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| <b>Cited as:</b> | <b>Pulles 2005</b><br><b>Pulles 2005:</b> Written communication from Tinus Pulles (TNO/NL) to Natascha Klijun (INFRAS, Bern), 11.12.2005 |
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### Written Communication

|                           |                                       |
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| Date of shipment / transmission | 11.12.2005                                |
| By E-Mail                       | <input checked="" type="checkbox"/> ( X ) |
| or by Letter                    | <input type="checkbox"/> ( )              |

Summary (where applicable)

Pulles proposition: "Your problem of, knowing an overall uncertainty for the total fuel use in combustion, but not the split within the combustion sector, could be solved along two different lines:

1. Expert-guessing the uncertainties for all subsectors, such that, using the simple rule of error propagation, the total uncertainty is similar/equal to the overall one you know. This would mean that every uncertainty for each subsector should be larger than the total uncertainty for the fuel. The exact numbers obviously depend on the Swiss energy data. (Integrated uncertainty of a sum of values is the square root of the sum of squares of the uncertainties in each term in the sum; if you do not know better, you could assume that the relative error in each of the subsectors is the same).
2. Providing in your calculations the AD for all but one subsector and calculate the last one from the overall fuel use, minus the sum of the "known" ADs. In this case you need to know the uncertainties of all "known" data and the total. The correlation is brought into the Monte Carlo by calculating the "unknown" from the others and does not need to be given an

My preference would be approach 1."

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| E-Mail or letter (scanned) attached | <input checked="" type="checkbox"/> Yes |
| Form renamed                        | <input type="checkbox"/> Yes            |
| Date / Signature                    | 25.03.2008, JH                          |