## **Appendix 2.1 - Reporting of PM emissions**

Table A2.1: Inclusion/exclusion of the condensable component from PM,,10,, and PM,,2.5,, emission factors (NOTE: NFR categories with no reported activity or PM emissions (notation keys 'NO' or 'NA' in the NFR tables) are excluded here!)

| = NFR code          | = Source / sector name   |                   |            |         | = condensable<br>component<br>= excluded |        | = EF reference and/or comments       = |  |      |           |
|---------------------|--|-------------------|------------|---------|--|--------|--|--|------|-----------|
| =                   | =  |                   | = included |         |  |        |  |  |      | $\square$ |
| < NFR 1 -<br>Energy |  |                   |            |         |  |        |  |  |      |           |
| < 1.A.1.a           | Public electricity and heat<br>production  |                   | =          |         | = ##green                                | n x ## |  | <  |      |           |
| < 1.A.1.b           | < Petroleum refining   |                   | =          | :       | = ##green                                | X 7    | ##                                     | <  |      |           |
| < 1.A.1.c           | < Manufacture of solid fuels and other energy industries   |                   | =          |         | = ##green                                | x ##   |  | <  | <    |           |
| < 1.A.2.a           | <ul> <li>Stationary combustion in<br/>manufacturing industries and<br/>construction: Iron and steel</li> </ul>                             |                   | =          |         | = ##green                                | X Ŧ    | ##                                     | <  | <    |           |
| < 1.A.2.b           |  | nbustion in manut |            | :       | = ##red ?## < no i                       |        | < no indication                        |  |      |           |
| < 1.A.2.c           | < Stationary combustion in<br>manufacturing industries and<br>construction: Chemicals  |                   | =          | :       | =  | <      |  |  |      |           |
| < 1.A.2.d           | < Stationary combustion in<br>manufacturing industries and<br>construction: Pulp, Paper and<br>Print                                       |                   | =          | :       | =  | <      |  |  |      |           |
| < 1.A.2.e           | <ul> <li>Stationary combustion in<br/>manufacturing industries and<br/>construction: Food processing,<br/>beverages and tobacco</li> </ul> |                   | =          | :       | = ##green                                | X Ŧ    | ##                                     | <  |      |           |
| < 1.A.2.f           | < Stationary combustion in<br>manufacturing industries and<br>construction: Non-metallic<br>minerals                                       |                   | =          | :       | = <                                      |        |  |  |      |           |
| < 1.A.2.g vii       | < Mobile combustion in<br>manufacturing industries and<br>construction (please specify in<br>the IIR)                                      |                   | = ##orange | x^      | ^1^^##                                   |        |  | < country-specific<br>likely to include<br>condensables    | EF   |           |
| < 1.A.2.g viii      | <ul> <li>Stationary combustion in<br/>manufacturing industries and<br/>construction: Other (please<br/>specify in the IIR)</li> </ul>      |                   | =          | :       | = ##green                                | X Ŧ    | ##                                     | <  |      |           |
| < 1.A.3.a i(i)      | < International aviation LTO (civil  |                   | )          | :       | = ##red                                  | ?#     | #                                      | < country-specific<br>without clear<br>indication          | EF   |           |
| < 1.A.3.a ii(i)     | < Domestic aviation LTO (civil)  |                   |            | :       | = ##red                                  | ?#     | #                                      | < country-specific<br>without clear<br>indication          | : EF |           |
| < 1.A.3.b i         | < Road transport: Passenger cars   |                   | = ##orange | x^      | ^1^^##                                   |        |  | < country-specific<br>likely to include<br>condensables    | EF   |           |
