

E-PRTR Reporting and Water Emissions

Anthea Southey
Inspector

Office of Environmental Enforcement

Outline of Presentation

- Background to PRTR
- Benefits of the PRTR
- EPA role as competent authority
- Licensed Facility role in reporting data under PRTR
- Common Reporting Errors
- AER/PRTR Reporting Update 2010
- The E_PRTR website and the development of a National website for PRTR.

What is PRTR?

- The **European Pollutant Release and Transfer Register** is an inventory of pollutant emissions from industry and other sources. The aim of the inventory is to make information on pollutant emissions and waste transfers more available to the public. This helps to increase public awareness on environmental matters, allows a free exchange of views, more effective participation on environmental decision-making and, eventually, to a better environment.

Benefits of PRTR Data Collection

The PRTR dataset facilitates the following :

- provides **public access** to information on industrial releases of pollutants and waste transfers
- useful for tracking of **emission trends**
- provides valuable **data for enforcement reports** and other reports
- demonstrates progress in **pollution reduction**
- evaluates progress relating to **environmental policies** and goals.

Benefits to stakeholders

- Benefits for Industry
 - *Driver for **Pollution Reduction***
 - *Dissemination of E-PRTR data enables similar industries to **benchmark** their environmental performance with other companies in the sector and to **reduce emissions** with financial savings*
 - *E-PRTR information can encourage industry and business to examine **environmental costs**, **reduce emissions and waste transfers** and to adopt cleaner production techniques – e.g. CGPP etc.*
 - *E-PRTR data can be used in **licensing decisions** for new plants and facilities.*

The E-PRTR Dataset

- The **E-PRTR data** is displayed on the European PRTR website: <http://prtr.ec.europa.eu> - screenshots later
- The E-PRTR includes data from **27 EU Member States**
- It contains data reported by **24,000 industrial facilities** covering **65 economic activities** across Europe
- It covers **9 industry sectors**

The 9 industry Sectors

- energy
- production and processing of metals
- mineral industry
- chemical industry
- waste and waste water management
- paper and wood production and processing
- intensive livestock production and aquaculture
- animal and vegetable products
- other activities.

Putting PRTR in context

- **PRTR Regulations**

- E-PRTR Regulation (EC) No. 166/2006; Irish PRTR Regulation S.I. No.123 of 2007
- Particular reference to reporting requirements in **Article 5** and quality assurance and assessment in **Article 9**.
- Particular reference to **water emissions and data quality**.

EPA Role

- Referring to **Article 9** of the E-PRTR Directive:
 - *The competent authorities shall assess the quality of the data provided by the operators of the facilities, in particular as to their completeness, consistency and credibility.*
- Other aspects fo EPA Role
 - Provision of reporting guidance on the EPA website:
 - General guidance
 - Sector specific guidance
 - Calculation tools – UWWTPs, Quarries and Intensive Ag.
 - Support through PRTR helpdesk: aerreturns@epa.ie
 - Data Validation and assessment
- Reporting E_PRTR data to the EU Commission
 - On reported emissions/waste transfers which exceed threshold in Annex II of E-PRTR Regulations (EC) No. 166/2006

Facility Operator Role

- Referring to **Article 5** of the E-PRTR Directive:
 - *The operator of each facility shall report annually to its competent authority, along with an indication of whether the information is based on measurement, calculation or estimation, of the following:*
 - Releases to **air, water and land** of any pollutant specified in **Annex 11** for which the applicable threshold value is exceeded.
 - Off-site transfers of **hazardous waste** (> 2 tonnes per year) or of **non-hazardous waste** (> 2,000 tonnes per year).
 - Off-site transfers of any **pollutant** specified in **Annex 11** in waste water destined for wastewater treatment for which the applicable threshold value is exceeded.

Reporting obligations under PRTR

- All EPA licensed activities and some unlicensed activities.
- Annual Submission of the AER and PRTR Emissions Reporting Workbook by 31st March each year.
 - *Note: Username and password does not change from year to year*
- PRTR reporting requirements:
 - Reporting of annual mass emissions of PRTR pollutants and licensed pollutants in Kg/annum
 - Releases to Air, Water and Wastewater
 - Methods of Measurement (M,C, E) and description of methods
 - Waste Transfers with EWC Codes and R/D Codes in tonnes per annum

