EUR-18826
FZKA-6312
ISBN 92-894-2088-X
European Communities 2001

Probabilistic Accident Consequence Uncertainty Assessment Using COSYMA:

Overall Uncertainty Analysis

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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 overall analysis of the uncertainty in the predicted consequences of accidental releases reflecting the uncertainty in the values of those input parameters which have been identified as important contributors to the overall uncertainty.

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. Section 1 (Background to the study) and the first part of section 3 are similar in this report and those describing the module analyses.

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.

EXECUTIVE SUMMARY

This report describes the final stages of an analysis of the uncertainty in the predictions of the probabilistic risk assessment (PRA) code, COSYMA. The probability distributions describing the uncertainty on the values of input parameters were obtained using formal techniques of expert judgement; this part of the study was undertaken jointly by the European Commission and the United States Nuclear Regulatory Commission. A full uncertainty analysis of COSYMA would require consideration of many hundreds of uncertain input parameters. This was considered to be unfeasible in a single analysis. Therefore a series of analyses of the uncertainly in different parts of the code was undertaken. Those parameters whose uncertainties make major contributions to the overall uncertainties were identified for each part of the code. A final, overall analysis was then undertaken using the parameters identified in the earlier analyses. This report describes the overall analysis; the earlier stages of the project are described in a series of reports. The complete set of reports on this project is listed in Appendix A.

The main aims of the study can be summarised as:

1 to formulate a state-of-the-art judgement methodology which is capable of finding broad acceptance;
2 to apply the methodology to estimate uncertainties associated with the prediction of the PRA code COSYMA;
3 to provide an input into identifying future R&D priorities.

The study was undertaken for three source terms encompassing a wide range of characteristics of those that have been postulated for Light Water Reactors (LWRs). These were taken from analyses of the Pressurised Water Reactor (PWR) proposed for the Hinkley Point site in the UK. The source terms considered were:

- UK1, a very large release identified as the risk dominant source terms for early health effects:
- CB2, a smaller release which makes a major contribution to the overall risk of late health effects:
- DBA, a design basis release.

COSYMA gives information on a wide variety of consequences of an accident. It was not possible to consider all of these endpoints, and so the study evaluated the uncertainty on a selection of endpoints which can be summarised as follows:

- concentration in air and deposition of iodine-131 and caesium-137 at selected distances
- individual dose integrated to 7 days in bone marrow, thyroid and skin at selected distances
- individual and collective risks of early fatal and non-fatal health effects
- the areas with emergency actions for sheltering, evacuation and distribution of stable iodine tablets
- individual and collective committed effective doses and doses in bone marrow and thyroid
- individual and collective risks of fatal cancers and leukaemia
- the areas and their time integral affected by relocation and by food restrictions.

The calculations of dose and risk were undertaken for a range of patterns of population

behaviour, as considered in licensing procedures in various countries. The study considered potential doses and risks calculated assuming that people are outdoors for the whole period, consequences assuming normal living with no countermeasures and consequences if allowance is made for the effects of countermeasures. The intervention levels adopted for these calculations were based on those suggested by the International Atomic Energy Agency (IAEA) for sheltering, evacuation, iodine tablets and relocation together with the EC levels for food restrictions.

The complete set of endpoints and behaviour patterns could not be considered for each of the three source terms because of the effort that would be required for such a study. Therefore the following set of situations was analysed:

UK1 potential outdoor doses from inhalation and external exposure integrated to 7 days and individual risks of early health effects

UK1 normal living with no countermeasures, for individual doses from inhalation and external exposure integrated to 7 days and the individual and collective risks of early health effects

UK1 with countermeasures, for individual doses from inhalation and external exposure integrated to 7 days and the individual and collective risks of early health effects

CB2 normal living with no countermeasures for individual and collective committed doses and individual and collective risks of late health effects

CB2 with countermeasures, for all endpoints selected

DBA potential outdoor individual committed dose and individual risks of late health effects

DBA with countermeasures for individual and collective committed dose and risks of late health effects, relocation and food restrictions.

Here “potential doses” refers to the calculation of doses outdoors and with no countermeasures; this is adopted as the calculations giving the highest doses that could potentially be received after the accident. “Normal living” refers to the situation with no countermeasures; the calculations include the effects of buildings in reducing exposure, allowing for average behaviour of the population and occupancy of buildings. “With countermeasures” refers to calculations where it is assumed that all members of the population follow the adopted countermeasures strategy, but use the normal living assumptions for other aspects of the calculations.

Four analyses on parts of the code were undertaken to select the parameters for inclusion in the overall analysis. The number of uncertain parameters considered in each of these analyses, and the number selected for the overall analyses, were:

Module	Number of parameters considered	Number identified for overall analysis
Atmospheric dispersion and deposition	28	24
Food chain	162	35
Internal and external dosimetry	159	100
Health effects	27	27
Overall analysis	376	186

The results of a single run of a PRA code are generally presented in terms of the complementary cumulative distribution function (ccdf) which gives the probability that the consequence is greater than a particular value. This analysis considered the uncertainty on the mean value and 95th and 99th percentiles of the distribution. The uncertainty analysis involved running COSYMA many times, and so generated many different estimates of the ccdf and its mean value and percentiles. A probability distribution can be derived from these results for each endpoint and the uncertainty on the predicted consequences is then described by percentiles of that distribution. The uncertainty is generally expressed using the ratio of the 95th to 5th percentile of the uncertainty distribution on the mean value or the specified percentile of the ccdf; this quantity is designated the uncertainty factor in this report.

Some results are presented using diagrams that show the 5% and 95% envelopes of all the ccdfs from the analysis. This presentation distinguishes two forms of uncertainty in determining the probability of exceeding a particular number of effects. The first form of uncertainty reflects the range of atmospheric conditions that could occur at the time of the accident, while the second form of uncertainty reflects the uncertainty on the input parameter values. This form of presentation shows the extent to which the uncertainty could be reduced by increasing knowledge about the most appropriate values for the input parameters; the uncertainty arising from the range of possible atmospheric conditions at the time of the release cannot be reduced.

Some results are also presented as the average of all the ccdfs from the analyses, here termed the “mean curve”. This form of presentation combines the uncertainties from the atmospheric conditions at the time of the accident and from the parameter values and describes the probability of exceeding a particular number of consequences allowing for both forms of uncertainty. However, this form of presentation does not include any information on the effects of reducing the uncertainty on the parameter values.

The study showed that the uncertainty on individual doses to 7 days, for the UK1 and CB2 releases, is generally between factors of about 10 and 100 for bone marrow and thyroid doses, but a few thousand for skin doses. The parameters whose uncertainties make large contributions to the overall uncertainty are those of the atmospheric dispersion model for bone marrow dose, the deposition velocities to skin for the skin dose, and some of the dispersion and deposition and internal dosimetry parameters for the thyroid dose.

The uncertainty on the individual risks of early fatalities, for the UK1 release, increases

considerably with distance, ranging from a factor of about 2 at short distances to a value approaching infinity at larger distances, where doses fall below the threshold for early effects for some values of the input parameters. The parameters whose uncertainties make large contributions to the overall uncertainties are some of those in the lung model together with some of the dispersion and deposition parameters.

The uncertainty on the numbers of early fatalities in the population, for the UK1 release, ranges between about 30 and 60. The parameters whose uncertainties make large contributions to the overall uncertainty depend on the situation (i.e. source term and population behaviour pattern) considered, with the deposition velocity of iodine to skin and the fractions of material deposited in different parts of the lung identified for some situations.

The study found that the uncertainties on the areas with early countermeasures (sheltering, evacuation and iodine tablets), for the CB2 release, are large, with uncertainty factors in the range from about 100 to about 300. To some extent this large uncertainty may reflect the small areas that are predicted to be affected for some values of the input parameters. The parameters whose uncertainties make large contributions to the uncertainty on the sheltering and evacuation areas are some of those in the lung model while those for the area in which iodine prophylaxis is indicated are the deposition velocity of iodine and the breathing rate.

The uncertainty on the extent of the relocation area, for the CB2 source term, was found to be the same as that on the evacuation area. The uncertainty on the time integrated area is smaller, about a factor of 100. The parameters whose uncertainties make large contributions to the overall uncertainty are the deposition parameters for aerosols.

The study showed that the uncertainties on the areas with food restrictions are rather different for the two source terms considered, ranging from about 30 to about 500 for milk, green vegetables and beef, with somewhat larger values for grain where the areas affected are rather small. The uncertainty for the DBA source term, where the affected areas are small, tends to be larger than that for the CB2 source term. The parameters whose uncertainties make large contributions to the overall uncertainty come from the food chain model.

The uncertainty factors on individual committed dose depend to some extent on the organ, population behaviour and source term, with the uncertainty on the effective dose being lower than that on the doses in particular organs. The uncertainty factors lie between about 10 and a few hundred. The parameters whose uncertainties make major contributions to the overall uncertainty also depend on the situation considered, and are different for the two source terms considered. The important uncertainties are those on some of the parameters of the internal dosimetry models, particularly of the lung model, and of the food chain models.

The uncertainty factors on the individual risks of fatal cancers, for the CB2 and DBA releases, range between about 50 and 100, with the uncertainties on the risk coefficients in remainder tissue, thyroid and lung being identified as important contributions to the overall uncertainty. Other parameters from the dispersion, dose or food chain model are also identified as making important contributions in some situations. The uncertainty factors on the individual risks of thyroid cancer and leukaemia are very high, more than a hundred thousand, reflecting the large

uncertainty assigned by the expert panel to the risk coefficients in these organs.

The uncertain factors on the number of late health effects, for the CB2 and DBA releases, and the parameters whose uncertainties make large contributions to the overall uncertainty are similar to those discussed above for the individual risks of late health effects.

The study has identified those parameters whose uncertainties make large contributions to the overall uncertainties for each of the endpoints considered. These findings could be used to determine priorities for future research projects.

The study also considered the extent to which the results could be applied to other situations. The results for effects where there is a threshold (risks of early health effects, extent and duration of countermeasures) are considered likely to be more specific to the situations considered here than are those relating to other effects (doses and risks of late health effects). Results for the endpoints relating to the risk of early health effects and the extent of countermeasures are only available for one source term; those relating to the risk of late health effects are available for two source terms.

ACKNOWLEDGEMENTS

The project team wishes to thank all those people who took part in the expert judgement elicitation process, as members or organisers of the expert panels. The project team also acknowledges a number of useful comments when papers describing the progress on this project have been presented at conferences.

The expert elicitation work and the derivation of distributions on the COSYMA input parameters was partially funded by the European Commission under contract number FI3P-CT92-0023. The module and overall uncertainty analyses were partially funded by the European Commission under contract number FI4P-CT95-0006.

2 BACKGROUND TO THE STUDY

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[1] in the European Union and MACCS[2] 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 have been carried out on predecessors of both programs[3,4,5]. 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 studies, the joint distribution was largely specified by the system developers, rather than experts in the many different fields involved in accident consequence modelling.

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

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 has been 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 were several aspects to the third objective above. The uncertainty has been better quantified because the distributions on the parameter values are determined from formal techniques

of expert judgement. In addition to calculating the uncertainty on the model predictions, the study has also identified the input parameters whose uncertainties make major contributions to the overall uncertainty. This will 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[1]. 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.

This report describes the overall analysis using the parameters that were identified as important in the module analyses. The uncertain parameters identified as important from each of the module analyses are given in Section 2.

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 and so 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, are given in one of the companion reports[6].

Situations considered

Complete uncertainty analyses of the consequences of accidental releases require substantial resources, both in terms of manpower and computer resources. In general an uncertainty analysis could not be undertaken alongside a study to determine risks using "best estimate" values of the parameters. One of the aims of the current study is to determine indicative levels of uncertainty should COSYMA be applied in other situations. This analysis has therefore been undertaken for several combinations of source term and patterns of population behaviour, and for a wide range of the possible endpoints of COSYMA. It was intended that the levels of uncertainty derived from this study would indicate the general levels of uncertainty for other applications of COSYMA in similar situations to the ones considered here.

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[7]. 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[8]. DBA is a design basis accident[9]. 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 2.1 to Table 2.3. Table 2.1 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 countermeasures, and that intervention levels might depend on the situation and scale of accident that occurs. A countermeasures strategy based on the IAEA[10] intervention levels for sheltering, evacuation, iodine tablets and relocation together with the EC levels for banning food[11,12,13] was used. The intervention levels and implementation times used for this study are given in Table 2.4. 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 has 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 2.5; they can be summarised as follows:

- concentration in air and deposition of ^{131}I and ^{137}Cs at selected distances.
- individual dose integrated 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.

The collective health effects were evaluated for a hypothetical site in central Europe, as defined in a recent international intercomparison of reactor accident programs[14].

As stated earlier, the aim of the exercise is 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 extent to which the results of this study can be

applied in other situations is considered in Section 5. 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 Sections 3 and 4 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 giving 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. Further information on the uncertainty in doses over short periods of time was obtained from the analyses for the CB2 source term.

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 concentration in air 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 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 *nth* 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^{th} and 99^{th} percentiles.

The uncertainty analysis involved running COSYMA many times, so that many different values for the various endpoints were obtained. The overall analysis involved 300 runs of COSYMA. 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. In this study, the uncertainty is characterised using the 5th, 10th, 25th, 50th, 75th, 90th and 95th percentiles of the uncertainty distributions on the different parts of the ccdf considered. 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”. These descriptions of the uncertainty are evaluated for the mean value and the 95th and 99th percentiles of the ccdf for each endpoint. 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 obtained. This quantity is termed the “reference uncertainty coefficient”. Results are also presented using a quantity designated the “mean curve”. This is obtained by taking the average of the individual ccdfs and represents the probability of exceeding particular levels of consequences allowing for the probability distributions of the atmospheric conditions and of the parameter values. The quantities used are described in more detail in the “methodology report”.[6]

One of the aims of the reports is to explain the relative magnitude of the uncertainty on different quantities, and identify those parameters whose uncertainties make large contributions to

the overall uncertainty. The explanations concentrate on the results for the mean value and the 99th percentile of the distribution, rather than on the 95th percentile. To some extent this reflects the difficulties in trying to explain the findings for the 95th percentile. The results for the 99th 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 95th 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.

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 was not considered in this main part of this study.

Each of the module analyses and the overall analysis were undertaken using runs of COSYMA considering 144 sequences of conditions selected using cyclic sampling; the same sequences were used in each analysis. The reasons for this choice of sampling scheme are described in the "methodology report"[6] on this study.

A separate, and more limited, study of the uncertainty from meteorological sampling was undertaken as part of the overall analysis. Some results from this study are presented in Section 3, where the variation in the predicted consequences for different sampling schemes is compared with the uncertainties found in the main part of the analysis. The results are presented in more detail in Appendix E.

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Table 2.1 Reactor inventory considered

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

Table 2.2 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[(a)]	La[(b)]	Pu[(c)]
UK1	$9\ 10^{-1}$	$7\ 10^{-3}$	$7\ 10^{-1}$	$5\ 10^{-1}$	$3\ 10^{-1}$	$6\ 10^{-2}$	$2\ 10^{-2}$	$4\ 10^{-3}$	$4\ 10^{-3}$
CB2	$1\ 10^{-2}$	$5\ 10^{-6}$	$2\ 10^{-3}$	$8\ 10^{-3}$	$8\ 10^{-6}$	$8\ 10^{-7}$	$8\ 10^{-7}$	$8\ 10^{-7}$	$3\ 10^{-7}$
DBA[(d)]	$1\ 10^{-7}$	-	$1\ 10^{-6}$	$1\ 10^{-6}$	$1\ 10^{-8}$	$1\ 10^{-8}$	$1\ 10^{-8}$	$1\ 10^{-8}$	$1\ 10^{-10}$

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 2.3 Activity released in the DBA source term

Radionuclide	Release (Bq)	Radionuclide	Release (Bq)	Radionuclide	Release (Bq)
^{24}Na	$7.0\ 10^{10}$	^{51}Cr	$1.4\ 10^{11}$	^{54}Mn	$1.4\ 10^{11}$
^{55}Fe	$5.2\ 10^{9}$	^{59}Fe	$5.2\ 10^{9}$	^{58}Co	$3.4\ 10^{11}$
^{60}Co	$3.2\ 10^{10}$	^{63}Ni	$5.6\ 10^{9}$	^{65}Zn	$1.4\ 10^{11}$
^{83}Br	$9.3\ 10^{10}$	^{84}Br	$2.6\ 10^{12}$	^{85}Br$^{(a)}$	$4.8\ 10^{9}$
^{83m}Kr	$5.2\ 10^{9}$	^{85m}Kr	$1.1\ 10^{11}$	^{85}Kr	$2.3\ 10^{9}$
^{87}Kr	$9.3\ 10^{10}$	^{88}Kr	$1.1\ 10^{11}$	^{89}Kr	$8.1\ 10^{10}$
^{86}Rb	$4.4\ 10^{9}$	^{88}Rb	$3.5\ 10^{13}$	^{89}Rb	$8.1\ 10^{12}$
^{89}Sr	$4.4\ 10^{10}$	^{90}Sr	$3.7\ 10^{8}$	^{91}Sr	$2.3\ 10^{11}$
^{90}Y	$4.4\ 10^{8}$	^{91m}Y	$6.3\ 10^{10}$	^{91}Y	$4.8\ 10^{8}$
^{93}Y	$3.7\ 10^{11}$	^{95}Zr	$4.1\ 10^{10}$	^{95}Nb	$4.4\ 10^{10}$
^{99}Mo	$1.6\ 10^{11}$	^{99m}Tc	$3.7\ 10^{10}$	^{103}Ru	$2.7\ 10^{10}$
^{106}Ru	$1.6\ 10^{10}$	^{103m}Rh	$6.3\ 10^{10}$	^{106}Rh	$3.5\ 10^{10}$
^{110m}Ag	$5.6\ 10^{10}$	^{122}Sb	$1.0\ 10^{11}$	^{124}Sb	$2.5\ 10^{10}$
^{125m}Te	1.7 10	^{127m}Te	$1.8\ 10^{9}$	^{127}Te	$8.5\ 10^{9}$
^{129m}Te	$3.3\ 10^{10}$	^{129}Te	$8.9\ 10^{12}$	^{131m}Te	$1.2\ 10^{11}$
^{131}Te	$2.3\ 10^{12}$	^{132}Te	$1.8\ 10^{10}$	^{130}I	$1.9\ 10^{10}$
^{131}I	$1.9\ 10^{12}$	^{132}I	$5.2\ 10^{12}$	^{133}I	$8.1\ 10^{12}$
^{134}I	$6.3\ 10^{12}$	^{135}I	$3.6\ 10^{12}$	^{131m}Xe	$2.3\ 10^{10}$
^{133m}Xe	$2.8\ 10^{10}$	^{133}Xe	$1.5\ 10^{12}$	^{135m}Xe	$9.3\ 10^{10}$
^{135}Xe	$3.4\ 10^{11}$	^{137}Xe	$8.1\ 10^{11}$	^{138}Xe	$4.1\ 10^{11}$
^{134}Cs	$2.1\ 10^{11}$	^{136}Cs	$2.5\ 10^{10}$	^{137}Cs	$2.7\ 10^{11}$
^{138}Cs	$5.9\ 10^{12}$	^{139}Cs	$2.0\ 10^{13}$	^{137m}Ba	$8.9\ 10^{11}$
^{139}Ba	$4.4\ 10^{12}$	^{140}Ba	$6.7\ 10^{10}$	^{140}La	$3.5\ 10^{10}$
^{141}Ce	$1.0\ 10^{10}$	^{143}Ce	$3.7\ 10^{10}$	^{144}Ce	$3.7\ 10^{10}$
^{143}Pr	$3.6\ 10^{8}$	^{144}Pr	$3.7\ 10^{10}$	^{187}W	$2.2\ 10^{11}$
^{237}U	$2.5\ 10^{8}$	^{239}U	$1.0\ 10^{10}$	^{239}Np	$4.1\ 10^{9}$
^{236}Pu	$1.7\ 10^{5}$	^{238}Pu	$3.7\ 10^{5}$	^{239}Pu	$1.5\ 10^{5}$
^{240}Pu	$1.4\ 10^{5}$	^{241}Pu	$4.1\ 10^{7}$	^{242}Pu	$4.4\ 10^{2}$
^{243}Pu	$8.5\ 10^{7}$	^{241}Am	$7.0\ 10^{4}$	^{242m}Am	$2.4\ 10^{3}$
^{242}Am	$4.8\ 10^{7}$	^{243}Am	$8.1\ 10^{3}$	^{244}Am	$2.7\ 10^{6}$
^{242}Cm	$1.6\ 10^{6}$	^{243}Cm	$6.3\ 10^{2}$	^{244}Cm	$9.6\ 10^{4}$

Table 2.4 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 inhalation dose to thyroid, for a person outdoors		
Relocation	30 mSv external dose in 30 days, for normal living		
Return from relocation	10 mSv external dose in 30 days, for normal living		
Food restrictions	Activity concentration levels in food		
	Radionuclide	Milk (Bq l^{-1})	Other foods (Bq kg^{-1})
	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	-[a]
Relocation	Depends on relocation area[b]	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^2 per day, and assumes that everyone is relocated at that time

Table 2.5 List of endpoints considered in the analysis

For COSYMA NE[a] 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[b] 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 PARAMETER VALUES

2.1 Method of identifying parameters from the module analyses

The main aim of the module analyses was to identify the parameters whose uncertainties make important contributions to the overall uncertainty in each module, so that they could be included in the overall analysis. The method of identifying the important uncertain parameters is described in the "methodology report"[1], which also describes the reasons for the choice of the particular method. The method was intended to ensure that all parameters that could be important are identified and included in this final stage, namely the overall analysis.

One of the aims of this overall analysis is to identify those parameters whose uncertainties make important contributions to the overall uncertainty from the complete system. The same criteria are adopted in this stage of the analysis to determine whether the uncertainties on parameters are important. The method is summarised here as the reason for the identification of the parameters for inclusion in this overall analysis, and to provide background for the discussions in Section 4 of this report. Two measures of importance were used in this project.

The first method is based on 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 method is based on 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, 95th and 99th percentiles, 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 number of parameters considered to be uncertain in each of the module analyses and the number identified as important and to be included in the overall analysis are given in Table 0.1. This shows that, as a result of undertaking the module analyses, the number of parameters to be considered in this overall analysis was reduced from 376 to 186.

The adequacy of this procedure is illustrated by the results shown in Table 0.2, which shows the percentage of the uncertainty on the 99th percentiles of the ccdfs for some of the endpoints contributed by the parameters that were included in the overall analysis, from the dose and food chain module analyses. It is seen that, in most cases, the selected parameters account for

more than 90% of the uncertainty on the endpoints. This shows that the method adopted for reducing the number of parameters to be considered in the overall analysis did successfully identify those parameters that provide the major part of the uncertainty from the different modules.

2.2 Distributions on the parameter values

The methods of deriving the distributions on the parameter values for each module were described in the reports on the module analyses[2-5], which also listed the parameters that were identified for inclusion in the overall analysis from each of the module analyses. A brief description of the models in COSYMA is given in Appendix B of this report; a more detailed description of the models used in each part of COSYMA, with an explanation of the model parameters, is given in the appropriate module analysis report.

The marginal distributions on the parameters selected from each of the module analyses are given in Table 0.3 for the dispersion and deposition module, Table 0.4 for the food chain module, Table 2.5 for the dose module and Table 0.6 for the health effects module.

The reports on the module analyses include comments on the position of the default parameter values relative to the distributions used in this study. In some cases, the default parameters are towards one end of the distribution adopted and this can affect the reference uncertainty coefficients (see Section 1.2) reported here. The comments on the relative position of the parameters are summarised here, for convenience. The models used in the study, and the precise meaning of the various parameters, are described in the reports on the appropriate module analysis.

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^{th} percentile of the distribution in all categories, and below the minimum value in category E/F; those for p_z are below the 5^{th} percentile for all categories other than E while those for q_z are above the 80^{th} percentile and in some categories above the maximum value. 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 included in the overall analysis.

The default values for the food chain models generally lie towards the centre of the uncertainty distributions, with the following exceptions. The processing loss for cereals is near the minimum value of the uncertainty distribution. The soil fixation parameter for caesium in the model for activity concentration in pasture and silage is near the maximum values of its distribution.

The distributions on the parameters[+] for early health effects show that there is considered to be rather more uncertainty on the parameters for lung effects than for the other effects. The ratio

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+ D_{50} is the dose causing an effect in 50% of the exposed population. D_∞ is the value of D_{50} at high dose rate. D_0 describes the variation of D_{50} with dose rate. The shape parameter describes the variation of the risk of early effects with dose. The parameters are described in more detail in the Health Effects Module report (reference 4)

of the 95th to 5th percentiles of the distributions of D_∞ for lung function impairment and the pulmonary syndrome are about 20, while those for the other effects considered are between about 3 and 6. The uncertainties on the shape parameters for each of the effects are similar, with the ratio of the 95th to 5th percentiles of the distributions being about 2 or 3. In general the default values of the parameters for early health effects are near the centres of the distributions obtained from the experts, except for the parameters for the haematopoietic and gastrointestinal syndromes. For the haematopoietic syndrome the default value for the shape parameter is greater than the maximum value of the range obtained, while the default values for the parameters D_0 and D_∞ are below the 5th and above the 95th percentiles of the distribution respectively. For the gastrointestinal syndrome, the default value for the shape parameter is greater than the maximum value of the experts' range, while the default value for the parameter D_0 is below the minimum value of the experts' range.

The distributions for the risk coefficients for late health effects show large uncertainties, with a long tail towards the low end of the distribution - there is typically more than 3 orders of magnitude between the 5th and 20th percentiles of the distributions. The distribution for the risk of lung, stomach and colon cancer and for cancer in "other organs" are particularly wide, with a factor of about 10^6 or greater between the 95th and 5th percentiles. The narrowest distributions are those for skin cancer and leukaemia, where the factors between the 95^{th} and 5^{th} percentiles are about $6\ 10^4$ and $8\ 10^4$ respectively; the distribution for thyroid cancer risk is also relatively narrow, with the ratio between the 95^{th} and 5^{th} percentiles being just greater than 10^5. The default values of the risk coefficients generally lie in the central parts of the overall distributions.

The default values of the internal dosimetry model parameters generally lie near the middle of the uncertainty distribution. However, the parameters describing the transfer of material from the lungs to blood are outside the uncertainty range for all elements considered. Some of the f_1 values are at, or close to, the maximum values of the uncertainty range.

The default parameter values of the external dosimetry model are generally near the centre of the range, with the exception of the residence time of material on skin and two of the location factors used to calculate the dose for comparison with the intervention levels for sheltering and evacuation.

2.3 Correlations between parameter values

The correlations between the parameter values are summarised in Table 0.7 to Table 0.11, which show the correlations for the dispersion and deposition models, the early health effects model, the food chain model, the internal dosimetry model and the external dosimetry model, respectively. These correlations reflect the ones used in the module analyses. There were no correlations between the parameters of the late health effects models.

The project staff considered whether there were any two modules for which there might be correlations between the parameter values, and ways in which any such correlations could be specified. Two people were members of two different expert panels (deposition and the soil-plant part of the food chain panel, and deposition and external dose), and were asked if they felt there

might be correlations between the two sets of parameters. In neither case did the expert consider that values could be specified, although they considered that there could be correlations.

Project staff considered that there would be no correlations between the parameters of the health effects module and any other module.

There might be correlations between the concentrations of material in foods and the external dose rate from deposited activity, as the rate at which material moves through the soil column could affect both. The project staff decided that it was not practicable to express correlations between the parameters, because of the way in which the processes were modelled for this study. The food chain models adopted here explicitly consider the rate of movement of activity into soil, and its uncertainty. However, the uncertainty on the external dose rate, and its time variation, was expressed without explicitly considering the behaviour of activity in soil.

Project staff considered that there would be correlations between the parameters describing metabolism in animals, used in the food chain models, and those describing human metabolism, used in the internal dosimetry models. The parameters are expressed differently in the two models, and the project staff concluded that it would not be practicable to describe the correlations.

Therefore, the only correlations taken into account between the parameters coming from different modules were those required to ensure that the correlation matrix was positive definite[1].

2.4 Generation of, and sampling from, the overall distribution

The distributions on the groups of parameters from each of the modules were combined into a single distribution in such a way that the marginal distributions of each parameter and the correlations between then were maintained, and no further correlations were introduced.

Samples were then drawn from the overall distribution using the program UNICORN[6]. This was not the program used in the module analyses, where the distribution was expressed as marginal distributions on the values for each parameter together with correlations between them. Distributions on the elicitation variables using different sampling methods had been compared in the generation of the input parameter distributions for the dose module analysis and it was found that, in this case, better agreement was obtained using the distribution as expressed in UNICORN than the alternative form used for the sampling procedure. Therefore the UNICORN program was used in the overall analysis.

2.5 References

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Table 0.1 Numbers of uncertain parameters considered in the overall analysis from each of the module analyses

Module	Number of parameters	Number identified for overall analysis
Dispersion and deposition	28	24
Food chain	162	35
Dosimetry	159	100
Health effects	27	27
Overall analysis	376[(a)]	186[(a)]

Note:
a A total of 376 uncertain parameters was considered in the project, of which 186 were identified for inclusion in the overall analysis.

Table 0.2 Percentage of the uncertainty in selected endpoints from the module analyses contributed by the parameters selected for the overall analysis

Endpoint[(a)]	Source term					
Meaning	UK1		CB2		DBA	
	Food module	Dose module	Food module	Dose module	Food module	Dose module
Area with evacuation	-[(b)]	99.2	-	98.3	-	-
Area with sheltering as the only action	-	98.2	-	98.3	-	-
Area with stable iodine tablets	-	96.7	-	100	-	-
Initial area subject to milk ban	-	-	98.9	-	90.8	-
Initial area subject to grain ban	-	-	91.5	-	81.4	
Individual dose to bone marrow in 7 days at the distance 4.9 km	-	96.8	-	90.7	-	-
Committed dose to bone marrow at the distance 4.9 km	-	-	71.9	98.1	90.9	86.0
Number of cases of early deaths	-	100	-	100	-	-
Number of fatal cancers	-	-	95.0	91.9	95.9	89.1

Notes:
a The contributions refer to the 99th percentile of the ccdf for the particular endpoints
b Indicates that this particular endpoint was not considered for the specified source term or is not affected by the parameters of the particular module

Table 0.3 Distributions on the atmospheric dispersion and deposition model parameters

Uncertain parameter	Unit	Default value	Percentiles of the distribution on the input parameter								
			Minimum	5%	20%	35%	50%	65%	80%	95%	Maximum
Atmospheric dispersion parameters											
Dispersion coefficient[(a)] p_y for Category A/B		1.503[(c)] 0.876	2.62 10^{-1}	2.90 10^{-1}	4.27 10^{-1}	6.75 10^{-1}	8.36 10^{-1}	1.01	1.36	1.77	1.93
Dispersion coefficient[(a)] p_y for Category C		0.659	1.82 10^{-1}	2.10 10^{-1}	3.53 10^{-1}	4.06 10^{-1}	4.28 10^{-1}	4.56 10^{-1}	4.96 10^{-1}	5.45 10^{-1}	5.60 10^{-1}
Dispersion coefficient[(a)] p_y for Category D		0.64	1.59 10^{-1}	1.66 10^{-1}	1.90 10^{-1}	2.05 10^{-1}	2.10 10^{-1}	2.56 10^{-1}	3.10 10^{-1}	3.57 10^{-1}	3.72 10^{-1}
Dispersion coefficient[(a)] p_y for Category E/F		0.801[(d)] 1.294	7.27 10^{-2}	8.75 10^{-2}	1.31 10^{-1}	1.96 10^{-1}	2.52 10^{-1}	3.06 10^{-1}	3.60 10^{-1}	4.42 10^{-1}	4.55 10^{-1}
Dispersion coefficient[(a)] q_y for Category A/B		0.833[(c)] 0.823	7.61 10^{-1}	7.68 10^{-1}	7.93 10^{-1}	8.28 10^{-1}	8.77 10^{-1}	9.40 10^{-1}	9.74 10^{-1}	1.02	1.04
Dispersion coefficient[(a)] q_y for Category C		0.807	7.91 10^{-1}	7.97 10^{-1}	8.17 10^{-1}	8.37 10^{-1}	8.67 10^{-1}	9.00 10^{-1}	9.32 10^{-1}	9.79 10^{-1}	1
Dispersion coefficient[(a)] q_y for Category D		0.784	6.72 10^{-1}	7.67 10^{-1}	8.44 10^{-1}	8.81 10^{-1}	9.17 10^{-1}	9.49 10^{-1}	9.84 10^{-1}	1.03	1.11
Dispersion coefficient[(a)] q_y for Category E/F		0.754[(d)] 0.718	7.45 10^{-1}	7.57 10^{-1}	7.92 10^{-1}	8.43 10^{-1}	8.78 10^{-1}	9.10 10^{-1}	9.35 10^{-1}	9.55 10^{-1}	9.61 10^{-1}
Dispersion coefficient[(a)] p_z for Category A/B		0.151[(c)] 0.127	7.38 10^{-3}	1.45 10^{-1}	6.65 10^{-1}	1.27	1.77	2.63	3.83	8.13	9.19
Dispersion coefficient[(a)] p_z for Category C		0.165	1.45 10^{-2}	7.72 10^{-2}	1.10 10^{-1}	1.96 10^{-1}	2.31 10^{-1}	2.92 10^{-1}	3.56 10^{-1}	4.35 10^{-1}	4.87 10^{-1}
Dispersion coefficient[(a)] p_z for Category D		0.215	1.13 10^{-2}	2.29 10^{-1}	4.42 10^{-1}	6.13 10^{-1}	9.01 10^{-1}	1.05	1.69	3.06	3.4
Dispersion coefficient[(a)] p_z for Category E/F		0.264[(d)] 0.241	6.35 10^{-2}	2.06 10^{-1}	4.53 10^{-1}	6.11 10^{-1}	1.26	7.52	1.78 10^{1}	4.76 10^{1}	5.98 10^{1}
Dispersion coefficient[(a)] q_z for Category A/B		1.219[(c)] 1.108	2.79 10^{-2}	3.96 10^{-1}	5.88 10^{-1}	6.63 10^{-1}	7.40 10^{-1}	8.25 10^{-1}	9.18 10^{-1}	1.08	1.18
Dispersion coefficient[(a)] q_z for Category C		0.996	4.34 10^{-1}	5.96 10^{-1}	6.83 10^{-1}	7.70 10^{-1}	8.85 10^{-1}	9.22 10^{-1}	9.42 10^{-1}	1.05	1.08
Dispersion coefficient[(a)] q_z for Category D		0.885	1.22 10^{-1}	3.13 10^{-1}	4.47 10^{-1}	4.96 10^{-1}	5.92 10^{-1}	6.47 10^{-1}	7.25 10^{-1}	8.66 10^{-1}	8.93 10^{-1}

Uncertain parameter	Unit	Default value	Percentiles of the distribution on the input parameter								
			Minimum	5%	20%	35%	50%	65%	80%	95%	Maximum
Dispersion coefficient[(a)] q_z for Category E/F		0.774[(d)] 0.662	$1.40\ 10^{-2}$	$1.21\ 10^{-1}$	$2.59\ 10^{-1}$	$3.24\ 10^{-1}$	$3.56\ 10^{-1}$	$4.10\ 10^{-1}$	$4.41\ 10^{-1}$	$5.29\ 10^{-1}$	$5.41\ 10^{-1}$
Dry deposition parameters											
Deposition velocity to ground of aerosols	m s^{-1}	$1.0\ 10^{-3}$	$1.00\ 10^{-6}$	$2.23\ 10^{-5}$	$2.55\ 10^{-4}$	$4.88\ 10^{-4}$	$7.21\ 10^{-4}$	$4.72\ 10^{-3}$	$8.71\ 10^{-3}$	$1.27\ 10^{-2}$	$3.08\ 10^{-2}$
Deposition velocity to ground of elemental iodine	m s^{-1}	$1.0\ 10^{-2}$	$1.00\ 10^{-6}$	$6.00\ 10^{-5}$	$2.77\ 10^{-3}$	$5.83\ 10^{-3}$	$8.18\ 10^{-3}$	$3.71\ 10^{-2}$	$6.59\ 10^{-2}$	$9.48\ 10^{-2}$	$1.65\ 10^{-1}$
Deposition velocity to skin for aerosols	m s^{-1}	$1.0\ 10^{-3}$	$1\ 10^{-7}$	$2.75\ 10^{-6}$	$9.05\ 10^{-5}$	$1.78\ 10^{-4}$	$2.66\ 10^{-4}$	$1.17\ 10^{-2}$	$2.32\ 10^{-2}$	$3.46\ 10^{-2}$	0.11
Deposition velocity to skin for elemental iodine	m s^{-1}	$1.0\ 10^{-2}$	$1\ 10^{-7}$	$1.39\ 10^{-6}$	$4.94\ 10^{-4}$	$9.86\ 10^{-4}$	$1.48\ 10^{-3}$	$4.57\ 10^{-2}$	$9.0\ 10^{-2}$	$1.34\ 10^{-1}$	$3.30\ 10^{-1}$
Wet deposition parameters											
Washout coefficient[(b)] term a for aerosols		$2.88\ 10^{-1}$	$2.00\ 10^{-3}$	$5.10\ 10^{-3}$	$3.31\ 10^{-2}$	$4.44\ 10^{-2}$	$7.20\ 10^{-2}$	$1.26\ 10^{-1}$	1.43	4.81	5.31
Washout coefficient[(b)] term b for aerosols		$8.0\ 10^{-1}$	$1.94\ 10^{-2}$	$2.13\ 10^{-1}$	$4.87\ 10^{-1}$	$5.21\ 10^{-1}$	$6.74\ 10^{-1}$	$7.79\ 10^{-1}$	$9.94\ 10^{-1}$	2.2	2.89
Washout coefficient[(b)] term a for elemental iodine		$2.88\ 10^{-1}$	$2.33\ 10^{-4}$	$6.97\ 10^{-3}$	$9.46\ 10^{-2}$	$1.33\ 10^{-1}$	$2.10\ 10^{-1}$	$6.13\ 10^{-1}$	1.43	2.13	2.42
Washout coefficient[(b)] term b for elemental iodine		$6.0\ 10^{-1}$	$2.53\ 10^{-2}$	$2.27\ 10^{-1}$	$4.81\ 10^{-1}$	$6.10\ 10^{-1}$	$7.72\ 10^{-1}$	$8.54\ 10^{-1}$	1.03	1.9	2.96

Notes:
a: Dispersion is modelled assuming that $\square = p\ x^q$. The units are such that $\square$ and x are in metres.
b: Wet deposition is modelled using a washout coefficient given by $\square = a$ (rain fall rate)^b. The units are such that $\square$ is in hr^{-1} if the rainfall rate is in mm hr^{-1}.
c: The default values are different for categories A and B.
d: The default values are different for categories E and F.

Table 0.4 Distributions on the food chain model parameters

FARMLAND parameter	Units	Default	Percentiles of the distribution on the parameter value								
			Minimum	5%	20%	35%	50%	65%	80%	95%	Maximum
Interception factor - pasture		0.25	$1.00\ 10^{-3}$	$2.73\ 10^{-2}$	$1.16\ 10^{-1}$	$2.04\ 10^{-1}$	$2.92\ 10^{-1}$	$4.71\ 10^{-1}$	$6.50\ 10^{-1}$	$8.29\ 10^{-1}$	$9.56\ 10^{-1}$
Retention time - hay/silage	days	$1.40\ 10^{1}$	$1.00\ 10^{-1}$	$2.33\ 10^{0}$	$7.24\ 10^{0}$	$1.22\ 10^{1}$	$1.71\ 10^{1}$	$2.60\ 10^{1}$	$3.50\ 10^{1}$	$4.39\ 10^{1}$	$5.50\ 10^{1}$
Interception factor - hay/silage		0.62	$1.00\ 10^{-3}$	$6.97\ 10^{-2}$	$2.40\ 10^{-1}$	$4.11\ 10^{-1}$	$5.81\ 10^{-1}$	$7.03\ 10^{-1}$	$8.25\ 10^{-1}$	$9.46\ 10^{-1}$	$1.00\ 10^{0}$
Root uptake pasture, Cs	Bq kg-1 / Bq kg-1	$3.00\ 10^{-2}$	$1.00\ 10^{-4}$	$2.11\ 10^{-3}$	$1.24\ 10^{-2}$	$2.27\ 10^{-2}$	$3.30\ 10^{-2}$	$1.02\ 10^{-1}$	$1.70\ 10^{-1}$	$2.39\ 10^{-1}$	$3.46\ 10^{-1}$
Soil migration pasture- k12, Cs	d-1	$6.65\ 10^{-4}$	$1.73\ 10^{-5}$	$2.34\ 10^{-4}$	$5.72\ 10^{-4}$	$9.04\ 10^{-4}$	$1.18\ 10^{-3}$	$2.34\ 10^{-3}$	$3.64\ 10^{-3}$	$5.47\ 10^{-3}$	$6.45\ 10^{-3}$
Soil migration pasture - k23, Cs	d-1	$1.72\ 10^{-4}$	$1.99\ 10^{-5}$	$3.07\ 10^{-5}$	$4.73\ 10^{-5}$	$1.14\ 10^{-4}$	$1.54\ 10^{-4}$	$2.96\ 10^{-4}$	$7.23\ 10^{-4}$	$9.94\ 10^{-3}$	$1.34\ 10^{-2}$
Soil migration pasture - k34, Cs	d-1	$1.07\ 10^{-4}$	$2.23\ 10^{-5}$	$5.90\ 10^{-5}$	$4.82\ 10^{-4}$	$9.35\ 10^{-4}$	$1.47\ 10^{-3}$	$2.07\ 10^{-3}$	$4.12\ 10^{-3}$	$1.83\ 10^{-2}$	$4.38\ 10^{-1}$
Soil migration pasture - k43, Cs	d-1	$4.03\ 10^{-6}$	$3.23\ 10^{-7}$	$8.85\ 10^{-5}$	$6.29\ 10^{-4}$	$1.42\ 10^{-3}$	$2.18\ 10^{-3}$	$3.52\ 10^{-3}$	$6.79\ 10^{-3}$	$2.45\ 10^{-2}$	$1.48\ 10^{0}$
Soil migration pasture - k45, Cs	d-1	$3.80\ 10^{-5}$	$2.65\ 10^{-6}$	$4.62\ 10^{-6}$	$7.45\ 10^{-6}$	$2.94\ 10^{-5}$	$4.95\ 10^{-5}$	$6.13\ 10^{-5}$	$1.11\ 10^{-4}$	$6.52\ 10^{-4}$	$8.31\ 10^{-3}$
Soil fixation pasture, k1,11, Cs	d-1	$2.11\ 10^{-3}$	$6.55\ 10^{-5}$	$1.83\ 10^{-4}$	$2.77\ 10^{-4}$	$3.61\ 10^{-4}$	$4.71\ 10^{-4}$	$6.26\ 10^{-4}$	$8.70\ 10^{-4}$	$1.47\ 10^{-3}$	$2.56\ 10^{-3}$
Resuspension factor pasture	m-1	$1.00\ 10^{-8}$	$1.00\ 10^{-10}$	$1.64\ 10^{-9}$	$2.63\ 10^{-8}$	$5.10\ 10^{-8}$	$7.57\ 10^{-8}$	$5.87\ 10^{-6}$	$1.17\ 10^{-5}$	$1.75\ 10^{-5}$	$6.60\ 10^{-5}$
Daily intake of hay/silage - dairy cows	kg d-1	$1.55\ 10^{1}$	$1.90\ 10^{0}$	$5.07\ 10^{0}$	$7.51\ 10^{0}$	$9.95\ 10^{0}$	$1.24\ 10^{1}$	$1.57\ 10^{1}$	$1.90\ 10^{1}$	$2.23\ 10^{1}$	$2.71\ 10^{1}$
Fm transfer to milk - dairy cows, Cs	d l-1	$5.00\ 10^{-3}$	$1.00\ 10^{-4}$	$1.01\ 10^{-3}$	$2.57\ 10^{-3}$	$4.13\ 10^{-3}$	$5.68\ 10^{-3}$	$1.18\ 10^{-2}$	$1.79\ 10^{-2}$	$2.41\ 10^{-2}$	$3.29\ 10^{-2}$
Fm transfer to milk - dairy cows, I	d l-1	$5.00\ 10^{-3}$	$1.00\ 10^{-5}$	$5.33\ 10^{-4}$	$2.90\ 10^{-3}$	$5.27\ 10^{-3}$	$7.63\ 10^{-3}$	$1.76\ 10^{-2}$	$2.75\ 10^{-2}$	$3.74\ 10^{-2}$	$5.49\ 10^{-2}$
Fm transfer to milk - dairy cows, Zn	d l-1	$1.00\ 10^{-2}$	$4.00\ 10^{-5}$	$3.03\ 10^{-4}$	$9.33\ 10^{-4}$	$1.77\ 10^{-3}$	$3.03\ 10^{-3}$	$5.20\ 10^{-3}$	$9.86\ 10^{-3}$	$3.04\ 10^{-2}$	$2.30\ 10^{-1}$
Ff transfer to meat - dairy cows, Cs	d kg-1	$3.00\ 10^{-2}$	$1.00\ 10^{-6}$	$1.10\ 10^{-3}$	$7.63\ 10^{-3}$	$1.42\ 10^{-2}$	$2.07\ 10^{-2}$	$3.90\ 10^{-2}$	$5.73\ 10^{-2}$	$7.56\ 10^{-2}$	$1.32\ 10^{-1}$
Ff transfer to liver - dairy cows, Ag	d kg-1	$4.00\ 10^{-1}$	$1.60\ 10^{-2}$	$1.21\ 10^{-1}$	$3.72\ 10^{-1}$	$7.04\ 10^{-1}$	$1.21\ 10^{0}$	$2.07\ 10^{0}$	$3.92\ 10^{0}$	$1.21\ 10^{1}$	$9.10\ 10^{1}$
Biological half-life - dairy cows, I	days	$1.40\ 10^{1}$	$1.00\ 10^{-2}$	$1.16\ 10^{-1}$	$2.37\ 10^{0}$	$4.62\ 10^{0}$	$6.88\ 10^{0}$	$1.30\ 10^{1}$	$1.92\ 10^{1}$	$2.54\ 10^{1}$	$3.85\ 10^{1}$
Ff transfer to meat - beef cattle, Cs	d kg-1	$3.00\ 10^{-2}$	$1.00\ 10^{-4}$	$3.05\ 10^{-3}$	$1.52\ 10^{-2}$	$2.74\ 10^{-2}$	$3.95\ 10^{-2}$	$5.68\ 10^{-2}$	$7.41\ 10^{-2}$	$9.14\ 10^{-2}$	$1.32\ 10^{-1}$
Ff transfer to meat - pigs, Te	d kg-1	$3.00\ 10^{-2}$	$4.00\ 10^{-4}$	$3.03\ 10^{-3}$	$9.33\ 10^{-3}$	$1.77\ 10^{-2}$	$3.03\ 10^{-2}$	$5.20\ 10^{-2}$	$9.86\ 10^{-2}$	$3.04\ 10^{-1}$	$2.30\ 10^{0}$
Ff transfer to meat - sheep, Zn	d kg-1	$2.00\ 10^{-2}$	$7.40\ 10^{-2}$	$2.52\ 10^{-1}$	$5.00\ 10^{-1}$	$7.34\ 10^{-1}$	$1.02\ 10^{0}$	$1.41\ 10^{0}$	$2.08\ 10^{0}$	$4.11\ 10^{0}$	$1.40\ 10^{1}$
Interception factor - cereals		0.3	$1.00\ 10^{-3}$	$2.63\ 10^{-2}$	$1.61\ 10^{-1}$	$2.96\ 10^{-1}$	$4.31\ 10^{-1}$	$6.13\ 10^{-1}$	$7.96\ 10^{-1}$	$9.78\ 10^{-1}$	$1.00\ 10^{0}$
Retention time - cereals - k21, Cs	d-1	$4.95\ 10^{-2}$	$1.20\ 10^{-6}$	$1.46\ 10^{-5}$	$1.54\ 10^{-3}$	$1.44\ 10^{-2}$	$2.53\ 10^{-2}$	$4.16\ 10^{-2}$	$6.32\ 10^{-2}$	$1.12\ 10^{-1}$	$1.68\ 10^{-1}$
Processing loss - cereals		0.1	$5.00\ 10^{-2}$	$1.00\ 10^{-1}$	$1.33\ 10^{-1}$	$1.66\ 10^{-1}$	$2.00\ 10^{-1}$	$3.00\ 10^{-1}$	$4.00\ 10^{-1}$	$5.00\ 10^{-1}$	$6.00\ 10^{-1}$
Translocation cereals - k23, Cs	d-1	$3.41\ 10^{-2}$	$1.18\ 10^{-5}$	$1.42\ 10^{-2}$	$3.23\ 10^{-2}$	$5.40\ 10^{-2}$	$7.19\ 10^{-2}$	$1.10\ 10^{-1}$	$2.00\ 10^{-1}$	$4.86\ 10^{-1}$	$1.12\ 10^{0}$
Translocation cereals - k34, Cs	d-1	$6.44\ 10^{-2}$	$2.52\ 10^{-2}$	$3.43\ 10^{-2}$	$5.02\ 10^{-2}$	$6.88\ 10^{-2}$	$9.40\ 10^{-2}$	$1.04\ 10^{-1}$	$1.88\ 10^{-1}$	$4.29\ 10^{-1}$	$6.26\ 10^{-1}$
Translocation cereals - k41, Cs	d-1	$5.21\ 10^{-2}$	$6.30\ 10^{-5}$	$1.61\ 10^{-2}$	$2.70\ 10^{-2}$	$3.17\ 10^{-2}$	$4.10\ 10^{-2}$	$5.45\ 10^{-2}$	$6.64\ 10^{-2}$	$1.07\ 10^{-1}$	$1.71\ 10^{-1}$
Retention time - green vegetables	days	$1.40\ 10^{1}$	$1.00\ 10^{-1}$	$3.60\ 10^{0}$	$8.53\ 10^{0}$	$1.35\ 10^{1}$	$1.84\ 10^{1}$	$2.82\ 10^{1}$	$3.80\ 10^{1}$	$4.78\ 10^{1}$	$5.48\ 10^{1}$
Soil contamination - green vegetables	fraction of dry mass	0.1	$1.30\ 10^{-2}$	$9.88\ 10^{-2}$	$3.05\ 10^{-1}$	$5.79\ 10^{-1}$	$9.94\ 10^{-1}$	$1.71\ 10^{0}$	$3.24\ 10^{0}$	$1.00\ 10^{1}$	$7.60\ 10^{1}$
Processing loss - green vegetables	Bq kg-1 / Bq kg-1	0.2	$5.00\ 10^{-2}$	$1.00\ 10^{-1}$	$1.33\ 10^{-1}$	$1.67\ 10^{-1}$	$2.00\ 10^{-1}$	$3.33\ 10^{-1}$	$4.67\ 10^{-1}$	$6.00\ 10^{-1}$	$9.00\ 10^{-1}$

FARMLAND parameter	Units	Default	Percentiles of the distribution on the parameter value								
			Minimum	5%	20%	35%	50%	65%	80%	95%	Maximum
Interception factor- potatoes		0.4	$1.00\ 10^{-4}$	$5.38\ 10^{-3}$	$1.39\ 10^{-1}$	$2.73\ 10^{-1}$	$4.07\ 10^{-1}$	$5.83\ 10^{-1}$	$7.58\ 10^{-1}$	$9.34\ 10^{-1}$	$1.00\ 10^{0}$
Retention time - potatoes, k21, Sr	d-1	$4.95\ 10^{-2}$	$1.13\ 10^{-5}$	$2.54\ 10^{-4}$	$1.50\ 10^{-3}$	$4.66\ 10^{-3}$	$9.00\ 10^{-3}$	$1.70\ 10^{-2}$	$3.41\ 10^{-2}$	$9.53\ 10^{-2}$	$1.49\ 10^{-1}$
Translocation potatoes- k24, Sr	d-1	$4.46\ 10^{-5}$	$1.98\ 10^{-8}$	$4.27\ 10^{-7}$	$7.23\ 10^{-7}$	$1.39\ 10^{-6}$	$3.11\ 10^{-6}$	$5.42\ 10^{-6}$	$1.14\ 10^{-5}$	$2.31\ 10^{-4}$	$6.32\ 10^{-4}$
Translocation potatoes - k45, Sr	d-1	$4.46\ 10^{-5}$	$3.69\ 10^{-5}$	$8.36\ 10^{-3}$	$2.96\ 10^{-2}$	$3.54\ 10^{-2}$	$4.27\ 10^{-2}$	$5.44\ 10^{-2}$	$6.15\ 10^{-2}$	$2.28\ 10^{-1}$	$3.61\ 10^{-1}$
Translocation potatoes - k51, Sr	d-1	$3.73\ 10^{-3}$	$1.99\ 10^{-6}$	$5.39\ 10^{-6}$	$3.49\ 10^{-5}$	$6.13\ 10^{-4}$	$1.98\ 10^{-3}$	$4.30\ 10^{-3}$	$1.14\ 10^{-2}$	$2.96\ 10^{-2}$	$8.08\ 10^{-2}$

Note:

a: The default delay time given for cream is the average for all milk products.

Table 0.5 Distributions on the dose model parameters

Uncertain Parameter	Units	Default	Percentiles of the distribution on the input parameter								
			Minimum	5%	20%	35%	50%	65%	80%	95%	Maximum
Parameters of the lung model											
Total initial deposition in respiratory tract		0.486	$1.18\ 10^{-1}$	$2.17\ 10^{-1}$	$3.02\ 10^{-1}$	$3.88\ 10^{-1}$	$4.73\ 10^{-1}$	$5.60\ 10^{-1}$	$6.46\ 10^{-1}$	$7.33\ 10^{-1}$	$8.62\ 10^{-1}$
Initial deposition in extrathoracic region		0.698	$4.60\ 10^{-3}$	$1.26\ 10^{-1}$	$2.86\ 10^{-1}$	$4.47\ 10^{-1}$	$6.07\ 10^{-1}$	$6.89\ 10^{-1}$	$7.70\ 10^{-1}$	$8.52\ 10^{-1}$	$9.81\ 10^{-1}$
Initial deposition in tracheobronchial region		0.221	$4.40\ 10^{-2}$	$1.14\ 10^{-1}$	$1.51\ 10^{-1}$	$1.88\ 10^{-1}$	$2.25\ 10^{-1}$	$3.46\ 10^{-1}$	$4.66\ 10^{-1}$	$5.86\ 10^{-1}$	$7.16\ 10^{-1}$
Initial deposition in extrathoracic region beyond the nasal region		0.56	$4.40\ 10^{-2}$	$8.93\ 10^{-2}$	$1.70\ 10^{-1}$	0.3	0.43	0.56	0.66	0.76	0.86
Transfer coefficient: ET1region to environment	d^{-1}	1.0	0.142	0.35	0.58	0.78	0.99	1.26	1.68	2.77	6.87
Transfer coefficient: pulmonary 1 region to the tracheobronchial region (rapid clearance rate)	d^{-1}	0.02	$7.62\ 10^{-4}$	$3.28\ 10^{-2}$	$1.48\ 10^{-1}$	$2.03\ 10^{-1}$	$2.71\ 10^{-1}$	$5.45\ 10^{-1}$	1.28	7.53	$1.65\ 10^{1}$
Transfer coefficient: pulmonary 2 region to the tracheobronchial region (intermediate clearance rate)	d^{-1}	$1.0\ 10^{-3}$	$6.55\ 10^{-8}$	$8.87\ 10^{-7}$	$3.56\ 10^{-6}$	$9.41\ 10^{-6}$	$4.96\ 10^{-5}$	$1.76\ 10^{-3}$	$3.24\ 10^{-1}$	1.96	5.08
Transfer coefficient: pulmonary 3 region to the tracheobronchial region (fast clearance rate)	d^{-1}	$1.0\ 10^{-4}$	$1.10\ 10^{-7}$	$2.96\ 10^{-6}$	$3.04\ 10^{-5}$	$6.14\ 10^{-5}$	$9.22\ 10^{-5}$	$1.24\ 10^{-4}$	$1.56\ 10^{-4}$	$3.43\ 10^{-4}$	$5.26\ 10^{-4}$
Transfer coefficient: pulmonary 3 region to the tracheobronchial region (slow clearance rate)	d^{-1}	$2.0\ 10^{-5}$	$5.88\ 10^{-6}$	$1.05\ 10^{-5}$	$1.45\ 10^{-5}$	$1.75\ 10^{-5}$	$2.04\ 10^{-5}$	$2.38\ 10^{-5}$	$2.86\ 10^{-5}$	$3.95\ 10^{-5}$	$7.07\ 10^{-5}$
Fast transfer coefficient: bronchial to extrathoracic regions	d^{-1}	-	$3.92\ 10^{-7}$	$2.01\ 10^{-5}$	$2.56\ 10^{-4}$	$1.76\ 10^{-2}$	$1.39\ 10^{-1}$	$3.38\ 10^{-1}$	$5.78\ 10^{-1}$	1.14	2.67
Slow transfer coefficient: bronchial to extrathoracic regions	d^{-1}	-	$4.61\ 10^{-3}$	$1.20\ 10^{-1}$	$7.23\ 10^{-1}$	1.1	1.55	1.65	2.19	2.194	$3.67\ 10^{1}$
Transfer coefficient: extrathoracic 2 to stomach	d^{-1}	100	$5.23\ 10^{-6}$	$9.68\ 10^{-5}$	$1.76\ 10^{-3}$	$1.16\ 10^{-2}$	$8.29\ 10^{-2}$	$8.84\ 10^{-1}$	5.66	$6.12\ 10^{1}$	$4.04\ 10^{2}$
Breathing rate	$m^3\ d^{-1}$	23	6	8.3	9.96	$1.16\ 10^{1}$	$1.33\ 10^{1}$	$1.67\ 10^{1}$	$2.01\ 10^{1}$	$2.35\ 10^{1}$	$3.00\ 10^{1}$
Parameters of the GI tract model											
Transfer coefficient: stomach to small intestine	d^{-1}	24	$1.08\ 10^{1}$	16.20	20.30	23.1	25.7	28.7	32.6	40.30	$6.12\ 10^{1}$
Parameters of the Strontium model											
Transfer coefficient for Strontium: any lung compartment to blood	d^{-1}	10	$1.63\ 10^{-3}$	$2.50\ 10^{-2}$	$3.22\ 10^{-1}$	$6.63\ 10^{-1}$	2.35	9.66	$2.06\ 10^{1}$	$3.30\ 10^{1}$	$6.20\ 10^{1}$
Transfer coefficient for Strontium: any lung compartment to transformed state in lung	d^{-1}	90	$1.00\ 10^{-1}$	$9.34\ 10^{-1}$	2.08	4.35	6.38	$1.33\ 10^{1}$	$2.77\ 10^{1}$	$3.54\ 10^{1}$	$3.86\ 10^{1}$
Transfer coefficient for Strontium: transformed state in lung to blood	d^{-1}	$5.0\ 10^{-3}$	$1.30\ 10^{-6}$	$1.08\ 10^{-5}$	$4.50\ 10^{-5}$	$6.77\ 10^{-5}$	$9.20\ 10^{-5}$	$1.16\ 10^{-4}$	$1.44\ 10^{-4}$	$1.69\ 10^{-4}$	$2.81\ 10^{-4}$
Parameters of the ruthenium model											
Transfer coefficient for Ruthenium: any lung compartment to blood	d^{-1}	10	$7.43\ 10^{-4}$	$1.76\ 10^{-3}$	$1.65\ 10^{-2}$	$4.24\ 10^{-2}$	$1.06\ 10^{-1}$	1.3	2.65	4.75	6.26
Transfer coefficient for Ruthenium: any lung compartment to transformed state in lung	d^{-1}	90	$1.71\ 10^{-2}$	$2.87\ 10^{-2}$	1.93	2.61	6.36	8.6	$1.28\ 10^{1}$	$1.58\ 10^{1}$	$1.67\ 10^{1}$

Uncertain Parameter	Units	Default	Percentiles of the distribution on the input parameter								
			Minimum	5%	20%	35%	50%	65%	80%	95%	Maximum
Transfer coefficient for Ruthenium: any lung compartment to transformed state in lung	d^{-1}	$5.0\ 10^{-3}$	$1.21\ 10^{-7}$	$5.99\ 10^{-7}$	$4.36\ 10^{-6}$	$9.30\ 10^{-6}$	$1.81\ 10^{-5}$	$4.89\ 10^{-5}$	$9.30\ 10^{-5}$	$1.70\ 10^{-4}$	$2.80\ 10^{-4}$
Ruthenium: f1 factor		$5.0\ 10^{-2}$	$2.50\ 10^{-3}$	$5.00\ 10^{-3}$	$1.67\ 10^{-2}$	$2.83\ 10^{-2}$	$4.00\ 10^{-2}$	$6.00\ 10^{-2}$	$8.00\ 10^{-2}$	$1.00\ 10^{-1}$	$2.00\ 10^{-1}$
Transfer coefficient for Ruthenium: blood to whole body		-	$8.85\ 10^{-2}$	$3.70\ 10^{-1}$	1.04	1.71	2.54	3.51	7.15	$2.73\ 10^{1}$	$3.32\ 10^{1}$
Transfer coefficient for Ruthenium: blood to whole body 2 compartment		-	$6.18\ 10^{-3}$	$4.79\ 10^{-1}$	1.15	1.71	2.79	4.35	8.74	$2.74\ 10^{1}$	$3.38\ 10^{1}$
Transfer coefficient for Ruthenium: blood to U.L.I.	d^{-1}	$6.9\ 10^{-2}$	$4.53\ 10^{-8}$	$9.53\ 10^{-7}$	$4.04\ 10^{-6}$	$5.67\ 10^{-4}$	$9.19\ 10^{-2}$	$2.74\ 10^{-1}$	$6.62\ 10^{-1}$	2.22	$1.02\ 10^{1}$
Transfer coefficient for Ruthenium: whole body to U.L.I.		-	$1.40\ 10^{-6}$	$6.49\ 10^{-5}$	$2.05\ 10^{-4}$	$6.01\ 10^{-4}$	$3.75\ 10^{-3}$	$1.32\ 10^{-2}$	$2.44\ 10^{-2}$	$4.50\ 10^{-2}$	$2.23\ 10^{-1}$
Transfer coefficient for Ruthenium: whole body 2 compartment to U.L.I.		-	$1.33\ 10^{-6}$	$6.97\ 10^{-5}$	$1.61\ 10^{-4}$	$3.03\ 10^{-4}$	$8.19\ 10^{-4}$	$6.49\ 10^{-3}$	$2.01\ 10^{-2}$	$4.60\ 10^{-2}$	$2.86\ 10^{-1}$
Parameters of the tellurium model											
Transfer coefficient for Tellurium: any lung compartment to blood	d^{-1}	10	$3.52\ 10^{-3}$	$3.60\ 10^{-3}$	$1.58\ 10^{-1}$	$4.96\ 10^{-1}$	$8.47\ 10^{-1}$	$1.03\ 10^{1}$	$1.80\ 10^{1}$	$2.84\ 10^{1}$	$4.05\ 10^{1}$
Transfer coefficient for Tellurium: any lung compartment to transformed state in lung	d^{-1}	90	$2.47\ 10^{-1}$	1.23	2.97	3.51	3.95	4.04	$1.23\ 10^{1}$	$1.96\ 10^{1}$	$2.15\ 10^{1}$
Transfer coefficient for Tellurium: transformed state in lung to blood	d^{-1}	$5.0\ 10^{-3}$	$6.00\ 10^{-8}$	$8.88\ 10^{-7}$	$1.29\ 10^{-5}$	$3.66\ 10^{-5}$	$6.17\ 10^{-5}$	$8.52\ 10^{-5}$	$1.79\ 10^{-4}$	$3.17\ 10^{-4}$	$6.61\ 10^{-4}$
Transfer coefficient for Tellurium: blood to bone	d^{-1}	0.108	$1.27\ 10^{-4}$	$1.76\ 10^{-2}$	$1.20\ 10^{-1}$	$1.86\ 10^{-1}$	$5.50\ 10^{-1}$	1.67	5.39	8.54	$2.00\ 10^{1}$
Transfer coefficient for Tellurium: blood to thyroid	d^{-1}	$1.7\ 10^{-3}$	$5.10\ 10^{-3}$	$3.36\ 10^{-2}$	$1.44\ 10^{-1}$	$3.32\ 10^{-1}$	$6.77\ 10^{-1}$	1.38	11.15	18.66	19.48
Transfer coefficient for Tellurium: blood to liver		-	$5.40\ 10^{-4}$	$5.50\ 10^{-3}$	$2.37\ 10^{-2}$	$4.66\ 10^{-2}$	$9.66\ 10^{-2}$	$2.23\ 10^{-1}$	9.71	13.69	14.09
Transfer coefficient for Tellurium: blood to U.L.I.	d^{-1}	$8.7\ 10^{-2}$	$3.93\ 10^{-4}$	$3.92\ 10^{-3}$	$1.71\ 10^{-2}$	$5.04\ 10^{-2}$	$1.09\ 10^{-1}$	$2.15\ 10^{-1}$	$3.99\ 10^{-1}$	2.21	3.03
Transfer coefficient for Tellurium: bone to U.L.I.	d^{-1}	$1.4\ 10^{-5}$	$9.84\ 10^{-5}$	$3.00\ 10^{-4}$	$9.72\ 10^{-4}$	$3.52\ 10^{-3}$	$6.75\ 10^{-3}$	$1.02\ 10^{-2}$	$2.60\ 10^{-2}$	$9.38\ 10^{-2}$	$1.31\ 10^{-1}$
Transfer coefficient for Tellurium: thyroid to U.L.I.	d^{-1}	$6.9\ 10^{-3}$	$4.76\ 10^{-6}$	$5.52\ 10^{-4}$	$2.78\ 10^{-3}$	$5.36\ 10^{-3}$	$8.02\ 10^{-3}$	$1.08\ 10^{-2}$	$1.35\ 10^{-2}$	$2.38\ 10^{-2}$	$1.47\ 10^{-1}$
Transfer coefficient for Tellurium: liver to U.L.I.		-	$3.96\ 10^{-5}$	$8.12\ 10^{-5}$	$1.54\ 10^{-3}$	$3.53\ 10^{-3}$	$5.61\ 10^{-3}$	$9.66\ 10^{-3}$	$1.18\ 10^{-2}$	$5.79\ 10^{-2}$	2.16
Parameters of the Iodine model											
Transfer coefficient for iodine: any lung compartment to blood	d^{-1}	100	$1.56\ 10^{-1}$	$6.65\ 10^{-1}$	3.74	$2.41\ 10^{1}$	$3.34\ 10^{1}$	$4.25\ 10^{1}$	$5.56\ 10^{1}$	$6.83\ 10^{1}$	$1.10\ 10^{2}$
Transfer coefficient for iodine: any lung compartment to transformed state in lung	d^{-1}	0	$2.69\ 10^{-2}$	$4.61\ 10^{-1}$	1.89	3.31	4.65	5.69	$1.07\ 10^{1}$	$1.27\ 10^{1}$	$1.31\ 10^{1}$
Transfer coefficient for iodine: transformed state in lung to blood	d^{-1}	-	$1.54\ 10^{-7}$	$6.84\ 10^{-7}$	$3.23\ 10^{-6}$	$5.49\ 10^{-6}$	$8.49\ 10^{-6}$	$1.29\ 10^{-5}$	$1.90\ 10^{-5}$	$9.86\ 10^{-4}$	$1.82\ 10^{-2}$
Transfer coefficient for Iodine: blood to thyroid		-	$4.00\ 10^{-2}$	$6.68\ 10^{-1}$	1.32	1.7	2.2	2.28	2.84	4.22	8.92

Uncertain Parameter	Units	Default	Percentiles of the distribution on the input parameter								
			Minimum	5%	20%	35%	50%	65%	80%	95%	Maximum
Transfer coefficient for Iodine: blood to Bladder		-	$1.42\ 10^{-1}$	1.18	2.08	2.92	4.89	7.0858	7.16	7.7	$1.07\ 10^{1}$
Transfer coefficient for Iodine: thyroid to U.L.I		-	$5.81\ 10^{-6}$	$1.45\ 10^{-4}$	$5.13\ 10^{-4}$	$1.20\ 10^{-3}$	$2.00\ 10^{-3}$	$2.61\ 10^{-3}$	$3.39\ 10^{-3}$	$4.25\ 10^{-3}$	$6.52\ 10^{-3}$
Parameters of the Caesium model											
Transfer coefficient for Caesium: any lung compartment to blood	d^{-1}	100	$4.62\ 10^{-3}$	$5.14\ 10^{-1}$	4.68	6.49	8.81	$1.64\ 10^{1}$	$1.97\ 10^{1}$	$2.79\ 10^{1}$	$5.95\ 10^{1}$
Transfer coefficient for Caesium: any lung compartment to transformed state in lung	d^{-1}	0	$2.14\ 10^{-1}$	1.23	3.72	4.24	5.12	6.01	7.28	8.27	8.57
Transfer coefficient for Caesium: transformed state in lung to blood	d^{-1}	-	$1.26\ 10^{-7}$	$1.21\ 10^{-6}$	$6.45\ 10^{-6}$	$9.83\ 10^{-6}$	$1.50\ 10^{-5}$	$1.82\ 10^{-5}$	$2.20\ 10^{-5}$	$2.98\ 10^{-4}$	$1.22\ 10^{-3}$
Caesium: f1-factor		1.0	$3.40\ 10^{-1}$	$5.43\ 10^{-1}$	$6.59\ 10^{-1}$	$7.76\ 10^{-1}$	$8.93\ 10^{-1}$	$9.28\ 10^{-1}$	$9.64\ 10^{-1}$	$9.99\ 10^{-1}$	1
Transfer coefficient for Caesium: blood to whole body	d^{-1}	2.5	$7.34\ 10^{-4}$	$4.26\ 10^{-2}$	$4.38\ 10^{-1}$	$4.61\ 10^{-1}$	$6.06\ 10^{-1}$	1.56	2.08	7.33	$2.10\ 10^{1}$
Transfer coefficient for Caesium: blood to whole body 2 compartment	d^{-1}	0.277	$1.53\ 10^{-2}$	$2.64\ 10^{-1}$	1	1.94	2.8	4.12	4.15	4.19	7.04
Transfer coefficient for Caesium: whole body to U.L.I.	d^{-1}	$1.3\ 10^{-3}$	$3.02\ 10^{-4}$	$3.04\ 10^{-4}$	$3.54\ 10^{-4}$	$8.20\ 10^{-4}$	$1.17\ 10^{-3}$	$1.22\ 10^{-3}$	$2.22\ 10^{-3}$	$2.34\ 10^{-3}$	$3.30\ 10^{-3}$
Transfer coefficient for Caesium: whole body 2 compartment to U.L.I	d^{-1}	$1.1\ 10^{-5}$	$1.09\ 10^{-5}$	$7.82\ 10^{-5}$	$2.51\ 10^{-3}$	$3.29\ 10^{-3}$	$7.83\ 10^{-3}$	$8.45\ 10^{-3}$	$1.38\ 10^{-2}$	$2.19\ 10^{-2}$	$3.39\ 10^{-2}$
Parameters of the Cerium model											
Cerium: f1 factor		$5.0\ 10^{-4}$	$5.00\ 10^{-5}$	$1.00\ 10^{-4}$	$1.67\ 10^{-4}$	$2.33\ 10^{-4}$	$3.00\ 10^{-4}$	$5.33\ 10^{-4}$	$7.70\ 10^{-4}$	$1.00\ 10^{-3}$	$2.00\ 10^{-3}$
Parameters of the Plutonium model											
Transfer coefficient for Plutonium: any lung compartment to blood	d^{-1}	10	$8.98\ 10^{-5}$	$7.58\ 10^{-4}$	$2.06\ 10^{-2}$	$2.62\ 10^{-2}$	$4.99\ 10^{-2}$	1.21	1.28	1.68	$1.02\ 10^{1}$
Transfer coefficient for Plutonium: any lung compartment to transformed state in lung	d^{-1}	90	$8.31\ 10^{-2}$	$5.52\ 10^{-1}$	$2.74\ 10^{1}$	$2.74\ 10^{1}$	$2.74\ 10^{1}$	$2.74\ 10^{1}$	$2.74\ 10^{1}$	$2.74\ 10^{1}$	$4.05\ 10^{1}$
Transfer coefficient for Plutonium: transformed state in lung to blood	d^{-1}	$5.0\ 10^{-3}$	$4.80\ 10^{-7}$	$1.41\ 10^{-6}$	$7.98\ 10^{-6}$	$9.74\ 10^{-6}$	$1.16\ 10^{-5}$	$2.11\ 10^{-5}$	$4.40\ 10^{-5}$	$5.18\ 10^{-5}$	$8.99\ 10^{-4}$
Transfer coefficient for Plutonium: R.B.M. to U.L.I.		-	$1.95\ 10^{-4}$	$1.63\ 10^{-3}$	$4.31\ 10^{-3}$	$7.13\ 10^{-3}$	$1.05\ 10^{-2}$	$1.40\ 10^{-2}$	$4.96\ 10^{-2}$	$4.39\ 10^{-1}$	1.42
Transfer coefficient for Plutonium: cortical marrow to U.L.I.		-	$1.29\ 10^{-4}$	$2.31\ 10^{-3}$	$7.17\ 10^{-3}$	$1.18\ 10^{-2}$	$3.46\ 10^{-2}$	$7.21\ 10^{-2}$	$1.13\ 10^{-1}$	$3.33\ 10^{-1}$	2.43
Transfer coefficient for Plutonium: blood to trabecular surface		-	$2.38\ 10^{-2}$	$6.64\ 10^{-2}$	$9.25\ 10^{-2}$	$2.06\ 10^{-1}$	$3.37\ 10^{-1}$	$5.67\ 10^{-1}$	$7.82\ 10^{-1}$	1.21	5.35
Transfer coefficient for Plutonium: blood to cortical surface		-	$1.06\ 10^{-2}$	$1.09\ 10^{-1}$	$2.73\ 10^{-1}$	$4.58\ 10^{-1}$	$4.99\ 10^{-1}$	$6.54\ 10^{-1}$	$8.59\ 10^{-1}$	1.59	4.57
Transfer coefficient for Plutonium: trabecular surface to trabecular volume	d^{-1}	$2.47\ 10^{-4}$	$1.73\ 10^{-7}$	$1.10\ 10^{-6}$	$5.98\ 10^{-6}$	$1.19\ 10^{-5}$	$3.50\ 10^{-5}$	$8.28\ 10^{-5}$	$1.62\ 10^{-4}$	$3.57\ 10^{-3}$	1.5
Transfer coefficient for Plutonium: cortical surface to cortical volume	d^{-1}	$4.11\ 10^{-5}$	$2.20\ 10^{-7}$	$1.62\ 10^{-6}$	$9.01\ 10^{-6}$	$1.61\ 10^{-5}$	$2.67\ 10^{-5}$	$1.11\ 10^{-4}$	$1.10\ 10^{-3}$	$7.64\ 10^{-3}$	2.41

Uncertain Parameter	Units	Default	Percentiles of the distribution on the input parameter								
			Minimum	5%	20%	35%	50%	65%	80%	95%	Maximum
Transfer coefficient for Plutonium: trabecular surface to R.B.M.	d^{-1}	$4.93\ 10^{-4}$	$1.36\ 10^{-7}$	$4.51\ 10^{-6}$	$2.89\ 10^{-5}$	$1.08\ 10^{-4}$	$1.60\ 10^{-4}$	$2.30\ 10^{-4}$	$1.03\ 10^{-3}$	$7.35\ 10^{-3}$	1.65
Transfer coefficient for Plutonium: trabecular volume to R.B.M.	d^{-1}	$4.93\ 10^{-4}$	$3.94\ 10^{-5}$	$1.32\ 10^{-3}$	$4.79\ 10^{-3}$	$8.23\ 10^{-3}$	$1.17\ 10^{-2}$	$3.49\ 10^{-2}$	$8.35\ 10^{-2}$	$2.89\ 10^{-1}$	1.61
Transfer coefficient for Plutonium: cortical surface to cortical marrow	d^{-1}	$8.21\ 10^{-5}$	$5.59\ 10^{-8}$	$9.12\ 10^{-7}$	$2.78\ 10^{-6}$	$7.14\ 10^{-6}$	$1.28\ 10^{-5}$	$3.86\ 10^{-5}$	$1.89\ 10^{-4}$	$3.19\ 10^{-3}$	1.58
Transfer coefficient for Plutonium: cortical volume to cortical marrow	d^{-1}	$8.21\ 10^{-5}$	$2.41\ 10^{-5}$	$7.87\ 10^{-4}$	$3.15\ 10^{-3}$	$6.35\ 10^{-3}$	$9.24\ 10^{-3}$	$1.23\ 10^{-2}$	$3.34\ 10^{-2}$	$6.24\ 10^{-1}$	1.57
Transfer coefficient for Plutonium: blood to liver		-	$5.11\ 10^{-4}$	$3.94\ 10^{-2}$	$2.23\ 10^{-1}$	$4.36\ 10^{-1}$	$6.26\ 10^{-1}$	$8.33\ 10^{-1}$	1.15	1.77	3.12
Transfer coefficient for Plutonium: liver to U.L.I.		-	$1.88\ 10^{-7}$	$1.28\ 10^{-6}$	$6.71\ 10^{-6}$	$1.26\ 10^{-5}$	$3.80\ 10^{-5}$	$9.58\ 10^{-5}$	$7.63\ 10^{-4}$	$1.26\ 10^{-2}$	$5.93\ 10^{-1}$
Transfer coefficient for Plutonium: blood to U.L.I.		-	$2.95\ 10^{-4}$	$4.49\ 10^{-3}$	$2.30\ 10^{-2}$	$4.50\ 10^{-2}$	$1.67\ 10^{-1}$	$3.44\ 10^{-1}$	1.31	1.44	$1.40\ 10^{1}$
Transfer coefficient for bladder to urine	d^{-1}	12	4.278	6.93	9.06	10.55	12.00	13.65	15.89	20.78	33.66
Parameters for dose coefficients of radionuclides not considered by the experts											
Np-Inhalation dose coefficient		1.0	0.3564	0.59	0.77	0.89	1.01	1.15	1.34	1.74	2.806
β dose to skin											
Skin residence time			0.5	2	2.17	2.33	2.5	2.67	2.84	3	15
Parameters for external γ dose from deposited material											
Zr-95 initial dose rate: deposited activity		1.0	$2.57\ 10^{-1}$	$4.10\ 10^{-1}$	$6.45\ 10^{-1}$	$8.79\ 10^{-1}$	1.11	1.95	2.79	3.63	5.8
Zr-95 dose to 10 days: deposited activity		1.0	$2.58\ 10^{-1}$	$3.66\ 10^{-1}$	$5.99\ 10^{-1}$	$8.32\ 10^{-1}$	1.06	1.84	2.61	3.38	5.39
Zr-95 dose to 30 days: deposited activity		1.0	$2.08\ 10^{-1}$	$3.27\ 10^{-1}$	$5.61\ 10^{-1}$	$7.95\ 10^{-1}$	1.03	1.71	2.39	3.06	4.81
Ru-106 initial dose rate: deposited activity		1.0	$8.52\ 10^{-2}$	$1.67\ 10^{-1}$	$3.93\ 10^{-1}$	$6.18\ 10^{-1}$	$8.44\ 10^{-1}$	1.62	2.4	3.17	6.21
Ru-106 dose to 30 days: deposited activity		1.0	$8.48\ 10^{-2}$	$1.66\ 10^{-1}$	$4.02\ 10^{-1}$	$6.38\ 10^{-1}$	$8.75\ 10^{-1}$	1.68	2.49	3.29	6.44
Ru-106 dose to 100 days: deposited activity		1.0	$7.40\ 10^{-2}$	$1.53\ 10^{-1}$	$3.73\ 10^{-1}$	$5.94\ 10^{-1}$	$8.14\ 10^{-1}$	1.64	2.46	3.29	6.8
Ru-106 dose to 1 year: deposited activity		1.0	$6.05\ 10^{-2}$	$1.30\ 10^{-1}$	$3.26\ 10^{-1}$	$5.21\ 10^{-1}$	$7.17\ 10^{-1}$	1.52	2.33	3.14	6.75
I-131 initial dose rate: deposited activity		1.0	$1.79\ 10^{-1}$	$2.06\ 10^{-1}$	$3.75\ 10^{-1}$	$5.44\ 10^{-1}$	$7.14\ 10^{-1}$	$9.40\ 10^{-1}$	1.17	1.39	1.6
I-131 dose to 1 day: deposited activity		1.0	$1.72\ 10^{-1}$	$2.12\ 10^{-1}$	$3.85\ 10^{-1}$	$5.57\ 10^{-1}$	$7.30\ 10^{-1}$	$9.72\ 10^{-1}$	1.21	1.46	1.8
I-131 dose to 3 days: deposited activity		1.0	$1.40\ 10^{-1}$	$1.77\ 10^{-1}$	$3.58\ 10^{-1}$	$5.39\ 10^{-1}$	$7.19\ 10^{-1}$	$9.91\ 10^{-1}$	1.26	1.53	1.94
I-131 dose to 10 days: deposited activity		1.0	$1.45\ 10^{-1}$	$1.87\ 10^{-1}$	$3.75\ 10^{-1}$	$5.63\ 10^{-1}$	$7.51\ 10^{-1}$	1.02	1.3	1.57	2.02
I-131 dose to 30 days: deposited activity		1.0	$1.41\ 10^{-1}$	$1.88\ 10^{-1}$	$3.72\ 10^{-1}$	$5.56\ 10^{-1}$	$7.40\ 10^{-1}$	1.06	1.37	1.69	2.26
Cs-137 initial dose rate: deposited activity		1.0	$1.93\ 10^{-1}$	$2.27\ 10^{-1}$	$4.31\ 10^{-1}$	$6.35\ 10^{-1}$	$8.38\ 10^{-1}$	1.06	1.28	1.5	1.76
Cs-137 dose to 100 days: deposited activity		1.0	$1.71\ 10^{-1}$	$2.01\ 10^{-1}$	$3.95\ 10^{-1}$	$5.89\ 10^{-1}$	$7.83\ 10^{-1}$	1.05	1.31	1.58	1.86
Cs-137 dose to 1 year: deposited activity		1.0	$1.37\ 10^{-1}$	$1.64\ 10^{-1}$	$3.41\ 10^{-1}$	$5.18\ 10^{-1}$	$6.95\ 10^{-1}$	$9.42\ 10^{-1}$	1.19	1.44	1.72
Cs-137 dose to 3 years: deposited activity		1.0	$1.03\ 10^{-1}$	$1.34\ 10^{-1}$	$2.79\ 10^{-1}$	$4.23\ 10^{-1}$	$5.68\ 10^{-1}$	$8.77\ 10^{-1}$	1.19	1.5	1.96

Uncertain Parameter	Units	Default	Percentiles of the distribution on the input parameter								
			Minimum	5%	20%	35%	50%	65%	80%	95%	Maximum
Cs-137 dose to 10 years: deposited activity		1.0	$5.76\ 10^{-2}$	$8.44\ 10^{-2}$	$2.05\ 10^{-1}$	$3.26\ 10^{-1}$	$4.47\ 10^{-1}$	$8.22\ 10^{-1}$	1.2	1.57	2.3
Cs-137 dose to 30 years: deposited activity		1.0	$4.12\ 10^{-2}$	$7.20\ 10^{-2}$	$2.06\ 10^{-1}$	$3.40\ 10^{-1}$	$4.74\ 10^{-1}$	1.09	1.71	2.33	4.07
Cs-137 dose to 100 years: deposited activity		1.0	$4.35\ 10^{-2}$	$7.42\ 10^{-2}$	$2.51\ 10^{-1}$	$4.27\ 10^{-1}$	$6.04\ 10^{-1}$	1.77	2.93	4.09	6.98
Location factors											
Location factor for normal living (NE), groundshine		0.14	$4.10\ 10^{-2}$	$1.20\ 10^{-1}$	$1.69\ 10^{-1}$	$1.99\ 10^{-1}$	$2.26\ 10^{-1}$	$2.59\ 10^{-1}$	$3.09\ 10^{-1}$	$4.18\ 10^{-1}$	$7.50\ 10^{-1}$
Location factor for sheltering (NE), groundshine		0.04	$3.87\ 10^{-3}$	$4.41\ 10^{-2}$	$7.30\ 10^{-2}$	$9.69\ 10^{-2}$	$1.22\ 10^{-1}$	$1.55\ 10^{-1}$	$2.05\ 10^{-1}$	$3.27\ 10^{-1}$	$6.81\ 10^{-1}$
Location factor for being in cars (NE), groundshine		0.7	$8.60\ 10^{-2}$	$1.00\ 10^{-1}$	$2.53\ 10^{-1}$	$3.97\ 10^{-1}$	$5.31\ 10^{-1}$	$6.69\ 10^{-1}$	$7.90\ 10^{-1}$	$9.20\ 10^{-1}$	1.07
Location factor for normal living (NE&NL), cloudshine		0.16	$8.41\ 10^{-2}$	$1.53\ 10^{-1}$	$1.97\ 10^{-1}$	$2.31\ 10^{-1}$	$2.78\ 10^{-1}$	$3.38\ 10^{-1}$	$4.18\ 10^{-1}$	$5.33\ 10^{-1}$	$7.84\ 10^{-1}$
Location factor for sheltering (NE), cloudshine		0.1	$4.98\ 10^{-2}$	$9.59\ 10^{-2}$	$1.27\ 10^{-1}$	$1.60\ 10^{-1}$	$2.12\ 10^{-1}$	$2.82\ 10^{-1}$	$3.68\ 10^{-1}$	$4.94\ 10^{-1}$	$7.77\ 10^{-1}$
Location factor for intervention (NE), cloudshine		1.0	$3.27\ 10^{-1}$	$7.01\ 10^{-1}$	$7.97\ 10^{-1}$	$8.40\ 10^{-1}$	$8.74\ 10^{-1}$	$9.15\ 10^{-1}$	$9.63\ 10^{-1}$	$9.99\ 10^{-1}$	1
Location factor for normal living (NE&NL), inhalation		0.5	$1.24\ 10^{-1}$	$3.09\ 10^{-1}$	$4.47\ 10^{-1}$	$5.68\ 10^{-1}$	$6.86\ 10^{-1}$	$8.49\ 10^{-1}$	$9.38\ 10^{-1}$	1.01	1.1
Location factor for sheltering (NE), inhalation		0.5	$1.05\ 10^{-1}$	$2.40\ 10^{-1}$	$3.93\ 10^{-1}$	$5.24\ 10^{-1}$	$6.56\ 10^{-1}$	$8.35\ 10^{-1}$	$9.33\ 10^{-1}$	1.01	1.11
Consumption rates											
Consumption rate for green vegetables	$kg\ y^{-1}$	43	48	52.75	67	81.25	95.5	109.75	124	138.25	143

