission of combustion gases produced upon combustion of processed fuel oil and demonstrate quantitatively, through air dispersion modelling or other means, that the combustion gases do not and will not have an adverse impact on air quality in the vicinity of a combustion plant. The quantification of emissions of combustion gases should be done only as part of a comprehensive and representative sampling and analysis programme carried out in real-world conditions at a number of combustion plants of different types. It would be appropriate to seek the Agency's opinion on the scope of any proposed sampling and analysis programme.

20. Provide a baseline report in accordance with section 86B of the EPA Act 1992 as amended. Follow the guidance provided in the following document: *European Commission Guidance concerning baseline reports under Article 22(2) of Directive 2010/75/EU on industrial emissions* (2014/C 136/03) which is available on the EPA website.

21. Undertake a screening for appropriate assessment and state whether the activity the subject of the licence (that is, the entire licensed activity including any new processes sought as part of this licence review), individually or in combination with other plans or projects, is likely to have a significant effect on a European site or European sites, in view of best scientific knowledge and the conservation objectives of the site or sites. Where it cannot be excluded on the basis of objective scientific information, following screening for appropriate assessment, that an activity, either individually or in combination with other plans or projects, will have a significant effect on a European site or sites, provide a Natura Impact Statement, as defined in Regulation 2(1) of the European Communities (Birds and Natural Habitats) Regulations (S.I. 477 of 2011). Where, based on screening, it is considered that an appropriate assessment is not required, provide a reasoned response.

All information should be submitted as one signed original, one hard copy and 2 copies on CD-ROM in electronic searchable PDF format.

For the purposes of the licence review, the reference number assigned in the register of licences is W0184-02.

Newspaper notices will be published by the Agency in the Irish Independent on 28 January 2016 and the Leinster Leader and Laois Nationalist on 2 February 2016 in accordance with Regulation 12(1) of the Environmental Protection Agency (Industrial Emissions)(Licensing) Regulations 2013, stating that the EPA is initiating a review of your licence.

It should be noted that where you fail or refuse to comply with the above requirements within the specified timeframe, the Agency may proceed with its proposed determination of the review.

Submission

In accordance with Regulation 12(3) of the Environmental Protection Agency (Industrial Emissions)(Licensing) Regulations 2013, you are entitled but not obliged to make a submission relating to the review within four weeks of the date of this notice, i.e. by 23 February 2016.

Yours sincerely

Brian Meaney
Environmental Licensing Programme
Office of Environmental Sustainability