

Brief Usage Description of the Open PRTR SQLite Database



ENDA GmbH & Co. KG — Environmental Data Management Solutions

Matthias Lüttger
Marcus Fritsche



Berlin, 2014
Rev. 2, 2014-11-04

Table of Contents

1	Introduction.....	3
2	SQL Queries.....	3
2.1	Examples.....	3
2.1.1	Facilities and their main activities for the year 2010.....	3
2.1.2	Facilities and release of dioxine by media, business sector (of the main economic acitvity) for all years.....	4
2.1.3	Facilities of the chemical industrie with pollutant releases by media for all years (only main economic activities).....	4
2.1.4	Aggregation of pollutant flows from releases by media for all years.....	5
2.1.5	Aggregation of waste water transfers by business sectors for year 2009.....	5
2.1.6	Facilities with transfer of dangerous waste by main economic activities, inner/foreign country and reuse/disposal.....	6
2.1.7	Aggregation of dangerous waste by main economic activities for all years.....	6
2.1.8	Facilities with confidential activities and reasons for confidentiality in the year 2010.....	6
2.1.9	CO2 emission to air by facility for the years 2007-2010.....	7

This short description is published under the terms of the GNU Free Documentation License:

Permission is granted to copy, distribute and/or modify this document under the terms of the GNU Free Documentation License, Version 1.3 or any later version published by the Free Software Foundation; with no Invariant Sections, no Front-Cover Texts, and no Back-Cover Texts.

See <<http://www.gnu.org/copyleft/fdl.html>> for a copy of the complete license.

1 Introduction

The German Federal Environment Agency is pleased to provide the data of the Pollutant Release and Transfer Register, PRTR, as SQLite database. For the querying of the underlying SQLite database please cf. to the examples in the next section.

The database contains PRTR data of the reporting years 2007 upto 2012.

2 SQL Queries

2.1 Examples

2.1.1 Facilities and their main activities for the year 2010

```
SELECT
  b.administrative_number as "administrative number",
  b.year as year,
  b.name as "facility name",
  b.mailing_address as "mailing address",
  t.prtr_key as t_nr,
  t.prtr_description as activity,
  t.business_sector as business,
  case when t.main_activity then 'Yes' else 'No' end as "main activity",
  b.federal_state as "federal state"
FROM
  facilities b,
  activities t
WHERE
  b.id = t.facility_id
  AND t.main_activity = 1
  AND b.year = '2010'
GROUP BY t.business_sector, b.year, b.administrative_number;
```

2.1.2 Facilities and release of dioxine by media, business sector (of the main economic activity) for all years

```
SELECT
  b.administrative_number,
  b.name,
  b.mailing_address,
  b.wgs84_x,
  b.wgs84_y,
  t.business_sector,
  t.prtr_key as t_nr,
  t.prtr_description as activity,
  t.main_activity as "main activity",
  f.annual_load,
  f.annual_load_accident,
  f.determination_method,
  f.compartment as "environmental compartment",
  f.substance_name,
  f.year
FROM facilities b
JOIN releases f ON
b.id = f.facility_id
JOIN activities t ON b.id = t.facility_id AND t.main_activity = 1
WHERE f.substance_name = 'PCDD + PCDF (dioxins + furans) (as Teq)'
ORDER BY f.annual_load DESC;
```

2.1.3 Facilities of the chemical industrie with pollutant releases by media for all years (only main economic activities)

```
SELECT
  b.administrative_number as "administrative number",
  b.name as "facility name",
  b.mailing_address as "mailing address",
  t.business_sector as business,
  t.prtr_key as t_nr,
  t.prtr_description as activity,
  t.main_activity as "main activity",
  f.annual_load,
  f.annual_load_accident,
  f.determination_method,
  f.compartment as "environmental compartment",
  f.substance_name AS substance,
  b.year AS year
FROM facilities b
  JOIN releases f ON b.id = f.facility_id
  JOIN activities t ON b.id = t.facility_id
WHERE
  t.main_activity = 1 AND t.business_sector = 'Chemical industry';
```

2.1.4 Aggregation of pollutant flows from releases by media for all years

```
SELECT
  f.substance_name AS substance,
  f.year as year,
  sum(f.annual_load) as "annual load",
  f.compartment as compartment
FROM
  releases f
WHERE f.substance_name is not null
GROUP BY f.substance_name, f.year, f.compartment
ORDER BY "annual load" DESC;
```

