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Signed: *Date: 18/05/2017*

OFFICE OF ENVIRONMENTAL SUSTAINABILITY

REPORT OF THE TECHNICAL COMMITTEE ON OBJECTIONS TO A PROPOSED DETERMINATION

TO:	Directors
FROM:	Technical Committee - Environmental Licensing Programme
DATE:	18th May 2017
RE:	Objection to a Proposed Determination (PD) issued to Enva Ireland Limited for an installation at Portlaoise, Co. Laois, Licence Register W0184-02.

Application Details	
Type of installation:	Non-hazardous and hazardous waste treatment and transfer facility
Categories of Activity under IED (2010/75/EU):	5.1,5.3, 5.5
Classes of Activity under the EPA Acts 1992, as amended:	11.1 11.2 (a), (b), (c), (d), (g) and (j) 11.4 (a)(ii) 11.6
Additional classes of activity sought by the licensee for inclusion in a revised licence:	11.2 (f) 11.4 (a)(i) 11.4 (b)(i) and (ii)
Licence review initiated:	26th January 2016
PD issued:	6th December 2016
First party objection received:	11th January 2017
Third party objections received:	20th December 2016 and 11th January 2017
Submissions on objections received:	Two

A. Company and background to this report

This licence review relates to a non-hazardous and hazardous waste treatment and transfer installation. The principal treatment activities involve the treatment of waste oil and the treatment of contaminated soil. Repackaging and/or bulking up of liquid and solid wastes such as paints, oil filters and sludges also takes place.

This report considers the first party objection, two third party objections and two submissions on objections received by the Agency in relation to the Proposed Determination (PD) issued to Enva Ireland Limited on 6 December 2016.

B. Consideration of the objections

The main issues raised in the objections and submissions on objections are summarised below. The original objections should be referred to at all times for greater detail and expansion of particular points.

Objector	**Date Received**
Objection – Ms Marie Conroy	20th December 2016
Objection – Mr Don Phelan	11th January 2017
Objection – Enva Ireland Limited	11th January 2017
Submission on objections – Mr Don Phelan	13th February 2017
Submission on objections – Enva Ireland Limited	13th February 2017

The Technical Committee (TC), comprising of Caitríona Collins (Chair) and Caroline Murphy, has considered all of the issues raised in the objections and the submissions on objections and this report details the Committee's comments.

The two third party objections are summarised according to the following headings:

1. Location and planning permission
2. Odour and nuisance
3. Health effects
4. Complaints and legal actions
5. Air emissions
6. Accidents
7. Waste acceptance
8. Public participation

1. Location and planning permission

Ms Marie Conroy raised the matter of the original planning permission for the site permitting the siting of a hazardous waste facility in close proximity to housing estates, schools and Port Laoise town. She further relates this to a subsequent housing development in a location that was previously considered for a planned western circular route, which was re-routed away from the facility following a recommendation by Laois County Council's Roads Department. The licensee outlined in its submission on this objection that it understands the re-routing was largely influenced by the fact that part of the proposed route traversed the licensee's site.

Technical Committee's Evaluation:

The decision to locate a facility or a housing development at any particular location is a matter for the relevant planning authority.

Recommendation:

No change.

2. Odour, dust and nuisance

Ms Conroy outlines in her objection that she has experienced odour nuisance which results in her not being able to open windows and doors and at times has caused her to vacate her home when the odour becomes unbearable. Mr Don Phelan also outlines at length and in substantial detail in his objection the matter of odour nuisance from the installation. To illustrate his point, he presents an outline of historical information relating to complaints, compliance history and emissions monitoring and he asks the question as to what exactly is being emitted from the tanks at the installation. Mr Phelan also raises concern about dust from the contaminated soil at the installation, citing the failure of the licensee to fully enclose the building and eliminate the risk of dust. In addition, Mr Phelan, in his submission on objection, stated that Ms Conroy's account of her experience was consistent with the reported experience of other residents, citing in particular odour complaints in early December 2016. The licensee outlined in its submission on this objection that the concerns expressed regarding odour have been addressed as part of the licence review process.

Technical Committee's Evaluation:

The technical committee notes the assertions of the objectors with respect to nuisance arising from odour. The technical committee further notes that the licensee took steps in 2016 to eliminate and minimise potentially odorous emissions. In addition, it is noted that the PD provides for the operation of a regenerative thermal oxidiser (to be installed within 12 months of date of grant of licence) as the preferred technique to treat process off-gases at the installation. All potentially odorous point source emissions (VOCs) have been identified and appropriate collection and treatment proposed, in accordance with Schedules B and C of the PD. It is also noted that the PD requires the complete enclosure of the soil recovery building in accordance with Condition 3.22.5. The technical committee further notes that the Agency is precluded from issuing a licence unless it is satisfied that environmental pollution will not occur.

Recommendation:

No change.

3. Health effects

Ms Conroy draws linkages between the odour nuisance caused and health effects being experienced. Ms Conroy describes how the odour from the plant gave her a general feeling of nausea, headache and feeling unwell. Mr Phelan set out in his objection the health investigation that was sought by Professor John Crown in the Seanad in 2014 and further, he describes the complaints made historically by residents and workers in relation to odour and health effects from the facility. Mr Phelan also raises concern about potential health impacts

from inhaling contaminated particulate matter as a result of the soil treatment activity undertaken at the site.

Technical Committee's Evaluation:

The technical committee is satisfied that the conditions and schedules of the PD will ensure that emissions from the installation will not cause exceedance of air and water quality standards and consequently will not adversely affect the health and well-being of people living and working in the vicinity of the installation. It is further noted that the overarching principle of the PD is to ensure that there will be no uncontrolled emissions from the installation.

Recommendation:

No change.

