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**Probabilistic Accident Consequence  
Uncertainty Assessment  
Using COSYMA:**

**Uncertainty from the Atmospheric Dispersion  
and Deposition Module**

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## FOREWORD

This is one of a series of reports describing an uncertainty analysis on the predictions of the accident consequence assessment code COSYMA. A complete list of the reports produced in this project is given in Appendix A, where the reports are divided into those describing the expert judgement study on the distributions of the input parameter values and those describing the results of the analysis. This report describes the results of the analysis of the uncertainty in the predicted consequences of accidental releases reflecting the uncertainty in the values of the input parameters of the atmospheric dispersion and deposition models.

All of the reports describing the results of the analysis have common material in their introductory sections, so that any single report can be read without having to refer to background material in other reports of the series. This is one of four reports which describe the different module analyses. Section 1 (Background to the study) is identical in each of these reports. Those parts of Section 2 describing the general approach, the methods for generating and combining distributions and sampling from them are identical in these reports apart from a few sentences referring to particular features of the module in question. The opening part of Section 3 is also the same in these reports.

Sections 1.1 and 1.2 of this report are almost identical to the first chapter of the "Methodology Report", with differences for references to material that is explained in more detail in that report. Section 1.2 of the Methodology Report includes a final paragraph that is not in the other reports.

Sections 1.1, 1.2 and 1.4 and the opening part of Section 3 are very similar to the equivalent sections of the overall analysis report.

Appendices A (list of reports from the project) and B (description of the models in COSYMA) are included in each of the reports on the uncertainty analysis.

## ABSTRACT

A study to perform an uncertainty analysis of the European accident consequence assessment system, COSYMA, has been carried out under contract to the European Commission. The study involved a series of analyses of the uncertainty in different sections of the system, followed by a final analysis of the uncertainty in the whole system.

The overall aims of the study can be summarised as:

- 1 to formulate a state-of-the-art expert judgement methodology which is capable of finding broad acceptance,
- 2 to apply the methodology to estimate uncertainties associated with the predictions of the probabilistic accident consequence assessment system COSYMA
- 3 to provide an input to identifying future R&D priorities.

This report describes the analysis of the uncertainty in the model predictions resulting from uncertainty in the values to be assigned to the input parameters describing atmospheric dispersion and deposition. The main aim of this part of the study was to identify the input parameters whose uncertainties make large contributions to the overall uncertainty; the parameters identified would then be included in the final analysis of the uncertainty in the whole system.

Uncertainty analysis involves specifying probability distributions for the values of each of the parameters involved, sampling sets of values from those distributions and propagating them through the model to derive information on the uncertainty in the model prediction. Those parameters whose uncertainties make major contributions to the overall uncertainty can then be identified using correlation coefficients between the input values and the model outputs. An earlier expert judgement study has provided distributions on the values of the parameters describing the rate of growth of plumes in the atmosphere and the rate at which material is deposited from those plumes.

The study evaluated the uncertainty on air and ground concentration, individual doses and risks, the extent of countermeasures and the numbers of health effects in the population. The calculations were undertaken for a number of situations with and without allowing for the effects of countermeasures. Some licensing procedures require estimates of the potential individual doses and risks at points near the reactor site. Potential doses are calculated assuming people are outdoors for the whole of the period of interest, and so make no allowance for countermeasures or shielding by normal occupation of buildings. The study evaluated such potential doses, and the associated risks of health effects. Consequences assuming normal living (ie allowing for shielding by buildings but no countermeasures) are considered in the licensing procedures of several countries. Hence calculations were undertaken for individual and collective doses and risks for normal living.

The source terms chosen encompass a wide range of characteristics (eg magnitude and composition) of source terms that have been postulated for LWRs. They are taken from analyses of the pressurised water reactor proposed for the Hinkley Point site in the UK. UK1 is a very large release; it is the risk-dominant source term for early health effects and a major contributor to the overall risk of late health effects from the reactor. CB2 is a smaller, but less unlikely, sequence that also makes a major contribution to the overall risk of late health effects from the reactor. DBA is a design basis

accident.

The study showed that the uncertainty (expressed as the ratio of the 95th to the 5th percentile of the probability distribution on the expectation value of the consequence) on the extent of early countermeasures is about a factor of 5 for the areas where sheltering or evacuation would be required and about a factor of 30 on the area where iodine tablets would be required. The uncertainties on the higher percentiles of the probability distributions of these areas are somewhat larger. The parameters whose uncertainty makes a major contribution to the overall uncertainty for these endpoints are the deposition velocity of elemental iodine and some of the parameters describing atmospheric dispersion, particularly in Pasquill stability category E/F.

The study showed that the uncertainty on the numbers of early fatalities is about 30 for the mean value of the distribution with rather lower values for the higher percentiles of the distribution, assuming that countermeasures are taken. The uncertainties for normal living are slightly higher. The parameters whose uncertainty makes a major contribution to the overall uncertainty for these endpoints are similar to those for the areas requiring countermeasures.

The study showed that the uncertainty on the areas relocated or affected by milk bans are generally between factors of about 3 and 10, with the most important parameter uncertainties being the deposition velocities of elemental iodine and aerosols and some of the dispersion parameters.

The study showed that the uncertainty on the numbers of fatal cancers are between factors of about 2 and 10. The parameters whose uncertainty makes major contributions to the overall uncertainty are the deposition velocity and washout coefficient of aerosols, and some of the dispersion parameters.

The parameters from this part of the analysis to be included in the final analysis were identified as the deposition parameters for aerosols and elemental iodine together with the dispersion parameters.

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# 1 BACKGROUND TO THE STUDY

## 1.1 Introduction

Despite the elaborate precautions taken in the design, construction and operation of nuclear facilities, there will always remain the possibility, however small, of accidental releases of radioactivity into the environment. There is a need to evaluate the risks arising from potential accidents, on a probabilistic basis, taking into account the spectrum of possible consequences of accidents and their associated probability of occurrence. Probabilistic risk assessment (PRA) or accident consequence assessment (ACA) is the process whereby the consequences of potential accidental releases are assessed, taking into account the range of conditions which may prevail at the time of the accident, and the associated probability of these conditions. Such assessments have applications in the design, siting, licensing and operating phases of a nuclear installation. They can be used to evaluate the risks posed by a specific or representative nuclear site, for example for comparison with safety criteria. They can be used for evaluating the effects of design changes or of plant modifications. They also have an input into emergency planning and to some aspects of siting studies.

A number of computer systems have been developed for use in such assessments. Such systems include models for describing the pathways by which people are irradiated following discharges of material, and for calculating the doses and the associated health risks. The models require values to be specified for a large number of input parameters. The predictions of such models are uncertain for two main reasons, which can be summarised as:

- (a) *modelling uncertainties*, arising from a lack of knowledge about the most appropriate mathematical formulation to represent environmental processes,
- (b) *parameter value uncertainties*, arising from inadequate knowledge about the most appropriate values to be assigned to the many parameters in the model.

The models adopted are not perfect as they contain idealisations and simplifying assumptions. They may not describe all features concerned; features which have been omitted because they make only a small contribution to the “best estimate” model prediction may make larger contributions to the uncertainty. The most appropriate values to be assigned to the many parameters involved in the model may not be known with certainty, leading to uncertainty in the final predictions of the model.

Two computer systems for use in probabilistic accident consequence assessments (COSYMA<sup>(1)</sup> in the European Union and MACCS<sup>(2)</sup> in the US) were developed around 1990, and made generally available. There has been an interest in quantifying the uncertainty in the predictions of such systems, and extensive analyses of the uncertainty on predecessors of both programs have been carried out<sup>(3,4,5)</sup>. An important feature of an uncertainty analysis is the derivation of a joint distribution\* on the values of the many parameters involved. In the earlier

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\* The joint distribution assigns a probability to each feasible set of values of the input parameters.



studies, the joint distribution was largely specified by the system developers, rather than experts in the many different fields involved in accident consequence modelling.

In 1991, both the European Commission (EC) and the United States Nuclear Regulatory Commission (USNRC) were considering initiating studies to better quantify the uncertainty in the input parameter values and in the predictions of the systems. An essential aspect of these studies was to obtain distributions and information on the dependencies between parameter values using formal expert judgement elicitation techniques. The studies were combined into a single EC/USNRC project intended to develop credible and traceable uncertainty distributions for the respective system input parameters. A further intention was for these distributions to be propagated through the two systems, and so quantify the uncertainty in the predictions.

The broad objectives of both the EC and USNRC for this study can be summarised as:

- 1 to formulate a state-of-the-art expert judgement methodology which is capable of finding broad acceptance;
- 2 to apply the methodology to estimate uncertainties associated with the predictions of the probabilistic accident consequence systems COSYMA and MACCS;
- 3 to provide an input to identifying future R&D priorities.

Within these broad objectives, small differences in emphasis exist between the EC and USNRC. This report concentrates on the analysis using COSYMA, and the EC aims and objectives.

The first objective was met in two ways. First, the collaboration between research teams from the US and Europe led to the development of agreed methods for the study, and in particular for the formal elicitation of expert judgement. Second, a protocol document describing the methods to be used for the final uncertainty analyses on COSYMA was distributed to a number of researchers in the field for comment. The views expressed on that document have been incorporated into the methods used for the analysis.

The second objective was met by using the joint distribution on the uncertain parameter values derived from the expert elicitation in an analysis of the uncertainty in the predictions of the consequences of accidental releases using COSYMA. Undertaking rigorous uncertainty analyses involves considerable computational costs and substantial effort. It is not possible to carry out such analyses on every occasion when accident consequence assessments are undertaken. It was intended that the levels of uncertainty obtained in this study would indicate the likely levels of uncertainty in other, similar, situations. Therefore, this analysis has been undertaken for several combinations of source term and types of population behaviour with the intention of deriving indicative levels of uncertainty should COSYMA be applied in other situations. For example, if the study shows that the uncertainty in a particular endpoint for a particular countermeasures strategy is a factor of 10, then it can be assumed that in similar situations the uncertainty is also a factor of 10, not 100.

There are several aspects to the third objective above. The uncertainty was better quantified because the distributions on the parameter values were determined from formal techniques of expert judgement. In addition to calculating the uncertainty on the model predictions, the study also identified the input parameters whose uncertainties make major contributions to the overall uncertainty. This can form an input into identifying research priorities.

Uncertainty analyses can be considered to consist of three broad stages, each of which could be further divided into smaller steps. The first step is to determine what types of uncertainty are present in the model being analysed, which types will be considered in the analysis and which of the model's input parameters will be considered to be uncertain. This step also includes identifying those model endpoints for which the uncertainty will be analysed. The second broad step is to determine the joint distribution on the values of the model input parameters that are being considered. This joint distribution includes not only the ranges of each of the parameter values, but also the probability distribution of the input parameter taking different values within that range and any dependencies between the values of the different parameters within their ranges. In this study, the joint distribution over the model input parameters has been obtained using formal techniques for eliciting expert judgement. These parts of the study have been described in a series of reports, as listed in Appendix A. The final broad step is to sample sets of input parameter values from the joint distribution, to propagate those values through the model, to determine the uncertainty on the model endpoints and identify those parameters whose uncertainties make large contributions to the overall uncertainty.

The models included in COSYMA are described in Appendix B. There are many hundreds of parameters involved in describing the transfer of radioactive material from its release through the environment to man and calculating the subsequent doses and risks. It would not be possible to consider all these parameters in a single analysis, because of the complexity of the analyses and amount of computation that would be required. Therefore, a series of analyses of parts of the complete COSYMA system have been carried out. These are described as “module analyses”, although the parts of the code considered in these analyses do not necessarily correspond exactly to the defined modules of COSYMA<sup>(1)</sup>. Throughout this report, the term “module” is used to refer to the part of the system under analysis, unless indicated otherwise. Each module includes a number of different models. Those parameters whose uncertainties make major contributions to the overall uncertainty for each module were identified and included in a final overall analysis. The following module analyses were carried out before the final analysis:

- 1) Dispersion and deposition
- 2) Foodchain transfer
- 3) Dosimetry - external, inhalation and ingestion doses
- 4) Early and late health effects.

The main aim of the module analyses was to identify the parameters which should be included in the final overall analysis, and the list of parameters constitutes the main conclusions of this report. A further part of the overall analysis is to explain the relative uncertainties on the different quantities considered. This report gives explanations for the relative uncertainties within this module, and so contributes to the process of understanding the results of the final analysis.

These explanations are also one of the conclusions of this section of the study. These explanations are included in section 3 of this report, where the endpoints are discussed in turn. This means that the main conclusions of this report are presented in section 3, rather than being drawn together in a separate “conclusions” section.

The module analysis reports do not include any discussions of the extent to which the results of the analysis might be applicable in other situations (e.g. other sites or source terms). The report on the overall analysis<sup>(6)</sup> does include a discussion on the extent to which the results of this study can be applied in other situations.

The analyses reported here calculated the uncertainty on the overall endpoints of COSYMA coming from the uncertainty in the input parameters for the particular module, rather than simply considering the uncertainty on the endpoints of that particular module. In this way, the importance of the parameter uncertainties can be judged in terms of their contribution to the overall uncertainty and not simply in terms of their contribution to some intermediate quantity in the calculation. Default values were allocated to the parameters of the other modules for which the uncertainty was not considered in the particular analysis. Thus the analysis of the uncertainty on the dispersion and deposition module assumed default values for the parameters describing food chain transfer, dose models and health effects models. This division into modules is such that no single parameter is input to more than one module, and there are no large correlations between the values of the input parameters for the different modules.

Since the study was intended to derive indicative levels for the uncertainty to be expected under normal applications of COSYMA, it was necessary to make as few changes as possible to COSYMA for this analysis. For this reason, the models used in COSYMA were not modified to give a better fit to the distributions provided by the experts. In some cases, the models included in COSYMA are complex and an uncertainty analysis of the full version of the system would have required excessive amounts of computer resources. In these cases, the models were simplified so that the uncertainty analysis could be carried out more easily. Simplifications were introduced in the calculation of the risk of late health effects, the models for transfer of some radionuclides to animal products, and the model for human metabolism of actinides. These simplifications will not have significantly altered the extent of the uncertainty on the predictions of COSYMA, though they may have altered slightly the central values about which the uncertainty is expressed. They have not affected the aims of the study, as the objective was to evaluate the extent of the uncertainty in the predictions for typical COSYMA calculations, rather than the absolute value of the consequences of particular accidental releases.

This is one of a series of reports describing the overall analysis of the uncertainty in the predictions of COSYMA. The starting point for this series of reports is taken as the end of the expert elicitation process. Appendix A gives a complete list of the reports relating to the project. The remainder of this chapter gives information relating to the study that is common to all the analyses, namely the source terms, endpoints, uncertainties and selection of atmospheric conditions adopted in the study. Further information on the methods adopted, and on the way in which the results are presented, is given in one of the companion reports<sup>(7)</sup>.

## 1.2 Situations considered

Three source terms, encompassing a wide range of characteristics of source terms that have been postulated for LWRs (e.g. magnitude and composition), have been considered in this study. They were taken from analyses of the pressurised water reactor proposed for the Hinkley Point site in the UK. UK1 is a very large release; it was identified as the risk-dominant source term for early health effects and a major contributor to the overall risk of late health effects from the reactor<sup>(8)</sup>. CB2 is a smaller, but less unlikely, sequence that also makes a major contribution to the overall risk of late health effects from the reactor<sup>(9)</sup>. DBA is a design basis accident<sup>(10)</sup>. This is a fault which the plant is designed to take or can be shown to withstand without unacceptable consequences, by virtue of the plant's inherent characteristics or safety systems. The amounts of material released for the UK1 and CB2 source terms were calculated from the reactor inventory and the release fractions which apply to groups of elements; the amount of each isotope released for the DBA source term was specified directly. The source terms are summarised in Table 1.1 to Table 1.3. Table 1.1 shows the assumed inventory of the reactor; Table 1.2 gives the release fractions used for the UK1 and CB2 source terms, and Table 1.3 gives the amount of each nuclide released in the DBA source term. Table 1.2 also gives approximate release fractions for the DBA source term, to enable easy comparisons of the magnitude of this and the other source terms.

The calculations were undertaken for a range of patterns of population behaviour. Some licensing procedures require estimates of the potential individual doses and risks at points near the reactor site. Potential doses are calculated assuming people are outdoors for the whole of the period of interest, and so make no allowance for countermeasures or shielding by normal occupation of buildings. The study evaluated such potential doses, and the associated risks of health effects. Consequences assuming normal living (i.e. allowing for shielding by buildings but no countermeasures) are considered in the licensing procedures of several countries. Hence calculations were also undertaken for individual and collective doses and risks for normal living.

There is also an interest in calculating the uncertainty on the predictions of COSYMA if allowance is made for the countermeasures that might be imposed following a reactor accident. International organisations have suggested ranges of criteria for implementing countermeasures, recognising that intervention levels might depend on the situation and scale of accident that occurs. A countermeasures strategy based on the IAEA<sup>(11)</sup> intervention levels for sheltering, evacuation, iodine tablets and relocation together with the EU levels for banning food<sup>(12,13,14)</sup> was used. The intervention levels and implementation times used for this study are given in Table 1.4. Doses and risks are calculated assuming normal living for those not subject to countermeasures, or not subject to countermeasures in a given time period.

COSYMA gives information on a wide variety of consequences of an accident. It was not possible to generate information on all of these endpoints in this study. Therefore, the study evaluated the uncertainty on a selection of endpoints; information on the uncertainty in other endpoints can be deduced from these results. A complete list of endpoints is given in Table 1.5; they can be summarised as follows:

- air concentration and deposition of <sup>131</sup>I and <sup>137</sup>Cs at selected distances.

- individual dose to 7 days in bone marrow, thyroid and skin at selected distances.
- individual and collective risks of early health effects (total risks of mortality, and of the haematopoietic syndrome, the total risks of morbidities and of lung morbidity and hypothyroidism).
- the areas with emergency actions for sheltering, evacuation and distribution of stable iodine tablets.
- individual and collective committed effective dose and doses in bone marrow and thyroid.
- individual and collective risks of the numbers of fatal cancers (total and from thyroid) and leukaemia.
- the areas and their time integrals affected by relocation and by food restrictions, for meat, milk, green vegetables and grain.

Different sub-sets of the complete list of endpoints are considered in the different module analyses, as some of the input parameter values for some of the modules do not influence all the endpoints. The endpoints considered in this module are identified in Section 3.

The collective health effects were evaluated for a hypothetical site in central Europe, as defined in a recent international intercomparison of reactor accident programs<sup>(15)</sup>.

As stated earlier, the aim of the exercise was to derive indicative levels of uncertainty that should be appropriate for other, similar analyses using COSYMA. The size of uncertainty associated with the predictions may change for different magnitudes of the source term, and for calculations with and without countermeasures. The following set of situations was chosen for analysis, where NE and NL refer to the separate sub-systems of COSYMA relating to the calculation of early effects (NE sub-system) and late effects (NL sub-system):-

- |     |  |
|-----|--|
| UK1 | potential outdoor doses and risks, for those NE endpoints relating to individual doses and risks.  |
| UK1 | normal living with no countermeasures, for those NE endpoints relating to individual doses and risks, and to numbers of health effects.                    |
| UK1 | with countermeasures, for those NE endpoints relating to individual doses and risks, and to numbers of health effects.                                     |
| CB2 | normal living with no countermeasures, for those NL endpoints relating to individual doses and risks, collective doses and numbers of late health effects. |
| CB2 | with countermeasures, for all NE and NL endpoints.   |
| DBA | potential outdoor doses and risks, for those NL endpoints relating to individual doses and risks.  |
| DBA | with countermeasures, for all NL endpoints.  |

The following terminology is used when the results are presented in Section 3 for the three situations considered. “Potential doses” is used to refer to the calculation of doses outdoors and with no countermeasures; this is adopted as the calculations give the highest doses that could potentially be received after the accident. “Normal living” is used to refer to the situation with no countermeasures; these calculations include the effects of buildings in reducing exposure, allowing for average behaviour of the population and occupancy of buildings. “With countermeasures” is used for the final situation;

these calculations assume that all members of the population follow the adopted countermeasures strategy, but use the normal living assumptions for other aspects of the calculations.

The uncertainty on individual doses and risks for early effects (the NE endpoints) were evaluated at 0.875, 5 and 20 km, while the uncertainties on individual doses and risks for late effects (the NL endpoints) were evaluated at 5, 20 and 100 km. COSYMA calculates doses at discrete points on a spatial grid, and assumes that the dose at the centre of each grid area applies throughout that area. Thus the dose at 0.875 km is calculated as representing the doses over the distance band between 0.75 and 1 km.

This combination of conditions means that information on the uncertainty of the numbers of early health effects in the population was obtained mainly from the analyses for the UK1 source term. Little information on the uncertainty on these endpoints could be obtained from the analyses with the CB2 source term as doses from this source term were generally below the thresholds for producing early health effects. Information on the uncertainties in doses over short time periods and risks of early health effects for people who are outdoors at the time of the accident, for people who are living normally with no countermeasures taken, and if countermeasures are taken on the basis of doses in the exposed population were obtained from the analyses for the UK1 source term. The predicted risks of early health effects, and the associated uncertainties in the predictions, will not depend on the criteria used to invoke countermeasures unless they are such that some people who receive doses above the threshold for deterministic effects are not sheltered and evacuated. Although the analysis for the CB2 source term could not give much information on risks of early health effects, it did give results for the doses in short time periods, both for normal living and if countermeasures were taken.

Information on the uncertainty in the predicted extent of early countermeasures (sheltering, evacuation and distribution of stable iodine tablets) was obtained from the analyses for the CB2 source term. Information on the uncertainty on the late countermeasures (relocation and food restrictions) was obtained from the analyses for the CB2 and DBA source terms. Two source terms were selected for this part of the analysis as they have different relative contributions from the iodine and caesium isotopes.

Information on the predicted risks of late health effects was also obtained from the CB2 and DBA source terms, for both individual and collective risks. Again, the two source terms were used because of the different relative contributions of the iodine and caesium isotopes.

The extent of the uncertainty on the predicted air concentration and deposition does not depend on the size of the release. The endpoints relating to concentration and deposition were only considered in the analysis for the CB2 source term, as this is the only source term for which all four distances (from NE and NL) were considered.

The results from a single run of COSYMA are presented using the complementary cumulative frequency distribution function (ccdf), which gives the probability that the consequence is greater than a particular value. The distribution can be summarised using various characteristic quantities such as the expectation value (the mean or average of the distribution) and various

percentiles. The *n*th percentile is the level of consequence that is exceeded with a probability of (100-n) percent. This study concentrates on the uncertainty on the mean value, the 95<sup>th</sup> and 99<sup>th</sup> percentiles.

The uncertainty analysis involved running COSYMA many times, so that many different values for the various endpoints were obtained. A probability distribution can be derived from these results, for each endpoint, and the uncertainty on the predicted consequence is then described by percentiles of that probability distribution. The general discussion of the extent of the uncertainty is presented using the ratio of the 95th to the 5th percentiles of the uncertainty distribution; the term “uncertainty factor” is used in this report to represent this factor. The same quantity is used in the reports describing the results of the expert elicitation, where it is termed “range factor”. More detailed information is presented in Appendix C, where the 5th, 10th, 25th, 50th, 75th, 90th and 95th percentiles of the uncertainty distributions on the different parts of the ccdf considered are given. These descriptions of the uncertainty are evaluated for the mean value and the 95th and 99th percentiles of the ccdf. Some results are also presented in terms of the “mean curve”, which is the average of the ccdfs from each of the COSYMA runs. The process is described in more detail in the “methodology report”.<sup>(7)</sup> There is also an interest in the extent to which predictions obtained using the default value for each input parameter could underestimate the results. Therefore the ratio of the 95th percentile of the uncertainty distribution to the value obtained with the default values for the input parameters was also determined. This quantity is termed the “reference uncertainty coefficient”.

One of the aims of the module analysis reports is to explain the relative magnitude of the uncertainty on different quantities, and to identify those parameters whose uncertainties make large contributions to the overall uncertainty. The explanations concentrate on the results for the mean value and the 99<sup>th</sup> percentile of the distribution, rather than on the 95<sup>th</sup> percentile. To some extent this reflects the difficulties in trying to explain the findings for the 95<sup>th</sup> percentile. The results for the 99<sup>th</sup> percentile reflect those for essentially the worst conditions that can arise. If individual doses or risks are being considered, this is on the plume centre line in adverse weather conditions. It is less clear, however, what conditions correspond to the 95<sup>th</sup> percentile. In general, this could occur in a variety of situations depending on values allocated to the many parameters involved in the analyses. In extreme cases of broad plumes, it could represent doses off the centre line. The mean value, representing the average across all conditions, is also easier to relate to the values of the parameters involved.

### **1.3 Items considered uncertain in the module analyses**

The analyses look at the uncertainty on the COSYMA endpoints resulting from the uncertainty on the parameters for the particular module considered in the analysis, using default values for the parameters of the other modules. The doses calculated in each of the module analyses are those summed over all routes of exposure considered in COSYMA, even though the particular uncertainties considered may not affect the doses from some of the routes. Equally, the runs with countermeasures consider all the countermeasures considered in this analysis, even though the imposition of some of them may not be affected by the uncertainty on the parameters for the module being analysed.

## **1.4 Choice of sequences of atmospheric conditions for the analysis**

Runs of COSYMA, when not considering uncertainty, assume that there is a single value for all parameters except the atmospheric conditions during the period of the release and the time taken for material to travel over the region of interest. Therefore, COSYMA predicts the probability distribution of consequences should an accident occur in any of the wide range of atmospheric conditions (including the changes of conditions during the travel of the plume) which might occur at the site of interest during the period in which the site operates. The sequences of conditions are obtained by using a data file giving atmospheric conditions every hour over a period of a few years, and assuming that the conditions during the future operation of the site will be similar to those observed in the past. It is not possible to undertake the calculations for every sequence of conditions over the operating period of the site, and even considering every sequence recorded over a one-year period would require excessive computer resources in an uncertainty analysis. Therefore a representative sample of starting times must be used. The predictions of COSYMA depend on the way in which these sequences are chosen. This source of uncertainty is not considered in the module analyses or in the overall analysis incorporating the parameters identified from the module analyses of this study. A separate study of the uncertainty from meteorological sampling was undertaken alongside the overall analysis and is described in reference 6.

The atmospheric conditions at the time of the release can affect the predictions of all the modules of COSYMA, not simply the dispersion and deposition module. Some radionuclides deposit at different rates relative to each other in wet and dry conditions. This can affect the relative mix of radionuclides contributing to doses from all pathways of exposure. The travel time of the plume to different distances can affect the extent to which countermeasures can reduce the doses received by the population, since countermeasures are modelled to require time for organisation and implementation before they are effective. Therefore the uncertainty analysis of all the modules must consider the possible range of atmospheric conditions that can occur.

Each of the module analyses was undertaken using runs of COSYMA considering 144 sequences of conditions selected using cyclic sampling. The reasons for this choice of sampling scheme are described in the “methodology report”<sup>(7)</sup> on this study.

## **1.5 Method of identifying important parameter uncertainties**

The method of identifying the important uncertain parameters is described in the “methodology report”<sup>(7)</sup>, which also describes the reasons for the choice of the particular method. It is summarised here to provide the background for the discussions in Section 3 of this report. Two indicators of importance were used in this project.

The first indicator is the partial rank correlation coefficients (PRCC) between the input parameter values and the COSYMA predictions. These measure the strength of monotonic relationships between values of an input parameter and a model prediction, when account has been



taken of the simultaneous effects of monotonic relationships with all other parameters.

The second indicator is the contribution of each parameter to the overall uncertainty. The coefficient of determination ( $R^2$ ) measures the fraction of the variation of the model output that can be explained by linear relationships between the model prediction and all of the input parameter values. The ratio of  $R^2$  values from an analysis with only one parameter considered to be uncertain to that from an analysis with all parameters considered to be uncertain represents the fraction of the overall uncertainty caused by the particular parameter.

The important uncertain parameters were identified for the mean value, 95<sup>th</sup> and 99<sup>th</sup> percentiles of the ccdf, for each of the endpoints and source terms considered. Parameters were included in the overall analysis if they were placed in the first or second rank according to their PRCC or if they were identified as contributing more than 15% of the overall uncertainty according to their contribution to the value of  $R^2$ . The justification for these criteria are given in the “methodology report”<sup>(7)</sup>.

## 1.6 References

1. KfK and NRPB. COSYMA - a new program package for accident consequence assessment. CEC Brussels, EUR 13028 (1991).
2. Chanin D I et al. MELCOR accident consequence code system (MACCS), User's Guide. NUREG/CR-4691. Albuquerque (1990).
3. Jones J A, Mansfield P A and Crick M J. An uncertainty analysis of the predicted consequences of nuclear accidents using the NRPB code MARC-2A. Chilton, NRPB-R274 (London HMSO) (1995).
4. Fischer F, Ehrhardt J and Hasemann I. Uncertainty and sensitivity analyses of the complete program system UFOMOD and of selected submodels. Karlsruhe KfK 4627 (1990).
5. Kocher D C, Ward R C, Killough G G et al. Sensitivity and uncertainty studies of the CRAC2 computer code. NUREG/CR-4038 (1985).
6. J A Jones, J Ehrhardt, L H J. Goossens, F Fischer, I Hasemann, B C P Kraan, R M Cooke. Probabilistic accident consequence uncertainty assessment using COSYMA: Overall uncertainty analysis. EUR 18826 and FZKA 6312 (2000).
7. Jones J A, Kraan B C P, Cooke R M, Goossens L H J, Fischer F and Hasemann I. Probabilistic accident consequence uncertainty assessments using COSYMA: Methodology and processing techniques. EUR 18827 and FZKA 6313 (2000).
8. Jones J A and J A Williams J A. An assessment of the radiological consequences of releases from degraded core accidents from a proposed PWR at Hinkley Point: Results using MARC-1. Chilton, NRPB-M152 (1988).
9. Jones J A and Williams J A. An assessment of the radiological consequences of releases from containment bypass accidents from a proposed PWR at Hinkley Point: Results using MARC-1. Chilton. NRPB-M154 (1988)
10. Jones J A and Williams J A. An assessment of the radiological consequences of releases from design basis accidents from a proposed PWR at Hinkley Point: Results using MARC-1. Chilton. NRPB-M153 (1988)
11. FAO, IAEA, ILO, OECD/NEA, PAHO, WHO. International basic safety standards for

protection against ionizing radiation and for the safety of radiation sources. Vienna, IAEA, Safety Series 115 (1996)

12. CEC. Council Regulation (Euratom) No 3954/87 laying down the maximum permitted levels of radioactive contamination of foodstuffs and feedingstuffs following a nuclear accident or any other case of radiological emergency. *Off. J. Eur. Commun.* L371/1/11 (1987), amended by Council Regulation 2218/89. *Off. J. Eur. Commun.* L211/1 (1989).
13. CEC. Council Regulation (Euratom) No 944/89 laying down the maximum permitted levels of radioactive contamination in minor foodstuffs following a nuclear accident or any other case of radiological emergency. *Off. J. Eur. Commun.* L101/17 1989.
14. CEC. Council Regulation (Euratom) No 770/90 laying down maximum permitted levels of radioactive contamination of feedingstuffs following a nuclear accident or any other case of radiological emergency. *Off. J. Eur. Commun.* L83/78 (1990).
15. Nuclear Energy Agency and Commission of the European Communities. Probabilistic accident consequence assessment codes. Second international comparison. Paris, OECD (1994).

**Table 1.1 Reactor inventory considered**

Radionuclide	Inventory (Bq)	Half-life	Radionuclide	Inventory (Bq)	Half-life
<sup>58</sup> Co	3.08 10 <sup>16</sup>	70.8 d	<sup>131m</sup> Te	3.47 10 <sup>17</sup>	30.0 h
<sup>60</sup> Co	1.14 10 <sup>16</sup>	5.27 y	<sup>132</sup> Te	4.85 10 <sup>18</sup>	78.2 h
<sup>85</sup> Kr	2.17 10 <sup>16</sup>	10.7 y	<sup>131</sup> I	3.39 10 <sup>18</sup>	8.04 d
<sup>85m</sup> Kr	9.25 10 <sup>17</sup>	4.48 h	<sup>132</sup> I	4.96 10 <sup>8</sup>	2.30 h
<sup>87</sup> Kr	1.70 10 <sup>18</sup>	76.3 min	<sup>133</sup> I	6.81 10 <sup>18</sup>	20.8 h
<sup>88</sup> Kr	2.34 10 <sup>18</sup>	2.84 h	<sup>134</sup> I	7.84 10 <sup>18</sup>	52.6 min
<sup>86</sup> Rb	7.96 10 <sup>15</sup>	18.6 d	<sup>135</sup> I	6.40 10 <sup>18</sup>	6.61 h
<sup>89</sup> Sr	3.37 10 <sup>18</sup>	50.5 d	<sup>133</sup> Xe	6.85 10 <sup>18</sup>	5.25 d
<sup>90</sup> Sr	1.75 10 <sup>17</sup>	29.1 y	<sup>135</sup> Xe	1.67 10 <sup>18</sup>	9.09 h
<sup>91</sup> Sr	4.37 10 <sup>18</sup>	8.48 h	<sup>134</sup> Cs	3.85 10 <sup>17</sup>	2.06 y
<sup>90</sup> Y	1.82 10 <sup>17</sup>	2.67 d	<sup>136</sup> Cs	1.33 10 <sup>17</sup>	13.2 d
<sup>91</sup> Y	4.51 10 <sup>18</sup>	58.6 d	<sup>137</sup> Cs	2.29 10 <sup>17</sup>	30.0 y
<sup>95</sup> Zr	5.88 10 <sup>18</sup>	65.5 d	<sup>140</sup> Ba	6.14 10 <sup>18</sup>	12.7 d
<sup>95</sup> Nb	5.81 10 <sup>18</sup>	35.1 d	<sup>140</sup> La	6.32 10 <sup>18</sup>	40.3 h
<sup>97</sup> Zr	5.88 10 <sup>18</sup>	16.9 h	<sup>141</sup> Ce	5.92 10 <sup>18</sup>	32.5 d
<sup>99</sup> Mo	6.44 10 <sup>18</sup>	66.02 h	<sup>143</sup> Ce	5.44 10 <sup>18</sup>	33.0 h
<sup>99m</sup> Tc	5.55 10 <sup>18</sup>	6.02 h	<sup>144</sup> Ce	3.59 10 <sup>18</sup>	285 d
<sup>103</sup> Ru	5.25 10 <sup>18</sup>	39.4 d	<sup>143</sup> Pr	5.40 10 <sup>18</sup>	13.6 d
<sup>105</sup> Ru	3.51 10 <sup>18</sup>	4.44 h	<sup>147</sup> Nd	2.36 10 <sup>18</sup>	11.0 d
<sup>106</sup> Rh	3.18 10 <sup>18</sup>	1.47 d	<sup>239</sup> Np	7.32 10 <sup>19</sup>	2.36 d
<sup>106</sup> Ru	1.30 10 <sup>18</sup>	368 d	<sup>238</sup> Pu	3.17 10 <sup>15</sup>	87.7 y
<sup>127</sup> Sb	2.93 10 <sup>17</sup>	3.89 d	<sup>239</sup> Pu	1.11 10 <sup>15</sup>	2.41 10 <sup>4</sup> y
<sup>129</sup> Sb	9.95 10 <sup>17</sup>	4.31 h	<sup>240</sup> Pu	1.06 10 <sup>15</sup>	6550 y
<sup>127</sup> Te	2.85 10 <sup>17</sup>	9.35 h	<sup>241</sup> Pu	3.12 10 <sup>17</sup>	14.4 y
<sup>127m</sup> Te	4.37 10 <sup>16</sup>	109 d	<sup>241</sup> Am	2.06 10 <sup>14</sup>	432 y
<sup>129</sup> Te	9.40 10 <sup>17</sup>	69.6 min	<sup>242</sup> Cm	6.62 10 <sup>16</sup>	163 d
<sup>129m</sup> Te	1.67 10 <sup>17</sup>	33.6 d	<sup>244</sup> Cm	2.75 10 <sup>15</sup>	18.1 y

**Table 1.2 Source terms considered for the assessment**

Source term	Fraction of core inventory released to the environment								
	Xe-Kr	Organic iodine	Inorganic iodine	Cs-Rb	Te-Sb	Ba-Sr	Ru <sup>(a)</sup>	La <sup>(b)</sup>	Pu <sup>(c)</sup>
UK1	$9 \cdot 10^{-1}$	$7 \cdot 10^{-3}$	$7 \cdot 10^{-1}$	$5 \cdot 10^{-1}$	$3 \cdot 10^{-1}$	$6 \cdot 10^{-2}$	$2 \cdot 10^{-2}$	$4 \cdot 10^{-3}$	$4 \cdot 10^{-3}$
CB2	$1 \cdot 10^{-2}$	$5 \cdot 10^{-6}$	$2 \cdot 10^{-3}$	$8 \cdot 10^{-3}$	$8 \cdot 10^{-6}$	$8 \cdot 10^{-7}$	$8 \cdot 10^{-7}$	$8 \cdot 10^{-7}$	$3 \cdot 10^{-7}$
DBA <sup>(d)</sup>	$1 \cdot 10^{-7}$	-	$1 \cdot 10^{-6}$	$1 \cdot 10^{-6}$	$1 \cdot 10^{-8}$	$1 \cdot 10^{-8}$	$1 \cdot 10^{-8}$	$1 \cdot 10^{-8}$	$1 \cdot 10^{-10}$

Notes

a Includes Ru, Rh, Co, Mo, Tc.

b Includes Y, La, Zr, Nb, Ce, Pr, Nd.

c Includes Np, Pu, Am, Cm.

d This source term is defined in terms of the amount of each radionuclide released. The information has been converted into the form presented here for comparison with the other source terms. The release fractions for different isotopes of the same element and for different elements differ from the values given here by up to a factor of 3.

**Table 1.3 Activity released in the DBA source term**

Radionuclide	Release (Bq)	Radionuclide	Release (Bq)	Radionuclide	Release (Bq)
<sup>24</sup> Na	7.0 10 <sup>10</sup>	<sup>51</sup> Cr	1.4 10 <sup>11</sup>	<sup>54</sup> Mn	1.4 10 <sup>11</sup>
<sup>55</sup> Fe	5.2 10 <sup>9</sup>	<sup>59</sup> Fe	5.2 10 <sup>9</sup>	<sup>56</sup> Co	3.4 10 <sup>11</sup>
<sup>60</sup> Co	3.2 10 <sup>10</sup>	<sup>63</sup> Ni	5.6 10 <sup>9</sup>	<sup>65</sup> Zn	1.4 10 <sup>11</sup>
<sup>83</sup> Br	9.3 10 <sup>10</sup>	<sup>84</sup> Br	2.6 10 <sup>12</sup>	<sup>85</sup> Br <sup>(a)</sup>	4.8 10 <sup>9</sup>
<sup>83m</sup> Kr	5.2 10 <sup>9</sup>	<sup>85m</sup> Kr	1.1 10 <sup>11</sup>	<sup>85</sup> Kr	2.3 10 <sup>9</sup>
<sup>87</sup> Kr	9.3 10 <sup>10</sup>	<sup>88</sup> Kr	1.1 10 <sup>11</sup>	<sup>89</sup> Kr	8.1 10 <sup>10</sup>
<sup>86</sup> Rb	4.4 10 <sup>9</sup>	<sup>88</sup> Rb	3.5 10 <sup>13</sup>	<sup>89</sup> Rb	8.1 10 <sup>12</sup>
<sup>89</sup> Sr	4.4 10 <sup>10</sup>	<sup>90</sup> Sr	3.7 10 <sup>8</sup>	<sup>91</sup> Sr	2.3 10 <sup>11</sup>
<sup>90</sup> Y	4.4 10 <sup>8</sup>	<sup>91m</sup> Y	6.3 10 <sup>10</sup>	<sup>91</sup> Y	4.8 10 <sup>8</sup>
<sup>93</sup> Y	3.7 10 <sup>11</sup>	<sup>95</sup> Zr	4.1 10 <sup>10</sup>	<sup>95</sup> Nb	4.4 10 <sup>10</sup>
<sup>99</sup> Mo	1.6 10 <sup>11</sup>	<sup>99m</sup> Tc	3.7 10 <sup>10</sup>	<sup>103</sup> Ru	2.7 10 <sup>10</sup>
<sup>106</sup> Ru	1.6 10 <sup>10</sup>	<sup>103m</sup> Rh	6.3 10 <sup>10</sup>	<sup>106</sup> Rh	3.5 10 <sup>10</sup>
<sup>110m</sup> Ag	5.6 10 <sup>10</sup>	<sup>122</sup> Sb	1.0 10 <sup>11</sup>	<sup>124</sup> Sb	2.5 10 <sup>10</sup>
<sup>125m</sup> Te	1.7 10	<sup>127m</sup> Te	1.8 10 <sup>9</sup>	<sup>127</sup> Te	8.5 10 <sup>9</sup>
<sup>129m</sup> Te	3.3 10 <sup>10</sup>	<sup>129</sup> Te	8.9 10 <sup>12</sup>	<sup>131m</sup> Te	1.2 10 <sup>11</sup>
<sup>131</sup> Te	2.3 10 <sup>12</sup>	<sup>132</sup> Te	1.8 10 <sup>10</sup>	<sup>130</sup> I	1.9 10 <sup>10</sup>
<sup>131</sup> I	1.9 10 <sup>12</sup>	<sup>132</sup> I	5.2 10 <sup>12</sup>	<sup>133</sup> I	8.1 10 <sup>12</sup>
<sup>134</sup> I	6.3 10 <sup>12</sup>	<sup>135</sup> I	3.6 10 <sup>12</sup>	<sup>131m</sup> Xe	2.3 10 <sup>10</sup>
<sup>133m</sup> Xe	2.8 10 <sup>10</sup>	<sup>133</sup> Xe	1.5 10 <sup>12</sup>	<sup>135m</sup> Xe	9.3 10 <sup>10</sup>
<sup>135</sup> Xe	3.4 10 <sup>11</sup>	<sup>137</sup> Xe	8.1 10 <sup>11</sup>	<sup>138</sup> Xe	4.1 10 <sup>11</sup>
<sup>134</sup> Cs	2.1 10 <sup>11</sup>	<sup>136</sup> Cs	2.5 10 <sup>10</sup>	<sup>137</sup> Cs	2.7 10 <sup>11</sup>
<sup>138</sup> Cs	5.9 10 <sup>12</sup>	<sup>138</sup> Cs	2.0 10 <sup>13</sup>	<sup>137m</sup> Ba	8.9 10 <sup>11</sup>
<sup>138</sup> Ba	4.4 10 <sup>12</sup>	<sup>140</sup> Ba	6.7 10 <sup>10</sup>	<sup>140</sup> La	3.5 10 <sup>10</sup>
<sup>141</sup> Ce	1.0 10 <sup>10</sup>	<sup>143</sup> Ce	3.7 10 <sup>10</sup>	<sup>144</sup> Ce	3.7 10 <sup>10</sup>
<sup>143</sup> Pr	3.6 10 <sup>8</sup>	<sup>144</sup> Pr	3.7 10 <sup>10</sup>	<sup>187</sup> W	2.2 10 <sup>11</sup>
<sup>237</sup> U	2.5 10 <sup>8</sup>	<sup>239</sup> U	1.0 10 <sup>10</sup>	<sup>239</sup> Np	4.1 10 <sup>9</sup>
<sup>236</sup> Pu	1.7 10 <sup>5</sup>	<sup>238</sup> Pu	3.7 10 <sup>5</sup>	<sup>239</sup> Pu	1.5 10 <sup>5</sup>
<sup>240</sup> Pu	1.4 10 <sup>5</sup>	<sup>241</sup> Pu	4.1 10 <sup>7</sup>	<sup>242</sup> Pu	4.4 10 <sup>2</sup>
<sup>243</sup> Pu	8.5 10 <sup>7</sup>	<sup>241</sup> Am	7.0 10 <sup>4</sup>	<sup>242m</sup> Am	2.4 10 <sup>3</sup>
<sup>242</sup> Am	4.8 10 <sup>7</sup>	<sup>243</sup> Am	8.1 10 <sup>3</sup>	<sup>244</sup> Am	2.7 10 <sup>6</sup>
<sup>242</sup> Cm	1.6 10 <sup>6</sup>	<sup>243</sup> Cm	6.3 10 <sup>2</sup>	<sup>244</sup> Cm	9.6 10 <sup>4</sup>

**Table 1.4 Countermeasures criteria and timings adopted in the study**

Action	Criteria		
Sheltering	10 mSv effective dose, total of committed inhalation dose and external dose to 7 days to a person outdoors		
Evacuation	50 mSv effective dose, total of committed inhalation dose and external dose to 7 days to a person outdoors		
Iodine tablets	100 mSv committed inhalation dose to thyroid to a person outdoors		
Relocation	30 mSv external dose in 30 days to a person in normal living		
Return from relocation	10 mSv external dose in 30 days to a person in normal living		
Food restrictions	Activity concentration levels in food		
	Radionuclide	Milk (Bq l <sup>-1</sup> )	Other foods (Bq kg <sup>-1</sup> )
	Strontium	125	750
	Iodine	500	2000
	Caesium and other long-lived radionuclides	1000	1250
	α - emitters	20	80

Action	Time when action initiated	Time when action withdrawn
Sheltering	2 hours	8 hours
Evacuation	6 hours	2 days
Iodine tablets	4 hours	- <sup>a</sup>
Relocation	Depends on relocation area <sup>b</sup>	When dose rate drops below criterion
Food restrictions	Start of first time period in which concentrations are above the criterion	End of last time period in which concentrations are above the criterion

Notes:

a COSYMA assumes that iodine tablets are taken on a single occasion only.

b COSYMA calculates an average relocation time, assuming that the area affected can be relocated at a rate of 100 km<sup>2</sup> per day, and assumes that everyone is relocated at that time

**Table 1.5 List of endpoints considered in the analysis**

**For COSYMA NE<sup>a</sup> runs**

Activity concentrations, at 0.875, 5 and 20 km.  
in air and on the ground, for Cs-137 and I-131.

Individual doses, at 0.875, 5 and 20 km  
integrated to 7 days for both inhalation and external dose  
for bone marrow, thyroid and skin.

Individual risks of deterministic health effects, at 0.875, 5 and 20 km.  
for mortality, the sum and the risk of the haematopoietic syndrome,  
for morbidity, the sum and the risk of lung morbidity, hypothyroidism and skin burns.

Areas with emergency actions,  
for sheltering only, evacuation and distribution of stable iodine tablets.

Number of deterministic health effects  
for mortality, the sum and haematopoietic syndrome.  
for morbidity, the sum and numbers of cases of lung morbidity, hypothyroidism and of skin burns.

**For COSYMA NL<sup>b</sup> runs**

Activity concentrations, at 5, 20 and 100 km  
in air and on the ground, for Cs-137 and I-131.

Individual doses, at 5, 20 and 100 km  
integrated to 50 years for both inhalation and external dose  
effective dose and for bone marrow and thyroid.

Individual risk of fatal stochastic health effects, at 5, 20 and 100 km  
for total, and the risks of death from leukaemia and thyroid cancer.

Areas with countermeasures  
for relocation, the initial area and its time integral  
for restrictions of milk, grain, leafy vegetables and beef, the initial area and its time integral.

Collective doses  
effective dose and for bone marrow and thyroid.

Numbers of fatal stochastic health effects  
the sum, and numbers of deaths from leukaemia and thyroid cancer.

Notes:

- a NE refers to the sub-system of COSYMA calculating short term doses, early health effects and the appropriate countermeasures.
- b NL refers to the sub-system of COSYMA calculating long term doses, late health effects and the appropriate countermeasures.

## 2 DISTRIBUTIONS ON THE INPUT PARAMETER VALUES

### 2.5 Introduction

The main stages of an uncertainty analysis were summarised in Section 1 of this report. The first stage is to take information from expert panels, supplemented from other sources where necessary, and to generate marginal distributions\* for those module input parameters considered to be uncertain, together with a correlation matrix describing the relationships between the marginal distributions for the different parameters. Sets of input parameter values are then sampled from these correlated marginal distributions for use in the uncertainty analysis. Section 2 describes this process for the atmospheric dispersion and deposition module.

Code input parameters for which marginal distributions and a correlation matrix have to be specified (ie the uncertain input parameters) are called target variables. Variables for which the experts have to give assessments are called elicitation variables. A fundamental aspect of the methodology of formal expert judgement elicitation is that experts should only be asked to provide assessments on elicitation variables that are physically observable, potentially measurable and with which the expert is familiar. Different experts may prefer different models for certain phenomena. An expert may be unwilling to give assessments on model dependent target variables. He may not relate to these target variables if he does not agree with the model which is described by these target variables. Therefore it is better to have elicitation variables which are not related to a certain model, and so to have elicitation variables which can be considered as model independent. Some of the parameters in accident consequence models represent quantities that can, in principle, be measured and for which distributions can be obtained directly from expert judgement. Others cannot and so must be derived from distributions on the values of other measurable quantities.

This process yields distributions on the parameters for different models (or for different parts of the overall model) considered within the module analysis. These distributions must then be combined into a single joint distribution\*\* on all of the parameters considered in the module analysis. The program used for the sampling could only handle joint distributions when they are expressed as marginal distributions for each of the parameters and the correlations between them. Therefore the distribution has to be expressed in this form. The steps required to obtain samples of target variable values are summarised below, and described in more detail in the later parts of Section 2.

1. Identify the models comprising the module and the uncertain target variables in those models.
2. Identify suitable elicitation variables from which distributions on the target variables can be obtained. Construct joint distributions, expressed in terms of marginal distributions and correlations, on the elicitation variables for the different models. The distributions come directly from information provided by the experts supplemented, in some cases, by further information provided by project staff.
3. Obtain the joint distribution on the target variables for each model from the joint distribution on the elicitation variables obtained from step 2; this procedure is known as “probabilistic

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\* The marginal distribution assigns a probability to each feasible value of a single parameter.

\*\* The joint distribution assigns a probability to each feasible set of values of the input parameters.



inversion”. Express the joint distribution on the target variables in terms of marginal distributions for each of the target variables involved, together with a correlation matrix between those distributions, for each model, as required by the program used for the sampling.

4. Combine the distributions on the target variables for each of the models into a distribution over the whole set of target variables involved in this module analysis, allowing for correlations between the different sub-sets of parameters. This distribution is expressed in terms of marginal distributions on each of the variables and correlations between them, so that it can be input to the program used for the final sampling.
5. Finally, sample the input values for the COSYMA module analysis from the distribution resulting from step 4.

As a check on the inversion process, a sub-step 3a was added. In this the COSYMA dispersion and deposition models and the joint distribution on the target variables are used to replicate the marginal distributions on the elicitation variables. The resulting distributions can then be compared with those obtained from the experts, as a check on the adequacy of the inversion process.

The summary above identified a number of steps which must be carried out for the parameters in each of the models considered in the module analysis. The structure of the remainder of Section 2 is as follows:

- Section 2.6 describes step 1 above, namely the models used in COSYMA, and the parameters that were considered to be uncertain.
- Section 2.7 describes step 2 above, namely the identification of the elicitation variables and the derivation of distributions on them from information derived from that provided by the expert panel, supplemented where necessary by information from the project staff.
- Section 2.8 outlines the general methods used for probabilistic inversion, which is step 3 above.
- Sections 2.9 and 2.10 (for atmospheric dispersion and deposition, respectively) describe details of step 3 and 3a relating to this module analysis. These sections describe the derivation of distributions on the target variables and give the distributions used in this study, together with the comparison of the distributions on the elicitation variables as reconstructed from the target variables and as specified by the experts.
- Section 2.11 describes step 4 above, namely the construction of the overall distribution on the whole set of target variables, in a form which is suitable for input to the sampling program used.
- Section 2.12 describes step 5 above, namely the sampling from the overall distribution.

## **2.6 Air concentration and deposition models in COSYMA and uncertain target variables**

This section describes the way in which calculations of air concentration and deposition are undertaken in COSYMA, and the parameters that were considered to be uncertain. Identifying the parameters that were regarded as uncertain is step 1 from Section 2.5.

Atmospheric dispersion is modelled in COSYMA using a version of the Gaussian plume dispersion model, modified to allow for hourly changes in atmospheric conditions such as wind speed and direction, diffusion category and precipitation rate. The model assumes that the concentration distribution within the plume of material is Gaussian both vertically and horizontally at right angles to the mean wind direction.

The basic equation of the Gaussian plume dispersion model is

$$C(x, y, z) = \frac{Q_0}{2\pi u \sigma_y \sigma_z} \exp\left(-\frac{y^2}{2\sigma_y^2}\right) \left[ \exp\left(-\frac{(z-H)^2}{2\sigma_z^2}\right) + \exp\left(-\frac{(z+H)^2}{2\sigma_z^2}\right) \right] \quad 1$$

where

$C(x,y,z)$  is the time integrated concentration at  $(x,y,z)$  [Bq s/m<sup>3</sup>],

$Q_0$  is the initial quantity of contaminant released [Bq],

$u$  is the (constant) windspeed (always in x direction) [m/s],

$H$  is the height of the release [m]

and  $\sigma_y$  and  $\sigma_z$  are the lateral and vertical plume spread, respectively [m].

$$\sigma_y = p_y x^{q_y} \quad \sigma_z = p_z x^{q_z} \quad 2$$

The standard deviation of the Gaussian distributions ( $\sigma_y$  and  $\sigma_z$ ) are described in COSYMA using power law functions

For one set of atmospheric conditions, the target variables of the Gaussian plume dispersion model are  $p_y, q_y, p_z, q_z$ . COSYMA considers dispersion in the six atmospheric stability categories proposed by Pasquill, and designated A to F. Therefore 24 target variables were identified for the atmospheric dispersion model, namely the parameters  $p_y, q_y, p_z, q_z$  in each of the 6 stability categories. This was subsequently reduced to 16 target variables, as explained in Section 2.7.

The calculations consider both dry and wet deposition to the ground.

Dry deposition is calculated using the deposition velocity, where the deposition rate is the product of the air concentration at ground level and the deposition velocity. The calculated air concentration is modified to allow for the effect of plume depletion during its travel, using the source depletion model. The deposition velocities for three forms of released material, namely aerosols, elemental iodine and organic iodine were considered to be uncertain in this study. It was assumed that all material released in particulate form has the same deposition velocity. The deposition velocity for noble gases was assumed to be zero, with no uncertainty.

Dry deposition to skin was also considered, with different values of the deposition velocity to skin for the three types of material identified above.

Wet deposition is calculated using the washout coefficient,  $\Lambda$ , the fraction of dispersing material deposited by rain in unit time. The washout coefficient is related to the rainfall rate,  $R$ , by

$$\Lambda = a R^b \quad 3$$

so the target variables are the quantities  $a$  and  $b$ . As with dry deposition, different values of these parameters are used for material released as aerosols, elemental iodine and organic iodine. It was assumed that all particulate material has the same values for these parameters. It was assumed that noble gases do not deposit.

Therefore 12 target variables were identified for the deposition model, namely the deposition velocities to ground and skin and the parameters of the expression for washout coefficient for each of three types of material.

The parameters considered to be uncertain in this module analysis are summarised in the first columns of Table 2.1 and Table 2.2, for atmospheric dispersion and deposition, respectively.

## 2.7 Distributions for the elicitation variables

Identifying suitable elicitation variables and determining distributions on them is step 2 from Section 2.5. The distributions on the elicitation variables for this module analysis were expressed as marginal distributions for each parameter together with correlations between them. They were derived from information provided by two expert panels, supplemented by information from project staff. The expert judgement aspects of the study were commissioned jointly by the USNRC and EC. The method for undertaking expert judgement elicitations was based on methods used in earlier American<sup>(1)</sup> and European<sup>(2)</sup> studies with some modifications. The method used in the project, together with some comments and suggestions for further improvements, is described in reference 3. The information used in this module analysis comes from two different panels of experts, one addressing the uncertainty on modelling atmospheric dispersion and one addressing the uncertainty on modelling deposition. The expert judgement elicitation process is described in detail in the report on the panels<sup>(4)</sup>.

The target variables of the atmospheric dispersion model were identified in Section 2.6 as the parameters  $p_y$ ,  $q_y$ ,  $p_z$ ,  $q_z$  in each stability category. These parameters are not directly observable, and so cannot be used as elicitation variables. However, values for these target variables could be determined from values for air concentration and  $\sigma_y$  in the appropriate stability category, using the relationships in equations 1 and 2. Air concentration and  $\sigma_y$  are observable, and are suitable to be elicitation variables. The elicitation variables were therefore taken as air concentration and  $\sigma_y$  for releases with a duration of one hour at particular distances in the same stability categories. The elicitation variables considered are listed in Table 2.3; the last column of Table 2.1 indicates which elicitation variables were used to derive each of the target variables.

The first expert panel gave information on air concentrations and cross wind spread in four sets of atmospheric conditions. However, the meteorological data used with COSYMA divides the range of atmospheric conditions into six stability categories. Two of the situations considered by the experts matched fairly closely the conditions normally considered to be stability category C

and D; the uncertainty distributions obtained for those conditions have been used here to represent the uncertainty on dispersion in stability categories C and D, respectively. One of the other situations considered by the experts was in the range of conditions allocated to stability categories A and B, but did not correspond exactly with either one of these categories. The uncertainty distributions derived from the expert elicitation exercise suggest that the uncertainty on the dispersion parameters for any one situation is greater than the differences normally assumed between the dispersion parameters in different stability categories. The project staff assumed that the difference between dispersion in stability categories A and B would be less than the distributions obtained for this situation. Therefore these distributions were used for the dispersion parameters in both categories A and B, which is identified in this report as category A/B. The final situation considered by the experts was in the range of conditions allocated to stability category E and F, but again did not correspond exactly with either of these conditions. The distributions obtained for this situation were used for the distributions in both stability categories E and F for the same reasons as those given for categories A and B; this is referred to as category E/F. Therefore the study only considered uncertainty on dispersion in 4 atmospheric stability categories.

The target variables for the dry deposition model are the dry deposition velocities. As the dry deposition velocity was regarded as measurable and model independent, it served as an elicitation variable, and the experts gave information directly for this quantity. The experts were asked for distributions on the deposition velocity to several different surfaces for different particle sizes and for different chemical forms of iodine. Not all this information was used in the project. The elicitation variables for dry deposition are summarised in the first part of Table 2.4; the last column of Table 2.2 indicates which elicitation variables were used to represent each of the target variables.

The target variables for the wet deposition model are the parameters a and b in the expression for the washout coefficient. Neither the parameters a and b nor the washout coefficient itself were considered to be measurable and model independent. Therefore the experts were asked for information on the fraction of material removed from a plume by rain of different intensities and durations. The elicitation variables for wet deposition are summarised in the second part of Table 2.4; the last column of Table 2.2 indicates which elicitation variables were used to determine each of the target variables.

The distributions on the elicitation variables, expressed as marginal distributions for each elicitation variable and the correlations between them, are presented in the report on the panels<sup>(4)</sup>.

The distributions on the elicitation variables for the different parts of the overall model were derived entirely from information provided by the experts. The project staff provided information on the correlations between some of the groups of target variables; this was used in step 4, which is described in Section 2.11.

### **2.7.1 Conditions included in the uncertainty distributions**

The experts were asked to provide uncertainty distributions as if the elicitation variables had been measured in defined conditions. However, the conditions were defined in a way that did not specify values for every quantity that each expert might feel could influence the value of the

variable. The experts were asked to include any resulting variation in the values of the elicitation variables within the distributions they provided.

The atmospheric conditions were specified in terms of the lapse rate, wind speed and standard deviation of the wind direction. The distributions were for dispersion over terrain described as simple, which was to include flat terrain and rolling hills. The effects of plume meander during the release period were to be included in the distributions provided.

The conditions to be included in the uncertainty distributions for the dry deposition velocity were identified only by average wind speed. The experts were asked to include effects of variation of quantities such as humidity, ambient air temperature, other meteorological conditions, chemical reactions, vapour to particle conversions and variations within surface type in the uncertainty distributions specified.

The uncertainty distributions for wet deposition were to include the effects of chemical reactions between the dispersing material and the rainwater, electrostatic effects and vertical profiles of pollutant concentration. The experts were asked to give information for particular amounts of rain within specified periods; any effects of variation in the rainfall rate within the period was to be included in the uncertainty distributions.

## **2.8 Probabilistic inversion**

Step 3 from Section 2.5 is to generate joint distributions on the target variables and express them as marginal distributions and correlations. The details are given in Sections 2.9 and 2.10, for the atmospheric dispersion and deposition models respectively, the general method is described here.

Some of the target variables are quantities which could be measured and so they served as elicitation variables. In this case, the distribution derived from step 2 could be used directly. In other cases, the target variables are quantities that cannot be measured and so they could not be used as elicitation variables. In this situation, it is the task of the uncertainty analyst to design the elicitation in such a way that, based on the information available on elicitation variables, a joint distribution on the target variables can be determined. This process is called probabilistic inversion. The problems which arise are similar to other inversion problems, yet different enough to require different methods to be used. Techniques for performing probabilistic inversion in the context of expert judgement have been under development for some years, and are still being refined. The methods used in this study are summarised in the "Methodology Report"<sup>(5)</sup>, and described in more detail in references 6 and 7. The computer programs used to implement these methods in this project are described in reference 8. The following paragraph summarises the process.

For a given model, a set of observable quantities can be predicted by the model when suitable values are assigned to various model parameters. Starting with values for the observables, and inverting the model, gives model parameter values which, when used with the model, ideally yield the observed values. Such an inversion is not always possible; for example the model may not adequately represent the processes occurring in the environment. Furthermore, in probabilistic inversion, the starting point is a (joint) distribution (in this study, obtained from expert judgement)

over possible values of the observables, rather than single values. A (joint) distribution over model parameters is sought which, when used with the model, returns the original distribution on the observables. Here again, it may not be possible to find a joint distribution that accurately reproduces the original joint distribution for the values of the observed quantities. In such cases a distribution over model parameters is sought which reproduces 'as well as possible' the distributions over the input values.

## 2.9 Uncertainty distributions on atmospheric dispersion parameters

The target variables for the dispersion model are  $p_y$ ,  $q_y$ ,  $p_z$ ,  $q_z$  for each of four stability categories; the elicitation variables are the air concentration and  $\sigma_y$  at particular distances in the same sets of atmospheric conditions. The relationship between the target and elicitation variables is given in equations 1 and 2. Probabilistic inversion, as described in Section 2.8, was used to obtain a joint distribution on  $p_y$ ,  $q_y$ ,  $p_z$ ,  $q_z$  for each category separately, from the distributions on the elicitation variables. The joint distribution for each stability category was then expressed as marginal distributions on each of the target variables together with correlations between them. The marginal distributions obtained for the atmospheric dispersion parameters are shown in the first part of Table 2.5 which also shows the default values for the parameters. The correlations between the parameters within a single stability category are given in the first part of Table 2.6. For this part of the analysis, the atmospheric dispersion model was considered to consist of four sub-models, namely dispersion in each of the stability categories considered. The elicitation and probabilistic inversion processes provided a distribution on the values of  $p_y$ ,  $q_y$ ,  $p_z$ ,  $q_z$  for each category separately. The combination of the distributions on the target variables for each stability category into a single joint distribution is described in Section 2.11.

The default values of the COSYMA dispersion parameters generally lie towards one end of, or outside, the range of values used in this study. Thus the default values for the parameter  $p_y$  in categories C, D and E/F are above the maximum value of the distribution; those for  $q_y$  are below the 20<sup>th</sup> percentile of the distribution in all categories, and below the minimum value in category E/F; those for  $p_z$  are below the 5<sup>th</sup> percentile for all categories other than E/F while those for  $q_z$  are above the 80<sup>th</sup> percentile and in some categories above the maximum value. The importance of these features is discussed in Section 3, when the results of the study are presented.

Step 3a is to use the distributions on the target variables with the COSYMA model to reconstruct the marginal distributions on the elicitation variables and compare them with the distributions provided by the experts. The results of the comparison, for  $\sigma_y$  and air concentration at different distances, are presented in Table 2.7 to Table 2.10, for the different stability conditions considered. In general the distributions on the elicitation variables obtained from the fitted distributions of parameter values reproduce the ones given by the experts to within one or two percent

## 2.10 Uncertainty distributions on deposition parameters

The target variables for dry deposition are the dry deposition velocities for different physical and chemical forms of released material; in this case the target variables could be used as elicitation variables, and probabilistic inversion was not needed. The distributions obtained are shown in the appropriate part of Table 2.5, which also shows the default parameter values. For this part of the analysis, the deposition parameters for each type of material and for deposition to skin and ground were considered separately. These distributions were combined into a single distribution in step 4 described in Section 2.11.

The target variables for wet deposition are the parameters a and b of the formula for the washout coefficient for the different physical and chemical forms of released material. The elicitation variables were the amount of material removed from a plume by rain of different intensities and durations. COSYMA assumes that this fraction is given by

$$F = 1 - \exp(-\Lambda t) \quad 4$$

where t is the duration of the rain and  $\Lambda$  the washout coefficient. A joint distribution on the values for the COSYMA parameters a and b was then obtained by fitting equations 3 and 4 to the expert distributions. This was then expressed as marginal distributions for each of the target variables together with correlations between them. The marginal distributions obtained are shown in the appropriate part of Table 2.5, which also shows the default parameter values, with the correlations shown in the “wet deposition” part of Table 2.6. For this part of the analysis, the target variables for wet deposition of each type of material were considered separately, and a distribution was obtained for each type of material. These distributions were combined in step 4 described in Section 2.11.

The default values of the COSYMA deposition parameters lie near the centre of the range of values obtained from the experts, for all the deposition parameters other than one of the terms in the formula for wet deposition of methyl iodide, where the default value is well below the 20<sup>th</sup> percentile of the distribution used in this study. This is unlikely to have any significant effect on the results of the study, as only a very small part of the iodine in the release is assumed to be in the form of methyl iodide.

The uncertainty on the deposition velocity of particulate material is somewhat lower than that on the deposition velocity of elemental iodine, and in both cases the uncertainty on deposition to skin is much greater than that on deposition to the ground. The uncertainty on the deposition velocity is greater than that on the washout coefficient for iodine, but the reverse is true for particulate material. This could affect the relative uncertainty on endpoints relating to doses from material on skin and those relating to doses from material deposited to the ground.

Step 3a is to use the distributions on the target variables with the COSYMA model to reconstruct the marginal distributions on the elicitation variables and compare them with the distributions provided by the experts. The distributions as given by the experts and those calculated using the fitted distributions of values for the target variables are compared in Table 2.11 to Table 2.13 for 1  $\mu\text{m}$  particles and for the two forms of iodine considered. In most cases, the distributions on the elicitation variables obtained with the fitted distributions on the parameter values are within 1% of those given by the experts.

## 2.11 Combining the distributions from the different parts of the model

The preceding sections have described the methods used to derive the joint distributions (expressed as marginal distributions and correlations) for the target variables for the atmospheric dispersion model for each stability category, dry deposition of each type of material to skin and to the ground, and washout of each type of material. Step 4 of Section 2.5 is to combine the distributions on the target variables for each model into a single distribution, also expressed in terms of marginal distributions and correlations. 28 input parameters were considered to be uncertain in this module analysis.

The derivation of the distribution on the parameters for each stability category separately was described in Section 2.9. The distributions were combined into a single distribution over all of the target variables of the dispersion model i.e. over the different stability categories. The project staff considered that the values allocated to the dispersion parameters in different stability categories should be correlated, for several reasons. Dispersion reflects the effects of atmospheric turbulence; the division of the possible range of atmospheric states into discrete stability categories is somewhat artificial. Those processes affecting dispersion in one category are likely to play some part in adjacent categories, leading to some dependence between the values that should be assigned to the dispersion parameters in the different categories. The value allocated to the dispersion parameters must represent an average value covering the set of atmospheric conditions within a stability category. It is reasonable to assume that, if a value of lateral plume spread of a certain stability category is sampled and corresponds to a high percentile of the underlying distribution, then a value of lateral plume spread in an adjacent stability category should also be sampled from the upper range of its distribution. Finally, plumes experience changes of atmospheric conditions as they travel away from their source. However, it seems unlikely that the rate of growth of a plume would change dramatically as those conditions change over a period of one hour. Assuming that there is a dependency between the values of the dispersion parameters in the different stability categories helps to reduce the rapidity of the changes in dispersion rate that could have been predicted by COSYMA, and so avoids unphysical predictions of the rate of plume growth. For these reasons a correlation structure was specified such that there was a correlation coefficient of 0.5 between the horizontal diffusion parameter  $\sigma_y$  in adjacent categories, with a smaller correlation between values in categories that are more widely separated. No explicit correlations were introduced between the values of  $\sigma_z$  in adjacent categories. However, the parameters used to determine  $\sigma_y$  and  $\sigma_z$  in each category are correlated; this together with the correlations between  $\sigma_y$  in different categories introduces a correlation between the values of  $\sigma_z$  in different categories. The resulting correlations are given in Table 2.6.

The experts were asked whether there were correlations between any of the dry deposition velocities of material to skin and to ground, and between the deposition velocities of the different types of material. The correlations specified are given in Table 2.6.

The project staff also considered that there could be a dependency between the deposition velocity and the rate of plume growth, as both processes are governed to some extent by atmospheric turbulence. Therefore both expert panels were asked for information on the



dependency between the dry deposition velocity and air concentration, for each stability category. The resulting correlations are given in Table 2.6.

The joint distribution over the complete set of parameters was constructed using the simulation program UNICORN<sup>(9)</sup> in a way which maintained the correlations within each of the groups and introduced the further correlations between the groups specified by the experts or the project staff. The construction of the joint distribution was done in such a way that the corresponding rank correlation matrix is assured to be positive definite (see the Methodology report<sup>(5)</sup> for further information on this requirement). There may be several distributions which achieve this combination, and so the minimum information distribution was used. The marginal distributions for the parameter values and the correlations between the different parameters were then extracted from the joint distribution. This process does not alter the marginal distribution but may introduce correlation between groups of parameters for the different models.

The complete distribution is summarised in Table 2.5, which shows the marginal distribution for each parameter, and Table 2.6, which shows those pairs of parameters with large correlations. Note that these distributions were derived for application in the models adopted in COSYMA. They should only be used in other models if the parameters have the same meanings as in the models adopted here.

The distribution as calculated using UNICORN includes the values for each percentile (from 0 to 100) of the marginal distributions, which are thus described by 101 values. The sampling program used (the Sandia LHS program<sup>(10)</sup>) cannot use such a large number of points, and so the distributions were simplified slightly by describing them in terms of the values at the smaller number of percentiles given in Table 2.5.

## **2.12 Sampling from the distribution**

The final step from Section 2.5 is to sample sets of input parameter values from the complete distribution. This was undertaken using the Sandia LHS code<sup>(10)</sup>; the input to this code is the joint distribution on the input parameters expressed as marginal distributions on the values for each of the parameters together with a correlation matrix between those values. This program ensures that the correlations specified between the input parameter values are reflected in the sets of input parameter values obtained. The input to this program is the marginal distribution of each parameter plus the rank correlation matrix between the different parameters.

## **2.13 References**

1. US Nuclear Regulatory Commission. Severe accident risks; an assessment for five US nuclear power plants. Washington NUREG-1150 (1990)
2. Cooke R. Expert judgement study on atmospheric dispersion and deposition. Delft. TUD report 91-81 (1991)
3. R M Cooke, L H J Goossens, B C P Kraan. Probabilistic accident consequence uncertainty assessment - procedures guide using structured expert judgement. EUR 18820
4. Harper F T, Hora S C, Young M L, Miller L A, Lui C H, McKay M D, Helton J C, Goossens L H J, Cooke R M, Päsler-Sauer J, Kraan B and Jones J A. Probabilistic accident

consequence uncertainty analysis. Dispersion and deposition uncertainty assessment. NUREG/CR-6244, EUR 15855, SAND94-1453, Washington, DC/USA, and Brussels-Luxembourg, (1995)

5. J A. Jones, B C P Kraan, R M Cooke, L H J. Goossens, F Fischer and I Hasemann. Probabilistic accident consequence uncertainty assessment using COSYMA: Methodology and processing techniques. EUR 18827
6. Cooke R M. Parameter fitting for uncertain models: modelling uncertainty in small models. Reliability Engineering and system safety. 44 89-102 (1994)
7. Kraan B C P and Cooke R M. Post-processing techniques for the joint CEC-USNRC uncertainty analysis of accident consequence codes. Journal of Statistical Computation and Simulation 57 (1-4) 243-261, (1996)
8. Kraan B C P and Cooke R M. Uncertainty in compartmental models for hazardous material – a case study. Journal of Hazardous Material 71 253-268 (2000)
9. Cooke R M. UNICORN: Methods and code for uncertainty analysis. AEA Technology Warrington, UK (1995)
10. Iman R L and Shortencarier M J. A Fortran 77 program and user's guide for the generation of Latin Hypercube and random samples for use with computer models. Sandia National Labs, Albuquerque, SAND 83-2365, NUREG/CR-3624 (1984)

**Table 2.1 Summary of uncertain target variables for atmospheric dispersion, and the quantities from which they were derived**

COSYMA parameter	Distributions obtained from <sup>(a)</sup>
$p_y$ and $q_y$ in category A/B <sup>(b)</sup>	1d, for category A/B
$p_z$ and $q_z$ in category A/B <sup>(b)</sup>	1a and 1d, for category A/B
$p_y$ and $q_y$ in category C <sup>(b)</sup>	1d, for category C
$p_z$ and $q_z$ in category C <sup>(b)</sup>	1a and 1d, for category C
$p_y$ and $q_y$ in category D <sup>(b)</sup>	1d, for category D
$p_z$ and $q_z$ in category D <sup>(b)</sup>	1a and 1d, for category D
$p_y$ and $q_y$ in category E/F <sup>(b)</sup>	1d, for category E/F
$p_z$ and $q_z$ in category E/F <sup>(b)</sup>	1a and 1d, for category E/F

Notes:

a The numbers in this column refer to the identifier in column 1 of Table

b  $p_y$ ,  $p_z$ ,  $q_y$  and  $q_z$  determine the values of  $\sigma_y$  and  $\sigma_z$  using the relationships given in equation 2.

**Table 2.2 Summary of uncertain target variables for deposition, and the quantities from which they were derived**

COSYMA parameter	Distributions obtained from <sup>(a)</sup>
Deposition velocity for particulate material to ground	1, for 1 $\mu\text{m}$ particulate to meadow
Deposition velocity for elemental iodine to ground	2, for meadow
Deposition velocity for organic iodine to ground	3, for meadow
Deposition velocity for particulate material to skin	1, for 1 $\mu\text{m}$ particulate to skin
Deposition velocity for elemental iodine to skin	2, for skin
Deposition velocity for organic iodine to skin	3, for skin
a and b in the formula for washout coefficient for particulate material <sup>(b)</sup>	6, for 1 $\mu\text{m}$ particulate
a and b in the formula for washout coefficient for elemental iodine <sup>(b)</sup>	5
a and b in the formula for washout coefficient for organic iodine <sup>(b)</sup>	4

Notes:

a The numbers in this column refer to the identifier in column 1 of Table

b The formula for washout coefficient is given in equation 4

**Table 2.3 Summary of elicitation variables for which distributions were obtained from expert judgement for atmospheric dispersion quantities**

Identifier	Quantity for which distributions were obtained
<b>For atmospheric dispersion</b>	
1	For four different meteorological conditions, at five distances between 0.5 and 30 km from the release point, the experts gave values for
1a	plume centre line concentration per unit release
1b	ratio of concentration at a point a short distance from the centre line to that on the centre line
1c	ratio of concentration at a point a short distance above the centre line to that on the centre line
1d	the standard deviation of the horizontal distribution of material
2	For five different meteorological conditions, at two distances close to the release point plume centre line concentration per unit release
3	For one meteorological condition, at one distance close to the release point ratio of concentration at a point a short distance from the centre line to that on the centre line ratio of concentration at a point a short distance above the centre line to that on the centre line the standard deviation of the horizontal distribution of material
4	For one meteorological condition with a stable atmosphere, for three release durations from 1 to 4 hours and three distances between 360 and 2000 m plume concentration at ground level on the centre line per unit release
5	For one meteorological condition with a stable atmosphere, for a release duration of 1 hour at 60 m from the source plume centre line concentration per unit release the standard deviation of the horizontal distribution of material the standard deviation of the vertical distribution of material
6	For one meteorological condition with an initial stable atmosphere, at three distances between 80 and 100 km from the release point ratio of concentration at a point a short distance from the centre line to that on the centre line ratio of concentration at a point a short distance above the centre line to that on the centre line the standard deviation of the horizontal distribution of material

**Table 2.4 Summary of elicitation variables which were obtained from expert judgement for deposition quantities**

Identifier	Quantity for which distributions were obtained
<b>For dry deposition</b>	
1	The deposition velocity at two wind speeds to urban surfaces, meadow, forest and human skin for five different aerosol sizes between 0.1 and 10 $\mu\text{m}$ .
2	The deposition velocity at two wind speeds to urban surfaces, meadow, forest and human skin for elemental iodine.
3	The deposition velocity at two wind speeds to urban surfaces, meadow, forest and human skin for methyl iodide.
<b>For wet deposition</b>	
4	The fraction of elemental iodine removed by rain for one hundred combinations of rainfall amount, rainfall duration and wind speed
5	The fraction of methyl iodide removed by rain for five combinations of rainfall amount and rainfall duration.
6	The fraction of aerosols removed by rain for five combinations of rainfall amount and rainfall duration, for four aerosol sizes between 0.1 and 10 $\mu\text{m}$

**Table 2.5 Distributions derived for the input parameters to COSYMA <sup>(a)</sup>**

Uncertain parameter	Unit	Default value	Percentiles of the distribution on the input parameter								
			Minimum	5%	20%	35%	50%	65%	80%	95%	Maximum
<b>Atmospheric dispersion parameters</b>											
Dispersion coefficient $p_y$ for Category A/B	(b)	1.503 <sup>(c)</sup> 0.876	$2.62 \cdot 10^{-1}$	$2.90 \cdot 10^{-1}$	$4.27 \cdot 10^{-1}$	$6.75 \cdot 10^{-1}$	$8.36 \cdot 10^{-1}$	1.01	1.36	1.77	1.93
Dispersion coefficient $p_y$ for Category C	(b)	0.659	$1.82 \cdot 10^{-1}$	$2.10 \cdot 10^{-1}$	$3.53 \cdot 10^{-1}$	$4.06 \cdot 10^{-1}$	$4.28 \cdot 10^{-1}$	$4.56 \cdot 10^{-1}$	$4.96 \cdot 10^{-1}$	$5.45 \cdot 10^{-1}$	$5.60 \cdot 10^{-1}$
Dispersion coefficient $p_y$ for Category D	(b)	0.64	$1.59 \cdot 10^{-1}$	$1.66 \cdot 10^{-1}$	$1.90 \cdot 10^{-1}$	$2.05 \cdot 10^{-1}$	$2.10 \cdot 10^{-1}$	$2.56 \cdot 10^{-1}$	$3.10 \cdot 10^{-1}$	$3.57 \cdot 10^{-1}$	$3.72 \cdot 10^{-1}$
Dispersion coefficient $p_y$ for Category E/F	(b)	0.801 <sup>(d)</sup> 1.294	$7.27 \cdot 10^{-2}$	$8.75 \cdot 10^{-2}$	$1.31 \cdot 10^{-1}$	$1.96 \cdot 10^{-1}$	$2.52 \cdot 10^{-1}$	$3.06 \cdot 10^{-1}$	$3.60 \cdot 10^{-1}$	$4.42 \cdot 10^{-1}$	$4.55 \cdot 10^{-1}$
Dispersion coefficient $q_y$ for Category A/B	(b)	0.833 <sup>(c)</sup> 0.823	$7.61 \cdot 10^{-1}$	$7.68 \cdot 10^{-1}$	$7.93 \cdot 10^{-1}$	$8.28 \cdot 10^{-1}$	$8.77 \cdot 10^{-1}$	$9.40 \cdot 10^{-1}$	$9.74 \cdot 10^{-1}$	1.02	1.04
Dispersion coefficient $q_y$ for Category C	(b)	0.807	$7.91 \cdot 10^{-1}$	$7.97 \cdot 10^{-1}$	$8.17 \cdot 10^{-1}$	$8.37 \cdot 10^{-1}$	$8.67 \cdot 10^{-1}$	$9.00 \cdot 10^{-1}$	$9.32 \cdot 10^{-1}$	$9.79 \cdot 10^{-1}$	1
Dispersion coefficient $q_y$ for Category D	(b)	0.784	$6.72 \cdot 10^{-1}$	$7.67 \cdot 10^{-1}$	$8.44 \cdot 10^{-1}$	$8.81 \cdot 10^{-1}$	$9.17 \cdot 10^{-1}$	$9.49 \cdot 10^{-1}$	$9.84 \cdot 10^{-1}$	1.03	1.11
Dispersion coefficient $q_y$ for Category E/F	(b)	0.754 <sup>(d)</sup> 0.718	$7.45 \cdot 10^{-1}$	$7.57 \cdot 10^{-1}$	$7.92 \cdot 10^{-1}$	$8.43 \cdot 10^{-1}$	$8.78 \cdot 10^{-1}$	$9.10 \cdot 10^{-1}$	$9.35 \cdot 10^{-1}$	$9.55 \cdot 10^{-1}$	$9.61 \cdot 10^{-1}$
Dispersion coefficient $p_z$ for Category A/B	(b)	0.151 <sup>(c)</sup> 0.127	$7.38 \cdot 10^{-3}$	$1.45 \cdot 10^{-2}$	$6.65 \cdot 10^{-2}$	1.27	1.77	2.63	3.83	8.13	9.19
Dispersion coefficient $p_z$ for Category C	(b)	0.165	$1.45 \cdot 10^{-2}$	$7.72 \cdot 10^{-2}$	$1.10 \cdot 10^{-1}$	$1.96 \cdot 10^{-1}$	$2.31 \cdot 10^{-1}$	$2.92 \cdot 10^{-1}$	$3.56 \cdot 10^{-1}$	$4.35 \cdot 10^{-1}$	$4.87 \cdot 10^{-1}$
Dispersion coefficient $p_z$ for Category D	(b)	0.215	$1.13 \cdot 10^{-2}$	$2.29 \cdot 10^{-2}$	$4.42 \cdot 10^{-2}$	$6.13 \cdot 10^{-2}$	$9.01 \cdot 10^{-2}$	1.05	1.69	3.06	3.4
Dispersion coefficient $p_z$ for Category E/F	(b)	0.264 <sup>(d)</sup> 0.241	$6.35 \cdot 10^{-2}$	$2.06 \cdot 10^{-1}$	$4.53 \cdot 10^{-1}$	$6.11 \cdot 10^{-1}$	1.26	7.52	$1.78 \cdot 10^1$	$4.76 \cdot 10^1$	$5.98 \cdot 10^1$
Dispersion coefficient $q_z$ for Category A/B	(b)	1.219 <sup>(c)</sup> 1.108	$2.79 \cdot 10^{-2}$	$3.96 \cdot 10^{-2}$	$5.88 \cdot 10^{-2}$	$6.63 \cdot 10^{-2}$	$7.40 \cdot 10^{-2}$	$8.25 \cdot 10^{-2}$	$9.18 \cdot 10^{-2}$	1.08	1.18
Dispersion coefficient $q_z$ for Category C	(b)	0.996	$4.34 \cdot 10^{-1}$	$5.96 \cdot 10^{-1}$	$6.83 \cdot 10^{-1}$	$7.70 \cdot 10^{-1}$	$8.85 \cdot 10^{-1}$	$9.22 \cdot 10^{-1}$	$9.42 \cdot 10^{-1}$	1.05	1.08

Uncertain parameter	Unit	Default value	Percentiles of the distribution on the input parameter								
			Minimum	5%	20%	35%	50%	65%	80%	95%	Maximum
Dispersion coefficient $q_z$ for Category D	(b)	0.885	$1.22 \cdot 10^{-1}$	$3.13 \cdot 10^{-1}$	$4.47 \cdot 10^{-1}$	$4.96 \cdot 10^{-1}$	$5.92 \cdot 10^{-1}$	$6.47 \cdot 10^{-1}$	$7.25 \cdot 10^{-1}$	$8.66 \cdot 10^{-1}$	$8.93 \cdot 10^{-1}$
Dispersion coefficient $q_z$ for Category E/F	(b)	0.774 <sup>(d)</sup> 0.662	$1.40 \cdot 10^{-2}$	$1.21 \cdot 10^{-1}$	$2.59 \cdot 10^{-1}$	$3.24 \cdot 10^{-1}$	$3.56 \cdot 10^{-1}$	$4.10 \cdot 10^{-1}$	$4.41 \cdot 10^{-1}$	$5.29 \cdot 10^{-1}$	$5.41 \cdot 10^{-1}$
<b>Dry deposition parameters</b>											
Deposition velocity to ground of aerosols	$m s^{-1}$	$1.0 \cdot 10^{-3}$	$1.00 \cdot 10^{-6}$	$2.23 \cdot 10^{-5}$	$2.55 \cdot 10^{-4}$	$4.88 \cdot 10^{-4}$	$7.21 \cdot 10^{-4}$	$4.72 \cdot 10^{-3}$	$8.71 \cdot 10^{-3}$	$1.27 \cdot 10^{-2}$	$3.08 \cdot 10^{-2}$
Deposition velocity to ground of elemental iodine	$m s^{-1}$	$1.0 \cdot 10^{-2}$	$1.00 \cdot 10^{-6}$	$6.00 \cdot 10^{-5}$	$2.77 \cdot 10^{-3}$	$5.83 \cdot 10^{-3}$	$8.18 \cdot 10^{-3}$	$3.71 \cdot 10^{-2}$	$6.59 \cdot 10^{-2}$	$9.48 \cdot 10^{-2}$	$1.65 \cdot 10^{-1}$
Deposition velocity to ground of methyl iodide	$m s^{-1}$	$5.0 \cdot 10^{-4}$	$1.00 \cdot 10^{-8}$	$6.15 \cdot 10^{-7}$	$1.33 \cdot 10^{-5}$	$2.60 \cdot 10^{-5}$	$3.87 \cdot 10^{-5}$	$1.53 \cdot 10^{-2}$	$3.07 \cdot 10^{-2}$	$4.6 \cdot 10^{-2}$	$1.65 \cdot 10^{-1}$
Deposition velocity to skin for aerosols	$m s^{-1}$	$1.0 \cdot 10^{-3}$	$1 \cdot 10^{-7}$	$2.75 \cdot 10^{-6}$	$9.05 \cdot 10^{-5}$	$1.78 \cdot 10^{-4}$	$2.66 \cdot 10^{-4}$	$1.17 \cdot 10^{-2}$	$2.32 \cdot 10^{-2}$	$3.46 \cdot 10^{-2}$	0.11
Deposition velocity to skin for elemental iodine	$m s^{-1}$	$1.0 \cdot 10^{-2}$	$1 \cdot 10^{-7}$	$1.39 \cdot 10^{-6}$	$4.94 \cdot 10^{-5}$	$9.86 \cdot 10^{-5}$	$1.48 \cdot 10^{-3}$	$4.57 \cdot 10^{-2}$	$9.0 \cdot 10^{-2}$	$1.34 \cdot 10^{-1}$	$3.30 \cdot 10^{-1}$
Deposition velocity to skin for methyl iodide	$m s^{-1}$	$5.0 \cdot 10^{-4}$	$1 \cdot 10^{-9}$	$3.86 \cdot 10^{-8}$	$3.19 \cdot 10^{-5}$	$6.38 \cdot 10^{-5}$	$9.58 \cdot 10^{-5}$	$2.59 \cdot 10^{-2}$	$5.16 \cdot 10^{-2}$	$7.74 \cdot 10^{-2}$	$3.30 \cdot 10^{-1}$
<b>Wet deposition parameters</b>											
Washout coefficient term a for aerosols	(e)	$2.88 \cdot 10^{-1}$	$2.00 \cdot 10^{-3}$	$5.10 \cdot 10^{-3}$	$3.31 \cdot 10^{-2}$	$4.44 \cdot 10^{-2}$	$7.20 \cdot 10^{-2}$	$1.26 \cdot 10^{-1}$	1.43	4.81	5.31
Washout coefficient term b for aerosols	(e)	$8.0 \cdot 10^{-1}$	$1.94 \cdot 10^{-2}$	$2.13 \cdot 10^{-1}$	$4.87 \cdot 10^{-1}$	$5.21 \cdot 10^{-1}$	$6.74 \cdot 10^{-1}$	$7.79 \cdot 10^{-1}$	$9.94 \cdot 10^{-1}$	2.2	2.89
Washout coefficient term a for elemental iodine	(e)	$2.88 \cdot 10^{-1}$	$2.33 \cdot 10^{-4}$	$6.97 \cdot 10^{-3}$	$9.46 \cdot 10^{-2}$	$1.33 \cdot 10^{-1}$	$2.10 \cdot 10^{-1}$	$6.13 \cdot 10^{-1}$	1.43	2.13	2.42
Washout coefficient term b for elemental iodine	(e)	$6.0 \cdot 10^{-1}$	$2.53 \cdot 10^{-2}$	$2.27 \cdot 10^{-1}$	$4.81 \cdot 10^{-1}$	$6.10 \cdot 10^{-1}$	$7.72 \cdot 10^{-1}$	$8.54 \cdot 10^{-1}$	1.03	1.9	2.96
Washout coefficient term a for methyl iodide	(e)	$2.88 \cdot 10^{-3}$	$1.00 \cdot 10^{-4}$	$5.00 \cdot 10^{-4}$	$2.27 \cdot 10^{-2}$	$3.58 \cdot 10^{-2}$	$6.12 \cdot 10^{-2}$	$1.74 \cdot 10^{-1}$	$3.82 \cdot 10^{-1}$	$5.87 \cdot 10^{-1}$	$6.72 \cdot 10^{-1}$
Washout coefficient term b for methyl iodide	(e)	$6.0 \cdot 10^{-1}$	$2.63 \cdot 10^{-2}$	$1.58 \cdot 10^{-1}$	$4.59 \cdot 10^{-1}$	$6.67 \cdot 10^{-1}$	$7.96 \cdot 10^{-1}$	1.02	1.22	2.35	3.27

Notes:

- a) These distributions were derived for application in the models adopted in COSYMA. They should only be used in other models if the parameters have the same meanings as in the models adopted here.
- b) Dispersion is modelled assuming  $\sigma = p x^q$ . The units of p and q are such that  $\sigma$  is in m.
- c) The two values are the default values for categories A and B respectively.
- d) The two values are the default values for categories E and F respectively.
- e) Wet deposition is modelled assuming that  $\Lambda = a R^b$ . The units are such that  $\Lambda$  is in  $\text{hr}^{-1}$  with rainfall rate in  $\text{mm hr}^{-1}$ .

**Table 2.6 Correlations between input parameters**

Correlated parameters		Correlation coefficient
<b>Dispersion – correlations within single stability categories</b>		
Dispersion coefficient $p_y$ for Category E/F	Dispersion coefficient $p_z$ for Category E/F	-0.22
Dispersion coefficient $q_y$ for Category D	Dispersion coefficient $q_z$ for Category D	-0.22
Dispersion coefficient $p_z$ for Category A/B	Dispersion coefficient $q_z$ for Category A/B	-0.24
Dispersion coefficient $p_z$ for Category D	Dispersion coefficient $q_z$ for Category D	-0.25
Dispersion coefficient $p_z$ for Category E/F	Dispersion coefficient $q_z$ for Category E/F	-0.47
<b>Wet deposition – correlations for a single type of material</b>		
Washout coefficient term a for aerosols	Washout coefficient term b for aerosols	-0.85
Washout coefficient term a for elemental iodine	Washout coefficient term b for elemental iodine	-0.62
<b>Dispersion – correlations between stability categories</b>		
Dispersion coefficient $q_y$ for Category A/B	Dispersion coefficient $q_y$ for Category D	0.42
Dispersion coefficient $q_y$ for Category A/B	Dispersion coefficient $q_y$ for Category E/F	0.27
Dispersion coefficient $q_y$ for Category A/B	Dispersion coefficient $q_y$ for Category C	0.75
Dispersion coefficient $q_y$ for Category C	Dispersion coefficient $q_y$ for Category D	0.54
Dispersion coefficient $q_y$ for Category C	Dispersion coefficient $q_y$ for Category E/F	0.33
Dispersion coefficient $q_y$ for Category D	Dispersion coefficient $q_y$ for Category E/F	0.63
Dispersion coefficient $q_y$ for Category D	Dispersion coefficient $q_z$ for Category E/F	-0.26
<b>Dry deposition – correlations between deposition velocities of different material or to different surfaces</b>		
Deposition velocity of aerosols	Deposition velocity of elemental iodine	0.32
Deposition velocity of aerosols	Deposition velocity to skin for aerosols	0.68
Deposition velocity of aerosols	Deposition velocity to skin for elemental iodine	0.23
Deposition velocity of elemental iodine	Deposition velocity to skin for aerosols	0.21
Deposition velocity of elemental iodine	Deposition velocity to skin for elemental iodine	0.7
Deposition velocity of methyl iodide	Deposition velocity to skin for methyl iodide	0.73
<b>Wet deposition – correlations between different materials</b>		
Washout coefficient term a for elemental iodine	Washout coefficient term a for methyl iodide	0.3
<b>Correlations between dispersion and deposition parameters</b>		
Deposition velocity of aerosols	Dispersion coefficient $q_y$ for Category A/B	0.26
Deposition velocity of aerosols	Dispersion coefficient $q_y$ for Category C	0.31
Deposition velocity of aerosols	Dispersion coefficient $q_y$ for Category D	0.58
Deposition velocity of aerosols	Dispersion coefficient $q_y$ for Category E/F	0.91
Deposition velocity of aerosols	Dispersion coefficient $q_z$ for Category E/F	-0.4
Deposition velocity of elemental iodine	Dispersion coefficient $q_y$ for Category E/F	0.3
Dispersion coefficient $q_y$ for Category C	Deposition velocity to skin for aerosols	0.2
Dispersion coefficient $q_y$ for Category D	Deposition velocity to skin for aerosols	0.39
Dispersion coefficient $q_y$ for Category E/F	Dispersion coefficient $q_z$ for Category E/F	-0.44
Dispersion coefficient $q_y$ for Category E/F	Deposition velocity to skin for aerosols	0.62
Dispersion coefficient $q_y$ for Category E/F	Deposition velocity to skin for elemental iodine	0.2
Dispersion coefficient $q_z$ for Category E/F	Deposition velocity to skin for aerosols	-0.29



**Table 2.7 Comparison between marginal distributions of elicitation variables obtained from the experts and from the distributions on target variables for dispersion in stability category A/B**

Quantity <sup>(a)</sup>	5%		50%		95%	
	DM <sup>(b)</sup>	Pred <sup>(c)</sup>	DM <sup>(b)</sup>	Pred <sup>(c)</sup>	DM <sup>(b)</sup>	Pred <sup>(c)</sup>
$\sigma_{y,AB}(x_1)$	$5.43 \cdot 10^1$	$5.43 \cdot 10^1$	$1.76 \cdot 10^2$	$1.72 \cdot 10^2$	$6.54 \cdot 10^2$	$6.43 \cdot 10^2$
$\sigma_{y,AB}(x_2)$	$1.03 \cdot 10^2$	$1.04 \cdot 10^2$	$3.30 \cdot 10^2$	$3.11 \cdot 10^2$	$1.27 \cdot 10^3$	$1.25 \cdot 10^3$
$\sigma_{y,AB}(x_3)$	$2.80 \cdot 10^2$	$2.80 \cdot 10^2$	$7.93 \cdot 10^2$	$7.92 \cdot 10^2$	$3.64 \cdot 10^3$	$3.61 \cdot 10^3$
$\sigma_{y,AB}(x_4)$	$6.78 \cdot 10^2$	$7.19 \cdot 10^2$	$2.30 \cdot 10^3$	$2.30 \cdot 10^3$	$1.16 \cdot 10^4$	$1.16 \cdot 10^4$
$C_{AB}(x_1)$	$4.65 \cdot 10^{-7}$	$4.82 \cdot 10^{-7}$	$7.31 \cdot 10^{-6}$	$7.31 \cdot 10^{-6}$	$7.42 \cdot 10^{-5}$	$7.41 \cdot 10^{-5}$
$C_{AB}(x_2)$	$9.06 \cdot 10^{-8}$	$1.48 \cdot 10^{-7}$	$1.83 \cdot 10^{-6}$	$1.82 \cdot 10^{-6}$	$1.91 \cdot 10^{-5}$	$1.90 \cdot 10^{-5}$
$C_{AB}(x_3)$	$2.24 \cdot 10^{-8}$	$2.25 \cdot 10^{-8}$	$3.08 \cdot 10^{-7}$	$3.10 \cdot 10^{-7}$	$2.48 \cdot 10^{-6}$	$2.50 \cdot 10^{-6}$
$C_{AB}(x_4)$	$2.30 \cdot 10^{-9}$	$2.30 \cdot 10^{-9}$	$5.58 \cdot 10^{-8}$	$5.11 \cdot 10^{-8}$	$4.52 \cdot 10^{-7}$	$4.50 \cdot 10^{-7}$

Notes:

- a  $\sigma_y$  values were specified at 4 distances downwind.  $C_{AB}$  represents the air concentration per unit release, also specified at 4 distances downwind
- b DM represents the distributions given by the experts
- c Pred represents the distributions obtained with the fitted distributions on the parameter values.