Reporting Errors – common errors

- **Emission to Water or Emission to Sewer :**
 - Use of **Incorrect units** e.g. tonnes instead of kg
 - Emissions not credible when compared to previous year
 - Not all **licensed emission points** reported
 - Not all **pollutants** reported (PRTR pollutants and licensed parameters). Refer to your Licence and to the EU PRTR Guidance Doc - Appendix **3** for indicative PRTR pollutants by Sector.
 - **Accidental** emissions not reported
 - **Fugitive** emissions not reported
 - Reporting does not reflect correct emission type e.g. emission is reported to surface water instead of wastewater/sewer

....common errors continued

- **Method of Measurement**

- Need to specify if the emission is based on:
 - Measurement (M) – release data based on direct monitoring results which need to be converted to annual mass emissions. Flow data is required for the conversion to annual mass emissions in Kg/annum.
 - Calculation (C) – release data based on calculations using activity data (fuel use, production rates, etc) and emission factors or mass balance calculations.
 - Estimation (E) – release data based on non-standardised estimations, calculation tools, expert guesses and assumptions.
- Choice of **Method Codes** can be incorrect – see examples later
- **Description of measurement methods** not clear– see examples later

Measurement Methods and Codes

Method Code	When to Use it	Description Field
PER	If the facilities license specifies a specific Standard Method they must work to – this tends to be a rare case.	Standard Code / Name
ISO / EN	Only for approved standard methods - EN/ISO/CEN (check EU PRTR guidance document for the list).	Leave Blank
ALT	If the facility is using a CEN or ISO standard but not one in the PRTR Guidance, this can be the case from time to time.	Standard Code Name
CRM	If a facility is using a non-ISO method validated using certified reference materials and acceptable to the competent authority (only applies to a few cases).	Standard code or method description
OTH	If not using a standard method.	Description of method e.g. Hach Method, ICP_MS, Colorimetric, etc.

Calculation Methods and Codes

Method Code	When to Use it	Description Field
PER	If the facility's license specifies a specific calculation method to be used.	Description of method
ETS	For CO2 emissions and facilities that are part of the ETS.	Leave Blank
OTH	If not using a standard calculation method e.g. it is based on fuel consumption or a non-standard calculation methodology that has been approved by the EPA E.G. GAS SIM LITE, EPA Emission Calculation Tool etc.	Description of calculation method or name of calculation tool
ISO / EN	Only for approved standard methods as listed in the PRTR Eu Guidance (check guidance list)	Leave Blank
NRB – not used very much in Ireland's case.	National or Regional binding calculation methodology prescribed by legal act for the pollutant and facility concerned.	Description of Method
MAB	Mass balance method, which is accepted by competent authority.	Description of Method.

Example 1

ISO/EN – Standard Method from the approved PRTR EU Guidance list.
EN number is entered as the method code and Description field is left blank

No. Annex II	Name	M, C or E	Method Code	Designation or Description
17	Arsenic and compounds (as As)	M	I.S. EN 14385	
12	Total Nitrogen	M	EN ISO 11905- 1:1998	

Example 2

Method Codes – OTH and MAB - For non-EN/ISO method - analytical method is outlined in the Description field.

Annex II	Name	M/C/E	Method Code	Designation or Description
07	Non-methane volatile organic compounds (NMVOC)	C	MAB	Mass balance calculation.
08	Nitrogen oxides (NO _x /NO ₂)	M	OTH	Chemiluminescence/Non Dispersive Infrared
11	Sulphur oxides (SO _x /SO ₂)	M	OTH	Non Dispersive Infrared
34	Total Phosphorus	M	OTH	Standard Methods, 2005, 21st Edition, Method 4500-P D

Example 3

CRM Example - The facility is not using a ISO/CEN method. But is using an equivalent methodology that has been validated using certified reference materials. The method should be acceptable to the competent authority.

No. Annex II	Name	M/C/E	Method Code	Designation or Description
13	Total phosphorus	M	CRM	US EPA Std. Mtds. 4500-P E
76	Total organic carbon (TOC)	M	CRM	US EPA Std. Mtds. 5220 D

Example 4

Example of Use of Method Code PER – The license specifies use of a Specific Method. This is found mostly for the monitoring of **air emissions**. No specific example for water emissions.

