

Additional Information for
the proposed JCM methodology
“Installation of Displacement Ventilation Air
Conditioning Device in the Cleanroom of
Semiconductor Manufacturing Factory”

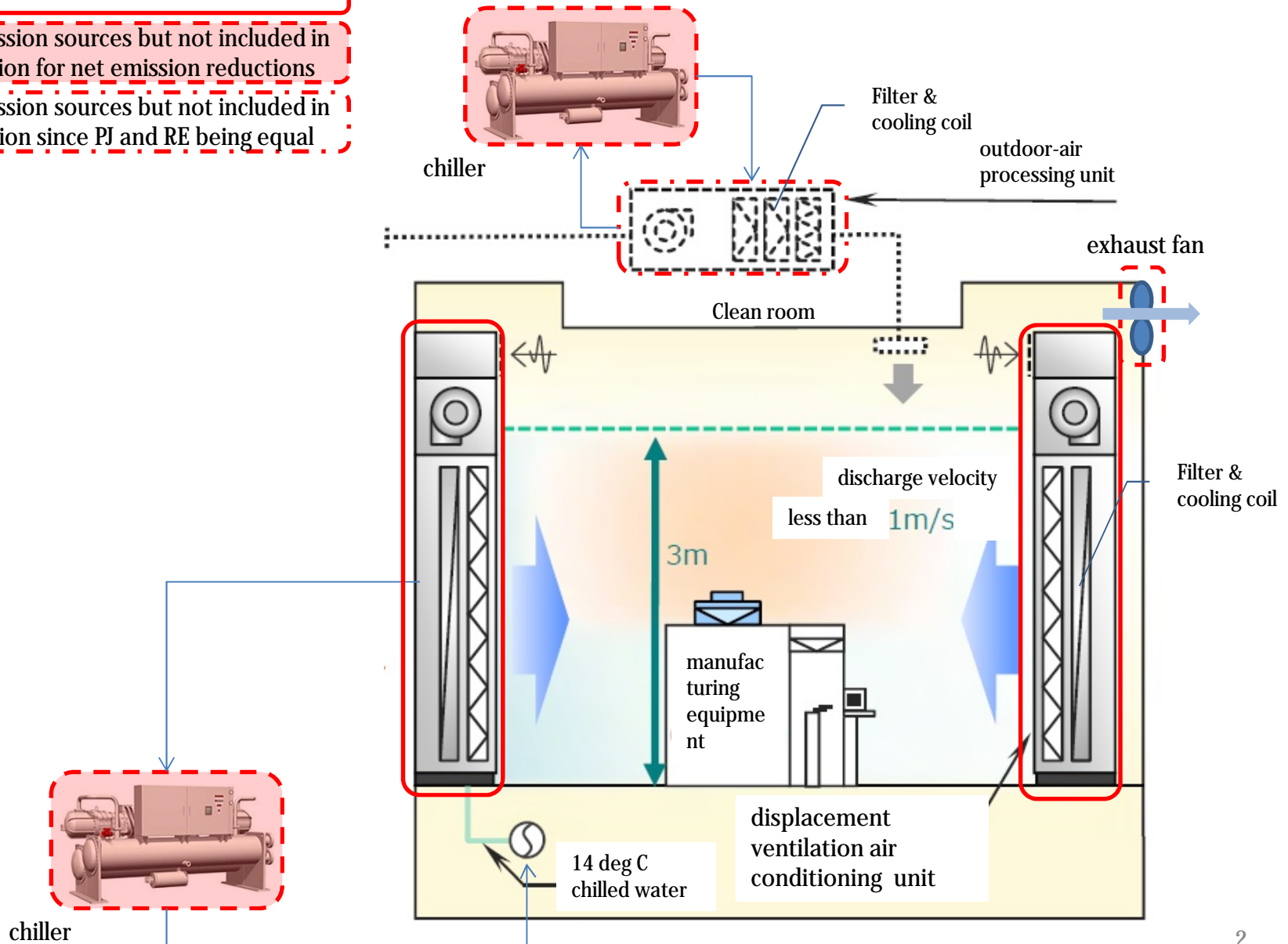
OUTLINE OF THE VENTILATION SYSTEM

Outline of the PROJECT ventilation system

GHG emission sources

GHG emission sources but not included in calculation for net emission reductions

GHG emission sources but not included in calculation since PJ and RE being equal

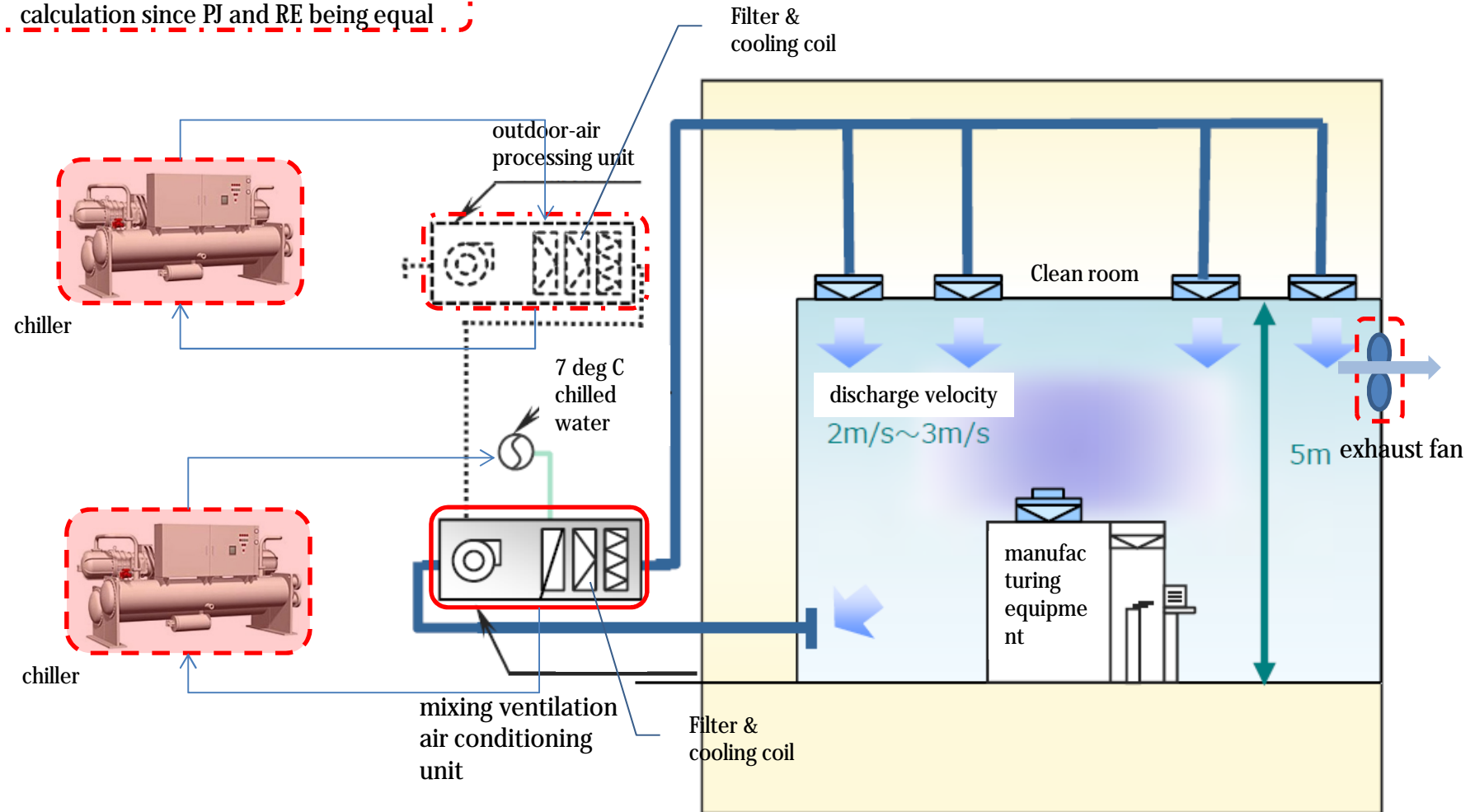


Outline of the REFERENCE ventilation system

GHG emission sources

GHG emission sources but not included in calculation for net emission reductions

GHG emission sources but not included in calculation since PJ and RE being equal



NUMBER OF TIMES OF VENTILATION REQUIRED FOR THE CLEANROOM

- Airborne particulate cleanliness, which is the maximum allowable number of particles per cubic meter of air, for each cleanliness class is determined in ISO standard (ISO 14644-1:2015) and American federal standard (FED-STD-209E).
- However, number of times for ventilating cleanroom to achieve such airborne particulate cleanliness is not determined or suggested by neither ISO nor FED-STD.
- Research on number of times for ventilating cleanroom has been conducted on the web, then recommended number of times has found from multiple sources. Research results are summarized in the table below.
- For Class 6, two recommended number and a range of numbers have found, namely 80 times/hour and 100-200 times/hour. Averaging 100-200 times/hour then 150 time/hour is derived. Therefore, 80 times/hour is selected as a default value in a conservative manner.
- For Class 7, two recommended number and a range of numbers have found, namely 40 times/hour and 30-70 times/hour. Averaging 30-70 times/hour then 50 time/hour is derived. Therefore, 40 times/hour is selected as a default value in a conservative manner.

Recommended number of times for ventilating cleanroom found on the web

ISO	FED-STD	Document A	Document B	Document C	Document D	Document E
Class 6	Class 1,000	80 times/h	100 ~ 200 times/h	80 times/h	100 ~ 200 times/h	80 times/h
Class 7	Class 10,000	40 times/h	30 ~ 70 times/h	40 times/h	30 ~ 70 times/h	40 times/h