4. Complaints and legal actions

Mr Phelan presents a comprehensive outline of historical complaints in his objection, including a detailed outline of the licensee's response to those complaints. This includes complaints dating back to a time prior to the current licence as well as the period of the current licence. He cites these complaints in the context of odour nuisance and health effects. He also raises the point about the successful prosecution taken by the Agency under the current licence in relation to odour nuisance.

Technical Committee's Evaluation:

The technical committee notes that the number of complaints received by the Agency since the PD was issued stands at 6 (between 7 December 2016 and the date of this report). This is a marked reduction in complaints over previous years (25 in 2016 prior to publication of PD and 41 in the period June to December 2015). In addition, it is noted that the PD requires the installation of infrastructure aimed at preventing and limiting odour emissions, including enclosing the soil recovery building and installation of a regenerative thermal oxidiser. Further, the technical committee consulted with the Office of Environmental Enforcement in May 2017, and it was confirmed that there have been no more recent complaints received.

Recommendation:

No change.

5. Air emissions

Mr Phelan presents a substantial amount of information about air emissions in his objection, according to the following issues:

- Historical air emissions monitoring, pre-dating any licence issued by the Agency.
- Historical air emissions monitoring, pre-dating the current licence from the Agency.
- Air emissions enforcement under the current licence.
- Air emissions modelling and assessment of air emissions for the licence review.
- Abatement technology.

These issues are described in more detail as part of the technical committee's evaluation below.

Technical Committee's Evaluation:

The technical committee notes the comprehensive presentation of air emissions information included in Mr Phelan's objection. Further, it notes that the historical information relating to the period that pre-dates the current licence or any licence issued from the Agency is not relevant to the process for the review of the current licence. The focus of the technical committee's evaluation is the material that is relevant to the licence review process. The technical committee also notes that the Agency is precluded from issuing a licence unless it is satisfied that environmental pollution will not occur.

Mr Phelan's outline of air emissions enforcement under the current licence is focused primarily on matters related to odour, as well as modelling of emissions. Odour has already been addressed in point 2 above. He is critical of the modelling techniques used and compares the level of emissions to the German standard TA Luft 2002. The technical committee notes that BAT (as per the Waste Treatments Industries BREF) is the preferred reference for VOC emission limits (total VOC) and as such the TA Luft standard for individual VOC emissions was not relied upon in the assessment for the purpose of the licence review. The air dispersion model presented with the licence review application used the AERMOD approach in accordance with the Agency's guidance AG4.

The technical committee further notes that the First and Second Interim Reports published by the Agency in relation to the installation conclude that air quality monitoring results in the vicinity of the installation indicate that BTEX levels are within ambient air quality guidelines. This is substantiated further by the Agency's monitoring of BTEX adjacent to the installation, in the period 1st May 2016 to 30th April 2017, which demonstrates that the measured levels of these pollutants are within relevant health based air quality guideline levels. Mr Phelan also asserts his dissatisfaction that the Agency would consider granting a new licence, when there is an open compliance investigation under the current licence. In response to this assertion, the technical committee is satisfied that its function is limited to consideration of the objections to the PD only and the Office of Environmental Enforcement is engaged with the licensee with respect to any matters under the current licence.

Mr Phelan is critical of the Agency's assessment of ground level concentrations of pollutants, which were measured at 2.3km and 150m from the installation in 2014 and 2015, respectively, stating that there are sensitive receptors closer to the installation than 150m. The technical committee notes Mr Phelan's assertions. However, it is further noted that the Second Interim Report of the Agency in relation to the installation states that the distance from the heated tanks to the nearest residents is comparable to the distance from the heated tanks to the monitoring locations used in 2014 and 2015. As such, the technical committee considers that the monitoring undertaken is sufficiently representative.

The technical committee notes that, in the absence of an air quality standard for total VOC, the inspector used the annual average for benzene only, as an air quality standard comparator. While this is a conservative approach, as the emissions will contain little or no benzene, given the complaints history relating to odour nuisance, the technical committee is satisfied that the inspector's approach is appropriate. Also the Second Interim Report presented details on short term averages for benzene and other VOCs measured during monitoring in 2015, which indicate that the measured concentrations are below the relevant 1-hour guideline values.

The VOC limit set out in the PD ensures that the maximum calculated predicted environmental concentration can never be achieved at the sensitive receptors, as described in the inspector's report. Mr Phelan was particularly critical of the monitoring undertaken when, he states, wind was blowing directly from the installation to the monitoring station.

However, the technical committee notes that the Second Interim Report indicates that the elevated levels of benzene were observed when the wind was blowing from the opposite direction and benzene emissions were therefore attributed to sources other than the licensed installation. In addition, results from the Agency's monitoring of BTEX adjacent to the installation, in the period 1st May 2016 to 30th April 2017, indicate that the additional measures taken by the licensee in 2016 to reduce emissions from the installation resulted in even lower levels of BTEX compounds being measured at the monitoring station, during periods when the wind was blowing from the direction of the installation.

Mr Phelan expresses concern about the potential for dioxin emissions from heated waste oils and calls for continuous monitoring of dioxins from the regenerative thermal oxidiser. The technical committee notes that an emission limit for dioxins and furans from the regenerative thermal oxidiser is included in the PD, along with scheduled monitoring. The risk of formation of dioxins and furans is minimal, given the limitation on the acceptance of waste containing chlorine provided for in the PD. The technical committee recommends an amendment to Table A.2.2 to provide for more explicit prohibition on the acceptance of chlorinated solvents or other wastes that contain halogenated organic compounds (see also the technical committee's evaluation of objection point 13b below).

Mr Phelan also expresses concern about potential air emissions from the processed fuel oil (both 11LS and 19LS grades), contending that it has not been demonstrated that the products will have no greater environmental impact than virgin fuel oil. The technical committee notes that the PD sets out quality criteria in Schedule E for reprocessed fuel oil, which include input restrictions, monitoring and minimum quality of reprocessed oil.