Air Emission Example from an EPA Licence:

Parameter: Dioxin (as TEQ as specified in Schedule B of this Licence)

Monitoring Frequency: Annually

Method: U.S. EPA Method 23 or as updated by CEN standard



Screenshot from the PRTR Emissions Reporting Workbook

A1 = 4.2 RELEASES TO WATERS			
	A	B	C
1	4.2 RELEASES TO WATERS		PRTR# : P0009 F
2	8		17
3	SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS		Data on ambient
4	RELEASES TO WATERS		
5	POLLUTANT		
6			
7	No. Annex II	Name	M/C/E Method Code Designation of
8	17	Arsenic and compounds (as As)	M EN 14385:2004
9	13	Total phosphorus	M CRM US EPA Stan Methods 4500
10	ADD NEW ROW	DELETE ROW *	* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button
11			
12	SECTION B : REMAINING PRTR POLLUTANTS		
13	RELEASES TO WATERS		
14	POLLUTANT		
15			
16	No. Annex II	Name	M/C/E Method Code Designation of
17	54	Trichlorobenzenes (TCBs)(all isomers)	M EN ISO 15680:2003
18	ADD NEW ROW	DELETE ROW *	* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button
19			
20	SECTION C : REMAINING POLLUTANT EMISSIONS (as required in your Licence)		
21	RELEASES TO WATERS		
22	POLLUTANT		
23			
24	Pollutant No.	Name	Method Used Designation of
25	238	Ammonia (as N)	C 6TH APHA Standa for Water and
26	ADD NEW ROW	DELETE ROW *	* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button
27			
28			
29	PRINT THIS SHEET		
30			
31			

Method Code

M, C, E

Method Description

Releases to Waters

Releases to Wastewater or Sewer

Releases to Land

Treatment & Transfers of Waste

Ref. - NACE Codes

Ready

Sum=76

NUM

Start

Citrix ...

Micro...

Inbox...

My D...

PRTR...

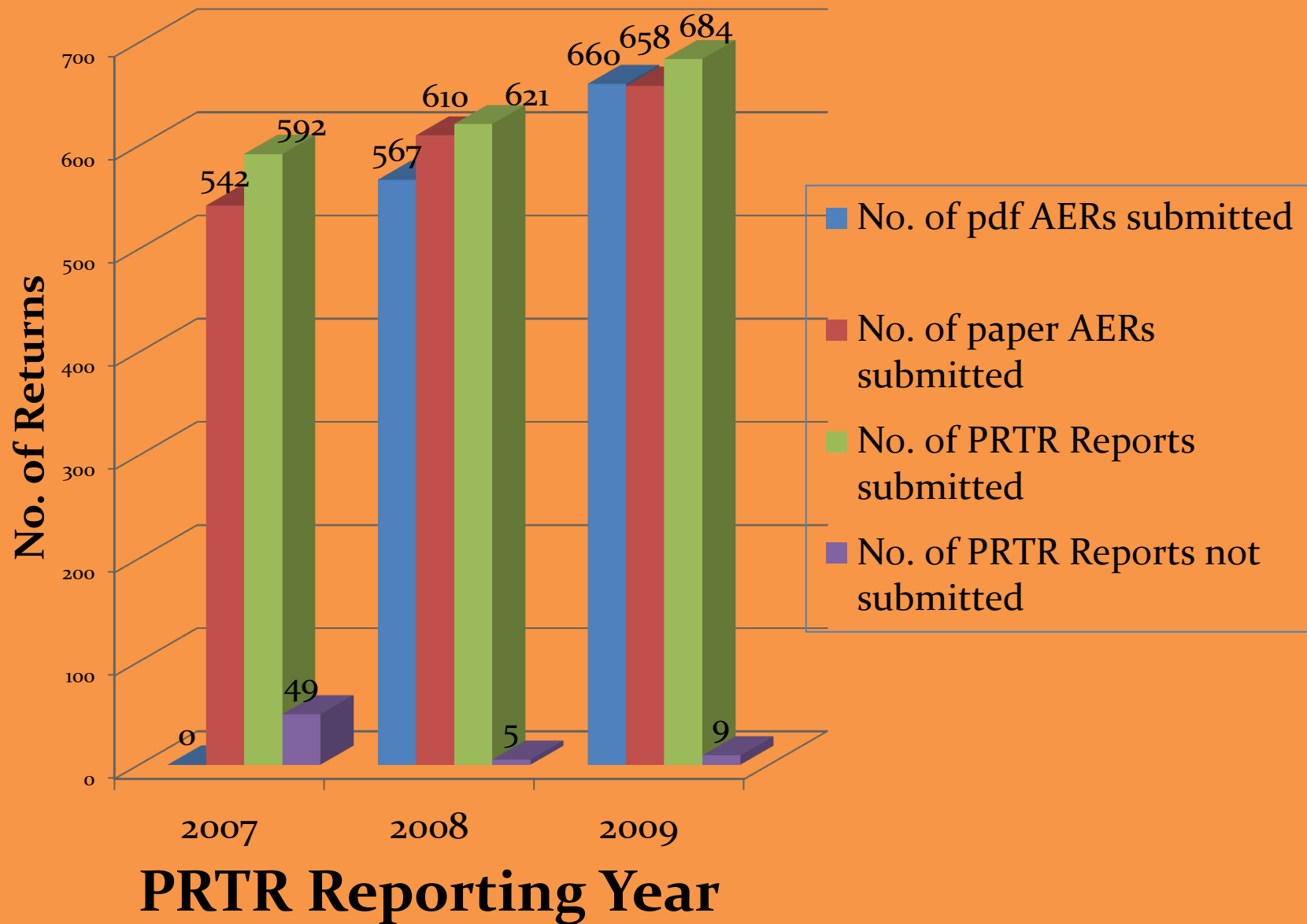
C:\Do...