Table 0.6 Distributions on parameters of the health effects models

Uncertain parameter	Unit	Default value	Percentiles of the distribution on the input parameter								
			Minimum	5%	20%	35%	50%	65%	80%	95%	Maximum
Parameters for early effects											
Lung function impairment: shape parameter V		7.0	1.73	3.04	4.42	5.22	6.4	7.58	8.53	9.57	$2.23\ 10^{1}$
Lung function impairment: model parameter D_0	$Gy^2\ h^{-1}$	$1.5\ 10^{1}$	$6.25\ 10^{-2}$	$5.51\ 10^{-1}$	2.21	5.19	7	$1.08\ 10^{1}$	$1.47\ 10^{1}$	$2.7\ 10^{1}$	$1.37\ 10^{3}$
Lung function impairment: model parameter D_∞	Gy	5.0	$1.05\ 10^{-1}$	2.96	4.58	5.34	6.4	$1.92\ 10^{1}$	$3.01\ 10^{1}$	$5.82\ 10^{1}$	$2.49\ 10^{2}$
skin: shape parameter V		5.0	$9.8\ 10^{-1}$	1.88	3.08	3.82	4.39	4.9	5.45	5.9	6.04
skin: model parameter D_0	$Gy^2\ h^{-1}$	5.0	$1.04\ 10^{-1}$	1.08	3.29	6.54	9.21	$1.16\ 10^{1}$	$1.61\ 10^{1}$	$3.77\ 10^{1}$	$5.04\ 10^{1}$
skin: model parameter D_∞	Gy	$2.0\ 10^{1}$	$4.\ 95\ 10^{-1}$	3.55	9.88	$1.43\ 10^{1}$	$1.77\ 10^{1}$	$2.2\ 10^{1}$	$3.01\ 10^{1}$	$6.8\ 10^{1}$	$1.01\ 10^{2}$
skin: Fraction of people dying for burns on 20% of exposed skin		$5.0\ 10^{-2}$	$2.42\ 10^{-3}$	$2.59\ 10^{-2}$	$4.92\ 10^{-2}$	$6.91\ 10^{-2}$	$8.98\ 10^{-2}$	$1.18\ 10^{-1}$	$1.55\ 10^{-1}$	$2.05\ 10^{-1}$	$2.78\ 10^{-1}$
Pulmonary syndrome: shape parameter V		7.0	4.35	5.44	6.24	7.01	7.56	8.2	8.7	$1.01\ 10^{1}$	$1.71\ 10^{1}$
Pulmonary syndrome: model parameter D_0	$Gy^2\ h^{-1}$	$3.0\ 10^{1}$	$8.96\ 10^{-2}$	2.32	3.91	4.54	5.54	9.86	$2.23\ 10^{1}$	$5.29\ 10^{1}$	$1.87\ 10^{2}$
Pulmonary syndrome: model parameter D_∞	Gy	$1.0\ 10^{1}$	1.84	7.68	8.69	9.63	$1.1\ 10^{1}$	$2.46\ 10^{1}$	$5.26\ 10^{1}$	$1.56\ 10^{2}$	$3.75\ 10^{2}$
Haematopoietic syndrome: shape parameter V		6.0	2.3	2.85	3.34	3.61	3.88	4	4.1	4.45	5.72
Haematopoietic syndrome: model parameter D_0	$Gy^2\ h^{-1}$	$1.0\ 10^{-1}$	$1.09\ 10^{-2}$	$1.71\ 10^{-1}$	$2.83\ 10^{-1}$	$4.09\ 10^{-1}$	$5.08\ 10^{-1}$	$6.23\ 10^{-1}$	$7.69\ 10^{-1}$	1.83	3.46
Haematopoietic syndrome: model parameter D_∞	Gy	4.5	$1.34\ 10^{-1}$	1.15	1.69	2.01	2.23	2.46	2.78	3.88	6.01
gastrointestinal syndrome: shape parameter V		$1.0\ 10^{1}$	4.71	5.96	6.55	7.12	7.49	7.78	8.13	8.69	9.23
gastrointestinal syndrome: model parameter D_0	$Gy^2\ h^{-1}$	0.0	$1.61\ 10^{-1}$	$9.24\ 10^{-1}$	1.67	2.2	2.49	2.55	3.19	4.01	4.68
gastrointestinal syndrome: model parameter D_∞	Gy	$1.5\ 10^{1}$	$3.1\ 10^{-1}$	2.55	4.69	5.7	6.68	7.99	$1.03\ 10^{1}$	$1.85\ 10^{1}$	$2.47\ 10^{1}$
Parameters for late effects											
Risk of death from radiation induced leukaemia	Sv^{-1}	$5.16\ 10^{-3}$	0	$2.28\ 10^{-7}$	$1.27\ 10^{-3}$	$2.9\ 10^{-3}$	$4.72\ 10^{-3}$	$7.91\ 10^{-3}$	$1.24\ 10^{-2}$	$1.87\ 10^{-2}$	$3.57\ 10^{-2}$

Uncertain parameter	Unit	Default value	Percentiles of the distribution on the input parameter								
			Minimum	5%	20%	35%	50%	65%	80%	95%	Maximum
Risk of death from radiation induced bone surface cancer	Sv^{-1}	$1.33\ 10^{-4}$	0	$1.85\ 10^{-8}$	$6.15\ 10^{-5}$	$1.34\ 10^{-4}$	$2.04\ 10^{-4}$	$7.47\ 10^{-4}$	$2.03\ 10^{-3}$	$5.27\ 10^{-3}$	$1.14\ 10^{-2}$
Risk of death from radiation induced breast cancer	Sv^{-1}	$8.0\ 10^{-3}$	0	$1.69\ 10^{-7}$	$1.15\ 10^{-3}$	$2.32\ 10^{-3}$	$4.30\ 10^{-3}$	$7.68\ 10^{-3}$	$1.43\ 10^{-2}$	$2.75\ 10^{-2}$	$4.25\ 10^{-2}$
Risk of death from radiation induced lung cancer	Sv^{-1}	$9.0\ 10^{-3}$	0	$2.03\ 10^{-8}$	$1.22\ 10^{-3}$	$4.26\ 10^{-3}$	$7.72\ 10^{-3}$	$1.24\ 10^{-2}$	$2.19\ 10^{-2}$	$4.53\ 10^{-2}$	$7.87\ 10^{-2}$
Risk of death from radiation induced stomach cancer	Sv^{-1}	$9.03\ 10^{-3}$	0	$1.55\ 10^{-8}$	$4.25\ 10^{-4}$	$1.11\ 10^{-3}$	$2.65\ 10^{-3}$	$5.6\ 10^{-3}$	$1.14\ 10^{-2}$	$2.51\ 10^{-2}$	$5.81\ 10^{-2}$
Risk of death from radiation induced colon cancer	Sv^{-1}	$3.43\ 10^{-3}$	0	$2.71\ 10^{-8}$	$1.02\ 10^{-3}$	$2.31\ 10^{-3}$	$4.21\ 10^{-3}$	$7.25\ 10^{-3}$	$1.32\ 10^{-2}$	$2.46\ 10^{-2}$	$3.59\ 10^{-2}$
Risk of death from radiation induced liver cancer	Sv^{-1}	$4.67\ 10^{-3}$	0	$4.68\ 10^{-8}$	$1.84\ 10^{-4}$	$4.16\ 10^{-4}$	$1.09\ 10^{-3}$	$3.52\ 10^{-3}$	$7.39\ 10^{-3}$	$1.56\ 10^{-2}$	$3.96\ 10^{-2}$
Risk of death from radiation induced pancreas cancer	Sv^{-1}	$5.26\ 10^{-3}$	0	$2.13\ 10^{-8}$	$2.52\ 10^{-4}$	$7.05\ 10^{-4}$	$1.36\ 10^{-3}$	$2.81\ 10^{-3}$	$5.\ 23\ 10^{-3}$	$1.09\ 10^{-2}$	$2.01\ 10^{-2}$
Risk of death from radiation induced thyroid cancer	Sv^{-1}	$1.77\ 10^{-3}$	0	$4.64\ 10^{-8}$	$7.02\ 10^{-5}$	$1.78\ 10^{-4}$	$4.26\ 10^{-4}$	$1.04\ 10^{-3}$	$2.05\ 10^{-3}$	$5.27\ 10^{-3}$	$1.25\ 10^{-2}$
Risk of death from radiation induced cancer in other organs	Sv^{-1}	$3.86\ 10^{-3}$	0	$4.37\ 10^{-8}$	$3.46\ 10^{-3}$	$6.93\ 10^{-3}$	$1.42\ 10^{-2}$	$2.48\ 10^{-2}$	$3.98\ 10^{-2}$	$6.82\ 10^{-2}$	$1.2\ 10^{-1}$
Risk of death from radiation induced skin cancer	Sv^{-1}	$1.38\ 10^{-4}$	0	$3.87\ 10^{-8}$	$6.95\ 10^{-5}$	$1.41\ 10^{-4}$	$3.32\ 10^{-4}$	$7.06\ 10^{-4}$	$1.19\ 10^{-3}$	$2.44\ 10^{-3}$	$4.34\ 10^{-3}$

Table 0.7 Correlations between parameters in the overall analysis for the dispersion and deposition models

Correlated parameters		
Dry deposition velocity for aerosols	Dry deposition velocity for elemental iodine	0.288
Dry deposition velocity for aerosols	Q-coefficient for sigma-y, category C	0.309
Dry deposition velocity for aerosols	Q-coefficient for sigma-y, category D	0.636
Dry deposition velocity for aerosols	Q-coefficient for sigma-y, category E and F	0.911
Dry deposition velocity for aerosols	P-coefficient for sigma-z, category E and F	-0.272
Dry deposition velocity for aerosols	Q-coefficient for sigma-z, category E and F	0.258
Dry deposition velocity for aerosols	Dry deposition velocity for aerosols, on skin	0.819
Dry deposition velocity for aerosols	Dry deposition velocity for elemental iodine, on skin	0.207
Dry deposition velocity for elemental iodine	Q-coefficient for sigma-y, category E and F	0.298
Dry deposition velocity for elemental iodine	Dry deposition velocity for aerosols, on skin	0.256
P-coefficient for sigma-y, category A and B	Q-coefficient for sigma-y, category A and B	-0.223
P-coefficient for sigma-y, category E and F	P-coefficient for sigma-z, category E and F	-0.345
P-coefficient for sigma-y, category E and F	Q-coefficient for sigma-z, category E and F	0.208
Q-coefficient for sigma-y, category A and B	Q-coefficient for sigma-y, category C	0.738
Q-coefficient for sigma-y, category A and B	Q-coefficient for sigma-y, category D	0.335
Q-coefficient for sigma-y, category C	Q-coefficient for sigma-y, category D	0.511
Q-coefficient for sigma-y, category C	Q-coefficient for sigma-y, category E and F	0.332
Q-coefficient for sigma-y, category C	Q-coefficient for sigma-z, category C	0.200
Q-coefficient for sigma-y, category C	Dry deposition velocity for aerosols, on skin	0.280
Q-coefficient for sigma-y, category D	Q-coefficient for sigma-y, category E and F	0.679
Q-coefficient for sigma-y, category D	Q-coefficient for sigma-z, category D	-0.212
Q-coefficient for sigma-y, category D	Dry deposition velocity for aerosols, on skin	0.607
Q-coefficient for sigma-y, category E and F	P-coefficient for sigma-z, category E and F	-0.260
Q-coefficient for sigma-y, category E and F	Q-coefficient for sigma-z, category E and F	0.272
Q-coefficient for sigma-y, category E and F	Dry deposition velocity for aerosols, on skin	0.902
Q-coefficient for sigma-y, category E and F	Dry deposition velocity for elemental iodine, on skin	0.253
P-coefficient for sigma-z, category A and B	Q-coefficient for sigma-z, category A and B	-0.308
P-coefficient for sigma-z, category A and B	Transfer coefficient for tellurium: any lung compartment to blood	-0.206
P-coefficient for sigma-z, category D	Q-coefficient for sigma-z, category D	-0.322
P-coefficient for sigma-z, category E and F	Q-coefficient for sigma-z, category E and F	-0.478
P-coefficient for sigma-z, category E and F	Dry deposition velocity for aerosols, on skin	-0.268
Q-coefficient for sigma-z, category E and F	Dry deposition velocity for aerosols, on skin	0.287
Wet deposition parameter a, for aerosols	Wet deposition parameter b, for aerosols	-0.867
Wet deposition parameter a, for elemental iodine	Wet deposition parameter b, for elemental iodine	-0.646
Dry deposition velocity for aerosols, on skin	Dry deposition velocity for elemental iodine, on skin	0.277

Table 0.8 Correlations between parameters in the overall analysis for the early health effects models

Correlated parmeters		Correlation coefficien
Lung function impairment: shape parameter V of dose relationship	Lung function impairment: model parameter D_0	-0.307
Lung function impairment: model parameter D_0	Lung function impairment: model parameter D_INF	0.359
Effects on skin: model parameter V	Effects on skin: model parameter D_INF	0.234
Pulmonary syndrome: model parameter V	Pulmonary syndrome: model parameter D_0	0.810
Pulmonary syndrome: model parameter V	Pulmonary syndrome: model parameter D_INF	0.750
Pulmonary syndrome: model parameter D_0	Pulmonary syndrome: model parameter D_INF	0.629
Haematopoietic syndrome: model parameter v	Haematopoietic syndrome: model parameter D_0	0.429
Haematopoietic syndrome: model parameter v	Haematopoietic syndrome: model parameter D_INF	0.731
Haematopoietic syndrome: model parameter D_0	Haematopoietic syndrome: model parameter D_INF	0.338
Haematopoietic syndrome: model parameter D_0	Gastrointestinal syndrome: model parameter D_0	-0.281
Gastrointestinal syndrome: model parameter v	Gastrointestinal syndrome: model parameter D_INF	0.742

Table 0.9 Correlations between parameters in the overall analysis from the food chain models

Correlated parameters		Correlation coefficien
Soil migration pasture – k12, Cs	Ff transfer to meat, - beet cattle, Cs	-0.203
Soil migration pasture – k12, Cs	Cs-137 dose to 10 years: deposited activity	-0.318
Soil migration pasture – k12, Cs	Cs-137 dose to 30 years: deposited activity	-0.404
Soil migration pasture – k12, Cs	Cs-137 dose to 100 years: deposited activity	-0.388
Soil migration pasture – k34, Cs	Soil migration pasture – k43, Cs	0.994
Fm transfer to milk – dairy cows, Cs	Fm transfer to milk – dairy cows, I	0.299
Ff transfer to meat – dairy cows, Cs	Ff transfer to meat, - beet cattle, Cs	0.895
Interception factor - Cereals	Translocation cereals – k23,Cs	0.286
Interception factor - Cereals	Interception factor - Potatoes	0.343
Retention time – cereals – k21, Cs	Translocation cereals – k23,Cs	-0.334
Retention time – cereals – k21, Cs	Translocation cereals – k34,Cs	-0.231
Translocation cereals – k23,Cs	Translocation cereals – k34,Cs	0.822
Translocation cereals – k23,Cs	Translocation cereals – k41,Cs	0.231
Translocation cereals – k34,Cs	Translocation cereals – k41,Cs	0.271
Retention time – potatoes, k21, Sr	Translocation potatoes – k24,Sr	0.976
Retention time – potatoes, k21, Sr	Translocation potatoes – k45,Sr	0.988
Translocation potatoes – k24,Sr	Translocation potatoes – k45,Sr	0.965

Table 0.10 Correlations between parameters in the overall analysis for the internal dosimetry models

Correlated parameters		Correlation coefficient
Total initial deposition in respiratory tract	Breathing rate	0.359
Initial deposition in respiratory extrathoracic region	Fast transfer coefficient: bronchial to extrathoracic regions	-0.211
Initial deposition in respiratory extrathoracic region	Slow transfer coefficient: bronchial to extrathoracic regions	-0.227
Initial deposition in respiratory extrathoracic region	Transfer coefficient: extrathoracic 2 to stomach	-0.309
Fast transfer coefficient: bronchial to extrathoracic regions	Slow transfer coefficient: bronchial to extrathoracic regions	0.797
Fast transfer coefficient: bronchial to extrathoracic regions	Transfer coefficient: pulmonary 2 region to the tracheobronchial region (intermediate clearance rate)	0.367
Slow transfer coefficient: bronchial to extrathoracic regions	Transfer coefficient: pulmonary 2 region to the tracheobronchial region (intermediate clearance rate)	0.377
Transfer coefficient for strontium: any lung compartment to blood	Transfer coefficient for strontium: any lung compartment to transformed state in lung	0.630
Transfer coefficient for strontium: any lung compartment to blood	Transfer coefficient for strontium: transformed state in lung to blood	0.833
Transfer coefficient for strontium: any lung compartment to blood	Transfer coefficient for ruthenium: any lung compartment to blood	-0.278
Transfer coefficient for strontium: any lung compartment to blood	Transfer coefficient for ruthenium: any lung compartment to transformed state in lung	-0.300
Transfer coefficient for strontium: any lung compartment to blood	Transfer coefficient for ruthenium: transformed state in lung to blood	-0.250
Transfer coefficient for strontium: any lung compartment to blood	Transfer coefficient for iodine: any lung compartment to blood	0.286
Transfer coefficient for strontium: any lung compartment to blood	Transfer coefficient for caesium: any lung compartment to blood	0.219
Transfer coefficient for strontium: any lung compartment to blood	Transfer coefficient for plutonium: any lung compartment to blood	0.278
Transfer coefficient for strontium: any lung compartment to blood	Transfer coefficient for plutonium: transformed state in lung to blood	0.218
Transfer coefficient for strontium: any lung compartment to transformed state in lung	Transfer coefficient for strontium: transformed state in lung to blood	0.716
Transfer coefficient for strontium: any lung compartment to transformed state in lung	Ru-106 dose to 100 days: deposited activity	-0.201
Transfer coefficient for strontium: transformed state in lung to blood	Transfer coefficient for ruthenium: any lung compartment to blood	-0.239
Transfer coefficient for strontium: transformed state in lung to blood	Transfer coefficient for ruthenium: any lung compartment to transformed state in lung	-0.272
Transfer coefficient for strontium: transformed state in lung to blood	Transfer coefficient for ruthenium: transformed state in lung to blood	-0.206
Transfer coefficient for strontium: transformed state in lung to blood	Transfer coefficient for iodine: any lung compartment to blood	0.219
Transfer coefficient for strontium: transformed state in lung to blood	Transfer coefficient for plutonium: any lung compartment to blood	0.232
Transfer coefficient for ruthenium: any lung compartment to blood	Transfer coefficient for ruthenium: any lung compartment to transformed state in lung	0.845
Transfer coefficient for ruthenium: any lung compartment to blood	Transfer coefficient for ruthenium: transformed state in lung to blood	0.931
Transfer coefficient for ruthenium: any lung compartment to transformed state in lung	Transfer coefficient for ruthenium: transformed state in lung to blood	0.776
Transfer coefficient for ruthenium: blood to whole body	Transfer coefficient for ruthenium: blood to whole body 2 compartment	0.745
Transfer coefficient for ruthenium: blood to whole body	Transfer coefficient for ruthenium: whole body 2 compartment to U.L.I.	-0.286
Transfer coefficient for ruthenium: blood to whole body	Transfer coefficient for ruthenium: blood to whole body	0.223
Transfer coefficient for ruthenium: blood to whole body	Transfer coefficient for ruthenium: blood to whole body 2 compartment	-0.680

Correlated parameters		Correlation coefficient
Transfer coefficient for ruthenium: blood to whole body	Transfer coefficient for ruthenium: whole body to U.L.I.	-0.319
Transfer coefficient for ruthenium: blood to whole body	Transfer coefficient for ruthenium: whole body 2 compartment to U.L.I.	0.416
Transfer coefficient for ruthenium: blood to whole body 2 compartment	Transfer coefficient for ruthenium: whole body 2 compartment to U.L.I.	-0.243
Transfer coefficient for ruthenium: blood to whole body 2 compartment	Transfer coefficient for ruthenium: blood to whole body	0.311
Transfer coefficient for ruthenium: blood to whole body 2 compartment	Transfer coefficient for ruthenium: blood to whole body 2 compartment	-0.892
Transfer coefficient for ruthenium: blood to whole body 2 compartment	Transfer coefficient for ruthenium: whole body to U.L.I.	-0.407
Transfer coefficient for ruthenium: blood to whole body 2 compartment	Transfer coefficient for ruthenium: whole body 2 compartment to U.L.I.	0.538
Transfer coefficient for ruthenium: blood to U.L.I.	Transfer coefficient for ruthenium: whole body to U.L.I.	-0.205
Transfer coefficient for ruthenium: whole body to U.L.I.	Transfer coefficient for ruthenium: whole body 2 compartment to U.L.I.	-0.610
Transfer coefficient for tellurium: any lung compartment to blood	Transfer coefficient for tellurium: any lung compartment to transformed state in lung	0.794
Transfer coefficient for tellurium: any lung compartment to blood	Transfer coefficient for tellurium: any lung compartment to blood	0.958
Transfer coefficient for tellurium: any lung compartment to transformed state in lung	Transfer coefficient for tellurium: any lung compartment to blood	0.760
Transfer coefficient for tellurium: blood to bone	Transfer coefficient for tellurium: blood to thyroid	0.726
Transfer coefficient for tellurium: blood to bone	Transfer coefficient for tellurium: blood to liver	0.567
Transfer coefficient for tellurium: blood to bone	Transfer coefficient for tellurium: thyroid to U.L.I.	0.410
Transfer coefficient for tellurium: blood to bone	Transfer coefficient for tellurium: liver to U.L.I.	-0.224
Transfer coefficient for tellurium: blood to bone	Transfer coefficient for plutonium: blood to trabecular surface	0.438
Transfer coefficient for tellurium: blood to thyroid	Transfer coefficient for tellurium: blood to liver	0.450
Transfer coefficient for tellurium: blood to thyroid	Transfer coefficient for tellurium: thyroid to U.L.I.	0.342
Transfer coefficient for tellurium: blood to thyroid	Transfer coefficient for tellurium: thyroid to U.L.I.	-0.205
Transfer coefficient for tellurium: blood to thyroid	Transfer coefficient for tellurium: liver to U.L.I.	-0.229
Transfer coefficient for tellurium: blood to thyroid	Transfer coefficient for plutonium: blood to trabecular surface	0.376
Transfer coefficient for tellurium: blood to liver	Transfer coefficient for tellurium: thyroid to U.L.I.	0.278
Transfer coefficient for tellurium: blood to liver	Transfer coefficient for tellurium: liver to U.L.I.	-0.303
Transfer coefficient for tellurium: blood to liver	Transfer coefficient for plutonium: blood to trabecular surface	0.272
Transfer coefficient for tellurium: thyroid to U.L.I.	Transfer coefficient for tellurium: bone to U.L.I.	-0.431
Transfer coefficient for tellurium: liver to U.L.I.	Transfer coefficient for plutonium: blood to cortical surface	-0.212
Transfer coefficient for iodine: any lung compartment to blood	Transfer coefficient for iodine: any lung compartment to transformed state in lung	-0.208
Transfer coefficient for iodine: any lung compartment to blood	Transfer coefficient for iodine: transformed state in lung to blood	0.542
Transfer coefficient for iodine: any lung compartment to transformed state in lung	Transfer coefficient for iodine: transformed state in lung to blood	-0.318
Transfer coefficient for iodine: blood to thyroid	Transfer coefficient for iodine: blood to bladder	0.230

Correlated parameters		Correlation coefficient
Transfer coefficient for iodine: blood to bladder	Transfer coefficient for iodine: thyroid to U.L.I.	-0.228
Transfer coefficient for caesium: any lung compartment to blood	Transfer coefficient for caesium: any lung compartment to transformed state in lung	-0.359
Transfer coefficient for caesium: any lung compartment to blood	Transfer coefficient for caesium: transformed state in lung to blood	0.772
Transfer coefficient for caesium: any lung compartment to transformed state in lung	Transfer coefficient for caesium: transformed state in lung to blood	-0.283
Transfer coefficient for ruthenium: blood to whole body	Transfer coefficient for ruthenium: blood to whole body 2 compartment	-0.331
Transfer coefficient for ruthenium: blood to whole body 2 compartment	Transfer coefficient for ruthenium: whole body to U.L.I.	0.476
Transfer coefficient for ruthenium: blood to whole body 2 compartment	Transfer coefficient for ruthenium: whole body 2 compartment to U.L.I.	-0.631
Transfer coefficient for ruthenium: whole body to U.L.I.	Transfer coefficient for ruthenium: whole body 2 compartment to U.L.I.	-0.716
Transfer coefficient for plutonium: any lung compartment to blood	Transfer coefficient for plutonium: transformed state in lung to blood	0.344
Transfer coefficient for plutonium: any lung compartment to transformed state in lung	Transfer coefficient for plutonium: transformed state in lung to blood	0.626
Transfer coefficient for plutonium: R.B.M. to U.L.I.	Transfer coefficient for plutonium: cortical marrow to U.L.I.	0.376
Transfer coefficient for plutonium: R.B.M. to U.L.I.	Transfer coefficient for plutonium: cortical volume to cortical marrow	0.347
Transfer coefficient for plutonium: cortical marrow to U.L.I.	Transfer coefficient for plutonium: trabecular volume to R.B.M.	0.335
Transfer coefficient for plutonium: blood to trabecular surface	Transfer coefficient for plutonium: blood to cortical surface	0.253
Transfer coefficient for plutonium: blood to trabecular surface	Transfer coefficient for plutonium: trabecular surface to trabecular volume	0.291
Transfer coefficient for plutonium: blood to trabecular surface	Transfer coefficient for plutonium: blood to U.L.I.	0.286
Transfer coefficient for plutonium: blood to trabecular surface	Transfer coefficient for plutonium: blood to liver	-0.226
Transfer coefficient for plutonium: trabecular surface to trabecular volume	Transfer coefficient for plutonium: liver to U.L.I.	0.291
Transfer coefficient for plutonium: cortical surface to cortical volume	Transfer coefficient for plutonium: trabecularl surface to R.B.M.	0.621
Transfer coefficient for plutonium: cortical surface to cortical volume	Transfer coefficient for plutonium: cortical surface to cortical marrow	0.401
Transfer coefficient for plutonium: trabecularl surface to R.B.M.	Transfer coefficient for plutonium: cortical surface to cortical marrow	0.603
Transfer coefficient for plutonium: trabecular volume to R.B.M.	Transfer coefficient for plutonium: blood to U.L.I.	-0.292

Table 0.11 Correlations between parameters in the overall analysis for the external dosimetry models

Correlated parameters		Correlation coefficient
Zr-95 initial dose rate: deposited activity	Zr-95 dose to 10 days: deposited activity	0.726
Zr-95 initial dose rate: deposited activity	Zr-95 dose to 30 days: deposited activity	0.590
Zr-95 initial dose rate: deposited activity	Ru-106 initial dose rate: deposited activity	0.639
Zr-95 initial dose rate: deposited activity	Ru-106 dose to 30 days: deposited activity	0.427
Zr-95 initial dose rate: deposited activity	Ru-106 dose to 100 days: deposited activity	0.256
Zr-95 dose to 10 days: deposited activity	Zr-95 dose to 30 days: deposited activity	0.747
Zr-95 dose to 10 days: deposited activity	Ru-106 initial dose rate: deposited activity	0.435
Zr-95 dose to 10 days: deposited activity	Ru-106 dose to 30 days: deposited activity	0.314
Zr-95 dose to 30 days: deposited activity	Ru-106 initial dose rate: deposited activity	0.357
Zr-95 dose to 30 days: deposited activity	Ru-106 dose to 30 days: deposited activity	0.278
Ru-106 initial dose rate: deposited activity	Ru-106 dose to 30 days: deposited activity	0.637
Ru-106 initial dose rate: deposited activity	Ru-106 dose to 100 days: deposited activity	0.285
Ru-106 initial dose rate: deposited activity	I-131 initial dose rate: deposited activity	0.323
Ru-106 initial dose rate: deposited activity	I-131 dose to 1 day: deposited activity	0.286
Ru-106 initial dose rate: deposited activity	I-131 dose to 3 days: deposited activity	0.271
Ru-106 initial dose rate: deposited activity	I-131 dose to 30 days: deposited activity	0.206
Ru-106 initial dose rate: deposited activity	Cs-137 initial dose rate: deposited activity	0.211
Ru-106 initial dose rate: deposited activity	Cs-137 dose to 100 days: deposited activity	0.224
Ru-106 dose to 30 days: deposited activity	Ru-106 dose to 100 days: deposited activity	0.455
Ru-106 dose to 30 days: deposited activity	Ru-106 dose to 1 year: deposited activity	0.222
Ru-106 dose to 30 days: deposited activity	I-131 initial dose rate: deposited activity	0.283
Ru-106 dose to 30 days: deposited activity	I-131 dose to 1 day: deposited activity	0.222
Ru-106 dose to 30 days: deposited activity	I-131 dose to 3 days: deposited activity	0.255
Ru-106 dose to 100 days: deposited activity	Ru-106 dose to 1 year: deposited activity	0.429
Ru-106 dose to 1 year: deposited activity	Ru-106 dose to 3 year: deposited activity	0.444
I-131 initial dose rate: deposited activity	I-131 dose to 1 day: deposited activity	0.773
I-131 initial dose rate: deposited activity	I-131 dose to 3 days: deposited activity	0.605
I-131 initial dose rate: deposited activity	I-131 dose to 10 days: deposited activity	0.496
I-131 initial dose rate: deposited activity	I-131 dose to 30 days: deposited activity	0.407
I-131 initial dose rate: deposited activity	Cs-137 initial dose rate: deposited activity	0.632
I-131 initial dose rate: deposited activity	Cs-137 dose to 100 days: deposited activity	0.462
I-131 initial dose rate: deposited activity	Cs-137 dose to 1 year: deposited activity	0.292
I-131 dose to 1 day: deposited activity	I-131 dose to 3 days: deposited activity	0.764
I-131 dose to 1 day: deposited activity	I-131 dose to 10 days: deposited activity	0.657
I-131 dose to 1 day: deposited activity	I-131 dose to 30 days: deposited activity	0.557
I-131 dose to 1 day: deposited activity	Cs-137 initial dose rate: deposited activity	0.525
I-131 dose to 1 day: deposited activity	Cs-137 dose to 100 days: deposited activity	0.382
I-131 dose to 1 day: deposited activity	Cs-137 dose to 1 year: deposited activity	0.235
I-131 dose to 3 days: deposited activity	I-131 dose to 10 days: deposited activity	0.833
I-131 dose to 3 days: deposited activity	I-131 dose to 30 days: deposited activity	0.692
I-131 dose to 3 days: deposited activity	Cs-137 initial dose rate: deposited activity	0.371
I-131 dose to 3 days: deposited activity	Cs-137 dose to 100 days: deposited activity	0.274
I-131 dose to 10 days: deposited activity	I-131 dose to 30 days: deposited activity	0.820
I-131 dose to 10 days: deposited activity	Cs-137 initial dose rate: deposited activity	0.272
I-131 dose to 30 days: deposited activity	Cs-137 initial dose rate: deposited activity	0.221
Cs-137 initial dose rate: deposited activity	Cs-137 dose to 100 days: deposited activity	0.698
Cs-137 initial dose rate: deposited activity	Cs-137 dose to 1 year: deposited activity	0.508
Cs-137 dose to 100 days: deposited activity	Cs-137 dose to 1 year: deposited activity	0.730
Cs-137 dose to 100 days: deposited activity	Cs-137 dose to 3 year: deposited activity	0.299
Cs-137 dose to 1 year: deposited activity	Cs-137 dose to 3 year: deposited activity	0.484
Cs-137 dose to 3 year: deposited activity	Cs-137 dose to 10 years: deposited activity	0.385

Correlated parameters		Correlation coefficient
Cs-137 dose to 3 year: deposited activity	Location factor for cars, groundshine	0.206
Cs-137 dose to 10 years: deposited activity	Cs-137 dose to 30 years: deposited activity	0.399
Cs-137 dose to 10 years: deposited activity	Cs-137 dose to 100 years: deposited activity	0.372
Cs-137 dose to 30 years: deposited activity	Cs-137 dose to 100 years: deposited activity	0.479
Location factor for normal living, groundshine	Location factor for sheltering, groundshine	0.881
Location factor for normal living, groundshine	Location factor for cars, groundshine	0.269
Location factor for normal living, groundshine	Location factor for normal living, cloudshine	0.708
Location factor for normal living, groundshine	Location factor for sheltering, cloudshine	0.680
Location factor for sheltering, groundshine	Location factor for cars, groundshine	0.277
Location factor for sheltering, groundshine	Location factor for normal living, cloudshine	0.633
Location factor for sheltering, groundshine	Location factor for sheltering, cloudshine	0.625
Location factor for normal living, cloudshine	Location factor for sheltering, cloudshine	0.961
Location factor for inhalation, normal living	Location factor for inhalation, sheltering	0.991

3 EXTENT OF THE UNCERTAINTY

This section presents the results of the overall uncertainty analysis considering those parameters whose uncertainties were identified as making important contributions to the overall uncertainty from the module analyses. The parameters whose uncertainties make major contributions to the overall uncertainty are described in the next section. The endpoints of the analysis were described in Section 1 of this report.

The results of COSYMA are generally presented as probability distributions (ccdfs), which can be summarised using mean values or values for various percentiles. Results are presented here for the mean value, the 95th and 99th percentiles of each of the endpoints considered. The methods and quantities used in this study to describe the uncertainty are described in the "methodology report". The overall analysis involved 300 runs of COSYMA, and so generated 300 sets of ccdfs for each of the endpoints. These results allow the construction of probability distributions which describe the uncertainty on the calculated results, which could themselves be percentiles of the ccdf describing the range of consequences allowing for the possible variation of atmospheric conditions at the time of the release. Various percentiles of the uncertainty distribution are given in Appendix C.

The 95% and 5% envelopes were derived for each endpoint[+], and the results are generally presented in terms of the ratio of values from these envelopes, which are termed "uncertainty factors". There are situations where some of the percentiles of the uncertainty distribution on an endpoint are zero, and so the uncertainty factor is infinite. In these cases, the tables of results show the 95th percentile of the uncertainty distribution in brackets.

Results are also presented for a run of COSYMA in which all parameters had their default value. The ccdf obtained from this run is termed, in this study, the "reference curve"; the ratio of values from the 95% envelope to the reference curve is termed the "reference uncertainty coefficient". The 95% envelope represents the level of consequences that could be exceeded with 5% probability, if the models in COSYMA are correct, given the distributions adopted for the parameter values. The reference uncertainty coefficient shows the extent to which the current COSYMA default values could underestimate plausible "correct" values of the consequences.

Each of the ccdfs from the analysis presents the probability of exceeding levels of consequences, allowing for the possible range of atmospheric conditions that might occur, if the correct values have been allocated to each of the parameters in that run. The individual ccdfs from each of the runs could represent the true value of the endpoint, and so the envelopes represent the extent to which the uncertainty could be reduced by increased knowledge of the most appropriate parameter values.

A further form of presentation is used in this overall analysis. The mean value of the 300 sets of ccdfs is also calculated and presented. This (designated the "mean curve" in this report)

+ The region between these envelopes is the area with 90% confidence of containing the true reference curve which expresses the probability of exceeding particular levels of consequences, allowing for the range of atmospheric conditions that could occur at the time of the accident.

shows the probability of exceeding particular levels of consequences, taking account of both the range of possible atmospheric conditions at the time of the release, and the uncertainty in the most appropriate value to assign to the different parameters. This form of presentation does not include any information on the way in which the results would change because of increased knowledge of the most appropriate parameter values. Results from the "mean curve" are included in Appendix C and diagrams in this section, but are not otherwise used in this report.

2.6 Uncertainty on air concentration and deposition

The only model parameters that can affect the uncertainty on the air concentration and deposition are those of the atmospheric dispersion and deposition modules. However the analysis for these endpoints was repeated in the overall analysis for completeness. The results are given in Table 3.1 and Table 3.2 which show the uncertainty factors and the reference uncertainty coefficients respectively. The values are similar to those presented in the report on the module analysis, though the agreement is better for caesium than for iodine. The results given here for caesium differ from those presented in the module analysis report because of the different sets of values of the parameters used in the two analyses, reflecting the different random samples from their distributions. The results given here for iodine differ from those presented in the module analysis report because of the different sets of parameter values used in the two analyses (also reflecting the different random samples) and the effects of not including the organic iodine deposition parameters in this analysis. The following comments on these results are essentially those in the module analysis report, which gives a more detailed explanation of the various effects than is given here.

The "uncertainty factor" on the mean value of air concentration of ^{137}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 about 200 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 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. Section 2, and the module analysis report, 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 "uncertainty factor" on the deposition of caesium decreases with increasing distance; that on the mean value falls from about 200 at the first distance considered to about 8 at the largest distance considered. The uncertainties on the 95th and 99th percentiles are rather larger than that on the mean value, though the differences between the uncertainty factors for the mean value and 99th percentile is generally small. As found for air concentration, the "reference uncertainty coefficient" is generally much smaller than the "uncertainty factor". The "uncertainty factor" on the mean value of deposition for ^{131}I is about 60 at the shortest and about 30 at the largest distances considered, with lower values at the intervening distances. The "uncertainty factor" on the 95th and 99th percentiles is greater, about 500 for the 95th percentile at the first and last distance but lower at the other distances. As with air concentration of iodine, the uncertainty factors for the 99th percentile and for the mean values are similar. 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 reference values for the mean deposition of both iodine and caesium lie slightly below the median value of the respective uncertainty distributions at the first distance considered. The reference values increase, relative to the median values of the uncertainty distributions, with increasing distance; at the last distance considered the reference values lie close to the 75th percentile of the distributions for the mean values.

The uncertainty for the deposition of caesium at 5 km is also illustrated in Figure 3.1, which shows the 5 and 95 percent envelopes, the mean curve and the reference curve for this quantity. The reference curve is near the centre of the uncertainty band, generally close to the mean curve. The results in Table 3.1 show that the uncertainty factor on the 95th percentile of the ccdf is somewhat larger than that on the 99th percentile. This reflects the different shape of the 5th and 95th percentile envelopes.

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.

The results presented here suggest that, in general, the predictions of air concentration and deposition that are obtained using the COSYMA model and default values are reasonably close to the median values of the ranges generated from the experts' distributions. If the experts' values are considered to be correct, then COSYMA gives reasonably accurate predictions of air concentration and deposition.

2.7 Individual doses to 7 days

The uncertainty factors for individual dose to 7 days are presented in Table 3.3, for the three organs and distances considered, and for the mean value and the 95th and 99th percentiles of

the ccdf. The uncertainty factors for the bone marrow and thyroid doses are generally between about 6 and about 100, while the uncertainty factors for skin dose are generally between about 1000 and 5000, though the uncertainty factors on the 95th percentiles when countermeasures are taken are much larger than this. The uncertainty factor for bone marrow dose decreases with increasing distance for normal living and for potential dose, but there is no consistent variation with distance if countermeasures are taken. The uncertainty factor for thyroid dose increases with distance for all cases considered other than for the CB2 source term if countermeasures are taken. The uncertainty factor for skin dose is greater at the second distance than the others, for all of the cases considered, other than the 95th percentile of the distributions if countermeasures are taken. The uncertainty factor for the 95th percentile tends to be greater than that for either the mean value or the 99th percentile.

The dose to bone marrow reflects contributions from both inhalation and external exposure. Countermeasures reduce the external dose from deposited material but have little impact on the inhalation dose as they are generally assumed to be implemented only after the plume has passed. Therefore the uncertainty factors for bone marrow doses with countermeasures would be expected to be lower than those for the other situations, as the uncertainty on air concentration is lower than that on deposition. The main contribution to the thyroid dose comes from inhalation, while that to the skin dose comes from direct deposition on skin. Both these routes of exposure reflect the air concentration rather than the deposition on the ground. The greater uncertainty on the skin dose reflects the considerable uncertainty on deposition velocity to skin. The uncertainty factors are lower for the potential dose than for the doses in normal living or with countermeasures, reflecting the contributions of the uncertainty on the location factors describing the relationship between air concentration in and out of doors.

The reference uncertainty coefficients are presented in Table 3.4. The values are lower than the uncertainty factors, showing that doses predicted using the default values for the parameters are well above the 5th percentile of the uncertainty distribution. The reference uncertainty coefficient for skin doses (typically in the range 20 to 40) is substantially lower than the uncertainty factor (more than 1000). The uncertainty distributions are skewed with long tails towards the low probability region, and the reference value is below the median of the distribution.

The uncertainty on individual doses to 7 days is also illustrated in Figure 3.2, which shows the 5 and 95 percent envelopes, the mean curve and the reference curve for the bone marrow dose at 5 km for the CB2 source term, if countermeasures are taken. For much of the distribution the reference curve is close to the 5 percent envelope.

If the uncertainty distribution, based on the experts' values is taken to be the correct predictions, then these results suggest that COSYMA underpredicts doses received within a few days of an accident and that the extent of the underprediction is greater for bone marrow and thyroid doses than for skin doses.

2.8 Individual risks of early health effects

The uncertainty factors for the individual risks of early health effects for the situations considered are given in Table 3.5. In many cases for the percentiles of the ccdf, the 5th percentile of the uncertainty distributions on the risks at the different distances are zero, and so the

corresponding uncertainty factor is infinite. Therefore results are given in this table only for the uncertainty on the mean risks; the uncertainty factors for the percentiles can be found in Appendix C. The uncertainty factors for the mean values for many of the early morbidities considered are also infinite. In this case, the table gives the 95th percentile of the uncertainty distribution on the mean value.

The uncertainty factor increases with increasing distance from the site; this reflects the greater uncertainty when doses and risks are just above a threshold value. The uncertainty on the risk of early mortality for potential exposures is slightly smaller than that for the other cases. This could also reflect the higher doses in this case when the risks are further from the threshold, and the shape of the relationship between doses and risks. If the dose is below the LD_{50}, the risk increases more than linearly with increases in dose but it increases less than linearly for doses above the LD_{50}. The uncertainty factors on the individual risks of morbidity are lower than those on the individual doses. This could reflect the summation of risks in different organs and the contribution of lung effects for which the uncertainty on dose was not included as an endpoint.

The uncertainty factors for the total risk of early morbidities are generally greater than those for the risk of early mortality. This is because morbidities are calculated only in those members of the population who survive early mortality, and so the uncertainty of the risk of morbidities includes the uncertainty on the risk of mortality. Note that the uncertainty on the risks of hypothyroidism does not include the uncertainty on the parameters of the risk model for this effect. As described in the report on the health effects module analysis, the expert panel were not asked for the uncertainty on the risk factors and the project staff did not feel able to specify the uncertainty on these parameters.

The reference uncertainty coefficients for the individual risks of early effects are also given in Table 3.5. The reference uncertainty coefficients for early mortalities with countermeasures and for normal living are similar to the uncertainty factors for these cases, and the predicted consequences using default values for the parameters are close to, or even below, the 5th percentile of the uncertainty distributions for the quantities. This feature was also found in the dose and health effects module analyses and reflects the position of the default values of some parameters relative to the distributions used in this analysis. Specifically, the default values for some of the parameters in the lung model and in the model relating bone marrow dose to risk of the haematopoietic syndrome are outside the uncertainty ranges.

The reference uncertainty coefficients for the risks of early morbidities are generally much lower than the uncertainty factors, and the default prediction lies in the upper part of the uncertainty distribution for these effects. In the case of the risks when countermeasures are taken, this reflects the low reference value for the risk of death, and hence a high reference value for the probability of surviving. The reference values for the risks of skin burns are also high in the uncertainty distributions, reflecting the default value for the retention time on skin which is well above the upper limit of the range used in this analysis.

The uncertainty on the individual risk of the haematopoietic syndrome is illustrated in Figure 3.3, which shows the 5 and 95 percent envelopes, the mean curve and the reference curve for the risk at 0.875 km if countermeasures are taken, for the UK1 source term. The reference value

is seen to lie close to the 5 percent envelope over the whole range of the curves.

If the uncertainty distribution, based on the experts' values is taken to be the correct predictions, then these results suggest that COSYMA underpredicts the risks of early mortalities, but gives predictions of the risk of early morbidities which are above the median of the "correct" range of values.

2.9 Extent of early countermeasures

The uncertainty factors for the areas in which evacuation, sheltering or iodine tablets would be required are given in Table 3.6, for the CB2 source term. There is a large uncertainty on these quantities, with the uncertainty factors for the extent of the areas evacuated and sheltered being between about 150 and 300 for the different percentiles of the ccdf. This reflects the large uncertainties found in the dose module analysis. The uncertainty on the area in which iodine tablets would be distributed is slightly smaller than this, between about 100 and 200 for the different percentiles. This reflects the combination of the uncertainties found in the dispersion and dose module analyses; the uncertainty factors were about 20 in each module analysis. Note that this study did not consider any uncertainty on the countermeasures criteria; the uncertainties presented here reflect those in the atmospheric dispersion and dose calculations only.

The reference uncertainty coefficients are given in Table 3.7. The values for the areas evacuated or sheltered are similar to, or larger than, the uncertainty factors for these areas, showing that the extent of countermeasures predicted with default parameter values lies near the lower end of the uncertainty range; the default prediction for the area evacuated in particular is below the 5^{th} percentile of the uncertainty distribution for all percentiles of the ccdf. This is not the case for the area where iodine tablets would be needed, for which the default prediction lies between the 25^{th} and 50^{th} percentiles of the uncertainty distribution. Similar effects were found in both the dispersion and deposition module analysis and the dose module analysis, the only modules for which the parameters can affect the extent of early countermeasures, and reflects the relative positions of the default values in the ranges used in this study. The default values for some of the parameters in the dispersion module 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 uncertainty on the areas affected by evacuation and sheltering are dominated by the uncertainty on some of the parameters of the lung model, for which the default values are towards one end of the ranges used in this analysis. However, the uncertainty on the iodine tablet area is dominated by that on some of the parameters of the iodine model, for which the default values are near the middle of their ranges. These effects in combination explain the relative positions of the reference values in their ranges.

The uncertainties on the areas in which evacuation or iodine tables would be required are illustrated in Figure 3.4 and Figure 3.5, which shows the 5 and 95 percent envelopes, the mean curve and the reference curve for these quantities. The diagrams illustrate the very different positions of the reference curves compared to the uncertainty range, discussed above.

If the uncertainty distribution, based on the experts' values is taken to be the correct predictions, then these results suggest that COSYMA underpredicts the extent of the areas where early countermeasures would be required, with a greater underprediction for sheltering or evacuation than for the area where iodine tablets would be required.

2.10 Numbers of early health effects

The uncertainty factors for the numbers of early health effects in the population are given in Table 3.8. In general the uncertainty factors for the numbers of effects reflect the uncertainty factors on the individual risks for the effects and the distances over which most of the effects occur. The uncertainty factors for the numbers of early mortalities and of cases of the haematopoietic syndrome with countermeasures are between 30 and about 40. The uncertainty on the numbers of effects for normal living is slightly larger than that when countermeasures are taken, with uncertainty factors for early mortality and for the haematopoietic syndrome being in the range from about 50 to about 70. These values are generally greater than the uncertainty factors for the risks at the first and second distances, and reflect the contributions of the smaller risks but larger numbers of people at increasing distances from the site.

The uncertainty factor for the numbers of cases of early morbidities is larger than that for early mortalities, as was also the case for the individual risks of morbidities. The uncertainty bands on the numbers of cases of the different morbidities considered have 5^{th} percentiles of zero; the uncertainty factor is infinite in these cases and the 95^{th} percentile of the uncertainty distribution is given in brackets in the table.

The reference uncertainty coefficients for the numbers of early health effects are also given in Table 3.8. The value for the numbers of mortalities with countermeasures is much larger than the uncertainty factor, showing that the value predicted with default values for the parameters is much lower than the 5^{th} percentile of the uncertainty distribution. Such a strong effect was not found in any of the module analyses, though the values for the uncertainty factor and the reference uncertainty coefficient are very similar for the dose module analysis. The reference uncertainty coefficient for the number of cases of the haematopoietic syndrome with countermeasures is also larger than the uncertainty factor, other than for the uncertainty on the 99^{th} percentile of the ccdf, so again the value predicted with default parameter values is near the lower end of the uncertainty range. This also reflects the findings for the individual risks, but the default value is even further outside the range than was the case for the individual risks at the different distances. This reflects the contribution of cases at the larger distances from the site where the default risk has fallen to zero but the uncertainty band includes non-zero risks. The reference uncertainty coefficients for the numbers of mortalities for normal living are slightly smaller than the uncertainty factors, but the value predicted with default parameter values is still in the lower end of the uncertainty range. The reference uncertainty coefficients for the numbers of cases of particular morbidities are generally in

the range between about 10 and about 50.

The uncertainty on the numbers of early mortalities, if countermeasures are taken, for the UK1 source term is illustrated in Figure 3.6, which shows the 5 and 95 percent envelopes, the mean curve and the reference curve. The figure clearly shows that the reference curve is below the 5 percent envelope at all points of the ccdf, as described above.

If the uncertainty distribution, based on the experts' values is taken to be the correct predictions, then these results suggest that COSYMA underpredicts the numbers of early health effects, with the underprediction being greater for the number of early mortalities than for early morbidities.

2.11 Long term individual and collective doses

This study assumed that the average concentration in food for each individual is equal to that which would have been obtained if all that individual's food were produced at the point of consumption.

The uncertainty factors on the long term individual doses are given in Table 3.9 for the distances and for the different parts of the ccdf considered. The uncertainty factors generally decrease with increasing distance. The uncertainty on the doses with countermeasures is generally less than that on the doses for normal living or the potential outdoor doses, other than for the effective dose for the CB2 source term at 5 km. The lower uncertainty when countermeasures are taken could reflect the impact of countermeasures in preventing high doses, and so reducing the range in which doses can lie. This would also explain why the uncertainty factors at the largest distance for the DBA source term are similar for the case with countermeasures and for potential exposures, as there will be very few countermeasures at this distance. The relative uncertainties when countermeasures are considered for the different source terms and organs are different, reflecting the different mixture of nuclides in the two source terms and so the different contributions of doses from different pathways. Thus the uncertainty factors for bone marrow dose for the CB2 source term are lower than those for the DBA source term, while the reverse is true for the thyroid dose, at the first and second distances considered. It is difficult to compare the uncertainty on long term and short term doses as there is only one case with the same organs and source term. The uncertainty on the bone marrow dose for CB2 with countermeasures is greater for the long term dose than for the short term dose, though the reverse is true for the thyroid dose. The greater uncertainty for the bone marrow dose reflects the increasing uncertainty in the metabolic behaviour of caesium and the external dose from deposited activity at long times.

The reference uncertainty coefficients are shown in Table 3.10. The values are generally much lower than the uncertainty factors, but the doses predicted using default parameter values are generally below the median of the uncertainty distribution. The dose module analysis found that the reference value was near to, or below, the 5^{th} percentile of the uncertainty distribution for many cases. The reference uncertainty coefficients for doses with countermeasures are lower, in some cases by considerable amounts, than those for normal living or potential doses. This effect was also found in the food module analysis.

The reference uncertainty coefficients for doses with countermeasures are also lower than

those for other situations, in all situations the reference values lie between the 25th and 75th percentiles of the uncertainty range. The reference values are lower in the uncertainty range at the shorter distances than at the longer distances. This is illustrated in Figure 3.7 which shows the 5 and 95 percent envelopes, the mean curve and the reference curve for the thyroid dose with countermeasures at 5 km for the CB2 source term.

The uncertainty factors and reference uncertainty coefficients for collective dose are given in Table 3.11, for doses with countermeasures and in normal living for the CB2 source term and with countermeasures for the DBA source term. The uncertainty on the collective dose represents the uncertainty on the individual doses over a wide range of distance. The values are consistent with those on individual doses at distances around 100 km.

If the uncertainty distribution, based on the experts' values is taken to be the correct predictions, then these results suggest that COSYMA gives reasonable predictions of the long term individual doses, particularly when countermeasures are taken.

2.12 Extent of late countermeasures

The results for the uncertainty on the extent and duration of late countermeasures (relocation and food restrictions) are shown in Table 3.12 and, which show the uncertainty factors and the reference uncertainty coefficients.

For the intervention levels adopted in this study, the relocation area and the evacuation area are very similar. The findings of this analysis may not apply to other situations where the intervention levels are such that the relocation and evacuation areas are distinct. The results for the uncertainty on the extent of the relocation area are identical to those for the uncertainty on the evacuation area, other than for the mean value where the uncertainty on the relocation area is slightly smaller than that on the evacuation area. As discussed in Section 2.9, the area predicted with default parameter values is lower than the 5th percentile of the range obtained here. The time integrated area predicted using default parameter values lies between the 10th and 25th percentile of the uncertainty distribution. This suggests that the default parameter values underestimate the area in which relocation would be required but tend to overestimate its duration within that area. A similar effect was found in the dose module, but not in the atmospheric dispersion module. The uncertainty on the area relocated is much greater than that on its time integral in the overall analysis; this was also found in the dose module analysis with the reverse being the case in the dispersion module analysis.

The uncertainty factors on the areas with restrictions on the production of milk, green vegetables and beef, and their time integrals, for the CB2 source term are similar with values between about 10 and 100. The uncertainty on the area where grain restrictions are required is much larger (about 1000), reflecting the greater uncertainty on smaller areas and the greater uncertainty on the concentrations in grain compared to other foods. The uncertainty on the areas for the DBA source term is greater than that for the CB2 source term, other than for the case of green vegetables. This again reflects the increasing uncertainty on threshold effects at levels close to the threshold value.

The reference uncertainty coefficients are generally less than the uncertainty factors, with the reference value towards the centre of the uncertainty distribution, although there are some exceptions to this. The reference value for the area with grain restrictions for the CB2 source term is above the 95th percentile of the uncertainty distribution. In the analysis of the dispersion module, the reference values for all the food restriction areas were found to be near the upper limit of the uncertainty range. This is caused by the default values for the plume width parameters which are greater than the values adopted for the uncertainty ranges. The values for the food module parameters have combined with those for the dispersion module parameters so that the reference value for the grain restriction area is above the 95th percentile of the distribution but the reference values for the other foods are lower in the distributions.

The reference value for the time integral of the area subject to a milk ban for the CB2 source term is close to the 5 percent envelope, as illustrated in Figure 3.8. This shows the 5 and 95 percent envelopes, the mean curve and the reference curve for this quantity. The results in Table 3.12 show that the reference curve is closer to the 5 percent envelope for the time integral of the area than it is for the initial extent of the area. The food module analysis found that the reference uncertainty coefficients and uncertainty factors for the initial area are very similar, but that the reference uncertainty coefficients are larger than the uncertainty factors for the time integral of the area.

The reference value for the area with green vegetables restrictions for the DBA source term is below the 5th percentile of the uncertainty distribution. This effect was also found in the food chain module analysis for this quantity.

If the uncertainty distribution, based on the experts' values is taken to be the correct predictions, then these results suggest that COSYMA give predictions which are towards the lower end of the “correct” range of values for most of the countermeasures considered.

2.13 Individual risks of late health effects

The results for the individual risks of late health effects are summarised in Table 3.13 and Table 3.14, which give the uncertainty factors and the reference uncertainty coefficients, respectively, for the risks at the three distances considered.

The uncertainty factors for the risks of fatal cancer decrease from about 100 at the first distance to about 50 at the final distance, for the cases with countermeasures for both CB2 and DBA and for the potential risk for DBA. The uncertainty factor for the mean value of the risk of fatal cancer for normal living for CB2 increases with distance. The variation of the uncertainty factors for the percentiles with distance is complicated by the restriction that the individual risk cannot exceed unity – the higher percentiles of the distribution of the uncertainty on the 95th and 99th percentiles of individual risk at the first distance are 1.0 both with countermeasures and in normal living. This clearly reduces the uncertainty factor on the percentiles of the distribution at the first distance. It also reduces the uncertainty on the mean value; while the percentiles of the uncertainty distribution for the mean value itself presented in Appendix C do not include the value of 1.0, the values that are averaged to give the mean do include that value.

The uncertainty factor on the individual risk of fatal cancer is between about 1 and 4 times greater than the uncertainty factor on the individual effective dose; this represents the contribution of the uncertainty on the risk coefficients to the overall uncertainty on the individual risk. The uncertainty factors on the mean value of individual risk of thyroid cancer and of leukaemia are very large – more than 100,000. The uncertainty factors on the percentiles of the distribution are infinite, and so the 95th percentiles of the uncertainty distributions are given in brackets in Table 3.13. This reflects the uncertainty on the risk coefficients for these effects which are also very large, for reasons presented in the health effects module analysis report.

The reference uncertainty coefficients for the risk of fatal cancer are lower than the uncertainty factors by factors of about 2 to 4, and the reference value is in the lower part of the uncertainty distribution. This reflects the way in which the risk of fatal cancer is calculated in COSYMA. COSYMA calculates the risk of cancer in each organ from the organ dose and its risk coefficient, and then sums them to provide the total risk of cancer. The uncertainty distributions on each of the risk coefficients are large with long tails towards the lower part of the distribution. Sampling from such distributions and then summing the total risk is more likely to provide a higher value of the total risk than would be obtained by using the median value of each distribution than to provide a lower value. Therefore the risk obtained using the default risk coefficients is likely to be in the lower part of the uncertainty distribution on the total cancer risk.

Many of the points identified above are illustrated in Figure 3.9, which shows the 5 and 95 percent envelopes, the mean curve and the reference curve for the individual risk of fatal cancer at 5 km for CB2, if countermeasures are taken. The 95 percent envelope and the mean curve show that the distributions include a risk of 1.0. The reference value is seen to be towards the lower end of the uncertainty range.

If the uncertainty distribution, based on the experts' values is taken to be the correct predictions, then these results suggest that COSYMA give predictions which are towards the lower end of the “correct” range of values for the individual risk of late health effects, perhaps reflecting the way in which COSYMA combines the risks in different organs.

2.14 Numbers of late health effects

The results on the numbers of late health effects in the population are summarised in Table 3.15 and Table 3.16, which show the uncertainty factors and the reference uncertainty coefficients respectively.

The uncertainty factors for the numbers of fatal cancers with countermeasures are between about 60 and about 80, for the DBA and CB2 source terms, with the values being slightly lower for the DBA source term. The uncertainty factors for normal living for the CB2 source term are between about 50 and 60 for the different parts of the probability distribution considered. The uncertainty factors on the numbers of cases of thyroid cancer and of leukaemia are large (more than 100,000). These results reflect the uncertainty factors for the individual risks of cancers over the distance range of interest.

The reference uncertainty coefficients show that the reference value is in the lower part of

the overall uncertainty distribution, again reflecting the results for the individual risks over the distances of interest. If the uncertainty distribution, based on the experts' values is taken to be the correct predictions, then these results suggest that COSYMA give predictions which are towards the lower end of the "correct" range of values for the individual risk of late health effects, perhaps reflecting the way in which COSYMA combines the risks in different organs.

These points are illustrated in Figure 3.10, which shows the 5 and 95 percent envelopes, the mean curve and the reference curve for the number of fatal cancers for the CB2 source term if countermeasures are taken. In particular, the reference curve is seen to be nearer to the 5 percent envelope than to the 95 percent envelope.

2.15 Uncertainty from meteorological sampling

Probabilistic risks assessments must express the probability distribution of consequences allowing for the different atmospheric conditions that can occur during the time of the release, and their associated probabilities. COSYMA, as all PRA codes, considers a representative sample of atmospheric conditions. The method used to select the sequences of conditions for analysis, and to allocate a probability to each sequence selected, could also introduce uncertainty to the final results. This study has concentrated on describing the uncertainty on the endpoints reflecting the uncertainty on the values of the input parameters. A limited analysis has also been carried out of the extent to which the predictions might change if different methods are used to selecting the sequences of atmospheric conditions for the analysis. The full results of the meteorological sampling analysis are presented in Appendix E. This section presents a brief comparison of the uncertainty in the endpoints reflecting the uncertainty in the input parameter values with that reflecting the choice of sequences of atmospheric conditions.

20 full runs of COSYMA were undertaken, consisting of 5 sets of sequences derived from each of 4 different meteorological sampling schemes; this compares with the main part of the uncertainty analysis where 300 runs were undertaken. The maximum and minimum value of each of the endpoints for each of the representative quantities of the ccdf considered in the main part of the uncertainty analysis were obtained from the 20 runs undertaken, and the ratio of the maximum to the minimum value calculated for each endpoint. This quantity is presented for every endpoint in Appendix F. Values for some of the endpoints are presented in Table 3.17, where they are compared with the uncertainty factors derived in the analysis of the effects of uncertainty in the parameter values.

Strictly speaking, this comparison is between different quantities. The difference between the values of endpoints obtained from different runs from the main uncertainty analysis reflects the uncertainty on the particular endpoint considered, representing the lack of knowledge of the most appropriate value to assign to each parameter. The difference between the values of endpoints obtained using different meteorological samples represents the error introduced by the use of a limited number of sequences of atmospheric conditions to represent the full range of conditions in the data set used. There is also an unquantifiable (but hopefully small) uncertainty because of the assumption that the range of atmospheric conditions during the lifetime of the plant can be represented by those on the data set adopted, which refers to a period in the past.

Despite these differences in the quantities used, it is instructive to compare the uncertainty resulting from the lack of knowledge of the parameter values with the errors introduced by only considering a limited number of sequences of conditions. The results presented in Table 3.17 show that the "uncertainty" from meteorological sampling is much smaller than that from the uncertainty on the parameter values, even for those endpoints involving threshold effects. The maximum and minimum values from the meteorological sampling analysis are generally less than a factor of 2 apart. This compares with the uncertainty analysis, where the lowest uncertainty factor given in the table is 2.5, twice the uncertainty found in the meteorological sampling analysis for that particular endpoint.

Table 3.1 Uncertainty factors on predicted air concentrations and deposition

Quantity	Uncertainty factor		
	Mean	95th percentile	99th percentile
Air concentration of iodine at 0.875 km	10	20	13
Air concentration of iodine at 5 km	52	72	79
Air concentration of iodine at 20 km	120	230	120
Air concentration of iodine at 100 km	200	300	250
Deposition of iodine at 0.875 km	62	520	83
Deposition of iodine at 5 km	19	100	20
Deposition of iodine at 20 km	7.0	170	9.1
Deposition of iodine at 100 km	26	530	100
Air concentration of caesium at 0.875 km	5.1	17	6.9
Air concentration of caesium at 5 km	9.1	17	12
Air concentration of caesium at 20 km	17	8.7	17
Air concentration of caesium at 100 km	18	23	16
Deposition of caesium at 0.875 km	200	1300[(a)]	320
Deposition of caesium at 5 km	52	530	74
Deposition of caesium at 20 km	21	72	29
Deposition of caesium at 100 km	8.2	31	11

Note
(a) The 5^{th} and 95^{th} percentiles of the uncertainty distribution are $2.5\ 10^{5}$ and $3.1\ 10^{8}$ respectively.

Table 3.2 "Reference uncertainty coefficients" on predicted air concentrations and deposition

Quantity	Ratio of 95th percentile to reference value.		
	Mean	95th percentile	99th percentile
Air concentration of iodine at 0.875 km	2.3	2.5	2.2
Air concentration of iodine at 5 km	8.1	6.0	8.5
Air concentration of iodine at 20 km	7.3	4.9	6.2
Air concentration of iodine at 100 km	4.3	6.6	3.3
Deposition of iodine at 0.875 km	3.8	5.5	3.1
Deposition of iodine at 5 km	3.3	3.9	3.0
Deposition of iodine at 20 km	1.6	1.7	1.5
Deposition of iodine at 100 km	1.3	1.8	0.91
Air concentration of caesium at 0.875 km	1.9	2.2	2.0
Air concentration of caesium at 5 km	4.9	5.6	4.0
Air concentration of caesium at 20 km	6.0	3.2	5.3
Air concentration of caesium at 100 km	2.6	2.0	2.3
Deposition of caesium at 0.875 km	12	19	10
Deposition of caesium at 5 km	8.1	19	7.2
Deposition of caesium at 20 km	3.6	6.6	3.8
Deposition of caesium at 100 km	1.7	1.7	1.6

Table 3.3 Uncertainty factors for short term individual doses at the three distances considered

Quantity	For mean value[(a)]			For 95th percentile[(a)]			For 99th percentile[(a)]		
UK1									
Dose to bone marrow for normal living	25	14	9.4	35	21	16	21	11	10
Dose to thyroid for normal living	27	63	64	45	54	62	45	81	89
Dose to skin for normal living[b]	1500	2500	1900	3200	5000	3200	2300	2900	2100
Potential dose to bone marrow	24	11	7.3	36	17	16	26	12	7.2
Potential dose to thyroid	19	26	36	32	45	45	20	44	44
Potential dose to skin[b]	1100	1700	1300	2900	3800	2500	1700	2500	2100
Dose to bone marrow with countermeasures	8.4	14	6.5	8.9	9.3	220	9.3	10	6.8
Dose to thyroid with countermeasures	38	53	59	55	100	680	54	72	59
Dose to skin with countermeasures[b]	1600	2900	2800	4400	15000	110000	2500	3200	2600
CB2									
Dose to bone marrow with countermeasures	7.6	8.6	6.6	8.1	7.8	26	8.9	12	7.8
Dose to thyroid with countermeasures	47	57	42	40	41	120	62	89	43
Dose to skin with countermeasures[b]	2500	3300	3200	5500	6600	14000	3800	4400	3300

Notes:
(a) The three values are the "uncertainty ratios" at 0.875, 5 and 20 km respectively
(b) 5th and 95th percentiles of the uncertainty distributions for doses to skin are

Conditions		Mean value			95th percentile of ccdf			99th percentile of ccdf		
UK1 normal living	95	$1.1\ 10^{4}$	$8.8\ 10^{2}$	$5.7\ 10^{1}$	$4.2\ 10^{4}$	$3.6\ 10^{3}$	$1.6\ 10^{2}$	$3.0\ 10^{5}$	$2.2\ 10^{4}$	$1.2\ 10^{3}$
	5	7.1	$3.6\ 10^{-1}$	$3.0\ 10^{-2}$	$1.3\ 10^{1}$	$7.1\ 10^{-1}$	$5.0\ 10^{-2}$	$1.3\ 10^{2}$	7.6	$5.9\ 10^{-3}$
UK 1 potential dose	95	$1.6\ 10^{4}$	$1.2\ 10^{3}$	$7.0\ 10^{1}$	$6.2\ 10^{4}$	$4.3\ 10^{3}$	$2.4\ 10^{2}$	$4.5\ 10^{5}$	$3.1\ 10^{4}$	$1.6\ 10^{3}$
	5	$1.4\ 10^{1}$	$7.0\ 10^{-1}$	$5.4\ 10^{-2}$	$2.1\ 10^{1}$	1.1	$9.8\ 10^{-2}$	$2.6\ 10^{2}$	$1.3\ 10^{1}$	$7.8\ 10^{-1}$
UK1 with countermeasures	95	$2.7\ 10^{3}$	$2.1\ 10^{2}$	8.0	$1.2\ 10^{4}$	$8.1\ 10^{2}$	$2.1\ 10^{1}$	$7.9\ 10^{4}$	$4.6\ 10^{3}$	$1.7\ 10^{2}$
	5	1.7	$7.3\ 10^{-2}$	$2.9\ 10^{-3}$	2.8	$5.6\ 10^{-2}$	$1.9\ 10^{-4}$	$3.2\ 10^{1}$	1.4	$6.5\ 10^{-2}$
CB2 with countermeasures	95	9.4	$6.6\ 10^{-1}$	$4.3\ 10^{-2}$	2.3	$2.1\ 10^{-1}$	3.2	$2.8\ 10^{2}$	$1.5\ 10^{1}$	$7.4\ 10^{-1}$
	5	$3.7\ 10^{-3}$	$2.0\ 10^{-4}$	$1.3\ 10^{-5}$	$3.6\ 10^{-4}$	$1.6\ 10^{-5}$	2.10^{-2}	$7.2\ 10^{-2}$	$3.4\ 10^{-3}$	$2.2\ 10^{-4}$

Table 3.4 Reference uncertainty coefficients for short term individual doses at the three distances considered

Quantity	For mean value[(a)]			For 95th percentile[(a)]			For 99th percentile[(a)]		
UK1									
Dose to bone marrow for normal living	10	13	8.0	12	15	6.8	7.8	9.1	6.6
Dose to thyroid for normal living	9.1	29	23	8.9	17	16	9.1	30	23
Dose to skin for normal living	18	46	32	18	44	21	17	43	29
Potential dose to bone marrow	6.0	6.7	3.7	7.6	8.5	3.9	5.0	5.0	3.0
Potential dose to thyroid	6.4	17	15	5.6	15	11	5.9	20	14
Potential dose to skin	14	34	22	15	28	17	14	33	21
Dose to bone marrow with countermeasures	4.5	13	6.4	5.4	7.4	7.4	3.6	7.4	4.5
Dose to thyroid with countermeasures	12	29	32	12	26	58	12	26	23
Dose to skin with countermeasures	25	58	43	26	59	120	23	44	36
CB2									
Dose to bone marrow with countermeasures	4.9	11	4.0	6.2	5.8	4.5	4.3	12	3.8
Dose to thyroid with countermeasures	8.0	18	6.6	7.2	7.9	7.4	7.1	23	4.7
Dose to skin with countermeasures	26	49	14	26	28	11	25	60	9.6

Note:
(a) The three values are the uncertainty ratios at 0.875, 5 and 20 km respectively.

Table 3.5 Uncertainty factors and reference uncertainty coefficients for the mean values of individual risks of early health effects for the UK1 source term at the three distances considered

Quantity	Uncertainty factor			Reference uncertainty coefficient		
Risk of early death with countermeasures	3.1	13	1100[b]	3.8	29	170
Risk of haematopoietic syndrome with countermeasures	3.9	71	($1.3\ 10^{-3}$)[a]	3.1	27	-[e]
Risk of early death for normal living	3.3	8.6	240	2.4	16	23
Risk of haematopoietic syndrome for normal living	4.7	82	($1.8\ 10^{-3}$)[a]	2.3	24	-[e]
Risk of early death for potential exposures	2.5	4.7	32	1.6	3.6	11
Risk of haematopoietic syndrome for potential exposures	2.7	9.5	3000[c]	1.6	3.2	6.0
Risk of early morbidities with countermeasures	87	250	6400[d]	1.0	4.5	36
Risk of lung morbidities with countermeasures	($3.1\ 10^{-2}$)[a]	($3.5\ 10^{-2}$)[a]	($6.9\ 10^{-3}$)[a]	58	40	-[e]
Risk of hypothyroidism with countermeasures	($1.9\ 10^{-2}$)[a]	($1.5\ 10^{-2}$)[a]	($9.5\ 10^{-4}$)[a]	0.98	15	-[e]
Risk of skin burns with countermeasures	($9.5\ 10^{-2}$)[a]	($1.5\ 10^{-1}$)[a]	($5.1\ 10^{-2}$)[a]	0.98	4.2	35
Risk of early morbidities for normal living	23	77	670	1.2	3.0	8.4
Risk of lung morbidities for normal living	($2.9\ 10^{-2}$)[a]	($4.0\ 10^{-2}$)[a]	($1.2\ 10^{-2}$)[a]	-[e]	9000[f]	-[e]
Risk of hypothyroidism for normal living	($2.7\ 10^{-2}$)[a]	($2.3\ 10^{-2}$)[a]	($6.2\ 10^{-3}$)[a]	1.4	4.8	490
Risk of skin burns for normal living	($1.1\ 10^{-1}$)[a]	($1.7\ 10^{-1}$)[a]	($1.0\ 10^{-1}$)[a]	1.2	2.5	7.9
Risk of early morbidities for potential exposures	15	30	130	1.7	2.6	4.6
Risk of lung morbidities for potential exposures	($2.3\ 10^{-2}$)[a]	($3.3\ 10^{-2}$)[a]	($1.7\ 10^{-2}$)[a]	-[e]	-[e]	-[e]
Risk of hypothyroidism for potential exposures	($1.8\ 10^{-2}$)[a]	($2.1\ 10^{-2}$)[a]	($7.6\ 10^{-3}$)[a]	9.7	14	46
Risk of skin burns for potential exposures	($8.3\ 10^{-2}$)[a]	($1.4\ 10^{-1}$)[a]	($1.2\ 10^{-1}$)[a]	1.8	2.4	5.2

Notes
(a) The uncertainty factor is infinite. The 95th percentile of the uncertainty distribution is given in brackets.
b) The 5th and 95th percentiles of the uncertainty distribution are $1.2\ 10^{-5}$ and $1.3\ 10^{-2}$ respectively.
(c) The 5th and 95th percentiles of the uncertainty distribution are $2.0\ 10^{-6}$ and $6.0\ 10^{-3}$ respectively.
(d) The 5th and 95th percentiles of the uncertainty distribution are $8.3\ 10^{-6}$ and $5.4\ 10^{-2}$ respectively.
(e) The reference value is zero. The 95th percentile of the uncertainty distribution is given in the column for the uncertainty factors.
(f) The reference value is $4.5\ 10^{-6}$, the 95th percentile of the uncertainty distribution is $4.0\ 10^{-2}$.

Table 3.6 Uncertainty factors for the extent of early countermeasures for the CB2 source term

Quantity	For mean value	For 95th percentile	For 99th percentile
Area evacuated	230	300	300
Area with sheltering	160	180	190
Area with iodine tablets	92	160	210

Table 3.7 Reference uncertainty coefficient for the extent of early countermeasures for the CB2 source term

Quantity	For mean value	For 95th percentile	For 99th percentile
Area evacuated	410	370	430
Area with sheltering	170	150	150
Area with iodine tablets	13	12	8.9

Table 3.8 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 95th percentile**	**For 99th percentile**	**For mean value**	**For 95th percentile**	**For 99th percentile**
Number of early mortalities, with countermeasures	43	45	33	110	110	110
Number of cases of haematopoietic syndrome with countermeasures	38	33	44	49	40	26
Number of early morbidities with countermeasures	1400[b]	1400[b]	710	35	35	25
Number of cases of lung morbidity with countermeasures	$(1.2\ 10^4)$[a]	$(5.9\ 10^4)$[a]	$(1.1\ 10^5)$[a]	680	480	410
Number of cases of hypothyroidism with countermeasures	$(2.3\ 10^3)$[a]	$(1.2\ 10^4)$[a]	$(2.1\ 10^4)$[a]	44	47	43
Number of cases of skin burns, with countermeasures	$(1.3\ 10^5)$[a]	$(4.5\ 10^5)$[a]	$(6.2\ 10^5)$[a]	35	32	21
Number of early mortalities for normal living	65	58	51	34	33	31
Number of cases of haematopoietic syndrome for normal living	56	58	71	31	28	29
Number of early morbidities for normal living	510	320	210	17	14	10
Number of cases of lung morbidity for normal living	$(2.4\ 10^4)$[a]	$(9.1\ 10^4)$[a]	$(2.0\ 10^5)$[a]	$1.4\ 10^7$	-	-
Number of cases of hypothyroidism for normal living	$(1.1\ 10^4)$[a]	$(4.3\ 10^4)$[a]	$(8.3\ 10^4)$[a]	43	32	32
Number of cases of skin burns for normal living	$(3.6\ 10^5)$[a]	$(8.7\ 10^5)$[a]	$(1.4\ 10^6)$[a]	16	13	9.8

Notes
(a) The uncertainty factor is infinite. Th 95th percentile of the uncertainty distribution is given in brackets.
(b) The 5th and 95th percentile of the uncertainty distribution for the mean value are 92 and $1.3\ 10^5$, for the 95th percentile the values are $3.4\ \ 10^2$ and $4.8\ 10^5$.

Table 3.9 Uncertainty factors for long term individual doses

Quantity	For mean value[(a)]			For 95th percentile[(a)]			For 99th percentile[(a)]		
CB2									
Effective dose with countermeasures	110	39	15	160	46	23	120	46	17
Bone marrow dose with countermeasures	47	26	19	170	55	26	56	36	23
Thyroid dose with countermeasures	30	16	13	78	36	16	36	19	16
Effective dose in normal living	100	63	55	310	110	58	98	76	66
Bone marrow dose in normal living	260	180	100	720	260	110	400	210	140
Thyroid dose in normal living	240	150	140	600	340	200	320	220	180
DBA									
Effective dose with countermeasures	44	33	37	78	54	78	55	36	41
Bone marrow dose with countermeasures	92	81	71	280	200	280	96	98	96
Thyroid dose with countermeasures	13	21	96	21	58	240	14	21	130
Potential effective dose	64	41	39	170	66	62	76	51	36
Potential bone marrow dose	120	90	51	300	130	190	130	81	55
Potential thyroid dose	230	150	150	420	210	160	320	210	170

Note
(a) The three values are the uncertainty factor at 5, 20 and 100 km respectively.

Table 3.10 Reference uncertainty coefficients for long term individual doses

Quantity	For mean value[(a)]			For 95th percentile[(a)]			For 99th percentile[(a)]		
CB2									
Effective dose with countermeasures	53	14	3.7	42	14	5.2	48	14	4.4
Bone marrow dose with countermeasures	11	4.7	2.5	18	8.1	3.0	9.8	5.9	3.1
Thyroid dose with countermeasures	11	4.9	2.7	17	7.1	3.0	11	5.3	3.2
Effective dose in normal living	55	27	13	93	31	11	44	29	13
Bone marrow dose in normal living	36	22	9.1	66	23	9.6	32	21	12
Thyroid dose in normal living	200	95	43	140	89	34	200	110	55
DBA									
Effective dose with countermeasures	17	17	11	24	20	17	17	17	13
Bone marrow dose with countermeasures	12	12	8.1	26	20	9.8	10	14	9.6
Thyroid dose with countermeasures	5.9	9.7	32	5.9	17	44	5.9	7.9	3.8
Potential effective dose	56	27	13	68	25	11	48	30	10
Potential bone marrow dose	24	14	6.5	35	14	5.6	22	13	5.9
Potential thyroid dose	210	110	56	140	79	39	230	120	5.5

Note:
(a) The three values are the reference uncertainty coefficients at 5, 20 and 100 km respectively.

Table 3.11 Uncertainty factors and reference uncertainty coefficients for collective dose

Quantity	Uncertainty factor			Reference uncertainty coefficient		
	For mean value	For 95th percentile	For 99th percentile	For mean value	For 95th percentile	For 99th percentile
CB2						
Effective dose with countermeasures	22	22	25	7.1	7.1	7.1
Bone marrow dose with countermeasures	15	19	23	3.0	4.0	4.5
Thyroid dose with countermeasures	9.7	14	15	3.1	4.1	4.6
Effective dose for normal living	45	58	68	18	18	29
Bone marrow dose for normal living	100	110	150	14	14	28
Thyroid dose for normal living	14-0	170	190	71	85	120
DBA						
Effective dose with countermeasures	28	32	65	13	14	16
Bone marrow dose with countermeasures	71	87	46	9.3	10	11
Thyroid dose with countermeasures	37	47	66	17	23	30

Table 3.12 Uncertainty factors and reference uncertainty coefficients for extent of late countermeasures

Quantity	Uncertainty factor			Reference uncertainty coefficient		
	For mean value	For 95th percentile	For 99th percentile	For mean value	For 95th percentile	For 99th percentile
CB2						
Relocation area	220	300	300	410	370	430
Time integral of relocation area	88	81	130	19	12	11
Initial area subject to milk ban	56	27	13	19	11	8.5
Time integral of area subject to milk ban	38	42	39	30	38	37
Initial area subject to grain ban	700	1100[b]	910	0.54	0.81	0.85
Time integral of area subject to grain ban	6200[c]	8500[c]	6900[c]	0.56	0.72	0.89
Initial area subject to green vegetable ban	25	12	9.3	17	14	10
Time integral of area subject to green vegetable ban	110	100	95	17	16	15
Initial area subject to beef ban	64	69	72	3.3	4.1	4.9
Time integral of area subject to beef ban	100	95	98	4.1	5.0	5.9
DBA						
Initial area subject to milk ban	440	490	420	130	120	110
Time integral of area subject to milk ban	190	170	180	160	140	130
Initial area subject to grain ban	(1.2)[a]	(5.4)[a]	(10)[a]	6.7	4.4	4.9
Time integral of area subject to grain ban	(2.4)[a]	(10)[a]	(20)[a]	7.1	4.5	4.9
Initial area subject to green vegetable ban	59	69	63	130	100	86
Time integral of area subject to green vegetable ban	60	68	65	110	96	88
Initial area subject to beef ban	500	580	610	31	29	47
Time integral of area subject to beef ban	1400[d]	(58)[d]	(100)[a]	74	53	54

Notes:
(a) In these cases the uncertainty factor is infinite, and the value for the 95th percentile of the uncertainty distributions is given in brackets.
(b) The 5th and 95th percentiles of the uncertainty distribution are 59 and 6.2 10^4.
(c) The 5th and 95th percentiles of the uncertainty distribution for the mean value are 4.2 and 2.6 10^4, for the 95th percentile these values are 13 and 1.1 10^5, and for the 99th percentile the values are 25 and 1.7 10^5.
(d) The 5th and 95th percentile of the uncertainty distribution are 9.3 10^{-3} and 13.

Table 3.13 Uncertainty factors for individual risk of late health effects

Quantity	For mean value[(a)]			For 95th percentile[(a)]			For 99th percentile[(a)]		
CB2									
Fatal cancers, with countermeasures	100	85	64	300	110	100	89	120	76
Leukaemia, with countermeasures	$4.6\ 10^{5}$	$2.3\ 10^{5}$	$3.2\ 10^{5}$	$(9.6\ 10^{-3})^{a}$	$(8.0\ 10^{-4})^{a}$	$(6.9\ 10^{-5})^{a}$	$(2.8\ 10^{-2})^{a}$	$(3.4\ 10^{-3})^{a}$	$(2.3\ 10^{-4})^{a}$
Thyroid cancer, with countermeasures	$2.6\ 10^{5}$	$2.5\ 10^{5}$	$1.8\ 10^{5}$	$(3.0\ 10^{-3})^{a}$	$(2.7\ 10^{-4})^{a}$	$(1.8\ 10^{-5})^{a}$	$(1.3\ 10^{-2})^{a}$	$(1.3\ 10^{-3})^{a}$	$(9.3\ 10^{-5})^{a}$
Fatal cancer, in normal living	27	61	79	200	160	75	12	98	96
Leukaemia, in normal living	$4.0\ 10^{5}$	$3.7\ 10^{5}$	$4.3\ 10^{5}$	$(1.4\ 10^{-1})^{a}$	$(7.6\ 10^{-3})^{a}$	$(4.3\ 10^{-4})^{a}$	$8.3\ 10^{6}$	$(5.7\ 10^{-2})^{a}$	$(3.6\ 10^{-3})^{a}$
Thyroid cancer, in normal living	$1.1\ 10^{5}$	$1.8\ 10^{6}$	$2.5\ 10^{6}$	$(1.9\ 10^{-1})^{a}$	$(1.4\ 10^{-2})^{a}$	$(5.5\ 10^{-4})^{a}$	$1.1\ 10^{5}$	$(9.8\ 10^{-2})^{a}$	$(4.6\ 10^{-3})^{a}$
DBA									
Fatal cancer, with countermeasures	96	75	65	200	120	140	110	93	68
Leukaemia, with countermeasures	$5.3\ 10^{5}$	$2.8\ 10^{5}$	$3.7\ 10^{5}$	$(7.4\ 10^{-6})^{a}$	$(7.6\ 10^{-7})^{a}$	$(3.9\ 10^{-8})^{a}$	$(2.6\ 10^{-5})^{a}$	$(3.5\ 10^{-6)})^{a}$	$2.9\ 10^{-7})^{a}$
Thyroid cancer, with countermeasures	$1.7\ 10^{5}$	$1.6\ 10^{5}$	$2.9\ 10^{5}$	$(2.5\ 10^{-6})^{a}$	$(7.9\ 10^{-7})^{a}$	$(3.9\ 10^{-8})^{a}$	$(2.6\ 10^{-5})^{a}$	$(3.5\ 10^{-6})^{a}$	$(2.9\ 10^{-7})^{a}$
Potential risk of fatal cancer	150	100	43	190	96	$(1.0\ 10^{-6})$	91	69	50
Potential risk of Leukaemia	$5.2\ 10^{5}$	$3.1\ 10^{5}$	$3.5\ 10^{5}$	$(2.1\ 10^{-5})$	$(1.1\ 10^{-6})$	$(4.1\ 10^{-8})$	$(1.3\ 10^{-4})$	$(6.8\ 10^{-6})$	$(3.4\ 10^{-7})^{a}$
Potential risk of thyroid cancer	$2.1\ 10^{5}$	$2.8\ 10^{5}$	$3.7\ 10^{5}$	$(4.9\ 10^{-5})$	$(3.8\ 10^{-6})$	$(1.3\ 10^{-7})$	$(6.0\ 10^{-4)}$	$(2.6\ 10^{-5})$	$(1.2\ 10^{-6})^{a}$

Note
(a) In these cases the uncertainty factor is infinite, and the 95th percentile of the uncertainty distribution is given in brackets.