Mr Phelan makes the assertion in his objection that the emissions points from the 23 processing tanks are unregulated and that the licensee vented and ducted these emissions to an abatement system described as a dustbin containing odour masking chemicals. He also expresses concern that the odour masking chemicals could have a potential adverse effect on sensitive members of the public. In response, the technical committee considers that any changes that take place under the current licence are a matter for compliance with the current licence. In addition, the technical committee notes that there are no documented risks to sensitive persons in relation to the odour masking chemical in use at the installation. Mr Phelan further asserts that the use of the carbon filter as a backup system is not sufficient to protect the environment in the event of a bypass and he also questions the efficacy of the carbon filters as described by the licensee. In addition, he contends that the regenerative thermal oxidiser has not been sized correctly to accommodate the proposed load. The licensee, in its submission on objections, refutes the claim that the regenerative thermal oxidiser is incorrectly sized, stating that there is an order of magnitude of spare capacity available for the treatment of the proposed load. In addition, the technical committee notes that the emission limit, which was determined based on detailed modelling and analysis, is the requirement with which the licensee must comply in any case. The technical committee notes that the use of carbon filters was introduced by the licensee in 2016 as a temporary abatement measure with the view to installing a regenerative thermal oxidiser or permanent carbon filter installations. The technical committee further notes that the PD definitively requires in Condition 3.22.6 that the regenerative thermal oxidiser is installed within 12 months of the date of grant of the licence and is to be used as the preferred technique; carbon filters are to be used only where the use of an alternative to the RTO is based on a technical justification and agreed by the Agency, as set out in Condition 6.19.9. As such, it is the opinion of the technical committee that the PD as drafted provides sufficient abatement controls to address potential air emissions at the installation.

Recommendation:

Amend Table A.2.2 by the addition of the following bullet point:

- For treatment, chlorinated solvents or other wastes that contain halogenated organic compounds >0.3% m/m

6. Accidents

Mr Phelan expresses concern in relation to potential accidents and an apparent lack of risk assessment and cites the explosion at the Hub Oil facility.

Technical Committee's Evaluation:

The technical committee notes that the inspector has presented an outline of measures to prevent accidents and limit their consequences in the inspector's report. In particular, the technical committee notes that an accredited health and safety management system is in place, which includes an emergency identification and preparedness aspect. In addition, the regenerative thermal oxidiser has been designed to prevent the occurrence of a potentially explosive atmosphere, as described in the inspector's report. The PD addresses accident prevention and emergency response in Condition 9.

Recommendation:

No change.

7. Waste acceptance

Mr Phelan expresses concern about the controls on waste acceptance at the installation and seeks that all deliveries are tested upon arrival.

Technical Committee's Evaluation:

The technical committee notes Mr Phelan's concerns and in response, notes that the PD includes a comprehensive and detailed condition to specifically address waste acceptance and characterisation procedures.

Recommendation:

No change.

8. Public participation

Mr Phelan outlines in his objection his dissatisfaction with notifications to the public in relation to aspects of the licence review process. In particular, he cites the period of time to make submissions up to the latest date for the PD and his dissatisfaction that the PD issued in advance of that date. He also states that not all members of the public who made submissions were notified of the appropriate assessment screening determination. Further, he contends that the period of time between the publication of the Natura Impact Statement and the inspector's report was insufficient for members of the public to make submissions on the Natura Impact Statement.

Technical Committee's Evaluation:

The technical committee notes that the latest date for the publication of the PD, in accordance with Section 87 (3) of the Environmental Protection Agency Act 1992 as amended, does not preclude the Agency from publishing a PD in advance of that date. The technical committee further notes that, due to an administrative oversight, two members of the public were not notified of the appropriate assessment screening determination, one of whom was also not notified of the publication of the PD. This was rectified by notifications in writing on 20th April 2017 and those persons were given the opportunity to make submissions or objections as appropriate. One submission was received and this is discussed in section 20 below. No further objection was received. With regard to the period of time between the publication of the Natura Impact Statement and the inspector's report, the technical committee notes that no minimum period is specified in the relevant legislation.

Recommendation:

No change.

The first party objection is summarised according to the following headings:

9. Waste acceptance
10. Storage and bunding
11. Wheel cleaning
12. Air sparging
13. Regenerative thermal oxidiser
14. Waste treatment
15. Waste derived fuel
16. Waste processes
17. Emissions to air
18. Emissions to sewer
19. Monitoring

9. Waste acceptance

a. The licensee requests that the hours of waste acceptance in the PD (07.30 – 21.00) in Condition 1.8.2 be extended to 07.00 – 23.00, in line with the hours of operation. The reason stated is to accommodate the shipping sector and emergency responses, where it is operationally difficult to offload oil if it has become cool in the tanker overnight. Mr Phelan, in his submission on objection, outlines his concern about testing of waste oil should it be delivered late to the installation, and the potential for emissions from heating waste oil in tankers to assist with unloading.

b. In relation to the quantities of each waste type set out in Table A.2.1, the licensee requests that the table be amended to allow variances in the quantities, subject to the overall tonnage remaining unchanged, with the agreement of the Agency.

c. The licensee has outlined that the list of wastes prohibited under Table A.2.2 is too restrictive. In particular it is seeking that animal by-products may be accepted with the agreement of the Agency, to provide for acceptance of tallow which may be used in the production of waste derived fuel. In addition, the licensee has requested that the phrase

"potentially infectious healthcare risk waste" be amended to "infectious healthcare risk waste", for the reason that it intends to accept sharps and chemicals (e.g. medicines) but not infectious waste and that "potential" may cause confusion or unnecessary restriction. The licensee also objects to the prohibition on non-hazardous construction and demolition waste, which it says is necessary for commercial reasons. Mr Phelan, in his submission on objection, objects to the amendments sought by the licensee in its objection.