Micro...

Docu...

16:18

AER/PRTR Reporting Update by Year – Dec 2010

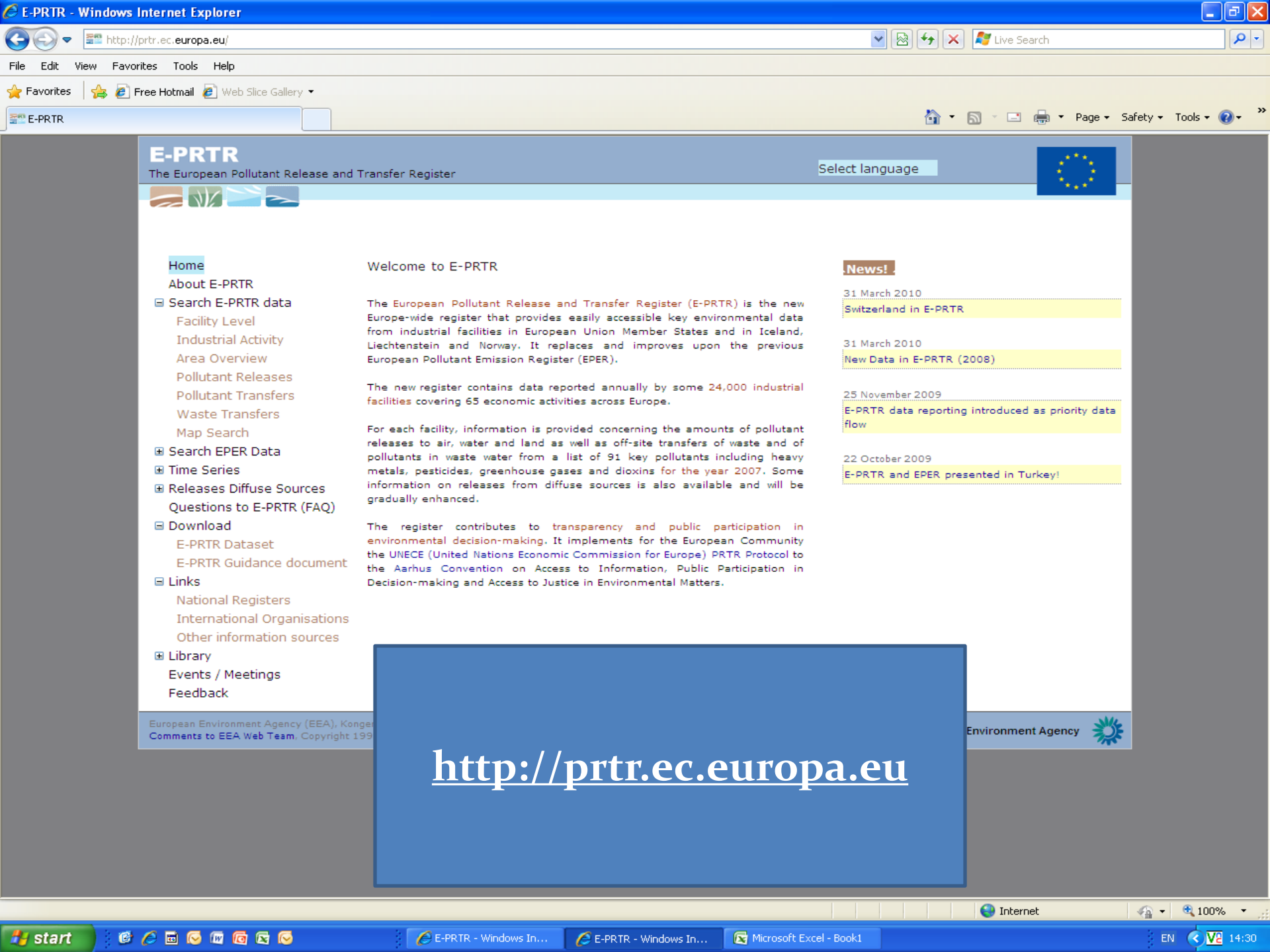


Some of the improvements to the PRTR Emissions Reporting Workbook for 2010

1. Addition of a **Prompt** for the selection of the **Method Code** - restrict the choice of Method Code to EN/ISO, OTH, ALT, PER, etc. Also updates to the linked Method Code Help sheet.
2. A new worksheet will be added to the workbook called **“Previous years data”** which will display all data entered for the previous year. The new data will be checked against previous year's data and a warning will come up if data has changed by +/- 50%.
3. **Reminder box** will prompt the use of the **correct units** for each Section of the Workbook.
4. **UWW Reporting** –the operator will use a **macro to populate the PRTR Emissions Reporting Workbook** (Emissions to Air and Water Sections) directly from the UWW Calculation Tool (V4).



Screenshots from the E_PRTR website



E-PRTR

The European Pollutant Release and Transfer Register

Select language



- Home
- About E-PRTR
- Search E-PRTR data
 - Facility Level
 - Industrial Activity
 - Area Overview
 - Pollutant Releases**
 - Pollutant Transfers
 - Waste Transfers
- Map Search
- Search EPER Data
- Time Series
- Releases Diffuse Sources
- Questions to E-PRTR (FAQ)
- Download
- Links
- Library
- Events / Meetings
- Feedback

Pollutant Releases

