

## Appendix 2.1 - Reporting of PM emissions

The condensable fraction of particulate matter (PM<sub>2.5</sub>) is documented for all activities in the emissions database. A documentation entry has been created for each time series, indicating the following options for condensable particulate matter:

- Yes (measured/determined), the condensable fraction of PM<sub>2.5</sub> was measured and is included in the emission values
- No, the condensable fraction has not been determined and is not included in the emission values
- NA (no condensable PM<sub>2.5</sub> is generated in the process)
- Unknown, the condensable fraction for PM<sub>2.5</sub> is unknown and could be zero

Below is an excerpt from the database, showing the aforementioned documentation entries by source category.



NFR categories with no reported activity or PM<sub>2.5</sub> emissions are excluded here.

| NFR Source Category |  | Yes                   | Not Applicable  | No                     | Unknown | Number of document entries |     |
|---------------------|--|-----------------------|---|------------------------|---------|----------------------------|-----|
|                     |  | (measured/determined) | (no condensable PM <sub>2.5</sub> are generated in the process) | (potentially possible) |         |                            |     |
| NFR 1 Energy        |  |                       |   |                        |         |                            |     |
| 1 A 1 a i           | Electricity Generation                                       | -                     | -   | 113                    | -       | -                          | 113 |
| 1 A 1 a iii         | Heat Plants  | -                     | -   | 38                     | -       | -                          | 38  |
| 1 A 1 b             | Petroleum Refining   | -                     | -   | 31                     | -       | -                          | 31  |
| 1 A 1 c i           | Manufacture of Solid Fuels                                   | -                     | -   | 34                     | -       | -                          | 34  |
| 1 A 1 c iii         | Other Energy Industries                                      | -                     | -   | 3                      | -       | -                          | 3   |
| 1 A 1 c iv          | Other Manufacture of Solid Fuels and Other Energy Industries | -                     | -   | 13                     | -       | -                          | 13  |
| 1 A 2 a             | Iron and Steel   | -                     | -   | 21                     | -       | -                          | 21  |
| 1 A 2 g vii         | Off-road Vehicles and Other Machinery                        | 4                     | -   | -                      | -       | -                          | 4   |
| 1 A 2 g viii        | Other  | -                     | -   | 104                    | -       | -                          | 104 |
| 1 A 3 a i (i)       | International Aviation LTO (civil)                           | -                     | -   | -                      | 2       | -                          | 2   |
| 1 A 3 a i (ii)      | International Aviation Cruise (civil)                        | -                     | -   | -                      | 2       | -                          | 2   |
| 1 A 3 a ii (i)      | Domestic Aviation LTO (civil)                                | -                     | -   | -                      | 2       | -                          | 2   |
| 1 A 3 a ii (ii)     | Domestic Aviation Cruise (civil)                             | -                     | -   | -                      | 2       | -                          | 2   |
| 1 A 3 b i           | Road Transport: Passenger Cars                               | 154                   | -   | -                      | -       | -                          | 154 |
| 1 A 3 b ii          | Road Transport: Light duty vehicles                          | 138                   | -   | -                      | -       | -                          | 138 |
| 1 A 3 b iii         | Road Transport: Heavy duty vehicles and buses                | 136                   | -   | -                      | -       | -                          | 136 |

|                     |  |    |    |    |    |   |    |
|---------------------|--|----|----|----|----|---|----|
| 1 A 3<br>b iv       | Road Transport: Mopeds and Motorcycles                               | 56 | -  | -  | -  | - | 56 |
| 1 A 3<br>b vi       | Road Transport: Automobile tyre and brake wear                       | -  | 12 | -  | -  | - | 12 |
| 1 A 3<br>b vii      | Road Transport: Automobile road abrasion                             | -  | 6  | -  | -  | - | 6  |
| 1 A 3<br>c          | Rail Transport   | 11 | -  | 1  | -  | - | 12 |
| 1 A 3<br>d i (i)    | International Maritime Navigation                                    | -  | -  | -  | 3  | - | 3  |
| 1 A 3<br>d ii       | National Navigation (shipping)                                       | 8  | -  | 1  | 1  | - | 10 |
| 1 A 3<br>e i        | Pipeline Transport   | -  | -  | 3  | -  | - | 3  |
| 1 A 4<br>a i        | Commercial/Institutional: Stationary                                 | -  | -  | 29 | -  | - | 29 |
| 1 A 4<br>a ii       | Commercial/Institutional: Mobile                                     | 3  | -  | -  | -  | - | 3  |
| 1 A 4<br>b i        | Residential: Stationary  | -  | -  | 15 | -  | - | 15 |
| 1 A 4<br>b ii       | Residential: Household and Gardening (mobile)                        | -  | -  | 4  | 4  | - | 8  |
| 1 A 4<br>c i        | Agriculture/Forestry/Fishing: Stationary                             | -  | -  | 16 | -  | - | 16 |
| 1 A 4<br>c ii       | Agriculture/Forestry/Fishing: Off-road Vehicles and other Machinery  | 6  | -  | -  | -  | - | 6  |
| 1 A 4<br>c iii      | Agriculture/Forestry/Fishing: National Fishing                       | -  | -  | -  | 4  | - | 4  |
| 1 A 5<br>a          | Other Stationary (including military)                                | -  | -  | 10 | -  | - | 10 |
| 1 A 5<br>b          | Other Mobile (including military, land based and recreational boats) | -  | -  | 9  | 1  | - | 10 |
| 1 B 1<br>a 2 i      | Mining Activities  | -  | 1  | -  | -  | - | 1  |
| 1 B 1<br>b          | Solid Fuel Transformation  | -  | 6  | 2  | -  | - | 8  |
| 1 B 2<br>c 2 ii     | Gas  | -  | -  | 1  | -  | - | 1  |
| <b>NFR 2 - IPPU</b> |  |    |    |    |    |   |    |
| 2 A 1               | Cement Production  | -  | -  | 1  | -  | - | 1  |
| 2 A 2               | Lime Production  | -  | -  | -  | 2  | - | 2  |
| 2 A 3               | Glass Production   | 6  | -  | -  | -  | - | 6  |
| 2 A 4<br>a          | Ceramics   | -  | -  | -  | 15 | - | 15 |
| 2 A 5<br>a          | Quarrying and Mining of Minerals other than Coal                     | -  | 4  | -  | -  | - | 4  |
| 2 A 5<br>b          | Construction and Demolition  | -  | 5  | -  | -  | - | 5  |
| 2 B 5<br>b          | Calcium Carbide  | -  | -  | -  | 1  | - | 1  |
| 2 B 8 f             | Carbon Black   | -  | -  | -  | 1  | - | 1  |
| 2 B 10<br>a         | Chemical Industry: Other   | -  | -  | -  | 1  | - | 1  |
| 2 C 1<br>a          | Steel  | -  | -  | -  | 4  | - | 4  |
| 2 C 1<br>b          | Pig Iron   | -  | -  | -  | 1  | - | 1  |
| 2 C 1<br>d          | Sinter   | -  | -  | -  | 1  | - | 1  |
| 2 C 1 f             | Other Iron and Steel Production                                      | -  | -  | -  | 1  | - | 1  |
| 2 C 2               | Ferroalloys Production   | -  | -  | -  | 1  | - | 1  |