**Table 2.8 Comparison between marginal distributions of elicitation variables obtained from the experts and from the distributions on target variables for dispersion in stability category C**

Quantity <sup>(a)</sup>	5%		50%		95%	
	DM <sup>(b)</sup>	Pred <sup>(c)</sup>	DM <sup>(b)</sup>	Pred <sup>(c)</sup>	DM <sup>(b)</sup>	Pred <sup>(c)</sup>
$\sigma_{y,C}(x_1)$	$3.30 \cdot 10^1$	$3.30 \cdot 10^1$	$9.49 \cdot 10^1$	$9.49 \cdot 10^1$	$1.95 \cdot 10^2$	$1.95 \cdot 10^2$
$\sigma_{y,C}(x_2)$	$6.48 \cdot 10^1$	$6.48 \cdot 10^1$	$1.72 \cdot 10^2$	$1.72 \cdot 10^2$	$3.46 \cdot 10^2$	$3.46 \cdot 10^2$
$\sigma_{y,C}(x_3)$	$1.75 \cdot 10^2$	$1.75 \cdot 10^2$	$4.46 \cdot 10^2$	$4.46 \cdot 10^2$	$1.04 \cdot 10^3$	$1.04 \cdot 10^3$
$\sigma_{y,C}(x_4)$	$4.48 \cdot 10^2$	$4.48 \cdot 10^2$	$1.22 \cdot 10^3$	$1.22 \cdot 10^3$	$3.37 \cdot 10^3$	$2.89 \cdot 10^3$
$\sigma_{y,C}(x_5)$	$1.10 \cdot 10^3$	$1.10 \cdot 10^3$	$2.82 \cdot 10^3$	$2.82 \cdot 10^3$	$8.25 \cdot 10^3$	$8.25 \cdot 10^3$
$C_C(x_1)$	$3.58 \cdot 10^{-6}$	$3.58 \cdot 10^{-6}$	$1.80 \cdot 10^{-5}$	$1.80 \cdot 10^{-5}$	$9.63 \cdot 10^{-5}$	$9.63 \cdot 10^{-5}$
$C_C(x_2)$	$1.02 \cdot 10^{-6}$	$1.02 \cdot 10^{-6}$	$5.44 \cdot 10^{-6}$	$5.44 \cdot 10^{-6}$	$2.68 \cdot 10^{-5}$	$2.70 \cdot 10^{-5}$
$C_C(x_3)$	$8.14 \cdot 10^{-8}$	$8.14 \cdot 10^{-8}$	$7.93 \cdot 10^{-7}$	$7.93 \cdot 10^{-7}$	$4.68 \cdot 10^{-6}$	$4.68 \cdot 10^{-6}$
$C_C(x_4)$	$1.28 \cdot 10^{-8}$	$1.30 \cdot 10^{-8}$	$1.22 \cdot 10^{-7}$	$1.20 \cdot 10^{-7}$	$7.31 \cdot 10^{-7}$	$7.30 \cdot 10^{-7}$
$C_C(x_5)$	$2.54 \cdot 10^{-9}$	$2.54 \cdot 10^{-9}$	$3.09 \cdot 10^{-8}$	$3.09 \cdot 10^{-8}$	$1.80 \cdot 10^{-7}$	$1.80 \cdot 10^{-7}$

Notes:

- a  $\sigma_y$  values were specified at 5 distances downwind. C represents the air concentration per unit release, also specified at 5 distances downwind
- a DM represents the distributions given by the experts
- b Pred represents the distributions obtained with the fitted distributions on the parameter values.

**Table 2.9 Comparison between marginal distributions of elicitation variables obtained from the experts and from the distributions on target variables for dispersion in stability category D**

	5%		50%		95%	
	DM	Pred	DM	Pred	DM	Pred
$\sigma_{y,D}(x_1)$	$2.40 \cdot 10^1$	$2.40 \cdot 10^1$	$6.84 \cdot 10^1$	$6.84 \cdot 10^1$	$1.94 \cdot 10^2$	$1.94 \cdot 10^2$
$\sigma_{y,D}(x_2)$	$4.64 \cdot 10^1$	$4.64 \cdot 10^1$	$1.26 \cdot 10^2$	$1.26 \cdot 10^2$	$3.24 \cdot 10^2$	$3.24 \cdot 10^2$
$\sigma_{y,D}(x_3)$	$1.26 \cdot 10^2$	$1.26 \cdot 10^2$	$3.26 \cdot 10^2$	$3.26 \cdot 10^2$	$8.58 \cdot 10^2$	$8.58 \cdot 10^2$
$\sigma_{y,D}(x_4)$	$2.77 \cdot 10^2$	$2.77 \cdot 10^2$	$1.04 \cdot 10^3$	$1.04 \cdot 10^3$	$3.28 \cdot 10^3$	$3.27 \cdot 10^3$
$\sigma_{y,D}(x_5)$	$8.17 \cdot 10^2$	$8.16 \cdot 10^2$	$2.47 \cdot 10^3$	$2.47 \cdot 10^3$	$8.10 \cdot 10^3$	$8.10 \cdot 10^3$
$C_D(x_1)/Q$	$3.12 \cdot 10^{-6}$	$3.12 \cdot 10^{-6}$	$2.45 \cdot 10^{-5}$	$2.45 \cdot 10^{-5}$	$1.40 \cdot 10^{-4}$	$1.40 \cdot 10^{-4}$
$C_D(x_2)/Q$	$8.45 \cdot 10^{-7}$	$8.45 \cdot 10^{-7}$	$7.98 \cdot 10^{-6}$	$7.98 \cdot 10^{-6}$	$5.96 \cdot 10^{-5}$	$5.96 \cdot 10^{-5}$
$C_D(x_3)/Q$	$1.59 \cdot 10^{-7}$	$1.58 \cdot 10^{-7}$	$1.71 \cdot 10^{-6}$	$1.71 \cdot 10^{-6}$	$1.26 \cdot 10^{-5}$	$1.26 \cdot 10^{-5}$
$C_D(x_4)/Q$	$1.13 \cdot 10^{-8}$	$1.13 \cdot 10^{-8}$	$2.60 \cdot 10^{-7}$	$2.60 \cdot 10^{-7}$	$2.00 \cdot 10^{-6}$	$2.00 \cdot 10^{-6}$
$C_D(x_5)/Q$	$3.76 \cdot 10^{-9}$	$2.40 \cdot 10^{-9}$	$5.37 \cdot 10^{-8}$	$5.36 \cdot 10^{-8}$	$4.71 \cdot 10^{-7}$	$4.70 \cdot 10^{-7}$

Notes:

- a  $\sigma_y$  values were specified at 5 distances downwind. C represents the air concentration per unit release, also specified at 5 distances downwind
- b DM represents the distributions given by the experts
- c Pred represents the distributions obtained with the fitted distributions on the parameter values.

**Table 2.10 Comparison between marginal distributions of elicitation variables obtained from the experts and from the distributions on target variables for dispersion in stability category E/F**

Quantity <sup>(a)</sup>	5%		50%		95%	
	DM <sup>(b)</sup>	Pred <sup>(c)</sup>	DM <sup>(b)</sup>	Pred <sup>(c)</sup>	DM <sup>(b)</sup>	Pred <sup>(c)</sup>
$\sigma_{y,EF}(x_1)$	$1.42 \cdot 10^1$	$1.42 \cdot 10^1$	$4.70 \cdot 10^1$	$4.70 \cdot 10^1$	$1.32 \cdot 10^2$	$1.30 \cdot 10^2$
$\sigma_{y,EF}(x_2)$	$2.58 \cdot 10^1$	$2.58 \cdot 10^1$	$8.78 \cdot 10^1$	$8.78 \cdot 10^1$	$2.43 \cdot 10^2$	$2.43 \cdot 10^2$
$\sigma_{y,EF}(x_3)$	$6.46 \cdot 10^1$	$6.47 \cdot 10^1$	$2.31 \cdot 10^2$	$2.31 \cdot 10^2$	$6.94 \cdot 10^2$	$6.94 \cdot 10^2$
$\sigma_{y,EF}(x_4)$	$1.59 \cdot 10^2$	$1.59 \cdot 10^2$	$6.33 \cdot 10^2$	$6.33 \cdot 10^2$	$2.11 \cdot 10^3$	$2.11 \cdot 10^3$
$\sigma_{y,EF}(x_5)$	$3.42 \cdot 10^2$	$3.42 \cdot 10^2$	$1.86 \cdot 10^3$	$1.86 \cdot 10^3$	$5.83 \cdot 10^3$	$5.83 \cdot 10^3$
$C_{EF}(x_1)/Q$	$1.76 \cdot 10^{-5}$	$1.81 \cdot 10^{-5}$	$1.22 \cdot 10^{-4}$	$1.22 \cdot 10^{-4}$	$8.27 \cdot 10^{-4}$	$8.27 \cdot 10^{-4}$
$C_{EF}(x_2)/Q$	$1.69 \cdot 10^{-6}$	$5.99 \cdot 10^{-6}$	$4.92 \cdot 10^{-5}$	$4.92 \cdot 10^{-5}$	$2.97 \cdot 10^{-4}$	$2.97 \cdot 10^{-4}$
$C_{EF}(x_3)/Q$	$1.03 \cdot 10^{-6}$	$1.03 \cdot 10^{-6}$	$1.07 \cdot 10^{-5}$	$1.07 \cdot 10^{-5}$	$8.47 \cdot 10^{-5}$	$8.47 \cdot 10^{-5}$
$C_{EF}(x_4)/Q$	$1.22 \cdot 10^{-7}$	$1.23 \cdot 10^{-7}$	$1.94 \cdot 10^{-6}$	$1.94 \cdot 10^{-6}$	$2.11 \cdot 10^{-5}$	$2.11 \cdot 10^{-5}$
$C_{EF}(x_5)/Q$	$1.45 \cdot 10^{-8}$	$1.45 \cdot 10^{-8}$	$5.40 \cdot 10^{-7}$	$5.39 \cdot 10^{-7}$	$7.66 \cdot 10^{-6}$	$7.69 \cdot 10^{-6}$

Notes:

- a  $\sigma_y$  values were specified at 5 distances downwind. C represents the air concentration per unit release, also specified at 5 distances downwind
- b DM represents the distributions given by the experts
- c Pred represents the distributions obtained with the fitted distributions on the parameter values.

**Table 2.11 Comparison between marginal distributions of elicitation variables obtained from the experts and from the distributions on target variables for wet deposition of 1 µm AMAD aerosols**

	Fraction of material removed by rain					
	Rainfall 0.05 mm/10 min.		Rainfall 0.33 mm/10 min.		Rainfall 1.67 mm/10 min.	
	DM <sup>(a)</sup>	Pred <sup>(b)</sup>	DM <sup>(a)</sup>	Pred <sup>(b)</sup>	DM <sup>(a)</sup>	Pred <sup>(b)</sup>
5%	2.70 10 <sup>-4</sup>	2.70 10 <sup>-4</sup>	1.56 10 <sup>-3</sup>	1.54 10 <sup>-3</sup>	4.50 10 <sup>-3</sup>	4.50 10 <sup>-3</sup>
50%	5.42 10 <sup>-3</sup>	5.42 10 <sup>-3</sup>	2.31 10 <sup>-2</sup>	2.31 10 <sup>-2</sup>	7.93 10 <sup>-2</sup>	7.93 10 <sup>-2</sup>
95%	4.30 10 <sup>-1</sup>	4.30 10 <sup>-1</sup>	6.36 10 <sup>-1</sup>	6.27 10 <sup>-1</sup>	7.20 10 <sup>-1</sup>	7.21 10 <sup>-1</sup>

Notes:

a DM represents the distributions given by the experts

b Pred represents the distributions obtained with the fitted distributions on the parameter values.

**Table 2.12 Comparison between marginal distributions of elicitation variables obtained from the experts and from the distributions on target variables for wet deposition of elemental iodine**

	Fraction of material removed by rain					
	Rainfall 0.05 mm/10 min.		Rainfall 0.33 mm/10 min.		Rainfall 1.67 mm/10 min.	
	DM <sup>(a)</sup>	Pred <sup>(b)</sup>	DM <sup>(a)</sup>	Pred <sup>(b)</sup>	DM <sup>(a)</sup>	Pred <sup>(b)</sup>
5%	4.43 10 <sup>-4</sup>	4.15 10 <sup>-4</sup>	2.36 10 <sup>-3</sup>	2.32 10 <sup>-3</sup>	1.07 10 <sup>-2</sup>	1.07 10 <sup>-2</sup>
50%	1.77 10 <sup>-2</sup>	1.77 10 <sup>-2</sup>	6.18 10 <sup>-2</sup>	6.18 10 <sup>-2</sup>	1.58 10 <sup>-1</sup>	1.58 10 <sup>-1</sup>
95%	1.87 10 <sup>-1</sup>	1.87 10 <sup>-1</sup>	3.97 10 <sup>-1</sup>	3.97 10 <sup>-1</sup>	7.83 10 <sup>-1</sup>	7.82 10 <sup>-1</sup>

Notes:

a DM represents the distributions given by the experts

b Pred represents the distributions obtained with the fitted distributions on the parameter values.

**Table 2.13 Comparison between marginal distributions of elicitation variables obtained from the experts and from the distributions on target variables for wet deposition of methyl iodide**

	Fraction of material removed by rain					
	Rainfall 0.05 mm/10 min.		Rainfall 0.33 mm/10 min.		Rainfall 1.67 mm/10 min.	
	DM <sup>(a)</sup>	Pred <sup>(b)</sup>	DM <sup>(a)</sup>	Pred <sup>(b)</sup>	DM <sup>(a)</sup>	Pred <sup>(b)</sup>
5%	4.27 10 <sup>-5</sup>	4.33 10 <sup>-5</sup>	1.11 10 <sup>-4</sup>	1.12 10 <sup>-4</sup>	2.59 10 <sup>-4</sup>	2.64 10 <sup>-4</sup>
50%	5.11 10 <sup>-3</sup>	5.12 10 <sup>-3</sup>	1.72 10 <sup>-2</sup>	1.72 10 <sup>-2</sup>	5.56 10 <sup>-2</sup>	5.56 10 <sup>-2</sup>
95%	4.53 10 <sup>-2</sup>	4.52 10 <sup>-2</sup>	1.49 10 <sup>-1</sup>	1.49 10 <sup>-1</sup>	5.94 10 <sup>-1</sup>	5.94 10 <sup>-1</sup>

Notes:

a DM represents the distributions given by the experts

b Pred represents the distributions obtained with the fitted distributions on the parameter values.

### 3 RESULTS

This section presents the results of the analysis of the atmospheric dispersion and deposition modules, and describes the extent of the uncertainty on the predictions and also those parameters whose uncertainties make important contributions to the overall uncertainty. The extent of the uncertainty is described using “uncertainty factors” (the ratio of the 95th to 5th percentiles of the distribution on the endpoint) and “reference uncertainty coefficients” (the ratio of the 95th percentile of the uncertainty distribution to the value obtained using default values for all the input parameters). Appendix C contains more extensive results on the extent of the uncertainty, giving 7 percentiles of the distribution on each of the endpoints, together with the reference value. The important parameter uncertainties are summarised in this chapter, which gives those parameters that are identified as important for groups of endpoints (either different parts of the ccdf for one quantity, or for related quantities). The criteria adopted to decide which parameters to include in the tables in this section are rather subjective. Appendix D contains more information on the contributions of the different parameter uncertainties to the overall uncertainty on the model predictions, listing those parameters that are identified in the top 3 ranks using PRCC and those making more than 10% contribution to the uncertainty. This appendix therefore identifies more parameters than are included in the overall analysis, using the criteria described in Section 1 of this report.

In the absence of any uncertainty, the results of COSYMA are presented in terms of probability distributions of the various quantities, where the probability reflects the occurrence of different atmospheric conditions at the time of the release. In this study, the probability distribution is characterised by its mean value and the 95<sup>th</sup> and 99<sup>th</sup> percentiles of the distribution. The methods and quantities used in this study to describe the uncertainty are described in the “Methodology Report”. The dispersion and deposition module analysis involved 100 runs of COSYMA and so generated 100 sets of ccdfs for each of the endpoints. One of the results of an uncertainty analysis is the uncertainty distribution on chosen percentiles and the mean value of the original probability distributions. This uncertainty is represented, in this study, by the “uncertainty factor” which is the ratio of the 95<sup>th</sup> and 5<sup>th</sup> percentiles of the uncertainty distribution on the chosen percentiles and mean value for the endpoints considered. COSYMA uses a binning system to derive its probability distributions. In some cases, the uncertainty range on a quantity includes values which are below the lower limit of the bottom bin used for the distribution; such values are reported as zero. In some cases the 5<sup>th</sup> (and higher) percentile is reported as zero, and the value of the uncertainty factor is infinite. The value of the 95<sup>th</sup> percentile is given in brackets in the results tables, in place of the uncertainty factor in these cases. Another quantity used is the “reference uncertainty coefficient”, which is the ratio of the 95<sup>th</sup> percentile of the uncertainty distribution for the chosen percentiles or mean value of the original probability distribution to the value predicted using the default values for the parameters in the model. A further ccdf, designated the “mean curve” is also used to present some of the results. This curve is obtained as the average of all the ccdfs obtained from the COSYMA runs.

The endpoints of the analysis were described in Section 1 of this report. The uncertainties on the dispersion and deposition parameter values affect the uncertainty on all of the endpoints considered in this study, and so results are presented here for all of the endpoints of the study. This is not the situation in other module analyses, where the uncertainty on the input parameter values

only affects the uncertainty on some of the endpoints considered. Information is given on individual doses and risks at three distances (0.875, 5 and 20 km for early effects and at 5, 20 and 100 km for late effects). Information on air concentration and deposition is given at each of the four distances considered for early and/or late effects.

The results presented here are specific to the situations and source terms considered in this analysis. The extent to which the results can be applied in other situations is considered in the report on the overall analysis.

### **3.5 Air concentration and deposition**

The extent of the uncertainty on the predicted air concentration and deposition does not depend on the amount of material released, although the absolute value of the concentration or deposition does. The uncertainty on these quantities is only presented here for the CB2 source term. The extent of the uncertainty, for both air concentration and deposition of iodine and caesium, is given in Table 3.1 in terms of the “uncertainty factor”, and in Table 3.2 in terms of the “reference uncertainty coefficient”. The parameters whose uncertainties make large contributions to the overall uncertainty are summarised in Table 3.3.

The “uncertainty factor” on the mean value of air concentration of  $^{137}\text{Cs}$  is about 5 at the shortest distance considered and increases to about 20 for the largest distance considered. The uncertainty on the percentiles also tends to increase with increasing distance, though the uncertainty on the 95th percentile is lower at the third distance than at the others. The uncertainty on the mean value of iodine air concentration is rather larger than that for caesium, and increases more rapidly with increasing distance from a factor of about 10 at the first distance to more than 400 at the largest distance considered. The uncertainty on the percentiles of air concentration for iodine tends to be larger than that on the mean value. The differences in the uncertainty factors for the two radionuclides reflect the impact of plume depletion and the different ranges for the uncertainties on the deposition velocity and washout coefficient of the two radionuclides; the uncertainties on some of the deposition parameters are identified as the most important contributors to the uncertainty on air concentration. The deposition velocity of iodine is about a factor of 10 higher than of caesium. Therefore, the depletion of the plume by dry deposition is much higher for iodine than for caesium and, as a consequence, variations in the deposition velocity of iodine cause much larger variations in the air concentration than for caesium. Section 2 showed that the COSYMA default values for the dispersion parameters lie towards one end of, or outside, the ranges used in this study. The horizontal plume width predicted using default values of the parameters is greater than that obtained from the distributions used in this study at short distances, but the width of the default plume increases more slowly with distance than that using the uncertainty ranges. However, the reverse is the case for the vertical extent of the plume; the default plume is narrower but grows more rapidly with distance than that obtained using the expert distributions. These effects act in opposite directions on the centre line concentration, and so the default concentrations on the centre line are nearer the centre of the range predicted with the distributions used in this study. This is reflected in the results shown in Table 3.1 and Table 3.2, which show that in many cases the “reference uncertainty coefficient” is much less than the “uncertainty factor”. In many cases the default value of the air concentration lies near the median value of the uncertainty distribution. The most important parameter uncertainties contributing to

the uncertainty on the air concentration of caesium are those on the deposition velocity of aerosols and on some of the dispersion parameters, particularly for categories D and E/F. The uncertainty on the deposition velocity makes an increasing contribution to the uncertainty on air concentration as distance increases, contributing more than 80% of the uncertainty on the mean value at the largest distance considered. The uncertainty on the deposition velocity of iodine makes the largest contribution to the overall uncertainty on the iodine air concentration, reflecting the impact of plume depletion, with the uncertainty on some of the dispersion factors also making large contributions for some distances or parts of the ccdf.

The “uncertainty factor” on the deposition of caesium decreases with increasing distance. This variation with distance is the opposite of that found for air concentration. This is explained below, after the discussion on the important parameter uncertainties. The uncertainty on the mean value falls from about 150 at the first distance considered to about 7 at the largest distance considered. The uncertainty on the 95th percentile is rather larger than that on the mean value while the uncertainty on the 99th percentile is comparable to that on the mean value. As found for air concentration, the “reference uncertainty coefficient” is generally much smaller than the “uncertainty factor”. The parameter whose uncertainty makes the largest contribution to the overall uncertainty is the deposition velocity of particulate material; its contribution decreases as distance increases reflecting the impact of plume depletion on the predicted deposition. The uncertainty on some of the dispersion factors, particularly for horizontal dispersion in categories D and E/F, also makes large contributions to the uncertainty. The “uncertainty factor” on the mean value of deposition for I-131 is about 30 at the shortest and largest distances considered, decreasing to about 5 at the other distances. The “uncertainty factor” on the 95th and 99th percentiles is greater, almost 300 for the 95th percentile at the first distance but lower at the other distances. The “reference uncertainty coefficient” is generally much lower than the “uncertainty factor”. The reference value is greater than the 95th percentile of the uncertainty distribution on the 99th percentile of the deposition of iodine at 100 km. The uncertainty on the deposition velocity of iodine is the most important contributor to the overall uncertainty at three of the four distances considered. At the first two distances, there is a positive relationship between the value of the deposition velocity and that of the deposition, while at the largest distance the deposition increases as the deposition velocity decreases, reflecting the effect of plume depletion on air concentration and deposition.

As noted above, the uncertainty on air concentration increases with increasing distance while that on deposition decreases with increasing distance. This reflects the importance of plume depletion in affecting the value of air concentration. To some extent, the lower concentrations at larger distances are the result of plume depletion in cases where the deposition parameters have high values. This therefore means that there is a tendency for lower than average air concentrations to correspond to higher than average deposition parameters and these counteract to produce the observed reduction in uncertainty on deposition as distance increases. This may be further influenced by the correlations between the deposition velocities and the dispersion parameters.

The uncertainty factors for the deposition of iodine are smaller than those for the deposition of caesium. This is an effect of plume depletion, since the uncertainty on the deposition velocity for caesium is greater than that for iodine. The higher deposition velocity of iodine means that plume depletion is greater for iodine than for caesium, and the two effects combine to give the observed relative uncertainties on the depositions.

### **3.6 Individual doses to 7 days and individual risks of early health effects**

Short term individual doses were considered for the UK1 source term, for potential outdoor doses, for normal activity and assuming that countermeasures were taken on the basis of dose. Short term individual doses were also considered for the CB2 source term assuming that countermeasures were taken. The countermeasures and criteria assumed are given in Section 1. The results are presented in Table 3.4, which shows the “uncertainty factor”, Table 3.5, which shows the “reference uncertainty factor” and Table 3.6, which shows those parameters whose uncertainties make large contributions to the overall uncertainty. The “uncertainty factors” and “reference uncertainty coefficients” are presented for the three distances considered for the mean value and for the 95th and 99th percentiles of the distributions of consequences, for each of the combinations considered.

In general, the “uncertainty factors” are similar for the mean value and for the 99th percentile for each of the quantities and combinations considered, but are somewhat larger for the 95th percentiles of the distributions. The “uncertainty factors” for skin dose with countermeasures, in normal living and for potential doses are similar, as are those for thyroid dose, but the uncertainty factors for the various organs in each situation are different. The “uncertainty factors” for bone marrow dose are similar for potential doses and for normal living, but are somewhat smaller than this if countermeasures are taken. The uncertainty factors for the CB2 and UK1 source terms with countermeasures are similar. The “uncertainty factors” are different at the different distances considered, with some cases where the uncertainty increases with increasing distance and some where it decreases. These differences reflect the different relative contributions of doses from inhalation and external exposure from deposited material to the different organ doses and at the different distances. This is clearly seen in the uncertainty in the dose to bone marrow at the first distance. For these calculations, it was assumed that countermeasures are implemented a few hours after the release, and therefore generally after the plume has passed the points at which doses are calculated, and so reduce the external dose from deposited material more than the inhalation dose. The uncertainty factor increases from the dose with countermeasures to that for normal living to that for potential dose, reflecting the greater uncertainty on deposition (and hence on external dose from deposited material) than on air concentration (and hence inhalation dose). The reduction in the uncertainty on the bone marrow dose with increasing distance reflects the reduction in the uncertainty on deposition with increasing distance. The uncertainty on the bone marrow dose is generally less than that on either the air concentration or the deposition. This reflects the similar contributions to bone marrow dose from inhalation and external exposure and the link between high air concentrations and lower depositions as a result of plume depletion. The “uncertainty factors” for skin dose are greater than those for the other doses because the uncertainty on the deposition velocity to skin is about 200 times greater than that to the ground, as described in Section 2. The main component of thyroid dose is that from inhalation of iodine. Its uncertainty increases with distance, reflecting the uncertainty in air concentration. It is similar for the different situations considered, reflecting the generally low impact of countermeasures on reducing inhalation dose.

The “reference uncertainty coefficients” are shown in Table 3.5. The values for doses to skin are about a factor of 10 to 20, and in this case the reference value lies slightly below the median of the uncertainty distribution. For other cases, particularly the doses to bone marrow in normal living, the “reference uncertainty coefficient” and “uncertainty factor” are similar. In these cases, the reference value tends to lie between the 5<sup>th</sup> and 10<sup>th</sup> percentiles of the uncertainty distribution.

The parameters whose uncertainties make major contributions to the overall uncertainty are shown in Table 3.6. The important parameter uncertainties are those contributing to the uncertainty on both air concentration and deposition, reflecting the contribution of inhalation dose and dose from deposited material to the different organs. The uncertainties on a number of different parameters make reasonable contributions to the various sets of doses considered in the analysis. The uncertainties on deposition velocities of iodine and of aerosols to ground are identified as important in most of the situations (doses, distances, population behaviour, percentiles, source terms) considered in the study. The uncertainties on the dispersion parameters, particularly for categories D and E/F are identified as important contributors in many of the cases considered. The uncertainty on the washout coefficients for aerosols was identified as an important contributor for doses at the third distance considered for bone marrow dose following UK1, but was not identified for other organs or distances. In general the same parameter uncertainties make the largest contributions for the different population behaviours considered, though the deposition parameters are less important for the case with countermeasures than for either of the cases without countermeasures, reflecting the effect of countermeasures in reducing doses from deposited activity more than those from inhalation.

The extent of the uncertainty on the individual risk of early health effects is summarised in Table 3.7 which shows the “uncertainty factors” and “reference uncertainty coefficients” for the mean value of risk at the three distances considered for the UK1 source term. Values are not given for the uncertainty on the 95<sup>th</sup> and 99<sup>th</sup> percentiles, for the following reason. The probability of zero individual risk of early effects for the situations considered is very high, generally more than 90% if default values are used for all the parameters. In many cases at least some of the combinations of parameter values selected for the uncertainty runs have resulted in probabilities of zero effects of essentially 100%. This means that the 95<sup>th</sup> and 99<sup>th</sup> percentiles of individual risk for some cases are essentially zero, and the “uncertainty factor” approaches infinity. For some combinations of distances and health effects, the “uncertainty factor” on the mean value is also essentially infinite. In these cases, the value of the 95<sup>th</sup> percentile of the uncertainty distribution is given in brackets in the table.

The “uncertainty factors” increase with distance from the site, and in some cases are infinite for the third distance considered. The “uncertainty factor” on the risks of both early death from all organs and for the haematopoietic syndrome at the first distance considered are between about 2 and 5. The uncertainty on the risk from potential exposures is lower than for normal living which in turn is lower than for the case where countermeasures are taken. This variation, and the variation of risk with distance, reflect the sigmoid curve relating dose to risk and the use of ratio (rather than difference) in this report to describe the extent of the uncertainty. The uncertainty on the risks for hypothyroidism and for skin burns tends to be greater than that on the risk of early death. The uncertainty on morbidities combines the uncertainty on the probability of surviving early death and on the probability of suffering the morbidity, and so would be expected to be



greater than that simply on early deaths.

The “reference uncertainty coefficients” are generally much lower than the “uncertainty factors” for the same endpoints. The reference value lies towards the upper end of the uncertainty distribution on the predictions, particularly for those cases where the “uncertainty factors” are large.

The parameters whose uncertainties make major contributions to the overall uncertainty on the mean value of individual risks are summarised in Table 3.8. The parameters that are identified depend to some extent on the endpoint and distance that is considered. For example, the most important parameter uncertainties for the mean value of risk of early death if countermeasures are taken are the deposition velocity of iodine to the ground and one of the dispersion coefficients for category D at the first distance, one of the dispersion coefficients for categories E/F at the second distance and the deposition velocities of iodine and aerosols to skin at the third distance. The washout coefficient for aerosols is only identified as an important uncertainty for a small number of the situations and distances considered. The important parameter uncertainties for the risk of death for normal living and for potential exposure show similar features, with deposition to ground being important at the first distance and deposition to skin being important at the third distance. Different parameters are identified at the different distances as the overall risk is dominated by effects in different organs at the different distances. Skin effects occur for lower air concentrations than the other early effects, and so extend to larger distances. Therefore the important parameter uncertainties at the largest distance considered are those related to the uncertainty on skin effects.

### **3.7 Extent of early countermeasures**

The uncertainty on the extent of early countermeasures, sheltering, evacuation and distribution of iodine tablets, is only considered for the CB2 source term. The “uncertainty factor” for the areas in which these actions would be required are given in Table 3.9 for the mean value and the 95th and 99th percentiles of the distributions. The “uncertainty factors” increase as the percentile of the distribution increases. The “uncertainty factors” for the area over which iodine tablets are distributed range between 27 for the mean value and 96 for the 99<sup>th</sup> percentile of the distribution, and are greater than those for the sheltering and evacuation areas, which are between about 4 and 9. The “uncertainty factors” for the areas with sheltering and evacuation are lower than those on the air concentration and deposition at different distances. The main exposure pathway for calculating the intervention doses for countermeasures is external dose from deposited material for sheltering and evacuation, but inhalation for the distribution of iodine tablets. The uncertainty factors for air concentration are larger than those for deposition, leading to the relatively larger uncertainty on the area for iodine tablets than for the other actions considered. The “reference uncertainty coefficients” are shown in Table 3.10. The values lie between about 3 and 7 for each of the endpoints considered. The default mean value for the area evacuated is lower than the 5th percentile of the uncertainty distribution for this endpoint while; for the higher percentiles of the distribution the default value lies around the 25<sup>th</sup> percentile of the uncertainty distribution. The reference values for the area in which iodine tablets are required and the sheltering area are close to the median of the uncertainty distribution, for all three quantities of the ccdf considered. As pointed out in Section 2, the default value for some of the parameters describing the horizontal width of the

plume are larger than the maximum values in the uncertainty distributions adopted here. This means that, with default parameter values, the plume width may be wider than any of the plumes considered in the uncertainty analysis, so leading to lower concentrations and doses near the centre line. Evacuation only occurs when doses are reasonably high, and therefore the evacuation area predicted using default parameter values is lower than the areas obtained in this analysis. Sheltering and the distribution of iodine tablets are initiated at lower doses than those for evacuation. Here the balance between the lower doses on the plume centre line and the higher doses away from the centre line for the broader default plume compared to those for the uncertainty analysis distributions are such that the default areas tend to lie nearer the centre of the uncertainty range.

The extent of the uncertainty on the evacuation area is also illustrated in Figure 3.1, which shows the 5<sup>th</sup> and 95<sup>th</sup> percentile envelopes together with the reference value. This shows that the uncertainty tends to increase towards the higher percentiles of the distribution and that the reference value is towards the lower end of the uncertainty range for the whole of the distribution.

The parameters whose uncertainties make major contributions to the overall uncertainty are given in Table 3.11. The uncertainty on the deposition velocity for elemental iodine is the most important contributor for the uncertainty on each of the areas and for each of the percentiles considered. It is an important contributor for the uncertainty on the countermeasures areas because of its importance in determining the uncertainty on air concentration. The uncertainty on two of the dispersion parameters ( $p_y$  and  $q_z$ ) for categories E/F also make important contributions to the overall uncertainty for some percentiles of the distribution for the area evacuated, but are not identified as important for all of the percentiles. The uncertainty on the deposition velocity of aerosols is also identified as an important contributor for the uncertainty on the 99<sup>th</sup> percentiles of the areas evacuated and sheltered, but not in other cases. This parameter is not included in Table 3.11 as it is only identified in one of the cases considered.

### **3.8 Numbers of early health effects**

Uncertainties on the numbers of early health effects were evaluated for the UK1 source term, for the cases for normal living and assuming that countermeasures were taken. They were also evaluated for the CB2 source term for the case when countermeasures are taken, but the values are generally sufficiently near zero that “uncertainty factors” cannot be calculated in most cases.

The numbers of early health effects in the population reflects both the individual risk of the effects at each distance from the site and the population distribution at those distances. The uncertainties on the individual risks were considered in Section 3.2. The uncertainties on individual risk tend to increase rapidly with distance from the site, complicating comparisons between the uncertainties on individual risk and numbers of effects in the population.

The extent of the uncertainty is summarised in Table 3.12 which shows the “uncertainty factors” and the “reference uncertainty coefficients” for the mean value and for the 95<sup>th</sup> and 99<sup>th</sup> percentiles of the numbers of early health effects. The “uncertainty factors” for the numbers of mortalities (both in total and from the haematopoietic syndrome) for the cases with countermeasures and in normal living are similar, within the range from about 20 to about 50. The default values tend to lie in the lower part of the uncertainty distribution for these quantities.

The uncertainty factors for the numbers of cases of early morbidities are rather larger than those for the numbers of mortalities; again the values are similar for the cases with countermeasures and for normal living. The uncertainty on the numbers of the different types of morbidities are generally much larger than that on the total number of morbidities – in some cases the 5<sup>th</sup> percentile of the uncertainty distribution is zero and the uncertainty factor is infinite. The uncertainty on morbidity includes both the uncertainty on the probability of surviving early mortality and of suffering an effect, and so should be greater than the uncertainty on mortality. The uncertainty on the numbers of cases of morbidities could also be large because small changes to the dose could produce relatively small changes to the distance at which the dose drops below the threshold but this could be accompanied by much larger changes in the numbers of people above the threshold. However, the exact reason why the uncertainties for the numbers of cases of skin burns and of hypothyroidism are greater and lower, respectively, for the case with countermeasures or normal living is not clear.

The extent of the uncertainty for the numbers of early mortalities with countermeasures is also illustrated in Figure 3.2 for the UK1 source term, which shows the 5<sup>th</sup> and 95<sup>th</sup> percentile envelopes and the reference distribution. This shows that the extent of the uncertainty is similar over most of the ccdf, with the reference value tending towards the lower end of the uncertainty distribution.

The parameters whose uncertainties make major contributions to the overall uncertainties on the numbers of early health effects are given in Table 3.13. In general the same important parameter uncertainties are identified for the different percentiles considered, for numbers of effects with countermeasures and in normal living. The important uncertainties are different for the different effects. The main exception to this is the numbers of early mortalities; the dispersion parameters for category E/F are only identified for the case with countermeasures. The uncertainties on some of the dispersion parameters for category E/F are identified as important for a number of endpoints and percentiles; however different parameters among this group are identified in different places. The uncertainties on a few parameters make large contributions to the uncertainties on many of the endpoints. The uncertainties on the deposition velocities of iodine and aerosols to skin are the main contributors for early death, numbers of cases of morbidity and for skin burns. The uncertainty on the deposition velocity of iodine is the only important contributor to the uncertainty on the numbers of cases of hypothyroidism. The uncertainty on the deposition velocity of iodine to skin is identified using the percentage contribution, but not the PRCC; this reflects an effect of the correlation between this parameter and the deposition velocity of iodine to ground. The uncertainty on the deposition velocity of aerosols is the main contributor to the overall uncertainty on the numbers of cases of lung morbidity. The uncertainty on the dispersion coefficient  $p_z$  in categories E/F also makes an important contribution to the uncertainty in several of the effects considered. Other dispersion parameters are identified for some percentiles of the ccdf for some endpoints, but are not identified consistently across many of the effects.

COSYMA predicts that there are no early health effects for CB2 for most sets of parameter values. The calculations suggest that the only early effects result from exposure of the skin, and the uncertainty on the deposition velocity of iodine to skin is identified as the most important contributor to the uncertainty.

### 3.9 Long term individual doses and risks

Uncertainties on long term individual doses and risks were calculated for the CB2 source term, for the case where countermeasures are taken and for normal living with no countermeasures. They were also calculated for the DBA source term, considering the uncertainty on the potential outdoor doses and on doses when countermeasures are taken.

The extent of the uncertainty on individual doses is summarised in Table 3.14 which shows the “uncertainty factors” for the mean value and for the 95th and 99th percentiles of the distributions for the different source terms and countermeasures strategies considered. For CB2, the “uncertainty factors” for the different organs are not very different, though the “uncertainty factors” for the 95th percentile at the second distance considered are somewhat larger than for the other situations considered. The “uncertainty factors” for normal living are slightly larger than those for the case with countermeasures, for most of the organs considered. The uncertainty on the thyroid dose is rather less than on the other doses considered. For all organs considered, the uncertainty on the 95th percentile of the distributions is larger than that on the other values considered. The uncertainty on the long term thyroid dose is lower than that on the thyroid dose in the short term, while the reverse is true for the bone marrow dose. This could reflect the variation of air concentration and deposition with the value of the deposition velocity, described below.

The uncertainty on doses with countermeasures for DBA is generally slightly larger than that for CB2, except for the thyroid dose. The uncertainty on the potential doses is generally slightly smaller than that on the doses with countermeasures, except for that on the thyroid dose. The reason for the differences between the behaviour of iodine and other doses is not clear.

The “reference uncertainty coefficient” is shown in Table 3.15. In general, the values are much lower than the “uncertainty factors”. In many cases, particularly for the 95th and 99th percentiles at 100 km from the site, the reference value is within a factor of 2 of the 95th percentile of the uncertainty distribution.

The parameters whose uncertainties make major contributions to the overall uncertainties are given in Table 3.15 for both source terms separately. The detailed ordering of the parameters is different for the different parts of the distributions considered. However, there are some parameters whose uncertainties make major contributions to many of the endpoints considered. These parameters are the deposition velocity of aerosols, the linear term in the washout coefficient for aerosols, and some of the dispersion coefficients particularly  $p_z$  for category E/F and  $q_y$  and  $q_z$  for category D. It is interesting to note that the uncertainty on the deposition velocity of iodine is only identified as important for the largest distance considered even for thyroid doses; the uncertainty on the washout coefficient for iodine is not identified as an important parameter for either source term. This could be a result of the variation of air concentration and deposition with deposition velocity, such that high values of deposition velocity lead to low values of air concentration but higher values of deposition. This could reduce the sensitivity of the long term thyroid doses to the deposition velocity of iodine.

Results are not presented here for the uncertainties on the long term individual risks as they are very similar to those on the long term individual doses. The uncertainty on the risk of fatal

cancers differs slightly from that on the effective dose as the cancer risk is calculated in COSYMA from the risk in each organ rather than directly from the effective dose. However, the results, for both the extent of the uncertainty and for the important parameter uncertainties, are very similar to those described here for effective dose. The uncertainties on the risks of leukaemia and thyroid cancers are the same as those given here for doses to bone marrow and thyroid, respectively, other than for small effects reflecting the binning of results when generating probability distributions and their percentiles.

### **3.10 Extent of late countermeasures**

The uncertainty on the extent of late countermeasures is considered for the CB2 and DBA source terms. The countermeasures adopted and the intervention levels are described in Section 1.

The extent of uncertainty on late countermeasures is summarised in Table 3.17 which shows the “uncertainty factors” and the “reference uncertainty coefficients” on the mean value, and the 95th and 99th percentiles of the distributions of the late countermeasures considered for both the CB2 and DBA source terms.

For the intervention criteria selected for this study, the relocation area is essentially the same as the evacuation area, and the results presented earlier are appropriate here. The uncertainty on the time integral of the relocation area is rather larger than that on the initial extent of the area. The parameters whose uncertainties make major contributions to the overall uncertainty on the time integral of the area are the deposition velocity and washout coefficient of aerosols.

The “uncertainty factor” for the areas of food restrictions, for both initial and time integrals of the areas, for all parts of the distributions considered for CB2 are similar, about a factor of 3 to 5. The uncertainty on the relocation area is slightly larger. The uncertainty on the time integral of the relocation area is much larger, as the absolute value is very small.

COSYMA predicts that food restrictions will be required for some situations for DBA. Results for relocation are not presented for this source term, as the predicted doses are below the threshold for which relocation would be implemented.

The “uncertainty factors” for DBA differ for the foods considered, reflecting to some extent the differences between the areas over which food restrictions are predicted using default values for the parameters. The “uncertainty factor” on the ban areas for milk and green vegetables is about 5, similar to the value for CB2. The food ban areas for grain and beef are much smaller than for the other foods, and the uncertainties are somewhat larger.

With the exception of the relocation area for CB2, the “reference uncertainty coefficients” are much lower than the “uncertainty factors”. In many cases the reference value is within a factor of 2 of the 95th percentile of the uncertainty distribution, and in two cases is slightly greater than the 95th percentile of the uncertainty distribution. This is a further effect of the broader plumes predicted using the default parameter values than the ones predicted from the uncertainty ranges, as already discussed for the extent of early countermeasures. Food restrictions are imposed at relatively low depositions, and so are assumed to be imposed towards the edges of the plume. Thus

the broader default plumes correspond to larger affected areas than those for the uncertainty analysis plumes.

The extent of the uncertainty on the food restriction areas is illustrated in Figure 3.3, which shows the 5<sup>th</sup> and 95<sup>th</sup> percentile envelopes of the initial area affected by a milk ban for the CB2 source term. This shows that the uncertainty does not vary substantially for the different percentiles of the ccdf, and that the reference value is towards the upper end of the uncertainty distribution for all other than the highest percentiles of the distribution.

The parameters whose uncertainties make major contributions to the overall uncertainty on the extent of countermeasures are given in Table 3.18 for the CB2 source term. The parameters whose uncertainties make the largest contributions to the uncertainty for the relocation area are the deposition velocity of elemental iodine and the dispersion coefficient  $p_z$  for category E/F, while for the time integral of the relocation area the important uncertainties are those on the deposition velocity and washout coefficients for aerosols. COSYMA predicts that relocation is not required for the DBA source term. The important uncertainties for food restrictions for the CB2 source term differ to some extent for the different foods considered, though the deposition velocity and washout coefficient of aerosols and the deposition velocity of iodine are identified as important uncertainties for most foods and percentiles of the distribution. The identification of important uncertainties for the DBA source term is more difficult, as the value of  $R^2$  is rather low for some of the foods considered. Where important uncertainties can be identified, they are similar to those described above for the CB2 source term though the dispersion parameters are not identified as strongly for this source term as for CB2. The uncertainty on the parameters of the washout coefficient for aerosols also make important contributions for some cases.

### 3.11 Collective dose and numbers of late health effects

The uncertainty on the collective dose and numbers of late effects was analysed for CB2 for normal living and for countermeasures, and for DBA with countermeasures. The results for collective doses and for numbers of health effects are similar. Results are presented here only for the numbers of late health effects; the full set of results is presented in Appendices C and D.

The extent of the uncertainty is summarised in Table 3.19 which shows the “uncertainty factors” and “reference uncertainty coefficients” for the mean value and for the 95th and 99th percentiles of the distributions. For CB2, with countermeasures, the “uncertainty factors” are close to 2 for all endpoints and percentiles considered. The values are slightly larger for the effects in the absence of countermeasures where they range between about 3 and 6. For DBA, the “uncertainty factors” are again slightly larger, lying between about 2 and 12. The uncertainty on the numbers of late health effects is generally smaller than the uncertainty on the long term individual doses. This is presented for distances from about 5 to 100 km, and decreases with increasing distance. The uncertainty on the numbers of health effects reflects the contribution to late effects from doses at large distances from the site.

The “reference uncertainty coefficients”, particularly for CB2 with normal living and for DBA, are rather lower than the “uncertainty factors” and in most cases are less than a factor of 2.

The extent of the uncertainty is illustrated in Figure 3.4, which shows the 5<sup>th</sup> and 95<sup>th</sup> percentile envelopes and the reference value for the numbers of fatal cancers with countermeasures for the CB2 source term. This shows that the uncertainty bands are similar for all percentiles of the distribution, and that the reference value lies near the centre of the distribution. This can be compared to the equivalent results for early effects, shown in Figure 3.2. The uncertainty on fatal cancers is much lower than that on the numbers of early effects. This may reflect the difference between the linear relationship between dose and risk for late effects and the non-linear relationship, with a dose threshold, for early effects.

The important uncertainties are shown in Table 3.20. The most important contributions come from the uncertainty on the washout coefficient of aerosols, the deposition velocity of aerosols and elemental iodine, and the dispersion coefficients  $p_z$  for category E/F. The dispersion coefficients for some other categories are also highly ranked for some endpoints. The deposition parameters for iodine are generally ranked below those for aerosols for both source terms. The uncertainties on both the linear and exponent terms of the washout coefficient are identified as making large contributions to some of the uncertainties. In general, the uncertainty on the exponent only contributes significantly to the higher percentiles of the distributions. The uncertainties on the dispersion parameters make a larger contribution to the overall uncertainty for the cases with countermeasures than for those without countermeasures.

### **3.12 Identification of important parameters for the overall analysis**

The parameters to be included in the overall analysis are those that are placed in the first or second rank plus those whose uncertainties make more than a 15% contribution to the overall uncertainty, for at least one endpoint and one source term. All input parameters for the module satisfied at least one of these criteria.

Table 3.21 shows those parameters that are identified according to their ranks and those that are identified according to their percentage contribution. All the input parameters are identified as important if the selection procedure is based on their ranks, while 15 parameters are also identified as important if the selection procedure is based on percentage contributions. The table also shows the source terms for which the parameter uncertainties were identified as being important contributors to the overall uncertainty for the atmospheric dispersion module. The table shows that most of the parameters are identified as being important for each of the source terms considered.

The parameters describing the wet and dry deposition rates of organic iodine were identified as important only if using their ranks. The uncertainties on these parameters are, however, unlikely to make major contributions to the overall uncertainty as the fraction of iodine released in the organic form for the source terms considered is very small, generally only about 1%. They were therefore omitted from the overall analysis.

Therefore, all the input parameters except those for the deposition of organic iodine were included in the overall analysis.

### **3.13 Other points**

One of the aims of this study was to identify priorities for further research. The uncertainties on the deposition velocities to the ground are identified as an important contributor to the overall uncertainty on air concentration, because of the impact of plume depletion in reducing air concentration, and to the overall uncertainty on other endpoints. Much of their contribution to the uncertainty on other endpoints reflects the importance of plume depletion. COSYMA uses a very simple model for determining the extent of plume depletion. The appropriateness of that model should be examined if research to improve PRA models were to be undertaken.



**Table 3.1 “Uncertainty factors” on predicted air concentrations and deposition**

Quantity	“Uncertainty factors”		
	Mean	95th percentile	99th percentile
Air concentration of iodine at 0.875 km	8.6	19	13
Air concentration of iodine at 5 km	46	55	42
Air concentration of iodine at 20 km	120	410	130
Air concentration of iodine at 100 km	420	( $2.5 \cdot 10^7$ ) <sup>(a)</sup>	3600 <sup>(b)</sup>
Deposition of iodine at 0.875 km	32	520	59
Deposition of iodine at 5 km	6.6	89	8.7
Deposition of iodine at 20 km	5.0	46	6.3
Deposition of iodine at 100 km	26	690	56
Air concentration of caesium at 0.875 km	5.2	13	7.4
Air concentration of caesium at 5 km	8.5	13	13
Air concentration of caesium at 20 km	14	7.8	17
Air concentration of caesium at 100 km	21	33	23
Deposition of caesium at 0.875 km	150	2000 <sup>(c)</sup>	210
Deposition of caesium at 5 km	38	560	62
Deposition of caesium at 20 km	21	74	35
Deposition of caesium at 100 km	7.5	9.1	8.5

Notes:

- a In this case the uncertainty factor is infinite, the value in brackets is the 95<sup>th</sup> percentile of the distribution.
- b The 5<sup>th</sup> and 95<sup>th</sup> percentiles of the uncertainty distribution are  $3.4 \cdot 10^4$  and  $1.2 \cdot 10^8$  respectively.
- c The 5<sup>th</sup> and 95<sup>th</sup> percentiles of the uncertainty distribution are  $1.5 \cdot 10^5$  and  $2.9 \cdot 10^9$  respectively.

**Table 3.2 “Reference uncertainty coefficients” on predicted air concentrations and deposition**

Quantity	Reference uncertainty coefficient		
	Mean	95th percentile	99th percentile
Air concentration of iodine at 0.875 km	2.2	2.6	2.0
Air concentration of iodine at 5 km	7.4	6.0	6.3
Air concentration of iodine at 20 km	6.7	4.7	5.6
Air concentration of iodine at 100 km	4.5	5.6	2.9
Deposition of iodine at 0.875 km	4.0	5.5	3.6
Deposition of iodine at 5 km	3.1	4.3	2.5
Deposition of iodine at 20 km	1.6	2.0	1.3
Deposition of iodine at 100 km	1.3	1.7	0.91
Air concentration of caesium at 0.875 km	1.9	2.3	1.8
Air concentration of caesium at 5 km	4.9	5.0	3.6
Air concentration of caesium at 20 km	5.7	3.0	4.3
Air concentration of caesium at 100 km	2.8	2.0	2.7
Deposition of caesium at 0.875 km	12	17	10
Deposition of caesium at 5 km	7.3	18	6.7
Deposition of caesium at 20 km	3.7	6.6	3.7
Deposition of caesium at 100 km	1.6	1.6	1.5

**Table 3.3 Important parameters for air concentration and deposition**

Quantity	Parameters whose uncertainties make large contributions to the overall uncertainty
Air concentration of caesium	Deposition velocity of caesium
Air concentration of iodine	Deposition velocity of iodine Dispersion parameters, particularly for categories E/F
Deposition of caesium	Deposition velocity of caesium Horizontal dispersion parameters, particularly for categories D and E/F.
Deposition of iodine	Deposition velocity of iodine Horizontal dispersion parameters for all categories

**Table 3.4 “Uncertainty factors” for short term individual doses at the three distances considered**

Quantity	For mean value <sup>(a)</sup>			For 95 <sup>th</sup> percentile <sup>(a)</sup>			For 99 <sup>th</sup> percentile <sup>(a)</sup>		
<b>UK1</b>									
Dose to bone marrow for normal living	12	5.0	2.8	22	12	6.9	15	4.4	3.5
Dose to thyroid for normal living	6.8	18	26	12	27	29	9.8	21	34
Dose to skin for normal living	460	280	220	620	510	275	400	420	220
Potential dose to bone marrow	15	5.1	3.4	25	14	9.5	19	5.0	4.1
Potential dose to thyroid	5.2	12	14	13	19	21	7.4	15	20
Potential dose to skin	460	280	220	620	510	275	400	420	220
Dose to bone marrow with countermeasures	6.2	6.0	6.7	10	8.9	25	7.9	7.2	5.7
Dose to thyroid with countermeasures	6.7	11	15	13	26	57	10	18	28
Dose to skin with countermeasures	530	380	250	600	1200 <sup>(b)</sup>	1800 <sup>(c)</sup>	470	590	350
<b>CB2</b>									
Dose to bone marrow with countermeasures	6.2	5.5	2.9	12	4.7	7.4	6.7	7.6	2.9
Dose to thyroid with countermeasures	7.3	14	18	18	13	50	11	16	18
Dose to skin with countermeasures	660	430	340	1260 <sup>(d)</sup>	480	380	790	850	320

Notes:

- a The three values are the “uncertainty factors” at 0.875, 5 and 20 km respectively
- b The 5<sup>th</sup> and 95<sup>th</sup> percentiles of the uncertainty distribution are  $2.1 \cdot 10^{-1}$  and  $2.5 \cdot 10^2$  respectively
- c The 5<sup>th</sup> and 95<sup>th</sup> percentiles of the uncertainty distribution are  $4.1 \cdot 10^{-3}$  and  $7.2 \cdot 10^1$  respectively
- d The 5<sup>th</sup> and 95<sup>th</sup> percentiles of the uncertainty distribution are  $1.4 \cdot 10^{-2}$  and  $1.7 \cdot 10^1$  respectively

**Table 3.5 “Reference uncertainty coefficients” for short term individual doses at the three distances considered**

Quantity	For mean value <sup>(a)</sup>			For 95 <sup>th</sup> percentile <sup>(a)</sup>			For 99 <sup>th</sup> percentile <sup>(a)</sup>		
<b>UK1</b>									
Dose to bone marrow for normal living	4.2	4.6	2.6	5.9	6.6	2.5	4.8	3.2	2.3
Dose to thyroid for normal living	2.1	6.6	6.1	2.7	5.6	4.6	2.0	5.8	9.6
Dose to skin for normal living	15	4.0	16	15	20	11	10	20	12
Potential dose to bone marrow	4.6	4.6	2.7	6.3	6.9	2.7	5.0	3.1	2.6
Potential dose to thyroid	2.2	6.1	5.4	2.3	5.4	4.3	2.0	5.5	4.8
Potential dose to skin	16	21	16	15	20	12	9.8	2.0	12
Dose to bone marrow with countermeasures	2.8	5.5	6.1	4.4	4.5	6.8	3.0	4.7	3.5
Dose to thyroid with countermeasures	2.2	4.6	5.3	2.6	5.3	13	1.9	4.0	5.9
Dose to skin with countermeasures	15	20	14	13	18	41	10	18	15
<b>CB2</b>									
Dose to bone marrow with countermeasures	3.0	7.0	2.3	4.6	3.1	2.6	2.0	7.1	2.0
Dose to thyroid with countermeasures	2.2	5.5	2.9	2.7	3.3	3.7	2.0	5.7	2.1
Dose to skin with countermeasures	15	18	10	12	13	9.1	9.8	21	8.5

Note:

a The three values are the “reference uncertainty coefficients” at 0.875, 5 and 20 km respectively

**Table 3.6 Important parameters for early doses for UK1 and CB2.**

Endpoint	For mean value	For 95 <sup>th</sup> percentile	For 99 <sup>th</sup> percentile
Bone marrow doses	Deposition velocity of iodine Deposition velocity of aerosols Dispersion factors, particularly $p_z$ for category E/F Washout coefficient of aerosols	Deposition velocity of iodine Deposition velocity of aerosols Dispersion factors, particularly $p_z$ for category E/F and $q_z$ for category D	Deposition velocity of iodine Deposition velocity of aerosols Dispersion factors, particularly $p_z$ for category E/F Washout coefficient of aerosols
Thyroid doses	Deposition velocity for iodine	Deposition velocity for iodine	Deposition velocity for iodine
Skin doses	Deposition velocity of iodine to skin Deposition velocity of aerosols to skin	Deposition velocity of iodine to skin Deposition velocity of aerosols to skin	Deposition velocity of iodine to skin Deposition velocity of aerosols to skin

**Table 3.7 “Uncertainty factors” and “reference uncertainty coefficients” for mean value of individual risks of early health effects for the UK1 source term at the three distances considered**

Quantity	Uncertainty factors			Reference uncertainty coefficients		
Risk of early death with countermeasures	4.8	17	(1.3 10 <sup>-3</sup> ) <sup>a</sup>	2.3	4.4	17
Risk of haematopoietic syndrome with countermeasures	5.3	1000	(4.9 10 <sup>-4</sup> ) <sup>a</sup>	2.5	12	-
Risk of early death for normal living	4.4	6.8	160	2.1	4.7	4.6
Risk of haematopoietic syndrome for normal living	4.6	23	(5.0 10 <sup>-4</sup> ) <sup>a</sup>	2.2	12	-
Risk of early death for potential exposures	2.5	6.0	10	1.7	3.9	4.0
Risk of haematopoietic syndrome for potential exposures	2.5	6.4	72	1.7	4.2	7.5
Risk of early morbidities with countermeasures	6.4	32	(2.5 10 <sup>-2</sup> ) <sup>a</sup>	1.3	3.7	15
Risk of lung morbidities with countermeasures	(4.0 10 <sup>-3</sup> ) <sup>a</sup>	(2.3 10 <sup>-3</sup> ) <sup>a</sup>	(5.8 10 <sup>-5</sup> ) <sup>a</sup>	7.6	2.7	-
Risk of hypothyroidism with countermeasures	47	430	(1.1 10 <sup>-4</sup> ) <sup>a</sup>	1.8	8.5	-
Risk of skin burns with countermeasures	250	2400 <sup>b</sup>	(2.3 10 <sup>-2</sup> ) <sup>a</sup>	1.4	4.0	-
Risk of early morbidities for normal living	5.6	12	170	1.3	2.9	6.1
Risk of lung morbidities for normal living	(1.2 10 <sup>-3</sup> ) <sup>a</sup>	(1.1 10 <sup>-3</sup> ) <sup>a</sup>	(9.8 10 <sup>-5</sup> ) <sup>a</sup>	-	240	-
Risk of hypothyroidism for normal living	120	370	(2.7 10 <sup>-3</sup> ) <sup>a</sup>	1.8	4.1	210
Risk of skin burns for normal living	17	46	5600 <sup>c</sup>	1.4	2.7	6.1
Risk of early morbidities for potential exposures	6.5	8.7	24	1.5	2.0	3.9
Risk of lung morbidities for potential exposures	(0) <sup>a</sup>	(1.0 10 <sup>-6</sup> ) <sup>a</sup>	(3.7 10 <sup>-6</sup> ) <sup>a</sup>	-	-	-
Risk of hypothyroidism for potential exposures	(1.0 10 <sup>-2</sup> ) <sup>a</sup>	(9.6 10 <sup>-3</sup> ) <sup>a</sup>	(3.0 10 <sup>-3</sup> ) <sup>a</sup>	5.5	6.9	18
Risk of skin burns for potential exposures	(8.3 10 <sup>-2</sup> ) <sup>a</sup>	380	960	1.7	2.1	4.5

Notes:

- a In this case the uncertainty factor is infinite, the value in brackets is the 95<sup>th</sup> percentile of the distribution.  
b The 5<sup>th</sup> and 95<sup>th</sup> percentiles of the uncertainty distribution in this case are 5.8 10<sup>-5</sup> and 1.4 10<sup>-1</sup> respectively.  
c The 5<sup>th</sup> and 95<sup>th</sup> percentiles of the uncertainty distribution in this case are 1.4 10<sup>-5</sup> and 7.8 10<sup>-2</sup> respectively.

**Table 3.8 Important parameters for the mean value of individual risk of early health effects for UK1**

Deposition velocity of iodine
Deposition velocity of aerosols
Dispersion parameters, particularly for categories D and E/F
Deposition velocity of aerosols to skin
Deposition velocity of iodine to skin

**Table 3.9 “Uncertainty factors” for the extent of early countermeasures for the CB2 source term**

Quantity	“Uncertainty factor”		
	For mean value	For 95 <sup>th</sup> percentile	For 99 <sup>th</sup> percentile
Area evacuated	5.0	7.6	8.6
Area with sheltering	4.3	4.9	5.9
Area with iodine tablets	27	62	96

**Table 3.10 “Reference uncertainty coefficients” for the extent of early countermeasures for the CB2 source term**

Quantity	Reference uncertainty coefficient		
	For mean value	For 95 <sup>th</sup> percentile	For 99 <sup>th</sup> percentile
Area evacuated	5.2	6.1	6.9
Area with sheltering	3.1	2.8	3.0
Area with iodine tablets	5.6	5.9	4.3

**Table 3.11 Parameters whose uncertainties make major contributions to the overall uncertainty on extent of countermeasures for the CB2 source term**

Quantity	Parameters
Area evacuated	Deposition velocity of elemental iodine Dispersion parameters for category E/F
Area with sheltering	Deposition velocity of elemental iodine
Area with iodine tablets	Deposition velocity of elemental iodine

**Table 3.12 “Uncertainty factors” and “reference uncertainty coefficients” for the number of early health effects for the UK1 source term**

Quantity	Uncertainty factors			Reference uncertainty coefficients		
	For mean value	For 95 <sup>th</sup> percentile	For 99 <sup>th</sup> percentile	For mean value	For 95 <sup>th</sup> percentile	For 99 <sup>th</sup> percentile
Number of early mortalities, with countermeasures	32	20	24	12	11	18
Number of cases of haematopoietic syndrome with countermeasures	41	28	55	21	19	17
Number of early morbidities with countermeasures	180	140	79	14	13	8.3
Number of cases of lung morbidity with countermeasures	190	(1300) <sup>a</sup>	210	9.7	10	13
Number of cases of hypothyroidism with countermeasures	95	100	190	13	8.7	12
Number of cases of skin burns, with countermeasures	5700 <sup>b</sup>	10000 <sup>b</sup>	1300 <sup>b</sup>	14	13	8.3
Number of early morbidities for normal living	43	30	24	8.7	7.2	6.9
Number of cases of haematopoietic syndrome for normal living	27	17	20	14	12	14
Number of early morbidities for normal living	120	36	51	11	10	7.1
Number of cases of lung morbidity for normal living	(280) <sup>a</sup>	(1200) <sup>a</sup>	(6300)	1.7 10 <sup>5</sup>	-	-
Number of cases of hypothyroidism for normal living	2000 <sup>b</sup>	2200 <sup>b</sup>	2100 <sup>b</sup>	21	20	20
Number of cases of skin burns for normal living	430	260	210	12	10	7.2

Notes:

a In these cases the uncertainty factors are infinite; the 95<sup>th</sup> percentile of the uncertainty distribution is given in brackets.

b The 5<sup>th</sup> and 95<sup>th</sup> percentiles of the uncertainty distribution in these cases are given below

Quantity	5 <sup>th</sup> percentile of distribution on			95 <sup>th</sup> percentile of distribution on		
	Mean value	95 <sup>th</sup> percentile	99 <sup>th</sup> percentile	Mean value	95 <sup>th</sup> percentile	99 <sup>th</sup> percentile
Number of cases of skin burns with countermeasures	8.1	17	190	51,000	170,000	240,000
Number of cases of hypothyroidism for normal living	2.8	11	24	5500	26,000	51,000

**Table 3.13 Parameters for whose uncertainties make important contributions to the overall uncertainty on numbers of early health effects**

Quantity	Important parameters
Numbers of early mortalities	Deposition velocity of iodine to skin Deposition velocity of aerosols to skin Dispersion coefficient $p_z$ for category E/F <sup>a</sup>
Number of cases of the haematopoietic syndrome	Dispersion coefficients for category E/F
Numbers of early morbidities	Deposition velocity of iodine to skin Deposition velocity of aerosols to skin
Number of cases of lung morbidity	Deposition velocity of aerosols Dispersion coefficients for category E/F
Number of cases of hypothyroidism	Deposition velocity of iodine
Number of cases of skin burns	Deposition velocity of iodine to skin Deposition velocity of aerosols to skin

Note

a This is only identified for the case when countermeasures are considered.

**Table 3.14 “Uncertainty factors” for long term individual doses**

Quantity	For mean value <sup>(a)</sup>			For 95 <sup>th</sup> percentile <sup>(a)</sup>			For 99 <sup>th</sup> percentile <sup>(a)</sup>		
<b>CB2</b>									
Effective dose with countermeasures	14	12	4.2	83	20	33	7.9	19	5.7
Bone marrow dose with countermeasures	1.5	12	4.1	110	21	3.3	8.3	20	5.7
Thyroid dose with countermeasures	8.8	8.5	3.5	27	13	3.2	5.1	8.5	4.9
Effective dose in normal living	18	12	6.1	290	35	8.7	41	18	9.1
Bone marrow dose in normal living	33	17	6.8	460	46	8.7	87	28	10
Thyroid dose in normal living	6.7	3.6	4.6	47	16	9.3	7.2	4.3	4.2
<b>DBA</b>									
Effective dose with countermeasures	19	11	7.1	140	30	22	27	14	8.3
Bone marrow dose with countermeasures	28	18	8.0	390	55	47	42	26	14
Thyroid dose with countermeasures	4.6	3.3	4.4	16	15	26	4.1	3.6	5.0
Potential effective dose	14	9.1	7.2	100	33	23	19	13	9.1
Potential bone marrow dose	25	18	7.9	200	51	45	33	21	11
Potential thyroid dose	4.9	3.0	4.1	26	16	24	4.8	4.0	4.8

Note

a: The three values are the “uncertainty factors” at 5, 20 and 100 km respectively.



**Table 3.15 “Reference uncertainty coefficients” for long term individual doses**

Quantity	For mean value <sup>(a)</sup>			For 95 <sup>th</sup> percentile <sup>(a)</sup>			For 99 <sup>th</sup> percentile <sup>(a)</sup>		
<b>CB2</b>									
Effective dose with countermeasures	4.4	3.0	1.9	7.2	4.8	1.4	2.2	3.5	1.8
Bone marrow dose with countermeasures	4.5	3.0	1.4	7.4	4.8	1.4	2.1	3.6	1.8
Thyroid dose with countermeasures	3.9	2.8	1.6	7.1	4.2	1.5	2.2	3.0	1.7
Effective dose in normal living	6.2	3.0	1.6	17	4.9	1.5	5.7	3.6	1.7
Bone marrow dose in normal living	6.6	3.1	1.7	20	5.1	1.6	6.6	3.8	1.8
Thyroid dose in normal living	3.9	2.1	1.3	7.4	2.7	1.4	3.6	2.1	1.3
<b>DBA</b>									
Effective dose with countermeasures	5.4	2.9	1.7	15	4.4	1.8	4.7	3.3	1.7
Bone marrow dose with countermeasures	5.8	3.2	1.8	19	5.0	2.0	5.1	3.7	1.7
Thyroid dose with countermeasures	3.1	1.8	1.3	4.4	2.2	1.5	3.0	1.7	1.2
Potential effective dose	6.4	3.2	1.7	14	4.8	1.8	5.3	3.2	1.7
Potential bone marrow dose	6.8	3.4	1.8	16	5.5	2.0	6.5	3.6	1.8
Potential thyroid dose	3.6	2.0	1.3	6.0	2.5	1.6	3.3	2.2	1.2

Note

a: The three values are the “reference uncertainty coefficients” at 5, 20 and 100 km respectively.

**Table 3.16 Important parameters for long term individual doses**

Organ	Important parameters for CB2	Important parameters for DBA
Effective dose	Deposition velocity of aerosols Washout coefficient of aerosols Dispersion coefficients $q_z$ for category D and $p_y$ for category E/F	Deposition velocity of aerosols Washout coefficient of aerosols
Bone marrow	Deposition velocity of aerosols Washout coefficient of aerosols	Deposition velocity of aerosols Washout coefficient of aerosols
Thyroid	Deposition velocity of aerosols Washout coefficient of aerosols Deposition velocity of iodine at largest distance	Deposition velocity of aerosols Washout coefficient of aerosols Deposition velocity of iodine at largest distance

**Table 3.17 “Uncertainty factors” and “reference uncertainty coefficients” for extent of late countermeasures**

Quantity	Uncertainty factors			Reference uncertainty coefficients		
	For mean value	For 95 <sup>th</sup> percentile	For 99 <sup>th</sup> percentile	For mean value	For 95 <sup>th</sup> percentile	For 99 <sup>th</sup> percentile
<b>CB2</b>						
Relocation area	5.0	7.6	8.6	5.2	6.2	6.9
Time integral of relocation area	69	71	110	8.9	6.2	6.3
Initial area subject to milk ban	5.3	3.9	4.0	1.3	1.7	2.2
Time integral of area subject to milk ban	3.5	3.6	4.2	1.1	1.4	2.0
Initial area subject to grain ban	5.5	4.6	4.0	1.0	1.4	1.7
Time integral of area subject to grain ban	5.3	4.4	4.2	0.99	1.4	1.8
Initial area subject to green vegetable ban	3.9	3.2	2.9	1.2	1.6	1.7
Time integral of area subject to green vegetable ban	3.0	3.0	3.2	0.92	1.1	1.2
Initial area subject to beef ban	5.6	5.5	3.8	1.1	1.6	1.7
Time integral of area subject to beef ban	3.8	3.5	3.6	1.0	1.6	1.9
<b>DBA</b>						
Initial area subject to milk ban	4.3	4.1	5.5	2.1	1.9	2.2
Time integral of area subject to milk ban	4.1	3.9	4.8	2.3	2.0	2.2
Initial area subject to grain ban	200	-	230	10	5.9	12
Time integral of area subject to grain ban	200	-	210	11	6.0	8.5
Initial area subject to green vegetable ban	5.0	4.9	5.1	2.5	2.2	2.0
Time integral of area subject to green vegetable ban	4.7	3.4	5.0	3.2	2.6	3.3
Initial area subject to beef ban	12	8.7	10	4.7	4.6	5.9
Time integral of area subject to beef ban	49	2.7	45	9.9	6.2	8.5

**Table 3.18 Important parameters for extent of late countermeasures for the CB2 source term**

Countermeasures	Important parameters for initial extent	Important parameters for time integral
Relocation	Deposition velocity of iodine Dispersion parameter $p_z$ for category E/F	Deposition velocity of aerosols Washout coefficient of aerosols
Milk ban	Deposition velocity of iodine Deposition velocity of aerosols	Deposition velocity of iodine Deposition velocity of aerosols Dispersion parameter $q_y$ for category E/F
Grain ban	Dispersion parameter $q_y$ for category A/B	Dispersion parameter $q_y$ for category D
Green vegetables ban	Deposition velocity of iodine Deposition velocity of aerosols	Washout coefficient of aerosols Dispersion parameters $p_z$ for category E/F and $q_y$ for category A/B
Beef ban	_(1)	Deposition velocity of aerosols

Note

1 In this case, the value of  $R^2$  is low, and no parameters are identified as being important.

**Table 3.19 “Uncertainty factors” and “reference uncertainty coefficients” for the numbers of late health effects**

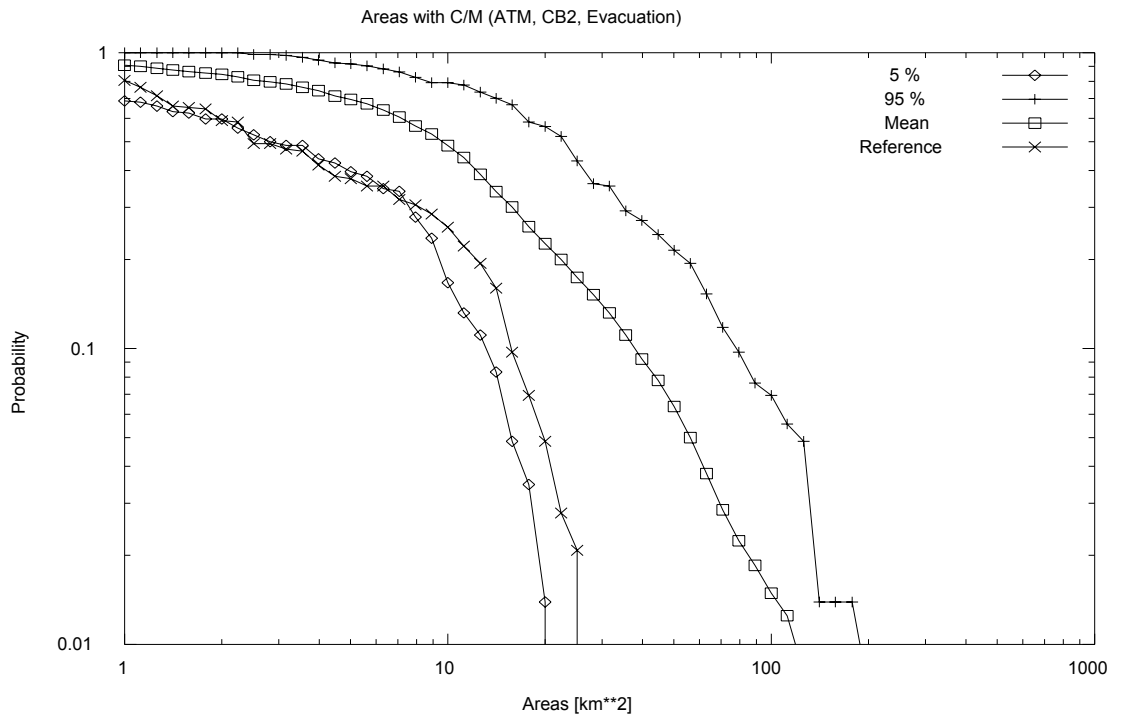
Quantity	Uncertainty factors			Reference uncertainty coefficients		
	For mean value	For 95 <sup>th</sup> percentile	For 99 <sup>th</sup> percentile	For mean value	For 95 <sup>th</sup> percentile	For 99 <sup>th</sup> percentile
<b>CB2</b>						
Number of fatal cancers, with countermeasures	2.2	1.9	2.4	1.3	1.5	1.7
Number of deaths from leukaemia, with countermeasures	2.3	1.9	2.4	1.3	1.5	1.7
Number of deaths from thyroid cancer, with countermeasures	2.4	2.2	2.7	1.4	1.7	2.0
Number of fatal cancers, for normal living	4.0	4.2	4.7	1.4	1.7	2.4
Number of deaths from leukaemia, for normal living	5.2	4.8	5.7	1.6	1.8	2.9
Number of deaths from thyroid cancer, for normal living	2.2	2.9	3.4	1.4	1.6	2.5
<b>DBA</b>						
Number of fatal cancers, with countermeasures	8.0	7.9	6.9	2.0	2.1	2.2
Number of deaths from leukaemia, with countermeasures	12	9.1	7.9	2.1	2.1	2.3
Number of deaths from thyroid cancer, with countermeasures	2.9	2.7	2.4	1.4	1.3	1.5

**Table 3.20 Important parameters for numbers of late health effects**

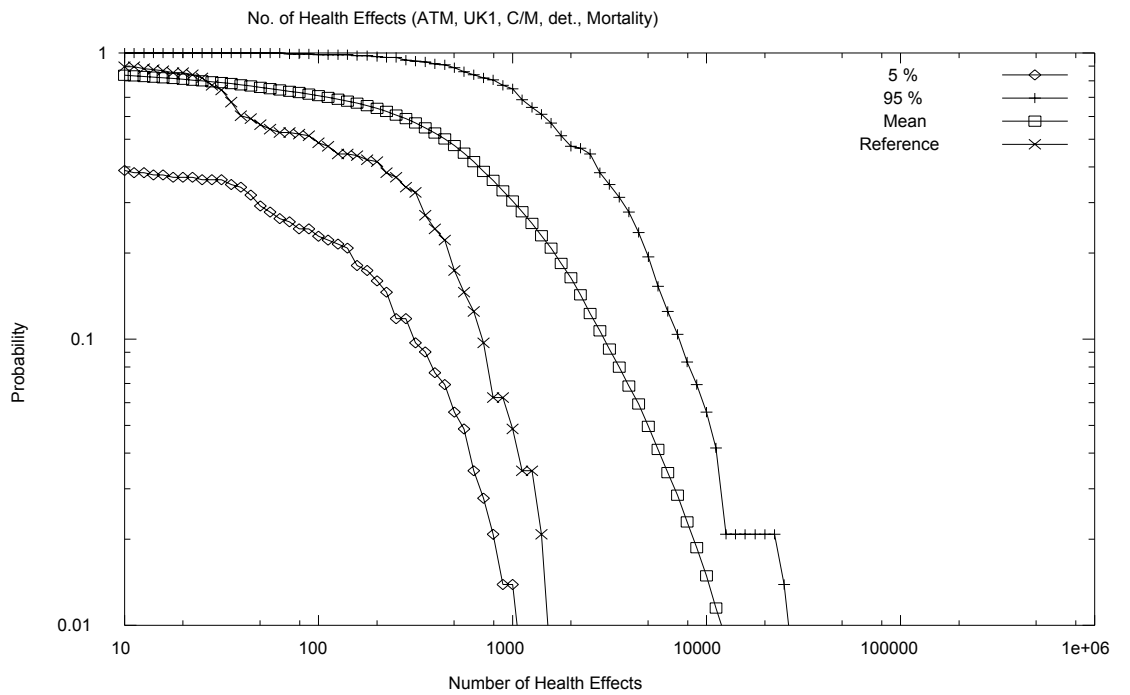
Effect	For CB2 source term	For DBA source term
Fatal cancers	Washout coefficient of aerosols Deposition velocity of aerosols Dispersion parameters $p_z$ in category E/F and $q_v$ in category A/B	Washout coefficient of aerosols Deposition velocity of aerosols
Leukaemias	Washout coefficient of aerosols Deposition velocity of aerosols Dispersion parameters $p_z$ in category E/F and $q_v$ in category A/B	Washout coefficient of aerosols Deposition velocity of aerosols
Thyroid cancers	Washout coefficient of aerosols Deposition velocity of aerosols Deposition velocity of iodine Dispersion parameters $p_z$ in category E/F and $q_v$ in category A/B	Washout coefficient of aerosols Deposition velocity of aerosols Deposition velocity of iodine

**Table 3.21 Summary of the rankings of parameters to the overall uncertainty**

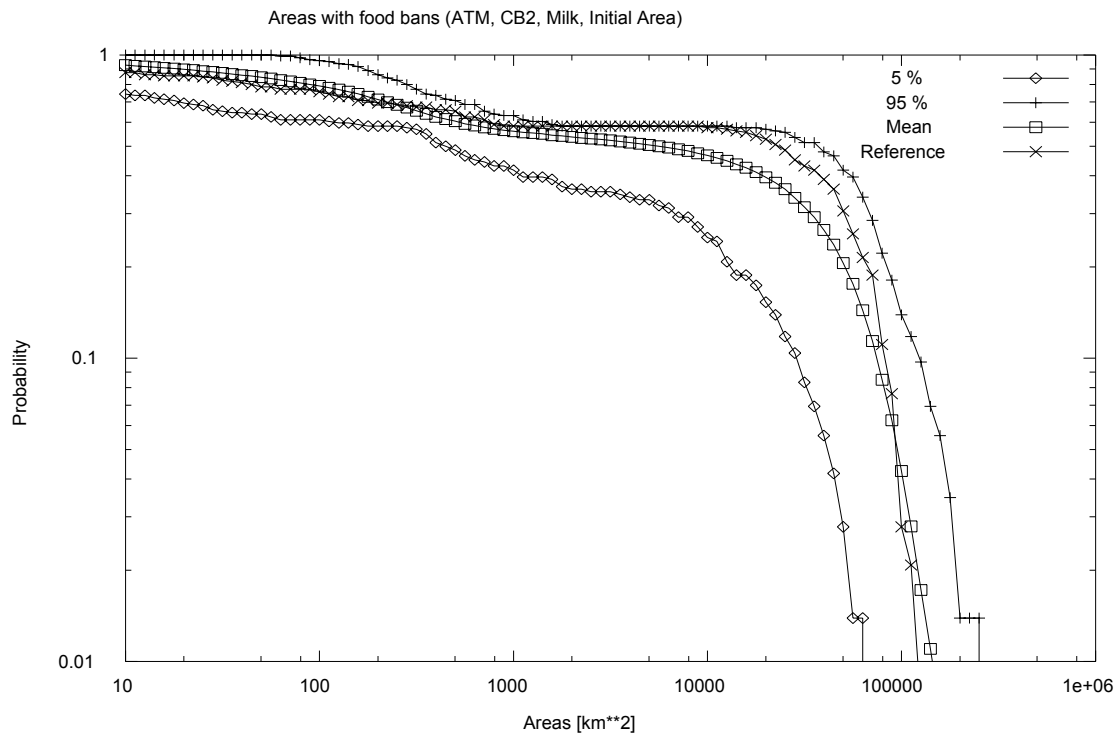
Selected input parameter	Selected using		Selected for source term		
	Ranks	Percentage contribution	UK1	CB2	DBA
Deposition velocity of aerosols	✓	✓	✓	✓	✓
Deposition velocity of elemental iodine	✓	✓	✓	✓	✓
Deposition velocity of methyl iodide	✓				✓
Dispersion coefficient $p_y$ for category A/B	✓	✓	✓	✓	✓
Dispersion coefficient $p_y$ for category C	✓				✓
Dispersion coefficient $p_y$ for category D	✓		✓	✓	✓
Dispersion coefficient $p_y$ for category E/F	✓	✓	✓	✓	✓
Dispersion coefficient $q_v$ for category A/B	✓	✓	✓	✓	✓
Dispersion coefficient $q_v$ for category C	✓	✓	✓	✓	✓
Dispersion coefficient $q_v$ for category D	✓	✓	✓	✓	✓
Dispersion coefficient $q_v$ for category E/F	✓	✓	✓	✓	✓
Dispersion coefficient $p_z$ for category A/B	✓		✓	✓	✓
Dispersion coefficient $p_z$ for category C	✓		✓	✓	✓
Dispersion coefficient $p_z$ for category D	✓		✓	✓	✓
Dispersion coefficient $p_z$ for category E/F	✓	✓	✓	✓	✓
Dispersion coefficient $q_z$ for category A/B	✓	✓	✓	✓	✓
Dispersion coefficient $q_z$ for category C	✓	✓	✓		
Dispersion coefficient $q_z$ for category D	✓	✓	✓	✓	✓
Dispersion coefficient $q_z$ for category E/F	✓	✓	✓		✓
Washout coefficient term a for aerosols	✓	✓	✓	✓	✓
Washout coefficient term b for aerosols	✓	✓	✓	✓	✓
Washout coefficient term a for elemental iodine	✓	✓	✓		✓
Washout coefficient term b for elemental iodine	✓			✓	
Washout coefficient term a for methyl iodide	✓			✓	
Washout coefficient term b for methyl iodide	✓			✓	
Deposition velocity to skin for aerosols	✓	✓	✓	✓	✓
Deposition velocity to skin for elemental iodine	✓	✓	✓	✓	✓
Deposition velocity to skin for methyl iodide	✓		✓	✓	✓



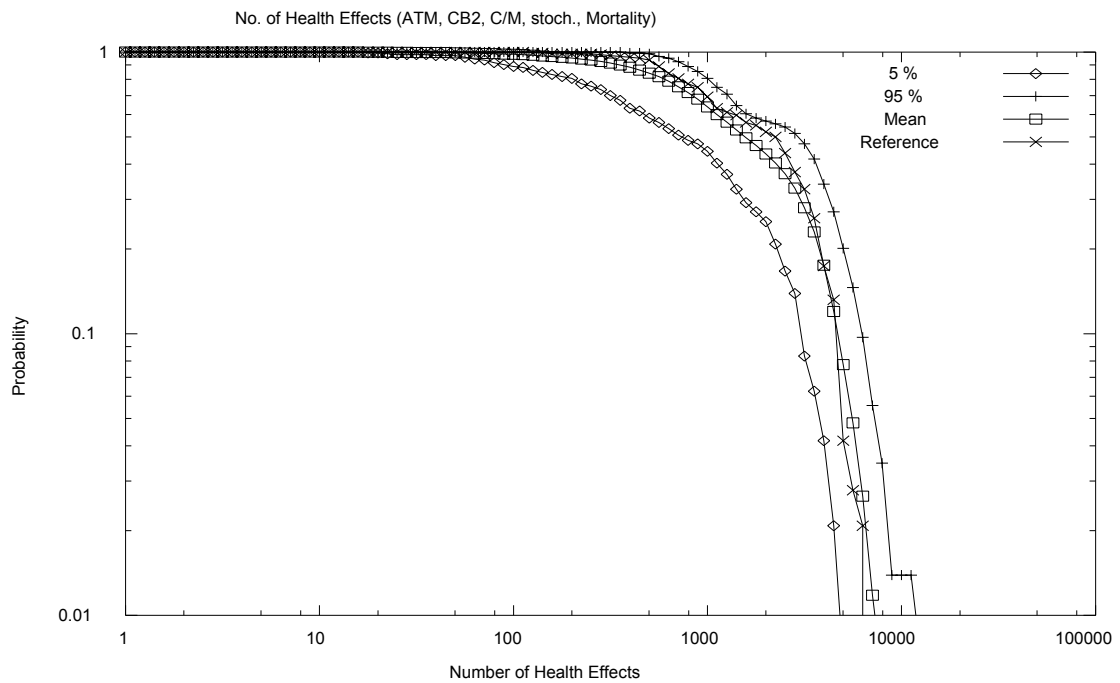
**Figure 3.1**      **Extent of the uncertainty on the evacuation area for the CB2 source term**



**Figure 3.2**      **Extent of the uncertainty on the numbers of early health effects for the UK1 source term**



**Figure 3.3** Extent of the uncertainty on the initial area affected by a milk ban for the CB2 source term



**Figure 3.4** Extent of the uncertainty on the numbers of fatal cancers with countermeasures for the CB2 source term.

## APPENDIX D

### Parameters making major contributions to the overall uncertainty

This appendix lists those parameters whose uncertainty makes a major contribution to the overall uncertainty on the model predictions. The parameters are selected on the basis of being ranked in the top 5 positions according to the absolute value of the partial rank correlation coefficient, provided that the PRCC s above the level that might be observed by chance.

The endpoints are identified using the short code listed in Table C.1 of Appendix C. The input parameters are also identified using a short code, which is given for all the parameters in Table D.1. The remaining tables list the input parameters meeting the criteria specified above for each of the endpoints considered. The tables give the following information:

ENDP	Short code name for the endpoint
INP.VAR.	Short code name for the input parameters
RK	Rank according to PRCC
PRCC	Value of the partial rank correlation coefficient
SUM%	The sum of the percentage contributions of the parameters to the uncertainty on the endpoint. The percentage contributions do not add up to 100% because of the effects of correlations between input parameter values, as discussed in the “Methodology Report”
%CON	The percentage contribution to the uncertainty on the endpoint made by the uncertainty in the value of the parameter
%SCON	The percentage contribution to the uncertainty on the endpoint made by the uncertainty in the value of the parameter, if the overall uncertainty is normalised to 100% (ie %CON/SUM%)
FAC1	The ratio of the 95th to the 5th percentile of the uncertainty distribution for this endpoint.
RSQ	The coefficient of determination, $R^2$ .

The quantities PRCC, percentage contribution and  $R^2$  are described in the “Methodology Report”.

The results given in Appendix C show that there are some endpoints and source terms where the results for many of the sets of parameter values are so small that they are below the lowest bin used in determining the uncertainty distribution on the endpoint. In some cases, it was not possible to determine the 95th percentile of the uncertainty distribution as the values are so low. In these cases

there are so few “non-zero” values that an analysis of the important uncertain parameters is meaningless, and so results for those situations are not included in this appendix.



**Table D.1 Description of the short names of the input parameters used in the following tables**

Short name of parameter	Description of parameter
VD(AER)	Deposition velocity of aerosols
VD(EL-I)	Deposition velocity of elemental iodine
VD(OG-I)	Deposition velocity of methyl iodide
PY1(A/B)	Dispersion coefficient <sup>(a)</sup> $p_y$ for Category A/B
PY1(C)	Dispersion coefficient <sup>(a)</sup> $p_y$ for Category C
PY1(D)	Dispersion coefficient <sup>(a)</sup> $p_y$ for Category D
PY1(E/F)	Dispersion coefficient <sup>(a)</sup> $p_y$ for Category E/F
QY1(A/B)	Dispersion coefficient <sup>(a)</sup> $q_y$ for Category A/B
QY1(C)	Dispersion coefficient <sup>(a)</sup> $q_y$ for Category C
QY1(D)	Dispersion coefficient <sup>(a)</sup> $q_y$ for Category D
QY1(E/F)	Dispersion coefficient <sup>(a)</sup> $q_y$ for Category E/F
PZ1(A/B)	Dispersion coefficient <sup>(a)</sup> $p_z$ for Category A/B
PZ1(C)	Dispersion coefficient <sup>(a)</sup> $p_z$ for Category C
PZ1(D)	Dispersion coefficient <sup>(a)</sup> $p_z$ for Category D
PZ1(E/F)	Dispersion coefficient <sup>(a)</sup> $p_z$ for Category E/F
QZ1(A/B)	Dispersion coefficient <sup>(a)</sup> $q_z$ for Category A/B
QZ1(C)	Dispersion coefficient <sup>(a)</sup> $q_z$ for Category C
QZ1(D)	Dispersion coefficient <sup>(a)</sup> $q_z$ for Category D
QZ1(E/F)	Dispersion coefficient <sup>(a)</sup> $q_z$ for Category E/F
AW(AER)	Washout coefficient <sup>(b)</sup> term a for aerosols
BW(AER)	Washout coefficient <sup>(b)</sup> term b for aerosols
AW(EL-I)	Washout coefficient <sup>(b)</sup> term a for elemental iodine
BW(EL-I)	Washout coefficient <sup>(b)</sup> term b for elemental iodine
AW(OG-I)	Washout coefficient <sup>(b)</sup> term a for methyl iodide
BW(OG-I)	Washout coefficient <sup>(b)</sup> term b for methyl iodide
SK(AER)	Deposition velocity to skin for aerosols
SK(EL-I)	Deposition velocity to skin for elemental iodine
SK(OG-I)	Deposition velocity to skin for methyl iodide

## Notes:

- a: Dispersion is modelled assuming that  $\sigma = p x^q$
- b: Wet deposition is modelled using a washout coefficient given by  $\Lambda = a (\text{rain fall rate})^b$
- c: The default values are different for categories A and B.
- d: The default values are different for categories E and F.