Technical Committee's Evaluation:

a. The technical committee notes that the hours of waste acceptance in the PD are not changed from the current licence. Given the reasons for the licence review initiated by the Agency, as set out in the Notice issued under Section 87(1)(b) of the EPA Acts 1992 as amended on 26 January 2016, the technical committee is of the opinion that it is not appropriate to change the hours of waste acceptance, as to do so would not be in keeping with the reasons for the licence review.

b. It is noted that Table A.2.1 in Schedule A.2 of the PD provides for "other" hazardous and non-hazardous waste to be accepted, if agreed by the Agency, in accordance with the list of waste codes authorised under Condition 8.9.2 of the licence. Therefore the technical committee considers that the Proposed Determination provides adequate flexibility and that the capacity of the installation is such that the waste types and their authorised quantities are appropriate.

c. The prohibition of certain waste source categories in Schedule A.2 (Table A.2.2) of the PD does not result in any significant practical change compared to current practices. The licensee did not specifically seek the inclusion of non-hazardous construction and demolition waste in its response to the licence review initiation, and where processes for such wastes were not outlined. It is noted that animal by-products and healthcare risk waste such as sharps are not accepted at the installation under the current licence; such wastes are not in keeping with the overall activity at the installation i.e. treatment and transfer of hazardous chemicals and soils. The technical committee further notes that excavated and dredged waste from construction and demolition (i.e. non-hazardous construction and demolition waste) is included in Table A.2.1.

Recommendation:

No change.

10. Storage and bunding

a. The licensee objects to the condition relating to bunding of tank and drum storage areas (Condition 3.7.2), on the basis that it may require new or empty drums to be stored in bunded areas and outlines concern also that tanks such as rainwater tanks would be required to be bunded. To this end, the licensee seeks that the condition be amended to include "Unless otherwise agreed with the Agency" at the start of the condition. Mr Phelan, in his submission on objection, complains that the use of the phrase "Unless otherwise agreed with the Agency", as sought in a number of areas by the licensee in its objection, pushes decisions outside the licence review process, with the effect of excluding public participation in such decisions.

b. The licensee also objects to the requirement of Condition 3.22.3 for all waste oil tanks and vessels to be closed to ensure no fugitive emissions occur, on the basis that it is virtually impossible to prevent relatively insignificant fugitive emissions from flanges, valves and instrumentation. To this end the licensee is seeking an amendment to the

condition to require that "… no significant fugitive emissions occur". Mr Phelan, in his submission on objection, complains that the use of the term "significant" is open to interpretation and seeks that the Agency's original wording be maintained.

c. The licensee objects to the requirement under Condition 3.22.5 to fully enclose the waste soil treatment building, and is seeking an 8-month timeframe to complete this work. Mr Phelan, in his submission on objection, seeks that the activity of soil treatment be suspended and that the 8-month timeframe for enclosure requested by the licensee not be granted.

d. The licensee outlines its objection to Condition 6.10 in terms of the requirement to carry out integrity and water tightness testing of all tanks, building structures etc. on the basis that the current cycle of testing under the existing licence should apply, without the need to commence a new cycle of testing. The frequency of testing is also questioned by the licensee, outlining that it is higher than the oil industry norm. Mr Phelan, in his submission on objection, expresses concern about the frequency of testing and that the licensee is seeking to demonstrate the integrity of tanks without having to carry out testing.

Technical Committee's Evaluation:

a. The technical committee notes that Condition 3.7.2 in the PD is identical to Condition 3.13.2 in the current licence and as such sees no reason to alter it. It is further noted that empty drums may contain residues of waste and as such should be stored in bunded areas, in the interest of ensuring stormwater does not become contaminated by runoff from empty drums.

b. The technical committee notes that BAT 24(d) of the Waste Industries Treatments BREF requires that odorous materials are handled in fully enclosed or suitably abated vessels, and in enclosed buildings connected to abatement. This requirement is reflected in Condition 8.10 of the PD. Further, it is stated in the inspector's report that the overarching principle of the PD is that there are to be no uncontrolled emissions at the installation, whether fugitive or point source and in this regard, the technical committee considers that Condition 3.22.3 is necessary and appropriate, without amendment.

c. The technical committee considers that the storage and treatment of contaminated soil in an enclosed building is essential to ensure that there are no uncontrolled emissions from the installation and this is in accordance with BAT 24(d) of the Waste Treatments Industries BREF. The technical committee further notes that the licensee committed in writing to Iarnród Éireann in February 2016 to enclose the soil remediation area and stated to the Agency in its responses as part of the licence review that the waste soil building was fully enclosed; to this end, the condition is appropriate.

d. The technical committee considers it appropriate that any revised licence as may be issued will take into account the cycle of testing that is underway under the current licence. However, the technical committee also notes that the frequency of testing set out in the PD is not changed from the current licence and is considered appropriate.

Recommendation:

Amend Condition 6.10 to read as follows:

The integrity and water-tightness of all tanks, bunding 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 at least once every three years 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.

11. Wheel cleaning

a. The licensee highlighted an apparent typographical error in Condition 3.19.3, which states in relation to wheel cleaners "...to ensure that storm water or waste is carried off site...", where it should state that "...to ensure that **no** storm water or waste is carried off site...". The licensee requests also that the word "contaminated" be inserted before "storm water". Mr Phelan, in his submission on objection, complains that the insertion of the word "contaminated" would serve to weaken the condition, as drafted, and seeks that the Agency's original wording be maintained.

b. The licensee also requests a change to Condition 3.19.4 in relation to daily inspection of the wheel wash, contending that the requirement is excessive. This is refuted by Mr Phelan, in his submission on objection, stating that the licensee cannot ensure proper functioning if it is not inspected, as per the condition as drafted.

