

Objection No. 3



Ms Noleen Keavey,
Office of Environmental Sustainability,
EPA Headquarters,
P.O. Box 3000
Johnstown Castle Estate,
County Wexford.

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Time	
11 JAN 2017	
Signature	<i>NH</i>
Environmental Protection Agency HQ, P.O. Box 3000, Johnstown Castle Estate, Co. Wexford.	

Date: 11th of January 2017

Licence Ref. No: W0184-02

Objection to the Proposed Determination

Dear Ms Keavey,

Enva Ireland Ltd. being the applicant/licensee of the proposed Industrial Emissions licence (Reference W0184-02) would like to object to specific conditions contained within the Proposed Determination as detailed in the attachment.

As required please find enclosed the relevant fee of €253.

While we have sought to be as comprehensive as possible in our submission, if you have any queries arising from our submission please do not hesitate to contact me so that we may have the opportunity to clarify the matter for the Agency before any final decision is made.

Yours Sincerely

Gareth Kelly
Director

Portlaoise Clonminam Industrial Estate, Portlaoise, Co. Laois, R32 XD95, Ireland (Registered address)

Cork Raffeen Industrial Estate, Ringaskiddy Road, Monkstown, Co. Cork, T12 TW44, Ireland

Shannon Smithstown Industrial Estate, Shannon, Co. Clare, V14 FT53, Ireland

Dublin John F Kennedy Road, John F Kennedy Industrial Estate, Dublin 12, D12 CF34, Ireland

Northern Ireland | Cloonagh Road, Downpatrick, Co. Down, BT30 6LJ, Northern Ireland

Enva Ireland Limited t/a Enva
Registered No: 317186. VAT No: IE 6337186A.
Directors: S. Dick (Managing) T. Walsh, J. Barcroft, T. Davy, A. Fitzpatrick, G. Kelly.





Condition 1.8.2

Current Wording in the Proposed Determination

Waste shall be accepted at the installation only between the hours of 07:30 and 21:00 Monday to Sunday inclusive.

Licensee Comment

The facility supports the shipping sector and is also involved in responding to emergency spills/incidents, both of which can require the arrival of waste at the facility at anytime of the day or night. While offloading may in some cases be deferred to the following morning this can create significant operational difficulties in particular where oil cools in the tanker increasing its viscosity and thereby making pumping more difficult. This can then require heating the oil in the tanker to assist offloading which is operationally difficult to achieve. It is requested that to best facilitate such scenarios the licence allows for the acceptance of waste during the same hours as the hours of operation (7am to 11pm).

Proposed clause wording:

Waste shall be accepted at the installation only between the hours of 07:00 and 23:00 Monday to Sunday inclusive.

Condition 3.7.2

Current Wording in the Proposed Determination

All tank and drum storage areas shall as a minimum, be bunded, either locally or remotely, to a volume not less than the greater of the following:

- i) 110% of the capacity of the largest tank or drum within the bunded area; or*
- ii) 25% of the total volume of substance that could be stored within the bunded area*

Licensee Comment

The condition appears to require new drums or empty drums to be stored in bunded areas which would not be necessary. It also appears to require tanks such as rainwater or mains water tanks to be bunded which would not be necessary.

Proposed clause wording:

Unless otherwise agreed with the Agency all tank and drum storage areas shall as a minimum, be bunded, either locally or remotely, to a volume not less than the greater of the following:

- i) 110% of the capacity of the largest tank or drum within the bunded area; or*
- ii) 25% of the total volume of substance that could be stored within the bunded area*

Condition 3.19.3

Current Wording in the Proposed Determination

The wheel cleaners shall be used by all vehicles leaving the facility as required to ensure that storm water or waste is carried off-site. All water from the wheel cleaning area shall be collected for safe disposal.

Licensee Comment

There is a typographical error whereby the word 'no' is missing from the sentence. In addition it is requested that for clarity the word 'contaminated' be inserted before storm water and the sentence be qualified to note that it only refers to waste being carried off-site by the wheels of vehicles and potentially deposited on the roadway (i.e. not transported off site in the proper intended manner).

Proposed clause wording:

*The wheel cleaners shall be used by all vehicles leaving the facility as required to ensure that **no contaminated** storm water or waste is carried off-site **by the wheels of vehicles**. All water from the wheel cleaning area shall be collected for safe disposal.*

Condition 3.19.4

Current Wording in the Proposed Determination

The wheel-wash shall be inspected on a daily basis and drained as required. Silt stones and other accumulated material shall be removed as required from the wheel-wash and disposed of appropriately.

Licensee Comment

The clause is unnecessarily prescriptive. Operation of the existing on-site wheel-wash is very rarely if ever necessary as vehicles are managed to avoid/minimise contact with debris/soil or contaminated storm water. A daily inspection is therefore considered excessive. Condition 3.19.2 separately requires the wheel-wash to be provided and maintained, while condition 3.19.4 indirectly requires the equipment to be functioning.

Proposed clause wording:

Delete clause or reword to read:

The wheel-wash shall be inspected and drained as required to ensure its proper functioning.

Condition 3.22.3

Current Wording in the Proposed Determination

All waste oil treatment and storage tanks and vessels shall be closed to ensure no fugitive emissions occur.

Licensee Comment

The condition appears very wide ranging and could be interpreted to prohibit any relatively insignificant fugitive emission including for example from flanges, valves, instrumentation etc. which is considered virtually impossible.

Proposed clause wording:

*All waste oil treatment and storage tanks and vessels shall be closed to ensure no **significant** fugitive emissions occur.*

Condition 3.22.5

Current Wording in the Proposed Determination

The waste soil treatment building shall be fully enclosed on all sides and doors installed.

Licensee Comment

The required infrastructure will have to be constructed and therefore a timeframe needs to be provided to allow for this development.