Table 3.14 Reference uncertainty coefficients for individual risk of late health effects

Quantity	Mean			95%			99%		
CB2									
Fatal cancer with countermeasures	56	34	15	110	43	20	38	39	20
Leukaemia with countermeasures	13	7.8	4.0	25	14	4.7	10	8.7	4.8
Thyroid cancer with countermeasures	11	7.1	3.2	16	8.9	3.1	11	7.4	4.7
Fatal cancers in normal living	16	32	17	66	55	19	5.0	40	19
Leukaemia in normal living	44	29	15	98	31	11	49	31	16
Thyroid cancer in normal living	56	58	37	89	58	24	56	62	36
DBA									
Fatal cancer with countermeasures	40	38	19	72	49	27	37	43	20
Leukaemia with countermeasures	17	17	12	45	27	14	12	17	12
Thyroid cancer with countermeasures	7.0	8.8	30	6.5	15	37	6.2	8.5	38
Potential risk of fatal cancer	71	40	15	83	40	17	5	38	16
Potential risk of leukaemia	41	22	9.5	62	22	7.	38	20	8.1
Potential risk of thyroid cancer	130	67	41	83	56	29	140	65	34

Table 3.15 Uncertainty factors for the numbers of late health effects[(a)]

Quantity	For mean value	For 95th percentile	For 99th percentile
CB2			
Number of fatal cancers, with countermeasures	71	71	85
Number of deaths from leukaemia, with countermeasures	(2.9 10^5)[b]	(2.8 10^3)	(3.5 10^3)
Number of deaths from thyroid cancer, with countermeasures	(1.6 10^5)[c]	(8.1 10^2)	(1.1 10^3)
Number of fatal cancers, for normal living	48	59	58
Number of deaths from leukaemia, for normal living	(3.6 10^5)[d]	(4.1 10^4)	(5.9 10^4)
Number of deaths from thyroid cancer, for normal living	(1.7 10^5)[e]	(5.9 10^4)	(9.3 10^4)
DBA			
Number of fatal cancers, with countermeasures	64	65	66
Number of deaths from leukaemia, with countermeasures	(2.5 10^5)[f]	(1.9)	(2.7)
Number of deaths from thyroid cancer, with countermeasures	(1.6 10^5)[g]	(3.4)	(5.0)

Notes
(a) In some cases the uncertainty factor is infinite. The 95th percentile of the uncertain distribution is given in brackets in these cases.
(b) The 5th and 95th percentiles of the uncertainty distribution in this case are 4.0 10^{-3} and 1.2 10^3
(c) The 5th and 95th percentiles of the uncertainty distribution in this case are 2.3 10^{-3} and 3.8 10^2
(d) The 5th and 95th percentiles of the uncertainty distribution in this case are 3.9 10^{-2} and 1.4 10^4
(e) The 5th and 95th percentiles of the uncertainty distribution in this case are 1.1 10^{-3} and 1.8 10
[4](f) The 5th and 95th percentiles of the uncertainty distribution in this case are 2.3 10^{-6} and 6.0 10^{-1}
(g) The 5th and 95th percentiles of the uncertainty distribution in this case are 4.8 10^{-6} and 7.7 10^{-1}

(h) **Table 3.16 Reference uncertainty coefficients for the numbers of late health effects**

Quantity	For mean value	For 95th percentile	For 99th percentile
CB2			
Number of fatal cancers, with countermeasures	23	23	26
Number of deaths from leukaemia, with countermeasures	4.9	5.6	5.1
Number of deaths from thyroid cancer, with countermeasures	4.0	4.2	4.3
Number of fatal cancers, for normal living	18	20	27
Number of deaths from leukaemia, for normal living	18	20	26
Number of deaths from thyroid cancer, for normal living	40	53	78
DBA			
Number of fatal cancers, with countermeasures	28	26	32
Number of deaths from leukaemia, with countermeasures	13	12	12
Number of deaths from thyroid cancer, with countermeasures	14	21	24

Table 3.17 Comparison of the extent of the uncertainty due to the parameter value uncertainty with that from meteorological sampling

	Mean value		95th percentile		99th percentile	
Quantity	UF[a]	MS[b]	UF[a]	MS[b]	UF[a]	MS[b]
Air concentration of iodine at 0.875	10	1.3	20	2.0	13	1.0
Deposition of caesium at 100 km	8.2	1.9	31	2.0	11	2.6
7 day dose to bone marrow at 0.875 km UK1 normal living	2.5	1.3	35	1.8	21	1.6
Individual risk of early death for potential exposure to UK1 at 0.875 km	2.5	1.3	-	1.0	-	1.0
Area evacuated CB2	230	1.7	300	1.4	300	1.4
Number of early deaths with countermeasures for UK1	43	1.9	45	1.9	33	2.3
Effective dose at 20 km with countermeasures CB2	39	1.7	46	1.6	46	1.8
Time integral of milk ban area for CB2	38	1.7	42	1.6	39	1.5
Time integral of milk ban area for DBA	190	1.8	170	1.7	180	2.0
Number of fatal cancers with countermeasures for CB2	71	1.4	71	1.5	85	1.6

Notes

a UF is the uncertainty factor

b MS is the ratio of the maximum to minimum value from the meteorological sampling uncertainty analysis

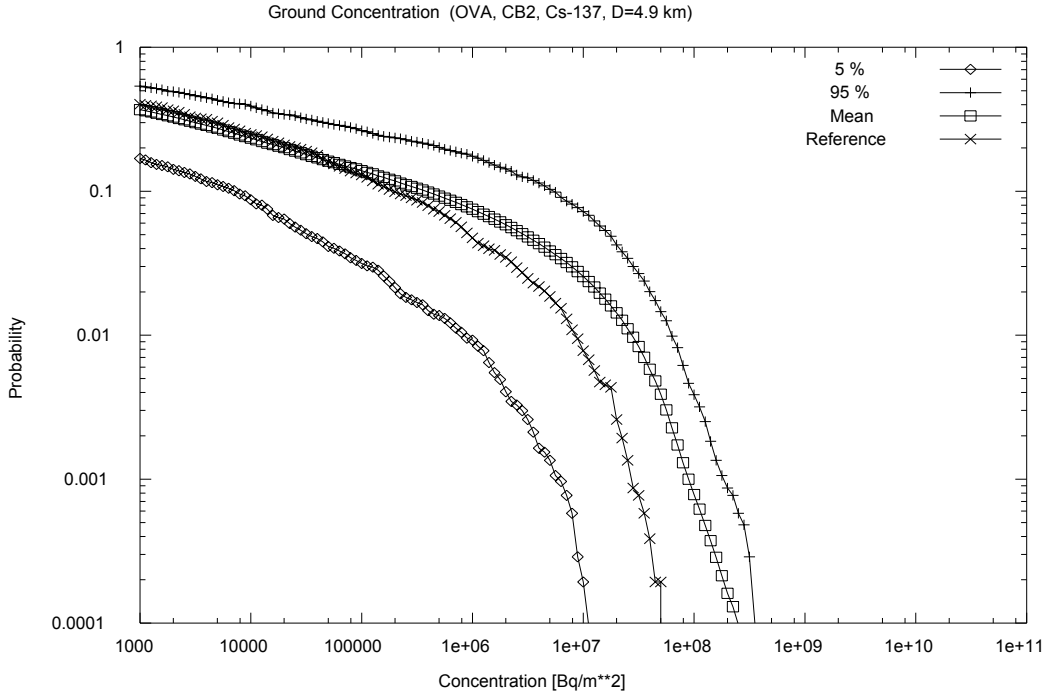

Figure 3.1 Extent of the uncertainty on the deposition of caesium-137 at 5 km

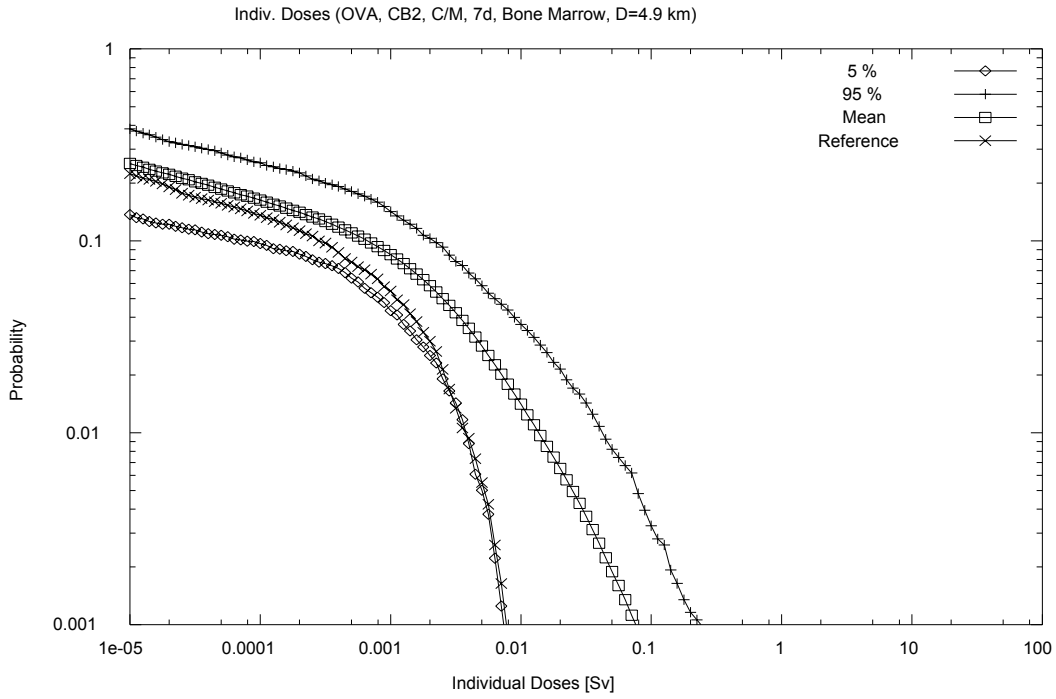

Figure 3.2 Extent of the uncertainty on the individual bone marrow doses to 7 days at 5 km for the CB2 source term

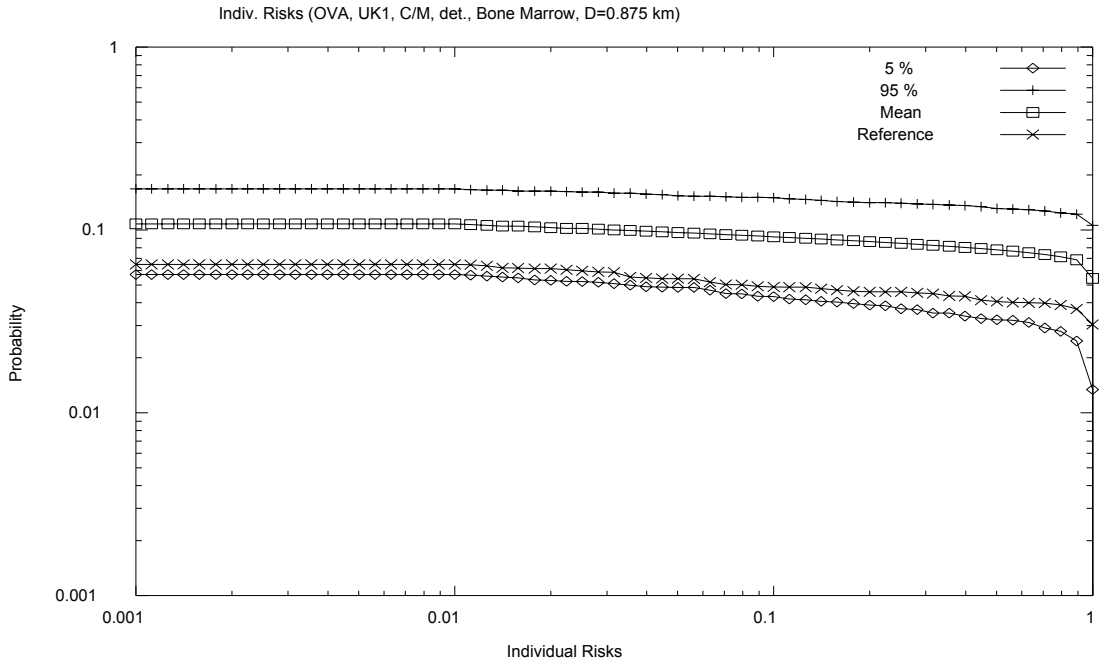

Figure 3.3 Extent of the uncertainty on the individual risk of the bone marrow syndrome with countermeasures at 0.875 km for the UK1 source term

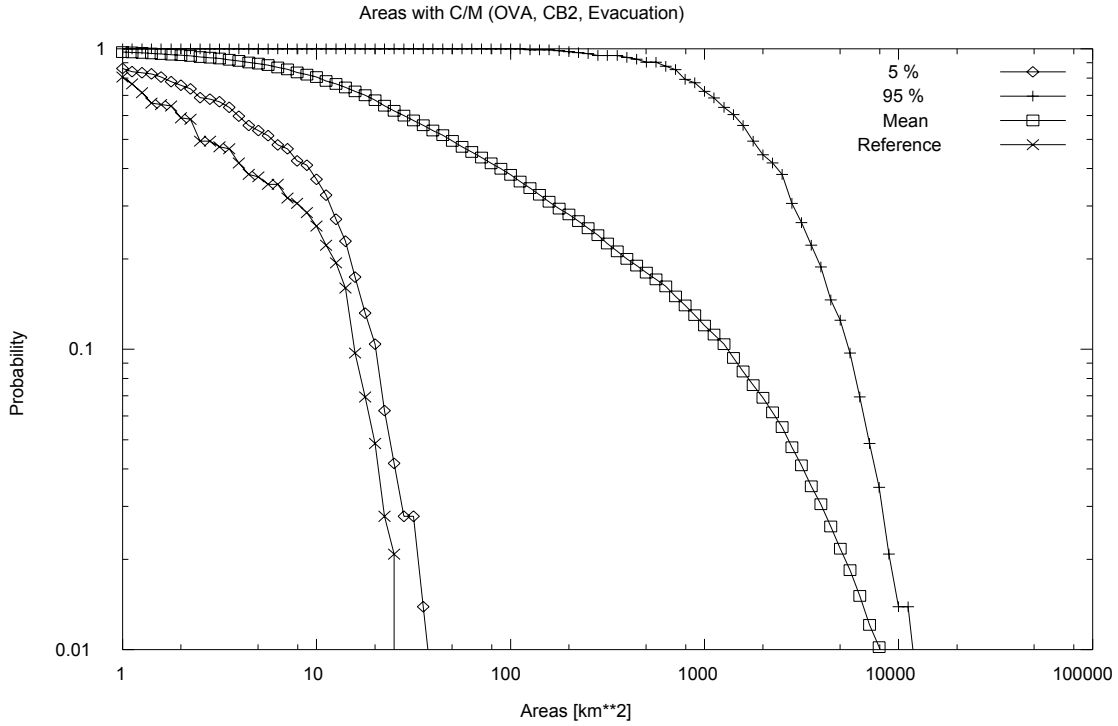

Figure 3.4 Extent of the uncertainty on the evacuation area for the CB2 source term

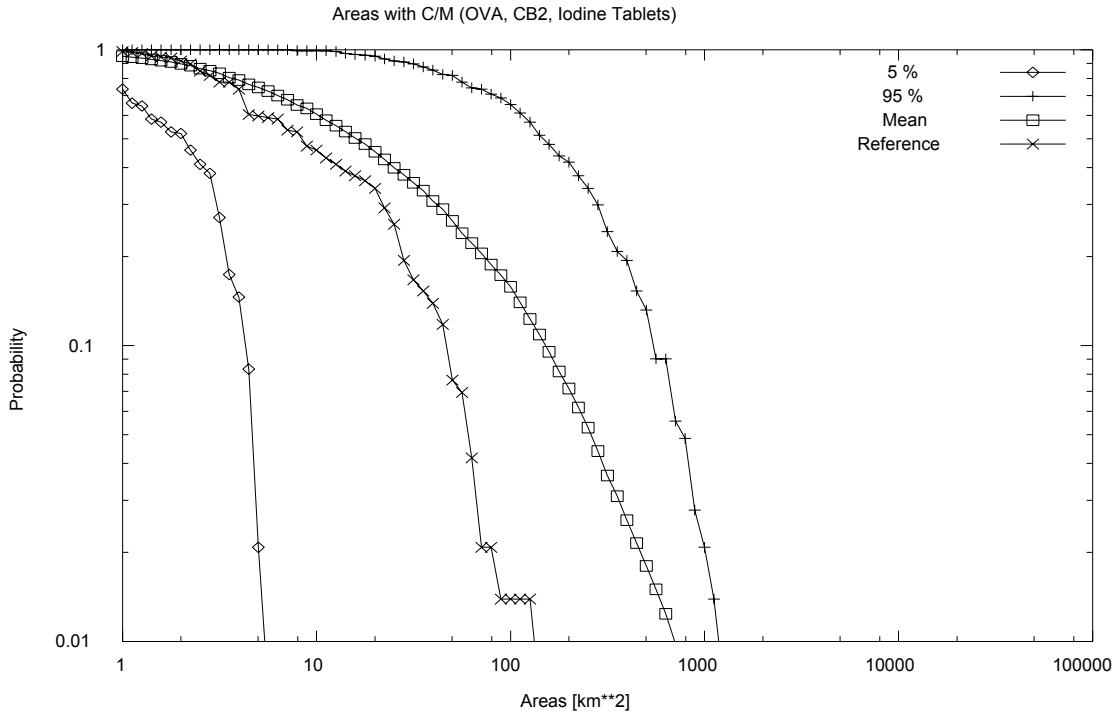

Figure 3.5 Extent of the uncertainty on the area with iodine tablets for the CB2 source term

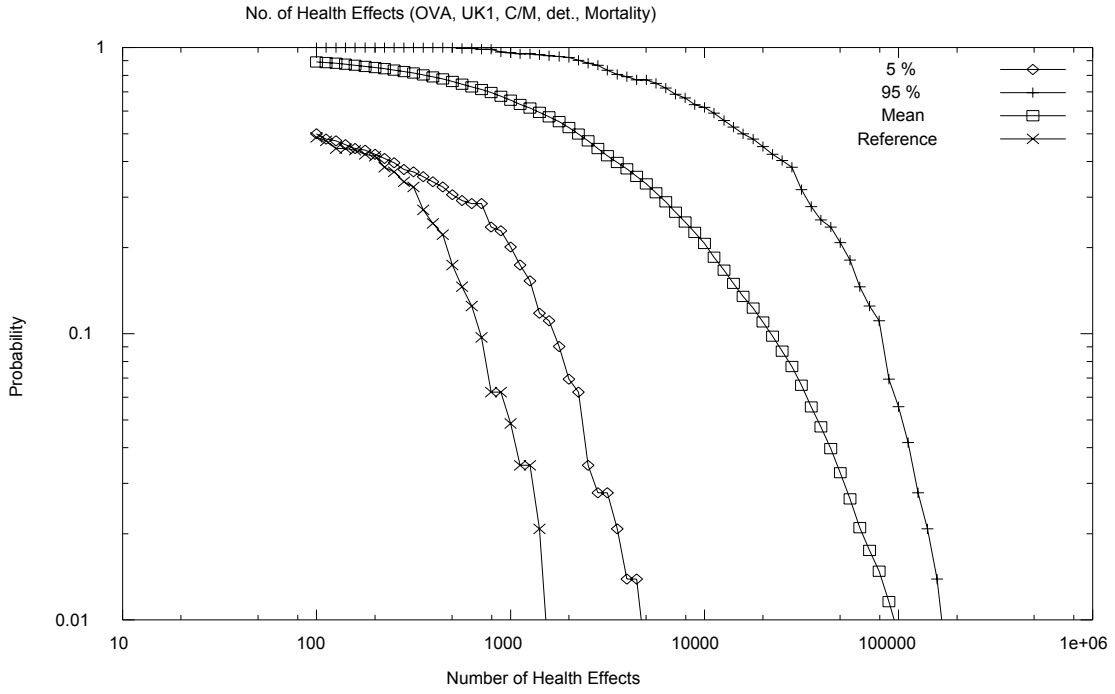

Figure 3.6 Extent of the uncertainty on the numbers of early deaths with countermeasures for the UK1 source term

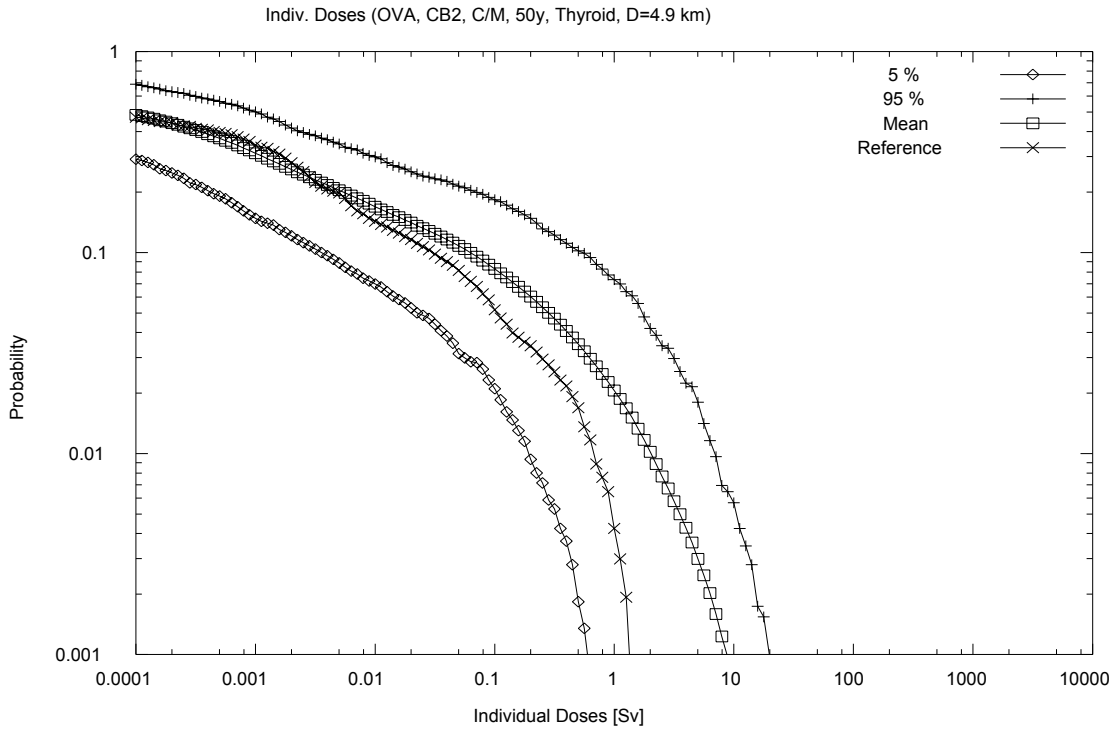

Figure 3.7 Extent of the uncertainty on the individual committed thyroid dose with countermeasures at 5 km for the CB2 source term

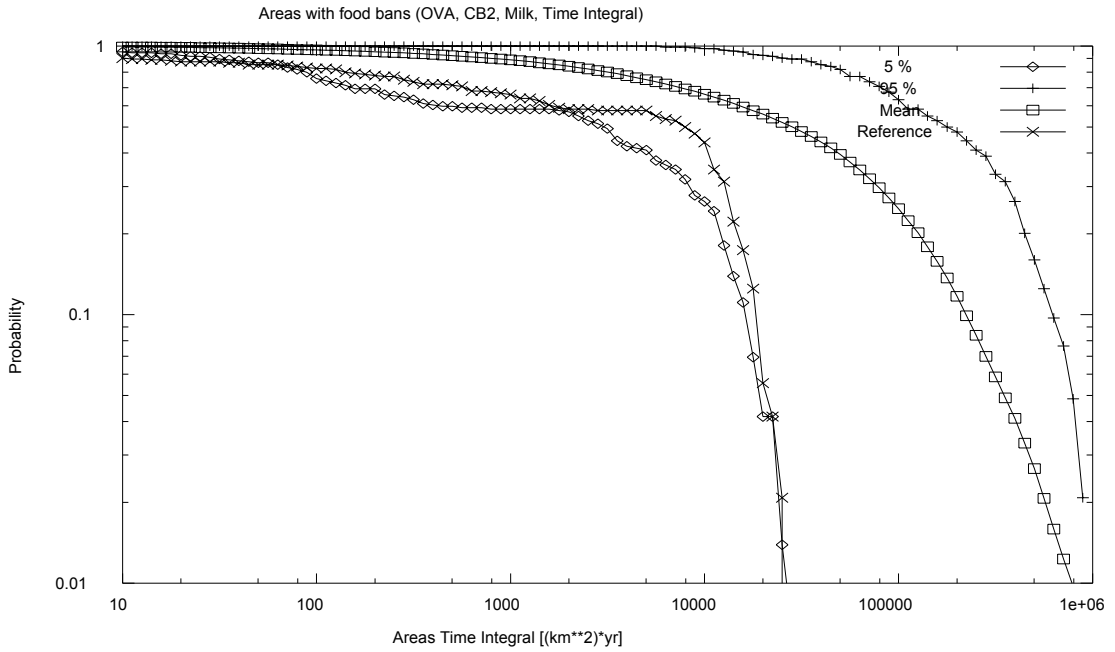

Figure 3.8 Extent of the uncertainty on the time integral of the milk restriction area for the CB2 source term

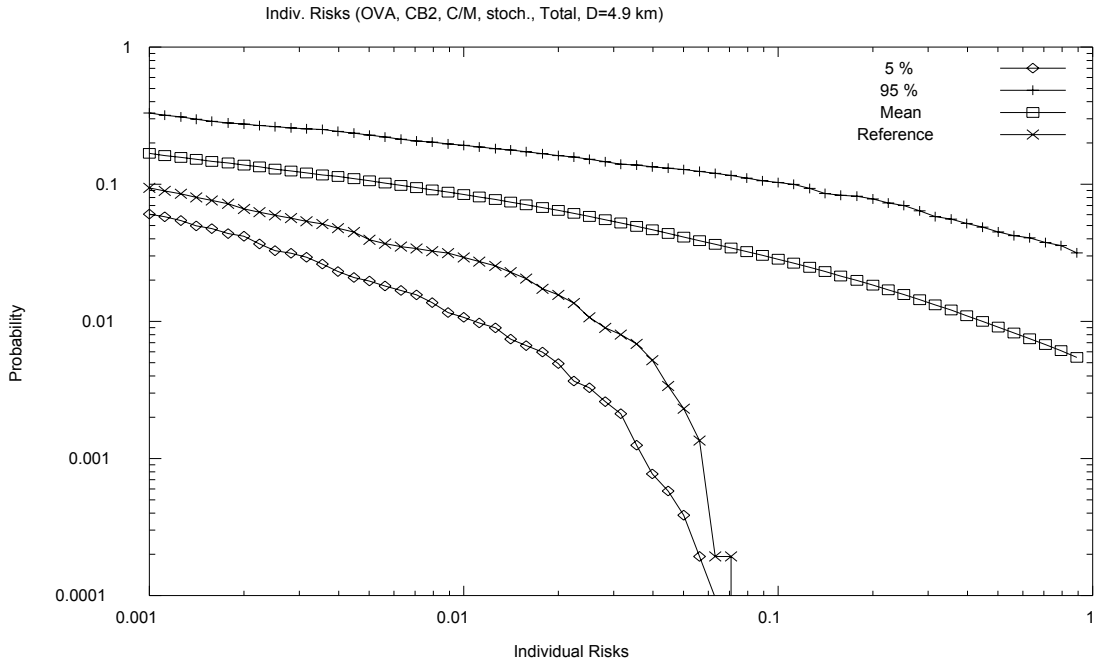

Figure 3.9 Extent of the uncertainty on the individual risk of fatal cancer with countermeasures at 5 km for the CB2 source term

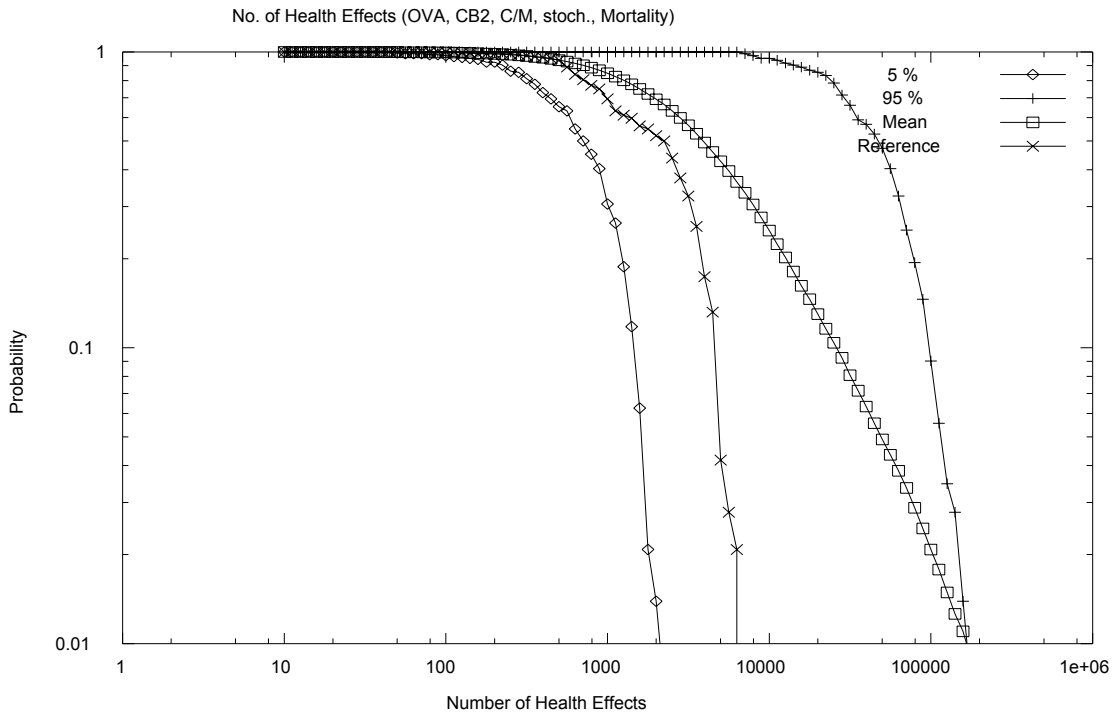

Figure 3.10 Extent of the uncertainty on the number of fatal cancers with countermeasures for the CB2 source term

3 IMPORTANT PARAMETER UNCERTAINTIES CONTRIBUTING TO THE OVERALL UNCERTAINTY

The overall analysis included those parameters identified as making important contributions to the uncertainty for any endpoint from the module analyses. The criteria used in the module analyses to identify important uncertain parameters was that they contributed more than 15% of the overall uncertainty on the endpoint or that they were ranked in first or second position using PRCCs. These criteria were chosen to ensure that all parameter uncertainties that were likely to make important contributions to the overall uncertainty were included in the analysis. The same criteria were adopted in the overall analysis, although here this could tend to identify parameters that are not of major importance to the overall uncertainty on a risk analysis.

This section summarises the important parameter uncertainties, identifying those uncertainties that are identified as important contributors to the overall uncertainty on more than one part of the ccdf or for groups of related endpoints. The criteria adopted for judging whether parameter uncertainties should be included in this summary are somewhat subjective. All the parameter uncertainties identified as important, for each of the endpoints and for each of the parts of the ccdf considered, are listed in Appendix D. This includes those parameters that contribute more than 10% of the overall uncertainty and those that are ranked in the top 3 positions using PRCC. The important parameter uncertainties for air concentration and deposition identified in the overall analysis should be the same as those identified in the analysis of the dispersion and deposition module. As noted in Section 4.1 there are some differences between the results of the two analyses, reflecting the different samples of values for the various parameters selected for the two analyses. The results for the other endpoints are generally consistent between the overall and module analyses.

If future research priorities were to be allocated to reduce the overall uncertainties, then this study indicates the parameters that should be considered for investigation. In some cases they are those with large uncertainties. In other cases, the uncertainties are smaller and other features determine their importance.

Air concentration and deposition

The parameters whose uncertainties make large contributions to the overall uncertainty for air concentration and deposition should be the same in both the dispersion module analysis and the overall analysis, as the parameters of that module are the only ones that can influence these endpoints. The results are similar, but there are some differences in the ordering of the parameters and in the relative amounts of the uncertainty contributed by each parameter. These reflect the different samples used for the two analyses, the influence of the other parameters on the statistical techniques used to identify the important parameters and the relative numbers of parameters and runs in the different analyses. The results are summarised in Table 3.1, which shows the results of both the overall and module analyses. In general, both analyses identified the same parameter uncertainties as being the most important, with differences for the uncertainties making smaller contributions. The comments made below reflect the results of the overall analysis, rather than of the module analysis.

The most important parameter uncertainties contributing to the uncertainty on the air

concentration of caesium are those on the deposition velocity of aerosols, other than at the first distance considered, and on some of the dispersion parameters. The same dispersion parameters are not identified consistently at the different distances and for the different percentiles of the ccdf; however one of the vertical dispersion parameters for category D and one of the horizontal dispersion parameters for categories E/F are identified for a number of cases. The uncertainty on the deposition velocity makes an increasing contribution to the uncertainty on air concentration as distance increases, reflecting the impact of plume depletion. The predicted air concentration increases as the value of the deposition velocity decreases. The uncertainty on the deposition velocity of iodine makes the largest contribution to the overall uncertainty on the iodine air concentration at all distances, with the uncertainty on some of the dispersion factors also making large contributions for some distances or parts of the ccdf. As with the results for caesium, there is no consistent identification of these parameters but one of the horizontal dispersion parameters for categories E/F is identified in a number of cases.

The parameter whose uncertainty makes the largest contribution to the overall uncertainty on the deposition of caesium is the deposition velocity of particulate material; its contribution decreases as distance increases. This is identified as important for the first three distances, with deposition increasing with increasing values of the deposition velocity. It is not identified at the largest distance; the negative correlation between air concentration and deposition velocity at this distance reduces the contribution of the deposition velocity to the uncertainty on the deposition. The uncertainty on the washout coefficient of caesium is identified as an important contributor to the uncertainty on the deposition at the final distance, but not at the earlier distances. The uncertainties on some of the dispersion factors, particularly for horizontal dispersion in categories D and E/F, also make large contributions to the uncertainty.

The uncertainty on the deposition velocity of iodine is the most important contributor to the overall uncertainty on the deposition of iodine at 3 of the 4 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. The uncertainty on deposition velocity was not identified as important for the third distance, presumably because the different effects of increasing deposition and increasing plume depletion cancel at this distance. The uncertainty on the washout coefficient of iodine is identified at the third distance, but not at the other distances. The uncertainties on some of the dispersion factors, particularly for horizontal dispersion in categories D and E/F, also make large contributions to the uncertainty.

3.2 Individual doses to 7 days

Only the uncertainties on parameters of the dispersion and deposition and dose modules can contribute to the overall uncertainties on the individual doses to 7 days. The parameters whose uncertainties make important contributions to the overall uncertainty on individual doses are summarised in Table 3.2. The analysis considered important parameter uncertainties for three organs, with three patterns of population behaviour for UK1 and one for CB2. Different parameter uncertainties are identified for the different organs, though the same parameter uncertainties tend to be important for the different patterns of population behaviour. This analysis identified the

uncertainties on a number of dispersion parameters as making important contributions to the overall uncertainties on some of the doses. In this respect it differs slightly from the dispersion module analysis, where the deposition velocities were identified as the major contributor in most cases.

The only parameters whose uncertainties were identified as making important contributions to the overall uncertainty for the bone marrow doses are from the dispersion and deposition module. Different parameters are identified for the different distances, situations and parts of the ccdf considered. The uncertainty on the parameter p_z for categories E/F is identified as an important contributor for the mean value for all situations and distances, but is not identified consistently for the percentiles of the ccdfs. The deposition velocity of iodine is also identified as important for the mean values at the first distance, with the parameter q_z for category D identified for the mean values at the other distances. Again, these parameters are not identified consistently for the percentiles.

The uncertainties on the 99th percentile of bone marrow dose with countermeasures at 5 km for the CB2 source term found in the module analyses are illustrated in Figure 3.1. The uncertainty from the dose module is seen to be much less than that from the atmospheric dispersion module. This is consistent with the finding that the most important parameter uncertainties are on some of the dispersion and deposition parameters.

The important parameter uncertainties identified for thyroid dose come from the dispersion and the dose modules. The important uncertainties for the UK1 source term are the breathing rate, identified for almost all situations, and the deposition velocity of iodine to ground. This is identified particularly at the second and third distances; there is a negative correlation between the deposition velocity and thyroid dose reflecting its effect on the air concentration through plume depletion. The important uncertainties for the CB2 source term are the deposition velocity of iodine to ground and some of the parameters of the iodine dose model, particularly the transfer coefficient between blood and bladder. These are generally consistent with the module analysis results.

The most important parameter uncertainties for the skin dose for the UK1 source term are the deposition velocities of iodine and aerosols to skin, which are identified for all population behaviour patterns considered. The dispersion parameter q_y for categories E/F is identified according to its percentage contribution for the 95th percentile of the ccdfs in all situations. The deposition velocities of iodine and aerosols to skin are also identified as important for the CB2 source term. For this source term the deposition velocity of iodine to ground is also identified as an important uncertainty according to its value of PRCC, but has a very low contribution to the R^2 value. It is negatively correlated with the skin dose, and so this reflects the impact of plume depletion on skin dose.

3.3 Individual risks of early health effects

Only the uncertainties on parameters of the dispersion, dose and health effects modules

can contribute to the overall uncertainties on the individual risks of early health effects. The parameters whose uncertainties make important contributions to the overall uncertainties for individual risks of early health effects for the UK1 source term are summarised in Table 3.3. The results for the CB2 source term are not considered here as the doses are below the threshold values for most of the situations considered, and important parameter uncertainties cannot be reliably identified in that situation. The results can be found in Appendix D if required.

For most of the effects considered, the uncertainty on individual parameters makes only a small percentage contributions to the overall uncertainty and important parameters are mainly identified on the basis of their PRCC.

The contributions to the overall uncertainty on the 99th percentile of the risk of early death with countermeasures at 5 km is illustrated in Figure 3.2, which shows the contributions found in the module analyses. This shows that the uncertainty from the dispersion and deposition parameters ranges over the complete range of risk from essentially zero to one. The dose module also provides a large uncertainty on this endpoint. The uncertainties have combined in such a way that the uncertainty in the overall analysis is lower than that in the module analyses separately.

The parameters whose uncertainties are identified as making important contributions to the overall uncertainty for the individual risk of early death differ for the different distances and situations. The uncertainty on two of the parameters describing the fraction of material deposited in different parts of the lung are identified for most of the situations of interest. These parameter uncertainties are not identified as making large contributions to the uncertainty for other organ doses, and so the contribution to the risk of death is likely to reflect the uncertainty on lung dose and death from lung exposure, which are not considered as endpoints in this analysis. This is consistent with the dose module results. The other uncertainties identified are on various dispersion parameters, but the identification is not consistent for the different distances and population behaviour patterns considered; parameters for categories D and E/F are identified for many of the situations considered. The uncertainty on the deposition velocity of iodine to skin is identified at the third distance for the risk with countermeasures and for the potential outdoor risk.

The important parameter uncertainties for risk of the haematopoietic syndrome are similar to those identified for the dose in bone marrow; parameters of the model relating doses to risks are only identified in a few of the distances and population behaviour patterns considered. The differences between the important parameters for risk and for dose reflect the effects of the non-linear relationship between doses and risks, and the tendency for the analysis procedures to consider linear relationships between model inputs and outputs. The uncertainty on the deposition velocity of iodine is an important contributor at the first distance considered, but not at the other distances. The uncertainties on some of the dispersion parameters, particularly q_z for category D and those for vertical dispersion in categories E/F, are identified for the other distances considered.

The important parameter uncertainties for risk of early morbidities are similar for the three behaviour patterns considered, though only the deposition parameter of iodine to skin is identified for all situations considered. The uncertainties on four other parameters, the dispersion parameter q_y for category D, the deposition velocity of iodine to the ground, one of the parameters describing the initial deposition of material in the lung and one of the parameters of the relationship

between lung dose and the risk of lung function impairment, are identified for some situations.

The important parameters identified for the risk of lung morbidities are two of the three parameters in the model for the variation of the D_{50} with dose and dose rate. Both parameters are identified for most of the distances, behaviour patterns and parts of the ccdf considered. The uncertainty on the third parameter of the relationship (the shape parameter) is not identified for any situation. None of the uncertainties on the parameters of the lung model are identified as important for the risk of lung morbidities. This seems strange, as they are identified for the risk of early death. This cannot be explained at present.

The important parameter uncertainties for the risk of hypothyroidism depend to some extent on the population behaviour and distance considered. The uncertainty on the parameters of the model relating risk of hypothyroidism to dose were not considered, as explained in the health module report. The transfer coefficient of iodine from lung to blood is identified for the first two distances if countermeasures are taken, and for all distances in the other cases considered. The deposition velocity of iodine is also identified for some of the distances for each of the population behaviour patterns considered. One of the parameters describing the initial deposition in lung is identified for some distances for the cases with countermeasures and for normal living, but not for the potential risk. In general, these are not the parameters that were identified for the thyroid dose. This is because the risk of hypothyroidism includes the probability of surviving early death and so is influenced by uncertainties in the doses in other organs.

The most important parameters for the risk of skin burns are very similar for each of the distances and behaviour patterns considered. The deposition velocities of iodine and aerosols to skin are important for all combinations considered, though the contribution of the uncertainty on deposition velocity of aerosols is just below the cut-off point identified for some cases particularly if countermeasures are taken. The uncertainty on the dispersion parameter q_y for categories E/F is also identified for most of the situations considered.

3.4 Extent of early countermeasures

Only the uncertainties on parameters of the dispersion and dose modules can contribute to the overall uncertainties on the extent of early countermeasures. The parameter whose uncertainties make large contributions to the overall uncertainty are summarised in Table 3.4. The uncertainty on the transfer coefficient from the extrathoracic 2 compartment to stomach and the fast transfer coefficient from the bronchial to the extrathoracic region are ranked in first and second places according to their values of PRCC for all percentiles of the ccdf for the evacuation area and the sheltering area. However, they only make a small percentage contribution (between 5 and 10 and between 10 and 15% respectively) to the uncertainty. The remainder of the uncertainty is either the result of many parameter uncertainties each contributing a very small portion of the overall uncertainty or reflects a failure of the analysis technique to explain the uncertainty in terms of linear relationships between model inputs and outputs. The important parameters for the area in which iodine tablets would be distributed are the deposition velocity of iodine, which is identified by both PRCC and percentage contribution, and the breathing rate. The uncertainty on the deposition velocity of iodine accounts for about 40% of the overall uncertainty on the area for iodine tablets. It is negatively correlated; the area decreases as the iodine deposition velocity increases, reflecting its influence on the air concentration and inhalation dose.

The uncertainties in the areas where evacuation or iodine tablets would be required as found in the different module analyses are illustrated in Figure 3.3 and Figure 3.4, respectively. The uncertainty on the evacuation area from the dose module is much greater than that from the atmospheric dispersion module. The reverse is the case for the area with iodine tablets, though the relative difference in the contributions is smaller than for the evacuation area. This is consistent with the identification of uncertainties on dose module parameters as being important for the uncertainty on evacuation area but uncertainties on dispersion module parameters as being important for the iodine tablet area. The important parameter uncertainties reflect those found in the module analyses.

3.5 Numbers of early health effects

Only the uncertainties on parameters of the dispersion, dose and health effects modules can contribute to the overall uncertainties on the numbers of early health effects. The parameters whose uncertainties make important contributions to the overall uncertainties on the number of cases of early health effects are given in Table 3.5. To some extent, the important parameter uncertainties for the numbers of early effects reflect those for the individual risks of early effects at the three distances considered, though not all the parameters identified for risk are also identified here, and others are identified in some cases. This reflects the distances over which early effects are predicted; those effects for which doses are above the threshold for longer distances make a larger contribution to the overall numbers of effects, and so also tend to dominate the uncertainty for the numbers. The important parameter uncertainties tend to be different for the cases with countermeasures and in normal living.

The discussion here only considers the results for the UK1 source term. The numbers of effects for the CB2 source term are sufficiently small to make identification of the important parameter uncertainties difficult; the results are given in Appendix D if required.

The most important parameter uncertainties for the number of early deaths with countermeasures and for normal living are different; the results with countermeasures depend also on the part of the ccdf considered. The most important uncertainties for mean value with countermeasures are the deposition velocity of elemental iodine to skin and the fraction of material deposited in the TB region of the lung. The most important uncertainties for the 95^{th} and 99^{th} percentiles of the ccdf are the fractions of material deposited in the extrathoracic and TB regions of the lungs. For the case with normal living, the most important parameter uncertainties are the deposition velocity of elemental iodine to skin and the fraction of material deposited in the extrathoracic region of the lungs, for all parts of the ccdf. The uncertainties in the 99^{th} percentile of the numbers of early deaths with countermeasures as found in the different analyses are illustrated in Figure 3.5. This shows that the atmospheric dispersion and dose module make similar contributions with the health effects module making a smaller contribution, and so it is not surprising that the important parameter uncertainties are from the dose and dispersion modules, rather than from the health effects module.

The most important parameter uncertainties for the uncertainty on the number of cases of haematopoietic syndrome also depend on whether countermeasure are taken. If countermeasures are taken, the most important uncertainties are those on the vertical dispersion parameters in

categories E/F, for all parts of the ccdf. The dispersion parameter p_z for categories E/F is also identified as important for all parts of the ccdf for the numbers of cases of the haematopoietic syndrome in normal living. One of the parameters of the formula for the variation of LD_{50} with dose rate is identified for the mean value and the 95th percentile, but not for the 99th percentile, while the dispersion parameter p_y for categories E/F is identified for the 99th percentile.

The most important parameter uncertainties for the number of early morbidities with countermeasures are the deposition velocity of iodine to skin and one of the parameters of the formula for the variation of D_{50} for lung function impairment with dose rate. These are identified for all parts of the ccdf considered. The most important parameter uncertainties for normal living are the deposition velocity of iodine to skin and the deposition velocity of iodine to ground. There is a positive correlation between the numbers of effects and the deposition velocity to skin, but a negative correlation between the numbers of effects and the deposition velocity to the ground. This suggests that the deposition velocity to the ground is identified because of its important contribution to the uncertainty on the air concentration, through the effects of plume depletion.

Different parameter uncertainties are identified for the number of cases of hypothyroidism for countermeasures or normal living. The important parameter uncertainties for countermeasures are the fraction of material deposited in the extrathoracic region of the lungs and the transfer coefficient for tellurium between blood and thyroid. The important parameter uncertainties for normal living are the deposition velocity of iodine to ground and the transfer coefficient of iodine between any lung compartment and blood. There is a negative correlation between the number of cases and the deposition velocity of iodine, reflecting its contribution to the uncertainty on air concentration.

The most important parameter uncertainties for the number of skin burns are the deposition velocities of iodine and aerosols to skin, for the number of effects with countermeasures or in normal living. One of the parameters in the model for the variation of D_{50} for skin burns with dose is identified as important for the numbers of effects with countermeasures, but not for normal living.

3.6 Long term individual and collective doses

The uncertainties on the parameters in the atmospheric dispersion, dose and food chain modules can contribute to the overall uncertainty on the long term individual and collective dose. The parameters whose uncertainties make important contributions to the overall uncertainty on individual dose are summarised in Table 3.6. The parameters tend to be different for the different population behaviour patterns considered, and for the different source terms. In some cases the important parameters are also different for the different distances for one organ and population behaviour pattern. The parameters whose uncertainties make important contributions to the overall uncertainty on collective dose are summarised in Table 3.7. The tables gives those parameters identified for several of the cases considered; the full results are presented in Appendix D. The following discussion summarises the results for the CB2 source term, and then discusses the differences between the important parameter uncertainties for the two source terms considered.

The relative uncertainties found in the different analyses are illustrated in Figure 3.6, for

the 99th percentile of the committed individual dose to thyroid with countermeasures at 5 km for the CB2 source term. In this particular case, the largest contribution is from the dose module and the contribution from the food module is extremely small as food restrictions are imposed in almost all situations. The relative contributions would not be the same in other cases where food restrictions are not so effective.

The uncertainty on the fast transfer coefficient between the bronchial and extrathoracic regions of the lung is identified as an important contributor to the overall uncertainty on the individual effective dose with countermeasures for all distances and percentiles of the ccdf considered. Other parameters are identified for one or two distances, but not for all three. The transfer coefficient between the extrathoracic 2 compartment and stomach is identified for all parts of the ccdf, but only for doses at 5 km. These parameter uncertainties are also identified as the most important contributors to the extent of the sheltering and evacuation areas; their importance for dose with countermeasures may reflect their effect in determining whether or not countermeasures are applied. The uncertainty on the external dose from deposited caesium at 30 years is identified for doses at 20 and 100 km for the 99th percentile of the ccdf, and for the mean value at 20 km. The deposition velocity of aerosols and one of the parameters of the model describing the uptake of caesium to pasture are identified in some situations. These same parameters are generally identified in the various module analyses.

The important uncertainties for the collective effective dose with countermeasures for the 95th and 99th percentiles of the ccdf are different from those for the mean value. For the percentiles of the ccdf, the important uncertainties are the external dose from deposited caesium to 30 years and one of the parameters of the model describing the uptake of caesium to pasture. The important uncertainties for the mean value are the fast transfer coefficient between the bronchial and extrathoracic regions of the lung and the same parameter of the model describing the uptake of caesium to pasture. These parameters were all identified for the individual dose, for some of the distances and parts of the ccdf.

The important uncertainties for the individual effective dose in normal living are different from those when countermeasures are taken, with uncertainties on parameters of the food chain model making the major contributions. This reflects the large difference between the uncertainty factors for these two cases found in the food module analysis; this large difference was not found in any of the other module analyses. The uncertainty on the interception factor for pasture is identified for all distances and percentiles of the ccdf, while the uncertainty on the uptake to milk for iodine is identified for all distances for the mean value and the 99th percentile, but not for the 95th percentile. The only uncertainty identified for more than one distance for the 95th percentile is that on the interception factor for pasture.

The important uncertainties for the collective effective dose in normal living are similar to those identified for the individual doses. The F_m parameters for uptake to milk for iodine and caesium and the interception factor for pasture are identified for all parts of the ccdf considered. The consumption rate of milk is identified for the mean value and the 99th percentile, but not for the 95th percentile.

The important parameter uncertainties identified for the individual bone marrow dose are

different with countermeasures and in normal living and, to a lesser extent, for the different distances and percentiles of the ccdfs. The uncertainty on the external dose from deposited caesium to 30 years is identified for the case with countermeasures for all distances and percentiles of the ccdf. The uncertainty on the deposition velocity of aerosols is identified for the doses at 5 km for all percentiles of the ccdf and also at 20 km for the 95th percentile, while the uncertainty on the washout coefficient of aerosols is identified for the two larger distances for the mean value and the 99th percentile, reflecting its contribution to the uncertainty on deposition. Other parameters are identified for the other distances for the 95th percentile of the ccdf.

The uncertainty on the transfer of caesium to milk is identified for all distances and percentiles, for bone marrow doses in normal living. The deposition velocity of aerosols is identified as important for the shorter distances. The transfer coefficient for caesium between the whole body 2 compartment and ULI is identified for the larger distances for all percentiles of the ccdf. Other parameters are identified for some distances for the 95th percentile, but not for the other parts of the ccdf considered.

The important parameter uncertainties for the collective dose in bone marrow differ for the case with countermeasures and in normal living. The transfer coefficient for caesium from the whole body 2 compartment to upper large intestine (ULI) is identified in both cases, while the external dose from deposited caesium to 30 years is identified for the case with countermeasures and the F_m factor for uptake to milk for caesium+ is identified for normal living.

The important parameter uncertainties identified for the individual thyroid dose also differ for the cases with countermeasures and for normal living, and for the different distances and percentiles of the ccdf. The uncertainty on the external dose to 30 years from deposited caesium is identified for all distances for both the mean value and the 99th percentile, but not for the 95th percentile. Several parameters of the dispersion and deposition module are identified for some situations, but there is little consistency between the different distances and percentiles of the ccdf. The uncertainty on doses in normal living is dominated by that on the interception factor for pasture and the uptake of iodine to milk, which are identified for all distances and percentiles of the distributions.

The important parameter uncertainties identified for the collective thyroid dose also differ for the cases with countermeasures and for normal living. The uncertainties identified for dose with countermeasures are the external dose to 30 years from deposited caesium and the deposition velocity of iodine. The important uncertainties for normal living are those given above for the uncertainty on the individual dose.

The important parameter uncertainties for collective thyroid dose in normal living are those for the collective effective dose in normal living with the omission of a parameter for caesium. The important parameters for the other organs and population behaviour patterns are generally different, though the uncertainty on the dose from deposited caesium to 30 years is identified for the thyroid and bone marrow doses with countermeasures and the F_m factor for caesium is identified for the bone marrow and effective doses for normal living.

+ F_m is the fraction of the animal's daily intake transferred to each litre of milk.

The important parameter uncertainties for DBA are generally different from those for CB2 if countermeasures are taken, though there is more consistency between the important parameters for the individual potential dose for DBA and the individual normal living dose for CB2. Collective doses were only considered for the case when countermeasures are taken.

There is little consistency in the parameter uncertainties that are identified as important across the different distances and percentiles of the ccdf, for the individual effective dose with countermeasures. The uncertainty on the fast transfer coefficient between the bronchial and extrathoracic regions is identified as important for the doses at 5 and 20 km, for all parts of the ccdf. Some of the parameters of the model for concentration of iodine and caesium in milk are identified at the larger distance, but there is little consistency between those identified for the different parts of the ccdf. Some of the dispersion and deposition model parameters are identified for the shorter distances, for the mean value and the 95^{th} percentile, but not for the 99^{th} percentile. The uncertainties on the interception factor for pasture and the iodine transfer to milk are identified as important for all distances and percentiles for the potential effective dose.

The important parameter uncertainties for the collective effective dose are some of those in the calculation of dose from caesium in milk; the consumption rate is identified for all parts of the ccdf considered while the F_m factor is identified for the mean value and the 95^{th} percentile and the interception factor for pasture is identified for the 99^{th} percentile.

The important parameter uncertainties for the individual bone marrow dose differ for the different distances and parts of the ccdf considered, but are similar for the doses with countermeasures and the potential doses, for DBA. The uncertainty on the transfer coefficient of caesium from the whole body 2 compartment to the ULI is identified for most of the situations considered. The uncertainty on the doses as 5 and 20 km is dominated by that on the deposition velocity of aerosols and the dispersion factor q_y for categories E/F. The uncertainty on the washout coefficient of aerosols is identified at the larger distances for some of the percentiles for potential dose, but not for dose with countermeasures. This reflects the greater importance of doses from deposited materials in those situations where countermeasures are not considered, and the increasing importance of wet deposition with increasing distance from the site, found in the dispersion module analysis. The uncertainty on the uptake factor to milk for caesium is also identified for some of the situations considered.

The important parameter uncertainties for the collective dose are the transfer coefficient of caesium from the whole body 2 compartment to the ULI and the uptake factor to milk for caesium. These were both identified as important uncertainties for the individual dose.

The important parameter uncertainties for the individual thyroid dose differ for the different distances and parts of the ccdf considered, if countermeasures are taken, for the DBA source term. The uncertainty on the transfer coefficient of iodine from blood to bladder is identified for the dose at 5 km for all parts of the ccdf. There is no consistent set of parameter uncertainties identified for the larger distances and parts of the ccdf. The uncertainties on the consumption rate of milk, interception factor for pasture and uptake of iodine to milk are identified for some situations. The uncertainty on the potential doses are dominated by those on the interception factor

for pasture and the uptake of iodine to milk. These results generally mirror those from the module analyses.

The important parameter uncertainties for the collective thyroid dose are those on the interception factor for pasture and the uptake of iodine to milk, which are identified for all parts of the ccdf. These parameters were identified for some of the individual thyroid doses with countermeasures, and consistently for the potential thyroid dose. It is reasonable to assume that the important parameter uncertainties for potential individual dose and for collective dose will be the same for this source term as the area with countermeasures is small and much of the collective dose comes from distances beyond those at which countermeasures are imposed.

3.7 Extent of late countermeasures

The uncertainties on parameters of the atmospheric dispersion and dose modules contribute to the overall uncertainty on the extent and duration of relocation, while those of the atmospheric dispersion and food chain modules contribute to the overall uncertainty on the extent and duration of food restrictions. The parameters whose uncertainties make large contributions to the overall uncertainties for the extent of late countermeasures are summarised in Table 3.8 for the CB2 source term, and in Table 3.9 for the DBA source term, for both the initial extent and the time integral of the countermeasures.

Relocation is only required for the CB2 source term. For the intervention levels and source term adopted in this study, the extent of the evacuation and relocation areas are almost identical, and so the important parameters for the initial extent of the area relocated for CB2 are the same as those for the area evacuated. They are the uncertainties on the transfer coefficient from the extrathoracic 2 compartment to stomach and the fast transfer coefficient from the bronchial to the extrathoracic region. They are identified only according to their values of PRCC, and only make a small percentage contribution to the uncertainty. The important parameter uncertainties for the time integral of the area relocated are different for the different parts of the ccdf considered. The dispersion coefficient p_z for category E/F is identified for all three parts of the ccdf considered, while the deposition velocity of aerosols is identified for the mean value and the washout coefficient of aerosols identified for the 95^{th} and 99^{th} percentiles. In all cases, the parameters are identified only by their PRCC, making a relatively small percentage contribution to the uncertainty (less than 5% for the dispersion parameter and between about 7 and 12% for the other parameters). The results found in this study may not be applicable to other situations, particularly if different intervention levels or source term composition are used.

The important parameter uncertainties for the extent of food restrictions are similar for the two source terms. The important uncertainties for the initial area and for its time integral for the CB2 source term are also similar; for the DBA source term, where the restrictions are required for shorter periods, the important uncertainties for the initial area and its time restriction are the same. The uncertainties on the time integral of the area with milk restrictions for CB2 as found in the different analyses is illustrated in Figure 3.7. The contribution from the food module is much greater than that from the dispersion module. The uncertainty bands from the two modules are also very different, with the dispersion module analysis providing much smaller values for the area affected than those found in the food module analysis. This helps to explain why the important

parameter uncertainties come from the food module rather than from the dispersion module.

The uncertainty on the interception factor for pasture is identified as a major contributor for the initial extent of the milk ban area for both source terms. The uptake factor to milk for caesium is also identified for the CB2 source term, while the uptake factor to milk for iodine is identified for the DBA source term. This difference reflects the relative amounts of the two nuclides in the different source terms. The important parameter uncertainties for the time integral of milk restrictions for CB2 are the uptake to milk for caesium, identified for all parts of the ccdf, with the root uptake factor to pasture for caesium identified for the mean value and the retention time on hay and silage identified for the 95th and 99th percentiles.

The main uncertainties contributing to the uncertainty on the initial extent of restrictions on meat, and its time integral, for the CB2 source term are the uptake factors to beef for milk and dairy cattle. The interception factor for pasture is also identified as an important uncertainty for the initial extent, while the retention time on hay and silage is identified for the time integral of the area. The important parameter uncertainties for the DBA source term are interception factor for pasture and the retention time on hay and silage.

The important parameter uncertainties for both source terms for the area with grain restrictions, and its time integral, are the interception factor for cereals and the retention time of caesium on cereals. The most important parameter uncertainty for the extent of restrictions on green vegetables and its time integral, for both source terms, is the soil contamination of vegetables, reflecting the assumption that restrictions are imposed on the concentration at harvest without any processing for consumption. The uncertainty on this parameter accounts for more than 50% of the overall uncertainty on the areas and time integrals. Other parameters (deposition velocity of iodine and the dispersion parameter q_y for categories A/B for CB2 and the washout coefficient of iodine for DBA) are identified for some parts of the ccdf, though not for all parts or both source terms. They only account for a few percent of the overall uncertainty.

3.8 Individual risks of late health effects

The uncertainties on the parameters of all of the modules can contribute to the overall uncertainty on the risks of late health effects. The parameters whose uncertainties make important contributions to the overall uncertainties on the individual risks of fatal cancer are summarised in Table 3.10. In almost all cases, the parameters are identified only by their PRCC; no parameter makes more than a few percent contribution to the uncertainty.

The uncertainties found in the different analyses are illustrated in Figure 3.8 for the 99th percentile of the individual risk of fatal cancer, with countermeasures, at 5 km for the CB2 source term. The uncertainty from the dose module is much larger than that from the other modules. As was found for the individual committed doses, food restrictions reduce the uncertainty from the food module to a very low level in this instance, though it makes a larger contribution in other situations.

The parameters whose uncertainties make large contributions to the overall uncertainty for fatal cancer risks for the CB2 source term if countermeasures are taken are the risk factor for the remainder and the transfer coefficient from the extrathoracic compartment to the stomach. The important parameters for the risk in normal living are the risk coefficients in remainder and thyroid,

which are identified for all distances and percentiles. The uptake of caesium to milk is also identified for some distances for the 95th percentile of the ccdf only. This parameter is identified by its percentage contribution to the uncertainty, rather than its PRCC. The importance of the risk coefficient for thyroid for normal living, but not for the case with countermeasures, reflects the impact of countermeasures on doses and risks; food restrictions are probably imposed on the basis of the caesium concentration and retained for a sufficient period that the iodine has decayed before the restrictions are lifted and so thyroid doses have a more limited impact on the risks.

The important parameters for DBA if countermeasures are taken are different for the different distances, and to a lesser extent for the different parts of the ccdf. The uncertainty on the risk coefficient for the remainder has the highest rank for most situations. The uncertainty on the risk coefficient for lung is identified for the first distance, but not for the other distances, where the uncertainty on the risk factor for the thyroid or the uptake of caesium to milk are identified. The identification of different parameters at different distances reflects the impact of food restrictions, which reduce the thyroid dose at the first distance. The important parameters for the potential risk are the risk coefficients for the remainder and the thyroid, which are identified in all cases considered. The deposition velocity of aerosols and the dispersion parameter q_y for categories E/F are identified by their percentage contribution for the 95th percentile of the ccdf at 5 km only.

The uncertainty on the risk of thyroid cancer or of leukaemia is dominated by the uncertainty on the risk coefficient for the particular organ, in all situations. The uncertainty on the risk coefficient for thyroid cancer accounts for about 50% of the overall uncertainty on the thyroid cancer risk; that for leukaemia accounts for about 30% of the overall uncertainty. The other parameters each make only a small contribution to the overall risk of cancer in these organs.

3.9 Numbers of late effects

The uncertainties on the parameters of all the modules can affect the overall uncertainty on the numbers of late health effects. The parameters whose uncertainties make important contributions to the overall uncertainty on the numbers of late health effects are given in Table 3.11. The most important parameter uncertainties for the numbers of late health effects are generally the same as those identified for the individual risks of late effects. The same parameters are identified for all parts of the ccdf, with only one exception, noted below. The uncertainties in the number of fatal cancers for CB2 if countermeasures are considered as found in the different analyses are illustrated in Figure 3.9. The dose module parameters contribute more uncertainty than those of any other module, though the other modules all make reasonable contributions to the uncertainty on this endpoint.

The important parameter uncertainties for the number of fatal cancers for the CB2 source term with countermeasures are the risk coefficient for the remainder and the transfer coefficient from the extrathoracic region to the stomach. The important parameters for normal living are the risk coefficient for the remainder and the uptake of caesium to milk. These parameters are identified by their PRCC, and make only small contributions to the overall uncertainty. For the DBA source term, the important parameter uncertainties are those on the risk coefficients for remainder and thyroid.

The most important parameter uncertainty for the numbers of thyroid cancers and of leukaemias are the risk coefficients in the appropriate organs, with the thyroid risk coefficient contributing about 50% of the uncertainty and the leukaemia risk coefficient contributing about 40% of the uncertainty. The uncertainty on the uptake of iodine to milk is identified as important using PRCCs for the DBA source term and for the CB2 source term in normal living, while the uncertainty on the deposition velocity of iodine is identified for the CB2 source term if countermeasures are taken. These parameters make only a small percentage contribution to the uncertainty. The uncertainty on the transfer coefficient of caesium from the whole body 2 compartment to ULI is identified for all of the cases considered for the number of leukaemias except the mean value when countermeasures are taken, where the external dose from deposited caesium over 30 years is identified.

4.10 Summary of important parameter uncertainties

The earlier sections have identified those parameters whose uncertainties make large contributions to the overall uncertainty on each of the endpoints considered in this study. This section briefly summarises the endpoints for which the parameters of the different modules make the most important contributions.

One of the aims of this study was to give some indication of future research priorities if effort were to be undertaken to reduce the overall uncertainties in PRA modelling. If such research were to be undertaken, reducing the uncertainty on those parameters identified in this section should be considered.

The uncertainties on the atmospheric dispersion model parameters make reasonable contributions to several of the endpoints relating to early health effects. In particular they are the only large contributors to the uncertainty on the short term dose to bone marrow and the individual and collective risks of total early mortalities and of the haematopoietic syndrome. They are not identified as important contributors to the uncertainty on the extent of countermeasures, committed doses and risks of late health effects.

The uncertainties on the deposition velocities to the ground are identified as important contributors to the overall uncertainties on the short term thyroid doses, the area where iodine tablets could be required, the individual risks of early morbidities and to the collective risk of some early effects. They are not identified as making major contributions to many of the late effects, though the uncertainty on deposition velocity of aerosols is identified as important for the committed bone marrow dose and the uncertainty on the deposition velocity of iodine is identified as important for the number of thyroid cancers, if countermeasures are taken. The uncertainties on the deposition velocities of iodine and aerosols to skin are identified as important contributors to the overall uncertainties for early doses to skin and individual and collective risks of skin burns. The uncertainties on washout coefficients are only identified as important for some of the committed doses. The uncertainties on the deposition velocities are identified as important contributors to the overall uncertainty on endpoints that are largely dominated by inhalation dose, reflecting the impact of plume depletion in reducing the air concentration. As with many other PRA codes, COSYMA uses a relatively simple model for calculating plume depletion. The adequacy of this model should be considered if further research is undertaken to improve the models in PRA

codes.

The most important parameter uncertainties relating to the dose models are those in the lung model and the breathing rate. These are identified as important for the overall uncertainty on the extent of the sheltering and evacuation areas, some of the individual and collective risks of early health effects and some of the committed doses. The uncertainties on the parameters of the model for dose coefficients are only identified as important in a few cases; some of the iodine parameters are identified for short term thyroid doses and for hypothyroidism and some of the caesium parameters are identified for the committed dose to bone marrow and the risk of leukaemia. The uncertainty on the external dose from deposited caesium is identified as important for some of the committed doses.

The uncertainties on some of the food chain model parameters are identified as important for the extent and duration of food restrictions and for some of the committed doses. The most important parameter uncertainties in the food model are those relating to the metabolism of iodine and caesium in animals, some of the interception factors and the retention on hay and silage.

The uncertainties on the parameters in the models for the risks of early health effects are identified particularly for the risk of lung morbidities. The most important uncertainties on the risk coefficients for cancers are those for lung, thyroid and remainder.

The distributions on the values of those parameters that were considered likely to make major contributions to the overall uncertainty were obtained from formal expert judgement elicitation with distributions on the other parameters provided by the project staff. The reports on the module analyses identify which distributions come from the expert elicitation rather project staff. The distributions for the vast majority of the parameters discussed in this chapter came from the expert elicitation.

Table 3.1 Parameters whose uncertainties make important contributions to the overall uncertainties for air concentration and deposition

Results from the overall analysis

Quantity	Parameters whose uncertainties make large contributions to the overall uncertainty
Air concentration of caesium	Deposition velocity of caesium, other than at the first distance Dispersion parameters, particularly q_y for categories E/F and q_z for category D
Air concentration of iodine	Deposition velocity of iodine Dispersion parameters, particularly p_y for categories E/F
Deposition of caesium	Deposition velocity of caesium other than at 20 km Washout coefficient of caesium at 20 km Horizontal dispersion parameters, particularly for categories E/F.
Deposition of iodine	Deposition velocity of iodine Horizontal dispersion parameters for categories D and E/F

Results from the module analysis

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 3.2 Parameters whose uncertainties make important contributions to the overall uncertainties for early doses for UK1 and CB2.

Endpoint	Important parameter uncertainties
Bone marrow doses	Dispersion factor p_z for category E/F Dispersion factor q_z for category D at the second and third distances
Thyroid doses	Deposition velocity for iodine Breathing rate for UK1 Transfer coefficient for iodine: blood to bladder, for CB2
Skin doses	Deposition velocity of iodine to skin Deposition velocity of aerosols to skin

Table 3.3 Parameters whose uncertainties make important contributions to the overall uncertainties for the individual risk of early health effects for UK1

Quantity	Important parameters
Early mortality	Dispersion parameters q_y in categories D and E/F Initial deposition in the extrathoracic region Initial deposition in the TB region
Haematopoietic syndrome	Deposition velocity of elemental iodine, for the first distance Dispersion parameters p_z in categories E/F and q_z in category D for some cases
Early morbidities	Deposition velocity for elemental iodine to skin Deposition velocity of iodine to ground Initial deposition in the extrathoracic region Dispersion parameter q_y in category D Lung function impairment model parameter D_0
Lung morbidities	Lung function impairment model parameter D_0 Lung function impairment model parameter D_∞
Hypothyroidism	Initial deposition in the extrathoracic region Transfer coefficient for iodine: any lung compartment to blood Deposition velocity of iodine for potential risk
Skin burns	Deposition velocity of iodine to skin Deposition velocity of aerosols to skin Dispersion parameter q_y in categories E/F

Table 3.4 Parameters whose uncertainties make major contributions to the overall uncertainty on extent of early countermeasures for the CB2 source term

Quantity	Important parameter uncertainties
Area evacuated	Fast transfer coefficient: bronchial to extrathoracic region Transfer coefficient: extrathoracic 2 to stomach
Area with sheltering	Fast transfer coefficient: bronchial to extrathoracic region Transfer coefficient: extrathoracic 2 to stomach
Area with iodine tablets	Deposition velocity of iodine Breathing rate

Table 3.5 Parameters for whose uncertainties make important contributions to the overall uncertainty on numbers of early health effects for the UK1 source term

Quantity	Important parameters
Risk of early mortalities	Deposition velocity of iodine to skin Initial deposition in the extrathoracic region of the lung Initial deposition in the TB region of the lung, with countermeasures only.
Risk of haematopoietic syndrome	With countermeasures: Vertical dispersion parameters for categories E/F
	For normal living: Dispersion parameter p_z for categories E/F Haematopoietic syndrome model parameter D_0
Risk of early morbidity	With countermeasures: Deposition velocity of iodine to skin Lung function impairment model parameter D_0
	For normal living Deposition velocity of iodine to skin Deposition velocity of iodine to ground
Risk of lung morbidity	Lung function impairment model parameters D_0 and D_∞
Risk of hypothyroidism	With countermeasures Initial deposition in the extrathoracic region of the lung Transfer coefficient for tellurium: blood to thyroid
	For normal living: Deposition velocity of iodine to ground Transfer coefficient for iodine; any lung compartment to blod
Risk of skin burns	Deposition velocity of iodine to skin Deposition velocity of aerosols to skin Skin burns model parameter D_∞

Table 3.6 Parameters whose uncertainties make important contributions to the overall uncertainties for long term individual doses

Organ	Important parameters for CB2	Important parameters for DBA
Effective dose	3.9.1 For dose with countermeasures Fast transfer coefficient: bronchial to extrathoracic region Transfer coefficient: extrathoric 2 compartment to stomach Cs-137 dose to 30 years: deposited activity	3.9.2 For dose with countermeasures Fast transfer coefficient: bronchial to extrathoracic region at 5 and 20 km. Food chain parameters at the larger distances, with little consistency
	3.9.3 For dose in normal living Interception factor for pasture, F_m factor for dairy cows for iodine	3.9.4 For potential dose Interception factor for pasture, F_m factor for dairy cows for iodine Consumption rate of milk
Bone marrow	3.9.5 For dose with countermeasures Cs-137 dose to 30 years: deposited activity Deposition velocity of aerosols, for some distances Washout coefficient of aerosols, for some distances	3.9.6 For dose with countermeasures QY(E/F) Transfer coefficient for caesium: whole body 2 compartment to ULI Deposition velocity of aerosols, for shorter distances Dispersion factor q_y for categories E/F for shorter distances F_m factor for dairy cows for caesium, for larger distacnes
	3.9.7 For dose in normal living Deposition velocity of aerosols at 5 km F_m factor for dairy cows for caesium Transfer coefficient for caesium: whole body 2 compartment to ULI, for some cases	For potential doses **As for doses with countermeasures, plus** **Washout coefficient of aerosols for some of the percentiles**
Thyroid	3.9.8 For dose with countermeasures Cs-137 dose to 30 years: deposited activity Dispersion and deposition parameters, but not consistently identified for many situations	3.9.9 For dose with countermeasures Transfer coefficient for iodine: blood to bladder at short distances Food chain model parameters, with little consistency at larger distances.
	3.9.10 For dose in normal living Interception factor for pasture F_m factor for dairy cows for iodine	3.9.11 For potential dose Interception factor for pasture, F_m factor for dairy cows for iodine

Table 3.7 Parameters whose uncertainties make important contributions to the overall uncertainties for collective dose

Organ	Important parameters for CB2	Important parameters for DBA
Effective dose	3.9.12 For dose with countermeasures Transfer coefficient: extrathoric 2 compartment to stomach Cs-137 dose to 30 years: deposited activity Soil migration rate for pasture – k12, Cs	3.9.13 For dose with countermeasures F_m transfer for dairy cows for Cs Consumption rate of milk
	3.9.14 For dose in normal living Interception factor for pasture, F_m factor for dairy cows for iodine F_m transfer for dairy cows for Cs Consumption rate of milk	
Bone marrow	3.9.15 For dose with countermeasures Cs-137 dose to 30 years: deposited activity Transfer coefficient for caesium: whole body 2 compartment to ULI	**For dose with countermeasures** Transfer coefficient for caesium: whole body 2 compartment to ULI F_m factor for dairy cows for caesium
	3.9.16 For dose in normal living F_m factor for dairy cows for caesium Transfer coefficient for caesium: whole body 2 compartment to ULI, for some cases	
Thyroid	3.9.17 For dose with countermeasures Cs-137 dose to 30 years: deposited activity Deposition velocity of elemental iodine	3.9.18 For dose with countermeasures Interception factor for pasture F_m factor for dairy cows for iodine
	3.9.19 For dose in normal living Interception factor for pasture F_m factor for dairy cows for iodine Consumption rate of milk	

Table 3.8 Parameters whose uncertainties make important contributions to the overall uncertainties for extent of late countermeasures for the CB2 source term

Countermeasures	Important parameters for initial extent	Important parameters for time integral
Relocation	Transfer coefficient: extrathoracic 2 to stomach Fast transfer coefficient: bronchial to extrathoracic region	Deposition velocity of aerosols[(a)] Washout coefficient of aerosols
Milk ban	Interception factor for pasture F_m factor for dairy cows for caesium	F_m factor for dairy cows for caesium Root uptake to pasture for caesium Retention time on hay and silage
Grain ban	Interception factor for cereals Retention time on cereals for caesium	Interception factor for cereals Retention time on cereals for caesium
Green vegetables ban	Soil contamination of green vegetables	Soil contamination of green vegetables
Beef ban	Interception factor for pasture F_f factor for beef cows for caesium F_f factor for dairy cows for caesium	F_f factor for beef cows for caesium F_f factor for dairy cows for caesium Retention time on hay and silage

Table 3.9 Parameters whose uncertainties make important contributions to the overall uncertainties for extent of late countermeasures for the DBA source term

Countermeasures	Important parameters for initial extent	Important parameters for time integral
Milk ban	Interception factor for pasture F_m factor for dairy cows for iodine	Interception factor for pasture F_m factor for dairy cows for iodine
Grain ban	Interception factor for cereals Retention time on cereals for caesium	Interception factor for cereals Retention time on cereals for caesium
Green vegetables ban	Soil contamination of green vegetables	Soil contamination of green vegetables
Beef ban	Interception factor for pasture Retention time on hay and silage	Interception factor for pasture Retention time on hay and silage

Table 3.10 Important parameters for the individual risks of fatal cancers

3.9.20 For CB2 with countermeasures
Risk factor for remainder
Transfer coefficient from extrathoracic compartment to stomach
3.9.21 For CB2 in normal living
Risk factor for remainder
Risk factor for thyroid
3.9.22 For DBA with countermeasures
Risk factor for remainder
Risk factor for lung, at 5 km
Risk factor for thyroid, at longer distances
For DBA, potential risks
Risk factor for remainder
Risk factor for thyroid

Table 3.11 Parameters whose uncertainties make important contributions to the overall uncertainties for numbers of late health effects

Effect	For CB2 source term	For DBA source term
Fatal cancers, with countermeasures	Risk factor for remainder Transfer coefficient from extrathoracic region to stomach	Risk factor for remainder Risk factor for thyroid
Leukaemias, with countermeasures	Risk factor for leukaemia Transfer coefficient for caesium: whole body 2 compartment to ULI	Risk factor for leukaemia Transfer coefficient for caesium: whole body 2 compartment to ULI
Thyroid cancers, with countermeasures	Risk factor for thyroid cancer Deposition velocity of iodine	Risk factor for thyroid cancer F_m factor for dairy cows for iodine Interception factor for pasture
Fatal cancers for normal living	Risk factor for remainder F_m factor for dairy cows for caesium	
Leukaemias for normal living	Risk factor for leukaemia Transfer coefficient for caesium: whole body 2 compartment to ULI	
Thyroid cancers for normal living	Risk factor for thyroid cancer F_m factor for dairy cows for iodine	

In the following figures, ATM, HEM, FOO and DCF are the atmospheric dispersion and deposition, health effects, food chain and dosimetry module analyses respectively, and OVA is the overall analysis.

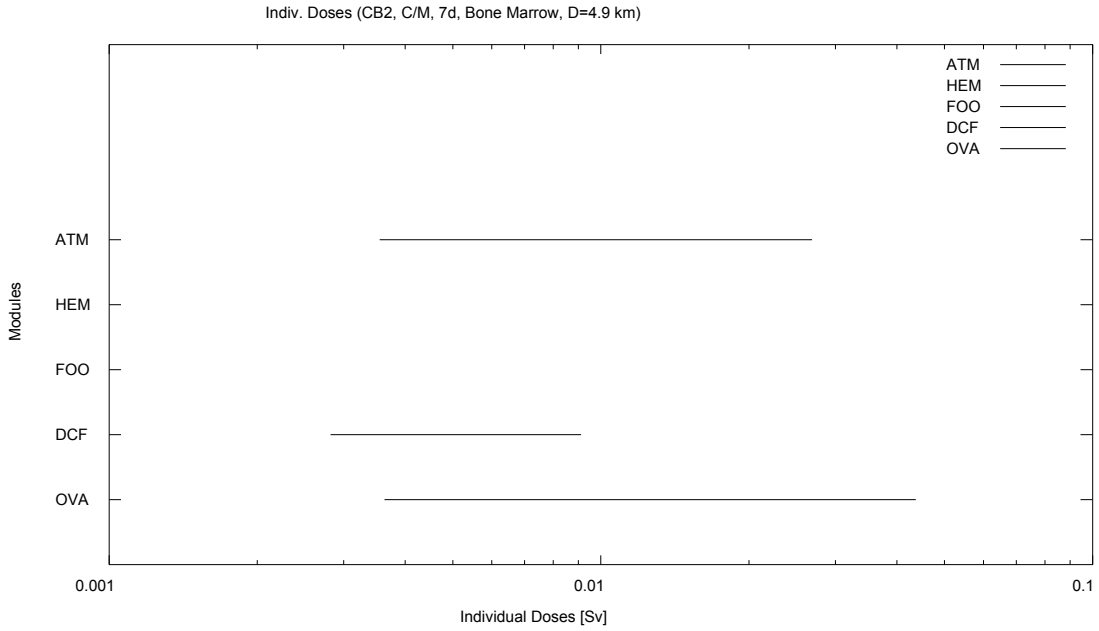

Figure 3.1 Contributions of the different modules to the uncertainty on the 99th percentile of the dose to bone marrow in 7 days at 5 km, with countermeasures, for the CB2 source term

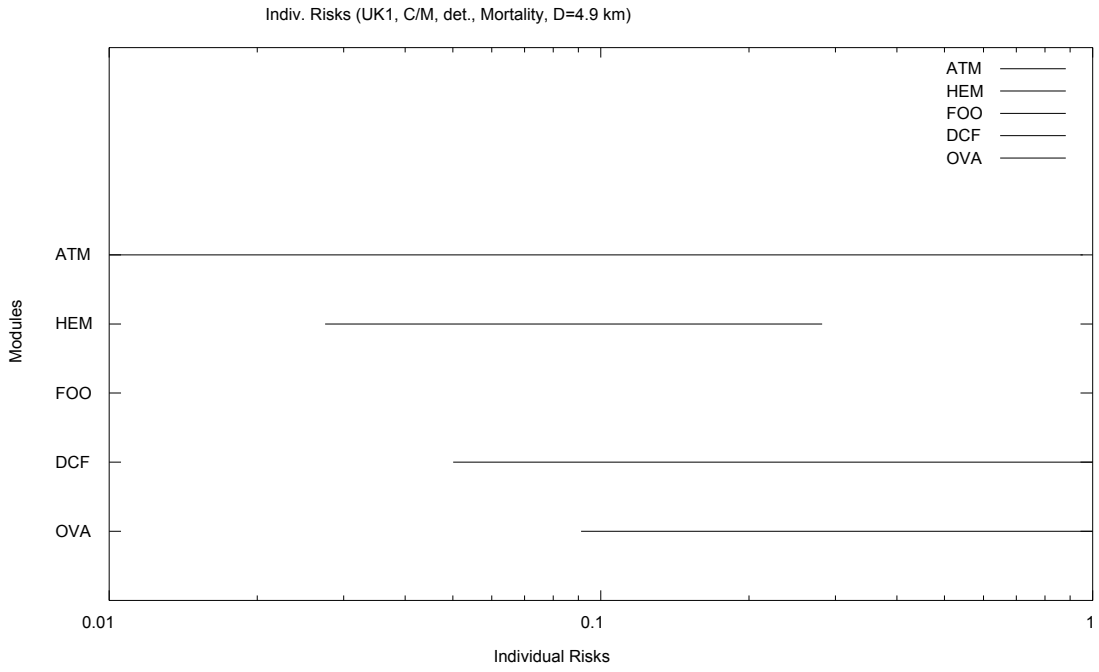

Figure 3.2 Contributions of the different modules to the uncertainty on the 99th

percentile of the individual risk of early death, with countermeasures, at 5 km for the UK1 source term

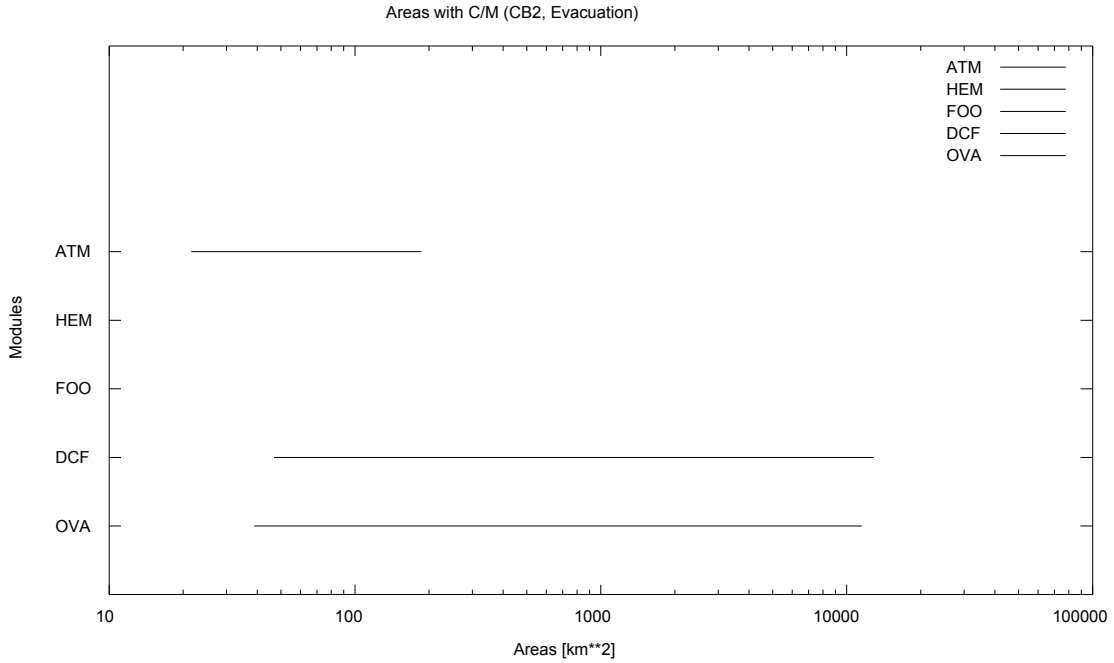

Figure 3.3 Contribution of the different modules to the uncertainty on the 99th percentile of the evacuation area, for the CB2 source term

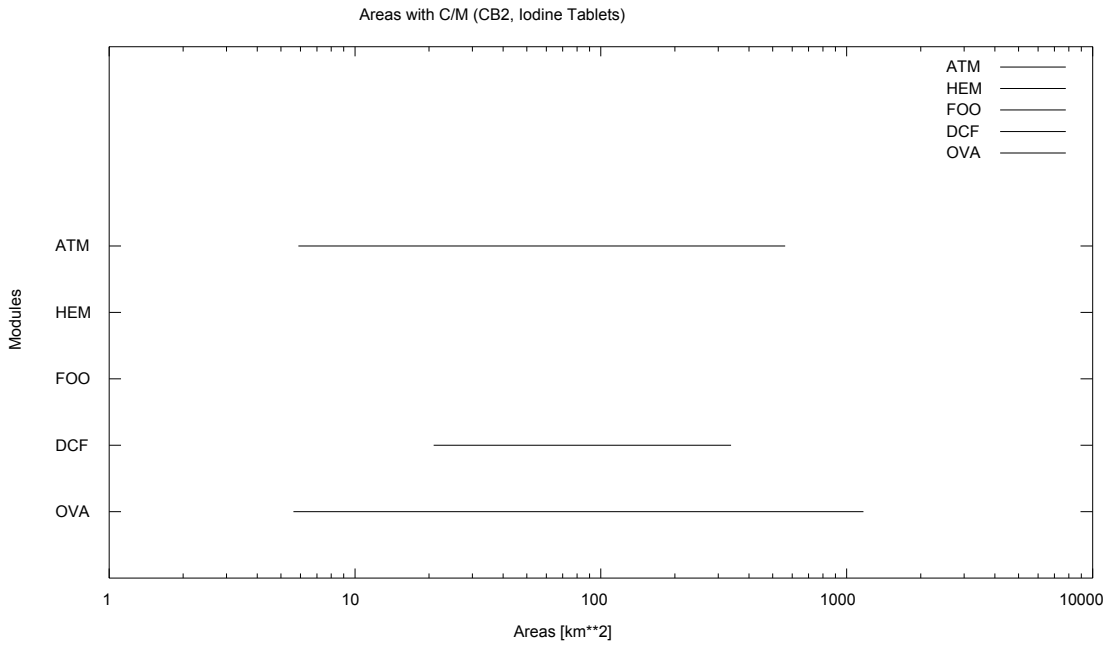

Figure 3.4 Contribution of the different modules to the uncertainty on the 99th percentile of the area with iodine tablets, for the CB2 source term.

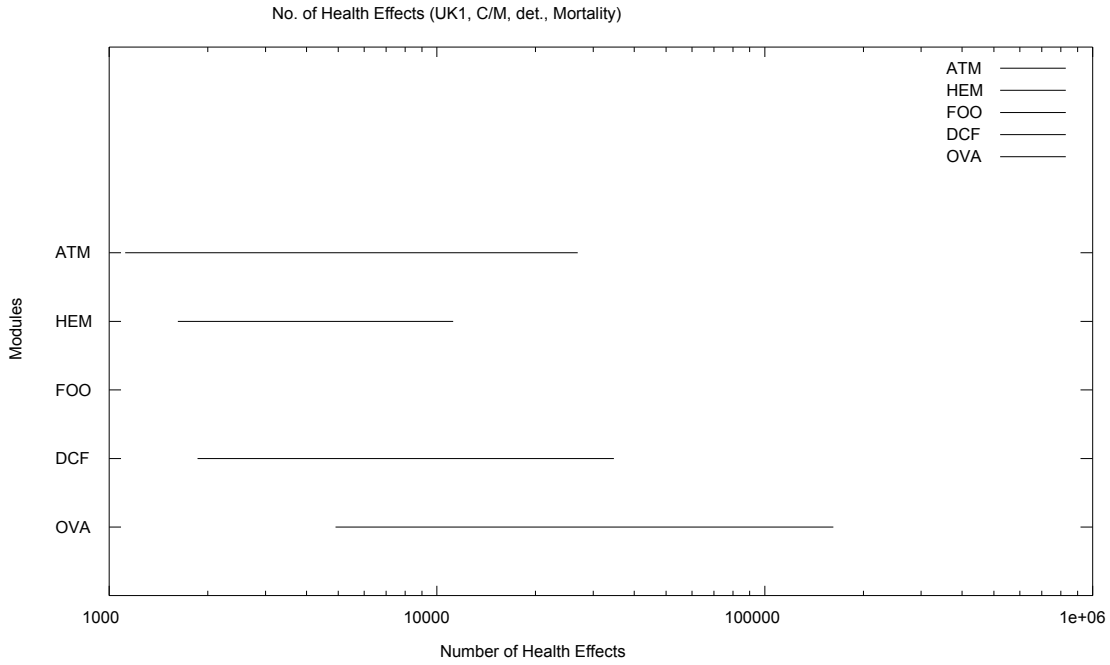

Figure 3.5 Contribution of the different modules to the uncertainty on the 99th percentile of the number of early deaths with countermeasures for the UK1 source term

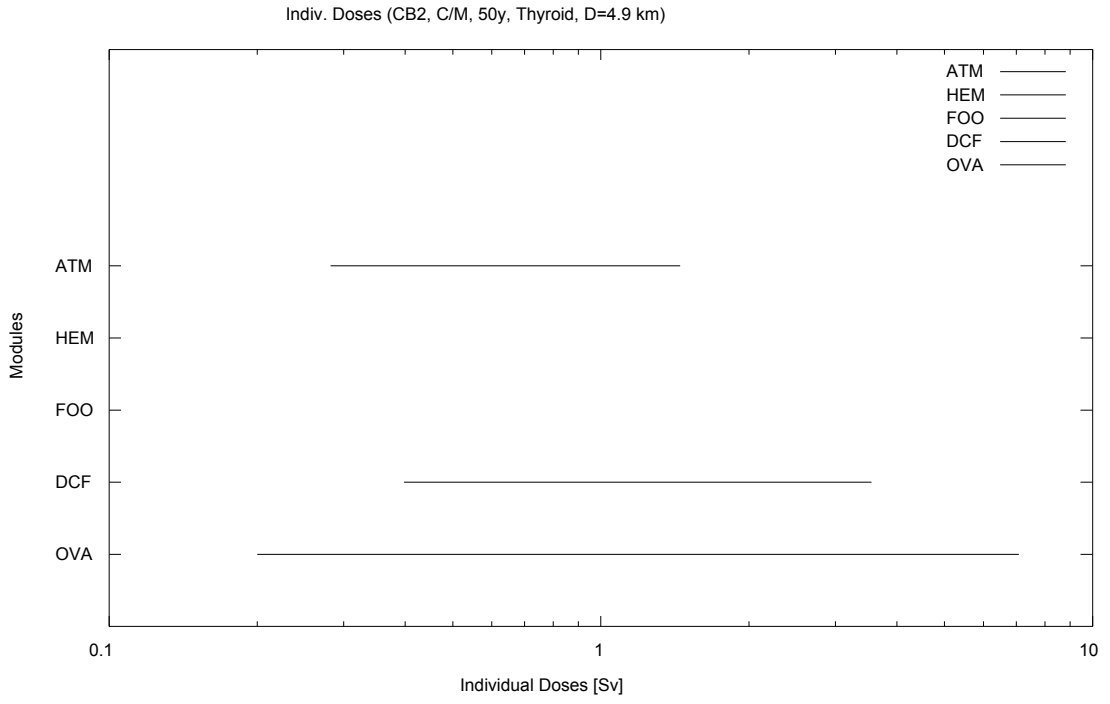

Figure 3.6 Contribution of the different modules to the uncertainty on the 99th percentile of the committed dose to thyroid at 5 km with countermeasures, for the CB2 source term.

