



Odour Impact Assessment Animal Rendering

Oran Utilities applied to the Scottish Environment Protection Agency (SEPA) to operate a new animal rendering plant at Kintore, Aberdeenshire. The installation was on the site of a similar process, operated by Dundas Brothers, which was the cause of numerous and persistent odour complaints which ultimately led to SEPA revoking the authorisation.

The main environmental concern from the processing of animal by-products is odour. Odours from the rendering plant were to be passed through a new thermal oxidation plant to remove offensive odour. Foul air from the process buildings was to be captured and passed through a re-engineered bio-filter. The process buildings were refurbished to a very high standard to prevent fugitive emissions.

The likely impact from process emissions was calculated using an appropriate atmospheric dispersion model and reliable emission estimates. A conservative approach was adopted in the case of the odour emissions. The assessment considered two emission scenarios: typical case, assuming that the process would achieve best practice in odour abatement, and worst case, assuming that odour abatement would only achieve the minimum acceptable emission standards.

A model sensitivity analysis was conducted for this study and considered the likely errors arising from meteorological data, surface roughness, efflux velocity, temperature of release, building and terrain effects and receptor height. The sensitivity analysis also considered different release scenarios, numerous options for the location of the bio-filter emission, source release height and seasonal and temporal variations. The predictions took account of the worst case dispersion conditions.

A range of mitigation measures were proposed to prevent or minimise the release of offensive odours to the atmosphere.

The likely impact from the emissions of combustion gases were assessed for both tallow and gas oil. The proposed installation was highly unlikely to result in any air quality objective or limit value being exceeded for either fuel option considered.

The odour assessment was reviewed by SEPA's air quality specialist team who considered it to be a very robust approach. The PPC permit was issued in early 2008.