This report will display the aggregated releases of a specific pollutant.

Country: Ireland Year: 2008

☒ Region ☐ River basin district

Region: All regions

Pollutant releases

Pollutant Group: Heavy metals

Pollutant: Lead and compounds (as Pb)

Releases to: ☐ Air ☒ Water ☐ Soil

Activity: Not included Expand to include

Search

Irish
Facilities:
Lead
Emissions in
Water



E-PRTR

The European Pollutant Release and Transfer Register



R

Facility level / Pollutant releases

Previous year < 2008

Facility: Bunlicky Waste Water Treatment Plant
Address: Bunlicky Limerick City, -, Co. Limerick,
Country: Ireland
Year: 2008 (published: 18 October 2010)
Regulation: E-PRTR Regulation

All values are yearly releases.

[For information of pollutants click here.](#)

Releases to air

Nothing reported

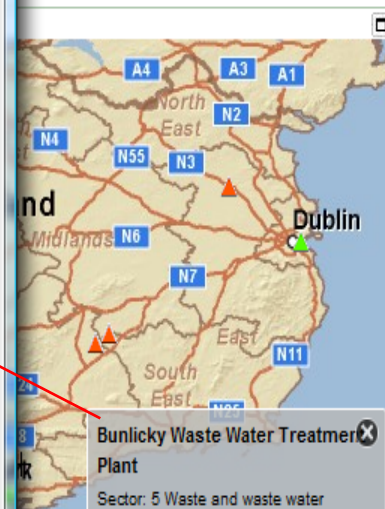
Releases to water

Pollutant name	Total	Accidental	Accidental %	Method	Method used	Confidentiality
Arsenic and compounds (as As)	19.1 kg	0	0 %	Estimated	EPA WWTP Tool V2.0	
Atrazine	1.35 kg	0	0 %	Estimated	EPA WWTP Tool V2.0	
Chlorides (as total Cl)	5,210 t	0	0 %	Estimated	EPA WWTP Tool V2.0	
Chloro-alkanes, C10-C13	4.39 kg	0	0 %	Estimated	EPA WWTP Tool V2.0	
Di-(2-ethyl hexyl) phthalate (DEHP)	26.2 kg	0	0 %	Estimated	EPA WWTP Tool V2.0	
Dieldrin	4.34 kg	0	0 %	Estimated	EPA WWTP Tool V2.0	
Diuron	1.97 kg	0	0 %	Estimated	EPA WWTP Tool V2.0	
Fluorides (as total F)	7.32 t	0	0 %	Estimated	EPA WWTP Tool V2.0	