Technical Committee's Evaluation:

a. It is clear that there is a typographical error in the condition which must be corrected for clarity. The technical committee considers that it is not necessary to include the word "contaminated" before "storm water" in this condition as the purpose of the condition is to control the escape of any material from the installation, including storm water whether or not it is contaminated.

b. The technical committee considers that the daily inspection of the wheel wash is not excessive; the inspection must be carried out daily, however, it need only be drained and cleared of accumulated material as required. The technical committee recommends no change to Condition 3.19.4.

Recommendation:

Amend Condition 3.19.3 to read as follows:

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

12. Air sparging

The licensee objects to the limitations on air sparging specified in Condition 6.18.6. The basis for this objection is as follows:

- The licensee is seeking to carry out monitoring and characterisation of emissions from high temperature (100°C) air sparging, as requested by the Agency in January

2016. This request was not fulfilled; the licensee proposed an alternative approach in September 2016, to be carried out post license review.

- The alternative monitoring proposal would provide information to the Agency to make a determination on the continued use of the high temperature air sparging process.
- The licensee is proposing to make a significant investment in a regenerative thermal oxidiser (RTO).

Mr Phelan, in his submission on objection, seeks that the practice of air sparging should not be allowed at all, even at the lower temperature of 30°C. In particular, he complains about the licensee seeking to provide for air sparging at temperatures above 30°C in the future, which would have the effect of excluding public participation in the decision making.

Technical Committee's Evaluation:

The technical committee notes the detailed description of this matter in the inspector's report. In particular, it is noted that the absence of the requested monitoring data as part of the licence review did not allow the inspector to consider the emissions from high temperature sparging and whether to recommend authorising the renewed use of the high temperature air sparging process. The technical committee is satisfied that the characterisation of such emissions post-licensing, for the purpose of potentially authorising the high temperature air sparging process in the longer term, is not appropriate and does not support the requirement for public participation in decision making. However, the technical committee acknowledges that there is merit in gathering data on high-temperature air sparging, by means of a limited test programme, to be agreed with the Agency. No provision for ongoing operation at high temperature is to be made.

Recommendation:

Amend Condition 6.18 to include a new sub-condition 6.18.11 as follows:

6.18.11 The licensee may carry out a test programme for the operation of the activity to include air-sparging at temperatures above 30°C, subject to the agreement of the Agency.

13. Regenerative thermal oxidiser

a. The licensee objects to the requirements of Condition 6.19.3 in relation to the introduction of gases to the regenerative thermal oxidiser (RTO). The licensee states that the current wording of the condition may be confusing as natural gas is introduced to the RTO at ambient temperatures to bring the chamber to the optimum temperature, at which point the process gases will be introduced. Mr Phelan, in his submission on objection, expresses concern that the use of the term "process gases" in relation to the gases entering the regenerative thermal oxidiser may be ambiguous.

b. The licensee objects to the restriction in Condition 6.19.7 relating to the treatment of gases from process or abatement systems involving the use or treatment of chlorinated solvents, or wastes containing halogenated organic compounds, in the RTO. The licensee states that while no chlorinated solvents are processed at the installation, all virgin and recovered oils typically have less than 0.3% (m/m) chlorine present and as such the waste oils processed at the installation will contain trace levels of chlorine, from which vapours will be routed to the RTO. Mr Phelan, in his submission on objection, points out that waste oil is variable in its constituents, and questions whether the regenerative thermal oxidiser is the proper abatement solution.

Technical Committee's Evaluation:

a. The intention of the condition is to ensure the RTO is operating at optimal conditions prior to the introduction of process gases that require treatment. It is therefore the opinion of the technical committee that the condition, as currently drafted, may be misinterpreted and should be amended for the purpose of clarity.

b. The technical committee notes that Schedule C.4 provides for waste monitoring, including testing of incoming waste oil for chlorinated/halogenated compounds. It is the opinion of the technical committee that this requirement can be aligned with the presence of up to 0.3% (m/m) chlorine, with an associated change to Condition 6.19.7. Further, it is the opinion of the technical committee that the waste acceptance criteria, together with the emission limits applicable to the RTO, will ensure that the RTO will adequately and sufficiently abate the emissions arising from the process (see also the technical committee's evaluation of objection point 5 above).

Recommendation:

a.

Amend Condition 6.19.3 to read as follows:

Gases, other than natural gas used as fuel to heat the chamber, 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.

b.

Amend Condition 6.19.7 to read as follows:

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

And

Amend the following phrase in Schedule C.4:

Change

"Chlorinated/halogenated compounds"

To

"Chlorinated/halogenated compounds (<0.3% m/m)"

14. Waste treatment

a. The licensee objects to the requirement set out in Condition 8.10 that all waste storage areas are to be inside buildings or in covered areas within 12 months of the date of grant of the licence, citing the current practice of unloading packaged wastes in a bunded area that is neither roofed nor proposed to be roofed. The licensee states that

storage of waste in this area is normally for 24 hours and is seeking that this condition be qualified with the phrase "unless otherwise agreed with the Agency". Mr Phelan, in his submission on objection, objects to this proposed change.

b. The licensee outlines its objection to Condition 8.13 in that it appears to address mixing of hazardous and non-hazardous waste only in terms of the production of waste derived fuel. The licensee points out that other hazardous and non-hazardous wastes are mixed for the purpose of shipment abroad, where separate shipment of hazardous and non-hazardous waste would be inefficient. The licensee seeks the deletion of the 3rd bullet point and the inclusion of "significant" as a qualifier in the 4th bullet point. Mr Phelan, in his submission on objection, expresses a fear that the door may be opened to a "whole field of potential chemical mixing onsite".

c. The licensee objects to the prohibition, set out in Condition 8.17, on the dispatch of waste from the installation for recovery or use at unlined soil recovery facilities on the basis that remediated soils should be acceptable at such facilities if they meet the inert criteria set out in Council Decision 2003/33/EC. The licensee further outlines that the term "unlined soil recovery facility" is potentially ambiguous as it may unintentionally exclude facilities abroad using thermal or other techniques (other than deposition to ground). The licensee seeks the inclusion of the phrase "unless otherwise agreed by the Agency", to which Mr Phelan objects in his submission on objection.

