

# Industrial Emissions Directive (IED) Licensing

## Updates and Learnings from the Past Year




2

### Introduction

- Dr Fergal Callaghan and Brigette Priestley from AWN Consulting.
- AWN have prepared numerous IED and IPC Licence and Licence Review applications for the **Pharma, manufacturing and food sectors** in Ireland over the last 10 years.
- We have been actively engaging with the EPA on current 'hot topics' in IED Licensing.



3

### What is IED Licensing?

- An Integrated Licence.
- Industrial Emissions Directive 2010 and Environmental Protection Agency (EPA) Act 1992 (as Amended)



4

### Getting an IE Licence

- If you plan to undertake an activity listed in the **First Schedule to the EPA Act 1992, as amended**, then you need a licence.
- Its not 'that scary'.



5

### Licence Review, Technical Amendment, or Condition 1 Change

- Licence Review
- Technical Amendment
- Condition 1 change



6

### Update on Technical Amendments

#### Sweetman v. EPA (February 2019)

*EPA's Guidance Note - currently under review.*



### Move to Online Applications

- Submitted online via EDEN;
- Collate a series of 'Attachments' for upload later;
- Naming convention for Attachments specified;
- Naming convention for drawings specified;
- File size limitations – 10MB
- Is it any quicker than the older way?



### The New Application Format

- Sections 1 to 10 (no more A, B, C);
- Detailed 'Guidance Document for Applicants' from the EPA.



### Timeline for Submission

10-12 weeks for completion of an application for submission



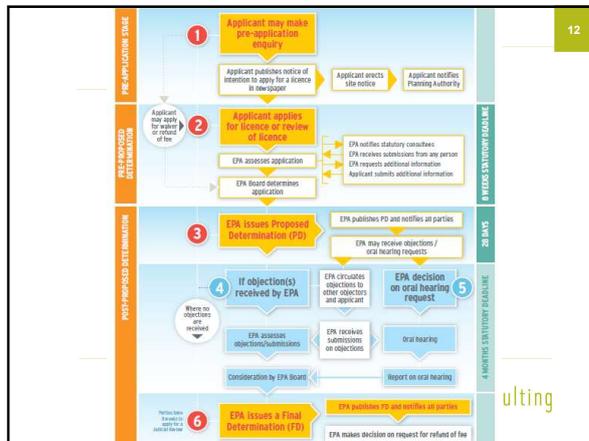
### Timeline for Submission

- Things that can hold up the submission process include:
- Change to the facility design or abatement technologies;
  - Availability of plant detail for Noise and / or Air dispersion modelling;
  - Quality, correctness and timeliness of the required info;
  - Timeliness of client's review for first drafts and final drafts;
  - Late, onerous changes from legal team.



### Timeline for Approval

### Statutory Deadlines v. Reality



## Requests for Further Information

13

Typically 1-2 RFIs in areas such as:

- Request for EIAR update;
- Request for a Natura Impact Statement (NIS);
- Additional BAT assessments;
- Applicability of other IED chapters (e.g. Chapter 5: Solvents, Chapter 3: Combustion Plant);
- Applicability of MCP Directive;
- Firewater retention requirement / storage capacity;
- Request to re-assess minor air emissions (existing licences only).



## Requirement for EIAR

14

- Some cross over – EIAR is higher level, IED requires more detail.
- May be requested by EPA for licence application even if no planning required.
- Will need to update it to an EIAR if you did an EIS during planning.



## Requirement for AAS or NIS

15

Issue on how to account for mitigation measures...  
Active and Passive mitigation measures can't be included?

People Over Wind & Anor v Coillte Teoranta  
(April 2018) - Court of Justice of the  
European Union (CJEU)

Kelly -v- An Bord Pleanála & anor (Feb  
2019)



## Request for an Extension on Time

16

Even if the application is 'great', the EPA  
may request an extension of time.

Typically 2-3 months.

Must be agreed in writing by the Applicant.



## BAT Conclusions and how they affect your licence

17

- National (EPA) BAT Conclusions v. EU Commission BAT Conclusions;
- Setting ELVs (e.g. Wastewater and Waste Gas BAT);
- Outlining the required abatement measures;
- Dictating licence conditions (e.g. requirement for fugitive air emissions monitoring – BAT 5 of the Wastewater and Waste Gas BAT).



## Upcoming EU BAT Conclusions

18

### Common Waste Gas Treatment in the Chemical Sector

New BAT in progress; kick off meeting report and interim meeting report available.

<http://eippcb.jrc.ec.europa.eu/reference/>



### After Approval – Licence Conditions

- ‘Contaminated’ firewater retention and risk assessment v. all firewater;
- New ELRA/CRAMP condition;
- CCTV and pressure testing of surface water and sewer lines;
- Fugitive emissions surveys.



### After Approval – Licence Conditions

Have option to object to new conditions at Proposed Determination.

Can present a risk assessment to justify why unreasonable (if applicable).