Proposed clause wording:

***Within 8 months of the date of grant of this licence** the waste soil treatment building shall be fully enclosed on all sides and doors installed.*

Condition 6.10

Current Wording in the Proposed Determination

The integrity and water tightness of all tanks, building structures, containers and underground pipes and their resistance to penetration by water or other materials carried or stored therein shall be tested and demonstrated by the licensee within 12 months of the date of grant of this licence. This testing shall be carried out by the licensee at least once every three years thereafter and reported to the Agency on each occasion. This testing shall be carried out in accordance with any guidance published by the Agency. A written record of all integrity tests and any maintenance or remedial work arising from them shall be maintained by the licensee.

Licensee Comment

The clause appears to exclude the provision and validity of any test reports carried out by the licensee (under the current licence) before the date of the new/revised licence being granted and thereby cause unnecessary duplication and additional impact on the Licensee. For example a tank

tested 12 months before the date of the new/revised licence would apparently have to be retested which is considered excessive and unnecessary. The frequency of tank testing is also considered excessive when compared to the oil industry norm, the significant number of tanks in operation at the facility and the impact on the process in terms of down time. The Licensee would suggest that a frequency of up to 5 years be accommodated in the licence for tanks noting that the oil industry norm would more typically be every 10 years (or more) for tanks. Separately to the testing regime, the Licensee would in any case respond to any apparent loss of integrity (leaks, etc) and effect a repair to maintain the required integrity.

Proposed clause wording:

The integrity and water tightness of all tanks, building structures, containers and underground pipes and their resistance to penetration by water or other materials carried or stored therein shall be tested and demonstrated by the licensee within 12 months of the date of grant of this licence. This testing shall be carried out by the licensee at least once every five years thereafter and reported to the Agency on each occasion. This testing shall be carried out in accordance with any guidance published by the Agency. A written record of all integrity tests and any maintenance or remedial work arising from them shall be maintained by the licensee.

Condition 6.18.6

Current Wording in the Proposed Determination

Air-sparging of waste oil shall only take place if the temperature of the waste oil is less than 30°C and the tank is connected to the vapour balancing ring main.

Licensee Comment

Section 5.3 of the Inspector's report notes that the EPA proposed monitoring regime to fully characterise the emissions from the 100°C air sparging carried out by Enva up to January 2016 was not carried out by Enva for a number of reasons. Enva sought (as part of the licence review) the option to carry out this monitoring once connected to the RTO and subject to a series of batch trials to characterise the emissions (and fulfil the EPA monitoring requirement). However this has not been provided for in the Proposed Determination.

As part of the submission made to the Agency in September 2016, Enva proposed a comprehensive alternative to the Agency's monitoring regime sought in the Section 90 request in January 2016. Enva proposed that the Agency's monitoring regime be carried out but under a far more controlled scenario whereby the emissions were captured and treated by the RTO (once installed) as opposed to being vented to atmosphere (as was the case up to January 2016). One of the primary reasons the requested monitoring was not carried out prior to the introduction of the RTO was due to the potential for further nuisance odours over a significant time period and under the threat of further enforcement action were there to be further nuisance odours (which the Directors had personally been put on notice of). The alternative monitoring proposal by Enva would allow for the proper assessment of the potential emissions from the sparging process and will provide the Agency with the evidence base required to make a determination on the continued use of the high temperature air sparging process. The Licensee is proposing to make a



very significant investment in an RTO for the oil recovery process and which would be considered the ultimate abatement technique for the waste oil processing industry.

Furthermore, Enva proposed that these tests be carried out on a series of batch trials to be agreed with the Agency. Only on foot of the results of these batch trials, the full characterisation of the emissions and the demonstrated abatement efficiency of the RTO to treat these emissions, would the Agency consider whether to authorise the use of the air sparging at higher temperatures than 30°C in the future. Enva are not seeking immediate consent for such high temperature sparging on grant of the licence but are seeking a means whereby Enva can, in properly controlled circumstances, gather monitoring data to provide to the Agency and therefore allow the EPA to make a determination on the potential air sparging of hot oil after the RTO is installed.

Enva respectfully contends that it is unreasonable and unjustifiable that the Agency would totally prohibit a means to gather data for the Agency's further assessment. The Licensee is making a considerable investment in the installation of an RTO which is compliant with BAT and is considered the ultimate abatement technique for the sector. Enva request that a wording is included in the licence to facilitate a test programme to allow a series of high temperature (ca. 100°C) sparging batch trials to gather the necessary emissions related data and inform the Agency's decision making on this potential process step. Such an approach allows the Agency to retain control of the decision making on this potential process step but from an informed perspective. It is considered highly likely that the emissions from this potential process step, when abated through the proposed RTO, would be demonstrated to have no significant impact on air quality in the local area. The test programme would in any case have to assess this appropriately.

Proposed clause wording:

*Air-sparging of waste oil shall only take place if the temperature of the waste oil is less than 30°C and the tank is connected to the vapour-balancing ring main. **Air-sparging of waste oil at a temperature of greater than 30°C (with the tank connected to the vapour-balancing ring main and RTO) may only recommence on authorisation from the Agency. The decision of the Agency to sanction the recommencement of air sparging oil at a temperature greater than 30°C will be subject to the outcome of a series of trials and associated environmental monitoring. The number, timing and duration of trials and the extent of the monitoring regime to be undertaken must be agreed with the Agency in advance of any such trials.***

Condition 6.19.3

Current Wording in the Proposed Determination

Gases shall only be introduced to the regenerative thermal oxidiser when the appropriate operating conditions have been achieved. In particular:

- (i) The burners in the combustion chamber are on and operating satisfactorily;*
- (ii) The temperature required under Condition 6.19.1 has been reached and maintained in the combustion chamber.*

Licensee Comment

Natural gas is used as a fuel to heat the chamber and maintain the temperature at the optimum temperature. In this regard, natural gas is introduced to the regenerative thermal oxidiser at ambient temperatures to bring the chamber to the optimum temperature and the process/waste gases will only be introduced at this point. For the avoidance of misinterpretation of the condition it is proposed the condition be reworded in the Final Determination.

