

Project: IPPC Support
Client: British Nuclear Group Sellafield Limited

The Challenge

Our client wished to submit an application for an Integrated Pollution Prevention and Control (IPPC) permit, designed to further regulate the impact of non-radiological site emissions beyond conditions set in their existing Integrated Pollution Control (IPC) permit. In order to support their application, the client was obliged to assess the impact of discharges from the site upon human health and also that of sensitive ecological receptors that could reasonably be expected to receive gaseous or liquid releases from its operations.

The Solution

Assisting the client in the planning stages of the project enabled the generation of a coherent emissions data set from a large operational site having highly complex discharge regimes. Initial screening assessments, followed by in-depth advanced modelling studies and a habitats survey enabled robust demonstrations that air and water quality within the local environment are not compromised by the site's activities.

Assistance with planning and implementation

- Identification of sensitive receptors that may be subject to gaseous and liquid emissions from the site
- Advising the client on the nature and quality of emissions data required for robust assessment of its discharges to air and controlled waters
- Obtaining supporting data from external agencies

Initial screening

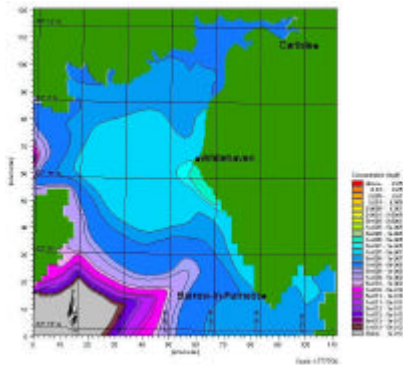
- Full characterisation of emission inventories
- Assessment against published environmental benchmarks
- Derivation of additional benchmarks in the absence of published data

Advanced dispersion modelling of aerial and aquatic discharges

- Industry standard modelling packages (MIKE21 and AERMOD)
- Detailed and realistic scenarios modelled using real monitored discharge data from each emissions point
- Model results obtained at each receptor point in the model domains
- Long- and short-term impacts to the receptors assessed by comparing model results against the relevant benchmark data
- Sensitivity testing performed to demonstrate the appropriate choice of model parameters for use in simulations by both models
- The habitats survey supported the conclusions of the advanced modelling in that emissions from the site are unlikely to impact on any designated conservation sites.



H1 screening software



Dispersion of a discharged substance within the north east Irish Sea

The Benefits

- We were able to show that aerial and aquatic discharges reported by the client company were unlikely to cause significant impacts at any of the identified sensitive receptors.



Certificate No 13950



Certificate No 66423