|                                 |  |   |               |            |            |              |    |
|---------------------------------|--|---|---------------|------------|------------|--------------|----|
| 2 C 3<br>a                      | By-Product Emissions   | - | -             | -          | 2          | -            | 2  |
| 2 C 5                           | Lead Production  | - | -             | -          | 2          | -            | 2  |
| 2 C 6                           | Zinc Production  | - | -             | -          | 2          | -            | 2  |
| 2 C 7<br>a                      | Copper Production  | - | -             | -          | 2          | -            | 2  |
| 2 C 7<br>c                      | Other Metal Production   | - | -             | -          | 1          | -            | 1  |
| 2 D 3<br>b                      | Road Paving with Asphalt   | - | -             | -          | 1          | -            | 1  |
| 2 G 4                           | Further Product Manufacture and Use  | 3 | -             | -          | 1          | -            | 4  |
| 2 H 1                           | Pulp and Paper Industry  | - | -             | 2          | -          | -            | 2  |
| 2 H 2                           | Food and Beverages Industry  | - | -             | -          | 2          | -            | 2  |
| 2 I                             | Wood Processing  | - | 1             | -          | -          | -            | 1  |
| 2 L                             | Handling of Bulk Products  | - | 1             | -          | 89         | -            | 90 |
| <b>NFR 3 - Agriculture</b>      |  |   |               |            |            |              |    |
| 3 B 1<br>a                      | Dairy Cattle   | - | 1             | -          | -          | -            | 1  |
| 3 B 1<br>b                      | Non-dairy Cattle   | - | 6             | -          | -          | -            | 6  |
| 3 B 2                           | Sheep  | - | 1             | -          | -          | -            | 1  |
| 3 B 3                           | Swine  | - | 4             | -          | -          | -            | 4  |
| 3 B 4<br>c                      | Deer   | - | 1             | -          | -          | -            | 1  |
| 3 B 4<br>d                      | Goats  | - | 1             | -          | -          | -            | 1  |
| 3 B 4<br>e                      | Horses   | - | 1             | -          | -          | -            | 1  |
| 3 B 4<br>g i                    | Laying Hens  | - | 1             | -          | -          | -            | 1  |
| 3 B 4<br>g ii                   | Broilers   | - | 1             | -          | -          | -            | 1  |
| 3 B 4<br>g iii                  | Turkeys  | - | 1             | -          | -          | -            | 1  |
| 3 B 4<br>g iv                   | Other Poultry  | - | 3             | -          | -          | -            | 3  |
| 3 B 4<br>h                      | Other Animals  | - | 3             | -          | -          | -            | 3  |
| 3 D 3                           | Farm-level Agricultural Operations incl. Storage, Handling and Transport of Agri. Products | - | 1             | -          | -          | -            | 1  |
| <b>NFR 5 - Waste</b>            |  |   |               |            |            |              |    |
| 5 A 1                           | Managed Waste Disposal Sites   | - | 1             | -          | -          | -            | 1  |
| 5 C 1<br>a ii 5                 | Other Waste  | - | -             | 1          | -          | -            | 1  |
| 5 C 2<br>a ii                   | Other Biogenic Waste   | - | -             | -          | 1          | -            | 1  |
| 5 E                             | Other Waste  | - | -             | -          | 6          | -            | 6  |
| <b>NFR 11 - Natural Sources</b> |  |   |               |            |            |              |    |
| 11 B                            | Forest Fires   | - | -             | -          | 1          | -            | 1  |
| <b>SUM</b>                      |  |   | <b>525 62</b> | <b>452</b> | <b>159</b> | <b>1.198</b> |    |