Proposed clause wording:

Process gases for abatement shall only be introduced to the regenerative thermal oxidiser when the appropriate operating conditions have been achieved. In particular:

- (i) *The burners in the combustion chamber are on and operating satisfactorily;*
- (ii) *The temperature required under Condition 6.19.1 has been reached and maintained in the combustion chamber.*

Condition 6.19.7

Current Wording in the Proposed Determination

Only gases from process or abatement systems not involving the use or treatment of chlorinated solvents or other wastes that contain halogenated organic compounds shall be directed to the regenerative thermal oxidiser.

Licensee Comment

No chlorinated solvents are employed at the Enva site or are used in the waste treatment process at the facility. However, all virgin fuels, as well as the recovered fuels produced by Enva at the site have low levels of chlorine present in the fuels (typically less than 0.3% m/m). As such, vapours from the waste fuels processed at the Enva site will contain trace levels of chlorine and these vapours will be routed to the RTO.

The RTO has been designed to allow for acceptance of up to 1% of chlorine in the vapour stream without increasing the risk of dioxin formation or other impact. As noted in Enva's submission to the Agency in May 2016 in answer to question 15, the proposed RTO supplier (Durr) currently has several RTO units operating within Ireland some of which have relatively high levels of chlorinated compounds in their input stream (up to 10g /Nm³). These RTOs are operated at the same temperature (850°C) as the proposed RTO and monitoring of their emissions has demonstrated no significant dioxin formation occurring (<0.1ng/m³). As such, the operating temperature of the RTO coupled with the absence of elevated chlorinated solvents in the waste stream means the dioxin risk is very low. As a consequence, to allow for the ongoing operation of the site with minimal risk to the environment and RTO operation it is requested to change the wording of this condition.

Proposed clause wording:

*Only gases from process or abatement systems not involving the use or treatment of chlorinated solvents or other wastes that contain halogenated organic compounds **greater than 0.3% (m/m Chlorine)** shall be directed to the regenerative thermal oxidiser.*

Condition 8.10

Current Wording in the Proposed Determination

All waste treatment and processing shall be carried out inside a building or closed vessel. All waste storage shall, within 12 months of the date of grant of this licence, be carried out inside a building or in a covered area. These requirements also apply to the storage of empty unwashed containers.

Licensee Comment

While most waste storage areas are currently roofed or proposed to be roofed, currently the unloading of packaged waste takes place in a bunded area (Area E in Fig 2.2) that is not currently roofed and it is not proposed to roof this area. Wastes are only staged in this area for relatively short periods of time (normally 24 hours) after unloading where they are inspected prior to being moved to a storage or processing area. The roofing of this area would afford little advantage for a significant level of expenditure.

Proposed clause wording:

*All waste treatment and processing shall be carried out inside a building or closed vessel. **Unless otherwise agreed with the Agency** all waste storage shall, within 12 months of the date of grant of this licence, be carried out inside a building or in a covered area. These requirements also apply to the storage of empty unwashed containers.*

Condition 8.13

Current Wording in the Proposed Determination

Mixing of hazardous waste and non-hazardous waste

The licensee may mix hazardous wastes of different categories or mix hazardous waste with non-hazardous waste subject to the following:

- *The mixing operation shall conform to best available techniques;*
- *The mixing operation shall be carried out in accordance with a Standard Operating Procedure;*
- *The purpose of the mixing operation shall be the production of waste derived fuel for dispatch to an appropriate facility;*
- *The mixing operation shall result in no environmental emissions;*
- *The mixing operation shall present no risk of adverse or unexpected chemical reactions resulting in the sudden or gradual release of gases;*

Licensee Comment

Clause 8.13 as drafted in the Proposed Determination is only considered appropriate for the proposed preparation of waste-derived fuel and thus clarification is sought in relation to the proposed bulking of waste for export. Bulk wastes for onward shipment (normally by export) may include both hazardous and non-hazardous wastes, destined for appropriate licensed recovery/disposal. This can include contaminated soils, filtercakes, drilling muds and other

compatible bulk wastes. The destination facilities for these wastes can accept both hazardous and non-hazardous wastes, which are both processed in the same manner and it would be inefficient to ship these separately. While these are not mixed to a homogenous state they are stored in the same area (bulk pile) and some mixing will inevitably occur. It is requested that the third bullet point be deleted and the fourth bullet point be qualified to include the word 'significant'.

Proposed clause wording:

The licensee may mix hazardous wastes of different categories or mix hazardous waste with non-hazardous waste subject to the following:

- *The mixing operation shall conform to best available techniques;*
- *The mixing operation shall be carried out in accordance with a Standard Operating Procedure;*
- *The mixing operation shall result in no **significant** environmental emissions;*
- *The mixing operation shall present no risk of adverse or unexpected chemical reactions resulting in the sudden or gradual release of gases;*

Condition 8.14

Current Wording in the Proposed Determination (of heading)
Standards regarding the supply of waste- derived fuel

Licensee Comment

These conditions should only relate to solid waste derived fuel and not to recovered oil which is dealt with separately under the licence. It is suggested that the heading be amended to reflect the fact that the clause only relates to solid fuels and not waste oil derived fuel.

Proposed heading wording:

*Standards regarding the supply of **solid** waste- derived fuel*

Condition 8.14.5

Current Wording in the Proposed Determination

The licensee shall annually, or at a greater frequency if so instructed by the Agency and unless otherwise agreed by the Agency, demonstrate, using a method agreed or specified by the Agency, that the treatment process for the manufacture of waste derived fuel results in a materially significant net increase in calorific value over the mixed waste introduced to the treatment process.