2.1.5 Aggregation of waste water transfers by business sectors for year 2009

```
SELECT
  v.substance_name as substance,
  v.year as year,
  sum(v.annual_load) as "annual load",
  t.business_sector as business
FROM
  facilities b,
  activities t,
  wastewater_transfers v
WHERE
  b.id = v.facility_id
  AND b.id = t.facility_id
  AND t.main_activity = 1
  AND v.substance_name is not null
  AND b.year = 2009
GROUP BY v.substance_name, v.year, t.business_sector
ORDER BY "annual load" DESC;
```

2.1.6 Facilities with transfer of dangerous waste by main economic activities, inner/foreign country and reuse/disposal

```
SELECT
  b.administrative_number as "administrative number",
  b.name as name,
  b.mailing_address as "mailing address",
  t.business_sector as business,
  t.prtr_key as t_nr,
  t.prtr_description as description,
  t.main_activity as "main activity",
  va.quantity as quantity,
  case when va.hazardous then 'hazardous' else 'nonhazardous' end AS "waste type",
  case when va.foreign_country then 'outland' else 'inland' end AS "inland/outland",
  va.disposition as disposition,
  va.year AS year
FROM
  facilities b
JOIN waste_transfers va ON b.id = va.facility_id
  AND va.hazardous
JOIN activities t ON b.id = t.facility_id AND t.main_activity
  AND va.year = '2010'
ORDER BY quantity DESC;
```

2.1.7 Aggregation of dangerous waste by main economic activities for all years

```
SELECT
  av.year as year,
  t.business_sector as business,
  sum(av.quantity) as "amount of waste"
FROM
  facilities b,
  activities t,
  waste_transfers av
WHERE
  b.id = av.facility_id
  AND b.id = t.facility_id
  AND t.main_activity = 1
  AND av.hazardous = 1
GROUP BY av.year, t.business_sector
ORDER BY year DESC, "amount of waste" DESC;
```

2.1.8 Facilities with confidential activities and reasons for confidentiality in the year 2010

```
SELECT b.federal_state, b.administrative_number, b.name, b.nace_text, pdcc.reason as
"proprietary data, company confidential"
FROM facilities b
  JOIN activities t
    ON b.id = t.facility_id
  JOIN activities_pdcc pdcc
    ON t.id = pdcc.activity_id
WHERE b.year = 2010;
```

2.1.9 CO₂ emission to air by facility for the years 2007-2010

```
SELECT b2007.administrative_number "administrative number", b2007.name "name (refers to 2007)", b2010.name "name (refers to 2010)", b2007.mailing_address "mailing address",
       f2007.annual_load || ' kg/a' "annual load 2007",
       f2008.annual_load || ' kg/a' "annual load 2008",
       f2009.annual_load || ' kg/a' "annual load 2009",
       f2010.annual_load || ' kg/a' "annual load 2010"
FROM facilities b2007, facilities b2008, facilities b2009, facilities b2010
LEFT JOIN releases f2007
    ON f2007.facility_id = b2007.id
    AND f2007.substance_name = 'Carbon dioxide (CO2)' AND f2007.compartment = 'Air'
LEFT JOIN releases f2008
    ON f2008.facility_id = b2008.id
    AND f2008.substance_name = 'Carbon dioxide (CO2)' AND f2008.compartment = 'Air'
LEFT JOIN releases f2009
    ON f2009.facility_id = b2009.id
    AND f2009.substance_name = 'Carbon dioxide (CO2)' AND f2009.compartment = 'Air'
LEFT JOIN releases f2010 ON f2010.facility_id = b2010.id
    AND f2010.substance_name = 'Carbon dioxide (CO2)' AND f2010.compartment = 'Air'
WHERE b2007.year = 2007 AND b2008.year = 2008 AND b2009.year = 2009 AND b2010.year = 2010
    AND (b2007.administrative_number = b2008.administrative_number OR b2008.predecessor_id = b2007.id)
    AND (b2008.administrative_number = b2009.administrative_number OR b2009.predecessor_id = b2008.id)
    AND (b2009.administrative_number = b2010.administrative_number OR b2010.predecessor_id = b2009.id)
    AND (f2007.id IS NOT NULL
        OR f2008.id IS NOT NULL
        OR f2009.id IS NOT NULL
        OR f2010.id IS NOT NULL)
ORDER BY b2007.name, b2007.administrative_number;
```