For the attention of

Joanne O'Kane
Limavady Borough Council
7 Connell Street
Limavady
Co. Londonderry
Northern Ireland
BT49 0HA

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Netcen
AEA Technology
B551 Harwell
Didcot
Oxfordshire
OX11 0QJ

Direct line
0870 190 6669
Direct facsimile
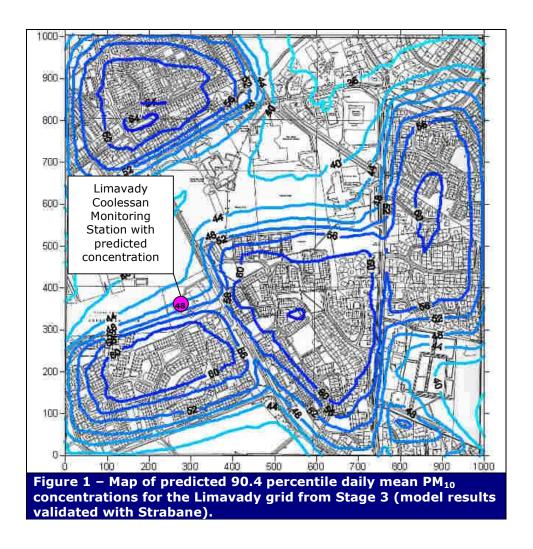0870 190 6386
e-mail
jaume.targa@aeat.co.uk

Dear Joanne

REVERIFICATION STUDY FOR PM$_{10}$ IN LIMAVADY GRID

In November 2003, netcen undertook the *"Air Quality Review and Assessment – Stage 3"* for Limavady Borough Council. This modelling study assessed Particulate Matter (PM$_{10}$) concentrations in Limavady and concluded that the daily PM$_{10}$ objective was likely to be exceeded in some parts of the study area. This modelling was validated with automatic monitoring data from the closest site, which at that time was in Strabane. At the time of the modelling, automatic monitoring was not carried out in Limavady BC.

Following recommendation from Stage 3, an automatic monitoring station has monitored PM$_{10}$ in Limavady Coolessan between October 2004 and April 2005. The data has been ratified to the QA/QC standards used in the Defra network by Netcen. These data have been used to verify the modelled results from Stage 3 domestic combustion assessment for the Limavady grid for PM$_{10}$, following Technical Guidance [LAQM.TG(03)].

Figure 1 shows the predicted 90.4 percentile daily mean PM$_{10}$ concentration for the Limavady grid from Stage 3 report. As can be seen, the predicted 90.4%ile daily mean PM10 concentration modelled at the Coolessan monitoring station was 48 μgm^{-3}. This value has been compared to the actual monitored 90.4%ile daily mean PM10 to reverify the modelling carried in Stage 3.

Figure 1 – Map of predicted 90.4 percentile daily mean PM$_{10}$ concentrations for the Limavady grid from Stage 3 (model results validated with Strabane).

Between October 2004 and April 2005, the 90.4 percentile daily mean PM$_{10}$ concentration at Limavady Coolessan was 26 μgm^{-3}. Following Technical Guidance [LAQM.TG(03)], this has been adjusted to 90.4%ile equivalent for 2004 using data from Belfast Centre and Derry AURN Stations. Table 1 below summarises the procedure.

Table 1. Adjustment of 90.4%ile monitored in Limavady Coolessan.

Site	90.4%ile daily mean PM10 in 2004	90.4%ile daily mean PM10 Oct 04 - April 05	Am/Pm
Belfast Centre	35 μgm^{-3}	32 μgm^{-3}	1.09
Derry	30 μgm^{-3}	35 μgm^{-3}	0.86
Limavady Coolessan	**25*** μgm^{-3}	26 μgm^{-3}	-
		Average (Ra)	**0.97**

*Obtained by multiplying the 0.97 times 26 μgm^{-3}

The monitoring data has been used to reverify the modelling carried out in Stage 3. Figure 2 shows the predicted 90.4 percentile daily mean PM$_{10}$ concentration for the Limavady grid. This has been reverified with data from Limavady Coolessan station. The reverification of the modelling study predicts that the maximum 90.4 percentile daily mean PM$_{10}$ within Limavady grid is 32 μgm^{-3}. This level is well below the daily PM$_{10}$ objective of 50 μgm^{-3}.
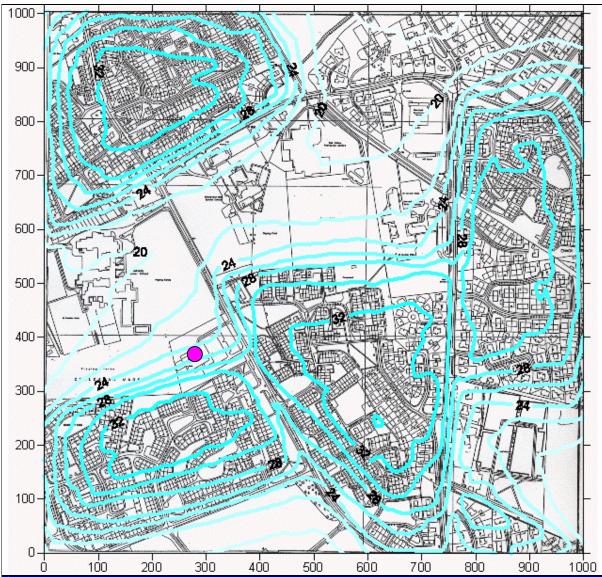
Figure 1 – Map of predicted 90.4 percentile daily mean PM$_{10}$ concentrations for the Limavady grid (model results corrected for bias using monitoring data from Limavady Coolessan monitoring station between 2004 and 2005).

The reverification study predicts that the daily PM$_{10}$ objective is unlikely to be exceeded in the Limavady grid. Limavady Borough Council should consider revoking the Air Quality Management Area due to domestic fuel combustion in Limavady.

Yours sincerely

Jaume Targa
Consultant