Table D.2  
endpoints

Contributions of parameter uncertainties to the overall uncertainty on the

**RESULTS FOR THE MEAN VALUE OF THE ENDPOINTS FOR THE  
UK1 SOURCE TERM**

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
AEVAC	VD(EL-I)	002	-.62	127.65	30.26	23.71	2.63E+00	.76
AEVAC	QY1(D)	001	.64	127.65	28.95	22.68	2.63E+00	.76
AEVAC	QY1(C)	009	.23	127.65	17.11	13.40	2.63E+00	.76
AEVAC	SK(EL-I)	021	.07	127.65	14.47	11.34	2.63E+00	.76
AEVAC	PZ1(E/F)	003	.38	127.65	02.63	02.06	2.63E+00	.76
AIOD	VD(EL-I)	001	-.89	149.97	83.33	55.56	9.71E+00	.90
AIOD	SK(EL-I)	024	-.04	149.97	44.44	29.63	9.71E+00	.90
AIOD	AW(EL-I)	003	-.42	149.97	03.33	02.22	9.71E+00	.90
AIOD	QY1(D)	002	.44	149.97	00.00	00.00	9.71E+00	.90
ASHEL	QY1(A/B)	001	.65	179.74	61.90	34.44	5.29E+00	.84
ASHEL	QY1(C)	008	.29	179.74	53.57	29.80	5.29E+00	.84
ASHEL	QY1(D)	002	.62	179.74	35.71	19.87	5.29E+00	.84
ASHEL	PY1(A/B)	003	.47	179.74	01.19	00.66	5.29E+00	.84
CACAE1	PZ1(E/F)	001	-.90	123.55	82.35	66.65	5.23E+00	.85
CACAE1	QZ1(E/F)	003	-.44	123.55	07.06	05.71	5.23E+00	.85
CACAE1	QZ1(D)	002	-.48	123.55	03.53	02.86	5.23E+00	.85
CACAE2	PZ1(E/F)	001	-.77	183.14	50.65	27.66	8.52E+00	.77
CACAE2	VD(AER)	004	-.37	183.14	35.06	19.14	8.52E+00	.77
CACAE2	QY1(E/F)	024	-.02	183.14	25.97	14.18	8.52E+00	.77
CACAE2	QZ1(E/F)	003	-.40	183.14	06.49	03.54	8.52E+00	.77
CACAE2	QZ1(D)	002	-.45	183.14	03.90	02.13	8.52E+00	.77
CACAE3	VD(AER)	001	-.55	246.76	74.03	30.00	1.40E+01	.77
CACAE3	QY1(E/F)	028	.00	246.76	53.25	21.58	1.40E+01	.77
CACAE3	SK(AER)	023	-.02	246.76	29.87	12.10	1.40E+01	.77
CACAE3	PZ1(E/F)	002	-.52	246.76	15.58	06.31	1.40E+01	.77
CACAE3	QZ1(D)	003	-.38	246.76	01.30	00.53	1.40E+01	.77
CAIOD1	VD(EL-I)	001	-.70	166.66	62.82	37.69	8.51E+00	.78
CAIOD1	SK(EL-I)	025	.04	166.66	30.77	18.46	8.51E+00	.78
CAIOD1	PZ1(E/F)	002	-.63	166.66	25.64	15.38	8.51E+00	.78
CAIOD1	QZ1(D)	003	-.36	166.66	02.56	01.54	8.51E+00	.78
CAIOD2	VD(EL-I)	001	-.88	172.21	88.89	51.62	3.84E+01	.90
CAIOD2	SK(EL-I)	028	-.01	172.21	45.56	26.46	3.84E+01	.90
CAIOD2	PZ1(E/F)	002	-.40	172.21	03.33	01.93	3.84E+01	.90
CAIOD2	QZ1(D)	003	-.36	172.21	01.11	00.64	3.84E+01	.90
CAIOD3	VD(EL-I)	001	-.93	182.96	94.68	51.75	9.07E+01	.94
CAIOD3	SK(EL-I)	020	-.11	182.96	51.06	27.91	9.07E+01	.94
CAIOD3	AW(EL-I)	002	-.39	182.96	02.13	01.16	9.07E+01	.94
CAIOD3	PZ1(E/F)	003	-.31	182.96	01.06	00.58	9.07E+01	.94
CGCAE1	VD(AER)	001	.74	272.74	86.36	31.66	1.52E+02	.88
CGCAE1	QY1(E/F)	013	-.06	272.74	68.18	25.00	1.52E+02	.88
CGCAE1	SK(AER)	014	-.06	272.74	35.23	12.92	1.52E+02	.88
CGCAE1	AW(AER)	003	.36	272.74	06.82	02.50	1.52E+02	.88
CGCAE1	PZ1(E/F)	002	-.45	272.74	00.00	00.00	1.52E+02	.88
CGCAE2	VD(AER)	001	.71	278.19	83.91	30.16	3.80E+01	.87
CGCAE2	QY1(E/F)	013	-.09	278.19	67.82	24.38	3.80E+01	.87
CGCAE2	SK(AER)	014	-.08	278.19	33.33	11.98	3.80E+01	.87
CGCAE2	QZ1(D)	003	-.39	278.19	06.90	02.48	3.80E+01	.87
CGCAE2	PZ1(E/F)	002	-.43	278.19	00.00	00.00	3.80E+01	.87
CGCAE3	VD(AER)	001	.50	239.50	53.95	22.53	2.26E+01	.76
CGCAE3	QY1(E/F)	016	-.05	239.50	42.11	17.58	2.26E+01	.76
CGCAE3	AW(AER)	002	.49	239.50	35.53	14.84	2.26E+01	.76
CGCAE3	QZ1(D)	003	-.39	239.50	09.21	03.85	2.26E+01	.76
CGIOD1	VD(EL-I)	001	.88	168.88	88.89	52.64	3.20E+01	.90
CGIOD1	SK(EL-I)	020	.07	168.88	46.67	27.64	3.20E+01	.90
CGIOD1	PZ1(E/F)	002	-.46	168.88	02.22	01.31	3.20E+01	.90
CGIOD1	QZ1(D)	003	-.40	168.88	02.22	01.31	3.20E+01	.90
CGIOD2	VD(EL-I)	001	.45	122.00	44.00	36.07	6.60E+00	.50
CGIOD2	SK(EL-I)	018	-.06	122.00	18.00	14.75	6.60E+00	.50
CGIOD2	PZ1(D)	002	-.41	122.00	12.00	09.84	6.60E+00	.50
CGIOD2	QZ1(D)	003	-.28	122.00	04.00	03.28	6.60E+00	.50
CGIOD3	PY1(A/B)	002	-.28	077.79	11.11	14.28	4.79E+00	.36
CGIOD3	VD(EL-I)	014	-.14	077.79	11.11	14.28	4.79E+00	.36
CGIOD3	PY1(C)	004	-.21	077.79	08.33	10.71	4.79E+00	.36
CGIOD3	PY1(D)	011	.15	077.79	08.33	10.71	4.79E+00	.36
CGIOD3	PZ1(A/B)	001	-.30	077.79	08.33	10.71	4.79E+00	.36

CGIOD3 QY1(E/F) 003 -.23 077.79 05.56 07.15 4.79E+00 .36

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
DECMBM1	VD(EL-I)	002	.72	118.05	48.19	40.82	6.24E+00	.83
DECMBM1	PZ1(E/F)	001	-.75	118.05	26.51	22.46	6.24E+00	.83
DECMBM1	SK(EL-I)	020	.08	118.05	26.51	22.46	6.24E+00	.83
DECMBM1	QZ1(D)	003	-.53	118.05	07.23	06.12	6.24E+00	.83
DECMBM2	PZ1(E/F)	001	-.78	131.51	61.64	46.87	6.00E+00	.73
DECMBM2	QZ1(D)	002	-.42	131.51	04.11	03.13	6.00E+00	.73
DECMBM2	QZ1(E/F)	003	-.36	131.51	04.11	03.13	6.00E+00	.73
DECMBM3	PZ1(E/F)	001	-.82	114.26	32.14	28.13	6.71E+00	.84
DECMBM3	VD(EL-I)	007	-.35	114.26	14.29	12.51	6.71E+00	.84
DECMBM3	QZ1(D)	003	-.65	114.26	11.90	10.41	6.71E+00	.84
DECMBM3	QZ1(E/F)	002	-.69	114.26	01.19	01.04	6.71E+00	.84
DECMSK1	SK(EL-I)	001	.88	188.75	74.16	39.29	5.35E+02	.89
DECMSK1	SK(AER)	002	.59	188.75	31.46	16.67	5.35E+02	.89
DECMSK1	VD(AER)	005	.27	188.75	25.84	13.69	5.35E+02	.89
DECMSK1	VD(EL-I)	003	-.45	188.75	25.84	13.69	5.35E+02	.89
DECMSK1	QY1(E/F)	019	-.10	188.75	19.10	10.12	5.35E+02	.89
DECMSK2	SK(EL-I)	001	.83	149.41	52.94	35.43	3.76E+02	.85
DECMSK2	SK(AER)	002	.67	149.41	40.00	26.77	3.76E+02	.85
DECMSK2	VD(AER)	007	.27	149.41	22.35	14.96	3.76E+02	.85
DECMSK2	VD(EL-I)	003	-.56	149.41	10.59	07.09	3.76E+02	.85
DECMSK3	SK(EL-I)	001	.83	145.35	47.67	32.80	2.48E+02	.86
DECMSK3	SK(AER)	002	.71	145.35	43.02	29.60	2.48E+02	.86
DECMSK3	VD(AER)	008	.29	145.35	20.93	14.40	2.48E+02	.86
DECMSK3	VD(EL-I)	003	-.58	145.35	08.14	05.60	2.48E+02	.86
DECMTH1	VD(EL-I)	002	-.63	154.56	48.05	31.09	6.67E+00	.77
DECMTH1	PZ1(E/F)	001	-.70	154.56	35.06	22.68	6.67E+00	.77
DECMTH1	SK(EL-I)	024	.05	154.56	23.38	15.13	6.67E+00	.77
DECMTH1	QZ1(D)	003	-.42	154.56	03.90	02.52	6.67E+00	.77
DECMTH2	VD(EL-I)	001	-.76	164.65	69.51	42.22	1.12E+01	.82
DECMTH2	SK(EL-I)	027	.04	164.65	32.93	20.00	1.12E+01	.82
DECMTH2	PZ1(E/F)	002	-.64	164.65	17.07	10.37	1.12E+01	.82
DECMTH2	QZ1(D)	003	-.39	164.65	01.22	00.74	1.12E+01	.82
DECMTH3	VD(EL-I)	001	-.83	163.64	75.00	45.83	1.46E+01	.88
DECMTH3	SK(EL-I)	025	-.03	163.64	40.91	25.00	1.46E+01	.88
DECMTH3	PZ1(E/F)	002	-.59	163.64	07.95	04.86	1.46E+01	.88
DECMTH3	QZ1(D)	003	-.51	163.64	03.41	02.08	1.46E+01	.88
DELVBM1	VD(EL-I)	001	.72	217.66	61.18	28.11	1.20E+01	.85
DELVBM1	VD(AER)	005	.29	217.66	36.47	16.76	1.20E+01	.85
DELVBM1	QY1(E/F)	007	.22	217.66	35.29	16.21	1.20E+01	.85
DELVBM1	SK(EL-I)	026	.03	217.66	34.12	15.68	1.20E+01	.85
DELVBM1	PZ1(E/F)	002	-.63	217.66	07.06	03.24	1.20E+01	.85
DELVBM1	QZ1(D)	003	-.46	217.66	07.06	03.24	1.20E+01	.85
DELVBM2	VD(AER)	003	.54	140.00	32.00	22.86	5.03E+00	.75
DELVBM2	QY1(E/F)	010	-.23	140.00	24.00	17.14	5.03E+00	.75
DELVBM2	PZ1(E/F)	001	-.71	140.00	17.33	12.38	5.03E+00	.75
DELVBM2	QZ1(D)	002	-.57	140.00	16.00	11.43	5.03E+00	.75
DELVBM3	AW(AER)	005	.29	105.76	21.15	20.00	2.80E+00	.52
DELVBM3	QZ1(D)	002	-.42	105.76	19.23	18.18	2.80E+00	.52
DELVBM3	VD(AER)	004	.30	105.76	13.46	12.73	2.80E+00	.52
DELVBM3	BW(AER)	022	.05	105.76	11.54	10.91	2.80E+00	.52
DELVBM3	PZ1(E/F)	001	-.44	105.76	07.69	07.27	2.80E+00	.52
DELVBM3	QZ1(E/F)	003	-.33	105.76	05.77	05.46	2.80E+00	.52
DELVSK1	SK(EL-I)	001	.87	192.22	66.67	34.68	4.63E+02	.90
DELVSK1	SK(AER)	002	.68	192.22	38.89	20.23	4.63E+02	.90
DELVSK1	VD(AER)	007	.27	192.22	28.89	15.03	4.63E+02	.90
DELVSK1	VD(EL-I)	003	-.44	192.22	23.33	12.14	4.63E+02	.90
DELVSK1	QY1(E/F)	019	-.11	192.22	21.11	10.98	4.63E+02	.90
DELVSK2	SK(AER)	002	.73	147.62	47.62	32.26	2.81E+02	.84
DELVSK2	SK(EL-I)	001	.79	147.62	44.05	29.84	2.81E+02	.84
DELVSK2	VD(AER)	010	.25	147.62	21.43	14.52	2.81E+02	.84
DELVSK2	VD(EL-I)	003	-.52	147.62	08.33	05.64	2.81E+02	.84
DELVSK3	SK(AER)	002	.75	129.28	51.22	39.62	2.25E+02	.82
DELVSK3	SK(EL-I)	001	.75	129.28	34.15	26.42	2.25E+02	.82
DELVSK3	VD(AER)	010	.22	129.28	17.07	13.20	2.25E+02	.82
DELVSK3	VD(EL-I)	003	-.55	129.28	03.66	02.83	2.25E+02	.82
DELVTH1	VD(EL-I)	002	-.63	154.65	50.67	32.76	6.78E+00	.75
DELVTH1	PZ1(E/F)	001	-.67	154.65	33.33	21.55	6.78E+00	.75
DELVTH1	SK(EL-I)	025	.05	154.65	25.33	16.38	6.78E+00	.75
DELVTH1	QZ1(D)	003	-.40	154.65	02.67	01.73	6.78E+00	.75

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
DELVTH2	VD(EL-I)	001	-.88	168.15	84.62	50.32	1.81E+01	.91
DELVTH2	SK(EL-I)	028	.02	168.15	41.76	24.83	1.81E+01	.91
DELVTH2	PZ1(E/F)	002	-.58	168.15	06.59	03.92	1.81E+01	.91
DELVTH2	QZ1(D)	003	-.44	168.15	01.10	00.65	1.81E+01	.91
DELVTH3	VD(EL-I)	001	-.93	186.16	92.55	49.72	2.64E+01	.94
DELVTH3	SK(EL-I)	026	-.06	186.16	47.87	25.71	2.64E+01	.94
DELVTH3	PZ1(E/F)	002	-.44	186.16	02.13	01.14	2.64E+01	.94
DELVTH3	QZ1(D)	003	-.43	186.16	00.00	00.00	2.64E+01	.94
DEOUBM1	VD(EL-I)	001	.73	227.88	63.95	28.06	1.48E+01	.86
DEOUBM1	VD(AER)	004	.30	227.88	39.53	17.35	1.48E+01	.86
DEOUBM1	QY1(E/F)	007	.22	227.88	38.37	16.84	1.48E+01	.86
DEOUBM1	SK(EL-I)	026	.02	227.88	34.88	15.31	1.48E+01	.86
DEOUBM1	QZ1(D)	003	-.43	227.88	05.81	02.55	1.48E+01	.86
DEOUBM1	PZ1(E/F)	002	-.58	227.88	04.65	02.04	1.48E+01	.86
DEOUBM2	VD(AER)	002	.60	177.93	45.45	25.54	5.08E+00	.77
DEOUBM2	QY1(E/F)	011	-.23	177.93	33.77	18.98	5.08E+00	.77
DEOUBM2	VD(EL-I)	007	.29	177.93	18.18	10.22	5.08E+00	.77
DEOUBM2	QZ1(D)	003	-.56	177.93	14.29	08.03	5.08E+00	.77
DEOUBM2	PZ1(E/F)	001	-.66	177.93	09.09	05.11	5.08E+00	.77
DEOUBM3	VD(AER)	002	.43	155.89	32.20	20.66	3.39E+00	.59
DEOUBM3	AW(AER)	003	.32	155.89	25.42	16.31	3.39E+00	.59
DEOUBM3	QY1(E/F)	008	-.22	155.89	22.03	14.13	3.39E+00	.59
DEOUBM3	QZ1(D)	001	-.44	155.89	15.25	09.78	3.39E+00	.59
DEOUSK1	SK(EL-I)	001	.87	192.22	66.67	34.68	4.63E+02	.90
DEOUSK1	SK(AER)	002	.68	192.22	38.89	20.23	4.63E+02	.90
DEOUSK1	VD(AER)	007	.27	192.22	28.89	15.03	4.63E+02	.90
DEOUSK1	VD(EL-I)	003	-.44	192.22	23.33	12.14	4.63E+02	.90
DEOUSK1	QY1(E/F)	019	-.11	192.22	21.11	10.98	4.63E+02	.90
DEOUSK2	SK(AER)	002	.73	147.62	47.62	32.26	2.81E+02	.84
DEOUSK2	SK(EL-I)	001	.79	147.62	44.05	29.84	2.81E+02	.84
DEOUSK2	VD(AER)	010	.25	147.62	21.43	14.52	2.81E+02	.84
DEOUSK2	VD(EL-I)	003	-.52	147.62	08.33	05.64	2.81E+02	.84
DEOUSK3	SK(AER)	002	.75	129.28	51.22	39.62	2.25E+02	.82
DEOUSK3	SK(EL-I)	001	.75	129.28	34.15	26.42	2.25E+02	.82
DEOUSK3	VD(AER)	010	.22	129.28	17.07	13.20	2.25E+02	.82
DEOUSK3	VD(EL-I)	003	-.55	129.28	03.66	02.83	2.25E+02	.82
DEOUTH1	PZ1(E/F)	001	-.69	117.63	48.53	41.26	5.10E+00	.68
DEOUTH1	VD(EL-I)	002	-.46	117.63	26.47	22.50	5.10E+00	.68
DEOUTH1	SK(EL-I)	022	.05	117.63	11.76	10.00	5.10E+00	.68
DEOUTH1	QZ1(D)	003	-.41	117.63	07.35	06.25	5.10E+00	.68
DEOUTH2	VD(EL-I)	001	-.86	156.82	80.68	51.45	1.19E+01	.88
DEOUTH2	SK(EL-I)	028	.04	156.82	38.64	24.64	1.19E+01	.88
DEOUTH2	PZ1(E/F)	002	-.60	156.82	07.95	05.07	1.19E+01	.88
DEOUTH2	QZ1(D)	003	-.45	156.82	01.14	00.73	1.19E+01	.88
DEOUTH3	VD(EL-I)	001	-.92	175.53	90.43	51.52	1.41E+01	.94
DEOUTH3	SK(EL-I)	028	.01	175.53	44.68	25.45	1.41E+01	.94
DEOUTH3	PZ1(E/F)	002	-.48	175.53	03.19	01.82	1.41E+01	.94
DEOUTH3	QZ1(D)	003	-.44	175.53	01.06	00.60	1.41E+01	.94
PECMBM	PZ1(E/F)	001	-.77	169.24	38.46	22.73	4.11E+01	.78
PECMBM	VD(AER)	019	-.11	169.24	26.92	15.91	4.11E+01	.78
PECMBM	QY1(E/F)	010	-.26	169.24	24.36	14.39	4.11E+01	.78
PECMBM	QY1(D)	011	-.25	169.24	17.95	10.61	4.11E+01	.78
PECMBM	PY1(E/F)	002	-.61	169.24	06.41	03.79	4.11E+01	.78
PECMBM	QZ1(E/F)	003	-.44	169.24	05.13	03.03	4.11E+01	.78
PECMLU	VD(AER)	002	-.50	211.27	59.15	28.00	1.88E+02	.71
PECMLU	QY1(E/F)	023	.04	211.27	43.66	20.67	1.88E+02	.71
PECMLU	PZ1(E/F)	001	-.63	211.27	32.39	15.33	1.88E+02	.71
PECMLU	QZ1(E/F)	003	-.32	211.27	07.04	03.33	1.88E+02	.71
PECMMB	SK(EL-I)	001	.83	150.61	48.24	32.03	1.81E+02	.85
PECMMB	SK(AER)	002	.68	150.61	41.18	27.34	1.81E+02	.85
PECMMB	VD(AER)	008	.24	150.61	22.35	14.84	1.81E+02	.85
PECMMB	VD(EL-I)	003	-.59	150.61	08.24	05.47	1.81E+02	.85
PECMMT	SK(EL-I)	001	.73	081.63	26.32	32.24	3.16E+01	.76
PECMMT	SK(AER)	004	.51	081.63	17.11	20.96	3.16E+01	.76
PECMMT	PZ1(E/F)	003	-.54	081.63	10.53	12.90	3.16E+01	.76
PECMMT	VD(EL-I)	002	-.56	081.63	00.00	00.00	3.16E+01	.76
PECMSK	SK(EL-I)	001	.83	157.00	52.33	33.33	5.73E+03	.86
PECMSK	SK(AER)	002	.67	157.00	39.53	25.18	5.73E+03	.86
PECMSK	VD(AER)	008	.23	157.00	23.26	14.82	5.73E+03	.86
PECMSK	VD(EL-I)	003	-.57	157.00	10.47	06.67	5.73E+03	.86

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
PECMTH	VD(EL-I)	001	-.86	169.66	83.15	49.01	9.54E+01	.89
PECMTH	SK(EL-I)	027	.00	169.66	40.45	23.84	9.54E+01	.89
PECMTH	PZ1(D)	003	-.48	169.66	03.37	01.99	9.54E+01	.89
PECMTH	QZ1(D)	002	-.51	169.66	02.25	01.33	9.54E+01	.89
PELVBM	PZ1(E/F)	001	-.69	065.62	26.56	40.48	2.66E+01	.64
PELVBM	PY1(E/F)	002	-.60	065.62	15.63	23.82	2.66E+01	.64
PELVBM	QY1(D)	004	-.35	065.62	07.81	11.90	2.66E+01	.64
PELVBM	QZ1(E/F)	003	-.45	065.62	00.00	00.00	2.66E+01	.64
PELVLU	VD(AER)	001	-.64	256.78	80.25	31.25	9.99E+99	.81
PELVLU	QY1(E/F)	010	.13	256.78	55.56	21.64	9.99E+99	.81
PELVLU	SK(AER)	014	-.09	256.78	37.04	14.42	9.99E+99	.81
PELVLU	PZ1(E/F)	002	-.55	256.78	19.75	07.69	9.99E+99	.81
PELVLU	AW(AER)	003	-.25	256.78	02.47	00.96	9.99E+99	.81
PELVMB	SK(AER)	002	.77	132.51	54.22	40.92	1.18E+02	.83
PELVMB	SK(EL-I)	001	.77	132.51	30.12	22.73	1.18E+02	.83
PELVMB	VD(AER)	012	.18	132.51	19.28	14.55	1.18E+02	.83
PELVMB	VD(EL-I)	003	-.62	132.51	02.41	01.82	1.18E+02	.83
PELVMT	SK(AER)	002	.71	136.73	51.90	37.96	4.28E+01	.79
PELVMT	SK(EL-I)	001	.72	136.73	34.18	25.00	4.28E+01	.79
PELVMT	VD(AER)	013	.17	136.73	18.99	13.89	4.28E+01	.79
PELVMT	VD(EL-I)	003	-.52	136.73	03.80	02.78	4.28E+01	.79
PELVSK	SK(AER)	002	.77	138.08	53.57	38.80	4.29E+02	.84
PELVSK	SK(EL-I)	001	.78	138.08	34.52	25.00	4.29E+02	.84
PELVSK	VD(AER)	012	.16	138.08	20.24	14.66	4.29E+02	.84
PELVSK	VD(EL-I)	003	-.59	138.08	03.57	02.59	4.29E+02	.84
PELVTH	VD(EL-I)	001	-.92	205.29	91.49	44.57	1.96E+03	.94
PELVTH	SK(EL-I)	022	-.11	205.29	48.94	23.84	1.96E+03	.94
PELVTH	PZ1(A/B)	003	-.38	205.29	00.00	00.00	1.96E+03	.94
PELVTH	QZ1(D)	002	-.42	205.29	00.00	00.00	1.96E+03	.94
RECMBM1	VD(EL-I)	001	.72	182.38	51.76	28.38	5.28E+00	.85
RECMBM1	SK(EL-I)	026	.02	182.38	28.24	15.48	5.28E+00	.85
RECMBM1	QY1(E/F)	008	.22	182.38	23.53	12.90	5.28E+00	.85
RECMBM1	QZ1(D)	002	-.70	182.38	21.18	11.61	5.28E+00	.85
RECMBM1	VD(AER)	015	.09	182.38	21.18	11.61	5.28E+00	.85
RECMBM1	PZ1(E/F)	003	-.62	182.38	08.24	04.52	5.28E+00	.85
RECMBM2	QY1(E/F)	007	-.28	220.00	40.00	18.18	1.05E+03	.75
RECMBM2	VD(AER)	015	-.12	220.00	40.00	18.18	1.05E+03	.75
RECMBM2	PZ1(E/F)	001	-.71	220.00	37.33	16.97	1.05E+03	.75
RECMBM2	QY1(D)	010	-.19	220.00	24.00	10.91	1.05E+03	.75
RECMBM2	QZ1(E/F)	003	-.32	220.00	10.67	04.85	1.05E+03	.75
RECMBM2	PY1(E/F)	002	-.51	220.00	04.00	01.82	1.05E+03	.75
RECMBM3	PZ1(E/F)	001	-.65	132.85	25.71	19.35	9.99E+99	.70
RECMBM3	QY1(E/F)	004	-.37	132.85	20.00	15.05	9.99E+99	.70
RECMBM3	VD(AER)	022	.11	132.85	17.14	12.90	9.99E+99	.70
RECMBM3	QY1(D)	007	-.29	132.85	14.29	10.76	9.99E+99	.70
RECMBM3	PY1(E/F)	003	-.42	132.85	02.86	02.15	9.99E+99	.70
RECMBM3	QZ1(E/F)	002	-.54	132.85	00.00	00.00	9.99E+99	.70
RECMLU1	VD(EL-I)	001	-.68	126.87	62.69	49.41	9.99E+99	.67
RECMLU1	SK(EL-I)	003	.26	126.87	19.40	15.29	9.99E+99	.67
RECMLU1	PY1(E/F)	002	.40	126.87	13.43	10.59	9.99E+99	.67
RECMLU2	VD(AER)	001	-.42	219.66	62.50	28.45	9.99E+99	.56
RECMLU2	QY1(E/F)	019	.07	219.66	44.64	20.32	9.99E+99	.56
RECMLU2	PZ1(E/F)	002	-.37	219.66	21.43	09.76	9.99E+99	.56
RECMLU2	PY1(D)	003	-.21	219.66	00.00	00.00	9.99E+99	.56
RECMLU3	PZ1(E/F)	001	-.55	118.19	21.82	18.46	9.99E+99	.55
RECMLU3	QY1(E/F)	004	-.31	118.19	21.82	18.46	9.99E+99	.55
RECMLU3	VD(AER)	026	-.03	118.19	21.82	18.46	9.99E+99	.55
RECMLU3	PY1(E/F)	003	-.34	118.19	03.64	03.08	9.99E+99	.55
RECMLU3	QZ1(E/F)	002	-.48	118.19	00.00	00.00	9.99E+99	.55
RECMMB1	VD(AER)	006	.40	224.14	47.13	21.03	6.42E+00	.87
RECMMB1	QY1(D)	004	.57	224.14	41.38	18.46	6.42E+00	.87
RECMMB1	QY1(E/F)	024	-.05	224.14	37.93	16.92	6.42E+00	.87
RECMMB1	SK(AER)	008	.30	224.14	31.03	13.84	6.42E+00	.87
RECMMB1	SK(EL-I)	001	.72	224.14	12.64	05.64	6.42E+00	.87
RECMMB1	PY1(E/F)	003	.61	224.14	08.05	03.59	6.42E+00	.87
RECMMB1	VD(EL-I)	002	-.71	224.14	00.00	00.00	6.42E+00	.87
RECMMB2	VD(AER)	006	.32	242.55	49.43	20.38	3.21E+01	.87
RECMMB2	SK(AER)	002	.58	242.55	48.28	19.91	3.21E+01	.87
RECMMB2	QY1(E/F)	028	-.02	242.55	40.23	16.59	3.21E+01	.87
RECMMB2	SK(EL-I)	001	.76	242.55	39.08	16.11	3.21E+01	.87
RECMMB2	PY1(E/F)	003	.55	242.55	05.75	02.37	3.21E+01	.87

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
RECMMB3	SK(EL-I)	001	.82	125.26	45.78	36.55	9.99E+99	.83
RECMMB3	SK(AER)	002	.69	125.26	37.35	29.82	9.99E+99	.83
RECMMB3	VD(AER)	014	.15	125.26	14.46	11.54	9.99E+99	.83
RECMMB3	VD(EL-I)	003	-.62	125.26	04.82	03.85	9.99E+99	.83
RECMMT1	VD(EL-I)	001	.71	200.00	51.72	25.86	4.83E+00	.87
RECMMT1	SK(EL-I)	015	.11	200.00	31.03	15.52	4.83E+00	.87
RECMMT1	QY1(E/F)	009	.22	200.00	27.59	13.79	4.83E+00	.87
RECMMT1	VD(AER)	013	.15	200.00	27.59	13.79	4.83E+00	.87
RECMMT1	QZ1(D)	002	-.70	200.00	20.69	10.35	4.83E+00	.87
RECMMT1	PZ1(E/F)	003	-.60	200.00	06.90	03.45	4.83E+00	.87
RECMMT2	PZ1(E/F)	001	-.66	082.53	46.03	55.77	1.73E+01	.63
RECMMT2	QZ1(D)	003	-.38	082.53	07.94	09.62	1.73E+01	.63
RECMMT2	SK(EL-I)	002	.41	082.53	04.76	05.77	1.73E+01	.63
RECMMT3	SK(EL-I)	001	.76	097.40	35.53	36.48	9.99E+99	.76
RECMMT3	SK(AER)	003	.52	097.40	23.68	24.31	9.99E+99	.76
RECMMT3	VD(EL-I)	002	-.57	097.40	01.32	01.36	9.99E+99	.76
RECMSK1	VD(AER)	007	.35	244.71	52.94	21.63	2.52E+02	.85
RECMSK1	QY1(E/F)	023	-.03	244.71	42.35	17.31	2.52E+02	.85
RECMSK1	QY1(D)	004	.47	244.71	38.82	15.86	2.52E+02	.85
RECMSK1	SK(AER)	005	.40	244.71	38.82	15.86	2.52E+02	.85
RECMSK1	SK(EL-I)	001	.72	244.71	23.53	09.62	2.52E+02	.85
RECMSK1	PY1(E/F)	003	.53	244.71	05.88	02.40	2.52E+02	.85
RECMSK1	VD(EL-I)	002	-.61	244.71	04.71	01.92	2.52E+02	.85
RECMSK2	VD(AER)	005	.36	252.30	51.14	20.27	2.40E+03	.88
RECMSK2	SK(AER)	002	.56	252.30	46.59	18.47	2.40E+03	.88
RECMSK2	SK(EL-I)	001	.78	252.30	44.32	17.57	2.40E+03	.88
RECMSK2	QY1(E/F)	023	-.06	252.30	40.91	16.21	2.40E+03	.88
RECMSK2	PY1(E/F)	003	.54	252.30	04.55	01.80	2.40E+03	.88
RECMSK3	SK(EL-I)	001	.83	138.09	50.00	36.21	9.99E+99	.84
RECMSK3	SK(AER)	002	.68	138.09	38.10	27.59	9.99E+99	.84
RECMSK3	VD(AER)	010	.19	138.09	17.86	12.93	9.99E+99	.84
RECMSK3	VD(EL-I)	003	-.59	138.09	08.33	06.03	9.99E+99	.84
RECMT1	VD(EL-I)	001	-.90	130.79	72.53	55.46	4.74E+01	.91
RECMT1	SK(EL-I)	010	.21	130.79	30.77	23.53	4.74E+01	.91
RECMT1	PY1(E/F)	003	.51	130.79	05.49	04.20	4.74E+01	.91
RECMT1	QY1(D)	002	.56	130.79	03.30	02.52	4.74E+01	.91
RECMT2	VD(EL-I)	001	-.78	162.62	81.93	50.38	4.33E+02	.83
RECMT2	SK(EL-I)	016	-.13	162.62	46.99	28.90	4.33E+02	.83
RECMT2	PZ1(D)	002	-.42	162.62	04.82	02.96	4.33E+02	.83
RECMT2	SK(AER)	003	.30	162.62	00.00	00.00	4.33E+02	.83
RECMT3	VD(EL-I)	001	-.64	190.00	50.00	26.32	9.99E+99	.80
RECMT3	QY1(E/F)	006	-.32	190.00	25.00	13.16	9.99E+99	.80
RECMT3	VD(AER)	022	-.09	190.00	25.00	13.16	9.99E+99	.80
RECMT3	SK(EL-I)	017	.14	190.00	20.00	10.53	9.99E+99	.80
RECMT3	PZ1(E/F)	002	-.64	190.00	16.25	08.55	9.99E+99	.80
RECMT3	QZ1(E/F)	003	-.46	190.00	01.25	00.66	9.99E+99	.80
RELVBM1	VD(AER)	005	.40	280.88	57.30	20.40	4.59E+00	.89
RELVBM1	QY1(E/F)	011	.21	280.88	56.18	20.00	4.59E+00	.89
RELVBM1	QY1(D)	007	.31	280.88	37.08	13.20	4.59E+00	.89
RELVBM1	VD(EL-I)	002	.60	280.88	34.83	12.40	4.59E+00	.89
RELVBM1	QZ1(D)	001	-.63	280.88	16.85	06.00	4.59E+00	.89
RELVBM1	PY1(E/F)	003	.41	280.88	04.49	01.60	4.59E+00	.89
RELVBM2	PZ1(E/F)	001	-.61	081.84	32.73	39.99	2.30E+01	.55
RELVBM2	VD(AER)	002	.40	081.84	14.55	17.78	2.30E+01	.55
RELVBM2	QY1(D)	003	-.31	081.84	00.00	00.00	2.30E+01	.55
RELVBM3	QY1(D)	003	-.38	171.43	30.16	17.59	9.99E+99	.63
RELVBM3	QY1(E/F)	007	-.21	171.43	30.16	17.59	9.99E+99	.63
RELVBM3	VD(AER)	028	-.02	171.43	30.16	17.59	9.99E+99	.63
RELVBM3	PZ1(E/F)	001	-.50	171.43	12.70	07.41	9.99E+99	.63
RELVBM3	PY1(E/F)	002	-.49	171.43	09.52	05.55	9.99E+99	.63
RELVLU1	VD(EL-I)	001	-.48	216.67	60.00	27.69	9.99E+99	.60
RELVLU1	SK(EL-I)	024	.03	216.67	33.33	15.38	9.99E+99	.60
RELVLU1	VD(AER)	019	-.08	216.67	33.33	15.38	9.99E+99	.60
RELVLU1	QY1(E/F)	016	-.09	216.67	30.00	13.85	9.99E+99	.60
RELVLU1	SK(AER)	004	-.17	216.67	21.67	10.00	9.99E+99	.60
RELVLU1	PZ1(A/B)	002	.28	216.67	05.00	02.31	9.99E+99	.60
RELVLU1	AW(EL-I)	003	.22	216.67	03.33	01.54	9.99E+99	.60
RELVLU2	VD(AER)	001	-.63	241.56	72.73	30.11	9.99E+99	.77
RELVLU2	QY1(E/F)	003	.25	241.56	46.75	19.35	9.99E+99	.77
RELVLU2	SK(AER)	017	-.10	241.56	36.36	15.05	9.99E+99	.77
RELVLU2	PZ1(E/F)	002	-.41	241.56	20.78	08.60	9.99E+99	.77

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
RELVLU3	VD(AER)	013	-.12	157.59	30.51	19.36	9.99E+99	.59
RELVLU3	PZ1(E/F)	001	-.57	157.59	27.12	17.21	9.99E+99	.59
RELVLU3	QY1(E/F)	007	-.20	157.59	25.42	16.13	9.99E+99	.59
RELVLU3	PY1(E/F)	002	-.40	157.59	06.78	04.30	9.99E+99	.59
RELVLU3	QZ1(E/F)	003	-.38	157.59	01.69	01.07	9.99E+99	.59
RELVMB1	QY1(D)	004	.53	148.75	30.00	20.17	5.60E+00	.80
RELVMB1	SK(AER)	005	.52	148.75	28.75	19.33	5.60E+00	.80
RELVMB1	VD(AER)	026	-.04	148.75	20.00	13.45	5.60E+00	.80
RELVMB1	QY1(E/F)	025	.05	148.75	17.50	11.76	5.60E+00	.80
RELVMB1	PY1(E/F)	003	.56	148.75	10.00	06.72	5.60E+00	.80
RELVMB1	SK(EL-I)	002	.64	148.75	05.00	03.36	5.60E+00	.80
RELVMB1	VD(EL-I)	001	-.70	148.75	02.50	01.68	5.60E+00	.80
RELVMB2	VD(AER)	007	.32	252.80	53.93	21.33	1.20E+01	.89
RELVMB2	SK(AER)	002	.62	252.80	51.69	20.45	1.20E+01	.89
RELVMB2	QY1(E/F)	026	.02	252.80	46.07	18.22	1.20E+01	.89
RELVMB2	QY1(D)	006	.36	252.80	30.34	12.00	1.20E+01	.89
RELVMB2	SK(EL-I)	001	.73	252.80	25.84	10.22	1.20E+01	.89
RELVMB2	PY1(E/F)	003	.59	252.80	05.62	02.22	1.20E+01	.89
RELVMB3	SK(AER)	002	.72	160.99	56.10	34.85	1.70E+02	.82
RELVMB3	SK(EL-I)	001	.76	160.99	34.15	21.21	1.70E+02	.82
RELVMB3	VD(AER)	009	.17	160.99	28.05	17.42	1.70E+02	.82
RELVMB3	QY1(E/F)	012	-.14	160.99	19.51	12.12	1.70E+02	.82
RELVMB3	VD(EL-I)	003	-.61	160.99	03.66	02.27	1.70E+02	.82
RELVMT1	VD(AER)	004	.40	291.00	60.67	20.85	4.41E+00	.89
RELVMT1	QY1(E/F)	012	.21	291.00	58.43	20.08	4.41E+00	.89
RELVMT1	QY1(D)	006	.35	291.00	39.33	13.52	4.41E+00	.89
RELVMT1	VD(EL-I)	002	.57	291.00	33.71	11.58	4.41E+00	.89
RELVMT1	QZ1(D)	001	-.62	291.00	16.85	05.79	4.41E+00	.89
RELVMT1	PY1(E/F)	003	.44	291.00	04.49	01.54	4.41E+00	.89
RELVMT2	VD(AER)	002	.48	194.21	52.17	26.86	6.78E+00	.69
RELVMT2	QY1(E/F)	009	-.18	194.21	36.23	18.66	6.78E+00	.69
RELVMT2	SK(AER)	010	.17	194.21	34.78	17.91	6.78E+00	.69
RELVMT2	PZ1(E/F)	001	-.58	194.21	13.04	06.71	6.78E+00	.69
RELVMT2	QZ1(D)	003	-.29	194.21	07.25	03.73	6.78E+00	.69
RELVMT3	SK(AER)	002	.67	174.69	55.70	31.89	1.60E+02	.79
RELVMT3	SK(EL-I)	001	.73	174.69	37.97	21.74	1.60E+02	.79
RELVMT3	VD(AER)	007	.18	174.69	31.65	18.12	1.60E+02	.79
RELVMT3	QY1(E/F)	010	-.13	174.69	22.78	13.04	1.60E+02	.79
RELVMT3	VD(EL-I)	003	-.54	174.69	05.06	02.90	1.60E+02	.79
RELVSK1	SK(AER)	004	.59	177.76	40.74	22.92	1.75E+01	.81
RELVSK1	VD(AER)	028	.00	177.76	29.63	16.67	1.75E+01	.81
RELVSK1	QY1(D)	005	.45	177.76	27.16	15.28	1.75E+01	.81
RELVSK1	QY1(E/F)	025	.05	177.76	24.69	13.89	1.75E+01	.81
RELVSK1	SK(EL-I)	001	.70	177.76	17.28	09.72	1.75E+01	.81
RELVSK1	PY1(E/F)	003	.59	177.76	09.88	05.56	1.75E+01	.81
RELVSK1	VD(EL-I)	002	-.64	177.76	00.00	00.00	1.75E+01	.81
RELVSK2	SK(AER)	002	.61	243.02	50.00	20.57	4.62E+01	.86
RELVSK2	VD(AER)	009	.27	243.02	48.84	20.10	4.62E+01	.86
RELVSK2	QY1(E/F)	026	-.04	243.02	39.53	16.27	4.62E+01	.86
RELVSK2	SK(EL-I)	001	.75	243.02	36.05	14.83	4.62E+01	.86
RELVSK2	QY1(D)	005	.32	243.02	26.74	11.00	4.62E+01	.86
RELVSK2	PY1(E/F)	003	.57	243.02	05.81	02.39	4.62E+01	.86
RELVSK3	SK(AER)	002	.74	166.65	57.14	34.29	5.62E+03	.84
RELVSK3	SK(EL-I)	001	.78	166.65	36.90	22.14	5.62E+03	.84
RELVSK3	VD(AER)	009	.20	166.65	29.76	17.86	5.62E+03	.84
RELVSK3	QY1(E/F)	010	-.17	166.65	20.24	12.15	5.62E+03	.84
RELVSK3	VD(EL-I)	003	-.60	166.65	04.76	02.86	5.62E+03	.84
RELVTH1	VD(EL-I)	001	-.90	190.22	84.78	44.57	1.17E+02	.92
RELVTH1	SK(EL-I)	007	.28	190.22	38.04	20.00	1.17E+02	.92
RELVTH1	VD(AER)	003	-.48	190.22	22.83	12.00	1.17E+02	.92
RELVTH1	QY1(D)	002	.52	190.22	01.09	00.57	1.17E+02	.92
RELVTH2	VD(EL-I)	001	-.89	156.06	85.71	54.92	3.67E+02	.91
RELVTH2	SK(EL-I)	021	.08	156.06	40.66	26.05	3.67E+02	.91
RELVTH2	PZ1(D)	002	-.49	156.06	03.30	02.11	3.67E+02	.91
RELVTH2	QZ1(D)	003	-.45	156.06	02.20	01.41	3.67E+02	.91
RELVTH3	VD(EL-I)	001	-.86	214.41	84.44	39.38	9.99E+99	.90
RELVTH3	SK(EL-I)	018	.10	214.41	38.89	18.14	9.99E+99	.90
RELVTH3	QY1(E/F)	003	-.34	214.41	24.44	11.40	9.99E+99	.90
RELVTH3	VD(AER)	027	-.01	214.41	23.33	10.88	9.99E+99	.90
RELVTH3	PY1(E/F)	002	-.43	214.41	01.11	00.52	9.99E+99	.90

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
REOUMB1	VD(AER)	005	.37	298.86	54.44	18.22	2.55E+00	.90
REOUMB1	QY1(D)	001	.56	298.86	53.33	17.84	2.55E+00	.90
REOUMB1	QY1(E/F)	015	.18	298.86	53.33	17.84	2.55E+00	.90
REOUMB1	QY1(C)	008	.33	298.86	32.22	10.78	2.55E+00	.90
REOUMB1	VD(EL-I)	003	.49	298.86	23.33	07.81	2.55E+00	.90
REOUMB1	PY1(E/F)	002	.49	298.86	05.56	01.86	2.55E+00	.90
REOUMB2	VD(AER)	002	.56	267.41	62.92	23.53	6.37E+00	.89
REOUMB2	QY1(E/F)	022	.07	267.41	58.43	21.85	6.37E+00	.89
REOUMB2	QY1(D)	009	.28	267.41	34.83	13.02	6.37E+00	.89
REOUMB2	QZ1(D)	001	-.75	267.41	26.97	10.09	6.37E+00	.89
REOUMB2	PZ1(E/F)	003	-.49	267.41	01.12	00.42	6.37E+00	.89
REOUMB3	AW(AER)	002	.37	125.92	33.33	26.47	7.19E+01	.54
REOUMB3	BW(AER)	015	.07	125.92	20.37	16.18	7.19E+01	.54
REOUMB3	QY1(C)	007	-.21	125.92	18.52	14.71	7.19E+01	.54
REOUMB3	QY1(D)	005	-.26	125.92	16.67	13.24	7.19E+01	.54
REOUMB3	PY1(E/F)	001	-.39	125.92	11.11	08.82	7.19E+01	.54
REOUMB3	PZ1(E/F)	003	-.36	125.92	01.85	01.47	7.19E+01	.54
REOULU2	VD(AER)	003	-.21	149.97	34.21	22.81	9.99E+99	.38
REOULU2	QY1(E/F)	023	.03	149.97	26.32	17.55	9.99E+99	.38
REOULU2	QZ1(E/F)	001	.26	149.97	23.68	15.79	9.99E+99	.38
REOULU2	SK(AER)	013	-.07	149.97	23.68	15.79	9.99E+99	.38
REOULU2	QZ1(D)	002	-.22	149.97	02.63	01.75	9.99E+99	.38
REOULU3	VD(AER)	003	-.22	146.11	33.33	22.81	9.99E+99	.39
REOULU3	QY1(E/F)	019	-.07	146.11	25.64	17.55	9.99E+99	.39
REOULU3	PZ1(E/F)	006	-.17	146.11	15.38	10.53	9.99E+99	.39
REOULU3	QZ1(E/F)	014	.08	146.11	15.38	10.53	9.99E+99	.39
REOULU3	QZ1(D)	001	-.24	146.11	10.26	07.02	9.99E+99	.39
REOULU3	SK(OG-I)	002	-.23	146.11	07.69	05.26	9.99E+99	.39
REOUMB1	SK(AER)	003	.61	129.72	36.49	28.13	6.51E+00	.74
REOUMB1	QY1(D)	005	.26	129.72	14.86	11.46	6.51E+00	.74
REOUMB1	QY1(E/F)	018	.12	129.72	14.86	11.46	6.51E+00	.74
REOUMB1	VD(AER)	012	-.18	129.72	14.86	11.46	6.51E+00	.74
REOUMB1	SK(EL-I)	002	.64	129.72	06.76	05.21	6.51E+00	.74
REOUMB1	VD(EL-I)	001	-.69	129.72	02.70	02.08	6.51E+00	.74
REOUMB2	SK(AER)	002	.60	223.75	50.00	22.35	8.66E+00	.80
REOUMB2	VD(AER)	019	.05	223.75	40.00	17.88	8.66E+00	.80
REOUMB2	QY1(E/F)	020	.05	223.75	33.75	15.08	8.66E+00	.80
REOUMB2	QY1(D)	006	.34	223.75	30.00	13.41	8.66E+00	.80
REOUMB2	SK(EL-I)	001	.67	223.75	25.00	11.17	8.66E+00	.80
REOUMB2	VD(EL-I)	003	-.51	223.75	05.00	02.23	8.66E+00	.80
REOUMB3	SK(AER)	002	.72	203.48	58.14	28.57	2.38E+01	.86
REOUMB3	VD(AER)	007	.21	203.48	40.70	20.00	2.38E+01	.86
REOUMB3	QY1(E/F)	022	-.06	203.48	31.40	15.43	2.38E+01	.86
REOUMB3	SK(EL-I)	001	.76	203.48	29.07	14.29	2.38E+01	.86
REOUMB3	VD(EL-I)	003	-.62	203.48	04.65	02.29	2.38E+01	.86
REOUMT1	VD(AER)	007	.33	308.86	56.67	18.35	2.54E+00	.90
REOUMT1	QY1(D)	001	.55	308.86	54.44	17.63	2.54E+00	.90
REOUMT1	QY1(E/F)	012	.23	308.86	54.44	17.63	2.54E+00	.90
REOUMT1	QY1(C)	006	.34	308.86	33.33	10.79	2.54E+00	.90
REOUMT1	QZ1(D)	003	-.47	308.86	12.22	03.96	2.54E+00	.90
REOUMT1	PY1(E/F)	002	.52	308.86	06.67	02.16	2.54E+00	.90
REOUMT2	VD(AER)	002	.57	275.83	63.74	23.11	5.99E+00	.91
REOUMT2	QY1(E/F)	022	.07	275.83	59.34	21.51	5.99E+00	.91
REOUMT2	QY1(D)	008	.33	275.83	36.26	13.15	5.99E+00	.91
REOUMT2	SK(AER)	027	.02	275.83	28.57	10.36	5.99E+00	.91
REOUMT2	QZ1(D)	001	-.75	275.83	24.18	08.77	5.99E+00	.91
REOUMT2	PZ1(E/F)	003	-.48	275.83	01.10	00.40	5.99E+00	.91
REOUMT3	SK(AER)	002	.45	145.30	42.19	29.04	1.00E+01	.64
REOUMT3	VD(AER)	005	.29	145.30	26.56	18.28	1.00E+01	.64
REOUMT3	SK(EL-I)	001	.47	145.30	20.31	13.98	1.00E+01	.64
REOUMT3	QY1(E/F)	009	-.21	145.30	15.63	10.76	1.00E+01	.64
REOUMT3	VD(EL-I)	003	-.34	145.30	01.56	01.07	1.00E+01	.64
REOUSK1	SK(AER)	003	.67	158.00	46.91	29.69	9.99E+99	.81
REOUSK1	VD(AER)	025	-.07	158.00	25.93	16.41	9.99E+99	.81
REOUSK1	QY1(E/F)	019	.09	158.00	22.22	14.06	9.99E+99	.81
REOUSK1	SK(EL-I)	001	.75	158.00	20.99	13.28	9.99E+99	.81
REOUSK1	VD(EL-I)	002	-.69	158.00	00.00	00.00	9.99E+99	.81
REOUSK2	SK(AER)	002	.63	191.25	50.00	26.14	3.84E+02	.80
REOUSK2	VD(AER)	022	.05	191.25	33.75	17.65	3.84E+02	.80
REOUSK2	SK(EL-I)	001	.73	191.25	32.50	16.99	3.84E+02	.80
REOUSK2	QY1(E/F)	028	.00	191.25	26.25	13.73	3.84E+02	.80
REOUSK2	VD(EL-I)	003	-.56	191.25	05.00	02.61	3.84E+02	.80



ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
REOUSK3	SK(AER)	002	.76	183.71	58.14	31.65	9.61E+02	.86
REOUSK3	SK(EL-I)	001	.80	183.71	34.88	18.99	9.61E+02	.86
REOUSK3	VD(AER)	013	.17	183.71	32.56	17.72	9.61E+02	.86
REOUSK3	QY1(E/F)	016	-.13	183.71	23.26	12.66	9.61E+02	.86
REOUSK3	VD(EL-I)	003	-.62	183.71	05.81	03.16	9.61E+02	.86
REOUTH1	VD(EL-I)	001	-.91	206.47	89.25	43.23	9.99E+99	.93
REOUTH1	SK(EL-I)	015	.13	206.47	45.16	21.87	9.99E+99	.93
REOUTH1	VD(AER)	002	-.46	206.47	25.81	12.50	9.99E+99	.93
REOUTH1	QY1(D)	003	.33	206.47	03.23	01.56	9.99E+99	.93
REOUTH2	VD(EL-I)	001	-.92	208.49	89.36	42.86	9.99E+99	.94
REOUTH2	SK(EL-I)	009	.19	208.49	43.62	20.92	9.99E+99	.94
REOUTH2	VD(AER)	002	-.47	208.49	24.47	11.74	9.99E+99	.94
REOUTH2	PY1(E/F)	003	.35	208.49	02.13	01.02	9.99E+99	.94
REOUTH3	VD(EL-I)	001	-.91	214.01	94.62	44.21	9.99E+99	.93
REOUTH3	SK(EL-I)	016	-.10	214.01	50.54	23.62	9.99E+99	.93
REOUTH3	QZ1(A/B)	002	-.30	214.01	01.08	00.50	9.99E+99	.93
REOUTH3	AW(OG-I)	003	.29	214.01	00.00	00.00	9.99E+99	.93

## RESULTS FOR THE 95TH PERCENTILE OF THE ENDPOINTS FOR THE UK1 SOURCE TERM

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
AEVAC	VD(EL-I)	001	-.58	139.74	38.36	27.45	2.34E+00	.73
AEVAC	QY1(A/B)	002	.51	139.74	31.51	22.55	2.34E+00	.73
AEVAC	SK(EL-I)	023	.04	139.74	20.55	14.71	2.34E+00	.73
AEVAC	QY1(C)	012	.12	139.74	17.81	12.75	2.34E+00	.73
AEVAC	PY1(A/B)	003	.46	139.74	05.48	03.92	2.34E+00	.73
AIOD	VD(EL-I)	001	-.92	154.25	85.11	55.18	1.07E+01	.94
AIOD	SK(EL-I)	027	-.01	154.25	44.68	28.97	1.07E+01	.94
AIOD	QY1(A/B)	002	.54	154.25	04.26	02.76	1.07E+01	.94
AIOD	AW(EL-I)	003	-.39	154.25	02.13	01.38	1.07E+01	.94
ASHEL	QY1(A/B)	001	.63	138.98	55.84	40.18	4.47E+00	.77
ASHEL	QY1(C)	011	.23	138.98	42.86	30.84	4.47E+00	.77
ASHEL	PY1(A/B)	002	.48	138.98	03.90	02.81	4.47E+00	.77
ASHEL	VD(AER)	003	-.43	138.98	00.00	00.00	4.47E+00	.77
CACAE1	QY1(E/F)	005	.40	153.75	30.00	19.51	1.32E+01	.80
CACAE1	PY1(E/F)	001	.68	153.75	28.75	18.70	1.32E+01	.80
CACAE1	VD(AER)	025	.02	153.75	23.75	15.45	1.32E+01	.80
CACAE1	QZ1(D)	002	-.58	153.75	20.00	13.01	1.32E+01	.80
CACAE1	PZ1(D)	003	-.57	153.75	06.25	04.07	1.32E+01	.80
CACAE2	QZ1(D)	001	-.63	129.70	32.43	25.00	1.32E+01	.74
CACAE2	QY1(E/F)	005	.43	129.70	21.62	16.67	1.32E+01	.74
CACAE2	PY1(E/F)	002	.52	129.70	17.57	13.55	1.32E+01	.74
CACAE2	QY1(D)	008	.22	129.70	14.86	11.46	1.32E+01	.74
CACAE2	PZ1(D)	003	-.48	129.70	04.05	03.12	1.32E+01	.74
CACAE3	QZ1(D)	002	-.39	081.83	20.00	24.44	7.76E+00	.55
CACAE3	PY1(E/F)	004	.35	081.83	12.73	15.56	7.76E+00	.55
CACAE3	VD(AER)	001	-.44	081.83	07.27	08.88	7.76E+00	.55
CACAE3	QY1(D)	003	.38	081.83	05.45	06.66	7.76E+00	.55
CAIOD1	PY1(E/F)	002	.54	116.67	22.22	19.05	1.78E+01	.72
CAIOD1	QZ1(D)	003	-.52	116.67	19.44	16.66	1.78E+01	.72
CAIOD1	QY1(E/F)	005	.37	116.67	16.67	14.29	1.78E+01	.72
CAIOD1	VD(EL-I)	001	-.55	116.67	09.72	08.33	1.78E+01	.72
CAIOD2	VD(EL-I)	001	-.79	123.19	54.88	44.55	5.13E+01	.82
CAIOD2	SK(EL-I)	018	.08	123.19	24.39	19.80	5.13E+01	.82
CAIOD2	PY1(E/F)	003	.44	123.19	08.54	06.93	5.13E+01	.82
CAIOD2	PZ1(D)	002	-.45	123.19	03.66	02.97	5.13E+01	.82
CAIOD3	VD(EL-I)	001	-.89	135.54	77.78	57.39	1.66E+02	.90
CAIOD3	SK(EL-I)	017	.09	135.54	36.67	27.05	1.66E+02	.90
CAIOD3	PY1(E/F)	003	.36	135.54	03.33	02.46	1.66E+02	.90
CAIOD3	QY1(D)	002	.42	135.54	02.22	01.64	1.66E+02	.90
CGCAE1	VD(AER)	001	.84	301.06	90.63	30.10	2.00E+03	.96
CGCAE1	QY1(E/F)	007	.31	301.06	78.13	25.95	2.00E+03	.96
CGCAE1	SK(AER)	015	-.13	301.06	37.50	12.46	2.00E+03	.96
CGCAE1	QY1(D)	017	.11	301.06	33.33	11.07	2.00E+03	.96
CGCAE1	PY1(E/F)	002	.63	301.06	03.13	01.04	2.00E+03	.96
CGCAE1	PZ1(D)	003	-.43	301.06	00.00	00.00	2.00E+03	.96
CGCAE2	VD(AER)	001	.80	302.09	87.37	28.92	5.75E+02	.95
CGCAE2	QY1(E/F)	009	.25	302.09	76.84	25.44	5.75E+02	.95
CGCAE2	QY1(D)	013	.22	302.09	35.79	11.85	5.75E+02	.95
CGCAE2	SK(AER)	016	-.15	302.09	34.74	11.50	5.75E+02	.95
CGCAE2	QZ1(D)	002	-.61	302.09	10.53	03.49	5.75E+02	.95
CGCAE2	PY1(E/F)	003	.58	302.09	03.16	01.05	5.75E+02	.95
CGCAE3	VD(AER)	001	.77	320.19	87.23	27.24	8.91E+01	.94
CGCAE3	QY1(E/F)	012	.17	320.19	76.60	23.92	8.91E+01	.94
CGCAE3	QY1(D)	005	.34	320.19	42.55	13.29	8.91E+01	.94
CGCAE3	SK(AER)	013	-.15	320.19	32.98	10.30	8.91E+01	.94
CGCAE3	QZ1(D)	002	-.55	320.19	10.64	03.32	8.91E+01	.94
CGCAE3	PY1(E/F)	003	.51	320.19	02.13	00.67	8.91E+01	.94
CGIOD1	VD(EL-I)	001	.82	228.41	77.27	33.83	3.63E+02	.88
CGIOD1	SK(EL-I)	019	.06	228.41	40.91	17.91	3.63E+02	.88
CGIOD1	QY1(E/F)	004	.38	228.41	30.68	13.43	3.63E+02	.88
CGIOD1	VD(AER)	018	-.06	228.41	28.41	12.44	3.63E+02	.88
CGIOD1	QZ1(D)	002	-.45	228.41	07.95	03.48	3.63E+02	.88
CGIOD1	PY1(E/F)	003	.45	228.41	03.41	01.49	3.63E+02	.88
CGIOD2	QY1(E/F)	011	.16	283.78	48.65	17.14	5.89E+01	.74
CGIOD2	VD(AER)	015	.09	283.78	47.30	16.67	5.89E+01	.74
CGIOD2	QY1(D)	002	.38	283.78	45.95	16.19	5.89E+01	.74
CGIOD2	VD(EL-I)	001	.45	283.78	37.84	13.33	5.89E+01	.74
CGIOD2	PY1(E/F)	003	.38	283.78	06.76	02.38	5.89E+01	.74

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
CGIOD3	QY1(D)	001	.57	209.89	56.34	26.84	3.02E+01	.71
CGIOD3	QY1(C)	016	.12	209.89	39.44	18.79	3.02E+01	.71
CGIOD3	QY1(A/B)	012	.20	209.89	30.99	14.76	3.02E+01	.71
CGIOD3	VD(AER)	010	.21	209.89	28.17	13.42	3.02E+01	.71
CGIOD3	QY1(E/F)	021	-.06	209.89	23.94	11.41	3.02E+01	.71
CGIOD3	PY1(D)	002	.33	209.89	02.82	01.34	3.02E+01	.71
CGIOD3	VD(OG-I)	003	-.31	209.89	00.00	00.00	3.02E+01	.71
DECMBM1	VD(EL-I)	002	.70	179.06	50.00	27.92	1.05E+01	.86
DECMBM1	SK(EL-I)	015	.10	179.06	29.07	16.23	1.05E+01	.86
DECMBM1	QY1(E/F)	007	.26	179.06	23.26	12.99	1.05E+01	.86
DECMBM1	QZ1(D)	001	-.71	179.06	20.93	11.69	1.05E+01	.86
DECMBM1	VD(AER)	018	.08	179.06	20.93	11.69	1.05E+01	.86
DECMBM1	PZ1(E/F)	003	-.61	179.06	08.14	04.55	1.05E+01	.86
DECMBM2	QZ1(D)	001	-.76	161.25	41.25	25.58	8.91E+00	.80
DECMBM2	QY1(E/F)	007	.26	161.25	30.00	18.60	8.91E+00	.80
DECMBM2	VD(AER)	013	.14	161.25	25.00	15.50	8.91E+00	.80
DECMBM2	PZ1(E/F)	002	-.56	161.25	08.75	05.43	8.91E+00	.80
DECMBM2	PZ1(D)	003	-.50	161.25	01.25	00.78	8.91E+00	.80
DECMBM3	QY1(D)	001	.69	295.40	68.97	23.35	2.45E+01	.87
DECMBM3	QY1(C)	004	.33	295.40	51.72	17.51	2.45E+01	.87
DECMBM3	QY1(A/B)	003	.34	295.40	42.53	14.40	2.45E+01	.87
DECMBM3	QY1(E/F)	018	.11	295.40	39.08	13.23	2.45E+01	.87
DECMBM3	VD(AER)	026	.01	295.40	34.48	11.67	2.45E+01	.87
DECMBM3	PY1(E/F)	002	.45	295.40	04.60	01.56	2.45E+01	.87
DECMSK1	SK(EL-I)	001	.84	234.84	61.80	26.32	6.03E+02	.89
DECMSK1	VD(AER)	007	.29	234.84	42.70	18.18	6.03E+02	.89
DECMSK1	QY1(E/F)	016	.10	234.84	35.96	15.31	6.03E+02	.89
DECMSK1	SK(AER)	003	.42	234.84	33.71	14.35	6.03E+02	.89
DECMSK1	VD(EL-I)	004	-.40	234.84	25.84	11.00	6.03E+02	.89
DECMSK1	PY1(E/F)	002	.50	234.84	03.37	01.44	6.03E+02	.89
DECMSK2	SK(EL-I)	001	.81	229.55	45.45	19.80	1.20E+03	.88
DECMSK2	VD(AER)	008	.26	229.55	45.45	19.80	1.20E+03	.88
DECMSK2	SK(AER)	004	.51	229.55	40.91	17.82	1.20E+03	.88
DECMSK2	QY1(E/F)	023	.07	229.55	38.64	16.83	1.20E+03	.88
DECMSK2	VD(EL-I)	002	-.55	229.55	13.64	05.94	1.20E+03	.88
DECMSK2	PY1(E/F)	003	.54	229.55	04.55	01.98	1.20E+03	.88
DECMSK3	VD(AER)	006	.36	271.44	50.55	18.62	1.78E+03	.91
DECMSK3	SK(AER)	002	.65	271.44	47.25	17.41	1.78E+03	.91
DECMSK3	QY1(E/F)	012	-.17	271.44	40.66	14.98	1.78E+03	.91
DECMSK3	SK(EL-I)	001	.81	271.44	39.56	14.57	1.78E+03	.91
DECMSK3	QY1(D)	003	.52	271.44	36.26	13.36	1.78E+03	.91
DECMTH1	PY1(E/F)	001	.59	131.99	24.00	18.18	1.29E+01	.75
DECMTH1	QY1(E/F)	005	.38	131.99	24.00	18.18	1.29E+01	.75
DECMTH1	QZ1(D)	003	-.55	131.99	20.00	15.15	1.29E+01	.75
DECMTH1	VD(AER)	024	-.02	131.99	17.33	13.13	1.29E+01	.75
DECMTH1	QY1(D)	012	.17	131.99	13.33	10.10	1.29E+01	.75
DECMTH1	PZ1(D)	002	-.56	131.99	08.00	06.06	1.29E+01	.75
DECMTH2	QY1(D)	005	.40	120.50	17.95	14.90	2.63E+01	.78
DECMTH2	VD(EL-I)	001	-.66	120.50	17.95	14.90	2.63E+01	.78
DECMTH2	QZ1(D)	003	-.48	120.50	15.38	12.76	2.63E+01	.78
DECMTH2	PY1(E/F)	002	.51	120.50	14.10	11.70	2.63E+01	.78
DECMTH2	QY1(E/F)	007	.33	120.50	14.10	11.70	2.63E+01	.78
DECMTH3	QY1(D)	001	.73	202.31	54.65	27.01	5.75E+01	.86
DECMTH3	QY1(C)	009	.22	202.31	41.86	20.69	5.75E+01	.86
DECMTH3	QY1(A/B)	003	.43	202.31	39.53	19.54	5.75E+01	.86
DECMTH3	VD(EL-I)	002	-.58	202.31	05.81	02.87	5.75E+01	.86
DELVBM1	VD(AER)	006	.40	257.28	52.81	20.53	2.14E+01	.89
DELVBM1	QY1(E/F)	008	.27	257.28	51.69	20.09	2.14E+01	.89
DELVBM1	VD(EL-I)	001	.70	257.28	46.07	17.91	2.14E+01	.89
DELVBM1	SK(EL-I)	025	.02	257.28	25.84	10.04	2.14E+01	.89
DELVBM1	QZ1(D)	002	-.66	257.28	15.73	06.11	2.14E+01	.89
DELVBM1	PZ1(E/F)	003	-.47	257.28	01.12	00.44	2.14E+01	.89
DELVBM2	VD(AER)	003	.48	262.08	59.77	22.81	1.17E+01	.87
DELVBM2	QY1(E/F)	016	.12	262.08	56.32	21.49	1.17E+01	.87
DELVBM2	QY1(D)	011	.22	262.08	32.18	12.28	1.17E+01	.87
DELVBM2	QZ1(D)	001	-.72	262.08	26.44	10.09	1.17E+01	.87
DELVBM2	PZ1(E/F)	002	-.48	262.08	01.15	00.44	1.17E+01	.87
DELVBM3	QY1(E/F)	008	.22	308.24	69.41	22.52	6.92E+00	.85
DELVBM3	VD(AER)	004	.37	308.24	69.41	22.52	6.92E+00	.85
DELVBM3	QY1(D)	001	.48	308.24	55.29	17.94	6.92E+00	.85
DELVBM3	QZ1(D)	003	-.47	308.24	15.29	04.96	6.92E+00	.85
DELVBM3	PY1(E/F)	002	.47	308.24	04.71	01.53	6.92E+00	.85

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
DELVSK1	SK(EL-I)	001	.84	241.11	55.56	23.04	6.17E+02	.90
DELVSK1	VD(AER)	008	.30	241.11	46.67	19.36	6.17E+02	.90
DELVSK1	SK(AER)	003	.53	241.11	40.00	16.59	6.17E+02	.90
DELVSK1	QY1(E/F)	015	.14	241.11	38.89	16.13	6.17E+02	.90
DELVSK1	PY1(E/F)	002	.54	241.11	03.33	01.38	6.17E+02	.90
DELVSK2	SK(AER)	002	.65	220.45	48.86	22.16	5.13E+02	.88
DELVSK2	VD(AER)	008	.27	220.45	44.32	20.10	5.13E+02	.88
DELVSK2	SK(EL-I)	001	.81	220.45	40.91	18.56	5.13E+02	.88
DELVSK2	QY1(E/F)	027	.02	220.45	36.36	16.49	5.13E+02	.88
DELVSK2	VD(EL-I)	003	-.57	220.45	10.23	04.64	5.13E+02	.88
DELVSK3	SK(AER)	002	.72	195.31	57.65	29.52	2.75E+02	.85
DELVSK3	VD(AER)	007	.22	195.31	37.65	19.28	2.75E+02	.85
DELVSK3	SK(EL-I)	001	.77	195.31	35.29	18.07	2.75E+02	.85
DELVSK3	QY1(E/F)	017	-.13	195.31	28.24	14.46	2.75E+02	.85
DELVSK3	VD(EL-I)	003	-.60	195.31	05.88	03.01	2.75E+02	.85
DELVTH1	QY1(E/F)	005	.37	137.34	26.67	19.42	1.17E+01	.75
DELVTH1	PY1(E/F)	001	.57	137.34	22.67	16.51	1.17E+01	.75
DELVTH1	QZ1(D)	002	-.55	137.34	21.33	15.53	1.17E+01	.75
DELVTH1	VD(AER)	024	.02	137.34	20.00	14.56	1.17E+01	.75
DELVTH1	QY1(D)	011	.17	137.34	14.67	10.68	1.17E+01	.75
DELVTH1	PZ1(D)	003	-.55	137.34	08.00	05.82	1.17E+01	.75
DELVTH2	VD(EL-I)	001	-.76	118.49	35.80	30.21	2.69E+01	.81
DELVTH2	QZ1(D)	002	-.49	118.49	11.11	09.38	2.69E+01	.81
DELVTH2	PZ1(D)	003	-.48	118.49	03.70	03.12	2.69E+01	.81
DELVTH3	VD(EL-I)	001	-.86	133.34	71.26	53.44	2.88E+01	.87
DELVTH3	SK(EL-I)	015	.09	133.34	33.33	25.00	2.88E+01	.87
DELVTH3	PY1(E/F)	003	.45	133.34	05.75	04.31	2.88E+01	.87
DELVTH3	QY1(D)	002	.48	133.34	05.75	04.31	2.88E+01	.87
DEOUBM1	VD(AER)	006	.39	259.98	53.33	20.51	2.45E+01	.90
DEOUBM1	QY1(E/F)	008	.28	259.98	51.11	19.66	2.45E+01	.90
DEOUBM1	VD(EL-I)	001	.72	259.98	48.89	18.81	2.45E+01	.90
DEOUBM1	SK(EL-I)	027	.00	259.98	26.67	10.26	2.45E+01	.90
DEOUBM1	QZ1(D)	002	-.63	259.98	14.44	05.55	2.45E+01	.90
DEOUBM1	PZ1(E/F)	003	-.44	259.98	01.11	00.43	2.45E+01	.90
DEOUBM2	VD(AER)	002	.53	272.74	64.77	23.75	1.38E+01	.88
DEOUBM2	QY1(E/F)	022	.07	272.74	59.09	21.67	1.38E+01	.88
DEOUBM2	QY1(D)	010	.24	272.74	34.09	12.50	1.38E+01	.88
DEOUBM2	QZ1(D)	001	-.69	272.74	22.73	08.33	1.38E+01	.88
DEOUBM2	PZ1(E/F)	003	-.45	272.74	01.14	00.42	1.38E+01	.88
DEOUBM3	VD(AER)	001	.50	317.08	76.14	24.01	9.55E+00	.88
DEOUBM3	QY1(E/F)	010	.16	317.08	71.59	22.58	9.55E+00	.88
DEOUBM3	QY1(D)	003	.48	317.08	53.41	16.84	9.55E+00	.88
DEOUBM3	PY1(E/F)	002	.49	317.08	04.55	01.43	9.55E+00	.88
DEOUSK1	SK(EL-I)	001	.84	242.22	56.67	23.40	6.17E+02	.90
DEOUSK1	VD(AER)	008	.30	242.22	46.67	19.27	6.17E+02	.90
DEOUSK1	SK(AER)	002	.53	242.22	40.00	16.51	6.17E+02	.90
DEOUSK1	QY1(E/F)	015	.13	242.22	38.89	16.06	6.17E+02	.90
DEOUSK1	PY1(E/F)	003	.53	242.22	03.33	01.37	6.17E+02	.90
DEOUSK2	SK(AER)	002	.65	220.46	48.86	22.16	5.13E+02	.88
DEOUSK2	VD(AER)	008	.27	220.46	44.32	20.10	5.13E+02	.88
DEOUSK2	SK(EL-I)	001	.81	220.46	42.05	19.07	5.13E+02	.88
DEOUSK2	QY1(E/F)	027	.02	220.46	35.23	15.98	5.13E+02	.88
DEOUSK2	VD(EL-I)	003	-.57	220.46	10.23	04.64	5.13E+02	.88
DEOUSK3	SK(AER)	002	.73	195.31	57.65	29.52	2.75E+02	.85
DEOUSK3	VD(AER)	007	.21	195.31	37.65	19.28	2.75E+02	.85
DEOUSK3	SK(EL-I)	001	.77	195.31	35.29	18.07	2.75E+02	.85
DEOUSK3	QY1(E/F)	017	-.13	195.31	28.24	14.46	2.75E+02	.85
DEOUSK3	VD(EL-I)	003	-.60	195.31	05.88	03.01	2.75E+02	.85
DEOUTH1	QY1(E/F)	004	.37	183.35	41.03	22.38	1.29E+01	.78
DEOUTH1	VD(AER)	015	.11	183.35	35.90	19.58	1.29E+01	.78
DEOUTH1	QZ1(D)	001	-.59	183.35	24.36	13.29	1.29E+01	.78
DEOUTH1	PY1(E/F)	002	.59	183.35	20.51	11.19	1.29E+01	.78
DEOUTH1	QY1(D)	013	.12	183.35	19.23	10.49	1.29E+01	.78
DEOUTH1	PZ1(D)	003	-.52	183.35	05.13	02.80	1.29E+01	.78
DEOUTH2	VD(EL-I)	001	-.71	127.50	21.25	16.67	1.86E+01	.80
DEOUTH2	QY1(D)	007	.34	127.50	17.50	13.73	1.86E+01	.80
DEOUTH2	QY1(E/F)	010	.23	127.50	16.25	12.75	1.86E+01	.80
DEOUTH2	QZ1(D)	002	-.52	127.50	15.00	11.76	1.86E+01	.80
DEOUTH2	VD(AER)	012	.17	127.50	13.75	10.78	1.86E+01	.80
DEOUTH2	PY1(E/F)	003	.49	127.50	12.50	09.80	1.86E+01	.80
DEOUTH3	VD(EL-I)	001	-.83	130.60	61.18	46.85	2.14E+01	.85
DEOUTH3	SK(EL-I)	017	.08	130.60	27.06	20.72	2.14E+01	.85
DEOUTH3	QY1(D)	002	.48	130.60	09.41	07.21	2.14E+01	.85
DEOUTH3	PY1(E/F)	003	.45	130.60	05.88	04.50	2.14E+01	.85

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
PECMBM	PZ1(E/F)	001	-.78	170.91	40.51	23.70	2.82E+01	.79
PECMBM	QY1(E/F)	006	-.37	170.91	26.58	15.55	2.82E+01	.79
PECMBM	VD(AER)	028	.00	170.91	25.32	14.81	2.82E+01	.79
PECMBM	PY1(E/F)	002	-.62	170.91	06.33	03.70	2.82E+01	.79
PECMBM	QZ1(E/F)	003	-.46	170.91	06.33	03.70	2.82E+01	.79
PECMLU	VD(AER)	002	-.41	199.99	48.53	24.27	9.99E+99	.68
PECMLU	PZ1(E/F)	001	-.65	199.99	41.18	20.59	9.99E+99	.68
PECMLU	QY1(E/F)	026	.01	199.99	35.29	17.65	9.99E+99	.68
PECMLU	QZ1(E/F)	003	-.36	199.99	05.88	02.94	9.99E+99	.68
PECMMB	SK(EL-I)	001	.79	140.24	46.34	33.04	1.41E+02	.82
PECMMB	SK(AER)	002	.66	140.24	41.46	29.56	1.41E+02	.82
PECMMB	VD(AER)	010	.18	140.24	19.51	13.91	1.41E+02	.82
PECMMB	VD(EL-I)	003	-.56	140.24	06.10	04.35	1.41E+02	.82
PECMMT	PZ1(E/F)	002	-.58	074.68	21.13	28.29	2.00E+01	.71
PECMMT	SK(EL-I)	001	.67	074.68	14.08	18.85	2.00E+01	.71
PECMMT	SK(AER)	004	.44	074.68	09.86	13.20	2.00E+01	.71
PECMMT	VD(EL-I)	003	-.57	074.68	01.41	01.89	2.00E+01	.71
PECMSK	SK(EL-I)	001	.80	149.39	49.40	33.07	1.02E+04	.83
PECMSK	SK(AER)	002	.65	149.39	39.76	26.61	1.02E+04	.83
PECMSK	VD(AER)	011	.19	149.39	20.48	13.71	1.02E+04	.83
PECMSK	VD(EL-I)	003	-.53	149.39	09.64	06.45	1.02E+04	.83
PECMTH	VD(EL-I)	001	-.83	180.23	87.21	48.39	1.05E+02	.86
PECMTH	SK(EL-I)	026	.06	180.23	40.70	22.58	1.05E+02	.86
PECMTH	PZ1(E/F)	002	-.41	180.23	04.65	02.58	1.05E+02	.86
PECMTH	PZ1(D)	003	-.31	180.23	01.16	00.64	1.05E+02	.86
PELVBM	PZ1(E/F)	001	-.66	090.17	31.15	34.55	1.66E+01	.61
PELVBM	PY1(E/F)	002	-.57	090.17	14.75	16.36	1.66E+01	.61
PELVBM	QY1(D)	006	-.31	090.17	14.75	16.36	1.66E+01	.61
PELVBM	QZ1(E/F)	003	-.36	090.17	01.64	01.82	1.66E+01	.61
PELVLU	VD(AER)	002	-.48	238.37	63.01	26.43	9.99E+99	.73
PELVLU	QY1(E/F)	013	.11	238.37	42.47	17.82	9.99E+99	.73
PELVLU	PZ1(E/F)	001	-.58	238.37	34.25	14.37	9.99E+99	.73
PELVLU	SK(AER)	004	-.18	238.37	34.25	14.37	9.99E+99	.73
PELVLU	AW(AER)	003	-.24	238.37	02.74	01.15	9.99E+99	.73
PELVMB	SK(AER)	001	.74	118.75	52.50	44.21	7.59E+01	.80
PELVMB	SK(EL-I)	002	.73	118.75	27.50	23.16	7.59E+01	.80
PELVMB	VD(AER)	018	.11	118.75	16.25	13.68	7.59E+01	.80
PELVMB	VD(EL-I)	003	-.59	118.75	01.25	01.05	7.59E+01	.80
PELVMT	SK(AER)	001	.68	116.20	50.00	43.03	3.09E+01	.74
PELVMT	SK(EL-I)	002	.67	116.20	29.73	25.59	3.09E+01	.74
PELVMT	VD(AER)	017	.10	116.20	14.86	12.79	3.09E+01	.74
PELVMT	VD(EL-I)	003	-.51	116.20	01.35	01.16	3.09E+01	.74
PELVSK	SK(AER)	002	.75	129.59	51.85	40.01	2.63E+02	.81
PELVSK	SK(EL-I)	001	.75	129.59	32.10	24.77	2.63E+02	.81
PELVSK	VD(AER)	019	.10	129.59	17.28	13.33	2.63E+02	.81
PELVSK	VD(EL-I)	003	-.57	129.59	02.47	01.91	2.63E+02	.81
PELVTH	VD(EL-I)	001	-.92	202.11	91.49	45.27	2.24E+03	.94
PELVTH	SK(EL-I)	021	-.11	202.11	48.94	24.21	2.24E+03	.94
PELVTH	AW(EL-I)	002	-.35	202.11	01.06	00.52	2.24E+03	.94
PELVTH	PZ1(A/B)	003	-.35	202.11	00.00	00.00	2.24E+03	.94
PEOUBM	AW(AER)	004	.29	093.87	28.57	30.44	5.37E+00	.49
PEOUBM	BW(AER)	025	.03	093.87	16.33	17.40	5.37E+00	.49
PEOUBM	QY1(D)	001	-.36	093.87	14.29	15.22	5.37E+00	.49
PEOUBM	PZ1(E/F)	002	-.35	093.87	04.08	04.35	5.37E+00	.49
PEOUBM	QZ1(E/F)	003	-.30	093.87	00.00	00.00	5.37E+00	.49
PEOUMB	SK(AER)	001	.69	149.36	55.84	37.39	2.95E+01	.77
PEOUMB	SK(EL-I)	002	.67	149.36	29.87	20.00	2.95E+01	.77
PEOUMB	VD(AER)	011	.14	149.36	24.68	16.52	2.95E+01	.77
PEOUMB	QY1(E/F)	014	-.13	149.36	16.88	11.30	2.95E+01	.77
PEOUMB	VD(EL-I)	003	-.51	149.36	02.60	01.74	2.95E+01	.77
PEOUMT	SK(AER)	001	.54	098.39	30.16	30.65	6.17E+00	.63
PEOUMT	SK(EL-I)	002	.47	098.39	15.87	16.13	6.17E+00	.63
PEOUMT	QY1(D)	003	-.37	098.39	03.17	03.22	6.17E+00	.63
PEOUSK	SK(AER)	002	.74	137.01	54.32	39.65	7.08E+02	.81
PEOUSK	SK(EL-I)	001	.75	137.01	33.33	24.33	7.08E+02	.81
PEOUSK	VD(AER)	012	.13	137.01	19.75	14.42	7.08E+02	.81
PEOUSK	VD(EL-I)	003	-.57	137.01	02.47	01.80	7.08E+02	.81
PEOUTH	VD(EL-I)	001	-.93	208.42	94.74	45.46	9.99E+99	.95
PEOUTH	SK(EL-I)	026	-.03	208.42	49.47	23.74	9.99E+99	.95
PEOUTH	QZ1(A/B)	002	-.32	208.42	01.05	00.50	9.99E+99	.95
PEOUTH	QZ1(D)	003	-.29	208.42	00.00	00.00	9.99E+99	.95

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
RECMBM1	VD(EL-I)	001	.65	174.06	50.62	29.08	9.99E+99	.81
RECMBM1	SK(EL-I)	020	.07	174.06	28.40	16.32	9.99E+99	.81
RECMBM1	VD(AER)	009	.16	174.06	20.99	12.06	9.99E+99	.81
RECMBM1	QY1(E/F)	016	.10	174.06	19.75	11.35	9.99E+99	.81
RECMBM1	QZ1(D)	002	-.65	174.06	19.75	11.35	9.99E+99	.81
RECMBM1	PZ1(E/F)	003	-.55	174.06	08.64	04.96	9.99E+99	.81
RECMMB1	VD(AER)	008	.26	228.36	46.91	20.54	9.99E+99	.81
RECMMB1	QY1(D)	003	.52	228.36	45.68	20.00	9.99E+99	.81
RECMMB1	QY1(E/F)	023	.05	228.36	40.74	17.84	9.99E+99	.81
RECMMB1	SK(AER)	010	.23	228.36	29.63	12.98	9.99E+99	.81
RECMMB1	SK(EL-I)	002	.59	228.36	09.88	04.33	9.99E+99	.81
RECMMB1	VD(EL-I)	001	-.62	228.36	00.00	00.00	9.99E+99	.81
RECMMB2	VD(AER)	007	.19	242.13	51.32	21.20	9.99E+99	.76
RECMMB2	QY1(E/F)	014	.12	242.13	44.74	18.48	9.99E+99	.76
RECMMB2	SK(AER)	005	.35	242.13	44.74	18.48	9.99E+99	.76
RECMMB2	SK(EL-I)	001	.62	242.13	34.21	14.13	9.99E+99	.76
RECMMB2	VD(EL-I)	002	-.40	242.13	09.21	03.80	9.99E+99	.76
RECMMB2	PY1(E/F)	003	.39	242.13	05.26	02.17	9.99E+99	.76
RECMMT1	VD(EL-I)	001	.65	182.69	53.09	29.06	3.89E+01	.81
RECMMT1	SK(EL-I)	015	.12	182.69	32.10	17.57	3.89E+01	.81
RECMMT1	VD(AER)	010	.15	182.69	23.46	12.84	3.89E+01	.81
RECMMT1	QY1(E/F)	013	.12	182.69	22.22	12.16	3.89E+01	.81
RECMMT1	QZ1(D)	002	-.63	182.69	17.28	09.46	3.89E+01	.81
RECMMT1	PZ1(E/F)	003	-.50	182.69	06.17	03.38	3.89E+01	.81
RECMMT2	VD(AER)	007	.22	233.31	48.00	20.57	9.99E+99	.75
RECMMT2	SK(EL-I)	001	.64	233.31	44.00	18.86	9.99E+99	.75
RECMMT2	QY1(E/F)	020	.06	233.31	40.00	17.14	9.99E+99	.75
RECMMT2	SK(AER)	005	.29	233.31	40.00	17.14	9.99E+99	.75
RECMMT2	VD(EL-I)	003	-.35	233.31	13.33	05.71	9.99E+99	.75
RECMMT2	PY1(E/F)	002	.39	233.31	04.00	01.71	9.99E+99	.75
RECMSK1	VD(AER)	005	.34	276.52	62.96	22.77	9.99E+99	.81
RECMSK1	QY1(E/F)	026	.02	276.52	50.62	18.31	9.99E+99	.81
RECMSK1	SK(AER)	007	.31	276.52	41.98	15.18	9.99E+99	.81
RECMSK1	QY1(D)	004	.35	276.52	38.27	13.84	9.99E+99	.81
RECMSK1	SK(EL-I)	001	.64	276.52	25.93	09.38	9.99E+99	.81
RECMSK1	VD(EL-I)	002	-.47	276.52	08.64	03.12	9.99E+99	.81
RECMSK1	PY1(E/F)	003	.42	276.52	03.70	01.34	9.99E+99	.81
RECMSK2	VD(AER)	006	.23	242.29	50.00	20.64	9.99E+99	.78
RECMSK2	SK(EL-I)	001	.68	242.29	43.59	17.99	9.99E+99	.78
RECMSK2	QY1(E/F)	017	.07	242.29	42.31	17.46	9.99E+99	.78
RECMSK2	SK(AER)	004	.34	242.29	42.31	17.46	9.99E+99	.78
RECMSK2	VD(EL-I)	003	-.39	242.29	14.10	05.82	9.99E+99	.78
RECMSK2	PY1(E/F)	002	.43	242.29	05.13	02.12	9.99E+99	.78
RECMTH1	VD(EL-I)	001	-.70	145.00	30.00	20.69	9.99E+99	.80
RECMTH1	QY1(D)	002	.61	145.00	28.75	19.83	9.99E+99	.80
RECMTH1	QY1(A/B)	011	.15	145.00	16.25	11.21	9.99E+99	.80
RECMTH1	QY1(C)	013	.13	145.00	16.25	11.21	9.99E+99	.80
RECMTH1	PY1(E/F)	003	.47	145.00	06.25	04.31	9.99E+99	.80
RECMTH2	QY1(A/B)	010	.13	177.50	22.50	12.68	9.99E+99	.40
RECMTH2	SK(AER)	005	.20	177.50	22.50	12.68	9.99E+99	.40
RECMTH2	QY1(E/F)	014	.08	177.50	20.00	11.27	9.99E+99	.40
RECMTH2	PZ1(C)	001	-.27	177.50	10.00	05.63	9.99E+99	.40
RECMTH2	VD(EL-I)	002	-.22	177.50	05.00	02.82	9.99E+99	.40
RECMTH2	PZ1(D)	003	-.21	177.50	02.50	01.41	9.99E+99	.40
RELVBM1	VD(AER)	004	.35	202.86	38.57	19.01	9.99E+99	.70
RELVBM1	VD(EL-I)	002	.44	202.86	38.57	19.01	9.99E+99	.70
RELVBM1	QY1(E/F)	011	-.12	202.86	27.14	13.38	9.99E+99	.70
RELVBM1	QZ1(D)	001	-.47	202.86	14.29	07.04	9.99E+99	.70
RELVBM1	QZ1(C)	003	-.39	202.86	07.14	03.52	9.99E+99	.70
RELVMB1	SK(AER)	004	.42	167.16	37.31	22.32	9.99E+99	.67
RELVMB1	QY1(D)	005	.37	167.16	28.36	16.97	9.99E+99	.67
RELVMB1	VD(AER)	023	.02	167.16	28.36	16.97	9.99E+99	.67
RELVMB1	QY1(E/F)	017	.05	167.16	23.88	14.29	9.99E+99	.67
RELVMB1	PY1(E/F)	003	.45	167.16	11.94	07.14	9.99E+99	.67
RELVMB1	SK(EL-I)	002	.48	167.16	05.97	03.57	9.99E+99	.67
RELVMB1	VD(EL-I)	001	-.52	167.16	00.00	00.00	9.99E+99	.67
RELVMB2	VD(AER)	007	.28	265.40	59.26	22.33	9.99E+99	.81
RELVMB2	QY1(E/F)	021	.06	265.40	51.85	19.54	9.99E+99	.81
RELVMB2	SK(AER)	003	.46	265.40	51.85	19.54	9.99E+99	.81
RELVMB2	QY1(D)	008	.25	265.40	29.63	11.16	9.99E+99	.81
RELVMB2	SK(EL-I)	001	.50	265.40	16.05	06.05	9.99E+99	.81
RELVMB2	PY1(E/F)	002	.48	265.40	06.17	02.32	9.99E+99	.81

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
RELVMB3	SK(AER)	002	.56	155.21	49.25	31.73	9.99E+99	.67
RELVMB3	SK(EL-I)	001	.60	155.21	25.37	16.35	9.99E+99	.67
RELVMB3	VD(AER)	020	-.03	155.21	23.88	15.39	9.99E+99	.67
RELVMB3	QY1(E/F)	017	.05	155.21	19.40	12.50	9.99E+99	.67
RELVMB3	VD(EL-I)	003	-.48	155.21	01.49	00.96	9.99E+99	.67
RELVMT1	VD(AER)	004	.35	202.86	38.57	19.01	2.00E+01	.70
RELVMT1	VD(EL-I)	002	.45	202.86	38.57	19.01	2.00E+01	.70
RELVMT1	QY1(E/F)	011	-.11	202.86	27.14	13.38	2.00E+01	.70
RELVMT1	QZ1(D)	001	-.47	202.86	14.29	07.04	2.00E+01	.70
RELVMT1	QZ1(C)	003	-.39	202.86	07.14	03.52	2.00E+01	.70
RELVMT2	SK(AER)	002	.47	233.31	54.67	23.43	9.99E+99	.75
RELVMT2	VD(AER)	004	.30	233.31	52.00	22.29	9.99E+99	.75
RELVMT2	QY1(E/F)	019	-.07	233.31	37.33	16.00	9.99E+99	.75
RELVMT2	SK(EL-I)	001	.53	233.31	34.67	14.86	9.99E+99	.75
RELVMT2	QZ1(C)	003	-.40	233.31	05.33	02.28	9.99E+99	.75
RELVMT3	SK(AER)	002	.59	184.53	56.34	30.53	9.99E+99	.71
RELVMT3	SK(EL-I)	001	.62	184.53	32.39	17.55	9.99E+99	.71
RELVMT3	VD(AER)	023	.06	184.53	30.99	16.79	9.99E+99	.71
RELVMT3	QY1(E/F)	026	-.03	184.53	23.94	12.97	9.99E+99	.71
RELVMT3	VD(EL-I)	003	-.44	184.53	04.23	02.29	9.99E+99	.71
RELVSK1	SK(AER)	001	.58	223.38	53.25	23.84	9.99E+99	.77
RELVSK1	VD(AER)	021	.06	223.38	41.56	18.61	9.99E+99	.77
RELVSK1	QY1(E/F)	023	.06	223.38	35.06	15.70	9.99E+99	.77
RELVSK1	QY1(D)	005	.29	223.38	27.27	12.21	9.99E+99	.77
RELVSK1	SK(EL-I)	002	.56	223.38	18.18	08.14	9.99E+99	.77
RELVSK1	PY1(E/F)	003	.54	223.38	09.09	04.07	9.99E+99	.77
RELVSK2	SK(AER)	002	.52	255.31	60.53	23.71	9.99E+99	.76
RELVSK2	VD(AER)	007	.21	255.31	56.58	22.16	9.99E+99	.76
RELVSK2	QY1(E/F)	021	.05	255.31	44.74	17.52	9.99E+99	.76
RELVSK2	SK(EL-I)	001	.52	255.31	35.53	13.92	9.99E+99	.76
RELVSK2	PY1(E/F)	003	.36	255.31	02.63	01.03	9.99E+99	.76
RELVSK3	SK(AER)	002	.55	158.22	49.25	31.13	9.99E+99	.67
RELVSK3	SK(EL-I)	001	.60	158.22	26.87	16.98	9.99E+99	.67
RELVSK3	VD(AER)	020	-.04	158.22	23.88	15.09	9.99E+99	.67
RELVSK3	QY1(E/F)	017	.06	158.22	20.90	13.21	9.99E+99	.67
RELVSK3	VD(EL-I)	003	-.47	158.22	01.49	00.94	9.99E+99	.67
RELVTH1	VD(EL-I)	001	-.63	123.51	57.35	46.43	9.99E+99	.68
RELVTH1	SK(EL-I)	010	.14	123.51	23.53	19.05	9.99E+99	.68
RELVTH1	VD(AER)	003	-.41	123.51	08.82	07.14	9.99E+99	.68
RELVTH1	QY1(D)	002	.43	123.51	02.94	02.38	9.99E+99	.68
RELVTH2	VD(EL-I)	001	-.54	107.92	31.75	29.42	9.99E+99	.63
RELVTH2	SK(EL-I)	017	.08	107.92	11.11	10.29	9.99E+99	.63
RELVTH2	PY1(E/F)	003	.33	107.92	09.52	08.82	9.99E+99	.63
RELVTH2	PZ1(D)	002	-.39	107.92	07.94	07.36	9.99E+99	.63
REOUMB1	PY1(E/F)	002	.21	109.08	09.09	08.33	1.00E+00	.33
REOUMB1	PZ1(A/B)	001	-.22	109.08	06.06	05.56	1.00E+00	.33
REOUMB1	PZ1(D)	003	-.20	109.08	06.06	05.56	1.00E+00	.33
REOUMB2	VD(AER)	002	.51	256.61	65.06	25.35	9.99E+99	.83
REOUMB2	QY1(E/F)	018	.10	256.61	60.24	23.48	9.99E+99	.83
REOUMB2	QY1(D)	016	.12	256.61	27.71	10.80	9.99E+99	.83
REOUMB2	QZ1(D)	001	-.62	256.61	21.69	08.45	9.99E+99	.83
REOUMB2	PZ1(E/F)	003	-.38	256.61	00.00	00.00	9.99E+99	.83
REOUMB1	SK(AER)	002	.60	113.05	36.23	32.05	9.99E+99	.69
REOUMB1	QY1(E/F)	018	.14	113.05	11.59	10.25	9.99E+99	.69
REOUMB1	VD(AER)	007	-.22	113.05	11.59	10.25	9.99E+99	.69
REOUMB1	SK(EL-I)	003	.57	113.05	04.35	03.85	9.99E+99	.69
REOUMB1	VD(EL-I)	001	-.64	113.05	04.35	03.85	9.99E+99	.69
REOUMB2	SK(AER)	001	.51	274.30	55.41	20.20	9.99E+99	.74
REOUMB2	VD(AER)	014	.13	274.30	52.70	19.21	9.99E+99	.74
REOUMB2	QY1(D)	003	.38	274.30	44.59	16.26	9.99E+99	.74
REOUMB2	QY1(E/F)	027	-.01	274.30	44.59	16.26	9.99E+99	.74
REOUMB2	SK(EL-I)	002	.42	274.30	17.57	06.41	9.99E+99	.74
REOUMB3	SK(AER)	001	.65	202.66	62.67	30.92	9.99E+99	.75
REOUMB3	VD(AER)	024	.04	202.66	37.33	18.42	9.99E+99	.75
REOUMB3	QY1(E/F)	026	.03	202.66	30.67	15.13	9.99E+99	.75
REOUMB3	SK(EL-I)	002	.60	202.66	26.67	13.16	9.99E+99	.75
REOUMB3	VD(EL-I)	003	-.45	202.66	04.00	01.97	9.99E+99	.75
REOUMT1	PY1(E/F)	002	.21	109.08	09.09	08.33	1.00E+00	.33
REOUMT1	PZ1(A/B)	001	-.22	109.08	06.06	05.56	1.00E+00	.33
REOUMT1	PZ1(D)	003	-.20	109.08	06.06	05.56	1.00E+00	.33

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
REOUMT2	VD(AER)	002	.45	275.89	68.67	24.89	9.99E+99	.83
REOUMT2	QY1(E/F)	015	.15	275.89	63.86	23.15	9.99E+99	.83
REOUMT2	QY1(D)	019	.12	275.89	28.92	10.48	9.99E+99	.83
REOUMT2	SK(AER)	023	-.07	275.89	28.92	10.48	9.99E+99	.83
REOUMT2	QZ1(D)	001	-.59	275.89	19.28	06.99	9.99E+99	.83
REOUMT2	QZ1(C)	003	-.31	275.89	01.20	00.43	9.99E+99	.83
REOUMT3	SK(AER)	001	.61	217.82	67.12	30.81	9.99E+99	.73
REOUMT3	VD(AER)	006	.17	217.82	46.58	21.38	9.99E+99	.73
REOUMT3	QY1(E/F)	025	-.04	217.82	35.62	16.35	9.99E+99	.73
REOUMT3	SK(EL-I)	002	.57	217.82	31.51	14.47	9.99E+99	.73
REOUMT3	VD(EL-I)	003	-.39	217.82	06.85	03.14	9.99E+99	.73
REOUSK1	SK(AER)	003	.55	128.99	39.13	30.34	9.99E+99	.69
REOUSK1	QY1(E/F)	016	.12	128.99	15.94	12.36	9.99E+99	.69
REOUSK1	VD(AER)	012	-.13	128.99	15.94	12.36	9.99E+99	.69
REOUSK1	SK(EL-I)	001	.61	128.99	10.14	07.86	9.99E+99	.69
REOUSK1	VD(EL-I)	002	-.60	128.99	00.00	00.00	9.99E+99	.69
REOUSK2	SK(AER)	001	.62	234.22	61.84	26.40	9.99E+99	.76
REOUSK2	VD(AER)	015	.11	234.22	44.74	19.10	9.99E+99	.76
REOUSK2	QY1(E/F)	027	-.02	234.22	34.21	14.61	9.99E+99	.76
REOUSK2	SK(EL-I)	002	.58	234.22	28.95	12.36	9.99E+99	.76
REOUSK2	QY1(D)	007	.21	234.22	23.68	10.11	9.99E+99	.76
REOUSK2	PY1(E/F)	003	.38	234.22	02.63	01.12	9.99E+99	.76
REOUSK3	SK(AER)	001	.62	195.90	60.27	30.77	9.99E+99	.73
REOUSK3	VD(AER)	021	.04	195.90	35.62	18.18	9.99E+99	.73
REOUSK3	QY1(E/F)	025	.02	195.90	28.77	14.69	9.99E+99	.73
REOUSK3	SK(EL-I)	002	.59	195.90	27.40	13.99	9.99E+99	.73
REOUSK3	VD(EL-I)	003	-.44	195.90	04.11	02.10	9.99E+99	.73
REOUTH1	QZ1(C)	001	.30	126.85	19.51	15.38	9.99E+99	.41
REOUTH1	QZ1(A/B)	003	-.21	126.85	17.07	13.46	9.99E+99	.41
REOUTH1	VD(EL-I)	002	-.22	126.85	17.07	13.46	9.99E+99	.41
REOUTH2	VD(EL-I)	001	-.31	128.19	40.63	31.70	9.99E+99	.32
REOUTH2	SK(EL-I)	011	.09	128.19	15.63	12.19	9.99E+99	.32
REOUTH2	PY1(E/F)	002	.21	128.19	09.38	07.32	9.99E+99	.32
REOUTH2	QY1(D)	003	.18	128.19	03.13	02.44	9.99E+99	.32



