***Changes to legislation:** There are currently no known outstanding effects for the Commission Regulation (EU) No 601/2012 (repealed), Division 2.. (See end of Document for details)*

ANNEX IV

Activity-specific monitoring methodologies related to installations (Article 20(2))

2. Refining of Mineral Oil as Listed in Annex I to Directive 2003/87/EC

A. *Scope*

The operator shall monitor and report all CO_2 emissions from combustion and production processes as occurring in refineries.

The operator shall include at least the following potential sources of CO_2 emissions: boilers, process heaters/treaters, internal combustion engines/turbines, catalytic and thermal oxidisers, coke calcining kilns, firewater pumps, emergency/standby generators, flares, incinerators, crackers, hydrogen production units, Claus process units, catalyst regeneration (from catalytic cracking and other catalytic processes) and cokers (flexi-coking, delayed coking).

B. *Specific monitoring rules*

The monitoring of mineral oil refining activities shall be carried out in accordance with section 1 of this Annex for combustion emissions including flue gas scrubbing. The operator may choose to use the mass balance methodology in accordance with Article 25 for the whole refinery or individual process units such as heavy oil gasification or calcinations plants. Where combinations of standard methodology and mass balance are used, the operator shall provide evidence to the competent authority demonstrating the completeness of emissions covered, and that no double counting of emissions occurs.

By way of derogation from Article 24 and 25, emissions from catalytic cracker regeneration, other catalyst regeneration and flexi-cokers shall be monitored using a mass balance, taking into account the state of the input air and the flue gas. All CO in the flue gas shall be accounted for as CO_2, applying the mass relation: t CO_2 = t CO * 1,571. The analysis of input air and flue gases and the choice of tiers shall be in accordance with the provisions of Articles 32 to 35. The specific calculation methodology shall be approved by the competent authority.

By way of derogation from Article 24, emissions from hydrogen production shall be calculated as activity data (expressed as tonnes of hydrocarbon feed) multiplied by the emission factor (expressed as t CO_2/t feed). The following tiers are defined for the emission factor:

Tier 1	:	The operator shall use a reference value of 2,9 t CO_2 per tonne feed processed, conservatively based on ethane.
Tier 2	:	The operator shall use an activity-specific emission factor calculated from the carbon content of the feed gas determined in accordance with Articles 32 to 35.

Changes to legislation:
There are currently no known outstanding effects for the Commission Regulation (EU) No 601/2012 (repealed), Division 2..