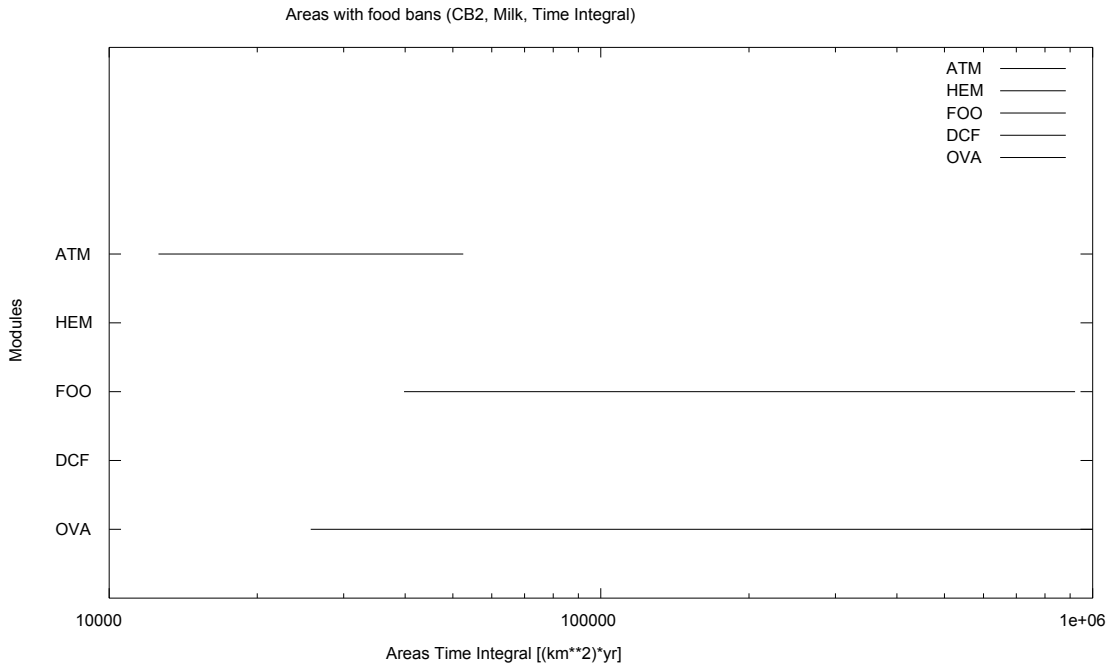

Figure 3.7 Contributions of the different modules to the uncertainty on the 99th percentile of the time integral of the area with milk restrictions, for the CB2 source term

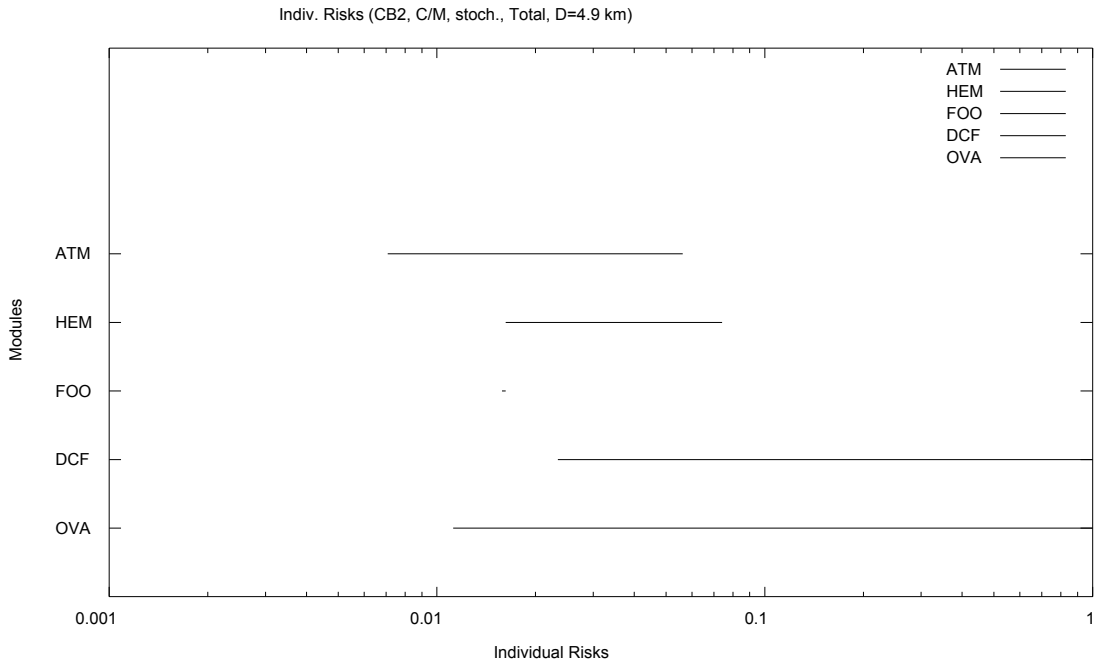

Figure 3.8 Contributions of the different modules to the uncertainty on the 99th percentile of the individual risk of fatal cancer, with countermeasures, at 5 km, for the CB2 source term

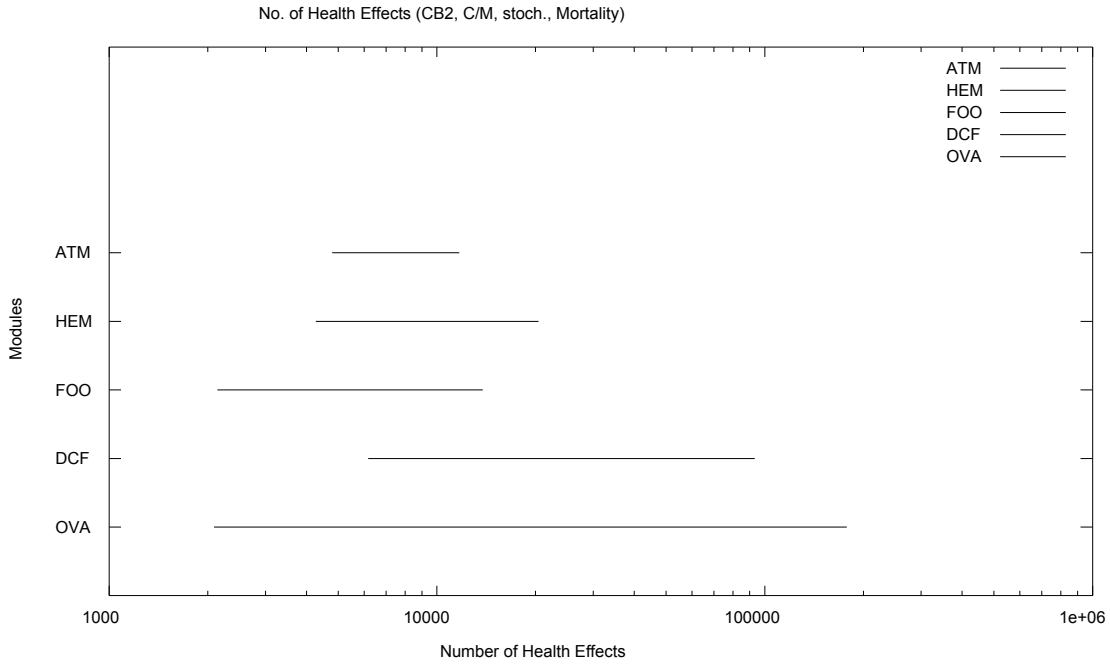

Figure 3.9 Contributions of the different modules to the uncertainty on the 99th percentiles of the numbers of fatal cancers, with countermeasures, for the CB2 source term

4 APPLICATION TO OTHER SITUATIONS

One of the aims of this study was to give information on the likely uncertainty in the predictions of COSYMA if it is applied in other situations.

Uncertainty analyses require considerable computer resources, both in terms of CP time and disk storage. This study could only consider 3 source terms, and did not consider each of the endpoints for each of the source terms. Information on the uncertainty on short-term doses has been obtained for the UK1 and CB2 source terms. However the doses following the CB2 source term are generally close to or below the threshold for early effects, and so information on the uncertainty on individual and collective risks of early effects was only obtained for the UK1 source term. The early countermeasures (sheltering, evacuation and iodine tablets) were only considered for the CB2 source terms. Relocation was considered for both the DBA and CB2 source terms; however the doses from the DBA source term are below the intervention levels considered, and so information on the uncertainty of this endpoint was only obtained for the CB2 source term. Information on the uncertainty on the extent of food restrictions, individual and collective long term doses and individual and collective risks of late health effects were determined for the CB2 and DBA source terms. This section considers the extent to which the results of this study can be applied in other situations.

4.1 Studies using the same source terms

The simplest case to consider is one using the same site and source terms as those adopted for this study, but with changes to some of the default parameter values. The uncertainty bands obtained in this study do not depend on the default values adopted for the parameters, as they are governed purely by the uncertainty distributions adopted. The values of the uncertainty factors calculated in this study can be applied directly in this situation. The reference uncertainty coefficients relate the 95% envelope to the reference curve. Appropriate values for the new study can be obtained from the results of this study by suitably scaling against the reference value.

It seems plausible to assume that the results of this study would be applicable for the same source terms at other sites. The transfer could be affected by differences in the atmospheric conditions at the two sites. However the uncertainty on the air concentration for a particular stability category found from the expert panel is larger than the difference between the concentrations in different categories as calculated using default parameter values. Therefore differences in the frequencies of the different conditions, between the site considered in this and other studies, will probably have only a small influence on the extent of the uncertainty. The uncertainty could also be affected by the amount of rainfall at the sites considered, as this would affect the pattern of wet deposition around the sites. However the parameters of the model for calculating wet deposition are only identified as important in a few situations. Again it seems plausible to conclude that differences between sites will not have a large impact on the uncertainty. The comparison of different meteorological sampling schemes showed that the uncertainty due to meteorological sampling was typically a factor of about 2. This could suggest that the difference between uncertainties at different sites is a similar factor.

The uncertainty on the extent of countermeasures in this study was expressed in terms of

the areas affected and their time integrals, rather than the numbers of people or amounts of food. This was done so that the results would be more applicable to other sites, by removing any effects of non-uniformities in the population or agricultural production distributions around the site. However the results should be reasonably applicable to numbers of people or amounts of food, unless the distributions around the site are very non-uniform. The results for threshold effects are more likely to be sensitive to the particular situation considered than those for other effects. Therefore the results for extent of countermeasures may be sensitive to the values selected for the intervention levels. This will be the case particularly for relocation, as the evacuation and relocation areas are very similar for the intervention criteria adopted in this study. This partly reflects modelling in COSYMA for when people can return from evacuation; COSYMA classes people who cannot return immediately as being relocated, and so the extent of the relocation area for the intervention levels adopted here is governed almost entirely by the evacuation criteria rather than the relocation criteria.

4.2 Studies for other source terms

The results of this study have mainly been presented in terms of the uncertainty factor and the reference uncertainty coefficient, which describe the extent of the uncertainty and the ratio of the 95% envelope to the reference value. The diagrams in Section 3 also include the mean curve, for a few of the endpoints, but in general the main text of this report has not considered the mean curve, or its relationships to the reference curve. Appendix C also gives the value from the mean curve for each of the endpoints considered. The relationship between the mean curve and the uncertainty bands can be described using the ratio of the 95% envelope to the mean curve, which is designated the 'mean uncertainty coefficient' in this study.

The uncertainty factor, reference uncertainty coefficients and mean uncertainty coefficient are presented in Table 4.1 for a selection of the endpoints and source terms considered in this study. The study has shown that the uncertainty factors and reference uncertainty coefficients vary widely between different endpoints, and in some cases different parts of the ccfd for an endpoint. In some cases there are also large differences between the values for the same endpoint where this was considered for different source terms. These points are seen for the subset of results given in Table 5.1– the spread would be much wider if other endpoints were included in the table. The mean uncertainty coefficient, on the other hand, varies between about 1 and about 5 for the set of endpoints presented in the table which includes both threshold and non-threshold effects – this spread does not become much wider as other endpoints are included. At first sight it seems as if the mean uncertainty coefficient could provide a method of transferring results to other source terms. Unfortunately this quantity relates to other quantities (the 95% envelope and the mean curve) which cannot easily be related to the reference curve. Therefore the relatively small variation between endpoints of the mean uncertainty coefficient seems to be an interesting finding of this study, but not one that helps to transfer the results to other situations.

Therefore any attempt to determine the uncertainty in other situations from the results of this study must be based on the uncertainty factors (for the extent of the uncertainty) and the reference uncertainty coefficients (to relate the uncertainty band to the reference values). The following reflects the extent to which this might be possible.

The uncertainty factor and reference uncertainty coefficient for any threshold effect must be sensitive to the source term and other aspects of the situation considered. This affects individual and collective risk of early health effects and the extent of countermeasures. This is illustrated by the differences between the results for numbers of early effects for normal living or with countermeasures for UK1, or the extent of food restrictions for the DBA and CB2 source terms. In fact the results presented in Section 3 show that the uncertainty factors and reference uncertainty coefficients for the individual and collective risks of early deaths for the different population behaviour patterns are fairly similar, and it may be possible to use those values for other situations. The use of results for threshold effects from this study for other applications must however be treated with caution. However the uncertainty factors for the extent of food restrictions, both for different foods for the same source term and for the two source terms for the same food, vary widely. However the source terms are very different, both in magnitude and composition – the release factors for CB2 are typically a thousand times greater than those for DBA and the relative release of caesium to iodine is four times greater for CB2 than for DBA. It may be adequate to assume that the uncertainty factor on the extent and duration of food restrictions (other than for grain) for most source terms which are not much larger than CB2 (about 1% of the volatile material in the core released) is between about 10 and 100. This may increase as the area affected becomes smaller.

The only non-threshold effects considered in this study are individual doses (both short-term and long-term) and the individual and collective risks of late health effects if countermeasures are not taken. The collective risk of late health effects when countermeasures are taken are only slightly affected by countermeasures and may be considered to be a non-threshold effect for this discussion. Examination of the results presented in Section 3 suggests that the uncertainty factor for short-term dose to bone marrow and to thyroid is in the region of a few tens and that for skin dose the uncertainty factor is about 1000 to 3000. These values could be used for all types of population behaviour, including countermeasures. The uncertainties for other organs are likely to be similar to those for bone marrow and thyroid. The results given in Section 3 suggest that the uncertainty factors for long-term effective dose is between about 10 and 100; the uncertainty factors for dose in specific organs are somewhat larger than this. The uncertainty factor for the individual and collective risks of fatal cancers is about 100.

Some of the results suggest that the uncertainty increases as the consequence decreases, (e.g. uncertainties on areas with food restrictions are greater for the DBA source term than for the CB2 source term). This is likely to be a general feature applying to other source terms.

4.3 Uncertainties for applications other than PRA

The uncertainty on the mean value of individual and collective doses and risks of late health effects should be similar to those for a continuous release. They could be applied to the average dose in a group of people, but not to the critical group dose, as all people in the exposed population in this study are assumed to have average behaviour – the higher percentiles of the ccfd for individual doses represent effects of atmospheric conditions rather than behaviour patterns.

The study found that the uncertainty factors on the evacuation and sheltering areas are large (more than 100), with much of this uncertainty reflecting the uncertainty on the dose

calculation. At first sight, it is tempting to assume that this uncertainty should be applicable to real time response. However the problems in extending results for threshold effects to other situations are such that any use of these results in other situations is questionable. Further there are many assumptions adopted in PRA codes that are not applicable to real time response, and these also would make the transfer of the results of this analysis to real time response unreliable.

Table 4.1 Uncertainty factors, reference uncertainty coefficients and mean uncertainty coefficients for selected endpoints

Endpoint	Source term	Part of ccfd	UF[a]	RUC[b]	MUC[c]
Area evacuated	CB2	Mean	230	410	4.6
		99th percentile	300	430	1.5
No of early deaths	UK1	Mean	43	110	3.3
		99th percentile	33	110	1.8
Initial milk ban area	CB2	Mean	56	19	3.3
		99th percentile	13	8.5	1.1
Initial milk ban area	DBA	Mean	440	130	3.8
		99th percentile	420	110	2.0
Time integral of milk ban area	CB2	Mean	38	30	2.8
		99th percentile	39	37	1.4
Time integral of milk ban area	DBA	Mean	190	160	3.3
		99th percentile	180	130	1.8
No of fatal cancers	CB2	Mean	71	23	4.0
		99th percentile	85	26	1.1
No of fatal cancers	DBA	Mean	64	28	2.8
		99th percentile	66	32	1.5

Notes
a UF is the uncertainty factor, the ratio of the 95th and 5th percentiles of the uncertainty distribution.
b RUC is the reference uncertainty coefficient, the ratio of the 95th percentile of the uncertainty distribution to the reference value.
c MUC is the mean uncertainty coefficient, the ratio of the 95th percentile of the uncertainty distribution to the value from the mean curve.

SUMMARY AND CONCLUSIONS

This is the last of a series of reports describing an analysis of the uncertainty in the predictions of the probabilistic risk assessment (PRA) code, COSYMA. The probability distributions describing the uncertainty on the values of input parameters were obtained using formal techniques of expert judgement; this part of the study was undertaken jointly by the European Commission and the United States Nuclear Regulatory Commission.

The main aims of the study can be summarised as:

4 to formulate a state-of-the-art judgement methodology which is capable of finding broad acceptance;
5 to apply the methodology to estimate uncertainties associated with the prediction of the PRA code COSYMA;
6 to provide an input into identifying future R&D priorities.

The study was undertaken for three source terms encompassing a wide range of characteristics of those that have been postulated for LWRs. There were taken from analyses of the PWR proposed for the Hinkley Point site in the UK. The source terms considered were:

- UK1, a very large release identified as the risk dominant source terms for early health effects:
- CB2, a smaller release which makes a major contribution to the overall risk of late health effects:
- DBA, a design basis release.

The study showed that the uncertainty on individual doses to 7 days, for the UK1 and CB2 releases, is generally between factors of about 10 and 100 for bone marrow and thyroid doses, but a few thousand for skin doses. The parameters whose uncertainties make large contributions to the overall uncertainty are those of the atmospheric dispersion model for bone marrow dose, the deposition velocities to skin for the skin dose, and some of the dispersion and deposition and internal dosimetry parameters for the thyroid dose.

The uncertainty on the individual risks of early fatalities, for the UK1 release, increases considerably with distance, ranging from a factor of about 2 at short distances to a value approaching infinity at larger distances, where doses fall below the threshold for early effects for some values of the input parameters. The parameters whose uncertainties make large contributions to the overall uncertainties are some of those in the lung model together with some of the dispersion and deposition parameters.

The uncertainty on the numbers of early fatalities in the population, for the UK1 release, ranges between about 30 and 60. The parameters whose uncertainties make large contributions to the overall uncertainty depend on the situation considered, with the deposition velocity of iodine to skin and the fractions of material deposited in different parts of the lung identified for some situations.

The study found that the uncertainties on the areas with early countermeasures

(sheltering, evacuation and iodine tablets), for the CB2 release, are large, with uncertainty factors in the range from about 100 to about 300. To some extent this large uncertainty may reflect the small areas that are predicted to be affected for source values of the input parameters. The parameters whose uncertainties make large contributions to the uncertainty on the sheltering and evacuation areas are some of those in the lung model while those for the area in which iodine prophylaxis is indicated are the deposition velocity of iodine and the breathing rate.

The study showed that the uncertainties on the areas with food restrictions are rather different for the two source terms considered, ranging from about 30 to about 500 for milk, green vegetables and beef, with rather larger values for grain where the areas affected are small. The uncertainty for the DBA source term, where the affected areas are small, tends to be larger than that for the CB2 source term. The parameters whose uncertainties make large contributions to the overall uncertainty come from the food chain model.

The uncertainty factors on individual committed dose depend to some extent on the organ, population behaviour and source term, with the uncertainty on the effective dose being lower than that on the doses in particular organs. The uncertainty factors lie between about 10 and a few hundred. The parameters whose uncertainties make major contributions to the overall uncertainty also depend on the situation considered, and are different for the two source terms considered. The important uncertainties are those on some of the parameters of the internal dosimetry models, particularly of the lung model, and of the food chain models.

The uncertainty factors on the individual risks of fatal cancers, for the CB2 and DBA releases, range between about 50 and 100, with the uncertainties on the risk coefficients in remainder, thyroid and lung being identified as important contributions to the overall uncertainty. Other parameters from the dispersion, dose or food chain model are also identified as making important contributions in some situations. The uncertainty factors on the individual risks of thyroid cancer and leukaemia are very high, more than a hundred thousand, reflecting the large uncertainty assigned by the expert panel to the risk coefficients in these organs.

The uncertain factors on the numbers of late health effects, for the CB2 and DBA releases, and the parameters whose uncertainties make large contributions to the overall uncertainty are similar to those discussed above for the individual risks of late health effects.

The uncertainties on the atmospheric dispersion model parameters make reasonable contributions to several of the endpoints relating to early health effects. In particular they are the only large contributors to the uncertainty on the short term dose to bone marrow and the individual and collective risks of total early mortalities and of the haematopoietic syndrome. They are not identified as important contributors to the uncertainty on the extent of countermeasures, committed doses and risks of late health effects.

The uncertainties on the deposition velocities to the ground are identified as important contributors to the overall uncertainties on the short term thyroid doses, the area where iodine tablets could be required, the individual risks of early morbidities and to the collective risk of some early effects. They are not identified as making major contributions to many of the late effects, though the uncertainty on deposition velocity of aerosols is identified as important for the

committed bone marrow dose and the uncertainty on the deposition velocity of iodine is identified as important for the number of thyroid cancers, if countermeasures are taken. The uncertainties on the deposition velocities of iodine and aerosols to skin are identified as important contributors to the overall uncertainties for early doses to skin and individual and collective risks of skin burns. The uncertainties on washout coefficients are only identified as important for some of the committed doses.

The most important parameter uncertainties relating to the dose models are those in the lung model and the breathing rate. These are identified as important for the overall uncertainty on the extent of the sheltering and evacuation areas, some of the individual and collective risks of early health effects and some of the committed doses. The uncertainties on the parameters of the model for dose coefficients are only identified as important in a few cases; some of the iodine parameters are identified for short term thyroid doses and for hypothyroidism and some of the caesium parameters are identified for the committed dose to bone marrow and the risk of leukaemia. The uncertainty on the external dose from deposited caesium is identified as important for some of the committed doses.

The uncertainties on some of the food chain model parameters are identified as important for the extent and duration of food restrictions and for some of the committed doses. The most important parameter uncertainties in the food model are those relating to the metabolism of iodine and caesium in animals, some of the interception factors and the retention on hay and silage.

The uncertainties on the parameters in the models for the risks of early health effects are identified particularly for the risk of lung morbidities. The most important uncertainties on the risk coefficients for cancers are those for lung, thyroid and remainder.

The study also considered the extent to which the results could be applied to other situations. The results for effects where there is a threshold (risks of early health effects, extent and duration of countermeasures, doses with countermeasures) are considered likely to be more specific to the situations considered than are those relating to other effects (doses and risks of late health effects either in the absence of countermeasures or if countermeasures are only applied in a small area).

The first objective of the study, to formulate a state-of-the-art judgement methodology which is capable of finding broad acceptance, was achieved through the co-operation between the EC and USNRC teams in obtaining the distributions on the elicitation variables. The agreement between the two teams suggests that the methods adopted would find general agreement. However, suggestions for further improving the methods have been made in the "procedures guide" written as part of this study.

The second objective, to apply the methodology to estimate uncertainties associated with the prediction of the PRA code COSYMA, has been achieved by carrying out the study described here. It was hoped that the estimates of uncertainty obtained here could be used to give indications of the uncertainty in other situations without having to repeat the extensive calculations undertaken in this study. For example, if the study showed the uncertainty in a particular endpoint for a particular pattern of population behaviour to be a factor of 10, then it may be possible to assume

that in similar situations it is also a factor of 10 rather 100. The study considered the uncertainty on a very small number of similar situations; in general the differences in the uncertainty for such situations is such that value could not easily be extrapolated to other situations. The study suggests that the uncertainty on the extent and duration of food restrictions and the numbers of fatal cancers in the population are likely to be about a factor of 100. Representative values for other endpoints are less easy to justify from the results of this study.

The final objective was to provide an input into identifying future R&D priorities. The study has identified those parameters whose uncertainties make large contributions to the overall uncertainties for each of the endpoints considered. It has also identified those parameters whose uncertainty contributes significantly to the uncertainties on groups of parameters. These findings could be used to determine priorities for future research projects. It has also identified some of the areas where the models themselves could be improved.

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).

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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).

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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. Probabi-

listic 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).

5 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[1]. It represents a fusion of ideas from the NRPB program MARC[2], the FZK program system UFOMOD[3] 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[4].*

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

* 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; 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).

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 γ irradiation from material in the plume,
- external γ irradiation from material deposited on the ground
- external β 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

Mainframe COSYMA contains five different models of atmospheric dispersion that are appropriate for different applications or are based on different assumptions and approximations[5].

The NE and NL sub-system include the MUSEMET[6] 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[7] 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[8], 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[9] 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[10], 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 γ 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 γ 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[11,12] and Forschungszentrum für Umwelt und Gesundheit (GSF)[13], 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[14] and the GSF model ECOSYS[15]. 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[16].

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[17]. 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[18,19], the US Nuclear Regulatory Commission[20] and GSF[21].

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[22]. 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.

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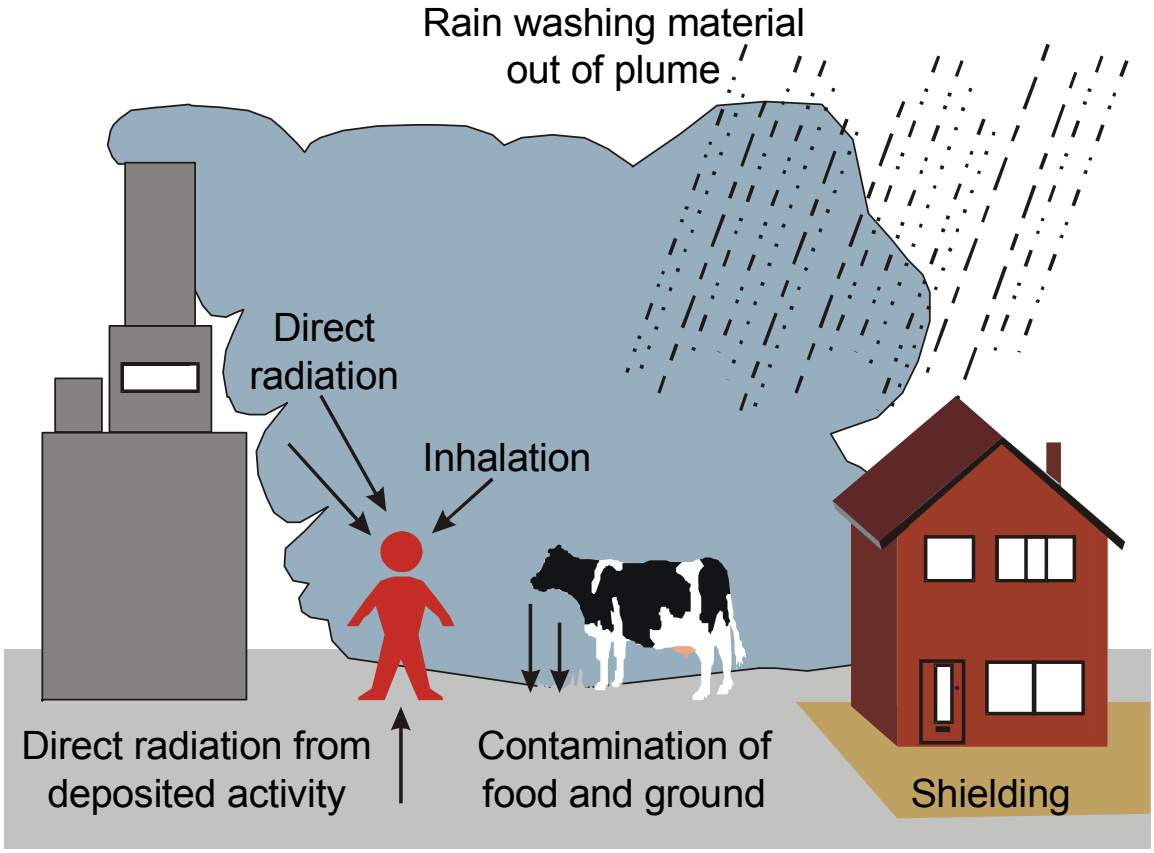

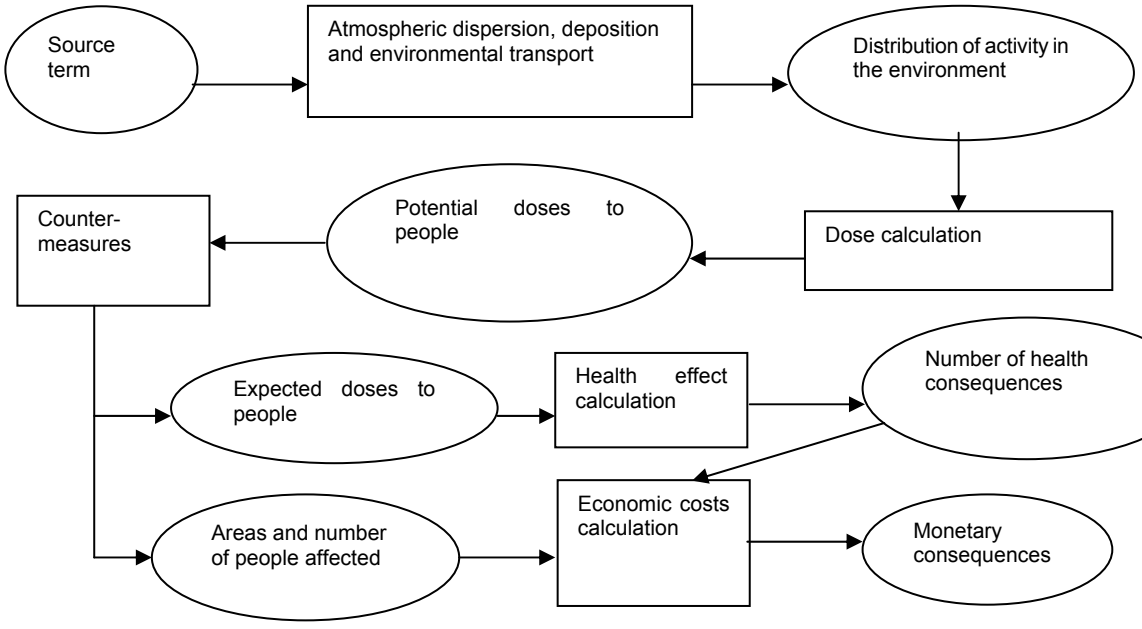

Figure B.1 Processes modelled in COSYMA

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.
95%/REF	the ratio of the 95th percentile of the uncertainty distribution to the reference value.
MNC	the average of the probability distributions from each run of the analysis (the "mean curve").

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[(a)]	Air concentration of ^{137}Cs
CAIOD[(a)]	Air concentration of ^{131}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[(a)]	Deposition of ^{137}Cs
CGIOD[(a)]	Deposition of ^{131}I
DECMBM[(a)]	Individual dose to bone marrow in 7 days, with countermeasures
DECMSK[(a)]	Individual dose to skin in 7 days, with countermeasures
DECMTH[(a)]	Individual dose to thyroid in 7 days, with countermeasures
DELVBM[(a)]	Individual dose to bone marrow in 7 days, for normal living
DELVSK[(a)]	Individual dose to skin in 7 days, for normal living
DELVTH[(a)]	Individual dose to thyroid in 7 days, for normal living
DEOUBM[(a)]	Individual dose to bone marrow in 7 days, potential outdoor dose
DEOUSK[(a)]	Individual dose to skin in 7 days, potential outdoor dose
DEOUTH[(a)]	Individual dose to thyroid in 7 days, potential outdoor dose
DLCMBM[(a)]	Committed dose to bone marrow from inhalation, ingestion and external exposure, with countermeasures
DLCMED[(a)]	Committed effective dose from inhalation, ingestion and external exposure, with countermeasures
DLCMTH[(a)]	Committed dose to thyroid from inhalation, ingestion and external exposure, with countermeasures
DLLVBM[(a)]	Committed dose to bone marrow from inhalation, ingestion and external exposure, for normal living
DLLVED[(a)]	Committed effective dose from inhalation, ingestion and external exposure, for normal living
DLLVTH[(a)]	Committed dose to thyroid from inhalation, ingestion and external exposure, for normal living

DLOUBM[(a)]	Committed dose to bone marrow from inhalation, ingestion and external exposure, potential outdoor dose
DLOUED[(a)]	Committed effective dose from inhalation, ingestion and external exposure, potential outdoor dose
DLOUTH[(a)]	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
RECMBM[(a)]	Individual risk of haematopoietic syndrome, with countermeasures
RECMLU[(a)]	Individual risk of lung morbidity, with countermeasures
RECMMB[(a)]	Individual risk of early morbidity, with countermeasures
RECMMT[(a)]	Individual risk of early death, with countermeasures
RECMSK[(a)]	Individual risk of skin burns, with countermeasures
RECMTH[(a)]	Individual risk of hypothyroidism, with countermeasures
RELVBM[(a)]	Individual risk of haematopoietic syndrome, for normal living
RELVLU[(a)]	Individual risk of lung morbidity, for normal living
RELVMB[(a)]	Individual risk of early morbidity, for normal living
RELVMT[(a)]	Individual risk of early death, for normal living
RELVSK[(a)]	Individual risk of skin burns, for normal living
RELVTH[(a)]	Individual risk of hypothyroidism, for normal living
REOUBM[(a)]	Individual risk of haematopoietic syndrome, potential outdoor risk
REOULU[(a)]	Individual risk of lung morbidity, potential outdoor risk
REOUMB[(a)]	Individual risk of early morbidity, potential outdoor risk
REOUMT[(a)]	Individual risk of early death, potential outdoor risk
REOUSK[(a)]	Individual risk of skin burns, potential outdoor risk
REOUTH[(a)]	Individual risk of hypothyroidism, potential outdoor risk
RLCMBM[(a)]	Individual risk of death from leukaemia, with countermeasures
RLCMMT[(a)]	Individual risk of fatal cancer, with countermeasures
RLCMTH[(a)]	Individual risk of death from thyroid cancer, with countermeasures
RLLVBM[(a)]	Individual risk of death from leukaemia, for normal living
RLLVMT[(a)]	Individual risk of fatal cancer, for normal living
RLLVTH[(a)]	Individual risk of death from thyroid cancer, for normal living
RLOUBM[(a)]	Individual risk of death from leukaemia, for potential outdoor exposure

RLOUMT[a]	Individual risk of fatal cancer, for potential outdoor exposure
RLOUTH[a]	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.

6 TABLE C.2 UNCERTAINTY DISTRIBUTIONS ON THE ENDPOINTS FOR EACH OF THE SOURCE TERMS

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

ENDPOINT	REF	MEDIAN	5 %	95 %	FAC1	10 %	90 %	FAC2	25 %	75 %	FAC3	95%/REF	MNC
CGIOD1	3.67E+10	4.46E+10	2.22E+09	1.38E+11	6.20E+01	5.31E+09	1.23E+11	2.32E+01	1.63E+10	9.18E+10	5.63E+00	3.76E+00	5.73E+10
CGIOD2	1.20E+09	1.86E+09	2.12E+08	3.93E+09	1.85E+01	5.90E+08	3.43E+09	5.81E+00	1.36E+09	2.78E+09	2.05E+00	3.26E+00	2.13E+09
CGIOD3	1.25E+08	1.21E+08	3.06E+07	2.05E+08	6.70E+00	4.29E+07	1.92E+08	4.47E+00	7.65E+07	1.60E+08	2.09E+00	1.64E+00	1.20E+08
CGCAE1	2.72E+08	4.28E+08	1.59E+07	3.25E+09	2.05E+02	3.72E+07	2.84E+09	7.63E+01	1.12E+08	1.80E+09	1.61E+01	1.19E+01	1.03E+09
CGCAE2	2.07E+07	4.63E+07	3.16E+06	1.68E+08	5.32E+01	5.46E+06	1.45E+08	2.66E+01	1.35E+07	1.05E+08	7.78E+00	8.12E+00	6.46E+07
CGCAE3	2.79E+06	5.76E+06	4.79E+05	1.01E+07	2.12E+01	8.18E+05	9.59E+06	1.17E+01	1.66E+06	7.85E+06	4.73E+00	3.63E+00	5.22E+06
CAIOD1	3.63E+12	2.89E+12	8.46E+11	8.20E+12	9.69E+00	1.16E+12	7.70E+12	6.65E+00	1.86E+12	6.33E+12	3.41E+00	2.26E+00	3.86E+12
CAIOD2	1.08E+11	2.04E+11	2.17E+10	8.72E+11	4.01E+01	2.89E+10	6.99E+11	2.42E+01	4.82E+10	4.33E+11	8.99E+00	8.04E+00	2.92E+11
CAIOD3	1.04E+10	1.54E+10	1.19E+09	7.56E+10	6.34E+01	1.51E+09	4.97E+10	3.28E+01	2.61E+09	3.12E+10	1.19E+01	7.24E+00	2.19E+10
CACAE1	2.27E+11	2.37E+11	8.53E+10	4.39E+11	5.15E+00	1.09E+11	4.06E+11	3.73E+00	1.50E+11	3.60E+11	2.40E+00	1.93E+00	2.53E+11
CACAE2	1.22E+10	1.75E+10	6.67E+09	6.03E+10	9.05E+00	8.22E+09	5.34E+10	6.50E+00	1.13E+10	3.70E+10	3.28E+00	4.95E+00	2.49E+10
CACAE3	1.10E+09	1.57E+09	4.03E+08	6.67E+09	1.66E+01	5.16E+08	5.18E+09	1.00E+01	8.15E+08	3.01E+09	3.69E+00	6.06E+00	2.27E+09
DECMBM1	9.15E-01	1.64E+00	4.89E-01	4.09E+00	8.37E+00	6.35E-01	3.39E+00	5.34E+00	9.97E-01	2.35E+00	2.36E+00	4.47E+00	1.85E+00
DECMBM2	5.13E-02	1.28E-01	4.69E-02	6.45E-01	1.38E+01	5.52E-02	3.88E-01	7.03E+00	8.06E-02	2.37E-01	2.94E+00	1.26E+01	2.15E-01
DECMBM3	3.01E-03	6.79E-03	2.95E-03	1.91E-02	6.48E+00	3.25E-03	1.49E-02	4.58E+00	4.34E-03	1.04E-02	2.40E+00	6.37E+00	8.74E-03
DECMTH1	3.12E+01	7.93E+01	1.01E+01	3.83E+02	3.80E+01	1.33E+01	2.63E+02	1.98E+01	2.93E+01	1.56E+02	5.30E+00	1.23E+01	1.21E+02
DECMTH2	9.06E-01	4.35E+00	4.89E-01	2.59E+01	5.30E+01	8.02E-01	1.86E+01	2.32E+01	1.78E+00	1.04E+01	5.87E+00	2.86E+01	8.33E+00
DECMTH3	4.13E-02	1.67E-01	2.25E-02	1.32E+00	5.86E+01	3.28E-02	7.13E-01	2.18E+01	7.07E-02	4.00E-01	5.66E+00	3.19E+01	3.48E-01
DECMSK1	1.11E+02	1.42E+02	1.69E+00	2.75E+03	1.63E+03	3.57E+00	2.19E+03	6.13E+02	1.60E+01	6.64E+02	4.15E+01	2.47E+01	6.26E+02
DECMSK2	3.59E+00	7.60E+00	7.31E-02	2.09E+02	2.85E+03	1.91E-01	1.28E+02	6.71E+02	1.17E+00	3.37E+01	2.88E+01	5.81E+01	3.78E+01
DECMSK3	1.87E-01	3.22E-01	2.91E-03	7.99E+00	2.75E+03	8.68E-03	4.21E+00	4.85E+02	3.93E-02	1.28E+00	3.26E+01	4.27E+01	1.53E+00
DELVBM1	2.40E+00	4.90E+00	9.95E-01	2.45E+01	2.46E+01	1.43E+00	1.83E+01	1.28E+01	2.76E+00	1.10E+01	3.97E+00	1.02E+01	8.02E+00
DELVBM2	1.02E-01	3.79E-01	9.76E-02	1.34E+00	1.37E+01	1.34E-01	9.44E-01	7.05E+00	2.21E-01	6.30E-01	2.85E+00	1.31E+01	4.95E-01
DELVBM3	1.08E-02	2.77E-02	9.14E-03	8.58E-02	9.38E+00	1.22E-02	6.48E-02	5.30E+00	1.78E-02	4.24E-02	2.37E+00	7.95E+00	3.46E-02
DELVTH1	7.70E+01	1.49E+02	2.61E+01	7.00E+02	2.68E+01	3.43E+01	5.34E+02	1.56E+01	6.39E+01	2.79E+02	4.37E+00	9.09E+00	2.27E+02
DELVTH2	2.36E+00	9.65E+00	1.07E+00	6.72E+01	6.29E+01	1.73E+00	3.93E+01	2.27E+01	3.62E+00	2.36E+01	6.53E+00	2.85E+01	1.80E+01
DELVTH3	2.18E-01	6.74E-01	7.83E-02	5.00E+00	6.39E+01	1.18E-01	3.51E+00	2.97E+01	2.35E-01	1.76E+00	7.50E+00	2.29E+01	1.36E+00
DELVSK1	6.11E+02	6.66E+02	7.10E+00	1.10E+04	1.55E+03	1.44E+01	8.08E+03	5.60E+02	6.04E+01	2.80E+03	4.64E+01	1.80E+01	2.41E+03
DELVSK2	1.92E+01	3.44E+01	3.57E-01	8.83E+02	2.47E+03	1.05E+00	5.13E+02	4.87E+02	5.20E+00	1.44E+02	2.76E+01	4.60E+01	1.65E+02
DELVSK3	1.76E+00	2.02E+00	3.00E-02	5.65E+01	1.89E+03	6.99E-02	2.76E+01	3.95E+02	3.60E-01	1.02E+01	2.82E+01	3.20E+01	1.13E+01
DEOUBM1	1.53E+01	1.85E+01	3.76E+00	9.14E+01	2.43E+01	4.76E+00	6.73E+01	1.42E+01	9.74E+00	4.04E+01	4.15E+00	5.96E+00	2.93E+01
DEOUBM2	6.36E-01	1.36E+00	3.76E-01	4.27E+00	1.14E+01	5.34E-01	3.26E+00	6.10E+00	8.26E-01	2.22E+00	2.69E+00	6.72E+00	1.70E+00
DEOUBM3	6.90E-02	9.92E-02	3.45E-02	2.54E-01	7.34E+00	4.69E-02	2.04E-01	4.35E+00	6.57E-02	1.50E-01	2.29E+00	3.68E+00	1.17E-01
DEOUTH1	1.53E+02	2.47E+02	5.30E+01	9.82E+02	1.85E+01	7.64E+01	7.01E+02	9.17E+00	1.23E+02	4.11E+02	3.34E+00	6.42E+00	3.34E+02
DEOUTH2	4.82E+00	1.61E+01	3.16E+00	8.36E+01	2.64E+01	4.01E+00	6.13E+01	1.53E+01	6.65E+00	3.09E+01	4.64E+00	1.74E+01	2.60E+01
DEOUTH3	4.55E-01	1.11E+00	1.97E-01	7.01E+00	3.56E+01	2.71E-01	4.83E+00	1.78E+01	4.52E-01	2.36E+00	5.22E+00	1.54E+01	1.96E+00
DEOUSK1	1.11E+03	1.05E+03	1.41E+01	1.55E+04	1.10E+03	2.30E+01	1.03E+04	4.48E+02	7.58E+01	3.98E+03	5.25E+01	1.40E+01	3.36E+03
DEOUSK2	3.49E+01	5.68E+01	6.95E-01	1.18E+03	1.70E+03	1.71E+00	6.14E+02	3.59E+02	6.39E+00	2.17E+02	3.39E+01	3.39E+01	2.27E+02
DEOUSK3	3.21E+00	3.43E+00	5.36E-02	6.95E+01	1.30E+03	1.23E-01	3.98E+01	3.24E+02	5.24E-01	1.51E+01	2.89E+01	2.17E+01	1.55E+01
RECMMT1	4.78E-02	1.06E-01	5.83E-02	1.82E-01	3.11E+00	6.78E-02	1.59E-01	2.35E+00	8.65E-02	1.35E-01	1.57E+00	3.79E+00	1.12E-01
RECMMT2	3.00E-03	3.04E-02	6.53E-03	8.68E-02	1.33E+01	1.24E-02	7.10E-02	5.74E+00	1.97E-02	4.89E-02	2.48E+00	2.89E+01	3.70E-02
RECMMT3	7.71E-05	1.88E-03	1.20E-05	1.28E-02	1.07E+03	1.43E-04	8.57E-03	6.00E+01	7.00E-04	4.64E-03	6.63E+00	1.66E+02	3.57E-03

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RECMBM1    4.27E-02  7.55E-02  | 3.41E-02  1.34E-01  3.93E+00  | 4.26E-02  1.20E-01  2.81E+00  | 5.72E-
                         02  9.79E-02  1.71E+00  ||  3.13E+00  ||  7.92E-02
RECMBM2    9.92E-04  8.20E-03  | 3.73E-04  2.64E-02  7.08E+01  | 1.04E-03  2.17E-02  2.09E+01  | 3.30E-
                         03  1.53E-02  4.65E+00  ||  2.66E+01  ||  1.01E-02
   RECMBM3     .00E+00  6.17E-05  |  .00E+00  1.30E-03  9.99E+99  |  .00E+00  1.09E-03  9.99E+99  |
                      .00E+00  4.26E-04  9.99E+99  ||  9.99E+99  ||  3.13E-04
RECMMB1    1.31E-01  2.77E-02  | 1.50E-03  1.31E-01  8.70E+01  | 2.92E-03  1.08E-01  3.70E+01  | 1.01E-
                         02  6.40E-02  6.31E+00  ||  1.00E+00  ||  4.34E-02
RECMMB2    3.77E-02  3.32E-02  | 6.78E-04  1.70E-01  2.51E+02  | 1.54E-03  1.24E-01  8.01E+01  | 7.65E-
                         03  6.77E-02  8.84E+00  ||  4.52E+00  ||  4.93E-02
RECMMB3    1.49E-03  4.38E-03  | 8.34E-06  5.37E-02  6.44E+03  | 3.33E-05  4.18E-02  1.26E+03  | 6.05E-
                         04  1.61E-02  2.67E+01  ||  3.61E+01  ||  1.27E-02
   RECMLU1    5.26E-04  2.22E-03  |  .00E+00  3.09E-02  9.99E+99  |  .00E+00  2.24E-02  9.99E+99  |
                      .00E+00  1.17E-02  9.99E+99  ||  5.87E+01  ||  7.91E-03
RECMLU2    8.62E-04  1.93E-03  |  .00E+00  3.48E-02  9.99E+99  |  .00E+00  2.36E-02  9.99E+99  | 2.82E-
                         06  9.99E-03  3.54E+03  ||  4.03E+01  ||  8.34E-03
RECMTH1    1.95E-02  4.75E-04  |  .00E+00  1.91E-02  9.99E+99  |  .00E+00  1.24E-02  9.99E+99  | 3.26E-
                         05  3.83E-03  1.17E+02  ||  9.81E-01  ||  3.96E-03
RECMTH2    9.75E-04  2.71E-04  |  .00E+00  1.45E-02  9.99E+99  |  .00E+00  6.88E-03  9.99E+99  | 1.04E-
                         06  2.06E-03  1.97E+03  ||  1.48E+01  ||  2.55E-03

ENDPOINT      REF      MEDIAN   |    5 %      95 %      FAC1    |   10 %      90 %      FAC2    |   25 %
                              75 %      FAC3    ||   95%/REF  ||        MNC
-------------------------------------------------------------------------------------------------------
                                 ---------------------------------------------------------
   RECMLU3     .00E+00  3.97E-05  |  .00E+00  6.88E-03  9.99E+99  |  .00E+00  3.78E-03  9.99E+99  |
                      .00E+00  7.34E-04  9.99E+99  ||  9.99E+99  ||  1.37E-03
   RECMTH3     .00E+00   .00E+00  |  .00E+00  9.51E-04  9.99E+99  |  .00E+00  4.35E-04  9.99E+99  |
                      .00E+00  7.07E-05  9.99E+99  ||  9.99E+99  ||  1.73E-04
RECMSK1    9.75E-02  1.83E-02  |  .00E+00  9.54E-02  9.99E+99  |  .00E+00  8.06E-02  9.99E+99  | 3.87E-
                         05  4.48E-02  1.16E+03  ||  9.78E-01  ||  2.91E-02
RECMSK2    3.50E-02  2.28E-02  |  .00E+00  1.48E-01  9.99E+99  |  .00E+00  1.07E-01  9.99E+99  | 9.49E-
                         06  5.81E-02  6.12E+03  ||  4.23E+00  ||  3.79E-02
   RECMSK3    1.49E-03  1.86E-03  |  .00E+00  5.14E-02  9.99E+99  |  .00E+00  3.82E-02  9.99E+99  |
                      .00E+00  1.31E-02  9.99E+99  ||  3.46E+01  ||  1.11E-02
RELVMT1    7.75E-02  1.11E-01  | 5.71E-02  1.87E-01  3.27E+00  | 6.61E-02  1.72E-01  2.61E+00  | 8.79E-
                         02  1.46E-01  1.66E+00  ||  2.41E+00  ||  1.18E-01
RELVMT2    6.14E-03  3.74E-02  | 1.12E-02  9.66E-02  8.63E+00  | 1.62E-02  8.30E-02  5.12E+00  | 2.59E-
                         02  5.79E-02  2.24E+00  ||  1.57E+01  ||  4.47E-02
RELVMT3    1.13E-03  4.83E-03  | 1.10E-04  2.62E-02  2.39E+02  | 5.59E-04  1.94E-02  3.47E+01  | 1.92E-
                         03  1.07E-02  5.58E+00  ||  2.32E+01  ||  8.14E-03
RELVBM1    7.24E-02  8.49E-02  | 3.47E-02  1.63E-01  4.70E+00  | 4.43E-02  1.50E-01  3.38E+00  | 6.13E-
                         02  1.14E-01  1.86E+00  ||  2.25E+00  ||  9.12E-02
RELVBM2    1.88E-03  1.18E-02  | 5.49E-04  4.47E-02  8.15E+01  | 1.58E-03  3.24E-02  2.05E+01  | 5.44E-
                         03  2.01E-02  3.70E+00  ||  2.38E+01  ||  1.55E-02
   RELVBM3     .00E+00  2.48E-05  |  .00E+00  1.76E-03  9.99E+99  |  .00E+00  1.09E-03  9.99E+99  |
                      .00E+00  3.49E-04  9.99E+99  ||  9.99E+99  ||  3.68E-04
RELVMB1    1.30E-01  4.95E-02  | 6.84E-03  1.54E-01  2.25E+01  | 1.06E-02  1.29E-01  1.22E+01  | 2.13E-
                         02  8.96E-02  4.21E+00  ||  1.18E+00  ||  6.21E-02
RELVMB2    7.98E-02  5.83E-02  | 3.09E-03  2.37E-01  7.66E+01  | 5.38E-03  1.68E-01  3.13E+01  | 1.84E-
                         02  1.07E-01  5.83E+00  ||  2.97E+00  ||  7.64E-02
RELVMB3    1.28E-02  1.26E-02  | 1.59E-04  1.07E-01  6.71E+02  | 5.85E-04  8.56E-02  1.46E+02  | 2.94E-
                         03  4.08E-02  1.39E+01  ||  8.37E+00  ||  2.94E-02
   RELVLU1     .00E+00  1.45E-03  |  .00E+00  2.91E-02  9.99E+99  |  .00E+00  2.04E-02  9.99E+99  |
                      .00E+00  1.03E-02  9.99E+99  ||  9.99E+99  ||  6.96E-03
   RELVLU2    4.46E-06  1.82E-03  |  .00E+00  3.99E-02  9.99E+99  |  .00E+00  2.27E-02  9.99E+99  |
                      .00E+00  1.03E-02  9.99E+99  ||  8.95E+03  ||  8.50E-03
   RELVLU3     .00E+00  7.51E-05  |  .00E+00  1.23E-02  9.99E+99  |  .00E+00  6.70E-03  9.99E+99  |
                      .00E+00  1.42E-03  9.99E+99  ||  9.99E+99  ||  2.61E-03
RELVTH1    1.87E-02  1.50E-03  |  .00E+00  2.69E-02  9.99E+99  |  .00E+00  1.98E-02  9.99E+99  | 2.01E-
                         04  7.36E-03  3.66E+01  ||  1.44E+00  ||  6.06E-03
RELVTH2    4.95E-03  1.54E-03  |  .00E+00  2.35E-02  9.99E+99  |  .00E+00  1.88E-02  9.99E+99  | 1.16E-
                         04  6.42E-03  5.53E+01  ||  4.76E+00  ||  5.68E-03
   RELVTH3    1.28E-05  1.01E-04  |  .00E+00  6.23E-03  9.99E+99  |  .00E+00  3.86E-03  9.99E+99  |
                      .00E+00  8.19E-04  9.99E+99  ||  4.87E+02  ||  1.21E-03
RELVSK1    8.87E-02  2.65E-02  |  .00E+00  1.07E-01  9.99E+99  |  .00E+00  8.68E-02  9.99E+99  | 2.04E-
                         04  5.37E-02  2.64E+02  ||  1.21E+00  ||  3.50E-02
RELVSK2    6.65E-02  3.76E-02  |  .00E+00  1.66E-01  9.99E+99  |  .00E+00  1.20E-01  9.99E+99  | 9.90E-
                         05  7.88E-02  7.96E+02  ||  2.50E+00  ||  5.01E-02
   RELVSK3    1.28E-02  6.88E-03  |  .00E+00  1.01E-01  9.99E+99  |  .00E+00  8.09E-02  9.99E+99  |
                      .00E+00  3.46E-02  9.99E+99  ||  7.88E+00  ||  2.47E-02
REOUMT1    1.31E-01  1.37E-01  | 8.71E-02  2.15E-01  2.47E+00  | 9.36E-02  1.98E-01  2.12E+00  | 1.11E-
                         01  1.71E-01  1.54E+00  ||  1.64E+00  ||  1.43E-01
REOUMT2    3.40E-02  5.99E-02  | 2.62E-02  1.23E-01  4.69E+00  | 3.29E-02  1.07E-01  3.26E+00  | 4.34E-
                         02  8.63E-02  1.99E+00  ||  3.61E+00  ||  6.65E-02
REOUMT3    2.84E-03  8.78E-03  | 9.86E-04  3.12E-02  3.16E+01  | 2.15E-03  2.47E-02  1.15E+01  | 4.64E-
                         03  1.62E-02  3.48E+00  ||  1.10E+01  ||  1.15E-02
REOUBM1    1.27E-01  1.24E-01  | 7.52E-02  2.02E-01  2.68E+00  | 8.33E-02  1.87E-01  2.24E+00  | 9.90E-
                         02  1.56E-01  1.58E+00  ||  1.58E+00  ||  1.30E-01
REOUBM2    3.03E-02  4.03E-02  | 1.03E-02  9.83E-02  9.54E+00  | 1.88E-02  8.44E-02  4.48E+00  | 2.87E-
                         02  5.72E-02  1.99E+00  ||  3.24E+00  ||  4.59E-02
REOUBM3    1.00E-03  1.29E-03  | 2.00E-06  6.03E-03  3.02E+03  | 4.40E-05  5.24E-03  1.19E+02  | 3.73E-
                         04  3.14E-03  8.43E+00  ||  6.01E+00  ||  2.20E-03
REOUMB1    7.35E-02  3.97E-02  | 8.62E-03  1.28E-01  1.48E+01  | 1.32E-02  1.05E-01  7.96E+00  | 2.03E-
                         02  7.24E-02  3.56E+00  ||  1.74E+00  ||  5.16E-02
REOUMB2    8.03E-02  5.89E-02  | 6.87E-03  2.08E-01  3.02E+01  | 1.04E-02  1.60E-01  1.54E+01  | 2.47E-
                         02  1.05E-01  4.26E+00  ||  2.59E+00  ||  7.58E-02
REOUMB3    2.87E-02  2.45E-02  | 1.00E-03  1.32E-01  1.32E+02  | 2.81E-03  1.08E-01  3.84E+01  | 6.83E-
                         03  5.38E-02  7.87E+00  ||  4.60E+00  ||  4.01E-02
   REOULU1     .00E+00  3.50E-04  |  .00E+00  2.29E-02  9.99E+99  |  .00E+00  1.35E-02  9.99E+99  |
                      .00E+00  4.71E-03  9.99E+99  ||  9.99E+99  ||  4.64E-03
   REOULU2     .00E+00  9.90E-04  |  .00E+00  3.34E-02  9.99E+99  |  .00E+00  2.23E-02  9.99E+99  |
                      .00E+00  9.30E-03  9.99E+99  ||  9.99E+99  ||  7.41E-03
   REOULU3     .00E+00  1.61E-04  |  .00E+00  1.65E-02  9.99E+99  |  .00E+00  1.00E-02  9.99E+99  |
                      .00E+00  2.14E-03  9.99E+99  ||  9.99E+99  ||  3.29E-03
REOUTH1    1.89E-03  5.33E-04  |  .00E+00  1.83E-02  9.99E+99  |  .00E+00  1.10E-02  9.99E+99  | 6.46E-
                         05  2.83E-03  4.39E+01  ||  9.70E+00  ||  3.15E-03
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REOUTH2    1.39E-03  9.74E-04  |  .00E+00  2.06E-02  9.99E+99  |  .00E+00  1.11E-02  9.99E+99  | 9.77E-
                       05  4.56E-03  4.67E+01  ||  1.48E+01  ||  4.16E-03
REOUTH3    1.66E-04  1.76E-04  |  .00E+00  7.63E-03  9.99E+99  |  .00E+00  5.27E-03  9.99E+99  | 4.92E-
                       06  1.17E-03  2.38E+02  ||  4.58E+01  ||  1.53E-03
REOUSK1    4.77E-02  1.37E-02  |  .00E+00  8.78E-02  9.99E+99  |  .00E+00  7.36E-02  9.99E+99  | 1.17E-
                       06  3.93E-02  3.36E+04  ||  1.84E+00  ||  2.62E-02
REOUSK2    5.79E-02  2.80E-02  |  .00E+00  1.41E-01  9.99E+99  |  .00E+00  1.11E-01  9.99E+99  | 7.50E-
                       06  6.68E-02  8.90E+03  ||  2.43E+00  ||  4.21E-02
   REOUSK3    2.35E-02  1.03E-02  |  .00E+00  1.21E-01  9.99E+99  |  .00E+00  9.29E-02  9.99E+99  |
                     .00E+00  4.26E-02  9.99E+99  ||  5.16E+00  ||  2.94E-02
   PECMMT     2.60E+02  4.73E+03  | 6.71E+02  2.89E+04  4.31E+01  | 1.20E+03  1.96E+04  1.63E+01  |
                    2.28E+03  1.12E+04  4.90E+00  ||  1.11E+02  ||  8.64E+03
   PECMBM     6.62E+01  7.53E+02  | 8.55E+01  3.27E+03  3.82E+01  | 1.20E+02  2.45E+03  2.04E+01  |
                    2.86E+02  1.62E+03  5.67E+00  ||  4.93E+01  ||  1.11E+03
   PECMMB     3.77E+03  9.33E+03  | 9.23E+01  1.32E+05  1.43E+03  | 2.20E+02  8.31E+04  3.77E+02  |
                    1.93E+03  3.01E+04  1.56E+01  ||  3.51E+01  ||  2.84E+04
PECMLU     1.77E+01  2.75E+02  |  .00E+00  1.21E+04  9.99E+99  |  .00E+00  6.95E+03  9.99E+99  | 6.18E-
                       01  1.85E+03  2.99E+03  ||  6.83E+02  ||  3.00E+03
PECMTH     5.14E+01  3.67E+01  |  .00E+00  2.28E+03  9.99E+99  |  .00E+00  1.19E+03  9.99E+99  | 5.28E-
                       01  3.32E+02  6.28E+02  ||  4.44E+01  ||  4.48E+02
PECMSK     3.67E+03  4.52E+03  |  .00E+00  1.30E+05  9.99E+99  |  .00E+00  7.09E+04  9.99E+99  | 2.64E-
                       01  2.60E+04  9.82E+04  ||  3.53E+01  ||  2.49E+04
   PELVMT     2.32E+03  1.17E+04  | 1.19E+03  7.80E+04  6.54E+01  | 2.41E+03  5.99E+04  2.48E+01  |
                    5.32E+03  3.06E+04  5.76E+00  ||  3.37E+01  ||  2.33E+04
   PELVBM     1.61E+02  8.56E+02  | 8.86E+01  4.95E+03  5.58E+01  | 1.51E+02  3.73E+03  2.48E+01  |
                    3.74E+02  2.03E+03  5.43E+00  ||  3.07E+01  ||  1.60E+03
   PELVMB     2.32E+04  2.88E+04  | 8.01E+02  4.04E+05  5.05E+02  | 2.24E+03  2.86E+05  1.28E+02  |
                    7.75E+03  1.13E+05  1.46E+01  ||  1.74E+01  ||  9.11E+04
   PELVLU     1.62E-03  4.87E+02  |  .00E+00  2.36E+04  9.99E+99  |  .00E+00  1.20E+04  9.99E+99  |
                     .00E+00  3.69E+03  9.99E+99  ||  1.46E+07  ||  7.25E+03
   PELVTH     2.64E+02  3.26E+02  |  .00E+00  1.14E+04  9.99E+99  | 2.38E-02  8.17E+03  3.43E+05  |
                    2.03E+01  1.81E+03  8.91E+01  ||  4.33E+01  ||  2.50E+03
   PELVSK     2.26E+04  1.66E+04  |  .00E+00  3.58E+05  9.99E+99  |  .00E+00  2.55E+05  9.99E+99  |
                    1.65E+01  8.17E+04  4.96E+03  ||  1.58E+01  ||  7.88E+04
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Extent of the uncertainty for the 95th percentile of the endpoints for the UK1 source term

ENDPOINT	REF	MEDIAN	5 %	95 %	FAC1	10 %	90 %	FAC2	25 %	75 %	FAC3	95%/REF	MNC
CGIOD1	1.58E+11	1.58E+11	1.70E+09	8.91E+11	5.25E+02	9.12E+09	7.24E+11	7.94E+01	3.55E+10	4.79E+11	1.35E+01	5.62E+00	1.78E+11
CGIOD2	5.50E+09	6.17E+09	2.09E+08	2.09E+10	1.00E+02	6.31E+08	1.70E+10	2.69E+01	2.19E+09	1.23E+10	5.62E+00	3.80E+00	7.08E+09
CGIOD3	5.25E+08	3.31E+08	3.16E+07	1.00E+09	3.16E+01	4.47E+07	8.71E+08	1.95E+01	1.45E+08	6.17E+08	4.27E+00	1.91E+00	3.55E+08
CGCAE1	1.05E+09	6.76E+08	1.51E+07	1.95E+10	1.29E+03	3.02E+07	1.51E+10	5.01E+02	1.62E+08	8.13E+09	5.01E+01	1.86E+01	2.24E+09
CGCAE2	5.89E+07	8.13E+07	2.00E+06	1.10E+09	5.50E+02	5.13E+06	9.12E+08	1.78E+02	2.14E+07	5.25E+08	2.45E+01	1.86E+01	1.78E+08
CGCAE3	8.13E+06	9.77E+06	6.03E+05	5.50E+07	9.12E+01	1.05E+06	4.47E+07	4.27E+01	3.24E+06	3.24E+07	1.00E+01	6.76E+00	1.41E+07
CAIOD1	1.41E+13	1.07E+13	2.00E+12	3.55E+13	1.78E+01	3.24E+12	3.09E+13	9.55E+00	5.89E+12	1.78E+13	3.02E+00	2.51E+00	1.12E+13
CAIOD2	4.90E+11	4.37E+11	6.92E+10	3.02E+12	4.37E+01	1.02E+11	2.51E+12	2.45E+01	1.95E+11	1.12E+12	5.75E+00	6.17E+00	5.01E+11
CAIOD3	4.47E+10	3.80E+10	2.75E+09	2.14E+11	7.76E+01	4.47E+09	1.48E+11	3.31E+01	1.20E+10	8.71E+10	7.24E+00	4.79E+00	3.98E+10
CACAE1	8.71E+11	7.24E+11	1.17E+11	1.95E+12	1.66E+01	1.95E+11	1.66E+12	8.51E+00	4.17E+11	1.17E+12	2.82E+00	2.24E+00	7.08E+11
CACAE2	3.24E+10	4.90E+10	1.12E+10	1.78E+11	1.58E+01	1.58E+10	1.45E+11	9.12E+00	2.88E+10	8.13E+10	2.82E+00	5.50E+00	5.01E+10
CACAE3	4.68E+09	4.27E+09	1.70E+09	1.48E+10	8.71E+00	2.09E+09	9.55E+09	4.57E+00	2.95E+09	6.17E+09	2.09E+00	3.16E+00	4.47E+09
DECMBM1	3.98E+00	7.24E+00	2.40E+00	2.14E+01	8.91E+00	3.47E+00	1.78E+01	5.13E+00	4.79E+00	1.15E+01	2.40E+00	5.37E+00	7.94E+00
DECMBM2	1.55E-01	4.17E-01	1.23E-01	1.15E+00	9.33E+00	1.66E-01	9.33E-01	5.62E+00	2.63E-01	6.31E-01	2.40E+00	7.41E+00	3.98E-01
DECMBM3	4.07E-03	9.33E-03	1.35E-04	3.02E-02	2.24E+02	8.51E-04	2.51E-02	2.95E+01	3.80E-03	1.70E-02	4.47E+00	7.41E+00	1.12E-02
DECMTH1	1.29E+02	2.24E+02	2.82E+01	1.55E+03	5.50E+01	4.68E+01	1.00E+03	2.14E+01	9.12E+01	5.62E+02	6.17E+00	1.20E+01	2.51E+02
DECMTH2	3.89E+00	9.33E+00	1.00E+00	1.00E+02	1.00E+02	1.70E+00	5.89E+01	3.47E+01	3.55E+00	2.63E+01	7.41E+00	2.57E+01	1.26E+01
DECMTH3	4.27E-02	1.82E-01	3.63E-03	2.45E+00	6.76E+02	8.32E-03	1.55E+00	1.86E+02	3.31E-02	6.03E-01	1.82E+01	5.75E+01	3.16E-01
DECMSK1	4.57E+02	5.37E+02	2.75E+00	1.20E+04	4.37E+03	7.76E+00	6.92E+03	8.91E+02	3.63E+01	2.95E+03	8.13E+01	2.63E+01	7.94E+02
DECMSK2	1.38E+01	2.34E+01	5.62E-02	8.13E+02	1.45E+04	2.00E-01	3.72E+02	1.86E+03	1.45E+00	1.02E+02	7.08E+01	5.89E+01	3.98E+01
DECMSK3	1.78E-01	3.16E-01	1.91E-04	2.14E+01	1.12E+05	1.12E-03	1.10E+01	9.77E+03	2.57E-02	2.69E+00	1.05E+02	1.20E+02	7.94E-01
DELVBM1	1.07E+01	2.00E+01	3.80E+00	1.32E+02	3.47E+01	5.50E+00	9.77E+01	1.78E+01	9.33E+00	5.62E+01	6.03E+00	1.23E+01	2.51E+01
DELVBM2	4.17E-01	1.29E+00	2.95E-01	6.17E+00	2.09E+01	4.37E-01	4.57E+00	1.05E+01	6.92E-01	2.51E+00	3.63E+00	1.48E+01	1.58E+00
DELVBM3	4.90E-02	8.13E-02	2.09E-02	3.31E-01	1.58E+01	2.75E-02	2.40E-01	8.71E+00	4.47E-02	1.45E-01	3.24E+00	6.76E+00	1.00E-01
DELVTH1	2.95E+02	4.79E+02	5.89E+01	2.63E+03	4.47E+01	8.91E+01	1.86E+03	2.09E+01	2.14E+02	1.12E+03	5.25E+00	8.91E+00	5.01E+02
DELVTH2	1.05E+01	2.51E+01	3.24E+00	1.74E+02	5.37E+01	5.13E+00	1.26E+02	2.45E+01	9.77E+00	6.17E+01	6.31E+00	1.66E+01	2.82E+01
DELVTH3	9.33E-01	1.78E+00	2.40E-01	1.48E+01	6.17E+01	3.89E-01	9.12E+00	2.34E+01	8.13E-01	4.17E+00	5.13E+00	1.58E+01	2.24E+00
DELVSK1	2.34E+03	2.45E+03	1.29E+01	4.17E+04	3.24E+03	2.95E+01	2.88E+04	9.77E+02	1.41E+02	1.12E+04	7.94E+01	1.78E+01	3.16E+03
DELVSK2	8.13E+01	1.32E+02	7.08E-01	3.55E+03	5.01E+03	1.48E+00	1.62E+03	1.10E+03	8.91E+00	5.01E+02	5.62E+01	4.37E+01	2.00E+02
DELVSK3	7.59E+00	8.32E+00	5.01E-02	1.58E+02	3.16E+03	1.35E-01	1.07E+02	7.94E+02	7.24E-01	3.24E+01	4.47E+01	2.09E+01	1.41E+01
DEOUBM1	6.92E+01	7.94E+01	1.48E+01	5.25E+02	3.55E+01	1.95E+01	3.72E+02	1.91E+01	3.31E+01	1.95E+02	5.89E+00	7.59E+00	1.00E+02
DEOUBM2	2.63E+00	4.57E+00	1.32E+00	2.24E+01	1.70E+01	1.55E+00	1.62E+01	1.05E+01	2.40E+00	8.71E+00	3.63E+00	8.51E+00	5.62E+00
DEOUBM3	3.02E-01	2.82E-01	7.41E-02	1.17E+00	1.58E+01	1.02E-01	9.33E-01	9.12E+00	1.62E-01	5.37E-01	3.31E+00	3.89E+00	3.55E-01
DEOUTH1	6.31E+02	8.51E+02	1.12E+02	3.55E+03	3.16E+01	1.74E+02	2.75E+03	1.58E+01	4.07E+02	1.66E+03	4.07E+00	5.62E+00	8.91E+02
DEOUTH2	2.19E+01	4.37E+01	7.08E+00	3.16E+02	4.47E+01	1.05E+01	1.78E+02	1.70E+01	2.09E+01	8.71E+01	4.17E+00	1.45E+01	5.01E+01
DEOUTH3	1.95E+00	3.02E+00	4.90E-01	2.19E+01	4.47E+01	8.13E-01	1.23E+01	1.51E+01	1.70E+00	6.31E+00	3.72E+00	1.12E+01	3.55E+00
DEOUSK1	4.27E+03	3.55E+03	2.14E+01	6.17E+04	2.88E+03	4.90E+01	3.80E+04	7.76E+02	2.09E+02	1.62E+04	7.76E+01	1.45E+01	5.01E+03
DEOUSK2	1.48E+02	1.91E+02	1.12E+00	4.27E+03	3.80E+03	2.09E+00	2.75E+03	1.32E+03	1.29E+01	7.24E+02	5.62E+01	2.88E+01	2.82E+02
DEOUSK3	1.38E+01	1.23E+01	9.77E-02	2.40E+02	2.45E+03	2.51E-01	1.51E+02	6.03E+02	1.05E+00	4.68E+01	4.47E+01	1.74E+01	2.00E+01
RECMMT1	1.29E-01	1.00E+00	9.77E-01	1.00E+00	1.02E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	7.76E+00	1.00E+00
RECMMT2	4.07E-03	5.89E-02	.00E+00	1.00E+00	9.99E+99	.00E+00	1.00E+00	9.99E+99	.00E+00	2.29E-01	9.99E+99	2.45E+02	1.12E-01
RECMMT3	.00E+00	.00E+00	.00E+00	6.46E-02	9.99E+99	.00E+00	1.32E-02	9.99E+99	.00E+00	.00E+00	9.99E+99	9.99E+99	.00E+00
RECMBM1	8.13E-02	1.00E+00	3.39E-02	1.00E+00	2.95E+01	1.66E-01	1.00E+00	6.03E+00	7.94E-01	1.00E+00	1.26E+00	1.23E+01	1.00E+00

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    RECMBM2     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                      .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMBM3     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                      .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMMB1    1.07E+00  1.29E-02  |  .00E+00  9.77E-01  9.99E+99  |  .00E+00  9.33E-01  9.99E+99  |
                      .00E+00  6.46E-01  9.99E+99  ||  9.12E-01  ||  7.94E-02
    RECMMB2    8.13E-02  1.58E-02  |  .00E+00  1.00E+00  9.99E+99  |  .00E+00  9.55E-01  9.99E+99  |
                      .00E+00  8.32E-01  9.99E+99  ||  1.23E+01  ||  2.51E-01
    RECMMB3     .00E+00   .00E+00  |  .00E+00  7.41E-01  9.99E+99  |  .00E+00  2.00E-01  9.99E+99  |
                      .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMLU1     .00E+00   .00E+00  |  .00E+00  2.95E-02  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                      .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMLU2     .00E+00   .00E+00  |  .00E+00  2.51E-02  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                      .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMLU3     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                      .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMTH1    1.20E-01   .00E+00  |  .00E+00  8.32E-02  9.99E+99  |  .00E+00  3.72E-02  9.99E+99  |
                      .00E+00   .00E+00  9.99E+99  ||  6.92E-01  ||   .00E+00
ENDPOINT      REF      MEDIAN   |    5 %      95 %      FAC1    |   10 %      90 %      FAC2    |   25 %
                             75 %      FAC3    ||   95%/REF  ||        MNC
-------------------------------------------------------------------------------------------------------------
                            ------------------------------------------------------
    RECMTH2     .00E+00   .00E+00  |  .00E+00  3.55E-02  9.99E+99  |  .00E+00  1.51E-02  9.99E+99  |
                      .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMTH3     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                      .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMSK1    9.50E-01   .00E+00  |  .00E+00  9.31E-01  9.99E+99  |  .00E+00  8.91E-01  9.99E+99  |
                      .00E+00  5.37E-01  9.99E+99  ||  9.80E-01  ||   .00E+00
    RECMSK2    8.13E-02   .00E+00  |  .00E+00  9.52E-01  9.99E+99  |  .00E+00  9.18E-01  9.99E+99  |
                      .00E+00  7.94E-01  9.99E+99  ||  1.17E+01  ||  8.91E-02
    RECMSK3     .00E+00   .00E+00  |  .00E+00  7.08E-01  9.99E+99  |  .00E+00  2.00E-01  9.99E+99  |
                      .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RELVMT1    1.00E+00  1.00E+00  | 8.51E-01  1.00E+00  1.17E+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  9.33E-02  |  .00E+00  1.00E+00  9.99E+99  |  .00E+00  1.00E+00  9.99E+99  | 2.14E-
                       02  7.24E-01  3.39E+01  ||  2.00E+01  ||  1.58E-01
    RELVMT3     .00E+00   .00E+00  |  .00E+00  1.55E-01  9.99E+99  |  .00E+00  1.02E-01  9.99E+99  |
                      .00E+00  3.24E-02  9.99E+99  ||  9.99E+99  ||  2.51E-03
    RELVBM1    1.00E+00  1.00E+00  | 1.95E-02  1.00E+00  5.13E+01  | 1.20E-01  1.00E+00  8.32E+00  |
                     1.00E+00  1.00E+00  1.00E+00  ||  1.00E+00  ||  1.00E+00
    RELVBM2     .00E+00   .00E+00  |  .00E+00  2.19E-01  9.99E+99  |  .00E+00  2.75E-02  9.99E+99  |
                      .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RELVBM3     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                      .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RELVMB1    1.02E+00  1.38E-01  |  .00E+00  1.12E+00  9.99E+99  |  .00E+00  1.00E+00  9.99E+99  |
                      .00E+00  8.71E-01  9.99E+99  ||  1.10E+00  ||  3.55E-01
    RELVMB2    9.55E-01  3.80E-01  |  .00E+00  1.66E+00  9.99E+99  |  .00E+00  1.12E+00  9.99E+99  |
                      .00E+00  9.33E-01  9.99E+99  ||  1.74E+00  ||  7.94E-01
    RELVMB3     .00E+00   .00E+00  |  .00E+00  9.55E-01  9.99E+99  |  .00E+00  9.12E-01  9.99E+99  |
                      .00E+00  9.12E-02  9.99E+99  ||  9.99E+99  ||   .00E+00
    RELVLU1     .00E+00   .00E+00  |  .00E+00  1.26E-02  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                      .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RELVLU2     .00E+00   .00E+00  |  .00E+00  6.46E-02  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                      .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RELVLU3     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                      .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RELVTH1    8.13E-02   .00E+00  |  .00E+00  1.32E-01  9.99E+99  |  .00E+00  6.61E-02  9.99E+99  |
                      .00E+00   .00E+00  9.99E+99  ||  1.62E+00  ||   .00E+00
    RELVTH2     .00E+00   .00E+00  |  .00E+00  1.12E-01  9.99E+99  |  .00E+00  6.03E-02  9.99E+99  |
                      .00E+00  1.23E-02  9.99E+99  ||  9.99E+99  ||   .00E+00
    RELVTH3     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                      .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RELVSK1    9.50E-01   .00E+00  |  .00E+00  9.52E-01  9.99E+99  |  .00E+00  9.16E-01  9.99E+99  |
                      .00E+00  7.59E-01  9.99E+99  ||  1.00E+00  ||  3.98E-02
    RELVSK2    9.50E-01  8.13E-02  |  .00E+00  9.61E-01  9.99E+99  |  .00E+00  9.39E-01  9.99E+99  |
                      .00E+00  8.70E-01  9.99E+99  ||  1.01E+00  ||  6.31E-01
    RELVSK3     .00E+00   .00E+00  |  .00E+00  9.42E-01  9.99E+99  |  .00E+00  9.09E-01  9.99E+99  |
                      .00E+00  7.41E-02  9.99E+99  ||  9.99E+99  ||   .00E+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  ||  1.00E+00
REOUMT2    5.01E-02  8.71E-01  |  .00E+00  1.00E+00  9.99E+99  | 1.20E-02  1.00E+00  8.32E+01  | 1.10E-
                       01  1.00E+00  9.12E+00  ||  2.00E+01  ||  8.91E-01
    REOUMT3     .00E+00   .00E+00  |  .00E+00  1.66E-01  9.99E+99  |  .00E+00  1.32E-01  9.99E+99  |
                      .00E+00  5.50E-02  9.99E+99  ||  9.99E+99  ||  2.00E-02
    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  ||  1.00E+00
    REOUBM2     .00E+00  4.90E-02  |  .00E+00  1.00E+00  9.99E+99  |  .00E+00  1.00E+00  9.99E+99  |
                      .00E+00  9.12E-01  9.99E+99  ||  9.99E+99  ||  2.00E-01
    REOUBM3     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                      .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    REOUMB1    6.61E-01  4.17E-02  |  .00E+00  1.00E+00  9.99E+99  |  .00E+00  9.55E-01  9.99E+99  |
                      .00E+00  7.41E-01  9.99E+99  ||  1.51E+00  ||  1.58E-01
    REOUMB2    9.55E-01  3.55E-01  |  .00E+00  1.66E+00  9.99E+99  |  .00E+00  1.26E+00  9.99E+99  |
                      .00E+00  9.55E-01  9.99E+99  ||  1.74E+00  ||  7.08E-01
    REOUMB3     .00E+00   .00E+00  |  .00E+00  9.77E-01  9.99E+99  |  .00E+00  9.33E-01  9.99E+99  |
                      .00E+00  3.72E-01  9.99E+99  ||  9.99E+99  ||  3.98E-02
    REOULU1     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                      .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    REOULU2     .00E+00   .00E+00  |  .00E+00  1.02E-01  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                      .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    REOULU3     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                      .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    REOUTH1     .00E+00   .00E+00  |  .00E+00  3.39E-02  9.99E+99  |  .00E+00  1.20E-02  9.99E+99  |
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                .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
REOUTH2   .00E+00   .00E+00  |  .00E+00  9.12E-02  9.99E+99  |  .00E+00  3.09E-02  9.99E+99  |
                .00E+00  1.05E-02  9.99E+99  ||  9.99E+99  ||   .00E+00
REOUTH3   .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
REOUSK1   4.68E-01   .00E+00  |  .00E+00  9.31E-01  9.99E+99  |  .00E+00  8.91E-01  9.99E+99  |
                .00E+00  1.82E-01  9.99E+99  ||  1.99E+00  ||   .00E+00
REOUSK2   9.33E-01  2.34E-02  |  .00E+00  9.55E-01  9.99E+99  |  .00E+00  9.28E-01  9.99E+99  |
                .00E+00  8.16E-01  9.99E+99  ||  1.02E+00  ||  2.82E-01
REOUSK3   .00E+00   .00E+00  |  .00E+00  9.47E-01  9.99E+99  |  .00E+00  9.12E-01  9.99E+99  |
                .00E+00  3.24E-01  9.99E+99  ||  9.99E+99  ||   .00E+00
PECMMT    1.00E+03  1.78E+04  | 2.34E+03  1.05E+05  4.47E+01  | 4.07E+03  6.31E+04  1.55E+01  |
                8.71E+03  4.17E+04  4.79E+00  ||  1.05E+02  ||  3.55E+04
PECMBM    3.31E+02  2.57E+03  | 3.98E+02  1.32E+04  3.31E+01  | 5.89E+02  1.05E+04  1.78E+01  |
                1.15E+03  7.08E+03  6.17E+00  ||  3.98E+01  ||  5.01E+03
PECMMB    1.38E+04  3.63E+04  | 3.39E+02  4.79E+05  1.41E+03  | 7.94E+02  2.75E+05  3.47E+02  |
                8.91E+03  1.05E+05  1.17E+01  ||  3.47E+01  ||  1.26E+05
PECMLU    1.23E+02  1.48E+03  |  .00E+00  5.89E+04  9.99E+99  |  .00E+00  3.02E+04  9.99E+99  |
                .00E+00  9.33E+03  9.99E+99  ||  4.79E+02  ||  1.12E+04
PECMTH    2.57E+02  1.51E+02  |  .00E+00  1.20E+04  9.99E+99  |  .00E+00  4.79E+03  9.99E+99  |
                .00E+00  1.41E+03  9.99E+99  ||  4.68E+01  ||  1.78E+03
PECMSK    1.38E+04  1.78E+04  |  .00E+00  4.47E+05  9.99E+99  |  .00E+00  2.40E+05  9.99E+99  |
                .00E+00  9.12E+04  9.99E+99  ||  3.24E+01  ||  1.12E+05
PELVMT    6.76E+03  3.98E+04  | 3.80E+03  2.19E+05  5.75E+01  | 7.08E+03  1.62E+05  2.29E+01  |
                1.78E+04  9.77E+04  5.50E+00  ||  3.24E+01  ||  1.00E+05
PELVBM    7.59E+02  3.16E+03  | 3.63E+02  2.09E+04  5.75E+01  | 6.46E+02  1.66E+04  2.57E+01  |
                1.35E+03  7.76E+03  5.75E+00  ||  2.75E+01  ||  6.31E+03
PELVMB    6.76E+04  9.33E+04  | 2.95E+03  9.33E+05  3.16E+02  | 8.13E+03  7.76E+05  9.55E+01  |
                3.02E+04  3.09E+05  1.02E+01  ||  1.38E+01  ||  4.47E+05
PELVLU    .00E+00  2.24E+03  |  .00E+00  9.12E+04  9.99E+99  |  .00E+00  5.01E+04  9.99E+99  |
                .00E+00  1.74E+04  9.99E+99  ||  9.99E+99  ||  2.51E+04
PELVTH    1.32E+03  1.35E+03  |  .00E+00  4.27E+04  9.99E+99  |  .00E+00  3.02E+04  9.99E+99  |
                7.08E+01  7.24E+03  1.02E+02  ||  3.24E+01  ||  1.26E+04
PELVSK    6.76E+04  5.13E+04  |  .00E+00  8.71E+05  9.99E+99  |  .00E+00  7.08E+05  9.99E+99  |
                6.31E+01  2.75E+05  4.37E+03  ||  1.29E+01  ||  3.98E+05
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Extent of the uncertainty for the 99th percentile of the endpoints for the UK1 source term

ENDPOINT	REF	MEDIAN	5 %	95 %	FAC1	10 %	90 %	FAC2	25 %	75 %	FAC3	95%/REF	MNC
CGIOD1	1.07E+12	1.15E+12	3.98E+10	3.39E+12	8.51E+01	1.23E+11	2.75E+12	2.24E+01	4.17E+11	2.00E+12	4.79E+00	3.16E+00	1.41E+12
CGIOD2	3.31E+10	4.57E+10	5.01E+09	1.00E+11	2.00E+01	1.32E+10	8.32E+10	6.31E+00	2.82E+10	6.61E+10	2.34E+00	3.02E+00	4.47E+10
CGIOD3	3.39E+09	2.63E+09	5.75E+08	5.01E+09	8.71E+00	9.55E+08	4.57E+09	4.79E+00	1.55E+09	3.72E+09	2.40E+00	1.48E+00	2.51E+09
CGCAE1	8.32E+09	9.12E+09	2.57E+08	8.51E+10	3.31E+02	8.51E+08	7.24E+10	8.51E+01	2.45E+09	4.27E+10	1.74E+01	1.02E+01	2.82E+10
CGCAE2	5.50E+08	9.55E+08	5.25E+07	3.98E+09	7.59E+01	1.20E+08	3.47E+09	2.88E+01	2.95E+08	2.40E+09	8.13E+00	7.24E+00	1.58E+09
CGCAE3	6.17E+07	9.55E+07	8.13E+06	2.34E+08	2.88E+01	1.58E+07	2.00E+08	1.26E+01	3.24E+07	1.51E+08	4.68E+00	3.80E+00	1.00E+08
CAIOD1	1.07E+14	7.24E+13	1.82E+13	2.40E+14	1.32E+01	2.24E+13	2.24E+14	1.00E+01	3.63E+13	1.74E+14	4.79E+00	2.24E+00	7.94E+13
CAIOD2	2.82E+12	4.27E+12	3.80E+11	2.40E+13	6.31E+01	4.90E+11	1.91E+13	3.89E+01	9.55E+11	1.17E+13	1.23E+01	8.51E+00	6.31E+12
CAIOD3	2.63E+11	3.09E+11	2.14E+10	1.62E+12	7.59E+01	2.95E+10	1.17E+12	3.98E+01	5.50E+10	6.61E+11	1.20E+01	6.17E+00	3.55E+11
CACAE1	6.31E+12	6.17E+12	1.82E+12	1.23E+13	6.76E+00	2.34E+12	1.17E+13	5.01E+00	3.55E+12	1.00E+13	2.82E+00	1.95E+00	5.62E+12
CACAE2	3.98E+11	4.27E+11	1.38E+11	1.58E+12	1.15E+01	1.70E+11	1.41E+12	8.32E+00	2.45E+11	8.51E+11	3.47E+00	3.98E+00	5.01E+11
CACAE3	2.51E+10	2.95E+10	7.59E+09	1.32E+11	1.74E+01	9.77E+09	1.02E+11	1.05E+01	1.62E+10	5.62E+10	3.47E+00	5.25E+00	3.55E+10
DECMBM1	2.57E+01	3.72E+01	1.00E+01	9.33E+01	9.33E+00	1.35E+01	7.94E+01	5.89E+00	2.19E+01	5.50E+01	2.51E+00	3.63E+00	3.98E+01
DECMBM2	1.29E+00	2.69E+00	9.33E-01	9.55E+00	1.02E+01	1.20E+00	7.59E+00	6.31E+00	1.62E+00	4.90E+00	3.02E+00	7.41E+00	3.16E+00
DECMBM3	7.76E-02	1.12E-01	5.13E-02	3.47E-01	6.76E+00	6.03E-02	2.69E-01	4.47E+00	7.94E-02	1.74E-01	2.19E+00	4.47E+00	1.26E-01
DECMTH1	9.55E+02	1.86E+03	2.09E+02	1.12E+04	5.37E+01	3.39E+02	7.59E+03	2.24E+01	6.92E+02	3.89E+03	5.62E+00	1.17E+01	2.51E+03
DECMTH2	2.69E+01	8.51E+01	9.77E+00	7.08E+02	7.24E+01	1.55E+01	4.90E+02	3.16E+01	3.47E+01	2.57E+02	7.41E+00	2.63E+01	1.58E+02
DECMTH3	1.15E+00	3.02E+00	4.57E-01	2.69E+01	5.89E+01	6.76E-01	1.62E+01	2.40E+01	1.32E+00	7.94E+00	6.03E+00	2.34E+01	5.01E+00
DECMSK1	3.39E+03	3.39E+03	3.24E+01	7.94E+04	2.45E+03	7.08E+01	5.13E+04	7.24E+02	3.98E+02	1.66E+04	4.17E+01	2.34E+01	1.26E+04
DECMSK2	1.05E+02	1.66E+02	1.45E+00	4.57E+03	3.16E+03	2.75E+00	2.75E+03	1.00E+03	2.45E+01	7.24E+02	2.95E+01	4.37E+01	6.31E+02
DECMSK3	4.79E+00	7.24E+00	6.46E-02	1.70E+02	2.63E+03	1.35E-01	9.33E+01	6.92E+02	7.59E-01	2.63E+01	3.47E+01	3.55E+01	2.00E+01
DELVBM1	6.61E+01	1.20E+02	2.40E+01	5.13E+02	2.14E+01	3.31E+01	3.98E+02	1.20E+01	6.61E+01	2.63E+02	3.98E+00	7.76E+00	1.78E+02
DELVBM2	2.88E+00	8.32E+00	2.29E+00	2.63E+01	1.15E+01	3.24E+00	2.04E+01	6.31E+00	4.68E+00	1.32E+01	2.82E+00	9.12E+00	1.00E+01
DELVBM3	2.69E-01	5.50E-01	1.70E-01	1.78E+00	1.05E+01	2.14E-01	1.41E+00	6.61E+00	3.63E-01	8.51E-01	2.34E+00	6.61E+00	6.31E-01
DELVTH1	2.29E+03	3.47E+03	4.68E+02	2.09E+04	4.47E+01	7.41E+02	1.45E+04	1.95E+01	1.45E+03	7.08E+03	4.90E+00	9.12E+00	4.47E+03
DELVTH2	6.03E+01	2.04E+02	2.24E+01	1.82E+03	8.13E+01	3.02E+01	1.15E+03	3.80E+01	7.41E+01	5.50E+02	7.41E+00	3.02E+01	3.55E+02
DELVTH3	5.37E+00	1.26E+01	1.38E+00	1.23E+02	8.91E+01	2.24E+00	7.94E+01	3.55E+01	4.79E+00	3.55E+01	7.41E+00	2.29E+01	2.24E+01
DELVSK1	1.82E+04	1.55E+04	1.32E+02	3.02E+05	2.29E+03	2.95E+02	2.14E+05	7.24E+02	1.48E+03	7.24E+04	4.90E+01	1.66E+01	4.47E+04
DELVSK2	5.13E+02	7.76E+02	7.59E+00	2.19E+04	2.88E+03	1.74E+01	1.12E+04	6.46E+02	1.10E+02	3.09E+03	2.82E+01	4.27E+01	2.82E+03
DELVSK3	4.27E+01	4.27E+01	5.89E-01	1.23E+03	2.09E+03	1.26E+00	6.17E+02	4.90E+02	7.08E+00	2.09E+02	2.95E+01	2.88E+01	1.58E+02
DEOUBM1	4.27E+02	4.57E+02	8.32E+01	2.14E+03	2.57E+01	1.10E+02	1.51E+03	1.38E+01	2.34E+02	9.33E+02	3.98E+00	5.01E+00	7.08E+02
DEOUBM2	1.86E+01	2.95E+01	7.94E+00	9.33E+01	1.17E+01	1.12E+01	6.61E+01	5.89E+00	1.95E+01	4.37E+01	2.24E+00	5.01E+00	3.55E+01
DEOUBM3	1.66E+00	2.00E+00	6.76E-01	4.90E+00	7.24E+00	8.71E-01	4.17E+00	4.79E+00	1.35E+00	2.88E+00	2.14E+00	2.95E+00	2.24E+00
DEOUTH1	4.47E+03	5.89E+03	1.32E+03	2.63E+04	2.00E+01	1.55E+03	2.09E+04	1.35E+01	2.69E+03	1.05E+04	3.89E+00	5.89E+00	7.08E+03
DEOUTH2	1.20E+02	3.63E+02	5.50E+01	2.40E+03	4.37E+01	7.59E+01	1.74E+03	2.29E+01	1.35E+02	7.41E+02	5.50E+00	2.00E+01	5.01E+02
DEOUTH3	1.17E+01	2.09E+01	3.89E+00	1.70E+02	4.37E+01	5.01E+00	1.12E+02	2.24E+01	9.12E+00	4.68E+01	5.13E+00	1.45E+01	3.16E+01
DEOUSK1	3.31E+04	2.63E+04	2.63E+02	4.47E+05	1.70E+03	5.37E+02	2.69E+05	5.01E+02	2.14E+03	9.77E+04	4.57E+01	1.35E+01	6.31E+04
DEOUSK2	9.33E+02	1.23E+03	1.26E+01	3.09E+04	2.45E+03	3.09E+01	1.41E+04	4.57E+02	1.70E+02	5.01E+03	2.95E+01	3.31E+01	3.98E+03
DEOUSK3	7.76E+01	6.92E+01	7.76E-01	1.62E+03	2.09E+03	2.24E+00	8.71E+02	3.89E+02	1.05E+01	3.24E+02	3.09E+01	2.09E+01	2.24E+02
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	1.00E+00
RECMMT2	5.01E-02	1.00E+00	9.12E-02	1.00E+00	1.10E+01	1.95E-01	1.00E+00	5.13E+00	1.00E+00	1.00E+00	1.00E+00	2.00E+01	1.00E+00
RECMMT3	.00E+00	2.57E-03	.00E+00	4.90E-01	9.99E+99	.00E+00	1.58E-01	9.99E+99	.00E+00	6.92E-02	9.99E+99	9.99E+99	6.31E-02
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	1.00E+00

