

## 3.0 Progress Report for Sulphur Dioxide

### 3.1 The national perspective

The main sources of sulphur dioxide in the United Kingdom are power stations which accounted for more than 71% of the total emissions in 2000. Other sources of emissions include other industrial combustion sources, domestic solid fuel burning and shipping.

Although concentrations of sulphur dioxide have been reduced significantly in recent years, exceedences of the current sulphur dioxide objectives may still occur in the vicinity of localised combustion plant, in areas where solid fuels are still the predominant source of domestic heating and in close proximity to major ports.

In the first round of reviews and assessments a small number of AQMAs were declared in the UK due to sulphur dioxide emissions from coal fired boiler plants, domestic coal burning and a major port. The majority of these have now been revoked.

### 3.2 The local perspective

In the First Stage Review and Assessment of Air Quality in York sulphur dioxide was assessed against the following objectives:

*‘The 99.9<sup>th</sup> percentile of 15-minute averages not to exceed 100ppb by the end of 2005.’*

The First Stage Review and Assessment of Air Quality in York concluded that in general concentrations of sulphur dioxide in York are low. However, the occurrence of occasional peaks in the monitoring data, possibly due to power station emissions, was highlighted and it was recommended that a detailed review and assessment of sulphur dioxide should be undertaken.

In the Second and Third Stage Review and Assessment of Air Quality in York sulphur dioxide was assessed against revised objectives which were:

‘A 24 hour mean of  $125\mu\text{g}/\text{m}^3$  (47ppb), not to be exceeded more than 3 times a year, to be achieved by the end of 2004’

‘A one hour mean of  $350\mu\text{g}/\text{m}^3$  (132ppb), not to be exceeded more than 24 times a year, to be achieved by the end of 2004’

‘A 15 minute mean of  $266\mu\text{g}/\text{m}^3$  (100ppb), not to be exceeded more than 35 times a year, to be achieved by the end of 2005’

It was concluded that these objectives would also be met in York without the need for further action at a local level.

In 2003 an Update and Screening Assessment was carried out. This assessment concluded that a detailed assessment of sulphur dioxide emissions from domestic solid fuel burning and idling diesel locomotives should be carried out. The Detailed Assessment was published in April 2004. It concluded that there was no risk of the air quality objectives being breached due to emissions from either of these sources.

### **3.3 Sulphur dioxide monitoring results from real-time monitoring stations**

City of York Council has undertaken real time monitoring of sulphur dioxide at three locations in the city. These are :

- Bootham [urban background site]
- Dunnington [sub-urban background site]
- City Centre [city centre site – site now closed]

The location of these monitoring sites was shown on in chapter 2 of City of York Council's 2007 Air Quality Progress Report<sup>1</sup>. All the sulphur dioxide analysers used were Monitor Labs ML9850b. Full information about the air pollution station locations, data management procedures and other QA/QC procedures for the real time air pollution stations have been previously documented as part of the Second and Third Stage Review and Assessment of Air Quality in York.<sup>2</sup>

The results of the sulphur dioxide monitoring undertaken at these sites was shown in City of York Council's Air Quality Progress Report, submitted to DEFRA in April 2007. Since there were no recorded breaches of the sulphur dioxide objectives in York, and no indication that there were likely to be, all three sulphur dioxide monitoring sites were closed.

### **3.4 Conclusions**

Historical sulphur dioxide monitoring in York indicated that the objectives for this pollutant were being met at all monitoring locations around the city. A further update and screening exercise for Sulphur Dioxide shall be carried out in April 2009.

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<sup>1</sup> City of York Council - Air Quality Progress Report. April 2007

<sup>2</sup> City of York Council - Second and Third Stage Review and Assessment of Air Quality in York – Technical Annex 2: Air Quality Monitoring in York. Feb 2001