Licensee Comment

Insofar as this condition requires the licensee to demonstrate that the calorific value (CV) of waste derived fuel it manufactures is greater than that of the mixed waste used to produce it, as the condition appears to do, the proposed condition is incapable of being complied with and should

be deleted. It is not possible to increase the CV of wastes beyond the combined CV of the wastes mixed together. The purpose of the process is to produce a consistent, homogenous waste derived fuel meeting the proposed recovery facility's acceptance criteria (e.g. Cement kilns in Ireland), rather than to increase the CV of the waste derived fuel over the mixed waste input.

Enva request that Condition 8.14.5 is removed in its entirety.

Condition 8.17

Current Wording in the Proposed Determination

No waste shall be dispatched from the installation for:

- *recovery, or*
 - *use,*
- at an unlined soil recovery facility.*

Licensee Comment

Enva have operated a soil treatment & recovery facility at Enva Portlaoise for over 15 years. During this time, under the approval of the EPA, Enva have treated contaminated soils to reach the inert criteria set out in Council Decision 2003/33/EC in order to enable recovery at appropriate facilities within Ireland. All recovery processes, procedures, testing criteria and final destination outlets have previously been approved by the Agency. In particular all facilities used for the dispatch of treated soils meeting this inert criteria have been subject to approval from the Agency. These facilities have been for the most part unlined soil recovery facilities.

The wording proposed in the Proposed Determination would appear to prevent the potential reuse of remediated soils completely. The reuse of remediated soils is in line with the waste hierarchy and is to be encouraged rather than overly restricted or prevented. It must be provided within the final licence if granted that remediated soil meeting the appropriate criteria can be reused or recovered at suitable final destinations and not restricted inappropriately. It is contended that that there are suitable criteria that provide for use/recovery at a variety of final (unlined) destinations using a risk based approach.

It is noted that several existing soil recovery facilities licenced by the Agency specifically require use of the inert criteria set out in Council Decision 2003/33/EC and yet these are unlined facilities. If in certain cases the inert criteria set out in Council Decision 2003/33/EC is not considered sufficient protection at a specific soil recovery facility it is still highly likely that there is suitable criteria to provide sufficient protection at the specific location.

In addition the definition of '*an unlined soil recovery facility*' is considered potentially ambiguous and may be interpreted to include soil recovery facilities (outside of Ireland) using thermal or other techniques rather than simply depositing soil on or in the ground. This would therefore appear to prevent their potential use by Enva which is not considered to be the Agency's intention

It is proposed that the qualification 'Unless otherwise approved by the Agency' be inserted before the existing sentence thus providing a mechanism to agree suitable destination facilities for remediated soil.

Proposed clause wording:

Unless otherwise approved by the Agency no waste shall be dispatched from the installation for:

- *recovery, or*
 - *use,*
- at an unlined soil recovery facility.*

SCHEDULE A: Limitations

Current Wording in the Proposed Determination

A.1 Waste processes

4th bullet point:

Sorting, crushing, shredding and repackaging of waste for onward shipment to appropriate facilities;

Licensee Comment

The existing activity whereby containers (e.g. drums, wheelie bins, IBCs, etc.) are cleaned/washed for reuse or if not reusable then disposed of has not been mentioned in this section and for clarity it is requested that this existing activity be included in this section. While in most cases these containers are not considered waste, they may in some cases be waste (where they are discarded by a customer). It is proposed that the fourth bullet point be amended to include the word washing.

Proposed clause wording:

4th bullet point:

*Sorting, **washing**, crushing, shredding and repackaging of waste for onward shipment to appropriate facilities;*

Schedule A.2 Waste Acceptance

Table A.2.1

Licensee Comment

The table sets out the maximum tonnage to be accepted at the facility per annum in each waste type. It is requested that a note be included to allow for the Agency to authorise variances in the individual category tonnages subject to the overall tonnage remaining unchanged. This is provided for in the current licence (W0184-01).

Proposed clause wording:

Insert a Note to column 3 to state:

The quantities of the individual waste types may be adjusted, only with the agreement of the Agency, subject to the total authorised waste quantity remaining the same.

Table A.2.2 Prohibited waste and waste categories

Current Wording

The following wastes or categories of waste shall not be accepted at the installation:

- Household waste and waste derived from household waste except as mentioned in Table A.2.1
- Biodegradable municipal waste and waste derived from biodegradable municipal waste except 20 01 25
- Agricultural waste except as mentioned in Table A.2.1
- Animal by-products
- Potentially infectious healthcare risk waste
- Construction and demolition waste except as mentioned in Table A.2.1

Licensee Comment

The prohibited wastes/categories are to a degree quite broad and may lead to specific instances where a waste is prohibited unnecessarily. For example the inclusion of Animal by-products is considered too broad a restriction as it would prevent the potential acceptance of tallow at the facility which could potentially be used in the production of a waste derived fuel. It is therefore suggested that the prohibition be amended to include 'unless otherwise agreed with the Agency' being added to the first sentence thereby allowing the Agency scope to consider such cases if they arise and can be properly managed at the facility.

The prohibition on 'potentially infectious healthcare waste' is considered too broad and vague a definition as to what might or might not be potentially infectious. The HSE Guidelines on Waste does not define potentially infectious healthcare waste but rather defines a number of specific healthcare risk waste namely: biological, infectious, chemical, sharps and radioactive. Enva are not proposing to accept 'infectious' healthcare waste but would propose to collect both sharps and chemicals (laboratory reagents, medicines etc.). It is therefore requested that the word 'potential' be deleted to avoid confusion and provide a clearer more workable definition as to what is prohibited.