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RECMBM2     .00E+00  2.19E-01  |  .00E+00  1.00E+00  9.99E+99  |  .00E+00  1.00E+00  9.99E+99  | 1.74E-
                        02  9.33E-01  5.37E+01  ||  9.99E+99  ||  3.98E-01
    RECMBM3     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                       .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
RECMMB1    1.82E+00  9.33E-01  | 1.55E-02  2.09E+00  1.35E+02  | 7.08E-02  1.90E+00  2.68E+01  | 3.72E-
                        01  1.32E+00  3.55E+00  ||  1.15E+00  ||  1.00E+00
RECMMB2    1.00E+00  9.33E-01  |  .00E+00  1.94E+00  9.99E+99  | 2.88E-02  1.70E+00  5.89E+01  | 2.57E-
                        01  1.12E+00  4.37E+00  ||  1.94E+00  ||  1.00E+00
    RECMMB3     .00E+00  1.55E-02  |  .00E+00  9.77E-01  9.99E+99  |  .00E+00  9.55E-01  9.99E+99  |
                       .00E+00  7.94E-01  9.99E+99  ||  9.99E+99  ||  7.08E-01
    RECMLU1     .00E+00  1.91E-02  |  .00E+00  9.55E-01  9.99E+99  |  .00E+00  9.12E-01  9.99E+99  |
                       .00E+00  5.62E-01  9.99E+99  ||  9.99E+99  ||  2.51E-01
    RECMLU2     .00E+00   .00E+00  |  .00E+00  9.77E-01  9.99E+99  |  .00E+00  9.33E-01  9.99E+99  |
                       .00E+00  5.25E-01  9.99E+99  ||  9.99E+99  ||  2.51E-01
    RECMLU3     .00E+00   .00E+00  |  .00E+00  1.55E-01  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                       .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMTH1    5.13E-01  2.09E-02  |  .00E+00  6.03E-01  9.99E+99  |  .00E+00  4.27E-01  9.99E+99  |
                       .00E+00  1.35E-01  9.99E+99  ||  1.17E+00  ||  1.00E-01
ENDPOINT      REF      MEDIAN   |    5 %      95 %      FAC1    |   10 %      90 %      FAC2    |   25 %
                              75 %      FAC3    ||   95%/REF  ||        MNC
-------------------------------------------------------------------------------------------------------------
                              ------------------------------------------------------
    RECMTH2    3.24E-02  1.17E-02  |  .00E+00  5.01E-01  9.99E+99  |  .00E+00  2.29E-01  9.99E+99  |
                       .00E+00  6.76E-02  9.99E+99  ||  1.55E+01  ||  4.47E-02
    RECMTH3     .00E+00   .00E+00  |  .00E+00  1.26E-02  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                       .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMSK1    9.50E-01  7.59E-01  |  .00E+00  9.64E-01  9.99E+99  |  .00E+00  9.49E-01  9.99E+99  |
                       .00E+00  9.10E-01  9.99E+99  ||  1.01E+00  ||  8.91E-01
    RECMSK2    9.50E-01  7.99E-01  |  .00E+00  9.64E-01  9.99E+99  |  .00E+00  9.51E-01  9.99E+99  |
                       .00E+00  9.16E-01  9.99E+99  ||  1.01E+00  ||  8.91E-01
    RECMSK3     .00E+00   .00E+00  |  .00E+00  9.51E-01  9.99E+99  |  .00E+00  9.19E-01  9.99E+99  |
                       .00E+00  7.41E-01  9.99E+99  ||  9.99E+99  ||  6.31E-01
    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  1.00E+00  1.00E+00  ||  1.00E+00  ||  1.00E+00
    RELVMT2    5.01E-02  1.00E+00  | 1.48E-01  1.00E+00  6.76E+00  | 5.75E-01  1.00E+00  1.74E+00  |
                      1.00E+00  1.00E+00  1.00E+00  ||  2.00E+01  ||  1.00E+00
    RELVMT3    5.00E-02  6.03E-02  |  .00E+00  1.00E+00  9.99E+99  |  .00E+00  1.00E+00  9.99E+99  |
                       .00E+00  1.58E-01  9.99E+99  ||  2.00E+01  ||  1.58E-01
    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  1.00E+00  1.00E+00  ||  1.00E+00  ||  1.00E+00
RELVBM2     .00E+00  6.92E-01  |  .00E+00  1.00E+00  9.99E+99  |  .00E+00  1.00E+00  9.99E+99  | 6.17E-
                        02  1.00E+00  1.62E+01  ||  9.99E+99  ||  8.91E-01
    RELVBM3     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                       .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
RELVMB1    2.34E+00  1.32E+00  | 1.95E-01  2.75E+00  1.41E+01  | 4.27E-01  2.40E+00  5.62E+00  | 8.71E-
                        01  1.95E+00  2.24E+00  ||  1.17E+00  ||  1.58E+00
RELVMB2    1.48E+00  1.12E+00  | 4.57E-02  2.51E+00  5.50E+01  | 1.41E-01  2.34E+00  1.66E+01  | 8.51E-
                        01  1.91E+00  2.24E+00  ||  1.70E+00  ||  1.58E+00
RELVMB3    8.91E-01  4.79E-01  |  .00E+00  1.32E+00  9.99E+99  |  .00E+00  1.05E+00  9.99E+99  | 1.35E-
                        02  9.33E-01  6.92E+01  ||  1.48E+00  ||  8.91E-01
    RELVLU1     .00E+00  1.07E-02  |  .00E+00  9.42E-01  9.99E+99  |  .00E+00  8.51E-01  9.99E+99  |
                       .00E+00  5.37E-01  9.99E+99  ||  9.99E+99  ||  1.41E-01
    RELVLU2     .00E+00  1.26E-02  |  .00E+00  9.59E-01  9.99E+99  |  .00E+00  9.12E-01  9.99E+99  |
                       .00E+00  5.25E-01  9.99E+99  ||  9.99E+99  ||  3.16E-01
    RELVLU3     .00E+00   .00E+00  |  .00E+00  8.13E-01  9.99E+99  |  .00E+00  9.55E-02  9.99E+99  |
                       .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
RELVTH1    5.62E-01  5.75E-02  |  .00E+00  7.94E-01  9.99E+99  |  .00E+00  6.92E-01  9.99E+99  | 1.02E-
                        02  2.82E-01  2.75E+01  ||  1.41E+00  ||  1.78E-01
    RELVTH2    1.62E-01  4.68E-02  |  .00E+00  7.94E-01  9.99E+99  |  .00E+00  6.31E-01  9.99E+99  |
                       .00E+00  2.34E-01  9.99E+99  ||  4.90E+00  ||  1.41E-01
    RELVTH3     .00E+00   .00E+00  |  .00E+00  1.74E-01  9.99E+99  |  .00E+00  1.07E-01  9.99E+99  |
                       .00E+00  1.51E-02  9.99E+99  ||  9.99E+99  ||   .00E+00
    RELVSK1    9.50E-01  8.31E-01  |  .00E+00  9.65E-01  9.99E+99  |  .00E+00  9.55E-01  9.99E+99  |
                       .00E+00  9.26E-01  9.99E+99  ||  1.02E+00  ||  8.91E-01
    RELVSK2    9.50E-01  8.42E-01  |  .00E+00  9.65E-01  9.99E+99  |  .00E+00  9.56E-01  9.99E+99  |
                       .00E+00  9.30E-01  9.99E+99  ||  1.02E+00  ||  8.91E-01
    RELVSK3    8.91E-01  1.58E-01  |  .00E+00  9.62E-01  9.99E+99  |  .00E+00  9.42E-01  9.99E+99  |
                       .00E+00  8.78E-01  9.99E+99  ||  1.08E+00  ||  8.91E-01
    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  ||  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  ||  1.00E+00
REOUMT3    5.01E-02  1.12E-01  |  .00E+00  1.00E+00  9.99E+99  |  .00E+00  1.00E+00  9.99E+99  | 3.80E-
                        02  7.94E-01  2.09E+01  ||  2.00E+01  ||  2.00E-01
    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  ||  1.00E+00
    REOUBM2    1.00E+00  1.00E+00  | 4.47E-01  1.00E+00  2.24E+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     .00E+00   .00E+00  |  .00E+00  6.03E-02  9.99E+99  |  .00E+00  1.38E-02  9.99E+99  |
                       .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
REOUMB1    1.91E+00  1.15E+00  | 3.24E-01  2.45E+00  7.59E+00  | 5.01E-01  2.04E+00  4.07E+00  | 8.51E-
                        01  1.74E+00  2.04E+00  ||  1.29E+00  ||  1.41E+00
REOUMB2    1.86E+00  1.45E+00  | 2.09E-01  2.63E+00  1.26E+01  | 3.98E-01  2.29E+00  5.75E+00  | 9.33E-
                        01  1.91E+00  2.04E+00  ||  1.41E+00  ||  1.78E+00
REOUMB3    9.77E-01  9.12E-01  |  .00E+00  1.91E+00  9.99E+99  |  .00E+00  1.74E+00  9.99E+99  | 1.20E-
                        01  1.12E+00  9.33E+00  ||  1.95E+00  ||  8.91E-01
    REOULU1     .00E+00   .00E+00  |  .00E+00  9.41E-01  9.99E+99  |  .00E+00  7.41E-01  9.99E+99  |
                       .00E+00  1.35E-01  9.99E+99  ||  9.99E+99  ||  1.78E-02
    REOULU2     .00E+00   .00E+00  |  .00E+00  9.59E-01  9.99E+99  |  .00E+00  8.71E-01  9.99E+99  |
                       .00E+00  3.98E-01  9.99E+99  ||  9.99E+99  ||  1.78E-01
    REOULU3     .00E+00   .00E+00  |  .00E+00  9.12E-01  9.99E+99  |  .00E+00  5.01E-01  9.99E+99  |
                       .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    REOUTH1    6.46E-02  1.91E-02  |  .00E+00  6.31E-01  9.99E+99  |  .00E+00  4.27E-01  9.99E+99  |
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		.00E+00	1.12E-01	9.99E+99	||	9.77E+00	||	5.62E-02			
REOUTH2	5.37E-02	3.24E-02	|	.00E+00	6.61E-01	9.99E+99	|	.00E+00	4.37E-01	9.99E+99	|
		.00E+00	1.41E-01	9.99E+99	||	1.23E+01	||	8.91E-02			
REOUTH3	.00E+00	.00E+00	|	.00E+00	2.82E-01	9.99E+99	|	.00E+00	1.58E-01	9.99E+99	|
		.00E+00	2.75E-02	9.99E+99	||	9.99E+99	||	1.58E-02			
REOUSK1	9.50E-01	7.41E-01	|	.00E+00	9.62E-01	9.99E+99	|	.00E+00	9.45E-01	9.99E+99	|
		.00E+00	8.91E-01	9.99E+99	||	1.01E+00	||	8.91E-01			
REOUSK2	9.50E-01	8.31E-01	|	.00E+00	9.64E-01	9.99E+99	|	.00E+00	9.53E-01	9.99E+99	|
		.00E+00	9.16E-01	9.99E+99	||	1.01E+00	||	8.91E-01			
REOUSK3	9.50E-01	4.57E-01	|	.00E+00	9.62E-01	9.99E+99	|	.00E+00	9.44E-01	9.99E+99	|
		.00E+00	9.02E-01	9.99E+99	||	1.01E+00	||	8.91E-01			
PECMMT	1.51E+03	3.47E+04	|	4.90E+03	1.62E+05	3.31E+01	|	8.51E+03	1.24E+05	1.45E+01	|
		1.82E+04	6.31E+04	3.47E+00	||	1.07E+02	||	8.91E+04			
PECMBM	1.32E+03	8.32E+03	|	7.76E+02	3.39E+04	4.37E+01	|	1.15E+03	3.02E+04	2.63E+01	|
		2.23E+03	1.91E+04	8.53E+00	||	2.57E+01	||	1.41E+04			
PECMMB	2.88E+04	6.76E+04	|	1.02E+03	7.24E+05	7.08E+02	|	2.04E+03	4.37E+05	2.14E+02	|
		1.95E+04	1.74E+05	8.91E+00	||	2.51E+01	||	3.98E+05			
PECMLU	2.57E+02	3.72E+03	|	.00E+00	1.10E+05	9.99E+99	|	.00E+00	7.19E+04	9.99E+99	|
		1.05E+01	2.09E+04	2.00E+03	||	4.27E+02	||	5.62E+04			
PECMTH	4.87E+02	3.59E+02	|	.00E+00	2.09E+04	9.99E+99	|	.00E+00	1.12E+04	9.99E+99	|
		.00E+00	3.02E+03	9.99E+99	||	4.29E+01	||	8.91E+03			
PECMSK	2.88E+04	3.72E+04	|	.00E+00	6.17E+05	9.99E+99	|	.00E+00	3.80E+05	9.99E+99	|
		5.13E+00	1.45E+05	2.82E+04	||	2.14E+01	||	3.55E+05			
PELVMT	1.12E+04	7.76E+04	|	6.76E+03	3.47E+05	5.13E+01	|	1.38E+04	2.82E+05	2.04E+01	|
		3.63E+04	1.48E+05	4.07E+00	||	3.09E+01	||	2.24E+05			
PELVBM	1.91E+03	6.92E+03	|	7.76E+02	5.50E+04	7.08E+01	|	1.48E+03	4.07E+04	2.75E+01	|
		2.82E+03	2.14E+04	7.59E+00	||	2.88E+01	||	2.24E+04			
PELVMB	1.48E+05	1.66E+05	|	7.08E+03	1.48E+06	2.09E+02	|	1.82E+04	1.12E+06	6.17E+01	|
		6.03E+04	5.13E+05	8.51E+00	||	1.00E+01	||	1.00E+06			
PELVLU	.00E+00	5.37E+03	|	.00E+00	2.04E+05	9.99E+99	|	.00E+00	1.00E+05	9.99E+99	|
		.00E+00	4.27E+04	9.99E+99	||	9.99E+99	||	1.41E+05			
PELVTH	2.63E+03	2.69E+03	|	.00E+00	8.32E+04	9.99E+99	|	.00E+00	5.25E+04	9.99E+99	|
		2.09E+02	1.78E+04	8.51E+01	||	3.16E+01	||	3.98E+04			
PELVSK	1.45E+05	1.07E+05	|	.00E+00	1.41E+06	9.99E+99	|	.00E+00	1.07E+06	9.99E+99	|
		1.55E+02	4.17E+05	2.69E+03	||	9.77E+00	||	8.91E+05			

Extent of the uncertainty for the mean value of the endpoints for the CB2 source term

ENDPOINT	REF	MEDIAN	5 %	95 %	FAC1	10 %	90 %	FAC2	25 %	75 %	FAC3	95%/REF	MNC
CGIOD1	1.05E+08	1.28E+08	6.37E+06	3.96E+08	6.21E+01	1.52E+07	3.54E+08	2.32E+01	4.68E+07	2.63E+08	5.63E+00	3.76E+00	1.64E+08
CGIOD2	3.44E+06	5.33E+06	6.08E+05	1.12E+07	1.85E+01	1.69E+06	9.82E+06	5.81E+00	3.88E+06	7.97E+06	2.06E+00	3.27E+00	6.10E+06
CGIOD3	3.59E+05	3.47E+05	8.32E+04	5.85E+05	7.03E+00	1.18E+05	5.50E+05	4.65E+00	2.16E+05	4.57E+05	2.12E+00	1.63E+00	3.41E+05
CGIOD4	2.30E+04	1.42E+04	1.12E+03	2.87E+04	2.56E+01	1.50E+03	2.66E+04	1.77E+01	4.85E+03	2.03E+04	4.19E+00	1.25E+00	1.37E+04
CGCAE1	4.35E+06	6.85E+06	2.55E+05	5.19E+07	2.04E+02	5.96E+05	4.55E+07	7.62E+01	1.79E+06	2.88E+07	1.61E+01	1.19E+01	1.66E+07
CGCAE2	3.32E+05	7.42E+05	5.14E+04	2.69E+06	5.24E+01	8.75E+04	2.32E+06	2.65E+01	2.16E+05	1.68E+06	7.76E+00	8.11E+00	1.03E+06
CGCAE3	4.52E+04	9.23E+04	7.78E+03	1.62E+05	2.08E+01	1.35E+04	1.54E+05	1.13E+01	2.68E+04	1.26E+05	4.70E+00	3.59E+00	8.38E+04
CGCAE4	6.38E+03	4.41E+03	1.29E+03	1.06E+04	8.24E+00	1.92E+03	9.14E+03	4.76E+00	2.78E+03	6.43E+03	2.31E+00	1.67E+00	5.07E+03
CAIOD1	1.03E+10	8.09E+09	2.25E+09	2.33E+10	1.03E+01	3.23E+09	2.19E+10	6.79E+00	5.17E+09	1.80E+10	3.48E+00	2.26E+00	1.09E+10
CAIOD2	3.05E+08	5.77E+08	4.73E+07	2.47E+09	5.23E+01	6.03E+07	1.98E+09	3.29E+01	1.17E+08	1.22E+09	1.05E+01	8.11E+00	8.20E+08
CAIOD3	2.93E+07	4.26E+07	1.86E+06	2.15E+08	1.15E+02	2.41E+06	1.41E+08	5.84E+01	5.58E+06	8.69E+07	1.56E+01	7.32E+00	6.10E+07
CAIOD4	1.56E+06	1.38E+06	3.43E+04	6.79E+06	1.98E+02	4.15E+04	5.99E+06	1.44E+02	1.02E+05	3.06E+06	3.01E+01	4.35E+00	2.18E+06
CACAE1	3.64E+09	3.80E+09	1.37E+09	7.03E+09	5.15E+00	1.74E+09	6.49E+09	3.73E+00	2.40E+09	5.76E+09	2.40E+00	1.93E+00	4.06E+09
CACAE2	1.95E+08	2.81E+08	1.07E+08	9.66E+08	9.05E+00	1.32E+08	8.55E+08	6.48E+00	1.81E+08	5.92E+08	3.28E+00	4.95E+00	3.99E+08
CACAE3	1.77E+07	2.54E+07	6.44E+06	1.07E+08	1.66E+01	8.26E+06	8.32E+07	1.01E+01	1.30E+07	4.85E+07	3.71E+00	6.04E+00	3.64E+07
CACAE4	1.40E+06	1.12E+06	2.07E+05	3.68E+06	1.78E+01	2.64E+05	2.88E+06	1.09E+01	4.36E+05	2.19E+06	5.02E+00	2.63E+00	1.49E+06
DECMBM1	3.21E-03	6.42E-03	2.05E-03	1.57E-02	7.65E+00	2.75E-03	1.29E-02	4.71E+00	4.10E-03	9.51E-03	2.32E+00	4.89E+00	7.32E-03
DECMBM2	1.83E-04	5.61E-04	2.26E-04	1.94E-03	8.58E+00	2.59E-04	1.58E-03	6.11E+00	3.71E-04	9.38E-04	2.53E+00	1.06E+01	7.60E-04
DECMBM3	2.99E-05	4.89E-05	1.80E-05	1.20E-04	6.65E+00	2.29E-05	1.08E-04	4.69E+00	3.39E-05	7.23E-05	2.13E+00	4.02E+00	5.76E-05
DECMTH1	1.03E-01	1.38E-01	1.77E-02	8.23E-01	4.65E+01	2.97E-02	6.22E-01	2.10E+01	6.04E-02	2.96E-01	4.91E+00	8.00E+00	2.43E-01
DECMTH2	3.15E-03	7.47E-03	1.00E-03	5.66E-02	5.65E+01	1.53E-03	3.77E-02	2.46E+01	3.09E-03	1.71E-02	5.54E+00	1.80E+01	1.53E-02
DECMTH3	4.99E-04	5.38E-04	7.94E-05	3.31E-03	4.17E+01	1.11E-04	2.45E-03	2.21E+01	1.96E-04	1.26E-03	6.46E+00	6.63E+00	1.00E-03
DECMSK1	3.58E-01	2.37E-01	3.69E-03	9.36E+00	2.54E+03	9.04E-03	6.87E+00	7.60E+02	4.15E-02	1.99E+00	4.81E+01	2.61E+01	1.92E+00
DECMSK2	1.34E-02	1.32E-02	2.03E-04	6.58E-01	3.25E+03	3.82E-04	3.48E-01	9.11E+02	2.62E-03	7.28E-02	2.78E+01	4.92E+01	1.18E-01
DECMSK3	3.17E-03	1.31E-03	1.34E-05	4.32E-02	3.21E+03	3.25E-05	2.81E-02	8.67E+02	1.89E-04	7.70E-03	4.07E+01	1.36E+01	8.81E-03
DLCMED2	2.09E-02	8.45E-02	1.05E-02	1.11E+00	1.06E+02	1.65E-02	6.36E-01	3.84E+01	3.16E-02	2.51E-01	7.93E+00	5.30E+01	2.56E-01
DLCMED3	4.23E-03	8.92E-03	1.46E-03	5.74E-02	3.93E+01	2.32E-03	3.66E-02	1.58E+01	3.75E-03	1.92E-02	5.13E+00	1.36E+01	1.77E-02
DLCMED4	7.69E-04	7.54E-04	1.87E-04	2.81E-03	1.50E+01	2.37E-04	2.35E-03	9.92E+00	3.92E-04	1.36E-03	3.46E+00	3.65E+00	1.14E-03
DLCMBM2	2.01E-02	2.71E-02	4.81E-03	2.26E-01	4.69E+01	6.12E-03	1.49E-01	2.43E+01	1.14E-02	7.09E-02	6.20E+00	1.12E+01	5.81E-02
DLCMBM3	4.07E-03	4.15E-03	7.20E-04	1.90E-02	2.64E+01	9.60E-04	1.48E-02	1.55E+01	2.05E-03	9.59E-03	4.67E+00	4.67E+00	6.88E-03
DLCMBM4	7.42E-04	4.47E-04	1.02E-04	1.97E-03	1.92E+01	1.51E-04	1.45E-03	9.59E+00	2.55E-04	8.14E-04	3.20E+00	2.65E+00	7.54E-04
DLCMTH2	2.65E-02	5.37E-02	9.94E-03	3.02E-01	3.04E+01	1.55E-02	1.98E-01	1.28E+01	2.66E-02	1.14E-01	4.27E+00	1.14E+01	9.03E-02
DLCMTH3	5.16E-03	6.99E-03	1.60E-03	2.55E-02	1.60E+01	2.04E-03	1.95E-02	9.57E+00	3.53E-03	1.27E-02	3.59E+00	4.94E+00	9.49E-03
DLCMTH4	8.52E-04	6.61E-04	1.81E-04	2.37E-03	1.31E+01	2.40E-04	1.81E-03	7.52E+00	3.68E-04	1.10E-03	3.00E+00	2.78E+00	9.61E-04
DLLVED2	1.53E-01	1.10E+00	8.12E-02	8.37E+00	1.03E+02	1.61E-01	5.06E+00	3.13E+01	4.13E-01	2.81E+00	6.80E+00	5.47E+01	3.09E+00
DLLVED3	2.01E-02	8.92E-02	8.59E-03	5.44E-01	6.33E+01	1.47E-02	3.67E-01	2.49E+01	3.50E-02	1.96E-01	5.59E+00	2.71E+01	2.21E-01
DLLVED4	2.75E-03	4.55E-03	6.27E-04	3.48E-02	5.55E+01	9.92E-04	2.36E-02	2.38E+01	1.89E-03	1.10E-02	5.86E+00	1.26E+01	1.31E-02
DLLVBM2	1.36E-01	3.65E-01	1.87E-02	4.91E+00	2.63E+02	3.20E-02	2.82E+00	8.79E+01	9.45E-02	9.94E-01	1.05E+01	3.60E+01	1.97E+00
DLLVBM3	1.82E-02	3.42E-02	2.30E-03	4.06E-01	1.76E+02	3.57E-03	2.46E-01	6.89E+01	1.13E-02	8.15E-02	7.19E+00	2.23E+01	1.52E-01
DLLVBM4	2.58E-03	2.07E-03	2.35E-04	2.35E-02	1.00E+02	3.50E-04	1.66E-02	4.73E+01	8.87E-04	5.89E-03	6.64E+00	9.10E+00	9.99E-03
DLLVTH2	3.69E-01	4.98E+00	3.04E-01	7.35E+01	2.42E+02	4.76E-01	4.92E+01	1.03E+02	1.33E+00	1.94E+01	1.46E+01	1.99E+02	1.88E+01
DLLVTH3	4.25E-02	3.00E-01	2.76E-02	4.05E+00	1.47E+02	4.05E-02	3.17E+00	7.82E+01	8.64E-02	1.11E+00	1.28E+01	9.54E+01	1.03E+00
DLLVTH4	4.14E-03	1.18E-02	1.28E-03	1.78E-01	1.39E+02	1.62E-03	1.33E-01	8.17E+01	4.22E-03	4.43E-02	1.05E+01	4.30E+01	4.71E-02
AEVAC	6.08E+00	6.68E+01	1.08E+01	2.47E+03	2.28E+02	1.38E+01	1.52E+03	1.10E+02	2.73E+01	3.67E+02	1.34E+01	4.06E+02	5.35E+02
ASHEL	4.31E+01	2.70E+02	4.40E+01	7.20E+03	1.64E+02	5.36E+01	5.12E+03	9.55E+01	9.50E+01	1.39E+03	1.47E+01	1.67E+02	1.57E+03

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    AIOD       1.82E+01  3.09E+01  | 2.57E+00  2.36E+02  9.17E+01  | 3.90E+00  1.51E+02  3.87E+01  |
                         9.92E+00  6.81E+01  6.86E+00  ||  1.30E+01  ||  6.16E+01
    ARELIN     6.08E+00  6.77E+01  | 1.10E+01  2.47E+03  2.23E+02  | 1.47E+01  1.52E+03  1.03E+02  |
                         2.79E+01  3.67E+02  1.32E+01  ||  4.06E+02  ||  5.35E+02
    ARELTIM    9.51E+00  3.86E+01  | 2.03E+00  1.78E+02  8.78E+01  | 4.04E+00  1.32E+02  3.27E+01  |
                         1.21E+01  8.07E+01  6.66E+00  ||  1.88E+01  ||  5.67E+01
    AFBIMIL    3.23E+04  1.30E+05  | 1.11E+04  6.21E+05  5.60E+01  | 2.38E+04  4.76E+05  2.00E+01  |
                         6.02E+04  2.31E+05  3.84E+00  ||  1.92E+01  ||  1.91E+05
    AFBIGRA    2.52E+04  4.03E+02  | 1.97E+01  1.36E+04  6.93E+02  | 2.64E+01  8.52E+03  3.23E+02  |
                         6.46E+01  2.40E+03  3.71E+01  ||  5.42E-01  ||  3.11E+03
    AFBIVEG    4.10E+04  1.48E+05  | 2.81E+04  7.12E+05  2.53E+01  | 4.17E+04  5.05E+05  1.21E+01  |
                         7.05E+04  2.71E+05  3.84E+00  ||  1.74E+01  ||  2.24E+05
    AFBIBEE    3.20E+04  2.37E+04  | 1.64E+03  1.05E+05  6.38E+01  | 4.01E+03  8.89E+04  2.22E+01  |
                         1.04E+04  5.24E+04  5.04E+00  ||  3.28E+00  ||  3.73E+04
    AFBTMIL    7.99E+03  5.64E+04  | 6.41E+03  2.41E+05  3.76E+01  | 1.21E+04  1.74E+05  1.43E+01  |
                         3.12E+04  1.02E+05  3.28E+00  ||  3.01E+01  ||  8.59E+04
    AFBTGRA    4.69E+04  1.45E+02  | 4.20E+00  2.61E+04  6.22E+03  | 9.06E+00  1.35E+04  1.49E+03  |
                         4.07E+01  2.13E+03  5.23E+01  ||  5.56E-01  ||  5.05E+03
    AFBTVEG    6.08E+03  8.02E+03  | 8.76E+02  1.01E+05  1.15E+02  | 1.52E+03  5.63E+04  3.69E+01  |
                         3.90E+03  2.36E+04  6.04E+00  ||  1.66E+01  ||  2.20E+04
ENDPOINT      REF      MEDIAN    |    5 %      95 %      FAC1    |   10 %      90 %      FAC2    |   25 %
                              75 %      FAC3    ||   95%/REF  ||        MNC
-------------------------------------------------------------------------------------------------------------
                              ------------------------------------------------------
    AFBTBEE    2.67E+04  2.12E+04  | 1.10E+03  1.09E+05  9.97E+01  | 2.26E+03  7.62E+04  3.37E+01  |
                         9.50E+03  4.64E+04  4.89E+00  ||  4.10E+00  ||  3.37E+04
 RECMMT1    6.85E-05  1.45E-03  |  .00E+00  1.59E-02  9.99E+99  |  .00E+00  1.06E-02  9.99E+99  | 1.64E-
                         06  4.36E-03  2.66E+03  ||  2.32E+02  ||  3.72E-03
    RECMMT2     .00E+00   .00E+00  |  .00E+00  9.70E-04  9.99E+99  |  .00E+00  5.95E-04  9.99E+99  |
                        .00E+00  2.71E-05  9.99E+99  ||  9.99E+99  ||  1.62E-04
    RECMMT3     .00E+00   .00E+00  |  .00E+00  2.09E-07  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                        .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||  1.39E-06
    RECMBM1     .00E+00   .00E+00  |  .00E+00  8.11E-06  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                        .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||  1.13E-05
    RECMBM2     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                        .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||  6.76E-06
    RECMBM3     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                        .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
 RECMMB1    1.35E-03  3.12E-03  |  .00E+00  7.21E-02  9.99E+99  |  .00E+00  5.75E-02  9.99E+99  | 5.47E-
                         05  2.62E-02  4.79E+02  ||  5.32E+01  ||  1.78E-02
    RECMMB2     .00E+00   .00E+00  |  .00E+00  1.01E-02  9.99E+99  |  .00E+00  4.81E-03  9.99E+99  |
                        .00E+00  1.11E-04  9.99E+99  ||  9.99E+99  ||  1.50E-03
    RECMMB3     .00E+00   .00E+00  |  .00E+00  5.42E-06  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                        .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||  1.65E-05
    RECMLU1     .00E+00   .00E+00  |  .00E+00  6.89E-03  9.99E+99  |  .00E+00  3.81E-03  9.99E+99  |
                        .00E+00  1.05E-04  9.99E+99  ||  9.99E+99  ||  1.44E-03
    RECMLU2     .00E+00   .00E+00  |  .00E+00  1.09E-04  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                        .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||  1.61E-04
    RECMLU3     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                        .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||  2.69E-08
    RECMTH1     .00E+00   .00E+00  |  .00E+00  8.05E-04  9.99E+99  |  .00E+00  3.95E-04  9.99E+99  |
                        .00E+00  2.56E-05  9.99E+99  ||  9.99E+99  ||  1.43E-04
    RECMTH2     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                        .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||  3.40E-07
    RECMTH3     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                        .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMSK1    1.35E-03  4.08E-04  |  .00E+00  7.02E-02  9.99E+99  |  .00E+00  5.56E-02  9.99E+99  |
                        .00E+00  2.44E-02  9.99E+99  ||  5.18E+01  ||  1.62E-02
    RECMSK2     .00E+00   .00E+00  |  .00E+00  9.83E-03  9.99E+99  |  .00E+00  3.72E-03  9.99E+99  |
                        .00E+00  8.90E-06  9.99E+99  ||  9.99E+99  ||  1.34E-03
    RECMSK3     .00E+00   .00E+00  |  .00E+00  3.59E-06  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                        .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||  1.65E-05
 RLCMMT2    1.01E-03  6.55E-03  | 5.49E-04  5.68E-02  1.03E+02  | 8.91E-04  3.62E-02  4.06E+01  | 2.42E-
                         03  1.88E-02  7.79E+00  ||  5.63E+01  ||  1.45E-02
 RLCMMT3    2.05E-04  7.22E-04  | 8.24E-05  7.03E-03  8.52E+01  | 1.28E-04  4.49E-03  3.52E+01  | 2.98E-
                         04  1.80E-03  6.04E+00  ||  3.42E+01  ||  1.92E-03
 RLCMMT4    3.75E-05  5.33E-05  | 8.86E-06  5.65E-04  6.37E+01  | 1.46E-05  2.92E-04  2.00E+01  | 2.66E-
                         05  1.13E-04  4.25E+00  ||  1.51E+01  ||  1.37E-04
 RLCMBM2    1.04E-04  1.19E-04  | 3.01E-09  1.40E-03  4.64E+05  | 1.38E-07  9.62E-04  6.98E+03  | 3.29E-
                         05  4.35E-04  1.32E+01  ||  1.34E+01  ||  3.88E-04
 RLCMBM3    2.10E-05  1.82E-05  | 7.19E-10  1.63E-04  2.27E+05  | 2.70E-08  1.23E-04  4.57E+03  | 5.30E-
                         06  5.94E-05  1.12E+01  ||  7.77E+00  ||  4.40E-05
 RLCMBM4    3.83E-06  2.25E-06  | 5.33E-11  1.55E-05  2.91E+05  | 1.09E-08  1.10E-05  1.01E+03  | 6.86E-
                         07  5.14E-06  7.50E+00  ||  4.05E+00  ||  4.58E-06
 RLCMTH2    4.70E-05  2.08E-05  | 2.07E-09  5.30E-04  2.56E+05  | 1.54E-08  3.58E-04  2.33E+04  | 3.24E-
                         06  1.00E-04  3.09E+01  ||  1.13E+01  ||  1.32E-04
 RLCMTH3    9.13E-06  2.16E-06  | 2.62E-10  6.51E-05  2.49E+05  | 2.86E-09  3.82E-05  1.34E+04  | 4.41E-
                         07  1.11E-05  2.52E+01  ||  7.13E+00  ||  1.29E-05
 RLCMTH4    1.51E-06  2.04E-07  | 2.75E-11  4.82E-06  1.76E+05  | 3.60E-10  3.00E-06  8.33E+03  | 4.19E-
                         08  1.10E-06  2.62E+01  ||  3.20E+00  ||  1.11E-06
 RLLVMT2    6.21E-03  2.69E-02  | 3.80E-03  1.02E-01  2.70E+01  | 6.07E-03  8.11E-02  1.33E+01  | 1.27E-
                         02  5.12E-02  4.03E+00  ||  1.65E+01  ||  3.63E-02
 RLLVMT3    9.33E-04  4.13E-03  | 4.83E-04  2.96E-02  6.14E+01  | 6.76E-04  1.56E-02  2.31E+01  | 1.67E-
                         03  9.41E-03  5.64E+00  ||  3.18E+01  ||  7.46E-03
 RLLVMT4    1.32E-04  2.85E-04  | 2.80E-05  2.22E-03  7.92E+01  | 4.87E-05  1.71E-03  3.51E+01  | 1.05E-
                         04  6.25E-04  5.94E+00  ||  1.67E+01  ||  6.92E-04
 RLLVBM2    7.04E-04  1.15E-03  | 7.69E-08  3.09E-02  4.02E+05  | 8.91E-06  1.63E-02  1.83E+03  | 2.30E-
                         04  5.69E-03  2.48E+01  ||  4.39E+01  ||  5.84E-03
 RLLVBM3    9.38E-05  1.16E-04  | 7.25E-09  2.70E-03  3.72E+05  | 9.45E-07  1.72E-03  1.82E+03  | 2.71E-
                         05  5.64E-04  2.08E+01  ||  2.87E+01  ||  6.85E-04
 RLLVBM4    1.33E-05  8.50E-06  | 4.49E-10  1.95E-04  4.34E+05  | 4.61E-08  9.25E-05  2.00E+03  | 2.01E-
                         06  3.33E-05  1.65E+01  ||  1.46E+01  ||  5.55E-05
 RLLVTH2    6.53E-04  1.65E-03  | 3.44E-07  3.67E-02  1.07E+05  | 3.52E-06  2.51E-02  7.13E+03  | 1.98E-
                         04  7.99E-03  4.04E+01  ||  5.62E+01  ||  7.88E-03
 RLLVTH3    7.51E-05  1.06E-04  | 2.48E-08  4.35E-03  1.75E+05  | 2.68E-07  1.94E-03  7.23E+03  | 1.19E-
                         05  6.17E-04  5.17E+01  ||  5.79E+01  ||  9.65E-04
 RLLVTH4    7.33E-06  5.05E-06  | 1.06E-09  2.68E-04  2.53E+05  | 1.36E-08  9.78E-05  7.20E+03  | 5.33E-
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                        07  2.49E-05  4.67E+01  ||  3.66E+01  ||  4.83E-05
    CDCMED     4.78E+04  6.41E+04  | 1.54E+04  3.41E+05  2.21E+01  | 2.05E+04  2.46E+05  1.20E+01  |
                      3.32E+04  1.33E+05  4.01E+00  ||  7.12E+00  ||  1.20E+05
    CDCMBM     4.61E+04  3.65E+04  | 9.16E+03  1.40E+05  1.53E+01  | 1.20E+04  1.03E+05  8.59E+00  |
                      2.03E+04  6.48E+04  3.18E+00  ||  3.04E+00  ||  6.03E+04
    CDCMTH     5.34E+04  5.69E+04  | 1.70E+04  1.65E+05  9.71E+00  | 2.15E+04  1.38E+05  6.41E+00  |
                      3.25E+04  9.27E+04  2.85E+00  ||  3.10E+00  ||  7.93E+04
    CDLVED     1.57E+05  4.32E+05  | 6.34E+04  2.83E+06  4.46E+01  | 8.53E+04  1.79E+06  2.10E+01  |
                      1.85E+05  9.88E+05  5.34E+00  ||  1.80E+01  ||  1.07E+06
    CDLVBM     1.46E+05  1.85E+05  | 2.01E+04  2.06E+06  1.03E+02  | 2.93E+04  1.22E+06  4.14E+01  |
                      7.55E+04  4.63E+05  6.13E+00  ||  1.41E+01  ||  7.63E+05
    CDLVTH     2.56E+05  1.52E+06  | 1.32E+05  1.83E+07  1.39E+02  | 1.94E+05  1.31E+07  6.76E+01  |
                      4.21E+05  5.30E+06  1.26E+01  ||  7.16E+01  ||  4.67E+06
PECMMT     1.07E-01  1.24E+00  |  .00E+00  5.30E+01  9.99E+99  |  .00E+00  3.11E+01  9.99E+99  | 2.61E-
                        02  7.67E+00  2.94E+02  ||  4.94E+02  ||  1.27E+01
    PECMBM      .00E+00   .00E+00  |  .00E+00  8.10E-01  9.99E+99  |  .00E+00  3.07E-02  9.99E+99  |
                       .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||  2.67E-01
PECMMB     2.08E+00  2.76E+00  |  .00E+00  5.41E+02  9.99E+99  |  .00E+00  2.35E+02  9.99E+99  | 1.05E-
                        01  2.45E+01  2.33E+02  ||  2.60E+02  ||  1.20E+02
    PECMLU      .00E+00   .00E+00  |  .00E+00  1.18E+01  9.99E+99  |  .00E+00  3.83E+00  9.99E+99  |
                       .00E+00  2.61E-01  9.99E+99  ||  9.99E+99  ||  9.90E+00
    PECMTH      .00E+00   .00E+00  |  .00E+00  6.75E-01  9.99E+99  |  .00E+00  3.67E-01  9.99E+99  |
                       .00E+00  3.59E-02  9.99E+99  ||  9.99E+99  ||  1.29E-01
    PECMSK     2.08E+00  3.37E-01  |  .00E+00  4.63E+02  9.99E+99  |  .00E+00  2.22E+02  9.99E+99  |
                       .00E+00  1.48E+01  9.99E+99  ||  2.23E+02  ||  1.10E+02
    PLCMMT     2.33E+03  5.09E+03  | 7.67E+02  5.44E+04  7.09E+01  | 1.22E+03  2.38E+04  1.94E+01  |
                      2.13E+03  1.06E+04  4.95E+00  ||  2.34E+01  ||  1.35E+04
    PLCMBM     2.38E+02  1.69E+02  | 4.00E-03  1.17E+03  2.92E+05  | 1.15E+00  8.18E+02  7.12E+02  |
                      5.55E+01  4.35E+02  7.83E+00  ||  4.90E+00  ||  3.59E+02
    PLCMTH     9.44E+01  1.69E+01  | 2.38E-03  3.78E+02  1.58E+05  | 3.15E-02  2.71E+02  8.60E+03  |
                      3.71E+00  9.65E+01  2.60E+01  ||  4.00E+00  ||  9.27E+01
    PLLVMT     7.39E+03  2.04E+04  | 2.77E+03  1.32E+05  4.75E+01  | 4.01E+03  9.37E+04  2.33E+01  |
                      9.11E+03  4.36E+04  4.78E+00  ||  1.78E+01  ||  4.48E+04
    PLLVBM     7.54E+02  6.73E+02  | 3.85E-02  1.37E+04  3.56E+05  | 4.70E+00  6.83E+03  1.46E+03  |
                      1.77E+02  2.97E+03  1.68E+01  ||  1.82E+01  ||  3.68E+03
    PLLVTH     4.52E+02  5.40E+02  | 1.06E-01  1.79E+04  1.68E+05  | 1.29E+00  8.16E+03  6.32E+03  |
                      5.90E+01  2.59E+03  4.39E+01  ||  3.95E+01  ||  3.66E+03
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Extent of the uncertainty for the 95th percentile of the endpoints for the CB2 source term

ENDPOINT	REF	MEDIAN	5 %	95 %	FAC1	10 %	90 %	FAC2	25 %	75 %	FAC3	95%/REF	MNC
CGIOD1	4.57E+08	4.47E+08	4.79E+06	2.51E+09	5.25E+02	2.63E+07	2.09E+09	7.94E+01	1.02E+08	1.35E+09	1.32E+01	5.50E+00	5.62E+08
CGIOD2	1.55E+07	1.78E+07	6.03E+05	6.03E+07	1.00E+02	1.82E+06	4.90E+07	2.69E+01	6.17E+06	3.55E+07	5.75E+00	3.89E+00	2.00E+07
CGIOD3	1.51E+06	9.33E+05	1.66E+04	2.82E+06	1.70E+02	8.51E+04	2.45E+06	2.88E+01	4.07E+05	1.78E+06	4.37E+00	1.86E+00	1.00E+06
CGIOD4	6.03E+04	2.88E+04	2.04E+02	1.07E+05	5.25E+02	2.95E+02	9.33E+04	3.16E+02	4.57E+03	6.61E+04	1.45E+01	1.78E+00	3.16E+04
CGCAE1	1.66E+07	1.07E+07	2.45E+05	3.09E+08	1.26E+03	4.79E+05	2.45E+08	5.13E+02	2.63E+06	1.29E+08	4.90E+01	1.86E+01	3.55E+07
CGCAE2	9.33E+05	1.32E+06	3.31E+04	1.74E+07	5.25E+02	8.32E+04	1.45E+07	1.74E+02	3.39E+05	8.51E+06	2.51E+01	1.86E+01	2.82E+06
CGCAE3	1.32E+05	1.58E+05	1.20E+04	8.71E+05	7.24E+01	1.95E+04	7.24E+05	3.72E+01	5.25E+04	5.13E+05	9.77E+00	6.61E+00	2.24E+05
CGCAE4	2.04E+04	1.29E+04	1.10E+03	3.39E+04	3.09E+01	3.39E+03	2.95E+04	8.71E+00	7.08E+03	2.34E+04	3.31E+00	1.66E+00	1.41E+04
CAIOD1	3.98E+10	2.95E+10	5.01E+09	1.00E+11	2.00E+01	8.91E+09	8.71E+10	9.77E+00	1.70E+10	5.01E+10	2.95E+00	2.51E+00	3.16E+10
CAIOD2	1.41E+09	1.17E+09	1.17E+08	8.51E+09	7.24E+01	2.04E+08	7.24E+09	3.55E+01	4.79E+08	3.16E+09	6.61E+00	6.03E+00	1.26E+09
CAIOD3	1.23E+08	1.07E+08	2.63E+06	6.03E+08	2.29E+02	6.46E+06	4.17E+08	6.46E+01	2.40E+07	2.40E+08	1.00E+01	4.90E+00	1.00E+08
CAIOD4	4.37E+06	2.88E+06	9.55E+04	2.88E+07	3.02E+02	1.20E+05	2.34E+07	1.95E+02	2.75E+05	1.15E+07	4.17E+01	6.61E+00	5.62E+06
CACAE1	1.38E+10	1.15E+10	1.86E+09	3.09E+10	1.66E+01	3.16E+09	2.69E+10	8.51E+00	6.61E+09	1.86E+10	2.82E+00	2.24E+00	1.12E+10
CACAE2	5.13E+08	7.94E+08	1.78E+08	2.88E+09	1.62E+01	2.51E+08	2.34E+09	9.33E+00	4.68E+08	1.32E+09	2.82E+00	5.62E+00	7.94E+08
CACAE3	7.41E+07	6.76E+07	2.69E+07	2.34E+08	8.71E+00	3.31E+07	1.51E+08	4.57E+00	4.79E+07	1.00E+08	2.09E+00	3.16E+00	7.08E+07
CACAE4	6.61E+06	4.07E+06	5.62E+05	1.29E+07	2.29E+01	9.12E+05	1.12E+07	1.23E+01	1.74E+06	9.12E+06	5.25E+00	1.95E+00	5.01E+06
DECMBM1	1.41E-02	3.24E-02	1.07E-02	8.71E-02	8.13E+00	1.45E-02	6.92E-02	4.79E+00	2.04E-02	5.37E-02	2.63E+00	6.17E+00	3.16E-02
DECMBM2	1.10E-03	2.24E-03	8.13E-04	6.31E-03	7.76E+00	1.07E-03	5.01E-03	4.68E+00	1.51E-03	3.47E-03	2.29E+00	5.75E+00	2.51E-03
DECMBM3	1.38E-04	1.58E-04	2.40E-05	6.17E-04	2.57E+01	4.37E-05	4.79E-04	1.10E+01	8.91E-05	2.82E-04	3.16E+00	4.47E+00	1.78E-04
DECMTH1	4.07E-01	4.47E-01	7.41E-02	2.95E+00	3.98E+01	1.05E-01	2.04E+00	1.95E+01	2.04E-01	1.12E+00	5.50E+00	7.24E+00	5.01E-01
DECMTH2	2.19E-02	2.57E-02	4.27E-03	1.74E-01	4.07E+01	6.46E-03	1.23E-01	1.91E+01	1.23E-02	5.37E-02	4.37E+00	7.94E+00	3.16E-02
DECMTH3	2.45E-03	1.95E-03	1.48E-04	1.82E-02	1.23E+02	2.45E-04	1.23E-02	5.01E+01	6.76E-04	6.17E-03	9.12E+00	7.41E+00	2.82E-03
DECMSK1	1.41E+00	9.12E-01	6.61E-03	3.63E+01	5.50E+03	2.09E-02	2.24E+01	1.07E+03	1.10E-01	8.91E+00	8.13E+01	2.57E+01	2.00E+00
DECMSK2	8.32E-02	5.25E-02	3.55E-04	2.34E+00	6.61E+03	7.76E-04	1.17E+00	1.51E+03	6.03E-03	2.69E-01	4.47E+01	2.82E+01	1.26E-01
DECMSK3	1.86E-02	5.50E-03	1.55E-05	2.09E-01	1.35E+04	6.61E-05	1.38E-01	2.09E+03	6.61E-04	3.24E-02	4.90E+01	1.12E+01	1.58E-02
DLCMED2	7.76E-02	2.63E-01	2.04E-02	3.24E+00	1.58E+02	3.24E-02	1.91E+00	5.89E+01	8.51E-02	8.71E-01	1.02E+01	4.17E+01	3.55E-01
DLCMED3	1.20E-02	2.57E-02	3.80E-03	1.74E-01	4.57E+01	5.37E-03	1.10E-01	2.04E+01	1.32E-02	6.31E-02	4.79E+00	1.45E+01	3.55E-02
DLCMED4	2.95E-03	2.88E-03	6.76E-04	1.55E-02	2.29E+01	8.91E-04	1.15E-02	1.29E+01	1.51E-03	6.76E-03	4.47E+00	5.25E+00	4.47E-03
DLCMBM2	7.41E-02	9.12E-02	7.94E-03	1.35E+00	1.70E+02	1.29E-02	9.33E-01	7.24E+01	2.95E-02	3.47E-01	1.17E+01	1.82E+01	1.58E-01
DLCMBM3	1.15E-02	1.32E-02	1.70E-03	9.33E-02	5.50E+01	2.45E-03	6.92E-02	2.82E+01	5.25E-03	3.55E-02	6.76E+00	8.13E+00	2.00E-02
DLCMBM4	2.88E-03	1.70E-03	3.31E-04	8.71E-03	2.63E+01	4.90E-04	6.03E-03	1.23E+01	8.51E-04	3.16E-03	3.72E+00	3.02E+00	2.51E-03
DLCMTH2	1.07E-01	1.86E-01	2.29E-02	1.78E+00	7.76E+01	3.63E-02	1.20E+00	3.31E+01	7.59E-02	5.13E-01	6.76E+00	1.66E+01	2.82E-01
DLCMTH3	1.74E-02	2.40E-02	3.47E-03	1.23E-01	3.55E+01	5.62E-03	8.91E-02	1.58E+01	1.12E-02	4.90E-02	4.37E+00	7.08E+00	3.16E-02
DLCMTH4	3.31E-03	2.29E-03	6.46E-04	1.00E-02	1.55E+01	8.32E-04	7.59E-03	9.12E+00	1.32E-03	4.17E-03	3.16E+00	3.02E+00	3.16E-03
DLLVED2	3.31E-01	2.14E+00	1.00E-01	3.09E+01	3.09E+02	1.66E-01	1.58E+01	9.55E+01	6.92E-01	7.24E+00	1.05E+01	9.33E+01	3.16E+00
DLLVED3	5.37E-02	1.95E-01	1.48E-02	1.66E+00	1.12E+02	2.57E-02	1.07E+00	4.17E+01	8.32E-02	4.79E-01	5.75E+00	3.09E+01	2.51E-01
DLLVED4	7.94E-03	1.23E-02	1.51E-03	8.71E-02	5.75E+01	2.69E-03	5.75E-02	2.14E+01	5.01E-03	2.88E-02	5.75E+00	1.10E+01	1.78E-02
DLLVBM2	2.63E-01	6.46E-01	2.40E-02	1.74E+01	7.24E+02	3.98E-02	8.32E+00	2.09E+02	1.02E-01	3.09E+00	3.02E+01	6.61E+01	1.12E+00
DLLVBM3	4.79E-02	7.24E-02	4.37E-03	1.12E+00	2.57E+02	7.08E-03	6.76E-01	9.55E+01	1.91E-02	2.00E-01	1.05E+01	2.34E+01	1.12E-01
DLLVBM4	7.24E-03	5.62E-03	6.31E-04	6.92E-02	1.10E+02	9.55E-04	3.47E-02	3.63E+01	2.19E-03	1.45E-02	6.61E+00	9.55E+00	8.91E-03
DLLVTH2	1.20E+00	7.76E+00	2.82E-01	1.70E+02	6.03E+02	6.46E-01	1.12E+02	1.74E+02	1.95E+00	3.02E+01	1.55E+01	1.41E+02	1.00E+01
DLLVTH3	1.35E-01	5.37E-01	3.55E-02	1.20E+01	3.39E+02	6.76E-02	5.75E+00	8.51E+01	1.66E-01	2.00E+00	1.20E+01	8.91E+01	8.91E-01
DLLVTH4	1.29E-02	2.09E-02	2.19E-03	4.37E-01	2.00E+02	3.80E-03	2.95E-01	7.76E+01	7.41E-03	9.77E-02	1.32E+01	3.39E+01	5.01E-02
AEVAC	1.86E+01	2.29E+02	2.34E+01	6.92E+03	2.95E+02	3.72E+01	4.90E+03	1.32E+02	8.32E+01	1.20E+03	1.45E+01	3.72E+02	2.51E+03
ASHEL	1.41E+02	8.32E+02	1.15E+02	2.04E+04	1.78E+02	1.51E+02	1.38E+04	9.12E+01	2.88E+02	4.17E+03	1.45E+01	1.45E+02	7.08E+03
AIOD	6.17E+01	9.12E+01	4.68E+00	7.41E+02	1.58E+02	7.08E+00	4.37E+02	6.17E+01					

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                    2.24E+01  2.19E+02  9.77E+00  ||  1.20E+01  ||  2.51E+02
    ARELIN     1.86E+01  2.29E+02  | 2.34E+01  6.92E+03  2.95E+02  | 3.72E+01  4.90E+03  1.32E+02  |
                    8.51E+01  1.20E+03  1.41E+01  ||  3.72E+02  ||  2.51E+03
    ARELTIM    3.89E+01  1.07E+02  | 5.89E+00  4.79E+02  8.13E+01  | 1.12E+01  3.72E+02  3.31E+01  |
                    3.89E+01  2.29E+02  5.89E+00  ||  1.23E+01  ||  2.24E+02
    AFBIMIL    9.33E+04  4.47E+05  | 3.72E+04  1.00E+06  2.69E+01  | 1.00E+05  1.00E+06  1.00E+01  |
                    2.19E+05  7.94E+05  3.63E+00  ||  1.07E+01  ||  7.94E+05
    AFBIGRA    7.59E+04  1.38E+03  | 5.89E+01  6.17E+04  1.05E+03  | 8.51E+01  3.31E+04  3.89E+02  |
                    2.29E+02  8.71E+03  3.80E+01  ||  8.13E-01  ||  1.26E+04
    AFBIVEG    7.41E+04  3.80E+05  | 8.71E+04  1.00E+06  1.15E+01  | 1.12E+05  1.00E+06  8.91E+00  |
                    1.91E+05  6.61E+05  3.47E+00  ||  1.35E+01  ||  7.94E+05
    AFBIBEE    9.55E+04  8.32E+04  | 5.62E+03  3.89E+05  6.92E+01  | 1.45E+04  3.16E+05  2.19E+01  |
                    4.17E+04  1.91E+05  4.57E+00  ||  4.07E+00  ||  1.58E+05
    AFBTMIL    2.09E+04  1.82E+05  | 1.91E+04  7.94E+05  4.17E+01  | 3.72E+04  5.50E+05  1.48E+01  |
                    8.91E+04  3.16E+05  3.55E+00  ||  3.80E+01  ||  3.16E+05
    AFBTGRA    1.48E+05  4.37E+02  | 1.26E+01  1.07E+05  8.51E+03  | 4.07E+01  6.61E+04  1.62E+03  |
                    1.17E+02  8.51E+03  7.24E+01  ||  7.24E-01  ||  2.24E+04
    AFBTVEG    1.38E+04  2.19E+04  | 2.14E+03  2.24E+05  1.05E+02  | 3.63E+03  1.48E+05  4.07E+01  |
                    8.91E+03  5.50E+04  6.17E+00  ||  1.62E+01  ||  1.00E+05
ENDPOINT      REF      MEDIAN    |   5 %      95 %      FAC1    |   10 %      90 %      FAC2    |   25 %
                             75 %      FAC3    ||   95%/REF  ||        MNC
-------------------------------------------------------------------------------------------------------------
                         ------------------------------------------------------
    AFBTBEE    6.92E+04  7.41E+04  | 3.63E+03  3.47E+05  9.55E+01  | 7.24E+03  2.63E+05  3.63E+01  |
                    3.31E+04  1.48E+05  4.47E+00  ||  5.01E+00  ||  1.41E+05
    RECMMT1     .00E+00   .00E+00  |  .00E+00  9.12E-02  9.99E+99  |  .00E+00  5.46E-02  9.99E+99  |
                     .00E+00  1.26E-03  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMMT2     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                     .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMMT3     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                     .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMBM1     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                     .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMBM2     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                     .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMBM3     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                     .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMMB1     .00E+00   .00E+00  |  .00E+00  9.19E-01  9.99E+99  |  .00E+00  8.13E-01  9.99E+99  |
                     .00E+00  1.45E-02  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMMB2     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                     .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMMB3     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                     .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMLU1     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                     .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMLU2     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                     .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMLU3     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                     .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMTH1     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                     .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMTH2     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                     .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMTH3     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                     .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMSK1     .00E+00   .00E+00  |  .00E+00  9.18E-01  9.99E+99  |  .00E+00  8.13E-01  9.99E+99  |
                     .00E+00  1.41E-02  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMSK2     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                     .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMSK3     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                     .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
RLCMMT2    3.80E-03  2.19E-02  | 1.41E-03  4.27E-01  3.02E+02  | 2.14E-03  2.29E-01  1.07E+02  | 5.89E-
                     03  7.24E-02  1.23E+01  ||  1.12E+02  ||  3.16E-02
RLCMMT3    5.89E-04  2.19E-03  | 2.34E-04  2.51E-02  1.07E+02  | 3.55E-04  1.66E-02  4.68E+01  | 8.13E-
                     04  6.03E-03  7.41E+00  ||  4.27E+01  ||  3.55E-03
RLCMMT4    1.45E-04  2.19E-04  | 2.88E-05  2.88E-03  1.00E+02  | 5.13E-05  1.51E-03  2.95E+01  | 9.77E-
                     05  5.01E-04  5.13E+00  ||  2.00E+01  ||  3.98E-04
RLCMBM2    3.80E-04  3.89E-04  |  .00E+00  9.55E-03  9.99E+99  | 3.72E-07  4.90E-03  1.32E+04  | 7.08E-
                     05  2.09E-03  2.95E+01  ||  2.51E+01  ||  7.94E-04
RLCMBM3    5.89E-05  5.13E-05  |  .00E+00  7.94E-04  9.99E+99  | 1.51E-07  4.68E-04  3.09E+03  | 1.41E-
                     05  2.29E-04  1.62E+01  ||  1.35E+01  ||  1.12E-04
RLCMBM4    1.48E-05  8.13E-06  |  .00E+00  6.92E-05  9.99E+99  |  .00E+00  5.37E-05  9.99E+99  | 2.34E-
                     06  2.14E-05  9.12E+00  ||  4.68E+00  ||  1.58E-05
RLCMTH2    1.91E-04  6.76E-05  |  .00E+00  3.02E-03  9.99E+99  |  .00E+00  1.58E-03  9.99E+99  | 8.91E-
                     06  3.55E-04  3.98E+01  ||  1.58E+01  ||  1.58E-04
RLCMTH3    3.02E-05  8.13E-06  |  .00E+00  2.69E-04  9.99E+99  |  .00E+00  1.45E-04  9.99E+99  | 1.58E-
                     06  4.27E-05  2.69E+01  ||  8.91E+00  ||  2.00E-05
RLCMTH4    5.89E-06  7.59E-07  |  .00E+00  1.82E-05  9.99E+99  |  .00E+00  1.07E-05  9.99E+99  | 1.48E-
                     07  4.27E-06  2.88E+01  ||  3.09E+00  ||  2.51E-06
RLLVMT2    1.51E-02  1.10E-01  | 4.90E-03  1.00E+00  2.04E+02  | 7.76E-03  9.12E-01  1.17E+02  | 2.95E-
                     02  3.72E-01  1.26E+01  ||  6.61E+01  ||  1.78E-01
RLLVMT3    2.51E-03  1.05E-02  | 8.71E-04  1.38E-01  1.58E+02  | 1.35E-03  7.24E-02  5.37E+01  | 3.72E-
                     03  3.09E-02  8.32E+00  ||  5.50E+01  ||  1.58E-02
RLLVMT4    3.80E-04  7.24E-04  | 9.33E-05  7.24E-03  7.76E+01  | 1.45E-04  4.57E-03  3.16E+01  | 2.75E-
                     04  2.00E-03  7.24E+00  ||  1.91E+01  ||  1.12E-03
RLLVBM2    1.38E-03  2.00E-03  |  .00E+00  1.35E-01  9.99E+99  | 8.32E-06  5.89E-02  7.08E+03  | 2.29E-
                     04  1.32E-02  5.75E+01  ||  9.77E+01  ||  5.01E-03
RLLVBM3    2.45E-04  2.45E-04  |  .00E+00  7.59E-03  9.99E+99  | 1.45E-06  4.17E-03  2.88E+03  | 4.07E-
                     05  1.17E-03  2.88E+01  ||  3.09E+01  ||  5.62E-04
RLLVBM4    3.80E-05  2.34E-05  |  .00E+00  4.27E-04  9.99E+99  |  .00E+00  2.45E-04  9.99E+99  | 5.37E-
                     06  9.12E-05  1.70E+01  ||  1.12E+01  ||  4.47E-05
RLLVTH2    2.14E-03  2.69E-03  |  .00E+00  1.91E-01  9.99E+99  | 3.16E-06  7.59E-02  2.40E+04  | 2.29E-
                     04  1.70E-02  7.41E+01  ||  8.91E+01  ||  5.01E-03
RLLVTH3    2.40E-04  1.95E-04  |  .00E+00  1.38E-02  9.99E+99  |  .00E+00  4.57E-03  9.99E+99  | 2.19E-
                     05  1.12E-03  5.13E+01  ||  5.75E+01  ||  4.47E-04
RLLVTH4    2.29E-05  9.12E-06  |  .00E+00  5.50E-04  9.99E+99  |  .00E+00  2.57E-04  9.99E+99  | 1.07E-
                     06  5.75E-05  5.37E+01  ||  2.40E+01  ||  2.82E-05
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    CDCMED     1.00E+05  1.15E+05  | 3.24E+04  7.08E+05  2.19E+01  | 4.27E+04  4.68E+05  1.10E+01  |
                      7.59E+04  2.34E+05  3.09E+00  ||  7.08E+00  ||  3.16E+05
    CDCMBM     9.77E+04  8.13E+04  | 2.04E+04  3.89E+05  1.91E+01  | 2.63E+04  2.45E+05  9.33E+00  |
                      4.68E+04  1.35E+05  2.88E+00  ||  3.98E+00  ||  1.58E+05
    CDCMTH     1.10E+05  1.15E+05  | 3.24E+04  4.47E+05  1.38E+01  | 4.17E+04  3.16E+05  7.59E+00  |
                      6.61E+04  1.91E+05  2.88E+00  ||  4.07E+00  ||  2.00E+05
    CDLVED     4.17E+05  1.05E+06  | 1.32E+05  7.59E+06  5.75E+01  | 1.95E+05  5.01E+06  2.57E+01  |
                      4.47E+05  2.75E+06  6.17E+00  ||  1.82E+01  ||  3.16E+06
    CDLVBM     3.89E+05  4.79E+05  | 5.01E+04  5.25E+06  1.05E+02  | 7.41E+04  3.47E+06  4.68E+01  |
                      1.95E+05  1.41E+06  7.24E+00  ||  1.35E+01  ||  2.00E+06
    CDLVTH     6.31E+05  4.27E+06  | 3.09E+05  5.37E+07  1.74E+02  | 5.13E+05  3.98E+07  7.76E+01  |
                      1.23E+06  1.62E+07  1.32E+01  ||  8.51E+01  ||  2.24E+07
    PECMMT     9.55E-01  8.13E+00  |  .00E+00  2.40E+02  9.99E+99  |  .00E+00  1.35E+02  9.99E+99  |
                       .00E+00  4.17E+01  9.99E+99  ||  2.51E+02  ||  4.47E+01
    PECMBM      .00E+00   .00E+00  |  .00E+00  1.32E-01  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                       .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
PECMMB     1.86E+01  2.24E+01  |  .00E+00  2.14E+03  9.99E+99  |  .00E+00  9.33E+02  9.99E+99  | 2.95E-
                          01  1.62E+02  5.50E+02  ||  1.15E+02  ||  3.98E+02
    PECMLU      .00E+00   .00E+00  |  .00E+00  7.59E+01  9.99E+99  |  .00E+00  2.88E+01  9.99E+99  |
                       .00E+00  6.92E-01  9.99E+99  ||  9.99E+99  ||   .00E+00
    PECMTH      .00E+00   .00E+00  |  .00E+00  5.25E+00  9.99E+99  |  .00E+00  2.51E+00  9.99E+99  |
                       .00E+00  1.62E-01  9.99E+99  ||  9.99E+99  ||   .00E+00
    PECMSK     1.86E+01  2.00E+00  |  .00E+00  2.00E+03  9.99E+99  |  .00E+00  8.91E+02  9.99E+99  |
                       .00E+00  1.12E+02  9.99E+99  ||  1.07E+02  ||  3.16E+02
    PLCMMT     4.90E+03  1.10E+04  | 1.62E+03  1.15E+05  7.08E+01  | 2.57E+03  5.62E+04  2.19E+01  |
                      4.47E+03  2.40E+04  5.37E+00  ||  2.34E+01  ||  4.47E+04
    PLCMBM     5.01E+02  3.80E+02  |  .00E+00  2.82E+03  9.99E+99  | 3.39E+00  1.91E+03  5.62E+02  |
                      1.23E+02  9.55E+02  7.76E+00  ||  5.62E+00  ||  1.26E+03
    PLCMTH     1.95E+02  3.63E+01  |  .00E+00  8.13E+02  9.99E+99  | 1.55E-02  5.37E+02  3.47E+04  |
                      8.13E+00  1.95E+02  2.40E+01  ||  4.17E+00  ||  3.98E+02
    PLLVMT     1.95E+04  5.25E+04  | 6.46E+03  3.80E+05  5.89E+01  | 9.55E+03  2.57E+05  2.69E+01  |
                      2.09E+04  1.23E+05  5.89E+00  ||  1.95E+01  ||  1.58E+05
    PLLVBM     2.04E+03  1.78E+03  |  .00E+00  4.07E+04  9.99E+99  | 1.00E+01  2.00E+04  2.00E+03  |
                      4.57E+02  8.13E+03  1.78E+01  ||  2.00E+01  ||  1.26E+04
    PLLVTH     1.12E+03  1.55E+03  |  .00E+00  5.89E+04  9.99E+99  | 2.88E+00  2.63E+04  9.12E+03  |
                      1.62E+02  7.94E+03  4.90E+01  ||  5.25E+01  ||  1.58E+04
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Extent of the uncertainty for the 99th percentile of the endpoints for the CB2 source term

ENDPOINT	REF	MEDIAN	5 %	95 %	FAC1	10 %	90 %	FAC2	25 %	75 %	FAC3	95%/REF	MNC
CGIOD1	3.09E+09	3.31E+09	1.15E+08	9.55E+09	8.32E+01	3.47E+08	7.94E+09	2.29E+01	1.17E+09	5.75E+09	4.90E+00	3.09E+00	3.98E+09
CGIOD2	9.33E+07	1.32E+08	1.45E+07	2.82E+08	1.95E+01	3.80E+07	2.40E+08	6.31E+00	8.13E+07	1.86E+08	2.29E+00	3.02E+00	1.26E+08
CGIOD3	9.77E+06	7.59E+06	1.58E+06	1.45E+07	9.12E+00	2.57E+06	1.29E+07	5.01E+00	4.47E+06	1.05E+07	2.34E+00	1.48E+00	7.08E+06
CGIOD4	6.17E+05	2.69E+05	5.50E+03	5.62E+05	1.02E+02	1.62E+04	5.01E+05	3.09E+01	1.10E+05	4.17E+05	3.80E+00	9.12E-01	2.51E+05
CGCAE1	1.32E+08	1.45E+08	4.17E+06	1.35E+09	3.24E+02	1.35E+07	1.15E+09	8.51E+01	3.89E+07	6.76E+08	1.74E+01	1.02E+01	4.47E+08
CGCAE2	8.71E+06	1.51E+07	8.51E+05	6.31E+07	7.41E+01	1.91E+06	5.62E+07	2.95E+01	4.68E+06	3.89E+07	8.32E+00	7.24E+00	2.51E+07
CGCAE3	1.00E+06	1.51E+06	1.32E+05	3.80E+06	2.88E+01	2.51E+05	3.24E+06	1.29E+01	5.25E+05	2.45E+06	4.68E+00	3.80E+00	1.58E+06
CGCAE4	1.23E+05	7.76E+04	1.82E+04	1.95E+05	1.07E+01	2.57E+04	1.66E+05	6.46E+00	4.79E+04	1.23E+05	2.57E+00	1.58E+00	7.94E+04
CAIOD1	3.09E+11	2.04E+11	5.13E+10	6.76E+11	1.32E+01	6.31E+10	6.46E+11	1.02E+01	1.02E+11	5.01E+11	4.90E+00	2.19E+00	2.24E+11
CAIOD2	7.94E+09	1.20E+10	8.51E+08	6.76E+10	7.94E+01	1.20E+09	5.37E+10	4.47E+01	2.45E+09	3.31E+10	1.35E+01	8.51E+00	1.78E+10
CAIOD3	7.41E+08	8.51E+08	3.89E+07	4.57E+09	1.17E+02	5.25E+07	3.31E+09	6.31E+01	1.20E+08	1.86E+09	1.55E+01	6.17E+00	1.00E+09
CAIOD4	4.27E+07	3.02E+07	5.62E+05	1.41E+08	2.51E+02	6.92E+05	1.10E+08	1.58E+02	2.09E+06	5.75E+07	2.75E+01	3.31E+00	3.98E+07
CACAE1	1.00E+11	1.00E+11	2.88E+10	2.00E+11	6.92E+00	3.80E+10	1.86E+11	4.90E+00	5.62E+10	1.58E+11	2.82E+00	2.00E+00	8.91E+10
CACAE2	6.31E+09	6.76E+09	2.19E+09	2.51E+10	1.15E+01	2.69E+09	2.29E+10	8.51E+00	3.89E+09	1.35E+10	3.47E+00	3.98E+00	7.94E+09
CACAE3	3.98E+08	4.68E+08	1.20E+08	2.09E+09	1.74E+01	1.55E+08	1.66E+09	1.07E+01	2.63E+08	8.91E+08	3.39E+00	5.25E+00	5.62E+08
CACAE4	2.75E+07	2.14E+07	4.07E+06	6.46E+07	1.58E+01	5.75E+06	5.50E+07	9.55E+00	9.12E+06	3.80E+07	4.17E+00	2.34E+00	2.51E+07
DECMBM1	8.71E-02	1.45E-01	4.17E-02	3.72E-01	8.91E+00	5.50E-02	3.02E-01	5.50E+00	8.71E-02	2.24E-01	2.57E+00	4.27E+00	1.58E-01
DECMBM2	3.80E-03	1.10E-02	3.63E-03	4.37E-02	1.20E+01	4.79E-03	3.63E-02	7.59E+00	6.92E-03	2.14E-02	3.09E+00	1.15E+01	1.26E-02
DECMBM3	7.24E-04	9.12E-04	3.55E-04	2.75E-03	7.76E+00	4.27E-04	2.14E-03	5.01E+00	6.17E-04	1.41E-03	2.29E+00	3.80E+00	1.12E-03
DECMTH1	3.16E+00	3.02E+00	3.63E-01	2.24E+01	6.17E+01	6.17E-01	1.66E+01	2.69E+01	1.38E+00	7.94E+00	5.75E+00	7.08E+00	4.47E+00
DECMTH2	6.61E-02	1.48E-01	1.70E-02	1.51E+00	8.91E+01	2.45E-02	1.10E+00	4.47E+01	4.57E-02	3.98E-01	8.71E+00	2.29E+01	2.82E-01
DECMTH3	1.29E-02	1.32E-02	1.41E-03	6.03E-02	4.27E+01	2.09E-03	4.79E-02	2.29E+01	4.27E-03	2.75E-02	6.46E+00	4.68E+00	2.24E-02
DECMSK1	1.12E+01	5.89E+00	7.24E-02	2.75E+02	3.80E+03	2.00E-01	1.74E+02	8.71E+02	9.55E-01	4.90E+01	5.13E+01	2.45E+01	3.55E+01
DECMSK2	2.45E-01	2.51E-01	3.39E-03	1.48E+01	4.37E+03	8.91E-03	8.32E+00	9.33E+02	5.62E-02	1.51E+00	2.69E+01	6.03E+01	1.78E+00
DECMSK3	7.76E-02	2.34E-02	2.24E-04	7.41E-01	3.31E+03	4.57E-04	5.25E-01	1.15E+03	3.55E-03	1.41E-01	3.98E+01	9.55E+00	1.78E-01
DLCMED2	5.37E-01	1.62E+00	2.09E-01	2.57E+01	1.23E+02	2.82E-01	1.35E+01	4.79E+01	6.46E-01	5.75E+00	8.91E+00	4.79E+01	3.98E+00
DLCMED3	7.94E-02	1.74E-01	2.40E-02	1.10E+00	4.57E+01	3.16E-02	6.76E-01	2.14E+01	6.92E-02	3.55E-01	5.13E+00	1.38E+01	2.51E-01
DLCMED4	9.77E-03	1.20E-02	2.51E-03	4.27E-02	1.70E+01	3.72E-03	3.31E-02	8.91E+00	5.75E-03	2.24E-02	3.89E+00	4.37E+00	1.78E-02
DLCMBM2	5.37E-01	5.75E-01	9.33E-02	5.25E+00	5.62E+01	1.32E-01	3.24E+00	2.45E+01	2.57E-01	1.45E+00	5.62E+00	9.77E+00	1.26E+00
DLCMBM3	7.59E-02	7.76E-02	1.23E-02	4.47E-01	3.63E+01	1.70E-02	3.09E-01	1.82E+01	3.80E-02	1.91E-01	5.01E+00	5.89E+00	1.26E-01
DLCMBM4	9.55E-03	6.76E-03	1.26E-03	2.95E-02	2.34E+01	1.91E-03	2.09E-02	1.10E+01	3.55E-03	1.23E-02	3.47E+00	3.09E+00	1.12E-02
DLCMTH2	6.61E-01	1.17E+00	2.00E-01	7.08E+00	3.55E+01	2.82E-01	4.68E+00	1.66E+01	5.50E-01	2.40E+00	4.37E+00	1.07E+01	2.00E+00
DLCMTH3	1.00E-01	1.17E-01	2.75E-02	5.25E-01	1.91E+01	3.80E-02	4.17E-01	1.10E+01	6.92E-02	2.40E-01	3.47E+00	5.25E+00	1.78E-01
DLCMTH4	1.12E-02	9.77E-03	2.29E-03	3.63E-02	1.58E+01	3.09E-03	2.75E-02	8.91E+00	4.90E-03	1.66E-02	3.39E+00	3.24E+00	1.41E-02
DLLVED2	4.68E+00	2.69E+01	2.09E+00	2.04E+02	9.77E+01	3.89E+00	1.32E+02	3.39E+01	9.12E+00	6.76E+01	7.41E+00	4.37E+01	4.47E+01
DLLVED3	4.07E-01	1.70E+00	1.55E-01	1.17E+01	7.59E+01	2.45E-01	7.94E+00	3.24E+01	6.92E-01	3.89E+00	5.62E+00	2.88E+01	2.82E+00
DLLVED4	4.68E-02	8.13E-02	9.33E-03	6.17E-01	6.61E+01	1.58E-02	3.89E-01	2.45E+01	3.47E-02	1.82E-01	5.25E+00	1.32E+01	1.41E-01
DLLVBM2	3.89E+00	7.41E+00	3.16E-01	1.26E+02	3.98E+02	5.89E-01	8.32E+01	1.41E+02	1.82E+00	2.40E+01	1.32E+01	3.24E+01	1.78E+01
DLLVBM3	3.63E-01	6.03E-01	3.55E-02	7.59E+00	2.14E+02	5.89E-02	4.07E+00	6.92E+01	1.74E-01	1.70E+00	9.77E+00	2.09E+01	1.26E+00
DLLVBM4	4.17E-02	3.80E-02	3.47E-03	4.90E-01	1.41E+02	5.89E-03	2.82E-01	4.79E+01	1.58E-02	1.00E-01	6.31E+00	1.17E+01	7.94E-02
DLLVTH2	1.00E+01	1.20E+02	6.46E+00	2.04E+03	3.16E+02	1.05E+01	1.15E+03	1.10E+02	3.09E+01	4.37E+02	1.41E+01	2.04E+02	2.82E+02
DLLVTH3	8.91E-01	6.46E+00	4.57E-01	1.00E+02	2.19E+02	6.92E-01	7.41E+01	1.07E+02	1.82E+00	2.34E+01	1.29E+01	1.12E+02	1.41E+01
DLLVTH4	7.24E-02	2.19E-01	2.24E-02	3.98E+00	1.78E+02	2.82E-02	2.45E+00	8.71E+01	6.76E-02	8.32E-01	1.23E+01	5.50E+01	5.62E-01
AEVAC	2.68E+01	3.24E+02	3.89E+01	1.15E+04	2.95E+02	5.50E+01	7.76E+03	1.41E+02	1.35E+02	1.58E+03	1.17E+01	4.28E+02	7.94E+03
ASHEL	2.40E+02	1.32E+03	1.91E+02	3.55E+04	1.86E+02	2.51E+02	2.29E+04	9.12E+01	4.37E+02	6.46E+03	1.48E+01	1.48E+02	1.78E+04
AIOD	1.32E+02	1.51E+02	5.62E+00	1.17E+03	2.09E+02	9.12E+00	6.92E+02	7.59E+01