| < 1.A.3.b ii        | < Road transport: Light duty vehicles  |                   | = ##orange | x^      | ^^1^^##                                  |        |  | < country-specific<br>likely to include<br>condensables    |      |           |
| < 1.A.3.b iii       | < Road transport: Heavy duty vehicles and buses  |                   | = ##orange | x^      | ^^ <b>1</b> ^^##                         |        |  | < country-specific EF<br>likely to include<br>condensables |      |           |
| < 1.A.3.b iv        | < Road transport: Mopeds & motorcycles   |                   | = ##orange | x^      | ^^1^^##                                  |        |  | < country-specific EF<br>likely to include<br>condensables |      |           |
| < 1.A.3.b v         | < Road transpor  | t: Gasoline evapo | ration     | ·<br> : | = NA                                     | -1     | <                                      |  |      | m         |

| < 1.A.3.b vi      | < Road transport: Automobile tyre and brake wear                            | =          | = ##green  | x ##   | <  |
|-------------------|---|------------|------------|--|--|
| < 1.A.3.b vii     | < Road transport: Automobile<br>road abrasion =                             |            | = ##green  | x ##   | <  |
| < 1.A.3.c         | < Railways  | = ##orange | x^^1^^##   |  | < country-specific EF<br>likely to include<br>condensables         |
| < 1.A.3.d i(ii)   | < International inland waterways  |            | = IE       | < included   | l in NFR 1.A.3.d ii  |
| < 1.A.3.d ii      | < National navigation (shipping)  | = ##green  | x^^1^^##   |  | < country-specific EF<br>likely to include<br>condensables         |
| < 1.A.3.e i       | < Pipeline transport  | =          | = ##green  | x ##   | <  |
| <1442i            | < Commercial/Institutional:   | _          | _ ##aroop  |  | <  |
| < 1.A.4.a i       | Stationary  | =          | = ##green  | x ##   |  |
| < 1.A.4.a ii      | < Commercial/Institutional:<br>Mobile                                       | = ##orange | x^^1^^##   |  | < country-specific EF<br>likely to include<br>condensables         |
| < 1.A.4.b i       | < Residential: Stationary   | =          | = ##green  | x ##   | <  |
| < 1.A.4.b ii      | < Residential: Household and gar  | e) = ##red | ?##        | < country-specific EF<br>without clear<br>indication       |  |
| < 1.A.4.c i       | < Agriculture/Forestry/Fishing:<br>Stationary                               | =          | = ##green  | x ##   | <  |
| < 1.A.4.c ii      | < Agriculture/Forestry/Fishing:<br>Off-road vehicles and other<br>machinery | = ##orange | x^^1^^##   |  | <pre>&lt; country-specific EF likely to include condensables</pre> |
| < 1.A.4.c iii     | < Agriculture/Forestry/Fishing: Na  | = ##red    | ?##        | < country-specific EF<br>without clear<br>indication       |  |
| < 1.A.5.a         | < Other stationary (including military)                                     | =          | = ##green  | x ##   | <  |
| < 1.A.5.b         | < Other, Mobile (including military, land based and recreational boats)     | x^^1^^##   |            | < country-specific EF<br>likely to include<br>condensables |  |
| < 1.B.1.a         | < Fugitive emission from solid<br>fuels: Coal mining and handling =         |            | = ##green  | x ##   | <  |
| < 1.B.1.b         | < Fugitive emission from solid<br>fuels: Solid fuel transformation =        |            | = ##green  | x ##   | <  |
| < 1.B.2.c         | < Venting and flaring (oil, gas, con<br>gas)                                | = ##red    | ?##        | < EMEP GB 2016 EF<br>without any<br>indication             |  |
| < NFR 2 -<br>IPPU |   |            |            |  |  |
| < 2.A.1           | < Cement production   | = ##red    | ?##        | < country-specific EF<br>without any<br>indication         |  |
| < 2.A.2           | < Lime production   | = ##red    | ?##        | < country-specific EF<br>without any<br>indication         |  |
| < 2.A.3           | < Glass production  | = ##red    | ?##        | <pre>&lt; country-specific EF without any indication</pre> |  |
| < 2.A.5.a         | < Quarrying and mining of minera<br>coal                                    | = ##red    | ?##        | < EMEP GB 2016 EF<br>without any<br>indication             |  |
| < 2.A.5.b         | < Construction and demolition   | = ##red    | ?##        | < EMEP GB 2016 EF<br>without any<br>indication             |  |
