

Dust Assessment for new coal port



Clydeport is a major importer of bulk minerals at their deep water facility at Hunterston, with capacity for vessels > 150,000 tonnes. Bulk cargoes are currently trans-shipped from Hunterston to coal fired power stations in the West Midlands by rail. Due to the up-grading of the west coast railway line, this freight traffic is likely to be subject to disruption. Alternative, secure means of transport were required to ensure continuity of supply.

Clydeport and their parent company Peel Ports proposed to build a new coal handling facility at Manisty Wharf on the Manchester Ship Canal. The proposal involves trans-shipping coal from Hunterston using smaller coastal vessels typically ~6,000 tonnes to offload a total of ~1,000,000 tonnes per year. The material would then be dispatched by rail to power stations nearby.

Although the nearest houses are more than 500m from the proposed facility, there are a number of industrial and commercial processes nearby which are sensitive to coal dust including paper manufacturing process, paper warehousing and car parking.

The project required a permit from the Port Health Authority for the canal area, the enforcing authority, under the Pollution Prevention and Control Regulations. Dust from the operations was predicted using an advanced dispersion model ADMS 3.1, using USEPA AP-42 emission estimates. The following sources were assessed:

- depositing material from offloading onto the quayside using three different methods;
- transporting material within the site using front loading shovels;
- tipping material into trains using front loading shovels;
- dust blow from the stockpile, spillages and crushed fines; and
- compacting out stockpile and vehicles running over material.

The results from the model indicated that air quality standards would not be exceeded, but levels of total suspended particles could have moderate to severe impacts on adjacent process operations within 250m of the site. The most important control measures at the site will be ensuring that the material is not too dry (> 9% moisture) when off loaded and that operations are suspended in very high winds.

The assessment concluded that the proposed methods of working would require very high methods of housekeeping, combined with real-time process monitoring to ensure that off site impacts are kept within acceptable limits. On this basis the Port Health Authority granted permission to operate the coal facility within the four month determination period. The process commenced operations in mid 2005.