## RESULTS FOR THE 99TH PERCENTILE OF THE ENDPOINTS FOR THE UK1 SOURCE TERM

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
AEVAC	VD(EL-I)	001	-.50	146.29	40.30	27.55	2.51E+00	.67
AEVAC	SK(EL-I)	027	.00	146.29	23.88	16.32	2.51E+00	.67
AEVAC	QY1(A/B)	003	.36	146.29	22.39	15.31	2.51E+00	.67
AEVAC	QY1(C)	007	.20	146.29	14.93	10.21	2.51E+00	.67
AEVAC	PY1(A/B)	002	.36	146.29	04.48	03.06	2.51E+00	.67
AIOD	VD(EL-I)	001	-.93	158.49	85.11	53.70	1.02E+01	.94
AIOD	SK(EL-I)	027	.01	158.49	45.74	28.86	1.02E+01	.94
AIOD	QY1(A/B)	002	.57	158.49	06.38	04.03	1.02E+01	.94
AIOD	AW(EL-I)	003	-.36	158.49	02.13	01.34	1.02E+01	.94
ASHEL	QY1(A/B)	001	.60	131.59	55.26	41.99	4.17E+00	.76
ASHEL	QY1(C)	006	.32	131.59	44.74	34.00	4.17E+00	.76
ASHEL	PY1(E/F)	003	.41	131.59	07.89	06.00	4.17E+00	.76
ASHEL	PY1(A/B)	002	.46	131.59	02.63	02.00	4.17E+00	.76
CACAE1	PZ1(E/F)	001	-.78	116.44	73.97	63.53	7.24E+00	.73
CACAE1	PY1(D)	002	-.34	116.44	02.74	02.35	7.24E+00	.73
CACAE1	BW(AER)	003	-.26	116.44	00.00	00.00	7.24E+00	.73
CACAE2	PZ1(E/F)	001	-.60	179.38	42.86	23.89	1.32E+01	.63
CACAE2	VD(AER)	002	-.33	179.38	33.33	18.58	1.32E+01	.63
CACAE2	QY1(E/F)	022	.05	179.38	25.40	14.16	1.32E+01	.63
CACAE2	PZ1(D)	003	-.30	179.38	03.17	01.77	1.32E+01	.63
CACAE3	VD(AER)	001	-.58	231.97	61.33	26.44	1.66E+01	.75
CACAE3	QY1(E/F)	008	.22	231.97	40.00	17.24	1.66E+01	.75
CACAE3	QY1(D)	019	-.09	231.97	25.33	10.92	1.66E+01	.75
CACAE3	SK(AER)	026	-.01	231.97	24.00	10.35	1.66E+01	.75
CACAE3	PZ1(D)	003	-.42	231.97	05.33	02.30	1.66E+01	.75
CACAE3	QZ1(D)	002	-.45	231.97	01.33	00.57	1.66E+01	.75
CAIOD1	VD(EL-I)	001	-.51	163.69	51.52	31.47	1.32E+01	.66
CAIOD1	SK(EL-I)	028	-.02	163.69	28.79	17.59	1.32E+01	.66
CAIOD1	PZ1(E/F)	002	-.43	163.69	21.21	12.96	1.32E+01	.66
CAIOD1	BW(AER)	003	-.30	163.69	00.00	00.00	1.32E+01	.66
CAIOD2	VD(EL-I)	001	-.82	168.26	87.06	51.74	3.89E+01	.85
CAIOD2	SK(EL-I)	025	-.03	168.26	44.71	26.57	3.89E+01	.85
CAIOD2	PZ1(D)	002	-.40	168.26	03.53	02.10	3.89E+01	.85
CAIOD2	SK(AER)	003	.30	168.26	00.00	00.00	3.89E+01	.85
CAIOD3	VD(EL-I)	001	-.92	177.47	93.55	52.71	7.94E+01	.93
CAIOD3	SK(EL-I)	019	-.09	177.47	48.39	27.27	7.94E+01	.93
CAIOD3	SK(AER)	002	.35	177.47	01.08	00.61	7.94E+01	.93
CAIOD3	PZ1(A/B)	003	-.34	177.47	00.00	00.00	7.94E+01	.93
CGCAE1	VD(AER)	001	.74	275.27	87.64	31.84	2.04E+02	.89
CGCAE1	QY1(E/F)	020	-.04	275.27	68.54	24.90	2.04E+02	.89
CGCAE1	SK(AER)	025	-.02	275.27	37.08	13.47	2.04E+02	.89
CGCAE1	AW(AER)	003	.27	275.27	05.62	02.04	2.04E+02	.89
CGCAE1	PZ1(E/F)	002	-.52	275.27	00.00	00.00	2.04E+02	.89
CGCAE2	VD(AER)	001	.69	255.93	82.14	32.09	6.03E+01	.84
CGCAE2	QY1(E/F)	012	-.10	255.93	63.10	24.66	6.03E+01	.84
CGCAE2	SK(AER)	013	-.10	255.93	33.33	13.02	6.03E+01	.84
CGCAE2	QZ1(E/F)	003	-.31	255.93	11.90	04.65	6.03E+01	.84
CGCAE2	PZ1(E/F)	002	-.48	255.93	00.00	00.00	6.03E+01	.84
CGCAE3	VD(AER)	001	.52	224.32	63.51	28.31	3.39E+01	.74
CGCAE3	QY1(E/F)	028	.00	224.32	48.65	21.69	3.39E+01	.74
CGCAE3	AW(AER)	002	.38	224.32	22.97	10.24	3.39E+01	.74
CGCAE3	QZ1(D)	003	-.32	224.32	06.76	03.01	3.39E+01	.74
CGIOD1	VD(EL-I)	001	.84	148.80	85.71	57.60	5.89E+01	.84
CGIOD1	SK(EL-I)	014	-.10	148.80	38.10	25.60	5.89E+01	.84
CGIOD1	PZ1(E/F)	002	-.37	148.80	03.57	02.40	5.89E+01	.84
CGIOD1	BW(AER)	003	-.29	148.80	01.19	00.80	5.89E+01	.84
CGIOD2	VD(EL-I)	001	.45	109.51	45.24	41.31	8.71E+00	.42
CGIOD2	SK(EL-I)	008	-.13	109.51	14.29	13.05	8.71E+00	.42
CGIOD2	PZ1(D)	002	-.34	109.51	11.90	10.87	8.71E+00	.42
CGIOD2	QZ1(D)	003	-.20	109.51	02.38	02.17	8.71E+00	.42
CGIOD3	QZ1(D)	007	.16	099.99	12.12	12.12	6.17E+00	.33
CGIOD3	BW(OG-I)	003	-.20	099.99	09.09	09.09	6.17E+00	.33
CGIOD3	PY1(A/B)	002	-.21	099.99	09.09	09.09	6.17E+00	.33
CGIOD3	PZ1(A/B)	001	-.21	099.99	06.06	06.06	6.17E+00	.33
DECMB1	VD(EL-I)	002	.63	113.48	33.78	29.77	7.94E+00	.74
DECMB1	PZ1(E/F)	001	-.65	113.48	29.73	26.20	7.94E+00	.74
DECMB1	SK(EL-I)	020	-.05	113.48	13.51	11.91	7.94E+00	.74
DECMB1	PY1(E/F)	003	-.44	113.48	02.70	02.38	7.94E+00	.74

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
DECMBM2	PZ1(E/F)	001	-.67	205.86	47.06	22.86	7.24E+00	.68
DECMBM2	VD(AER)	008	-.18	205.86	32.35	15.71	7.24E+00	.68
DECMBM2	QY1(E/F)	022	-.06	205.86	27.94	13.57	7.24E+00	.68
DECMBM2	QY1(D)	009	-.18	205.86	22.06	10.72	7.24E+00	.68
DECMBM2	PY1(D)	003	-.30	205.86	00.00	00.00	7.24E+00	.68
DECMBM2	QZ1(D)	002	-.31	205.86	00.00	00.00	7.24E+00	.68
DECMBM3	QZ1(C)	002	-.62	102.50	16.25	15.85	5.75E+00	.80
DECMBM3	QZ1(D)	001	-.67	102.50	16.25	15.85	5.75E+00	.80
DECMBM3	VD(EL-I)	006	-.44	102.50	16.25	15.85	5.75E+00	.80
DECMBM3	PY1(E/F)	005	.47	102.50	12.50	12.20	5.75E+00	.80
DECMBM3	PZ1(D)	003	-.52	102.50	05.00	04.88	5.75E+00	.80
DECMSK1	SK(EL-I)	001	.85	183.91	74.71	40.62	4.68E+02	.87
DECMSK1	SK(AER)	002	.56	183.91	31.03	16.87	4.68E+02	.87
DECMSK1	VD(EL-I)	003	-.39	183.91	26.44	14.38	4.68E+02	.87
DECMSK1	VD(AER)	005	.24	183.91	25.29	13.75	4.68E+02	.87
DECMSK1	QY1(E/F)	021	-.08	183.91	18.39	10.00	4.68E+02	.87
DECMSK2	SK(EL-I)	001	.81	150.00	52.38	34.92	5.89E+02	.84
DECMSK2	SK(AER)	002	.65	150.00	39.29	26.19	5.89E+02	.84
DECMSK2	VD(AER)	009	.21	150.00	20.24	13.49	5.89E+02	.84
DECMSK2	VD(EL-I)	003	-.53	150.00	09.52	06.35	5.89E+02	.84
DECMSK3	SK(AER)	002	.68	164.72	47.06	28.57	3.47E+02	.85
DECMSK3	SK(EL-I)	001	.82	164.72	45.88	27.85	3.47E+02	.85
DECMSK3	VD(AER)	008	.20	164.72	28.24	17.14	3.47E+02	.85
DECMSK3	QY1(E/F)	019	-.07	164.72	20.00	12.14	3.47E+02	.85
DECMSK3	VD(EL-I)	003	-.62	164.72	07.06	04.29	3.47E+02	.85
DECMTH1	VD(EL-I)	002	-.43	170.31	39.06	22.93	1.00E+01	.64
DECMTH1	PZ1(E/F)	001	-.49	170.31	32.81	19.26	1.00E+01	.64
DECMTH1	SK(EL-I)	027	-.01	170.31	21.88	12.85	1.00E+01	.64
DECMTH1	BW(AER)	003	-.31	170.31	01.56	00.92	1.00E+01	.64
DECMTH2	VD(EL-I)	001	-.69	175.34	72.73	41.48	1.78E+01	.77
DECMTH2	SK(EL-I)	022	-.06	175.34	40.26	22.96	1.78E+01	.77
DECMTH2	PZ1(E/F)	002	-.42	175.34	09.09	05.18	1.78E+01	.77
DECMTH2	PZ1(D)	003	-.39	175.34	06.49	03.70	1.78E+01	.77
DECMTH3	VD(EL-I)	001	-.78	152.46	73.17	47.99	2.82E+01	.82
DECMTH3	SK(EL-I)	023	.04	152.46	36.59	24.00	2.82E+01	.82
DECMTH3	QZ1(D)	002	-.51	152.46	06.10	04.00	2.82E+01	.82
DECMTH3	PZ1(D)	003	-.43	152.46	03.66	02.40	2.82E+01	.82
DELVBM1	VD(EL-I)	001	.63	177.32	58.67	33.09	1.55E+01	.75
DELVBM1	SK(EL-I)	020	-.04	177.32	29.33	16.54	1.55E+01	.75
DELVBM1	VD(AER)	009	.20	177.32	25.33	14.28	1.55E+01	.75
DELVBM1	QY1(E/F)	011	.15	177.32	22.67	12.78	1.55E+01	.75
DELVBM1	PZ1(E/F)	002	-.48	177.32	08.00	04.51	1.55E+01	.75
DELVBM1	QY1(D)	003	-.31	177.32	02.67	01.51	1.55E+01	.75
DELVBM2	PZ1(E/F)	001	-.60	086.79	32.08	36.96	4.37E+00	.53
DELVBM2	VD(AER)	002	.35	086.79	16.98	19.56	4.37E+00	.53
DELVBM2	QY1(E/F)	011	-.13	086.79	09.43	10.87	4.37E+00	.53
DELVBM2	QY1(D)	003	-.28	086.79	00.00	00.00	4.37E+00	.53
DELVBM3	AW(AER)	005	.22	114.26	20.41	17.86	3.47E+00	.49
DELVBM3	BW(AER)	026	-.02	114.26	14.29	12.51	3.47E+00	.49
DELVBM3	QY1(C)	013	-.14	114.26	12.24	10.71	3.47E+00	.49
DELVBM3	QZ1(D)	001	-.34	114.26	10.20	08.93	3.47E+00	.49
DELVBM3	PZ1(E/F)	002	-.31	114.26	02.04	01.79	3.47E+00	.49
DELVBM3	QY1(D)	003	-.25	114.26	02.04	01.79	3.47E+00	.49
DELVSK1	SK(EL-I)	001	.82	188.36	65.12	34.57	3.98E+02	.86
DELVSK1	SK(AER)	002	.64	188.36	40.70	21.61	3.98E+02	.86
DELVSK1	VD(AER)	010	.20	188.36	29.07	15.43	3.98E+02	.86
DELVSK1	VD(EL-I)	003	-.36	188.36	22.09	11.73	3.98E+02	.86
DELVSK1	QY1(E/F)	025	-.05	188.36	20.93	11.11	3.98E+02	.86
DELVSK2	SK(AER)	002	.73	144.55	49.40	34.18	4.17E+02	.83
DELVSK2	SK(EL-I)	001	.77	144.55	43.37	30.00	4.17E+02	.83
DELVSK2	VD(AER)	011	.20	144.55	20.48	14.17	4.17E+02	.83
DELVSK2	VD(EL-I)	003	-.49	144.55	08.43	05.83	4.17E+02	.83
DELVSK3	SK(AER)	002	.74	126.49	49.40	39.05	2.24E+02	.83
DELVSK3	SK(EL-I)	001	.76	126.49	32.53	25.72	2.24E+02	.83
DELVSK3	VD(AER)	010	.21	126.49	18.07	14.29	2.24E+02	.83
DELVSK3	VD(EL-I)	003	-.58	126.49	02.41	01.91	2.24E+02	.83
DELVTH1	VD(EL-I)	002	-.44	154.82	40.32	26.04	9.77E+00	.62
DELVTH1	PZ1(E/F)	001	-.47	154.82	30.65	19.80	9.77E+00	.62
DELVTH1	SK(EL-I)	028	.00	154.82	22.58	14.58	9.77E+00	.62
DELVTH1	BW(AER)	003	-.30	154.82	01.61	01.04	9.77E+00	.62

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
DELVTH2	VD(EL-I)	001	-.80	172.60	84.52	48.97	2.14E+01	.84
DELVTH2	SK(EL-I)	021	-.05	172.60	44.05	25.52	2.14E+01	.84
DELVTH2	PZ1(E/F)	003	-.37	172.60	04.76	02.76	2.14E+01	.84
DELVTH2	PZ1(D)	002	-.40	172.60	03.57	02.07	2.14E+01	.84
DELVTH3	VD(EL-I)	001	-.91	191.43	90.32	47.18	3.39E+01	.93
DELVTH3	SK(EL-I)	024	-.03	191.43	45.16	23.59	3.39E+01	.93
DELVTH3	PZ1(D)	002	-.40	191.43	02.15	01.12	3.39E+01	.93
DELVTH3	PZ1(E/F)	003	-.32	191.43	02.15	01.12	3.39E+01	.93
DEOUBM1	VD(EL-I)	001	.65	192.13	64.47	33.56	1.86E+01	.76
DEOUBM1	SK(EL-I)	021	-.04	192.13	32.89	17.12	1.86E+01	.76
DEOUBM1	VD(AER)	009	.19	192.13	28.95	15.07	1.86E+01	.76
DEOUBM1	QY1(E/F)	010	.17	192.13	26.32	13.70	1.86E+01	.76
DEOUBM1	PZ1(E/F)	002	-.44	192.13	05.26	02.74	1.86E+01	.76
DEOUBM1	QY1(D)	003	-.31	192.13	02.63	01.37	1.86E+01	.76
DEOUBM2	VD(AER)	002	.44	118.93	34.48	28.99	5.01E+00	.58
DEOUBM2	QY1(E/F)	011	-.14	118.93	22.41	18.84	5.01E+00	.58
DEOUBM2	PZ1(E/F)	001	-.55	118.93	13.79	11.60	5.01E+00	.58
DEOUBM2	SK(AER)	015	-.08	118.93	13.79	11.60	5.01E+00	.58
DEOUBM2	QY1(D)	003	-.32	118.93	00.00	00.00	5.01E+00	.58
DEOUBM3	VD(AER)	001	.33	135.18	25.93	19.18	4.07E+00	.54
DEOUBM3	AW(AER)	005	.26	135.18	24.07	17.81	4.07E+00	.54
DEOUBM3	BW(AER)	025	-.02	135.18	18.52	13.70	4.07E+00	.54
DEOUBM3	QY1(E/F)	022	-.05	135.18	18.52	13.70	4.07E+00	.54
DEOUBM3	QZ1(D)	002	-.31	135.18	07.41	05.48	4.07E+00	.54
DEOUBM3	QY1(D)	003	-.28	135.18	00.00	00.00	4.07E+00	.54
DEOUSK1	SK(EL-I)	001	.82	188.36	65.12	34.57	3.98E+02	.86
DEOUSK1	SK(AER)	002	.64	188.36	40.70	21.61	3.98E+02	.86
DEOUSK1	VD(AER)	010	.21	188.36	29.07	15.43	3.98E+02	.86
DEOUSK1	VD(EL-I)	003	-.37	188.36	22.09	11.73	3.98E+02	.86
DEOUSK1	QY1(E/F)	025	-.06	188.36	20.93	11.11	3.98E+02	.86
DEOUSK2	SK(AER)	002	.73	142.15	49.40	34.75	4.17E+02	.83
DEOUSK2	SK(EL-I)	001	.77	142.15	42.17	29.67	4.17E+02	.83
DEOUSK2	VD(AER)	011	.20	142.15	20.48	14.41	4.17E+02	.83
DEOUSK2	VD(EL-I)	003	-.49	142.15	07.23	05.09	4.17E+02	.83
DEOUSK3	SK(AER)	002	.74	125.29	49.40	39.43	2.24E+02	.83
DEOUSK3	SK(EL-I)	001	.76	125.29	32.53	25.96	2.24E+02	.83
DEOUSK3	VD(AER)	010	.20	125.29	16.87	13.46	2.24E+02	.83
DEOUSK3	VD(EL-I)	003	-.58	125.29	02.41	01.92	2.24E+02	.83
DEOUTH1	PZ1(E/F)	001	-.49	129.79	36.84	28.38	7.41E+00	.57
DEOUTH1	VD(EL-I)	003	-.30	129.79	22.81	17.57	7.41E+00	.57
DEOUTH1	BW(AER)	002	-.30	129.79	01.75	01.35	7.41E+00	.57
DEOUTH2	VD(EL-I)	001	-.77	169.10	81.48	48.18	1.48E+01	.81
DEOUTH2	SK(EL-I)	023	-.06	169.10	41.98	24.83	1.48E+01	.81
DEOUTH2	PZ1(E/F)	002	-.42	169.10	06.17	03.65	1.48E+01	.81
DEOUTH2	PZ1(D)	003	-.40	169.10	04.94	02.92	1.48E+01	.81
DEOUTH3	VD(EL-I)	001	-.90	181.33	89.01	49.09	2.00E+01	.91
DEOUTH3	SK(EL-I)	026	.04	181.33	41.76	23.03	2.00E+01	.91
DEOUTH3	PZ1(D)	003	-.33	181.33	02.20	01.21	2.00E+01	.91
DEOUTH3	PZ1(E/F)	002	-.34	181.33	02.20	01.21	2.00E+01	.91
PECMBM	PZ1(E/F)	001	-.72	169.88	34.25	20.16	5.50E+01	.73
PECMBM	VD(AER)	026	-.04	169.88	24.66	14.52	5.50E+01	.73
PECMBM	QY1(E/F)	008	-.23	169.88	23.29	13.71	5.50E+01	.73
PECMBM	PY1(E/F)	002	-.56	169.88	06.85	04.03	5.50E+01	.73
PECMBM	QZ1(E/F)	003	-.42	169.88	04.11	02.42	5.50E+01	.73
PECMLU	VD(AER)	002	-.52	215.97	66.67	30.87	2.14E+02	.69
PECMLU	QY1(E/F)	016	.09	215.97	46.38	21.48	2.14E+02	.69
PECMLU	SK(AER)	028	.01	215.97	27.54	12.75	2.14E+02	.69
PECMLU	PZ1(E/F)	001	-.56	215.97	26.09	12.08	2.14E+02	.69
PECMLU	QZ1(E/F)	003	-.28	215.97	07.25	03.36	2.14E+02	.69
PECMMB	SK(EL-I)	001	.78	132.07	43.21	32.72	7.94E+01	.81
PECMMB	SK(AER)	002	.65	132.07	40.74	30.85	7.94E+01	.81
PECMMB	VD(AER)	011	.19	132.07	18.52	14.02	7.94E+01	.81
PECMMB	VD(EL-I)	003	-.56	132.07	04.94	03.74	7.94E+01	.81
PECMMT	PZ1(E/F)	001	-.56	077.34	27.27	35.26	2.40E+01	.66
PECMMT	SK(EL-I)	002	.53	077.34	04.55	05.88	2.40E+01	.66
PECMMT	VD(EL-I)	003	-.47	077.34	03.03	03.92	2.40E+01	.66
PECMSK	SK(EL-I)	001	.79	145.12	47.56	32.77	1.29E+03	.82
PECMSK	SK(AER)	002	.63	145.12	40.24	27.73	1.29E+03	.82
PECMSK	VD(AER)	008	.21	145.12	20.73	14.28	1.29E+03	.82
PECMSK	VD(EL-I)	003	-.53	145.12	08.54	05.88	1.29E+03	.82

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
PECMTH	VD(EL-I)	001	-.80	186.05	81.40	43.75	1.86E+02	.86
PECMTH	SK(EL-I)	028	.01	186.05	39.53	21.25	1.86E+02	.86
PECMTH	PZ1(E/F)	002	-.45	186.05	04.65	02.50	1.86E+02	.86
PECMTH	QZ1(A/B)	003	-.38	186.05	03.49	01.88	1.86E+02	.86
PELVBM	PZ1(E/F)	001	-.58	103.48	21.05	20.34	2.00E+01	.57
PELVBM	PY1(E/F)	002	-.53	103.48	15.79	15.26	2.00E+01	.57
PELVBM	QY1(D)	006	-.27	103.48	15.79	15.26	2.00E+01	.57
PELVBM	QY1(E/F)	004	-.30	103.48	10.53	10.18	2.00E+01	.57
PELVBM	QZ1(E/F)	003	-.37	103.48	01.75	01.69	2.00E+01	.57
PELVLU	VD(AER)	001	-.54	241.88	70.27	29.05	9.99E+99	.74
PELVLU	QY1(E/F)	008	.12	241.88	45.95	19.00	9.99E+99	.74
PELVLU	SK(AER)	006	-.18	241.88	37.84	15.64	9.99E+99	.74
PELVLU	PZ1(E/F)	002	-.53	241.88	25.68	10.62	9.99E+99	.74
PELVLU	QY1(D)	003	.20	241.88	10.81	04.47	9.99E+99	.74
PELVMB	SK(AER)	001	.76	115.21	56.96	49.44	5.13E+01	.79
PELVMB	SK(EL-I)	002	.71	115.21	22.78	19.77	5.13E+01	.79
PELVMB	VD(AER)	010	.16	115.21	16.46	14.29	5.13E+01	.79
PELVMB	VD(EL-I)	003	-.61	115.21	00.00	00.00	5.13E+01	.79
PELVMT	SK(AER)	001	.66	097.05	48.53	50.01	2.40E+01	.68
PELVMT	SK(EL-I)	002	.58	097.05	20.59	21.22	2.40E+01	.68
PELVMT	VD(EL-I)	003	-.47	097.05	00.00	00.00	2.40E+01	.68
PELVSK	SK(AER)	001	.76	127.13	58.02	45.64	2.14E+02	.81
PELVSK	SK(EL-I)	002	.73	127.13	28.40	22.34	2.14E+02	.81
PELVSK	VD(AER)	011	.16	127.13	19.75	15.54	2.14E+02	.81
PELVSK	VD(EL-I)	003	-.58	127.13	01.23	00.97	2.14E+02	.81
PELVTH	VD(EL-I)	001	-.90	212.95	89.25	41.91	2.14E+03	.93
PELVTH	SK(EL-I)	023	-.09	212.95	47.31	22.22	2.14E+03	.93
PELVTH	VD(AER)	016	-.15	212.95	23.66	11.11	2.14E+03	.93
PELVTH	QY1(E/F)	009	-.22	212.95	21.51	10.10	2.14E+03	.93
PELVTH	PY1(E/F)	002	-.43	212.95	01.08	00.51	2.14E+03	.93
PELVTH	PZ1(A/B)	003	-.35	212.95	00.00	00.00	2.14E+03	.93
RECMBM1	VD(EL-I)	003	.20	106.89	17.24	16.13	1.00E+00	.29
RECMBM1	PY1(E/F)	001	-.26	106.89	13.79	12.90	1.00E+00	.29
RECMBM1	PZ1(C)	002	-.22	106.89	06.90	06.46	1.00E+00	.29
RECMBM2	PZ1(E/F)	001	-.58	214.57	49.09	22.88	9.99E+99	.55
RECMBM2	VD(AER)	012	-.08	214.57	34.55	16.10	9.99E+99	.55
RECMBM2	QY1(E/F)	006	-.13	214.57	32.73	15.25	9.99E+99	.55
RECMBM2	QZ1(D)	002	-.25	214.57	01.82	00.85	9.99E+99	.55
RECMBM2	PY1(E/F)	003	-.20	214.57	00.00	00.00	9.99E+99	.55
RECMLU1	VD(EL-I)	001	-.58	112.53	51.79	46.02	9.99E+99	.56
RECMLU1	SK(EL-I)	005	.17	112.53	17.86	15.87	9.99E+99	.56
RECMLU1	PY1(E/F)	002	.31	112.53	10.71	09.52	9.99E+99	.56
RECMLU1	PZ1(D)	003	-.31	112.53	07.14	06.34	9.99E+99	.56
RECMMB1	VD(EL-I)	001	-.69	101.46	18.84	18.57	2.40E+00	.69
RECMMB1	QY1(D)	004	.37	101.46	15.94	15.71	2.40E+00	.69
RECMMB1	PY1(E/F)	003	.44	101.46	11.59	11.42	2.40E+00	.69
RECMMB1	VD(AER)	011	.22	101.46	11.59	11.42	2.40E+00	.69
RECMMB1	SK(EL-I)	002	.47	101.46	00.00	00.00	2.40E+00	.69
RECMMB2	SK(AER)	001	.49	137.09	51.61	37.65	4.47E+01	.62
RECMMB2	VD(AER)	007	.25	137.09	30.65	22.36	4.47E+01	.62
RECMMB2	QY1(E/F)	012	-.12	137.09	17.74	12.94	4.47E+01	.62
RECMMB2	SK(EL-I)	003	.30	137.09	01.61	01.17	4.47E+01	.62
RECMMB2	VD(EL-I)	002	-.41	137.09	01.61	01.17	4.47E+01	.62
RECMMB3	SK(EL-I)	001	.74	135.12	40.54	30.00	9.99E+99	.74
RECMMB3	SK(AER)	002	.56	135.12	39.19	29.00	9.99E+99	.74
RECMMB3	VD(AER)	021	-.02	135.12	17.57	13.00	9.99E+99	.74
RECMMB3	QY1(E/F)	018	.07	135.12	14.86	11.00	9.99E+99	.74
RECMMB3	VD(EL-I)	003	-.55	135.12	04.05	03.00	9.99E+99	.74
RECMMT1	QZ1(A/B)	001	-.23	103.47	10.34	09.99	1.00E+00	.29
RECMMT1	PY1(E/F)	002	-.19	103.47	06.90	06.67	1.00E+00	.29
RECMMT1	VD(OG-I)	003	-.17	103.47	03.45	03.33	1.00E+00	.29
RECMMT2	PZ1(E/F)	001	-.47	102.71	45.95	44.74	9.99E+99	.37
RECMMT2	AW(EL-I)	003	-.21	102.71	10.81	10.52	9.99E+99	.37
RECMMT2	QZ1(E/F)	002	-.25	102.71	00.00	00.00	9.99E+99	.37
RECMMT3	SK(EL-I)	001	.73	139.17	41.89	30.10	9.99E+99	.74
RECMMT3	SK(AER)	002	.56	139.17	39.19	28.16	9.99E+99	.74
RECMMT3	VD(AER)	025	-.01	139.17	17.57	12.62	9.99E+99	.74
RECMMT3	QY1(E/F)	018	.04	139.17	14.86	10.68	9.99E+99	.74
RECMMT3	VD(EL-I)	003	-.54	139.17	04.05	02.91	9.99E+99	.74

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
RECMSK1	VD(AER)	002	.32	213.22	45.59	21.38	9.99E+99	.68
RECMSK1	SK(EL-I)	001	.55	213.22	39.71	18.62	9.99E+99	.68
RECMSK1	SK(AER)	005	.26	213.22	35.29	16.55	9.99E+99	.68
RECMSK1	QY1(E/F)	015	-.12	213.22	29.41	13.79	9.99E+99	.68
RECMSK1	QZ1(C)	003	-.31	213.22	02.94	01.38	9.99E+99	.68
RECMSK2	SK(AER)	001	.55	221.07	57.89	26.19	9.99E+99	.76
RECMSK2	VD(AER)	003	.35	221.07	47.37	21.43	9.99E+99	.76
RECMSK2	SK(EL-I)	002	.53	221.07	42.11	19.05	9.99E+99	.76
RECMSK2	QY1(E/F)	010	-.18	221.07	30.26	13.69	9.99E+99	.76
RECMSK2	VD(EL-I)	016	-.08	221.07	22.37	10.12	9.99E+99	.76
RECMSK3	SK(EL-I)	001	.74	138.66	41.33	29.81	9.99E+99	.75
RECMSK3	SK(AER)	002	.57	138.66	40.00	28.85	9.99E+99	.75
RECMSK3	VD(AER)	019	-.04	138.66	18.67	13.46	9.99E+99	.75
RECMSK3	QY1(E/F)	018	.09	138.66	16.00	11.54	9.99E+99	.75
RECMSK3	VD(EL-I)	003	-.56	138.66	04.00	02.88	9.99E+99	.75
RECMTH1	VD(EL-I)	001	-.88	140.92	82.95	58.86	3.55E+01	.88
RECMTH1	SK(EL-I)	007	.21	140.92	35.23	25.00	3.55E+01	.88
RECMTH1	PY1(E/F)	002	.41	140.92	04.55	03.23	3.55E+01	.88
RECMTH1	QY1(D)	003	.37	140.92	00.00	00.00	3.55E+01	.88
RECMTH2	VD(EL-I)	001	-.72	140.27	72.73	51.85	9.99E+99	.77
RECMTH2	SK(EL-I)	021	-.04	140.27	37.66	26.85	9.99E+99	.77
RECMTH2	PY1(E/F)	003	.35	140.27	09.09	06.48	9.99E+99	.77
RECMTH2	PZ1(D)	002	-.43	140.27	06.49	04.63	9.99E+99	.77
RELVBM2	PZ1(E/F)	001	-.60	100.03	29.09	29.08	9.99E+99	.55
RELVBM2	VD(AER)	002	.36	100.03	20.00	19.99	9.99E+99	.55
RELVBM2	QY1(E/F)	012	-.11	100.03	12.73	12.73	9.99E+99	.55
RELVBM2	PY1(E/F)	003	-.28	100.03	01.82	01.82	9.99E+99	.55
RELVMB1	VD(EL-I)	001	-.74	090.28	37.50	41.54	2.34E+00	.72
RELVMB1	QY1(D)	002	.52	090.28	13.89	15.39	2.34E+00	.72
RELVMB1	PY1(E/F)	003	.48	090.28	12.50	13.85	2.34E+00	.72
RELVMB2	VD(AER)	008	.23	176.01	42.67	24.24	2.88E+00	.75
RELVMB2	QY1(E/F)	010	.17	176.01	37.33	21.21	2.88E+00	.75
RELVMB2	SK(AER)	007	.24	176.01	33.33	18.94	2.88E+00	.75
RELVMB2	QZ1(D)	002	-.51	176.01	18.67	10.61	2.88E+00	.75
RELVMB2	SK(EL-I)	003	.49	176.01	06.67	03.79	2.88E+00	.75
RELVMB2	VD(EL-I)	001	-.56	176.01	00.00	00.00	2.88E+00	.75
RELVMB3	SK(AER)	001	.65	157.54	64.38	40.87	9.99E+99	.73
RELVMB3	VD(AER)	004	.24	157.54	28.77	18.26	9.99E+99	.73
RELVMB3	QY1(E/F)	013	-.14	157.54	17.81	11.31	9.99E+99	.73
RELVMB3	SK(EL-I)	002	.47	157.54	15.07	09.57	9.99E+99	.73
RELVMB3	VD(EL-I)	003	-.40	157.54	01.37	00.87	9.99E+99	.73
RELVMT2	PZ1(E/F)	001	-.59	094.42	29.63	31.38	2.00E+01	.54
RELVMT2	VD(AER)	002	.35	094.42	18.52	19.61	2.00E+01	.54
RELVMT2	QY1(E/F)	013	-.10	094.42	11.11	11.77	2.00E+01	.54
RELVMT2	QY1(D)	003	-.30	094.42	00.00	00.00	2.00E+01	.54
RELVMT3	SK(EL-I)	002	.50	163.78	46.38	28.32	9.99E+99	.69
RELVMT3	SK(AER)	001	.53	163.78	44.93	27.43	9.99E+99	.69
RELVMT3	VD(AER)	005	.28	163.78	24.64	15.04	9.99E+99	.69
RELVMT3	VD(EL-I)	019	-.06	163.78	18.84	11.50	9.99E+99	.69
RELVMT3	AW(AER)	003	.33	163.78	02.90	01.77	9.99E+99	.69
RELVSK1	SK(AER)	004	.23	173.08	28.85	16.67	5.47E+00	.52
RELVSK1	VD(AER)	011	.15	173.08	28.85	16.67	5.47E+00	.52
RELVSK1	SK(EL-I)	001	.40	173.08	26.92	15.55	5.47E+00	.52
RELVSK1	QY1(E/F)	016	-.10	173.08	17.31	10.00	5.47E+00	.52
RELVSK1	QZ1(D)	002	.31	173.08	03.85	02.22	5.47E+00	.52
RELVSK1	QZ1(C)	003	-.23	173.08	01.92	01.11	5.47E+00	.52
RELVSK2	SK(AER)	002	.34	173.78	42.62	24.53	9.99E+99	.61
RELVSK2	SK(EL-I)	001	.53	173.78	39.34	22.64	9.99E+99	.61
RELVSK2	VD(AER)	003	.31	173.78	36.07	20.76	9.99E+99	.61
RELVSK2	QY1(E/F)	006	-.20	173.78	19.67	11.32	9.99E+99	.61
RELVSK3	SK(AER)	001	.67	206.59	69.74	33.76	9.99E+99	.76
RELVSK3	VD(AER)	008	.18	206.59	40.79	19.74	9.99E+99	.76
RELVSK3	SK(EL-I)	002	.54	206.59	32.89	15.92	9.99E+99	.76
RELVSK3	QY1(E/F)	017	-.06	206.59	30.26	14.65	9.99E+99	.76
RELVSK3	VD(EL-I)	003	-.25	206.59	11.84	05.73	9.99E+99	.76
RELVTH1	VD(EL-I)	001	-.90	193.42	85.71	44.31	8.13E+01	.91
RELVTH1	SK(EL-I)	005	.32	193.42	37.36	19.32	8.13E+01	.91
RELVTH1	VD(AER)	003	-.41	193.42	24.18	12.50	8.13E+01	.91
RELVTH1	QY1(D)	002	.45	193.42	01.10	00.57	8.13E+01	.91
RELVTH2	VD(EL-I)	001	-.87	154.56	85.23	55.14	9.99E+99	.88
RELVTH2	SK(EL-I)	019	.13	154.56	38.64	25.00	9.99E+99	.88
RELVTH2	PZ1(D)	002	-.47	154.56	03.41	02.21	9.99E+99	.88
RELVTH2	QZ1(D)	003	-.43	154.56	02.27	01.47	9.99E+99	.88

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
RELVTH3	VD(EL-I)	002	-.41	125.47	41.82	33.33	9.99E+99	.55
RELVTH3	SK(EL-I)	022	-.06	125.47	21.82	17.39	9.99E+99	.55
RELVTH3	QZ1(D)	001	-.44	125.47	14.55	11.60	9.99E+99	.55
RELVTH3	PZ1(D)	003	-.26	125.47	03.64	02.90	9.99E+99	.55
REOUMB3	BW(AER)	009	-.13	102.36	14.29	13.96	9.99E+99	.42
REOUMB3	QY1(D)	001	-.36	102.36	14.29	13.96	9.99E+99	.42
REOUMB3	AW(AER)	022	.07	102.36	11.90	11.63	9.99E+99	.42
REOUMB3	QZ1(D)	002	-.23	102.36	04.76	04.65	9.99E+99	.42
REOUMB3	VD(AER)	003	.23	102.36	00.00	00.00	9.99E+99	.42
REOUMB1	QY1(D)	002	.37	136.81	28.07	20.52	2.51E+00	.57
REOUMB1	SK(AER)	004	.29	136.81	21.05	15.39	2.51E+00	.57
REOUMB1	QY1(E/F)	021	.05	136.81	15.79	11.54	2.51E+00	.57
REOUMB1	VD(AER)	022	-.05	136.81	15.79	11.54	2.51E+00	.57
REOUMB1	VD(EL-I)	001	-.53	136.81	07.02	05.13	2.51E+00	.57
REOUMB1	SK(EL-I)	003	.37	136.81	00.00	00.00	2.51E+00	.57
REOUMB2	VD(AER)	020	.12	198.65	42.67	21.48	2.57E+00	.75
REOUMB2	SK(AER)	004	.41	198.65	40.00	20.14	2.57E+00	.75
REOUMB2	QY1(E/F)	022	.11	198.65	34.67	17.45	2.57E+00	.75
REOUMB2	QY1(D)	006	.37	198.65	32.00	16.11	2.57E+00	.75
REOUMB2	SK(EL-I)	001	.53	198.65	12.00	06.04	2.57E+00	.75
REOUMB2	PY1(E/F)	003	.47	198.65	05.33	02.68	2.57E+00	.75
REOUMB2	VD(EL-I)	002	-.52	198.65	01.33	00.67	2.57E+00	.75
REOUMB3	VD(AER)	002	.42	228.58	62.34	27.27	1.41E+02	.77
REOUMB3	SK(AER)	005	.39	228.58	53.25	23.30	1.41E+02	.77
REOUMB3	QY1(E/F)	026	.02	228.58	48.05	21.02	1.41E+02	.77
REOUMB3	SK(EL-I)	001	.53	228.58	20.78	09.09	1.41E+02	.77
REOUMB3	VD(EL-I)	003	-.41	228.58	05.19	02.27	1.41E+02	.77
REOUMT3	VD(AER)	001	.36	169.13	38.18	22.57	9.99E+99	.55
REOUMT3	SK(AER)	008	.18	169.13	32.73	19.35	9.99E+99	.55
REOUMT3	QY1(E/F)	009	-.16	169.13	21.82	12.90	9.99E+99	.55
REOUMT3	SK(EL-I)	002	.35	169.13	20.00	11.83	9.99E+99	.55
REOUMT3	AW(EL-I)	003	-.27	169.13	03.64	02.15	9.99E+99	.55
REOUSK1	SK(AER)	002	.59	202.55	57.69	28.48	9.99E+99	.78
REOUSK1	VD(AER)	011	.18	202.55	42.31	20.89	9.99E+99	.78
REOUSK1	QY1(E/F)	024	-.03	202.55	32.05	15.82	9.99E+99	.78
REOUSK1	SK(EL-I)	001	.63	202.55	29.49	14.56	9.99E+99	.78
REOUSK1	VD(EL-I)	003	-.47	202.55	05.13	02.53	9.99E+99	.78
REOUSK2	SK(EL-I)	001	.58	195.78	45.07	23.02	9.99E+99	.71
REOUSK2	SK(AER)	002	.43	195.78	42.25	21.58	9.99E+99	.71
REOUSK2	VD(AER)	008	.21	195.78	36.62	18.70	9.99E+99	.71
REOUSK2	QY1(E/F)	022	-.05	195.78	23.94	12.23	9.99E+99	.71
REOUSK2	QZ1(C)	003	-.31	195.78	04.23	02.16	9.99E+99	.71
REOUSK3	SK(AER)	001	.62	225.63	66.67	29.55	9.99E+99	.78
REOUSK3	VD(AER)	003	.33	225.63	52.56	23.29	9.99E+99	.78
REOUSK3	QY1(E/F)	014	-.11	225.63	37.18	16.48	9.99E+99	.78
REOUSK3	SK(EL-I)	002	.54	225.63	34.62	15.34	9.99E+99	.78
REOUTH1	VD(EL-I)	001	-.83	186.04	84.88	45.62	9.99E+99	.86
REOUTH1	SK(EL-I)	015	.12	186.04	40.70	21.88	9.99E+99	.86
REOUTH1	VD(AER)	007	-.20	186.04	18.60	10.00	9.99E+99	.86
REOUTH1	PY1(A/B)	002	.35	186.04	04.65	02.50	9.99E+99	.86
REOUTH1	QY1(D)	003	.28	186.04	01.16	00.62	9.99E+99	.86
REOUTH2	VD(EL-I)	001	-.90	189.02	89.01	47.09	9.99E+99	.91
REOUTH2	SK(EL-I)	005	.29	189.02	39.56	20.93	9.99E+99	.91
REOUTH2	VD(AER)	003	-.34	189.02	20.88	11.05	9.99E+99	.91
REOUTH2	PY1(E/F)	002	.35	189.02	02.20	01.16	9.99E+99	.91
REOUTH3	VD(EL-I)	001	-.69	148.64	75.00	50.46	9.99E+99	.72
REOUTH3	SK(EL-I)	023	.04	148.64	36.11	24.29	9.99E+99	.72
REOUTH3	QZ1(D)	003	-.27	148.64	02.78	01.87	9.99E+99	.72
REOUTH3	SK(OG-I)	002	-.29	148.64	02.78	01.87	9.99E+99	.72

**Results for the mean value of the endpoints for the CB2 source term**

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
AEVAC	VD(EL-I)	003	-.48	125.37	33.80	26.96	4.98E+00	.71
AEVAC	PZ1(E/F)	001	-.68	125.37	29.58	23.59	4.98E+00	.71
AEVAC	SK(EL-I)	025	.04	125.37	14.08	11.23	4.98E+00	.71
AEVAC	QZ1(D)	002	-.52	125.37	09.86	07.86	4.98E+00	.71
AFBIBEE	VD(AER)	007	-.16	207.50	45.00	21.69	5.60E+00	.40
AFBIBEE	QY1(E/F)	028	-.01	207.50	42.50	20.48	5.60E+00	.40
AFBIBEE	SK(AER)	022	-.06	207.50	22.50	10.84	5.60E+00	.40
AFBIBEE	PZ1(C)	003	.19	207.50	07.50	03.61	5.60E+00	.40
AFBIBEE	SK(OG-I)	001	.22	207.50	02.50	01.20	5.60E+00	.40
AFBIBEE	PZ1(E/F)	002	.21	207.50	00.00	00.00	5.60E+00	.40
AFBIGRA	QY1(E/F)	028	.00	197.60	36.59	18.52	5.55E+00	.41
AFBIGRA	VD(AER)	015	-.12	197.60	36.59	18.52	5.55E+00	.41
AFBIGRA	QY1(D)	014	-.14	197.60	26.83	13.58	5.55E+00	.41
AFBIGRA	PZ1(C)	003	.21	197.60	07.32	03.70	5.55E+00	.41
AFBIGRA	SK(OG-I)	001	.25	197.60	04.88	02.47	5.55E+00	.41
AFBIGRA	PZ1(E/F)	002	.24	197.60	02.44	01.23	5.55E+00	.41
AFBIMIL	VD(EL-I)	001	-.57	206.11	72.73	35.29	5.31E+00	.66
AFBIMIL	SK(EL-I)	020	-.05	206.11	43.94	21.32	5.31E+00	.66
AFBIMIL	VD(AER)	003	-.26	206.11	25.76	12.50	5.31E+00	.66
AFBIMIL	QY1(E/F)	013	.11	206.11	21.21	10.29	5.31E+00	.66
AFBIMIL	AW(AER)	002	.27	206.11	01.52	00.74	5.31E+00	.66
AFBIVEG	VD(EL-I)	001	-.45	182.70	58.62	32.09	3.86E+00	.58
AFBIVEG	SK(EL-I)	021	-.07	182.70	37.93	20.76	3.86E+00	.58
AFBIVEG	VD(AER)	003	-.25	182.70	22.41	12.27	3.86E+00	.58
AFBIVEG	PZ1(E/F)	002	.29	182.70	01.72	00.94	3.86E+00	.58
AFBTBEE	QY1(D)	005	-.25	176.00	26.00	14.77	3.82E+00	.50
AFBTBEE	QY1(E/F)	022	-.05	176.00	24.00	13.64	3.82E+00	.50
AFBTBEE	VD(AER)	024	-.04	176.00	20.00	11.36	3.82E+00	.50
AFBTBEE	AW(AER)	002	.29	176.00	14.00	07.95	3.82E+00	.50
AFBTBEE	PZ1(E/F)	001	.35	176.00	08.00	04.55	3.82E+00	.50
AFBTBEE	SK(OG-I)	003	.28	176.00	06.00	03.41	3.82E+00	.50
AFBTGRA	QY1(E/F)	027	-.02	190.45	35.71	18.75	5.32E+00	.42
AFBTGRA	VD(AER)	015	-.10	190.45	33.33	17.50	5.32E+00	.42
AFBTGRA	QY1(D)	011	-.16	190.45	26.19	13.75	5.32E+00	.42
AFBTGRA	PZ1(C)	003	.22	190.45	07.14	03.75	5.32E+00	.42
AFBTGRA	SK(OG-I)	002	.26	190.45	07.14	03.75	5.32E+00	.42
AFBTGRA	PZ1(E/F)	001	.26	190.45	02.38	01.25	5.32E+00	.42
AFBTMIL	AW(AER)	001	.47	169.83	39.68	23.36	3.49E+00	.63
AFBTMIL	BW(AER)	012	.15	169.83	25.40	14.96	3.49E+00	.63
AFBTMIL	VD(EL-I)	003	-.37	169.83	22.22	13.08	3.49E+00	.63
AFBTMIL	PZ1(E/F)	002	.42	169.83	09.52	05.61	3.49E+00	.63
AFBTVEG	AW(AER)	002	.26	152.28	27.27	17.91	2.99E+00	.44
AFBTVEG	BW(AER)	019	.07	152.28	18.18	11.94	2.99E+00	.44
AFBTVEG	PZ1(E/F)	001	.39	152.28	13.64	08.96	2.99E+00	.44
AFBTVEG	PZ1(C)	003	.25	152.28	09.09	05.97	2.99E+00	.44
AIOD	VD(EL-I)	001	-.94	163.18	90.53	55.48	2.72E+01	.95
AIOD	SK(EL-I)	024	.03	163.18	44.21	27.09	2.72E+01	.95
AIOD	QZ1(D)	002	-.63	163.18	02.11	01.29	2.72E+01	.95
AIOD	PZ1(D)	003	-.49	163.18	01.05	00.64	2.72E+01	.95
ARELIN	VD(EL-I)	003	-.48	125.37	33.80	26.96	4.98E+00	.71
ARELIN	PZ1(E/F)	001	-.68	125.37	29.58	23.59	4.98E+00	.71
ARELIN	SK(EL-I)	025	.04	125.37	14.08	11.23	4.98E+00	.71
ARELIN	QZ1(D)	002	-.52	125.37	09.86	07.86	4.98E+00	.71
ARELTIM	VD(AER)	001	.59	228.00	66.67	29.24	6.91E+01	.75
ARELTIM	QY1(E/F)	008	-.17	228.00	48.00	21.05	6.91E+01	.75
ARELTIM	SK(AER)	027	-.01	228.00	28.00	12.28	6.91E+01	.75
ARELTIM	AW(AER)	003	.34	228.00	16.00	07.02	6.91E+01	.75
ARELTIM	PZ1(E/F)	002	-.40	228.00	00.00	00.00	6.91E+01	.75
ASHEL	VD(EL-I)	002	-.56	122.24	38.89	31.81	4.32E+00	.72
ASHEL	SK(EL-I)	026	.02	122.24	15.28	12.50	4.32E+00	.72
ASHEL	QZ1(D)	001	-.60	122.24	13.89	11.36	4.32E+00	.72
ASHEL	PZ1(D)	003	-.39	122.24	04.17	03.41	4.32E+00	.72
CACAE1	PZ1(E/F)	001	-.90	123.55	82.35	66.65	5.23E+00	.85
CACAE1	QZ1(E/F)	003	-.44	123.55	07.06	05.71	5.23E+00	.85
CACAE1	QZ1(D)	002	-.48	123.55	03.53	02.86	5.23E+00	.85
CACAE2	PZ1(E/F)	001	-.77	183.14	50.65	27.66	8.52E+00	.77
CACAE2	VD(AER)	004	-.37	183.14	35.06	19.14	8.52E+00	.77
CACAE2	QY1(E/F)	024	-.02	183.14	25.97	14.18	8.52E+00	.77
CACAE2	QZ1(E/F)	003	-.40	183.14	06.49	03.54	8.52E+00	.77
CACAE2	QZ1(D)	002	-.45	183.14	03.90	02.13	8.52E+00	.77

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
CACAE3	VD(AER)	001	-.55	246.76	74.03	30.00	1.41E+01	.77
CACAE3	QY1(E/F)	028	.00	246.76	53.25	21.58	1.41E+01	.77
CACAE3	SK(AER)	023	-.02	246.76	29.87	12.10	1.41E+01	.77
CACAE3	PZ1(E/F)	002	-.52	246.76	15.58	06.31	1.41E+01	.77
CACAE3	QZ1(D)	003	-.37	246.76	01.30	00.53	1.41E+01	.77
CACAE4	VD(AER)	001	-.65	287.07	81.18	28.28	2.14E+01	.85
CACAE4	QY1(E/F)	027	.02	287.07	63.53	22.13	2.14E+01	.85
CACAE4	SK(AER)	024	.03	287.07	31.76	11.06	2.14E+01	.85
CACAE4	AW(AER)	002	-.32	287.07	11.76	04.10	2.14E+01	.85
CACAE4	PZ1(D)	003	-.29	287.07	01.18	00.41	2.14E+01	.85
CAIOD1	VD(EL-I)	001	-.70	165.38	62.82	37.99	8.57E+00	.78
CAIOD1	SK(EL-I)	025	.05	165.38	30.77	18.61	8.57E+00	.78
CAIOD1	PZ1(E/F)	002	-.63	165.38	25.64	15.50	8.57E+00	.78
CAIOD1	QZ1(D)	003	-.36	165.38	02.56	01.55	8.57E+00	.78
CAIOD2	VD(EL-I)	001	-.87	176.39	89.89	50.96	4.63E+01	.89
CAIOD2	SK(EL-I)	028	.00	176.39	46.07	26.12	4.63E+01	.89
CAIOD2	PZ1(E/F)	002	-.36	176.39	03.37	01.91	4.63E+01	.89
CAIOD2	QZ1(D)	003	-.35	176.39	01.12	00.63	4.63E+01	.89
CAIOD3	VD(EL-I)	001	-.93	181.89	95.74	52.64	1.16E+02	.94
CAIOD3	SK(EL-I)	024	-.04	181.89	48.94	26.91	1.16E+02	.94
CAIOD3	QY1(E/F)	003	-.28	181.89	09.57	05.26	1.16E+02	.94
CAIOD3	AW(EL-I)	002	-.37	181.89	02.13	01.17	1.16E+02	.94
CAIOD4	VD(EL-I)	001	-.97	187.62	97.94	52.20	4.25E+02	.97
CAIOD4	SK(EL-I)	009	-.17	187.62	52.58	28.02	4.25E+02	.97
CAIOD4	QY1(E/F)	003	-.25	187.62	11.34	06.04	4.25E+02	.97
CAIOD4	AW(EL-I)	002	-.49	187.62	02.06	01.10	4.25E+02	.97
CDCMBM	QY1(A/B)	005	.21	131.37	23.53	17.91	2.26E+00	.51
CDCMBM	AW(AER)	002	.32	131.37	19.61	14.93	2.26E+00	.51
CDCMBM	QY1(C)	017	.11	131.37	19.61	14.93	2.26E+00	.51
CDCMBM	QY1(D)	007	.20	131.37	15.69	11.94	2.26E+00	.51
CDCMBM	PZ1(E/F)	001	.39	131.37	13.73	10.45	2.26E+00	.51
CDCMBM	PY1(E/F)	003	.29	131.37	05.88	04.48	2.26E+00	.51
CDCMED	QY1(A/B)	005	.23	121.16	23.08	19.05	2.24E+00	.52
CDCMED	QY1(C)	017	.10	121.16	19.23	15.87	2.24E+00	.52
CDCMED	AW(AER)	002	.32	121.16	17.31	14.29	2.24E+00	.52
CDCMED	QY1(D)	007	.20	121.16	13.46	11.11	2.24E+00	.52
CDCMED	PZ1(E/F)	001	.39	121.16	11.54	09.52	2.24E+00	.52
CDCMED	PY1(E/F)	003	.29	121.16	05.77	04.76	2.24E+00	.52
CDCMTH	VD(EL-I)	001	-.50	124.65	32.31	25.92	2.38E+00	.65
CDCMTH	SK(EL-I)	026	.01	124.65	18.46	14.81	2.38E+00	.65
CDCMTH	QY1(A/B)	005	.25	124.65	13.85	11.11	2.38E+00	.65
CDCMTH	AW(AER)	002	.42	124.65	12.31	09.88	2.38E+00	.65
CDCMTH	AW(EL-I)	003	-.34	124.65	10.77	08.64	2.38E+00	.65
CDLVBM	AW(AER)	001	.54	194.04	65.67	33.84	5.25E+00	.67
CDLVBM	BW(AER)	009	.10	194.04	41.79	21.54	5.25E+00	.67
CDLVBM	VD(AER)	002	.31	194.04	22.39	11.54	5.25E+00	.67
CDLVBM	QZ1(D)	003	-.27	194.04	04.48	02.31	5.25E+00	.67
CDLVED	AW(AER)	001	.55	191.17	66.18	34.62	4.65E+00	.68
CDLVED	BW(AER)	009	.09	191.17	42.65	22.31	4.65E+00	.68
CDLVED	VD(AER)	002	.32	191.17	20.59	10.77	4.65E+00	.68
CDLVED	QZ1(D)	003	-.28	191.17	04.41	02.31	4.65E+00	.68
CDLVTH	AW(AER)	001	.39	145.15	53.23	36.67	2.23E+00	.62
CDLVTH	BW(AER)	023	-.03	145.15	40.32	27.78	2.23E+00	.62
CDLVTH	VD(AER)	003	.33	145.15	09.68	06.67	2.23E+00	.62
CDLVTH	VD(EL-I)	002	-.33	145.15	06.45	04.44	2.23E+00	.62
CGCAE1	VD(AER)	001	.74	272.74	86.36	31.66	1.52E+02	.88
CGCAE1	QY1(E/F)	013	-.06	272.74	68.18	25.00	1.52E+02	.88
CGCAE1	SK(AER)	014	-.06	272.74	35.23	12.92	1.52E+02	.88
CGCAE1	AW(AER)	003	.36	272.74	06.82	02.50	1.52E+02	.88
CGCAE1	PZ1(E/F)	002	-.45	272.74	00.00	00.00	1.52E+02	.88
CGCAE2	VD(AER)	001	.71	277.04	83.91	30.29	3.77E+01	.87
CGCAE2	QY1(E/F)	013	-.09	277.04	66.67	24.07	3.77E+01	.87
CGCAE2	SK(AER)	014	-.08	277.04	33.33	12.03	3.77E+01	.87
CGCAE2	QZ1(D)	003	-.39	277.04	06.90	02.49	3.77E+01	.87
CGCAE2	PZ1(E/F)	002	-.43	277.04	00.00	00.00	3.77E+01	.87
CGCAE3	VD(AER)	001	.50	239.50	53.95	22.53	2.14E+01	.76
CGCAE3	QY1(E/F)	016	-.05	239.50	42.11	17.58	2.14E+01	.76
CGCAE3	AW(AER)	002	.49	239.50	35.53	14.84	2.14E+01	.76
CGCAE3	QZ1(D)	003	-.38	239.50	09.21	03.85	2.14E+01	.76
CGCAE4	AW(AER)	001	.57	162.67	77.61	47.71	7.54E+00	.67
CGCAE4	BW(AER)	010	.09	162.67	52.24	32.11	7.54E+00	.67
CGCAE4	PZ1(E/F)	002	.40	162.67	13.43	08.26	7.54E+00	.67
CGCAE4	QY1(D)	003	-.19	162.67	00.00	00.00	7.54E+00	.67



ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
CGIOD1	VD(EL-I)	001	.88	167.77	88.89	52.98	3.25E+01	.90
CGIOD1	SK(EL-I)	021	.07	167.77	46.67	27.82	3.25E+01	.90
CGIOD1	PZ1(E/F)	002	-.46	167.77	02.22	01.32	3.25E+01	.90
CGIOD1	QZ1(D)	003	-.39	167.77	02.22	01.32	3.25E+01	.90
CGIOD2	VD(EL-I)	001	.45	124.47	44.90	36.07	6.59E+00	.49
CGIOD2	SK(EL-I)	018	-.07	124.47	16.33	13.12	6.59E+00	.49
CGIOD2	PZ1(D)	002	-.41	124.47	12.24	09.83	6.59E+00	.49
CGIOD2	QZ1(D)	003	-.28	124.47	04.08	03.28	6.59E+00	.49
CGIOD3	PY1(A/B)	002	-.28	083.77	13.51	16.13	5.00E+00	.37
CGIOD3	VD(EL-I)	012	-.14	083.77	13.51	16.13	5.00E+00	.37
CGIOD3	PZ1(A/B)	001	-.29	083.77	08.11	09.68	5.00E+00	.37
CGIOD3	QY1(E/F)	003	-.23	083.77	05.41	06.46	5.00E+00	.37
CGIOD4	VD(EL-I)	001	-.78	185.14	81.48	44.01	2.62E+01	.81
CGIOD4	SK(EL-I)	019	.05	185.14	38.27	20.67	2.62E+01	.81
CGIOD4	QZ1(D)	002	.43	185.14	07.41	04.00	2.62E+01	.81
CGIOD4	AW(EL-I)	003	.29	185.14	03.70	02.00	2.62E+01	.81
DECMB1	VD(EL-I)	002	.68	111.08	40.74	36.68	6.23E+00	.81
DECMB1	PZ1(E/F)	001	-.76	111.08	30.86	27.78	6.23E+00	.81
DECMB1	SK(EL-I)	019	.07	111.08	22.22	20.00	6.23E+00	.81
DECMB1	QZ1(D)	003	-.54	111.08	06.17	05.55	6.23E+00	.81
DECMB2	PZ1(E/F)	001	-.78	105.39	51.35	48.72	5.54E+00	.74
DECMB2	QZ1(D)	003	-.53	105.39	09.46	08.98	5.54E+00	.74
DECMB2	PY1(E/F)	002	-.59	105.39	05.41	05.13	5.54E+00	.74
DECMB3	VD(AER)	003	.44	186.97	43.48	23.26	2.92E+00	.69
DECMB3	QY1(E/F)	013	-.12	186.97	37.68	20.15	2.92E+00	.69
DECMB3	QZ1(D)	001	-.54	186.97	26.09	13.95	2.92E+00	.69
DECMB3	PZ1(E/F)	002	-.50	186.97	02.90	01.55	2.92E+00	.69
DECMSK1	SK(EL-I)	001	.90	172.21	82.22	47.74	6.58E+02	.90
DECMSK1	VD(EL-I)	002	-.49	172.21	26.67	15.49	6.58E+02	.90
DECMSK1	SK(AER)	003	.44	172.21	21.11	12.26	6.58E+02	.90
DECMSK1	VD(AER)	005	.26	172.21	20.00	11.61	6.58E+02	.90
DECMSK2	SK(EL-I)	001	.89	153.93	68.54	44.53	4.32E+02	.89
DECMSK2	SK(AER)	003	.61	153.93	28.09	18.25	4.32E+02	.89
DECMSK2	VD(AER)	006	.28	153.93	19.10	12.41	4.32E+02	.89
DECMSK2	VD(EL-I)	002	-.64	153.93	14.61	09.49	4.32E+02	.89
DECMSK3	SK(EL-I)	001	.85	163.23	50.57	30.98	3.38E+02	.87
DECMSK3	SK(AER)	002	.73	163.23	44.83	27.46	3.38E+02	.87
DECMSK3	VD(AER)	010	.19	163.23	24.14	14.79	3.38E+02	.87
DECMSK3	QY1(E/F)	009	-.19	163.23	17.24	10.56	3.38E+02	.87
DECMSK3	VD(EL-I)	003	-.66	163.23	08.05	04.93	3.38E+02	.87
DECMTH1	VD(EL-I)	001	-.65	156.61	55.26	35.29	7.31E+00	.76
DECMTH1	PZ1(E/F)	002	-.65	156.61	28.95	18.49	7.31E+00	.76
DECMTH1	SK(EL-I)	025	.06	156.61	26.32	16.81	7.31E+00	.76
DECMTH1	QZ1(D)	003	-.41	156.61	02.63	01.68	7.31E+00	.76
DECMTH2	VD(EL-I)	001	-.87	161.78	84.27	52.09	1.39E+01	.89
DECMTH2	SK(EL-I)	027	.03	161.78	41.57	25.70	1.39E+01	.89
DECMTH2	PZ1(E/F)	002	-.51	161.78	05.62	03.47	1.39E+01	.89
DECMTH2	QZ1(D)	003	-.42	161.78	01.12	00.69	1.39E+01	.89
DECMTH3	VD(EL-I)	001	-.90	154.43	91.11	59.00	1.79E+01	.90
DECMTH3	SK(EL-I)	028	.00	154.43	45.56	29.50	1.79E+01	.90
DECMTH3	AW(EL-I)	002	-.27	154.43	02.22	01.44	1.79E+01	.90
DECMTH3	QZ1(D)	003	-.26	154.43	01.11	00.72	1.79E+01	.90
DLCMB2	VD(AER)	001	.80	303.15	85.26	28.12	1.54E+01	.95
DLCMB2	QY1(E/F)	012	.19	303.15	75.79	25.00	1.54E+01	.95
DLCMB2	QY1(D)	008	.34	303.15	40.00	13.19	1.54E+01	.95
DLCMB2	SK(AER)	014	-.18	303.15	32.63	10.76	1.54E+01	.95
DLCMB2	QZ1(D)	002	-.58	303.15	10.53	03.47	1.54E+01	.95
DLCMB2	PY1(E/F)	003	.50	303.15	02.11	00.70	1.54E+01	.95
DLCMB3	VD(AER)	001	.59	272.26	73.49	26.99	1.25E+01	.83
DLCMB3	QY1(E/F)	023	.02	272.26	60.24	22.13	1.25E+01	.83
DLCMB3	AW(AER)	002	.43	272.26	19.28	07.08	1.25E+01	.83
DLCMB3	QZ1(D)	003	-.37	272.26	08.43	03.10	1.25E+01	.83
DLCMB4	AW(AER)	001	.56	150.82	65.57	43.48	4.14E+00	.61
DLCMB4	BW(AER)	005	.19	150.82	39.34	26.08	4.14E+00	.61
DLCMB4	PZ1(E/F)	002	.42	150.82	14.75	09.78	4.14E+00	.61
DLCMB4	QZ1(A/B)	003	.21	150.82	01.64	01.09	4.14E+00	.61
DLCMED2	VD(AER)	001	.78	301.05	84.21	27.97	1.43E+01	.95
DLCMED2	QY1(E/F)	012	.19	301.05	75.79	25.18	1.43E+01	.95
DLCMED2	QY1(D)	008	.32	301.05	40.00	13.29	1.43E+01	.95
DLCMED2	SK(AER)	013	-.18	301.05	32.63	10.84	1.43E+01	.95
DLCMED2	QZ1(D)	002	-.57	301.05	10.53	03.50	1.43E+01	.95
DLCMED2	PY1(E/F)	003	.48	301.05	03.16	01.05	1.43E+01	.95

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
DLCMED3	VD(AER)	001	.59	271.05	73.49	27.11	1.16E+01	.83
DLCMED3	QY1(E/F)	025	.02	271.05	60.24	22.22	1.16E+01	.83
DLCMED3	AW(AER)	002	.43	271.05	19.28	07.11	1.16E+01	.83
DLCMED3	QZ1(D)	003	-.37	271.05	08.43	03.11	1.16E+01	.83
DLCMED4	AW(AER)	001	.56	145.90	65.57	44.94	4.16E+00	.61
DLCMED4	BW(AER)	004	.19	145.90	37.70	25.84	4.16E+00	.61
DLCMED4	PZ1(E/F)	002	.41	145.90	14.75	10.11	4.16E+00	.61
DLCMED4	QZ1(A/B)	003	.20	145.90	00.00	00.00	4.16E+00	.61
DLCMTH2	VD(AER)	001	.67	242.35	69.41	28.64	7.99E+00	.85
DLCMTH2	QY1(E/F)	020	-.07	242.35	58.82	24.27	7.99E+00	.85
DLCMTH2	QY1(D)	019	.07	242.35	30.59	12.62	7.99E+00	.85
DLCMTH2	SK(AER)	012	-.17	242.35	24.71	10.20	7.99E+00	.85
DLCMTH2	QZ1(D)	002	-.53	242.35	16.47	06.80	7.99E+00	.85
DLCMTH2	PZ1(E/F)	003	-.47	242.35	01.18	00.49	7.99E+00	.85
DLCMTH3	VD(AER)	001	.59	245.14	67.07	27.36	8.47E+00	.82
DLCMTH3	QY1(E/F)	028	.00	245.14	53.66	21.89	8.47E+00	.82
DLCMTH3	AW(AER)	002	.45	245.14	19.51	07.96	8.47E+00	.82
DLCMTH3	QZ1(D)	003	-.42	245.14	10.98	04.48	8.47E+00	.82
DLCMTH4	AW(AER)	001	.61	128.81	59.09	45.87	3.47E+00	.66
DLCMTH4	BW(AER)	004	.26	128.81	31.82	24.70	3.47E+00	.66
DLCMTH4	VD(EL-I)	003	-.33	128.81	12.12	09.41	3.47E+00	.66
DLCMTH4	PZ1(E/F)	002	.42	128.81	10.61	08.24	3.47E+00	.66
DLLVBM2	VD(AER)	001	.72	279.34	85.06	30.45	3.33E+01	.87
DLLVBM2	QY1(E/F)	012	-.11	279.34	66.67	23.87	3.33E+01	.87
DLLVBM2	SK(AER)	015	-.08	279.34	33.33	11.93	3.33E+01	.87
DLLVBM2	QZ1(D)	003	-.33	279.34	05.75	02.06	3.33E+01	.87
DLLVBM2	PZ1(E/F)	002	-.43	279.34	00.00	00.00	3.33E+01	.87
DLLVBM3	VD(AER)	001	.49	235.12	52.70	22.41	1.72E+01	.74
DLLVBM3	QY1(E/F)	016	-.05	235.12	40.54	17.24	1.72E+01	.74
DLLVBM3	AW(AER)	002	.49	235.12	37.84	16.09	1.72E+01	.74
DLLVBM3	BW(AER)	014	.06	235.12	24.32	10.34	1.72E+01	.74
DLLVBM3	QZ1(D)	003	-.31	235.12	06.76	02.88	1.72E+01	.74
DLLVBM4	AW(AER)	001	.60	157.34	77.94	49.54	6.87E+00	.68
DLLVBM4	BW(AER)	006	.14	157.34	50.00	31.78	6.87E+00	.68
DLLVBM4	PZ1(E/F)	002	.37	157.34	11.76	07.47	6.87E+00	.68
DLLVBM4	QY1(D)	003	-.21	157.34	00.00	00.00	6.87E+00	.68
DLLVED2	VD(AER)	001	.71	278.18	83.91	30.16	1.77E+01	.87
DLLVED2	QY1(E/F)	012	-.12	278.18	65.52	23.55	1.77E+01	.87
DLLVED2	SK(AER)	016	-.07	278.18	33.33	11.98	1.77E+01	.87
DLLVED2	QZ1(D)	003	-.36	278.18	06.90	02.48	1.77E+01	.87
DLLVED2	PZ1(E/F)	002	-.43	278.18	00.00	00.00	1.77E+01	.87
DLLVED3	VD(AER)	001	.50	236.47	52.70	22.29	1.15E+01	.74
DLLVED3	QY1(E/F)	013	-.06	236.47	40.54	17.14	1.15E+01	.74
DLLVED3	AW(AER)	002	.48	236.47	37.84	16.00	1.15E+01	.74
DLLVED3	BW(AER)	016	.05	236.47	24.32	10.28	1.15E+01	.74
DLLVED3	QZ1(D)	003	-.31	236.47	06.76	02.86	1.15E+01	.74
DLLVED4	AW(AER)	001	.61	155.87	79.41	50.95	6.13E+00	.68
DLLVED4	BW(AER)	006	.15	155.87	50.00	32.08	6.13E+00	.68
DLLVED4	PZ1(E/F)	002	.38	155.87	11.76	07.54	6.13E+00	.68
DLLVED4	QY1(D)	003	-.21	155.87	00.00	00.00	6.13E+00	.68
DLLVTH2	VD(AER)	001	.58	257.90	71.05	27.55	6.66E+00	.76
DLLVTH2	QY1(E/F)	009	-.16	257.90	55.26	21.43	6.66E+00	.76
DLLVTH2	QZ1(D)	002	-.43	257.90	10.53	04.08	6.66E+00	.76
DLLVTH2	PZ1(D)	003	-.38	257.90	02.63	01.02	6.66E+00	.76
DLLVTH3	VD(AER)	001	.45	200.00	42.86	21.43	3.62E+00	.63
DLLVTH3	AW(AER)	002	.33	200.00	34.92	17.46	3.62E+00	.63
DLLVTH3	QY1(E/F)	008	-.15	200.00	28.57	14.29	3.62E+00	.63
DLLVTH3	BW(AER)	024	-.02	200.00	23.81	11.90	3.62E+00	.63
DLLVTH3	QZ1(D)	003	-.29	200.00	06.35	03.17	3.62E+00	.63
DLLVTH4	AW(AER)	001	.51	168.08	52.78	31.40	4.59E+00	.72
DLLVTH4	BW(AER)	024	.03	168.08	38.89	23.14	4.59E+00	.72
DLLVTH4	VD(EL-I)	002	-.50	168.08	27.78	16.53	4.59E+00	.72
DLLVTH4	PZ1(E/F)	003	.37	168.08	06.94	04.13	4.59E+00	.72
PECMMB	SK(EL-I)	001	.88	109.42	74.12	67.74	9.99E+99	.85
PECMMB	VD(EL-I)	002	-.61	109.42	12.94	11.83	9.99E+99	.85
PECMMB	QZ1(D)	003	-.31	109.42	01.18	01.08	9.99E+99	.85
PECMMT	SK(EL-I)	001	.89	140.70	81.40	57.85	9.99E+99	.86
PECMMT	VD(EL-I)	002	-.55	140.70	19.77	14.05	9.99E+99	.86
PECMMT	SK(AER)	003	.34	140.70	13.95	09.91	9.99E+99	.86
PECMSK	SK(EL-I)	001	.89	140.70	81.40	57.85	9.99E+99	.86
PECMSK	VD(EL-I)	002	-.55	140.70	19.77	14.05	9.99E+99	.86
PECMSK	SK(AER)	003	.34	140.70	13.95	09.91	9.99E+99	.86

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
PECMTH	VD(AER)	005	-.18	226.09	42.03	18.59	9.99E+99	.69
PECMTH	QY1(E/F)	008	-.15	226.09	37.68	16.67	9.99E+99	.69
PECMTH	VD(EL-I)	003	-.46	226.09	34.78	15.38	9.99E+99	.69
PECMTH	PZ1(E/F)	001	-.57	226.09	28.99	12.82	9.99E+99	.69
PECMTH	PY1(E/F)	002	-.48	226.09	05.80	02.57	9.99E+99	.69
PLCMBM	QY1(A/B)	005	.21	131.37	23.53	17.91	2.26E+00	.51
PLCMBM	AW(AER)	002	.32	131.37	19.61	14.93	2.26E+00	.51
PLCMBM	QY1(C)	017	.11	131.37	19.61	14.93	2.26E+00	.51
PLCMBM	QY1(D)	007	.20	131.37	15.69	11.94	2.26E+00	.51
PLCMBM	PZ1(E/F)	001	.39	131.37	13.73	10.45	2.26E+00	.51
PLCMBM	PY1(E/F)	003	.29	131.37	05.88	04.48	2.26E+00	.51
PLCMMT	QY1(A/B)	005	.23	127.44	23.53	18.46	2.24E+00	.51
PLCMMT	QY1(C)	018	.10	127.44	19.61	15.39	2.24E+00	.51
PLCMMT	AW(AER)	002	.31	127.44	17.65	13.85	2.24E+00	.51
PLCMMT	QY1(D)	007	.20	127.44	15.69	12.31	2.24E+00	.51
PLCMMT	PZ1(E/F)	001	.39	127.44	11.76	09.23	2.24E+00	.51
PLCMMT	PY1(E/F)	003	.28	127.44	05.88	04.61	2.24E+00	.51
PLCMTH	VD(EL-I)	001	-.50	124.65	32.31	25.92	2.38E+00	.65
PLCMTH	SK(EL-I)	026	.01	124.65	18.46	14.81	2.38E+00	.65
PLCMTH	QY1(A/B)	005	.25	124.65	13.85	11.11	2.38E+00	.65
PLCMTH	AW(AER)	002	.42	124.65	12.31	09.88	2.38E+00	.65
PLCMTH	AW(EL-I)	003	-.34	124.65	10.77	08.64	2.38E+00	.65
PLLVBM	AW(AER)	001	.55	188.07	65.67	34.92	5.24E+00	.67
PLLVBM	BW(AER)	009	.11	188.07	41.79	22.22	5.24E+00	.67
PLLVBM	VD(AER)	002	.30	188.07	20.90	11.11	5.24E+00	.67
PLLVBM	QZ1(D)	003	-.27	188.07	04.48	02.38	5.24E+00	.67
PLLVMT	AW(AER)	001	.54	190.94	68.18	35.71	4.02E+00	.66
PLLVMT	BW(AER)	009	.09	190.94	43.94	23.01	4.02E+00	.66
PLLVMT	PZ1(E/F)	003	.26	190.94	10.61	05.56	4.02E+00	.66
PLLVMT	QZ1(D)	002	-.27	190.94	04.55	02.38	4.02E+00	.66
PLLVTH	AW(AER)	001	.40	146.75	54.84	37.37	2.18E+00	.62
PLLVTH	BW(AER)	025	-.02	146.75	40.32	27.48	2.18E+00	.62
PLLVTH	VD(AER)	003	.32	146.75	08.06	05.49	2.18E+00	.62
PLLVTH	VD(EL-I)	002	-.33	146.75	06.45	04.40	2.18E+00	.62
RECMMB1	SK(EL-I)	001	.89	117.46	73.26	62.37	9.99E+99	.86
RECMMB1	VD(EL-I)	002	-.59	117.46	15.12	12.87	9.99E+99	.86
RECMMB1	QZ1(D)	003	-.47	117.46	03.49	02.97	9.99E+99	.86
RECMMB2	PY1(A/B)	003	-.42	077.06	14.75	19.14	9.99E+99	.61
RECMMB2	SK(EL-I)	001	.64	077.06	14.75	19.14	9.99E+99	.61
RECMMB2	SK(OG-I)	006	-.17	077.06	11.48	14.90	9.99E+99	.61
RECMMB2	VD(OG-I)	016	-.13	077.06	08.20	10.64	9.99E+99	.61
RECMMB2	VD(EL-I)	002	-.57	077.06	03.28	04.26	9.99E+99	.61
RECMMT1	SK(EL-I)	001	.89	145.98	83.91	57.48	9.99E+99	.87
RECMMT1	VD(EL-I)	002	-.50	145.98	24.14	16.54	9.99E+99	.87
RECMMT1	QZ1(D)	003	-.43	145.98	02.30	01.58	9.99E+99	.87
RECMMT2	SK(EL-I)	001	.63	069.45	16.95	24.41	9.99E+99	.59
RECMMT2	PY1(A/B)	003	-.37	069.45	11.86	17.08	9.99E+99	.59
RECMMT2	PY1(D)	007	.20	069.45	08.47	12.20	9.99E+99	.59
RECMMT2	VD(EL-I)	002	-.56	069.45	01.69	02.43	9.99E+99	.59
RECMSK1	SK(EL-I)	001	.89	145.98	83.91	57.48	9.99E+99	.87
RECMSK1	VD(EL-I)	002	-.51	145.98	24.14	16.54	9.99E+99	.87
RECMSK1	QZ1(D)	003	-.43	145.98	02.30	01.58	9.99E+99	.87
RECMSK2	SK(EL-I)	001	.63	069.45	16.95	24.41	9.99E+99	.59
RECMSK2	PY1(A/B)	003	-.37	069.45	11.86	17.08	9.99E+99	.59
RECMSK2	PY1(D)	007	.20	069.45	08.47	12.20	9.99E+99	.59
RECMSK2	VD(EL-I)	002	-.56	069.45	01.69	02.43	9.99E+99	.59
RECMTH1	VD(EL-I)	003	-.42	230.32	42.42	18.42	9.99E+99	.66
RECMTH1	QY1(E/F)	005	-.23	230.32	36.36	15.79	9.99E+99	.66
RECMTH1	VD(AER)	028	-.01	230.32	36.36	15.79	9.99E+99	.66
RECMTH1	PZ1(E/F)	002	-.47	230.32	16.67	07.24	9.99E+99	.66
RECMTH1	PY1(E/F)	001	-.47	230.32	06.06	02.63	9.99E+99	.66
RLCMBM2	VD(AER)	001	.80	304.20	85.26	28.03	1.55E+01	.95
RLCMBM2	QY1(E/F)	012	.19	304.20	75.79	24.91	1.55E+01	.95
RLCMBM2	QY1(D)	008	.34	304.20	40.00	13.15	1.55E+01	.95
RLCMBM2	SK(AER)	013	-.18	304.20	32.63	10.73	1.55E+01	.95
RLCMBM2	QZ1(D)	002	-.58	304.20	10.53	03.46	1.55E+01	.95
RLCMBM2	PY1(E/F)	003	.50	304.20	02.11	00.69	1.55E+01	.95
RLCMBM3	VD(AER)	001	.59	272.26	73.49	26.99	1.25E+01	.83
RLCMBM3	QY1(E/F)	023	.02	272.26	60.24	22.13	1.25E+01	.83
RLCMBM3	AW(AER)	002	.43	272.26	19.28	07.08	1.25E+01	.83
RLCMBM3	QZ1(D)	003	-.37	272.26	08.43	03.10	1.25E+01	.83

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
RLCMBM4	AW(AER)	001	.56	150.82	65.57	43.48	4.14E+00	.61
RLCMBM4	BW(AER)	005	.19	150.82	39.34	26.08	4.14E+00	.61
RLCMBM4	PZ1(E/F)	002	.42	150.82	14.75	09.78	4.14E+00	.61
RLCMBM4	QZ1(A/B)	003	.21	150.82	01.64	01.09	4.14E+00	.61
RLCMMT2	VD(AER)	001	.79	303.16	85.26	28.12	1.46E+01	.95
RLCMMT2	QY1(E/F)	012	.19	303.16	75.79	25.00	1.46E+01	.95
RLCMMT2	QY1(D)	008	.34	303.16	40.00	13.19	1.46E+01	.95
RLCMMT2	SK(AER)	014	-.18	303.16	32.63	10.76	1.46E+01	.95
RLCMMT2	QZ1(D)	002	-.58	303.16	10.53	03.47	1.46E+01	.95
RLCMMT2	PY1(E/F)	003	.50	303.16	03.16	01.04	1.46E+01	.95
RLCMMT3	VD(AER)	001	.59	273.45	73.49	26.88	1.17E+01	.83
RLCMMT3	QY1(E/F)	023	.03	273.45	60.24	22.03	1.17E+01	.83
RLCMMT3	QY1(D)	021	.03	273.45	27.71	10.13	1.17E+01	.83
RLCMMT3	AW(AER)	002	.43	273.45	19.28	07.05	1.17E+01	.83
RLCMMT3	QZ1(D)	003	-.37	273.45	08.43	03.08	1.17E+01	.83
RLCMMT4	AW(AER)	001	.56	145.90	65.57	44.94	4.16E+00	.61
RLCMMT4	BW(AER)	005	.19	145.90	37.70	25.84	4.16E+00	.61
RLCMMT4	PZ1(E/F)	002	.41	145.90	14.75	10.11	4.16E+00	.61
RLCMMT4	QZ1(A/B)	003	.20	145.90	00.00	00.00	4.16E+00	.61
RLCMTH2	VD(AER)	001	.67	242.35	69.41	28.64	7.99E+00	.85
RLCMTH2	QY1(E/F)	020	-.07	242.35	58.82	24.27	7.99E+00	.85
RLCMTH2	QY1(D)	018	.07	242.35	30.59	12.62	7.99E+00	.85
RLCMTH2	SK(AER)	011	-.17	242.35	24.71	10.20	7.99E+00	.85
RLCMTH2	QZ1(D)	002	-.53	242.35	16.47	06.80	7.99E+00	.85
RLCMTH2	PZ1(E/F)	003	-.47	242.35	01.18	00.49	7.99E+00	.85
RLCMTH3	VD(AER)	001	.59	245.14	67.07	27.36	8.47E+00	.82
RLCMTH3	QY1(E/F)	028	.00	245.14	53.66	21.89	8.47E+00	.82
RLCMTH3	AW(AER)	002	.44	245.14	19.51	07.96	8.47E+00	.82
RLCMTH3	QZ1(D)	003	-.42	245.14	10.98	04.48	8.47E+00	.82
RLCMTH4	AW(AER)	001	.61	128.81	59.09	45.87	3.47E+00	.66
RLCMTH4	BW(AER)	004	.26	128.81	31.82	24.70	3.47E+00	.66
RLCMTH4	VD(EL-I)	003	-.33	128.81	12.12	09.41	3.47E+00	.66
RLCMTH4	PZ1(E/F)	002	.42	128.81	10.61	08.24	3.47E+00	.66
RLLVBM2	VD(AER)	001	.72	280.49	85.06	30.33	3.33E+01	.87
RLLVBM2	QY1(E/F)	012	-.11	280.49	66.67	23.77	3.33E+01	.87
RLLVBM2	SK(AER)	015	-.08	280.49	34.48	12.29	3.33E+01	.87
RLLVBM2	QZ1(D)	003	-.33	280.49	05.75	02.05	3.33E+01	.87
RLLVBM2	PZ1(E/F)	002	-.44	280.49	00.00	00.00	3.33E+01	.87
RLLVBM3	VD(AER)	001	.49	235.12	52.70	22.41	1.72E+01	.74
RLLVBM3	QY1(E/F)	016	-.05	235.12	40.54	17.24	1.72E+01	.74
RLLVBM3	AW(AER)	002	.49	235.12	37.84	16.09	1.72E+01	.74
RLLVBM3	BW(AER)	014	.06	235.12	24.32	10.34	1.72E+01	.74
RLLVBM3	QZ1(D)	003	-.31	235.12	06.76	02.88	1.72E+01	.74
RLLVBM4	AW(AER)	001	.60	157.34	77.94	49.54	6.87E+00	.68
RLLVBM4	BW(AER)	006	.14	157.34	50.00	31.78	6.87E+00	.68
RLLVBM4	PZ1(E/F)	002	.37	157.34	11.76	07.47	6.87E+00	.68
RLLVBM4	QY1(D)	003	-.21	157.34	00.00	00.00	6.87E+00	.68
RLLVMT2	VD(AER)	001	.75	297.81	86.81	29.15	1.54E+01	.91
RLLVMT2	QY1(E/F)	026	-.01	297.81	72.53	24.35	1.54E+01	.91
RLLVMT2	SK(AER)	017	-.09	297.81	35.16	11.81	1.54E+01	.91
RLLVMT2	QY1(D)	025	-.01	297.81	30.77	10.33	1.54E+01	.91
RLLVMT2	QZ1(D)	003	-.45	297.81	08.79	02.95	1.54E+01	.91
RLLVMT2	PZ1(E/F)	002	-.45	297.81	00.00	00.00	1.54E+01	.91
RLLVMT3	VD(AER)	001	.57	255.72	65.82	25.74	1.18E+01	.79
RLLVMT3	QY1(E/F)	020	-.03	255.72	51.90	20.30	1.18E+01	.79
RLLVMT3	AW(AER)	002	.46	255.72	27.85	10.89	1.18E+01	.79
RLLVMT3	QZ1(D)	003	-.33	255.72	07.59	02.97	1.18E+01	.79
RLLVMT4	AW(AER)	001	.61	157.34	79.41	50.47	6.13E+00	.68
RLLVMT4	BW(AER)	006	.15	157.34	50.00	31.78	6.13E+00	.68
RLLVMT4	PZ1(E/F)	002	.38	157.34	11.76	07.47	6.13E+00	.68
RLLVMT4	QY1(D)	003	-.20	157.34	00.00	00.00	6.13E+00	.68
RLLVTH2	VD(AER)	001	.58	257.90	71.05	27.55	6.66E+00	.76
RLLVTH2	QY1(E/F)	009	-.16	257.90	55.26	21.43	6.66E+00	.76
RLLVTH2	QZ1(D)	002	-.43	257.90	10.53	04.08	6.66E+00	.76
RLLVTH2	PZ1(D)	003	-.38	257.90	02.63	01.02	6.66E+00	.76
RLLVTH3	VD(AER)	001	.45	200.00	42.86	21.43	3.62E+00	.63
RLLVTH3	AW(AER)	002	.33	200.00	34.92	17.46	3.62E+00	.63
RLLVTH3	QY1(E/F)	008	-.15	200.00	28.57	14.29	3.62E+00	.63
RLLVTH3	BW(AER)	024	-.02	200.00	23.81	11.90	3.62E+00	.63
RLLVTH3	QZ1(D)	003	-.29	200.00	06.35	03.17	3.62E+00	.63
RLLVTH4	AW(AER)	001	.51	168.08	52.78	31.40	4.59E+00	.72
RLLVTH4	BW(AER)	024	.03	168.08	38.89	23.14	4.59E+00	.72
RLLVTH4	VD(EL-I)	002	-.50	168.08	27.78	16.53	4.59E+00	.72
RLLVTH4	PZ1(E/F)	003	.37	168.08	06.94	04.13	4.59E+00	.72

## RESULTS FOR THE 95TH PERCENTILE OF THE ENDPOINTS FOR THE CB2 SOURCE TERM

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
AEVAC	VD(EL-I)	002	-.56	177.33	48.00	27.07	7.59E+00	.75
AEVAC	PZ1(E/F)	001	-.69	177.33	29.33	16.54	7.59E+00	.75
AEVAC	SK(EL-I)	027	.02	177.33	21.33	12.03	7.59E+00	.75
AEVAC	VD(AER)	026	-.05	177.33	21.33	12.03	7.59E+00	.75
AEVAC	QY1(E/F)	009	-.19	177.33	18.67	10.53	7.59E+00	.75
AEVAC	QZ1(E/F)	003	-.40	177.33	02.67	01.51	7.59E+00	.75
AFBIBEE	VD(AER)	005	-.20	181.44	44.19	24.36	5.50E+00	.43
AFBIBEE	QY1(E/F)	025	.04	181.44	39.53	21.79	5.50E+00	.43
AFBIBEE	SK(AER)	020	-.09	181.44	25.58	14.10	5.50E+00	.43
AFBIBEE	QY1(D)	011	-.14	181.44	18.60	10.25	5.50E+00	.43
AFBIBEE	PY1(E/F)	003	.21	181.44	06.98	03.85	5.50E+00	.43
AFBIBEE	QZ1(A/B)	001	.22	181.44	04.65	02.56	5.50E+00	.43
AFBIBEE	SK(OG-I)	002	.22	181.44	04.65	02.56	5.50E+00	.43
AFBIGRA	QY1(E/F)	027	-.01	184.09	36.36	19.75	4.57E+00	.44
AFBIGRA	VD(AER)	016	-.11	184.09	36.36	19.75	4.57E+00	.44
AFBIGRA	QY1(D)	004	-.21	184.09	27.27	14.81	4.57E+00	.44
AFBIGRA	SK(AER)	015	-.11	184.09	22.73	12.35	4.57E+00	.44
AFBIGRA	AW(AER)	002	.25	184.09	06.82	03.70	4.57E+00	.44
AFBIGRA	SK(OG-I)	001	.27	184.09	06.82	03.70	4.57E+00	.44
AFBIGRA	QZ1(A/B)	003	.22	184.09	04.55	02.47	4.57E+00	.44
AFBIMIL	VD(EL-I)	001	-.55	195.51	65.15	33.32	3.89E+00	.66
AFBIMIL	SK(EL-I)	025	-.03	195.51	39.39	20.15	3.89E+00	.66
AFBIMIL	VD(AER)	002	-.32	195.51	24.24	12.40	3.89E+00	.66
AFBIMIL	AW(AER)	003	.31	195.51	07.58	03.88	3.89E+00	.66
AFBIVEG	VD(EL-I)	001	-.47	178.49	47.69	26.72	3.24E+00	.65
AFBIVEG	SK(EL-I)	019	-.06	178.49	30.77	17.24	3.24E+00	.65
AFBIVEG	VD(AER)	002	-.33	178.49	21.54	12.07	3.24E+00	.65
AFBIVEG	AW(AER)	003	.33	178.49	20.00	11.21	3.24E+00	.65
AFBTBEE	AW(AER)	001	.40	159.59	25.00	15.67	3.55E+00	.52
AFBTBEE	QY1(D)	002	-.31	159.59	25.00	15.67	3.55E+00	.52
AFBTBEE	QY1(E/F)	013	-.11	159.59	25.00	15.67	3.55E+00	.52
AFBTBEE	VD(AER)	027	.02	159.59	21.15	13.25	3.55E+00	.52
AFBTBEE	SK(OG-I)	003	.30	159.59	07.69	04.82	3.55E+00	.52
AFBTGRA	QY1(E/F)	028	.00	175.02	31.82	18.18	4.37E+00	.44
AFBTGRA	VD(AER)	019	-.09	175.02	29.55	16.88	4.37E+00	.44
AFBTGRA	QY1(D)	003	-.22	175.02	25.00	14.28	4.37E+00	.44
AFBTGRA	SK(AER)	013	-.13	175.02	22.73	12.99	4.37E+00	.44
AFBTGRA	AW(AER)	001	.31	175.02	11.36	06.49	4.37E+00	.44
AFBTGRA	SK(OG-I)	002	.25	175.02	06.82	03.90	4.37E+00	.44
AFBTMIL	AW(AER)	001	.56	150.79	60.32	40.00	3.55E+00	.63
AFBTMIL	BW(AER)	007	.20	150.79	34.92	23.16	3.55E+00	.63
AFBTMIL	QY1(D)	002	-.32	150.79	11.11	07.37	3.55E+00	.63
AFBTMIL	VD(EL-I)	003	-.32	150.79	11.11	07.37	3.55E+00	.63
AFBTVEG	AW(AER)	002	.24	161.37	56.82	35.21	2.95E+00	.44
AFBTVEG	BW(AER)	013	-.08	161.37	50.00	30.98	2.95E+00	.44
AFBTVEG	PZ1(E/F)	001	.29	161.37	09.09	05.63	2.95E+00	.44
AFBTVEG	QY1(D)	003	-.19	161.37	09.09	05.63	2.95E+00	.44
AIOD	VD(EL-I)	001	-.94	175.79	95.79	54.49	6.17E+01	.95
AIOD	SK(EL-I)	028	-.01	175.79	48.42	27.54	6.17E+01	.95
AIOD	AW(EL-I)	002	-.42	175.79	01.05	00.60	6.17E+01	.95
AIOD	PZ1(D)	003	-.37	175.79	01.05	00.60	6.17E+01	.95
ARELIN	VD(EL-I)	002	-.56	177.33	48.00	27.07	7.59E+00	.75
ARELIN	PZ1(E/F)	001	-.69	177.33	29.33	16.54	7.59E+00	.75
ARELIN	SK(EL-I)	027	.02	177.33	21.33	12.03	7.59E+00	.75
ARELIN	VD(AER)	026	-.05	177.33	21.33	12.03	7.59E+00	.75
ARELIN	QY1(E/F)	009	-.19	177.33	18.67	10.53	7.59E+00	.75
ARELIN	QZ1(E/F)	003	-.40	177.33	02.67	01.51	7.59E+00	.75
ARELTIM	VD(AER)	001	.43	188.70	48.39	25.64	7.08E+01	.62
ARELTIM	QY1(E/F)	013	-.10	188.70	35.48	18.80	7.08E+01	.62
ARELTIM	AW(AER)	003	.34	188.70	27.42	14.53	7.08E+01	.62
ARELTIM	SK(AER)	025	.02	188.70	20.97	11.11	7.08E+01	.62
ARELTIM	PZ1(E/F)	002	-.37	188.70	00.00	00.00	7.08E+01	.62
ASHEL	VD(EL-I)	001	-.53	170.16	49.25	28.94	4.90E+00	.67
ASHEL	SK(EL-I)	021	.08	170.16	19.40	11.40	4.90E+00	.67
ASHEL	PZ1(E/F)	002	-.31	170.16	04.48	02.63	4.90E+00	.67
ASHEL	QZ1(E/F)	003	-.30	170.16	00.00	00.00	4.90E+00	.67
CACAE1	QY1(E/F)	005	.40	153.75	30.00	19.51	1.29E+01	.80
CACAE1	PY1(E/F)	001	.68	153.75	28.75	18.70	1.29E+01	.80
CACAE1	VD(AER)	025	.02	153.75	23.75	15.45	1.29E+01	.80
CACAE1	QZ1(D)	002	-.58	153.75	20.00	13.01	1.29E+01	.80
CACAE1	PZ1(D)	003	-.57	153.75	06.25	04.07	1.29E+01	.80



ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
CACAE2	QZ1(D)	001	-.63	131.06	32.43	24.74	1.35E+01	.74
CACAE2	QY1(E/F)	005	.43	131.06	21.62	16.50	1.35E+01	.74
CACAE2	PY1(E/F)	002	.52	131.06	17.57	13.41	1.35E+01	.74
CACAE2	QY1(D)	008	.22	131.06	14.86	11.34	1.35E+01	.74
CACAE2	PZ1(D)	003	-.49	131.06	04.05	03.09	1.35E+01	.74
CACAE3	QZ1(D)	002	-.39	080.01	18.18	22.72	7.76E+00	.55
CACAE3	PY1(E/F)	004	.36	080.01	12.73	15.91	7.76E+00	.55
CACAE3	VD(AER)	001	-.44	080.01	09.09	11.36	7.76E+00	.55
CACAE3	QY1(D)	003	.38	080.01	05.45	06.81	7.76E+00	.55
CACAE4	VD(AER)	001	-.56	236.47	68.92	29.15	3.31E+01	.74
CACAE4	QY1(E/F)	010	.09	236.47	48.65	20.57	3.31E+01	.74
CACAE4	SK(AER)	014	-.07	236.47	31.08	13.14	3.31E+01	.74
CACAE4	AW(AER)	002	-.34	236.47	21.62	09.14	3.31E+01	.74
CACAE4	QY1(D)	003	.31	236.47	08.11	03.43	3.31E+01	.74
CAIOD1	PY1(E/F)	002	.53	116.67	20.83	17.85	1.95E+01	.72
CAIOD1	QZ1(D)	003	-.52	116.67	19.44	16.66	1.95E+01	.72
CAIOD1	QY1(E/F)	005	.37	116.67	16.67	14.29	1.95E+01	.72
CAIOD1	VD(EL-I)	001	-.55	116.67	11.11	09.52	1.95E+01	.72
CAIOD2	VD(EL-I)	001	-.81	126.46	59.04	46.69	5.50E+01	.83
CAIOD2	SK(EL-I)	015	.10	126.46	25.30	20.01	5.50E+01	.83
CAIOD2	QY1(D)	003	.42	126.46	06.02	04.76	5.50E+01	.83
CAIOD2	PZ1(D)	002	-.44	126.46	03.61	02.85	5.50E+01	.83
CAIOD3	VD(EL-I)	001	-.90	135.54	78.89	58.20	4.07E+02	.90
CAIOD3	SK(EL-I)	011	.14	135.54	36.67	27.05	4.07E+02	.90
CAIOD3	QY1(D)	002	.46	135.54	03.33	02.46	4.07E+02	.90
CAIOD3	PY1(E/F)	003	.33	135.54	02.22	01.64	4.07E+02	.90
CAIOD4	VD(EL-I)	001	-.91	146.74	85.87	58.52	9.99E+99	.92
CAIOD4	SK(EL-I)	024	-.03	146.74	45.65	31.11	9.99E+99	.92
CAIOD4	PZ1(E/F)	003	.39	146.74	00.00	00.00	9.99E+99	.92
CAIOD4	QY1(D)	002	.45	146.74	00.00	00.00	9.99E+99	.92
CDCMBM	AW(AER)	001	.50	123.10	41.54	33.74	1.95E+00	.65
CDCMBM	BW(AER)	010	.14	123.10	24.62	20.00	1.95E+00	.65
CDCMBM	QY1(A/B)	002	.44	123.10	24.62	20.00	1.95E+00	.65
CDCMBM	QY1(C)	018	.07	123.10	15.38	12.49	1.95E+00	.65
CDCMBM	VD(AER)	003	-.36	123.10	03.08	02.50	1.95E+00	.65
CDCMED	AW(AER)	001	.51	124.63	40.00	32.10	1.91E+00	.65
CDCMED	QY1(A/B)	002	.45	124.63	26.15	20.98	1.91E+00	.65
CDCMED	BW(AER)	010	.15	124.63	24.62	19.75	1.91E+00	.65
CDCMED	QY1(C)	017	.07	124.63	16.92	13.58	1.91E+00	.65
CDCMED	VD(AER)	003	-.37	124.63	03.08	02.47	1.91E+00	.65
CDCMTH	AW(AER)	001	.58	130.02	34.29	26.37	2.19E+00	.70
CDCMTH	VD(EL-I)	003	-.38	130.02	20.00	15.38	2.19E+00	.70
CDCMTH	BW(AER)	005	.25	130.02	18.57	14.28	2.19E+00	.70
CDCMTH	QY1(A/B)	002	.45	130.02	18.57	14.28	2.19E+00	.70
CDCMTH	SK(EL-I)	020	-.07	130.02	14.29	10.99	2.19E+00	.70
CDLVBM	AW(AER)	001	.58	178.27	75.36	42.27	4.79E+00	.69
CDLVBM	BW(AER)	017	.06	178.27	49.28	27.64	4.79E+00	.69
CDLVBM	VD(AER)	002	.29	178.27	14.49	08.13	4.79E+00	.69
CDLVBM	QY1(D)	003	-.23	178.27	01.45	00.81	4.79E+00	.69
CDLVED	AW(AER)	001	.56	180.87	75.00	41.47	4.57E+00	.68
CDLVED	BW(AER)	018	.05	180.87	50.00	27.64	4.57E+00	.68
CDLVED	VD(AER)	002	.29	180.87	14.71	08.13	4.57E+00	.68
CDLVED	QY1(D)	003	-.23	180.87	01.47	00.81	4.57E+00	.68
CDLVTH	AW(AER)	001	.37	145.16	58.06	40.00	2.95E+00	.62
CDLVTH	BW(AER)	017	-.09	145.16	45.16	31.11	2.95E+00	.62
CDLVTH	VD(AER)	003	.30	145.16	06.45	04.44	2.95E+00	.62
CDLVTH	VD(EL-I)	002	-.33	145.16	03.23	02.23	2.95E+00	.62
CGCAE1	VD(AER)	001	.83	300.01	90.63	30.21	2.00E+03	.96
CGCAE1	QY1(E/F)	007	.30	300.01	78.13	26.04	2.00E+03	.96
CGCAE1	SK(AER)	016	-.12	300.01	37.50	12.50	2.00E+03	.96
CGCAE1	QY1(D)	017	.11	300.01	33.33	11.11	2.00E+03	.96
CGCAE1	PY1(E/F)	002	.63	300.01	03.13	01.04	2.00E+03	.96
CGCAE1	PZ1(E/F)	003	-.42	300.01	00.00	00.00	2.00E+03	.96
CGCAE2	VD(AER)	001	.80	303.14	87.37	28.82	5.62E+02	.95
CGCAE2	QY1(E/F)	010	.25	303.14	76.84	25.35	5.62E+02	.95
CGCAE2	QY1(D)	014	.22	303.14	35.79	11.81	5.62E+02	.95
CGCAE2	SK(AER)	016	-.15	303.14	34.74	11.46	5.62E+02	.95
CGCAE2	QZ1(D)	002	-.60	303.14	10.53	03.47	5.62E+02	.95
CGCAE2	PY1(E/F)	003	.57	303.14	03.16	01.04	5.62E+02	.95

