

Question 2

Regarding the air quality assessment, and in addition to the requirements of question (1) for, you must unambiguously identify which chemical substances may be emitted and at what concentration, from the carbon capture process, and explain with reference to materials added and any subsequent reactions how these are present. Where you refer to proxy substances, explain why use of a proxy is necessary, and provide justification as to why they are suitable as proxies.

We have provided a table identifying the 26 key compounds that may be emitted from the carbon capture plant.

Further information will be provided as part of the response to question 6.

You also need to discuss/address whether discharge of collected CO₂ in “other than normal” operating circumstances may lead to potential harm to human health or the environment. If so, screening or full assessment (i.e. dispersion modelling) should be provided as appropriate to appropriately assess the impact risk from non-routine discharges.

There are a number of other than normal operating conditions (OTNOC) that have been identified during activities such as HAZID, ENVID and HAZOP. Following the HAZOP, a number of potential low frequency-high severity events have been through a LOPA (layer of protection analysis) to further reduce the associated risks. It should be noted that CO₂ venting after the CO₂ compressor is to the main absorber stack, so this is effectively recombined with the residual emissions and therefore unlikely to impact on human health or the environment. Venting will be limited to out of specification events and unexpected shutdowns of the transport and storage system and is likely to be for short periods of time and infrequently. An OTNOC management plan will be developed by Heidelberg Materials covering this venting and other events such as start ups and CCS warm up periods.

You need to address the question of whether all designated ecological receptors have been identified, as per notes on the document noise impact assessment so that NRW can audit the methodology and findings.

The air quality modelling files used to for the application have been provided directly by RSK. Updated model input file has also been provided which includes all the designated ecological receptors, this model will be run again to assess the additional amine emissions identified in the first part of this question and the work required for question 6 below is completed.

The noise modelling files will be provided in accordance with the time lines proposed in the response to question 5 below.