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                    3.47E+01  3.09E+02  8.91E+00  ||  8.91E+00  ||  6.31E+02
    ARELIN     2.68E+01  3.24E+02  | 3.89E+01  1.15E+04  2.95E+02  | 5.50E+01  7.76E+03  1.41E+02  |
                    1.35E+02  1.58E+03  1.17E+01  ||  4.28E+02  ||  7.94E+03
    ARELTIM    1.02E+02  1.70E+02  | 8.51E+00  1.10E+03  1.29E+02  | 1.91E+01  7.41E+02  3.89E+01  |
                    5.98E+01  3.47E+02  5.80E+00  ||  1.07E+01  ||  4.47E+02
    AFBIMIL    1.17E+05  6.61E+05  | 7.76E+04  1.00E+06  1.29E+01  | 1.55E+05  1.00E+06  6.46E+00  |
                    3.29E+05  1.00E+06  3.04E+00  ||  8.51E+00  ||  8.91E+05
    AFBIGRA    1.00E+05  2.04E+03  | 9.77E+01  8.91E+04  9.12E+02  | 1.32E+02  5.37E+04  4.07E+02  |
                    3.24E+02  1.34E+04  4.13E+01  ||  8.91E-01  ||  5.62E+04
    AFBIVEG    9.77E+04  5.13E+05  | 1.07E+05  1.00E+06  9.33E+00  | 1.70E+05  1.00E+06  5.89E+00  |
                    2.63E+05  8.91E+05  3.39E+00  ||  1.02E+01  ||  8.91E+05
    AFBIBEE    1.26E+05  1.32E+05  | 8.51E+03  6.17E+05  7.24E+01  | 2.19E+04  4.68E+05  2.14E+01  |
                    5.89E+04  2.63E+05  4.47E+00  ||  4.90E+00  ||  3.55E+05
    AFBTGRA    1.91E+05  7.24E+02  | 2.45E+01  1.70E+05  6.92E+03  | 6.03E+01  1.05E+05  1.74E+03  |
                    1.86E+02  1.62E+04  8.71E+01  ||  8.91E-01  ||  1.12E+05
    AFBTVEG    1.78E+04  2.95E+04  | 2.88E+03  2.74E+05  9.51E+01  | 4.68E+03  1.95E+05  4.17E+01  |
                    1.15E+04  7.24E+04  6.31E+00  ||  1.54E+01  ||  2.24E+05
    AFBTMIL    2.69E+04  2.40E+05  | 2.57E+04  1.00E+06  3.89E+01  | 5.01E+04  7.24E+05  1.45E+01  |
                    1.15E+05  4.17E+05  3.63E+00  ||  3.72E+01  ||  7.08E+05
ENDPOINT      REF      MEDIAN    |   5 %      95 %      FAC1    |   10 %      90 %      FAC2    |   25 %
                              75 %      FAC3    ||   95%/REF  ||        MNC
-------------------------------------------------------------------------------------------------------------
                                 ----------------------------------------------------
    AFBTBEE    8.13E+04  9.77E+04  | 4.90E+03  4.79E+05  9.77E+01  | 1.05E+04  3.63E+05  3.47E+01  |
                    4.37E+04  1.78E+05  4.07E+00  ||  5.89E+00  ||  2.82E+05
    RECMMT1    1.15E-03  2.69E-03  |  .00E+00  1.00E+00  9.99E+99  |  .00E+00  2.09E-01  9.99E+99  |
                     .00E+00  8.41E-02  9.99E+99  ||  8.71E+02  ||  7.94E-02
    RECMMT2     .00E+00   .00E+00  |  .00E+00  2.88E-02  9.99E+99  |  .00E+00  3.98E-03  9.99E+99  |
                     .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMMT3     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                     .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMBM1     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                     .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMBM2     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                     .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMBM3     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                     .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMMB1    2.29E-02  1.86E-02  |  .00E+00  1.00E+00  9.99E+99  |  .00E+00  9.62E-01  9.99E+99  |
                     .00E+00  8.68E-01  9.99E+99  ||  4.37E+01  ||  7.94E-01
    RECMMB2     .00E+00   .00E+00  |  .00E+00  5.25E-01  9.99E+99  |  .00E+00  1.07E-01  9.99E+99  |
                     .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMMB3     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                     .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMLU1     .00E+00   .00E+00  |  .00E+00  2.29E-01  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                     .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMLU2     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                     .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMLU3     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                     .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMTH1     .00E+00   .00E+00  |  .00E+00  1.82E-02  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                     .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMTH2     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                     .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMTH3     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                     .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMSK1    2.29E-02   .00E+00  |  .00E+00  9.56E-01  9.99E+99  |  .00E+00  9.31E-01  9.99E+99  |
                     .00E+00  8.48E-01  9.99E+99  ||  4.17E+01  ||  7.94E-01
    RECMSK2     .00E+00   .00E+00  |  .00E+00  4.57E-01  9.99E+99  |  .00E+00  9.33E-02  9.99E+99  |
                     .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    RECMSK3     .00E+00   .00E+00  |  .00E+00   .00E+00  9.99E+99  |  .00E+00   .00E+00  9.99E+99  |
                     .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
RLCMMT2    2.63E-02  1.41E-01  | 1.12E-02  1.00E+00  8.91E+01  | 1.66E-02  1.00E+00  6.03E+01  | 5.01E-
                     02  5.37E-01  1.07E+01  ||  3.80E+01  ||  4.47E-01
RLCMMT3    3.80E-03  1.35E-02  | 1.29E-03  1.48E-01  1.15E+02  | 2.40E-03  8.13E-02  3.39E+01  | 5.13E-
                     03  3.31E-02  6.46E+00  ||  3.89E+01  ||  2.51E-02
RLCMMT4    4.79E-04  8.71E-04  | 1.26E-04  9.55E-03  7.59E+01  | 2.24E-04  4.90E-03  2.19E+01  | 3.89E-
                     04  1.95E-03  5.01E+00  ||  2.00E+01  ||  2.24E-03
RLCMBM2    2.75E-03  2.45E-03  |  .00E+00  2.75E-02  9.99E+99  | 4.57E-06  2.00E-02  4.37E+03  | 7.08E-
                     04  9.12E-03  1.29E+01  ||  1.00E+01  ||  7.94E-03
RLCMBM3    3.89E-04  3.80E-04  |  .00E+00  3.39E-03  9.99E+99  | 3.72E-07  2.24E-03  6.03E+03  | 8.91E-
                     05  1.12E-03  1.26E+01  ||  8.71E+00  ||  7.94E-04
RLCMBM4    4.90E-05  3.39E-05  |  .00E+00  2.34E-04  9.99E+99  | 1.70E-07  1.48E-04  8.71E+02  | 8.51E-
                     06  8.13E-05  9.55E+00  ||  4.79E+00  ||  7.08E-05
RLCMTH2    1.17E-03  4.37E-04  |  .00E+00  1.29E-02  9.99E+99  | 4.27E-07  7.08E-03  1.66E+04  | 6.92E-
                     05  2.00E-03  2.88E+01  ||  1.10E+01  ||  2.51E-03
RLCMTH3    1.78E-04  4.17E-05  |  .00E+00  1.32E-03  9.99E+99  |  .00E+00  7.76E-04  9.99E+99  | 7.59E-
                     06  1.82E-04  2.40E+01  ||  7.41E+00  ||  2.24E-04
RLCMTH4    2.00E-05  3.09E-06  |  .00E+00  9.33E-05  9.99E+99  |  .00E+00  5.01E-05  9.99E+99  | 6.76E-
                     07  1.55E-05  2.29E+01  ||  4.68E+00  ||  1.78E-05
RLLVMT2    2.00E-01  8.91E-01  | 8.32E-02  1.00E+00  1.20E+01  | 1.38E-01  1.00E+00  7.24E+00  | 3.89E-
                     01  1.00E+00  2.57E+00  ||  5.01E+00  ||  1.00E+00
RLLVMT3    1.91E-02  8.91E-02  | 7.76E-03  7.59E-01  9.77E+01  | 1.29E-02  4.37E-01  3.39E+01  | 3.16E-
                     02  2.24E-01  7.08E+00  ||  3.98E+01  ||  1.58E-01
RLLVMT4    2.29E-03  4.79E-03  | 4.57E-04  4.37E-02  9.55E+01  | 7.24E-04  3.55E-02  4.90E+01  | 1.91E-
                     03  1.15E-02  6.03E+00  ||  1.91E+01  ||  1.00E-02
RLLVBM2    2.04E-02  2.40E-02  | 1.20E-06  1.00E+00  8.32E+05  | 9.33E-05  5.01E-01  5.37E+03  | 4.27E-
                     03  1.55E-01  3.63E+01  ||  4.90E+01  ||  1.26E-01
RLLVBM3    1.86E-03  2.04E-03  |  .00E+00  5.75E-02  9.99E+99  | 9.12E-06  3.16E-02  3.47E+03  | 3.80E-
                     04  1.00E-02  2.63E+01  ||  3.09E+01  ||  7.94E-03
RLLVBM4    2.19E-04  1.51E-04  |  .00E+00  3.55E-03  9.99E+99  | 1.15E-06  1.78E-03  1.55E+03  | 3.16E-
                     05  5.89E-04  1.86E+01  ||  1.62E+01  ||  5.01E-04
RLLVTH2    1.78E-02  3.89E-02  | 9.55E-06  1.00E+00  1.05E+05  | 1.00E-04  9.12E-01  9.12E+03  | 4.07E-
                     03  2.40E-01  5.89E+01  ||  5.62E+01  ||  1.78E-01
RLLVTH3    1.58E-03  2.51E-03  |  .00E+00  9.77E-02  9.99E+99  | 5.25E-06  4.07E-02  7.76E+03  | 2.45E-
                     04  1.26E-02  5.13E+01  ||  6.17E+01  ||  1.12E-02
RLLVTH4    1.29E-04  7.24E-05  |  .00E+00  4.57E-03  9.99E+99  |  .00E+00  2.00E-03  9.99E+99  | 8.91E-
                     06  4.57E-04  5.13E+01  ||  3.55E+01  ||  4.47E-04
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    CDCMED     1.41E+05  1.55E+05  | 3.94E+04  1.00E+06  2.54E+01  | 5.62E+04  7.48E+05  1.33E+01  |
                         9.55E+04  3.47E+05  3.63E+00  ||  7.08E+00  ||  8.91E+05
    CDCMBM     1.35E+05  1.10E+05  | 2.63E+04  6.03E+05  2.29E+01  | 3.31E+04  3.39E+05  1.02E+01  |
                         5.85E+04  1.91E+05  3.26E+00  ||  4.47E+00  ||  5.01E+05
    CDCMTH     1.48E+05  1.54E+05  | 4.57E+04  6.76E+05  1.48E+01  | 5.50E+04  3.98E+05  7.24E+00  |
                         8.43E+04  2.51E+05  2.98E+00  ||  4.57E+00  ||  5.01E+05
    CDLVED     4.57E+05  1.55E+06  | 1.95E+05  1.32E+07  6.76E+01  | 2.82E+05  8.32E+06  2.95E+01  |
                         6.46E+05  4.07E+06  6.31E+00  ||  2.88E+01  ||  1.00E+07
    CDLVBM     4.37E+05  7.59E+05  | 7.94E+04  1.22E+07  1.53E+02  | 1.02E+05  6.31E+06  6.17E+01  |
                         2.95E+05  2.09E+06  7.08E+00  ||  2.79E+01  ||  7.08E+06
    CDLVTH     6.76E+05  6.74E+06  | 4.37E+05  8.13E+07  1.86E+02  | 7.41E+05  5.74E+07  7.74E+01  |
                         1.78E+06  2.29E+07  1.29E+01  ||  1.20E+02  ||  5.62E+07
PECMMT     2.45E+00  2.04E+01  |  .00E+00  5.50E+02  9.99E+99  |  .00E+00  3.24E+02  9.99E+99  | 2.51E-
                           01  8.32E+01  3.31E+02  ||  2.24E+02  ||  2.51E+02
    PECMBM      .00E+00   .00E+00  |  .00E+00  1.74E+01  9.99E+99  |  .00E+00  4.47E-01  9.99E+99  |
                          .00E+00   .00E+00  9.99E+99  ||  9.99E+99  ||   .00E+00
    PECMMB     4.68E+01  5.13E+01  |  .00E+00  5.13E+03  9.99E+99  |  .00E+00  2.19E+03  9.99E+99  |
                         1.91E+00  2.95E+02  1.55E+02  ||  1.10E+02  ||  2.51E+03
    PECMLU      .00E+00   .00E+00  |  .00E+00  2.82E+02  9.99E+99  |  .00E+00  6.46E+01  9.99E+99  |
                          .00E+00  5.13E+00  9.99E+99  ||  9.99E+99  ||  1.12E+02
    PECMTH      .00E+00   .00E+00  |  .00E+00  1.44E+01  9.99E+99  |  .00E+00  7.24E+00  9.99E+99  |
                          .00E+00  7.62E-01  9.99E+99  ||  9.99E+99  ||  2.82E+00
    PECMSK     4.68E+01  7.91E+00  |  .00E+00  4.17E+03  9.99E+99  |  .00E+00  1.78E+03  9.99E+99  |
                          .00E+00  2.45E+02  9.99E+99  ||  8.91E+01  ||  2.24E+03
    PLCMMT     6.76E+03  1.55E+04  | 2.09E+03  1.78E+05  8.51E+01  | 3.31E+03  8.91E+04  2.69E+01  |
                         6.31E+03  3.55E+04  5.62E+00  ||  2.63E+01  ||  1.58E+05
    PLCMBM     6.92E+02  5.50E+02  |  .00E+00  3.55E+03  9.99E+99  | 4.07E+00  2.34E+03  5.75E+02  |
                         1.51E+02  1.34E+03  8.85E+00  ||  5.13E+00  ||  2.82E+03
    PLCMTH     2.57E+02  4.68E+01  |  .00E+00  1.10E+03  9.99E+99  | 2.04E-02  7.40E+02  3.62E+04  |
                         1.05E+01  2.69E+02  2.57E+01  ||  4.27E+00  ||  8.91E+02
    PLLVMT     2.19E+04  7.24E+04  | 1.02E+04  5.89E+05  5.75E+01  | 1.35E+04  3.72E+05  2.75E+01  |
                         3.16E+04  1.70E+05  5.37E+00  ||  2.69E+01  ||  5.01E+05
    PLLVBM     2.24E+03  2.75E+03  |  .00E+00  5.89E+04  9.99E+99  | 1.31E+01  3.28E+04  2.50E+03  |
                         6.92E+02  1.15E+04  1.66E+01  ||  2.63E+01  ||  4.47E+04
    PLLVTH     1.20E+03  2.34E+03  |  .00E+00  9.33E+04  9.99E+99  | 4.07E+00  4.07E+04  1.00E+04  |
                         3.09E+02  1.32E+04  4.27E+01  ||  7.76E+01  ||  6.31E+04
```

Extent of the uncertainty for the mean value of the endpoints for the DBA source term

ENDPOINT	REF	MEDIAN	5 %	95 %	FAC1	10 %	90 %	FAC2	25 %	75 %	FAC3	95%/REF	MNC
CGIOD2	9.57E+02	1.48E+03	1.69E+02	3.12E+03	1.85E+01	4.69E+02	2.73E+03	5.81E+00	1.08E+03	2.21E+03	2.05E+00	3.26E+00	1.69E+03
CGIOD3	9.98E+01	9.65E+01	2.45E+01	1.63E+02	6.66E+00	3.46E+01	1.53E+02	4.42E+00	6.19E+01	1.27E+02	2.05E+00	1.64E+00	9.56E+01
CGIOD4	6.31E+00	3.75E+00	6.09E-01	7.74E+00	1.27E+01	7.44E-01	7.22E+00	9.71E+00	1.52E+00	5.45E+00	3.58E+00	1.23E+00	3.77E+00
CGCAE2	4.89E+01	1.09E+02	7.46E+00	3.97E+02	5.32E+01	1.29E+01	3.42E+02	2.66E+01	3.18E+01	2.47E+02	7.78E+00	8.12E+00	1.52E+02
CGCAE3	6.58E+00	1.36E+01	1.13E+00	2.39E+01	2.12E+01	1.93E+00	2.26E+01	1.17E+01	3.91E+00	1.85E+01	4.73E+00	3.63E+00	1.23E+01
CGCAE4	8.34E-01	6.21E-01	1.43E-01	1.44E+00	1.01E+01	2.30E-01	1.28E+00	5.57E+00	3.43E-01	9.25E-01	2.70E+00	1.73E+00	6.92E-01
CAIOD2	8.62E+04	1.63E+05	1.73E+04	6.93E+05	4.01E+01	2.30E+04	5.56E+05	2.41E+01	3.83E+04	3.44E+05	8.99E+00	8.04E+00	2.32E+05
CAIOD3	8.30E+03	1.22E+04	9.50E+02	6.01E+04	6.33E+01	1.22E+03	3.95E+04	3.24E+01	2.08E+03	2.48E+04	1.19E+01	7.24E+00	1.74E+04
CAIOD4	4.37E+02	4.00E+02	2.56E+01	1.63E+03	6.37E+01	3.11E+01	1.47E+03	4.74E+01	5.28E+01	8.33E+02	1.58E+01	3.73E+00	5.81E+02
CACAE2	2.87E+04	4.14E+04	1.57E+04	1.42E+05	9.05E+00	1.94E+04	1.26E+05	6.50E+00	2.66E+04	8.72E+04	3.28E+00	4.95E+00	5.88E+04
CACAE3	2.60E+03	3.71E+03	9.49E+02	1.57E+04	1.66E+01	1.22E+03	1.22E+04	1.00E+01	1.92E+03	7.10E+03	3.69E+00	6.06E+00	5.35E+03
CACAE4	1.81E+02	1.49E+02	3.02E+01	4.99E+02	1.65E+01	3.80E+01	3.59E+02	9.46E+00	6.26E+01	2.61E+02	4.17E+00	2.76E+00	1.92E+02
DLCMED2	1.63E-05	4.13E-05	6.22E-06	2.72E-04	4.37E+01	9.27E-06	1.92E-04	2.07E+01	1.75E-05	8.39E-05	4.79E+00	1.66E+01	8.60E-05
DLCMED3	2.36E-06	5.99E-06	1.19E-06	3.97E-05	3.34E+01	1.63E-06	2.20E-05	1.35E+01	3.01E-06	1.14E-05	3.78E+00	1.69E+01	1.38E-05
DLCMED4	2.75E-07	5.33E-07	8.52E-08	3.13E-06	3.67E+01	1.25E-07	2.15E-06	1.72E+01	2.35E-07	1.07E-06	4.54E+00	1.14E+01	1.21E-06
DLCMBM2	1.45E-05	1.85E-05	1.84E-06	1.69E-04	9.20E+01	2.65E-06	8.62E-05	3.26E+01	6.89E-06	4.32E-05	6.27E+00	1.16E+01	5.21E-05
DLCMBM3	1.97E-06	3.08E-06	2.85E-07	2.31E-05	8.11E+01	4.20E-07	1.43E-05	3.40E+01	1.10E-06	5.78E-06	5.24E+00	1.17E+01	9.64E-06
DLCMBM4	2.48E-07	1.98E-07	2.83E-08	1.99E-06	7.06E+01	4.09E-08	1.20E-06	2.94E+01	9.42E-08	5.25E-07	5.58E+00	8.06E+00	8.21E-07
DLCMTH2	4.18E-05	6.43E-05	1.85E-05	2.48E-04	1.34E+01	2.36E-05	1.90E-04	8.04E+00	3.75E-05	1.01E-04	2.68E+00	5.92E+00	1.00E-04
DLCMTH3	8.56E-06	1.87E-05	4.05E-06	8.29E-05	2.05E+01	5.84E-06	6.37E-05	1.09E+01	9.62E-06	3.50E-05	3.64E+00	9.68E+00	3.06E-05
DLCMTH4	6.67E-07	2.36E-06	2.19E-07	2.11E-05	9.64E+01	3.23E-07	1.58E-05	4.90E+01	7.89E-07	7.05E-06	8.94E+00	3.16E+01	5.92E-06
DLOUED2	2.93E-05	2.30E-04	2.54E-05	1.63E-03	6.42E+01	3.88E-05	1.03E-03	2.65E+01	9.85E-05	4.87E-04	4.95E+00	5.58E+01	5.37E-04
DLOUED3	3.76E-06	1.79E-05	2.47E-06	1.00E-04	4.06E+01	3.97E-06	7.08E-05	1.78E+01	7.79E-06	3.39E-05	4.35E+00	2.67E+01	3.63E-05
DLOUED4	4.46E-07	7.79E-07	1.50E-07	5.90E-06	3.92E+01	1.87E-07	3.28E-06	1.75E+01	3.93E-07	1.73E-06	4.40E+00	1.32E+01	1.86E-06
DLOUBM2	2.52E-05	6.33E-05	4.78E-06	5.94E-04	1.24E+02	7.39E-06	3.43E-04	4.63E+01	1.97E-05	1.62E-04	8.26E+00	2.36E+01	2.52E-04
DLOUBM3	3.32E-06	6.33E-06	5.20E-07	4.68E-05	9.00E+01	1.05E-06	2.80E-05	2.68E+01	2.24E-06	1.25E-05	5.61E+00	1.41E+01	1.95E-05
DLOUBM4	4.15E-07	3.50E-07	5.25E-08	2.68E-06	5.10E+01	9.21E-08	1.83E-06	1.99E+01	1.58E-07	7.93E-07	5.03E+00	6.46E+00	1.17E-06
DLOUTH2	9.49E-05	1.32E-03	8.60E-05	1.97E-02	2.29E+02	1.26E-04	1.39E-02	1.11E+02	3.66E-04	5.13E-03	1.40E+01	2.08E+02	5.03E-03
DLOUTH3	1.06E-05	7.57E-05	7.57E-06	1.13E-03	1.49E+02	1.05E-05	8.36E-04	7.94E+01	2.37E-05	3.06E-04	1.29E+01	1.06E+02	2.71E-04
DLOUTH4	8.73E-07	3.04E-06	3.29E-07	4.90E-05	1.49E+02	4.34E-07	3.39E-05	7.81E+01	9.90E-07	1.13E-05	1.14E+01	5.61E+01	1.15E-05
ARELIN	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	.00E+00	.00E+00	9.99E+99	.00E+00	.00E+00	9.99E+99	9.99E+99	1.84E-05
ARELTIM	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	.00E+00	.00E+00	9.99E+99	.00E+00	.00E+00	9.99E+99	9.99E+99	6.81E-06
AFBIMIL	6.45E+00	1.13E+02	1.90E+00	8.31E+02	4.37E+02	7.02E+00	6.34E+02	9.03E+01	3.31E+01	3.07E+02	9.29E+00	1.29E+02	2.20E+02
AFBIGRA	1.80E-01	4.10E-04	.00E+00	1.20E+00	9.99E+99	.00E+00	1.95E-01	9.99E+99	.00E+00	1.70E-02	9.99E+99	6.68E+00	1.81E-01
AFBIVEG	1.48E+01	2.78E+02	3.17E+01	1.87E+03	5.91E+01	4.63E+01	1.12E+03	2.41E+01	1.01E+02	6.18E+02	6.12E+00	1.26E+02	5.10E+02
AFBIBEE	5.63E-01	2.57E+00	3.49E-02	1.73E+01	4.97E+02	1.20E-01	1.49E+01	1.24E+02	5.63E-01	6.91E+00	1.23E+01	3.08E+01	5.33E+00
AFBTMIL	5.37E-01	1.44E+01	4.56E-01	8.75E+01	1.92E+02	1.19E+00	6.81E+01	5.72E+01	4.60E+00	3.43E+01	7.46E+00	1.63E+02	2.62E+01
AFBTGRA	3.33E-01	6.11E-04	.00E+00	2.36E+00	9.99E+99	.00E+00	3.72E-01	9.99E+99	.00E+00	3.09E-02	9.99E+99	7.08E+00	3.46E-01
AFBTVEG	3.86E-01	6.97E+00	6.71E-01	4.04E+01	6.02E+01	9.94E-01	2.79E+01	2.80E+01	2.30E+00	1.52E+01	6.60E+00	1.05E+02	1.21E+01
AFBTBEE	1.77E-01	1.58E+00	9.25E-03	1.31E+01	1.42E+03	3.73E-02	1.01E+01	2.70E+02	2.42E-01	5.08E+00	2.10E+01	7.42E+01	3.55E+00
RLCMMT2	7.82E-07	2.94E-06	3.26E-07	3.13E-05	9.59E+01	5.37E-07	2.38E-05	4.42E+01	1.15E-06	7.71E-06	6.68E+00	4.00E+01	1.05E-05
RLCMMT3	1.11E-07	3.64E-07	5.56E-08	4.18E-06	7.51E+01	7.86E-08	2.43E-06	3.09E+01	1.65E-07	1.01E-06	6.11E+00	3.77E+01	1.39E-06
RLCMMT4	1.32E-08	2.91E-08	3.80E-09	2.47E-07	6.48E+01	5.41E-09	1.50E-07	2.76E+01	1.17E-08	6.75E-08	5.75E+00	1.87E+01	9.17E-08

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 RLCMBM2    7.49E-08  7.08E-08  | 2.40E-12  1.28E-06  5.34E+05  | 3.07E-10  8.04E-07  2.62E+03  | 1.63E-
                        08  2.60E-07  1.59E+01  ||  1.71E+01  ||  3.69E-07
 RLCMBM3    1.02E-08  1.05E-08  | 6.05E-13  1.71E-07  2.83E+05  | 7.14E-11  1.15E-07  1.61E+03  | 2.47E-
                        09  3.90E-08  1.58E+01  ||  1.68E+01  ||  6.94E-08
 RLCMBM4    1.28E-09  8.64E-10  | 4.18E-14  1.54E-08  3.68E+05  | 1.13E-11  7.88E-09  6.96E+02  | 2.13E-
                        10  2.94E-09  1.38E+01  ||  1.21E+01  ||  5.51E-09
 RLCMTH2    7.40E-08  2.25E-08  | 2.97E-12  5.14E-07  1.73E+05  | 1.51E-11  3.13E-07  2.08E+04  | 4.49E-
                        09  1.09E-07  2.44E+01  ||  6.95E+00  ||  1.21E-07
 RLCMTH3    1.52E-08  6.23E-09  | 1.30E-12  1.33E-07  1.03E+05  | 6.68E-12  8.36E-08  1.25E+04  | 1.08E-
                        09  3.45E-08  3.19E+01  ||  8.80E+00  ||  3.42E-08
 RLCMTH4    1.18E-09  8.50E-10  | 1.20E-13  3.48E-08  2.90E+05  | 1.55E-12  1.46E-08  9.42E+03  | 1.09E-
                        10  4.53E-09  4.14E+01  ||  2.95E+01  ||  6.24E-09
 RLOUMT2    1.39E-06  1.07E-05  | 1.03E-06  9.85E-05  9.55E+01  | 1.79E-06  6.13E-05  3.42E+01  | 4.42E-
                        06  2.57E-05  5.82E+00  ||  7.06E+01  ||  3.31E-05
 RLOUMT3    1.80E-07  8.92E-07  | 1.14E-07  7.11E-06  6.25E+01  | 1.83E-07  4.17E-06  2.27E+01  | 3.57E-
                        07  2.02E-06  5.67E+00  ||  3.95E+01  ||  2.56E-06
 RLOUMT4    2.16E-08  4.52E-08  | 7.39E-09  3.16E-07  4.28E+01  | 9.09E-09  2.22E-07  2.44E+01  | 1.80E-
                        08  1.01E-07  5.62E+00  ||  1.46E+01  ||  1.30E-07
ENDPOINT      REF      MEDIAN   |    5 %      95 %      FAC1    |   10 %      90 %      FAC2    |   25 %
                                 75 %      FAC3    ||   95%/REF  ||        MNC
-------------------------------------------------------------------------------------------------------------
                                -----------------------------------------------------
 RLOUBM2    1.30E-07  2.33E-07  | 1.02E-11  5.35E-06  5.23E+05  | 1.56E-09  3.14E-06  2.02E+03  | 5.51E-
                        08  9.16E-07  1.66E+01  ||  4.12E+01  ||  1.80E-06
 RLOUBM3    1.71E-08  2.25E-08  | 1.23E-12  3.78E-07  3.07E+05  | 1.73E-10  2.21E-07  1.28E+03  | 5.65E-
                        09  7.98E-08  1.41E+01  ||  2.21E+01  ||  1.37E-07
 RLOUBM4    2.14E-09  1.48E-09  | 5.78E-14  2.04E-08  3.53E+05  | 1.19E-11  1.13E-08  9.46E+02  | 3.85E-
                        10  4.50E-09  1.17E+01  ||  9.54E+00  ||  7.92E-09
 RLOUTH2    1.68E-07  4.30E-07  | 1.05E-10  2.18E-05  2.08E+05  | 1.02E-09  1.15E-05  1.12E+04  | 5.73E-
                        08  2.44E-06  4.26E+01  ||  1.30E+02  ||  5.33E-06
 RLOUTH3    1.87E-08  3.02E-08  | 4.47E-12  1.26E-06  2.81E+05  | 6.44E-11  5.27E-07  8.19E+03  | 3.13E-
                        09  1.60E-07  5.13E+01  ||  6.70E+01  ||  2.84E-07
 RLOUTH4    1.55E-09  1.37E-09  | 1.70E-13  6.36E-08  3.73E+05  | 3.33E-12  2.39E-08  7.19E+03  | 1.36E-
                        10  7.22E-09  5.32E+01  ||  4.11E+01  ||  1.20E-08
    CDCMED     1.04E+01  2.49E+01  | 4.93E+00  1.40E+02  2.84E+01  | 6.69E+00  8.10E+01  1.21E+01  |
                      1.30E+01  4.57E+01  3.52E+00  ||  1.34E+01  ||  5.26E+01
    CDCMBM     9.11E+00  1.21E+01  | 1.20E+00  8.49E+01  7.09E+01  | 1.96E+00  4.86E+01  2.47E+01  |
                      4.41E+00  2.31E+01  5.24E+00  ||  9.33E+00  ||  3.59E+01
    CDCMTH     3.09E+01  8.44E+01  | 1.40E+01  5.20E+02  3.72E+01  | 2.19E+01  3.94E+02  1.80E+01  |
                      3.92E+01  2.03E+02  5.19E+00  ||  1.68E+01  ||  1.64E+02
 PLCMMT     4.96E-01  1.49E+00  | 2.19E-01  1.40E+01  6.41E+01  | 3.10E-01  8.47E+00  2.74E+01  | 6.46E-
                        01  3.70E+00  5.73E+00  ||  2.83E+01  ||  4.96E+00
 PLCMBM     4.70E-02  4.14E-02  | 2.35E-06  5.95E-01  2.53E+05  | 3.28E-04  4.14E-01  1.26E+03  | 1.05E-
                        02  1.43E-01  1.36E+01  ||  1.27E+01  ||  2.53E-01
 PLCMTH     5.48E-02  3.22E-02  | 4.82E-06  7.74E-01  1.61E+05  | 4.01E-05  4.23E-01  1.05E+04  | 5.48E-
                        03  1.61E-01  2.93E+01  ||  1.41E+01  ||  1.80E-01
```

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

ENDPOINT	REF	MEDIAN	5 %	95 %	FAC1	10 %	90 %	FAC2	25 %	75 %	FAC3	95%/REF	MNC
CGIOD2	4.37E+03	4.90E+03	1.91E+02	1.66E+04	8.71E+01	5.50E+02	1.35E+04	2.45E+01	1.78E+03	9.77E+03	5.50E+00	3.80E+00	5.62E+03
CGIOD3	4.17E+02	2.63E+02	2.88E+01	7.94E+02	2.75E+01	3.80E+01	6.92E+02	1.82E+01	1.15E+02	4.90E+02	4.27E+00	1.91E+00	2.82E+02
CGIOD4	1.62E+01	6.61E+00	9.55E-01	2.88E+01	3.02E+01	1.35E+00	2.45E+01	1.82E+01	2.57E+00	1.78E+01	6.92E+00	1.78E+00	8.91E+00
CGCAE2	1.38E+02	1.95E+02	4.68E+00	2.57E+03	5.50E+02	1.20E+01	2.14E+03	1.78E+02	5.01E+01	1.26E+03	2.51E+01	1.86E+01	3.98E+02
CGCAE3	1.95E+01	2.29E+01	1.41E+00	1.29E+02	9.12E+01	2.45E+00	1.07E+02	4.37E+01	7.59E+00	7.59E+01	1.00E+01	6.61E+00	3.16E+01
CGCAE4	2.14E+00	1.62E+00	3.39E-02	4.68E+00	1.38E+02	1.07E-01	4.17E+00	3.89E+01	6.17E-01	3.24E+00	5.25E+00	2.19E+00	1.78E+00
CAIOD2	3.89E+05	3.55E+05	5.50E+04	2.40E+06	4.37E+01	8.13E+04	2.04E+06	2.51E+01	1.55E+05	8.91E+05	5.75E+00	6.17E+00	3.98E+05
CAIOD3	3.55E+04	3.02E+04	2.24E+03	1.70E+05	7.59E+01	3.55E+03	1.20E+05	3.39E+01	9.55E+03	6.92E+04	7.24E+00	4.79E+00	3.16E+04
CAIOD4	1.20E+03	6.92E+02	9.55E+01	6.92E+03	7.24E+01	1.20E+02	5.75E+03	4.79E+01	1.74E+02	2.95E+03	1.70E+01	5.75E+00	1.26E+03
CACAE2	7.59E+04	1.17E+05	2.63E+04	4.27E+05	1.62E+01	3.72E+04	3.47E+05	9.33E+00	6.92E+04	1.91E+05	2.75E+00	5.62E+00	1.26E+05
CACAE3	1.10E+04	1.00E+04	3.98E+03	3.47E+04	8.71E+00	4.90E+03	2.24E+04	4.57E+00	6.92E+03	1.48E+04	2.14E+00	3.16E+00	1.00E+04
CACAE4	8.13E+02	5.13E+02	3.72E+01	1.51E+03	4.07E+01	8.91E+01	1.38E+03	1.55E+01	2.19E+02	1.00E+03	4.57E+00	1.86E+00	5.62E+02
DLCMED2	4.57E-05	1.51E-04	1.41E-05	1.10E-03	7.76E+01	2.04E-05	7.59E-04	3.72E+01	5.25E-05	3.63E-04	6.92E+00	2.40E+01	2.00E-04
DLCMED3	6.92E-06	2.19E-05	2.57E-06	1.38E-04	5.37E+01	4.17E-06	9.33E-05	2.24E+01	1.15E-05	4.68E-05	4.07E+00	2.00E+01	2.82E-05
DLCMED4	6.76E-07	1.32E-06	1.51E-07	1.17E-05	7.76E+01	2.63E-07	7.76E-06	2.95E+01	5.62E-07	3.63E-06	6.46E+00	1.74E+01	2.00E-06
DLCMBM2	3.24E-05	6.61E-05	3.02E-06	8.51E-04	2.82E+02	5.13E-06	5.25E-04	1.02E+02	1.23E-05	2.34E-04	1.91E+01	2.63E+01	1.12E-04
DLCMBM3	5.37E-06	7.59E-06	5.37E-07	1.07E-04	2.00E+02	8.13E-07	5.62E-05	6.92E+01	2.04E-06	1.95E-05	9.55E+00	2.00E+01	1.12E-05
DLCMBM4	5.50E-07	4.79E-07	1.95E-08	5.37E-06	2.75E+02	5.37E-08	3.39E-06	6.31E+01	1.82E-07	1.23E-06	6.76E+00	9.77E+00	7.08E-07
DLCMTH2	2.19E-04	3.39E-04	6.17E-05	1.29E-03	2.09E+01	9.12E-05	9.33E-04	1.02E+01	1.62E-04	5.62E-04	3.47E+00	5.89E+00	3.98E-04
DLCMTH3	3.02E-05	8.51E-05	8.71E-06	5.01E-04	5.75E+01	1.66E-05	3.47E-04	2.09E+01	3.31E-05	1.95E-04	5.89E+00	1.66E+01	1.12E-04
DLCMTH4	1.86E-06	4.27E-06	3.39E-07	8.13E-05	2.40E+02	6.92E-07	5.75E-05	8.32E+01	1.29E-06	2.09E-05	1.62E+01	4.37E+01	1.00E-05
DLOUED2	8.32E-05	5.37E-04	3.24E-05	5.62E-03	1.74E+02	5.62E-05	2.95E-03	5.25E+01	1.62E-04	1.58E-03	9.77E+00	6.76E+01	7.08E-04
DLOUED3	1.15E-05	4.17E-05	4.27E-06	2.82E-04	6.61E+01	6.76E-06	1.91E-04	2.82E+01	1.70E-05	9.55E-05	5.62E+00	2.45E+01	5.01E-05
DLOUED4	1.20E-06	2.00E-06	2.14E-07	1.32E-05	6.17E+01	4.27E-07	9.33E-06	2.19E+01	9.77E-07	4.47E-06	4.57E+00	1.10E+01	2.82E-06
DLOUBM2	6.76E-05	1.35E-04	7.94E-06	2.34E-03	2.95E+02	1.26E-05	1.38E-03	1.10E+02	2.88E-05	6.17E-04	2.14E+01	3.47E+01	2.51E-04
DLOUBM3	9.55E-06	1.48E-05	1.00E-06	1.32E-04	1.32E+02	1.58E-06	8.13E-05	5.13E+01	3.98E-06	3.89E-05	9.77E+00	1.38E+01	2.00E-05
DLOUBM4	1.07E-06	8.32E-07	3.24E-08	6.03E-06	1.86E+02	7.94E-08	4.17E-06	5.25E+01	3.47E-07	1.82E-06	5.25E+00	5.62E+00	1.12E-06
DLOUTH2	3.31E-04	2.09E-03	1.10E-04	4.57E-02	4.17E+02	2.34E-04	2.82E-02	1.20E+02	6.03E-04	8.13E-03	1.35E+01	1.38E+02	2.82E-03
DLOUTH3	3.80E-05	1.48E-04	1.41E-05	3.02E-03	2.14E+02	2.34E-05	1.74E-03	7.41E+01	5.01E-05	5.37E-04	1.07E+01	7.94E+01	2.24E-04
DLOUTH4	2.57E-06	5.25E-06	6.46E-07	1.00E-04	1.55E+02	1.00E-06	6.31E-05	6.31E+01	1.78E-06	2.19E-05	1.23E+01	3.89E+01	1.12E-05
ARELIN	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	.00E+00	.00E+00	9.99E+99	.00E+00	.00E+00	9.99E+99	9.99E+99	.00E+00
ARELTIM	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	.00E+00	.00E+00	9.99E+99	.00E+00	.00E+00	9.99E+99	9.99E+99	.00E+00
AFBIMIL	3.02E+01	5.13E+02	7.59E+00	3.72E+03	4.90E+02	2.95E+01	2.69E+03	9.12E+01	1.38E+02	1.38E+03	1.00E+01	1.23E+02	1.12E+03
AFBIGRA	1.23E+00	.00E+00	.00E+00	5.37E+00	9.99E+99	.00E+00	1.12E+00	9.99E+99	.00E+00	1.23E-01	9.99E+99	4.37E+00	2.82E-01
AFBIVEG	5.13E+01	7.76E+02	7.59E+01	5.25E+03	6.92E+01	1.48E+02	3.16E+03	2.14E+01	3.39E+02	1.70E+03	5.01E+00	1.02E+02	2.00E+03
AFBIBEE	2.63E+00	1.12E+01	1.32E-01	7.59E+01	5.75E+02	7.24E-01	6.61E+01	9.12E+01	2.45E+00	3.24E+01	1.32E+01	2.88E+01	2.51E+01
AFBTMIL	2.51E+00	5.50E+01	1.95E+00	3.39E+02	1.74E+02	5.01E+00	2.69E+02	5.37E+01	1.78E+01	1.35E+02	7.59E+00	1.35E+02	1.26E+02
AFBTGRA	2.29E+00	.00E+00	.00E+00	1.02E+01	9.99E+99	.00E+00	2.19E+00	9.99E+99	.00E+00	2.01E-01	9.99E+99	4.47E+00	5.01E-01
AFBTVEG	1.10E+00	1.74E+01	1.55E+00	1.05E+02	6.76E+01	3.24E+00	7.76E+01	2.40E+01	6.92E+00	3.80E+01	5.50E+00	9.55E+01	4.47E+01
AFBTBEE	1.10E+00	7.24E+00	.00E+00	5.75E+01	9.99E+99	1.70E-01	4.17E+01	2.45E+02	1.26E+00	2.29E+01	1.82E+01	5.25E+01	2.00E+01
RLCMMT2	2.09E-06	1.00E-05	7.41E-07	1.51E-04	2.04E+02	9.77E-07	7.59E-05	7.76E+01	2.95E-06	3.09E-05	1.05E+01	7.24E+01	1.58E-05
RLCMMT3	3.16E-07	1.32E-06	1.32E-07	1.55E-05	1.17E+02	1.91E-07	7.24E-06	3.80E+01	4.57E-07	3.31E-06	7.24E+00	4.90E+01	1.78E-06
RLCMMT4	3.16E-08	7.59E-08	6.31E-09	8.51E-07	1.35E+02	1.35E-08	4.68E-07	3.47E+01	2.88E-08	2.19E-07	7.59E+00	2.69E+01	1.12E-07

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RLCMBM2    1.66E-07  1.86E-07  |  .00E+00  7.41E-06  9.99E+99  | 1.74E-10  4.37E-06  2.51E+04  | 2.63E-
                       08  1.17E-06  4.47E+01  ||  4.47E+01  ||  5.01E-07
RLCMBM3    2.82E-08  2.69E-08  |  .00E+00  7.59E-07  9.99E+99  |  .00E+00  4.17E-07  9.99E+99  | 4.47E-
                       09  1.23E-07  2.75E+01  ||  2.69E+01  ||  6.31E-08
RLCMBM4    2.82E-09  1.82E-09  |  .00E+00  3.89E-08  9.99E+99  |  .00E+00  2.09E-08  9.99E+99  | 1.41E-
                       10  7.24E-09  5.13E+01  ||  1.38E+01  ||   .00E+00
RLCMTH2    3.89E-07  1.07E-07  |  .00E+00  2.51E-06  9.99E+99  | 6.61E-11  1.55E-06  2.34E+04  | 2.09E-
                       08  5.13E-07  2.45E+01  ||  6.46E+00  ||  2.51E-07
RLCMTH3    5.37E-08  3.16E-08  |  .00E+00  7.94E-07  9.99E+99  |  .00E+00  4.57E-07  9.99E+99  | 3.98E-
                       09  1.32E-07  3.31E+01  ||  1.48E+01  ||  6.31E-08
RLCMTH4    3.24E-09  1.78E-09  |  .00E+00  1.20E-07  9.99E+99  |  .00E+00  4.68E-08  9.99E+99  | 6.76E-
                       11  1.02E-08  1.51E+02  ||  3.72E+01  ||   .00E+00
RLOUMT2    3.89E-06  2.57E-05  | 1.70E-06  3.24E-04  1.91E+02  | 2.40E-06  2.09E-04  8.71E+01  | 7.59E-
                       06  8.71E-05  1.15E+01  ||  8.32E+01  ||  3.98E-05
RLOUMT3    5.37E-07  2.24E-06  | 2.24E-07  2.14E-05  9.55E+01  | 3.16E-07  1.45E-05  4.57E+01  | 7.94E-
                       07  6.03E-06  7.59E+00  ||  3.98E+01  ||  3.16E-06
RLOUMT4    5.89E-08  1.15E-07  |  .00E+00  1.00E-06  9.99E+99  | 2.00E-08  6.17E-07  3.09E+01  | 4.27E-
                       08  2.95E-07  6.92E+00  ||  1.70E+01  ||   .00E+00
ENDPOINT      REF      MEDIAN   |    5 %      95 %      FAC1    |   10 %      90 %      FAC2    |   25 %
                              75 %      FAC3    ||   95%/REF  ||        MNC
-------------------------------------------------------------------------------------------------------------
                          ------------------------------------------------------
RLOUBM2    3.47E-07  4.07E-07  |  .00E+00  2.14E-05  9.99E+99  |  .00E+00  1.15E-05  9.99E+99  | 6.46E-
                       08  2.51E-06  3.89E+01  ||  6.17E+01  ||  1.12E-06
RLOUBM3    4.90E-08  4.47E-08  |  .00E+00  1.10E-06  9.99E+99  |  .00E+00  7.41E-07  9.99E+99  | 2.88E-
                       09  2.09E-07  7.24E+01  ||  2.24E+01  ||   .00E+00
   RLOUBM4    5.50E-09   .00E+00  |  .00E+00  4.07E-08  9.99E+99  |  .00E+00  2.69E-08  9.99E+99  |
                     .00E+00  8.71E-09  9.99E+99  ||  7.41E+00  ||   .00E+00
RLOUTH2    5.89E-07  7.41E-07  |  .00E+00  4.90E-05  9.99E+99  |  .00E+00  2.14E-05  9.99E+99  | 6.76E-
                       08  4.79E-06  7.08E+01  ||  8.32E+01  ||  1.41E-06
RLOUTH3    6.76E-08  5.01E-08  |  .00E+00  3.80E-06  9.99E+99  |  .00E+00  1.20E-06  9.99E+99  | 2.24E-
                       09  3.16E-07  1.41E+02  ||  5.62E+01  ||   .00E+00
   RLOUTH4    4.57E-09   .00E+00  |  .00E+00  1.32E-07  9.99E+99  |  .00E+00  4.90E-08  9.99E+99  |
                     .00E+00  8.32E-09  9.99E+99  ||  2.88E+01  ||   .00E+00
   CDCMED     3.39E+01  7.41E+01  | 1.48E+01  4.79E+02  3.24E+01  | 1.86E+01  2.69E+02  1.45E+01  |
                    3.89E+01  1.38E+02  3.55E+00  ||  1.41E+01  ||  1.41E+02
   CDCMBM     3.16E+01  3.31E+01  | 3.63E+00  3.16E+02  8.71E+01  | 6.17E+00  1.78E+02  2.88E+01  |
                    1.45E+01  7.59E+01  5.25E+00  ||  1.00E+01  ||  8.91E+01
   CDCMTH     8.91E+01  2.95E+02  | 4.47E+01  2.09E+03  4.68E+01  | 7.08E+01  1.66E+03  2.34E+01  |
                    1.29E+02  8.13E+02  6.31E+00  ||  2.34E+01  ||  7.08E+02
   PLCMMT     1.62E+00  4.37E+00  | 6.61E-01  4.27E+01  6.46E+01  | 8.91E-01  2.69E+01  3.02E+01  |
                    1.91E+00  1.00E+01  5.25E+00  ||  2.63E+01  ||  1.41E+01
PLCMBM     1.62E-01  1.26E-01  |  .00E+00  1.91E+00  9.99E+99  | 1.35E-04  1.20E+00  8.91E+03  | 3.09E-
                       02  4.90E-01  1.58E+01  ||  1.17E+01  ||  6.31E-01
PLCMTH     1.58E-01  1.20E-01  |  .00E+00  3.39E+00  9.99E+99  | 1.70E-04  1.55E+00  9.12E+03  | 1.74E-
                       02  6.61E-01  3.80E+01  ||  2.14E+01  ||  7.08E-01
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Extent of the uncertainty for the 99th percentile of the endpoints for the DBA source term

ENDPOINT	REF	MEDIAN	5 %	95 %	FAC1	10 %	90 %	FAC2	25 %	75 %	FAC3	95%/REF	MNC
CGIOD2	2.63E+04	3.63E+04	3.98E+03	7.94E+04	2.00E+01	1.05E+04	6.61E+04	6.31E+00	2.24E+04	5.25E+04	2.34E+00	3.02E+00	3.55E+04
CGIOD3	2.69E+03	2.14E+03	4.57E+02	3.98E+03	8.71E+00	7.76E+02	3.63E+03	4.68E+00	1.23E+03	2.95E+03	2.40E+00	1.48E+00	2.00E+03
CGIOD4	1.70E+02	7.41E+01	1.00E+01	1.55E+02	1.55E+01	1.23E+01	1.38E+02	1.12E+01	3.31E+01	1.15E+02	3.47E+00	9.12E-01	7.08E+01
CGCAE2	1.29E+03	2.24E+03	1.23E+02	9.33E+03	7.59E+01	2.82E+02	8.32E+03	2.95E+01	6.92E+02	5.62E+03	8.13E+00	7.24E+00	3.98E+03
CGCAE3	1.45E+02	2.24E+02	1.91E+01	5.50E+02	2.88E+01	3.72E+01	4.79E+02	1.29E+01	7.59E+01	3.55E+02	4.68E+00	3.80E+00	2.51E+02
CGCAE4	1.82E+01	1.10E+01	2.40E+00	2.63E+01	1.10E+01	3.47E+00	2.34E+01	6.76E+00	6.46E+00	1.74E+01	2.69E+00	1.45E+00	1.12E+01
CAIOD2	2.24E+06	3.39E+06	3.09E+05	1.91E+07	6.17E+01	3.89E+05	1.51E+07	3.89E+01	7.59E+05	9.33E+06	1.23E+01	8.51E+00	5.01E+06
CAIOD3	2.09E+05	2.45E+05	1.70E+04	1.29E+06	7.59E+01	2.34E+04	9.33E+05	3.98E+01	4.37E+04	5.25E+05	1.20E+01	6.17E+00	2.82E+05
CAIOD4	1.20E+04	8.51E+03	4.07E+02	3.98E+04	9.77E+01	5.62E+02	3.02E+04	5.37E+01	1.12E+03	1.66E+04	1.48E+01	3.31E+00	1.12E+04
CACAE2	9.33E+05	1.00E+06	3.24E+05	3.72E+06	1.15E+01	3.98E+05	3.39E+06	8.51E+00	5.75E+05	2.00E+06	3.47E+00	3.98E+00	1.12E+06
CACAE3	5.89E+04	6.92E+04	1.78E+04	3.09E+05	1.74E+01	2.29E+04	2.40E+05	1.05E+01	3.89E+04	1.32E+05	3.39E+00	5.25E+00	7.94E+04
CACAE4	3.98E+03	3.09E+03	6.03E+02	9.33E+03	1.55E+01	8.51E+02	7.76E+03	9.12E+00	1.35E+03	5.50E+03	4.07E+00	2.34E+00	3.16E+03
DLCMED2	4.57E-04	8.91E-04	1.38E-04	7.59E-03	5.50E+01	1.91E-04	4.37E-03	2.29E+01	4.07E-04	1.95E-03	4.79E+00	1.66E+01	1.41E-03
DLCMED3	4.79E-05	1.15E-04	2.29E-05	8.32E-04	3.63E+01	3.16E-05	4.47E-04	1.41E+01	5.75E-05	2.34E-04	4.07E+00	1.74E+01	1.78E-04
DLCMED4	5.25E-06	1.10E-05	1.66E-06	6.76E-05	4.07E+01	2.29E-06	4.27E-05	1.86E+01	4.90E-06	2.19E-05	4.47E+00	1.29E+01	1.78E-05
DLCMBM2	3.98E-04	4.47E-04	4.17E-05	3.98E-03	9.55E+01	6.31E-05	1.91E-03	3.02E+01	1.58E-04	9.12E-04	5.75E+00	1.00E+01	8.91E-04
DLCMBM3	3.89E-05	5.89E-05	5.50E-06	5.37E-04	9.77E+01	8.51E-06	2.95E-04	3.47E+01	1.91E-05	1.23E-04	6.46E+00	1.38E+01	1.12E-04
DLCMBM4	4.68E-06	3.80E-06	4.68E-07	4.47E-05	9.55E+01	7.08E-07	2.40E-05	3.39E+01	1.70E-06	9.33E-06	5.50E+00	9.55E+00	7.94E-06
DLCMTH2	9.12E-04	1.26E-03	3.98E-04	5.37E-03	1.35E+01	4.90E-04	4.07E-03	8.32E+00	7.24E-04	1.95E-03	2.69E+00	5.89E+00	1.58E-03
DLCMTH3	1.95E-04	4.17E-04	7.41E-05	1.55E-03	2.09E+01	1.41E-04	1.23E-03	8.71E+00	2.29E-04	7.76E-04	3.39E+00	7.94E+00	6.31E-04
DLCMTH4	1.41E-05	4.90E-05	4.17E-06	5.37E-04	1.29E+02	6.17E-06	3.89E-04	6.31E+01	1.45E-05	1.58E-04	1.10E+01	3.80E+01	1.12E-04
DLOUED2	8.51E-04	6.03E-03	5.37E-04	4.07E-02	7.59E+01	9.55E-04	2.51E-02	2.63E+01	2.34E-03	1.20E-02	5.13E+00	4.79E+01	7.94E-03
DLOUED3	7.76E-05	3.31E-04	4.47E-05	2.29E-03	5.13E+01	6.03E-05	1.55E-03	2.57E+01	1.48E-04	7.41E-04	5.01E+00	2.95E+01	5.01E-04
DLOUED4	8.51E-06	1.45E-05	2.40E-06	8.71E-05	3.63E+01	3.72E-06	5.89E-05	1.58E+01	7.41E-06	3.02E-05	4.07E+00	1.02E+01	2.24E-05
DLOUBM2	6.76E-04	1.45E-03	1.15E-04	1.51E-02	1.32E+02	1.66E-04	9.12E-03	5.50E+01	4.07E-04	3.89E-03	9.55E+00	2.24E+01	2.82E-03
DLOUBM3	6.61E-05	1.20E-04	1.05E-05	8.51E-04	8.13E+01	1.86E-05	5.13E-04	2.75E+01	3.89E-05	2.45E-04	6.31E+00	1.29E+01	2.00E-04
DLOUBM4	8.13E-06	6.31E-06	8.71E-07	4.79E-05	5.50E+01	1.23E-06	2.95E-05	2.40E+01	2.75E-06	1.32E-05	4.79E+00	5.89E+00	1.00E-05
DLOUTH2	2.45E-03	2.95E-02	1.74E-03	5.62E-01	3.24E+02	2.95E-03	3.09E-01	1.05E+02	7.94E-03	1.23E-01	1.55E+01	2.29E+02	7.94E-02
DLOUTH3	2.29E-04	1.48E-03	1.35E-04	2.82E-02	2.09E+02	2.04E-04	2.09E-02	1.02E+02	5.01E-04	6.03E-03	1.20E+01	1.23E+02	3.98E-03
DLOUTH4	1.91E-05	5.50E-05	6.31E-06	1.05E-03	1.66E+02	8.51E-06	6.61E-04	7.76E+01	1.78E-05	1.86E-04	1.05E+01	5.50E+01	1.41E-04
ARELIN	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	.00E+00	.00E+00	9.99E+99	.00E+00	.00E+00	9.99E+99	9.99E+99	.00E+00
ARELTIM	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	.00E+00	.00E+00	9.99E+99	.00E+00	.00E+00	9.99E+99	9.99E+99	.00E+00
AFBIMIL	4.90E+01	8.13E+02	1.32E+01	5.50E+03	4.17E+02	4.90E+01	4.17E+03	8.51E+01	2.34E+02	2.09E+03	8.91E+00	1.12E+02	2.82E+03
AFBIGRA	2.04E+00	.00E+00	.00E+00	1.00E+01	9.99E+99	.00E+00	1.54E+00	9.99E+99	.00E+00	2.09E-01	9.99E+99	4.90E+00	5.01E+00
AFBIVEG	9.22E+01	1.20E+03	1.26E+02	7.94E+03	6.31E+01	2.34E+02	4.90E+03	2.09E+01	5.37E+02	2.45E+03	4.57E+00	8.61E+01	4.47E+03
AFBIBEE	4.07E+00	1.82E+01	3.19E-01	1.93E+02	6.07E+02	1.10E+00	1.15E+02	1.05E+02	4.47E+00	6.31E+01	1.41E+01	4.74E+01	7.08E+01
AFBTMIL	4.07E+00	8.51E+01	2.82E+00	5.13E+02	1.82E+02	8.91E+00	4.17E+02	4.68E+01	2.75E+01	2.04E+02	7.41E+00	1.26E+02	2.82E+02
AFBTGRA	4.07E+00	.00E+00	.00E+00	2.00E+01	9.99E+99	.00E+00	2.95E+00	9.99E+99	.00E+00	3.50E-01	9.99E+99	4.90E+00	1.00E+01
AFBTVEG	1.88E+00	2.63E+01	2.57E+00	1.66E+02	6.46E+01	4.79E+00	1.10E+02	2.29E+01	1.09E+01	5.50E+01	5.02E+00	8.83E+01	1.00E+02
AFBTBEE	1.86E+00	1.00E+01	.00E+00	1.00E+02	9.99E+99	4.28E-01	7.94E+01	1.85E+02	2.14E+00	3.24E+01	1.51E+01	5.37E+01	4.47E+01
RLCMMT2	2.19E-05	6.92E-05	7.24E-06	8.13E-04	1.12E+02	1.26E-05	4.68E-04	3.72E+01	2.57E-05	1.86E-04	7.24E+00	3.72E+01	1.41E-04
RLCMMT3	2.19E-06	7.59E-06	1.00E-06	9.33E-05	9.33E+01	1.38E-06	4.68E-05	3.39E+01	3.02E-06	1.91E-05	6.31E+00	4.27E+01	1.58E-05
RLCMMT4	2.51E-07	5.25E-07	7.59E-08	5.13E-06	6.76E+01	1.07E-07	3.39E-06	3.16E+01	2.40E-07	1.41E-06	5.89E+00	2.04E+01	1.00E-06

```
 RLCMBM2    2.09E-06  1.48E-06  |  .00E+00  2.57E-05  9.99E+99  | 2.00E-09  1.86E-05  9.33E+03  | 3.98E-
                         07  5.89E-06  1.48E+01  ||  1.23E+01  ||  6.31E-06
 RLCMBM3    2.00E-07  1.86E-07  |  .00E+00  3.47E-06  9.99E+99  | 1.91E-10  2.51E-06  1.32E+04  | 4.17E-
                         08  8.71E-07  2.09E+01  ||  1.74E+01  ||  7.08E-07
 RLCMBM4    2.40E-08  1.66E-08  |  .00E+00  2.88E-07  9.99E+99  |  .00E+00  1.51E-07  9.99E+99  | 3.31E-
                         09  6.17E-08  1.86E+01  ||  1.20E+01  ||  4.47E-08
 RLCMTH2    1.62E-06  4.17E-07  |  .00E+00  1.00E-05  9.99E+99  | 2.19E-10  6.46E-06  2.95E+04  | 8.91E-
                         08  2.34E-06  2.63E+01  ||  6.17E+00  ||  2.24E-06
 RLCMTH3    3.47E-07  1.45E-07  |  .00E+00  2.95E-06  9.99E+99  | 1.38E-10  1.91E-06  1.38E+04  | 2.51E-
                         08  7.59E-07  3.02E+01  ||  8.51E+00  ||  7.08E-07
 RLCMTH4    2.51E-08  1.91E-08  |  .00E+00  9.55E-07  9.99E+99  |  .00E+00  3.39E-07  9.99E+99  | 1.82E-
                         09  9.55E-08  5.25E+01  ||  3.80E+01  ||  8.91E-08
 RLOUMT2    3.98E-05  2.63E-04  | 2.45E-05  2.24E-03  9.12E+01  | 3.63E-05  1.38E-03  3.80E+01  | 1.02E-
                         04  6.03E-04  5.89E+00  ||  5.62E+01  ||  4.47E-04
 RLOUMT3    3.72E-06  1.82E-05  | 2.04E-06  1.41E-04  6.92E+01  | 3.39E-06  8.32E-05  2.45E+01  | 6.76E-
                         06  3.80E-05  5.62E+00  ||  3.80E+01  ||  2.82E-05
 RLOUMT4    4.17E-07  8.13E-07  | 1.29E-07  6.46E-06  5.01E+01  | 1.78E-07  4.27E-06  2.40E+01  | 3.55E-
                         07  1.82E-06  5.13E+00  ||  1.55E+01  ||  1.41E-06
ENDPOINT      REF      MEDIAN   |    5 %      95 %      FAC1    |   10 %      90 %      FAC2    |   25 %
                               75 %      FAC3    ||   95%/REF  ||        MNC
-------------------------------------------------------------------------------------------------------------
                              ----------------------------------------------------
 RLOUBM2    3.55E-06  5.25E-06  |  .00E+00  1.35E-04  9.99E+99  | 6.61E-09  6.46E-05  9.77E+03  | 1.05E-
                         06  2.19E-05  2.09E+01  ||  3.80E+01  ||  1.78E-05
 RLOUBM3    3.39E-07  3.80E-07  |  .00E+00  6.76E-06  9.99E+99  |  .00E+00  4.17E-06  9.99E+99  | 9.12E-
                         08  1.62E-06  1.78E+01  ||  2.00E+01  ||  1.26E-06
    RLOUBM4    4.17E-08  2.57E-08  |  .00E+00  3.39E-07  9.99E+99  |  .00E+00  2.00E-07  9.99E+99  |
                       .00E+00  7.76E-08  9.99E+99  ||  8.13E+00  ||   .00E+00
 RLOUTH2    4.37E-06  1.10E-05  |  .00E+00  6.03E-04  9.99E+99  | 2.95E-08  2.57E-04  8.71E+03  | 1.17E-
                         06  6.03E-05  5.13E+01  ||  1.38E+02  ||  5.01E-05
 RLOUTH3    4.07E-07  6.76E-07  |  .00E+00  2.63E-05  9.99E+99  |  .00E+00  1.12E-05  9.99E+99  | 6.92E-
                         08  3.39E-06  4.90E+01  ||  6.46E+01  ||  2.82E-06
    RLOUTH4    3.39E-08  2.14E-08  |  .00E+00  1.15E-06  9.99E+99  |  .00E+00  4.57E-07  9.99E+99  |
                       .00E+00  1.23E-07  9.99E+99  ||  3.39E+01  ||   .00E+00
    CDCMED     4.79E+01  1.08E+02  | 2.24E+01  7.41E+02  3.31E+01  | 2.95E+01  4.27E+02  1.45E+01  |
                      5.75E+01  2.14E+02  3.72E+00  ||  1.55E+01  ||  4.47E+02
    CDCMBM     4.27E+01  5.01E+01  | 7.41E+00  4.79E+02  6.46E+01  | 1.00E+01  2.51E+02  2.51E+01  |
                      2.40E+01  1.10E+02  4.57E+00  ||  1.12E+01  ||  3.55E+02
    CDCMTH     1.15E+02  4.90E+02  | 7.41E+01  3.39E+03  4.57E+01  | 1.12E+02  2.51E+03  2.24E+01  |
                      2.24E+02  1.32E+03  5.89E+00  ||  2.95E+01  ||  1.78E+03
    PLCMMT     2.29E+00  6.76E+00  | 1.12E+00  7.41E+01  6.61E+01  | 1.51E+00  4.37E+01  2.88E+01  |
                      2.82E+00  1.58E+01  5.62E+00  ||  3.24E+01  ||  5.01E+01
 PLCMBM     2.19E-01  2.04E-01  |  .00E+00  2.69E+00  9.99E+99  | 2.09E-04  1.91E+00  9.12E+03  | 5.50E-
                         02  6.76E-01  1.23E+01  ||  1.23E+01  ||  2.51E+00
 PLCMTH     2.04E-01  2.14E-01  |  .00E+00  4.95E+00  9.99E+99  | 3.31E-04  2.57E+00  7.76E+03  | 2.95E-
                         02  9.55E-01  3.24E+01  ||  2.43E+01  ||  2.82E+00
```

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 3 positions according to the absolute value of the partial rank correlation coefficient, or providing more than 10% contribution to the uncertainty.

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

VD(AER)	dry deposition velocity for aerosols
VD(EL-I)	dry deposition velocity for elemental iodine
PY1(A/B)	P-Coefficient for sigma-y, category A and B
PY1(C)	P-Coefficient for sigma-y, category C
PY1(D)	P-Coefficient for sigma-y, category D
PY1(E/F)	P-Coefficient for sigma-y, category E and F
QY1(A/B)	Q-Coefficient for sigma-y, category A and B
QY1(C)	Q-Coefficient for sigma-y, category C
QY1(D)	Q-Coefficient for sigma-y, category D
QY1(E/F)	Q-Coefficient for sigma-y, category E and F
PZ1(A/B)	P-Coefficient for sigma-z, category A and B
PZ1(C)	P-Coefficient for sigma-z, category C
PZ1(D)	P-Coefficient for sigma-z, category D
PZ1(E/F)	P-Coefficient for sigma-z, category E and F
QZ1(A/B)	Q-Coefficient for sigma-z, category A and B
QZ1(C)	Q-Coefficient for sigma-Z, category C
QZ1(D)	Q-Coefficient for sigma-z, category D
QZ1(E/F)	Q-Coefficient for sigma-z, category E and F
AW(AER)	A_LAMBDA for aerosols
BW(AER)	B_LAMBDA for aerosols
AW(EL-I)	A_LAMBDA for elemental iodine
BW(EL-I)	B_LAMBDA for elemental iodine
SK(AER)	dry deposition velocity for aerosols, on skin
SK(EL-I)	dry deposition velocity for elemental iodine, on skin
V(LUMB)	lung function impairment: shape parameter VPAR of dose relationship
D0(LUMB)	lung function impairment: model parameter D_0 (GY**2/H)
DI(LUMB)	lung function impairment: model parameter D_INF (GY)
V(SK)	effects on skin: shape parameter VPAR of dose relationship
D0(SK)	effects on skin: model parameter D_0 (GY**2/H)
DI(SK)	effects on skin: model parameter D_INF (GY)
SKMORT	mortality rate of skin 20% exposed
V(LUMT)	pulmonary syndrome: shape parameter VPAR of dose relationship
D0(LUMT)	pulmonary syndrome: model parameter D_0 (GY**2/H)
DI(LUMT)	pulmonary syndrome: model parameter D_INF (GY)
V(BM)	hematopoietic syndrome: shape parameter VPAR of dose relationship
D0(BM)	hematopoietic syndrome: model parameter D_0 (GY**2/H)
DI(BM)	hematopoietic syndrome: model parameter D_INF (GY)
V(GI)	gastrointestinal syndrome: shape parameter VPAR of dose relationship
D0(GI)	gastrointestinal syndrome: model parameter D_0 (GY**2/H)
DI(GI)	gastrointestinal syndrome: model parameter D_INF (GY)
RF(BM)	stoch som effects: frt of radiation induced bone marrow cancer deaths
RF(BS)	stoch som effects: frt of radiation induced bone surface cancer deaths
RF(BR)	stoch som effects: fraction of radiation induced breast cancer deaths

RF(LU)	stoch som effects: fraction of radiation induced lung cancer deaths
RF(ST)	stoch som effects: fraction of radiation induced stomach cancer deaths
RF(CO)	stoch som effects: fraction of radiation induced colon cancer deaths
RF(LV)	stoch som effects: fraction of radiation induced liver cancer deaths
RF(PA)	stoch som effects: fraction of radiation induced pancreas cancr deaths
RF(TH)	stoch som effects: fraction of radiation induced thyroid cancer deaths
RF(RE)	stoch som effects: frt of radiation induced cancer deaths of remainder
RF(SK)	stoch som effects: fraction of radiation induced skin cancer deaths
INTFACP	Interception factor - pasture
RTHS	Retention time - hay/silage
INTFACHS	Interception factor - hay/silage
RUP_CS	Root uptake pasture, Cs
SMP12_CS	Soil migration pasture - k12, Cs
SMP23_CS	Soil migration pasture - k23, Cs
SMP34_CS	Soil migration pasture - k34, Cs
SMP43_CS	Soil migration pasture - k43, Cs
SMP45_CS	Soil migration pasture - k45, Cs
FIX_CS	Soil fixation pasture - k1,11, Cs
RESUSP	Resuspension factor pasture
DIHSDC	Daily intake of hay/silage - dairy cows
FMDC_CS	Fm transfer to milk - dairy cows, Cs
FMDC_I	Fm transfer to milk - dairy cows, I
FMDC_ZN	Fm transfer to milk - dairy cows, Zn
FFDC_CS	Ff transfer to meat - dairy cows, Cs
FLDC_AG	Ff transfer to liver - dairy cows, Ag
BIODC_I	Biological half-life - dairy cows, I
FFBC_CS	Ff transfer to meat - beef cattle, Cs
FFS_ZN	Ff transfer to meat - sheep, Zn
FFP_TE	Ff transfer to meat - pigs, Te
INTFACC	Interception Factor - Cereals
RTC_CS	Retention time - cereals - k21, Cs
PLOSSC	Processing loss - cereals
TC23_CS	Translocation cereals - k23, Cs
TC34_CS	Translocation cereals - k34, Cs
TC41_CS	Translocation cereals - k41, Cs
RTG	Retention time - green vegetables
SOLCONG	Soil contamination - green vegetables
PLOSSG	Processing loss - green vegetables
INTFACPO	Interception factor- potatoes
RTPO_SR	Retention time - potatoes, k21, Sr
TPO24_SR	Translocation potatoes - k24, Sr
TPO45_SR	Translocation potatoes - k45, Sr
TPO51_SR	Translocation potatoes - k51, Sr
INDEPRT	Total initial deposition in respiratory tract
INDEPET	Initial deposition in extrathoracic region
INDEPTB	Initial deposition in tracheobronchial region

INDEPEXT	Initial deposition in extrathoracic region beyond the nasal region
ET1-ENV	Transfer coefficient: ET1region to environment
AI1-TBF	Transfer coefficient: pulmonary 1 region to the tracheobronchial region (rapid clearance rate)
AI2-TBF	Transfer coefficient: pulmonary 2 region to the tracheobronchial region (intermediate clearance rate)
AI3-TBF	Transfer coefficient: pulmonary 3 region to the tracheobronchial region (slow clearance rate)
AI3-LNTH	Transfer coefficient: pulmonary 3 region to the thoracic lymph nodes
BBF-ET2	Fast transfer coefficient: bronchial to extrathoracic regions
BBS-ET2	Slow transfer coefficient: bronchial to extrathoracic regions
ET2-STOM	Transfer coefficient: extrathoracic 2 to stomach
STOM-SI	Transfer coefficient: stomach to small intestine
SRANY-BL	Transfer coefficient for Strontium: any lung compartment to blood
SRANY-AT	Transfer coefficient for Strontium: any lung compartment to transformed state in lung
SRAT-BL	Transfer coefficient for Strontium: transformed state in lung to blood
RUANY-BL	Transfer coefficient for Ruthenium: any lung compartment to blood
RUANY-AT	Transfer coefficient for Ruthenium: any lung compartment to transformed state in lung
RUAT-BL	Transfer coefficient for Ruthenium: transformed state in lung to blood
RUTC-WB	Transfer coefficient for Ruthenium: blood to whole body
RUTC-WB2	Transfer coefficient for Ruthenium: blood to whole body 2 compartment
RUTC-ULI	Transfer coefficient for Ruthenium: blood to U.L.I.
RUWB-ULI	Transfer coefficient for Ruthenium: whole body to U.L.I.
RUWB2-UL	Transfer coefficient for Ruthenium: whole body 2 compartment to U.L.I.
TEANY-BL	Transfer coefficient for Tellurium: any lung compartment to blood
TEANY-AT	Transfer coefficient for Tellurium: any lung compartment to transformed state in lung
TEAT-BL	Transfer coefficient for Tellurium: transformed state in lung to blood
TETC-BNE	Transfer coefficient for Tellurium: blood to bone
TETC-THR	Transfer coefficient for Tellurium: blood to thyroid
TETC-LIV	Transfer coefficient for Tellurium: blood to liver
TETC-ULI	Transfer coefficient for Tellurium: blood to U.L.I.
TEBN-ULI	Transfer coefficient for Tellurium: bone to U.L.I.
TETH-ULI	Transfer coefficient for Tellurium: thyroid to U.L.I.
TELV-ULI	Transfer coefficient for Tellurium: liver to U.L.I.
IANY-BL	Transfer coefficient for Iodine: any lung compartment to blood
IANY-AT	Transfer coefficient for Iodine: any lung compartment to transformed state in lung
IANYT-BL	Transfer coefficient for Iodine: transformed state in lung to blood
ITC-THR	Transfer coefficient for Iodine: blood to thyroid
ITC-BLAD	Transfer coefficient for Iodine: blood to Bladder
ITHR-ULI	Transfer coefficient for Iodine: thyroid to U.L.I.
CSANY-BL	Transfer coefficient for Caesium: any lung compartment to blood
CSANY-AT	Transfer coefficient for Caesium: any lung compartment to transformed state in

	lung
CSAT-BL	Transfer coefficient for Caesium: transformed state in lung to Blood
CSF1	Caesium: f1-factor
CSTC-WB	Transfer coefficient for Caesium: blood to whole body
CSTC-WB2	Transfer coefficient for Caesium: blood to whole body 2 compartment
CSWB-ULI	Transfer coefficient for Caesium: whole body to U.L.I.
CSWB2-UL	Transfer coefficient for Caesium: whole body 2 compartment to U.L.I.
CEF1	Cerium: f1 factor
PUANY-BL	Transfer coefficient for Plutonium: any lung compartment to blood
PUANY-AT	Transfer coefficient for Plutonium: any lung compartment to transformed state in lung
PUAT-BL	Transfer coefficient for Plutonium: transformed state in lung to blood
PURM-ULI	Transfer coefficient for Plutonium: R.B.M. to U.L.I.
PUCM-ULI	Transfer coefficient for Plutonium: cortical marrow to U.L.I.
PUTC-TS	Transfer coefficient for Plutonium: blood to trabecular surface
PUTC-CS	Transfer coefficient for Plutonium: blood to cortical surface
PUTS-TV	Transfer coefficient for Plutonium: trabecular surface to trabecular volume
PUCS-CV	Transfer coefficient for Plutonium: cortical surface to cortical volume
PUTS-RBM	Transfer coefficient for Plutonium: trabecular surface to R.B.M.
PUTV-RBM	Transfer coefficient for Plutonium: trabecular volume to R.B.M.
PUCS-CM	Transfer coefficient for Plutonium: cortical surface to cortical marrow
PUCV-CM	Transfer coefficient for Plutonium: cortical volume to cortical marrow
PUTC-LIV	Transfer coefficient for Plutonium: blood to liver
PULV-ULI	Transfer coefficient for Plutonium: liver to U.L.I.
PUTC-ULI	Transfer coefficient for Plutonium: blood to U.L.I.
NP-INHAL	Np-Inhalation dose coefficient
SKINRES	Skin residence time
ZRGRINDR	Zr-95 initial dose rate: deposited activity
ZRGR10D	Zr-95 dose to 10 days: deposited activity
ZRGR30D	Zr-95 dose to 30 days: deposited activity
RUGRINDR	Ru-106 initial dose rate: deposited activity
RUGR30D	Ru-106 dose to 30 days: deposited activity
RUGR100D	Ru-106 dose to 100 days: deposited activity
RUGR1Y	Ru-106 dose to 1 year: deposited activity
RUGR3Y	Ru-106 dose to 3 years: deposited activity
IGRINDR	I-131 initial dose rate: deposited activity
IGR1D	I-131 dose to 1 day: deposited activity
IGR3D	I-131 dose to 3 days: deposited activity
IGR10D	I-131 dose to 10 days: deposited activity
IGR30D	I-131 dose to 30 days: deposited activity
CSGRINDR	Cs-137 initial dose rate: deposited activity
CSGR100D	Cs-137 dose to 100 days: deposited activity
CSGR1Y	Cs-137 dose to 1 year: deposited activity
CSGR3Y	Cs-137 dose to 3 years: deposited activity
CSGR10Y	Cs-137 dose to 10 years: deposited activity
CSGR30Y	Cs-137 dose to 30 years: deposited activity

CSGR100Y	Cs-137 dose to 100 years: deposited activity
LFGRNLVE	Location factor for normal living (NE), groundshine
LFGRSHLT	Location factor for sheltering (NE), groundshine
LFGRCAR	Location factor for being in cars (NE), groundshine
LFCLNLIV	Location factor for normal living (NE&NL), cloudshine
LFCLSHLT	Location factor for sheltering (NE), cloudshine
LFCLPROT	Location factor for intervention (NE), cloudshine
LFIHNLIV	Location factor for normal living (NE&NL), inhalation
LFIHSHLT	Location factor for sheltering (NE), inhalation
CNSRTGVG	Consumption rate for green vegetables
CNSRTMLK	Consumption rate for milk (including milk products)
CNSRTSMT	Consumption rate for sheep meat
CNSRTPRK	Consumption rate for pork
BRETHRAT	Breathing rate

7 TABLE D2 CONTRIBUTION OF PARAMETER UNCERTAINTIES TO THE OVERALL UNCERTAINTY ON THE ENDPOINTS

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

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
CACAE1	PZ1(E/F)	001	-.85	120.56	61.36	50.90	5.15E+00	.88
CACAE1	QZ1(D)	003	-.35	120.56	01.14	00.95	5.15E+00	.88
CACAE1	QZ1(E/F)	002	-.40	120.56	01.14	00.95	5.15E+00	.88
CACAE2	VD(AER)	003	-.48	173.59	35.63	20.53	9.05E+00	.87
CACAE2	QY1(E/F)	060	-.07	173.59	28.74	16.56	9.05E+00	.87
CACAE2	SK(AER)	096	.04	173.59	20.69	11.92	9.05E+00	.87
CACAE2	PZ1(E/F)	001	-.75	173.59	16.09	09.27	9.05E+00	.87
CACAE2	QZ1(D)	002	-.48	173.59	01.15	00.66	9.05E+00	.87
CACAE3	VD(AER)	001	-.56	267.84	68.97	25.75	1.66E+01	.87
CACAE3	QY1(E/F)	070	-.06	267.84	57.47	21.46	1.66E+01	.87
CACAE3	SK(AER)	109	.02	267.84	44.83	16.74	1.66E+01	.87
CACAE3	QY1(D)	087	-.04	267.84	31.03	11.59	1.66E+01	.87
CACAE3	PZ1(E/F)	002	-.51	267.84	00.00	00.00	1.66E+01	.87
CACAE3	QZ1(D)	003	-.41	267.84	00.00	00.00	1.66E+01	.87
CAIOD1	VD(EL-I)	001	-.79	131.06	58.62	44.73	9.69E+00	.87
CAIOD1	PZ1(E/F)	002	-.66	131.06	18.39	14.03	9.69E+00	.87
CAIOD1	QZ1(D)	003	-.33	131.06	02.30	01.75	9.69E+00	.87
CAIOD2	VD(EL-I)	001	-.90	155.51	83.70	53.82	4.01E+01	.92
CAIOD2	PZ1(E/F)	002	-.55	155.51	04.35	02.80	4.01E+01	.92
CAIOD2	QZ1(D)	003	-.35	155.51	01.09	00.70	4.01E+01	.92
CAIOD3	VD(EL-I)	001	-.96	165.56	93.75	56.63	6.34E+01	.96
CAIOD3	PZ1(E/F)	002	-.45	165.56	01.04	00.63	6.34E+01	.96
CAIOD3	QZ1(D)	003	-.23	165.56	00.00	00.00	6.34E+01	.96
CGCAE1	VD(AER)	001	.67	345.08	83.52	24.20	2.05E+02	.91
CGCAE1	QY1(E/F)	111	.02	345.08	71.43	20.70	2.05E+02	.91
CGCAE1	SK(AER)	112	-.01	345.08	58.24	16.88	2.05E+02	.91
CGCAE1	PZ1(E/F)	002	-.41	345.08	17.58	05.09	2.05E+02	.91
CGCAE1	AW(AER)	003	.24	345.08	08.79	02.55	2.05E+02	.91
CGCAE2	VD(AER)	001	.65	325.55	78.89	24.23	5.32E+01	.90
CGCAE2	QY1(E/F)	130	.00	325.55	67.78	20.82	5.32E+01	.90
CGCAE2	SK(AER)	114	-.01	325.55	55.56	17.07	5.32E+01	.90
CGCAE2	PZ1(E/F)	002	-.41	325.55	16.67	05.12	5.32E+01	.90
CGCAE2	QZ1(D)	003	-.34	325.55	03.33	01.02	5.32E+01	.90
CGCAE3	AW(AER)	001	.38	257.93	41.98	16.28	2.12E+01	.81
CGCAE3	VD(AER)	002	.34	257.93	39.51	15.32	2.12E+01	.81
CGCAE3	BW(AER)	054	-.07	257.93	37.04	14.36	2.12E+01	.81
CGCAE3	QY1(E/F)	035	.09	257.93	37.04	14.36	2.12E+01	.81
CGCAE3	SK(AER)	090	-.04	257.93	29.63	11.49	2.12E+01	.81
CGCAE3	QZ1(D)	003	-.33	257.93	02.47	00.96	2.12E+01	.81
CGIOD1	VD(EL-I)	001	.94	166.92	87.23	52.26	6.20E+01	.94
CGIOD1	PZ1(E/F)	002	-.50	166.92	05.32	03.19	6.20E+01	.94
CGIOD1	QZ1(D)	003	-.38	166.92	02.13	01.28	6.20E+01	.94
CGIOD2	VD(EL-I)	001	.45	120.21	23.73	19.74	1.85E+01	.59
CGIOD2	QZ1(D)	002	-.30	120.21	08.47	07.05	1.85E+01	.59
CGIOD2	PZ1(E/F)	003	-.26	120.21	06.78	05.64	1.85E+01	.59
CGIOD3	AW(EL-I)	001	.25	110.33	18.75	16.99	6.70E+00	.48
CGIOD3	TEANY-BL	003	.17	110.33	02.08	01.89	6.70E+00	.48
CGIOD3	D0(GI)	002	-.18	110.33	00.00	00.00	6.70E+00	.48
DECMBM1	PZ1(E/F)	001	-.64	192.65	16.87	08.76	8.37E+00	.83
DECMBM1	LFGRCAR	003	.35	192.65	10.84	05.63	8.37E+00	.83
DECMBM1	VD(EL-I)	002	.45	192.65	07.23	03.75	8.37E+00	.83
DECMBM2	PZ1(E/F)	001	-.68	115.33	30.77	26.68	1.38E+01	.78
DECMBM2	QZ1(D)	002	-.40	115.33	02.56	02.22	1.38E+01	.78
DECMBM2	QZ1(E/F)	003	-.33	115.33	00.00	00.00	1.38E+01	.78
DECMBM3	PZ1(E/F)	001	-.63	118.22	25.97	21.97	6.48E+00	.77
DECMBM3	QZ1(D)	002	-.47	118.22	06.49	05.49	6.48E+00	.77
DECMBM3	QZ1(E/F)	003	-.39	118.22	00.00	00.00	6.48E+00	.77
DECMSK1	SK(EL-I)	001	.86	212.13	74.73	35.23	1.63E+03	.91
DECMSK1	SK(AER)	003	.27	212.13	30.77	14.51	1.63E+03	.91
DECMSK1	QY1(E/F)	074	.05	212.13	25.27	11.91	1.63E+03	.91

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DECMSK1   PZ1(E/F)  002 -.29   212.13  09.89  04.66     1.63E+03 .91
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ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
DECMSK2	SK(EL-I)	001	.80	201.21	67.05	33.32	2.85E+03	.88
DECMSK2	SK(AER)	003	.31	201.21	32.95	16.38	2.85E+03	.88
DECMSK2	QY1(E/F)	060	.06	201.21	25.00	12.42	2.85E+03	.88
DECMSK2	VD(EL-I)	002	-.41	201.21	01.14	00.57	2.85E+03	.88
DECMSK3	SK(EL-I)	001	.82	197.66	68.54	34.68	2.75E+03	.89
DECMSK3	SK(AER)	003	.30	197.66	33.71	17.05	2.75E+03	.89
DECMSK3	QY1(E/F)	035	.10	197.66	25.84	13.07	2.75E+03	.89
DECMSK3	VD(EL-I)	002	-.45	197.66	01.12	00.57	2.75E+03	.89
DECMTH1	LFIHNLIV	022	.15	152.34	21.43	14.07	3.80E+01	.84
DECMTH1	LFIHSHLT	074	-.05	152.34	20.24	13.29	3.80E+01	.84
DECMTH1	VD(EL-I)	003	-.43	152.34	11.90	07.81	3.80E+01	.84
DECMTH1	BRETHRAT	001	.50	152.34	10.71	07.03	3.80E+01	.84
DECMTH1	PZ1(E/F)	002	-.46	152.34	08.33	05.47	3.80E+01	.84
DECMTH2	VD(EL-I)	001	-.50	148.81	18.29	12.29	5.30E+01	.82
DECMTH2	BRETHRAT	002	.44	148.81	08.54	05.74	5.30E+01	.82
DECMTH2	PZ1(E/F)	003	-.43	148.81	07.32	04.92	5.30E+01	.82
DECMTH3	VD(EL-I)	001	-.53	148.81	20.73	13.93	5.86E+01	.82
DECMTH3	BRETHRAT	002	.48	148.81	08.54	05.74	5.86E+01	.82
DECMTH3	TETC-THR	003	.38	148.81	06.10	04.10	5.86E+01	.82
DELVBM1	VD(EL-I)	001	.70	324.39	31.11	09.59	2.46E+01	.90
DELVBM1	LFGRNLVE	003	.42	324.39	17.78	05.48	2.46E+01	.90
DELVBM1	PZ1(E/F)	002	-.54	324.39	13.33	04.11	2.46E+01	.90
DELVBM2	PZ1(E/F)	001	-.64	254.07	18.39	07.24	1.37E+01	.87
DELVBM2	VD(EL-I)	003	.41	254.07	09.20	03.62	1.37E+01	.87
DELVBM2	QZ1(D)	002	-.43	254.07	06.90	02.72	1.37E+01	.87
DELVBM3	LFGRNLVE	003	.36	281.65	31.03	11.02	9.38E+00	.87
DELVBM3	PZ1(E/F)	001	-.50	281.65	06.90	02.45	9.38E+00	.87
DELVBM3	QZ1(D)	002	-.39	281.65	04.60	01.63	9.38E+00	.87
DELVSK1	SK(EL-I)	001	.84	223.28	71.11	31.85	1.55E+03	.90
DELVSK1	SK(AER)	003	.29	223.28	34.44	15.42	1.55E+03	.90
DELVSK1	QY1(E/F)	080	.04	223.28	27.78	12.44	1.55E+03	.90
DELVSK1	PZ1(E/F)	002	-.31	223.28	11.11	04.98	1.55E+03	.90
DELVSK2	SK(EL-I)	001	.78	198.94	63.64	31.99	2.47E+03	.88
DELVSK2	SK(AER)	003	.34	198.94	32.95	16.56	2.47E+03	.88
DELVSK2	QY1(E/F)	096	.03	198.94	23.86	11.99	2.47E+03	.88
DELVSK2	VD(EL-I)	002	-.42	198.94	01.14	00.57	2.47E+03	.88
DELVSK3	SK(EL-I)	001	.79	186.43	63.64	34.14	1.89E+03	.88
DELVSK3	SK(AER)	003	.36	186.43	30.68	16.46	1.89E+03	.88
DELVSK3	QY1(E/F)	055	.07	186.43	21.59	11.58	1.89E+03	.88
DELVSK3	VD(EL-I)	002	-.49	186.43	02.27	01.22	1.89E+03	.88
DELVTH1	LFIHNLIV	014	.19	147.59	21.43	14.52	2.68E+01	.84
DELVTH1	LFIHSHLT	052	-.09	147.59	20.24	13.71	2.68E+01	.84
DELVTH1	VD(EL-I)	001	-.49	147.59	14.29	09.68	2.68E+01	.84
DELVTH1	BRETHRAT	002	.48	147.59	11.90	08.06	2.68E+01	.84
DELVTH1	PZ1(E/F)	003	-.47	147.59	09.52	06.45	2.68E+01	.84
DELVTH2	VD(EL-I)	001	-.69	151.85	36.47	24.02	6.29E+01	.85
DELVTH2	LFIHNLIV	027	.11	151.85	15.29	10.07	6.29E+01	.85
DELVTH2	BRETHRAT	002	.43	151.85	09.41	06.20	6.29E+01	.85
DELVTH2	PZ1(E/F)	003	-.43	151.85	03.53	02.32	6.29E+01	.85
DELVTH3	VD(EL-I)	001	-.75	173.58	44.83	25.83	6.39E+01	.87
DELVTH3	BRETHRAT	002	.46	173.58	10.34	05.96	6.39E+01	.87
DELVTH3	ITC-THR	003	.36	173.58	01.15	00.66	6.39E+01	.87
DEOUBM1	VD(EL-I)	001	.74	317.73	42.22	13.29	2.43E+01	.90
DEOUBM1	VD(AER)	003	.37	317.73	36.67	11.54	2.43E+01	.90
DEOUBM1	QY1(E/F)	073	.06	317.73	35.56	11.19	2.43E+01	.90
DEOUBM1	PZ1(E/F)	002	-.52	317.73	14.44	04.54	2.43E+01	.90
DEOUBM2	PZ1(E/F)	001	-.61	270.85	20.93	07.73	1.14E+01	.86
DEOUBM2	VD(EL-I)	002	.46	270.85	16.28	06.01	1.14E+01	.86
DEOUBM2	QZ1(D)	003	-.39	270.85	05.81	02.15	1.14E+01	.86
DEOUBM3	RUGRINDR	002	.33	301.27	25.61	08.50	7.34E+00	.82
DEOUBM3	PZ1(E/F)	001	-.44	301.27	08.54	02.83	7.34E+00	.82
DEOUBM3	QZ1(D)	003	-.33	301.27	04.88	01.62	7.34E+00	.82
DEOUSK1	SK(EL-I)	001	.85	223.30	75.56	33.84	1.10E+03	.90
DEOUSK1	SK(AER)	003	.28	223.30	34.44	15.42	1.10E+03	.90
DEOUSK1	QY1(E/F)	063	.06	223.30	28.89	12.94	1.10E+03	.90
DEOUSK1	PZ1(E/F)	002	-.34	223.30	12.22	05.47	1.10E+03	.90

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
DEOUSK2	SK(EL-I)	001	.79	202.33	67.82	33.52	1.70E+03	.87
DEOUSK2	SK(AER)	003	.33	202.33	33.33	16.47	1.70E+03	.87
DEOUSK2	QY1(E/F)	097	.04	202.33	25.29	12.50	1.70E+03	.87
DEOUSK2	VD(EL-I)	002	-.43	202.33	01.15	00.57	1.70E+03	.87
DEOUSK3	SK(EL-I)	001	.79	187.38	66.67	35.58	1.30E+03	.87
DEOUSK3	SK(AER)	003	.35	187.38	32.18	17.17	1.30E+03	.87
DEOUSK3	QY1(E/F)	059	.06	187.38	22.99	12.27	1.30E+03	.87
DEOUSK3	VD(EL-I)	002	-.49	187.38	02.30	01.23	1.30E+03	.87
DEOUTH1	PZ1(E/F)	001	-.49	127.96	15.19	11.87	1.85E+01	.79
DEOUTH1	BRETHRAT	002	.47	127.96	13.92	10.88	1.85E+01	.79
DEOUTH1	VD(EL-I)	003	-.41	127.96	10.13	07.92	1.85E+01	.79
DEOUTH2	VD(EL-I)	001	-.66	142.73	36.59	25.64	2.64E+01	.82
DEOUTH2	BRETHRAT	003	.43	142.73	10.98	07.69	2.64E+01	.82
DEOUTH2	PZ1(E/F)	002	-.46	142.73	06.10	04.27	2.64E+01	.82
DEOUTH3	VD(EL-I)	001	-.74	163.61	47.06	28.76	3.56E+01	.85
DEOUTH3	BRETHRAT	002	.47	163.61	11.76	07.19	3.56E+01	.85
DEOUTH3	ITC-THR	003	.36	163.61	02.35	01.44	3.56E+01	.85
PECMBM	PZ1(E/F)	001	-.73	148.07	19.75	13.34	3.82E+01	.81
PECMBM	QZ1(E/F)	002	-.41	148.07	01.23	00.83	3.82E+01	.81
PECMBM	PY1(E/F)	003	-.32	148.07	00.00	00.00	3.82E+01	.81
PECMLU	D0(LUMB)	001	-.66	188.54	40.23	21.34	9.99E+09	.87
PECMLU	DI(LUMB)	002	-.50	188.54	28.74	15.24	9.99E+09	.87
PECMLU	DI(LUMT)	004	.30	188.54	19.54	10.36	9.99E+09	.87
PECMLU	D0(LUMT)	003	.34	188.54	18.39	09.75	9.99E+09	.87
PECMMB	SK(EL-I)	001	.71	209.79	52.44	25.00	1.43E+03	.82
PECMMB	SK(AER)	014	.13	209.79	30.49	14.53	1.43E+03	.82
PECMMB	QY1(E/F)	045	.07	209.79	25.61	12.21	1.43E+03	.82
PECMMB	DI(SK)	003	-.32	209.79	08.54	04.07	1.43E+03	.82
PECMMB	D0(LUMB)	002	-.32	209.79	03.66	01.74	1.43E+03	.82
PECMMT	SK(EL-I)	001	.49	115.00	13.75	11.96	4.31E+01	.80
PECMMT	INDEPTB	002	.44	115.00	12.50	10.87	4.31E+01	.80
PECMMT	INDEPET	003	-.42	115.00	07.50	06.52	4.31E+01	.80
PECMSK	SK(EL-I)	001	.80	233.04	62.50	26.82	9.99E+09	.88
PECMSK	SK(AER)	003	.25	233.04	37.50	16.09	9.99E+09	.88
PECMSK	QY1(E/F)	041	.09	233.04	32.95	14.14	9.99E+09	.88
PECMSK	VD(AER)	048	.08	233.04	26.14	11.22	9.99E+09	.88
PECMSK	DI(SK)	002	-.40	233.04	11.36	04.87	9.99E+09	.88
PECMTH	INDEPET	001	.46	140.62	12.35	08.78	9.99E+09	.81
PECMTH	VD(EL-I)	003	-.35	140.62	07.41	05.27	9.99E+09	.81
PECMTH	TETC-THR	002	.38	140.62	03.70	02.63	9.99E+09	.81
PELVBM	LFGRNLVE	005	.34	178.54	19.05	10.67	5.58E+01	.84
PELVBM	D0(BM)	002	-.45	178.54	13.10	07.34	5.58E+01	.84
PELVBM	PZ1(E/F)	001	-.63	178.54	08.33	04.67	5.58E+01	.84
PELVBM	PY1(E/F)	003	-.37	178.54	01.19	00.67	5.58E+01	.84
PELVLU	D0(LUMB)	001	-.66	191.81	40.70	21.22	9.99E+09	.86
PELVLU	DI(LUMB)	002	-.41	191.81	22.09	11.52	9.99E+09	.86
PELVLU	D0(LUMT)	003	.35	191.81	19.77	10.31	9.99E+09	.86
PELVMB	SK(EL-I)	001	.70	180.51	52.44	29.05	5.05E+02	.82
PELVMB	SK(AER)	010	.16	180.51	24.39	13.51	5.05E+02	.82
PELVMB	QY1(E/F)	028	.11	180.51	19.51	10.81	5.05E+02	.82
PELVMB	D0(LUMB)	003	-.31	180.51	02.44	01.35	5.05E+02	.82
PELVMB	VD(EL-I)	002	-.37	180.51	02.44	01.35	5.05E+02	.82
PELVMT	SK(EL-I)	001	.57	111.48	20.25	18.16	6.54E+01	.79
PELVMT	INDEPTB	003	.37	111.48	08.86	07.95	6.54E+01	.79
PELVMT	INDEPET	002	-.38	111.48	06.33	05.68	6.54E+01	.79
PELVSK	SK(EL-I)	001	.76	211.57	62.79	29.68	9.99E+09	.86
PELVSK	SK(AER)	003	.27	211.57	34.88	16.49	9.99E+09	.86
PELVSK	QY1(E/F)	033	.10	211.57	27.91	13.19	9.99E+09	.86
PELVSK	VD(AER)	112	.02	211.57	22.09	10.44	9.99E+09	.86
PELVSK	VD(EL-I)	002	-.32	211.57	00.00	00.00	9.99E+09	.86