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
CGCAE3	VD(AER)	001	.77	321.25	87.23	27.15	7.41E+01	.94
CGCAE3	QY1(E/F)	012	.17	321.25	76.60	23.84	7.41E+01	.94
CGCAE3	QY1(D)	005	.35	321.25	42.55	13.25	7.41E+01	.94
CGCAE3	SK(AER)	013	-.16	321.25	32.98	10.27	7.41E+01	.94
CGCAE3	QZ1(D)	002	-.56	321.25	10.64	03.31	7.41E+01	.94
CGCAE3	PY1(E/F)	003	.50	321.25	02.13	00.66	7.41E+01	.94
CGCAE4	QY1(C)	005	.26	232.83	35.94	15.44	9.12E+00	.64
CGCAE4	QY1(D)	008	.20	232.83	35.94	15.44	9.12E+00	.64
CGCAE4	VD(AER)	007	.23	232.83	34.38	14.77	9.12E+00	.64
CGCAE4	QY1(E/F)	015	-.10	232.83	25.00	10.74	9.12E+00	.64
CGCAE4	QY1(A/B)	020	.06	232.83	23.44	10.07	9.12E+00	.64
CGCAE4	PZ1(E/F)	001	.41	232.83	14.06	06.04	9.12E+00	.64
CGCAE4	PZ1(C)	002	.40	232.83	12.50	05.37	9.12E+00	.64
CGCAE4	PY1(D)	003	.28	232.83	01.56	00.67	9.12E+00	.64
CGIOD1	VD(EL-I)	001	.82	227.27	77.27	34.00	5.25E+02	.88
CGIOD1	SK(EL-I)	020	.05	227.27	40.91	18.00	5.25E+02	.88
CGIOD1	QY1(E/F)	004	.36	227.27	30.68	13.50	5.25E+02	.88
CGIOD1	VD(AER)	019	-.06	227.27	27.27	12.00	5.25E+02	.88
CGIOD1	QZ1(D)	003	-.44	227.27	07.95	03.50	5.25E+02	.88
CGIOD1	PY1(E/F)	002	.45	227.27	03.41	01.50	5.25E+02	.88
CGIOD2	QY1(E/F)	010	.16	281.08	48.65	17.31	8.91E+01	.74
CGIOD2	VD(AER)	016	.09	281.08	47.30	16.83	8.91E+01	.74
CGIOD2	QY1(D)	002	.38	281.08	45.95	16.35	8.91E+01	.74
CGIOD2	VD(EL-I)	001	.45	281.08	37.84	13.46	8.91E+01	.74
CGIOD2	PY1(E/F)	003	.37	281.08	05.41	01.92	8.91E+01	.74
CGIOD3	QY1(D)	001	.57	204.26	54.93	26.89	4.57E+01	.71
CGIOD3	QY1(C)	016	.13	204.26	39.44	19.31	4.57E+01	.71
CGIOD3	QY1(A/B)	013	.19	204.26	30.99	15.17	4.57E+01	.71
CGIOD3	VD(AER)	012	.21	204.26	26.76	13.10	4.57E+01	.71
CGIOD3	QY1(E/F)	023	-.07	204.26	22.54	11.03	4.57E+01	.71
CGIOD3	PY1(D)	002	.34	204.26	02.82	01.38	4.57E+01	.71
CGIOD3	VD(OG-I)	003	-.30	204.26	00.00	00.00	4.57E+01	.71
CGIOD4	VD(EL-I)	001	-.83	128.74	57.47	44.64	6.92E+02	.87
CGIOD4	SK(EL-I)	025	-.02	128.74	29.89	23.22	6.92E+02	.87
CGIOD4	QY1(D)	002	.64	128.74	10.34	08.03	6.92E+02	.87
CGIOD4	QZ1(D)	003	.54	128.74	02.30	01.79	6.92E+02	.87
DECMBM1	VD(EL-I)	002	.71	155.81	47.67	30.59	1.20E+01	.86
DECMBM1	SK(EL-I)	013	.11	155.81	27.91	17.91	1.20E+01	.86
DECMBM1	QZ1(D)	001	-.76	155.81	22.09	14.18	1.20E+01	.86
DECMBM1	QY1(E/F)	006	.27	155.81	16.28	10.45	1.20E+01	.86
DECMBM1	PZ1(E/F)	003	-.66	155.81	11.63	07.46	1.20E+01	.86
DECMBM2	VD(AER)	007	.40	197.66	40.00	20.24	4.68E+00	.85
DECMBM2	QY1(E/F)	023	.04	197.66	37.65	19.05	4.68E+00	.85
DECMBM2	QZ1(D)	001	-.77	197.66	34.12	17.26	4.68E+00	.85
DECMBM2	SK(AER)	024	.04	197.66	20.00	10.12	4.68E+00	.85
DECMBM2	VD(EL-I)	003	.46	197.66	17.65	08.93	4.68E+00	.85
DECMBM2	PZ1(E/F)	002	-.61	197.66	05.88	02.97	4.68E+00	.85
DECMBM3	QY1(E/F)	008	.26	302.33	69.41	22.96	7.41E+00	.85
DECMBM3	VD(AER)	004	.36	302.33	69.41	22.96	7.41E+00	.85
DECMBM3	QY1(D)	003	.41	302.33	51.76	17.12	7.41E+00	.85
DECMBM3	QZ1(D)	002	-.46	302.33	15.29	05.06	7.41E+00	.85
DECMBM3	PY1(E/F)	001	.51	302.33	05.88	01.94	7.41E+00	.85
DECMSK1	SK(EL-I)	001	.87	223.59	69.66	31.16	1.26E+03	.89
DECMSK1	VD(AER)	007	.30	223.59	38.20	17.08	1.26E+03	.89
DECMSK1	QY1(E/F)	021	.08	223.59	31.46	14.07	1.26E+03	.89
DECMSK1	VD(EL-I)	003	-.43	223.59	28.09	12.56	1.26E+03	.89
DECMSK1	SK(AER)	008	.26	223.59	25.84	11.56	1.26E+03	.89
DECMSK1	PY1(E/F)	002	.46	223.59	02.25	01.01	1.26E+03	.89
DECMSK2	SK(EL-I)	001	.88	189.87	62.92	33.14	4.79E+02	.89
DECMSK2	SK(AER)	003	.53	189.87	32.58	17.16	4.79E+02	.89
DECMSK2	VD(AER)	006	.28	189.87	31.46	16.57	4.79E+02	.89
DECMSK2	QY1(E/F)	021	-.08	189.87	23.60	12.43	4.79E+02	.89
DECMSK2	VD(EL-I)	002	-.66	189.87	14.61	07.69	4.79E+02	.89
DECMSK3	SK(AER)	002	.73	191.96	52.87	27.54	3.80E+02	.87
DECMSK3	SK(EL-I)	001	.82	191.96	37.93	19.76	3.80E+02	.87
DECMSK3	VD(AER)	008	.25	191.96	35.63	18.56	3.80E+02	.87
DECMSK3	QY1(E/F)	014	-.17	191.96	25.29	13.17	3.80E+02	.87
DECMSK3	VD(EL-I)	003	-.67	191.96	05.75	03.00	3.80E+02	.87
DECMTH1	QZ1(D)	001	-.58	127.41	24.66	19.35	1.78E+01	.73
DECMTH1	QY1(E/F)	005	.37	127.41	23.29	18.28	1.78E+01	.73
DECMTH1	PY1(E/F)	003	.50	127.41	17.81	13.98	1.78E+01	.73
DECMTH1	VD(AER)	021	-.03	127.41	16.44	12.90	1.78E+01	.73
DECMTH1	QY1(D)	010	.16	127.41	13.70	10.75	1.78E+01	.73
DECMTH1	PZ1(D)	002	-.53	127.41	06.85	05.38	1.78E+01	.73



ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
DECMTH2	VD(EL-I)	001	-.75	116.66	46.15	39.56	1.32E+01	.78
DECMTH2	SK(EL-I)	011	.16	116.66	16.67	14.29	1.32E+01	.78
DECMTH2	QY1(D)	003	.42	116.66	10.26	08.79	1.32E+01	.78
DECMTH2	PZ1(D)	002	-.42	116.66	03.85	03.30	1.32E+01	.78
DECMTH3	VD(EL-I)	001	-.88	131.43	69.66	53.00	5.01E+01	.89
DECMTH3	SK(EL-I)	012	.12	131.43	31.46	23.94	5.01E+01	.89
DECMTH3	QY1(D)	002	.51	131.43	06.74	05.13	5.01E+01	.89
DECMTH3	PY1(E/F)	003	.40	131.43	03.37	02.56	5.01E+01	.89
DLCMBM2	VD(AER)	001	.84	300.00	85.57	28.52	1.07E+02	.97
DLCMBM2	QY1(E/F)	012	.28	300.00	75.26	25.09	1.07E+02	.97
DLCMBM2	QY1(D)	013	.27	300.00	36.08	12.03	1.07E+02	.97
DLCMBM2	SK(AER)	015	-.20	300.00	34.02	11.34	1.07E+02	.97
DLCMBM2	QZ1(D)	002	-.67	300.00	10.31	03.44	1.07E+02	.97
DLCMBM2	PY1(E/F)	003	.66	300.00	03.09	01.03	1.07E+02	.97
DLCMBM3	VD(AER)	001	.76	312.75	86.17	27.55	2.14E+01	.94
DLCMBM3	QY1(E/F)	011	.22	312.75	75.53	24.15	2.14E+01	.94
DLCMBM3	QY1(D)	012	.21	312.75	39.36	12.59	2.14E+01	.94
DLCMBM3	QZ1(D)	002	-.57	312.75	10.64	03.40	2.14E+01	.94
DLCMBM3	PY1(E/F)	003	.52	312.75	02.13	00.68	2.14E+01	.94
DLCMBM4	QY1(C)	006	.22	194.42	40.74	20.95	3.31E+00	.54
DLCMBM4	QY1(A/B)	007	.19	194.42	33.33	17.14	3.31E+00	.54
DLCMBM4	QY1(D)	017	.09	194.42	22.22	11.43	3.31E+00	.54
DLCMBM4	PZ1(E/F)	001	.37	194.42	12.96	06.67	3.31E+00	.54
DLCMBM4	PZ1(C)	002	.30	194.42	09.26	04.76	3.31E+00	.54
DLCMBM4	AW(AER)	003	.25	194.42	03.70	01.90	3.31E+00	.54
DLCMED2	VD(AER)	001	.84	301.04	86.46	28.72	8.32E+01	.96
DLCMED2	QY1(E/F)	011	.29	301.04	76.04	25.26	8.32E+01	.96
DLCMED2	QY1(D)	012	.28	301.04	37.50	12.46	8.32E+01	.96
DLCMED2	SK(AER)	017	-.18	301.04	34.38	11.42	8.32E+01	.96
DLCMED2	QZ1(D)	002	-.66	301.04	10.42	03.46	8.32E+01	.96
DLCMED2	PY1(E/F)	003	.64	301.04	03.13	01.04	8.32E+01	.96
DLCMED3	VD(AER)	001	.76	309.56	85.11	27.49	2.04E+01	.94
DLCMED3	QY1(E/F)	011	.23	309.56	75.53	24.40	2.04E+01	.94
DLCMED3	QY1(D)	014	.21	309.56	39.36	12.71	2.04E+01	.94
DLCMED3	QZ1(D)	002	-.58	309.56	10.64	03.44	2.04E+01	.94
DLCMED3	PY1(E/F)	003	.51	309.56	02.13	00.69	2.04E+01	.94
DLCMED4	QY1(C)	005	.23	183.31	40.74	22.22	3.31E+00	.54
DLCMED4	QY1(A/B)	007	.19	183.31	33.33	18.18	3.31E+00	.54
DLCMED4	QY1(D)	020	.07	183.31	20.37	11.11	3.31E+00	.54
DLCMED4	PZ1(E/F)	001	.36	183.31	12.96	07.07	3.31E+00	.54
DLCMED4	PZ1(C)	002	.31	183.31	09.26	05.05	3.31E+00	.54
DLCMED4	AW(AER)	003	.25	183.31	03.70	02.02	3.31E+00	.54
DLCMTH2	VD(AER)	001	.75	284.05	80.85	28.46	2.69E+01	.94
DLCMTH2	QY1(E/F)	010	.30	284.05	72.34	25.47	2.69E+01	.94
DLCMTH2	QY1(D)	013	.26	284.05	36.17	12.73	2.69E+01	.94
DLCMTH2	SK(AER)	019	-.11	284.05	32.98	11.61	2.69E+01	.94
DLCMTH2	QZ1(D)	002	-.63	284.05	12.77	04.50	2.69E+01	.94
DLCMTH2	PY1(E/F)	003	.57	284.05	04.26	01.50	2.69E+01	.94
DLCMTH3	VD(AER)	001	.69	281.34	78.02	27.73	1.26E+01	.91
DLCMTH3	QY1(E/F)	013	.18	281.34	69.23	24.61	1.26E+01	.91
DLCMTH3	QY1(D)	006	.35	281.34	42.86	15.23	1.26E+01	.91
DLCMTH3	QZ1(D)	002	-.53	281.34	12.09	04.30	1.26E+01	.91
DLCMTH3	VD(EL-I)	003	-.49	281.34	01.10	00.39	1.26E+01	.91
DLCMTH4	QY1(C)	004	.26	142.56	31.48	22.08	3.16E+00	.54
DLCMTH4	QY1(A/B)	013	.11	142.56	24.07	16.88	3.16E+00	.54
DLCMTH4	QY1(D)	017	.08	142.56	14.81	10.39	3.16E+00	.54
DLCMTH4	PZ1(E/F)	001	.38	142.56	12.96	09.09	3.16E+00	.54
DLCMTH4	VD(EL-I)	002	-.34	142.56	11.11	07.79	3.16E+00	.54
DLCMTH4	AW(AER)	003	.29	142.56	03.70	02.60	3.16E+00	.54
DLLVBM2	VD(AER)	001	.83	314.57	87.50	27.82	4.57E+02	.96
DLLVBM2	QY1(E/F)	009	.27	314.57	77.08	24.50	4.57E+02	.96
DLLVBM2	QY1(D)	012	.26	314.57	38.54	12.25	4.57E+02	.96
DLLVBM2	SK(AER)	016	-.16	314.57	34.38	10.93	4.57E+02	.96
DLLVBM2	QZ1(D)	003	-.58	314.57	09.38	02.98	4.57E+02	.96
DLLVBM2	PY1(E/F)	002	.64	314.57	03.13	01.00	4.57E+02	.96
DLLVBM3	VD(AER)	001	.79	310.62	86.17	27.74	4.57E+01	.94
DLLVBM3	QY1(E/F)	015	.18	310.62	74.47	23.97	4.57E+01	.94
DLLVBM3	QY1(D)	014	.19	310.62	39.36	12.67	4.57E+01	.94
DLLVBM3	QZ1(D)	002	-.55	310.62	09.57	03.08	4.57E+01	.94
DLLVBM3	PY1(E/F)	003	.52	310.62	02.13	00.69	4.57E+01	.94

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
DLLVBM4	QY1(C)	004	.25	192.74	43.64	22.64	8.71E+00	.55
DLLVBM4	QY1(A/B)	007	.21	192.74	38.18	19.81	8.71E+00	.55
DLLVBM4	QY1(D)	021	.04	192.74	21.82	11.32	8.71E+00	.55
DLLVBM4	VD(AER)	008	.18	192.74	20.00	10.38	8.71E+00	.55
DLLVBM4	PZ1(E/F)	001	.33	192.74	10.91	05.66	8.71E+00	.55
DLLVBM4	PZ1(C)	002	.27	192.74	07.27	03.77	8.71E+00	.55
DLLVBM4	AW(AER)	003	.26	192.74	03.64	01.89	8.71E+00	.55
DLLVED2	VD(AER)	001	.81	313.55	86.46	27.57	2.95E+02	.96
DLLVED2	QY1(E/F)	008	.29	313.55	77.08	24.58	2.95E+02	.96
DLLVED2	QY1(D)	012	.25	313.55	37.50	11.96	2.95E+02	.96
DLLVED2	SK(AER)	020	-.10	313.55	34.38	10.96	2.95E+02	.96
DLLVED2	QZ1(D)	003	-.61	313.55	09.38	02.99	2.95E+02	.96
DLLVED2	PY1(E/F)	002	.68	313.55	04.17	01.33	2.95E+02	.96
DLLVED3	VD(AER)	001	.78	311.70	85.11	27.31	3.47E+01	.94
DLLVED3	QY1(E/F)	015	.19	311.70	74.47	23.89	3.47E+01	.94
DLLVED3	QY1(D)	012	.21	311.70	40.43	12.97	3.47E+01	.94
DLLVED3	QZ1(D)	003	-.53	311.70	08.51	02.73	3.47E+01	.94
DLLVED3	PY1(E/F)	002	.54	311.70	02.13	00.68	3.47E+01	.94
DLLVED4	QY1(C)	004	.25	189.10	43.64	23.08	8.71E+00	.55
DLLVED4	QY1(A/B)	007	.21	189.10	38.18	20.19	8.71E+00	.55
DLLVED4	QY1(D)	022	.06	189.10	21.82	11.54	8.71E+00	.55
DLLVED4	PZ1(E/F)	001	.35	189.10	10.91	05.77	8.71E+00	.55
DLLVED4	PZ1(C)	002	.28	189.10	07.27	03.84	8.71E+00	.55
DLLVED4	AW(AER)	003	.25	189.10	03.64	01.92	8.71E+00	.55
DLLVTH2	VD(AER)	004	.48	308.78	71.43	23.13	4.68E+01	.91
DLLVTH2	QY1(E/F)	008	.34	308.78	69.23	22.42	4.68E+01	.91
DLLVTH2	QY1(D)	010	.32	308.78	40.66	13.17	4.68E+01	.91
DLLVTH2	VD(EL-I)	003	.49	308.78	26.37	08.54	4.68E+01	.91
DLLVTH2	QZ1(D)	002	-.52	308.78	12.09	03.92	4.68E+01	.91
DLLVTH2	PY1(E/F)	001	.60	308.78	05.49	01.78	4.68E+01	.91
DLLVTH3	VD(AER)	001	.55	320.47	76.14	23.76	1.62E+01	.88
DLLVTH3	QY1(E/F)	011	.13	320.47	68.18	21.28	1.62E+01	.88
DLLVTH3	QY1(D)	003	.44	320.47	55.68	17.37	1.62E+01	.88
DLLVTH3	PY1(E/F)	002	.48	320.47	04.55	01.42	1.62E+01	.88
DLLVTH4	QY1(C)	005	.30	152.13	32.39	21.29	9.33E+00	.71
DLLVTH4	QY1(A/B)	006	.26	152.13	29.58	19.44	9.33E+00	.71
DLLVTH4	VD(EL-I)	001	-.52	152.13	19.72	12.96	9.33E+00	.71
DLLVTH4	QY1(D)	003	.31	152.13	18.31	12.04	9.33E+00	.71
DLLVTH4	PZ1(E/F)	002	.44	152.13	08.45	05.55	9.33E+00	.71
PECMMB	SK(EL-I)	001	.85	115.00	73.75	64.13	9.99E+99	.80
PECMMB	VD(EL-I)	002	-.54	115.00	13.75	11.96	9.99E+99	.80
PECMMB	QZ1(D)	003	-.35	115.00	02.50	02.17	9.99E+99	.80
PECMTH	SK(EL-I)	001	.84	139.49	80.25	57.53	9.99E+99	.81
PECMTH	VD(EL-I)	002	-.47	139.49	19.75	14.16	9.99E+99	.81
PECMTH	QZ1(D)	003	-.29	139.49	01.23	00.88	9.99E+99	.81
PECMSK	SK(EL-I)	001	.84	139.49	80.25	57.53	9.99E+99	.81
PECMSK	VD(EL-I)	002	-.47	139.49	19.75	14.16	9.99E+99	.81
PECMSK	QZ1(D)	003	-.29	139.49	01.23	00.88	9.99E+99	.81
PECMTH	PZ1(E/F)	001	-.58	207.61	33.33	16.05	9.99E+99	.66
PECMTH	QY1(E/F)	004	-.23	207.61	27.27	13.14	9.99E+99	.66
PECMTH	VD(EL-I)	003	-.28	207.61	25.76	12.41	9.99E+99	.66
PECMTH	VD(AER)	019	.08	207.61	24.24	11.68	9.99E+99	.66
PECMTH	PY1(E/F)	002	-.54	207.61	10.61	05.11	9.99E+99	.66
PLCMBM	AW(AER)	001	.51	123.10	41.54	33.74	1.95E+00	.65
PLCMBM	BW(AER)	010	.15	123.10	24.62	20.00	1.95E+00	.65
PLCMBM	QY1(A/B)	002	.44	123.10	24.62	20.00	1.95E+00	.65
PLCMBM	QY1(C)	016	.07	123.10	15.38	12.49	1.95E+00	.65
PLCMBM	VD(AER)	003	-.35	123.10	03.08	02.50	1.95E+00	.65
PLCMTH	AW(AER)	001	.51	121.55	38.46	31.64	1.95E+00	.65
PLCMTH	QY1(A/B)	002	.45	121.55	26.15	21.51	1.95E+00	.65
PLCMTH	BW(AER)	008	.17	121.55	21.54	17.72	1.95E+00	.65
PLCMTH	QY1(C)	018	.07	121.55	15.38	12.65	1.95E+00	.65
PLCMTH	VD(AER)	003	-.37	121.55	04.62	03.80	1.95E+00	.65
PLCMTH	AW(AER)	001	.58	133.82	35.21	26.31	2.24E+00	.71
PLCMTH	QY1(A/B)	002	.45	133.82	19.72	14.74	2.24E+00	.71
PLCMTH	VD(EL-I)	003	-.37	133.82	19.72	14.74	2.24E+00	.71
PLCMTH	BW(AER)	006	.24	133.82	18.31	13.68	2.24E+00	.71
PLCMTH	SK(EL-I)	018	-.09	133.82	15.49	11.58	2.24E+00	.71
PLLVBM	AW(AER)	001	.58	178.27	75.36	42.27	4.79E+00	.69
PLLVBM	BW(AER)	015	.07	178.27	49.28	27.64	4.79E+00	.69
PLLVBM	VD(AER)	002	.28	178.27	15.94	08.94	4.79E+00	.69
PLLVBM	QY1(D)	003	-.22	178.27	01.45	00.81	4.79E+00	.69

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
PLLVMT	AW(AER)	001	.60	181.97	76.39	41.98	4.17E+00	.72
PLLVMT	BW(AER)	017	.06	181.97	51.39	28.24	4.17E+00	.72
PLLVMT	VD(AER)	002	.27	181.97	13.89	07.63	4.17E+00	.72
PLLVMT	QZ1(D)	003	-.22	181.97	01.39	00.76	4.17E+00	.72
PLLVTH	AW(AER)	001	.39	147.56	60.66	41.11	2.88E+00	.61
PLLVTH	BW(AER)	019	-.07	147.56	44.26	29.99	2.88E+00	.61
PLLVTH	VD(AER)	003	.29	147.56	06.56	04.45	2.88E+00	.61
PLLVTH	VD(EL-I)	002	-.33	147.56	03.28	02.22	2.88E+00	.61
RECMMB1	SK(EL-I)	001	.72	147.15	54.29	36.89	9.99E+99	.70
RECMMB1	VD(AER)	018	.08	147.15	15.71	10.68	9.99E+99	.70
RECMMB1	VD(EL-I)	002	-.42	147.15	11.43	07.77	9.99E+99	.70
RECMMB1	QZ1(D)	003	-.26	147.15	05.71	03.88	9.99E+99	.70
RECMMT1	SK(EL-I)	001	.72	147.15	54.29	36.89	9.99E+99	.70
RECMMT1	VD(AER)	018	.08	147.15	15.71	10.68	9.99E+99	.70
RECMMT1	VD(EL-I)	002	-.42	147.15	11.43	07.77	9.99E+99	.70
RECMMT1	QZ1(D)	003	-.26	147.15	05.71	03.88	9.99E+99	.70
RECMSK1	SK(EL-I)	001	.72	147.15	54.29	36.89	9.99E+99	.70
RECMSK1	VD(AER)	018	.08	147.15	15.71	10.68	9.99E+99	.70
RECMSK1	VD(EL-I)	002	-.42	147.15	11.43	07.77	9.99E+99	.70
RECMSK1	QZ1(D)	003	-.26	147.15	05.71	03.88	9.99E+99	.70
RLCMBM2	VD(AER)	001	.84	302.08	86.46	28.62	1.07E+02	.96
RLCMBM2	QY1(E/F)	013	.26	302.08	76.04	25.17	1.07E+02	.96
RLCMBM2	QY1(D)	012	.26	302.08	36.46	12.07	1.07E+02	.96
RLCMBM2	SK(AER)	015	-.18	302.08	34.38	11.38	1.07E+02	.96
RLCMBM2	QZ1(D)	003	-.65	302.08	10.42	03.45	1.07E+02	.96
RLCMBM2	PY1(E/F)	002	.65	302.08	03.13	01.04	1.07E+02	.96
RLCMBM3	VD(AER)	001	.76	310.62	86.17	27.74	2.19E+01	.94
RLCMBM3	QY1(E/F)	011	.21	310.62	75.53	24.32	2.19E+01	.94
RLCMBM3	QY1(D)	012	.21	310.62	39.36	12.67	2.19E+01	.94
RLCMBM3	QZ1(D)	002	-.56	310.62	09.57	03.08	2.19E+01	.94
RLCMBM3	PY1(E/F)	003	.51	310.62	02.13	00.69	2.19E+01	.94
RLCMBM4	QY1(C)	005	.24	192.74	40.00	20.75	3.39E+00	.55
RLCMBM4	QY1(A/B)	008	.18	192.74	32.73	16.98	3.39E+00	.55
RLCMBM4	QY1(D)	018	.09	192.74	21.82	11.32	3.39E+00	.55
RLCMBM4	PZ1(E/F)	001	.38	192.74	14.55	07.55	3.39E+00	.55
RLCMBM4	PZ1(C)	002	.31	192.74	09.09	04.72	3.39E+00	.55
RLCMBM4	AW(AER)	003	.25	192.74	03.64	01.89	3.39E+00	.55
RLCMMT2	VD(AER)	001	.85	296.91	85.57	28.82	8.51E+01	.97
RLCMMT2	QY1(E/F)	013	.26	296.91	75.26	25.35	8.51E+01	.97
RLCMMT2	QY1(D)	010	.31	296.91	37.11	12.50	8.51E+01	.97
RLCMMT2	SK(AER)	017	-.17	296.91	34.02	11.46	8.51E+01	.97
RLCMMT2	QZ1(D)	002	-.68	296.91	10.31	03.47	8.51E+01	.97
RLCMMT2	PY1(E/F)	003	.66	296.91	03.09	01.04	8.51E+01	.97
RLCMMT3	VD(AER)	001	.75	309.57	85.11	27.49	2.09E+01	.94
RLCMMT3	QY1(E/F)	011	.22	309.57	74.47	24.06	2.09E+01	.94
RLCMMT3	QY1(D)	012	.21	309.57	39.36	12.71	2.09E+01	.94
RLCMMT3	QZ1(D)	002	-.58	309.57	10.64	03.44	2.09E+01	.94
RLCMMT3	PY1(E/F)	003	.51	309.57	02.13	00.69	2.09E+01	.94
RLCMMT4	QY1(C)	006	.22	188.86	40.74	21.57	3.39E+00	.54
RLCMMT4	QY1(A/B)	007	.20	188.86	33.33	17.65	3.39E+00	.54
RLCMMT4	QY1(D)	019	.07	188.86	22.22	11.77	3.39E+00	.54
RLCMMT4	PZ1(E/F)	001	.37	188.86	12.96	06.86	3.39E+00	.54
RLCMMT4	PZ1(C)	002	.31	188.86	09.26	04.90	3.39E+00	.54
RLCMMT4	AW(AER)	003	.25	188.86	03.70	01.96	3.39E+00	.54
RLCMTH2	VD(AER)	001	.75	284.05	80.85	28.46	2.75E+01	.94
RLCMTH2	QY1(E/F)	010	.30	284.05	72.34	25.47	2.75E+01	.94
RLCMTH2	QY1(D)	013	.27	284.05	36.17	12.73	2.75E+01	.94
RLCMTH2	SK(AER)	019	-.11	284.05	32.98	11.61	2.75E+01	.94
RLCMTH2	QZ1(D)	002	-.63	284.05	12.77	04.50	2.75E+01	.94
RLCMTH2	PY1(E/F)	003	.58	284.05	04.26	01.50	2.75E+01	.94
RLCMTH3	VD(AER)	001	.69	280.24	76.92	27.45	1.26E+01	.91
RLCMTH3	QY1(E/F)	013	.18	280.24	69.23	24.70	1.26E+01	.91
RLCMTH3	QY1(D)	006	.35	280.24	42.86	15.29	1.26E+01	.91
RLCMTH3	QZ1(D)	002	-.53	280.24	12.09	04.31	1.26E+01	.91
RLCMTH3	VD(EL-I)	003	-.49	280.24	01.10	00.39	1.26E+01	.91
RLCMTH4	QY1(C)	004	.27	143.66	32.73	22.78	3.16E+00	.55
RLCMTH4	QY1(A/B)	013	.12	143.66	25.45	17.72	3.16E+00	.55
RLCMTH4	QY1(D)	017	.08	143.66	14.55	10.13	3.16E+00	.55
RLCMTH4	PZ1(E/F)	001	.38	143.66	12.73	08.86	3.16E+00	.55
RLCMTH4	VD(EL-I)	002	-.35	143.66	09.09	06.33	3.16E+00	.55
RLCMTH4	AW(AER)	003	.30	143.66	03.64	02.53	3.16E+00	.55

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
RLLVBM2	VD(AER)	001	.83	313.53	87.50	27.91	4.57E+02	.96
RLLVBM2	QY1(E/F)	010	.27	313.53	77.08	24.58	4.57E+02	.96
RLLVBM2	QY1(D)	012	.26	313.53	38.54	12.29	4.57E+02	.96
RLLVBM2	SK(AER)	017	-.15	313.53	34.38	10.97	4.57E+02	.96
RLLVBM2	QZ1(D)	003	-.58	313.53	09.38	02.99	4.57E+02	.96
RLLVBM2	PY1(E/F)	002	.64	313.53	03.13	01.00	4.57E+02	.96
RLLVBM3	VD(AER)	001	.79	308.49	86.17	27.93	4.57E+01	.94
RLLVBM3	QY1(E/F)	015	.18	308.49	74.47	24.14	4.57E+01	.94
RLLVBM3	QY1(D)	013	.19	308.49	39.36	12.76	4.57E+01	.94
RLLVBM3	QZ1(D)	002	-.54	308.49	09.57	03.10	4.57E+01	.94
RLLVBM3	PY1(E/F)	003	.51	308.49	02.13	00.69	4.57E+01	.94
RLLVBM4	QY1(C)	004	.24	192.74	43.64	22.64	8.71E+00	.55
RLLVBM4	QY1(A/B)	007	.21	192.74	38.18	19.81	8.71E+00	.55
RLLVBM4	QY1(D)	021	.05	192.74	21.82	11.32	8.71E+00	.55
RLLVBM4	VD(AER)	008	.18	192.74	20.00	10.38	8.71E+00	.55
RLLVBM4	PZ1(E/F)	001	.34	192.74	10.91	05.66	8.71E+00	.55
RLLVBM4	PZ1(C)	002	.28	192.74	07.27	03.77	8.71E+00	.55
RLLVBM4	AW(AER)	003	.26	192.74	03.64	01.89	8.71E+00	.55
RLLVMT2	VD(AER)	001	.82	312.51	86.46	27.67	3.09E+02	.96
RLLVMT2	QY1(E/F)	009	.29	312.51	77.08	24.66	3.09E+02	.96
RLLVMT2	QY1(D)	013	.25	312.51	37.50	12.00	3.09E+02	.96
RLLVMT2	SK(AER)	020	-.10	312.51	34.38	11.00	3.09E+02	.96
RLLVMT2	QZ1(D)	003	-.61	312.51	09.38	03.00	3.09E+02	.96
RLLVMT2	PY1(E/F)	002	.68	312.51	04.17	01.33	3.09E+02	.96
RLLVMT3	VD(AER)	001	.78	308.41	84.21	27.30	3.80E+01	.95
RLLVMT3	QY1(E/F)	014	.20	308.41	73.68	23.89	3.80E+01	.95
RLLVMT3	QY1(D)	015	.19	308.41	38.95	12.63	3.80E+01	.95
RLLVMT3	QZ1(D)	002	-.54	308.41	09.47	03.07	3.80E+01	.95
RLLVMT3	PY1(E/F)	003	.54	308.41	02.11	00.68	3.80E+01	.95
RLLVMT4	QY1(C)	003	.25	196.37	45.45	23.15	8.91E+00	.55
RLLVMT4	QY1(A/B)	007	.20	196.37	38.18	19.44	8.91E+00	.55
RLLVMT4	QY1(D)	022	.05	196.37	21.82	11.11	8.91E+00	.55
RLLVMT4	VD(AER)	008	.17	196.37	20.00	10.18	8.91E+00	.55
RLLVMT4	PZ1(E/F)	001	.34	196.37	10.91	05.56	8.91E+00	.55
RLLVMT4	PZ1(C)	002	.27	196.37	07.27	03.70	8.91E+00	.55
RLLVTH2	VD(AER)	004	.48	308.78	71.43	23.13	4.79E+01	.91
RLLVTH2	QY1(E/F)	008	.34	308.78	69.23	22.42	4.79E+01	.91
RLLVTH2	QY1(D)	010	.33	308.78	40.66	13.17	4.79E+01	.91
RLLVTH2	VD(EL-I)	003	.49	308.78	26.37	08.54	4.79E+01	.91
RLLVTH2	QZ1(D)	002	-.52	308.78	12.09	03.92	4.79E+01	.91
RLLVTH2	PY1(E/F)	001	.60	308.78	05.49	01.78	4.79E+01	.91
RLLVTH3	VD(AER)	001	.55	317.06	75.00	23.65	1.62E+01	.88
RLLVTH3	QY1(E/F)	012	.14	317.06	68.18	21.50	1.62E+01	.88
RLLVTH3	QY1(D)	003	.44	317.06	54.55	17.20	1.62E+01	.88
RLLVTH3	PY1(E/F)	002	.49	317.06	04.55	01.44	1.62E+01	.88
RLLVTH4	QY1(C)	005	.29	149.32	30.99	20.75	9.33E+00	.71
RLLVTH4	QY1(A/B)	006	.26	149.32	28.17	18.87	9.33E+00	.71
RLLVTH4	VD(EL-I)	001	-.51	149.32	19.72	13.21	9.33E+00	.71
RLLVTH4	QY1(D)	003	.32	149.32	18.31	12.26	9.33E+00	.71
RLLVTH4	PZ1(E/F)	002	.43	149.32	08.45	05.66	9.33E+00	.71

## RESULTS FOR THE 99TH PERCENTILE OF THE ENDPOINTS FOR THE CB2 SOURCE TERM

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
AEVAC	VD(EL-I)	002	-.50	204.34	50.72	24.82	8.62E+00	.69
AEVAC	VD(AER)	019	-.08	204.34	34.78	17.02	8.62E+00	.69
AEVAC	QY1(E/F)	007	-.23	204.34	33.33	16.31	8.62E+00	.69
AEVAC	SK(EL-I)	023	.05	204.34	21.74	10.64	8.62E+00	.69
AEVAC	PZ1(E/F)	001	-.56	204.34	18.84	09.22	8.62E+00	.69
AEVAC	PY1(E/F)	003	-.34	204.34	01.45	00.71	8.62E+00	.69
AFBIBEE	QY1(E/F)	026	-.02	166.09	32.14	19.35	3.80E+00	.56
AFBIBEE	VD(AER)	013	-.16	166.09	32.14	19.35	3.80E+00	.56
AFBIBEE	SK(AER)	005	-.23	166.09	28.57	17.20	3.80E+00	.56
AFBIBEE	AW(AER)	001	.40	166.09	14.29	08.60	3.80E+00	.56
AFBIBEE	PY1(E/F)	003	.25	166.09	05.36	03.23	3.80E+00	.56
AFBIBEE	QZ1(A/B)	002	.27	166.09	03.57	02.15	3.80E+00	.56
AFBIGRA	VD(AER)	009	-.22	175.05	33.93	19.38	4.07E+00	.56
AFBIGRA	QY1(E/F)	024	.05	175.05	30.36	17.34	4.07E+00	.56
AFBIGRA	SK(AER)	013	-.15	175.05	23.21	13.26	4.07E+00	.56
AFBIGRA	AW(AER)	001	.44	175.05	17.86	10.20	4.07E+00	.56
AFBIGRA	SK(OG-I)	002	.31	175.05	08.93	05.10	4.07E+00	.56
AFBIGRA	BW(AER)	003	.27	175.05	05.36	03.06	4.07E+00	.56
AFBIMIL	VD(EL-I)	001	-.61	171.86	57.75	33.60	3.98E+00	.71
AFBIMIL	SK(EL-I)	019	.07	171.86	29.58	17.21	3.98E+00	.71
AFBIMIL	VD(AER)	003	-.33	171.86	19.72	11.47	3.98E+00	.71
AFBIMIL	AW(AER)	002	.38	171.86	14.08	08.19	3.98E+00	.71
AFBIVEG	VD(EL-I)	001	-.45	170.79	46.15	27.02	2.95E+00	.65
AFBIVEG	SK(EL-I)	019	-.08	170.79	29.23	17.11	2.95E+00	.65
AFBIVEG	AW(AER)	002	.41	170.79	21.54	12.61	2.95E+00	.65
AFBIVEG	VD(AER)	003	-.38	170.79	21.54	12.61	2.95E+00	.65
AFBTBEE	AW(AER)	001	.53	171.65	40.00	23.30	3.56E+00	.60
AFBTBEE	QY1(D)	002	-.29	171.65	21.67	12.62	3.56E+00	.60
AFBTBEE	VD(AER)	015	-.11	171.65	20.00	11.65	3.56E+00	.60
AFBTBEE	BW(AER)	006	.27	171.65	18.33	10.68	3.56E+00	.60
AFBTBEE	QY1(E/F)	020	.04	171.65	18.33	10.68	3.56E+00	.60
AFBTBEE	PZ1(E/F)	003	.28	171.65	03.33	01.94	3.56E+00	.60
AFBTGRA	VD(AER)	008	-.17	188.71	33.96	18.00	4.17E+00	.53
AFBTGRA	QY1(E/F)	022	.03	188.71	32.08	17.00	4.17E+00	.53
AFBTGRA	SK(AER)	009	-.16	188.71	26.42	14.00	4.17E+00	.53
AFBTGRA	QY1(D)	010	-.16	188.71	18.87	10.00	4.17E+00	.53
AFBTGRA	AW(AER)	001	.41	188.71	16.98	09.00	4.17E+00	.53
AFBTGRA	SK(OG-I)	002	.31	188.71	09.43	05.00	4.17E+00	.53
AFBTGRA	BW(AER)	003	.25	188.71	05.66	03.00	4.17E+00	.53
AFBTMIL	AW(AER)	001	.56	172.03	58.82	34.19	4.17E+00	.68
AFBTMIL	BW(AER)	007	.16	172.03	36.76	21.37	4.17E+00	.68
AFBTMIL	QY1(D)	002	-.34	172.03	13.24	07.70	4.17E+00	.68
AFBTMIL	VD(EL-I)	003	-.33	172.03	10.29	05.98	4.17E+00	.68
AFBTVEG	AW(AER)	001	.48	173.00	69.84	40.37	3.16E+00	.63
AFBTVEG	BW(AER)	026	.01	173.00	52.38	30.28	3.16E+00	.63
AFBTVEG	PZ1(E/F)	002	.32	173.00	04.76	02.75	3.16E+00	.63
AFBTVEG	BW(EL-I)	003	.27	173.00	00.00	00.00	3.16E+00	.63
AIOD	VD(EL-I)	001	-.93	180.68	95.70	52.97	9.56E+01	.93
AIOD	SK(EL-I)	021	.06	180.68	46.24	25.59	9.56E+01	.93
AIOD	AW(EL-I)	003	-.30	180.68	01.08	00.60	9.56E+01	.93
AIOD	PZ1(A/B)	002	-.31	180.68	00.00	00.00	9.56E+01	.93
ARELIN	VD(EL-I)	002	-.50	204.34	50.72	24.82	8.62E+00	.69
ARELIN	VD(AER)	019	-.08	204.34	34.78	17.02	8.62E+00	.69
ARELIN	QY1(E/F)	007	-.23	204.34	33.33	16.31	8.62E+00	.69
ARELIN	SK(EL-I)	023	.05	204.34	21.74	10.64	8.62E+00	.69
ARELIN	PZ1(E/F)	001	-.56	204.34	18.84	09.22	8.62E+00	.69
ARELIN	PY1(E/F)	003	-.34	204.34	01.45	00.71	8.62E+00	.69
ARELTIM	AW(AER)	001	.42	158.98	50.00	31.45	1.12E+02	.56
ARELTIM	BW(AER)	019	.07	158.98	30.36	19.10	1.12E+02	.56
ARELTIM	VD(AER)	002	.34	158.98	21.43	13.48	1.12E+02	.56
ARELTIM	QZ1(E/F)	003	-.27	158.98	05.36	03.37	1.12E+02	.56
ASHEL	VD(EL-I)	001	-.53	189.07	51.56	27.27	5.89E+00	.64
ASHEL	VD(AER)	002	-.32	189.07	23.44	12.40	5.89E+00	.64
ASHEL	PZ1(D)	003	-.24	189.07	04.69	02.48	5.89E+00	.64
CACAE1	PZ1(E/F)	001	-.78	115.07	73.97	64.28	7.41E+00	.73
CACAE1	VD(AER)	003	-.27	115.07	04.11	03.57	7.41E+00	.73
CACAE1	PY1(D)	002	-.33	115.07	01.37	01.19	7.41E+00	.73
CACAE2	PZ1(E/F)	001	-.60	176.21	42.86	24.32	1.32E+01	.63
CACAE2	VD(AER)	002	-.33	176.21	33.33	18.91	1.32E+01	.63
CACAE2	QY1(E/F)	022	.05	176.21	25.40	14.41	1.32E+01	.63

CACAE2 PZ1(D) 003 -.31 176.21 04.76 02.70 1.32E+01 .63

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
CACAE3	VD(AER)	001	-.58	231.97	61.33	26.44	1.70E+01	.75
CACAE3	QY1(E/F)	008	.22	231.97	40.00	17.24	1.70E+01	.75
CACAE3	QY1(D)	019	-.09	231.97	25.33	10.92	1.70E+01	.75
CACAE3	SK(AER)	026	-.01	231.97	24.00	10.35	1.70E+01	.75
CACAE3	PZ1(D)	003	-.41	231.97	05.33	02.30	1.70E+01	.75
CACAE3	QZ1(D)	002	-.44	231.97	01.33	00.57	1.70E+01	.75
CACAE4	VD(AER)	001	-.67	294.15	81.18	27.60	2.34E+01	.85
CACAE4	QY1(E/F)	009	.11	294.15	62.35	21.20	2.34E+01	.85
CACAE4	QY1(D)	008	-.12	294.15	36.47	12.40	2.34E+01	.85
CACAE4	AW(AER)	003	-.29	294.15	08.24	02.80	2.34E+01	.85
CACAE4	QZ1(D)	002	-.29	294.15	00.00	00.00	2.34E+01	.85
CAIOD1	VD(EL-I)	001	-.52	165.20	53.03	32.10	1.35E+01	.66
CAIOD1	SK(EL-I)	027	-.02	165.20	30.30	18.34	1.35E+01	.66
CAIOD1	PZ1(E/F)	002	-.43	165.20	21.21	12.84	1.35E+01	.66
CAIOD1	BW(AER)	003	-.29	165.20	00.00	00.00	1.35E+01	.66
CAIOD2	VD(EL-I)	001	-.82	167.10	88.24	52.81	4.17E+01	.85
CAIOD2	SK(EL-I)	025	-.02	167.10	44.71	26.76	4.17E+01	.85
CAIOD2	PZ1(D)	002	-.38	167.10	03.53	02.11	4.17E+01	.85
CAIOD2	SK(AER)	003	.31	167.10	00.00	00.00	4.17E+01	.85
CAIOD3	VD(EL-I)	001	-.92	180.70	94.62	52.36	1.29E+02	.93
CAIOD3	SK(EL-I)	021	-.05	180.70	48.39	26.78	1.29E+02	.93
CAIOD3	PZ1(D)	003	-.27	180.70	01.08	00.60	1.29E+02	.93
CAIOD3	SK(AER)	002	.34	180.70	01.08	00.60	1.29E+02	.93
CAIOD4	VD(EL-I)	001	-.96	185.43	97.92	52.81	3.63E+03	.96
CAIOD4	SK(EL-I)	018	.06	185.43	50.00	26.96	3.63E+03	.96
CAIOD4	VD(OG-I)	003	-.25	185.43	03.13	01.69	3.63E+03	.96
CAIOD4	AW(EL-I)	002	-.42	185.43	02.08	01.12	3.63E+03	.96
CDCMBM	AW(AER)	001	.52	133.98	60.38	45.07	2.40E+00	.53
CDCMBM	BW(AER)	003	.23	133.98	30.19	22.53	2.40E+00	.53
CDCMBM	PZ1(E/F)	002	.28	133.98	05.66	04.22	2.40E+00	.53
CDCMED	AW(AER)	001	.52	132.08	56.60	42.85	2.45E+00	.53
CDCMED	BW(AER)	003	.23	132.08	28.30	21.43	2.45E+00	.53
CDCMED	SK(AER)	008	-.11	132.08	13.21	10.00	2.45E+00	.53
CDCMED	PZ1(E/F)	002	.28	132.08	03.77	02.85	2.45E+00	.53
CDCMTH	AW(AER)	001	.55	141.67	43.33	30.59	2.69E+00	.60
CDCMTH	VD(EL-I)	002	-.38	141.67	31.67	22.35	2.69E+00	.60
CDCMTH	BW(AER)	003	.28	141.67	20.00	14.12	2.69E+00	.60
CDCMTH	SK(EL-I)	019	-.05	141.67	16.67	11.77	2.69E+00	.60
CDLVBM	AW(AER)	001	.53	159.68	69.35	43.43	5.75E+00	.62
CDLVBM	BW(AER)	011	.11	159.68	43.55	27.27	5.75E+00	.62
CDLVBM	VD(AER)	002	.29	159.68	11.29	07.07	5.75E+00	.62
CDLVBM	PY1(E/F)	003	-.27	159.68	03.23	02.02	5.75E+00	.62
CDLVED	AW(AER)	001	.53	154.84	69.35	44.79	5.62E+00	.62
CDLVED	BW(AER)	009	.12	154.84	41.94	27.09	5.62E+00	.62
CDLVED	VD(AER)	002	.30	154.84	11.29	07.29	5.62E+00	.62
CDLVED	PY1(E/F)	003	-.27	154.84	03.23	02.09	5.62E+00	.62
CDLVTH	AW(AER)	003	.31	122.66	41.51	33.84	3.47E+00	.53
CDLVTH	BW(AER)	025	-.01	122.66	30.19	24.61	3.47E+00	.53
CDLVTH	VD(EL-I)	001	-.36	122.66	15.09	12.30	3.47E+00	.53
CDLVTH	VD(AER)	002	.32	122.66	00.00	00.00	3.47E+00	.53
CGCAE1	VD(AER)	001	.74	275.27	87.64	31.84	2.09E+02	.89
CGCAE1	QY1(E/F)	019	-.05	275.27	68.54	24.90	2.09E+02	.89
CGCAE1	SK(AER)	026	-.02	275.27	37.08	13.47	2.09E+02	.89
CGCAE1	AW(AER)	003	.27	275.27	05.62	02.04	2.09E+02	.89
CGCAE1	PZ1(E/F)	002	-.52	275.27	00.00	00.00	2.09E+02	.89
CGCAE2	VD(AER)	001	.69	254.74	82.14	32.24	6.17E+01	.84
CGCAE2	QY1(E/F)	012	-.10	254.74	63.10	24.77	6.17E+01	.84
CGCAE2	SK(AER)	013	-.10	254.74	33.33	13.08	6.17E+01	.84
CGCAE2	QZ1(E/F)	003	-.32	254.74	11.90	04.67	6.17E+01	.84
CGCAE2	PZ1(E/F)	002	-.48	254.74	00.00	00.00	6.17E+01	.84
CGCAE3	VD(AER)	001	.52	222.97	62.16	27.88	3.47E+01	.74
CGCAE3	QY1(E/F)	027	-.01	222.97	47.30	21.21	3.47E+01	.74
CGCAE3	AW(AER)	002	.38	222.97	22.97	10.30	3.47E+01	.74
CGCAE3	QZ1(D)	003	-.31	222.97	06.76	03.03	3.47E+01	.74
CGCAE4	AW(AER)	001	.48	170.32	62.50	36.70	8.51E+00	.64
CGCAE4	BW(AER)	025	.02	170.32	45.31	26.60	8.51E+00	.64
CGCAE4	VD(AER)	003	.27	170.32	17.19	10.09	8.51E+00	.64
CGCAE4	PZ1(E/F)	002	.28	170.32	09.38	05.51	8.51E+00	.64
CGIOD1	VD(EL-I)	001	.83	148.80	85.71	57.60	5.89E+01	.84
CGIOD1	SK(EL-I)	014	-.09	148.80	38.10	25.60	5.89E+01	.84
CGIOD1	PZ1(E/F)	002	-.37	148.80	03.57	02.40	5.89E+01	.84
CGIOD1	BW(AER)	003	-.29	148.80	00.00	00.00	5.89E+01	.84

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
CGIOD2	VD(EL-I)	001	.45	116.65	47.62	40.82	8.71E+00	.42
CGIOD2	SK(EL-I)	008	-.13	116.65	16.67	14.29	8.71E+00	.42
CGIOD2	PZ1(D)	002	-.34	116.65	11.90	10.20	8.71E+00	.42
CGIOD2	QZ1(D)	003	-.20	116.65	02.38	02.04	8.71E+00	.42
CGIOD3	BW(OG-I)	003	-.20	096.96	09.09	09.37	6.31E+00	.33
CGIOD3	PY1(A/B)	001	-.21	096.96	09.09	09.37	6.31E+00	.33
CGIOD3	PZ1(A/B)	002	-.21	096.96	06.06	06.25	6.31E+00	.33
CGIOD4	VD(EL-I)	001	-.69	163.90	75.00	45.76	5.62E+01	.72
CGIOD4	SK(EL-I)	025	.02	163.90	37.50	22.88	5.62E+01	.72
CGIOD4	QZ1(D)	002	.46	163.90	09.72	05.93	5.62E+01	.72
CGIOD4	BW(OG-I)	003	-.30	163.90	04.17	02.54	5.62E+01	.72
DECMBM1	PZ1(E/F)	001	-.70	113.34	33.33	29.41	6.76E+00	.75
DECMBM1	VD(EL-I)	002	.57	113.34	24.00	21.18	6.76E+00	.75
DECMBM1	PY1(E/F)	003	-.56	113.34	08.00	07.06	6.76E+00	.75
DECMBM2	PZ1(E/F)	001	-.64	178.47	43.08	24.14	7.59E+00	.65
DECMBM2	QY1(E/F)	008	-.18	178.47	29.23	16.38	7.59E+00	.65
DECMBM2	VD(AER)	018	-.11	178.47	29.23	16.38	7.59E+00	.65
DECMBM2	QY1(D)	013	-.14	178.47	18.46	10.34	7.59E+00	.65
DECMBM2	PY1(E/F)	002	-.38	178.47	01.54	00.86	7.59E+00	.65
DECMBM2	QZ1(D)	003	-.34	178.47	01.54	00.86	7.59E+00	.65
DECMBM3	VD(AER)	002	.32	127.30	27.27	21.42	2.95E+00	.55
DECMBM3	QY1(E/F)	028	-.01	127.30	20.00	15.71	2.95E+00	.55
DECMBM3	AW(AER)	008	.16	127.30	12.73	10.00	2.95E+00	.55
DECMBM3	BW(AER)	020	-.07	127.30	12.73	10.00	2.95E+00	.55
DECMBM3	QZ1(D)	001	-.39	127.30	12.73	10.00	2.95E+00	.55
DECMBM3	SK(AER)	026	-.03	127.30	12.73	10.00	2.95E+00	.55
DECMBM3	QY1(D)	003	-.31	127.30	00.00	00.00	2.95E+00	.55
DECMSK1	SK(EL-I)	001	.89	162.50	82.95	51.05	7.94E+02	.88
DECMSK1	VD(EL-I)	002	-.46	162.50	27.27	16.78	7.94E+02	.88
DECMSK1	SK(AER)	003	.41	162.50	19.32	11.89	7.94E+02	.88
DECMSK1	VD(AER)	007	.21	162.50	17.05	10.49	7.94E+02	.88
DECMSK2	SK(EL-I)	001	.87	151.15	68.60	45.39	8.51E+02	.86
DECMSK2	SK(AER)	003	.57	151.15	27.91	18.47	8.51E+02	.86
DECMSK2	VD(AER)	006	.24	151.15	18.60	12.31	8.51E+02	.86
DECMSK2	VD(EL-I)	002	-.60	151.15	13.95	09.23	8.51E+02	.86
DECMSK3	SK(EL-I)	001	.86	149.43	52.87	35.38	3.24E+02	.87
DECMSK3	SK(AER)	002	.71	149.43	41.38	27.69	3.24E+02	.87
DECMSK3	VD(AER)	012	.15	149.43	20.69	13.85	3.24E+02	.87
DECMSK3	VD(EL-I)	003	-.66	149.43	08.05	05.39	3.24E+02	.87
DECMTH1	VD(EL-I)	001	-.48	170.32	46.88	27.52	1.12E+01	.64
DECMTH1	SK(EL-I)	028	-.01	170.32	26.56	15.59	1.12E+01	.64
DECMTH1	PZ1(E/F)	002	-.44	170.32	25.00	14.68	1.12E+01	.64
DECMTH1	BW(AER)	003	-.30	170.32	00.00	00.00	1.12E+01	.64
DECMTH2	VD(EL-I)	001	-.80	177.36	84.52	47.65	1.62E+01	.84
DECMTH2	SK(EL-I)	025	-.04	177.36	44.05	24.84	1.62E+01	.84
DECMTH2	PZ1(E/F)	003	-.39	177.36	05.95	03.35	1.62E+01	.84
DECMTH2	PZ1(D)	002	-.42	177.36	04.76	02.68	1.62E+01	.84
DECMTH3	VD(EL-I)	001	-.88	158.38	89.89	56.76	1.78E+01	.89
DECMTH3	SK(EL-I)	028	.01	158.38	43.82	27.67	1.78E+01	.89
DECMTH3	PZ1(D)	002	-.31	158.38	01.12	00.71	1.78E+01	.89
DECMTH3	QZ1(D)	003	-.29	158.38	01.12	00.71	1.78E+01	.89
DLCMBM2	VD(AER)	001	.65	292.32	78.02	26.69	8.32E+00	.91
DLCMBM2	QY1(E/F)	014	.16	292.32	71.43	24.44	8.32E+00	.91
DLCMBM2	QY1(D)	005	.32	292.32	39.56	13.53	8.32E+00	.91
DLCMBM2	SK(AER)	018	-.12	292.32	29.67	10.15	8.32E+00	.91
DLCMBM2	QZ1(D)	002	-.50	292.32	12.09	04.14	8.32E+00	.91
DLCMBM2	PY1(E/F)	003	.47	292.32	04.40	01.51	8.32E+00	.91
DLCMBM3	VD(AER)	001	.54	241.56	68.83	28.49	2.00E+01	.77
DLCMBM3	QY1(E/F)	020	.03	241.56	54.55	22.58	2.00E+01	.77
DLCMBM3	SK(AER)	012	-.12	241.56	25.97	10.75	2.00E+01	.77
DLCMBM3	AW(AER)	002	.38	241.56	19.48	08.06	2.00E+01	.77
DLCMBM3	QZ1(D)	003	-.36	241.56	07.79	03.22	2.00E+01	.77
DLCMBM4	AW(AER)	001	.47	174.19	64.52	37.04	5.75E+00	.62
DLCMBM4	BW(AER)	026	.02	174.19	46.77	26.85	5.75E+00	.62
DLCMBM4	VD(AER)	003	.25	174.19	17.74	10.18	5.75E+00	.62
DLCMBM4	PZ1(E/F)	002	.28	174.19	09.68	05.56	5.75E+00	.62
DLCMED2	VD(AER)	001	.62	287.77	76.67	26.64	7.94E+00	.90
DLCMED2	QY1(E/F)	014	.15	287.77	71.11	24.71	7.94E+00	.90
DLCMED2	QY1(D)	005	.31	287.77	40.00	13.90	7.94E+00	.90
DLCMED2	SK(AER)	018	-.11	287.77	28.89	10.04	7.94E+00	.90
DLCMED2	QZ1(D)	002	-.51	287.77	12.22	04.25	7.94E+00	.90
DLCMED2	PY1(E/F)	003	.45	287.77	04.44	01.54	7.94E+00	.90



ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
DLCMED3	VD(AER)	001	.54	241.57	68.83	28.49	1.91E+01	.77
DLCMED3	QY1(E/F)	022	.03	241.57	54.55	22.58	1.91E+01	.77
DLCMED3	SK(AER)	011	-.12	241.57	24.68	10.22	1.91E+01	.77
DLCMED3	AW(AER)	002	.38	241.57	19.48	08.06	1.91E+01	.77
DLCMED3	QZ1(D)	003	-.36	241.57	09.09	03.76	1.91E+01	.77
DLCMED4	AW(AER)	001	.47	168.24	63.49	37.74	5.75E+00	.63
DLCMED4	BW(AER)	023	.02	168.24	44.44	26.41	5.75E+00	.63
DLCMED4	VD(AER)	003	.25	168.24	17.46	10.38	5.75E+00	.63
DLCMED4	PZ1(E/F)	002	.28	168.24	09.52	05.66	5.75E+00	.63
DLCMTH2	VD(AER)	002	.45	231.98	61.33	26.44	5.13E+00	.75
DLCMTH2	QY1(E/F)	027	.00	231.98	53.33	22.99	5.13E+00	.75
DLCMTH2	SK(AER)	016	.11	231.98	32.00	13.79	5.13E+00	.75
DLCMTH2	QY1(D)	014	.12	231.98	28.00	12.07	5.13E+00	.75
DLCMTH2	QZ1(D)	001	-.45	231.98	17.33	07.47	5.13E+00	.75
DLCMTH2	QZ1(A/B)	003	-.34	231.98	04.00	01.72	5.13E+00	.75
DLCMTH3	VD(AER)	001	.56	226.01	64.94	28.73	8.51E+00	.77
DLCMTH3	QY1(E/F)	027	.00	226.01	50.65	22.41	8.51E+00	.77
DLCMTH3	SK(AER)	015	-.10	226.01	24.68	10.92	8.51E+00	.77
DLCMTH3	AW(AER)	003	.38	226.01	19.48	08.62	8.51E+00	.77
DLCMTH3	QZ1(D)	002	-.40	226.01	10.39	04.60	8.51E+00	.77
DLCMTH4	AW(AER)	001	.48	131.16	55.74	42.50	4.90E+00	.61
DLCMTH4	BW(AER)	017	.07	131.16	37.70	28.74	4.90E+00	.61
DLCMTH4	VD(EL-I)	002	-.36	131.16	08.20	06.25	4.90E+00	.61
DLCMTH4	QY1(D)	003	-.29	131.16	00.00	00.00	4.90E+00	.61
DLLVBM2	VD(AER)	001	.70	273.26	86.05	31.49	8.71E+01	.86
DLLVBM2	QY1(E/F)	021	-.05	273.26	67.44	24.68	8.71E+01	.86
DLLVBM2	SK(AER)	013	-.13	273.26	32.56	11.92	8.71E+01	.86
DLLVBM2	QZ1(E/F)	003	-.31	273.26	12.79	04.68	8.71E+01	.86
DLLVBM2	PZ1(E/F)	002	-.44	273.26	00.00	00.00	8.71E+01	.86
DLLVBM3	VD(AER)	001	.53	266.25	76.25	28.64	2.82E+01	.80
DLLVBM3	QY1(E/F)	011	.13	266.25	65.00	24.41	2.82E+01	.80
DLLVBM3	SK(AER)	009	-.13	266.25	27.50	10.33	2.82E+01	.80
DLLVBM3	AW(AER)	003	.34	266.25	13.75	05.16	2.82E+01	.80
DLLVBM3	QZ1(D)	002	-.35	266.25	08.75	03.29	2.82E+01	.80
DLLVBM4	AW(AER)	001	.48	187.30	58.73	31.36	1.02E+01	.63
DLLVBM4	BW(AER)	021	.05	187.30	39.68	21.19	1.02E+01	.63
DLLVBM4	VD(AER)	003	.24	187.30	23.81	12.71	1.02E+01	.63
DLLVBM4	PZ1(E/F)	002	.31	187.30	11.11	05.93	1.02E+01	.63
DLLVED2	VD(AER)	001	.68	273.79	84.52	30.87	4.07E+01	.84
DLLVED2	QY1(E/F)	020	-.06	273.79	66.67	24.35	4.07E+01	.84
DLLVED2	SK(AER)	012	-.14	273.79	32.14	11.74	4.07E+01	.84
DLLVED2	QZ1(E/F)	003	-.29	273.79	11.90	04.35	4.07E+01	.84
DLLVED2	PZ1(E/F)	002	-.42	273.79	00.00	00.00	4.07E+01	.84
DLLVED3	VD(AER)	001	.53	261.25	76.25	29.19	1.78E+01	.80
DLLVED3	QY1(E/F)	011	.12	261.25	63.75	24.40	1.78E+01	.80
DLLVED3	SK(AER)	010	-.12	261.25	28.75	11.00	1.78E+01	.80
DLLVED3	AW(AER)	003	.33	261.25	13.75	05.26	1.78E+01	.80
DLLVED3	QZ1(D)	002	-.35	261.25	08.75	03.35	1.78E+01	.80
DLLVED4	AW(AER)	001	.47	185.72	60.32	32.48	9.12E+00	.63
DLLVED4	BW(AER)	022	.04	185.72	41.27	22.22	9.12E+00	.63
DLLVED4	VD(AER)	003	.25	185.72	22.22	11.96	9.12E+00	.63
DLLVED4	PZ1(E/F)	002	.32	185.72	12.70	06.84	9.12E+00	.63
DLLVTH2	VD(AER)	001	.48	242.45	75.76	31.25	7.24E+00	.66
DLLVTH2	QY1(E/F)	020	-.05	242.45	56.06	23.12	7.24E+00	.66
DLLVTH2	SK(AER)	024	-.02	242.45	33.33	13.75	7.24E+00	.66
DLLVTH2	PZ1(D)	003	-.28	242.45	01.52	00.63	7.24E+00	.66
DLLVTH2	PZ1(E/F)	002	-.30	242.45	00.00	00.00	7.24E+00	.66
DLLVTH3	VD(AER)	001	.44	217.20	65.63	30.22	4.27E+00	.64
DLLVTH3	QY1(E/F)	028	.00	217.20	50.00	23.02	4.27E+00	.64
DLLVTH3	SK(AER)	021	.03	217.20	32.81	15.11	4.27E+00	.64
DLLVTH3	QZ1(D)	002	-.26	217.20	06.25	02.88	4.27E+00	.64
DLLVTH3	PY1(A/B)	003	-.18	217.20	03.13	01.44	4.27E+00	.64
DLLVTH4	AW(AER)	002	.40	138.96	57.63	41.47	4.17E+00	.59
DLLVTH4	BW(AER)	026	-.01	138.96	44.07	31.71	4.17E+00	.59
DLLVTH4	VD(EL-I)	001	-.42	138.96	15.25	10.97	4.17E+00	.59
DLLVTH4	PZ1(E/F)	003	.29	138.96	10.17	07.32	4.17E+00	.59
PECMMB	SK(EL-I)	001	.86	115.86	74.39	64.21	9.99E+99	.82
PECMMB	VD(EL-I)	002	-.56	115.86	13.41	11.57	9.99E+99	.82
PECMMB	PY1(E/F)	003	-.28	115.86	02.44	02.11	9.99E+99	.82
PECMMT	SK(EL-I)	001	.87	139.27	79.76	57.27	9.99E+99	.84
PECMMT	VD(EL-I)	002	-.54	139.27	19.05	13.68	9.99E+99	.84
PECMMT	PZ1(A/B)	003	-.28	139.27	02.38	01.71	9.99E+99	.84

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
PECMSK	SK(EL-I)	001	.87	139.27	79.76	57.27	9.99E+99	.84
PECMSK	VD(EL-I)	002	-.53	139.27	19.05	13.68	9.99E+99	.84
PECMSK	PZ1(A/B)	003	-.28	139.27	02.38	01.71	9.99E+99	.84
PECMTH	QY1(E/F)	004	-.26	207.17	34.29	16.55	9.99E+99	.70
PECMTH	PZ1(E/F)	001	-.60	207.17	32.86	15.86	9.99E+99	.70
PECMTH	VD(AER)	020	-.06	207.17	32.86	15.86	9.99E+99	.70
PECMTH	VD(EL-I)	003	-.37	207.17	31.43	15.17	9.99E+99	.70
PECMTH	PY1(E/F)	002	-.53	207.17	07.14	03.45	9.99E+99	.70
PLCMBM	AW(AER)	001	.53	132.08	60.38	45.71	2.45E+00	.53
PLCMBM	BW(AER)	003	.24	132.08	30.19	22.86	2.45E+00	.53
PLCMBM	PZ1(E/F)	002	.27	132.08	05.66	04.29	2.45E+00	.53
PLCMMT	AW(AER)	001	.52	126.43	54.72	43.28	2.45E+00	.53
PLCMMT	BW(AER)	003	.24	126.43	26.42	20.90	2.45E+00	.53
PLCMMT	PZ1(E/F)	002	.28	126.43	03.77	02.98	2.45E+00	.53
PLCMTH	AW(AER)	001	.56	138.34	43.33	31.32	2.75E+00	.60
PLCMTH	VD(EL-I)	002	-.39	138.34	30.00	21.69	2.75E+00	.60
PLCMTH	BW(AER)	003	.29	138.34	20.00	14.46	2.75E+00	.60
PLCMTH	SK(EL-I)	020	-.04	138.34	16.67	12.05	2.75E+00	.60
PLLVBM	AW(AER)	001	.53	159.69	70.97	44.44	5.70E+00	.62
PLLVBM	BW(AER)	008	.11	159.69	43.55	27.27	5.70E+00	.62
PLLVBM	VD(AER)	002	.28	159.69	11.29	07.07	5.70E+00	.62
PLLVBM	PY1(E/F)	003	-.26	159.69	03.23	02.02	5.70E+00	.62
PLLVMT	AW(AER)	001	.54	170.51	75.41	44.23	4.68E+00	.61
PLLVMT	BW(AER)	008	.11	170.51	45.90	26.92	4.68E+00	.61
PLLVMT	VD(AER)	002	.23	170.51	11.48	06.73	4.68E+00	.61
PLLVMT	QZ1(A/B)	003	-.17	170.51	01.64	00.96	4.68E+00	.61
PLLVTH	AW(AER)	002	.31	125.48	43.14	34.38	3.39E+00	.51
PLLVTH	BW(AER)	028	.00	125.48	29.41	23.44	3.39E+00	.51
PLLVTH	VD(EL-I)	001	-.35	125.48	17.65	14.07	3.39E+00	.51
PLLVTH	VD(AER)	003	.28	125.48	00.00	00.00	3.39E+00	.51
RECMMB1	SK(EL-I)	001	.86	151.17	86.90	57.48	9.99E+99	.84
RECMMB1	VD(EL-I)	003	-.36	151.17	29.76	19.69	9.99E+99	.84
RECMMB1	QZ1(D)	002	-.37	151.17	02.38	01.57	9.99E+99	.84
RECMMT1	SK(EL-I)	001	.85	153.55	86.90	56.59	9.99E+99	.84
RECMMT1	VD(EL-I)	003	-.35	153.55	29.76	19.38	9.99E+99	.84
RECMMT1	QZ1(D)	002	-.35	153.55	01.19	00.77	9.99E+99	.84
RECMSK1	SK(EL-I)	001	.85	153.55	86.90	56.59	9.99E+99	.84
RECMSK1	VD(EL-I)	003	-.35	153.55	29.76	19.38	9.99E+99	.84
RECMSK1	QZ1(D)	002	-.35	153.55	01.19	00.77	9.99E+99	.84
RLCMBM2	VD(AER)	001	.64	293.42	78.02	26.59	8.51E+00	.91
RLCMBM2	QY1(E/F)	014	.16	293.42	71.43	24.34	8.51E+00	.91
RLCMBM2	QY1(D)	005	.31	293.42	39.56	13.48	8.51E+00	.91
RLCMBM2	SK(AER)	018	-.12	293.42	29.67	10.11	8.51E+00	.91
RLCMBM2	QZ1(D)	002	-.49	293.42	10.99	03.75	8.51E+00	.91
RLCMBM2	PY1(E/F)	003	.47	293.42	04.40	01.50	8.51E+00	.91
RLCMBM3	VD(AER)	001	.53	246.77	68.83	27.89	2.00E+01	.77
RLCMBM3	QY1(E/F)	020	.04	246.77	54.55	22.11	2.00E+01	.77
RLCMBM3	SK(AER)	011	-.13	246.77	24.68	10.00	2.00E+01	.77
RLCMBM3	AW(AER)	002	.38	246.77	20.78	08.42	2.00E+01	.77
RLCMBM3	QZ1(D)	003	-.36	246.77	09.09	03.68	2.00E+01	.77
RLCMBM4	AW(AER)	001	.47	175.80	64.52	36.70	5.75E+00	.62
RLCMBM4	BW(AER)	025	.02	175.80	46.77	26.60	5.75E+00	.62
RLCMBM4	VD(AER)	003	.25	175.80	17.74	10.09	5.75E+00	.62
RLCMBM4	PZ1(E/F)	002	.28	175.80	09.68	05.51	5.75E+00	.62
RLCMMT2	VD(AER)	001	.62	293.32	77.78	26.52	7.94E+00	.90
RLCMMT2	QY1(E/F)	014	.16	293.32	72.22	24.62	7.94E+00	.90
RLCMMT2	QY1(D)	005	.30	293.32	40.00	13.64	7.94E+00	.90
RLCMMT2	SK(AER)	018	-.12	293.32	30.00	10.23	7.94E+00	.90
RLCMMT2	QZ1(D)	002	-.50	293.32	12.22	04.17	7.94E+00	.90
RLCMMT2	PY1(E/F)	003	.45	293.32	04.44	01.51	7.94E+00	.90
RLCMMT3	VD(AER)	001	.54	244.16	68.83	28.19	1.91E+01	.77
RLCMMT3	QY1(E/F)	022	.03	244.16	54.55	22.34	1.91E+01	.77
RLCMMT3	SK(AER)	013	-.11	244.16	25.97	10.64	1.91E+01	.77
RLCMMT3	AW(AER)	002	.38	244.16	19.48	07.98	1.91E+01	.77
RLCMMT3	QZ1(D)	003	-.37	244.16	09.09	03.72	1.91E+01	.77
RLCMMT4	AW(AER)	001	.47	171.42	63.49	37.04	5.75E+00	.63
RLCMMT4	BW(AER)	026	.02	171.42	46.03	26.85	5.75E+00	.63
RLCMMT4	VD(AER)	003	.26	171.42	17.46	10.19	5.75E+00	.63
RLCMMT4	PZ1(E/F)	002	.29	171.42	11.11	06.48	5.75E+00	.63

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
RLCMTH2	VD(AER)	002	.44	231.98	61.33	26.44	5.25E+00	.75
RLCMTH2	QY1(E/F)	027	.01	231.98	53.33	22.99	5.25E+00	.75
RLCMTH2	SK(AER)	016	.11	231.98	32.00	13.79	5.25E+00	.75
RLCMTH2	QY1(D)	015	.12	231.98	28.00	12.07	5.25E+00	.75
RLCMTH2	QZ1(D)	001	-.45	231.98	17.33	07.47	5.25E+00	.75
RLCMTH2	QZ1(A/B)	003	-.33	231.98	04.00	01.72	5.25E+00	.75
RLCMTH3	VD(AER)	001	.55	226.01	64.94	28.73	8.51E+00	.77
RLCMTH3	QY1(E/F)	028	.00	226.01	50.65	22.41	8.51E+00	.77
RLCMTH3	SK(AER)	015	-.10	226.01	24.68	10.92	8.51E+00	.77
RLCMTH3	AW(AER)	003	.37	226.01	19.48	08.62	8.51E+00	.77
RLCMTH3	QZ1(D)	002	-.40	226.01	10.39	04.60	8.51E+00	.77
RLCMTH4	AW(AER)	001	.48	131.16	55.74	42.50	4.90E+00	.61
RLCMTH4	BW(AER)	018	.07	131.16	37.70	28.74	4.90E+00	.61
RLCMTH4	VD(EL-I)	002	-.36	131.16	08.20	06.25	4.90E+00	.61
RLCMTH4	QY1(D)	003	-.29	131.16	00.00	00.00	4.90E+00	.61
RLLVBM2	VD(AER)	001	.70	273.25	86.05	31.49	8.71E+01	.86
RLLVBM2	QY1(E/F)	021	-.05	273.25	67.44	24.68	8.71E+01	.86
RLLVBM2	SK(AER)	013	-.13	273.25	32.56	11.92	8.71E+01	.86
RLLVBM2	QZ1(E/F)	003	-.31	273.25	12.79	04.68	8.71E+01	.86
RLLVBM2	PZ1(E/F)	002	-.44	273.25	00.00	00.00	8.71E+01	.86
RLLVBM3	VD(AER)	001	.53	263.75	76.25	28.91	2.82E+01	.80
RLLVBM3	QY1(E/F)	010	.13	263.75	65.00	24.64	2.82E+01	.80
RLLVBM3	SK(AER)	009	-.14	263.75	27.50	10.43	2.82E+01	.80
RLLVBM3	AW(AER)	003	.34	263.75	13.75	05.21	2.82E+01	.80
RLLVBM3	QZ1(D)	002	-.35	263.75	08.75	03.32	2.82E+01	.80
RLLVBM4	AW(AER)	001	.48	187.31	58.73	31.35	1.05E+01	.63
RLLVBM4	BW(AER)	019	.05	187.31	41.27	22.03	1.05E+01	.63
RLLVBM4	VD(AER)	003	.24	187.31	23.81	12.71	1.05E+01	.63
RLLVBM4	PZ1(E/F)	002	.31	187.31	12.70	06.78	1.05E+01	.63
RLLVMT2	VD(AER)	001	.68	272.94	85.88	31.46	2.63E+01	.85
RLLVMT2	QY1(E/F)	021	-.06	272.94	67.06	24.57	2.63E+01	.85
RLLVMT2	SK(AER)	013	-.13	272.94	32.94	12.07	2.63E+01	.85
RLLVMT2	QZ1(E/F)	003	-.29	272.94	11.76	04.31	2.63E+01	.85
RLLVMT2	PZ1(E/F)	002	-.44	272.94	00.00	00.00	2.63E+01	.85
RLLVMT3	VD(AER)	001	.53	260.00	76.25	29.33	1.82E+01	.80
RLLVMT3	QY1(E/F)	013	.11	260.00	63.75	24.52	1.82E+01	.80
RLLVMT3	SK(AER)	010	-.13	260.00	27.50	10.58	1.82E+01	.80
RLLVMT3	AW(AER)	003	.33	260.00	13.75	05.29	1.82E+01	.80
RLLVMT3	QZ1(D)	002	-.34	260.00	07.50	02.88	1.82E+01	.80
RLLVMT4	AW(AER)	001	.47	187.31	60.32	32.20	9.33E+00	.63
RLLVMT4	BW(AER)	022	.04	187.31	41.27	22.03	9.33E+00	.63
RLLVMT4	VD(AER)	003	.24	187.31	22.22	11.86	9.33E+00	.63
RLLVMT4	PZ1(E/F)	002	.31	187.31	12.70	06.78	9.33E+00	.63
RLLVTH2	VD(AER)	001	.49	240.93	74.24	30.81	7.24E+00	.66
RLLVTH2	QY1(E/F)	020	-.06	240.93	56.06	23.27	7.24E+00	.66
RLLVTH2	SK(AER)	024	-.02	240.93	31.82	13.21	7.24E+00	.66
RLLVTH2	PZ1(D)	003	-.28	240.93	03.03	01.26	7.24E+00	.66
RLLVTH2	PZ1(E/F)	002	-.30	240.93	00.00	00.00	7.24E+00	.66
RLLVTH3	VD(AER)	001	.44	214.07	65.63	30.66	4.27E+00	.64
RLLVTH3	QY1(E/F)	027	-.01	214.07	50.00	23.36	4.27E+00	.64
RLLVTH3	SK(AER)	020	.04	214.07	32.81	15.33	4.27E+00	.64
RLLVTH3	QZ1(D)	002	-.26	214.07	06.25	02.92	4.27E+00	.64
RLLVTH3	PY1(A/B)	003	-.17	214.07	01.56	00.73	4.27E+00	.64
RLLVTH4	AW(AER)	002	.39	142.35	57.63	40.48	4.17E+00	.59
RLLVTH4	BW(AER)	026	-.02	142.35	44.07	30.96	4.17E+00	.59
RLLVTH4	VD(EL-I)	001	-.42	142.35	16.95	11.91	4.17E+00	.59
RLLVTH4	PZ1(E/F)	003	.30	142.35	10.17	07.14	4.17E+00	.59

## RESULTS FOR THE MEAN VALUE OF THE ENDPOINTS FOR THE DBA SOURCE TERM

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
AFBIBEE	VD(AER)	003	.36	212.33	43.08	20.29	1.18E+01	.65
AFBIBEE	QY1(E/F)	017	-.08	212.33	33.85	15.94	1.18E+01	.65
AFBIBEE	VD(EL-I)	002	.37	212.33	30.77	14.49	1.18E+01	.65
AFBIBEE	PZ1(E/F)	001	-.38	212.33	01.54	00.73	1.18E+01	.65
AFBIGRA	VD(AER)	001	.57	238.66	68.00	28.49	2.02E+02	.75
AFBIGRA	QY1(E/F)	012	-.13	238.66	50.67	21.23	2.02E+02	.75
AFBIGRA	SK(AER)	025	-.02	238.66	28.00	11.73	2.02E+02	.75
AFBIGRA	AW(AER)	003	.36	238.66	17.33	07.26	2.02E+02	.75
AFBIGRA	PZ1(E/F)	002	-.45	238.66	00.00	00.00	2.02E+02	.75
AFBIMLL	AW(EL-I)	024	.06	077.14	08.57	11.11	4.31E+00	.35
AFBIMLL	PY1(A/B)	006	-.20	077.14	08.57	11.11	4.31E+00	.35
AFBIMLL	PZ1(A/B)	001	-.32	077.14	08.57	11.11	4.31E+00	.35
AFBIMLL	PZ1(D)	002	-.26	077.14	08.57	11.11	4.31E+00	.35
AFBIMLL	QZ1(A/B)	003	-.22	077.14	05.71	07.40	4.31E+00	.35
AFBIVEG	PY1(C)	003	-.24	081.53	07.89	09.68	4.98E+00	.38
AFBIVEG	PZ1(A/B)	001	-.32	081.53	07.89	09.68	4.98E+00	.38
AFBIVEG	QZ1(D)	002	-.28	081.53	07.89	09.68	4.98E+00	.38
AFBTBEE	VD(AER)	001	.57	237.83	68.92	28.98	4.89E+01	.74
AFBTBEE	QY1(E/F)	008	-.14	237.83	51.35	21.59	4.89E+01	.74
AFBTBEE	SK(AER)	027	-.01	237.83	28.38	11.93	4.89E+01	.74
AFBTBEE	AW(AER)	003	.33	237.83	14.86	06.25	4.89E+01	.74
AFBTBEE	PZ1(E/F)	002	-.42	237.83	00.00	00.00	4.89E+01	.74
AFBTGRA	VD(AER)	001	.58	236.87	69.74	29.44	1.96E+02	.76
AFBTGRA	QY1(E/F)	011	-.13	236.87	51.32	21.67	1.96E+02	.76
AFBTGRA	SK(AER)	026	-.02	236.87	28.95	12.22	1.96E+02	.76
AFBTGRA	AW(AER)	003	.37	236.87	17.11	07.22	1.96E+02	.76
AFBTGRA	PZ1(E/F)	002	-.43	236.87	00.00	00.00	1.96E+02	.76
AFBTMLL	VD(AER)	003	.23	109.49	14.29	13.05	4.13E+00	.42
AFBTMLL	AW(EL-I)	019	.10	109.49	11.90	10.87	4.13E+00	.42
AFBTMLL	PZ1(A/B)	001	-.31	109.49	04.76	04.35	4.13E+00	.42
AFBTMLL	QZ1(A/B)	002	-.25	109.49	04.76	04.35	4.13E+00	.42
AFBTVEG	VD(AER)	002	.38	166.69	35.00	21.00	4.70E+00	.60
AFBTVEG	QY1(E/F)	016	-.14	166.69	25.00	15.00	4.70E+00	.60
AFBTVEG	VD(EL-I)	004	.33	166.69	23.33	14.00	4.70E+00	.60
AFBTVEG	SK(AER)	026	.04	166.69	16.67	10.00	4.70E+00	.60
AFBTVEG	QZ1(D)	001	-.42	166.69	11.67	07.00	4.70E+00	.60
AFBTVEG	QY1(D)	003	-.36	166.69	00.00	00.00	4.70E+00	.60
CACAE2	PZ1(E/F)	001	-.77	183.14	50.65	27.66	8.52E+00	.77
CACAE2	VD(AER)	004	-.37	183.14	35.06	19.14	8.52E+00	.77
CACAE2	QY1(E/F)	024	-.02	183.14	25.97	14.18	8.52E+00	.77
CACAE2	QZ1(E/F)	003	-.40	183.14	06.49	03.54	8.52E+00	.77
CACAE2	QZ1(D)	002	-.45	183.14	03.90	02.13	8.52E+00	.77
CACAE3	VD(AER)	001	-.55	246.76	74.03	30.00	1.40E+01	.77
CACAE3	QY1(E/F)	028	.00	246.76	53.25	21.58	1.40E+01	.77
CACAE3	SK(AER)	023	-.02	246.76	29.87	12.10	1.40E+01	.77
CACAE3	PZ1(E/F)	002	-.52	246.76	15.58	06.31	1.40E+01	.77
CACAE3	QZ1(D)	003	-.38	246.76	01.30	00.53	1.40E+01	.77
CACAE4	VD(AER)	001	-.63	291.63	82.14	28.17	1.92E+01	.84
CACAE4	QY1(E/F)	028	.01	291.63	64.29	22.05	1.92E+01	.84
CACAE4	SK(AER)	023	.04	291.63	32.14	11.02	1.92E+01	.84
CACAE4	AW(AER)	003	-.29	291.63	11.90	04.08	1.92E+01	.84
CACAE4	PZ1(D)	002	-.30	291.63	01.19	00.41	1.92E+01	.84
CAIOD2	VD(EL-I)	001	-.88	172.21	88.89	51.62	3.83E+01	.90
CAIOD2	SK(EL-I)	028	-.01	172.21	45.56	26.46	3.83E+01	.90
CAIOD2	PZ1(E/F)	002	-.40	172.21	03.33	01.93	3.83E+01	.90
CAIOD2	QZ1(D)	003	-.36	172.21	01.11	00.64	3.83E+01	.90
CAIOD3	VD(EL-I)	001	-.93	182.96	94.68	51.75	8.76E+01	.94
CAIOD3	SK(EL-I)	020	-.11	182.96	51.06	27.91	8.76E+01	.94
CAIOD3	AW(EL-I)	002	-.39	182.96	02.13	01.16	8.76E+01	.94
CAIOD3	PZ1(E/F)	003	-.31	182.96	01.06	00.58	8.76E+01	.94
CAIOD4	VD(EL-I)	001	-.96	192.72	96.88	50.27	1.94E+02	.96
CAIOD4	SK(EL-I)	006	-.18	192.72	54.17	28.11	1.94E+02	.96
CAIOD4	VD(OG-I)	003	-.28	192.72	03.13	01.62	1.94E+02	.96
CAIOD4	AW(EL-I)	002	-.50	192.72	02.08	01.08	1.94E+02	.96
CDCMBM	VD(AER)	002	.51	235.53	52.63	22.35	1.16E+01	.76
CDCMBM	QY1(E/F)	020	-.04	235.53	40.79	17.32	1.16E+01	.76
CDCMBM	AW(AER)	001	.51	235.53	38.16	16.20	1.16E+01	.76
CDCMBM	BW(AER)	015	.07	235.53	25.00	10.61	1.16E+01	.76
CDCMBM	QZ1(D)	003	-.33	235.53	07.89	03.35	1.16E+01	.76

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
CDCMED	VD(AER)	001	.52	227.64	51.32	22.54	7.37E+00	.76
CDCMED	QY1(E/F)	017	-.06	227.64	39.47	17.34	7.37E+00	.76
CDCMED	AW(AER)	002	.50	227.64	38.16	16.76	7.37E+00	.76
CDCMED	BW(AER)	018	.06	227.64	25.00	10.98	7.37E+00	.76
CDCMED	QZ1(D)	003	-.33	227.64	06.58	02.89	7.37E+00	.76
CDCMTH	VD(AER)	002	.46	158.23	26.87	16.98	2.90E+00	.67
CDCMTH	AW(AER)	005	.24	158.23	22.39	14.15	2.90E+00	.67
CDCMTH	BW(AER)	013	-.08	158.23	17.91	11.32	2.90E+00	.67
CDCMTH	QY1(E/F)	007	-.16	158.23	17.91	11.32	2.90E+00	.67
CDCMTH	VD(EL-I)	001	-.53	158.23	16.42	10.38	2.90E+00	.67
CDCMTH	PY1(A/B)	003	-.27	158.23	04.48	02.83	2.90E+00	.67
CGCAE2	VD(AER)	001	.71	278.19	83.91	30.16	3.80E+01	.87
CGCAE2	QY1(E/F)	013	-.09	278.19	67.82	24.38	3.80E+01	.87
CGCAE2	SK(AER)	014	-.08	278.19	33.33	11.98	3.80E+01	.87
CGCAE2	QZ1(D)	003	-.39	278.19	06.90	02.48	3.80E+01	.87
CGCAE2	PZ1(E/F)	002	-.43	278.19	00.00	00.00	3.80E+01	.87
CGCAE3	VD(AER)	001	.50	239.50	53.95	22.53	2.26E+01	.76
CGCAE3	QY1(E/F)	016	-.05	239.50	42.11	17.58	2.26E+01	.76
CGCAE3	AW(AER)	002	.49	239.50	35.53	14.84	2.26E+01	.76
CGCAE3	QZ1(D)	003	-.39	239.50	09.21	03.85	2.26E+01	.76
CGCAE4	AW(AER)	001	.56	170.15	74.63	43.86	8.50E+00	.67
CGCAE4	BW(AER)	012	.09	170.15	49.25	28.95	8.50E+00	.67
CGCAE4	PZ1(E/F)	002	.37	170.15	13.43	07.89	8.50E+00	.67
CGCAE4	QY1(D)	003	-.19	170.15	00.00	00.00	8.50E+00	.67
CGIOD2	VD(EL-I)	001	.45	124.47	44.90	36.07	6.60E+00	.49
CGIOD2	SK(EL-I)	019	-.06	124.47	18.37	14.76	6.60E+00	.49
CGIOD2	PZ1(D)	002	-.41	124.47	12.24	09.83	6.60E+00	.49
CGIOD2	QZ1(D)	003	-.28	124.47	04.08	03.28	6.60E+00	.49
CGIOD3	PY1(A/B)	002	-.28	083.35	13.89	16.66	4.70E+00	.36
CGIOD3	VD(EL-I)	015	-.13	083.35	11.11	13.33	4.70E+00	.36
CGIOD3	PZ1(A/B)	001	-.30	083.35	08.33	09.99	4.70E+00	.36
CGIOD3	QY1(E/F)	003	-.23	083.35	05.56	06.67	4.70E+00	.36
CGIOD4	VD(EL-I)	001	-.74	189.73	78.21	41.22	1.34E+01	.78
CGIOD4	SK(EL-I)	020	.06	189.73	37.18	19.60	1.34E+01	.78
CGIOD4	QZ1(D)	002	.42	189.73	08.97	04.73	1.34E+01	.78
CGIOD4	AW(EL-I)	003	.28	189.73	03.85	02.03	1.34E+01	.78
DLCMBM2	VD(AER)	001	.75	295.55	87.78	29.70	2.84E+01	.90
DLCMBM2	QY1(E/F)	023	-.05	295.55	71.11	24.06	2.84E+01	.90
DLCMBM2	SK(AER)	020	-.07	295.55	35.56	12.03	2.84E+01	.90
DLCMBM2	QZ1(D)	003	-.42	295.55	08.89	03.01	2.84E+01	.90
DLCMBM2	PZ1(E/F)	002	-.45	295.55	00.00	00.00	2.84E+01	.90
DLCMBM3	VD(AER)	001	.53	242.87	58.44	24.06	1.82E+01	.77
DLCMBM3	QY1(E/F)	016	-.04	242.87	46.75	19.25	1.82E+01	.77
DLCMBM3	AW(AER)	002	.49	242.87	32.47	13.37	1.82E+01	.77
DLCMBM3	QZ1(D)	003	-.32	242.87	07.79	03.21	1.82E+01	.77
DLCMBM4	AW(AER)	001	.60	166.16	76.47	46.02	8.02E+00	.68
DLCMBM4	BW(AER)	008	.14	166.16	48.53	29.21	8.02E+00	.68
DLCMBM4	PZ1(E/F)	002	.36	166.16	11.76	07.08	8.02E+00	.68
DLCMBM4	QY1(D)	003	-.20	166.16	00.00	00.00	8.02E+00	.68
DLCMED2	VD(AER)	001	.74	295.55	86.67	29.32	1.89E+01	.90
DLCMED2	QY1(E/F)	025	-.03	295.55	72.22	24.44	1.89E+01	.90
DLCMED2	SK(AER)	016	-.09	295.55	35.56	12.03	1.89E+01	.90
DLCMED2	QZ1(D)	003	-.44	295.55	08.89	03.01	1.89E+01	.90
DLCMED2	PZ1(E/F)	002	-.47	295.55	00.00	00.00	1.89E+01	.90
DLCMED3	VD(AER)	001	.53	245.46	59.74	24.34	1.08E+01	.77
DLCMED3	QY1(E/F)	017	-.04	245.46	48.05	19.58	1.08E+01	.77
DLCMED3	AW(AER)	002	.47	245.46	31.17	12.70	1.08E+01	.77
DLCMED3	QZ1(D)	003	-.31	245.46	07.79	03.17	1.08E+01	.77
DLCMED4	AW(AER)	001	.60	160.29	76.47	47.71	7.14E+00	.68
DLCMED4	BW(AER)	007	.15	160.29	48.53	30.28	7.14E+00	.68
DLCMED4	PZ1(E/F)	002	.37	160.29	13.24	08.26	7.14E+00	.68
DLCMED4	QY1(D)	003	-.21	160.29	00.00	00.00	7.14E+00	.68
DLCMTH2	VD(AER)	001	.65	286.03	80.23	28.05	4.60E+00	.86
DLCMTH2	QY1(E/F)	023	-.04	286.03	67.44	23.58	4.60E+00	.86
DLCMTH2	QY1(D)	012	.15	286.03	38.37	13.41	4.60E+00	.86
DLCMTH2	QZ1(D)	003	-.46	286.03	12.79	04.47	4.60E+00	.86
DLCMTH2	PZ1(E/F)	002	-.47	286.03	00.00	00.00	4.60E+00	.86
DLCMTH3	VD(AER)	001	.42	204.85	51.61	25.19	3.34E+00	.62
DLCMTH3	QY1(E/F)	012	-.07	204.85	38.71	18.90	3.34E+00	.62
DLCMTH3	SK(AER)	022	.03	204.85	22.58	11.02	3.34E+00	.62
DLCMTH3	QY1(D)	020	.04	204.85	20.97	10.24	3.34E+00	.62
DLCMTH3	VD(EL-I)	002	-.34	204.85	01.61	00.79	3.34E+00	.62
DLCMTH3	PZ1(A/B)	003	-.26	204.85	00.00	00.00	3.34E+00	.62