Technical Committee's Evaluation:

a. As stated in the inspector's report, the overarching principle in the PD is that there are to be no uncontrolled emissions at the installation, whether fugitive or point source. The technical committee is of the opinion that the storage of waste in uncovered areas is in conflict with this principle and BAT 24(d) of the Waste Treatments Industries BREF.

b. The technical committee notes the ban on mixing of hazardous waste set out in Article 18 of the Waste Framework Directive, and the derogations specified therein. Notwithstanding this, and taking the derogations specified in Article 18 into account, it appears reasonable to the technical committee that the licensee would be permitted to mix compatible hazardous and non-hazardous wastes for the purpose of onward shipment, where to do so would allow for greater efficiency and does not result in environmental emissions. However, in the event of such mixing taking place, the entire volume of the mixed waste is to be classified as hazardous waste. The technical committee does not consider it appropriate to include "significant" as a qualifier in the 4th bullet point, given the overarching principle of the RD as stated previously.

c. As stated in the inspector's report, the criteria set out in Council Decision 2003/33/EC, are applicable at lined landfills. Therefore the technical committee considers it inappropriate to allow treated soil to be deposited at any facility that is not authorised in accordance with the Landfill Directive. The technical committee understands that the condition is not envisaged to address facilities other than those for deposition to ground. In the event that the waste is exported for treatment, it will be subject to the appropriate controls under transfrontier shipment of waste.

Recommendation:

Amend the 3rd bullet point of Condition 8.13 to read as follows:

- The purpose of the mixing operation shall be:
  - The production of waste-derived fuel for dispatch to an appropriate facility; or,
  - **The mixing of other compatible wastes for efficient shipment to an appropriate facility**.

And

Include a new bullet point (after the 3rd bullet point) as follows:

- The entire volume of the mixed waste shall be classified as hazardous waste.

15. Waste derived fuel

a. The licensee objects to the heading of Condition 8.14, as it does not specify that it relates to solid waste-derived fuel only and seeks that the heading be amended for the purpose of clarity.

b. The licensee objects to the requirement set out in Condition 8.14.5 relating to the net increase in calorific value (CV) of the waste-derived fuel over the mixed waste introduced to the process, on the basis that the CV of the waste-derived fuel cannot be increased beyond that of the combined wastes used to produce it. Mr Phelan, in his submission on objection, raises concern about the apparent characterisation by the licensee of the 19LS recovered fuel oil as equivalent to heavy fuel oil.

Technical Committee's Evaluation:

a. The technical committee notes that the requirements set out in Condition 8.14 are addressed to solid waste-derived fuel and as such it is appropriate that the heading be amended for the sake of clarity.

b. The technical committee notes that the requirement set out in Condition 8.14.5 in relation to a net increase in calorific value is more appropriately required for the production of refuse derived fuel (RDF) or solid recovered fuel (SRF). Such waste processing is not undertaken at the installation and as such, the technical committee considers that the condition is not relevant to the activities at the installation. The technical committee also notes that the production of 19LS recovered fuel must be in accordance with the quality and specified uses set out in Schedule E.2 and Condition 6.23.3.

Recommendation:

a.

Amend heading of Condition 8.14 to read as follows:

"Standards regarding the supply of waste-derived fuel, other than reprocessed oil in accordance with Condition 6.23"

b.

Delete Condition 8.14.5.

16. Waste processes

The licensee objects to the list of waste processes set out in Schedule A.1, as it does not accommodate the current practice of washing containers for reuse (e.g. drums, wheelie bins, IBCs, etc.). Mr Phelan, in his submission on objection, expresses concern about the disposal of the wash water from this process.

Technical Committee's Evaluation:

The technical committee notes that Condition 8.10 of the PD requires unwashed empty waste containers to be stored indoors or under roof. No information is presented otherwise on the management of the empty containers. It appears reasonable that the licensee would continue to be allowed to carry out washing of such containers for reuse, in the interest of compliance with the waste hierarchy and efficient use of resources. All waste treatment and processing is to be carried out indoors or in closed vessels, in accordance with Condition 8.10. All process effluent is treated at the installation and discharged to sewer, in accordance with the consent provided by Irish Water, and as such is subject to the emission limits set out in Schedule B.3.

Recommendation:

Amend the Schedule A.1 to insert a new bullet point after the existing 3rd bullet as follows:

- Washing of empty waste containers for reuse, or for onward shipment to appropriate facilities;

17. Emissions to air

a. The licensee objects to the emission limit set out in Schedule B.1 for VOCs at the installation, contending that the limit is excessively restrictive and setting out the following points of rationale for this assertion (paraphrased):

   i. *The strict limit should not apply to the carbon filters, being minor emission points, which places a significant financial and operational burden on the licensee;*

   ii. *With reference to BAT 41 of the Waste Treatments Industries BREF (2006), all but one of the carbon filters will have low flows/loads and as such the upper limit of BAT 41 of 50 mg/Nm^3 should apply, rather than the lower limit of 20 mg/Nm^3 as quoted in the inspector's report and presented in the PD.*

   iii. *The ambient air quality limit for benzene is used as the benchmark for setting Total VOC ELVs, which is a highly conservative approach and does not accurately reflect the emissions from the plant.*

   iv. *The low emission limit will create a compliance risk for the licensee in relation to methane emissions, for which the carbon filters do not provide a high removal efficiency, albeit that emissions of methane do not pose a nuisance risk or a risk to human health in the open atmosphere.*

   v. *The inspector's report disregards the air dispersion modelling evidence provided for the review, which indicates no significant impact on the receiving environment.*

   vi. *The EPA has not found evidence of significant levels of benzene in the emission gases (2012) or in the ambient air (2015), however, this information*

has been disregarded by the inspector (referencing Note 2 to Table 5 in the inspector's report).

