

**SUPPLEMENT 4: GasSim2 Release Version 2.00.0071**

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## 1. REVISIONS TO GASSIM2

This supplement to the GasSim2 manual covers revisions to the model in release version 2.00.0071. The previous version available from the GasSim web site was 2.00.0070. The revision is associated with bug fixes identified during the last two months and minor improvements to the functionality of the model.

### Bug Fixes

- On the Tier 2 results **screen** the hourly maximum concentration for Sulphur Dioxide over the modelled domain was being scaled by a factor of 1.34 , and differed from the maximum concentration that would be found in the exported results. The figures reported on the screen were always higher and therefore more conservative than the actual maximum value. This has been corrected.
- In PI reporting the concentration calculated for Chlorobenzene was being displayed for Benzyl Chloride. These are in fact different species and the Benzyl Chloride value to report now appears as 'n/a' as it is not modelled.
- On the Tier 2 results screen the percentile for 15 minute mean exceedances now appears as '99.9' rather than '99.6'. This is a typographical change, as the correct percentile was reported previously but labelled incorrectly.
- The parameter input screen is used in various parts of the software to specify a distribution as an input parameter. For example the user can select a 'Triangular' distribution with specified minimum, likely and maximum values on this screen. The cancel button on this screen should cancel the change to the input parameter, but in some circumstances it was changing the distribution type or making the software behave as if a change had been made when it had not (for example requesting a justification). This has been fixed.
- Fix for the software occasionally crashing in Tier 2, typically when loading the results (but sometimes in other circumstances such as when entering the Tier 2 results).

### Improvements to Functionality

Some additional advice is provided to users in three places within the software:

- On the Trace Gas Inventory screen a message box will appear if the user changes the Hydrogen Sulphide concentration, suggesting they may also need to change the corresponding Sulphur Dioxide concentration.
- On the Tier 2 results screen a message box will appear if the user selects Sulphur Dioxide as the pollutant. This warns the user that there is no UK annual EAL for human health, and that the limit quoted refers to vegetation.
- On the Tier 2 export screen some text has been added to indicate that hourly, 8 hourly, 24 hourly and annual options refer to 100<sup>th</sup> percentile figures in contrast to the 'Objectives Only' option which reports the appropriate percentiles for each averaging period.