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
DLCMTH4	VD(EL-I)	001	-.70	186.08	60.76	32.65	4.39E+00	.79
DLCMTH4	SK(EL-I)	027	-.01	186.08	30.38	16.33	4.39E+00	.79
DLCMTH4	AW(AER)	002	.34	186.08	22.78	12.24	4.39E+00	.79
DLCMTH4	BW(AER)	016	-.09	186.08	20.25	10.88	4.39E+00	.79
DLCMTH4	PZ1(E/F)	003	.33	186.08	03.80	02.04	4.39E+00	.79
DLOUBM2	VD(AER)	001	.71	279.34	83.91	30.04	2.52E+01	.87
DLOUBM2	QY1(E/F)	012	-.10	279.34	66.67	23.87	2.52E+01	.87
DLOUBM2	SK(AER)	015	-.07	279.34	34.48	12.34	2.52E+01	.87
DLOUBM2	QZ1(D)	003	-.38	279.34	06.90	02.47	2.52E+01	.87
DLOUBM2	PZ1(E/F)	002	-.44	279.34	00.00	00.00	2.52E+01	.87
DLOUBM3	VD(AER)	001	.51	237.30	53.33	22.47	1.78E+01	.75
DLOUBM3	QY1(E/F)	015	-.06	237.30	41.33	17.42	1.78E+01	.75
DLOUBM3	AW(AER)	002	.50	237.30	37.33	15.73	1.78E+01	.75
DLOUBM3	BW(AER)	014	.07	237.30	24.00	10.11	1.78E+01	.75
DLOUBM3	QZ1(D)	003	-.36	237.30	09.33	03.93	1.78E+01	.75
DLOUBM4	AW(AER)	001	.58	164.69	75.00	45.54	7.87E+00	.68
DLOUBM4	BW(AER)	008	.12	164.69	48.53	29.47	7.87E+00	.68
DLOUBM4	PZ1(E/F)	002	.36	164.69	11.76	07.14	7.87E+00	.68
DLOUBM4	QY1(D)	003	-.20	164.69	00.00	00.00	7.87E+00	.68
DLOUED2	VD(AER)	001	.71	274.41	83.72	30.51	1.41E+01	.86
DLOUED2	QY1(E/F)	012	-.12	274.41	65.12	23.73	1.41E+01	.86
DLOUED2	SK(AER)	016	-.07	274.41	33.72	12.29	1.41E+01	.86
DLOUED2	QZ1(D)	003	-.40	274.41	08.14	02.97	1.41E+01	.86
DLOUED2	PZ1(E/F)	002	-.45	274.41	00.00	00.00	1.41E+01	.86
DLOUED3	VD(AER)	001	.51	233.31	53.33	22.86	9.09E+00	.75
DLOUED3	QY1(E/F)	013	-.07	233.31	41.33	17.71	9.09E+00	.75
DLOUED3	AW(AER)	002	.49	233.31	37.33	16.00	9.09E+00	.75
DLOUED3	BW(AER)	015	.06	233.31	24.00	10.29	9.09E+00	.75
DLOUED3	QZ1(D)	003	-.37	233.31	09.33	04.00	9.09E+00	.75
DLOUED4	AW(AER)	001	.58	162.66	76.12	46.80	7.23E+00	.67
DLOUED4	BW(AER)	008	.11	162.66	49.25	30.28	7.23E+00	.67
DLOUED4	PZ1(E/F)	002	.37	162.66	13.43	08.26	7.23E+00	.67
DLOUED4	QY1(D)	003	-.21	162.66	00.00	00.00	7.23E+00	.67
DLOUTH2	VD(AER)	001	.54	222.87	61.43	27.56	4.94E+00	.70
DLOUTH2	QY1(E/F)	010	-.18	222.87	45.71	20.51	4.94E+00	.70
DLOUTH2	QZ1(D)	002	-.45	222.87	12.86	05.77	4.94E+00	.70
DLOUTH2	PZ1(D)	003	-.41	222.87	04.29	01.92	4.94E+00	.70
DLOUTH3	VD(AER)	001	.45	158.61	31.03	19.56	3.05E+00	.58
DLOUTH3	AW(AER)	004	.27	158.61	27.59	17.39	3.05E+00	.58
DLOUTH3	BW(AER)	022	-.02	158.61	18.97	11.96	3.05E+00	.58
DLOUTH3	QY1(E/F)	008	-.20	158.61	18.97	11.96	3.05E+00	.58
DLOUTH3	QZ1(D)	003	-.31	158.61	08.62	05.43	3.05E+00	.58
DLOUTH3	VD(EL-I)	002	-.33	158.61	03.45	02.18	3.05E+00	.58
DLOUTH4	VD(EL-I)	001	-.60	173.33	44.00	25.39	4.14E+00	.75
DLOUTH4	AW(AER)	002	.43	173.33	38.67	22.31	4.14E+00	.75
DLOUTH4	BW(AER)	018	-.06	173.33	30.67	17.69	4.14E+00	.75
DLOUTH4	SK(EL-I)	021	-.03	173.33	21.33	12.31	4.14E+00	.75
DLOUTH4	PZ1(E/F)	003	.39	173.33	08.00	04.62	4.14E+00	.75
PLCMBM	VD(AER)	002	.51	235.53	52.63	22.35	1.16E+01	.76
PLCMBM	QY1(E/F)	020	-.04	235.53	40.79	17.32	1.16E+01	.76
PLCMBM	AW(AER)	001	.51	235.53	38.16	16.20	1.16E+01	.76
PLCMBM	BW(AER)	015	.07	235.53	25.00	10.61	1.16E+01	.76
PLCMBM	QZ1(D)	003	-.33	235.53	07.89	03.35	1.16E+01	.76
PLCMMT	VD(AER)	001	.52	228.96	51.32	22.41	8.00E+00	.76
PLCMMT	QY1(E/F)	018	-.07	228.96	39.47	17.24	8.00E+00	.76
PLCMMT	AW(AER)	002	.51	228.96	38.16	16.67	8.00E+00	.76
PLCMMT	BW(AER)	017	.07	228.96	25.00	10.92	8.00E+00	.76
PLCMMT	QZ1(D)	003	-.34	228.96	07.89	03.45	8.00E+00	.76
PLCMTH	VD(AER)	002	.46	158.23	26.87	16.98	2.90E+00	.67
PLCMTH	AW(AER)	005	.24	158.23	22.39	14.15	2.90E+00	.67
PLCMTH	BW(AER)	013	-.08	158.23	17.91	11.32	2.90E+00	.67
PLCMTH	QY1(E/F)	007	-.16	158.23	17.91	11.32	2.90E+00	.67
PLCMTH	VD(EL-I)	001	-.53	158.23	16.42	10.38	2.90E+00	.67
PLCMTH	PY1(A/B)	003	-.27	158.23	04.48	02.83	2.90E+00	.67
RLCMBM2	VD(AER)	001	.75	295.55	87.78	29.70	2.84E+01	.90
RLCMBM2	QY1(E/F)	023	-.05	295.55	71.11	24.06	2.84E+01	.90
RLCMBM2	SK(AER)	020	-.07	295.55	35.56	12.03	2.84E+01	.90
RLCMBM2	QZ1(D)	003	-.42	295.55	08.89	03.01	2.84E+01	.90
RLCMBM2	PZ1(E/F)	002	-.45	295.55	00.00	00.00	2.84E+01	.90
RLCMBM3	VD(AER)	001	.53	242.87	58.44	24.06	1.82E+01	.77
RLCMBM3	QY1(E/F)	016	-.04	242.87	46.75	19.25	1.82E+01	.77
RLCMBM3	AW(AER)	002	.49	242.87	32.47	13.37	1.82E+01	.77
RLCMBM3	QZ1(D)	003	-.32	242.87	07.79	03.21	1.82E+01	.77

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
RLCMBM4	AW(AER)	001	.60	166.16	76.47	46.02	8.02E+00	.68
RLCMBM4	BW(AER)	008	.14	166.16	48.53	29.21	8.02E+00	.68
RLCMBM4	PZ1(E/F)	002	.36	166.16	11.76	07.08	8.02E+00	.68
RLCMBM4	QY1(D)	003	-.20	166.16	00.00	00.00	8.02E+00	.68
RLCMMT2	VD(AER)	001	.75	292.31	85.71	29.32	1.96E+01	.91
RLCMMT2	QY1(E/F)	024	-.04	292.31	71.43	24.44	1.96E+01	.91
RLCMMT2	SK(AER)	017	-.08	292.31	35.16	12.03	1.96E+01	.91
RLCMMT2	QZ1(D)	003	-.44	292.31	08.79	03.01	1.96E+01	.91
RLCMMT2	PZ1(E/F)	002	-.47	292.31	00.00	00.00	1.96E+01	.91
RLCMMT3	VD(AER)	001	.53	244.17	59.74	24.47	1.15E+01	.77
RLCMMT3	QY1(E/F)	016	-.04	244.17	46.75	19.15	1.15E+01	.77
RLCMMT3	AW(AER)	002	.47	244.17	32.47	13.30	1.15E+01	.77
RLCMMT3	QZ1(D)	003	-.33	244.17	07.79	03.19	1.15E+01	.77
RLCMMT4	AW(AER)	001	.60	158.81	76.47	48.15	7.28E+00	.68
RLCMMT4	BW(AER)	008	.14	158.81	48.53	30.56	7.28E+00	.68
RLCMMT4	PZ1(E/F)	002	.37	158.81	11.76	07.41	7.28E+00	.68
RLCMMT4	QY1(D)	003	-.21	158.81	00.00	00.00	7.28E+00	.68
RLCMTH2	VD(AER)	001	.65	286.03	80.23	28.05	4.60E+00	.86
RLCMTH2	QY1(E/F)	023	-.04	286.03	67.44	23.58	4.60E+00	.86
RLCMTH2	QY1(D)	012	.15	286.03	38.37	13.41	4.60E+00	.86
RLCMTH2	QZ1(D)	003	-.46	286.03	12.79	04.47	4.60E+00	.86
RLCMTH2	PZ1(E/F)	002	-.47	286.03	00.00	00.00	4.60E+00	.86
RLCMTH3	VD(AER)	001	.42	204.85	51.61	25.19	3.34E+00	.62
RLCMTH3	QY1(E/F)	012	-.07	204.85	38.71	18.90	3.34E+00	.62
RLCMTH3	SK(AER)	022	.03	204.85	22.58	11.02	3.34E+00	.62
RLCMTH3	QY1(D)	020	.04	204.85	20.97	10.24	3.34E+00	.62
RLCMTH3	VD(EL-I)	002	-.34	204.85	01.61	00.79	3.34E+00	.62
RLCMTH3	PZ1(A/B)	003	-.26	204.85	00.00	00.00	3.34E+00	.62
RLCMTH4	VD(EL-I)	001	-.70	186.08	60.76	32.65	4.39E+00	.79
RLCMTH4	SK(EL-I)	027	-.01	186.08	30.38	16.33	4.39E+00	.79
RLCMTH4	AW(AER)	002	.34	186.08	22.78	12.24	4.39E+00	.79
RLCMTH4	BW(AER)	016	-.09	186.08	20.25	10.88	4.39E+00	.79
RLCMTH4	PZ1(E/F)	003	.33	186.08	03.80	02.04	4.39E+00	.79
RLOUBM2	VD(AER)	001	.71	279.34	83.91	30.04	2.52E+01	.87
RLOUBM2	QY1(E/F)	012	-.10	279.34	66.67	23.87	2.52E+01	.87
RLOUBM2	SK(AER)	015	-.07	279.34	34.48	12.34	2.52E+01	.87
RLOUBM2	QZ1(D)	003	-.38	279.34	06.90	02.47	2.52E+01	.87
RLOUBM2	PZ1(E/F)	002	-.44	279.34	00.00	00.00	2.52E+01	.87
RLOUBM3	VD(AER)	001	.51	237.30	53.33	22.47	1.78E+01	.75
RLOUBM3	QY1(E/F)	015	-.06	237.30	41.33	17.42	1.78E+01	.75
RLOUBM3	AW(AER)	002	.50	237.30	37.33	15.73	1.78E+01	.75
RLOUBM3	BW(AER)	014	.07	237.30	24.00	10.11	1.78E+01	.75
RLOUBM3	QZ1(D)	003	-.36	237.30	09.33	03.93	1.78E+01	.75
RLOUBM4	AW(AER)	001	.58	164.69	75.00	45.54	7.87E+00	.68
RLOUBM4	BW(AER)	008	.12	164.69	48.53	29.47	7.87E+00	.68
RLOUBM4	PZ1(E/F)	002	.36	164.69	11.76	07.14	7.87E+00	.68
RLOUBM4	QY1(D)	003	-.20	164.69	00.00	00.00	7.87E+00	.68
RLOUMT2	VD(AER)	001	.71	275.57	83.72	30.38	1.51E+01	.86
RLOUMT2	QY1(E/F)	012	-.11	275.57	66.28	24.05	1.51E+01	.86
RLOUMT2	SK(AER)	015	-.07	275.57	33.72	12.24	1.51E+01	.86
RLOUMT2	QZ1(D)	003	-.40	275.57	08.14	02.95	1.51E+01	.86
RLOUMT2	PZ1(E/F)	002	-.46	275.57	00.00	00.00	1.51E+01	.86
RLOUMT3	VD(AER)	001	.51	230.65	52.00	22.54	1.00E+01	.75
RLOUMT3	QY1(E/F)	013	-.07	230.65	40.00	17.34	1.00E+01	.75
RLOUMT3	AW(AER)	002	.50	230.65	37.33	16.18	1.00E+01	.75
RLOUMT3	BW(AER)	015	.06	230.65	24.00	10.41	1.00E+01	.75
RLOUMT3	QZ1(D)	003	-.37	230.65	09.33	04.05	1.00E+01	.75
RLOUMT4	AW(AER)	001	.58	164.17	76.12	46.37	7.29E+00	.67
RLOUMT4	BW(AER)	009	.11	164.17	50.75	30.91	7.29E+00	.67
RLOUMT4	PZ1(E/F)	002	.36	164.17	11.94	07.27	7.29E+00	.67
RLOUMT4	QY1(D)	003	-.21	164.17	00.00	00.00	7.29E+00	.67
RLOUTH2	VD(AER)	001	.54	222.87	61.43	27.56	4.94E+00	.70
RLOUTH2	QY1(E/F)	010	-.18	222.87	45.71	20.51	4.94E+00	.70
RLOUTH2	QZ1(D)	002	-.45	222.87	12.86	05.77	4.94E+00	.70
RLOUTH2	PZ1(D)	003	-.41	222.87	04.29	01.92	4.94E+00	.70
RLOUTH3	VD(AER)	001	.45	158.61	31.03	19.56	3.05E+00	.58
RLOUTH3	AW(AER)	004	.27	158.61	27.59	17.39	3.05E+00	.58
RLOUTH3	BW(AER)	022	-.02	158.61	18.97	11.96	3.05E+00	.58
RLOUTH3	QY1(E/F)	008	-.20	158.61	18.97	11.96	3.05E+00	.58
RLOUTH3	QZ1(D)	003	-.31	158.61	08.62	05.43	3.05E+00	.58
RLOUTH3	VD(EL-I)	002	-.33	158.61	03.45	02.18	3.05E+00	.58

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
RLOUTH4	VD(EL-I)	001	-.60	173.33	44.00	25.39	4.14E+00	.75
RLOUTH4	AW(AER)	002	.43	173.33	38.67	22.31	4.14E+00	.75
RLOUTH4	BW(AER)	018	-.06	173.33	30.67	17.69	4.14E+00	.75
RLOUTH4	SK(EL-I)	021	-.03	173.33	21.33	12.31	4.14E+00	.75
RLOUTH4	PZ1(E/F)	003	.39	173.33	08.00	04.62	4.14E+00	.75



## RESULTS FOR THE 95TH PERCENTILE OF THE ENDPOINTS FOR THE DBA SOURCE TERM

ENDP	INP. VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
AFBIBEE	VD(AER)	001	.33	168.11	36.17	21.52	8.71E+00	.47
AFBIBEE	QY1(E/F)	010	-.13	168.11	23.40	13.92	8.71E+00	.47
AFBIBEE	AW(AER)	006	.21	168.11	21.28	12.66	8.71E+00	.47
AFBIBEE	VD(EL-I)	008	.16	168.11	17.02	10.12	8.71E+00	.47
AFBIBEE	PZ1(E/F)	002	-.30	168.11	02.13	01.27	8.71E+00	.47
AFBIBEE	QY1(D)	003	-.28	168.11	00.00	00.00	8.71E+00	.47
AFBIGRA	VD(AER)	003	.36	206.42	46.77	22.66	9.99E+99	.62
AFBIGRA	QY1(E/F)	013	-.08	206.42	33.87	16.41	9.99E+99	.62
AFBIGRA	AW(AER)	002	.37	206.42	30.65	14.85	9.99E+99	.62
AFBIGRA	SK(AER)	011	.09	206.42	24.19	11.72	9.99E+99	.62
AFBIGRA	PZ1(E/F)	001	-.38	206.42	01.61	00.78	9.99E+99	.62
AFBIMIL	VD(EL-I)	001	-.38	121.31	34.04	28.06	4.07E+00	.47
AFBIMIL	PZ1(A/B)	002	-.30	121.31	04.26	03.51	4.07E+00	.47
AFBIMIL	QY1(A/B)	003	.24	121.31	02.13	01.76	4.07E+00	.47
AFBIVEG	VD(EL-I)	001	-.33	136.70	28.57	20.90	4.90E+00	.49
AFBIVEG	QY1(D)	006	-.22	136.70	16.33	11.95	4.90E+00	.49
AFBIVEG	PZ1(A/B)	002	-.29	136.70	04.08	02.98	4.90E+00	.49
AFBIVEG	QY1(A/B)	003	.25	136.70	00.00	00.00	4.90E+00	.49
AFBTBEE	VD(AER)	001	.42	199.99	50.00	25.00	2.75E+01	.62
AFBTBEE	QY1(E/F)	012	-.10	199.99	37.10	18.55	2.75E+01	.62
AFBTBEE	AW(AER)	003	.34	199.99	25.81	12.91	2.75E+01	.62
AFBTBEE	SK(AER)	028	.00	199.99	20.97	10.49	2.75E+01	.62
AFBTBEE	PZ1(E/F)	002	-.38	199.99	01.61	00.81	2.75E+01	.62
AFBTGRA	VD(AER)	002	.37	204.82	46.77	22.83	9.99E+99	.62
AFBTGRA	QY1(E/F)	017	-.05	204.82	35.48	17.32	9.99E+99	.62
AFBTGRA	AW(AER)	001	.38	204.82	33.87	16.54	9.99E+99	.62
AFBTGRA	BW(AER)	027	.02	204.82	22.58	11.02	9.99E+99	.62
AFBTGRA	SK(AER)	022	.04	204.82	20.97	10.24	9.99E+99	.62
AFBTGRA	PZ1(E/F)	003	-.35	204.82	00.00	00.00	9.99E+99	.62
AFBTMIL	VD(EL-I)	001	-.41	108.68	36.96	34.01	3.89E+00	.46
AFBTMIL	PZ1(A/B)	002	-.28	108.68	02.17	02.00	3.89E+00	.46
AFBTMIL	QY1(A/B)	003	.23	108.68	02.17	02.00	3.89E+00	.46
AFBTVEG	AW(AER)	028	.02	088.42	11.63	13.15	3.39E+00	.43
AFBTVEG	BW(AER)	016	-.13	088.42	11.63	13.15	3.39E+00	.43
AFBTVEG	QY1(D)	001	-.33	088.42	04.65	05.26	3.39E+00	.43
AFBTVEG	QZ1(D)	003	-.27	088.42	04.65	05.26	3.39E+00	.43
AFBTVEG	VD(AER)	002	.28	088.42	04.65	05.26	3.39E+00	.43
CACAE2	QZ1(D)	001	-.63	129.70	32.43	25.00	1.35E+01	.74
CACAE2	QY1(E/F)	005	.43	129.70	21.62	16.67	1.35E+01	.74
CACAE2	PY1(E/F)	002	.52	129.70	17.57	13.55	1.35E+01	.74
CACAE2	QY1(D)	008	.22	129.70	14.86	11.46	1.35E+01	.74
CACAE2	PZ1(D)	003	-.49	129.70	04.05	03.12	1.35E+01	.74
CACAE3	QZ1(D)	002	-.40	080.01	20.00	25.00	7.76E+00	.55
CACAE3	PY1(E/F)	004	.35	080.01	12.73	15.91	7.76E+00	.55
CACAE3	VD(AER)	001	-.43	080.01	07.27	09.09	7.76E+00	.55
CACAE3	QY1(D)	003	.38	080.01	05.45	06.81	7.76E+00	.55
CACAE4	VD(AER)	001	-.48	191.82	50.82	26.49	3.63E+01	.61
CACAE4	QY1(E/F)	010	.12	191.82	32.79	17.09	3.63E+01	.61
CACAE4	AW(AER)	003	-.23	191.82	22.95	11.96	3.63E+01	.61
CACAE4	SK(AER)	021	-.04	191.82	22.95	11.96	3.63E+01	.61
CACAE4	QY1(D)	002	.33	191.82	01.64	00.85	3.63E+01	.61
CAIOD2	VD(EL-I)	001	-.79	122.85	54.22	44.14	5.01E+01	.83
CAIOD2	SK(EL-I)	017	.09	122.85	24.10	19.62	5.01E+01	.83
CAIOD2	PY1(E/F)	003	.44	122.85	08.43	06.86	5.01E+01	.83
CAIOD2	PZ1(D)	002	-.45	122.85	03.61	02.94	5.01E+01	.83
CAIOD3	VD(EL-I)	001	-.89	138.20	78.65	56.91	1.58E+02	.89
CAIOD3	SK(EL-I)	017	.09	138.20	37.08	26.83	1.58E+02	.89
CAIOD3	PY1(E/F)	003	.36	138.20	03.37	02.44	1.58E+02	.89
CAIOD3	QY1(D)	002	.42	138.20	02.25	01.63	1.58E+02	.89
CAIOD4	VD(EL-I)	001	-.86	146.62	81.82	55.80	2.88E+02	.88
CAIOD4	SK(EL-I)	017	-.07	146.62	45.45	31.00	2.88E+02	.88
CAIOD4	AW(EL-I)	003	-.34	146.62	03.41	02.33	2.88E+02	.88
CAIOD4	QY1(D)	002	.37	146.62	01.14	00.78	2.88E+02	.88
CDCMBM	AW(AER)	001	.58	194.40	71.83	36.95	8.91E+00	.71
CDCMBM	BW(AER)	018	.05	194.40	47.89	24.63	8.91E+00	.71
CDCMBM	VD(AER)	002	.29	194.40	19.72	10.14	8.91E+00	.71
CDCMBM	QY1(D)	003	-.19	194.40	04.23	02.18	8.91E+00	.71
CDCMED	AW(AER)	001	.58	195.80	73.24	37.41	7.94E+00	.71
CDCMED	BW(AER)	019	.05	195.80	49.30	25.18	7.94E+00	.71

CDCMED	VD(AER)	002	.31	195.80	19.72	10.07	7.94E+00	.71
CDCMED	QY1(D)	003	-.18	195.80	04.23	02.16	7.94E+00	.71

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
CDCMTH	AW(AER)	004	.23	160.68	36.07	22.45	2.69E+00	.61
CDCMTH	BW(AER)	007	-.14	160.68	31.15	19.39	2.69E+00	.61
CDCMTH	VD(EL-I)	001	-.49	160.68	18.03	11.22	2.69E+00	.61
CDCMTH	VD(AER)	002	.32	160.68	13.11	08.16	2.69E+00	.61
CDCMTH	PY1(A/B)	003	-.25	160.68	04.92	03.06	2.69E+00	.61
CGCAE2	VD(AER)	001	.80	304.19	88.42	29.07	5.75E+02	.95
CGCAE2	QY1(E/F)	009	.26	304.19	77.89	25.61	5.75E+02	.95
CGCAE2	QY1(D)	013	.22	304.19	35.79	11.77	5.75E+02	.95
CGCAE2	SK(AER)	016	-.16	304.19	34.74	11.42	5.75E+02	.95
CGCAE2	QZ1(D)	002	-.61	304.19	10.53	03.46	5.75E+02	.95
CGCAE2	PY1(E/F)	003	.59	304.19	03.16	01.04	5.75E+02	.95
CGCAE3	VD(AER)	001	.77	320.19	87.23	27.24	8.91E+01	.94
CGCAE3	QY1(E/F)	012	.18	320.19	76.60	23.92	8.91E+01	.94
CGCAE3	QY1(D)	005	.33	320.19	42.55	13.29	8.91E+01	.94
CGCAE3	SK(AER)	013	-.15	320.19	32.98	10.30	8.91E+01	.94
CGCAE3	QZ1(D)	002	-.56	320.19	10.64	03.32	8.91E+01	.94
CGCAE3	PY1(E/F)	003	.50	320.19	02.13	00.67	8.91E+01	.94
CGCAE4	QY1(D)	005	.29	267.62	45.07	16.84	7.59E+01	.71
CGCAE4	VD(AER)	006	.25	267.62	42.25	15.79	7.59E+01	.71
CGCAE4	QY1(C)	007	.25	267.62	39.44	14.74	7.59E+01	.71
CGCAE4	QY1(E/F)	016	-.09	267.62	33.80	12.63	7.59E+01	.71
CGCAE4	QY1(A/B)	010	.15	267.62	29.58	11.05	7.59E+01	.71
CGCAE4	PZ1(C)	001	.42	267.62	09.86	03.68	7.59E+01	.71
CGCAE4	PZ1(E/F)	002	.39	267.62	09.86	03.68	7.59E+01	.71
CGCAE4	PY1(E/F)	003	.30	267.62	02.82	01.05	7.59E+01	.71
CGIOD2	QY1(E/F)	010	.16	281.08	48.65	17.31	5.75E+01	.74
CGIOD2	VD(AER)	015	.09	281.08	47.30	16.83	5.75E+01	.74
CGIOD2	QY1(D)	002	.38	281.08	45.95	16.35	5.75E+01	.74
CGIOD2	VD(EL-I)	001	.45	281.08	37.84	13.46	5.75E+01	.74
CGIOD2	PY1(E/F)	003	.37	281.08	05.41	01.92	5.75E+01	.74
CGIOD3	QY1(D)	001	.57	212.70	57.75	27.15	2.63E+01	.71
CGIOD3	QY1(C)	016	.12	212.70	39.44	18.54	2.63E+01	.71
CGIOD3	QY1(A/B)	011	.20	212.70	32.39	15.23	2.63E+01	.71
CGIOD3	VD(AER)	009	.21	212.70	28.17	13.24	2.63E+01	.71
CGIOD3	QY1(E/F)	023	-.06	212.70	25.35	11.92	2.63E+01	.71
CGIOD3	PY1(D)	002	.33	212.70	02.82	01.33	2.63E+01	.71
CGIOD3	PZ1(A/B)	003	-.31	212.70	01.41	00.66	2.63E+01	.71
CGIOD4	VD(EL-I)	001	-.63	125.66	36.49	29.04	3.80E+01	.74
CGIOD4	SK(EL-I)	026	-.02	125.66	20.27	16.13	3.80E+01	.74
CGIOD4	QY1(D)	002	.54	125.66	17.57	13.98	3.80E+01	.74
CGIOD4	QY1(A/B)	005	.29	125.66	16.22	12.91	3.80E+01	.74
CGIOD4	QY1(C)	021	.05	125.66	13.51	10.75	3.80E+01	.74
CGIOD4	QZ1(D)	003	.41	125.66	02.70	02.15	3.80E+01	.74
DLCMBM2	VD(AER)	001	.84	307.28	87.50	28.48	3.89E+02	.96
DLCMBM2	QY1(E/F)	009	.28	307.28	77.08	25.08	3.89E+02	.96
DLCMBM2	QY1(D)	013	.20	307.28	36.46	11.87	3.89E+02	.96
DLCMBM2	SK(AER)	016	-.15	307.28	35.42	11.53	3.89E+02	.96
DLCMBM2	QZ1(D)	003	-.65	307.28	10.42	03.39	3.89E+02	.96
DLCMBM2	PY1(E/F)	002	.65	307.28	03.13	01.02	3.89E+02	.96
DLCMBM3	VD(AER)	001	.78	307.43	86.17	28.03	5.50E+01	.94
DLCMBM3	QY1(E/F)	014	.18	307.43	74.47	24.22	5.50E+01	.94
DLCMBM3	QY1(D)	016	.17	307.43	38.30	12.46	5.50E+01	.94
DLCMBM3	QZ1(D)	002	-.56	307.43	09.57	03.11	5.50E+01	.94
DLCMBM3	PY1(E/F)	003	.52	307.43	02.13	00.69	5.50E+01	.94
DLCMBM4	QY1(C)	006	.27	243.50	46.38	19.05	4.68E+01	.69
DLCMBM4	QY1(A/B)	007	.27	243.50	39.13	16.07	4.68E+01	.69
DLCMBM4	QY1(D)	013	.15	243.50	33.33	13.69	4.68E+01	.69
DLCMBM4	VD(AER)	004	.28	243.50	33.33	13.69	4.68E+01	.69
DLCMBM4	PZ1(E/F)	002	.36	243.50	08.70	03.57	4.68E+01	.69
DLCMBM4	PZ1(C)	001	.37	243.50	07.25	02.98	4.68E+01	.69
DLCMBM4	PY1(E/F)	003	.28	243.50	02.90	01.19	4.68E+01	.69
DLCMED2	VD(AER)	001	.79	310.49	86.32	27.80	1.38E+02	.95
DLCMED2	QY1(E/F)	008	.30	310.49	76.84	24.75	1.38E+02	.95
DLCMED2	QY1(D)	012	.21	310.49	37.89	12.20	1.38E+02	.95
DLCMED2	SK(AER)	017	-.15	310.49	33.68	10.85	1.38E+02	.95
DLCMED2	QZ1(D)	003	-.57	310.49	09.47	03.05	1.38E+02	.95
DLCMED2	PY1(E/F)	002	.63	310.49	04.21	01.36	1.38E+02	.95
DLCMED3	VD(AER)	001	.74	315.09	84.95	26.96	3.02E+01	.93
DLCMED3	QY1(E/F)	017	.15	315.09	73.12	23.21	3.02E+01	.93
DLCMED3	QY1(D)	009	.24	315.09	41.94	13.31	3.02E+01	.93
DLCMED3	QZ1(D)	002	-.53	315.09	09.68	03.07	3.02E+01	.93
DLCMED3	PY1(E/F)	003	.51	315.09	02.15	00.68	3.02E+01	.93

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
DLCMED4	QY1(C)	003	.29	234.80	47.83	20.37	2.19E+01	.69
DLCMED4	QY1(A/B)	007	.26	234.80	40.58	17.28	2.19E+01	.69
DLCMED4	QY1(D)	009	.20	234.80	36.23	15.43	2.19E+01	.69
DLCMED4	VD(AER)	008	.25	234.80	30.43	12.96	2.19E+01	.69
DLCMED4	PZ1(E/F)	001	.38	234.80	08.70	03.71	2.19E+01	.69
DLCMED4	PZ1(C)	002	.37	234.80	07.25	03.09	2.19E+01	.69
DLCMTH2	VD(AER)	003	.44	311.49	73.56	23.62	1.58E+01	.87
DLCMTH2	QY1(E/F)	007	.29	311.49	71.26	22.88	1.58E+01	.87
DLCMTH2	QY1(D)	009	.28	311.49	42.53	13.65	1.58E+01	.87
DLCMTH2	QZ1(D)	002	-.46	311.49	12.64	04.06	1.58E+01	.87
DLCMTH2	PY1(E/F)	001	.51	311.49	05.75	01.85	1.58E+01	.87
DLCMTH3	QY1(D)	001	.52	306.11	64.63	21.11	1.48E+01	.82
DLCMTH3	VD(AER)	003	.38	306.11	64.63	21.11	1.48E+01	.82
DLCMTH3	QY1(E/F)	017	.10	306.11	59.76	19.52	1.48E+01	.82
DLCMTH3	QY1(C)	005	.19	306.11	35.37	11.55	1.48E+01	.82
DLCMTH3	PY1(E/F)	002	.42	306.11	04.88	01.59	1.48E+01	.82
DLCMTH4	QY1(A/B)	004	.38	149.97	29.49	19.66	2.63E+01	.78
DLCMTH4	QY1(C)	010	.22	149.97	28.21	18.81	2.63E+01	.78
DLCMTH4	VD(EL-I)	001	-.65	149.97	26.92	17.95	2.63E+01	.78
DLCMTH4	QY1(D)	002	.48	149.97	21.79	14.53	2.63E+01	.78
DLCMTH4	PZ1(E/F)	003	.40	149.97	05.13	03.42	2.63E+01	.78
DLOUBM2	VD(AER)	001	.82	300.01	85.42	28.47	2.00E+02	.96
DLOUBM2	QY1(E/F)	013	.22	300.01	75.00	25.00	2.00E+02	.96
DLOUBM2	QY1(D)	014	.20	300.01	35.42	11.81	2.00E+02	.96
DLOUBM2	SK(AER)	018	-.13	300.01	34.38	11.46	2.00E+02	.96
DLOUBM2	QZ1(D)	002	-.66	300.01	11.46	03.82	2.00E+02	.96
DLOUBM2	PY1(E/F)	003	.62	300.01	03.13	01.04	2.00E+02	.96
DLOUBM3	VD(AER)	001	.76	312.74	86.17	27.55	5.13E+01	.94
DLOUBM3	QY1(E/F)	014	.18	312.74	75.53	24.15	5.13E+01	.94
DLOUBM3	QY1(D)	011	.23	312.74	39.36	12.59	5.13E+01	.94
DLOUBM3	SK(AER)	013	-.19	312.74	31.91	10.20	5.13E+01	.94
DLOUBM3	QZ1(D)	002	-.56	312.74	10.64	03.40	5.13E+01	.94
DLOUBM3	PY1(E/F)	003	.50	312.74	02.13	00.68	5.13E+01	.94
DLOUBM4	QY1(C)	006	.26	257.15	41.43	16.11	4.47E+01	.70
DLOUBM4	QY1(D)	008	.23	257.15	40.00	15.56	4.47E+01	.70
DLOUBM4	VD(AER)	004	.29	257.15	40.00	15.56	4.47E+01	.70
DLOUBM4	QY1(A/B)	009	.19	257.15	32.86	12.78	4.47E+01	.70
DLOUBM4	QY1(E/F)	014	-.13	257.15	30.00	11.67	4.47E+01	.70
DLOUBM4	PZ1(E/F)	002	.38	257.15	10.00	03.89	4.47E+01	.70
DLOUBM4	PZ1(C)	001	.40	257.15	08.57	03.33	4.47E+01	.70
DLOUBM4	PY1(E/F)	003	.29	257.15	02.86	01.11	4.47E+01	.70
DLOUED2	VD(AER)	001	.76	307.43	85.11	27.68	1.02E+02	.94
DLOUED2	QY1(E/F)	010	.25	307.43	75.53	24.57	1.02E+02	.94
DLOUED2	QY1(D)	013	.21	307.43	36.17	11.77	1.02E+02	.94
DLOUED2	SK(AER)	019	-.08	307.43	35.11	11.42	1.02E+02	.94
DLOUED2	QZ1(D)	002	-.60	307.43	10.64	03.46	1.02E+02	.94
DLOUED2	PY1(E/F)	003	.59	307.43	04.26	01.39	1.02E+02	.94
DLOUED3	VD(AER)	001	.75	314.88	85.11	27.03	3.31E+01	.94
DLOUED3	QY1(E/F)	014	.18	314.88	74.47	23.65	3.31E+01	.94
DLOUED3	QY1(D)	007	.28	314.88	41.49	13.18	3.31E+01	.94
DLOUED3	QZ1(D)	002	-.56	314.88	10.64	03.38	3.31E+01	.94
DLOUED3	PY1(E/F)	003	.52	314.88	02.13	00.68	3.31E+01	.94
DLOUED4	QY1(C)	005	.27	253.64	43.48	17.14	2.34E+01	.69
DLOUED4	QY1(D)	007	.24	253.64	42.03	16.57	2.34E+01	.69
DLOUED4	VD(AER)	006	.25	253.64	37.68	14.86	2.34E+01	.69
DLOUED4	QY1(A/B)	009	.19	253.64	34.78	13.71	2.34E+01	.69
DLOUED4	QY1(E/F)	015	-.10	253.64	27.54	10.86	2.34E+01	.69
DLOUED4	PZ1(E/F)	002	.39	253.64	10.14	04.00	2.34E+01	.69
DLOUED4	PZ1(C)	001	.40	253.64	08.70	03.43	2.34E+01	.69
DLOUED4	PY1(D)	003	.29	253.64	01.45	00.57	2.34E+01	.69
DLOUTH2	VD(AER)	003	.43	304.54	71.59	23.51	2.57E+01	.88
DLOUTH2	QY1(E/F)	009	.27	304.54	68.18	22.39	2.57E+01	.88
DLOUTH2	QY1(D)	008	.27	304.54	40.91	13.43	2.57E+01	.88
DLOUTH2	QZ1(D)	002	-.49	304.54	12.50	04.10	2.57E+01	.88
DLOUTH2	PY1(E/F)	001	.54	304.54	05.68	01.87	2.57E+01	.88
DLOUTH3	VD(AER)	001	.51	319.74	76.74	24.00	1.58E+01	.86
DLOUTH3	QY1(E/F)	011	.15	319.74	70.93	22.18	1.58E+01	.86
DLOUTH3	QY1(D)	002	.48	319.74	58.14	18.18	1.58E+01	.86
DLOUTH3	PY1(E/F)	003	.46	319.74	04.65	01.45	1.58E+01	.86
DLOUTH4	QY1(C)	006	.27	169.75	32.89	19.38	2.45E+01	.76
DLOUTH4	QY1(D)	002	.45	169.75	31.58	18.60	2.45E+01	.76
DLOUTH4	QY1(A/B)	007	.26	169.75	28.95	17.05	2.45E+01	.76
DLOUTH4	VD(EL-I)	001	-.58	169.75	14.47	08.52	2.45E+01	.76
DLOUTH4	PZ1(E/F)	003	.43	169.75	07.89	04.65	2.45E+01	.76

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
PLCMBM	AW(AER)	001	.58	195.81	71.83	36.68	9.12E+00	.71
PLCMBM	BW(AER)	019	.05	195.81	49.30	25.18	9.12E+00	.71
PLCMBM	VD(AER)	002	.30	195.81	19.72	10.07	9.12E+00	.71
PLCMBM	QZ1(D)	003	-.19	195.81	02.82	01.44	9.12E+00	.71
PLCMMT	AW(AER)	001	.59	191.68	72.22	37.68	7.94E+00	.72
PLCMMT	BW(AER)	016	.06	191.68	48.61	25.36	7.94E+00	.72
PLCMMT	VD(AER)	002	.31	191.68	19.44	10.14	7.94E+00	.72
PLCMMT	QY1(D)	003	-.19	191.68	04.17	02.18	7.94E+00	.72
PLCMTH	AW(AER)	004	.24	162.92	37.10	22.77	2.69E+00	.62
PLCMTH	BW(AER)	007	-.14	162.92	32.26	19.80	2.69E+00	.62
PLCMTH	VD(EL-I)	001	-.49	162.92	17.74	10.89	2.69E+00	.62
PLCMTH	VD(AER)	002	.32	162.92	14.52	08.91	2.69E+00	.62
PLCMTH	PY1(A/B)	003	-.26	162.92	04.84	02.97	2.69E+00	.62
RLCMBM2	VD(AER)	001	.84	307.28	87.50	28.48	3.98E+02	.96
RLCMBM2	QY1(E/F)	010	.28	307.28	77.08	25.08	3.98E+02	.96
RLCMBM2	QY1(D)	013	.20	307.28	36.46	11.87	3.98E+02	.96
RLCMBM2	SK(AER)	016	-.15	307.28	35.42	11.53	3.98E+02	.96
RLCMBM2	QZ1(D)	003	-.65	307.28	10.42	03.39	3.98E+02	.96
RLCMBM2	PY1(E/F)	002	.65	307.28	03.13	01.02	3.98E+02	.96
RLCMBM3	VD(AER)	001	.78	306.36	86.17	28.13	5.37E+01	.94
RLCMBM3	QY1(E/F)	014	.18	306.36	74.47	24.31	5.37E+01	.94
RLCMBM3	QY1(D)	015	.17	306.36	38.30	12.50	5.37E+01	.94
RLCMBM3	QZ1(D)	002	-.56	306.36	09.57	03.12	5.37E+01	.94
RLCMBM3	PY1(E/F)	003	.53	306.36	02.13	00.70	5.37E+01	.94
RLCMBM4	QY1(C)	004	.27	246.40	46.38	18.82	4.68E+01	.69
RLCMBM4	QY1(A/B)	007	.26	246.40	39.13	15.88	4.68E+01	.69
RLCMBM4	QY1(D)	014	.16	246.40	34.78	14.12	4.68E+01	.69
RLCMBM4	VD(AER)	006	.27	246.40	33.33	13.53	4.68E+01	.69
RLCMBM4	PZ1(E/F)	002	.36	246.40	08.70	03.53	4.68E+01	.69
RLCMBM4	PZ1(C)	001	.37	246.40	07.25	02.94	4.68E+01	.69
RLCMBM4	PY1(E/F)	003	.28	246.40	02.90	01.18	4.68E+01	.69
RLCMMT2	VD(AER)	001	.80	310.43	86.46	27.85	1.62E+02	.96
RLCMMT2	QY1(E/F)	008	.29	310.43	76.04	24.50	1.62E+02	.96
RLCMMT2	QY1(D)	011	.23	310.43	37.50	12.08	1.62E+02	.96
RLCMMT2	SK(AER)	017	-.12	310.43	34.38	11.07	1.62E+02	.96
RLCMMT2	QZ1(D)	003	-.61	310.43	10.42	03.36	1.62E+02	.96
RLCMMT2	PY1(E/F)	002	.64	310.43	04.17	01.34	1.62E+02	.96
RLCMMT3	VD(AER)	001	.76	310.63	84.04	27.05	3.02E+01	.94
RLCMMT3	QY1(E/F)	016	.16	310.63	73.40	23.63	3.02E+01	.94
RLCMMT3	QY1(D)	010	.22	310.63	40.43	13.02	3.02E+01	.94
RLCMMT3	QZ1(D)	002	-.55	310.63	10.64	03.43	3.02E+01	.94
RLCMMT3	PY1(E/F)	003	.52	310.63	02.13	00.69	3.02E+01	.94
RLCMMT4	QY1(C)	003	.29	239.68	47.06	19.63	2.19E+01	.68
RLCMMT4	QY1(A/B)	007	.26	239.68	39.71	16.57	2.19E+01	.68
RLCMMT4	QY1(D)	010	.18	239.68	35.29	14.72	2.19E+01	.68
RLCMMT4	VD(AER)	008	.25	239.68	30.88	12.88	2.19E+01	.68
RLCMMT4	PZ1(C)	001	.37	239.68	08.82	03.68	2.19E+01	.68
RLCMMT4	PZ1(E/F)	002	.37	239.68	08.82	03.68	2.19E+01	.68
RLCMTH2	VD(AER)	003	.44	311.49	73.56	23.62	1.58E+01	.87
RLCMTH2	QY1(E/F)	007	.29	311.49	71.26	22.88	1.58E+01	.87
RLCMTH2	QY1(D)	008	.28	311.49	42.53	13.65	1.58E+01	.87
RLCMTH2	QZ1(D)	002	-.45	311.49	12.64	04.06	1.58E+01	.87
RLCMTH2	PY1(E/F)	001	.51	311.49	05.75	01.85	1.58E+01	.87
RLCMTH3	QY1(D)	001	.53	304.89	64.63	21.20	1.51E+01	.82
RLCMTH3	VD(AER)	003	.39	304.89	64.63	21.20	1.51E+01	.82
RLCMTH3	QY1(E/F)	016	.09	304.89	59.76	19.60	1.51E+01	.82
RLCMTH3	QY1(C)	005	.18	304.89	35.37	11.60	1.51E+01	.82
RLCMTH3	PY1(E/F)	002	.43	304.89	04.88	01.60	1.51E+01	.82
RLCMTH4	QY1(A/B)	004	.39	148.10	29.11	19.66	2.63E+01	.79
RLCMTH4	VD(EL-I)	001	-.66	148.10	27.85	18.80	2.63E+01	.79
RLCMTH4	QY1(C)	010	.22	148.10	26.58	17.95	2.63E+01	.79
RLCMTH4	QY1(D)	002	.48	148.10	21.52	14.53	2.63E+01	.79
RLCMTH4	PZ1(E/F)	003	.40	148.10	05.06	03.42	2.63E+01	.79
RLOUBM2	VD(AER)	001	.82	302.09	86.46	28.62	2.04E+02	.96
RLOUBM2	QY1(E/F)	012	.23	302.09	75.00	24.83	2.04E+02	.96
RLOUBM2	QY1(D)	014	.19	302.09	35.42	11.72	2.04E+02	.96
RLOUBM2	SK(AER)	018	-.12	302.09	35.42	11.72	2.04E+02	.96
RLOUBM2	QZ1(D)	002	-.66	302.09	11.46	03.79	2.04E+02	.96
RLOUBM2	PY1(E/F)	003	.61	302.09	03.13	01.04	2.04E+02	.96
RLOUBM3	VD(AER)	001	.76	314.89	86.17	27.37	1.32E+02	.94
RLOUBM3	QY1(E/F)	012	.21	314.89	75.53	23.99	1.32E+02	.94
RLOUBM3	QY1(D)	011	.23	314.89	40.43	12.84	1.32E+02	.94
RLOUBM3	QZ1(D)	002	-.57	314.89	10.64	03.38	1.32E+02	.94
RLOUBM3	PY1(E/F)	003	.52	314.89	02.13	00.68	1.32E+02	.94

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
RLOUBM4	QY1(D)	004	.28	264.61	46.15	17.44	9.99E+99	.65
RLOUBM4	VD(AER)	008	.16	264.61	46.15	17.44	9.99E+99	.65
RLOUBM4	QY1(E/F)	020	.05	264.61	41.54	15.70	9.99E+99	.65
RLOUBM4	QY1(C)	007	.16	264.61	32.31	12.21	9.99E+99	.65
RLOUBM4	PZ1(E/F)	002	.40	264.61	12.31	04.65	9.99E+99	.65
RLOUBM4	PY1(E/F)	001	.43	264.61	07.69	02.91	9.99E+99	.65
RLOUBM4	PZ1(C)	003	.29	264.61	06.15	02.32	9.99E+99	.65
RLOUMT2	VD(AER)	001	.77	305.26	85.26	27.93	1.07E+02	.95
RLOUMT2	QY1(E/F)	011	.25	305.26	75.79	24.83	1.07E+02	.95
RLOUMT2	QY1(D)	013	.21	305.26	35.79	11.72	1.07E+02	.95
RLOUMT2	SK(AER)	019	-.08	305.26	34.74	11.38	1.07E+02	.95
RLOUMT2	QZ1(D)	002	-.62	305.26	11.58	03.79	1.07E+02	.95
RLOUMT2	PY1(E/F)	003	.60	305.26	03.16	01.04	1.07E+02	.95
RLOUMT3	VD(AER)	001	.76	317.00	85.11	26.85	3.31E+01	.94
RLOUMT3	QY1(E/F)	012	.19	317.00	75.53	23.83	3.31E+01	.94
RLOUMT3	QY1(D)	007	.28	317.00	41.49	13.09	3.31E+01	.94
RLOUMT3	SK(AER)	014	-.18	317.00	31.91	10.07	3.31E+01	.94
RLOUMT3	QZ1(D)	002	-.56	317.00	10.64	03.36	3.31E+01	.94
RLOUMT3	PY1(E/F)	003	.51	317.00	02.13	00.67	3.31E+01	.94
RLOUMT4	QY1(C)	005	.28	252.19	43.48	17.24	2.40E+01	.69
RLOUMT4	QY1(D)	007	.24	252.19	40.58	16.09	2.40E+01	.69
RLOUMT4	VD(AER)	006	.25	252.19	37.68	14.94	2.40E+01	.69
RLOUMT4	QY1(A/B)	009	.19	252.19	34.78	13.79	2.40E+01	.69
RLOUMT4	QY1(E/F)	014	-.11	252.19	27.54	10.92	2.40E+01	.69
RLOUMT4	PZ1(E/F)	002	.39	252.19	10.14	04.02	2.40E+01	.69
RLOUMT4	PZ1(C)	001	.40	252.19	08.70	03.45	2.40E+01	.69
RLOUMT4	PY1(E/F)	003	.28	252.19	02.90	01.15	2.40E+01	.69
RLOUTH2	VD(AER)	003	.43	304.54	71.59	23.51	2.57E+01	.88
RLOUTH2	QY1(E/F)	009	.26	304.54	68.18	22.39	2.57E+01	.88
RLOUTH2	QY1(D)	008	.27	304.54	39.77	13.06	2.57E+01	.88
RLOUTH2	QZ1(D)	002	-.49	304.54	13.64	04.48	2.57E+01	.88
RLOUTH2	PY1(E/F)	001	.53	304.54	05.68	01.87	2.57E+01	.88
RLOUTH3	VD(AER)	001	.50	320.90	76.74	23.91	1.58E+01	.86
RLOUTH3	QY1(E/F)	011	.15	320.90	70.93	22.10	1.58E+01	.86
RLOUTH3	QY1(D)	002	.48	320.90	59.30	18.48	1.58E+01	.86
RLOUTH3	PY1(E/F)	003	.47	320.90	04.65	01.45	1.58E+01	.86
RLOUTH4	QY1(D)	004	.37	181.53	36.92	20.34	9.99E+99	.65
RLOUTH4	QY1(C)	010	.15	181.53	33.85	18.65	9.99E+99	.65
RLOUTH4	QY1(A/B)	006	.24	181.53	30.77	16.95	9.99E+99	.65
RLOUTH4	QY1(E/F)	013	.13	181.53	18.46	10.17	9.99E+99	.65
RLOUTH4	PY1(E/F)	001	.42	181.53	07.69	04.24	9.99E+99	.65
RLOUTH4	PZ1(E/F)	003	.37	181.53	07.69	04.24	9.99E+99	.65
RLOUTH4	VD(EL-I)	002	-.40	181.53	06.15	03.39	9.99E+99	.65



# RESULTS FOR THE 99TH PERCENTILE OF THE ENDPOINTS FOR THE DBA SOURCE TERM

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
AFBIBEE	AW(AER)	003	.20	142.50	42.50	29.82	1.00E+01	.40
AFBIBEE	BW(AER)	018	-.07	142.50	32.50	22.81	1.00E+01	.40
AFBIBEE	PY1(A/B)	002	-.20	142.50	07.50	05.26	1.00E+01	.40
AFBIBEE	QY1(D)	001	-.24	142.50	00.00	00.00	1.00E+01	.40
AFBIGRA	AW(AER)	001	.41	184.47	53.45	28.97	2.28E+02	.58
AFBIGRA	BW(AER)	025	.01	184.47	34.48	18.69	2.28E+02	.58
AFBIGRA	VD(AER)	002	.31	184.47	27.59	14.96	2.28E+02	.58
AFBIGRA	QY1(E/F)	010	-.09	184.47	18.97	10.28	2.28E+02	.58
AFBIGRA	QY1(D)	003	-.26	184.47	01.72	00.93	2.28E+02	.58
AFBIMIL	VD(EL-I)	001	-.33	175.02	38.46	21.97	5.50E+00	.52
AFBIMIL	QY1(E/F)	014	-.15	175.02	21.15	12.08	5.50E+00	.52
AFBIMIL	VD(AER)	026	.02	175.02	21.15	12.08	5.50E+00	.52
AFBIMIL	PZ1(A/B)	002	-.27	175.02	03.85	02.20	5.50E+00	.52
AFBIMIL	QZ1(C)	003	.24	175.02	03.85	02.20	5.50E+00	.52
AFBIVEG	QY1(E/F)	010	-.21	182.44	28.07	15.39	5.13E+00	.57
AFBIVEG	VD(EL-I)	007	-.23	182.44	26.32	14.43	5.13E+00	.57
AFBIVEG	VD(AER)	024	.04	182.44	24.56	13.46	5.13E+00	.57
AFBIVEG	QY1(D)	014	-.16	182.44	21.05	11.54	5.13E+00	.57
AFBIVEG	PY1(C)	001	-.28	182.44	07.02	03.85	5.13E+00	.57
AFBIVEG	VD(OG-I)	002	-.28	182.44	03.51	01.92	5.13E+00	.57
AFBIVEG	QY1(A/B)	003	.27	182.44	00.00	00.00	5.13E+00	.57
AFBTBEE	AW(AER)	001	.35	187.51	50.00	26.67	4.47E+01	.56
AFBTBEE	BW(AER)	021	-.03	187.51	33.93	18.10	4.47E+01	.56
AFBTBEE	VD(AER)	002	.31	187.51	28.57	15.24	4.47E+01	.56
AFBTBEE	QY1(E/F)	010	-.11	187.51	19.64	10.47	4.47E+01	.56
AFBTBEE	QY1(D)	003	-.24	187.51	03.57	01.90	4.47E+01	.56
AFBTGRA	AW(AER)	001	.41	184.70	52.54	28.45	2.09E+02	.59
AFBTGRA	BW(AER)	027	.00	184.70	35.59	19.27	2.09E+02	.59
AFBTGRA	VD(AER)	002	.31	184.70	27.12	14.68	2.09E+02	.59
AFBTGRA	QY1(E/F)	010	-.10	184.70	18.64	10.09	2.09E+02	.59
AFBTGRA	QY1(D)	003	-.27	184.70	01.69	00.91	2.09E+02	.59
AFBTMIL	VD(EL-I)	001	-.37	157.37	40.74	25.89	4.76E+00	.54
AFBTMIL	SK(EL-I)	026	.02	157.37	18.52	11.77	4.76E+00	.54
AFBTMIL	QY1(D)	017	-.14	157.37	16.67	10.59	4.76E+00	.54
AFBTMIL	PZ1(D)	003	-.27	157.37	07.41	04.71	4.76E+00	.54
AFBTMIL	PZ1(A/B)	002	-.27	157.37	01.85	01.18	4.76E+00	.54
AFBTVEG	QY1(D)	001	-.30	126.63	20.00	15.79	5.01E+00	.45
AFBTVEG	VD(EL-I)	013	-.15	126.63	13.33	10.53	5.01E+00	.45
AFBTVEG	PZ1(C)	003	-.23	126.63	08.89	07.02	5.01E+00	.45
AFBTVEG	PY1(C)	002	-.24	126.63	06.67	05.27	5.01E+00	.45
CACAE2	PZ1(E/F)	001	-.60	176.21	42.86	24.32	1.32E+01	.63
CACAE2	VD(AER)	002	-.33	176.21	33.33	18.91	1.32E+01	.63
CACAE2	QY1(E/F)	022	.06	176.21	25.40	14.41	1.32E+01	.63
CACAE2	PZ1(D)	003	-.30	176.21	03.17	01.80	1.32E+01	.63
CACAE3	VD(AER)	001	-.58	230.64	61.33	26.59	1.70E+01	.75
CACAE3	QY1(E/F)	008	.21	230.64	40.00	17.34	1.70E+01	.75
CACAE3	QY1(D)	019	-.09	230.64	25.33	10.98	1.70E+01	.75
CACAE3	SK(AER)	026	-.01	230.64	24.00	10.41	1.70E+01	.75
CACAE3	PZ1(D)	003	-.42	230.64	05.33	02.31	1.70E+01	.75
CACAE3	QZ1(D)	002	-.44	230.64	01.33	00.58	1.70E+01	.75
CACAE4	VD(AER)	001	-.65	296.34	80.72	27.24	2.34E+01	.83
CACAE4	QY1(E/F)	009	.11	296.34	61.45	20.74	2.34E+01	.83
CACAE4	QY1(D)	008	-.11	296.34	36.14	12.20	2.34E+01	.83
CACAE4	AW(AER)	003	-.29	296.34	08.43	02.84	2.34E+01	.83
CACAE4	QZ1(D)	002	-.29	296.34	00.00	00.00	2.34E+01	.83
CAIOD2	VD(EL-I)	001	-.82	167.08	87.06	52.11	3.89E+01	.85
CAIOD2	SK(EL-I)	025	-.03	167.08	44.71	26.76	3.89E+01	.85
CAIOD2	PZ1(D)	002	-.40	167.08	03.53	02.11	3.89E+01	.85
CAIOD2	SK(AER)	003	.30	167.08	00.00	00.00	3.89E+01	.85
CAIOD3	VD(EL-I)	001	-.92	178.55	93.55	52.39	7.94E+01	.93
CAIOD3	SK(EL-I)	019	-.09	178.55	48.39	27.10	7.94E+01	.93
CAIOD3	SK(AER)	002	.35	178.55	01.08	00.60	7.94E+01	.93
CAIOD3	PZ1(A/B)	003	-.34	178.55	00.00	00.00	7.94E+01	.93
CAIOD4	VD(EL-I)	001	-.95	190.54	96.84	50.82	2.29E+02	.95
CAIOD4	SK(EL-I)	026	.01	190.54	50.53	26.52	2.29E+02	.95
CAIOD4	VD(OG-I)	003	-.32	190.54	04.21	02.21	2.29E+02	.95
CAIOD4	AW(EL-I)	002	-.43	190.54	02.11	01.11	2.29E+02	.95
CDCMBM	AW(AER)	001	.53	172.13	65.57	38.09	7.94E+00	.61
CDCMBM	BW(AER)	007	.14	172.13	39.34	22.85	7.94E+00	.61



CDCMBM	VD(AER)	002	.30	172.13	19.67	11.43	7.94E+00	.61
CDCMBM	QZ1(E/F)	003	-.19	172.13	06.56	03.81	7.94E+00	.61

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
CDCMED	AW(AER)	001	.54	163.94	65.57	40.00	6.76E+00	.61
CDCMED	BW(AER)	005	.16	163.94	37.70	23.00	6.76E+00	.61
CDCMED	VD(AER)	002	.32	163.94	18.03	11.00	6.76E+00	.61
CDCMED	QZ1(E/F)	003	-.21	163.94	06.56	04.00	6.76E+00	.61
CDCMTH	VD(EL-I)	001	-.57	113.75	34.48	30.31	2.40E+00	.58
CDCMTH	AW(AER)	003	.23	113.75	17.24	15.16	2.40E+00	.58
CDCMTH	BW(AER)	026	.00	113.75	12.07	10.61	2.40E+00	.58
CDCMTH	VD(AER)	002	.35	113.75	08.62	07.58	2.40E+00	.58
CGCAE2	VD(AER)	001	.69	257.12	82.14	31.95	6.03E+01	.84
CGCAE2	QY1(E/F)	012	-.11	257.12	63.10	24.54	6.03E+01	.84
CGCAE2	SK(AER)	013	-.09	257.12	33.33	12.96	6.03E+01	.84
CGCAE2	QZ1(E/F)	003	-.32	257.12	11.90	04.63	6.03E+01	.84
CGCAE2	PZ1(E/F)	002	-.48	257.12	00.00	00.00	6.03E+01	.84
CGCAE3	VD(AER)	001	.52	224.32	62.16	27.71	3.47E+01	.74
CGCAE3	QY1(E/F)	028	.00	224.32	48.65	21.69	3.47E+01	.74
CGCAE3	AW(AER)	002	.38	224.32	24.32	10.84	3.47E+01	.74
CGCAE3	QZ1(D)	003	-.31	224.32	06.76	03.01	3.47E+01	.74
CGCAE4	AW(AER)	001	.43	175.42	57.38	32.71	1.20E+01	.61
CGCAE4	BW(AER)	028	.00	175.42	42.62	24.30	1.20E+01	.61
CGCAE4	VD(AER)	003	.28	175.42	21.31	12.15	1.20E+01	.61
CGCAE4	PZ1(E/F)	002	.28	175.42	09.84	05.61	1.20E+01	.61
CGIOD2	VD(EL-I)	001	.45	111.89	45.24	40.43	8.71E+00	.42
CGIOD2	SK(EL-I)	008	-.13	111.89	14.29	12.77	8.71E+00	.42
CGIOD2	PZ1(D)	002	-.34	111.89	11.90	10.64	8.71E+00	.42
CGIOD2	QZ1(D)	003	-.20	111.89	02.38	02.13	8.71E+00	.42
CGIOD3	BW(OG-I)	003	-.20	099.99	09.09	09.09	6.03E+00	.33
CGIOD3	PY1(A/B)	001	-.21	099.99	09.09	09.09	6.03E+00	.33
CGIOD3	PZ1(A/B)	002	-.21	099.99	06.06	06.06	6.03E+00	.33
CGIOD4	VD(EL-I)	001	-.65	160.87	72.46	45.04	1.35E+01	.69
CGIOD4	SK(EL-I)	026	.01	160.87	34.78	21.62	1.35E+01	.69
CGIOD4	QZ1(D)	002	.45	160.87	13.04	08.11	1.35E+01	.69
CGIOD4	BW(OG-I)	003	-.31	160.87	04.35	02.70	1.35E+01	.69
DLCMBM2	VD(AER)	001	.69	277.90	84.88	30.54	4.17E+01	.86
DLCMBM2	QY1(E/F)	016	-.08	277.90	67.44	24.27	4.17E+01	.86
DLCMBM2	SK(AER)	015	-.09	277.90	34.88	12.55	4.17E+01	.86
DLCMBM2	QZ1(E/F)	003	-.37	277.90	13.95	05.02	4.17E+01	.86
DLCMBM2	PZ1(E/F)	002	-.46	277.90	00.00	00.00	4.17E+01	.86
DLCMBM3	VD(AER)	001	.54	252.50	73.75	29.21	2.57E+01	.80
DLCMBM3	QY1(E/F)	012	.11	252.50	61.25	24.26	2.57E+01	.80
DLCMBM3	SK(AER)	009	-.14	252.50	26.25	10.40	2.57E+01	.80
DLCMBM3	AW(AER)	003	.35	252.50	15.00	05.94	2.57E+01	.80
DLCMBM3	QZ1(D)	002	-.36	252.50	08.75	03.47	2.57E+01	.80
DLCMBM4	AW(AER)	001	.45	193.65	53.97	27.87	1.38E+01	.63
DLCMBM4	BW(AER)	023	.03	193.65	38.10	19.67	1.38E+01	.63
DLCMBM4	VD(AER)	003	.29	193.65	28.57	14.75	1.38E+01	.63
DLCMBM4	QY1(E/F)	021	.04	193.65	20.63	10.65	1.38E+01	.63
DLCMBM4	PZ1(E/F)	002	.29	193.65	09.52	04.92	1.38E+01	.63
DLCMED2	VD(AER)	001	.68	269.75	84.88	31.47	2.69E+01	.86
DLCMED2	QY1(E/F)	019	-.07	269.75	66.28	24.57	2.69E+01	.86
DLCMED2	SK(AER)	015	-.09	269.75	33.72	12.50	2.69E+01	.86
DLCMED2	QZ1(E/F)	003	-.37	269.75	13.95	05.17	2.69E+01	.86
DLCMED2	PZ1(E/F)	002	-.47	269.75	00.00	00.00	2.69E+01	.86
DLCMED3	VD(AER)	001	.52	252.54	74.36	29.44	1.41E+01	.78
DLCMED3	QY1(E/F)	015	.10	252.54	61.54	24.37	1.41E+01	.78
DLCMED3	SK(AER)	010	-.12	252.54	26.92	10.66	1.41E+01	.78
DLCMED3	AW(AER)	003	.32	252.54	15.38	06.09	1.41E+01	.78
DLCMED3	QZ1(D)	002	-.34	252.54	07.69	03.05	1.41E+01	.78
DLCMED4	AW(AER)	001	.44	182.25	54.84	30.09	8.32E+00	.62
DLCMED4	BW(AER)	026	.02	182.25	38.71	21.24	8.32E+00	.62
DLCMED4	VD(AER)	003	.29	182.25	25.81	14.16	8.32E+00	.62
DLCMED4	PZ1(E/F)	002	.31	182.25	11.29	06.19	8.32E+00	.62
DLCMTH2	VD(AER)	001	.59	245.46	77.92	31.74	4.07E+00	.77
DLCMTH2	QY1(E/F)	014	-.09	245.46	59.74	24.34	4.07E+00	.77
DLCMTH2	SK(AER)	027	-.01	245.46	35.06	14.28	4.07E+00	.77
DLCMTH2	QZ1(D)	003	-.35	245.46	10.39	04.23	4.07E+00	.77
DLCMTH2	PZ1(E/F)	002	-.42	245.46	01.30	00.53	4.07E+00	.77
DLCMTH3	VD(AER)	001	.35	160.00	46.00	28.75	3.55E+00	.50
DLCMTH3	QY1(E/F)	024	-.03	160.00	32.00	20.00	3.55E+00	.50
DLCMTH3	SK(AER)	018	.07	160.00	28.00	17.50	3.55E+00	.50
DLCMTH3	PY1(A/B)	002	-.22	160.00	06.00	03.75	3.55E+00	.50
DLCMTH3	VD(EL-I)	003	-.20	160.00	00.00	00.00	3.55E+00	.50

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
DLCMTH4	VD(EL-I)	001	-.59	155.56	61.90	39.79	5.01E+00	.63
DLCMTH4	SK(EL-I)	028	.00	155.56	30.16	19.39	5.01E+00	.63
DLCMTH4	AW(AER)	003	.23	155.56	22.22	14.28	5.01E+00	.63
DLCMTH4	BW(AER)	013	-.07	155.56	19.05	12.25	5.01E+00	.63
DLCMTH4	QZ1(D)	002	.24	155.56	04.76	03.06	5.01E+00	.63
DLOUBM2	VD(AER)	001	.71	256.47	83.53	32.57	3.31E+01	.85
DLOUBM2	QY1(E/F)	008	-.14	256.47	62.35	24.31	3.31E+01	.85
DLOUBM2	SK(AER)	010	-.12	256.47	31.76	12.38	3.31E+01	.85
DLOUBM2	QZ1(E/F)	003	-.32	256.47	11.76	04.59	3.31E+01	.85
DLOUBM2	PZ1(E/F)	002	-.48	256.47	00.00	00.00	3.31E+01	.85
DLOUBM3	VD(AER)	001	.53	246.07	67.11	27.27	2.09E+01	.76
DLOUBM3	QY1(E/F)	028	.00	246.07	52.63	21.39	2.09E+01	.76
DLOUBM3	SK(AER)	010	-.12	246.07	25.00	10.16	2.09E+01	.76
DLOUBM3	AW(AER)	002	.39	246.07	22.37	09.09	2.09E+01	.76
DLOUBM3	QZ1(D)	003	-.36	246.07	09.21	03.74	2.09E+01	.76
DLOUBM4	AW(AER)	001	.44	183.62	59.02	32.14	1.15E+01	.61
DLOUBM4	BW(AER)	028	.01	183.62	42.62	23.21	1.15E+01	.61
DLOUBM4	VD(AER)	002	.27	183.62	24.59	13.39	1.15E+01	.61
DLOUBM4	PZ1(E/F)	003	.26	183.62	09.84	05.36	1.15E+01	.61
DLOUED2	VD(AER)	001	.68	253.69	82.93	32.69	1.91E+01	.82
DLOUED2	QY1(E/F)	010	-.14	253.69	60.98	24.04	1.91E+01	.82
DLOUED2	SK(AER)	016	-.09	253.69	32.93	12.98	1.91E+01	.82
DLOUED2	QZ1(E/F)	003	-.29	253.69	10.98	04.33	1.91E+01	.82
DLOUED2	PZ1(E/F)	002	-.46	253.69	00.00	00.00	1.91E+01	.82
DLOUED3	VD(AER)	001	.54	236.86	65.79	27.78	1.32E+01	.76
DLOUED3	QY1(E/F)	023	-.02	236.86	50.00	21.11	1.32E+01	.76
DLOUED3	SK(AER)	016	-.09	236.86	25.00	10.55	1.32E+01	.76
DLOUED3	AW(AER)	002	.38	236.86	21.05	08.89	1.32E+01	.76
DLOUED3	QZ1(D)	003	-.36	236.86	07.89	03.33	1.32E+01	.76
DLOUED4	AW(AER)	001	.43	168.33	60.00	35.64	9.12E+00	.60
DLOUED4	BW(AER)	028	.00	168.33	45.00	26.73	9.12E+00	.60
DLOUED4	VD(AER)	002	.27	168.33	21.67	12.87	9.12E+00	.60
DLOUED4	PZ1(E/F)	003	.25	168.33	08.33	04.95	9.12E+00	.60
DLOUTH2	VD(AER)	001	.36	190.73	59.26	31.07	4.79E+00	.54
DLOUTH2	QY1(E/F)	026	-.03	190.73	44.44	23.30	4.79E+00	.54
DLOUTH2	SK(AER)	022	.06	190.73	31.48	16.51	4.79E+00	.54
DLOUTH2	QZ1(D)	003	-.30	190.73	07.41	03.89	4.79E+00	.54
DLOUTH2	PZ1(D)	002	-.33	190.73	05.56	02.92	4.79E+00	.54
DLOUTH3	VD(AER)	001	.39	144.65	35.71	24.69	3.98E+00	.56
DLOUTH3	QY1(E/F)	019	-.06	144.65	23.21	16.05	3.98E+00	.56
DLOUTH3	SK(AER)	016	.08	144.65	23.21	16.05	3.98E+00	.56
DLOUTH3	AW(AER)	007	.16	144.65	21.43	14.82	3.98E+00	.56
DLOUTH3	BW(AER)	011	-.11	144.65	19.64	13.58	3.98E+00	.56
DLOUTH3	VD(EL-I)	002	-.27	144.65	01.79	01.24	3.98E+00	.56
DLOUTH3	QY1(D)	003	-.21	144.65	00.00	00.00	3.98E+00	.56
DLOUTH4	VD(EL-I)	001	-.53	143.54	45.16	31.46	4.79E+00	.62
DLOUTH4	AW(AER)	002	.32	143.54	37.10	25.85	4.79E+00	.62
DLOUTH4	BW(AER)	019	-.05	143.54	30.65	21.35	4.79E+00	.62
DLOUTH4	SK(EL-I)	026	.01	143.54	19.35	13.48	4.79E+00	.62
DLOUTH4	BW(EL-I)	003	.27	143.54	00.00	00.00	4.79E+00	.62
PLCMBM	AW(AER)	001	.53	172.13	65.57	38.09	7.94E+00	.61
PLCMBM	BW(AER)	006	.14	172.13	39.34	22.85	7.94E+00	.61
PLCMBM	VD(AER)	002	.31	172.13	19.67	11.43	7.94E+00	.61
PLCMBM	QZ1(E/F)	003	-.20	172.13	06.56	03.81	7.94E+00	.61
PLCMMT	AW(AER)	001	.54	162.30	65.57	40.40	6.92E+00	.61
PLCMMT	BW(AER)	006	.16	162.30	37.70	23.23	6.92E+00	.61
PLCMMT	VD(AER)	002	.31	162.30	18.03	11.11	6.92E+00	.61
PLCMMT	PY1(E/F)	003	-.21	162.30	01.64	01.01	6.92E+00	.61
PLCMTH	VD(EL-I)	001	-.57	113.76	36.21	31.83	2.40E+00	.58
PLCMTH	AW(AER)	003	.24	113.76	17.24	15.15	2.40E+00	.58
PLCMTH	BW(AER)	027	.01	113.76	12.07	10.61	2.40E+00	.58
PLCMTH	VD(AER)	002	.35	113.76	08.62	07.58	2.40E+00	.58
RLCMBM2	VD(AER)	001	.69	275.58	84.88	30.80	4.27E+01	.86
RLCMBM2	QY1(E/F)	017	-.07	275.58	67.44	24.47	4.27E+01	.86
RLCMBM2	SK(AER)	013	-.10	275.58	33.72	12.24	4.27E+01	.86
RLCMBM2	QZ1(E/F)	003	-.37	275.58	13.95	05.06	4.27E+01	.86
RLCMBM2	PZ1(E/F)	002	-.46	275.58	00.00	00.00	4.27E+01	.86
RLCMBM3	VD(AER)	001	.54	252.50	73.75	29.21	2.57E+01	.80
RLCMBM3	QY1(E/F)	014	.10	252.50	61.25	24.26	2.57E+01	.80
RLCMBM3	SK(AER)	007	-.15	252.50	26.25	10.40	2.57E+01	.80
RLCMBM3	AW(AER)	002	.35	252.50	15.00	05.94	2.57E+01	.80
RLCMBM3	QZ1(D)	003	-.35	252.50	08.75	03.47	2.57E+01	.80

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
RLCMBM4	AW(AER)	001	.45	192.06	53.97	28.10	1.38E+01	.63
RLCMBM4	BW(AER)	023	.03	192.06	38.10	19.84	1.38E+01	.63
RLCMBM4	VD(AER)	002	.29	192.06	28.57	14.88	1.38E+01	.63
RLCMBM4	QY1(E/F)	020	.04	192.06	20.63	10.74	1.38E+01	.63
RLCMBM4	PZ1(E/F)	003	.28	192.06	09.52	04.96	1.38E+01	.63
RLCMMT2	VD(AER)	001	.69	273.24	84.88	31.06	2.82E+01	.86
RLCMMT2	QY1(E/F)	019	-.07	273.24	67.44	24.68	2.82E+01	.86
RLCMMT2	SK(AER)	014	-.10	273.24	33.72	12.34	2.82E+01	.86
RLCMMT2	QZ1(E/F)	003	-.37	273.24	13.95	05.11	2.82E+01	.86
RLCMMT2	PZ1(E/F)	002	-.47	273.24	00.00	00.00	2.82E+01	.86
RLCMMT3	VD(AER)	001	.53	256.39	74.36	29.00	1.62E+01	.78
RLCMMT3	QY1(E/F)	015	.09	256.39	61.54	24.00	1.62E+01	.78
RLCMMT3	SK(AER)	012	-.11	256.39	28.21	11.00	1.62E+01	.78
RLCMMT3	AW(AER)	003	.33	256.39	15.38	06.00	1.62E+01	.78
RLCMMT3	QZ1(D)	002	-.34	256.39	07.69	03.00	1.62E+01	.78
RLCMMT4	AW(AER)	001	.45	188.70	54.84	29.06	8.51E+00	.62
RLCMMT4	BW(AER)	023	.03	188.70	38.71	20.51	8.51E+00	.62
RLCMMT4	VD(AER)	003	.30	188.70	27.42	14.53	8.51E+00	.62
RLCMMT4	QY1(E/F)	026	.02	188.70	19.35	10.25	8.51E+00	.62
RLCMMT4	PZ1(E/F)	002	.30	188.70	11.29	05.98	8.51E+00	.62
RLCMTH2	VD(AER)	001	.60	248.06	79.22	31.94	4.07E+00	.77
RLCMTH2	QY1(E/F)	015	-.10	248.06	61.04	24.61	4.07E+00	.77
RLCMTH2	SK(AER)	027	-.01	248.06	35.06	14.13	4.07E+00	.77
RLCMTH2	QZ1(D)	003	-.36	248.06	10.39	04.19	4.07E+00	.77
RLCMTH2	PZ1(E/F)	002	-.42	248.06	01.30	00.52	4.07E+00	.77
RLCMTH3	VD(AER)	001	.35	157.14	44.90	28.57	3.63E+00	.49
RLCMTH3	QY1(E/F)	024	-.03	157.14	30.61	19.48	3.63E+00	.49
RLCMTH3	SK(AER)	018	.06	157.14	26.53	16.88	3.63E+00	.49
RLCMTH3	PY1(A/B)	002	-.21	157.14	06.12	03.89	3.63E+00	.49
RLCMTH3	VD(EL-I)	003	-.19	157.14	00.00	00.00	3.63E+00	.49
RLCMTH4	VD(EL-I)	001	-.59	153.97	61.90	40.20	5.01E+00	.63
RLCMTH4	SK(EL-I)	028	.01	153.97	30.16	19.59	5.01E+00	.63
RLCMTH4	AW(AER)	003	.23	153.97	22.22	14.43	5.01E+00	.63
RLCMTH4	BW(AER)	013	-.07	153.97	19.05	12.37	5.01E+00	.63
RLCMTH4	QZ1(D)	002	.24	153.97	04.76	03.09	5.01E+00	.63
RLOUBM2	VD(AER)	001	.71	260.00	83.53	32.13	3.31E+01	.85
RLOUBM2	QY1(E/F)	009	-.13	260.00	63.53	24.43	3.31E+01	.85
RLOUBM2	SK(AER)	012	-.12	260.00	32.94	12.67	3.31E+01	.85
RLOUBM2	QZ1(E/F)	003	-.31	260.00	11.76	04.52	3.31E+01	.85
RLOUBM2	PZ1(E/F)	002	-.48	260.00	00.00	00.00	3.31E+01	.85
RLOUBM3	VD(AER)	001	.53	243.42	67.11	27.57	2.09E+01	.76
RLOUBM3	QY1(E/F)	027	.00	243.42	52.63	21.62	2.09E+01	.76
RLOUBM3	SK(AER)	011	-.12	243.42	25.00	10.27	2.09E+01	.76
RLOUBM3	AW(AER)	002	.40	243.42	21.05	08.65	2.09E+01	.76
RLOUBM3	QZ1(D)	003	-.35	243.42	07.89	03.24	2.09E+01	.76
RLOUBM4	AW(AER)	001	.43	181.98	59.02	32.43	1.41E+01	.61
RLOUBM4	BW(AER)	028	.00	181.98	42.62	23.42	1.41E+01	.61
RLOUBM4	VD(AER)	003	.26	181.98	22.95	12.61	1.41E+01	.61
RLOUBM4	PZ1(E/F)	002	.26	181.98	09.84	05.41	1.41E+01	.61
RLOUMT2	VD(AER)	001	.69	252.99	81.93	32.38	2.19E+01	.83
RLOUMT2	QY1(E/F)	010	-.15	252.99	60.24	23.81	2.19E+01	.83
RLOUMT2	SK(AER)	016	-.09	252.99	32.53	12.86	2.19E+01	.83
RLOUMT2	QZ1(E/F)	003	-.30	252.99	10.84	04.28	2.19E+01	.83
RLOUMT2	PZ1(E/F)	002	-.48	252.99	00.00	00.00	2.19E+01	.83
RLOUMT3	VD(AER)	001	.54	239.48	65.79	27.47	1.48E+01	.76
RLOUMT3	QY1(E/F)	023	-.02	239.48	51.32	21.43	1.48E+01	.76
RLOUMT3	SK(AER)	015	-.09	239.48	25.00	10.44	1.48E+01	.76
RLOUMT3	AW(AER)	002	.38	239.48	21.05	08.79	1.48E+01	.76
RLOUMT3	QZ1(D)	003	-.36	239.48	07.89	03.29	1.48E+01	.76
RLOUMT4	AW(AER)	001	.43	175.01	60.00	34.28	9.33E+00	.60
RLOUMT4	BW(AER)	028	.00	175.01	43.33	24.76	9.33E+00	.60
RLOUMT4	VD(AER)	002	.26	175.01	21.67	12.38	9.33E+00	.60
RLOUMT4	PZ1(E/F)	003	.26	175.01	10.00	05.71	9.33E+00	.60
RLOUTH2	VD(AER)	001	.36	190.73	59.26	31.07	4.79E+00	.54
RLOUTH2	QY1(E/F)	026	-.03	190.73	44.44	23.30	4.79E+00	.54
RLOUTH2	SK(AER)	023	.06	190.73	31.48	16.51	4.79E+00	.54
RLOUTH2	QZ1(D)	003	-.30	190.73	07.41	03.89	4.79E+00	.54
RLOUTH2	PZ1(D)	002	-.33	190.73	05.56	02.92	4.79E+00	.54

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
RLOUTH3	VD(AER)	001	.39	142.86	35.71	25.00	3.98E+00	.56
RLOUTH3	QY1(E/F)	020	-.06	142.86	23.21	16.25	3.98E+00	.56
RLOUTH3	SK(AER)	015	.07	142.86	23.21	16.25	3.98E+00	.56
RLOUTH3	AW(AER)	007	.16	142.86	19.64	13.75	3.98E+00	.56
RLOUTH3	BW(AER)	010	-.11	142.86	19.64	13.75	3.98E+00	.56
RLOUTH3	VD(EL-I)	002	-.27	142.86	01.79	01.25	3.98E+00	.56
RLOUTH3	QY1(D)	003	-.22	142.86	00.00	00.00	3.98E+00	.56
RLOUTH4	VD(EL-I)	001	-.53	145.15	45.16	31.11	4.79E+00	.62
RLOUTH4	AW(AER)	002	.32	145.15	37.10	25.56	4.79E+00	.62
RLOUTH4	BW(AER)	019	-.05	145.15	30.65	21.12	4.79E+00	.62
RLOUTH4	SK(EL-I)	026	.01	145.15	19.35	13.33	4.79E+00	.62
RLOUTH4	BW(EL-I)	003	.28	145.15	01.61	01.11	4.79E+00	.62

## APPENDIX A

### Reports from the Project

#### Reports on the expert elicitation

Harper F T, Hora S C, Young M L, Miller L A, Lui C H, McKay M D, Helton J C, Goossens L H J, Cooke R M, Päsler-Sauer J, Kraan B and Jones J A. Probabilistic accident consequence uncertainty analysis. Dispersion and deposition uncertainty assessment. NUREG/CR-6244, EUR 15855, SAND94-1453, Washington, DC/USA, and Brussels-Luxembourg, (1995).

Brown J, Goossens L H J, Kraan B C P, Cooke R M, Jones J A, Harper F T, Haskin F E, Abbott M L, Young M L, Hora S C, Rood A. Probabilistic accident consequence uncertainty analysis. Food chain uncertainty assessment. NUREG/CR-6523, EUR 16771, SAND97-0335 Washington, DC/USA, and Brussels-Luxembourg, (1997).

Goossens L H J, Boardman J, Kraan B C P, Cooke R M, Jones J A, Harper F T, Young M L and Hora S C. Probabilistic accident consequence uncertainty analysis: Uncertainty assessment for deposited material and external doses. Report NUREG/CR-6526, EUR 16772, Washington, DC/USA, and Brussels-Luxembourg, (1997).

Goossens L H J., Harrison J.D, Kraan B.C.P, Cooke R.M, Harper F.T. and Hora S.C. Probabilistic accident consequence uncertainty analysis: Uncertainty assessment for internal dosimetry, Report NUREG/CR-6571, EUR 16773, Washington, DC/USA, and Brussels-Luxembourg, (1997).

Little M P, Muirhead C R, Goossens L H J, Kraan B C P, Cooke R M, Harper F T and Hora S C. Probabilistic accident consequence uncertainty analysis: Late health effects uncertainty assessment, Report NUREG/CR-6555, EUR 16774, Washington, DC/USA, and Brussels-Luxembourg, (1997).

Haskin F.E., Harper F.T, Goossens L H J, Randall J, Kraan B.C.P and Grupa J.B. Probabilistic accident consequence uncertainty analysis: Early health effects uncertainty assessment, Report NUREG/CR-6545, EUR 16775, Washington, DC/USA, and Brussels-Luxembourg, (1997).

Goossens L H J, Jones J A, Ehrhardt J, Kraan B C P. Probabilistic accident consequence uncertainty assessment: Countermeasures Uncertainty Assessments. EUR 18821 and FZKA 6307 (2000).

#### Reports on the COSYMA uncertainty analysis

Cooke R M, Goossens L H J, Kraan B C P. Probabilistic accident consequence uncertainty assessment - procedures guide using structured expert judgement. EUR 18820 (2000).

Jones J A, Ehrhardt J, Fischer F, Hasemann I, Goossens L H J, Kraan B C P, Cooke R M. Probabilistic accident consequence uncertainty assessment using COSYMA: Uncertainty from the Atmospheric Dispersion and Deposition Module. EUR 18822 and FZKA 6308 (2000).

Brown J, Jones J A, Fischer F, Hasemann I, Goossens L H J, Kraan B C P, Cooke R M. Probabilistic accident consequence uncertainty assessment using COSYMA: Uncertainty from the Food Chain Module. EUR 18823 and FZKA 6309 (2000).

Jones J A, Fischer F, Hasemann I, Goossens L H J, Kraan B C P, Cooke R M. Probabilistic accident consequence uncertainty assessment using COSYMA: Uncertainty from the Health Effects Module. EUR 18824 and FZKA 6310 (2000).

Jones J A, Fischer F, Hasemann I, Goossens L H J, Kraan B C P, Cooke R M, Phipps A, and Khursheed A. Probabilistic accident consequence uncertainty assessment using COSYMA: Uncertainty from the dose module. EUR18825 and FZKA 6311 (2000).

Jones J A, Ehrhardt J, Goossens L H J, Fischer F, Hasemann I, Kraan B C P, Cooke R M. Probabilistic accident consequence uncertainty assessment using COSYMA: Overall uncertainty analysis. EUR 18826 and FZKA 6312 (2000).

Jones J A, Kraan B C P, Cooke R M, Goossens L H J, Fischer F, and Hasemann I. Probabilistic accident consequence uncertainty assessment using COSYMA: Methodology and processing techniques. EUR 18827 and FZKA 6313 (2000).

## **APPENDIX B**

### **Summary of the COSYMA Accident Consequence Code**

COSYMA is intended for probabilistic calculations of the off-site consequences of hypothetical accidental releases of radioactive material to atmosphere at nuclear sites. It calculates the health effects, impact of countermeasures and economic costs of the releases. The processes considered in the calculations, and the routes of exposure following accidental releases to atmosphere, are illustrated in Figure B.1. The calculation is divided into a number of steps, as is also illustrated in Figure 1. COSYMA is a modular code, with different modules addressing the different stages of the calculation. However, while Figure 1 illustrates the steps in the calculation, the modules of the codes do not correspond exactly with the boxes shown in that figure. The following sections give brief descriptions of the models included in COSYMA. In some cases, COSYMA includes more than one model for a particular feature. This appendix also specifies which of the models was used for this uncertainty analysis.

COSYMA was developed by the National Radiological Protection Board (NRPB) of the UK and Forschungszentrum Karlsruhe (FZK) of Germany, as part of the European Commission's MARIA

project<sup>(1)</sup>. It represents a fusion of ideas from the NRPB program MARC<sup>(2)</sup>, the FZK program system UFOMOD<sup>(3)</sup> and input from other MARIA contractors. The program package was first made available in 1990 for use on mainframe computers, and several updates have been released since then. A PC version was first released in 1993 and has since been updated<sup>(4)</sup>.\*

COSYMA is a package of programs and data bases, rather than a single program. The mainframe version contains three main accident consequence assessment programs together with a number of preprocessing and evaluation programs. The three main sub-systems of COSYMA are known as the NE, NL and FL sub-systems. The NE (near, early) sub-system is limited to calculating early health effects and the influence of emergency actions to reduce those effects and is intended for use in the region near to the site. The NL (near, late) subsystem is limited to calculating late health effects and the associated countermeasures, and is intended mainly for use in the region near to the site. The FL (far, late) sub-system is concerned with calculating late health effects and appropriate countermeasures at larger distances from the site. Each of these programs is further sub-divided into a series of modules for the various steps in the calculation. PC COSYMA incorporates the NE and NL sub-systems of the mainframe version.

The main endpoints of COSYMA are the numbers of health effects, the impact of countermeasures and the economic costs resulting from an accidental release. A large number of intermediate results are obtained in the process of calculating the major endpoints; these results include activity concentrations, individual and collective doses and the countermeasures that would be imposed at different locations. The package contains a series of evaluation programs that allow these results to be presented in a variety of ways.

Following an accidental release to atmosphere, people can be irradiated by a number of routes of exposure. The ones considered in COSYMA are:-

- external  $\gamma$  irradiation from material in the plume,
- external  $\gamma$  irradiation from material deposited on the ground
- external  $\beta$  irradiation of skin from material deposited on skin and clothes
- internal irradiation following the inhalation of material from the plume or of material that has been deposited and subsequently resuspended
- internal irradiation from the ingestion of contaminated foods.

COSYMA includes some models directly within the various modules or subsidiary programs, but in other cases it uses results of models taken from data libraries. Thus the atmospheric dispersion models are used directly. COSYMA does not however, include models for the contamination of food or dosimetric calculations, using instead data libraries giving the results of other models, which are not part of COSYMA, itself, but whose uncertainty is considered within the current study.

## **B.1 Atmospheric dispersion and deposition**

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\* The mainframe and PC versions of COSYMA are made available on behalf of the European Commission. People wishing to obtain the mainframe version of the system should contact Dr J Ehrhardt, FZK, Germany (e-mail [RODOS@RODOS.FZK.DE](mailto:RODOS@RODOS.FZK.DE)); those wishing to obtain the PC version of the system should contact Dr J A Jones, NRPB, UK (e-mail [Arthur.Jones@NRPB.ORG.UK](mailto:Arthur.Jones@NRPB.ORG.UK)).

Mainframe COSYMA contains five different models of atmospheric dispersion that are appropriate for different applications or are based on different assumptions and approximations<sup>(5)</sup>.

The NE and NL sub-system include the MUSEMET<sup>(6)</sup> model, which was originally written at Forschungsanlage Julich but has been extensively modified at FZK for use with COSYMA. This is a segmented Gaussian plume model allowing for changes of atmospheric conditions and wind direction during plume travel. This model derives the sequences of atmospheric conditions affecting the plume from a data file giving hourly averages for wind speed and direction, stability category, precipitation intensity and mixing layer depth. It allows for the effects on the subsequent dispersion of plume rise and buildings near the release point. It also includes the effects of wet and dry deposition of the dispersing material. This model is also included in PC COSYMA.

The NE and NL sub-systems can also be used with the COSGAP or RIMPUFF dispersion models, which are provided as separate programs. COSGAP<sup>(7)</sup> is a Gaussian plume dispersion model, which is similar to MUSEMET but does not consider changes of wind direction during plume travel. It is based on the dispersion model in MARC. RIMPUFF<sup>(8)</sup>, developed by Risø National Laboratory, Denmark, is a Gaussian puff trajectory model which derives the atmospheric conditions affecting the plume by interpolating between data from a number of meteorological stations in the region of interest.

The NL sub-system also contains the ISOLA<sup>(9)</sup> model for very long release durations. This uses statistics of atmospheric conditions and is only appropriate for releases that are sufficiently small that no countermeasures and no early health effects would be expected.

The FL sub-system is linked to the Mesos model<sup>(10)</sup>, developed by Imperial College, UK. This is a trajectory model for dispersion over long distances that uses meteorological data for a large area, such as the whole of Europe.

Accident consequence assessment programs need to consider the consequences should the accident occur in any of a wide range of atmospheric conditions. It is not possible to calculate the consequences for every sequence of conditions that might arise, and so some method is required to sample a representative set of conditions from those possible. Both the mainframe and PC versions of COSYMA include a flexible program to undertake this sampling.

Only the MUSEMET dispersion model is included in this study, using the NE and NL sub-systems. The uncertainty in dispersion modelling includes both the uncertainty on the spread of the plume around its trajectory, and the uncertainty on the location of the plume trajectory. The other Gaussian models included in COSYMA (RIMPUFF, COSGAP and ISOLA) use similar descriptions of the growth of plumes and of the trajectory. Therefore the uncertainty on consequences predicted using MUSEMET should be similar to the uncertainties predicted using the other Gaussian models. However, MESOS uses a different method of calculating plume trajectories, and the uncertainties on calculations using MESOS may not be the same as those using Gaussian plume or puff models.

## **B.2 Dose calculations**

As stated earlier, COSYMA does not include dosimetric models but uses information from data libraries which are calculated with these models. The libraries include information on the doses



from 197 radionuclides.

The data library used for calculating external exposure from  $\gamma$  emitting material deposited on the ground contains outdoor doses per unit deposit integrated to a series of times. These doses are combined with location factors representing the reduction of external  $\gamma$  irradiation by the shielding effects of buildings and typical behaviour of the population. The library is drawn from a number of sources, using results of models developed at NRPB<sup>(11,12)</sup> and Forschungszentrum für Umwelt und Gesundheit (GSF)<sup>(13)</sup>, Germany. The doses for those radionuclides making major contributions to the dose from fission reactor accidents are derived from a model describing the deposition patterns in urban areas and the subsequent transfer of material between the different surfaces. Location factors are used to describe the protection offered by buildings.

The doses from internal irradiation following ingestion or inhalation are calculated using data libraries of dose per unit intake derived using models which are consistent with those in ICRP publications 56, 67 and 69. COSYMA needs information on the dose received in different periods after the accident, and so this information is included in the data libraries. The method used for calculating doses and risks of health effects in the mainframe version of COSYMA allows for the variation of dose per unit intake with age at intake, and so the libraries contain information on doses for different age groups in the population. The PC version uses a simpler method which only considers the doses to adults.

### **B.3 Food chain models**

COSYMA requires information on the concentration of material in foods as a function of time after the accident. It does not include a food chain model, but uses the results of such models through data libraries which give the activity concentration for a range of radionuclides in a number of foods at a series of times following unit deposition. The concentration of material in foods depends on the time of year at which the deposition occurs. COSYMA uses two data libraries, for deposition in summer and winter. Within a run of COSYMA, the “summer” or “winter” data library is used depending on the date in the year of the meteorological sequence being analysed.

COSYMA uses libraries derived from the NRPB model FARMLAND<sup>(14)</sup> and the GSF model ECOSYS<sup>(15)</sup>. The libraries were created using agreed values for the food chain parameters for application within the European Union, but there are differences because of other modelling assumptions made and because of the foods considered in each. The foods which can be considered with FARMLAND are milk, meat and liver from cattle, pork, meat and liver from sheep, green vegetables, grain products, potatoes and other root vegetables. The foods which can be considered with ECOSYS are milk, beef pork, grain products, potatoes and other root vegetables, and leafy and non-leafy green vegetables.

The intakes of these foods are calculated within COSYMA using one of two assumptions about the distribution of food between harvest and consumption. One method assumes that all food consumed is produced locally, and is used in calculating individual ingestion doses. The other method uses information on the amount of food produced in the area of interest, and calculates collective doses on the assumption that all food produced is consumed somewhere.

For this study, the FARMLAND food chain model was used to calculate the uncertainty on concentrations of activity in foods. Doses from ingestion of food were calculated on the assumption that all food consumed is produced locally.

## **B.4 Countermeasures**

COSYMA allows the user to consider the effect of a wide range of countermeasures in reducing the exposure of the population, and gives the user considerable freedom in specifying the criteria at which the actions will be imposed or withdrawn<sup>(16)</sup>.

Sheltering as the only action and sheltering combined with evacuation may be implemented automatically or on the basis of dose. The distribution of iodine tablets, automatically or on the basis of dose, can also be considered. These actions are assumed to be implemented sufficiently rapidly to reduce the risks of both early and late health effects. Relocation is considered as an action to reduce doses and risks over longer time periods. It can be implemented on a dose criterion. Return from evacuation or relocation is also considered on a dose criterion. The effects of decontamination in reducing the period of relocation can be considered. If these actions are initiated on the basis of dose, the user can specify the intervention levels, organs and pathways to be considered, and the time over which the dose is to be integrated. The behaviour of the population considered in the dose criteria can also be described using location factors.

Food restrictions can also be considered<sup>(17)</sup>. They can be implemented or withdrawn on the basis of doses received within specified time periods or on the basis of the instantaneous concentration of radionuclides in foods.

## **B.5 Health effects**

COSYMA considers both early and late health effects in the population, using methods recommended by NRPB<sup>(18,19)</sup>, the US Nuclear Regulatory Commission<sup>(20)</sup> and GSF<sup>(21)</sup>.

The risk of early health effects is calculated using "hazard functions". The method allows for the variation of risk with the rate at which dose is accumulated over the first few days following the accident. Ten different fatal and non-fatal effects are considered by COSYMA, though not all are considered for this study.

The risk of late health effects is calculated using the linear dose response relationship. COSYMA considers the risk of fatal and non-fatal cancers in ten organs, and the risk of leukaemia. It also considers the risk of hereditary effects. The method adopted in the mainframe version of COSYMA allows for the variation of risk with age at exposure<sup>(22)</sup>. PC COSYMA uses a simpler method which only considers the doses and risks to adults, assuming that the risk is the product of committed dose and risk coefficient. The mainframe version of COSYMA can provide information on the numbers of cancers in the people alive at the time of the accident, and in their descendants. It also gives information on the times at which the cancers occur. For this study, the approximation used in PC COSYMA for calculating the risks of late health effects was adopted.

## **B.6 Economic effects**

COSYMA can calculate the off-site economic cost of the accident, considering the costs arising from the countermeasures and the costs of health effects. The assumptions and models are described in references 23 and 24. The countermeasures for which costs are considered are movement of the population, food restrictions and decontamination. The costs arising from lost production in the area from which people are moved can be assessed in terms of the per capita contribution of the relocated population to gross domestic product (GDP) or in terms of the value of the land affected. For longer periods of relocation, the lost capital value of the land and its assets may be calculated. The costs of food restrictions include contributions to GDP as well as the lost capital value and the disposal costs of the food affected. The cost arising from health effects may be calculated in terms of the treatment costs and the lost economic productivity of the affected individuals or an estimation of the cost of health effects may be obtained using a more subjective approach to the valuation of life.

This study did not consider the uncertainty on economic effects.