The licensee is seeking that a separate emission limit be provided for benzene, based on TA Luft (2002) and total VOCs, which allows the results of the air dispersion model to be applied, discounting benzene, which can be assessed separately. Mr Phelan, in his submission on objection, sets out an argument as to why the emission limit, as set out in Schedule B.1 of the PD, should not be changed on foot of the licensee's objection.

b. The licensee objects to the requirement to monitor minor emission points (i.e. 6 no. carbon filters), as set out in Schedule C.1.2 of the PD, in particular the frequency of such monitoring. Mr Phelan, in his submission on objection, calls for frequent monitoring of emissions, and objects to the reduction in monitoring proposed by the licensee.

Technical Committee's Evaluation:

a. The technical committee notes that the licensee is seeking separate emission limits to be applied for benzene and total VOCs (measured as TOC) both in relation to aggregated emissions of VOCs and limits on specific emission points. It is noted that the inspector has outlined in his inspector's report the rationale for taking a conservative approach in the setting of emissions limits for total VOCs, using the air quality standard for benzene as a comparator. Given that there is no air quality standard for total VOCs, the technical committee considers that the approach taken is appropriate.

   However, it is also noted that the VOC emission limits applicable to the carbon filters do not exclude methane and as such may present a compliance risk for the licensee in the event that methane is generated from the biological degradation of waste oil processed at the installation. The technical committee therefore considers it appropriate to address this by way of amendments to Condition 4.1 and Schedule C.1.2 of the PD. The technical committee further notes that the RTO is the preferred technique to treat process off-gases at the installation and carbon filters are to be used only where the use of an alternative to the RTO is based on a technical justification and agreed by the Agency, as set out in Condition 6.19.9.

   The licensee makes the point that all but one of the carbon filters are considered low load and is therefore seeking the higher limit of 50mg/m^3 to be applied; however, the technical committee considers that the emission limit of 20mg/m^3 is appropriate for the stated loads, and in order to ensure that the 1kg/hr limit is adhered to.

b. The monitoring requirement for the carbon filters is related to the requirement set out in Condition 6.18.8 for the timely replacement of media in the carbon filters. Four carbon filters were installed as late as 2016 and a further two are proposed. Therefore, it is the opinion of the technical committee that the frequency is necessary to support the need to ensure the performance and timely replacement of the media. The technical committee further notes that Condition 6.8 provides for the frequency of monitoring to be amended with the approval of the Agency, following evaluation of test results.

Recommendation:

Amend Condition 4.1 by the addition of 4.1.3 as follows:

4.1.3 The emission limits for total organic carbon (as C) applicable to emission points A3-52, A3-53, A3-54, A3-55, A3-56 and A3-57 shall exclude methane.

And

Amend Schedule C.1.2 as follows

Emission Points 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
Methane	Monthly	Standard method

18. Emissions to sewer

The licensee objects to Schedule B.3 of the PD, stating that it is incorrectly based on Schedule C.4 of the current licence and has not taken into account the changes that were agreed with Laois County Council and the Agency in October 2006. The licensee further states that these details were presented in its response to the Agency dated 6th September 2016 and states that subsequent correspondence between Enva and Irish Water confirmed that the proposed schedule was intended to be based on the current limits (i.e. as amended in October 2006).

Technical Committee's Evaluation:

The Agency consulted with Irish Water on 21st November 2016 under Section 99E of the EPA Act as amended, seeking consent to the discharge proposed by the licensee, referencing the licensee's correspondence dated 6th September 2016. A response was received from Irish Water on 22nd November 2016 granting consent to the proposed discharge, including limit values and monitoring obligations for discharge of process effluent to sewer. These details are reflected in the PD. Irish Water was further consulted on 13th January 2017 requesting comments on the licensee's objection insofar as it relates to the conditions imposed by Irish Water and a response was received on 15th February 2017. The response outlined an amended Section 99E response, which is to be reflected in the revised licence.

Recommendation:

Replace Condition 5.9.2 with the following:

5.9.2 The licensee shall at no time discharge or permit the discharge into the sewer of any liquid matter or thing which:

(i) would constitute a danger to sewer maintenance personnel working in the wastewater network or wastewater treatment plant;

(ii) cannot be appropriately treated at the downstream wastewater treatment plant

(iii) would be liable to render wastewater sludge generated at the downstream wastewater treatment plant unsuitable for disposal to agricultural lands or other approved disposal routes;

(iv) would be liable to cause corrosion to sewer pipes, penstock and sewer fittings or the general integrity of the sewer;

(v) would be liable to cause the liberation of by-products detrimental to either the wastewater network or wastewater treatment plant;

(vi) would be liable to cause impairment of the receiving environment and ecosystem to which the wastewater treatment plant discharges;

(vii) would be liable to give rise to flammable or explosive vapours in the receiving wastewater network;

(viii) would be liable to cause the release of nuisance odours from the wastewater network either directly or indirectly following mixing with other wastewater within the network; or

(ix) would be liable to cause a blockage in the wastewater network or set or congeal at average sewer temperature.