| < 2.A.5.c         | < Storage, handling and transport<br>products                               | = IE       | < included | l in NFR 2.L   |  |
| < 2.A.6           | < Other mineral products (please<br>IIR)                                    | = ##red    | ?##        | < country-specific EF<br>without any<br>indication         |  |

| < 2.B.3    | < Adipic acid production   | = NE   | < no EF in El | MEP GB 2019   |  |
|------------|--|--|---------------|---|--|
| < 2.B.5    | < Carbide production   | = ##red  | ?##           | < country-specific EF<br>without any<br>indication                            |  |
| < 2.B.7    | < Soda ash production  | = ##red  | ?##           | < country-specific EF<br>without any<br>indication                            |  |
| < 2.B.10.a | < Chemical industry: Other (please specify in the IIR)                             | = ##red  | ?##           | < carbon black:<br>country-specific EF<br>without any<br>indication           |  |
| < 2.B.10.a | < Chemical industry: Other (please specify in the IIR)                             | = ##red  | ?##           | < fertilizer<br>production: country-<br>specific EF without<br>any indication |  |
| < 2.B.10.b | < Storage, handling and transport of chemical products (please specify in the IIR) | = IE   | < included ir | NFR 2.L   |  |
| < 2.C.1    | < Iron and steel production  | = ##red  | ?##           | < country-specific EF<br>without any<br>indication                            |  |
| < 2.C.2    | < Ferroalloys production   | = ##red  | ?##           | < country-specific EF<br>without any<br>indication                            |  |
| < 2.C.3    | < Aluminium production   | = ##red  | ?##           | < country-specific EF<br>without any<br>indication                            |  |
| < 2.C.4    | < Magnesium production   | = NE<br>production; e<br>secondary m<br>production al<br>1.A.2.b |               | emission for<br>lagnesium   |  |
| < 2.C.5    | < Lead production  | = ##red  | ?##           | < country-specific EF<br>without any<br>indication                            |  |
| < 2.C.6    | < Zinc production  | = ##red  | ?##           | < country-specific EF<br>without any<br>indication                            |  |
| < 2.C.7.a  | < Copper production  | = ##red  | ?##           | < country-specific EF<br>without any<br>indication                            |  |
| < 2.C.7.c  | < Other metal production (please specify in the IIR)                               | = ##red  | ?##           | < no indication   |  |
| < 2.C.7.d  | < Storage, handling and transport of metal products (please specify in the IIR)    | = IE   | < included ir | NFR 2.L   |  |
| < 2.D.3.b  | < Road paving with asphalt   | = ##red  | ?##           | < country-specific EF<br>without any<br>indication                            |  |
| < 2.G      | < Other product use: Tobacco   | = ##red  | ?##           | < country-specific EF<br>without any<br>indication                            |  |
| < 2.G      | < Other product use: Fireworks   | = ##red  | ?##           | < EMEP GB 2019 EF<br>without any<br>indication                                |  |
| < 2.G      | < Other product use: Charcoal  | = ##red  | ?##           | < EF from 1.A.4 EMEP<br>GB 2019 EF without<br>any indication                  |  |
| < 2.H.1    | < Pulp and paper industry  | = ##red  | ?##           | < country-specific EF<br>without any<br>indication                            |  |
| < 2.H.2    | < Food and beverages industry  | = ##red  | ?##           | < EMEP GB 2016 EF<br>without any<br>indication                                |  |

| < 2.1                    | < Wood processing   |   | = ##red     | ?##                   | < country-specific<br>without any<br>indication | EF  |      |
|--------------------------|---|---|-------------|-----------------------|---|---|------|
| < 2.J                    | < Produ superscript   |   | superscript | ction of PO           | Ps  | =   | = NE |
| < 2.L                    | < Other production, consumption, storage,<br>transportation or handling of bulk products<br>(please specify in the IIR) |   | = ?         | < countr<br>any indic | y-specific EF without cation                    |   |      |
| < NFR 3 -<br>Agriculture |   |   |             |                       |   |   |      |