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
PELVTH	VD(EL-I)	001	-.67	128.53	33.33	25.93	9.99E+09	.84
PELVTH	IANY-BL	002	.44	128.53	05.95	04.63	9.99E+09	.84
PELVTH	ITC-BLAD	003	-.35	128.53	02.38	01.85	9.99E+09	.84
RECMBM1	VD(EL-I)	001	.49	240.28	19.51	08.12	3.93E+00	.82
RECMBM1	QZ1(D)	002	-.44	240.28	07.32	03.05	3.93E+00	.82
RECMBM1	PZ1(D)	003	-.38	240.28	00.00	00.00	3.93E+00	.82
RECMBM2	PZ1(E/F)	001	-.69	170.00	16.25	09.56	7.08E+01	.80
RECMBM2	QZ1(D)	002	-.33	170.00	01.25	00.74	7.08E+01	.80
RECMBM2	QZ1(E/F)	003	-.31	170.00	00.00	00.00	7.08E+01	.80
RECMBM3	PZ1(E/F)	001	-.64	139.14	24.32	17.48	9.99E+09	.74
RECMBM3	QZ1(E/F)	002	-.39	139.14	01.35	00.97	9.99E+09	.74
RECMBM3	QZ1(D)	003	-.22	139.14	00.00	00.00	9.99E+09	.74
RECMLU1	D0(LUMB)	001	-.56	202.43	36.47	18.02	9.99E+09	.85
RECMLU1	DI(LUMT)	003	.36	202.43	29.41	14.53	9.99E+09	.85
RECMLU1	DI(LUMB)	002	-.49	202.43	28.24	13.95	9.99E+09	.85
RECMLU1	D0(LUMT)	004	.33	202.43	25.88	12.78	9.99E+09	.85
RECMLU1	V(LUMT)	057	-.06	202.43	24.71	12.21	9.99E+09	.85
RECMLU2	D0(LUMB)	001	-.61	188.31	39.53	20.99	9.99E+09	.86
RECMLU2	DI(LUMB)	002	-.48	188.31	29.07	15.44	9.99E+09	.86
RECMLU2	DI(LUMT)	003	.36	188.31	24.42	12.97	9.99E+09	.86
RECMLU2	D0(LUMT)	004	.30	188.31	20.93	11.11	9.99E+09	.86
RECMLU2	V(LUMT)	089	-.04	188.31	19.77	10.50	9.99E+09	.86
RECMLU3	D0(LUMB)	001	-.57	178.75	32.50	18.18	9.99E+09	.80
RECMLU3	DI(LUMB)	002	-.32	178.75	18.75	10.49	9.99E+09	.80
RECMLU3	INDEPET	003	-.29	178.75	03.75	02.10	9.99E+09	.80
RECMMB1	QY1(E/F)	037	.11	277.87	38.37	13.81	8.70E+01	.86
RECMMB1	SK(AER)	041	.10	277.87	38.37	13.81	8.70E+01	.86
RECMMB1	VD(AER)	078	.06	277.87	33.72	12.14	8.70E+01	.86
RECMMB1	QY1(D)	009	.23	277.87	32.56	11.72	8.70E+01	.86
RECMMB1	SK(EL-I)	001	.57	277.87	25.58	09.21	8.70E+01	.86
RECMMB1	BBF-ET2	003	.33	277.87	03.49	01.26	8.70E+01	.86
RECMMB1	INDEPET	002	.34	277.87	03.49	01.26	8.70E+01	.86
RECMMB2	QY1(E/F)	031	.09	310.38	50.57	16.29	2.51E+02	.87
RECMMB2	SK(AER)	029	.09	310.38	48.28	15.56	2.51E+02	.87
RECMMB2	VD(AER)	016	.14	310.38	43.68	14.07	2.51E+02	.87
RECMMB2	QY1(D)	002	.28	310.38	41.38	13.33	2.51E+02	.87
RECMMB2	SK(EL-I)	001	.68	310.38	37.93	12.22	2.51E+02	.87
RECMMB2	D0(LUMB)	003	-.25	310.38	02.30	00.74	2.51E+02	.87
RECMMB3	SK(EL-I)	001	.70	195.00	53.75	27.56	6.44E+03	.80
RECMMB3	SK(AER)	020	.11	195.00	26.25	13.46	6.44E+03	.80
RECMMB3	QY1(E/F)	049	.07	195.00	21.25	10.90	6.44E+03	.80
RECMMB3	DI(SK)	003	-.30	195.00	08.75	04.49	6.44E+03	.80
RECMMB3	D0(LUMB)	002	-.31	195.00	05.00	02.56	6.44E+03	.80
RECMMT1	QY1(D)	002	.46	262.58	38.64	14.72	3.11E+00	.88
RECMMT1	QY1(E/F)	033	.12	262.58	34.09	12.98	3.11E+00	.88
RECMMT1	VD(AER)	038	.11	262.58	29.55	11.25	3.11E+00	.88
RECMMT1	INDEPET	001	-.54	262.58	09.09	03.46	3.11E+00	.88
RECMMT1	PY1(E/F)	003	.42	262.58	06.82	02.60	3.11E+00	.88
RECMMT2	INDEPET	001	-.56	142.00	14.46	10.18	1.33E+01	.83
RECMMT2	INDEPTB	002	.40	142.00	10.84	07.63	1.33E+01	.83
RECMMT2	PZ1(E/F)	003	-.40	142.00	08.43	05.94	1.33E+01	.83
RECMMT3	INDEPTB	002	.44	111.94	13.16	11.76	1.07E+03	.76
RECMMT3	SK(EL-I)	001	.44	111.94	13.16	11.76	1.07E+03	.76
RECMMT3	INDEPET	003	-.35	111.94	07.89	07.05	1.07E+03	.76
RECMSK1	SK(AER)	007	.25	287.57	47.19	16.41	9.99E+09	.89
RECMSK1	QY1(E/F)	070	.06	287.57	44.94	15.63	9.99E+09	.89
RECMSK1	SK(EL-I)	001	.74	287.57	44.94	15.63	9.99E+09	.89
RECMSK1	VD(AER)	040	.11	287.57	40.45	14.07	9.99E+09	.89
RECMSK1	QY1(D)	013	.19	287.57	31.46	10.94	9.99E+09	.89
RECMSK1	DI(SK)	002	-.32	287.57	07.87	02.74	9.99E+09	.89
RECMSK1	INDEPTB	003	-.32	287.57	01.12	00.39	9.99E+09	.89
RECMSK2	SK(AER)	004	.24	299.91	51.69	17.24	9.99E+09	.89
RECMSK2	QY1(E/F)	046	.08	299.91	50.56	16.86	9.99E+09	.89
RECMSK2	SK(EL-I)	001	.75	299.91	50.56	16.86	9.99E+09	.89
RECMSK2	VD(AER)	020	.13	299.91	43.82	14.61	9.99E+09	.89
RECMSK2	QY1(D)	008	.19	299.91	32.58	10.86	9.99E+09	.89
RECMSK2	DI(SK)	002	-.31	299.91	08.99	03.00	9.99E+09	.89
RECMSK2	INDEPTB	003	-.28	299.91	00.00	00.00	9.99E+09	.89

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
RECMSK3	SK(EL-I)	001	.76	228.76	62.07	27.13	9.99E+09	.87
RECMSK3	SK(AER)	003	.23	228.76	36.78	16.08	9.99E+09	.87
RECMSK3	QY1(E/F)	045	.08	228.76	29.89	13.07	9.99E+09	.87
RECMSK3	VD(AER)	078	.04	228.76	24.14	10.55	9.99E+09	.87
RECMSK3	DI(SK)	002	-.38	228.76	11.49	05.02	9.99E+09	.87
RECMTH1	INDEPET	001	.57	150.49	17.28	11.48	9.99E+09	.81
RECMTH1	IANY-BL	002	.42	150.49	07.41	04.92	9.99E+09	.81
RECMTH1	BBF-ET2	003	.32	150.49	02.47	01.64	9.99E+09	.81
RECMTH2	INDEPET	001	.50	135.54	15.19	11.21	9.99E+09	.79
RECMTH2	IANY-BL	002	.38	135.54	06.33	04.67	9.99E+09	.79
RECMTH2	TETC-THR	003	.32	135.54	02.53	01.87	9.99E+09	.79
RECMTH3	TEANY-BL	022	.16	125.61	13.51	10.76	9.99E+09	.74
RECMTH3	TEAT-BL	059	.08	125.61	13.51	10.76	9.99E+09	.74
RECMTH3	VD(EL-I)	002	-.34	125.61	13.51	10.76	9.99E+09	.74
RECMTH3	TETC-THR	001	.38	125.61	05.41	04.31	9.99E+09	.74
RECMTH3	IANY-AT	003	-.27	125.61	01.35	01.07	9.99E+09	.74
RELVBM1	QY1(E/F)	062	.06	337.01	48.31	14.33	4.70E+00	.89
RELVBM1	VD(AER)	009	.27	337.01	47.19	14.00	4.70E+00	.89
RELVBM1	SK(AER)	102	-.03	337.01	37.08	11.00	4.70E+00	.89
RELVBM1	VD(EL-I)	001	.58	337.01	24.72	07.34	4.70E+00	.89
RELVBM1	PZ1(E/F)	003	-.39	337.01	11.24	03.34	4.70E+00	.89
RELVBM1	QZ1(D)	002	-.41	337.01	08.99	02.67	4.70E+00	.89
RELVBM2	LFGRNLVE	003	.32	217.83	23.81	10.93	8.15E+01	.84
RELVBM2	D0(BM)	002	-.49	217.83	14.29	06.56	8.15E+01	.84
RELVBM2	PZ1(E/F)	001	-.58	217.83	13.10	06.01	8.15E+01	.84
RELVBM3	QY1(D)	011	-.18	153.29	15.58	10.16	9.99E+09	.77
RELVBM3	QY1(E/F)	023	-.13	153.29	15.58	10.16	9.99E+09	.77
RELVBM3	PY1(E/F)	002	-.37	153.29	05.19	03.39	9.99E+09	.77
RELVBM3	PZ1(E/F)	001	-.50	153.29	02.60	01.70	9.99E+09	.77
RELVBM3	VD(EL-I)	003	.33	153.29	01.30	00.85	9.99E+09	.77
RELVLU1	D0(LUMB)	001	-.60	182.96	42.17	23.05	9.99E+09	.83
RELVLU1	DI(LUMB)	002	-.39	182.96	25.30	13.83	9.99E+09	.83
RELVLU1	DI(LUMT)	004	.30	182.96	22.89	12.51	9.99E+09	.83
RELVLU1	D0(LUMT)	003	.31	182.96	21.69	11.86	9.99E+09	.83
RELVLU2	D0(LUMB)	001	-.67	187.14	47.06	25.15	9.99E+09	.85
RELVLU2	DI(LUMB)	002	-.42	187.14	24.71	13.20	9.99E+09	.85
RELVLU2	DI(LUMT)	004	.28	187.14	22.35	11.94	9.99E+09	.85
RELVLU2	D0(LUMT)	003	.34	187.14	21.18	11.32	9.99E+09	.85
RELVLU2	V(LUMT)	082	-.05	187.14	20.00	10.69	9.99E+09	.85
RELVLU3	D0(LUMB)	001	-.55	195.03	31.65	16.23	9.99E+09	.79
RELVLU3	D0(LUMT)	002	.30	195.03	13.92	07.14	9.99E+09	.79
RELVLU3	INDEPET	003	-.29	195.03	02.53	01.30	9.99E+09	.79
RELVMB1	QY1(E/F)	052	.09	254.92	35.37	13.87	2.25E+01	.82
RELVMB1	SK(AER)	041	.10	254.92	34.15	13.40	2.25E+01	.82
RELVMB1	QY1(D)	007	.21	254.92	31.71	12.44	2.25E+01	.82
RELVMB1	VD(AER)	092	.04	254.92	29.27	11.48	2.25E+01	.82
RELVMB1	SK(EL-I)	001	.51	254.92	25.61	10.05	2.25E+01	.82
RELVMB1	INDEPET	002	.29	254.92	02.44	00.96	2.25E+01	.82
RELVMB1	IANY-BL	003	.27	254.92	01.22	00.48	2.25E+01	.82
RELVMB2	QY1(E/F)	034	.10	318.25	54.55	17.14	7.66E+01	.88
RELVMB2	SK(AER)	046	.09	318.25	50.00	15.71	7.66E+01	.88
RELVMB2	VD(AER)	011	.17	318.25	47.73	15.00	7.66E+01	.88
RELVMB2	QY1(D)	002	.33	318.25	43.18	13.57	7.66E+01	.88
RELVMB2	SK(EL-I)	001	.63	318.25	32.95	10.35	7.66E+01	.88
RELVMB2	INDEPTB	003	-.29	318.25	00.00	00.00	7.66E+01	.88
RELVMB3	SK(EL-I)	001	.66	199.88	50.62	25.33	6.71E+02	.81
RELVMB3	SK(AER)	004	.18	199.88	28.40	14.21	6.71E+02	.81
RELVMB3	QY1(E/F)	018	.13	199.88	22.22	11.12	6.71E+02	.81
RELVMB3	D0(LUMB)	003	-.28	199.88	03.70	01.85	6.71E+02	.81
RELVMB3	VD(EL-I)	002	-.34	199.88	02.47	01.24	6.71E+02	.81
RELVMT1	QY1(D)	002	.48	309.93	48.35	15.60	3.27E+00	.91
RELVMT1	QY1(E/F)	028	.15	309.93	47.25	15.25	3.27E+00	.91
RELVMT1	VD(AER)	018	.21	309.93	41.76	13.47	3.27E+00	.91
RELVMT1	SK(AER)	099	-.04	309.93	37.36	12.05	3.27E+00	.91
RELVMT1	PY1(E/F)	003	.46	309.93	06.59	02.13	3.27E+00	.91
RELVMT1	INDEPET	001	-.51	309.93	05.49	01.77	3.27E+00	.91
RELVMT2	INDEPET	001	-.50	171.49	12.35	07.20	8.63E+00	.81
RELVMT2	INDEPTB	002	.38	171.49	11.11	06.48	8.63E+00	.81
RELVMT2	PZ1(E/F)	003	-.33	171.49	08.64	05.04	8.63E+00	.81

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
RELVMT3	SK(EL-I)	001	.48	119.83	15.79	13.18	2.39E+02	.76
RELVMT3	INDEPET	002	-.36	119.83	07.89	06.58	2.39E+02	.76
RELVMT3	INDEPTB	003	.35	119.83	07.89	06.58	2.39E+02	.76
RELVSK1	SK(EL-I)	001	.74	263.72	48.86	18.53	9.99E+09	.88
RELVSK1	SK(AER)	002	.27	263.72	44.32	16.81	9.99E+09	.88
RELVSK1	QY1(E/F)	053	.09	263.72	40.91	15.51	9.99E+09	.88
RELVSK1	VD(AER)	073	.07	263.72	34.09	12.93	9.99E+09	.88
RELVSK1	QY1(D)	026	.13	263.72	27.27	10.34	9.99E+09	.88
RELVSK1	IANY-BL	003	.25	263.72	01.14	00.43	9.99E+09	.88
RELVSK2	SK(AER)	002	.27	302.19	52.81	17.48	9.99E+09	.89
RELVSK2	QY1(E/F)	054	.06	302.19	51.69	17.11	9.99E+09	.89
RELVSK2	SK(EL-I)	001	.75	302.19	49.44	16.36	9.99E+09	.89
RELVSK2	VD(AER)	022	.13	302.19	43.82	14.50	9.99E+09	.89
RELVSK2	QY1(D)	005	.23	302.19	34.83	11.53	9.99E+09	.89
RELVSK2	INDEPTB	003	-.26	302.19	00.00	00.00	9.99E+09	.89
RELVSK3	SK(EL-I)	001	.74	230.18	60.47	26.27	9.99E+09	.86
RELVSK3	SK(AER)	003	.30	230.18	40.70	17.68	9.99E+09	.86
RELVSK3	QY1(E/F)	032	.10	230.18	32.56	14.15	9.99E+09	.86
RELVSK3	VD(AER)	126	-.01	230.18	24.42	10.61	9.99E+09	.86
RELVSK3	VD(EL-I)	002	-.30	230.18	00.00	00.00	9.99E+09	.86
RELVTH1	INDEPET	001	.45	143.10	11.39	07.96	9.99E+09	.79
RELVTH1	VD(EL-I)	003	-.35	143.10	10.13	07.08	9.99E+09	.79
RELVTH1	IANY-BL	002	.45	143.10	08.86	06.19	9.99E+09	.79
RELVTH2	VD(EL-I)	001	-.49	127.50	15.00	11.76	9.99E+09	.80
RELVTH2	INDEPET	003	.41	127.50	11.25	08.82	9.99E+09	.80
RELVTH2	IANY-BL	002	.45	127.50	08.75	06.86	9.99E+09	.80
RELVTH3	VD(EL-I)	001	-.66	145.53	40.74	27.99	9.99E+09	.81
RELVTH3	IANY-BL	002	.33	145.53	03.70	02.54	9.99E+09	.81
RELVTH3	ITC-THR	003	.31	145.53	01.23	00.85	9.99E+09	.81
REOUBM1	QY1(E/F)	021	.14	334.12	54.95	16.45	2.68E+00	.91
REOUBM1	QY1(D)	002	.49	334.12	51.65	15.46	2.68E+00	.91
REOUBM1	VD(AER)	011	.25	334.12	50.55	15.13	2.68E+00	.91
REOUBM1	SK(AER)	046	-.09	334.12	39.56	11.84	2.68E+00	.91
REOUBM1	VD(EL-I)	001	.57	334.12	21.98	06.58	2.68E+00	.91
REOUBM1	D0(BM)	003	-.44	334.12	07.69	02.30	2.68E+00	.91
REOUBM2	QY1(E/F)	127	.01	297.74	37.65	12.65	9.54E+00	.85
REOUBM2	VD(AER)	007	.30	297.74	37.65	12.65	9.54E+00	.85
REOUBM2	SK(AER)	097	.03	297.74	31.76	10.67	9.54E+00	.85
REOUBM2	D0(BM)	002	-.46	297.74	17.65	05.93	9.54E+00	.85
REOUBM2	PZ1(E/F)	001	-.48	297.74	15.29	05.14	9.54E+00	.85
REOUBM2	QZ1(D)	003	-.42	297.74	12.94	04.35	9.54E+00	.85
REOUBM3	D0(BM)	002	-.47	170.95	18.07	10.57	3.02E+03	.83
REOUBM3	PZ1(E/F)	001	-.61	170.95	04.82	02.82	3.02E+03	.83
REOUBM3	PY1(E/F)	003	-.44	170.95	03.61	02.11	3.02E+03	.83
REOULU1	D0(LUMB)	001	-.58	180.08	41.98	23.31	9.99E+09	.81
REOULU1	DI(LUMB)	002	-.41	180.08	23.46	13.03	9.99E+09	.81
REOULU1	VD(EL-I)	003	-.33	180.08	08.64	04.80	9.99E+09	.81
REOULU2	D0(LUMB)	001	-.66	172.13	50.60	29.40	9.99E+09	.83
REOULU2	DI(LUMB)	002	-.40	172.13	24.10	14.00	9.99E+09	.83
REOULU2	INDEPET	003	-.32	172.13	02.41	01.40	9.99E+09	.83
REOULU3	D0(LUMB)	001	-.60	184.19	37.80	20.52	9.99E+09	.82
REOULU3	DI(LUMB)	002	-.36	184.19	19.51	10.59	9.99E+09	.82
REOULU3	INDEPET	003	-.30	184.19	02.44	01.32	9.99E+09	.82
REOUMB1	SK(AER)	028	.11	223.75	31.25	13.97	1.48E+01	.80
REOUMB1	QY1(E/F)	024	.12	223.75	30.00	13.41	1.48E+01	.80
REOUMB1	SK(EL-I)	001	.54	223.75	30.00	13.41	1.48E+01	.80
REOUMB1	QY1(D)	004	.21	223.75	26.25	11.73	1.48E+01	.80
REOUMB1	VD(AER)	109	-.02	223.75	22.50	10.06	1.48E+01	.80
REOUMB1	D0(BM)	003	.28	223.75	03.75	01.68	1.48E+01	.80
REOUMB1	VD(EL-I)	002	-.35	223.75	01.25	00.56	1.48E+01	.80
REOUMB2	QY1(E/F)	095	.04	304.61	48.84	16.03	3.02E+01	.86
REOUMB2	SK(AER)	023	.14	304.61	46.51	15.27	3.02E+01	.86
REOUMB2	QY1(D)	002	.37	304.61	44.19	14.51	3.02E+01	.86
REOUMB2	VD(AER)	015	.16	304.61	43.02	14.12	3.02E+01	.86
REOUMB2	SK(EL-I)	001	.59	304.61	29.07	09.54	3.02E+01	.86
REOUMB2	D0(LUMB)	003	-.32	304.61	02.33	00.76	3.02E+01	.86

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
REOUMB3	SK(EL-I)	001	.66	248.80	48.78	19.61	1.32E+02	.82
REOUMB3	SK(AER)	009	.16	248.80	40.24	16.17	1.32E+02	.82
REOUMB3	QY1(E/F)	026	.11	248.80	37.80	15.19	1.32E+02	.82
REOUMB3	VD(AER)	038	.09	248.80	29.27	11.76	1.32E+02	.82
REOUMB3	D0(LUMB)	002	-.31	248.80	02.44	00.98	1.32E+02	.82
REOUMB3	VD(EL-I)	003	-.29	248.80	00.00	00.00	1.32E+02	.82
REOUMT1	QY1(D)	001	.56	330.47	59.78	18.09	2.47E+00	.92
REOUMT1	QY1(E/F)	023	.18	330.47	53.26	16.12	2.47E+00	.92
REOUMT1	VD(AER)	013	.22	330.47	47.83	14.47	2.47E+00	.92
REOUMT1	SK(AER)	052	-.08	330.47	40.22	12.17	2.47E+00	.92
REOUMT1	PY1(E/F)	002	.50	330.47	05.43	01.64	2.47E+00	.92
REOUMT1	QZ1(A/B)	003	-.38	330.47	01.09	00.33	2.47E+00	.92
REOUMT2	QY1(E/F)	021	.14	257.08	36.90	14.35	4.69E+00	.84
REOUMT2	SK(AER)	102	.03	257.08	32.14	12.50	4.69E+00	.84
REOUMT2	VD(AER)	036	.11	257.08	30.95	12.04	4.69E+00	.84
REOUMT2	QY1(D)	017	.15	257.08	26.19	10.19	4.69E+00	.84
REOUMT2	QZ1(D)	002	-.39	257.08	11.90	04.63	4.69E+00	.84
REOUMT2	INDEPET	001	-.40	257.08	08.33	03.24	4.69E+00	.84
REOUMT2	QZ1(C)	003	-.35	257.08	00.00	00.00	4.69E+00	.84
REOUMT3	SK(EL-I)	001	.46	107.99	14.47	13.40	3.16E+01	.76
REOUMT3	INDEPET	003	-.39	107.99	10.53	09.75	3.16E+01	.76
REOUMT3	INDEPTB	002	.40	107.99	10.53	09.75	3.16E+01	.76
REOUSK1	SK(EL-I)	001	.75	244.86	55.17	22.53	9.99E+09	.87
REOUSK1	SK(AER)	003	.28	244.86	42.53	17.37	9.99E+09	.87
REOUSK1	QY1(E/F)	035	.09	244.86	36.78	15.02	9.99E+09	.87
REOUSK1	VD(AER)	102	-.03	244.86	28.74	11.74	9.99E+09	.87
REOUSK1	VD(EL-I)	002	-.34	244.86	00.00	00.00	9.99E+09	.87
REOUSK2	SK(EL-I)	001	.75	275.07	52.27	19.00	9.99E+09	.88
REOUSK2	SK(AER)	002	.30	275.07	48.86	17.76	9.99E+09	.88
REOUSK2	QY1(E/F)	070	.05	275.07	43.18	15.70	9.99E+09	.88
REOUSK2	VD(AER)	072	.05	275.07	36.36	13.22	9.99E+09	.88
REOUSK2	QY1(D)	005	.20	275.07	29.55	10.74	9.99E+09	.88
REOUSK2	D0(SK)	003	-.26	275.07	04.55	01.65	9.99E+09	.88
REOUSK3	SK(EL-I)	001	.76	242.56	60.92	25.12	9.99E+09	.87
REOUSK3	SK(AER)	003	.30	242.56	43.68	18.01	9.99E+09	.87
REOUSK3	QY1(E/F)	035	.09	242.56	36.78	15.16	9.99E+09	.87
REOUSK3	VD(AER)	117	.01	242.56	27.59	11.37	9.99E+09	.87
REOUSK3	VD(EL-I)	002	-.30	242.56	00.00	00.00	9.99E+09	.87
REOUTH1	VD(EL-I)	001	-.55	136.83	26.58	19.43	9.99E+09	.79
REOUTH1	IANY-BL	002	.44	136.83	06.33	04.63	9.99E+09	.79
REOUTH1	ITC-THR	003	.33	136.83	03.80	02.78	9.99E+09	.79
REOUTH2	VD(EL-I)	001	-.55	132.98	22.78	17.13	9.99E+09	.79
REOUTH2	IANY-BL	002	.44	132.98	07.59	05.71	9.99E+09	.79
REOUTH2	ITC-THR	003	.36	132.98	03.80	02.86	9.99E+09	.79
REOUTH3	VD(EL-I)	001	-.68	129.30	41.46	32.06	9.99E+09	.82
REOUTH3	IANY-BL	002	.39	129.30	04.88	03.77	9.99E+09	.82
REOUTH3	IANY-AT	003	-.34	129.30	03.66	02.83	9.99E+09	.82

Results for the 95th percentile of the endpoints for the UK1 source term

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
CACAE1	QY1(E/F)	005	.35	241.42	35.63	14.76	1.66E+01	.87
CACAE1	PZ1(E/F)	004	-.43	241.42	28.74	11.90	1.66E+01	.87
CACAE1	SK(AER)	134	.00	241.42	28.74	11.90	1.66E+01	.87
CACAE1	VD(AER)	011	-.21	241.42	27.59	11.43	1.66E+01	.87
CACAE1	PY1(E/F)	001	.62	241.42	25.29	10.48	1.66E+01	.87
CACAE1	QY1(D)	008	.27	241.42	25.29	10.48	1.66E+01	.87
CACAE1	QZ1(D)	003	-.45	241.42	10.34	04.28	1.66E+01	.87
CACAE1	PZ1(D)	002	-.45	241.42	00.00	00.00	1.66E+01	.87
CACAE2	QZ1(D)	001	-.56	150.54	20.99	13.94	1.58E+01	.81
CACAE2	QY1(D)	007	.27	150.54	16.05	10.66	1.58E+01	.81
CACAE2	PY1(E/F)	002	.49	150.54	13.58	09.02	1.58E+01	.81
CACAE2	PZ1(D)	003	-.44	150.54	01.23	00.82	1.58E+01	.81
CACAE3	QZ1(D)	002	-.39	098.64	12.33	12.50	8.71E+00	.73
CACAE3	VD(AER)	001	-.45	098.64	09.59	09.72	8.71E+00	.73
CACAE3	QZ1(A/B)	003	-.30	098.64	06.85	06.94	8.71E+00	.73
CAIOD1	QY1(E/F)	005	.35	173.81	20.24	11.64	1.78E+01	.84
CAIOD1	QY1(D)	010	.22	173.81	19.05	10.96	1.78E+01	.84
CAIOD1	PY1(E/F)	002	.44	173.81	14.29	08.22	1.78E+01	.84
CAIOD1	QZ1(D)	003	-.44	173.81	13.10	07.54	1.78E+01	.84
CAIOD1	VD(EL-I)	001	-.62	173.81	11.90	06.85	1.78E+01	.84
CAIOD2	VD(EL-I)	001	-.85	124.17	51.72	41.65	4.37E+01	.87
CAIOD2	PY1(E/F)	002	.34	124.17	05.75	04.63	4.37E+01	.87
CAIOD2	QZ1(D)	003	-.33	124.17	05.75	04.63	4.37E+01	.87
CAIOD3	VD(EL-I)	001	-.91	126.42	78.02	61.71	7.76E+01	.91
CAIOD3	QY1(D)	002	.29	126.42	03.30	02.61	7.76E+01	.91
CAIOD3	PY1(D)	003	.29	126.42	00.00	00.00	7.76E+01	.91
CGCAE1	VD(AER)	001	.83	368.35	89.80	24.38	1.29E+03	.98
CGCAE1	QY1(E/F)	006	.35	368.35	82.65	22.44	1.29E+03	.98
CGCAE1	SK(AER)	084	-.04	368.35	66.33	18.01	1.29E+03	.98
CGCAE1	QY1(D)	007	.23	368.35	44.90	12.19	1.29E+03	.98
CGCAE1	PY1(E/F)	002	.56	368.35	04.08	01.11	1.29E+03	.98
CGCAE1	PZ1(D)	003	-.49	368.35	01.02	00.28	1.29E+03	.98
CGCAE2	VD(AER)	001	.73	365.59	85.42	23.36	5.50E+02	.96
CGCAE2	QY1(E/F)	008	.23	365.59	80.21	21.94	5.50E+02	.96
CGCAE2	SK(AER)	135	.00	365.59	64.58	17.66	5.50E+02	.96
CGCAE2	QY1(D)	009	.23	365.59	44.79	12.25	5.50E+02	.96
CGCAE2	QZ1(D)	002	-.54	365.59	07.29	01.99	5.50E+02	.96
CGCAE2	PY1(E/F)	003	.46	365.59	03.13	00.86	5.50E+02	.96
CGCAE3	VD(AER)	001	.67	363.77	82.98	22.81	9.12E+01	.94
CGCAE3	QY1(E/F)	033	.12	363.77	77.66	21.35	9.12E+01	.94
CGCAE3	SK(AER)	118	.02	363.77	62.77	17.26	9.12E+01	.94
CGCAE3	QY1(D)	005	.32	363.77	50.00	13.74	9.12E+01	.94
CGCAE3	QZ1(D)	002	-.42	363.77	07.45	02.05	9.12E+01	.94
CGCAE3	PY1(E/F)	003	.35	363.77	01.06	00.29	9.12E+01	.94
CGIOD1	VD(EL-I)	001	.91	223.32	75.53	33.82	5.25E+02	.94
CGIOD1	QY1(E/F)	003	.34	223.32	30.85	13.81	5.25E+02	.94
CGIOD1	VD(AER)	013	-.18	223.32	25.53	11.43	5.25E+02	.94
CGIOD1	SK(AER)	032	-.12	223.32	22.34	10.00	5.25E+02	.94
CGIOD1	PY1(E/F)	002	.37	223.32	02.13	00.95	5.25E+02	.94
CGIOD2	QY1(E/F)	009	.17	293.75	56.25	19.15	1.00E+02	.80
CGIOD2	VD(AER)	095	.03	293.75	47.50	16.17	1.00E+02	.80
CGIOD2	QY1(D)	004	.23	293.75	45.00	15.32	1.00E+02	.80
CGIOD2	SK(AER)	125	.01	293.75	41.25	14.04	1.00E+02	.80
CGIOD2	VD(EL-I)	001	.43	293.75	22.50	07.66	1.00E+02	.80
CGIOD2	QZ1(D)	002	-.25	293.75	08.75	02.98	1.00E+02	.80
CGIOD2	QZ1(A/B)	003	-.25	293.75	02.50	00.85	1.00E+02	.80
CGIOD3	QY1(D)	001	.26	248.63	51.43	20.69	3.16E+01	.70
CGIOD3	QY1(E/F)	024	.12	248.63	41.43	16.66	3.16E+01	.70
CGIOD3	VD(AER)	076	.05	248.63	34.29	13.79	3.16E+01	.70
CGIOD3	SK(AER)	122	-.01	248.63	31.43	12.64	3.16E+01	.70
CGIOD3	IANY-BL	002	.22	248.63	00.00	00.00	3.16E+01	.70
CGIOD3	RUANY-BL	003	-.20	248.63	00.00	00.00	3.16E+01	.70
DECMBM1	VD(EL-I)	003	.46	240.28	15.85	06.60	8.91E+00	.82
DECMBM1	PZ1(E/F)	001	-.48	240.28	14.63	06.09	8.91E+00	.82
DECMBM1	QZ1(D)	002	-.47	240.28	07.32	03.05	8.91E+00	.82

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
DECMBM2	QZ1(D)	001	-.52	184.45	16.88	09.15	9.33E+00	.77
DECMBM2	PZ1(E/F)	003	-.33	184.45	11.69	06.34	9.33E+00	.77
DECMBM2	PY1(E/F)	002	.35	184.45	09.09	04.93	9.33E+00	.77
DECMBM3	QY1(D)	001	.56	311.43	65.91	21.16	2.24E+02	.88
DECMBM3	QY1(E/F)	017	.15	311.43	40.91	13.14	2.24E+02	.88
DECMBM3	VD(AER)	122	.01	311.43	32.95	10.58	2.24E+02	.88
DECMBM3	QY1(C)	010	.19	311.43	31.82	10.22	2.24E+02	.88
DECMBM3	QZ1(D)	003	-.33	311.43	11.36	03.65	2.24E+02	.88
DECMBM3	PY1(D)	002	.34	311.43	01.14	00.37	2.24E+02	.88
DECMSK1	SK(EL-I)	001	.87	260.35	66.67	25.61	4.37E+03	.93
DECMSK1	SK(AER)	002	.28	260.35	44.09	16.93	4.37E+03	.93
DECMSK1	QY1(E/F)	006	.20	260.35	41.94	16.11	4.37E+03	.93
DECMSK1	VD(AER)	123	.01	260.35	32.26	12.39	4.37E+03	.93
DECMSK1	PY1(E/F)	003	.26	260.35	02.15	00.83	4.37E+03	.93
DECMSK2	SK(EL-I)	001	.82	271.45	56.04	20.64	1.45E+04	.91
DECMSK2	SK(AER)	003	.34	271.45	51.65	19.03	1.45E+04	.91
DECMSK2	QY1(E/F)	016	.14	271.45	48.35	17.81	1.45E+04	.91
DECMSK2	VD(AER)	077	.05	271.45	38.46	14.17	1.45E+04	.91
DECMSK2	QY1(D)	012	.15	271.45	27.47	10.12	1.45E+04	.91
DECMSK2	VD(EL-I)	002	-.40	271.45	00.00	00.00	1.45E+04	.91
DECMSK3	QY1(E/F)	046	.08	329.14	59.14	17.97	1.12E+05	.93
DECMSK3	SK(AER)	003	.35	329.14	58.06	17.64	1.12E+05	.93
DECMSK3	QY1(D)	002	.46	329.14	53.76	16.33	1.12E+05	.93
DECMSK3	VD(AER)	017	.14	329.14	48.39	14.70	1.12E+05	.93
DECMSK3	SK(EL-I)	001	.79	329.14	37.63	11.43	1.12E+05	.93
DECMTH1	BRETHRAT	001	.49	179.71	07.14	03.97	5.50E+01	.84
DECMTH1	PY1(E/F)	003	.37	179.71	07.14	03.97	5.50E+01	.84
DECMTH1	ITC-BLAD	002	-.38	179.71	02.38	01.32	5.50E+01	.84
DECMTH2	VD(EL-I)	001	-.51	174.59	06.02	03.45	1.00E+02	.83
DECMTH2	BRETHRAT	002	.41	174.59	04.82	02.76	1.00E+02	.83
DECMTH2	QZ1(A/B)	003	-.32	174.59	01.20	00.69	1.00E+02	.83
DECMTH3	QY1(D)	001	.54	234.88	52.33	22.28	6.76E+02	.86
DECMTH3	QY1(C)	016	.17	234.88	34.88	14.85	6.76E+02	.86
DECMTH3	QY1(E/F)	020	.15	234.88	27.91	11.88	6.76E+02	.86
DECMTH3	QY1(A/B)	004	.29	234.88	25.58	10.89	6.76E+02	.86
DECMTH3	PY1(D)	003	.32	234.88	01.16	00.49	6.76E+02	.86
DECMTH3	VD(EL-I)	002	-.39	234.88	00.00	00.00	6.76E+02	.86
DELVBM1	QY1(E/F)	011	.19	346.21	46.15	13.33	3.47E+01	.91
DELVBM1	VD(AER)	014	.18	346.21	42.86	12.38	3.47E+01	.91
DELVBM1	SK(AER)	124	.01	346.21	36.26	10.47	3.47E+01	.91
DELVBM1	VD(EL-I)	001	.68	346.21	32.97	09.52	3.47E+01	.91
DELVBM1	LFGRNLVE	003	.36	346.21	14.29	04.13	3.47E+01	.91
DELVBM1	PZ1(E/F)	002	-.41	346.21	13.19	03.81	3.47E+01	.91
DELVBM2	QY1(E/F)	024	.14	346.01	44.94	12.99	2.09E+01	.89
DELVBM2	VD(AER)	023	.15	346.01	40.45	11.69	2.09E+01	.89
DELVBM2	SK(AER)	039	.10	346.01	38.20	11.04	2.09E+01	.89
DELVBM2	PZ1(E/F)	002	-.44	346.01	14.61	04.22	2.09E+01	.89
DELVBM2	QZ1(D)	001	-.47	346.01	11.24	03.25	2.09E+01	.89
DELVBM2	PZ1(D)	003	-.37	346.01	00.00	00.00	2.09E+01	.89
DELVBM3	QY1(E/F)	026	.13	383.29	47.78	12.47	1.58E+01	.90
DELVBM3	VD(AER)	012	.19	383.29	41.11	10.73	1.58E+01	.90
DELVBM3	SK(AER)	028	.11	383.29	40.00	10.44	1.58E+01	.90
DELVBM3	QY1(D)	003	.29	383.29	32.22	08.41	1.58E+01	.90
DELVBM3	QZ1(D)	002	-.31	383.29	08.89	02.32	1.58E+01	.90
DELVBM3	QZ1(A/B)	001	-.35	383.29	01.11	00.29	1.58E+01	.90
DELVSK1	SK(EL-I)	001	.85	268.53	63.04	23.48	3.24E+03	.92
DELVSK1	SK(AER)	002	.32	268.53	47.83	17.81	3.24E+03	.92
DELVSK1	QY1(E/F)	006	.20	268.53	44.57	16.60	3.24E+03	.92
DELVSK1	VD(AER)	118	.01	268.53	35.87	13.36	3.24E+03	.92
DELVSK1	PY1(E/F)	003	.27	268.53	02.17	00.81	3.24E+03	.92
DELVSK2	SK(EL-I)	001	.81	259.38	56.04	21.61	5.01E+03	.91
DELVSK2	SK(AER)	003	.37	259.38	49.45	19.06	5.01E+03	.91
DELVSK2	QY1(E/F)	011	.15	259.38	43.96	16.95	5.01E+03	.91
DELVSK2	VD(AER)	100	.02	259.38	34.07	13.14	5.01E+03	.91
DELVSK2	VD(EL-I)	002	-.43	259.38	00.00	00.00	5.01E+03	.91
DELVSK3	SK(EL-I)	001	.80	236.64	58.89	24.89	3.16E+03	.90
DELVSK3	SK(AER)	003	.40	236.64	45.56	19.25	3.16E+03	.90
DELVSK3	QY1(E/F)	058	.06	236.64	37.78	15.97	3.16E+03	.90
DELVSK3	VD(AER)	086	.04	236.64	28.89	12.21	3.16E+03	.90
DELVSK3	VD(EL-I)	002	-.51	236.64	01.11	00.47	3.16E+03	.90

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
DELVTH1	PY1(E/F)	003	.38	182.11	07.14	03.92	4.47E+01	.84
DELVTH1	BRETHRAT	001	.46	182.11	05.95	03.27	4.47E+01	.84
DELVTH1	ITC-BLAD	002	-.40	182.11	02.38	01.31	4.47E+01	.84

DELVTH2	VD(EL-I)	001	-.63	153.53	13.10	08.53	5.37E+01	.84
DELVTH2	BRETHRAT	002	.42	153.53	05.95	03.88	5.37E+01	.84
DELVTH2	ITC-BLAD	003	-.34	153.53	02.38	01.55	5.37E+01	.84
DELVTH3	VD(EL-I)	001	-.71	130.93	28.57	21.82	6.17E+01	.84
DELVTH3	LFIHNLIV	072	.06	130.93	14.29	10.91	6.17E+01	.84
DELVTH3	LFIHSHLT	122	.01	130.93	13.10	10.01	6.17E+01	.84
DELVTH3	BRETHRAT	002	.47	130.93	10.71	08.18	6.17E+01	.84
DELVTH3	INDEPEXT	003	.35	130.93	03.57	02.73	6.17E+01	.84
DEOUBM1	QY1(E/F)	013	.19	336.32	51.65	15.36	3.55E+01	.91
DEOUBM1	VD(AER)	007	.25	336.32	49.45	14.70	3.55E+01	.91
DEOUBM1	SK(AER)	114	-.02	336.32	40.66	12.09	3.55E+01	.91
DEOUBM1	VD(EL-I)	001	.74	336.32	40.66	12.09	3.55E+01	.91
DEOUBM1	PZ1(E/F)	002	-.42	336.32	14.29	04.25	3.55E+01	.91
DEOUBM1	PZ1(D)	003	-.37	336.32	00.00	00.00	3.55E+01	.91
DEOUBM2	QY1(E/F)	018	.16	346.01	56.18	16.24	1.70E+01	.89
DEOUBM2	VD(AER)	008	.26	346.01	51.69	14.94	1.70E+01	.89
DEOUBM2	SK(AER)	079	.05	346.01	47.19	13.64	1.70E+01	.89
DEOUBM2	PZ1(E/F)	002	-.43	346.01	17.98	05.20	1.70E+01	.89
DEOUBM2	QZ1(D)	001	-.44	346.01	11.24	03.25	1.70E+01	.89
DEOUBM2	PZ1(D)	003	-.36	346.01	00.00	00.00	1.70E+01	.89
DEOUBM3	QY1(E/F)	014	.16	402.20	63.33	15.75	1.58E+01	.90
DEOUBM3	VD(AER)	002	.31	402.20	56.67	14.09	1.58E+01	.90
DEOUBM3	SK(AER)	054	.07	402.20	52.22	12.98	1.58E+01	.90
DEOUBM3	QY1(D)	004	.29	402.20	43.33	10.77	1.58E+01	.90
DEOUBM3	RUGRINDR	003	.30	402.20	10.00	02.49	1.58E+01	.90
DEOUBM3	QZ1(A/B)	001	-.35	402.20	02.22	00.55	1.58E+01	.90
DEOUSK1	SK(EL-I)	001	.86	267.85	64.52	24.09	2.88E+03	.93
DEOUSK1	SK(AER)	002	.31	267.85	48.39	18.07	2.88E+03	.93
DEOUSK1	QY1(E/F)	008	.19	267.85	45.16	16.86	2.88E+03	.93
DEOUSK1	VD(AER)	093	.02	267.85	35.48	13.25	2.88E+03	.93
DEOUSK1	PY1(E/F)	003	.26	267.85	02.15	00.80	2.88E+03	.93
DEOUSK2	SK(EL-I)	001	.82	259.36	59.34	22.88	3.80E+03	.91
DEOUSK2	SK(AER)	003	.35	259.36	50.55	19.49	3.80E+03	.91
DEOUSK2	QY1(E/F)	009	.16	259.36	45.05	17.37	3.80E+03	.91
DEOUSK2	VD(AER)	102	.02	259.36	35.16	13.56	3.80E+03	.91
DEOUSK2	VD(EL-I)	002	-.44	259.36	00.00	00.00	3.80E+03	.91
DEOUSK3	SK(EL-I)	001	.81	239.98	61.11	25.46	2.45E+03	.90
DEOUSK3	SK(AER)	003	.39	239.98	46.67	19.45	2.45E+03	.90
DEOUSK3	QY1(E/F)	052	.06	239.98	38.89	16.21	2.45E+03	.90
DEOUSK3	VD(AER)	079	.04	239.98	30.00	12.50	2.45E+03	.90
DEOUSK3	VD(EL-I)	002	-.52	239.98	01.11	00.46	2.45E+03	.90
DEOUTH1	QY1(E/F)	013	.22	195.04	24.10	12.36	3.16E+01	.83
DEOUTH1	VD(AER)	095	.03	195.04	21.69	11.12	3.16E+01	.83
DEOUTH1	PY1(E/F)	002	.41	195.04	09.64	04.94	3.16E+01	.83
DEOUTH1	BRETHRAT	001	.48	195.04	06.02	03.09	3.16E+01	.83
DEOUTH1	ITC-BLAD	003	-.39	195.04	02.41	01.24	3.16E+01	.83
DEOUTH2	VD(EL-I)	001	-.60	152.47	09.76	06.40	4.47E+01	.82
DEOUTH2	BRETHRAT	002	.42	152.47	06.10	04.00	4.47E+01	.82
DEOUTH2	QZ1(A/B)	003	-.34	152.47	01.22	00.80	4.47E+01	.82
DEOUTH3	VD(EL-I)	001	-.69	124.54	27.16	21.81	4.47E+01	.81
DEOUTH3	BRETHRAT	002	.46	124.54	11.11	08.92	4.47E+01	.81
DEOUTH3	INDEPEXT	003	.30	124.54	02.47	01.98	4.47E+01	.81
PECMBM	QY1(E/F)	005	-.23	158.75	20.00	12.60	3.31E+01	.80
PECMBM	VD(AER)	085	-.04	158.75	18.75	11.81	3.31E+01	.80
PECMBM	PZ1(E/F)	001	-.71	158.75	17.50	11.02	3.31E+01	.80
PECMBM	QZ1(E/F)	002	-.40	158.75	01.25	00.79	3.31E+01	.80
PECMBM	PY1(E/F)	003	-.32	158.75	00.00	00.00	3.31E+01	.80
PECMLU	D0(LUMB)	001	-.64	185.96	40.70	21.89	9.99E+09	.86
PECMLU	DI(LUMB)	002	-.47	185.96	26.74	14.38	9.99E+09	.86
PECMLU	DI(LUMT)	004	.29	185.96	19.77	10.63	9.99E+09	.86
PECMLU	D0(LUMT)	003	.33	185.96	18.60	10.00	9.99E+09	.86
PECMMB	SK(EL-I)	001	.69	197.43	50.62	25.64	1.41E+03	.81
PECMMB	SK(AER)	017	.13	197.43	27.16	13.76	1.41E+03	.81
PECMMB	QY1(E/F)	068	.06	197.43	22.22	11.25	1.41E+03	.81
PECMMB	DI(SK)	003	-.31	197.43	08.64	04.38	1.41E+03	.81
PECMMB	D0(LUMB)	002	-.34	197.43	04.94	02.50	1.41E+03	.81

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
PECMMT	INDEPTB	001	.46	118.22	14.29	12.09	4.47E+01	.77
PECMMT	INDEPET	002	-.39	118.22	07.79	06.59	4.47E+01	.77
PECMMT	SK(EL-I)	003	.39	118.22	07.79	06.59	4.47E+01	.77
PECMSK	SK(EL-I)	001	.78	224.16	63.22	28.20	9.99E+09	.87
PECMSK	SK(AER)	004	.24	224.16	35.63	15.89	9.99E+09	.87
PECMSK	QY1(E/F)	048	.08	224.16	29.89	13.33	9.99E+09	.87
PECMSK	VD(AER)	064	.06	224.16	24.14	10.77	9.99E+09	.87
PECMSK	DI(SK)	002	-.38	224.16	11.49	05.13	9.99E+09	.87
PECMSK	VD(EL-I)	003	-.26	224.16	00.00	00.00	9.99E+09	.87
PECMTH	INDEPET	001	.42	139.35	11.39	08.17	9.99E+09	.79
PECMTH	INDEPEXT	003	.31	139.35	06.33	04.54	9.99E+09	.79
PECMTH	TETC-THR	002	.39	139.35	03.80	02.73	9.99E+09	.79
PELVBM	D0(BM)	002	-.45	172.16	12.05	07.00	5.75E+01	.83
PELVBM	PZ1(E/F)	001	-.65	172.16	09.64	05.60	5.75E+01	.83
PELVBM	PY1(E/F)	003	-.40	172.16	01.20	00.70	5.75E+01	.83
PELVLU	D0(LUMB)	001	-.65	190.71	41.18	21.59	9.99E+09	.85
PELVLU	DI(LUMB)	002	-.38	190.71	21.18	11.11	9.99E+09	.85
PELVLU	D0(LUMT)	003	.33	190.71	18.82	09.87	9.99E+09	.85
PELVMB	SK(EL-I)	001	.67	181.36	48.15	26.55	3.16E+02	.81
PELVMB	SK(AER)	010	.15	181.36	23.46	12.94	3.16E+02	.81
PELVMB	D0(LUMB)	003	-.33	181.36	03.70	02.04	3.16E+02	.81
PELVMB	VD(EL-I)	002	-.40	181.36	03.70	02.04	3.16E+02	.81
PELVMT	SK(EL-I)	001	.47	111.49	10.26	09.20	5.75E+01	.78
PELVMT	INDEPTB	003	.37	111.49	08.97	08.05	5.75E+01	.78
PELVMT	INDEPET	002	-.39	111.49	07.69	06.90	5.75E+01	.78
PELVSK	SK(EL-I)	001	.74	209.49	62.35	29.76	9.99E+09	.85
PELVSK	SK(AER)	003	.27	209.49	35.29	16.85	9.99E+09	.85
PELVSK	QY1(E/F)	033	.10	209.49	28.24	13.48	9.99E+09	.85
PELVSK	VD(AER)	136	.00	209.49	21.18	10.11	9.99E+09	.85
PELVSK	VD(EL-I)	002	-.32	209.49	00.00	00.00	9.99E+09	.85
PELVTH	VD(EL-I)	001	-.67	135.99	34.94	25.69	9.99E+09	.83
PELVTH	IANY-BL	002	.42	135.99	04.82	03.54	9.99E+09	.83
PELVTH	ITC-BLAD	003	-.33	135.99	02.41	01.77	9.99E+09	.83
RECMBM1	LFCLNLIV	133	-.01	195.78	24.29	12.41	2.95E+01	.70
RECMBM1	LFCLSHLT	019	.13	195.78	22.86	11.68	2.95E+01	.70
RECMBM1	VD(EL-I)	001	.37	195.78	15.71	08.02	2.95E+01	.70
RECMBM1	PZ1(E/F)	002	-.36	195.78	11.43	05.84	2.95E+01	.70
RECMBM1	PZ1(D)	003	-.31	195.78	00.00	00.00	2.95E+01	.70
RECMBM2	QZ1(A/B)	003	-.21	124.64	03.28	02.63	9.99E+09	.61
RECMBM2	INDEPET	001	-.28	124.64	01.64	01.32	9.99E+09	.61
RECMBM2	QZ1(D)	002	-.23	124.64	01.64	01.32	9.99E+09	.61
RECMLU1	D0(SK)	002	-.21	150.70	06.78	04.50	9.99E+09	.59
RECMLU1	RUGR30D	003	.20	150.70	01.69	01.12	9.99E+09	.59
RECMLU1	CSGR10Y	001	.22	150.70	00.00	00.00	9.99E+09	.59
RECMLU2	QY1(D)	008	.14	164.20	16.98	10.34	9.99E+09	.53
RECMLU2	D0(LUMB)	001	-.30	164.20	15.09	09.19	9.99E+09	.53
RECMLU2	INDEPET	002	-.23	164.20	03.77	02.30	9.99E+09	.53
RECMLU2	CSF1	003	-.17	164.20	01.89	01.15	9.99E+09	.53
RECMMB1	QY1(E/F)	063	.06	274.30	39.74	14.49	9.99E+09	.78
RECMMB1	QY1(D)	007	.18	274.30	37.18	13.55	9.99E+09	.78
RECMMB1	SK(AER)	059	.07	274.30	35.90	13.09	9.99E+09	.78
RECMMB1	VD(AER)	013	.14	274.30	35.90	13.09	9.99E+09	.78
RECMMB1	SK(EL-I)	001	.36	274.30	17.95	06.54	9.99E+09	.78
RECMMB1	BBF-ET2	002	.27	274.30	02.56	00.93	9.99E+09	.78
RECMMB1	INDEPET	003	.26	274.30	02.56	00.93	9.99E+09	.78
RECMMB2	QY1(E/F)	065	.05	312.22	53.09	17.00	9.99E+09	.81
RECMMB2	QY1(D)	002	.28	312.22	49.38	15.82	9.99E+09	.81
RECMMB2	SK(AER)	101	.03	312.22	49.38	15.82	9.99E+09	.81
RECMMB2	VD(AER)	004	.17	312.22	46.91	15.02	9.99E+09	.81
RECMMB2	SK(EL-I)	001	.54	312.22	33.33	10.68	9.99E+09	.81
RECMMB2	IANY-BL	003	.20	312.22	01.23	00.39	9.99E+09	.81
RECMMB3	SK(EL-I)	001	.38	210.82	29.23	13.86	9.99E+09	.65
RECMMB3	QY1(D)	029	.10	210.82	27.69	13.13	9.99E+09	.65
RECMMB3	QY1(E/F)	091	.03	210.82	26.15	12.40	9.99E+09	.65
RECMMB3	SK(AER)	130	.00	210.82	24.62	11.68	9.99E+09	.65
RECMMB3	VD(AER)	025	.11	210.82	21.54	10.22	9.99E+09	.65
RECMMB3	D0(LUMB)	003	-.23	210.82	01.54	00.73	9.99E+09	.65
RECMMB3	BBS-ET2	002	-.24	210.82	00.00	00.00	9.99E+09	.65

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
RECMMT1	INDEPET	001	-.27	113.25	09.43	08.33	1.02E+00	.53
RECMMT1	INDEPTB	002	.23	113.25	07.55	06.67	1.02E+00	.53
RECMMT1	TELV-ULI	003	-.20	113.25	01.89	01.67	1.02E+00	.53
RECMMT2	SK(AER)	049	.09	182.40	25.68	14.08	9.99E+09	.74
RECMMT2	QY1(E/F)	020	.14	182.40	24.32	13.33	9.99E+09	.74
RECMMT2	SK(EL-I)	002	.32	182.40	17.57	09.63	9.99E+09	.74
RECMMT2	INDEPET	001	-.37	182.40	08.11	04.45	9.99E+09	.74
RECMMT2	INDEPTB	003	.28	182.40	06.76	03.71	9.99E+09	.74
RECMMT3	SK(EL-I)	001	.41	206.19	31.25	15.16	9.99E+09	.64
RECMMT3	QY1(D)	050	.07	206.19	26.56	12.88	9.99E+09	.64
RECMMT3	QY1(E/F)	068	.06	206.19	26.56	12.88	9.99E+09	.64
RECMMT3	SK(AER)	117	.02	206.19	26.56	12.88	9.99E+09	.64
RECMMT3	D0(LUMB)	002	-.25	206.19	01.56	00.76	9.99E+09	.64
RECMMT3	VD(EL-I)	003	-.20	206.19	00.00	00.00	9.99E+09	.64
RECMSK1	QY1(D)	003	.20	293.52	44.74	15.24	9.99E+09	.76
RECMSK1	QY1(E/F)	134	.00	293.52	44.74	15.24	9.99E+09	.76
RECMSK1	SK(AER)	007	.15	293.52	44.74	15.24	9.99E+09	.76
RECMSK1	VD(AER)	020	.11	293.52	40.79	13.90	9.99E+09	.76
RECMSK1	SK(EL-I)	001	.44	293.52	25.00	08.52	9.99E+09	.76
RECMSK1	BBF-ET2	002	.20	293.52	01.32	00.45	9.99E+09	.76
RECMSK2	QY1(E/F)	075	.05	306.25	55.00	17.96	9.99E+09	.80
RECMSK2	SK(AER)	039	.08	306.25	53.75	17.55	9.99E+09	.80
RECMSK2	VD(AER)	003	.19	306.25	48.75	15.92	9.99E+09	.80
RECMSK2	QY1(D)	002	.19	306.25	45.00	14.69	9.99E+09	.80
RECMSK2	SK(EL-I)	001	.55	306.25	37.50	12.24	9.99E+09	.80
RECMSK3	SK(EL-I)	001	.38	210.82	29.23	13.86	9.99E+09	.65
RECMSK3	QY1(D)	028	.11	210.82	27.69	13.13	9.99E+09	.65
RECMSK3	QY1(E/F)	091	.03	210.82	26.15	12.40	9.99E+09	.65
RECMSK3	SK(AER)	130	.01	210.82	24.62	11.68	9.99E+09	.65
RECMSK3	VD(AER)	025	.11	210.82	21.54	10.22	9.99E+09	.65
RECMSK3	D0(LUMB)	003	-.23	210.82	01.54	00.73	9.99E+09	.65
RECMSK3	BBS-ET2	002	-.24	210.82	00.00	00.00	9.99E+09	.65
RECMTH1	INDEPET	001	.31	171.01	13.56	07.93	9.99E+09	.59
RECMTH1	QZ1(A/B)	003	-.20	171.01	03.39	01.98	9.99E+09	.59
RECMTH1	PY1(E/F)	002	.21	171.01	01.69	00.99	9.99E+09	.59
RECMTH2	QY1(D)	001	.21	146.56	21.43	14.62	9.99E+09	.56
RECMTH2	QY1(E/F)	020	.11	146.56	17.86	12.19	9.99E+09	.56
RECMTH2	IANY-AT	003	-.19	146.56	03.57	02.44	9.99E+09	.56
RECMTH2	PUANY-AT	002	-.20	146.56	01.79	01.22	9.99E+09	.56
RELVBM1	VD(AER)	024	.11	227.56	26.09	11.47	5.13E+01	.69
RELVBM1	QY1(E/F)	109	.02	227.56	24.64	10.83	5.13E+01	.69
RELVBM1	VD(EL-I)	001	.32	227.56	17.39	07.64	5.13E+01	.69
RELVBM1	PZ1(E/F)	003	-.28	227.56	11.59	05.09	5.13E+01	.69
RELVBM1	QZ1(D)	002	-.30	227.56	08.70	03.82	5.13E+01	.69
RELVBM2	D0(BM)	001	-.23	252.43	11.11	04.40	9.99E+09	.63
RELVBM2	QZ1(D)	003	-.21	252.43	07.94	03.15	9.99E+09	.63
RELVBM2	V(SK)	002	-.21	252.43	07.94	03.15	9.99E+09	.63
RELVLU1	D0(LUMB)	002	-.23	122.65	12.28	10.01	9.99E+09	.57
RELVLU1	RUTC-WB	001	-.23	122.65	01.75	01.43	9.99E+09	.57
RELVLU1	TETC-LIV	003	-.16	122.65	00.00	00.00	9.99E+09	.57
RELVLU2	D0(LUMB)	001	-.34	134.99	22.81	16.90	9.99E+09	.57
RELVLU2	INDEPET	002	-.21	134.99	05.26	03.90	9.99E+09	.57
RELVLU2	V(BM)	003	-.16	134.99	00.00	00.00	9.99E+09	.57
RELVLU3	D0(LUMB)	002	-.17	089.76	08.16	09.09	9.99E+09	.49
RELVLU3	CSWB2-UL	003	-.15	089.76	00.00	00.00	9.99E+09	.49
RELVLU3	VD(AER)	001	-.18	089.76	00.00	00.00	9.99E+09	.49
RELVMB1	QY1(D)	010	.15	232.39	29.73	12.79	9.99E+09	.74
RELVMB1	QY1(E/F)	046	.08	232.39	29.73	12.79	9.99E+09	.74
RELVMB1	SK(AER)	063	.06	232.39	29.73	12.79	9.99E+09	.74
RELVMB1	SK(EL-I)	001	.47	232.39	27.03	11.63	9.99E+09	.74
RELVMB1	VD(AER)	092	.03	232.39	24.32	10.47	9.99E+09	.74
RELVMB1	INDEPET	002	.24	232.39	02.70	01.16	9.99E+09	.74
RELVMB1	VD(EL-I)	003	-.21	232.39	01.35	00.58	9.99E+09	.74
RELVMB2	QY1(E/F)	056	.06	307.29	50.62	16.47	9.99E+09	.81
RELVMB2	SK(AER)	068	.05	307.29	45.68	14.87	9.99E+09	.81
RELVMB2	QY1(D)	002	.29	307.29	44.44	14.46	9.99E+09	.81
RELVMB2	VD(AER)	017	.13	307.29	44.44	14.46	9.99E+09	.81
RELVMB2	SK(EL-I)	001	.56	307.29	34.57	11.25	9.99E+09	.81
RELVMB2	INDEPTB	003	-.22	307.29	00.00	00.00	9.99E+09	.81

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
RELVMB3	SK(EL-I)	001	.66	181.89	48.05	26.42	9.99E+09	.77
RELVMB3	SK(AER)	008	.15	181.89	22.08	12.14	9.99E+09	.77
RELVMB3	QY1(E/F)	084	.04	181.89	18.18	10.00	9.99E+09	.77
RELVMB3	VD(EL-I)	002	-.27	181.89	02.60	01.43	9.99E+09	.77
RELVMB3	D0(LUMB)	003	-.24	181.89	01.30	00.71	9.99E+09	.77
RELVMT1	INDEPET	002	-.22	131.48	08.77	06.67	1.17E+00	.57
RELVMT1	PUANY-AT	001	.28	131.48	01.75	01.33	1.17E+00	.57
RELVMT1	ZRGR30D	003	-.22	131.48	00.00	00.00	1.17E+00	.57
RELVMT2	QY1(E/F)	014	.16	192.88	25.71	13.33	9.99E+09	.70
RELVMT2	SK(AER)	061	.06	192.88	25.71	13.33	9.99E+09	.70
RELVMT2	VD(AER)	120	-.01	192.88	20.00	10.37	9.99E+09	.70
RELVMT2	INDEPET	001	-.35	192.88	10.00	05.18	9.99E+09	.70
RELVMT2	SKMORT	002	.27	192.88	01.43	00.74	9.99E+09	.70
RELVMT2	VD(EL-I)	003	-.27	192.88	00.00	00.00	9.99E+09	.70
RELVMT3	SK(EL-I)	001	.64	185.64	51.32	27.64	9.99E+09	.76
RELVMT3	SK(AER)	007	.18	185.64	27.63	14.88	9.99E+09	.76
RELVMT3	QY1(E/F)	076	.05	185.64	22.37	12.05	9.99E+09	.76
RELVMT3	VD(EL-I)	002	-.24	185.64	01.32	00.71	9.99E+09	.76
RELVMT3	D0(LUMB)	003	-.22	185.64	00.00	00.00	9.99E+09	.76
RELVSK1	SK(AER)	008	.17	243.75	41.25	16.92	9.99E+09	.80
RELVSK1	SK(EL-I)	001	.61	243.75	41.25	16.92	9.99E+09	.80
RELVSK1	QY1(E/F)	076	.05	243.75	37.50	15.38	9.99E+09	.80
RELVSK1	VD(AER)	057	.07	243.75	30.00	12.31	9.99E+09	.80
RELVSK1	QY1(D)	041	.09	243.75	28.75	11.79	9.99E+09	.80
RELVSK1	PZ1(C)	002	.24	243.75	02.50	01.03	9.99E+09	.80
RELVSK1	LFCLPROT	003	.20	243.75	00.00	00.00	9.99E+09	.80
RELVSK2	SK(AER)	015	.12	281.10	46.84	16.66	9.99E+09	.79
RELVSK2	SK(EL-I)	001	.61	281.10	46.84	16.66	9.99E+09	.79
RELVSK2	QY1(E/F)	105	.02	281.10	45.57	16.21	9.99E+09	.79
RELVSK2	VD(AER)	012	.13	281.10	39.24	13.96	9.99E+09	.79
RELVSK2	QY1(D)	005	.17	281.10	34.18	12.16	9.99E+09	.79
RELVSK2	SKMORT	002	-.24	281.10	05.06	01.80	9.99E+09	.79
RELVSK2	LFCLPROT	003	.19	281.10	00.00	00.00	9.99E+09	.79
RELVSK3	SK(EL-I)	001	.66	181.67	53.95	29.70	9.99E+09	.76
RELVSK3	SK(AER)	006	.17	181.67	25.00	13.76	9.99E+09	.76
RELVSK3	QY1(E/F)	113	.02	181.67	19.74	10.87	9.99E+09	.76
RELVSK3	VD(EL-I)	002	-.26	181.67	01.32	00.73	9.99E+09	.76
RELVSK3	D0(LUMB)	003	-.18	181.67	00.00	00.00	9.99E+09	.76
RELVTH1	INDEPET	002	.29	139.68	09.52	06.82	9.99E+09	.63
RELVTH1	VD(EL-I)	001	-.31	139.68	07.94	05.68	9.99E+09	.63
RELVTH1	SKMORT	003	.19	139.68	00.00	00.00	9.99E+09	.63
RELVTH2	QY1(D)	001	.31	145.58	24.24	16.65	9.99E+09	.66
RELVTH2	VD(EL-I)	002	-.24	145.58	03.03	02.08	9.99E+09	.66
RELVTH2	ITC-BLAD	003	-.23	145.58	01.52	01.04	9.99E+09	.66
RELVTH3	VD(EL-I)	001	-.30	112.13	07.02	06.26	9.99E+09	.57
RELVTH3	CSAT-BL	002	-.22	112.13	03.51	03.13	9.99E+09	.57
RELVTH3	IANY-AT	003	-.19	112.13	00.00	00.00	9.99E+09	.57
REOUBM1	PZ1(E/F)	003	-.21	121.52	03.92	03.23	1.00E+00	.51
REOUBM1	CSWB2-UL	001	-.23	121.52	01.96	01.61	1.00E+00	.51
REOUBM1	PZ1(D)	002	-.22	121.52	00.00	00.00	1.00E+00	.51
REOUBM2	QY1(E/F)	039	.10	313.06	43.37	13.85	9.99E+09	.83
REOUBM2	VD(AER)	009	.22	313.06	40.96	13.08	9.99E+09	.83
REOUBM2	SK(AER)	134	.00	313.06	36.14	11.54	9.99E+09	.83
REOUBM2	D0(BM)	001	-.39	313.06	18.07	05.77	9.99E+09	.83
REOUBM2	PZ1(E/F)	002	-.39	313.06	13.25	04.23	9.99E+09	.83
REOUBM2	QZ1(D)	003	-.36	313.06	10.84	03.46	9.99E+09	.83
REOULU1	D0(LUMB)	003	-.20	087.34	09.09	10.41	9.99E+09	.55
REOULU1	RUWB-ULI	001	-.21	087.34	03.64	04.17	9.99E+09	.55
REOULU1	TETC-LIV	002	-.20	087.34	00.00	00.00	9.99E+09	.55
REOULU2	D0(LUMB)	001	-.40	111.76	25.00	22.37	9.99E+09	.60
REOULU2	PY1(D)	003	.18	111.76	03.33	02.98	9.99E+09	.60
REOULU2	D0(BM)	002	.18	111.76	01.67	01.49	9.99E+09	.60
REOULU3	D0(LUMB)	005	-.16	081.17	08.33	10.26	9.99E+09	.48
REOULU3	INDEPET	001	-.19	081.17	04.17	05.14	9.99E+09	.48
REOULU3	DI(LUMB)	003	-.16	081.17	02.08	02.56	9.99E+09	.48
REOULU3	PY1(D)	002	.17	081.17	02.08	02.56	9.99E+09	.48

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
REOUMB1	SK(EL-I)	001	.49	186.15	31.94	17.16	9.99E+09	.72
REOUMB1	SK(AER)	027	.11	186.15	22.22	11.94	9.99E+09	.72
REOUMB1	QY1(E/F)	007	.14	186.15	20.83	11.19	9.99E+09	.72
REOUMB1	QY1(D)	010	.13	186.15	19.44	10.44	9.99E+09	.72
REOUMB1	VD(EL-I)	002	-.40	186.15	06.94	03.73	9.99E+09	.72
REOUMB1	CEF1	003	-.19	186.15	01.39	00.75	9.99E+09	.72
REOUMB2	QY1(E/F)	106	.02	299.89	48.15	16.06	9.99E+09	.81
REOUMB2	QY1(D)	002	.32	299.89	46.91	15.64	9.99E+09	.81
REOUMB2	SK(AER)	050	.08	299.89	45.68	15.23	9.99E+09	.81
REOUMB2	VD(AER)	011	.15	299.89	40.74	13.58	9.99E+09	.81
REOUMB2	SK(EL-I)	001	.51	299.89	29.63	09.88	9.99E+09	.81
REOUMB2	D0(LUMB)	003	-.19	299.89	00.00	00.00	9.99E+09	.81
REOUMB3	SK(EL-I)	001	.68	210.19	52.56	25.01	9.99E+09	.78
REOUMB3	SK(AER)	006	.16	210.19	29.49	14.03	9.99E+09	.78
REOUMB3	QY1(E/F)	128	.00	210.19	26.92	12.81	9.99E+09	.78
REOUMB3	VD(EL-I)	002	-.25	210.19	01.28	00.61	9.99E+09	.78
REOUMB3	D0(LUMB)	003	-.22	210.19	00.00	00.00	9.99E+09	.78
REOUMT2	QY1(E/F)	009	.18	219.50	26.39	12.02	9.99E+09	.72
REOUMT2	SK(AER)	084	-.04	219.50	22.22	10.12	9.99E+09	.72
REOUMT2	INDEPET	003	-.27	219.50	11.11	05.06	9.99E+09	.72
REOUMT2	QZ1(D)	002	-.28	219.50	11.11	05.06	9.99E+09	.72
REOUMT2	QZ1(C)	001	-.29	219.50	00.00	00.00	9.99E+09	.72
REOUMT3	SK(EL-I)	001	.65	214.34	49.35	23.02	9.99E+09	.77
REOUMT3	SK(AER)	007	.16	214.34	33.77	15.76	9.99E+09	.77
REOUMT3	QY1(E/F)	088	.04	214.34	27.27	12.72	9.99E+09	.77
REOUMT3	D0(SK)	003	-.21	214.34	03.90	01.82	9.99E+09	.77
REOUMT3	VD(EL-I)	002	-.23	214.34	00.00	00.00	9.99E+09	.77
REOUSK1	SK(EL-I)	001	.58	221.13	40.79	18.45	9.99E+09	.76
REOUSK1	SK(AER)	003	.19	221.13	36.84	16.66	9.99E+09	.76
REOUSK1	QY1(E/F)	035	.08	221.13	31.58	14.28	9.99E+09	.76
REOUSK1	QY1(D)	028	.10	221.13	26.32	11.90	9.99E+09	.76
REOUSK1	VD(AER)	074	-.05	221.13	22.37	10.12	9.99E+09	.76
REOUSK1	VD(EL-I)	002	-.27	221.13	01.32	00.60	9.99E+09	.76
REOUSK2	SK(EL-I)	001	.63	259.59	48.10	18.53	9.99E+09	.79
REOUSK2	SK(AER)	016	.11	259.59	43.04	16.58	9.99E+09	.79
REOUSK2	QY1(E/F)	094	.03	259.59	39.24	15.12	9.99E+09	.79
REOUSK2	QY1(D)	005	.18	259.59	32.91	12.68	9.99E+09	.79
REOUSK2	VD(AER)	019	.10	259.59	32.91	12.68	9.99E+09	.79
REOUSK2	D0(SK)	003	-.21	259.59	03.80	01.46	9.99E+09	.79
REOUSK2	VD(EL-I)	002	-.22	259.59	00.00	00.00	9.99E+09	.79
REOUSK3	SK(EL-I)	001	.68	201.33	58.44	29.03	9.99E+09	.77
REOUSK3	SK(AER)	005	.16	201.33	29.87	14.84	9.99E+09	.77
REOUSK3	QY1(E/F)	134	.00	201.33	24.68	12.26	9.99E+09	.77
REOUSK3	D0(SK)	003	-.18	201.33	03.90	01.94	9.99E+09	.77
REOUSK3	VD(EL-I)	002	-.22	201.33	00.00	00.00	9.99E+09	.77
REOUTH1	VD(EL-I)	001	-.35	091.39	13.56	14.84	9.99E+09	.59
REOUTH1	PURM-ULI	003	.22	091.39	01.69	01.85	9.99E+09	.59
REOUTH1	CSAT-BL	002	-.23	091.39	00.00	00.00	9.99E+09	.59
REOUTH2	QY1(D)	002	.28	110.44	14.93	13.52	9.99E+09	.67
REOUTH2	IANY-AT	003	-.26	110.44	05.97	05.41	9.99E+09	.67
REOUTH2	VD(EL-I)	001	-.32	110.44	04.48	04.06	9.99E+09	.67
REOUTH3	VD(EL-I)	001	-.40	093.06	11.86	12.74	9.99E+09	.59
REOUTH3	ITC-THR	002	.30	093.06	08.47	09.10	9.99E+09	.59
REOUTH3	V(GI)	003	-.20	093.06	00.00	00.00	9.99E+09	.59

Results for the 99th percentile of the endpoints for the UK1 source term

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
CACAE1	PZ1(E/F)	001	-.77	141.49	62.20	43.96	6.76E+00	.82
CACAE1	QZ1(E/F)	002	-.32	141.49	03.66	02.59	6.76E+00	.82
CACAE1	PZ1(D)	003	-.26	141.49	00.00	00.00	6.76E+00	.82
CACAE2	VD(AER)	002	-.39	176.89	29.49	16.67	1.15E+01	.78
CACAE2	QY1(E/F)	101	.03	176.89	23.08	13.05	1.15E+01	.78
CACAE2	PZ1(E/F)	001	-.58	176.89	16.67	09.42	1.15E+01	.78
CACAE2	QZ1(D)	003	-.37	176.89	01.28	00.72	1.15E+01	.78
CACAE3	VD(AER)	001	-.50	256.51	55.42	21.61	1.74E+01	.83
CACAE3	QY1(E/F)	110	.03	256.51	42.17	16.44	1.74E+01	.83
CACAE3	QY1(D)	007	-.19	256.51	34.94	13.62	1.74E+01	.83
CACAE3	SK(AER)	040	.10	256.51	31.33	12.21	1.74E+01	.83
CACAE3	PZ1(D)	003	-.36	256.51	06.02	02.35	1.74E+01	.83
CACAE3	QZ1(D)	002	-.50	256.51	02.41	00.94	1.74E+01	.83
CAIOD1	VD(EL-I)	001	-.74	145.15	58.54	40.33	1.32E+01	.82
CAIOD1	PZ1(E/F)	002	-.58	145.15	19.51	13.44	1.32E+01	.82
CAIOD1	QZ1(D)	003	-.22	145.15	01.22	00.84	1.32E+01	.82
CAIOD2	VD(EL-I)	001	-.86	161.75	80.90	50.02	6.31E+01	.89
CAIOD2	PZ1(E/F)	002	-.46	161.75	03.37	02.08	6.31E+01	.89
CAIOD2	QZ1(D)	003	-.34	161.75	01.12	00.69	6.31E+01	.89
CAIOD3	VD(EL-I)	001	-.93	162.67	89.36	54.93	7.59E+01	.94
CAIOD3	PZ1(E/F)	003	-.25	162.67	00.00	00.00	7.59E+01	.94
CAIOD3	QZ1(D)	002	-.28	162.67	00.00	00.00	7.59E+01	.94
CGCAE1	VD(AER)	001	.73	348.47	86.02	24.69	3.31E+02	.93
CGCAE1	QY1(E/F)	077	.05	348.47	72.04	20.67	3.31E+02	.93
CGCAE1	SK(AER)	035	-.10	348.47	58.06	16.66	3.31E+02	.93
CGCAE1	QY1(D)	036	.09	348.47	37.63	10.80	3.31E+02	.93
CGCAE1	PZ1(E/F)	002	-.52	348.47	22.58	06.48	3.31E+02	.93
CGCAE1	PZ1(D)	003	-.27	348.47	02.15	00.62	3.31E+02	.93
CGCAE2	VD(AER)	001	.64	327.77	80.00	24.41	7.59E+01	.90
CGCAE2	QY1(E/F)	076	.06	327.77	66.67	20.34	7.59E+01	.90
CGCAE2	SK(AER)	073	-.06	327.77	55.56	16.95	7.59E+01	.90
CGCAE2	QY1(D)	032	.10	327.77	33.33	10.17	7.59E+01	.90
CGCAE2	PZ1(E/F)	002	-.44	327.77	21.11	06.44	7.59E+01	.90
CGCAE2	PZ1(D)	003	-.37	327.77	01.11	00.34	7.59E+01	.90
CGCAE3	VD(AER)	002	.39	276.71	55.81	20.17	2.88E+01	.86
CGCAE3	QY1(E/F)	013	.21	276.71	52.33	18.91	2.88E+01	.86
CGCAE3	SK(AER)	117	-.02	276.71	43.02	15.55	2.88E+01	.86
CGCAE3	AW(AER)	001	.41	276.71	23.26	08.41	2.88E+01	.86
CGCAE3	QZ1(D)	003	-.36	276.71	03.49	01.26	2.88E+01	.86
CGIOD1	VD(EL-I)	001	.90	155.52	83.33	53.58	8.51E+01	.90
CGIOD1	PZ1(E/F)	002	-.46	155.52	07.78	05.00	8.51E+01	.90
CGIOD1	QZ1(D)	003	-.26	155.52	01.11	00.71	8.51E+01	.90
CGIOD2	VD(EL-I)	001	.36	120.23	11.86	09.86	2.00E+01	.59
CGIOD2	PZ1(E/F)	002	-.34	120.23	10.17	08.46	2.00E+01	.59
CGIOD2	QZ1(D)	003	-.32	120.23	06.78	05.64	2.00E+01	.59
CGIOD3	AW(EL-I)	001	.20	111.49	11.54	10.35	8.71E+00	.52
CGIOD3	CSGRINDR	002	-.18	111.49	03.85	03.45	8.71E+00	.52
CGIOD3	CSTC-WB2	003	-.18	111.49	00.00	00.00	8.71E+00	.52
DECMBM1	PZ1(E/F)	001	-.64	181.39	20.99	11.57	9.33E+00	.81
DECMBM1	LFGRCAR	002	.35	181.39	11.11	06.12	9.33E+00	.81
DECMBM1	VD(EL-I)	003	.33	181.39	02.47	01.36	9.33E+00	.81
DECMBM2	PZ1(E/F)	001	-.70	162.82	20.99	12.89	1.02E+01	.81
DECMBM2	QZ1(D)	002	-.35	162.82	00.00	00.00	1.02E+01	.81
DECMBM2	QZ1(E/F)	003	-.33	162.82	00.00	00.00	1.02E+01	.81
DECMBM3	VD(EL-I)	002	-.50	124.30	17.95	14.44	6.76E+00	.78
DECMBM3	QZ1(D)	001	-.56	124.30	11.54	09.28	6.76E+00	.78
DECMBM3	PY1(E/F)	003	.32	124.30	05.13	04.13	6.76E+00	.78
DECMSK1	SK(EL-I)	001	.84	208.84	72.22	34.58	2.45E+03	.90
DECMSK1	SK(AER)	004	.24	208.84	30.00	14.37	2.45E+03	.90
DECMSK1	QY1(E/F)	036	.08	208.84	24.44	11.70	2.45E+03	.90
DECMSK1	PZ1(E/F)	002	-.29	208.84	11.11	05.32	2.45E+03	.90
DECMSK1	VD(EL-I)	003	-.26	208.84	00.00	00.00	2.45E+03	.90

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
DECMSK2	SK(EL-I)	001	.78	200.03	65.52	32.76	3.16E+03	.87
DECMSK2	SK(AER)	003	.32	200.03	33.33	16.66	3.16E+03	.87
DECMSK2	QY1(E/F)	036	.09	200.03	24.14	12.07	3.16E+03	.87
DECMSK2	VD(EL-I)	002	-.40	200.03	01.15	00.57	3.16E+03	.87
DECMSK3	SK(EL-I)	001	.81	203.50	68.18	33.50	2.63E+03	.88
DECMSK3	SK(AER)	003	.31	203.50	35.23	17.31	2.63E+03	.88
DECMSK3	QY1(E/F)	014	.13	203.50	28.41	13.96	2.63E+03	.88
DECMSK3	VD(AER)	102	-.02	203.50	20.45	10.05	2.63E+03	.88
DECMSK3	VD(EL-I)	002	-.45	203.50	01.14	00.56	2.63E+03	.88
DECMTH1	LFIHNLIV	038	.12	157.69	20.48	12.99	5.37E+01	.83
DECMTH1	LFIHSHLT	105	-.03	157.69	19.28	12.23	5.37E+01	.83
DECMTH1	VD(EL-I)	002	-.46	157.69	13.25	08.40	5.37E+01	.83
DECMTH1	PZ1(E/F)	003	-.45	157.69	10.84	06.87	5.37E+01	.83
DECMTH1	BRETHRAT	001	.47	157.69	08.43	05.35	5.37E+01	.83
DECMTH2	VD(EL-I)	001	-.52	158.59	20.73	13.07	7.24E+01	.82
DECMTH2	BRETHRAT	002	.41	158.59	06.10	03.85	7.24E+01	.82
DECMTH2	PZ1(E/F)	003	-.37	158.59	06.10	03.85	7.24E+01	.82
DECMTH3	VD(EL-I)	001	-.52	130.70	19.23	14.71	5.89E+01	.78
DECMTH3	BRETHRAT	002	.44	130.70	08.97	06.86	5.89E+01	.78
DECMTH3	TETC-THR	003	.40	130.70	05.13	03.93	5.89E+01	.78
DELVBM1	VD(EL-I)	001	.62	308.04	26.14	08.49	2.14E+01	.88
DELVBM1	LFGRNLVE	003	.37	308.04	18.18	05.90	2.14E+01	.88
DELVBM1	PZ1(E/F)	002	-.55	308.04	17.05	05.53	2.14E+01	.88
DELVBM2	LFGRNLVE	006	.27	240.85	25.30	10.50	1.15E+01	.83
DELVBM2	PZ1(E/F)	001	-.60	240.85	19.28	08.00	1.15E+01	.83
DELVBM2	QZ1(D)	002	-.33	240.85	04.82	02.00	1.15E+01	.83
DELVBM2	PZ1(D)	003	-.33	240.85	00.00	00.00	1.15E+01	.83
DELVBM3	LFGRNLVE	005	.27	260.69	30.95	11.87	1.05E+01	.84
DELVBM3	QZ1(D)	001	-.44	260.69	05.95	02.28	1.05E+01	.84
DELVBM3	PZ1(E/F)	003	-.31	260.69	04.76	01.83	1.05E+01	.84
DELVBM3	PZ1(D)	002	-.35	260.69	00.00	00.00	1.05E+01	.84
DELVSK1	SK(EL-I)	001	.82	220.13	69.66	31.64	2.29E+03	.89
DELVSK1	SK(AER)	003	.26	220.13	33.71	15.31	2.29E+03	.89
DELVSK1	QY1(E/F)	036	.09	220.13	26.97	12.25	2.29E+03	.89
DELVSK1	PZ1(E/F)	002	-.31	220.13	12.36	05.61	2.29E+03	.89
DELVSK2	SK(EL-I)	001	.75	194.28	60.92	31.36	2.88E+03	.87
DELVSK2	SK(AER)	003	.34	194.28	33.33	17.16	2.88E+03	.87
DELVSK2	QY1(E/F)	048	.07	194.28	24.14	12.43	2.88E+03	.87
DELVSK2	VD(EL-I)	002	-.42	194.28	01.15	00.59	2.88E+03	.87
DELVSK3	SK(EL-I)	001	.77	183.93	62.07	33.75	2.09E+03	.87
DELVSK3	SK(AER)	003	.37	183.93	31.03	16.87	2.09E+03	.87
DELVSK3	QY1(E/F)	028	.11	183.93	21.84	11.87	2.09E+03	.87
DELVSK3	VD(EL-I)	002	-.47	183.93	02.30	01.25	2.09E+03	.87
DELVTH1	LFIHNLIV	021	.15	150.47	20.48	13.61	4.47E+01	.83
DELVTH1	LFIHSHLT	070	-.06	150.47	19.28	12.81	4.47E+01	.83
DELVTH1	VD(EL-I)	001	-.52	150.47	16.87	11.21	4.47E+01	.83
DELVTH1	PZ1(E/F)	002	-.46	150.47	12.05	08.01	4.47E+01	.83
DELVTH1	BRETHRAT	003	.44	150.47	09.64	06.41	4.47E+01	.83
DELVTH2	VD(EL-I)	001	-.67	157.69	37.35	23.69	8.13E+01	.83
DELVTH2	BRETHRAT	002	.39	157.69	07.23	04.58	8.13E+01	.83
DELVTH2	PZ1(E/F)	003	-.38	157.69	04.82	03.06	8.13E+01	.83
DELVTH3	VD(EL-I)	001	-.73	170.87	44.19	25.86	8.91E+01	.86
DELVTH3	BRETHRAT	002	.42	170.87	08.14	04.76	8.91E+01	.86
DELVTH3	INDEPEXT	003	.36	170.87	03.49	02.04	8.91E+01	.86
DEOUBM1	VD(EL-I)	001	.66	304.59	37.21	12.22	2.57E+01	.86
DEOUBM1	VD(AER)	003	.34	304.59	36.05	11.84	2.57E+01	.86
DEOUBM1	QY1(E/F)	072	.07	304.59	32.56	10.69	2.57E+01	.86
DEOUBM1	PZ1(E/F)	002	-.52	304.59	18.60	06.11	2.57E+01	.86
DEOUBM2	IGR10D	006	.27	236.76	24.05	10.16	1.17E+01	.79
DEOUBM2	PZ1(E/F)	001	-.58	236.76	22.78	09.62	1.17E+01	.79
DEOUBM2	VD(AER)	002	.34	236.76	15.19	06.42	1.17E+01	.79
DEOUBM2	PZ1(D)	003	-.32	236.76	00.00	00.00	1.17E+01	.79
DEOUBM3	RUGRINDR	002	.36	260.00	22.50	08.65	7.24E+00	.80
DEOUBM3	QZ1(D)	001	-.39	260.00	07.50	02.88	7.24E+00	.80
DEOUBM3	PZ1(D)	003	-.33	260.00	00.00	00.00	7.24E+00	.80

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
DEOUSK1	SK(EL-I)	001	.83	217.89	73.03	33.52	1.70E+03	.89
DEOUSK1	SK(AER)	004	.25	217.89	33.71	15.47	1.70E+03	.89
DEOUSK1	QY1(E/F)	024	.10	217.89	28.09	12.89	1.70E+03	.89
DEOUSK1	PZ1(E/F)	002	-.34	217.89	13.48	06.19	1.70E+03	.89
DEOUSK1	VD(EL-I)	003	-.26	217.89	00.00	00.00	1.70E+03	.89
DEOUSK2	SK(EL-I)	001	.76	198.78	63.95	32.17	2.45E+03	.86
DEOUSK2	SK(AER)	003	.34	198.78	34.88	17.55	2.45E+03	.86
DEOUSK2	QY1(E/F)	047	.07	198.78	24.42	12.28	2.45E+03	.86
DEOUSK2	VD(EL-I)	002	-.42	198.78	01.16	00.58	2.45E+03	.86
DEOUSK3	SK(EL-I)	001	.77	182.50	66.28	36.32	2.09E+03	.86
DEOUSK3	SK(AER)	003	.35	182.50	31.40	17.21	2.09E+03	.86
DEOUSK3	QY1(E/F)	028	.10	182.50	22.09	12.10	2.09E+03	.86
DEOUSK3	VD(EL-I)	002	-.47	182.50	02.33	01.28	2.09E+03	.86
DEOUTH1	PZ1(E/F)	001	-.47	129.94	18.18	13.99	2.00E+01	.77
DEOUTH1	VD(EL-I)	002	-.46	129.94	14.29	11.00	2.00E+01	.77
DEOUTH1	BRETHRAT	003	.42	129.94	10.39	08.00	2.00E+01	.77
DEOUTH2	VD(EL-I)	001	-.66	146.79	37.04	25.23	4.37E+01	.81
DEOUTH2	BRETHRAT	003	.40	146.79	07.41	05.05	4.37E+01	.81
DEOUTH2	PZ1(E/F)	002	-.41	146.79	06.17	04.20	4.37E+01	.81
DEOUTH3	VD(EL-I)	001	-.72	164.90	45.78	27.76	4.37E+01	.83
DEOUTH3	BRETHRAT	002	.43	164.90	09.64	05.85	4.37E+01	.83
DEOUTH3	INDEPEXT	003	.35	164.90	03.61	02.19	4.37E+01	.83
PECMBM	PZ1(E/F)	001	-.71	129.91	25.97	19.99	4.37E+01	.77
PECMBM	QZ1(E/F)	002	-.40	129.91	01.30	01.00	4.37E+01	.77
PECMBM	PY1(E/F)	003	-.30	129.91	00.00	00.00	4.37E+01	.77
PECMLU	D0(LUMB)	001	-.64	189.45	40.70	21.48	9.99E+09	.86
PECMLU	DI(LUMB)	002	-.47	189.45	26.74	14.11	9.99E+09	.86
PECMLU	D0(LUMT)	003	.32	189.45	20.93	11.05	9.99E+09	.86
PECMLU	DI(LUMT)	004	.26	189.45	19.77	10.44	9.99E+09	.86
PECMMB	SK(EL-I)	001	.68	202.39	48.15	23.79	7.08E+02	.81
PECMMB	SK(AER)	011	.14	202.39	28.40	14.03	7.08E+02	.81
PECMMB	QY1(E/F)	067	.06	202.39	24.69	12.20	7.08E+02	.81
PECMMB	D0(LUMB)	002	-.35	202.39	04.94	02.44	7.08E+02	.81
PECMMB	VD(EL-I)	003	-.27	202.39	00.00	00.00	7.08E+02	.81
PECMMT	INDEPTB	002	.42	111.90	14.47	12.93	3.31E+01	.76
PECMMT	INDEPET	001	-.43	111.90	09.21	08.23	3.31E+01	.76
PECMMT	PZ1(E/F)	003	-.34	111.90	03.95	03.53	3.31E+01	.76
PECMSK	SK(EL-I)	001	.78	229.90	60.92	26.50	9.99E+09	.87
PECMSK	SK(AER)	003	.28	229.90	37.93	16.50	9.99E+09	.87
PECMSK	QY1(E/F)	074	.05	229.90	32.18	14.00	9.99E+09	.87
PECMSK	VD(AER)	073	.06	229.90	25.29	11.00	9.99E+09	.87
PECMSK	DI(SK)	002	-.39	229.90	12.64	05.50	9.99E+09	.87
PECMTH	TEANY-BL	014	.20	135.54	13.92	10.27	9.99E+09	.79
PECMTH	INDEPET	001	.41	135.54	11.39	08.40	9.99E+09	.79
PECMTH	VD(EL-I)	003	-.33	135.54	08.86	06.54	9.99E+09	.79
PECMTH	TETC-THR	002	.40	135.54	05.06	03.73	9.99E+09	.79
PELVBM	PZ1(E/F)	001	-.65	149.28	08.64	05.79	7.08E+01	.81
PELVBM	PY1(E/F)	002	-.39	149.28	02.47	01.65	7.08E+01	.81
PELVBM	QZ1(E/F)	003	-.37	149.28	00.00	00.00	7.08E+01	.81
PELVLU	D0(LUMB)	001	-.63	195.22	40.48	20.74	9.99E+09	.84
PELVLU	DI(LUMB)	002	-.40	195.22	21.43	10.98	9.99E+09	.84
PELVLU	D0(LUMT)	003	.33	195.22	20.24	10.37	9.99E+09	.84
PELVMB	SK(EL-I)	001	.66	180.12	48.15	26.73	2.09E+02	.81
PELVMB	SK(AER)	008	.16	180.12	22.22	12.34	2.09E+02	.81
PELVMB	D0(LUMB)	003	-.35	180.12	03.70	02.05	2.09E+02	.81
PELVMB	VD(EL-I)	002	-.36	180.12	03.70	02.05	2.09E+02	.81
PELVMT	INDEPTB	003	.37	127.31	09.09	07.14	5.13E+01	.77
PELVMT	INDEPET	002	-.37	127.31	07.79	06.12	5.13E+01	.77
PELVMT	SK(EL-I)	001	.39	127.31	05.19	04.08	5.13E+01	.77
PELVSK	SK(EL-I)	001	.73	214.25	61.90	28.89	9.99E+09	.84
PELVSK	SK(AER)	003	.27	214.25	35.71	16.67	9.99E+09	.84
PELVSK	QY1(E/F)	034	.10	214.25	28.57	13.33	9.99E+09	.84
PELVSK	VD(AER)	110	-.02	214.25	21.43	10.00	9.99E+09	.84
PELVSK	VD(EL-I)	002	-.30	214.25	00.00	00.00	9.99E+09	.84