The list of prohibited wastes includes 'construction and demolition wastes except as mentioned in Table A2.1' thereby apparently prohibiting the acceptance of non-hazardous construction and demolition wastes. As there are no additional hazards or concerns with regard to this non-hazardous C&D waste it should not be prohibited. It is considered necessary for the facility to be able to accept non-hazardous C&D waste (e.g. soil & stones, concrete, or mixed C&D waste) as well as hazardous C&D waste for commercial reasons. Such non-hazardous waste may be processed on site (e.g. screened to separate fractions) and or bulked for export as efficiently as

hazardous C&D waste with no additional environmental impact. It is requested that this waste be removed from the prohibited list.

Proposed clause wording:

Unless otherwise agreed with the Agency the following wastes or categories of waste shall not be accepted at the installation:

- *Household waste and waste derived from household waste except as mentioned in Table A.2.1*
- *Biodegradable municipal waste and waste derived from biodegradable municipal waste except 20 01 25*
- *Agricultural waste except as mentioned in Table A.2.1*
- *Animal by-products*
- *Infectious healthcare risk waste*

Schedule B.1 Emissions to Air

Current Wording in the Proposed Determination

Limit on aggregated emissions of VOC

Sources of Emissions to air at the installation	Total authorised emission of volatile organic compounds (VOC – measures as TOC(as C))
Discharges to air mentioned in this schedule (Schedule B. 1: Emissions to Air) for which TOC is a regulated parameter, including A2-1, A3-52, A3-53, A3-54, A3-55, A3-56 and A3-57	1.02 kg/hour, measured as TOC (as C)
New discharges to air as may be agreed by the Agency for which TOC is a regulated parameter	

Licensee Comment

Section 8 of the inspectors report details the consideration of emissions to air from the Enva facility and in particular Section 8.7 addresses the "Impact of Emissions on the Receiving Environment". This section of the report identifies the rationale behind the setting of emission limit values for VOCs at the Enva facility. Enva considers that the setting of the ELVs in this excessively restrictive manner should be revisited (as set out below) and revised limits set (also set out below) for a number of reasons:

Reasons for objection:

- Firstly, in the Section 90 response issued to the EPA on the 6th of September 2016, the six carbon filters have been categorised as "minor" emission points in accordance with the EPA classification approach outlined in "IPPC Application Guidance Notes V4/12" and the rationale for this categorisation has been clearly presented based on monitoring data in the submission to the EPA. This "minor" categorisation has not been disputed in any EPA

correspondence or in the inspectors report and these emissions points remain "minor" in their classification. It is highly unusual for such strict limits to be applied to minor emission points and this places a significant financial and operational burden on Enva which is not consistent with EPA licensing policy or norms and as such is disproportionate. Enva acknowledges the EPA requirement for proper regulation but to impose such excessively strict limits and monthly monitoring on a whole series of minor emission points in the PD does not appear to be based on the scientific data presented to the EPA and as such appears unreasonable and unsupported by evidence.

- Secondly, it is noted that the inspector does identify the source of the concentration limit in the PD as BAT 41 of the Waste Treatment Industries BREF (2006) which states that BAT is to reduce air emission of VOCs to $20\text{mg}/\text{Nm}^3$ but for low VOC loads, the higher end of the range is extended to $50\text{mg}/\text{Nm}^3$. Given that all but one of the carbon filters proposed will have very low flows/loads (A3-52, A3-53, A3-55, A3-56 and A3-57 will all have maximum volume flows of $2,220\text{Nm}^3/\text{hr}$) and all are designated as minor emission points, hence a BAT limit of $50\text{mg}/\text{Nm}^3$ would be more appropriate to these sources as opposed to that applied in the PD ($20\text{mg}/\text{Nm}^3$). As noted in the TA Luft, the mass emission values effectively act as thresholds above which the concentration limits apply and given that these are minor emission points a mass emission threshold of $0.1\text{kg}/\text{hour}$ should apply (i.e. 20% of the BAT limit of $0.5\text{kg}/\text{hr}$). In other words, a Total VOC limit of $50\text{mg}/\text{Nm}^3$ on the carbon filters would only apply where the mass emissions from the source were above $0.1\text{kg}/\text{hr}$ (i.e. the EPA's threshold for significant emissions). Enva request that in the event that the EPA continue with the use of concentration limits in the Final Determination, that the limits as expressed above are applied but Enva request that standard mass emission limits for Total VOCs are applied in the licence as per bullet point number 4 below.
- Thirdly, the ambient air quality limit for benzene is employed by the inspector as the benchmark for setting Total VOC ELVs and this approach (as noted by the inspector) is highly conservative and does not accurately reflect the emissions from the plant. Further details are provided in the following section on how Enva suggest concerns around benzene levels from the plant may be resolved with more specific monitoring proposed, which is a more proportionate approach based on the available data.
- Fourthly, there is potential for methane generation from biological degradation of the waste oils processed at the Enva facility. Methane is odourless and is not a health hazard in the open atmosphere and hence, emissions of methane do not pose a nuisance risk or a risk to human health. While the carbon filters provide a high abatement efficiency for the non-methane VOCs, the efficiency for methane removal is considerably lower. As such, setting these very low emission limits for VOCs from the carbon filters will result in a high compliance risk (as a result of methane) that is unnecessary and with little environmental gain in relation to human health and odour. Enva request that a proportionate approach be adopted by the use of the standard TA Luft Mass Emission rate for Total VOCs ($0.5\text{kg}/\text{hr}$), as employed as standard in Ireland, is employed in the Final Determination to properly regulate VOC emissions including methane from the carbon filters.

The inspectors report has disregarded the evidence supplied by Enva in the form of the air dispersion modelling requested by the Agency of the VOC emissions and supplied by Enva for this review process. This modelling has been undertaken in accordance with EPA standard practice to illustrate the potential impact on the environment of Enva operating at full capacity from all VOC emissions sources (including the TA Luft Emission Limit of 0.5kg/hr applied as standard in Ireland). The modelling indicates no significant impact on the receiving environment at these emission levels (Total VOCs). Levels have been compared to specifically identified VOC emissions from the Enva plant such as toluene, xylenes, etc. Methane does not pose a health risk in open ambient air so there is no comparator for assessing impact from methane.