### Firewater Retention Draft EPA Guidelines

- March 2018
- Not a ‘Final’ Document
- BUT being applied by EPA at present
- Unlikely to change (much)



### Firewater Retention Draft Guidelines

- Two Qualifying Factors:
  1. Environmentally Hazardous Substance Storage Thresholds (i.e. H400+ chemicals)
  2. Environmental Receptor Criteria.
- Site separation (15m distance OR 2 hour fire walls)
- Fire Significance v. Environmental Hazard (c.f. Fire Risk x Fire Exposure x Environmental Sensitivity)
- Spreadsheet for calculating the Risk (R1 or R0) (c.f. Low/Medium/High Risk)
- Three methodologies for calculating Firewater in Risk R1 areas
- Use of bunds for containment – only the ‘available’ volume, and only if it can be generated/captured in the bund during a fire.



### Medium Combustion Plant Directive

- Combustion of fuels in plants with a rated thermal input equal to or greater than 1 megawatt thermal (MWth) and less than 50 MWth.
- Emission Limit Values (ELVs) to be applied from 20 December 2018 for new plants and by 2025 (for emissions from existing medium combustion plant greater than 5MW) or 2030 (for existing medium combustion plant greater than 1 MW).
- ELVs do not apply to plant with <500 hours / year total unit operation time.
- Monitoring requirements set out in Part 1 of Schedule 3 of the MCPD



### Medium Combustion Plant Directive

- Registration only – no ‘permit’.
- 1 week to 1 month for approval.
- Must be done in addition to GHG Permit but surrendered if IED licence in place.
- MCPD will have implications on your IED Licence.



## Case Studies



## Case Study 1

- Food production site which became subject to IED licensing because it exceeded the > 200 tonnes per day of milk processed threshold.
- The site had operated on heavy fuel oil for steam generation – common in many industries which are not EPA licensed.



## BAT and BREF for the Sector

- EPA BAT Guidance for the Dairy Sector, 2008;
- BREF for the Food, Drink and Milk Industries, 2006;
- BREF document for Industrial Cooling Systems, 2001;
- BREF document on Energy Efficiency, 2009.



## Particulate Emissions from Spray Drying

- Particulates from spray dryers – required to be reduced to 50 mg/m<sup>3</sup> and to 5-10 mg/m<sup>3</sup> in 2021 when revised BREF comes into force.
- Why?



## NOx, SOx and Particulates from Boilers

- Particulates, SOx and NOx from heavy fuel combustion are relatively high compared with those from LPG or Natural Gas.

Required limits will be:

- NOx 190 mg/m<sup>3</sup>
- SOx 35 mg/m<sup>3</sup>
- Particulates 50 mg/m<sup>3</sup>



## NOx, SOx and Particulates from Boilers

- These limits could not be met by HFO.
- So prior to commencement of the licence the site had to retrofit LPG, install new boilers and burners and decommission HFO.
- Significant time and capital investment and increased operating cost.



### Case Study 2 – VOC emissions and RTO

- Volatile Organic Compounds (VOC).
- The site in question is a chemical manufacturing facility that previously had a limit for VOC to air of 150 mg/m<sup>3</sup> TOC as C (total organic carbon).



### BAT and VOC Emissions

- The EPA as part of IED compliance determined that the limit needed to be reduced to 50 mg/m<sup>3</sup> to meet the requirements of the BAT Guidance for the Manufacture of Organic Fine Chemicals, 2008.



### BAT and VOC Emissions

- Previously the site was able to operate without abatement but with no significant impact on ground level VOC concentration.
- The reduction in limit value meant VOC abatement was required.
- AWN completed an abatement options study.



### Abatement Technology

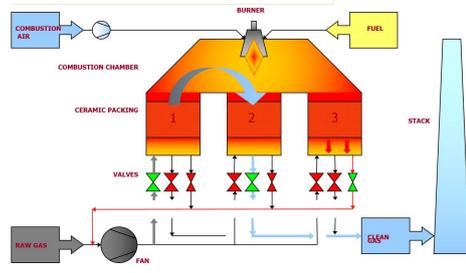
- Cryogenic System
- Carbon adsorption
- Concentrator/steam recovery
- Thermal Oxidation – Regenerative Thermal Oxidiser



### Thermal Oxidiser



### Thermal Oxidiser



## Thermal Oxidiser

- Capital cost in excess of 1M euro
- EPA licence review



## Case Study 3

- Chemical manufacturing facility.
- Solvent exhaust treated using thermal oxidiser.
- Change to process led to siloxane compounds being used in a coating process.



## Siloxane



## BAT limit

- BAT limit -
- The BAT Guidance Note for Pharmaceutical and other Speciality Organic Chemicals – 20 mg/m<sup>3</sup>



## Abatement solution

- Exhaust is greater than 500 deg C.
- Conventional fabric filter not appropriate.
- Selected solution was a ceramic filter.



## Ceramic filter



---

## Discussion

---