| < 3.B.1.a                | < Manure management - Dairy cattle  |   |             | = ##red               | ?##   | < EMEP GB 2016 E<br>without any<br>indication   |      |
| < 3.B.1.b                | < Manure manag  | < Manure management - Non-dairy cattle                          |             |                       | ?##   | < EMEP GB 2016 E<br>without any<br>indication   | F    |
| < 3.B.2                  | < Manure manag  | < Manure management - Sheep                                     |             |                       | ?##   | < EMEP GB 2016 E<br>without any<br>indication   | F    |
| < 3.B.3                  | < Manure management - Swine   |   |             | = ##red               | ?##   | < EMEP GB 2016 E<br>without any<br>indication   | EF   |
| < 3.B.4.a                | < Manure manag  | gement - Buffalo  |             | = IE                  | < EMEP<br>any indic                             | GB 2016 EF without                              |      |
| < 3.B.4.d                | < Manure management - Goats   |   |             | = ##red               | ?##   | < EMEP GB 2016 E<br>without any<br>indication   | ĒF   |
| < 3.B.4.e                | < Manure management - Horses  |   |             | = ##red               | ?##   | < EMEP GB 2016 E<br>without any<br>indication   | EF   |
| < 3.B.4.f                | < Manure management - Mules and asses   |   | = IE        | < EMEP<br>any indic   | GB 2016 EF without                              |   |      |
| < 3.B.4.g i              | < Manure management - Laying hens   |   |             | = ##red               | ?##   | < EMEP GB 2016 E<br>without any<br>indication   | EF   |
| < 3.B.4.g ii             | < Manure management - Broilers  |   |             | = ##red               | ?##   | < EMEP GB 2016 E<br>without any<br>indication   | EF   |
| < 3.B.4.g iii            | < Manure management - Turkeys   |   |             | = ##red               | ?##   | < EMEP GB 2016 E<br>without any<br>indication   | EF   |
| < 3.B.4.g iv             | < Manure management - Other poultry   |   |             | = ##red               | ?##   | < EMEP GB 2016 E<br>without any<br>indication   | EF   |
| < 3.B.4.h                |   | < Manure management - Other animals (please specify in the IIR) |             |                       | < EMEP<br>any indic                             | GB 2016 EF without cation                       |      |
| < 3.D.c                  | < Farm-level agricultural operations including<br>storage, handling and transport of agricultural<br>products           |   | = ##red     | ?##                   | < EMEP GB 2016 E<br>without any<br>indication   | ĒF  |      |
| < NFR 5 -<br>Waste       |   |   |             |                       |   |   |      |
| < 5.A                    | < Biological Treatment of Waste - Solid Waste<br>Disposal on Land   |   |             | = ##red               | ?##   | < EMEP-GB 2019:<br>without any<br>indication    |      |
| < 5.C.1.b v              | < Cremation   |   |             | = ##red               | ?##   | < country-specific<br>without any<br>indication |      |
| < 5.E.2                  | < Other Waste: Building and Car Fires   |   |             | = ##red               | ?##   | < EMEP GB 2016 E<br>without any<br>indication   | EF   |

| appendix2.1-pm-   | reporting                           |                     |      |         |     | 5/5  |
|---|-------------------------------------|---------------------|------|---------|-----|--|
| < MEMO<br>ITEMS - NOT<br>TO BE<br>INCLUDED IN<br>NATIONAL<br>TOTALS |                                     |                     |      |         |     |  |
| < 1.A.3.a i(ii)   | < International a                   | viation cruise (civ | /il) | = ##red | ?## | < country-specific EF<br>without clear<br>indication |
| < 1.A.3.a ii(ii)  | < Domestic aviation cruise (civil)  |                     |      | = ##red | ?## | < country-specific EF<br>without clear<br>indication |
| < 1.A.3.d i(i)  | < International maritime navigation |                     |      | = ##red | ?## | < country-specific EF<br>without clear<br>indication |
| < 1.A.5.c   | < Multilateral op                   | erations            |      | = NE    | <   |  |
| < 11.B  | < Forest fires                      |                     |      | = ##red | ?## | < EMEP GB 2016 EF<br>without any<br>indication       |
| 1   |                                     |                     |      |         |     |  |