The EPA carried out a series of air emissions tests on tanks at the Enva site in April 2012 and found no evidence of significant levels of benzene in the emission gases. Similarly the EPA have carried out ambient air quality testing in the Clonminam area of Portlaoise (ca. 150m from the Enva site) over several months in 2015 and found that levels of benzene in the area were circa 25.8% of the limit for the protection of human health ($5\mu\text{g}/\text{m}^3$) and typical of levels in an urban area close to roads and other sources of benzene. The EPA noted that there is no evidence of any impact as a result of benzene emissions from ENVA at this monitoring location. Other VOCs (e.g. toluene) are noted and these are more representative of emissions from Enva's oil recovery process.

However, the inspector has disregarded this significant evidence base and cites the reasons for this in Note 2 to Table 5 of the inspectors report which notes that *"Total VOC is compared against an air quality standard (AQS) for benzene, there being no AQS for total VOC. It is acknowledged that the emission will in fact contain little to no benzene, meaning that assessment against this parameter is highly conservative in terms of protection air quality"*. As noted by the inspector there is no evidence base in either the EPA emissions monitoring of the Enva tanks or the EPA ambient monitoring in the Portlaoise area to highlight benzene as a risk. The use of benzene as a comparator for Total VOC emissions is not appropriate or justifiable and should instead be accounted for by a separate limit for benzene in addition to a Total VOC limit.

Given the concerns of the Inspector in relation to benzene and in the interests of ensuring full transparency of the emission levels of key pollutants such as benzene, Enva propose that routine compliance monitoring for benzene is undertaken and the appropriate emission limit value is applied for this parameter. The TA Luft 2002 cites that benzene is a Class III carcinogenic substance and the following guidelines apply:

Mass Flow of 2.5 g/hr

Or

Mass Concentration of $1\text{ mg}/\text{m}^3$

Given there are seven potential sources of benzene at the Enva facility the aggregated emission rate for benzene is therefore 0.0175 kg/hr ($7 \times 2.5\text{ g/hr}$). This limit should be applied for benzene which will be specifically tested in the monitoring regime. Modelling of all seven sources at this mass emission rate is shown graphically in Figure 1 which demonstrates that the maximum ground level concentration if all stacks operated at this ELV would be $0.37\mu\text{g}/\text{m}^3$ compared to the limit value of $5\mu\text{g}/\text{m}^3$ and hence no significant impact from benzene on the surrounding environment.

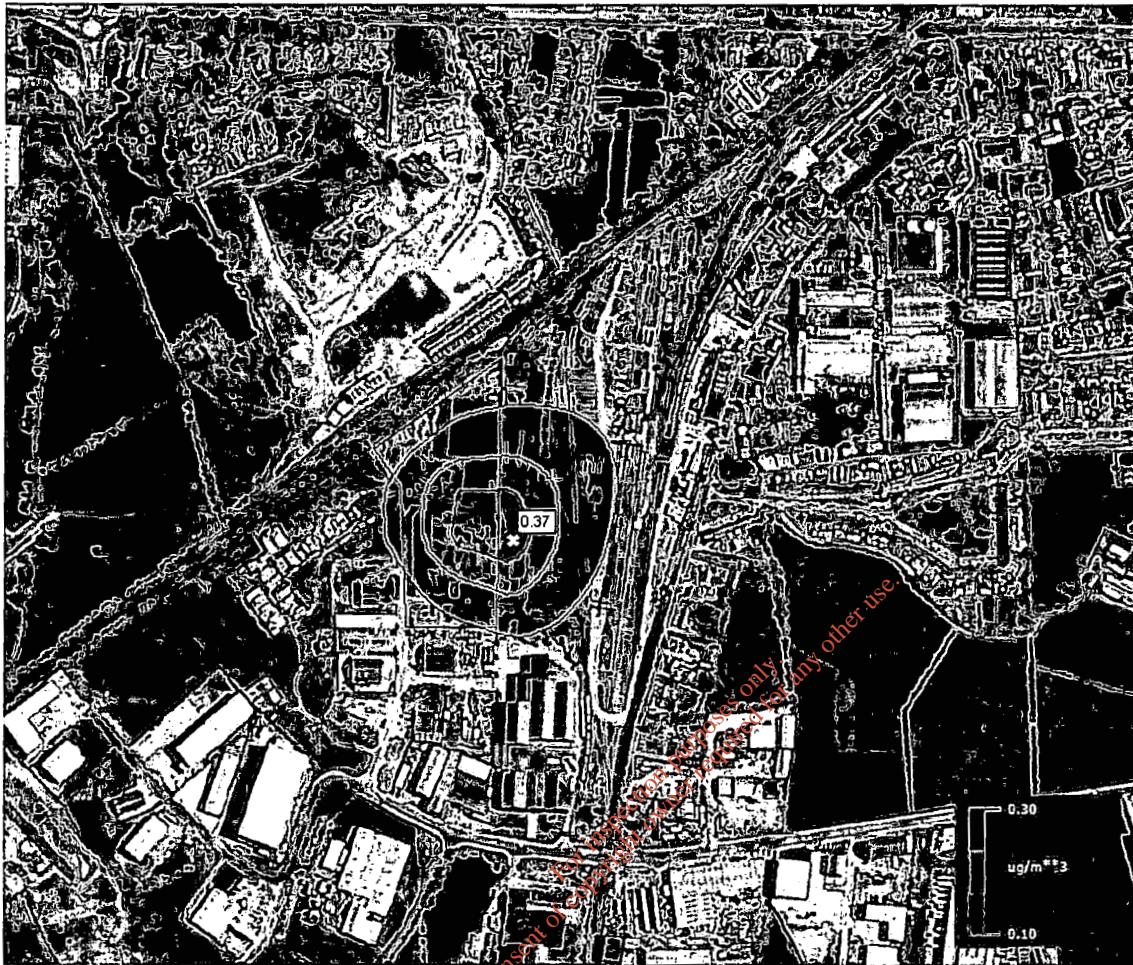


Figure 1: Annual Average benzene concentrations (from the RTO and Carbon Filters - excluding background) as a result of the proposed benzene mass emission limit.