Facility
Search Map
and details
on
pollutant
releases to
water

Contents:

[Details](#)
[Pollutant releases](#)
[Pollutant transfers](#)
[Waste transfers](#)
[Confidentiality](#)



Bunlicky Waste Water Treatment Plant
Sector: 5 Waste and waste water management
Address: Bunlicky Limerick City
City: Co. Limerick,
Postal Code: -
[Show facility details](#)

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Contents:

Development of a National PRTR website

- A National PRTR website will be developed in conjunction with the ratification of the PRTR Protocol by Ireland. This will probably take place in mid-2011.
- The website should display all Irish facilities which are covered by the PRTR Regulations
- It should provide details on pollutants and waste transfers that are above the E_PRTR thresholds.



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Zoom to County!

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Table Of Content

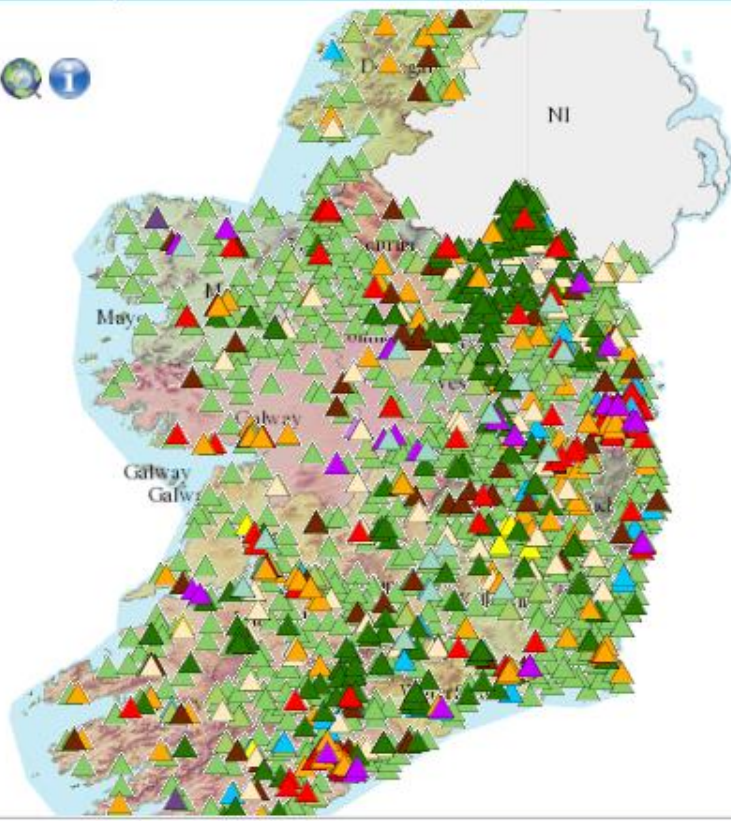
List of Current Layers

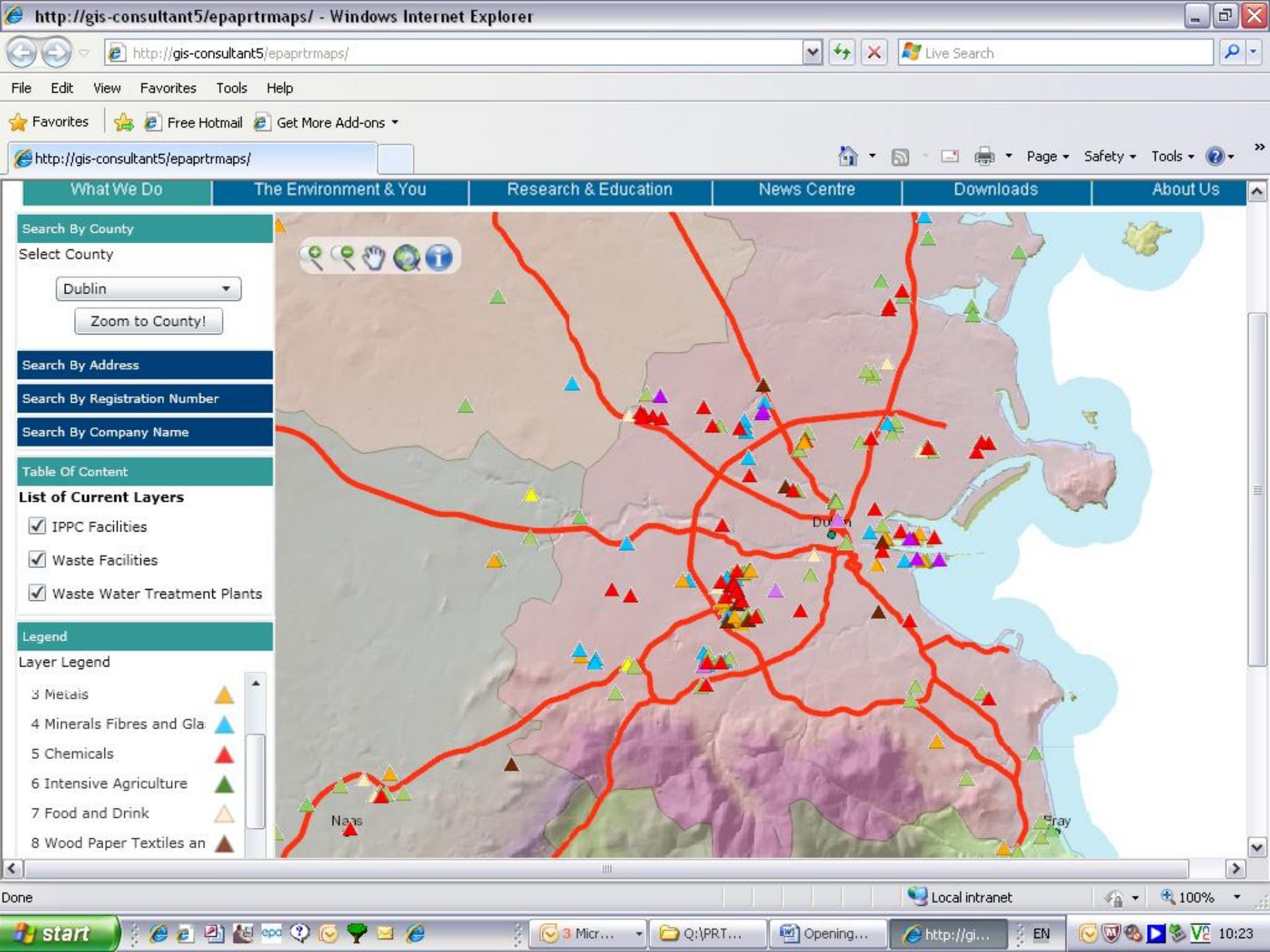
- ☒ IPPC Facilities
- ☒ Waste Facilities
- ☒ Waste Water Treatment Plants