Replace Schedule B.3 Emissions to Sewer with the following:

B.3 Emissions to Sewer

Emission Point Reference No:	SE-1
Name of Receiving Waters:	River Triogue
Location:	In the yard behind the canteen
Grid Reference:	646006 697809
Volume to be emitted [Note 1]:	Maximum in any one day: 50m^3
	Maximum rate per hour (m^3): 10m^3
	Hours of discharge: 2300 to 0600[Note 1]

Parameter	**Emission Limit Value**
Temperature	35°C (monthly mean) 43°C (daily maximum)
pH	6-9
Toxicity	10 TU

	mg/l	kg/day
COD	6,000	280
Suspended Solids	400	20
Sulphate (as SO4)	800	40
Chloride	6,000	300
Fats, oils and grease	100	5
Total Phosphorous	150	7.5
Total Nitrogen	125	-
Ammonia	80	4
Phenols	30	1.5
Copper	0.5	0.025
Zinc	0.5	0.025
Lead	0.5	0.025
Cadmium	0.005	0.00025

Note 1: Unless otherwise agreed in writing with Irish Water and the Agency under exceptional circumstances.

Replace Schedule C.3 Monitoring of Emissions to Sewer with the following:

C.3 Monitoring of Emissions to Sewer

Emission Point Reference No: SE-1

Parameter	**Monitoring Frequency** Note 1 & 2	**Analysis Method/Technique**
Flow to sewer	Continuous	Flow meter
pH	Continuous	pH meter
Temperature	Continuous	Temperature probe
Chemical Oxygen Demand	Daily	Standard Method
Suspended Solids	Daily	Standard Method
Ammonia	Daily	Standard Method
Sulphates	Weekly	Standard Method
Chloride	Weekly	Standard Method
Total Phosphorous	Weekly	Standard Method
Phenols	Weekly	Standard Method
Copper	Weekly	Standard Method
Zinc	Weekly	Standard Method

Lead	Weekly	Standard Method
Cadmium	Weekly	Standard Method
Fats, Oils & Grease	Weekly	Standard Method
Total Nitrogen	Weekly	Standard Method
Full metals screen	Quarterly	ICP
Priority Substances	As requested	Standard Method
Toxicity	As requested	Standard Method
Respirometry	Annually	Standard Method

Note 1: All samples except pH and temperature shall be collected on a 24 hour flow proportional composite sampling basis.

Note 2: Sampling shall take place on alternate weekdays on a rolling basis to ensure representative samples are obtained for site operations which may vary across the working week.

19. Monitoring

a. The licensee objects to the requirement to test all incoming waste oil for PCBs, according to Schedule C.4, citing that it is too onerous and disproportionate to the risks involved. The licensee further states that the majority of waste oils are from the automotive and marine sources, and that any oil from energy/electrical sector are required to be analysed before collection.

b. The licensee objects to the requirement to monitor reprocessed oil for the parameter fluorine, in accordance with Schedule E.1, on the basis that fluorine is not considered a parameter of concern in waste oil and there is no standard or validated method available for analysing fluorine in used oil or waste derived oils. The licensee further outlines that a test method for chlorine has been established and is in use at the installation, and is set out as a requirement in Tables E.1 and E.2.

Technical Committee's Evaluation:

a. The technical committee understands that the risk of PCB contamination in waste oil relates primarily to waste oil from the energy and electrical sectors. This is well documented in the *Management Plan for Polychlorinated Biphenyls (PCBs) in Ireland* (EPA, 2008) and the *National Implementation for the Plan Stockholm Convention on Persistent Organic Pollutants* (EPA, 2012). It is noted that each batch of reprocessed oil is tested for PCBs in accordance with Schedule E.1, while Schedule E.2 includes limitations on the PCB content of reprocessed oil according to the use restrictions. As such, it may be appropriate to limit the monitoring of PCBs in incoming waste to waste oils from the energy and electrical sectors only.

b. The technical committee notes the licensee's objection to the inclusion of fluorine in the monitoring requirements set out in Schedule E. However, it is also noted that the requirement is unchanged from the existing licence, where it was introduced by Technical Amendment B in 2011 and as such is not recommending a change to the requirement.

Recommendation:

a.

Change the following wording in Schedule C.4:

From

"Each container accepted for treatment"

To

"Each container from the energy and electrical sectors accepted for treatment"

20. Submission received on Appropriate Assessment (17th May 2017)

Following the notifications issued on 20th April 2017 as discussed in section 8 above, one submission was received, from Ms. Laura Murphy on 17th May 2017. In her submission, Ms Murphy outlines concern in relation to the data presented in the NIS and the conclusions drawn in relation to the predicted impacts on the habitats and species of the River Barrow and River Nore SAC. Ms Murphy refers also to contamination of rainwater runoff from the installation and associated concerns about the adverse effects on the River Triogue. The technical committee notes that the inspector's appropriate assessment, as presented in the inspector's report, addresses the concerns relating to the contamination of rainwater at the installation, in particular the additional mitigation measures provided for in the PD, including *inter alia* more frequent cleaning and maintenance of silt traps and interceptors and the introduction of lower trigger levels for stormwater discharges and the introduction of continuous monitoring of discharges. Ms Murphy also expresses concern about the potential impact on groundwater quality that may adversely affect the qualifying interests of the River Barrow and Nore SAC. The technical committee notes that there are no discharges to ground or groundwater at the installation and Schedule C.6 of the PD provides for groundwater monitoring at the installation.

The technical committee has reviewed the appropriate assessment in the inspector's report and, taking into account the additional submission received on 17th May 2017, and the contents of this technical committee report, considers that no reasonable scientific doubt remains as to the absence of adverse effects on the integrity of this European Site at River Barrow and River Nore SAC.

C. Overall Recommendation

It is recommended that the Board of the Agency grant a licence to the applicant

(i) for the reasons outlined in the Proposed Determination, and
(ii) subject to the conditions and reasons for same in the Proposed Determination, and
(iii) subject to the amendments proposed in this report.

Signed:

Caitríona Collins

Caitríona Collins, Inspector
for and on behalf of the Technical Committee