## B.7 References

- 1 KfK and NRPB. COSYMA: A new program package for accident consequence assessment. CEC. Brussels, EUR-13028 (1991).
- 2 Hill M D, Simmonds J R and Jones J A. NRPB methodology for assessing the radiological consequences of accidental releases of radionuclides to atmosphere - MARC-1. Chilton, NRPB-R224 (1988) (London HMSO).
- 3 Ehrhardt J, Burkart K, Hasemann I, Matzerath C, Panitz H-J and Steinhauer C. The program system UFOMOD for assessing the consequences of nuclear accidents. KfK-4330 (1988).
- 4 Jones J A, Mansfield P A , Haywood S M , Hasemann I, Steinhauer C, Ehrhardt J and Faude D. PC COSYMA (Version 2): an accident consequence assessment package for use on a PC. EUR report 16239 (1995).
- 5 Panitz H-J, Päsler-Sauer J and Matzerath C. UFOMOD: Atmospheric dispersion and deposition. KfK-4332 (1989).
- 6 Straka J, Geiß H and Vogt K J. Diffusion of waste air puffs and plumes under changing weather conditions. *Contr. Atmos. Phys.* 54 207-221, (1981).
- 7 Jones J A and Charles D. AD-MARC: The atmospheric dispersion module in the methodology for assessing the radiological consequences of accidental releases. Chilton, NRPB-M72, (1982).
- 8 Mikkelsen T, Larsen S E and Thykier-Nielsen S. Description of the Riso puff model. *Nuclear Technol* 76 56-65 (1984).
- 9 Hübschmann W and Raskob W. ISOLA V: a Fortran-77 code for the calculation of the long-term concentration distribution in the environment of nuclear installations.
- 10 ApSimon H M and Goddard A J H. Atmospheric transport of radioisotopes and the assessment of population doses on a European scale. CEC Luxembourg EUR-9128 (1983).
- 11 Charles D, Crick M J, Fell T P and Greenhalgh J R. DOSE-MARC: The dosimetric module in the methodology for assessing the radiological consequences of accidental releases. Chilton NRPB-M74 (1982).
- 12 Crick M J and Brown J. EXPURT: A model for evaluating exposure from radioactive material deposited in the urban environment. Chilton NRPB-R235 (1990).
- 13 Jacob P, Paretzke H G, Rosenbaum H, Zankl M. Organ doses from radionuclides on the ground. Part 1: Simple time dependencies. *Health Physics* 54 617-633 (1988).
- 14 Brown J and Simmonds J R. FARMLAND a dynamic model for the transfer of

- radionuclides through terrestrial foodchains. Chilton. NRPB-R273 (1995).
- 15 Matthies M, Einfeld K, Müller H, Paretzke H G, Pröhl G and Wirth G. Simulation des Transfers von Radionukliden in landwirtschaftlichen Nahrungsketten. GSF Bericht S-882 (1982).
- 16 Hasemann I and Ehrhardt J. COSYMA: dose models and countermeasures for external exposure and inhalation. Karlsruhe KfK 4333, (1994).
- 17 Steinhauer C. COSYMA: ingestion pathways and foodbans. Karlsruhe. KfK 4334 (1992)
- 18 Edwards A A. Private communication (1995).
- 19 NRPB. Estimates of late radiation risks to the UK population. Documents of the NRPB 4 (4) 15-157 (1993).
- 20 Evans J S, Moeller D W and Cooper D W. Health effects models for nuclear power plant accident consequence analysis. NUREG/CR-4214 (1985), Rev 1, (1990).
- 21 Paretzke H G, Stather J W and Muirhead C R. Risk factors for late somatic effects. In Proceedings of the CEC Seminar on methods and codes for assessing the off-site consequences of nuclear accidents, Athens 1990, Luxembourg EUR 13013 (1991).
- 22 Ehrhardt J, Hasemann I, Matzerath-Boccaccini C, Steinhauer C and Raicevic J. COSYMA: health effects models. Karlsruhe FZKA 5567 (1995).
- 23 Haywood S M, Robinson C A and Heady C. COCO-1: model for assessing the cost of offsite consequences of accidental releases of radioactivity. Chilton NRPB-R243 (1991).
- 24 Faude D. COSYMA: Modelling of economic consequences. Karlsruhe, KfK Report 4336 (1992)

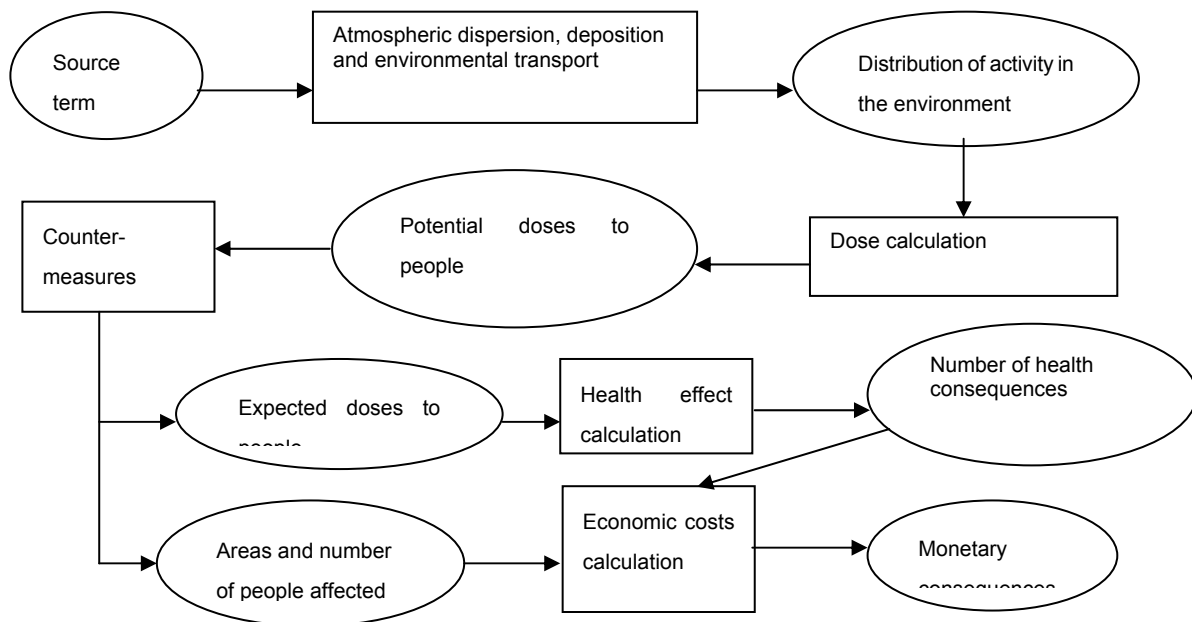
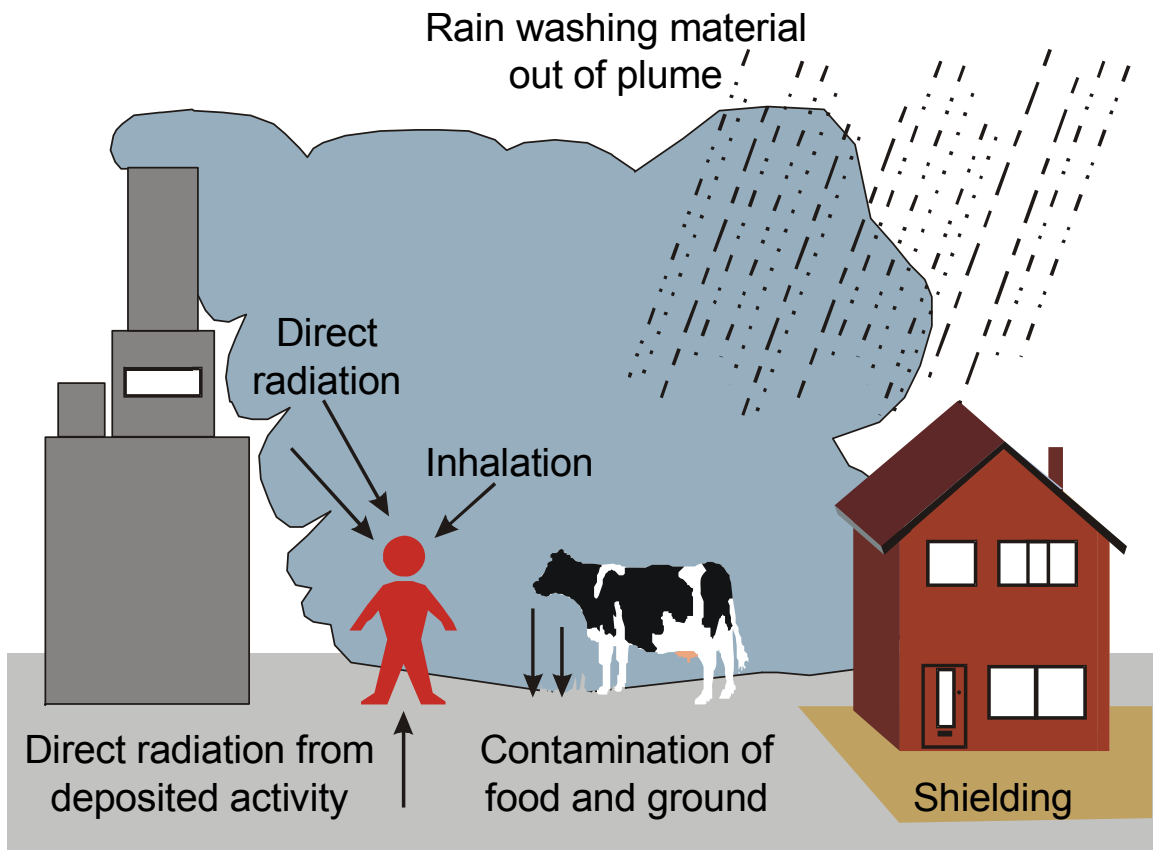


Figure B.1 Processes modelled in COSYMA

## Appendix C

### Extent of the uncertainty on the predicted consequences

This appendix includes tables giving various percentiles of the distribution of uncertainty on all of the model endpoints considered in the study. The endpoints are identified using a short code. The short codes for all of the endpoints considered are listed in Table C.1

The remaining tables give some of the percentiles of the uncertainty distributions on the mean value, the 95th and 99th percentiles and the probability of zero effects for each of the endpoints considered, for each of the three source terms. The table contains the following information:

REF	the value obtained in a single run of COSYMA using the default values for all of the input parameters.
MEDIAN	the median value from the uncertainty distribution on the quantity given.
5 % etc	the percentiles of the uncertainty distribution on the quantity given.
FAC1	the ratio of the 95th to 5th percentiles of the uncertainty distribution on the quantity given.
FAC2	the ratio of the 90th to 10th percentiles of the uncertainty distribution on the quantity given.
FAC3	the ratio of the 75th to 25th percentiles of the uncertainty distribution on the quantity given.

The final column gives the ratio of the 95th percentile of the uncertainty distribution to the reference value.

The analysis has resulted in sets of values for the each of the endpoints from each of the runs of COSYMA considered. The percentiles of the uncertainty distribution on each endpoint is evaluated from this set of values. The program used to evaluate the percentiles first specifies a series of bins. Each of the values for the endpoint are allocated to one of the bins, and the probability distribution on the endpoint constructed. The value assigned to a percentile of the distribution is the value of the lower end of the bin containing that percentile. The values allocated to the highest bin are 6 to 9 orders of magnitude greater than those allocated to the lowest bin, depending on the particular endpoint considered. There are some situations where percentiles of the uncertainty distribution for the quantities considered fall below the value that would be allocated to the lowest bin. In this case the value is reported as zero, and the ratio of the percentiles is reported as "9.99E+99".

**Table C.1 Description of the endpoint codes used in the following tables**

Short code	Description of endpoint
AEVAC	Area with evacuation
AFBIBEE	Time integral of area subject to beef ban
AFBIGRA	Initial area subject to grain ban
AFBIMIL	Initial area subject to milk ban
AFBIVEG	Initial area subject to green vegetables ban
AFBTBEE	Time integral of area subject to beef ban
AFBTMIL	Time integral of area subject to milk ban
AFBTVEG	Time integral of area subject to green vegetables ban
AIOD	Area with stable iodine tablets
ARELIN	Area relocated
ARELTIM	Time integral of area relocated
ASHEL	Area with sheltering as the only action
CACAE <sup>(a)</sup>	Air concentration of <sup>137</sup> Cs
CAIOD <sup>(a)</sup>	Air concentration of <sup>131</sup> I
CDCMBM	Collective dose to bone marrow, with countermeasures
CDCMED	Collective effective dose, with countermeasures
CDCMTH	Collective dose to thyroid, with countermeasures
CDLVBM	Collective dose to bone marrow, for normal living
CDLVED	Collective effective dose, for normal living
CDLVTH	Collective dose to thyroid, for normal living
CDOUBM	Collective dose to bone marrow, potential outdoor exposure
CDOUED	Collective effective dose, potential outdoor exposure
CDOUTH	Collective dose to thyroid, potential outdoor exposure
CGCAE <sup>(a)</sup>	Deposition of <sup>137</sup> Cs
CGIOD <sup>(a)</sup>	Deposition of <sup>131</sup> I
DECMBM <sup>(a)</sup>	Individual dose to bone marrow in 7 days, with countermeasures
DECMSK <sup>(a)</sup>	Individual dose to skin in 7 days, with countermeasures
DECMTH <sup>(a)</sup>	Individual dose to thyroid in 7 days, with countermeasures
DELVBM <sup>(a)</sup>	Individual dose to bone marrow in 7 days, for normal living
DELVSK <sup>(a)</sup>	Individual dose to skin in 7 days, for normal living
DELVTH <sup>(a)</sup>	Individual dose to thyroid in 7 days, for normal living
DEOUBM <sup>(a)</sup>	Individual dose to bone marrow in 7 days, potential outdoor dose
DEOUSK <sup>(a)</sup>	Individual dose to skin in 7 days, potential outdoor dose
DEOUTH <sup>(a)</sup>	Individual dose to thyroid in 7 days, potential outdoor dose
DLCMBM <sup>(a)</sup>	Individual committed dose to bone marrow from inhalation, ingestion and external exposure, with countermeasures
DLCMED <sup>(a)</sup>	Individual committed effective dose from inhalation, ingestion and external exposure, with countermeasures
DLCMTH <sup>(a)</sup>	Individual committed dose to thyroid from inhalation, ingestion and external exposure, with countermeasures
DLLVBM <sup>(a)</sup>	Individual committed dose to bone marrow from inhalation, ingestion and external exposure, for normal living

DLLVED <sup>(a)</sup>	Individual committed effective dose from inhalation, ingestion and external exposure, for normal living
DLLVTH <sup>(a)</sup>	Individual committed dose to thyroid from inhalation, ingestion and external exposure, for normal living
DLOUBM <sup>(a)</sup>	Individual committed dose to bone marrow from inhalation, ingestion and external exposure, potential outdoor dose
DLOUED <sup>(a)</sup>	Individual committed effective dose from inhalation, ingestion and external exposure, potential outdoor dose
DLOUTH <sup>(a)</sup>	Individual committed dose to thyroid from inhalation, ingestion and external exposure, potential outdoor dose
PECMBM	Number of cases of haematopoietic syndrome, with countermeasures
PECMLU	Number of cases of lung morbidity, with countermeasures
PECMMB	Number of cases of early morbidity, with countermeasures
PECMMT	Number of cases of early death, with countermeasures
PECMSK	Number of cases of skin burns, with countermeasures
PECMTH	Number of cases of hypothyroidism, with countermeasures
PELVBM	Number of cases of haematopoietic syndrome, for normal living
PELVLU	Number of cases of lung morbidity, for normal living
PELVMB	Number of cases of early morbidity, for normal living
PELVMT	Number of cases of early death, for normal living
PELVSK	Number of cases of skin burns, for normal living
PELVTH	Number of cases of hypothyroidism, for normal living
PLCMBM	Number of deaths from leukaemia, with countermeasures
PLCMMT	Number of fatal cancers, with countermeasures
PLCMTH	Number of cases of fatal thyroid cancer, with countermeasures
PLLVBM	Number of deaths from leukaemia, for normal living
PLLVMT	Number of fatal cancers, for normal living
PLLVTH	Number of cases of fatal thyroid cancer, for normal living
RECBM <sup>(a)</sup>	Individual risk of haematopoietic syndrome, with countermeasures
RECMLU <sup>(a)</sup>	Individual risk of lung morbidity, with countermeasures
RECMMB <sup>(a)</sup>	Individual risk of early morbidity, with countermeasures
RECMMT <sup>(a)</sup>	Individual risk of early death, with countermeasures
RECMSK <sup>(a)</sup>	Individual risk of skin burns, with countermeasures
RECMTH <sup>(a)</sup>	Individual risk of hypothyroidism, with countermeasures
RELVBM <sup>(a)</sup>	Individual risk of haematopoietic syndrome, for normal living
RELVLU <sup>(a)</sup>	Individual risk of lung morbidity, for normal living
RELVMB <sup>(a)</sup>	Individual risk of early morbidity, for normal living
RELVMT <sup>(a)</sup>	Individual risk of early death, for normal living
RELVSK <sup>(a)</sup>	Individual risk of skin burns, for normal living
RELVTH <sup>(a)</sup>	Individual risk of hypothyroidism, for normal living
REOUBM <sup>(a)</sup>	Individual risk of haematopoietic syndrome, potential outdoor risk
REOULU <sup>(a)</sup>	Individual risk of lung morbidity, potential outdoor risk
REOUMB <sup>(a)</sup>	Individual risk of early morbidity, potential outdoor risk
REOUMT <sup>(a)</sup>	Individual risk of early death, potential outdoor risk
REOUSK <sup>(a)</sup>	Individual risk of skin burns, potential outdoor risk
REOUTH <sup>(a)</sup>	Individual risk of hypothyroidism, potential outdoor risk



RLCMBM <sup>(a)</sup>	Individual risk of death from leukaemia, with countermeasures
RLCMMT <sup>(a)</sup>	Individual risk of fatal cancer, with countermeasures
RLCMTH <sup>(a)</sup>	Individual risk of death from thyroid cancer, with countermeasures
RLLVBM <sup>(a)</sup>	Individual risk of death from leukaemia, for normal living
RLLVMT <sup>(a)</sup>	Individual risk of fatal cancer, for normal living
RLLVTH <sup>(a)</sup>	Individual risk of death from thyroid cancer, for normal living
RLOUBM <sup>(a)</sup>	Individual risk of death from leukaemia, for potential outdoor exposure
RLOUMT <sup>(a)</sup>	Individual risk of fatal cancer, for potential outdoor exposure
RLOUTH <sup>(a)</sup>	Individual risk of death from thyroid cancer, for potential outdoor exposure

Note:

a            These endpoints are evaluated at a series of distances (0.875, 5, 20 and 100 km). The names include a number 1 to 4 to indicate which distance is considered. Note that the endpoints relating to early effects are only evaluated at distances from 0.875 to 20 km, while those relating to late effects are evaluated at distances from 5 to 100 km. Air concentration and deposition are evaluated at all four distances.

**Table C.2      Uncertainty distributions on the endpoints for each of the source terms**

**1.7      Extent of the uncertainty for the mean value of the endpoints for the UK1 source term**

MEAN VAL	REF	MEDIAN	5 % 75 %	95 % FAC3	FAC1 	10 % 95%/REF	90 %	FAC2	25 %
CGIOD1	3.67E+10	4.75E+10	4.64E+09 9.44E+10	1.49E+11 4.94E+00	3.20E+01 	6.67E+09 4.05E+00	1.26E+11	1.89E+01	1.91E+10
CGIOD2	1.20E+09	1.95E+09	5.68E+08 2.59E+09	3.75E+09 1.77E+00	6.60E+00 	7.16E+08 3.12E+00	3.35E+09	4.67E+00	1.47E+09
CGIOD3	1.25E+08	1.18E+08	4.12E+07 1.55E+08	1.97E+08 1.87E+00	4.79E+00 	5.43E+07 1.57E+00	1.91E+08	3.51E+00	8.29E+07
CGCAE1	2.72E+08	4.23E+08	2.14E+07 1.64E+09	3.26E+09 1.23E+01	1.52E+02 	5.22E+07 1.20E+01	2.72E+09	5.20E+01	1.33E+08
CGCAE2	2.07E+07	4.18E+07	3.99E+06 1.16E+08	1.52E+08 6.25E+00	3.80E+01 	7.47E+06 7.31E+00	1.44E+08	1.93E+01	1.85E+07
CGCAE3	2.79E+06	5.55E+06	4.60E+05 1.04E+07	2.26E+01 2.26E+01		1.04E+06	9.92E+06	9.58E+00	2.16E+06

CAIOD1	3.63E+12	2.94E+12	8.03E+06	3.73E+00	3.73E+00	1.17E+12	7.41E+12	6.36E+00	1.75E+12
CAIOD2	1.08E+11	1.69E+11	2.06E+10	7.92E+11	3.84E+01	2.69E+10	6.14E+11	2.28E+01	4.34E+10
CAIOD3	1.04E+10	1.09E+10	7.56E+08	6.86E+10	9.07E+01	1.19E+09	4.79E+10	4.02E+01	2.18E+09
CACAE1	2.27E+11	2.55E+11	8.29E+10	4.34E+11	5.23E+00	9.38E+10	3.97E+11	4.23E+00	1.44E+11
CACAE2	1.22E+10	1.81E+10	7.04E+09	6.00E+10	8.52E+00	8.46E+09	4.99E+10	5.90E+00	1.09E+10
CACAE3	1.10E+09	1.52E+09	4.51E+08	6.33E+09	1.40E+01	5.77E+08	4.64E+09	8.04E+00	8.51E+08
DECMBM1	9.15E-01	1.34E+00	4.11E-01	2.56E+00	6.24E+00	5.00E-01	2.32E+00	4.63E+00	8.95E-01
DECMBM2	5.13E-02	9.15E-02	4.66E-02	2.80E-01	6.00E+00	4.92E-02	2.01E-01	4.10E+00	6.17E-02
DECMBM3	3.01E-03	4.94E-03	2.72E-03	1.82E-02	6.71E+00	3.21E-03	1.14E-02	3.53E+00	3.76E-03
DECMTH1	3.12E+01	2.60E+01	1.01E+01	6.73E+01	6.67E+00	1.30E+01	6.15E+01	4.74E+00	1.80E+01
DECMTH2	9.06E-01	1.38E+00	3.73E-01	4.19E+00	1.12E+01	4.10E-01	3.92E+00	9.57E+00	6.92E-01
DECMTH3	4.13E-02	5.06E-02	1.50E-02	2.19E-01	1.46E+01	1.94E-02	1.72E-01	8.86E+00	2.96E-02
DECMSK1	1.11E+02	1.58E+02	3.03E+00	1.62E+03	5.35E+02	5.90E+00	9.69E+02	1.64E+02	2.14E+01
DECMSK2	3.59E+00	8.52E+00	1.90E-01	7.14E+01	3.76E+02	3.51E-01	4.19E+01	1.20E+02	1.25E+00
DECMSK3	1.87E-01	3.84E-01	1.05E-02	2.61E+00	2.48E+02	1.64E-02	1.97E+00	1.20E+02	4.49E-02
DELVBM1	2.40E+00	4.27E+00	8.33E-01	1.00E+01	1.20E+01	1.30E+00	8.74E+00	6.71E+00	2.11E+00
DELVBM2	1.02E-01	2.29E-01	9.32E-02	4.69E-01	5.03E+00	1.13E-01	3.85E-01	3.40E+00	1.66E-01
DELVBM3	1.08E-02	1.73E-02	9.88E-03	2.77E-02	2.80E+00	1.03E-02	2.50E-02	2.44E+00	1.39E-02
DELVTH1	7.70E+01	6.39E+01	2.44E+01	1.66E+02	6.78E+00	3.20E+01	1.58E+02	4.93E+00	4.32E+01
DELVTH2	2.36E+00	3.62E+00	8.68E-01	1.57E+01	1.81E+01	9.96E-01	1.25E+01	1.26E+01	1.52E+00
DELVTH3	2.18E-01	2.77E-01	5.02E-02	1.33E+00	2.64E+01	5.53E-02	9.15E-01	1.65E+01	8.17E-02
DELVSK1	6.11E+02	1.13E+03	2.08E+01	9.66E+03	4.63E+02	3.16E+01	5.52E+03	1.74E+02	1.19E+02
DELVSK2	1.92E+01	5.73E+01	1.45E+00	4.08E+02	2.81E+02	2.49E+00	2.83E+02	1.14E+02	7.48E+00
DELVSK3	1.76E+00	3.87E+00	1.27E-01	2.85E+01	2.25E+02	2.21E-01	1.97E+01	8.91E+01	4.63E-01
DEOUBM1	1.53E+01	2.86E+01	4.73E+00	6.99E+01	1.48E+01	7.83E+00	6.05E+01	7.72E+00	1.30E+01
DEOUBM2	6.36E-01	1.40E+00	5.75E-01	2.92E+00	5.08E+00	6.96E-01	2.54E+00	3.66E+00	1.06E+00
DEOUBM3	6.90E-02	1.11E-01	5.40E-02	1.83E-01	3.39E+00	6.13E-02	1.58E-01	2.58E+00	8.34E-02
DEOUTH1	1.53E+02	1.51E+02	6.61E+01	3.38E+02	5.10E+00	7.48E+01	3.16E+02	4.23E+00	1.12E+02
DEOUTH2	4.82E+00	7.78E+00	2.46E+00	2.92E+01	1.19E+01	3.29E+00	2.37E+01	7.21E+00	4.20E+00
DEOUTH3	4.55E-01	5.80E-01	1.75E-01	2.48E+00	1.41E+01	1.94E-01	1.81E+00	9.33E+00	2.37E-01
DEOUSK1	1.11E+03	2.06E+03	3.79E+01	1.76E+04	4.63E+02	5.75E+01	1.00E+04	1.74E+02	2.17E+02
DEOUSK2	3.49E+01	1.04E+02	2.64E+00	7.42E+02	2.81E+02	4.52E+00	5.15E+02	1.14E+02	1.36E+01
DEOUSK3	3.21E+00	7.04E+00	2.30E-01	5.18E+01	2.25E+02	4.02E-01	3.58E+01	8.91E+01	8.42E-01
RECMMT1	4.78E-02	5.80E-02	2.30E-02	1.11E-01	4.83E+00	2.84E-02	9.41E-02	3.32E+00	4.11E-02
RECMMT2	3.00E-03	6.47E-03	7.68E-04	1.33E-02	1.73E+01	2.13E-03	1.22E-02	5.75E+00	4.05E-03
RECMMT3	7.71E-05	2.49E-04	0.00E+00	1.32E-03	9.99E+99	0.00E+00	1.13E-03	9.99E+99	1.58E-05
RECMBM1	4.27E-02	5.28E-02	2.00E-02	1.06E-01	5.28E+00	2.51E-02	9.07E-02	3.62E+00	3.93E-02
RECMBM2	9.92E-04	2.41E-03	1.17E-05	1.24E-02	1.05E+03	3.79E-05	9.22E-03	2.43E+02	4.09E-04
RECMBM3	.00E+00	0.00E+00	0.00E+00	4.93E-04	9.99E+99	0.00E+00	2.24E-04	9.99E+99	0.00E+00
RECMMB1	1.31E-01	7.91E-02	2.63E-02	1.69E-01	6.42E+00	3.41E-02	1.54E-01	4.52E+00	4.49E-02
RECMMB2	3.77E-02	5.40E-02	4.39E-03	1.41E-01	3.21E+01	8.10E-03	1.28E-01	1.58E+01	1.50E-02
RECMMB3	1.49E-03	3.00E-03	0.00E+00	2.26E-02	9.99E+99	1.42E-05	2.01E-02	1.41E+03	2.80E-04
			1.07E-02	3.83E+01		1.52E+01			

MEAN VAL    REF    MEDIAN    |    5 %    95 %    FAC1    |    10 %    90 %    FAC2    |    25 %

				75 %			FAC3		95%/REF			
RECMLU1	5.26E-04	2.37E-04		0.00E+00	4.02E-03	9.99E+99		0.00E+00	3.43E-03	9.99E+99		3.68E-06
				1.91E-03	5.18E+02		7.64E+00					
RECMLU2	8.62E-04	3.06E-04		0.00E+00	2.34E-03	9.99E+99		0.00E+00	1.31E-03	9.99E+99		6.76E-05
				8.09E-04	1.20E+01		2.71E+00					
RECMLU3	.00E+00	0.00E+00		0.00E+00	5.84E-05	9.99E+99		0.00E+00	2.08E-05	9.99E+99		0.00E+00
				0.00E+00	9.99E+99		9.99E+99					
RECMT1	1.95E-02	8.19E-03		7.43E-04	3.52E-02	4.74E+01		9.03E-04	3.16E-02	3.50E+01		1.85E-03
				1.79E-02	9.71E+00		1.81E+00					
RECMT2	9.75E-04	1.12E-03		1.91E-05	8.28E-03	4.33E+02		8.19E-05	6.59E-03	8.05E+01		2.67E-04
				2.97E-03	1.11E+01		8.50E+00					
RECMT3	.00E+00	1.72E-06		0.00E+00	1.11E-04	9.99E+99		0.00E+00	9.42E-05	9.99E+99		0.00E+00
				2.95E-05	9.99E+99		9.99E+99					
RECMSK1	9.75E-02	5.78E-02		5.29E-04	1.34E-01	2.52E+02		9.04E-03	1.18E-01	1.30E+01		2.03E-02
				9.97E-02	4.90E+00		1.37E+00					
RECMSK2	3.50E-02	4.90E-02		5.82E-05	1.40E-01	2.40E+03		1.32E-03	1.23E-01	9.28E+01		6.90E-03
				9.20E-02	1.33E+01		3.99E+00					
RECMSK3	1.49E-03	2.64E-03		0.00E+00	2.25E-02	9.99E+99		0.00E+00	2.01E-02	9.99E+99		1.46E-04
				1.01E-02	6.95E+01		1.51E+01					
RELVMT1	7.75E-02	8.05E-02		3.76E-02	1.66E-01	4.41E+00		4.30E-02	1.46E-01	3.38E+00		5.97E-02
				1.08E-01	1.81E+00		2.14E+00					
RELVMT2	6.14E-03	1.27E-02		4.29E-03	2.91E-02	6.78E+00		7.24E-03	2.55E-02	3.53E+00		9.41E-03
				1.97E-02	2.09E+00		4.73E+00					
RELVMT3	1.13E-03	1.85E-03		3.27E-05	5.23E-03	1.60E+02		1.27E-04	4.69E-03	3.70E+01		4.50E-04
				3.61E-03	8.04E+00		4.63E+00					
RELVBM1	7.24E-02	7.74E-02		3.53E-02	1.62E-01	4.59E+00		4.10E-02	1.42E-01	3.48E+00		5.71E-02
				1.05E-01	1.84E+00		2.24E+00					
RELVBM2	1.88E-03	8.94E-03		9.69E-04	2.23E-02	2.30E+01		2.33E-03	1.93E-02	8.28E+00		5.51E-03
				1.39E-02	2.52E+00		1.19E+01					
RELVBM3	.00E+00	0.00E+00		0.00E+00	4.95E-04	9.99E+99		0.00E+00	4.29E-04	9.99E+99		0.00E+00
				1.36E-04	9.99E+99		9.99E+99					
RELVMB1	1.30E-01	8.08E-02		3.04E-02	1.70E-01	5.60E+00		4.13E-02	1.54E-01	3.73E+00		6.35E-02
				1.14E-01	1.80E+00		1.31E+00					

RELVMB2	7.98E-02	9.53E-02	1.92E-02	2.30E-01	1.20E+01	2.42E-02	1.97E-01	8.15E+00	3.74E-02
RELVMB3	1.28E-02	2.09E-02	4.61E-04	7.85E-02	1.70E+02	1.47E-03	7.27E-02	4.95E+01	3.15E-03
RELVLU1	.00E+00	0.00E+00	0.00E+00	1.17E-03	9.99E+99	0.00E+00	9.24E-05	9.99E+99	0.00E+00
RELVLU2	4.46E-06	0.00E+00	0.00E+00	1.08E-03	9.99E+99	0.00E+00	6.29E-04	9.99E+99	0.00E+00
RELVLU3	.00E+00	0.00E+00	0.00E+00	9.81E-05	9.99E+99	0.00E+00	5.74E-05	9.99E+99	0.00E+00
RELVTH1	1.87E-02	5.35E-03	2.86E-04	3.33E-02	1.17E+02	3.99E-04	2.88E-02	7.21E+01	9.12E-04
RELVTH2	4.95E-03	3.70E-03	5.50E-05	2.01E-02	3.67E+02	1.54E-04	1.75E-02	1.14E+02	4.15E-04
RELVTH3	1.28E-05	5.86E-05	0.00E+00	2.72E-03	9.99E+99	0.00E+00	1.51E-03	9.99E+99	0.00E+00
RELVSK1	8.87E-02	5.51E-02	7.04E-03	1.23E-01	1.75E+01	1.51E-02	1.13E-01	7.49E+00	2.99E-02
RELVSK2	6.65E-02	7.95E-02	3.87E-03	1.79E-01	4.62E+01	8.30E-03	1.59E-01	1.92E+01	1.83E-02
RELVSK3	1.28E-02	2.08E-02	1.38E-05	7.75E-02	5.62E+03	2.62E-04	7.09E-02	2.71E+02	2.59E-03
REOUMT1	1.31E-01	1.31E-01	8.59E-02	2.18E-01	2.54E+00	9.69E-02	1.94E-01	2.00E+00	1.05E-01
REOUMT2	3.40E-02	5.21E-02	2.20E-02	1.32E-01	5.99E+00	2.64E-02	1.02E-01	3.88E+00	3.51E-02
REOUMT3	2.84E-03	5.43E-03	1.13E-03	1.13E-02	1.00E+01	1.66E-03	9.73E-03	5.84E+00	3.26E-03
REOUBM1	1.27E-01	1.27E-01	8.47E-02	2.16E-01	2.55E+00	9.52E-02	1.91E-01	2.01E+00	1.04E-01
REOUBM2	3.03E-02	4.90E-02	2.00E-02	1.28E-01	6.37E+00	2.43E-02	9.85E-02	4.05E+00	3.28E-02
REOUBM3	1.00E-03	2.64E-03	1.04E-04	7.51E-03	7.19E+01	3.14E-04	5.76E-03	1.84E+01	1.15E-03
REOUMB1	7.35E-02	4.85E-02	1.73E-02	1.13E-01	6.51E+00	2.35E-02	1.07E-01	4.55E+00	3.08E-02
REOUMB2	8.03E-02	7.22E-02	1.85E-02	1.60E-01	8.66E+00	2.13E-02	1.45E-01	6.84E+00	3.73E-02
REOUMB3	2.87E-02	4.33E-02	4.68E-03	1.11E-01	2.38E+01	5.56E-03	9.90E-02	1.78E+01	9.55E-03
REOULU1	.00E+00	0.00E+00	0.00E+00	0.00E+00	9.99E+99	0.00E+00	0.00E+00	9.99E+99	0.00E+00
REOULU2	.00E+00	0.00E+00	0.00E+00	1.02E-06	9.99E+99	0.00E+00	0.00E+00	9.99E+99	0.00E+00
REOULU3	.00E+00	0.00E+00	0.00E+00	3.65E-06	9.99E+99	0.00E+00	0.00E+00	9.99E+99	0.00E+00
REOUTH1	1.89E-03	2.99E-04	0.00E+00	1.04E-02	9.99E+99	0.00E+00	6.58E-03	9.99E+99	0.00E+00
REOUTH2	1.39E-03	7.43E-04	0.00E+00	9.59E-03	9.99E+99	0.00E+00	6.61E-03	9.99E+99	1.57E-05
REOUTH3	1.66E-04	1.58E-04	0.00E+00	3.05E-03	9.99E+99	0.00E+00	2.56E-03	9.99E+99	0.00E+00
REOUSK1	4.77E-02	2.73E-02	0.00E+00	8.34E-02	9.99E+99	1.84E-03	7.89E-02	4.28E+01	9.12E-03
REOUSK2	5.79E-02	4.92E-02	3.21E-04	1.23E-01	3.84E+02	2.25E-03	1.10E-01	4.91E+01	9.81E-03
REOUSK3	2.35E-02	3.32E-02	1.09E-04	1.05E-01	9.61E+02	3.46E-04	8.97E-02	2.59E+02	2.91E-03
PECMMT	2.60E+02	8.43E+02	9.66E+01	3.05E+03	3.16E+01	1.99E+02	2.56E+03	1.29E+01	4.69E+02
PECMBM	6.62E+01	2.21E+02	3.44E+01	1.41E+03	4.11E+01	4.97E+01	1.02E+03	2.04E+01	8.88E+01
PECMMB	3.77E+03	9.14E+03	2.83E+02	5.12E+04	1.81E+02	6.56E+02	4.23E+04	6.45E+01	1.63E+03
PECM LU	1.77E+01	1.55E+01	9.12E-01	1.71E+02	1.88E+02	1.50E+00	1.38E+02	9.19E+01	5.93E+00
PECMTH	5.14E+01	8.03E+01	6.87E+00	6.56E+02	9.54E+01	9.13E+00	4.11E+02	4.50E+01	2.19E+01
PECMSK	3.67E+03	9.03E+03	8.90E+00	5.10E+04	5.73E+03	7.20E+01	4.13E+04	5.73E+02	7.43E+02
PELVMT	2.32E+03	4.42E+03	4.73E+02	2.02E+04	4.28E+01	6.23E+02	1.65E+04	2.66E+01	1.36E+03
PELVBM	1.61E+02	6.05E+02	8.21E+01	2.18E+03	2.66E+01	2.37E+02	1.44E+03	6.07E+00	3.85E+02
PELVMB	2.32E+04	4.83E+04	2.22E+03	2.62E+05	1.18E+02	4.72E+03	2.13E+05	4.50E+01	7.80E+03
PELVLU	1.62E-03	6.02E-02	0.00E+00	2.78E+02	9.99E+99	0.00E+00	1.43E+02	9.99E+99	0.00E+00
PELVTH	2.64E+02	6.01E+02	2.82E+00	5.52E+03	1.96E+03	4.45E+00	3.74E+03	8.41E+02	2.46E+01
PELVSK	2.26E+04	4.63E+04	6.03E+02	2.59E+05	4.29E+02	1.65E+03	2.11E+05	1.28E+02	5.30E+03

## EXTENT OF THE UNCERTAINTY FOR THE 95TH PERCENTILE OF THE ENDPOINTS FOR THE UK1 SOURCE TERM

95 %-FRT    REF    MEDIAN    |    5 %    95 %    FAC1    |    10 %    90 %    FAC2    |    25 %

	75 %			FAC3			95%/REF		
CGIOD1	1.58E+11	1.70E+11	2.45E+09	8.91E+11	3.63E+02	5.37E+09	7.24E+11	1.35E+02	3.55E+10
CGIOD2	5.50E+09	5.75E+09	4.47E+11	1.26E+01	5.62E+00	8.13E+08	2.04E+10	2.51E+01	2.57E+09
CGIOD3	5.25E+08	3.09E+08	3.89E+08	2.29E+10	5.89E+01	4.17E+00	9.55E+08	2.04E+01	1.26E+08
CGCAE1	1.05E+09	8.91E+08	1.20E+10	4.68E+00	4.68E+07	2.04E+00	1.35E+10	5.25E+02	2.24E+08
CGCAE2	5.89E+07	1.00E+08	8.91E+06	1.78E+10	2.00E+03	1.70E+01	8.51E+08	1.74E+02	2.45E+07
CGCAE3	8.13E+06	1.17E+07	1.91E+06	1.10E+09	5.75E+02	1.86E+01	4.68E+07	4.37E+01	3.72E+06
CAIOD1	1.41E+13	1.02E+13	6.17E+05	5.50E+07	8.91E+01	6.76E+00	2.69E+13	7.76E+00	6.17E+12
CAIOD2	4.90E+11	3.80E+11	3.31E+07	8.91E+00	3.47E+12	2.57E+00	1.05E+11	2.14E+01	1.70E+11
CAIOD3	4.47E+10	3.39E+10	5.75E+10	2.95E+12	5.13E+01	6.03E+00	1.51E+11	8.91E+01	8.32E+09
CACAE1	8.71E+11	6.17E+11	1.23E+09	2.04E+11	1.66E+02	4.57E+00	1.78E+12	8.71E+00	3.80E+11
CACAE2	3.24E+10	5.01E+10	7.94E+10	9.55E+00	2.04E+11	2.34E+00	9.33E+00	9.33E+00	2.75E+10
CACAE3	4.68E+09	4.37E+09	1.55E+11	2.04E+12	1.32E+01	4.90E+00	9.12E+09	4.37E+00	2.88E+09
DECMBM1	3.98E+00	5.75E+00	1.82E+09	1.41E+10	7.76E+00	3.02E+00	1.38E+01	6.46E+00	3.39E+00
DECMBM2	1.55E-01	3.16E-01	5.75E+09	2.00E+00	2.14E+00	4.37E+00	6.31E-01	4.37E+00	2.14E-01
DECMBM3	4.07E-03	6.92E-03	1.66E+00	1.74E+01	1.05E+01	4.47E+00	2.04E-02	1.02E+01	3.63E-03
DECMTH1	1.29E+02	1.02E+02	9.55E+00	2.82E+00	4.37E+00	6.76E+00	2.57E+02	7.08E+00	6.17E+01
DECMTH2	3.89E+00	3.89E+00	7.76E-02	6.92E-01	8.91E+00	1.45E-01	1.66E+01	1.32E+01	2.29E+00
DECMTH3	4.27E-02	9.55E-02	4.79E-01	2.24E+00	2.63E+00	4.47E+00	3.80E-01	3.16E+01	2.82E-02
DECMSK1	4.57E+02	6.17E+02	1.12E-03	2.75E-02	2.45E+01	2.00E-03	4.68E+03	3.24E+02	4.27E+01
DECMSK2	1.38E+01	2.24E+01	1.35E-02	3.72E+00	6.76E+00	1.26E+01	1.95E+02	3.89E+02	1.58E+00
DECMSK3	1.78E-01	5.50E-01	2.57E+01	3.31E+02	1.29E+01	3.63E+01	4.79E+00	4.47E+02	6.31E-02
DELVBM1	1.07E+01	1.62E+01	1.62E+02	2.63E+00	2.57E+00	5.25E+00	5.89E+01	1.62E+01	6.92E+00
DELVBM2	4.17E-01	8.13E-01	7.76E-01	2.04E+01	2.63E+01	1.26E+00	2.40E+00	7.94E+00	4.37E-01
DELVBM3	4.90E-02	5.89E-02	9.55E-03	5.50E-01	5.75E+01	1.20E-02	5.01E+00	5.01E+00	3.39E-02
DELVTH1	2.95E+02	2.34E+02	1.70E-01	6.03E+00	1.29E+01	1.29E+01	7.08E+00	7.08E+00	1.45E+02
DELVTH2	1.05E+01	1.02E+01	9.55E+00	5.75E+03	6.03E+02	1.45E+01	4.57E+01	1.23E+01	6.92E+00
DELVTH3	9.33E-01	7.94E-01	2.95E+03	6.92E+01	1.26E+01	1.26E+01	3.02E+00	1.51E+01	3.39E-01
DELVSK1	2.34E+03	4.27E+03	2.09E-03	7.24E+00	1.78E+03	4.07E+01	3.55E+02	3.55E+02	2.14E+02
DELVSK2	8.13E+01	1.70E+02	2.09E+01	2.51E+02	1.20E+03	5.01E-01	1.29E+03	2.63E+02	1.41E+01
DELVSK3	7.59E+00	1.45E+01	8.71E+01	5.50E+01	1.82E+01	1.82E+01	6.92E+01	1.91E+02	1.29E+00
DEOUBM1	6.92E+01	1.10E+02	4.07E-03	7.24E+00	1.78E+03	1.07E-02	1.74E+01	1.74E+01	4.17E+01
DEOUBM2	2.63E+00	5.25E+00	2.09E+00	3.31E+01	4.07E+01	4.07E+01	8.13E+00	8.13E+00	2.88E+00
DEOUBM3	3.02E-01	3.80E-01	3.63E+01	4.79E+00	5.89E+00	5.89E+00	6.31E+00	6.31E+00	1.91E-01
DEOUTH1	6.31E+02	5.25E+02	1.74E-02	1.20E-01	6.92E+00	2.29E-02	5.75E+02	5.75E+02	3.39E+02
DEOUTH2	2.19E+01	2.95E+01	9.55E-02	2.82E+00	2.45E+00	2.45E+00	9.33E+00	9.33E+00	1.58E+01
DEOUTH3	1.95E+00	1.86E+00	6.76E+01	7.94E+02	1.17E+01	8.13E+01	9.33E+00	9.33E+00	1.58E+01
DEOUSK1	4.27E+03	7.76E+03	3.80E+02	2.63E+00	2.69E+00	2.69E+00	3.55E+02	3.55E+02	2.14E+02
DEOUSK2	1.48E+02	3.09E+02	2.19E+00	5.89E+01	2.69E+01	3.72E+00	2.63E+02	2.63E+02	1.41E+01
DEOUSK3	1.38E+01	2.63E+01	2.04E+01	2.95E+00	5.62E+00	5.62E+00	2.63E+02	2.63E+02	1.41E+01
RECMMT1	1.29E-01	7.41E-01	5.50E+01	3.39E+04	6.17E+02	7.59E+01	2.00E+01	2.00E+01	8.51E-02
RECMMT2	4.07E-03	3.31E-02	1.62E+04	7.59E+01	1.45E+01	1.45E+01	2.00E+00	2.00E+00	8.51E-02
RECMMT3	0.00E+00	0.00E+00	3.16E+00	1.62E+03	5.13E+02	4.90E+00	0.00E+00	0.00E+00	0.00E+00
RECMBM1	8.13E-02	7.24E-01	7.08E+02	5.01E+01	2.00E+01	2.00E+01	0.00E+00	0.00E+00	0.00E+00
RECMBM2	0.00E+00	0.00E+00	3.63E+01	2.82E+01	1.17E+01	1.17E+01	0.00E+00	0.00E+00	0.00E+00
RECMBM3	0.00E+00	0.00E+00	2.34E+02	5.62E+00	6.31E+00	6.31E+00	0.00E+00	0.00E+00	0.00E+00

				0.00E+00	9.99E+99		9.99E+99						
RECMMB1	1.07E+00	9.55E-01		0.00E+00	1.35E+00	9.99E+99		2.14E-02	1.15E+00	5.37E+01		1.29E-01	
				1.02E+00	7.94E+00		1.26E+00						
RECMMB2	8.13E-02	5.37E-01		0.00E+00	9.77E-01	9.99E+99		0.00E+00	9.55E-01	9.99E+99		0.00E+00	
				9.55E-01	9.99E+99		1.20E+01						
RECMMB3	0.00E+00	0.00E+00		0.00E+00	0.00E+00	9.99E+99		0.00E+00	0.00E+00	9.99E+99		0.00E+00	
				0.00E+00	9.99E+99		9.99E+99						
RECMLU1	0.00E+00	0.00E+00		0.00E+00	0.00E+00	9.99E+99		0.00E+00	0.00E+00	9.99E+99		0.00E+00	
				0.00E+00	9.99E+99		9.99E+99						
RECMLU2	0.00E+00	0.00E+00		0.00E+00	0.00E+00	9.99E+99		0.00E+00	0.00E+00	9.99E+99		0.00E+00	
				0.00E+00	9.99E+99		9.99E+99						
RECMLU3	0.00E+00	0.00E+00		0.00E+00	0.00E+00	9.99E+99		0.00E+00	0.00E+00	9.99E+99		0.00E+00	
				0.00E+00	9.99E+99		9.99E+99						
RECMTL1	1.20E-01	1.45E-02		0.00E+00	3.09E-01	9.99E+99		0.00E+00	1.91E-01	9.99E+99		0.00E+00	
				7.59E-02	9.99E+99		2.57E+00						
RECMTL2	0.00E+00	0.00E+00		0.00E+00	1.58E-02	9.99E+99		0.00E+00	0.00E+00	9.99E+99		0.00E+00	
				0.00E+00	9.99E+99		9.99E+99						

95 %-FRT    REF    MEDIAN    |    5 %    95 %    FAC1    |    10 %    90 %    FAC2    |    25 %

				75 %	FAC3	95%/REF						
RECMT3	0.00E+00	0.00E+00		0.00E+00	0.00E+00	9.99E+99		0.00E+00	0.00E+00	9.99E+99		0.00E+00
				0.00E+00	9.99E+99		9.99E+99					
RECMSK1	9.50E-01	8.91E-01		0.00E+00	9.50E-01	9.99E+99		0.00E+00	9.50E-01	9.99E+99		0.00E+00
				9.50E-01	9.99E+99		1.00E+00					
RECMSK2	8.13E-02	5.13E-01		0.00E+00	9.50E-01	9.99E+99		0.00E+00	9.50E-01	9.99E+99		0.00E+00
				9.50E-01	9.99E+99		1.17E+01					
RECMSK3	0.00E+00	0.00E+00		0.00E+00	0.00E+00	9.99E+99		0.00E+00	0.00E+00	9.99E+99		0.00E+00
				0.00E+00	9.99E+99		9.99E+99					
RELVMT1	1.00E+00	1.00E+00		5.01E-02	1.00E+00	2.00E+01		6.76E-02	1.00E+00	1.48E+01		9.33E-01
				1.00E+00	1.07E+00		1.00E+00					
RELVMT2	5.01E-02	5.01E-02		0.00E+00	5.01E-02	9.99E+99		0.00E+00	5.01E-02	9.99E+99		3.02E-03
				5.01E-02	1.66E+01		1.00E+00					
RELVMT3	0.00E+00	7.41E-04		0.00E+00	5.01E-02	9.99E+99		0.00E+00	5.00E-02	9.99E+99		0.00E+00
				5.00E-02	9.99E+99		9.99E+99					
RELVBM1	1.00E+00	1.00E+00		0.00E+00	1.00E+00	9.99E+99		2.19E-02	1.00E+00	4.57E+01		9.33E-01
				1.00E+00	1.07E+00		1.00E+00					
RELVBM2	0.00E+00	0.00E+00		0.00E+00	0.00E+00	9.99E+99		0.00E+00	0.00E+00	9.99E+99		0.00E+00
				0.00E+00	9.99E+99		9.99E+99					
RELVBM3	0.00E+00	0.00E+00		0.00E+00	0.00E+00	9.99E+99		0.00E+00	0.00E+00	9.99E+99		0.00E+00
				0.00E+00	9.99E+99		9.99E+99					
RELVMB1	1.02E+00	9.55E-01		0.00E+00	1.17E+00	9.99E+99		1.62E-02	1.05E+00	6.46E+01		1.86E-01
				9.55E-01	5.13E+00		1.15E+00					
RELVMB2	9.55E-01	9.55E-01		0.00E+00	1.32E+00	9.99E+99		0.00E+00	1.10E+00	9.99E+99		1.45E-02
				9.77E-01	6.76E+01		1.38E+00					
RELVMB3	0.00E+00	0.00E+00		0.00E+00	9.55E-01	9.99E+99		0.00E+00	9.55E-01	9.99E+99		0.00E+00
				5.89E-01	9.99E+99		9.99E+99					
RELVLU1	0.00E+00	0.00E+00		0.00E+00	0.00E+00	9.99E+99		0.00E+00	0.00E+00	9.99E+99		0.00E+00
				0.00E+00	9.99E+99		9.99E+99					
RELVLU2	0.00E+00	0.00E+00		0.00E+00	0.00E+00	9.99E+99		0.00E+00	0.00E+00	9.99E+99		0.00E+00
				0.00E+00	9.99E+99		9.99E+99					
RELVLU3	0.00E+00	0.00E+00		0.00E+00	0.00E+00	9.99E+99		0.00E+00	0.00E+00	9.99E+99		0.00E+00
				0.00E+00	9.99E+99		9.99E+99					
RELVTH1	8.13E-02	0.00E+00		0.00E+00	2.19E-01	9.99E+99		0.00E+00	1.20E-01	9.99E+99		0.00E+00
				2.82E-02	9.99E+99		2.69E+00					



RELVTH2	0.00E+00	0.00E+00		0.00E+00	9.33E-02	9.99E+99		0.00E+00	5.89E-02	9.99E+99		0.00E+00
				1.51E-02	9.99E+99		9.99E+99					
RELVTH3	0.00E+00	0.00E+00		0.00E+00	0.00E+00	9.99E+99		0.00E+00	0.00E+00	9.99E+99		0.00E+00
				0.00E+00	9.99E+99		9.99E+99					
RELVSK1	9.50E-01	8.91E-01		0.00E+00	9.50E-01	9.99E+99		0.00E+00	9.50E-01	9.99E+99		0.00E+00
				9.50E-01	9.99E+99		1.00E+00					
RELVSK2	9.50E-01	9.50E-01		0.00E+00	9.50E-01	9.99E+99		0.00E+00	9.50E-01	9.99E+99		0.00E+00
				9.50E-01	9.99E+99		1.00E+00					
RELVSK3	0.00E+00	0.00E+00		0.00E+00	9.50E-01	9.99E+99		0.00E+00	9.50E-01	9.99E+99		0.00E+00
				5.62E-01	9.99E+99		9.99E+99					
REOUMT1	1.00E+00	1.00E+00		1.00E+00	1.00E+00	1.00E+00		1.00E+00	1.00E+00	1.00E+00		1.00E+00
				1.00E+00	1.00E+00		1.00E+00					
REOUMT2	5.01E-02	3.47E-01		0.00E+00	1.00E+00	9.99E+99		1.23E-03	1.00E+00	8.13E+02		5.01E-02
				1.00E+00	2.00E+01		2.00E+01					
REOUMT3	0.00E+00	4.57E-02		0.00E+00	5.01E-02	9.99E+99		0.00E+00	5.01E-02	9.99E+99		0.00E+00
				5.01E-02	9.99E+99		9.99E+99					
REOUBM1	1.00E+00	1.00E+00		1.00E+00	1.00E+00	1.00E+00		1.00E+00	1.00E+00	1.00E+00		1.00E+00
				1.00E+00	1.00E+00		1.00E+00					
REOUBM2	0.00E+00	3.16E-01		0.00E+00	1.00E+00	9.99E+99		0.00E+00	1.00E+00	9.99E+99		0.00E+00
				1.00E+00	9.99E+99		9.99E+99					
REOUBM3	0.00E+00	0.00E+00		0.00E+00	0.00E+00	9.99E+99		0.00E+00	0.00E+00	9.99E+99		0.00E+00
				0.00E+00	9.99E+99		9.99E+99					
REOUMB1	6.61E-01	1.35E-01		0.00E+00	9.55E-01	9.99E+99		0.00E+00	9.55E-01	9.99E+99		0.00E+00
				8.91E-01	9.99E+99		1.45E+00					
REOUMB2	9.55E-01	7.59E-01		0.00E+00	1.15E+00	9.99E+99		0.00E+00	1.07E+00	9.99E+99		2.40E-02
				9.77E-01	4.07E+01		1.20E+00					
REOUMB3	0.00E+00	2.88E-02		0.00E+00	9.55E-01	9.99E+99		0.00E+00	9.55E-01	9.99E+99		0.00E+00
				9.55E-01	9.99E+99		9.99E+99					
REOULU1	0.00E+00	0.00E+00		0.00E+00	0.00E+00	9.99E+99		0.00E+00	0.00E+00	9.99E+99		0.00E+00
				0.00E+00	9.99E+99		9.99E+99					
REOULU2	0.00E+00	0.00E+00		0.00E+00	0.00E+00	9.99E+99		0.00E+00	0.00E+00	9.99E+99		0.00E+00
				0.00E+00	9.99E+99		9.99E+99					
REOULU3	0.00E+00	0.00E+00		0.00E+00	0.00E+00	9.99E+99		0.00E+00	0.00E+00	9.99E+99		0.00E+00
				0.00E+00	9.99E+99		9.99E+99					
REOUTH1	0.00E+00	0.00E+00		0.00E+00	1.51E-02	9.99E+99		0.00E+00	0.00E+00	9.99E+99		0.00E+00
				0.00E+00	9.99E+99		9.99E+99					
REOUTH2	0.00E+00	0.00E+00		0.00E+00	2.45E-02	9.99E+99		0.00E+00	1.15E-02	9.99E+99		0.00E+00
				0.00E+00	9.99E+99		9.99E+99					
REOUTH3	0.00E+00	0.00E+00		0.00E+00	0.00E+00	9.99E+99		0.00E+00	0.00E+00	9.99E+99		0.00E+00
				0.00E+00	9.99E+99		9.99E+99					
REOUSK1	4.68E-01	0.00E+00		0.00E+00	9.50E-01	9.99E+99		0.00E+00	9.50E-01	9.99E+99		0.00E+00
				6.76E-01	9.99E+99		2.03E+00					
REOUSK2	9.33E-01	6.03E-01		0.00E+00	9.50E-01	9.99E+99		0.00E+00	9.50E-01	9.99E+99		0.00E+00
				9.50E-01	9.99E+99		1.02E+00					
REOUSK3	0.00E+00	2.82E-02		0.00E+00	9.50E-01	9.99E+99		0.00E+00	9.50E-01	9.99E+99		0.00E+00
				9.50E-01	9.99E+99		9.99E+99					
PECMMT	1.00E+03	2.69E+03		5.25E+02	1.05E+04	2.00E+01		8.13E+02	8.71E+03	1.07E+01		1.51E+03
				5.13E+03	3.39E+00		1.05E+01					
PECMBM	3.31E+02	1.00E+03		2.19E+02	6.17E+03	2.82E+01		2.63E+02	5.50E+03	2.09E+01		4.07E+02
				2.19E+03	5.37E+00		1.86E+01					
PECMMB	1.38E+04	3.24E+04		1.23E+03	1.74E+05	1.41E+02		3.16E+03	1.29E+05	4.07E+01		7.41E+03
				7.24E+04	9.77E+00		1.26E+01					
PECMLU	1.23E+02	7.59E+01		0.00E+00	1.26E+03	9.99E+99		7.94E+00	6.46E+02	8.13E+01		3.16E+01
				2.88E+02	9.12E+00		1.02E+01					
PECMTH	2.57E+02	3.24E+02		2.14E+01	2.24E+03	1.05E+02		3.24E+01	1.86E+03	5.75E+01		7.94E+01
				1.15E+03	1.45E+01		8.71E+00					
PECMSK	1.38E+04	3.09E+04		1.70E+01	1.74E+05	1.02E+04		2.82E+02	1.29E+05	4.57E+02		3.80E+03
				7.24E+04	1.91E+01		1.26E+01					
PELVMT	6.76E+03	1.20E+04		1.58E+03	4.90E+04	3.09E+01		2.34E+03	3.89E+04	1.66E+01		5.37E+03
				2.75E+04	5.13E+00		7.24E+00					
PELVBM	7.59E+02	2.19E+03		5.37E+02	8.91E+03	1.66E+01		8.71E+02	6.17E+03	7.08E+00		1.29E+03
				3.89E+03	3.02E+00		1.17E+01					
PELVMB	6.76E+04	1.45E+05		8.91E+03	6.76E+05	7.59E+01		1.91E+04	5.37E+05	2.82E+01		3.31E+04
				3.63E+05	1.10E+01		1.00E+01					
PELVLU	0.00E+00	0.00E+00		0.00E+00	1.15E+03	9.99E+99		0.00E+00	5.89E+02	9.99E+99		0.00E+00
				8.91E+01	9.99E+99		9.99E+99					
PELVTH	1.32E+03	2.40E+03		1.15E+01	2.57E+04	2.24E+03		1.78E+01	1.51E+04	8.51E+02		1.05E+02
				6.76E+03	6.46E+01		1.95E+01					
PELVSK	6.76E+04	1.41E+05		2.57E+03	6.76E+05	2.63E+02		6.31E+03	5.37E+05	8.51E+01		2.40E+04
				3.63E+05	1.51E+01		1.00E+01					

# EXTENT OF THE UNCERTAINTY FOR THE 99TH PERCENTILE OF

C.9

## THE ENDPOINTS FOR THE UK1 SOURCE TERM

99 %-FRT	REF	MEDIAN	5 % 75 %	95 % FAC3	FAC1 	10 % 95%/REF	90 %	FAC2	25 %
CGIOD1	1.07E+12	1.15E+12	6.46E+10	3.80E+12	5.89E+01	1.29E+11	2.95E+12	2.29E+01	3.98E+11
			2.29E+12	5.75E+00		3.55E+00			
CGIOD2	3.31E+10	4.79E+10	9.33E+09	8.13E+10	8.71E+00	1.58E+10	7.59E+10	4.79E+00	2.75E+10
			6.17E+10	2.24E+00		2.45E+00			
CGIOD3	3.39E+09	2.57E+09	7.41E+08	4.57E+09	6.17E+00	1.15E+09	4.17E+09	3.63E+00	1.78E+09
			3.31E+09	1.86E+00		1.35E+00			
CGCAE1	8.32E+09	1.02E+10	4.17E+08	8.51E+10	2.04E+02	1.23E+09	6.46E+10	5.25E+01	2.40E+09
			3.89E+10	1.62E+01		1.02E+01			
CGCAE2	5.50E+08	1.15E+09	6.03E+07	3.63E+09	6.03E+01	1.35E+08	3.39E+09	2.51E+01	2.75E+08
			2.45E+09	8.91E+00		6.61E+00			
CGCAE3	6.17E+07	1.10E+08	6.76E+06	2.29E+08	3.39E+01	2.14E+07	2.04E+08	9.55E+00	3.63E+07
			1.66E+08	4.57E+00		3.72E+00			
CAIOD1	1.07E+14	7.08E+13	1.62E+13	2.14E+14	1.32E+01	2.04E+13	2.00E+14	9.77E+00	3.72E+13
			1.51E+14	4.07E+00		2.00E+00			
CAIOD2	2.82E+12	3.39E+12	4.47E+11	1.74E+13	3.89E+01	5.89E+11	1.38E+13	2.34E+01	9.77E+11
			9.12E+12	9.33E+00		6.17E+00			
CAIOD3	2.63E+11	2.24E+11	1.86E+10	1.48E+12	7.94E+01	2.24E+10	1.02E+12	4.57E+01	4.37E+10
			5.25E+11	1.20E+01		5.62E+00			
CACAE1	6.31E+12	5.75E+12	1.51E+12	1.10E+13	7.24E+00	2.04E+12	1.07E+13	5.25E+00	3.39E+12
			9.33E+12	2.75E+00		1.74E+00			
CACAE2	3.98E+11	4.07E+11	1.07E+11	1.41E+12	1.32E+01	1.62E+11	1.12E+12	6.92E+00	2.29E+11
			7.08E+11	3.09E+00		3.55E+00			
CACAE3	2.51E+10	2.88E+10	6.31E+09	1.05E+11	1.66E+01	1.00E+10	8.13E+10	8.13E+00	1.70E+10
			4.90E+10	2.88E+00		4.17E+00			
DECMBM1	2.57E+01	3.09E+01	9.77E+00	7.76E+01	7.94E+00	1.26E+01	5.62E+01	4.47E+00	1.91E+01
			4.47E+01	2.34E+00		3.02E+00			

DECMBM2	1.29E+00	2.09E+00		8.32E-01	6.03E+00	7.24E+00		9.55E-01	4.17E+00	4.37E+00		1.32E+00
				3.02E+00	2.29E+00			4.68E+00				
DECMBM3	7.76E-02	9.33E-02		4.68E-02	2.69E-01	5.75E+00		5.25E-02	2.19E-01	4.17E+00		7.41E-02
				1.41E-01	1.91E+00			3.47E+00				
DECMTH1	9.55E+02	6.61E+02		1.78E+02	1.78E+03	1.00E+01		2.24E+02	1.70E+03	7.59E+00		3.80E+02
				1.38E+03	3.63E+00			1.86E+00				
DECMTH2	2.69E+01	2.75E+01		6.03E+00	1.07E+02	1.78E+01		8.71E+00	9.33E+01	1.07E+01		1.41E+01
				5.37E+01	3.80E+00			3.98E+00				
DECMTH3	1.15E+00	1.02E+00		2.40E-01	6.76E+00	2.82E+01		3.47E-01	3.31E+00	9.55E+00		5.62E-01
				1.78E+00	3.16E+00			5.89E+00				
DECMSK1	3.39E+03	4.27E+03		7.24E+01	3.39E+04	4.68E+02		1.32E+02	2.29E+04	1.74E+02		6.92E+02
				1.23E+04	1.78E+01			1.00E+01				
DECMSK2	1.05E+02	1.74E+02		3.24E+00	1.91E+03	5.89E+02		6.03E+00	9.55E+02	1.58E+02		2.63E+01
				3.98E+02	1.51E+01			1.82E+01				
DECMSK3	4.79E+00	7.94E+00		2.04E-01	7.08E+01	3.47E+02		3.31E-01	3.98E+01	1.20E+02		8.91E-01
				1.91E+01	2.14E+01			1.48E+01				
DELVBM1	6.61E+01	9.77E+01		2.04E+01	3.16E+02	1.55E+01		3.39E+01	2.29E+02	6.76E+00		5.13E+01
				1.48E+02	2.88E+00			4.79E+00				
DELVBM2	2.88E+00	5.01E+00		2.14E+00	9.33E+00	4.37E+00		2.57E+00	8.13E+00	3.16E+00		3.80E+00
				7.08E+00	1.86E+00			3.24E+00				
DELVBM3	2.69E-01	3.31E-01		1.78E-01	6.17E-01	3.47E+00		2.09E-01	5.37E-01	2.57E+00		2.51E-01
				4.47E-01	1.78E+00			2.29E+00				
DELVTH1	2.29E+03	1.55E+03		4.57E+02	4.47E+03	9.77E+00		5.25E+02	4.17E+03	7.94E+00		9.33E+02
				3.31E+03	3.55E+00			1.95E+00				
DELVTH2	6.03E+01	7.76E+01		1.62E+01	3.47E+02	2.14E+01		2.00E+01	2.88E+02	1.45E+01		3.02E+01
				2.00E+02	6.61E+00			5.75E+00				
DELVTH3	5.37E+00	5.50E+00		8.51E-01	2.88E+01	3.39E+01		1.00E+00	2.14E+01	2.14E+01		1.70E+00
				1.05E+01	6.17E+00			5.37E+00				
DELVSK1	1.82E+04	2.63E+04		4.37E+02	1.74E+05	3.98E+02		6.92E+02	1.26E+05	1.82E+02		3.80E+03
				7.59E+04	2.00E+01			9.55E+00				
DELVSK2	5.13E+02	1.26E+03		2.40E+01	1.00E+04	4.17E+02		5.89E+01	7.41E+03	1.26E+02		1.74E+02
				2.88E+03	1.66E+01			1.95E+01				
DELVSK3	4.27E+01	5.62E+01		2.34E+00	5.25E+02	2.24E+02		3.89E+00	4.27E+02	1.10E+02		8.71E+00
				1.91E+02	2.19E+01			1.23E+01				
DEOUBM1	4.27E+02	6.61E+02		1.15E+02	2.14E+03	1.86E+01		2.00E+02	1.62E+03	8.13E+00		3.39E+02
				1.00E+03	2.95E+00			5.01E+00				
DEOUBM2	1.86E+01	3.16E+01		1.15E+01	5.75E+01	5.01E+00		1.58E+01	5.50E+01	3.47E+00		2.45E+01
				4.27E+01	1.74E+00			3.09E+00				
DEOUBM3	1.66E+00	2.09E+00		1.05E+00	4.27E+00	4.07E+00		1.23E+00	3.39E+00	2.75E+00		1.48E+00
				2.82E+00	1.91E+00			2.57E+00				
DEOUTH1	4.47E+03	3.72E+03		1.20E+03	8.91E+03	7.41E+00		1.62E+03	8.32E+03	5.13E+00		2.24E+03
				6.46E+03	2.88E+00			2.00E+00				
DEOUTH2	1.20E+02	1.66E+02		4.47E+01	6.61E+02	1.48E+01		6.03E+01	5.50E+02	9.12E+00		8.51E+01
				3.80E+02	4.47E+00			5.50E+00				
DEOUTH3	1.17E+01	1.23E+01		2.82E+00	5.62E+01	2.00E+01		3.24E+00	4.07E+01	1.26E+01		4.79E+00
				2.04E+01	4.27E+00			4.79E+00				
DEOUSK1	3.31E+04	4.79E+04		7.94E+02	3.16E+05	3.98E+02		1.26E+03	2.29E+05	1.82E+02		6.92E+03
				1.38E+05	2.00E+01			9.55E+00				
DEOUSK2	9.33E+02	2.29E+03		4.37E+01	1.82E+04	4.17E+02		1.07E+02	1.35E+04	1.26E+02		3.09E+02
				5.25E+03	1.70E+01			1.95E+01				
DEOUSK3	7.76E+01	1.02E+02		4.27E+00	9.55E+02	2.24E+02		7.08E+00	7.76E+02	1.10E+02		1.58E+01
				3.47E+02	2.19E+01			1.23E+01				
RECMMT1	1.00E+00	1.00E+00		1.00E+00	1.00E+00	1.00E+00		1.00E+00	1.00E+00	1.00E+00		1.00E+00
				1.00E+00	1.00E+00			1.00E+00				
RECMMT2	5.01E-02	5.01E-02		0.00E+00	9.55E-01	9.99E+99		1.58E-02	2.63E-01	1.66E+01		5.01E-02
				6.03E-02	1.20E+00			1.91E+01				
RECMMT3	0.00E+00	0.00E+00		0.00E+00	5.01E-02	9.99E+99		0.00E+00	5.00E-02	9.99E+99		0.00E+00
				1.91E-02	9.99E+99			9.99E+99				
RECMBM1	1.00E+00	1.00E+00		1.00E+00	1.00E+00	1.00E+00		1.00E+00	1.00E+00	1.00E+00		1.00E+00
				1.00E+00	1.00E+00			1.00E+00				
RECMBM2	0.00E+00	0.00E+00		0.00E+00	9.55E-01	9.99E+99		0.00E+00	2.09E-01	9.99E+99		0.00E+00
				1.70E-02	9.99E+99			9.99E+99				
RECMBM3	0.00E+00	0.00E+00		0.00E+00	0.00E+00	9.99E+99		0.00E+00	0.00E+00	9.99E+99		0.00E+00
				0.00E+00	9.99E+99			9.99E+99				
RECMMB1	1.82E+00	1.55E+00		8.71E-01	2.09E+00	2.40E+00		1.00E+00	2.04E+00	2.04E+00		1.35E+00
				1.91E+00	1.41E+00			1.15E+00				
RECMMB2	1.00E+00	9.55E-01		3.02E-02	1.35E+00	4.47E+01		1.58E-01	1.17E+00	7.41E+00		5.62E-01
				1.05E+00	1.86E+00			1.35E+00				
RECMMB3	0.00E+00	0.00E+00		0.00E+00	9.55E-01	9.99E+99		0.00E+00	9.55E-01	9.99E+99		0.00E+00
				3.72E-01	9.99E+99			9.99E+99				
RECMLU1	0.00E+00	0.00E+00		0.00E+00	1.48E-01	9.99E+99		0.00E+00	9.12E-02	9.99E+99		0.00E+00
				2.34E-02	9.99E+99			9.99E+99				
RECMLU2	0.00E+00	0.00E+00		0.00E+00	0.00E+00	9.99E+99		0.00E+00	0.00E+00	9.99E+99		0.00E+00
				0.00E+00	9.99E+99			9.99E+99				

99 %-FRT    REF    MEDIAN    |    5 %    95 %    FAC1    |    10 %    90 %    FAC2    |    25 %

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			75 %			FAC3	95%/REF			
RECMLU3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.99E+99	0.00E+00	0.00E+00	9.99E+99	0.00E+00	
RECMTM1	5.13E-01	2.63E-01	2.24E-02	7.94E-01	3.55E+01	3.16E-02	7.59E-01	2.40E+01	6.17E-02	
RECMTM2	3.24E-02	2.45E-02	0.00E+00	3.02E-01	9.99E+99	0.00E+00	2.29E-01	9.99E+99	0.00E+00	
RECMTM3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.99E+99	0.00E+00	0.00E+00	9.99E+99	0.00E+00	
RECMSK1	9.50E-01	9.50E-01	0.00E+00	9.50E-01	9.99E+99	4.47E-01	9.50E-01	2.13E+00	9.33E-01	
RECMSK2	9.50E-01	9.50E-01	0.00E+00	9.50E-01	9.99E+99	0.00E+00	9.50E-01	9.99E+99	2.04E-01	
RECMSK3	0.00E+00	0.00E+00	0.00E+00	9.50E-01	9.99E+99	0.00E+00	9.50E-01	9.99E+99	0.00E+00	
RELVMT1	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	
RELVMT2	5.01E-02	2.63E-01	5.01E-02	1.00E+00	2.00E+01	5.01E-02	1.00E+00	2.00E+01	6.76E-02	
RELVMT3	5.00E-02	5.00E-02	0.00E+00	5.01E-02	9.99E+99	0.00E+00	5.01E-02	9.99E+99	0.00E+00	
RELVBM1	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	
RELVBM2	0.00E+00	2.24E-01	0.00E+00	1.00E+00	9.99E+99	0.00E+00	1.00E+00	9.99E+99	1.86E-02	
RELVBM3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.99E+99	0.00E+00	0.00E+00	9.99E+99	0.00E+00	
RELVMB1	2.34E+00	1.91E+00	1.02E+00	2.40E+00	2.34E+00	1.32E+00	2.24E+00	1.70E+00	1.70E+00	
RELVMB2	1.48E+00	1.66E+00	7.94E-01	2.29E+00	2.88E+00	9.55E-01	2.09E+00	2.19E+00	1.29E+00	
RELVMB3	8.91E-01	9.50E-01	0.00E+00	9.77E-01	9.99E+99	0.00E+00	9.55E-01	9.99E+99	0.00E+00	

RELVLU1	0.00E+00	0.00E+00		0.00E+00	0.00E+00	9.99E+99		0.00E+00	0.00E+00	9.99E+99		0.00E+00
				0.00E+00	9.99E+99		9.99E+99					
RELVLU2	0.00E+00	0.00E+00		0.00E+00	0.00E+00	9.99E+99		0.00E+00	0.00E+00	9.99E+99		0.00E+00
				0.00E+00	9.99E+99		9.99E+99					
RELVLU3	0.00E+00	0.00E+00		0.00E+00	0.00E+00	9.99E+99		0.00E+00	0.00E+00	9.99E+99		0.00E+00
				0.00E+00	9.99E+99		9.99E+99					
RELVTH1	5.62E-01	1.91E-01		1.10E-02	8.91E-01	8.13E+01		1.95E-02	8.51E-01	4.37E+01		3.31E-02
				6.17E-01	1.86E+01		1.58E+00					
RELVTH2	1.62E-01	9.12E-02		0.00E+00	7.94E-01	9.99E+99		0.00E+00	6.61E-01	9.99E+99		1.70E-02
				3.72E-01	2.19E+01		4.90E+00					
RELVTH3	0.00E+00	0.00E+00		0.00E+00	3.47E-02	9.99E+99		0.00E+00	2.00E-02	9.99E+99		0.00E+00
				0.00E+00	9.99E+99		9.99E+99					
RELVSK1	9.50E-01	9.50E-01		1.74E-01	9.50E-01	5.47E+00		8.51E-01	9.50E-01	1.12E+00		9.50E-01
				9.50E-01	1.00E+00		1.00E+00					
RELVSK2	9.50E-01	9.50E-01		0.00E+00	9.50E-01	9.99E+99		3.31E-01	9.50E-01	2.87E+00		9.50E-01
				9.50E-01	1.00E+00		1.00E+00					
RELVSK3	8.91E-01	9.50E-01		0.00E+00	9.50E-01	9.99E+99		0.00E+00	9.50E-01	9.99E+99		0.00E+00
				9.50E-01	9.99E+99		1.07E+00					
REOUMT1	1.00E+00	1.00E+00		1.00E+00	1.00E+00	1.00E+00		1.00E+00	1.00E+00	1.00E+00		1.00E+00
				1.00E+00	1.00E+00		1.00E+00					
REOUMT2	1.00E+00	1.00E+00		1.00E+00	1.00E+00	1.00E+00		1.00E+00	1.00E+00	1.00E+00		1.00E+00
				1.00E+00	1.00E+00		1.00E+00					
REOUMT3	5.01E-02	5.01E-02		0.00E+00	8.71E-02	9.99E+99		0.00E+00	5.01E-02	9.99E+99		8.13E-03
				5.01E-02	6.17E+00		1.74E+00					
REOUBM1	1.00E+00	1.00E+00		1.00E+00	1.00E+00	1.00E+00		1.00E+00	1.00E+00	1.00E+00		1.00E+00
				1.00E+00	1.00E+00		1.00E+00					
REOUBM2	1.00E+00	1.00E+00		1.00E+00	1.00E+00	1.00E+00		1.00E+00	1.00E+00	1.00E+00		1.00E+00
				1.00E+00	1.00E+00		1.00E+00					
REOUBM3	0.00E+00	0.00E+00		0.00E+00	6.31E-02	9.99E+99		0.00E+00	1.02E-02	9.99E+99		0.00E+00
				0.00E+00	9.99E+99		9.99E+99					
REOUMB1	1.91E+00	1.41E+00		7.76E-01	1.95E+00	2.51E+00		8.71E-01	1.86E+00	2.14E+00		1.05E+00
				1.78E+00	1.70E+00		1.02E+00					
REOUMB2	1.86E+00	1.78E+00		7.59E-01	1.95E+00	2.57E+00		9.12E-01	1.91E+00	2.09E+00		1.10E+00
				1.86E+00	1.70E+00		1.05E+00					
REOUMB3	9.77E-01	9.77E-01		1.26E-02	1.78E+00	1.41E+02		2.09E-02	1.51E+00	7.24E+01		2.00E-01
				1.26E+00	6.31E+00		1.82E+00					
REOULU1	0.00E+00	0.00E+00		0.00E+00	0.00E+00	9.99E+99		0.00E+00	0.00E+00	9.99E+99		0.00E+00
				0.00E+00	9.99E+99		9.99E+99					
REOULU2	0.00E+00	0.00E+00		0.00E+00	0.00E+00	9.99E+99		0.00E+00	0.00E+00	9.99E+99		0.00E+00
				0.00E+00	9.99E+99		9.99E+99					
REOULU3	0.00E+00	0.00E+00		0.00E+00	0.00E+00	9.99E+99		0.00E+00	0.00E+00	9.99E+99		0.00E+00
				0.00E+00	9.99E+99		9.99E+99					
REOUTH1	6.46E-02	1.32E-02		0.00E+00	4.90E-01	9.99E+99		0.00E+00	2.51E-01	9.99E+99		0.00E+00
				1.07E-01	9.99E+99		7.59E+00					
REOUTH2	5.37E-02	2.19E-02		0.00E+00	3.72E-01	9.99E+99		0.00E+00	2.45E-01	9.99E+99		0.00E+00
				9.12E-02	9.99E+99		6.92E+00					
REOUTH3	0.00E+00	0.00E+00		0.00E+00	7.24E-02	9.99E+99		0.00E+00	4.68E-02	9.99E+99		0.00E+00
				1.58E-02	9.99E+99		9.99E+99					
REOUSK1	9.50E-01	9.50E-01		0.00E+00	9.50E-01	9.99E+99		0.00E+00	9.50E-01	9.99E+99		4.27E-01
				9.50E-01	2.23E+00		1.00E+00					
REOUSK2	9.50E-01	9.50E-01		0.00E+00	9.50E-01	9.99E+99		0.00E+00	9.50E-01	9.99E+99		4.27E-01
				9.50E-01	2.23E+00		1.00E+00					
REOUSK3	9.50E-01	9.50E-01		0.00E+00	9.50E-01	9.99E+99		0.00E+00	9.50E-01	9.99E+99		0.00E+00
				9.50E-01	9.99E+99		1.00E+00					
PECMMT	1.51E+03	5.50E+03		1.12E+03	2.69E+04	2.40E+01		1.70E+03	1.70E+04	1.00E+01		2.95E+03
				1.00E+04	3.39E+00		1.78E+01					
PECMBM	1.32E+03	2.19E+03		3.98E+02	2.19E+04	5.50E+01		4.57E+02	1.38E+04	3.02E+01		7.94E+02
				5.75E+03	7.24E+00		1.66E+01					
PECMMB	2.88E+04	5.50E+04		3.02E+03	2.40E+05	7.94E+01		7.08E+03	2.00E+05	2.82E+01		1.66E+04
				1.15E+05	6.92E+00		8.32E+00					
PECMLU	2.57E+02	2.63E+02		1.51E+01	3.24E+03	2.14E+02		4.57E+01	2.57E+03	5.62E+01		1.15E+02
				1.17E+03	1.02E+01		1.26E+01					
PECMTH	4.87E+02	6.61E+02		3.16E+01	5.89E+03	1.86E+02		5.01E+01	5.01E+03	1.00E+02		1.41E+02
				2.14E+03	1.51E+01		1.21E+01					
PECMSK	2.88E+04	4.96E+04		1.86E+02	2.40E+05	1.29E+03		1.07E+03	2.00E+05	1.86E+02		1.07E+04
				1.10E+05	1.02E+01		8.31E+00					
PELVMT	1.12E+04	2.40E+04		3.24E+03	7.76E+04	2.40E+01		4.17E+03	6.61E+04	1.58E+01		8.71E+03
				4.17E+04	4.79E+00		6.92E+00					
PELVBM	1.91E+03	4.90E+03		1.35E+03	2.69E+04	2.00E+01		1.45E+03	2.09E+04	1.45E+01		2.34E+03
				8.13E+03	3.47E+00		1.41E+01					
PELVMB	1.48E+05	2.29E+05		2.04E+04	1.05E+06	5.13E+01		4.27E+04	9.33E+05	2.19E+01		8.71E+04
				5.37E+05	6.17E+00		7.08E+00					
PELVLU	0.00E+00	0.00E+00		0.00E+00	6.31E+03	9.99E+99		0.00E+00	1.95E+03	9.99E+99		0.00E+00
				3.98E+02	9.99E+99		9.99E+99					
PELVTH	2.63E+03	4.27E+03		2.40E+01	5.13E+04	2.14E+03		3.16E+01	4.27E+04	1.35E+03		2.45E+02
				1.78E+04	7.24E+01		1.95E+01					
PELVSK	1.45E+05	2.29E+05		4.90E+03	1.05E+06	2.14E+02		1.86E+04	9.22E+05	4.95E+01		5.50E+04
				5.37E+05	9.77E+00		7.24E+00					

C.11

## EXTENT OF THE UNCERTAINTY FOR THE MEAN VALUE OF THE ENDPOINTS FOR THE CB2 SOURCE TERM

MEAN VAL	REF	MEDIAN		5 %	95 %	FAC1		10 %	90 %	FAC2		25 %
				75 %	FAC3		95%/REF					

CGIOD1	1.05E+08	1.36E+08	1.30E+07	4.24E+08	3.25E+01	1.87E+07	3.61E+08	1.93E+01	5.27E+07
CGIOD2	3.44E+06	5.54E+06	1.63E+06	1.07E+07	6.59E+00	2.01E+06	9.59E+06	4.76E+00	4.20E+06
CGIOD3	3.59E+05	3.32E+05	1.13E+05	5.63E+05	5.00E+00	1.47E+05	5.46E+05	3.72E+00	2.37E+05
CGIOD4	2.30E+04	1.45E+04	1.13E+03	2.97E+04	2.62E+01	1.76E+03	2.55E+04	1.45E+01	4.83E+03
CGCAE1	4.35E+06	6.76E+06	3.43E+05	5.21E+07	1.52E+02	8.36E+05	4.34E+07	5.20E+01	2.13E+06
CGCAE2	3.32E+05	6.68E+05	6.43E+04	2.43E+06	3.77E+01	1.20E+05	2.30E+06	1.92E+01	2.97E+05
CGCAE3	4.52E+04	8.89E+04	7.79E+03	1.67E+05	2.14E+01	1.69E+04	1.59E+05	9.40E+00	3.48E+04
CGCAE4	6.38E+03	4.19E+03	1.35E+03	1.02E+04	7.54E+00	2.11E+03	9.21E+03	4.37E+00	2.93E+03
CAIOD1	1.03E+10	8.31E+09	2.63E+09	2.25E+10	8.57E+00	3.20E+09	2.11E+10	6.61E+00	4.98E+09
CAIOD2	3.05E+08	4.84E+08	4.87E+07	2.25E+09	4.63E+01	6.52E+07	1.74E+09	2.67E+01	1.21E+08
CAIOD3	2.93E+07	3.06E+07	1.70E+06	1.96E+08	1.16E+02	2.37E+06	1.36E+08	5.74E+01	5.34E+06
CAIOD4	1.56E+06	9.20E+05	1.64E+04	6.96E+06	4.25E+02	3.26E+04	5.01E+06	1.54E+02	9.97E+04
CACAE1	3.64E+09	4.08E+09	1.33E+09	6.94E+09	5.23E+00	1.50E+09	6.35E+09	4.23E+00	2.31E+09
CACAE2	1.95E+08	2.89E+08	1.13E+08	9.60E+08	8.52E+00	1.35E+08	7.99E+08	5.90E+00	1.74E+08
CACAE3	1.77E+07	2.43E+07	7.22E+06	1.02E+08	1.41E+01	9.23E+06	7.45E+07	8.07E+00	1.36E+07
CACAE4	1.40E+06	1.12E+06	1.79E+05	3.84E+06	2.14E+01	2.63E+05	2.71E+06	1.03E+01	4.34E+05
DECMBM1	3.21E-03	5.25E-03	1.56E-03	9.70E-03	6.23E+00	2.08E-03	9.09E-03	4.36E+00	3.48E-03
DECMBM2	1.83E-04	4.21E-04	2.30E-04	1.27E-03	5.54E+00	2.47E-04	9.66E-04	3.91E+00	3.24E-04
DECMBM3	2.99E-05	4.32E-05	2.40E-05	6.99E-05	2.92E+00	2.55E-05	6.41E-05	2.51E+00	3.29E-05
DECMTH1	1.03E-01	8.89E-02	3.16E-02	2.31E-01	7.31E+00	3.81E-02	2.16E-01	5.66E+00	5.35E-02
DECMTH2	3.15E-03	4.61E-03	1.25E-03	1.74E-02	1.39E+01	1.43E-03	1.53E-02	1.07E+01	2.17E-03
DECMTH3	4.99E-04	4.63E-04	8.04E-05	1.44E-03	1.79E+01	9.41E-05	1.20E-03	1.27E+01	1.62E-04
DECMSK1	3.58E-01	2.68E-01	7.95E-03	5.23E+00	6.58E+02	1.52E-02	3.15E+00	2.07E+02	5.71E-02
DECMSK2	1.34E-02	1.70E-02	5.64E-04	2.44E-01	4.32E+02	1.16E-03	1.62E-01	1.39E+02	4.15E-03
DECMSK3	3.17E-03	4.21E-03	9.90E-05	3.34E-02	3.38E+02	1.97E-04	2.19E-02	1.11E+02	4.92E-04
DLCMED2	2.09E-02	2.75E-02	6.49E-03	9.28E-02	1.43E+01	9.56E-03	7.15E-02	7.48E+00	1.47E-02
DLCMED3	4.23E-03	6.90E-03	1.08E-03	1.25E-02	1.16E+01	1.85E-03	1.18E-02	6.39E+00	3.21E-03
DLCMED4	7.69E-04	5.51E-04	2.59E-04	1.08E-03	4.16E+00	3.51E-04	9.41E-04	2.68E+00	4.62E-04
DLCMBM2	2.01E-02	2.61E-02	5.88E-03	9.03E-02	1.54E+01	9.01E-03	6.90E-02	7.66E+00	1.34E-02
DLCMBM3	4.07E-03	6.60E-03	9.69E-04	1.21E-02	1.25E+01	1.70E-03	1.14E-02	6.73E+00	3.07E-03
DLCMBM4	7.42E-04	5.29E-04	2.50E-04	1.04E-03	4.14E+00	3.33E-04	9.06E-04	2.72E+00	4.45E-04
DLCMTH2	2.65E-02	4.21E-02	1.29E-02	1.03E-01	7.99E+00	1.54E-02	8.78E-02	5.69E+00	2.61E-02
DLCMTH3	5.16E-03	7.89E-03	1.72E-03	1.46E-02	8.47E+00	2.45E-03	1.35E-02	5.49E+00	4.13E-03
DLCMTH4	8.52E-04	6.44E-04	3.48E-04	1.21E-03	3.47E+00	4.48E-04	1.13E-03	2.52E+00	5.45E-04
DLLVED2	1.53E-01	2.87E-01	5.37E-02	9.52E-01	1.77E+01	6.37E-02	8.46E-01	1.33E+01	1.37E-01
DLLVED3	2.01E-02	3.45E-02	5.29E-03	6.10E-02	1.15E+01	7.74E-03	5.48E-02	7.08E+00	1.51E-02
DLLVED4	2.75E-03	1.72E-03	7.32E-04	4.49E-03	6.13E+00	9.05E-04	3.65E-03	4.03E+00	1.19E-03
DLLVBM2	1.36E-01	2.56E-01	2.70E-02	8.98E-01	3.33E+01	4.54E-02	7.99E-01	1.76E+01	1.08E-01
DLLVBM3	1.82E-02	3.20E-02	3.34E-03	5.73E-02	1.72E+01	6.34E-03	5.21E-02	8.21E+00	1.32E-02
DLLVBM4	2.58E-03	1.61E-03	6.27E-04	4.31E-03	6.87E+00	8.42E-04	3.47E-03	4.12E+00	1.07E-03
DLLVTH2	3.69E-01	7.11E-01	2.14E-01	1.42E+00	6.66E+00	3.10E-01	1.30E+00	4.18E+00	4.75E-01
DLLVTH3	4.25E-02	5.42E-02	2.43E-02	8.79E-02	3.62E+00	2.87E-02	8.19E-02	2.86E+00	3.70E-02
DLLVTH4	4.14E-03	2.52E-03	1.21E-03	5.57E-03	4.59E+00	1.56E-03	4.77E-03	3.06E+00	1.93E-03
AEVAC	6.08E+00	1.36E+01	6.31E+00	3.14E+01	4.98E+00	8.33E+00	2.57E+01	3.08E+00	1.05E+01
ASHEL	4.31E+01	5.16E+01	3.12E+01	1.35E+02	4.32E+00	3.54E+01	9.08E+01	2.57E+00	4.37E+01

AIOD	1.82E+01	2.35E+01		3.76E+00	1.02E+02	2.72E+01		4.13E+00	8.77E+01	2.12E+01		5.88E+00
				5.10E+01	8.67E+00			5.64E+00				
ARELIN	6.08E+00	1.36E+01		6.31E+00	3.14E+01	4.98E+00		8.33E+00	2.57E+01	3.08E+00		1.05E+01
				1.87E+01	1.77E+00			5.17E+00				
ARELTIM	9.51E+00	2.84E+01		1.23E+00	8.48E+01	6.91E+01		1.69E+00	7.93E+01	4.68E+01		8.98E+00
				6.72E+01	7.48E+00			8.92E+00				
AFBIMIL	3.23E+04	2.52E+04		8.17E+03	4.34E+04	5.31E+00		1.15E+04	4.11E+04	3.57E+00		1.43E+04
				3.34E+04	2.33E+00			1.34E+00				
AFBIGRA	2.52E+04	1.39E+04		4.54E+03	2.52E+04	5.55E+00		6.65E+03	2.45E+04	3.69E+00		9.50E+03
				2.12E+04	2.23E+00			1.00E+00				
AFBIVEG	4.10E+04	2.88E+04		1.27E+04	4.91E+04	3.86E+00		1.39E+04	4.34E+04	3.13E+00		1.83E+04
				3.71E+04	2.02E+00			1.20E+00				
AFBIBEE	3.20E+04	1.97E+04		6.37E+03	3.57E+04	5.60E+00		9.80E+03	3.42E+04	3.49E+00		1.40E+04
				2.93E+04	2.09E+00			1.12E+00				
AFBTMIL	7.99E+03	5.00E+03		2.52E+03	8.78E+03	3.49E+00		3.15E+03	7.36E+03	2.34E+00		3.82E+03
				6.16E+03	1.62E+00			1.10E+00				
AFBTGRA	4.69E+04	2.52E+04		8.72E+03	4.64E+04	5.32E+00		1.27E+04	4.52E+04	3.57E+00		1.77E+04
				3.95E+04	2.23E+00			9.89E-01				

MEAN VAL    REF    MEDIAN    |    5 %    95 %    FAC1    |    10 %    90 %    FAC2    |    25 %

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			75 %	FAC3			95%/REF	-----		
AFBTVEG	6.08E+03	3.21E+03	1.88E+03	5.61E+03	2.99E+00	2.12E+03	5.08E+03	2.40E+00	2.55E+03	
			4.26E+03	1.67E+00		9.22E-01				
AFBTBEE	2.67E+04	1.51E+04	7.03E+03	2.68E+04	3.82E+00	8.63E+03	2.45E+04	2.84E+00	1.14E+04	
			2.10E+04	1.84E+00		1.00E+00				
RECMMT1	6.85E-05	1.02E-05	0.00E+00	2.26E-03	9.99E+99	0.00E+00	1.83E-03	9.99E+99	0.00E+00	
			9.78E-04	9.99E+99		3.30E+01				
RECMMT2	.00E+00	0.00E+00	0.00E+00	3.04E-05	9.99E+99	0.00E+00	8.10E-07	9.99E+99	0.00E+00	
			0.00E+00	9.99E+99		9.99E+99				
RECMMT3	.00E+00	0.00E+00	0.00E+00	0.00E+00	9.99E+99	0.00E+00	0.00E+00	9.99E+99	0.00E+00	
			0.00E+00	9.99E+99		9.99E+99				
RECMBM1	.00E+00	0.00E+00	0.00E+00	0.00E+00	9.99E+99	0.00E+00	0.00E+00	9.99E+99	0.00E+00	
			0.00E+00	9.99E+99		9.99E+99				
RECMBM2	.00E+00	0.00E+00	0.00E+00	0.00E+00	9.99E+99	0.00E+00	0.00E+00	9.99E+99	0.00E+00	
			0.00E+00	9.99E+99		9.99E+99				
RECMBM3	.00E+00	0.00E+00	0.00E+00	0.00E+00	9.99E+99	0.00E+00	0.00E+00	9.99E+99	0.00E+00	
			0.00E+00	9.99E+99		9.99E+99				
RECMMB1	1.35E-03	3.96E-04	0.00E+00	4.32E-02	9.99E+99	0.00E+00	3.50E-02	9.99E+99	5.78E-06	
			1.87E-02	3.25E+03		3.19E+01				
RECMMB2	.00E+00	0.00E+00	0.00E+00	5.88E-04	9.99E+99	0.00E+00	1.62E-05	9.99E+99	0.00E+00	
			0.00E+00	9.99E+99		9.99E+99				
RECMMB3	.00E+00	0.00E+00	0.00E+00	0.00E+00	9.99E+99	0.00E+00	0.00E+00	9.99E+99	0.00E+00	
			0.00E+00	9.99E+99		9.99E+99				
RECMLU1	.00E+00	0.00E+00	0.00E+00	0.00E+00	9.99E+99	0.00E+00	0.00E+00	9.99E+99	0.00E+00	
			0.00E+00	9.99E+99		9.99E+99				
RECMLU2	.00E+00	0.00E+00	0.00E+00	0.00E+00	9.99E+99	0.00E+00	0.00E+00	9.99E+99	0.00E+00	
			0.00E+00	9.99E+99		9.99E+99				
RECMLU3	.00E+00	0.00E+00	0.00E+00	0.00E+00	9.99E+99	0.00E+00	0.00E+00	9.99E+99	0.00E+00	
			0.00E+00	9.99E+99		9.99E+99				
RECMT1	.00E+00	0.00E+00	0.00E+00	1.43E-04	9.99E+99	0.00E+00	8.34E-05	9.99E+99	0.00E+00	
			0.00E+00	9.99E+99		9.99E+99				
RECMT2	.00E+00	0.00E+00	0.00E+00	0.00E+00	9.99E+99	0.00E+00	0.00E+00	9.99E+99	0.00E+00	