Legend

Layer Legend

- 30 General
- 1 Mineral and Other Mate





Search by Company Name

Table Of Content

List of Current Layers

- ☐ IPPC Facilities
- ☐ Waste Facilities
- ☒ Waste Water Treatment Plants

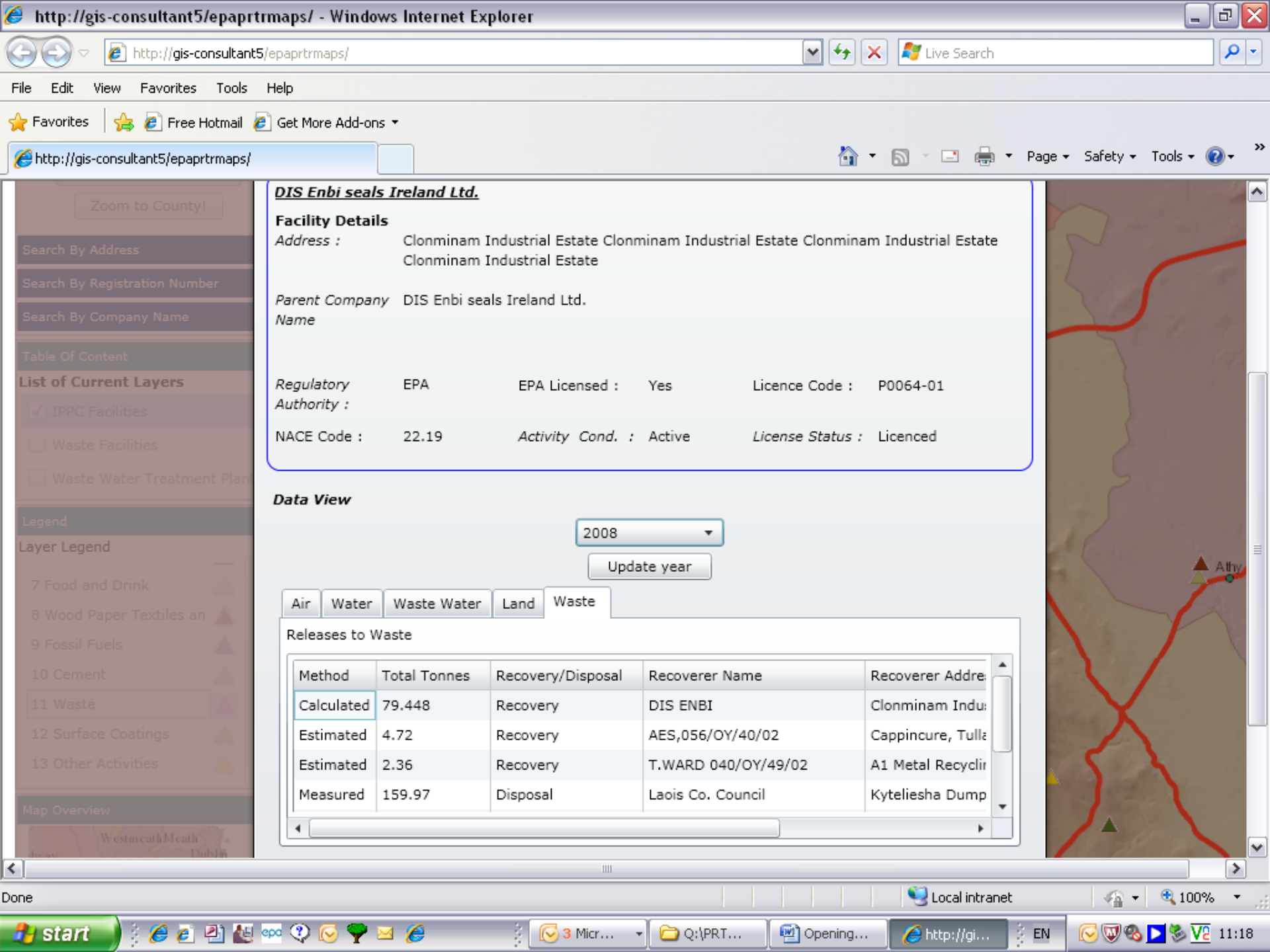
Legend

Layer Legend

- 30 General
- 1 Mineral and Other Mate
- 2 Energy
- 3 Metals
- 4 Minerals Fibres and Gla
- 5 Chemicals
- 6 Intensive Agriculture

Map Overview



[Zoom to County!](#)[Search By Address](#)[Search By Registration Number](#)[Search By Company Name](#)[Table Of Content](#)[List of Current Layers](#)☒ IPPC Facilities☐ Waste Facilities☐ Waste Water Treatment Plant[Legend](#)[Layer Legend](#)

7 Food and Drink

8 Wood Paper Textiles an

9 Fossil Fuels

10 Cement

11 Waste

12 Surface Coatings

13 Other Activities

[Map Overview](#)**DIS Enbi seals Ireland Ltd.****Facility Details**

Address : Clonminam Industrial Estate Clonminam Industrial Estate Clonminam Industrial Estate
Clonminam Industrial Estate

Parent Company Name DIS Enbi seals Ireland Ltd.

Regulatory Authority : EPA EPA Licensed : Yes Licence Code : P0064-01

NACE Code : 22.19 **Activity Cond. :** Active **License Status :** Licenced

Data View

2008 ▾

[Update year](#)[Air](#) [Water](#) [Waste Water](#) [Land](#) [Waste](#)**Releases to Waste**

Method	Total Tonnes	Recovery/Disposal	Recoverer Name	Recoverer Address
Calculated	79.448	Recovery	DIS ENBI	Clonminam Indu
Estimated	4.72	Recovery	AES,056/OY/40/02	Cappincure, Tulla
Estimated	2.36	Recovery	T.WARD 040/OY/49/02	A1 Metal Recyclin
Measured	159.97	Disposal	Laois Co. Council	Kyteliesha Dump

Final Points to Note

- *The EU Commission is reviewing the E_PRTR Regulations and are considering the lowering of thresholds for some of the pollutants which will mean that more facilities will have data that is reportable to Europe.*
- *The first cycle of triennial reporting (2007 to 2009) by Member States is required by the end of March 2011.*



Thank you