With the levels of benzene regulated in the Final Determination through a specific ELV for these minor emission points, the ELV for the remaining VOCs (methane, toluene, xylenes, etc.) should be set based on standard practice for these lower risk compounds. The BAT Guidance Notes for the Waste Sector: Waste Transfer and Materials Recovery (2011) does not include any ELV for total VOCs but other more recent BAT notes¹ include employ the TA Luft 2002 guidelines at the BAT emission limit values and this has been standard practice for setting limits for emissions to atmosphere in Ireland. Paragraph 5.2.5 of TA Luft 2002 lists the guideline for Organic Substances as follows:

- Mass Flow of 0.5 kg/hr
- Or
- Mass Concentration of 50 mg/m³

¹ BAT Guidance Note for Ferrous Metal Processing and the Pressing, Drawing and Stamping of Large Castings where the Production Area exceeds 500 sq m (2012)
 BAT Guidance Note for the Manufacture of Integrated Circuits (2010)

This is the limit typically employed in the various sectoral BAT Guidance notes and the mass emission limit (0.5kg/hr) sought for the carbon filters in this licence review in line the EPA principles of consistency. The air dispersion modelling previously submitted for this licence review has demonstrated that all carbon filters operating at this Mass Emission Limit of 0.5kg/hr will not have an adverse impact on air quality. Figure 2 shows the cumulative impact of the RTO and carbon filters operating at this limit as the maximum ground level concentrations as a result of this operation.



Figure 2: Annual Average VOC concentrations (from the RTO and Carbon Filters - excluding background) as a result of the proposed mass emission limit.

The model illustrates the maximum ground level concentration will be $78.11\mu\text{g}/\text{m}^3$ (Average Total VOCs) to the east of the site at the rail yard. The inspector's report notes that this concentration compares unfavourably to the air quality standard for benzene which is true but with benzene specifically addressed by means of a specific limit for this parameter as outlined above, comparison of the total VOC level with the benzene limit is not valid. Other parameters such as toluene, ethylbenzenes and xylenes are attributed to the Enva facility and health guidelines for these parameters are as follows:

- Toluene 1,910µg/m³ (UK Environment Agency Guideline)
- Ethylbenzene 4,410µg/m³ (UK Environment Agency Guideline)
- Xylenes 2,200µg/m³ (UK Environment Agency Guideline)

Based on these more relevant guidelines, the maximum ground level concentration (78.11µg/m³) as a result of all stacks operating at the standard TA Luft mass emission limit of 0.5kg/hr would be 4% of the strictest health guideline (Toluene). There is no EAL for methane given that this parameter poses no health risk in open ambient air and potentially the emissions from the Enva facility may constitute a large fraction of methane.

As a result, the operation of all of the carbon filters (which are designated as minor emission points) at a mass emission rate of 0.5kg/hr will not have an adverse impact on human health or the environment and this limit should be used as the basis to set the ELVs for the carbon filters. Enva respectfully request that the EPA amend the aggregate limits for these minor emissions sources to include for an aggregate benzene limit and aggregate Total VOC limit based on TA Luft as best practice. Given the significant differences in volumes flows from the carbon filters, the use of mass emission limits is more applicable and the relevant mass emission limits for use in the Final Determination are outlined below.

As a result of this analysis, the use of the aggregated emission limit for VOCs from minor emission points as currently presented in the PD is not justified and is disproportionate and unreasonable as a result. Enva request that this schedule is amended to account for a specific limit for benzene also in addition to a specific more appropriate limit for other VOCs as presented below.

Proposed clause wording:

Limit on aggregated emissions of VOC

<i>Sources of Emissions to air at the installation</i>	<i>Total authorised emission of volatile organic compounds</i>
<i>Discharges to air mentioned in this schedule (Schedule B. 1: Emissions to Air) for which TOC is a regulated parameter, including A2-1, A3-52, A3-53, A3-54, A3-55, A3-56 and A3-57</i>	3.50 kg/hour, measured as TOC (as C) 0.0175 kg/hour, measured as Benzene
<i>New discharges to air as may be agreed by the Agency for which TOC is a regulated parameter</i>	

In addition to the change in the aggregated limit in Schedule B.1, Enva request that the emission limit values for the carbon filters listed in Schedule B.1 are also modified as follows:

Limits on Specific Emission Points

Source	Total Organic Carbon (as C) Mass Emission Limit (kg/hr)	Benzene Mass Emission Limit (g/hr)
A3-52	0.5	2.5
A3-53	0.5	2.5
A3-54	0.5	2.5

A3-55	0.5	2.5
A3-56	0.5	2.5
A3-57	0.5	2.5

As outlined earlier, minor emission point emission limits are not typically set by the EPA, however Enva does consider the setting of emission values for these minor emission points to be acceptable once these are set at an appropriate level, in order to provide transparency to the EPA and the general public. These proposed emission limits will provide the relevant information on the actual levels of benzene emitted from the Enva site while at the same time allowing for the application of the standard TA Luft mass emission limit for VOCs for the more typical VOC emissions associated with the Enva-site (toluene, xylenes, methane, etc.).