				0.00E+00	9.99E+99		9.99E+99							
RECMTH3	.00E+00	0.00E+00		0.00E+00	0.00E+00	9.99E+99		9.99E+99	0.00E+00	0.00E+00	9.99E+99		0.00E+00	0.00E+00
				0.00E+00	9.99E+99		9.99E+99							
RECMSK1	1.35E-03	2.03E-04		0.00E+00	4.32E-02	9.99E+99		0.00E+00	3.49E-02	9.99E+99		0.00E+00	0.00E+00	0.00E+00
				1.87E-02	9.99E+99		3.19E+01							
RECMSK2	.00E+00	0.00E+00		0.00E+00	5.88E-04	9.99E+99		0.00E+00	5.29E-06	9.99E+99		0.00E+00	0.00E+00	0.00E+00
				0.00E+00	9.99E+99		9.99E+99							
RECMSK3	.00E+00	0.00E+00		0.00E+00	0.00E+00	9.99E+99		0.00E+00	0.00E+00	9.99E+99		0.00E+00	0.00E+00	0.00E+00
				0.00E+00	9.99E+99		9.99E+99							
RLCMMT2	1.01E-03	1.31E-03		3.06E-04	4.47E-03	1.46E+01		4.64E-04	3.44E-03	7.42E+00		6.98E-04		
				2.48E-03	3.55E+00		4.43E+00							
RLCMMT3	2.05E-04	3.31E-04		5.16E-05	6.05E-04	1.17E+01		8.91E-05	5.75E-04	6.46E+00		1.57E-04		
				4.69E-04	2.99E+00		2.94E+00							
RLCMMT4	3.75E-05	2.70E-05		1.26E-05	5.25E-05	4.16E+00		1.70E-05	4.57E-05	2.68E+00		2.26E-05		
				3.48E-05	1.54E+00		1.40E+00							
RLCMBM2	1.04E-04	1.34E-04		3.00E-05	4.66E-04	1.55E+01		4.65E-05	3.56E-04	7.66E+00		6.93E-05		
				2.55E-04	3.68E+00		4.49E+00							
RLCMBM3	2.10E-05	3.40E-05		5.00E-06	6.23E-05	1.25E+01		8.77E-06	5.90E-05	6.73E+00		1.58E-05		
				4.83E-05	3.05E+00		2.97E+00							
RLCMBM4	3.83E-06	2.73E-06		1.29E-06	5.35E-06	4.14E+00		1.72E-06	4.67E-06	2.72E+00		2.30E-06		
				3.53E-06	1.54E+00		1.40E+00							
RLCMT2	4.70E-05	7.46E-05		2.29E-05	1.83E-04	7.99E+00		2.73E-05	1.55E-04	5.69E+00		4.62E-05		
				1.11E-04	2.41E+00		3.89E+00							
RLCMT3	9.13E-06	1.40E-05		3.04E-06	2.58E-05	8.47E+00		4.34E-06	2.38E-05	5.49E+00		7.30E-06		
				1.90E-05	2.61E+00		2.82E+00							
RLCMT4	1.51E-06	1.14E-06		6.15E-07	2.14E-06	3.47E+00		7.92E-07	2.00E-06	2.52E+00		9.65E-07		
				1.47E-06	1.53E+00		1.42E+00							
RLLVMT2	6.21E-03	9.80E-03		2.15E-03	3.32E-02	1.54E+01		2.55E-03	2.83E-02	1.11E+01		4.38E-03		
				2.12E-02	4.85E+00		5.34E+00							
RLLVMT3	9.33E-04	1.55E-03		2.31E-04	2.74E-03	1.18E+01		3.61E-04	2.60E-03	7.21E+00		6.83E-04		
				2.14E-03	3.13E+00		2.93E+00							
RLLVMT4	1.32E-04	8.23E-05		3.45E-05	2.12E-04	6.13E+00		4.36E-05	1.76E-04	4.03E+00		5.66E-05		
				1.22E-04	2.16E+00		1.60E+00							
RLLVBM2	7.04E-04	1.32E-03		1.39E-04	4.63E-03	3.33E+01		2.34E-04	4.12E-03	1.76E+01		5.55E-04		
				3.43E-03	6.18E+00		6.58E+00							
RLLVBM3	9.38E-05	1.65E-04		1.72E-05	2.96E-04	1.72E+01		3.27E-05	2.69E-04	8.21E+00		6.84E-05		
				2.36E-04	3.46E+00		3.15E+00							
RLLVBM4	1.33E-05	8.31E-06		3.24E-06	2.23E-05	6.87E+00		4.35E-06	1.79E-05	4.12E+00		5.55E-06		
				1.25E-05	2.25E+00		1.67E+00							
RLLVTH2	6.53E-04	1.26E-03		3.79E-04	2.52E-03	6.66E+00		5.48E-04	2.29E-03	4.18E+00		8.41E-04		
				1.80E-03	2.13E+00		3.86E+00							
RLLVTH3	7.51E-05	9.60E-05		4.30E-05	1.56E-04	3.62E+00		5.07E-05	1.45E-04	2.86E+00		6.55E-05		
				1.24E-04	1.89E+00		2.07E+00							
RLLVTH4	7.33E-06	4.46E-06		2.15E-06	9.86E-06	4.59E+00		2.76E-06	8.44E-06	3.06E+00		3.42E-06		
				6.55E-06	1.92E+00		1.34E+00							
CDCMED	4.78E+04	4.49E+04		2.66E+04	5.95E+04	2.24E+00		3.27E+04	5.84E+04	1.78E+00		4.13E+04		
				4.97E+04	1.20E+00		1.25E+00							
CDCMBM	4.61E+04	4.32E+04		2.55E+04	5.77E+04	2.26E+00		3.10E+04	5.58E+04	1.80E+00		3.93E+04		
				4.79E+04	1.22E+00		1.25E+00							
CDCMTH	5.34E+04	5.07E+04		3.12E+04	7.42E+04	2.38E+00		3.77E+04	7.03E+04	1.87E+00		4.53E+04		
				6.18E+04	1.37E+00		1.39E+00							
CDLVED	1.57E+05	1.72E+05		5.49E+04	2.55E+05	4.65E+00		7.59E+04	2.25E+05	2.97E+00		1.09E+05		
				2.00E+05	1.83E+00		1.62E+00							
CDLVBM	1.46E+05	1.60E+05		4.56E+04	2.39E+05	5.25E+00		6.95E+04	2.12E+05	3.04E+00		1.00E+05		
				1.89E+05	1.89E+00		1.64E+00							
CDLVTH	2.56E+05	2.50E+05		1.62E+05	3.62E+05	2.23E+00		1.73E+05	3.39E+05	1.96E+00		2.05E+05		
				2.93E+05	1.42E+00		1.41E+00							
PECMTH	1.07E-01	1.99E-02		0.00E+00	2.52E+00	9.99E+99		0.00E+00	1.56E+00	9.99E+99		2.03E-04		
				4.86E-01	2.40E+03		2.35E+01							
PECMBM	.00E+00	0.00E+00		0.00E+00	0.00E+00	9.99E+99		0.00E+00	0.00E+00	9.99E+99		0.00E+00	0.00E+00	0.00E+00
				0.00E+00	9.99E+99		9.99E+99							
PECMTH	.00E+00	0.00E+00		0.00E+00	4.84E+01	9.99E+99		0.00E+00	3.01E+01	9.99E+99		4.22E-02		
				9.32E+00	2.21E+02		2.33E+01							
PECMTH	.00E+00	0.00E+00		0.00E+00	0.00E+00	9.99E+99		0.00E+00	0.00E+00	9.99E+99		0.00E+00	0.00E+00	0.00E+00
				0.00E+00	9.99E+99		9.99E+99							
PECMTH	.00E+00	0.00E+00		0.00E+00	1.29E-01	9.99E+99		0.00E+00	8.16E-02	9.99E+99		0.00E+00		
				1.52E-02	9.99E+99		9.99E+99							
PECMTH	2.08E+00	3.88E-01		0.00E+00	4.84E+01	9.99E+99		0.00E+00	3.01E+01	9.99E+99		4.05E-03		
				9.32E+00	2.30E+03		2.33E+01							
PLCMMT	2.33E+03	2.19E+03		1.30E+03	2.90E+03	2.24E+00		1.59E+03	2.84E+03	1.79E+00		2.00E+03		
				2.43E+03	1.21E+00		1.25E+00							
PLCMBM	2.38E+02	2.23E+02		1.32E+02	2.98E+02	2.26E+00		1.60E+02	2.88E+02	1.80E+00		2.03E+02		
				2.47E+02	1.22E+00		1.25E+00							
PLCMT3	9.44E+01	8.98E+01		5.52E+01	1.31E+02	2.38E+00		6.67E+01	1.24E+02	1.87E+00		8.01E+01		
				1.09E+02	1.37E+00		1.39E+00							
PLLVMT	7.39E+03	7.28E+03		2.56E+03	1.03E+04	4.02E+00		3.61E+03	9.51E+03	2.63E+00		5.16E+03		
				8.66E+03	1.68E+00		1.39E+00							
PLLVBM	7.54E+02	8.06E+02		2.35E+02	1.23E+03	5.24E+00		3.58E+02	1.09E+03	3.04E+00		5.16E+02		
				9.66E+02	1.87E+00		1.64E+00							
PLLVTH	4.52E+02	4.36E+02		2.87E+02	6.25E+02	2.18E+00		3.02E+02	5.95E+02	1.97E+00		3.58E+02		
				5.14E+02	1.44E+00		1.38E+00							

## EXTENT OF THE UNCERTAINTY FOR THE 95TH PERCENTILE OF THE ENDPOINTS FOR THE CB2 SOURCE TERM

95 %-FRT	REF	MEDIAN	5 % 75 %	95 % FAC3	FAC1 	10 % 95%/REF	90 %	FAC2	25 %
CGIOD1	4.57E+08	4.90E+08	4.79E+06 1.29E+09	2.51E+09 1.26E+01	5.25E+02 	1.48E+07 5.50E+00	2.09E+09	1.41E+02	1.02E+08
CGIOD2	1.55E+07	1.62E+07	7.41E+05 3.39E+07	6.61E+07 4.57E+00	8.91E+01 	2.34E+06 4.27E+00	5.75E+07	2.45E+01	7.41E+06
CGIOD3	1.51E+06	8.71E+05	6.61E+04 1.58E+06	3.02E+06 4.68E+00	4.57E+01 	9.77E+04 2.00E+00	2.75E+06	2.82E+01	3.39E+05
CGIOD4	6.03E+04	2.95E+04	1.48E+02 7.41E+04	1.02E+05 4.07E+01	6.92E+02 	2.63E+02 1.70E+00	9.55E+04	3.63E+02	1.82E+03
CGCAE1	1.66E+07	1.41E+07	1.45E+05 1.23E+08	2.88E+08 3.39E+01	2.00E+03 	4.17E+05 1.74E+01	2.14E+08	5.13E+02	3.63E+06
CGCAE2	9.33E+05	1.62E+06	3.09E+04 7.41E+06	1.74E+07 1.86E+01	5.62E+02 	7.94E+04 1.86E+01	1.35E+07	1.70E+02	3.98E+05
CGCAE3	1.32E+05	1.86E+05	1.17E+04 5.37E+05	8.71E+05 8.91E+00	7.41E+01 	2.04E+04 6.61E+00	7.41E+05	3.63E+01	6.03E+04
CGCAE4	2.04E+04	1.38E+04	3.63E+03 2.19E+04	3.31E+04 2.45E+00	9.12E+00 	4.47E+03 1.62E+00	3.09E+04	6.92E+00	8.91E+03
CAIOD1	3.98E+10	2.88E+10	5.25E+09 4.47E+10	1.02E+11 2.57E+00	1.95E+01 	9.77E+09 2.57E+00	7.76E+10	7.94E+00	1.74E+10
CAIOD2	1.41E+09	1.02E+09	1.55E+08 2.69E+09	8.51E+09 6.46E+00	5.50E+01 	2.63E+08 6.03E+00	6.31E+09	2.40E+01	4.17E+08
CAIOD3	1.23E+08	9.55E+07	1.41E+06 2.24E+08	5.75E+08 1.38E+01	4.07E+02 	4.27E+06 4.68E+00	4.27E+08	1.00E+02	1.62E+07

CAIOD4	4.37E+06	2.00E+06		0.00E+00	2.45E+07	9.99E+99		0.00E+00	1.91E+07	9.99E+99		1.17E+05
				1.29E+07	1.10E+02			5.62E+00				
CACAE1	1.38E+10	9.77E+09		2.51E+09	3.24E+10	1.29E+01		3.24E+09	2.88E+10	8.91E+00		6.03E+09
				1.86E+10	3.09E+00			2.34E+00				
CACAE2	5.13E+08	8.13E+08		1.91E+08	2.57E+09	1.35E+01		2.29E+08	2.14E+09	9.33E+00		4.37E+08
				1.20E+09	2.75E+00			5.01E+00				
CACAE3	7.41E+07	7.08E+07		2.88E+07	2.24E+08	7.76E+00		3.39E+07	1.45E+08	4.27E+00		4.57E+07
				9.12E+07	2.00E+00			3.02E+00				
CACAE4	6.61E+06	3.80E+06		3.89E+05	1.29E+07	3.31E+01		8.91E+05	1.17E+07	1.32E+01		1.70E+06
				9.12E+06	5.37E+00			1.95E+00				
DECMBM1	1.41E-02	2.40E-02		5.37E-03	6.46E-02	1.20E+01		9.12E-03	5.25E-02	5.75E+00		1.51E-02
				3.72E-02	2.45E+00			4.57E+00				
DECMBM2	1.10E-03	2.09E-03		7.24E-04	3.39E-03	4.68E+00		1.05E-03	3.16E-03	3.02E+00		1.38E-03
				2.88E-03	2.09E+00			3.09E+00				
DECMBM3	1.38E-04	1.70E-04		4.90E-05	3.63E-04	7.41E+00		6.46E-05	3.31E-04	5.13E+00		9.55E-05
				2.88E-04	3.02E+00			2.63E+00				
DECMTH1	4.07E-01	3.02E-01		6.17E-02	1.10E+00	1.78E+01		9.55E-02	8.13E-01	8.51E+00		1.91E-01
				5.50E-01	2.88E+00			2.69E+00				
DECMTH2	2.19E-02	1.91E-02		5.50E-03	7.24E-02	1.32E+01		8.13E-03	5.62E-02	6.92E+00		1.07E-02
				3.02E-02	2.82E+00			3.31E+00				
DECMTH3	2.45E-03	1.82E-03		1.82E-04	9.12E-03	5.01E+01		3.63E-04	6.92E-03	1.91E+01		6.92E-04
				3.72E-03	5.37E+00			3.72E+00				
DECMSK1	1.41E+00	8.13E-01		1.38E-02	1.74E+01	1.26E+03		2.88E-02	1.26E+01	4.37E+02		9.77E-02
				9.33E+00	9.55E+01			1.23E+01				
DECMSK2	8.32E-02	9.12E-02		2.24E-03	1.07E+00	4.79E+02		2.95E-03	8.13E-01	2.75E+02		1.23E-02
				2.82E-01	2.29E+01			1.29E+01				
DECMSK3	1.86E-02	2.19E-02		4.47E-04	1.70E-01	3.80E+02		6.46E-04	1.48E-01	2.29E+02		1.91E-03
				6.17E-02	3.24E+01			9.12E+00				
DLCMED2	7.76E-02	1.00E-01		6.76E-03	5.62E-01	8.32E+01		1.41E-02	5.13E-01	3.63E+01		3.47E-02
				4.47E-01	1.29E+01			7.24E+00				
DLCMED3	1.20E-02	1.62E-02		2.82E-03	5.75E-02	2.04E+01		3.47E-03	5.13E-02	1.48E+01		6.17E-03
				3.63E-02	5.89E+00			4.79E+00				
DLCMED4	2.95E-03	2.45E-03		1.23E-03	4.07E-03	3.31E+00		1.62E-03	3.80E-03	2.34E+00		2.09E-03
				2.95E-03	1.41E+00			1.38E+00				
DLCMBM2	7.41E-02	9.55E-02		5.13E-03	5.50E-01	1.07E+02		1.26E-02	5.01E-01	3.98E+01		3.24E-02
				4.37E-01	1.35E+01			7.41E+00				
DLCMBM3	1.15E-02	1.55E-02		2.57E-03	5.50E-02	2.14E+01		3.02E-03	4.90E-02	1.62E+01		5.75E-03
				3.55E-02	6.17E+00			4.79E+00				
DLCMBM4	2.88E-03	2.40E-03		1.17E-03	3.89E-03	3.31E+00		1.55E-03	3.72E-03	2.40E+00		2.00E-03
				2.88E-03	1.45E+00			1.35E+00				
DLCMTH2	1.07E-01	1.66E-01		2.82E-02	7.59E-01	2.69E+01		3.72E-02	6.61E-01	1.78E+01		6.46E-02
				5.37E-01	8.32E+00			7.08E+00				
DLCMTH3	1.74E-02	2.40E-02		5.75E-03	7.24E-02	1.26E+01		6.76E-03	6.03E-02	8.91E+00		1.10E-02
				4.27E-02	3.89E+00			4.17E+00				
DLCMTH4	3.31E-03	2.82E-03		1.55E-03	4.90E-03	3.16E+00		1.95E-03	4.27E-03	2.19E+00		2.40E-03
				3.24E-03	1.35E+00			1.48E+00				
DLLVED2	3.31E-01	4.90E-01		1.86E-02	5.50E+00	2.95E+02		6.46E-02	3.63E+00	5.62E+01		1.55E-01
				2.19E+00	1.41E+01			1.66E+01				
DLLVED3	5.37E-02	7.08E-02		7.59E-03	2.63E-01	3.47E+01		1.12E-02	1.86E-01	1.66E+01		2.40E-02
				1.32E-01	5.50E+00			4.90E+00				
DLLVED4	7.94E-03	5.25E-03		1.35E-03	1.17E-02	8.71E+00		1.95E-03	1.05E-02	5.37E+00		3.55E-03
				7.59E-03	2.14E+00			1.48E+00				
DLLVBM2	2.63E-01	3.80E-01		1.15E-02	5.25E+00	4.57E+02		3.02E-02	3.39E+00	1.12E+02		1.02E-01
				2.00E+00	1.95E+01			2.00E+01				
DLLVBM3	4.79E-02	6.31E-02		5.37E-03	2.45E-01	4.57E+01		8.13E-03	1.74E-01	2.14E+01		1.74E-02
				1.26E-01	7.24E+00			5.13E+00				
DLLVBM4	7.24E-03	4.90E-03		1.29E-03	1.12E-02	8.71E+00		1.62E-03	9.77E-03	6.03E+00		3.09E-03
				6.92E-03	2.24E+00			1.55E+00				
DLLVTH2	1.20E+00	2.09E+00		1.91E-01	8.91E+00	4.68E+01		3.55E-01	6.92E+00	1.95E+01		7.76E-01
				4.37E+00	5.62E+00			7.41E+00				
DLLVTH3	1.35E-01	1.62E-01		2.24E-02	3.63E-01	1.62E+01		5.01E-02	3.24E-01	6.46E+00		7.94E-02
				2.29E-01	2.88E+00			2.69E+00				
DLLVTH4	1.29E-02	8.32E-03		1.86E-03	1.74E-02	9.33E+00		3.39E-03	1.51E-02	4.47E+00		5.75E-03
				1.07E-02	1.86E+00			1.35E+00				
AEVAC	1.86E+01	4.37E+01		1.51E+01	1.15E+02	7.59E+00		1.78E+01	1.00E+02	5.62E+00		2.34E+01
				6.31E+01	2.69E+00			6.17E+00				
ASHEL	1.41E+02	1.62E+02		8.13E+01	3.98E+02	4.90E+00		8.51E+01	2.88E+02	3.39E+00		1.17E+02
				2.19E+02	1.86E+00			2.82E+00				
AIOD	6.17E+01	6.76E+01		5.88E+00	3.63E+02	6.17E+01		7.08E+00	2.45E+02	3.47E+01		1.26E+01
				1.58E+02	1.26E+01			5.89E+00				
ARELIN	1.86E+01	4.37E+01		1.51E+01	1.15E+02	7.59E+00		1.78E+01	1.00E+02	5.62E+00		2.34E+01
				6.31E+01	2.69E+00			6.17E+00				
ARELTIM	3.89E+01	1.20E+02		3.39E+00	2.40E+02	7.08E+01		6.92E+00	2.09E+02	3.02E+01		3.98E+01
				1.66E+02	4.17E+00			6.17E+00				
AFBIMIL	9.33E+04	7.94E+04		4.17E+04	1.62E+05	3.89E+00		4.68E+04	1.29E+05	2.75E+00		6.31E+04
				1.10E+05	1.74E+00			1.74E+00				
AFBIGRA	7.59E+04	5.37E+04		2.34E+04	1.07E+05	4.57E+00		3.47E+04	8.32E+04	2.40E+00		4.37E+04
				7.08E+04	1.62E+00			1.41E+00				
AFBIVEG	7.41E+04	6.61E+04		3.63E+04	1.17E+05	3.24E+00		4.47E+04	9.77E+04	2.19E+00		5.25E+04
				8.32E+04	1.58E+00			1.58E+00				
AFBIBEE	9.55E+04	7.41E+04		2.69E+04	1.48E+05	5.50E+00		4.57E+04	1.15E+05	2.51E+00		5.89E+04
				9.77E+04	1.66E+00			1.55E+00				
AFBTMIL	2.09E+04	1.58E+04		8.32E+03	2.95E+04	3.55E+00		1.05E+04	2.29E+04	2.19E+00		1.29E+04
				1.91E+04	1.48E+00			1.41E+00				
AFBTGRA	1.48E+05	9.77E+04		4.57E+04	2.00E+05	4.37E+00		6.17E+04	1.48E+05	2.40E+00		8.13E+04
				1.29E+05	1.58E+00			1.35E+00				

95 %-FRT	REF	MEDIAN	5 % 75 %	95 % FAC3	FAC1 	10 % 95%/REF	90 %	FAC2	25 %
AFBTVEG	1.38E+04	8.91E+03	5.13E+03 1.15E+04	1.51E+04 1.66E+00	2.95E+00 	5.62E+03 1.10E+00	1.38E+04	2.45E+00	6.92E+03
AFBTBEE	6.92E+04	5.01E+04	3.02E+04 5.89E+04	1.07E+05 1.35E+00	3.55E+00 	3.24E+04 1.55E+00	7.24E+04	2.24E+00	4.37E+04
RECMMT1	0.00E+00	0.00E+00	0.00E+00 0.00E+00	1.15E-02 9.99E+99	9.99E+99 	0.00E+00 9.99E+99	2.14E-03	9.99E+99	0.00E+00
RECMMT2	0.00E+00	0.00E+00	0.00E+00 0.00E+00	0.00E+00 9.99E+99	9.99E+99 	0.00E+00 9.99E+99	0.00E+00	9.99E+99	0.00E+00
RECMMT3	0.00E+00	0.00E+00	0.00E+00 0.00E+00	0.00E+00 9.99E+99	9.99E+99 	0.00E+00 9.99E+99	0.00E+00	9.99E+99	0.00E+00
RECMBM1	0.00E+00	0.00E+00	0.00E+00 0.00E+00	0.00E+00 9.99E+99	9.99E+99 	0.00E+00 9.99E+99	0.00E+00	9.99E+99	0.00E+00
RECMBM2	0.00E+00	0.00E+00	0.00E+00 0.00E+00	0.00E+00 9.99E+99	9.99E+99 	0.00E+00 9.99E+99	0.00E+00	9.99E+99	0.00E+00
RECMBM3	0.00E+00	0.00E+00	0.00E+00 0.00E+00	0.00E+00 9.99E+99	9.99E+99 	0.00E+00 9.99E+99	0.00E+00	9.99E+99	0.00E+00
RECMMB1	0.00E+00	0.00E+00	0.00E+00 0.00E+00	2.29E-01 9.99E+99	9.99E+99 	0.00E+00 9.99E+99	4.27E-02	9.99E+99	0.00E+00
RECMMB2	0.00E+00	0.00E+00	0.00E+00 0.00E+00	0.00E+00 9.99E+99	9.99E+99 	0.00E+00 9.99E+99	0.00E+00	9.99E+99	0.00E+00
RECMMB3	0.00E+00	0.00E+00	0.00E+00 0.00E+00	0.00E+00 9.99E+99	9.99E+99 	0.00E+00 9.99E+99	0.00E+00	9.99E+99	0.00E+00
RECMLU1	0.00E+00	0.00E+00	0.00E+00 0.00E+00	0.00E+00 9.99E+99	9.99E+99 	0.00E+00 9.99E+99	0.00E+00	9.99E+99	0.00E+00
RECMLU2	0.00E+00	0.00E+00	0.00E+00 0.00E+00	0.00E+00 9.99E+99	9.99E+99 	0.00E+00 9.99E+99	0.00E+00	9.99E+99	0.00E+00
RECMLU3	0.00E+00	0.00E+00	0.00E+00 0.00E+00	0.00E+00 9.99E+99	9.99E+99 	0.00E+00 9.99E+99	0.00E+00	9.99E+99	0.00E+00
RECMT1	0.00E+00	0.00E+00	0.00E+00 0.00E+00	0.00E+00 9.99E+99	9.99E+99 	0.00E+00 9.99E+99	0.00E+00	9.99E+99	0.00E+00
RECMT2	0.00E+00	0.00E+00	0.00E+00 0.00E+00	0.00E+00 9.99E+99	9.99E+99 	0.00E+00 9.99E+99	0.00E+00	9.99E+99	0.00E+00
RECMT3	0.00E+00	0.00E+00	0.00E+00 0.00E+00	0.00E+00 9.99E+99	9.99E+99 	0.00E+00 9.99E+99	0.00E+00	9.99E+99	0.00E+00
RECMSK1	0.00E+00	0.00E+00	0.00E+00 0.00E+00	2.29E-01 9.99E+99	9.99E+99 	0.00E+00 9.99E+99	4.27E-02	9.99E+99	0.00E+00
RECMSK2	0.00E+00	0.00E+00	0.00E+00 0.00E+00	0.00E+00 9.99E+99	9.99E+99 	0.00E+00 9.99E+99	0.00E+00	9.99E+99	0.00E+00
RECMSK3	0.00E+00	0.00E+00	0.00E+00 0.00E+00	0.00E+00 9.99E+99	9.99E+99 	0.00E+00 9.99E+99	0.00E+00	9.99E+99	0.00E+00
RLCMMT2	3.80E-03	4.90E-03	3.16E-04 2.19E-02	2.69E-02 1.32E+01	8.51E+01 	6.76E-04 7.08E+00	2.51E-02	3.72E+01	1.66E-03
RLCMMT3	5.89E-04	7.94E-04	1.35E-04 1.78E-03	2.82E-03 6.03E+00	2.09E+01 	1.62E-04 4.79E+00	2.51E-03	1.55E+01	2.95E-04
RLCMMT4	1.45E-04	1.20E-04	5.89E-05 1.45E-04	2.00E-04 1.41E+00	3.39E+00 	7.76E-05 1.38E+00	1.86E-04	2.40E+00	1.02E-04
RLCMBM2	3.80E-04	5.01E-04	2.63E-05 2.29E-03	2.82E-03 1.35E+01	1.07E+02 	6.46E-05 7.41E+00	2.57E-03	3.98E+01	1.70E-04
RLCMBM3	5.89E-05	8.13E-05	1.32E-05 1.82E-04	2.88E-04 6.17E+00	2.19E+01 	1.55E-05 4.90E+00	2.57E-04	1.66E+01	2.95E-05
RLCMBM4	1.48E-05	1.23E-05	6.03E-06 1.48E-05	2.04E-05 1.45E+00	3.39E+00 	7.94E-06 1.38E+00	1.91E-05	2.40E+00	1.02E-05
RLCMTH2	1.91E-04	2.95E-04	4.90E-05 9.33E-04	1.35E-03 8.13E+00	2.75E+01 	6.61E-05 7.08E+00	1.15E-03	1.74E+01	1.15E-04
RLCMTH3	3.02E-05	4.27E-05	1.02E-05 7.59E-05	1.29E-04 3.89E+00	1.26E+01 	1.20E-05 4.27E+00	1.07E-04	8.91E+00	1.95E-05
RLCMTH4	5.89E-06	5.01E-06	2.75E-06 5.62E-06	8.71E-06 1.32E+00	3.16E+00 	3.47E-06 1.48E+00	7.59E-06	2.19E+00	4.27E-06
RLLVMT2	1.51E-02	2.19E-02	7.76E-04 1.02E-01	2.40E-01 1.48E+01	3.09E+02 	2.88E-03 1.58E+01	1.62E-01	5.62E+01	6.92E-03
RLLVMT3	2.51E-03	3.31E-03	3.31E-04 6.46E-03	1.26E-02 5.89E+00	3.80E+01 	5.37E-04 5.01E+00	8.91E-03	1.66E+01	1.10E-03
RLLVMT4	3.80E-04	2.57E-04	6.46E-05 3.72E-04	5.75E-04 2.19E+00	8.91E+00 	8.71E-05 1.51E+00	5.01E-04	5.75E+00	1.70E-04
RLLVBM2	1.38E-03	2.00E-03	5.89E-05 1.05E-02	2.69E-02 2.00E+01	4.57E+02 	1.55E-04 1.95E+01	1.74E-02	1.12E+02	5.25E-04
RLLVBM3	2.45E-04	3.24E-04	2.75E-05 6.46E-04	1.26E-03 7.08E+00	4.57E+01 	4.17E-05 5.13E+00	8.91E-04	2.14E+01	9.12E-05
RLLVBM4	3.80E-05	2.57E-05	6.61E-06 3.63E-05	5.75E-05 2.29E+00	8.71E+00 	8.32E-06 1.51E+00	5.01E-05	6.03E+00	1.58E-05
RLLVTH2	2.14E-03	3.72E-03	3.31E-04 7.76E-03	1.58E-02 5.62E+00	4.79E+01 	6.31E-04 7.41E+00	1.20E-02	1.91E+01	1.38E-03
RLLVTH3	2.40E-04	2.82E-04	3.98E-05 3.98E-04	6.46E-04 2.88E+00	1.62E+01 	8.91E-05 2.69E+00	5.75E-04	6.46E+00	1.38E-04
RLLVTH4	2.29E-05	1.48E-05	3.31E-06 1.91E-05	3.09E-05 1.91E+00	9.33E+00 	6.03E-06 1.35E+00	2.69E-05	4.47E+00	1.00E-05
CDCMED	1.00E+05	1.07E+05	7.76E+04 1.23E+05	1.48E+05 1.29E+00	1.91E+00 	8.51E+04 1.48E+00	1.35E+05	1.58E+00	9.55E+04
CDCMBM	9.77E+04	1.02E+05	7.41E+04 1.17E+05	1.45E+05 1.29E+00	1.95E+00 	8.32E+04 1.48E+00	1.32E+05	1.58E+00	9.12E+04
CDCMTH	1.10E+05	1.17E+05	8.32E+04 1.35E+05	1.82E+05 1.35E+00	2.19E+00 	9.12E+04 1.66E+00	1.55E+05	1.70E+00	1.00E+05
CDLVED	4.17E+05	4.27E+05	1.62E+05 5.25E+05	7.41E+05 1.95E+00	4.57E+00 	2.09E+05 1.78E+00	6.76E+05	3.24E+00	2.69E+05
CDLVBM	3.89E+05	3.98E+05	1.48E+05 4.90E+05	7.08E+05 1.95E+00	4.79E+00 	1.95E+05 1.82E+00	6.31E+05	3.24E+00	2.51E+05
CDLVTH	6.31E+05	5.89E+05	3.55E+05 7.41E+05	1.05E+06 1.55E+00	2.95E+00 	4.27E+05 1.66E+00	9.12E+05	2.14E+00	4.79E+05

PECMMT	9.55E-01	7.08E-02		0.00E+00	1.70E+01	9.99E+99		0.00E+00	1.02E+01	9.99E+99		0.00E+00
				3.80E+00	9.99E+99			1.78E+01				
PECMBM	0.00E+00	0.00E+00		0.00E+00	0.00E+00	9.99E+99		0.00E+00	0.00E+00	9.99E+99		0.00E+00
				0.00E+00	9.99E+99			9.99E+99				
PECMMB	1.86E+01	1.66E+00		0.00E+00	3.24E+02	9.99E+99		0.00E+00	1.95E+02	9.99E+99		1.26E-01
				7.24E+01	5.75E+02			1.74E+01				
PECMLU	0.00E+00	0.00E+00		0.00E+00	0.00E+00	9.99E+99		0.00E+00	0.00E+00	9.99E+99		0.00E+00
				0.00E+00	9.99E+99			9.99E+99				
PECMTH	0.00E+00	0.00E+00		0.00E+00	7.76E-01	9.99E+99		0.00E+00	3.98E-01	9.99E+99		0.00E+00
				1.05E-01	9.99E+99			9.99E+99				
PECMSK	1.86E+01	1.41E+00		0.00E+00	3.24E+02	9.99E+99		0.00E+00	1.95E+02	9.99E+99		0.00E+00
				7.24E+01	9.99E+99			1.74E+01				
PLCMMT	4.90E+03	5.25E+03		3.72E+03	7.24E+03	1.95E+00		4.17E+03	6.61E+03	1.58E+00		4.57E+03
				5.89E+03	1.29E+00			1.48E+00				
PLCMBM	5.01E+02	5.25E+02		3.80E+02	7.41E+02	1.95E+00		4.27E+02	6.76E+02	1.58E+00		4.68E+02
				6.03E+02	1.29E+00			1.48E+00				
PLCMTH	1.95E+02	2.09E+02		1.45E+02	3.24E+02	2.24E+00		1.62E+02	2.69E+02	1.66E+00		1.78E+02
				2.40E+02	1.35E+00			1.66E+00				
PLLVMT	1.95E+04	1.86E+04		7.76E+03	3.24E+04	4.17E+00		1.02E+04	2.95E+04	2.88E+00		1.29E+04
				2.34E+04	1.82E+00			1.66E+00				
PLLVBM	2.04E+03	2.09E+03		7.59E+02	3.63E+03	4.79E+00		1.02E+03	3.24E+03	3.16E+00		1.32E+03
				2.57E+03	1.95E+00			1.78E+00				
PLLVTH	1.12E+03	1.02E+03		6.31E+02	1.82E+03	2.88E+00		7.59E+02	1.62E+03	2.14E+00		8.51E+02
				1.29E+03	1.51E+00			1.62E+00				

## EXTENT OF THE UNCERTAINTY FOR THE 99TH PERCENTILE OF THE ENDPOINTS FOR THE CB2 SOURCE TERM

99 %-FRT	REF	MEDIAN	5 % 75 %	95 % FAC3	FAC1 	10 % 95%/REF	90 %	FAC2	25 %
CGIOD1	3.09E+09	3.24E+09	1.86E+08 6.61E+09	1.10E+10 6.17E+00	5.89E+01 	3.47E+08 3.55E+00	8.32E+09	2.40E+01	1.07E+09
CGIOD2	9.33E+07	1.35E+08	2.69E+07 1.78E+08	2.34E+08 2.24E+00	8.71E+00 	4.57E+07 2.51E+00	2.19E+08	4.79E+00	7.94E+07
CGIOD3	9.77E+06	7.24E+06	2.04E+06 9.55E+06	1.29E+07 1.86E+00	6.31E+00 	3.24E+06 1.32E+00	1.17E+07	3.63E+00	5.13E+06
CGIOD4	6.17E+05	2.40E+05	1.00E+04 4.27E+05	5.62E+05 3.98E+00	5.62E+01 	3.16E+04 9.12E-01	5.37E+05	1.70E+01	1.07E+05
CGCAE1	1.32E+08	1.62E+08	6.61E+06 6.17E+08	1.38E+09 1.58E+01	2.09E+02 	1.95E+07 1.05E+01	1.05E+09	5.37E+01	3.89E+07
CGCAE2	8.71E+06	1.86E+07	9.55E+05 3.98E+07	5.89E+07 8.91E+00	6.17E+01 	2.14E+06 6.76E+00	5.37E+07	2.51E+01	4.47E+06
CGCAE3	1.00E+06	1.74E+06	1.07E+05 2.69E+06	3.72E+06 4.68E+00	3.47E+01 	3.39E+05 3.72E+00	3.31E+06	9.77E+00	5.75E+05
CGCAE4	1.23E+05	8.71E+04	2.19E+04 1.26E+05	1.86E+05 2.40E+00	8.51E+00 	3.31E+04 1.51E+00	1.55E+05	4.68E+00	5.25E+04
CAIOD1	3.09E+11	2.04E+11	4.57E+10 4.37E+11	6.17E+11 4.17E+00	1.35E+01 	5.62E+10 2.00E+00	5.75E+11	1.02E+01	1.05E+11
CAIOD2	7.94E+09	9.55E+09	1.20E+09 2.57E+10	5.01E+10 9.33E+00	4.17E+01 	1.51E+09 6.31E+00	3.89E+10	2.57E+01	2.75E+09
CAIOD3	7.41E+08	6.46E+08	3.24E+07 1.48E+09	4.17E+09 1.23E+01	1.29E+02 	5.25E+07 5.62E+00	2.88E+09	5.50E+01	1.20E+08

CAIOD4	4.27E+07	2.09E+07	3.39E+04	1.23E+08	3.63E+03	4.79E+05	9.12E+07	1.91E+02	1.91E+06
			6.46E+07	3.39E+01		2.88E+00			
CACAE1	1.00E+11	9.12E+10	2.40E+10	1.78E+11	7.41E+00	3.24E+10	1.70E+11	5.25E+00	5.37E+10
			1.51E+11	2.82E+00		1.78E+00			
CACAE2	6.31E+09	6.61E+09	1.70E+09	2.24E+10	1.32E+01	2.57E+09	1.82E+10	7.08E+00	3.72E+09
			1.15E+10	3.09E+00		3.55E+00			
CACAE3	3.98E+08	4.68E+08	1.00E+08	1.70E+09	1.70E+01	1.58E+08	1.32E+09	8.32E+00	2.69E+08
			7.76E+08	2.88E+00		4.27E+00			
CACAE4	2.75E+07	1.95E+07	3.16E+06	7.41E+07	2.34E+01	4.90E+06	4.79E+07	9.77E+00	1.02E+07
			3.55E+07	3.47E+00		2.69E+00			
DECMBM1	8.71E-02	1.20E-01	3.72E-02	2.51E-01	6.76E+00	4.79E-02	2.40E-01	5.01E+00	7.41E-02
			1.74E-01	2.34E+00		2.88E+00			
DECMBM2	3.80E-03	6.61E-03	3.55E-03	2.69E-02	7.59E+00	4.17E-03	1.95E-02	4.68E+00	5.01E-03
			1.12E-02	2.24E+00		7.08E+00			
DECMBM3	7.24E-04	8.91E-04	4.90E-04	1.45E-03	2.95E+00	5.37E-04	1.29E-03	2.40E+00	6.61E-04
			1.10E-03	1.66E+00		2.00E+00			
DECMTH1	3.16E+00	2.14E+00	5.50E-01	6.17E+00	1.12E+01	6.92E-01	5.75E+00	8.32E+00	1.15E+00
			4.68E+00	4.07E+00		1.95E+00			
DECMTH2	6.61E-02	8.51E-02	2.34E-02	3.80E-01	1.62E+01	2.88E-02	3.31E-01	1.15E+01	3.72E-02
			2.00E-01	5.37E+00		5.75E+00			
DECMTH3	1.29E-02	1.10E-02	1.55E-03	2.75E-02	1.78E+01	1.86E-03	2.40E-02	1.29E+01	3.09E-03
			1.82E-02	5.89E+00		2.14E+00			
DECMSK1	1.12E+01	6.61E+00	1.38E-01	1.10E+02	7.94E+02	3.47E-01	7.24E+01	2.09E+02	1.51E+00
			3.24E+01	2.14E+01		9.77E+00			
DECMSK2	2.45E-01	2.95E-01	6.03E-03	5.13E+00	8.51E+02	1.62E-02	2.19E+00	1.35E+02	7.24E-02
			8.91E-01	1.23E+01		2.09E+01			
DECMSK3	7.76E-02	8.13E-02	2.04E-03	6.61E-01	3.24E+02	4.17E-03	4.68E-01	1.12E+02	9.77E-03
			2.45E-01	2.51E+01		8.51E+00			
DLCMED2	5.37E-01	6.76E-01	1.48E-01	1.17E+00	7.94E+00	2.24E-01	1.10E+00	4.90E+00	4.27E-01
			9.33E-01	2.19E+00		2.19E+00			
DLCMED3	7.94E-02	1.32E-01	1.45E-02	2.75E-01	1.91E+01	2.82E-02	2.63E-01	9.33E+00	4.79E-02
			1.95E-01	4.07E+00		3.47E+00			
DLCMED4	9.77E-03	7.41E-03	3.09E-03	1.78E-02	5.75E+00	4.68E-03	1.35E-02	2.88E+00	5.62E-03
			9.77E-03	1.74E+00		1.82E+00			
DLCMBM2	5.37E-01	6.61E-01	1.35E-01	1.12E+00	8.32E+00	2.09E-01	1.05E+00	5.01E+00	3.80E-01
			9.12E-01	2.40E+00		2.09E+00			
DLCMBM3	7.59E-02	1.29E-01	1.35E-02	2.69E-01	2.00E+01	2.63E-02	2.57E-01	9.77E+00	4.68E-02
			1.86E-01	3.98E+00		3.55E+00			
DLCMBM4	9.55E-03	7.08E-03	2.95E-03	1.70E-02	5.75E+00	4.47E-03	1.29E-02	2.88E+00	5.37E-03
			9.55E-03	1.78E+00		1.78E+00			
DLCMTH2	6.61E-01	8.91E-01	2.82E-01	1.45E+00	5.13E+00	4.27E-01	1.29E+00	3.02E+00	6.46E-01
			1.12E+00	1.74E+00		2.19E+00			
DLCMTH3	1.00E-01	1.51E-01	3.55E-02	3.02E-01	8.51E+00	4.07E-02	2.82E-01	6.92E+00	6.92E-02
			2.19E-01	3.16E+00		3.02E+00			
DLCMTH4	1.12E-02	8.71E-03	3.98E-03	1.95E-02	4.90E+00	5.25E-03	1.55E-02	2.95E+00	6.17E-03
			1.12E-02	1.82E+00		1.74E+00			
DLLVED2	4.68E+00	7.08E+00	6.61E-01	2.69E+01	4.07E+01	1.45E+00	2.57E+01	1.78E+01	2.34E+00
			1.74E+01	7.41E+00		5.75E+00			
DLLVED3	4.07E-01	6.31E-01	8.13E-02	1.45E+00	1.78E+01	1.32E-01	1.26E+00	9.55E+00	2.24E-01
			9.55E-01	4.27E+00		3.55E+00			
DLLVED4	4.68E-02	3.24E-02	8.51E-03	7.76E-02	9.12E+00	1.41E-02	6.17E-02	4.37E+00	2.09E-02
			4.90E-02	2.34E+00		1.66E+00			
DLLVBM2	3.89E+00	6.17E+00	2.95E-01	2.57E+01	8.71E+01	8.71E-01	2.40E+01	2.75E+01	1.74E+00
			1.66E+01	9.55E+00		6.61E+00			
DLLVBM3	3.63E-01	5.75E-01	4.90E-02	1.38E+00	2.82E+01	1.07E-01	1.20E+00	1.12E+01	1.82E-01
			8.91E-01	4.90E+00		3.80E+00			
DLLVBM4	4.17E-02	3.02E-02	7.24E-03	7.41E-02	1.02E+01	1.29E-02	5.89E-02	4.57E+00	1.91E-02
			4.57E-02	2.40E+00		1.78E+00			
DLLVTH2	1.00E+01	1.70E+01	4.90E+00	3.55E+01	7.24E+00	5.89E+00	3.31E+01	5.62E+00	1.00E+01
			2.51E+01	2.51E+00		3.55E+00			
DLLVTH3	8.91E-01	1.05E+00	4.47E-01	1.91E+00	4.27E+00	5.50E-01	1.74E+00	3.16E+00	6.46E-01
			1.48E+00	2.29E+00		2.14E+00			
DLLVTH4	7.24E-02	4.68E-02	2.29E-02	9.55E-02	4.17E+00	2.88E-02	9.12E-02	3.16E+00	3.80E-02
			6.61E-02	1.74E+00		1.32E+00			
AEVAC	2.68E+01	6.76E+01	2.16E+01	1.86E+02	8.62E+00	2.88E+01	1.74E+02	6.03E+00	3.72E+01
			1.23E+02	3.31E+00		6.94E+00			
ASHEL	2.40E+02	2.51E+02	1.20E+02	7.08E+02	5.89E+00	1.45E+02	5.13E+02	3.55E+00	1.95E+02
			3.63E+02	1.86E+00		2.95E+00			
AIOD	1.32E+02	1.20E+02	5.88E+00	5.62E+02	9.56E+01	9.04E+00	3.80E+02	4.21E+01	1.58E+01
			2.45E+02	1.55E+01		4.27E+00			
ARELIN	2.68E+01	6.76E+01	2.16E+01	1.86E+02	8.62E+00	2.88E+01	1.74E+02	6.03E+00	3.72E+01
			1.23E+02	3.31E+00		6.94E+00			
ARELTIM	1.02E+02	1.48E+02	5.75E+00	6.46E+02	1.12E+02	1.23E+01	3.31E+02	2.69E+01	5.62E+01
			2.51E+02	4.47E+00		6.31E+00			
AFBIMIL	1.17E+05	1.10E+05	6.46E+04	2.57E+05	3.98E+00	6.92E+04	1.66E+05	2.40E+00	8.71E+04
			1.38E+05	1.58E+00		2.19E+00			
AFBIGRA	1.00E+05	7.41E+04	4.27E+04	1.74E+05	4.07E+00	5.01E+04	1.07E+05	2.14E+00	6.17E+04
			8.91E+04	1.45E+00		1.74E+00			
AFBIVEG	9.77E+04	8.32E+04	5.50E+04	1.62E+05	2.95E+00	5.75E+04	1.32E+05	2.29E+00	6.92E+04
			1.07E+05	1.55E+00		1.66E+00			
AFBIBEE	1.26E+05	9.77E+04	5.62E+04	2.14E+05	3.80E+00	6.92E+04	1.41E+05	2.04E+00	8.51E+04
			1.23E+05	1.45E+00		1.70E+00			
AFBTMIL	2.69E+04	2.09E+04	1.26E+04	5.25E+04	4.17E+00	1.48E+04	2.95E+04	2.00E+00	1.74E+04
			2.75E+04	1.58E+00		1.95E+00			
AFBTGRA	1.91E+05	1.38E+05	8.13E+04	3.39E+05	4.17E+00	8.91E+04	1.95E+05	2.19E+00	1.10E+05
			1.67E+05	1.52E+00		1.78E+00			

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99 %-FRT	REF	MEDIAN	5 % 75 %	95 % FAC3	FAC1 	10 % 95%/REF	90 %	FAC2	25 %
AFBTVEG	1.78E+04	1.23E+04	6.76E+03 1.55E+04	2.14E+04 1.62E+00	3.16E+00 	7.24E+03 1.20E+00	1.91E+04	2.63E+00	9.55E+03
AFBTBEE	8.13E+04	6.61E+04	4.35E+04 7.94E+04	1.55E+05 1.39E+00	3.56E+00 	5.01E+04 1.91E+00	8.51E+04	1.70E+00	5.73E+04
RECMMT1	1.15E-03	0.00E+00	0.00E+00 5.00E-02	5.00E-02 9.99E+99	9.99E+99 	0.00E+00 4.35E+01	5.00E-02	9.99E+99	0.00E+00
RECMMT2	0.00E+00	0.00E+00	0.00E+00 0.00E+00	0.00E+00 9.99E+99	9.99E+99 	0.00E+00 9.99E+99	0.00E+00	9.99E+99	0.00E+00
RECMMT3	0.00E+00	0.00E+00	0.00E+00 0.00E+00	0.00E+00 9.99E+99	9.99E+99 	0.00E+00 9.99E+99	0.00E+00	9.99E+99	0.00E+00
RECMBM1	0.00E+00	0.00E+00	0.00E+00 0.00E+00	0.00E+00 9.99E+99	9.99E+99 	0.00E+00 9.99E+99	0.00E+00	9.99E+99	0.00E+00
RECMBM2	0.00E+00	0.00E+00	0.00E+00 0.00E+00	0.00E+00 9.99E+99	9.99E+99 	0.00E+00 9.99E+99	0.00E+00	9.99E+99	0.00E+00
RECMBM3	0.00E+00	0.00E+00	0.00E+00 0.00E+00	0.00E+00 9.99E+99	9.99E+99 	0.00E+00 9.99E+99	0.00E+00	9.99E+99	0.00E+00
RECMMB1	2.29E-02	0.00E+00	0.00E+00 9.50E-01	9.50E-01 9.99E+99	9.99E+99 	0.00E+00 4.15E+01	9.50E-01	9.99E+99	0.00E+00
RECMMB2	0.00E+00	0.00E+00	0.00E+00 0.00E+00	0.00E+00 9.99E+99	9.99E+99 	0.00E+00 9.99E+99	0.00E+00	9.99E+99	0.00E+00
RECMMB3	0.00E+00	0.00E+00	0.00E+00 0.00E+00	0.00E+00 9.99E+99	9.99E+99 	0.00E+00 9.99E+99	0.00E+00	9.99E+99	0.00E+00
RECMLU1	0.00E+00	0.00E+00	0.00E+00 0.00E+00	0.00E+00 9.99E+99	9.99E+99 	0.00E+00 9.99E+99	0.00E+00	9.99E+99	0.00E+00
RECMLU2	0.00E+00	0.00E+00	0.00E+00 0.00E+00	0.00E+00 9.99E+99	9.99E+99 	0.00E+00 9.99E+99	0.00E+00	9.99E+99	0.00E+00
RECMLU3	0.00E+00	0.00E+00	0.00E+00 0.00E+00	0.00E+00 9.99E+99	9.99E+99 	0.00E+00 9.99E+99	0.00E+00	9.99E+99	0.00E+00
RECMTH1	0.00E+00	0.00E+00	0.00E+00 0.00E+00	0.00E+00 9.99E+99	9.99E+99 	0.00E+00 9.99E+99	0.00E+00	9.99E+99	0.00E+00
RECMTH2	0.00E+00	0.00E+00	0.00E+00 0.00E+00	0.00E+00 9.99E+99	9.99E+99 	0.00E+00 9.99E+99	0.00E+00	9.99E+99	0.00E+00
RECMTH3	0.00E+00	0.00E+00	0.00E+00 0.00E+00	0.00E+00 9.99E+99	9.99E+99 	0.00E+00 9.99E+99	0.00E+00	9.99E+99	0.00E+00
RECMSK1	2.29E-02	0.00E+00	0.00E+00 9.50E-01	9.50E-01 9.99E+99	9.99E+99 	0.00E+00 4.15E+01	9.50E-01	9.99E+99	0.00E+00
RECMSK2	0.00E+00	0.00E+00	0.00E+00 0.00E+00	0.00E+00 9.99E+99	9.99E+99 	0.00E+00 9.99E+99	0.00E+00	9.99E+99	0.00E+00
RECMSK3	0.00E+00	0.00E+00	0.00E+00 0.00E+00	0.00E+00 9.99E+99	9.99E+99 	0.00E+00 9.99E+99	0.00E+00	9.99E+99	0.00E+00
RLCMMT2	2.63E-02	3.24E-02	7.08E-03 4.57E-02	5.62E-02 2.29E+00	7.94E+00 	1.07E-02 2.14E+00	5.25E-02	4.90E+00	2.00E-02
RLCMMT3	3.80E-03	6.46E-03	7.08E-04 9.55E-03	1.35E-02 4.07E+00	1.91E+01 	1.38E-03 3.55E+00	1.29E-02	9.33E+00	2.34E-03
RLCMMT4	4.79E-04	3.55E-04	1.51E-04 4.79E-04	8.71E-04 1.78E+00	5.75E+00 	2.24E-04 1.82E+00	6.61E-04	2.95E+00	2.69E-04
RLCMBM2	2.75E-03	3.39E-03	6.92E-04 4.68E-03	5.89E-03 2.40E+00	8.51E+00 	1.07E-03 2.14E+00	5.50E-03	5.13E+00	1.95E-03
RLCMBM3	3.89E-04	6.61E-04	6.92E-05 9.77E-04	1.38E-03 4.07E+00	2.00E+01 	1.35E-04 3.55E+00	1.32E-03	9.77E+00	2.40E-04
RLCMBM4	4.90E-05	3.72E-05	1.55E-05 4.90E-05	8.91E-05 1.78E+00	5.75E+00 	2.29E-05 1.82E+00	6.76E-05	2.95E+00	2.75E-05
RLCMTH2	1.17E-03	1.58E-03	4.90E-04 2.00E-03	2.57E-03 1.74E+00	5.25E+00 	7.41E-04 2.19E+00	2.29E-03	3.09E+00	1.15E-03
RLCMTH3	1.78E-04	2.69E-04	6.31E-05 3.89E-04	5.37E-04 3.16E+00	8.51E+00 	7.24E-05 3.02E+00	5.01E-04	6.92E+00	1.23E-04
RLCMTH4	2.00E-05	1.55E-05	7.08E-06 2.00E-05	3.47E-05 1.82E+00	4.90E+00 	9.12E-06 1.74E+00	2.75E-05	3.02E+00	1.10E-05
RLLVMT2	2.00E-01	2.95E-01	2.88E-02 6.03E-01	7.59E-01 5.75E+00	2.63E+01 	6.03E-02 3.80E+00	7.41E-01	1.23E+01	1.05E-01
RLLVMT3	1.91E-02	3.02E-02	3.80E-03 4.57E-02	6.92E-02 4.37E+00	1.82E+01 	6.17E-03 3.63E+00	6.03E-02	9.77E+00	1.05E-02
RLLVMT4	2.29E-03	1.55E-03	4.07E-04 2.34E-03	3.80E-03 2.34E+00	9.33E+00 	6.92E-04 1.66E+00	3.02E-03	4.37E+00	1.00E-03
RLLVBM2	2.04E-02	3.24E-02	1.51E-03 8.51E-02	1.32E-01 9.55E+00	8.71E+01 	4.47E-03 6.46E+00	1.23E-01	2.75E+01	8.91E-03
RLLVBM3	1.86E-03	2.95E-03	2.51E-04 4.68E-03	7.08E-03 5.01E+00	2.82E+01 	5.50E-04 3.80E+00	6.17E-03	1.12E+01	9.33E-04
RLLVBM4	2.19E-04	1.55E-04	3.72E-05 2.34E-04	3.89E-04 2.40E+00	1.05E+01 	6.76E-05 1.78E+00	3.09E-04	4.57E+00	9.77E-05
RLLVTH2	1.78E-02	3.02E-02	8.71E-03 4.47E-02	6.31E-02 2.51E+00	7.24E+00 	1.05E-02 3.55E+00	5.75E-02	5.50E+00	1.78E-02
RLLVTH3	1.58E-03	1.86E-03	7.94E-04 2.63E-03	3.39E-03 2.29E+00	4.27E+00 	9.77E-04 2.14E+00	3.09E-03	3.16E+00	1.15E-03
RLLVTH4	1.29E-04	8.32E-05	4.07E-05 1.15E-04	1.70E-04 1.74E+00	4.17E+00 	5.13E-05 1.32E+00	1.62E-04	3.16E+00	6.61E-05
CDCMED	1.41E+05	1.35E+05	9.77E+04 1.48E+05	2.40E+05 1.20E+00	2.45E+00 	1.07E+05 1.70E+00	1.74E+05	1.62E+00	1.23E+05
CDCMBM	1.35E+05	1.32E+05	9.55E+04 1.45E+05	2.29E+05 1.20E+00	2.40E+00 	1.02E+05 1.70E+00	1.70E+05	1.66E+00	1.20E+05
CDCMTH	1.48E+05	1.48E+05	1.05E+05 1.66E+05	2.82E+05 1.23E+00	2.69E+00 	1.10E+05 1.91E+00	1.95E+05	1.78E+00	1.35E+05
CDLVED	4.57E+05	6.17E+05	2.34E+05 7.76E+05	1.32E+06 1.71E+00	5.62E+00 	3.02E+05 2.88E+00	1.10E+06	3.63E+00	4.55E+05
CDLVBM	4.37E+05	5.75E+05	2.19E+05 7.41E+05	1.26E+06 1.74E+00	5.75E+00 	2.75E+05 2.88E+00	1.05E+06	3.80E+00	4.27E+05
CDLVTH	6.76E+05	8.51E+05	5.01E+05 1.07E+06	1.74E+06 1.55E+00	3.47E+00 	5.89E+05 2.57E+00	1.38E+06	2.34E+00	6.92E+05



PECMMT	2.45E+00	4.86E-01		0.00E+00	2.51E+01	9.99E+99		0.00E+00	1.86E+01	9.99E+99		0.00E+00
				7.35E+00	9.99E+99			1.02E+01				
PECMBM	0.00E+00	0.00E+00		0.00E+00	0.00E+00	9.99E+99		0.00E+00	0.00E+00	9.99E+99		0.00E+00
				0.00E+00	9.99E+99			9.99E+99				
PECMMB	4.68E+01	1.05E+01		0.00E+00	4.90E+02	9.99E+99		0.00E+00	3.55E+02	9.99E+99		8.22E-01
				1.40E+02	1.71E+02			1.05E+01				
PECMLU	0.00E+00	0.00E+00		0.00E+00	0.00E+00	9.99E+99		0.00E+00	0.00E+00	9.99E+99		0.00E+00
				0.00E+00	9.99E+99			9.99E+99				
PECMTH	0.00E+00	0.00E+00		0.00E+00	3.10E+00	9.99E+99		0.00E+00	1.67E+00	9.99E+99		0.00E+00
				2.79E-01	9.99E+99			9.99E+99				
PECMSK	4.68E+01	9.45E+00		0.00E+00	4.90E+02	9.99E+99		0.00E+00	3.55E+02	9.99E+99		0.00E+00
				1.40E+02	9.99E+99			1.05E+01				
PLCMMT	6.76E+03	6.61E+03		4.79E+03	1.17E+04	2.45E+00		5.25E+03	8.51E+03	1.62E+00		6.03E+03
				7.24E+03	1.20E+00			1.74E+00				
PLCMBM	6.92E+02	6.76E+02		4.90E+02	1.20E+03	2.45E+00		5.25E+02	8.71E+02	1.66E+00		6.17E+02
				7.41E+02	1.20E+00			1.74E+00				
PLCMTH	2.57E+02	2.63E+02		1.82E+02	5.01E+02	2.75E+00		1.95E+02	3.47E+02	1.78E+00		2.40E+02
				2.95E+02	1.23E+00			1.95E+00				
PLLVMT	2.19E+04	2.75E+04		1.12E+04	5.25E+04	4.68E+00		1.41E+04	4.37E+04	3.09E+00		2.04E+04
				3.31E+04	1.62E+00			2.40E+00				
PLLVBM	2.24E+03	2.95E+03		1.13E+03	6.46E+03	5.70E+00		1.41E+03	5.50E+03	3.89E+00		2.09E+03
				3.80E+03	1.82E+00			2.88E+00				
PLLVTH	1.20E+03	1.51E+03		8.91E+02	3.02E+03	3.39E+00		1.02E+03	2.45E+03	2.40E+00		1.17E+03
				1.91E+03	1.62E+00			2.51E+00				

# EXTENT OF THE UNCERTAINTY FOR THE MEAN VALUE OF THE ENDPOINTS FOR THE DBA SOURCE TERM

MEAN VAL	REF	MEDIAN	5 % 75 %	95 % FAC3	FAC1 	10 % 95%/REF	90 %	FAC2	25 %
CGIOD2	9.57E+02	1.55E+03	4.52E+02	2.98E+03	6.60E+00	5.70E+02	2.66E+03	4.67E+00	1.17E+03
CGIOD3	9.98E+01	9.38E+01	3.34E+01	1.57E+02	4.70E+00	4.32E+01	1.52E+02	3.51E+00	6.60E+01
CGIOD4	6.31E+00	3.94E+00	6.10E-01	8.14E+00	1.34E+01	7.52E-01	7.08E+00	9.41E+00	1.47E+00
CGCAE2	4.89E+01	9.85E+01	9.41E+00	3.58E+02	3.80E+01	1.76E+01	3.39E+02	1.93E+01	4.36E+01
CGCAE3	6.58E+00	1.31E+01	1.09E+00	2.46E+01	2.26E+01	2.44E+00	2.34E+01	9.58E+00	5.08E+00
CGCAE4	8.34E-01	5.83E-01	1.68E-01	1.43E+00	8.50E+00	2.42E-01	1.28E+00	5.27E+00	3.58E-01
CAIOD2	8.62E+04	1.34E+05	1.64E+04	6.30E+05	3.83E+01	2.14E+04	4.89E+05	2.28E+01	3.45E+04
CAIOD3	8.30E+03	8.64E+03	6.23E+02	5.46E+04	8.76E+01	9.50E+02	3.81E+04	4.01E+01	1.74E+03
CAIOD4	4.37E+02	2.61E+02	8.79E+00	1.71E+03	1.94E+02	1.71E+01	1.28E+03	7.47E+01	4.06E+01
CACAE2	2.87E+04	4.26E+04	1.66E+04	1.41E+05	8.52E+00	1.99E+04	1.18E+05	5.90E+00	2.57E+04
CACAE3	2.60E+03	3.57E+03	1.06E+03	1.49E+04	1.40E+01	1.36E+03	1.09E+04	8.04E+00	2.01E+03
CACAE4	1.81E+02	1.50E+02	2.57E+01	4.94E+02	1.92E+01	3.80E+01	3.37E+02	8.88E+00	6.20E+01
DLCMED2	1.63E-05	2.68E-05	4.68E-06	8.87E-05	1.89E+01	6.60E-06	7.91E-05	1.20E+01	1.28E-05
DLCMED3	2.36E-06	3.97E-06	6.30E-07	6.80E-06	1.08E+01	9.94E-07	6.35E-06	6.39E+00	1.72E-06
DLCMED4	2.75E-07	1.78E-07	6.55E-08	4.68E-07	7.14E+00	9.13E-08	3.73E-07	4.09E+00	1.24E-07
DLCMBM2	1.45E-05	2.43E-05	2.94E-06	8.36E-05	2.84E+01	4.98E-06	7.55E-05	1.52E+01	1.03E-05
DLCMBM3	1.97E-06	3.53E-06	3.48E-07	6.33E-06	1.82E+01	6.89E-07	5.77E-06	8.37E+00	1.49E-06
DLCMBM4	2.48E-07	1.64E-07	5.59E-08	4.48E-07	8.02E+00	7.49E-08	3.59E-07	4.79E+00	1.04E-07
DLCMTH2	4.18E-05	5.89E-05	2.83E-05	1.30E-04	4.60E+00	3.09E-05	1.17E-04	3.79E+00	3.94E-05
DLCMTH3	8.56E-06	8.45E-06	4.51E-06	1.50E-05	3.34E+00	5.42E-06	1.30E-05	2.39E+00	6.65E-06
DLCMTH4	6.67E-07	4.15E-07	1.92E-07	8.44E-07	4.39E+00	2.03E-07	6.97E-07	3.42E+00	2.97E-07
DLOUED2	2.93E-05	5.67E-05	1.32E-05	1.87E-04	1.41E+01	1.56E-05	1.65E-04	1.06E+01	3.14E-05
DLOUED3	3.76E-06	6.88E-06	1.31E-06	1.19E-05	9.09E+00	1.64E-06	1.12E-05	6.81E+00	3.01E-06
DLOUED4	4.46E-07	2.95E-07	1.04E-07	7.55E-07	7.23E+00	1.45E-07	6.31E-07	4.34E+00	1.96E-07
DLOUBM2	2.52E-05	4.78E-05	6.77E-06	1.71E-04	2.52E+01	9.74E-06	1.58E-04	1.63E+01	2.33E-05
DLOUBM3	3.32E-06	6.35E-06	6.37E-07	1.13E-05	1.78E+01	1.25E-06	1.04E-05	8.32E+00	2.60E-06
DLOUBM4	4.15E-07	2.79E-07	9.33E-08	7.34E-07	7.87E+00	1.25E-07	6.12E-07	4.90E+00	1.78E-07
DLOUTH2	9.49E-05	1.87E-04	6.95E-05	3.43E-04	4.94E+00	9.16E-05	3.17E-04	3.46E+00	1.35E-04
DLOUTH3	1.06E-05	1.30E-05	7.05E-06	2.15E-05	3.05E+00	8.33E-06	2.05E-05	2.46E+00	9.97E-06
DLOUTH4	8.73E-07	5.52E-07	2.76E-07	1.14E-06	4.14E+00	3.24E-07	9.77E-07	3.02E+00	4.15E-07
ARELIN	.00E+00	0.00E+00	0.00E+00	0.00E+00	9.99E+99	0.00E+00	0.00E+00	9.99E+99	0.00E+00
ARELTIM	.00E+00	0.00E+00	0.00E+00	0.00E+00	9.99E+99	0.00E+00	0.00E+00	9.99E+99	0.00E+00
AFBIMIL	6.45E+00	7.86E+00	3.23E+00	1.39E+01	4.31E+00	4.80E+00	1.22E+01	2.54E+00	6.27E+00
AFBIGRA	1.80E-01	6.32E-01	9.22E-03	1.86E+00	2.02E+02	1.75E-02	1.66E+00	9.49E+01	1.14E-01
AFBIVEG	1.48E+01	1.93E+01	7.30E+00	3.64E+01	4.98E+00	1.06E+01	2.94E+01	2.77E+00	1.57E+01
AFBIBEE	5.63E-01	1.38E+00	2.26E-01	2.66E+00	1.18E+01	4.40E-01	2.46E+00	5.60E+00	8.02E-01
AFBTMIL	5.37E-01	7.62E-01	2.96E-01	1.22E+00	4.13E+00	4.16E-01	1.08E+00	2.60E+00	6.10E-01
AFBTGRA	3.33E-01	1.16E+00	1.78E-02	3.48E+00	1.96E+02	2.98E-02	3.04E+00	1.02E+02	1.96E-01
AFBTVEG	3.86E-01	6.77E-01	2.67E-01	1.26E+00	4.70E+00	3.47E-01	1.05E+00	3.02E+00	5.20E-01
AFBTBEE	1.77E-01	5.46E-01	3.59E-02	1.76E+00	4.89E+01	6.02E-02	1.57E+00	2.61E+01	1.57E-01

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RLCMMT2	7.82E-07	1.30E-06		2.19E-07	4.29E-06	1.96E+01		3.01E-07	3.84E-06	1.28E+01		6.30E-07
				2.90E-06	4.60E+00			5.49E+00				
RLCMMT3	1.11E-07	1.90E-07		2.87E-08	3.29E-07	1.15E+01		4.59E-08	3.05E-07	6.64E+00		8.25E-08
				2.63E-07	3.19E+00			2.97E+00				
RLCMMT4	1.32E-08	8.57E-09		3.13E-09	2.28E-08	7.28E+00		4.25E-09	1.82E-08	4.27E+00		5.93E-09
				1.30E-08	2.19E+00			1.73E+00				
RLCMBM2	7.49E-08	1.25E-07		1.52E-08	4.31E-07	2.84E+01		2.57E-08	3.90E-07	1.52E+01		5.29E-08
				2.95E-07	5.57E+00			5.76E+00				
RLCMBM3	1.02E-08	1.82E-08		1.80E-09	3.26E-08	1.82E+01		3.56E-09	2.98E-08	8.37E+00		7.68E-09
				2.51E-08	3.27E+00			3.21E+00				
RLCMBM4	1.28E-09	8.45E-10		2.88E-10	2.31E-09	8.02E+00		3.87E-10	1.85E-09	4.79E+00		5.37E-10
				1.33E-09	2.49E+00			1.81E+00				
RLCMTH2	7.40E-08	1.04E-07		5.01E-08	2.30E-07	4.60E+00		5.47E-08	2.07E-07	3.79E+00		6.97E-08
				1.60E-07	2.30E+00			3.11E+00				
RLCMTH3	1.52E-08	1.49E-08		7.98E-09	2.66E-08	3.34E+00		9.60E-09	2.29E-08	2.39E+00		1.18E-08
				1.83E-08	1.55E+00			1.76E+00				
RLCMTH4	1.18E-09	7.34E-10		3.40E-10	1.49E-09	4.39E+00		3.60E-10	1.23E-09	3.42E+00		5.25E-10
				1.03E-09	1.96E+00			1.27E+00				
RLOUMT2	1.39E-06	2.68E-06		5.93E-07	8.97E-06	1.51E+01		6.75E-07	8.08E-06	1.20E+01		1.45E-06
				6.57E-06	4.53E+00			6.43E+00				
RLOUMT3	1.80E-07	3.33E-07		5.84E-08	5.83E-07	1.00E+01		7.76E-08	5.41E-07	6.98E+00		1.47E-07
				4.60E-07	3.13E+00			3.24E+00				
RLOUMT4	2.16E-08	1.45E-08		5.07E-09	3.70E-08	7.29E+00		6.94E-09	3.09E-08	4.45E+00		9.43E-09
				2.20E-08	2.33E+00			1.71E+00				
RLOUBM2	1.30E-07	2.47E-07		3.50E-08	8.81E-07	2.52E+01		5.03E-08	8.17E-07	1.63E+01		1.20E-07
				6.62E-07	5.50E+00			6.78E+00				
RLOUBM3	1.71E-08	3.28E-08		3.29E-09	5.83E-08	1.78E+01		6.45E-09	5.37E-08	8.32E+00		1.34E-08
				4.59E-08	3.43E+00			3.40E+00				
RLOUTH4	1.55E-09	9.78E-10		4.88E-10	2.02E-09	4.14E+00		5.73E-10	1.73E-09	3.02E+00		7.34E-10
				1.48E-09	2.02E+00			1.31E+00				
CDCMED	1.04E+01	1.44E+01		2.76E+00	2.03E+01	7.37E+00		3.85E+00	1.99E+01	5.16E+00		6.80E+00
				1.75E+01	2.58E+00			1.95E+00				
MEAN VAL	REF	MEDIAN		5 %	95 %	FAC1		10 %	90 %	FAC2		25 %
				75 %	FAC3			95%/REF				
-----												
CDCMBM	9.11E+00	1.33E+01		1.67E+00	1.93E+01	1.16E+01		2.91E+00	1.80E+01	6.19E+00		5.69E+00
				1.61E+01	2.83E+00			2.12E+00				
CDCMTH	3.09E+01	2.76E+01		1.48E+01	4.30E+01	2.90E+00		1.99E+01	4.00E+01	2.01E+00		2.32E+01
				3.38E+01	1.45E+00			1.39E+00				
PLCMMT	4.96E-01	6.93E-01		1.23E-01	9.86E-01	8.00E+00		1.84E-01	9.52E-01	5.16E+00		3.19E-01
				8.46E-01	2.65E+00			1.99E+00				
PLCMBM	4.70E-02	6.87E-02		8.63E-03	9.97E-02	1.16E+01		1.50E-02	9.31E-02	6.19E+00		2.94E-02
				8.33E-02	2.83E+00			2.12E+00				
PLCMTH	5.48E-02	4.89E-02		2.63E-02	7.62E-02	2.90E+00		3.52E-02	7.08E-02	2.01E+00		4.11E-02
				5.98E-02	1.45E+00			1.39E+00				

## 1.8 Extent of the uncertainty for the 95th percentile of the endpoints for the DBA source term

C.19

95 %-FRT	REF	MEDIAN	5 % 75 %	95 % FAC3	FAC1 	10 % 95%/REF	90 %	FAC2	25 %
CGIOD2	4.37E+03	4.57E+03	3.16E+02	1.82E+04	5.75E+01	6.46E+02	1.62E+04	2.51E+01	2.04E+03
			9.55E+03	4.68E+00		4.17E+00			
CGIOD3	4.17E+02	2.45E+02	3.24E+01	8.51E+02	2.63E+01	4.07E+01	7.59E+02	1.86E+01	1.05E+02
			4.37E+02	4.17E+00		2.04E+00			
CGIOD4	1.62E+01	5.62E+00	7.08E-01	2.69E+01	3.80E+01	1.12E+00	2.57E+01	2.29E+01	2.04E+00
			2.04E+01	1.00E+01		1.66E+00			
CGCAE2	1.38E+02	2.34E+02	4.47E+00	2.57E+03	5.75E+02	1.15E+01	2.00E+03	1.74E+02	5.75E+01
			1.10E+03	1.91E+01		1.86E+01			
CGCAE3	1.95E+01	2.75E+01	1.45E+00	1.29E+02	8.91E+01	2.51E+00	1.10E+02	4.37E+01	8.91E+00
			7.94E+01	8.91E+00		6.61E+00			
CGCAE4	2.14E+00	1.70E+00	6.31E-02	4.79E+00	7.59E+01	2.63E-01	4.27E+00	1.62E+01	9.33E-01

CAIOD2	3.89E+05	3.02E+05	4.68E+04	2.34E+06	5.01E+01	2.24E+00	8.32E+04	1.78E+06	2.14E+01	1.35E+05
CAIOD3	3.55E+04	2.69E+04	1.02E+03	1.62E+05	1.58E+02	6.03E+00	1.41E+03	1.20E+05	8.51E+01	6.61E+03
CAIOD4	1.20E+03	5.50E+02	2.00E+01	5.75E+03	2.88E+02	4.57E+00	2.63E+01	4.79E+03	1.82E+02	1.15E+02
CACAE2	7.59E+04	1.20E+05	2.82E+04	3.80E+05	1.35E+01	4.79E+00	3.39E+04	3.16E+05	9.33E+00	6.46E+04
CACAE3	1.10E+04	1.02E+04	4.27E+03	3.31E+04	7.76E+00	5.01E+00	5.01E+03	2.14E+04	4.27E+00	6.76E+03
CACAE4	8.13E+02	4.37E+02	4.07E+01	1.48E+03	3.63E+01	3.02E+00	8.51E+01	1.38E+03	1.62E+01	2.14E+02
DLCMED2	4.57E-05	6.17E-05	4.79E-06	6.61E-04	1.38E+02	1.45E+01	1.20E-05	4.47E-04	3.72E+01	2.51E-05
DLCMED3	6.92E-06	9.12E-06	1.00E-06	3.02E-05	3.02E+01	1.82E-06	2.40E-05	1.32E+01	3.47E-06	
DLCMED4	6.76E-07	5.50E-07	5.50E-08	1.20E-06	2.19E+01	4.37E+00	1.26E-07	1.10E-06	8.71E+00	3.09E-07
DLCMBM2	3.24E-05	4.57E-05	1.58E-06	6.17E-04	3.89E+02	3.98E-06	4.17E-04	1.05E+02	1.38E-05	
DLCMBM3	5.37E-06	7.08E-06	4.90E-07	2.69E-05	5.50E+01	1.91E+01	8.91E-07	2.19E-05	2.45E+01	2.19E-06
DLCMBM4	5.50E-07	4.90E-07	2.40E-08	1.12E-06	4.68E+01	7.76E-08	1.02E-06	1.32E+01	2.45E-07	
DLCMTH2	2.19E-04	3.16E-04	6.03E-05	9.55E-04	1.58E+01	2.04E+00	8.32E-05	7.59E-04	9.12E+00	1.74E-04
DLCMTH3	3.02E-05	2.82E-05	4.47E-06	6.61E-05	1.48E+01	2.19E+00	1.02E-05	5.75E-05	5.62E+00	1.78E-05
DLCMTH4	1.86E-06	1.26E-06	1.07E-07	2.82E-06	2.63E+01	1.51E+00	3.24E-07	2.69E-06	8.32E+00	6.92E-07
DLOUED2	8.32E-05	1.38E-04	1.10E-05	1.12E-03	1.02E+02	1.35E+01	1.95E-05	9.55E-04	4.90E+01	4.47E-05
DLOUED3	1.15E-05	1.58E-05	1.66E-06	5.50E-05	3.31E+01	3.02E-06	5.01E-05	1.66E+01	6.03E-06	
DLOUED4	1.20E-06	9.55E-07	9.33E-08	2.19E-06	2.34E+01	4.79E+00	2.00E-07	1.00E+01	5.37E-07	
DLOUBM2	6.76E-05	9.33E-05	5.25E-06	1.05E-03	2.00E+02	1.82E+00	1.20E-05	8.71E-04	7.24E+01	3.09E-05
DLOUBM3	9.55E-06	1.35E-05	1.02E-06	5.25E-05	5.13E+01	5.50E+00	1.86E-06	4.68E-05	2.51E+01	4.37E-06
DLOUBM4	1.07E-06	9.12E-07	4.68E-08	2.09E-06	4.47E+01	5.01E+00	1.38E-07	1.95E-06	1.41E+01	4.47E-07
DLOUTH2	3.31E-04	6.17E-04	7.76E-05	2.00E-03	2.57E+01	1.95E+00	1.23E-04	1.74E-03	1.41E+01	2.51E-04
DLOUTH3	3.80E-05	4.79E-05	6.03E-06	9.55E-05	1.58E+01	6.03E+00	1.41E-05	8.71E-05	6.17E+00	2.40E-05
DLOUTH4	2.57E-06	1.91E-06	1.66E-07	4.07E-06	2.45E+01	2.51E+00	5.01E-07	3.72E-06	7.41E+00	1.12E-06
ARELIN	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.99E+99	1.58E+00	0.00E+00	0.00E+00	9.99E+99	0.00E+00
ARELTIM	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.99E+99	9.99E+99	0.00E+00	9.99E+99	0.00E+00	0.00E+00
AFBIMIL	3.02E+01	3.09E+01	1.41E+01	5.75E+01	4.07E+00	9.99E+99	1.78E+01	5.25E+01	2.95E+00	2.29E+01
AFBIGRA	1.23E+00	3.47E+00	0.00E+00	7.24E+00	9.99E+99	1.91E+00	1.03E-01	7.08E+00	6.85E+01	8.13E-01
AFBIVEG	5.13E+01	4.90E+01	2.29E+01	1.12E+02	4.90E+00	5.89E+00	3.09E+01	8.91E+01	2.88E+00	3.79E+01
AFBIBEE	2.63E+00	5.89E+00	1.38E+00	1.20E+01	8.71E+00	2.19E+00	2.34E+00	9.55E+00	4.07E+00	3.09E+00
AFBTMIL	2.51E+00	2.69E+00	1.26E+00	4.90E+00	3.89E+00	4.57E+00	1.55E+00	4.37E+00	2.82E+00	1.95E+00
AFBTGRA	2.29E+00	6.92E+00	0.00E+00	1.38E+01	9.99E+99	1.95E+00	1.66E-01	1.26E+01	7.60E+01	1.51E+00
AFBTVEG	1.10E+00	1.51E+00	8.51E-01	2.88E+00	3.39E+00	6.03E+00	9.55E-01	2.63E+00	2.75E+00	1.15E+00
AFBTBEE	1.10E+00	3.16E+00	2.45E-01	6.76E+00	2.75E+01	2.63E+00	2.82E-01	6.17E+00	2.19E+01	7.41E-01
RLCMMT2	2.09E-06	2.82E-06	2.00E-07	3.24E-05	1.62E+02	6.17E+00	5.25E-07	2.19E-05	4.17E+01	1.05E-06
RLCMMT3	3.16E-07	4.17E-07	4.79E-08	1.45E-06	3.02E+01	1.55E+01	8.13E-08	1.15E-06	1.41E+01	1.55E-07
RLCMMT4	3.16E-08	2.63E-08	2.63E-09	5.75E-08	2.19E+01	4.57E+00	5.75E-09	5.37E-08	9.33E+00	1.41E-08
RLCMBM2	1.66E-07	2.34E-07	8.13E-09	3.24E-06	3.98E+02	1.82E+00	2.04E-08	2.14E-06	1.05E+02	7.08E-08
RLCMBM3	2.82E-08	3.72E-08	2.57E-09	1.38E-07	5.37E+01	1.95E+01	4.57E-09	1.12E-07	2.45E+01	1.12E-08
RLCMBM4	2.82E-09	2.51E-09	1.23E-10	5.75E-09	4.68E+01	4.90E+00	3.98E-10	5.25E-09	1.32E+01	1.26E-09
RLCMTH2	3.89E-07	5.62E-07	1.07E-07	1.70E-06	1.58E+01	2.04E+00	1.48E-07	1.35E-06	9.12E+00	3.09E-07
RLCMTH3	5.37E-08	5.01E-08	7.76E-09	1.17E-07	1.51E+01	4.37E+00	1.82E-08	1.00E-07	5.50E+00	3.16E-08
RLCMTH4	3.24E-09	2.19E-09	1.91E-10	5.01E-09	2.63E+01	2.19E+00	5.75E-10	4.68E-09	8.13E+00	1.23E-09
RLOUMT2	3.89E-06	6.17E-06	5.13E-07	5.50E-05	1.07E+02	1.55E+00	8.71E-07	4.57E-05	5.25E+01	2.19E-06
RLOUMT3	5.37E-07	7.59E-07	7.94E-08	2.63E-06	3.31E+01	1.41E+01	1.38E-07	2.45E-06	1.78E+01	2.75E-07
RLOUMT4	5.89E-08	4.57E-08	4.47E-09	1.07E-07	2.40E+01	4.90E+00	9.33E-09	9.77E-08	1.05E+01	2.63E-08

RLOUBM2	3.47E-07	4.79E-07		2.69E-08	5.50E-06	2.04E+02		6.17E-08	4.47E-06	7.24E+01		1.62E-07
				7.41E-08	2.82E+00			1.82E+00				
				2.40E-06	1.48E+01			1.58E+01				
RLOUBM4	5.50E-09	3.72E-09		0.00E+00	1.07E-08	9.99E+99		0.00E+00	1.00E-08	9.99E+99		1.86E-09
				7.08E-09	3.80E+00			1.95E+00				
RLOUTH2	5.89E-07	1.07E-06		1.38E-07	3.55E-06	2.57E+01		2.19E-07	3.09E-06	1.41E+01		4.47E-07
				2.40E-06	5.37E+00			6.03E+00				
RLOUBM3	4.90E-08	6.92E-08		2.04E-09	2.69E-07	1.32E+02		6.61E-09	2.45E-07	3.72E+01		2.29E-08
				1.78E-07	7.76E+00			5.50E+00				

C.20

MEAN VAL	REF	MEDIAN		5 %	95 %	FAC1		10 %	90 %	FAC2		25 %
				75 %	FAC3			95%/REF				
RLOUTH3	6.76E-08	8.32E-08		1.07E-08	1.70E-07	1.58E+01		2.51E-08	1.55E-07	6.17E+00		4.27E-08
				1.15E-07	2.69E+00			2.51E+00				
RLOUTH4	4.57E-09	3.09E-09		0.00E+00	7.08E-09	9.99E+99		0.00E+00	6.46E-09	9.99E+99		1.45E-09
				4.37E-09	3.02E+00			1.55E+00				
CDCMED	3.39E+01	4.07E+01		8.91E+00	7.08E+01	7.94E+00		1.17E+01	6.61E+01	5.62E+00		2.14E+01
				5.13E+01	2.40E+00			2.09E+00				
CDCMBM	3.16E+01	3.80E+01		7.41E+00	6.61E+01	8.91E+00		1.02E+01	6.03E+01	5.89E+00		1.91E+01
				4.90E+01	2.57E+00			2.09E+00				
CDCMTH	8.91E+01	7.59E+01		4.37E+01	1.17E+02	2.69E+00		5.50E+01	1.15E+02	2.09E+00		6.31E+01

				9.12E+01	1.45E+00		1.32E+00						
PLCMMT	1.62E+00	1.95E+00		4.37E-01	3.47E+00	7.94E+00		5.62E-01	3.16E+00	5.62E+00		1.02E+00	
				2.51E+00	2.45E+00		2.14E+00						
PLCMBM	1.62E-01	1.95E-01		3.80E-02	3.47E-01	9.12E+00		5.25E-02	3.16E-01	6.03E+00		9.77E-02	
				2.51E-01	2.57E+00		2.14E+00						
PLCMTH	1.58E-01	1.35E-01		7.76E-02	2.09E-01	2.69E+00		9.77E-02	2.04E-01	2.09E+00		1.12E-01	
				1.62E-01	1.45E+00		1.32E+00						

# EXTENT OF THE UNCERTAINTY FOR THE 99TH PERCENTILE OF THE ENDPOINTS FOR THE DBA SOURCE TERM

99 %-FRT	REF	MEDIAN	5 % 75 %	95 % FAC3	FAC1 	10 % 95%/REF	90 %	FAC2	25 %
CGIOD2	2.63E+04	3.80E+04	7.41E+03 4.90E+04	6.46E+04 2.24E+00	8.71E+00 	1.26E+04 2.45E+00	6.03E+04	4.79E+00	2.19E+04
CGIOD3	2.69E+03	2.04E+03	6.03E+02 2.63E+03	3.63E+03 1.86E+00	6.03E+00 	9.12E+02 1.35E+00	3.31E+03	3.63E+00	1.41E+03
CGIOD4	1.70E+02	6.76E+01	1.15E+01 1.17E+02	1.55E+02 3.98E+00	1.35E+01 	1.38E+01 9.12E-01	1.38E+02	1.00E+01	2.95E+01
CGCAE2	1.29E+03	2.75E+03	1.41E+02 5.89E+03	8.51E+03 8.91E+00	6.03E+01 	3.16E+02 6.61E+00	7.94E+03	2.51E+01	6.61E+02
CGCAE3	1.45E+02	2.57E+02	1.58E+01 3.89E+02	5.50E+02 4.57E+00	3.47E+01 	5.01E+01 3.80E+00	4.79E+02	9.55E+00	8.51E+01
CGCAE4	1.82E+01	1.26E+01	2.29E+00 1.86E+01	2.75E+01 2.45E+00	1.20E+01 	4.37E+00 1.51E+00	2.29E+01	5.25E+00	7.59E+00
CAIOD2	2.24E+06	2.69E+06	3.55E+05 7.24E+06	1.38E+07 9.33E+00	3.89E+01 	4.68E+05 6.17E+00	1.10E+07	2.34E+01	7.76E+05
CAIOD3	2.09E+05	1.78E+05	1.48E+04 4.17E+05	1.17E+06 1.20E+01	7.94E+01 	1.78E+04 5.62E+00	8.13E+05	4.57E+01	3.47E+04
CAIOD4	1.20E+04	5.89E+03	1.48E+02 1.78E+04	3.39E+04 2.45E+01	2.29E+02 	2.69E+02 2.82E+00	2.57E+04	9.55E+01	7.24E+02
CACAE2	9.33E+05	9.77E+05	2.51E+05 1.66E+06	3.31E+06 3.02E+00	1.32E+01 	3.80E+05 3.55E+00	2.69E+06	7.08E+00	5.50E+05
CACAE3	5.89E+04	6.92E+04	1.48E+04 1.15E+05	2.51E+05 2.88E+00	1.70E+01 	2.34E+04 4.27E+00	1.95E+05	8.32E+00	3.98E+04
CACAE4	3.98E+03	2.88E+03	4.57E+02 4.79E+03	1.07E+04 3.24E+00	2.34E+01 	7.08E+02 2.69E+00	6.46E+03	9.12E+00	1.48E+03
DLCMED2	4.57E-04	7.59E-04	7.94E-05 1.74E-03	2.14E-03 7.59E+00	2.69E+01 	1.26E-04 4.68E+00	2.04E-03	1.62E+01	2.29E-04
DLCMED3	4.79E-05	7.08E-05	1.12E-05 1.07E-04	1.58E-04 3.63E+00	1.41E+01 	1.78E-05 3.31E+00	1.38E-04	7.76E+00	2.95E-05
DLCMED4	5.25E-06	3.39E-06	1.05E-06 5.13E-06	8.71E-06 2.14E+00	8.32E+00 	1.35E-06 1.66E+00	6.61E-06	4.90E+00	2.40E-06
DLCMBM2	3.98E-04	7.08E-04	4.90E-05 1.66E-03	2.04E-03 8.91E+00	4.17E+01 	1.02E-04 5.13E+00	1.95E-03	1.91E+01	1.86E-04
DLCMBM3	3.89E-05	6.46E-05	5.62E-06 9.77E-05	1.45E-04 4.07E+00	2.57E+01 	1.20E-05 3.72E+00	1.29E-04	1.07E+01	2.40E-05
DLCMBM4	4.68E-06	3.16E-06	5.89E-07 4.68E-06	8.13E-06 2.34E+00	1.38E+01 	1.07E-06 1.74E+00	6.17E-06	5.75E+00	2.00E-06
DLCMTH2	9.12E-04	1.26E-03	6.61E-04 1.95E-03	2.69E-03 2.29E+00	4.07E+00 	7.24E-04 2.95E+00	2.40E-03	3.31E+00	8.51E-04
DLCMTH3	1.95E-04	1.95E-04	9.55E-05 2.51E-04	3.39E-04 1.74E+00	3.55E+00 	1.26E-04 1.74E+00	3.09E-04	2.45E+00	1.45E-04
DLCMTH4	1.41E-05	8.51E-06	3.31E-06 1.07E-05	1.66E-05 1.82E+00	5.01E+00 	3.98E-06 1.17E+00	1.38E-05	3.47E+00	5.89E-06
DLOUED2	8.51E-04	1.51E-03	2.34E-04 2.82E-03	4.47E-03 4.90E+00	1.91E+01 	3.63E-04 5.25E+00	4.27E-03	1.17E+01	5.75E-04
DLOUED3	7.76E-05	1.32E-04	1.86E-05 1.82E-04	2.45E-04 3.63E+00	1.32E+01 	2.95E-05 3.16E+00	2.40E-04	8.13E+00	5.01E-05
DLOUED4	8.51E-06	5.89E-06	1.62E-06 8.51E-06	1.48E-05 2.09E+00	9.12E+00 	2.29E-06 1.74E+00	1.15E-05	5.01E+00	4.07E-06
DLOUBM2	6.76E-04	1.29E-03	1.32E-04 2.63E-03	4.37E-03 7.41E+00	3.31E+01 	1.86E-04 6.46E+00	3.98E-03	2.14E+01	3.55E-04
DLOUBM3	6.61E-05	1.17E-04	1.15E-05 1.66E-04	2.40E-04 3.98E+00	2.09E+01 	2.40E-05 3.63E+00	2.24E-04	9.33E+00	4.17E-05
DLOUBM4	8.13E-06	5.50E-06	1.26E-06 8.13E-06	1.45E-05 2.24E+00	1.15E+01 	2.04E-06 1.78E+00	1.10E-05	5.37E+00	3.63E-06
DLOUTH2	2.45E-03	4.37E-03	1.70E-03 5.75E-03	8.13E-03 2.04E+00	4.79E+00 	2.04E-03 3.31E+00	7.08E-03	3.47E+00	2.82E-03
DLOUTH3	2.29E-04	2.63E-04	1.26E-04 3.47E-04	5.01E-04 1.86E+00	3.98E+00 	1.58E-04 2.19E+00	4.47E-04	2.82E+00	1.86E-04
DLOUTH4	1.91E-05	1.12E-05	4.79E-06 1.48E-05	2.29E-05 1.78E+00	4.79E+00 	6.03E-06 1.20E+00	2.00E-05	3.31E+00	8.32E-06
ARELIN	0.00E+00	0.00E+00	0.00E+00 0.00E+00	0.00E+00 9.99E+99	9.99E+99 	0.00E+00 9.99E+99	0.00E+00	9.99E+99	0.00E+00
ARELTIM	0.00E+00	0.00E+00	0.00E+00 0.00E+00	0.00E+00 9.99E+99	9.99E+99 	0.00E+00 9.99E+99	0.00E+00	9.99E+99	0.00E+00
AFBIMIL	4.90E+01	5.01E+01	2.00E+01 7.08E+01	1.10E+02 2.24E+00	5.50E+00 	2.28E+01 2.24E+00	1.00E+02	4.38E+00	3.16E+01
AFBIGRA	2.04E+00	5.50E+00	1.03E-01 9.12E+00	2.36E+01 6.31E+00	2.28E+02 	2.36E-01 1.15E+01	1.38E+01	5.84E+01	1.45E+00
AFBIVEG	9.22E+01	7.41E+01	3.47E+01 1.20E+02	1.78E+02 2.24E+00	5.13E+00 	3.72E+01 1.93E+00	1.70E+02	4.58E+00	5.37E+01
AFBIBEE	4.07E+00	7.59E+00	2.40E+00 1.48E+01	2.40E+01 3.31E+00	1.00E+01 	3.24E+00 5.89E+00	2.12E+01	6.54E+00	4.47E+00
AFBTMIL	4.07E+00	4.17E+00	1.87E+00 5.75E+00	8.91E+00 2.14E+00	4.76E+00 	2.00E+00 2.19E+00	8.13E+00	4.07E+00	2.69E+00
AFBTGRA	4.07E+00	9.77E+00	1.66E-01 1.62E+01	3.47E+01 5.62E+00	2.09E+02 	3.14E-01 8.51E+00	2.75E+01	8.76E+01	2.88E+00
AFBTVEG	1.88E+00	2.19E+00	1.23E+00 3.16E+00	6.17E+00 1.86E+00	5.01E+00 	1.29E+00 3.28E+00	4.27E+00	3.31E+00	1.70E+00
AFBTBEE	1.86E+00	4.47E+00	3.55E-01 7.76E+00	1.58E+01 6.03E+00	4.47E+01 	4.90E-01 8.51E+00	1.02E+01	2.09E+01	1.29E+00

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RLCMMT2	2.19E-05	3.63E-05		3.63E-06	1.02E-04	2.82E+01		6.03E-06	1.00E-04	1.66E+01		1.07E-05
				8.51E-05	7.94E+00			4.68E+00				
RLCMMT3	2.19E-06	3.47E-06		4.68E-07	7.59E-06	1.62E+01		8.32E-07	6.61E-06	7.94E+00		1.38E-06
				5.13E-06	3.72E+00			3.47E+00				
RLCMMT4	2.51E-07	1.62E-07		4.90E-08	4.17E-07	8.51E+00		6.46E-08	3.16E-07	4.90E+00		1.12E-07
				2.40E-07	2.14E+00			1.66E+00				
RLCMBM2	2.09E-06	3.72E-06		2.51E-07	1.07E-05	4.27E+01		5.25E-07	1.02E-05	1.95E+01		9.55E-07
				8.71E-06	9.12E+00			5.13E+00				
RLCMBM3	2.00E-07	3.31E-07		2.88E-08	7.41E-07	2.57E+01		6.31E-08	6.61E-07	1.05E+01		1.23E-07
				5.01E-07	4.07E+00			3.72E+00				
RLCMBM4	2.40E-08	1.62E-08		3.02E-09	4.17E-08	1.38E+01		5.50E-09	3.16E-08	5.75E+00		1.02E-08
				2.45E-08	2.40E+00			1.74E+00				
RLCMT2	1.62E-06	2.24E-06		1.17E-06	4.79E-06	4.07E+00		1.29E-06	4.27E-06	3.31E+00		1.51E-06
				3.47E-06	2.29E+00			2.95E+00				
RLCMT3	3.47E-07	3.47E-07		1.66E-07	6.03E-07	3.63E+00		2.24E-07	5.50E-07	2.45E+00		2.57E-07
				4.47E-07	1.74E+00			1.74E+00				
RLCMT4	2.51E-08	1.51E-08		5.89E-09	2.95E-08	5.01E+00		7.08E-09	2.45E-08	3.47E+00		1.02E-08
				1.86E-08	1.82E+00			1.17E+00				
RLOUMT2	3.98E-05	7.24E-05		1.02E-05	2.24E-04	2.19E+01		1.62E-05	2.09E-04	1.29E+01		2.69E-05
				1.38E-04	5.13E+00			5.62E+00				
RLOUMT3	3.72E-06	6.31E-06		8.13E-07	1.20E-05	1.48E+01		1.45E-06	1.15E-05	7.94E+00		2.34E-06
				8.91E-06	3.80E+00			3.24E+00				
RLOUMT4	4.17E-07	2.88E-07		7.76E-08	7.24E-07	9.33E+00		1.12E-07	5.62E-07	5.01E+00		1.95E-07
				4.17E-07	2.14E+00			1.74E+00				
RLOUBM2	3.55E-06	6.76E-06		6.76E-07	2.24E-05	3.31E+01		9.77E-07	2.09E-05	2.14E+01		1.86E-06
				1.35E-05	7.24E+00			6.31E+00				
RLOUBM4	4.17E-08	2.82E-08		5.25E-09	7.41E-08	1.41E+01		1.05E-08	5.62E-08	5.37E+00		1.86E-08
				4.27E-08	2.29E+00			1.78E+00				
RLOUTH2	4.37E-06	7.76E-06		3.02E-06	1.45E-05	4.79E+00		3.63E-06	1.23E-05	3.39E+00		5.01E-06
				1.00E-05	2.00E+00			3.31E+00				
RLOUTH3	4.07E-07	4.68E-07		2.24E-07	8.91E-07	3.98E+00		2.82E-07	7.94E-07	2.82E+00		3.31E-07
				6.17E-07	1.86E+00			2.19E+00				
99 %-FRT	REF	MEDIAN		5 %	95 %	FAC1		10 %	90 %	FAC2		25 %
				75 %	FAC3			95%/REF				
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RLOUBM3	3.39E-07	6.03E-07		5.89E-08	1.23E-06	2.09E+01		1.23E-07	1.15E-06	9.33E+00		2.14E-07
				8.71E-07	4.07E+00			3.63E+00				
RLOUTH4	3.39E-08	2.00E-08		8.32E-09	3.98E-08	4.79E+00		1.07E-08	3.55E-08	3.31E+00		1.48E-08
				2.63E-08	1.78E+00			1.17E+00				
CDCMED	4.79E+01	6.03E+01		1.51E+01	1.02E+02	6.76E+00		2.34E+01	9.55E+01	4.07E+00		4.31E+01
				7.59E+01	1.76E+00			2.14E+00				
CDCMBM	4.27E+01	5.62E+01		1.26E+01	1.00E+02	7.94E+00		2.19E+01	9.12E+01	4.17E+00		4.07E+01
				7.24E+01	1.78E+00			2.34E+00				
CDCMTH	1.15E+02	1.12E+02		7.08E+01	1.70E+02	2.40E+00		7.69E+01	1.51E+02	1.97E+00		9.12E+01
				1.38E+02	1.51E+00			1.48E+00				
PLCMMT	2.29E+00	2.95E+00		7.24E-01	5.01E+00	6.92E+00		1.12E+00	4.57E+00	4.07E+00		2.09E+00
				3.72E+00	1.78E+00			2.19E+00				
PLCMBM	2.19E-01	2.88E-01		6.46E-02	5.13E-01	7.94E+00		1.12E-01	4.68E-01	4.17E+00		2.09E-01
				3.72E-01	1.78E+00			2.34E+00				
PLCMT2	2.04E-01	2.00E-01		1.26E-01	3.02E-01	2.40E+00		1.35E-01	2.69E-01	2.00E+00		1.58E-01
				2.45E-01	1.55E+00			1.48E+00				