Schedule B 3 Emissions to Sewer

Licensee Comment

The entire Schedule B.3 in the Proposed Determination is incorrectly based on Schedule C.4 of the original licence W0184-01 and subsequent technical amendments as published on the EPA public file. This schedule is however obsolete, as it was subsequently replaced in agreement with the Local Authority (Laois County Council) and the Agency in October 2006. The details of this were included in our response to query 20 in our submission dated 6th of September 2016. Subsequent communication between Enva and Irish Water (who are now the appropriate authority for discharges to sewer) to clarify the matter has confirmed that the proposed schedule was intended to be based on the current limits in place for discharges to sewer which are those included in our response to query 20. Enva therefore objects to the proposed Schedule B.3 to allow for its replacement by Irish Water with a revised Schedule.

Schedule C.1.2. Monitoring of Emissions to Air

Current Wording in the Proposed Determination

Emission Point Reference No: A3-52, A3-53, A3-54, A3-55, A3-56 and A3-57

Parameter	Monitoring Frequency	Analysis method/technique
Total Organic Carbon (as C)	Monthly	FID

Licensee Comment

As outlined in the previous objection, in the Section 90 response issued to the EPA on the 6th of September 2016, the six carbon filters at the Enva facility have been categorised as "minor" emission points and this categorisation has not been disputed by the EPA. The "minor" categorisation is clearly demonstrated based on actual monitoring data and the levels detected and anticipated in future have been very low and/or periodic in nature.



Based on a review of EPA licensing and enforcement practice, the requirement for monitoring of minor emission points is highly unusual and is rarely, if ever, applied in EPA licenses. Typically only "main" emission points or boiler emission points are assigned monitoring frequencies in Schedule C of licenses as these are the key pollutant sources. At the Enva facility, the RTO is a main emission point and the PD requires continuous VOC monitoring of this source as well as other periodic testing (quarterly NO_x and CO and biannual dioxins/furans). Enva do not object to this monitoring regime given that it is a "main" emission point and the testing regime is consistent with current EPA licensing practice.

However, requiring monitoring from minor emission points is not consistent with current EPA licensing practice. Notwithstanding this point and as indicated earlier, Enva understands the need for some periodic monitoring to be undertaken on these minor sources to publically demonstrate compliance both with the Total VOC limit and the benzene limits proposed in the objection to Schedule B.1 listed earlier.

However, Enva objects strongly to the imposition of the excessive level of monitoring proposed on these minor emission points (i.e. monthly monitoring of the carbon filters) as specified in the PD. This is not consistent with current EPA licensing practice and Enva are unaware of any other licensee who is required to carry out monthly monitoring of any air emission point, let alone emission points categorized as minor.

In the first instance, the requirement for monthly monitoring may often not be feasible given that a number of the sources are periodic or back-up in nature and operate intermittently. At any given time only a fraction of the filters are likely to be operating and hence, monthly monitoring could require several visits of a monitoring team. In addition, the financial implications of imposing monthly monitoring for 6 minor emission points (i.e. up to 72 samples per annum) is highly onerous given that these are minor emission points with little significance and which other similar operators are not faced with such costs.

Enva acknowledges the EPA requirement for some monitoring on these minor emission points but to require monthly monitoring does not appear to be based on the scientific data presented to the EPA and is not consistent with established practice. Enva respectfully requests altered more appropriate monitoring regime that is more in line with the significance of the emission points and licensing norms as follows:

Proposed clause wording:

Emission Point Reference No: A3-52, A3-53, A3-54, A3-55, A3-56 and A3-57

Parameter	Monitoring Frequency	Analysis method/technique
Total Organic Carbon (as C)	Quarterly	FID
Benzene	Biannually	Charcoal tube / Analysis by solvent desorption followed by GC-MS or GC-FID

Schedule C.4 Waste Monitoring

Current Wording

Waste	Frequency	Parameter	Method
Incoming waste oil	Each container accepted for treatment	PCB <10ppm Chlorinated/halogenated compounds	Standard Method
Treated soil for landfill	Each treated batch	Landfill waste acceptance criteria	Standard Methods
Other ^{Note 1}			

Note 1: Analytical requirements to be determined on a case by case basis

Licensee Comment

The requirement to test PCBs in all incoming waste oil containers is an extremely onerous task as the test method requires a laborious manual clean up stage for the waste oil prior to analysis in a Gas Chromatograph. The requirement to carry out such analysis would require significantly more laboratory staff dedicated to just this single parameter which is grossly disproportionate to the risks involved. The current controls in place require all waste oils arising from the energy/electrical sectors to be analysed before collection and this has been very effective in managing and controlling PCBs within the regulated waste sector. Furthermore the majority of waste oils collected arise from automotive and marine sources where it makes little sense to analyse for PCBs.

Proposed wording:

Waste	Frequency	Parameter	Method
Incoming waste oil	Waste oil arising from electrical equipment	PCB <10ppm Chlorinated/halogenated compounds	Standard Method
Treated soil for landfill	Each treated batch	Landfill waste acceptance criteria	Standard Methods
Other ^{Note 1}			

Note 1: Analytical requirements to be determined on a case by case basis

Schedule E.1 Reprocessed oil Quality, Monitoring and Input Restrictions

Licensee Comment

The Table E.1 setting out the parameters for the monitoring of Reprocessed Oil includes the parameter Fluorine, however there is no standard or validated method available for analysing



fluorine in used oil or waste oil derived fuels. Fluorine is not considered a parameter of concern in relation to waste oils and is not typically monitored in any waste oil derived fuels, including in the UK where the relevant test method used for halogens is IP 503 used to determine the Chlorine content. Enva has invested in the laboratory equipment necessary to analyse waste oils and waste oil derived fuels for halogens using IP 503 which is considered the most appropriate parameter (included already in Table E.1 & E.2). It is therefore requested that Fluorine be removed from Table E.1 on this basis.

Proposed clause wording:

Delete fluorine from Table E.1

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