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
PELVTH	VD(EL-I)	001	-.66	135.41	35.37	26.12	9.99E+09	.82
PELVTH	IANY-BL	002	.39	135.41	04.88	03.60	9.99E+09	.82
PELVTH	ITC-THR	003	.33	135.41	01.22	00.90	9.99E+09	.82
RECMBM1	PZ1(E/F)	001	-.21	079.07	04.17	05.27	1.00E+00	.48
RECMBM1	PUTV-RBM	003	.18	079.07	00.00	00.00	1.00E+00	.48
RECMBM1	ZRGR10D	002	.20	079.07	00.00	00.00	1.00E+00	.48
RECMBM2	PZ1(E/F)	001	-.65	165.89	15.79	09.52	9.99E+09	.76
RECMBM2	QZ1(D)	003	-.27	165.89	00.00	00.00	9.99E+09	.76
RECMBM2	QZ1(E/F)	002	-.30	165.89	00.00	00.00	9.99E+09	.76
RECMBM3	DI(LUMT)	002	-.17	137.70	02.70	01.96	9.99E+09	.37
RECMBM3	CSGRINDR	003	.16	137.70	00.00	00.00	9.99E+09	.37
RECMBM3	LFGRCAR	001	.17	137.70	00.00	00.00	9.99E+09	.37
RECMLU1	D0(LUMB)	001	-.44	205.00	30.00	14.63	9.99E+09	.80
RECMLU1	DI(LUMT)	003	.39	205.00	30.00	14.63	9.99E+09	.80
RECMLU1	DI(LUMB)	002	-.40	205.00	22.50	10.98	9.99E+09	.80
RECMLU2	D0(LUMB)	001	-.51	181.13	37.97	20.96	9.99E+09	.79
RECMLU2	DI(LUMB)	002	-.36	181.13	25.32	13.98	9.99E+09	.79
RECMLU2	LFGRSHLT	003	.27	181.13	00.00	00.00	9.99E+09	.79
RECMLU3	D0(LUMB)	001	-.32	127.37	12.90	10.13	9.99E+09	.62
RECMLU3	BBF-ET2	002	-.24	127.37	04.84	03.80	9.99E+09	.62
RECMLU3	PULV-ULI	003	.20	127.37	00.00	00.00	9.99E+09	.62
RECMMB1	QY1(E/F)	020	.14	235.52	26.58	11.29	1.35E+02	.79
RECMMB1	SK(AER)	106	-.02	235.52	26.58	11.29	1.35E+02	.79
RECMMB1	DI(LUMT)	003	.27	235.52	20.25	08.60	1.35E+02	.79
RECMMB1	SK(EL-I)	001	.38	235.52	15.19	06.45	1.35E+02	.79
RECMMB1	BBF-ET2	002	.30	235.52	03.80	01.61	1.35E+02	.79
RECMMB2	QY1(E/F)	041	.09	252.50	31.25	12.38	9.99E+09	.80
RECMMB2	SK(AER)	119	-.01	252.50	30.00	11.88	9.99E+09	.80
RECMMB2	VD(AER)	038	.10	252.50	27.50	10.89	9.99E+09	.80
RECMMB2	SK(EL-I)	001	.42	252.50	17.50	06.93	9.99E+09	.80
RECMMB2	D0(LUMB)	002	-.29	252.50	07.50	02.97	9.99E+09	.80
RECMMB2	DI(BM)	003	.26	252.50	00.00	00.00	9.99E+09	.80
RECMMB3	SK(EL-I)	001	.67	185.78	54.55	29.36	9.99E+09	.77
RECMMB3	SK(AER)	022	.10	185.78	23.38	12.58	9.99E+09	.77
RECMMB3	QY1(E/F)	035	.08	185.78	19.48	10.49	9.99E+09	.77
RECMMB3	DI(SK)	002	-.30	185.78	10.39	05.59	9.99E+09	.77
RECMMB3	D0(LUMB)	003	-.27	185.78	01.30	00.70	9.99E+09	.77
RECMMT2	INDEPET	002	-.33	136.74	11.67	08.53	1.10E+01	.60
RECMMT2	INDEPTB	003	.24	136.74	10.00	07.31	1.10E+01	.60
RECMMT2	PZ1(E/F)	001	-.33	136.74	05.00	03.66	1.10E+01	.60
RECMMT3	SK(EL-I)	001	.62	154.06	44.74	29.04	9.99E+09	.76
RECMMT3	SK(AER)	020	.15	154.06	21.05	13.66	9.99E+09	.76
RECMMT3	QY1(E/F)	025	.14	154.06	15.79	10.25	9.99E+09	.76
RECMMT3	DI(SK)	002	-.29	154.06	09.21	05.98	9.99E+09	.76
RECMMT3	VD(EL-I)	003	-.25	154.06	01.32	00.86	9.99E+09	.76
RECMSK1	SK(EL-I)	001	.62	242.72	47.56	19.59	9.99E+09	.82
RECMSK1	SK(AER)	033	.10	242.72	35.37	14.57	9.99E+09	.82
RECMSK1	QY1(E/F)	043	.08	242.72	34.15	14.07	9.99E+09	.82
RECMSK1	VD(AER)	066	.05	242.72	28.05	11.56	9.99E+09	.82
RECMSK1	SKMORT	002	-.39	242.72	12.20	05.03	9.99E+09	.82
RECMSK1	BBF-ET2	003	.29	242.72	02.44	01.01	9.99E+09	.82
RECMSK2	SK(EL-I)	001	.58	254.90	43.90	17.22	9.99E+09	.82
RECMSK2	SK(AER)	013	.17	254.90	37.80	14.83	9.99E+09	.82
RECMSK2	QY1(E/F)	065	.06	254.90	35.37	13.88	9.99E+09	.82
RECMSK2	VD(AER)	088	.04	254.90	29.27	11.48	9.99E+09	.82
RECMSK2	SKMORT	002	-.42	254.90	14.63	05.74	9.99E+09	.82
RECMSK2	DI(BM)	003	.24	254.90	00.00	00.00	9.99E+09	.82
RECMSK3	SK(EL-I)	001	.72	195.00	63.75	32.69	9.99E+09	.80
RECMSK3	SK(AER)	005	.20	195.00	27.50	14.10	9.99E+09	.80
RECMSK3	QY1(E/F)	109	.02	195.00	21.25	10.90	9.99E+09	.80
RECMSK3	DI(SK)	002	-.33	195.00	11.25	05.77	9.99E+09	.80
RECMSK3	VD(EL-I)	003	-.23	195.00	00.00	00.00	9.99E+09	.80
RECMTH1	INDEPET	001	.53	144.83	16.67	11.51	9.99E+09	.78
RECMTH1	IANY-BL	002	.36	144.83	05.13	03.54	9.99E+09	.78
RECMTH1	BBF-ET2	003	.34	144.83	02.56	01.77	9.99E+09	.78
RECMTH2	INDEPET	001	.44	140.87	17.11	12.15	9.99E+09	.76
RECMTH2	IANY-BL	002	.29	140.87	05.26	03.73	9.99E+09	.76
RECMTH2	TETC-THR	003	.29	140.87	02.63	01.87	9.99E+09	.76

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
RECMTH3	BRETHRAT	002	.22	098.40	03.28	03.33	9.99E+09	.61
RECMTH3	VD(EL-I)	001	-.24	098.40	03.28	03.33	9.99E+09	.61
RECMTH3	V(BM)	003	.21	098.40	00.00	00.00	9.99E+09	.61

RELVBM1	ITHR-ULI	003	.20	090.00	02.00	02.22	1.00E+00	.50
RELVBM1	PZ1(E/F)	001	-.22	090.00	02.00	02.22	1.00E+00	.50
RELVBM1	ZRGR10D	002	.21	090.00	02.00	02.22	1.00E+00	.50
RELVBM2	LFGRNLVE	003	.30	196.25	21.25	10.83	9.99E+09	.80
RELVBM2	PZ1(E/F)	001	-.59	196.25	15.00	07.64	9.99E+09	.80
RELVBM2	D0(BM)	002	-.42	196.25	12.50	06.37	9.99E+09	.80
RELVBM3	CSAT-BL	001	-.23	091.57	02.08	02.27	9.99E+09	.48
RELVBM3	ITHR-ULI	003	.19	091.57	00.00	00.00	9.99E+09	.48
RELVBM3	PUCS-CM	002	.20	091.57	00.00	00.00	9.99E+09	.48
RELVLU1	D0(LUMB)	001	-.51	187.07	38.46	20.56	9.99E+09	.78
RELVLU1	DI(LUMB)	002	-.35	187.07	23.08	12.34	9.99E+09	.78
RELVLU1	DI(LUMT)	003	.31	187.07	23.08	12.34	9.99E+09	.78
RELVLU2	D0(LUMB)	001	-.56	175.17	41.98	23.97	9.99E+09	.81
RELVLU2	DI(LUMB)	002	-.39	175.17	25.93	14.80	9.99E+09	.81
RELVLU2	INDEPET	003	-.30	175.17	02.47	01.41	9.99E+09	.81
RELVLU3	D0(LUMB)	002	-.29	140.26	14.93	10.64	9.99E+09	.67
RELVLU3	INDEPET	001	-.29	140.26	10.45	07.45	9.99E+09	.67
RELVLU3	IGR3D	003	-.21	140.26	00.00	00.00	9.99E+09	.67
RELVMB1	QY1(E/F)	100	.03	253.28	27.27	10.77	1.41E+01	.77
RELVMB1	SK(AER)	086	.04	253.28	27.27	10.77	1.41E+01	.77
RELVMB1	VD(AER)	040	.10	253.28	25.97	10.25	1.41E+01	.77
RELVMB1	DI(LUMT)	001	.28	253.28	23.38	09.23	1.41E+01	.77
RELVMB1	IANY-BL	003	.26	253.28	01.30	00.51	1.41E+01	.77
RELVMB1	INDEPTB	002	-.27	253.28	01.30	00.51	1.41E+01	.77
RELVMB2	QY1(E/F)	084	.05	296.36	41.46	13.99	5.50E+01	.82
RELVMB2	VD(AER)	014	.16	296.36	39.02	13.17	5.50E+01	.82
RELVMB2	SK(AER)	097	.04	296.36	37.80	12.75	5.50E+01	.82
RELVMB2	QY1(D)	005	.23	296.36	30.49	10.29	5.50E+01	.82
RELVMB2	SK(EL-I)	001	.30	296.36	12.20	04.12	5.50E+01	.82
RELVMB2	IANY-BL	002	.27	296.36	01.22	00.41	5.50E+01	.82
RELVMB2	INDEPTB	003	-.26	296.36	00.00	00.00	5.50E+01	.82
RELVMB3	SK(EL-I)	001	.55	182.62	42.67	23.37	9.99E+09	.75
RELVMB3	SK(AER)	020	.11	182.62	24.00	13.14	9.99E+09	.75
RELVMB3	QY1(E/F)	005	.19	182.62	18.67	10.22	9.99E+09	.75
RELVMB3	VD(EL-I)	002	-.32	182.62	02.67	01.46	9.99E+09	.75
RELVMB3	PY1(A/B)	003	-.20	182.62	00.00	00.00	9.99E+09	.75
RELVMT2	INDEPET	001	-.30	104.96	09.84	09.37	6.76E+00	.61
RELVMT2	INDEPTB	002	.27	104.96	09.84	09.37	6.76E+00	.61
RELVMT2	PZ1(E/F)	003	-.26	104.96	03.28	03.12	6.76E+00	.61
RELVMT3	SK(EL-I)	001	.32	122.87	19.70	16.03	9.99E+09	.66
RELVMT3	SKMORT	002	.25	122.87	03.03	02.47	9.99E+09	.66
RELVMT3	QY1(D)	003	-.25	122.87	00.00	00.00	9.99E+09	.66
RELVSK1	SK(EL-I)	001	.57	239.05	40.24	16.83	9.99E+09	.82
RELVSK1	SK(AER)	018	.12	239.05	32.93	13.78	9.99E+09	.82
RELVSK1	QY1(E/F)	079	.05	239.05	30.49	12.75	9.99E+09	.82
RELVSK1	VD(AER)	030	.10	239.05	25.61	10.71	9.99E+09	.82
RELVSK1	SKMORT	002	-.51	239.05	20.73	08.67	9.99E+09	.82
RELVSK1	BBF-ET2	003	.26	239.05	03.66	01.53	9.99E+09	.82
RELVSK2	SK(AER)	010	.17	253.70	35.37	13.94	9.99E+09	.82
RELVSK2	SK(EL-I)	002	.51	253.70	35.37	13.94	9.99E+09	.82
RELVSK2	QY1(E/F)	089	.03	253.70	34.15	13.46	9.99E+09	.82
RELVSK2	VD(AER)	026	.10	253.70	28.05	11.06	9.99E+09	.82
RELVSK2	SKMORT	001	-.55	253.70	25.61	10.09	9.99E+09	.82
RELVSK2	BBF-ET2	003	.22	253.70	04.88	01.92	9.99E+09	.82
RELVSK3	SK(EL-I)	001	.64	209.75	55.56	26.49	9.99E+09	.81
RELVSK3	SK(AER)	002	.26	209.75	33.33	15.89	9.99E+09	.81
RELVSK3	QY1(E/F)	042	.08	209.75	24.69	11.77	9.99E+09	.81
RELVSK3	PY1(A/B)	003	-.23	209.75	01.23	00.59	9.99E+09	.81
RELVTH1	INDEPET	001	.46	140.32	12.99	09.26	9.99E+09	.77
RELVTH1	VD(EL-I)	003	-.32	140.32	09.09	06.48	9.99E+09	.77
RELVTH1	IANY-BL	002	.40	140.32	07.79	05.55	9.99E+09	.77

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
RELVTH2	VD(EL-I)	001	-.50	135.54	15.19	11.21	9.99E+09	.79
RELVTH2	INDEPET	003	.39	135.54	11.39	08.40	9.99E+09	.79
RELVTH2	IANY-BL	002	.43	135.54	07.59	05.60	9.99E+09	.79
RELVTH3	VD(EL-I)	001	-.57	123.99	33.80	27.26	9.99E+09	.71
RELVTH3	INDEPEXT	003	.23	123.99	05.63	04.54	9.99E+09	.71
RELVTH3	ITC-THR	002	.24	123.99	02.82	02.27	9.99E+09	.71
REOUBM2	D0(BM)	003	-.26	103.36	12.28	11.88	2.24E+00	.57
REOUBM2	PZ1(E/F)	001	-.28	103.36	10.53	10.19	2.24E+00	.57
REOUBM2	QZ1(D)	002	-.28	103.36	05.26	05.09	2.24E+00	.57
REOUBM3	PZ1(E/F)	002	-.22	159.18	03.39	02.13	9.99E+09	.59
REOUBM3	QZ1(A/B)	003	-.22	159.18	03.39	02.13	9.99E+09	.59
REOUBM3	QZ1(E/F)	001	-.23	159.18	00.00	00.00	9.99E+09	.59
REOULU1	D0(LUMB)	001	-.47	153.24	36.00	23.49	9.99E+09	.75
REOULU1	DI(LUMB)	003	-.28	153.24	17.33	11.31	9.99E+09	.75
REOULU1	VD(EL-I)	002	-.34	153.24	09.33	06.09	9.99E+09	.75
REOULU2	D0(LUMB)	001	-.60	150.73	46.84	31.08	9.99E+09	.79
REOULU2	DI(LUMB)	002	-.37	150.73	22.78	15.11	9.99E+09	.79
REOULU2	INDEPET	003	-.29	150.73	03.80	02.52	9.99E+09	.79
REOULU3	D0(LUMB)	001	-.31	153.10	23.44	15.31	9.99E+09	.64
REOULU3	DI(LUMB)	003	-.20	153.10	12.50	08.16	9.99E+09	.64
REOULU3	INDEPET	002	-.30	153.10	10.94	07.15	9.99E+09	.64
REOUMB1	QY1(E/F)	033	.10	238.24	32.89	13.81	7.59E+00	.76
REOUMB1	SK(AER)	107	.03	238.24	32.89	13.81	7.59E+00	.76
REOUMB1	QY1(D)	005	.21	238.24	27.63	11.60	7.59E+00	.76
REOUMB1	VD(AER)	056	.07	238.24	26.32	11.05	7.59E+00	.76
REOUMB1	SK(EL-I)	002	.32	238.24	15.79	06.63	7.59E+00	.76
REOUMB1	D0(BM)	001	.35	238.24	07.89	03.31	7.59E+00	.76
REOUMB1	INDEPTB	003	-.22	238.24	00.00	00.00	7.59E+00	.76
REOUMB2	QY1(E/F)	105	.03	275.00	40.00	14.55	1.26E+01	.80
REOUMB2	SK(AER)	074	.06	275.00	37.50	13.64	1.26E+01	.80
REOUMB2	VD(AER)	018	.15	275.00	36.25	13.18	1.26E+01	.80
REOUMB2	QY1(D)	002	.31	275.00	33.75	12.27	1.26E+01	.80
REOUMB2	SK(EL-I)	003	.30	275.00	13.75	05.00	1.26E+01	.80
REOUMB2	D0(LUMB)	001	-.34	275.00	06.25	02.27	1.26E+01	.80
REOUMB3	QY1(E/F)	010	.15	270.20	40.26	14.90	9.99E+09	.77
REOUMB3	SK(AER)	086	.04	270.20	40.26	14.90	9.99E+09	.77
REOUMB3	VD(AER)	021	.13	270.20	32.47	12.02	9.99E+09	.77
REOUMB3	SK(EL-I)	001	.44	270.20	31.17	11.54	9.99E+09	.77
REOUMB3	D0(LUMB)	003	-.23	270.20	03.90	01.44	9.99E+09	.77
REOUMB3	VD(EL-I)	002	-.27	270.20	00.00	00.00	9.99E+09	.77
REOUMT2	CSTC-WB	001	-.22	086.87	01.89	02.18	1.00E+00	.53
REOUMT2	PUANY-AT	002	.22	086.87	01.89	02.18	1.00E+00	.53
REOUMT2	PUTC-ULI	003	-.19	086.87	00.00	00.00	1.00E+00	.53
REOUMT3	INDEPET	001	-.36	101.54	18.75	18.47	9.99E+09	.64
REOUMT3	QY1(D)	003	-.25	101.54	01.56	01.54	9.99E+09	.64
REOUMT3	QZ1(A/B)	002	-.26	101.54	01.56	01.54	9.99E+09	.64
REOUSK1	SK(EL-I)	001	.63	230.46	53.16	23.07	9.99E+09	.79
REOUSK1	SK(AER)	005	.16	230.46	37.97	16.48	9.99E+09	.79
REOUSK1	QY1(E/F)	047	.07	230.46	31.65	13.73	9.99E+09	.79
REOUSK1	VD(AER)	110	.02	230.46	25.32	10.99	9.99E+09	.79
REOUSK1	SKMORT	002	-.27	230.46	08.86	03.84	9.99E+09	.79
REOUSK1	VD(EL-I)	003	-.25	230.46	00.00	00.00	9.99E+09	.79
REOUSK2	SK(EL-I)	001	.58	230.51	43.90	19.04	9.99E+09	.82
REOUSK2	SK(AER)	003	.25	230.51	35.37	15.34	9.99E+09	.82
REOUSK2	QY1(E/F)	124	-.01	230.51	29.27	12.70	9.99E+09	.82
REOUSK2	VD(AER)	084	.03	230.51	23.17	10.05	9.99E+09	.82
REOUSK2	SKMORT	002	-.43	230.51	17.07	07.41	9.99E+09	.82
REOUSK3	SK(EL-I)	001	.62	224.55	51.85	23.09	9.99E+09	.81
REOUSK3	SK(AER)	003	.23	224.55	38.27	17.04	9.99E+09	.81
REOUSK3	QY1(E/F)	068	.06	224.55	29.63	13.20	9.99E+09	.81
REOUSK3	SKMORT	002	-.31	224.55	07.41	03.30	9.99E+09	.81
REOUTH1	VD(EL-I)	001	-.51	121.56	24.32	20.01	9.99E+09	.74
REOUTH1	IANY-BL	002	.39	121.56	05.41	04.45	9.99E+09	.74
REOUTH1	ITC-THR	003	.29	121.56	02.70	02.22	9.99E+09	.74
REOUTH2	VD(EL-I)	001	-.54	136.42	22.08	16.19	9.99E+09	.77
REOUTH2	IANY-BL	002	.40	136.42	07.79	05.71	9.99E+09	.77
REOUTH2	ITC-THR	003	.33	136.42	03.90	02.86	9.99E+09	.77
REOUTH3	VD(EL-I)	001	-.63	109.42	36.49	33.35	9.99E+09	.74
REOUTH3	INDEPEXT	003	.24	109.42	06.76	06.18	9.99E+09	.74
REOUTH3	IANY-AT	002	-.28	109.42	04.05	03.70	9.99E+09	.74

9 RESULTS FOR THE MEAN VALUE OF THE ENDPOINTS FOR THE CB2 SOURCE TERM

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
AEVAC	BBF-ET2	002	-.45	206.00	30.59	14.85	2.28E+02	.85
AEVAC	BBS-ET2	078	-.07	206.00	22.35	10.85	2.28E+02	.85
AEVAC	ET2-STOM	001	-.56	206.00	16.47	08.00	2.28E+02	.85
AEVAC	BRETHRAT	003	.35	206.00	03.53	01.71	2.28E+02	.85
AFBIBEE	FFBC_CS	002	.43	147.61	36.05	24.42	6.38E+01	.86
AFBIBEE	FFDC_CS	112	.04	147.61	26.74	18.12	6.38E+01	.86
AFBIBEE	INTFACP	001	.65	147.61	20.93	14.18	6.38E+01	.86
AFBIBEE	RTHS	003	.37	147.61	05.81	03.94	6.38E+01	.86
AFBIGRA	RTC_CS	002	.46	150.03	19.51	13.00	6.93E+02	.82
AFBIGRA	INTFACC	001	-.50	150.03	18.29	12.19	6.93E+02	.82
AFBIGRA	BBF-ET2	003	-.33	150.03	15.85	10.56	6.93E+02	.82
AFBIMIL	INTFACP	001	.60	131.33	18.60	14.16	5.60E+01	.86
AFBIMIL	AW(AER)	012	-.17	131.33	15.12	11.51	5.60E+01	.86
AFBIMIL	FMDC_CS	002	.56	131.33	08.14	06.20	5.60E+01	.86
AFBIMIL	VD(EL-I)	003	-.37	131.33	05.81	04.42	5.60E+01	.86
AFBIVEG	SOLCONG	001	.74	135.97	43.02	31.64	2.53E+01	.86
AFBIVEG	VD(EL-I)	002	-.32	135.97	08.14	05.99	2.53E+01	.86
AFBIVEG	QY1(D)	003	.28	135.97	01.16	00.85	2.53E+01	.86
AFBTBEE	FFBC_CS	001	.48	175.12	46.59	26.60	9.97E+01	.88
AFBTBEE	FFDC_CS	120	.03	175.12	36.36	20.76	9.97E+01	.88
AFBTBEE	RTHS	002	.48	175.12	09.09	05.19	9.97E+01	.88
AFBTBEE	INTFACP	003	.45	175.12	05.68	03.24	9.97E+01	.88
AFBTGRA	INTFACC	001	-.59	186.00	31.76	17.08	6.22E+03	.85
AFBTGRA	RTC_CS	002	.55	186.00	28.24	15.18	6.22E+03	.85
AFBTGRA	PLOSSC	003	-.49	186.00	11.76	06.32	6.22E+03	.85
AFBTMIL	FMDC_CS	001	.77	127.37	38.64	30.34	3.76E+01	.88
AFBTMIL	RUP_CS	002	.50	127.37	11.36	08.92	3.76E+01	.88
AFBTMIL	RTHS	003	.47	127.37	07.95	06.24	3.76E+01	.88
AFBTVEG	SOLCONG	001	.82	131.63	46.74	35.51	1.15E+02	.92
AFBTVEG	RTC_CS	002	.74	131.63	25.00	18.99	1.15E+02	.92
AFBTVEG	INTFACC	003	-.60	131.63	07.61	05.78	1.15E+02	.92
AIOD	VD(EL-I)	001	-.84	172.89	66.30	38.35	9.17E+01	.92
AIOD	BRETHRAT	002	.48	172.89	08.70	05.03	9.17E+01	.92
AIOD	ITC-BLAD	003	-.44	172.89	02.17	01.26	9.17E+01	.92
ARELIN	BBF-ET2	002	-.45	202.48	30.59	15.11	2.23E+02	.85
ARELIN	BBS-ET2	078	-.07	202.48	22.35	11.04	2.23E+02	.85
ARELIN	ET2-STOM	001	-.56	202.48	16.47	08.13	2.23E+02	.85
ARELIN	CSANY-BL	003	-.35	202.48	11.76	05.81	2.23E+02	.85
ARELTIM	VD(AER)	001	.30	190.93	14.10	07.38	8.78E+01	.78
ARELTIM	PZ1(E/F)	002	-.29	190.93	05.13	02.69	8.78E+01	.78
ARELTIM	PZ1(D)	003	-.28	190.93	00.00	00.00	8.78E+01	.78
ASHEL	BBF-ET2	002	-.48	218.52	31.40	14.37	1.64E+02	.86
ASHEL	BBS-ET2	135	-.03	218.52	22.09	10.11	1.64E+02	.86
ASHEL	ET2-STOM	001	-.57	218.52	18.60	08.51	1.64E+02	.86
ASHEL	CSANY-BL	003	-.36	218.52	11.63	05.32	1.64E+02	.86
CACAE1	PZ1(E/F)	001	-.87	127.72	60.00	46.98	5.15E+00	.90
CACAE1	QZ1(D)	003	-.38	127.72	01.11	00.87	5.15E+00	.90
CACAE1	QZ1(E/F)	002	-.44	127.72	01.11	00.87	5.15E+00	.90
CACAE2	VD(AER)	003	-.44	181.89	34.83	19.15	9.05E+00	.89
CACAE2	QY1(E/F)	041	-.10	181.89	28.09	15.44	9.05E+00	.89
CACAE2	SK(AER)	133	.03	181.89	20.22	11.12	9.05E+00	.89
CACAE2	PZ1(E/F)	001	-.76	181.89	15.73	08.65	9.05E+00	.89
CACAE2	QZ1(D)	002	-.47	181.89	01.12	00.62	9.05E+00	.89
CACAE3	VD(AER)	001	-.55	272.17	66.67	24.50	1.66E+01	.90
CACAE3	QY1(E/F)	044	-.10	272.17	55.56	20.41	1.66E+01	.90
CACAE3	SK(AER)	138	.02	272.17	43.33	15.92	1.66E+01	.90
CACAE3	QY1(D)	144	-.02	272.17	30.00	11.02	1.66E+01	.90
CACAE3	PZ1(E/F)	002	-.54	272.17	00.00	00.00	1.66E+01	.90
CACAE3	QZ1(D)	003	-.43	272.17	00.00	00.00	1.66E+01	.90
CACAE4	VD(AER)	001	-.59	334.82	77.17	23.05	1.78E+01	.92
CACAE4	QY1(E/F)	020	-.14	334.82	66.30	19.80	1.78E+01	.92
CACAE4	SK(AER)	115	.04	334.82	53.26	15.91	1.78E+01	.92
CACAE4	AW(AER)	002	-.29	334.82	13.04	03.89	1.78E+01	.92
CACAE4	QZ1(D)	003	-.22	334.82	00.00	00.00	1.78E+01	.92

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
CAIOD1	VD(EL-I)	001	-.81	134.39	57.78	42.99	1.03E+01	.90
CAIOD1	PZ1(E/F)	002	-.66	134.39	16.67	12.40	1.03E+01	.90
CAIOD1	QZ1(D)	003	-.30	134.39	02.22	01.65	1.03E+01	.90
CAIOD2	VD(EL-I)	001	-.90	164.68	82.80	50.28	5.23E+01	.93
CAIOD2	PZ1(E/F)	002	-.49	164.68	03.23	01.96	5.23E+01	.93
CAIOD2	QZ1(D)	003	-.31	164.68	01.08	00.66	5.23E+01	.93
CAIOD3	VD(EL-I)	001	-.95	172.84	94.79	54.84	1.15E+02	.96
CAIOD3	D0(GI)	003	-.22	172.84	00.00	00.00	1.15E+02	.96
CAIOD3	PZ1(E/F)	002	-.30	172.84	00.00	00.00	1.15E+02	.96
CAIOD4	VD(EL-I)	001	-.98	186.70	95.92	51.38	1.98E+02	.98
CAIOD4	AW(EL-I)	002	-.39	186.70	05.10	02.73	1.98E+02	.98
CAIOD4	PZ1(E/F)	003	.26	186.70	01.02	00.55	1.98E+02	.98
CDCMBM	CSGR30Y	001	.55	187.15	45.35	24.23	1.53E+01	.86
CDCMBM	CSGR100Y	029	.17	187.15	26.74	14.29	1.53E+01	.86
CDCMBM	SMP12_CS	003	-.38	187.15	23.26	12.43	1.53E+01	.86
CDCMBM	CSWB2-UL	002	-.40	187.15	06.98	03.73	1.53E+01	.86
CDCMED	CSGR30Y	004	.31	151.99	16.88	11.11	2.21E+01	.77
CDCMED	BBF-ET2	001	-.38	151.99	15.58	10.25	2.21E+01	.77
CDCMED	SMP12_CS	002	-.37	151.99	11.69	07.69	2.21E+01	.77
CDCMED	ET2-STOM	003	-.32	151.99	05.19	03.41	2.21E+01	.77
CDCMTH	CSGR30Y	001	.50	160.09	36.47	22.78	9.71E+00	.85
CDCMTH	CSGR100Y	037	.15	160.09	23.53	14.70	9.71E+00	.85
CDCMTH	SMP12_CS	010	-.28	160.09	18.82	11.76	9.71E+00	.85
CDCMTH	VD(EL-I)	002	-.46	160.09	08.24	05.15	9.71E+00	.85
CDCMTH	ITC-BLAD	003	-.39	160.09	02.35	01.47	9.71E+00	.85
CDLVBM	FMDC_CS	001	.61	151.78	33.33	21.96	1.03E+02	.87
CDLVBM	CSWB2-UL	002	-.52	151.78	09.20	06.06	1.03E+02	.87
CDLVBM	INTFACP	003	.44	151.78	04.60	03.03	1.03E+02	.87
CDLVED	FMDC_CS	002	.49	132.52	23.26	17.55	4.46E+01	.86
CDLVED	FMDC_I	004	.42	132.52	23.26	17.55	4.46E+01	.86
CDLVED	INTFACP	001	.52	132.52	16.28	12.28	4.46E+01	.86
CDLVED	CNSRTMLK	003	.45	132.52	06.98	05.27	4.46E+01	.86
CDLVTH	FMDC_I	001	.80	143.53	46.74	32.56	1.39E+02	.92
CDLVTH	INTFACP	002	.74	143.53	29.35	20.45	1.39E+02	.92
CDLVTH	CNSRTMLK	003	.55	143.53	04.35	03.03	1.39E+02	.92
CGCAE1	VD(AER)	001	.70	352.82	81.72	23.16	2.04E+02	.93
CGCAE1	QY1(E/F)	143	-.02	352.82	69.89	19.81	2.04E+02	.93
CGCAE1	SK(AER)	095	.05	352.82	56.99	16.15	2.04E+02	.93
CGCAE1	PZ1(E/F)	002	-.48	352.82	17.20	04.88	2.04E+02	.93
CGCAE1	AW(AER)	003	.32	352.82	08.60	02.44	2.04E+02	.93
CGCAE2	VD(AER)	001	.68	325.92	76.34	23.42	5.24E+01	.93
CGCAE2	QY1(E/F)	147	-.02	325.92	65.59	20.12	5.24E+01	.93
CGCAE2	SK(AER)	118	.03	325.92	53.76	16.49	5.24E+01	.93
CGCAE2	PZ1(E/F)	002	-.45	325.92	16.13	04.95	5.24E+01	.93
CGCAE2	PZ1(D)	003	-.35	325.92	01.08	00.33	5.24E+01	.93
CGCAE3	AW(AER)	001	.45	255.40	40.00	15.66	2.08E+01	.85
CGCAE3	VD(AER)	002	.36	255.40	37.65	14.74	2.08E+01	.85
CGCAE3	BW(AER)	158	.01	255.40	35.29	13.82	2.08E+01	.85
CGCAE3	QY1(E/F)	083	.07	255.40	35.29	13.82	2.08E+01	.85
CGCAE3	SK(AER)	150	-.02	255.40	28.24	11.06	2.08E+01	.85
CGCAE3	QZ1(D)	003	-.29	255.40	02.35	00.92	2.08E+01	.85
CGCAE4	AW(AER)	001	.57	181.32	65.43	36.09	8.24E+00	.81
CGCAE4	BW(AER)	065	.10	181.32	48.15	26.56	8.24E+00	.81
CGCAE4	PUCS-CM	002	-.34	181.32	00.00	00.00	8.24E+00	.81
CGCAE4	QY1(A/B)	003	-.31	181.32	00.00	00.00	8.24E+00	.81
CGIOD1	VD(EL-I)	001	.94	180.98	86.32	47.70	6.21E+01	.95
CGIOD1	PZ1(E/F)	002	-.50	180.98	05.26	02.91	6.21E+01	.95
CGIOD1	QZ1(D)	003	-.36	180.98	02.11	01.17	6.21E+01	.95
CGIOD2	VD(EL-I)	001	.49	133.78	20.59	15.39	1.85E+01	.68
CGIOD2	QZ1(D)	002	-.27	133.78	07.35	05.49	1.85E+01	.68
CGIOD2	PZ1(E/F)	003	-.22	133.78	05.88	04.40	1.85E+01	.68
CGIOD3	AW(EL-I)	002	.21	094.75	15.25	16.09	7.03E+00	.59
CGIOD3	CSGRINDR	003	-.20	094.75	01.69	01.78	7.03E+00	.59
CGIOD3	RUANY-BL	001	-.25	094.75	00.00	00.00	7.03E+00	.59
CGIOD4	VD(EL-I)	001	-.72	140.82	63.86	45.35	2.56E+01	.83
CGIOD4	AW(EL-I)	002	.31	140.82	06.02	04.27	2.56E+01	.83
CGIOD4	RUANY-BL	003	-.24	140.82	00.00	00.00	2.56E+01	.83

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
DECMBM1	LFGRNLVE	008	.24	202.33	20.45	10.11	7.65E+00	.88
DECMBM1	PZ1(E/F)	001	-.68	202.33	13.64	06.74	7.65E+00	.88
DECMBM1	LFGRCAR	003	.36	202.33	10.23	05.06	7.65E+00	.88
DECMBM1	VD(EL-I)	002	.50	202.33	07.95	03.93	7.65E+00	.88
DECMBM2	PZ1(E/F)	001	-.74	159.19	11.36	07.14	8.58E+00	.88
DECMBM2	PY1(E/F)	002	-.45	159.19	02.27	01.43	8.58E+00	.88
DECMBM2	QZ1(D)	003	-.44	159.19	01.14	00.72	8.58E+00	.88
DECMBM3	LFGRNLVE	004	.29	233.29	23.81	10.21	6.65E+00	.84
DECMBM3	PZ1(E/F)	001	-.56	233.29	16.67	07.15	6.65E+00	.84
DECMBM3	QZ1(D)	002	-.42	233.29	05.95	02.55	6.65E+00	.84
DECMBM3	QZ1(E/F)	003	-.35	233.29	00.00	00.00	6.65E+00	.84
DECMSK1	SK(EL-I)	001	.91	203.07	80.85	39.81	2.54E+03	.94
DECMSK1	SK(AER)	012	.18	203.07	21.28	10.48	2.54E+03	.94
DECMSK1	PZ1(E/F)	003	-.35	203.07	07.45	03.67	2.54E+03	.94
DECMSK1	VD(EL-I)	002	-.35	203.07	00.00	00.00	2.54E+03	.94
DECMSK2	SK(EL-I)	001	.88	181.57	75.00	41.31	3.25E+03	.92
DECMSK2	SK(AER)	003	.24	181.57	20.65	11.37	3.25E+03	.92
DECMSK2	VD(EL-I)	002	-.53	181.57	02.17	01.20	3.25E+03	.92
DECMSK3	SK(EL-I)	001	.84	204.43	67.39	32.96	3.21E+03	.92
DECMSK3	SK(AER)	003	.25	204.43	28.26	13.82	3.21E+03	.92
DECMSK3	QY1(E/F)	096	.05	204.43	22.83	11.17	3.21E+03	.92
DECMSK3	VD(EL-I)	002	-.54	204.43	02.17	01.06	3.21E+03	.92
DECMTH1	VD(EL-I)	001	-.56	137.00	21.35	15.58	4.65E+01	.89
DECMTH1	LFIHNLIV	015	.18	137.00	15.73	11.48	4.65E+01	.89
DECMTH1	LFIHSHLT	071	-.09	137.00	14.61	10.66	4.65E+01	.89
DECMTH1	PZ1(E/F)	003	-.49	137.00	05.62	04.10	4.65E+01	.89
DECMTH1	ITC-BLAD	002	-.50	137.00	03.37	02.46	4.65E+01	.89
DECMTH2	VD(EL-I)	001	-.76	145.49	48.89	33.60	5.65E+01	.90
DECMTH2	ITC-BLAD	002	-.45	145.49	02.22	01.53	5.65E+01	.90
DECMTH2	PZ1(E/F)	003	-.43	145.49	02.22	01.53	5.65E+01	.90
DECMTH3	VD(EL-I)	001	-.83	134.10	58.24	43.43	4.17E+01	.91
DECMTH3	BRETHRAT	003	.41	134.10	06.59	04.91	4.17E+01	.91
DECMTH3	ITC-BLAD	002	-.42	134.10	02.20	01.64	4.17E+01	.91
DLCMBM2	VD(AER)	002	.43	261.71	37.08	14.17	4.69E+01	.89
DLCMBM2	CSGR30Y	001	.58	261.71	33.71	12.88	4.69E+01	.89
DLCMBM2	QY1(E/F)	081	-.07	261.71	31.46	12.02	4.69E+01	.89
DLCMBM2	PZ1(E/F)	003	-.35	261.71	15.73	06.01	4.69E+01	.89
DLCMBM3	CSGR30Y	001	.55	251.23	35.23	14.02	2.64E+01	.88
DLCMBM3	VD(AER)	003	.35	251.23	28.41	11.31	2.64E+01	.88
DLCMBM3	AW(AER)	002	.42	251.23	11.36	04.52	2.64E+01	.88
DLCMBM4	CSGR30Y	001	.48	182.47	36.47	19.99	1.92E+01	.85
DLCMBM4	CSGR100Y	050	.14	182.47	21.18	11.61	1.92E+01	.85
DLCMBM4	SMP12_CS	004	-.35	182.47	20.00	10.96	1.92E+01	.85
DLCMBM4	AW(AER)	002	.43	182.47	10.59	05.80	1.92E+01	.85
DLCMBM4	CSWB2-UL	003	-.42	182.47	07.06	03.87	1.92E+01	.85
DLCMED2	BBF-ET2	001	-.46	155.80	26.58	17.06	1.06E+02	.79
DLCMED2	BBS-ET2	080	.07	155.80	16.46	10.56	1.06E+02	.79
DLCMED2	ET2-STOM	002	-.38	155.80	08.86	05.69	1.06E+02	.79
DLCMED2	PZ1(E/F)	003	-.31	155.80	08.86	05.69	1.06E+02	.79
DLCMED3	BBF-ET2	001	-.43	151.99	22.08	14.53	3.93E+01	.77
DLCMED3	CSGR30Y	002	.30	151.99	15.58	10.25	3.93E+01	.77
DLCMED3	ET2-STOM	003	-.29	151.99	05.19	03.41	3.93E+01	.77
DLCMED4	CSGR30Y	003	.33	155.92	19.48	12.49	1.50E+01	.77
DLCMED4	SMP12_CS	001	-.37	155.92	14.29	09.16	1.50E+01	.77
DLCMED4	BBF-ET2	002	-.33	155.92	10.39	06.66	1.50E+01	.77
DLCMTH2	CSGR30Y	001	.43	210.67	25.88	12.28	3.04E+01	.85
DLCMTH2	VD(AER)	004	.31	210.67	22.35	10.61	3.04E+01	.85
DLCMTH2	PZ1(E/F)	002	-.40	210.67	17.65	08.38	3.04E+01	.85
DLCMTH2	ITC-BLAD	003	-.36	210.67	01.18	00.56	3.04E+01	.85
DLCMTH3	CSGR30Y	001	.51	218.42	32.18	14.73	1.60E+01	.87
DLCMTH3	VD(AER)	009	.26	218.42	21.84	10.00	1.60E+01	.87
DLCMTH3	AW(AER)	002	.40	218.42	06.90	03.16	1.60E+01	.87
DLCMTH3	SMP23_CS	003	-.35	218.42	00.00	00.00	1.60E+01	.87
DLCMTH4	CSGR30Y	001	.47	165.96	31.76	19.14	1.31E+01	.85
DLCMTH4	CSGR100Y	046	.14	165.96	20.00	12.05	1.31E+01	.85
DLCMTH4	SMP12_CS	014	-.25	165.96	17.65	10.64	1.31E+01	.85
DLCMTH4	AW(AER)	003	.45	165.96	08.24	04.97	1.31E+01	.85
DLCMTH4	VD(EL-I)	002	-.45	165.96	07.06	04.25	1.31E+01	.85
ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
DLLVBM2	VD(AER)	002	.52	234.76	37.08	15.79	2.63E+02	.89
DLLVBM2	QY1(E/F)	050	-.12	234.76	30.34	12.92	2.63E+02	.89
DLLVBM2	SK(AER)	158	.01	234.76	26.97	11.49	2.63E+02	.89
DLLVBM2	FMDC_CS	001	.53	234.76	23.60	10.05	2.63E+02	.89

DLLVBM2	CSWB2-UL	003	-.45	234.76	05.62	02.39	2.63E+02	.89
DLLVBM3	FMDC_CS	001	.57	183.06	27.27	14.90	1.76E+02	.88
DLLVBM3	AW(AER)	003	.41	183.06	11.36	06.21	1.76E+02	.88
DLLVBM3	CSWB2-UL	002	-.49	183.06	06.82	03.73	1.76E+02	.88
DLLVBM4	FMDC_CS	001	.58	149.47	28.74	19.23	1.00E+02	.87
DLLVBM4	AW(AER)	003	.44	149.47	12.64	08.46	1.00E+02	.87
DLLVBM4	CSWB2-UL	002	-.53	149.47	08.05	05.39	1.00E+02	.87
DLLVED2	FMDC_I	002	.54	161.45	22.73	14.08	1.03E+02	.88
DLLVED2	INTFACP	001	.54	161.45	15.91	09.85	1.03E+02	.88
DLLVED2	CNSRTMLK	003	.42	161.45	05.68	03.52	1.03E+02	.88
DLLVED3	FMDC_I	002	.43	140.05	22.35	15.96	6.33E+01	.85
DLLVED3	FMDC_CS	003	.43	140.05	18.82	13.44	6.33E+01	.85
DLLVED3	INTFACP	001	.48	140.05	15.29	10.92	6.33E+01	.85
DLLVED4	FMDC_CS	002	.47	125.97	21.18	16.81	5.55E+01	.85
DLLVED4	FMDC_I	004	.36	125.97	20.00	15.88	5.55E+01	.85
DLLVED4	INTFACP	001	.48	125.97	15.29	12.14	5.55E+01	.85
DLLVED4	CNSRTMLK	003	.43	125.97	07.06	05.60	5.55E+01	.85
DLLVTH2	FMDC_I	001	.77	151.70	42.86	28.25	2.42E+02	.91
DLLVTH2	INTFACP	002	.69	151.70	28.57	18.83	2.42E+02	.91
DLLVTH2	CNSRTMLK	003	.45	151.70	03.30	02.18	2.42E+02	.91
DLLVTH3	FMDC_I	001	.78	144.01	46.15	32.05	1.47E+02	.91
DLLVTH3	INTFACP	002	.70	144.01	29.67	20.60	1.47E+02	.91
DLLVTH3	CNSRTMLK	003	.50	144.01	04.40	03.06	1.47E+02	.91
DLLVTH4	FMDC_I	001	.70	138.85	38.89	28.01	1.39E+02	.90
DLLVTH4	INTFACP	002	.65	138.85	22.22	16.00	1.39E+02	.90
DLLVTH4	VD(EL-I)	003	-.53	138.85	07.78	05.60	1.39E+02	.90
PECMBM	PY1(E/F)	001	-.45	116.13	11.76	10.13	9.99E+09	.68
PECMBM	VD(EL-I)	002	.34	116.13	08.82	07.59	9.99E+09	.68
PECMBM	PZ1(E/F)	003	-.30	116.13	01.47	01.27	9.99E+09	.68
PECMLU	D0(LUMB)	001	-.56	164.23	21.43	13.05	9.99E+09	.84
PECMLU	INDEPET	002	-.38	164.23	04.76	02.90	9.99E+09	.84
PECMLU	PZ1(E/F)	003	-.25	164.23	02.38	01.45	9.99E+09	.84
PECMMB	SK(EL-I)	001	.79	136.44	54.55	39.98	9.99E+09	.88
PECMMB	PZ1(E/F)	002	-.41	136.44	07.95	05.83	9.99E+09	.88
PECMMB	D0(LUMB)	003	-.40	136.44	02.27	01.66	9.99E+09	.88
PECMMT	SK(EL-I)	001	.70	117.96	33.73	28.59	9.99E+09	.83
PECMMT	PZ1(E/F)	002	-.41	117.96	04.82	04.09	9.99E+09	.83
PECMMT	DI(SK)	003	-.40	117.96	03.61	03.06	9.99E+09	.83
PECMSK	SK(EL-I)	001	.87	176.14	75.00	42.58	9.99E+09	.92
PECMSK	DI(SK)	002	-.39	176.14	06.52	03.70	9.99E+09	.92
PECMSK	VD(EL-I)	003	-.32	176.14	00.00	00.00	9.99E+09	.92
PECMTH	VD(EL-I)	001	-.38	125.58	21.79	17.35	9.99E+09	.78
PECMTH	ITC-THR	003	.33	125.58	06.41	05.10	9.99E+09	.78
PECMTH	ITC-BLAD	002	-.34	125.58	03.85	03.07	9.99E+09	.78
PLCMBM	RF(BM)	001	.91	151.76	69.89	46.05	2.92E+05	.93
PLCMBM	CSGR30Y	002	.40	151.76	10.75	07.08	2.92E+05	.93
PLCMBM	CSWB2-UL	003	-.35	151.76	05.38	03.55	2.92E+05	.93
PLCMMT	RF(RE)	001	.51	154.72	17.86	11.54	7.09E+01	.84
PLCMMT	ET2-STOM	002	-.49	154.72	16.67	10.77	7.09E+01	.84
PLCMMT	RF(LU)	003	.39	154.72	11.90	07.69	7.09E+01	.84
PLCMTH	RF(TH)	001	.97	153.04	90.82	59.34	1.58E+05	.98
PLCMTH	VD(EL-I)	002	-.46	153.04	03.06	02.00	1.58E+05	.98
PLCMTH	CNSRTMLK	003	.41	153.04	00.00	00.00	1.58E+05	.98
PLLVBM	RF(BM)	001	.83	152.70	57.30	37.52	3.56E+05	.89
PLLVBM	FMDC_CS	003	.41	152.70	12.36	08.09	3.56E+05	.89
PLLVBM	CSWB2-UL	002	-.44	152.70	07.87	05.15	3.56E+05	.89
PLLVMT	FMDC_CS	001	.49	121.39	14.29	11.77	4.75E+01	.84
PLLVMT	RF(RE)	002	.47	121.39	10.71	08.82	4.75E+01	.84
PLLVMT	RF(LU)	003	.33	121.39	07.14	05.88	4.75E+01	.84
PLLVTH	RF(TH)	001	.92	129.44	67.37	52.05	1.68E+05	.95
PLLVTH	FMDC_I	002	.69	129.44	10.53	08.14	1.68E+05	.95
PLLVTH	INTFACP	003	.59	129.44	09.47	07.32	1.68E+05	.95

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
RECMBM1	PY1(E/F)	001	-.39	127.78	09.23	07.22	9.99E+09	.65
RECMBM1	CNSRTPRK	003	.26	127.78	03.08	02.41	9.99E+09	.65
RECMBM1	INTFACPO	002	.27	127.78	00.00	00.00	9.99E+09	.65
RECMBM2	VD(EL-I)	003	.25	067.66	08.06	11.91	9.99E+09	.62
RECMBM2	PZ1(E/F)	002	-.26	067.66	04.84	07.15	9.99E+09	.62
RECMBM2	CSGR100D	001	.27	067.66	00.00	00.00	9.99E+09	.62
RECMLU1	D0(LUMB)	001	-.49	153.32	17.72	11.56	9.99E+09	.79

RECMLU1	INDEPET	002	-.32	153.32	05.06	03.30	9.99E+09	.79
RECMLU1	PZ1(E/F)	003	-.26	153.32	02.53	01.65	9.99E+09	.79
RECMLU2	D0(LUMB)	001	-.27	134.85	08.70	06.45	9.99E+09	.69
RECMLU2	SRANY-AT	002	-.24	134.85	01.45	01.08	9.99E+09	.69
RECMLU2	FMDC_I	003	.23	134.85	00.00	00.00	9.99E+09	.69
RECMLU3	D0(SK)	002	.19	082.85	01.69	02.04	9.99E+09	.59
RECMLU3	PULV-ULI	001	.23	082.85	01.69	02.04	9.99E+09	.59
RECMLU3	PY1(A/B)	003	.18	082.85	00.00	00.00	9.99E+09	.59
RECMMB1	SK(EL-I)	001	.79	164.41	63.22	38.45	9.99E+09	.87
RECMMB1	PZ1(E/F)	003	-.33	164.41	06.90	04.20	9.99E+09	.87
RECMMB1	DI(SK)	002	-.33	164.41	05.75	03.50	9.99E+09	.87
RECMMB2	SK(EL-I)	001	.63	102.66	33.77	32.89	9.99E+09	.77
RECMMB2	PZ1(E/F)	002	-.35	102.66	03.90	03.80	9.99E+09	.77
RECMMB2	D0(LUMB)	003	-.33	102.66	01.30	01.27	9.99E+09	.77
RECMMB3	SK(EL-I)	001	.40	080.06	10.77	13.45	9.99E+09	.65
RECMMB3	DI(SK)	003	-.23	080.06	01.54	01.92	9.99E+09	.65
RECMMB3	VD(AER)	002	.23	080.06	01.54	01.92	9.99E+09	.65
RECMMT1	SK(EL-I)	001	.67	131.15	33.73	25.72	9.99E+09	.83
RECMMT1	INDEPTB	002	.35	131.15	04.82	03.68	9.99E+09	.83
RECMMT1	DI(SK)	003	-.33	131.15	03.61	02.75	9.99E+09	.83
RECMMT2	SK(EL-I)	001	.63	101.24	33.33	32.92	9.99E+09	.75
RECMMT2	PZ1(E/F)	002	-.37	101.24	04.00	03.95	9.99E+09	.75
RECMMT2	DI(SK)	003	-.30	101.24	02.67	02.64	9.99E+09	.75
RECMMT3	SK(EL-I)	001	.40	088.05	12.12	13.76	9.99E+09	.66
RECMMT3	DI(SK)	003	-.25	088.05	03.03	03.44	9.99E+09	.66
RECMMT3	TC41_CS	002	.25	088.05	00.00	00.00	9.99E+09	.66
RECMSK1	SK(EL-I)	001	.86	181.58	75.00	41.30	9.99E+09	.92
RECMSK1	DI(SK)	002	-.42	181.58	08.70	04.79	9.99E+09	.92
RECMSK1	VD(EL-I)	003	-.25	181.58	00.00	00.00	9.99E+09	.92
RECMSK2	SK(EL-I)	001	.71	115.00	52.50	45.65	9.99E+09	.80
RECMSK2	VD(EL-I)	002	-.37	115.00	08.75	07.61	9.99E+09	.80
RECMSK2	QZ1(E/F)	003	-.30	115.00	00.00	00.00	9.99E+09	.80
RECMSK3	SK(EL-I)	001	.40	088.05	12.12	13.76	9.99E+09	.66
RECMSK3	DI(SK)	003	-.25	088.05	03.03	03.44	9.99E+09	.66
RECMSK3	TC41_CS	002	.25	088.05	00.00	00.00	9.99E+09	.66
RECMTH1	VD(EL-I)	001	-.38	121.63	18.99	15.61	9.99E+09	.79
RECMTH1	ITC-THR	002	.30	121.63	03.80	03.12	9.99E+09	.79
RECMTH1	ITC-BLAD	003	-.30	121.63	01.27	01.04	9.99E+09	.79
RECMTH2	IGRINDR	002	-.23	108.24	03.28	03.03	9.99E+09	.61
RECMTH2	V(LUMB)	001	.27	108.24	03.28	03.03	9.99E+09	.61
RECMTH2	LFGRNLVE	003	.23	108.24	00.00	00.00	9.99E+09	.61
RLCMBM2	RF(BM)	001	.87	197.99	53.76	27.15	4.64E+05	.93
RLCMBM2	VD(AER)	003	.37	197.99	18.28	09.23	4.64E+05	.93
RLCMBM2	CSGR30Y	002	.50	197.99	15.05	07.60	4.64E+05	.93
RLCMBM3	RF(BM)	001	.89	187.13	58.51	31.27	2.27E+05	.94
RLCMBM3	CSGR30Y	002	.45	187.13	12.77	06.82	2.27E+05	.94
RLCMBM3	AW(AER)	003	.40	187.13	04.26	02.28	2.27E+05	.94
RLCMBM4	RF(BM)	001	.90	150.68	67.74	44.96	2.91E+05	.93
RLCMBM4	AW(AER)	003	.38	150.68	03.23	02.14	2.91E+05	.93
RLCMBM4	PUCS-CM	002	-.41	150.68	00.00	00.00	2.91E+05	.93
RLCMMT2	ET2-STOM	001	-.56	164.69	25.61	15.55	1.03E+02	.82
RLCMMT2	RF(RE)	002	.38	164.69	12.20	07.41	1.03E+02	.82
RLCMMT2	BBF-ET2	003	-.34	164.69	09.76	05.93	1.03E+02	.82
RLCMMT3	ET2-STOM	001	-.47	143.94	19.51	13.55	8.52E+01	.82
RLCMMT3	RF(RE)	002	.44	143.94	15.85	11.01	8.52E+01	.82
RLCMMT3	RF(LU)	003	.35	143.94	10.98	07.63	8.52E+01	.82

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
RLCMMT4	RF(RE)	001	.51	153.04	18.82	12.30	6.37E+01	.85
RLCMMT4	ET2-STOM	002	-.46	153.04	15.29	09.99	6.37E+01	.85
RLCMMT4	RF(LU)	003	.44	153.04	14.12	09.23	6.37E+01	.85
RLCMTH2	RF(TH)	001	.95	164.89	84.54	51.27	2.56E+05	.97
RLCMTH2	CSGR30Y	002	.39	164.89	08.25	05.00	2.56E+05	.97
RLCMTH2	PZ1(E/F)	003	-.37	164.89	05.15	03.12	2.56E+05	.97
RLCMTH3	RF(TH)	001	.96	160.77	87.63	54.51	2.49E+05	.97
RLCMTH3	CSGR30Y	002	.44	160.77	09.28	05.77	2.49E+05	.97
RLCMTH3	VD(EL-I)	003	-.31	160.77	01.03	00.64	2.49E+05	.97
RLCMTH4	RF(TH)	001	.96	151.50	89.69	59.20	1.76E+05	.97
RLCMTH4	VD(EL-I)	002	-.40	151.50	02.06	01.36	1.76E+05	.97
RLCMTH4	CNSRTMLK	003	.38	151.50	00.00	00.00	1.76E+05	.97
RLLVBM2	RF(BM)	001	.80	183.08	49.44	27.00	4.02E+05	.89
RLLVBM2	VD(AER)	002	.40	183.08	21.35	11.66	4.02E+05	.89
RLLVBM2	CSWB2-UL	003	-.37	183.08	05.62	03.07	4.02E+05	.89
RLLVBM3	RF(BM)	001	.80	162.61	53.41	32.85	3.72E+05	.88
RLLVBM3	CSWB2-UL	002	-.40	162.61	06.82	04.19	3.72E+05	.88
RLLVBM3	AW(AER)	003	.35	162.61	04.55	02.80	3.72E+05	.88
RLLVBM4	RF(BM)	001	.81	149.34	55.06	36.87	4.34E+05	.89
RLLVBM4	FMDC_CS	003	.40	149.34	11.24	07.53	4.34E+05	.89
RLLVBM4	CSWB2-UL	002	-.44	149.34	07.87	05.27	4.34E+05	.89
RLLVMT2	VD(AER)	004	.33	226.25	29.55	13.06	2.70E+01	.88
RLLVMT2	QY1(E/F)	099	.06	226.25	27.27	12.05	2.70E+01	.88
RLLVMT2	SK(AER)	058	-.12	226.25	22.73	10.05	2.70E+01	.88
RLLVMT2	RF(RE)	001	.46	226.25	07.95	03.51	2.70E+01	.88
RLLVMT2	FMDC_CS	003	.36	226.25	06.82	03.01	2.70E+01	.88
RLLVMT2	RF(TH)	002	.45	226.25	05.68	02.51	2.70E+01	.88
RLLVMT3	FMDC_CS	002	.44	140.80	12.05	08.56	6.14E+01	.83
RLLVMT3	RF(RE)	001	.44	140.80	09.64	06.85	6.14E+01	.83
RLLVMT3	RF(TH)	003	.37	140.80	03.61	02.56	6.14E+01	.83
RLLVMT4	FMDC_CS	001	.50	130.69	14.12	10.80	7.92E+01	.85
RLLVMT4	INTFACP	003	.33	130.69	09.41	07.20	7.92E+01	.85
RLLVMT4	RF(RE)	002	.43	130.69	08.24	06.30	7.92E+01	.85
RLLVTH2	RF(TH)	001	.91	136.07	61.70	45.34	1.07E+05	.94
RLLVTH2	FMDC_I	002	.70	136.07	11.70	08.60	1.07E+05	.94
RLLVTH2	INTFACP	003	.59	136.07	10.64	07.82	1.07E+05	.94
RLLVTH3	RF(TH)	001	.91	129.69	67.02	51.68	1.75E+05	.94
RLLVTH3	FMDC_I	002	.68	129.69	10.64	08.20	1.75E+05	.94
RLLVTH3	INTFACP	003	.57	129.69	10.64	08.20	1.75E+05	.94
RLLVTH4	RF(TH)	001	.90	128.62	65.96	51.28	2.53E+05	.94
RLLVTH4	FMDC_I	002	.61	128.62	08.51	06.62	2.53E+05	.94
RLLVTH4	INTFACP	003	.52	128.62	08.51	06.62	2.53E+05	.94

Results for the 95th percentile of the endpoints for the CB2 source term

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
AEVAC	BBF-ET2	002	-.42	208.38	27.06	12.99	2.95E+02	.85
AEVAC	BBS-ET2	052	-.10	208.38	21.18	10.16	2.95E+02	.85
AEVAC	ET2-STOM	001	-.52	208.38	15.29	07.34	2.95E+02	.85
AEVAC	BRETHRAT	003	.33	208.38	03.53	01.69	2.95E+02	.85
AFBIBEE	FFBC_CS	002	.43	151.23	37.50	24.80	6.92E+01	.88
AFBIBEE	FFDC_CS	079	.07	151.23	28.41	18.79	6.92E+01	.88
AFBIBEE	INTFACP	001	.71	151.23	23.86	15.78	6.92E+01	.88
AFBIBEE	RTHS	003	.42	151.23	05.68	03.76	6.92E+01	.88
AFBIGRA	INTFACC	001	-.53	142.71	20.73	14.53	1.05E+03	.82
AFBIGRA	RTC_CS	002	.48	142.71	20.73	14.53	1.05E+03	.82
AFBIGRA	BBF-ET2	004	-.31	142.71	14.63	10.25	1.05E+03	.82
AFBIGRA	PLOSSC	003	-.32	142.71	06.10	04.27	1.05E+03	.82
AFBIMIL	INTFACP	001	.60	126.70	19.77	15.60	2.69E+01	.86
AFBIMIL	QY1(A/B)	003	.39	126.70	16.28	12.85	2.69E+01	.86
AFBIMIL	FMDC_CS	002	.57	126.70	09.30	07.34	2.69E+01	.86
AFBIVEG	SOLCONG	001	.77	134.51	54.02	40.16	1.15E+01	.87
AFBIVEG	QY1(A/B)	002	.27	134.51	11.49	08.54	1.15E+01	.87
AFBIVEG	VD(AER)	003	-.26	134.51	03.45	02.56	1.15E+01	.87
AFBTBEE	FFBC_CS	002	.53	184.67	47.25	25.59	9.55E+01	.91
AFBTBEE	FFDC_CS	137	.03	184.67	37.36	20.23	9.55E+01	.91
AFBTBEE	RTHS	001	.57	184.67	10.99	05.95	9.55E+01	.91
AFBTBEE	INTFACP	003	.49	184.67	05.49	02.97	9.55E+01	.91
AFBTGRA	INTFACC	001	-.61	189.54	32.94	17.38	8.51E+03	.85
AFBTGRA	RTC_CS	002	.57	189.54	29.41	15.52	8.51E+03	.85
AFBTGRA	PLOSSC	003	-.52	189.54	12.94	06.83	8.51E+03	.85
AFBTMIL	FMDC_CS	001	.82	131.06	43.33	33.06	4.17E+01	.90
AFBTMIL	RTHS	002	.53	131.06	08.89	06.78	4.17E+01	.90
AFBTMIL	RUP_CS	003	.48	131.06	08.89	06.78	4.17E+01	.90
AFBTVEG	SOLCONG	001	.86	138.87	50.54	36.39	1.05E+02	.93
AFBTVEG	RTC_CS	002	.76	138.87	25.81	18.59	1.05E+02	.93
AFBTVEG	INTFACC	003	-.63	138.87	09.68	06.97	1.05E+02	.93
AIOD	VD(EL-I)	001	-.85	176.18	70.65	40.10	1.58E+02	.92
AIOD	BRETHRAT	002	.43	176.18	08.70	04.94	1.58E+02	.92
AIOD	ITC-BLAD	003	-.39	176.18	01.09	00.62	1.58E+02	.92
ARELIN	BBF-ET2	002	-.41	209.55	27.06	12.91	2.95E+02	.85
ARELIN	BBS-ET2	051	-.10	209.55	21.18	10.11	2.95E+02	.85
ARELIN	ET2-STOM	001	-.52	209.55	15.29	07.30	2.95E+02	.85
ARELIN	BRETHRAT	003	.33	209.55	03.53	01.68	2.95E+02	.85
ARELTIM	CSGR3Y	003	.26	177.96	19.48	10.95	8.13E+01	.77
ARELTIM	CSGR1Y	006	.24	177.96	18.18	10.22	8.13E+01	.77
ARELTIM	AW(AER)	002	.27	177.96	15.58	08.75	8.13E+01	.77
ARELTIM	PZ1(E/F)	001	-.33	177.96	05.19	02.92	8.13E+01	.77
ASHEL	BBF-ET2	002	-.46	227.21	29.41	12.94	1.78E+02	.85
ASHEL	ET2-STOM	001	-.54	227.21	17.65	07.77	1.78E+02	.85
ASHEL	BRETHRAT	003	.34	227.21	03.53	01.55	1.78E+02	.85
CACAE1	QY1(E/F)	008	.24	237.72	34.44	14.49	1.66E+01	.90
CACAE1	PZ1(E/F)	003	-.44	237.72	27.78	11.69	1.66E+01	.90
CACAE1	SK(AER)	070	.09	237.72	27.78	11.69	1.66E+01	.90
CACAE1	VD(AER)	045	-.12	237.72	26.67	11.22	1.66E+01	.90
CACAE1	PY1(E/F)	001	.64	237.72	24.44	10.28	1.66E+01	.90
CACAE1	QY1(D)	009	.24	237.72	24.44	10.28	1.66E+01	.90
CACAE1	QZ1(D)	002	-.52	237.72	10.00	04.21	1.66E+01	.90
CACAE2	QZ1(D)	001	-.60	149.47	20.00	13.38	1.62E+01	.85
CACAE2	QY1(D)	006	.25	149.47	15.29	10.23	1.62E+01	.85
CACAE2	PY1(E/F)	002	.52	149.47	12.94	08.66	1.62E+01	.85
CACAE2	QZ1(C)	003	-.41	149.47	01.18	00.79	1.62E+01	.85
CACAE3	QZ1(D)	001	-.44	102.50	11.25	10.98	8.71E+00	.80
CACAE3	VD(AER)	002	-.42	102.50	10.00	09.76	8.71E+00	.80
CACAE3	LFGRSHLT	003	.33	102.50	01.25	01.22	8.71E+00	.80
CACAE4	VD(AER)	001	-.51	253.52	52.27	20.62	2.29E+01	.88
CACAE4	QY1(E/F)	031	-.11	253.52	42.05	16.59	2.29E+01	.88
CACAE4	SK(AER)	102	.04	253.52	35.23	13.90	2.29E+01	.88
CACAE4	AW(AER)	002	-.34	253.52	26.14	10.31	2.29E+01	.88
CACAE4	BW(AER)	056	.09	253.52	26.14	10.31	2.29E+01	.88
CACAE4	QY1(D)	003	.29	253.52	10.23	04.04	2.29E+01	.88

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
CAIOD1	QY1(E/F)	007	.28	171.27	19.54	11.41	2.00E+01	.87
CAIOD1	QY1(D)	020	.17	171.27	18.39	10.74	2.00E+01	.87
CAIOD1	PY1(E/F)	002	.45	171.27	12.64	07.38	2.00E+01	.87
CAIOD1	QZ1(D)	003	-.45	171.27	12.64	07.38	2.00E+01	.87
CAIOD1	VD(EL-I)	001	-.63	171.27	12.64	07.38	2.00E+01	.87
CAIOD2	VD(EL-I)	001	-.86	124.39	54.44	43.77	7.24E+01	.90
CAIOD2	PY1(E/F)	003	.33	124.39	04.44	03.57	7.24E+01	.90
CAIOD2	QZ1(A/B)	002	-.34	124.39	02.22	01.78	7.24E+01	.90
CAIOD3	VD(EL-I)	001	-.91	132.44	78.49	59.26	2.29E+02	.93
CAIOD3	QY1(D)	002	.30	132.44	02.15	01.62	2.29E+02	.93
CAIOD3	PY1(D)	003	.27	132.44	00.00	00.00	2.29E+02	.93
CAIOD4	VD(EL-I)	001	-.96	146.34	85.57	58.47	3.02E+02	.97
CAIOD4	PY1(D)	003	.39	146.34	00.00	00.00	3.02E+02	.97
CAIOD4	QY1(D)	002	.45	146.34	00.00	00.00	3.02E+02	.97
CDCMBM	CSGR30Y	001	.50	177.73	37.65	21.18	1.91E+01	.85
CDCMBM	CSGR100Y	030	.16	177.73	24.71	13.90	1.91E+01	.85
CDCMBM	SMP12_CS	003	-.34	177.73	22.35	12.58	1.91E+01	.85
CDCMBM	CSWB2-UL	002	-.46	177.73	07.06	03.97	1.91E+01	.85
CDCMED	CSGR30Y	002	.35	143.15	18.99	13.27	2.19E+01	.79
CDCMED	SMP12_CS	001	-.38	143.15	13.92	09.72	2.19E+01	.79
CDCMED	BBF-ET2	003	-.34	143.15	07.59	05.30	2.19E+01	.79
CDCMTH	CSGR30Y	001	.43	155.28	28.92	18.62	1.38E+01	.83
CDCMTH	CSGR100Y	055	.12	155.28	20.48	13.19	1.38E+01	.83
CDCMTH	SMP12_CS	017	-.23	155.28	18.07	11.64	1.38E+01	.83
CDCMTH	VD(EL-I)	002	-.42	155.28	09.64	06.21	1.38E+01	.83
CDCMTH	CNSRTMLK	003	.40	155.28	07.23	04.66	1.38E+01	.83
CDLVBM	FMDC_CS	001	.62	148.33	34.48	23.25	1.05E+02	.87
CDLVBM	CSWB2-UL	002	-.52	148.33	08.05	05.43	1.05E+02	.87
CDLVBM	INTFACP	003	.46	148.33	04.60	03.10	1.05E+02	.87
CDLVED	FMDC_I	003	.46	133.37	24.14	18.10	5.75E+01	.87
CDLVED	FMDC_CS	002	.51	133.37	22.99	17.24	5.75E+01	.87
CDLVED	INTFACP	001	.57	133.37	17.24	12.93	5.75E+01	.87
CDLVTH	FMDC_I	001	.82	143.12	47.31	33.06	1.74E+02	.93
CDLVTH	INTFACP	002	.76	143.12	29.03	20.28	1.74E+02	.93
CDLVTH	CNSRTMLK	003	.57	143.12	04.30	03.00	1.74E+02	.93
CGCAE1	VD(AER)	001	.85	380.59	89.80	23.59	1.26E+03	.98
CGCAE1	QY1(E/F)	009	.26	380.59	82.65	21.72	1.26E+03	.98
CGCAE1	SK(AER)	133	.04	380.59	66.33	17.43	1.26E+03	.98
CGCAE1	QY1(D)	012	.23	380.59	44.90	11.80	1.26E+03	.98
CGCAE1	PZ1(E/F)	003	-.51	380.59	15.31	04.02	1.26E+03	.98
CGCAE1	PY1(E/F)	002	.56	380.59	04.08	01.07	1.26E+03	.98
CGCAE2	VD(AER)	001	.78	366.98	84.54	23.04	5.25E+02	.97
CGCAE2	QY1(E/F)	043	.13	366.98	79.38	21.63	5.25E+02	.97
CGCAE2	SK(AER)	098	.06	366.98	63.92	17.42	5.25E+02	.97
CGCAE2	QY1(D)	009	.24	366.98	44.33	12.08	5.25E+02	.97
CGCAE2	QZ1(D)	002	-.56	366.98	07.22	01.97	5.25E+02	.97
CGCAE2	PY1(E/F)	003	.49	366.98	03.09	00.84	5.25E+02	.97
CGCAE3	VD(AER)	001	.73	363.48	80.21	22.07	7.24E+01	.96
CGCAE3	QY1(E/F)	149	.02	363.48	76.04	20.92	7.24E+01	.96
CGCAE3	SK(AER)	103	.07	363.48	61.46	16.91	7.24E+01	.96
CGCAE3	QY1(D)	005	.34	363.48	48.96	13.47	7.24E+01	.96
CGCAE3	QZ1(D)	002	-.45	363.48	07.29	02.01	7.24E+01	.96
CGCAE3	PY1(E/F)	003	.39	363.48	01.04	00.29	7.24E+01	.96
CGCAE4	QY1(D)	001	.34	260.38	49.38	18.96	3.09E+01	.81
CGCAE4	QY1(E/F)	085	-.07	260.38	37.04	14.23	3.09E+01	.81
CGCAE4	VD(AER)	020	.17	260.38	35.80	13.75	3.09E+01	.81
CGCAE4	SK(AER)	028	.15	260.38	30.86	11.85	3.09E+01	.81
CGCAE4	QY1(C)	006	.23	260.38	28.40	10.91	3.09E+01	.81
CGCAE4	DI(LUMB)	003	-.28	260.38	02.47	00.95	3.09E+01	.81
CGCAE4	PUCS-CM	002	-.29	260.38	00.00	00.00	3.09E+01	.81
CGIOD1	VD(EL-I)	001	.91	235.74	74.74	31.70	5.25E+02	.95
CGIOD1	QY1(E/F)	006	.28	235.74	30.53	12.95	5.25E+02	.95
CGIOD1	VD(AER)	084	-.08	235.74	25.26	10.72	5.25E+02	.95
CGIOD1	QZ1(D)	003	-.32	235.74	03.16	01.34	5.25E+02	.95
CGIOD1	PY1(E/F)	002	.39	235.74	02.11	00.90	5.25E+02	.95

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
CGIOD2	QY1(E/F)	025	.16	283.31	53.57	18.91	1.00E+02	.84
CGIOD2	VD(AER)	047	.12	283.31	45.24	15.97	1.00E+02	.84
CGIOD2	QY1(D)	030	.15	283.31	42.86	15.13	1.00E+02	.84
CGIOD2	SK(AER)	120	-.04	283.31	39.29	13.87	1.00E+02	.84
CGIOD2	VD(EL-I)	001	.41	283.31	20.24	07.14	1.00E+02	.84
CGIOD2	QZ1(D)	002	-.28	283.31	08.33	02.94	1.00E+02	.84
CGIOD2	QZ1(A/B)	003	-.27	283.31	02.38	00.84	1.00E+02	.84
CGIOD3	QY1(D)	004	.21	234.32	46.05	19.65	1.70E+02	.76
CGIOD3	QY1(E/F)	039	.11	234.32	36.84	15.72	1.70E+02	.76
CGIOD3	VD(AER)	057	.08	234.32	31.58	13.48	1.70E+02	.76
CGIOD3	SK(AER)	092	-.06	234.32	27.63	11.79	1.70E+02	.76
CGIOD3	CSTC-WB2	002	-.22	234.32	00.00	00.00	1.70E+02	.76
CGIOD3	IANY-BL	003	.21	234.32	00.00	00.00	1.70E+02	.76
CGIOD3	RUANY-BL	001	-.29	234.32	00.00	00.00	1.70E+02	.76
CGIOD4	VD(EL-I)	001	-.71	137.84	50.00	36.27	5.25E+02	.82
CGIOD4	QY1(D)	002	.36	137.84	12.20	08.85	5.25E+02	.82
CGIOD4	PY1(D)	003	.24	137.84	00.00	00.00	5.25E+02	.82
DECMBM1	LFCLNLIV	069	.09	234.23	25.00	10.67	8.13E+00	.88
DECMBM1	VD(EL-I)	003	.55	234.23	15.91	06.79	8.13E+00	.88
DECMBM1	PZ1(E/F)	002	-.56	234.23	10.23	04.37	8.13E+00	.88
DECMBM1	QZ1(D)	001	-.57	234.23	06.82	02.91	8.13E+00	.88
DECMBM2	LFCLNLIV	108	.06	216.56	31.76	14.67	7.76E+00	.85
DECMBM2	LFCLSHLT	059	.10	216.56	29.41	13.58	7.76E+00	.85
DECMBM2	LFGRNLVE	022	.17	216.56	23.53	10.87	7.76E+00	.85
DECMBM2	PZ1(E/F)	002	-.47	216.56	08.24	03.80	7.76E+00	.85
DECMBM2	QZ1(D)	001	-.54	216.56	08.24	03.80	7.76E+00	.85
DECMBM2	QZ1(C)	003	-.33	216.56	02.35	01.09	7.76E+00	.85
DECMBM3	QY1(E/F)	048	.11	350.49	49.44	14.11	2.57E+01	.89
DECMBM3	VD(AER)	009	.24	350.49	44.94	12.82	2.57E+01	.89
DECMBM3	SK(AER)	075	.08	350.49	40.45	11.54	2.57E+01	.89
DECMBM3	LFGRNLVE	003	.29	350.49	12.36	03.53	2.57E+01	.89
DECMBM3	ET2-STOM	001	.35	350.49	02.25	00.64	2.57E+01	.89
DECMBM3	QZ1(C)	002	-.33	350.49	00.00	00.00	2.57E+01	.89
DECMSK1	SK(EL-I)	001	.92	237.85	75.79	31.86	5.50E+03	.95
DECMSK1	SK(AER)	009	.22	237.85	32.63	13.72	5.50E+03	.95
DECMSK1	QY1(E/F)	031	.14	237.85	31.58	13.28	5.50E+03	.95
DECMSK1	VD(AER)	045	.11	237.85	24.21	10.18	5.50E+03	.95
DECMSK1	QZ1(D)	003	-.28	237.85	01.05	00.44	5.50E+03	.95
DECMSK1	VD(EL-I)	002	-.30	237.85	00.00	00.00	5.50E+03	.95
DECMSK2	SK(EL-I)	001	.88	229.18	69.89	30.50	6.61E+03	.93
DECMSK2	SK(AER)	003	.27	229.18	33.33	14.54	6.61E+03	.93
DECMSK2	QY1(E/F)	107	.04	229.18	30.11	13.14	6.61E+03	.93
DECMSK2	VD(AER)	017	.15	229.18	23.66	10.32	6.61E+03	.93
DECMSK2	VD(EL-I)	002	-.52	229.18	00.00	00.00	6.61E+03	.93
DECMSK3	SK(EL-I)	001	.81	244.65	56.52	23.10	1.35E+04	.92
DECMSK3	SK(AER)	004	.32	244.65	38.04	15.55	1.35E+04	.92
DECMSK3	QY1(E/F)	131	.02	244.65	34.78	14.22	1.35E+04	.92
DECMSK3	VD(AER)	007	.20	244.65	27.17	11.11	1.35E+04	.92
DECMSK3	BBF-ET2	003	.35	244.65	05.43	02.22	1.35E+04	.92
DECMSK3	VD(EL-I)	002	-.60	244.65	01.09	00.45	1.35E+04	.92
DECMTH1	BRETHRAT	002	.44	158.68	06.90	04.35	3.98E+01	.87
DECMTH1	VD(EL-I)	003	-.44	158.68	05.75	03.62	3.98E+01	.87
DECMTH1	ITC-BLAD	001	-.45	158.68	04.60	02.90	3.98E+01	.87
DECMTH2	VD(EL-I)	001	-.71	139.88	26.14	18.69	4.07E+01	.88
DECMTH2	IANY-BL	002	.37	139.88	02.27	01.62	4.07E+01	.88
DECMTH2	ITC-BLAD	003	-.36	139.88	02.27	01.62	4.07E+01	.88
DECMTH3	VD(EL-I)	001	-.80	133.59	37.08	27.76	1.23E+02	.89
DECMTH3	IANY-BL	002	.39	133.59	01.12	00.84	1.23E+02	.89
DECMTH3	PY1(D)	003	.34	133.59	00.00	00.00	1.23E+02	.89
DLCMBM2	VD(AER)	001	.52	330.25	65.59	19.86	1.70E+02	.93
DLCMBM2	QY1(E/F)	073	.08	330.25	61.29	18.56	1.70E+02	.93
DLCMBM2	SK(AER)	130	.03	330.25	48.39	14.65	1.70E+02	.93
DLCMBM2	QY1(D)	023	.17	330.25	36.56	11.07	1.70E+02	.93
DLCMBM2	CSGR30Y	002	.50	330.25	13.98	04.23	1.70E+02	.93
DLCMBM2	PY1(E/F)	003	.37	330.25	02.15	00.65	1.70E+02	.93
DLCMBM3	VD(AER)	001	.46	313.28	56.67	18.09	5.50E+01	.90
DLCMBM3	QY1(E/F)	150	.01	313.28	52.22	16.67	5.50E+01	.90
DLCMBM3	SK(AER)	123	.04	313.28	42.22	13.48	5.50E+01	.90
DLCMBM3	QY1(D)	018	.18	313.28	34.44	10.99	5.50E+01	.90
DLCMBM3	CSGR30Y	002	.45	313.28	16.67	05.32	5.50E+01	.90
DLCMBM3	CSWB2-UL	003	-.28	313.28	01.11	00.35	5.50E+01	.90

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
DLCMBM4	CSGR30Y	001	.41	169.75	21.52	12.68	2.63E+01	.79
DLCMBM4	SMP12_CS	004	-.36	169.75	17.72	10.44	2.63E+01	.79
DLCMBM4	CSWB2-UL	003	-.38	169.75	07.59	04.47	2.63E+01	.79
DLCMBM4	RUP_CS	002	.38	169.75	06.33	03.73	2.63E+01	.79
DLCMED2	VD(AER)	004	.29	240.43	33.33	13.86	1.58E+02	.84
DLCMED2	QY1(E/F)	138	.02	240.43	32.14	13.37	1.58E+02	.84
DLCMED2	BBF-ET2	001	-.39	240.43	14.29	05.94	1.58E+02	.84
DLCMED2	ET2-STOM	002	-.33	240.43	04.76	01.98	1.58E+02	.84
DLCMED2	PY1(E/F)	003	.33	240.43	04.76	01.98	1.58E+02	.84
DLCMED3	VD(AER)	002	.32	242.74	32.93	13.57	4.57E+01	.82
DLCMED3	QY1(E/F)	078	-.07	242.74	29.27	12.06	4.57E+01	.82
DLCMED3	BBF-ET2	001	-.34	242.74	12.20	05.03	4.57E+01	.82
DLCMED3	CSGR30Y	003	.31	242.74	10.98	04.52	4.57E+01	.82
DLCMED4	BBF-ET2	002	-.37	138.59	14.67	10.59	2.29E+01	.75
DLCMED4	SMP12_CS	001	-.37	138.59	10.67	07.70	2.29E+01	.75
DLCMED4	CSGR30Y	003	.29	138.59	08.00	05.77	2.29E+01	.75
DLCMTH2	VD(AER)	002	.42	301.14	58.70	19.49	7.76E+01	.92
DLCMTH2	QY1(E/F)	034	.16	301.14	55.43	18.41	7.76E+01	.92
DLCMTH2	SK(AER)	147	.02	301.14	44.57	14.80	7.76E+01	.92
DLCMTH2	QY1(D)	017	.20	301.14	36.96	12.27	7.76E+01	.92
DLCMTH2	CSGR30Y	003	.41	301.14	10.87	03.61	7.76E+01	.92
DLCMTH2	PY1(E/F)	001	.44	301.14	04.35	01.44	7.76E+01	.92
DLCMTH3	VD(AER)	002	.39	271.85	48.31	17.77	3.55E+01	.89
DLCMTH3	QY1(E/F)	101	.06	271.85	44.94	16.53	3.55E+01	.89
DLCMTH3	SK(AER)	118	.04	271.85	35.96	13.23	3.55E+01	.89
DLCMTH3	QY1(D)	018	.19	271.85	33.71	12.40	3.55E+01	.89
DLCMTH3	CSGR30Y	003	.38	271.85	12.36	04.55	3.55E+01	.89
DLCMTH3	VD(EL-I)	001	-.49	271.85	00.00	00.00	3.55E+01	.89
DLCMTH4	CSGR30Y	002	.41	165.30	18.52	11.20	1.55E+01	.81
DLCMTH4	SMP12_CS	003	-.34	165.30	16.05	09.71	1.55E+01	.81
DLCMTH4	VD(EL-I)	001	-.43	165.30	07.41	04.48	1.55E+01	.81
DLLVBM2	VD(AER)	001	.59	324.35	64.89	20.01	7.24E+02	.94
DLLVBM2	QY1(E/F)	154	.01	324.35	61.70	19.02	7.24E+02	.94
DLLVBM2	SK(AER)	143	.02	324.35	51.06	15.74	7.24E+02	.94
DLLVBM2	QY1(D)	010	.28	324.35	36.17	11.15	7.24E+02	.94
DLLVBM2	FMDC_CS	002	.48	324.35	11.70	03.61	7.24E+02	.94
DLLVBM2	INTFACP	003	.42	324.35	01.06	00.33	7.24E+02	.94
DLLVBM3	VD(AER)	002	.45	272.17	45.56	16.74	2.57E+02	.90
DLLVBM3	QY1(E/F)	116	-.04	272.17	42.22	15.51	2.57E+02	.90
DLLVBM3	SK(AER)	163	.01	272.17	36.67	13.47	2.57E+02	.90
DLLVBM3	FMDC_CS	001	.50	272.17	17.78	06.53	2.57E+02	.90
DLLVBM3	CSWB2-UL	003	-.45	272.17	04.44	01.63	2.57E+02	.90
DLLVBM4	FMDC_CS	001	.47	158.59	21.95	13.84	1.10E+02	.82
DLLVBM4	CSWB2-UL	002	-.36	158.59	06.10	03.85	1.10E+02	.82
DLLVBM4	INTFACP	003	.34	158.59	03.66	02.31	1.10E+02	.82
DLLVED2	QY1(E/F)	137	-.03	277.71	43.33	15.60	3.09E+02	.90
DLLVED2	VD(AER)	002	.42	277.71	41.11	14.80	3.09E+02	.90
DLLVED2	SK(AER)	128	-.04	277.71	33.33	12.00	3.09E+02	.90
DLLVED2	QY1(D)	005	.33	277.71	32.22	11.60	3.09E+02	.90
DLLVED2	INTFACP	001	.47	277.71	08.89	03.20	3.09E+02	.90
DLLVED2	FMDC_I	003	.40	277.71	07.78	02.80	3.09E+02	.90
DLLVED3	QY1(E/F)	075	-.08	219.00	25.00	11.42	1.12E+02	.84
DLLVED3	VD(AER)	004	.31	219.00	23.81	10.87	1.12E+02	.84
DLLVED3	QY1(D)	008	.24	219.00	22.62	10.33	1.12E+02	.84
DLLVED3	INTFACP	001	.44	219.00	11.90	05.43	1.12E+02	.84
DLLVED3	FMDC_I	003	.32	219.00	10.71	04.89	1.12E+02	.84
DLLVED3	RF(CO)	002	-.32	219.00	00.00	00.00	1.12E+02	.84
DLLVED4	FMDC_CS	002	.40	126.25	15.00	11.88	5.75E+01	.80
DLLVED4	INTFACP	001	.42	126.25	13.75	10.89	5.75E+01	.80
DLLVED4	CNSRTMLK	003	.30	126.25	07.50	05.94	5.75E+01	.80
DLLVTH2	QY1(E/F)	061	.09	241.84	29.67	12.27	6.03E+02	.91
DLLVTH2	VD(AER)	011	.22	241.84	25.27	10.45	6.03E+02	.91
DLLVTH2	QY1(D)	012	.22	241.84	24.18	10.00	6.03E+02	.91
DLLVTH2	FMDC_I	002	.65	241.84	21.98	09.09	6.03E+02	.91
DLLVTH2	INTFACP	001	.65	241.84	18.68	07.72	6.03E+02	.91
DLLVTH2	CNSRTMLK	003	.34	241.84	03.30	01.36	6.03E+02	.91
DLLVTH3	FMDC_I	002	.58	191.99	26.44	13.77	3.39E+02	.87
DLLVTH3	INTFACP	001	.60	191.99	21.84	11.38	3.39E+02	.87
DLLVTH3	CNSRTMLK	003	.32	191.99	04.60	02.40	3.39E+02	.87

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
DLLVTH4	FMDC_I	003	.49	136.82	19.54	14.28	2.00E+02	.87
DLLVTH4	INTFACP	002	.58	136.82	16.09	11.76	2.00E+02	.87
DLLVTH4	VD(EL-I)	001	-.61	136.82	14.94	10.92	2.00E+02	.87
PECMBM	PY1(E/F)	001	-.40	122.34	07.46	06.10	9.99E+09	.67
PECMBM	PZ1(E/F)	003	-.24	122.34	01.49	01.22	9.99E+09	.67
PECMBM	SRAT-BL	002	-.25	122.34	00.00	00.00	9.99E+09	.67
PECMLU	D0(LUMB)	001	-.47	149.48	20.25	13.55	9.99E+09	.79
PECMLU	INDEPET	002	-.35	149.48	06.33	04.23	9.99E+09	.79
PECMLU	PZ1(E/F)	003	-.29	149.48	05.06	03.39	9.99E+09	.79
PECMMB	SK(EL-I)	001	.78	144.87	55.17	38.08	9.99E+09	.87
PECMMB	PZ1(E/F)	002	-.42	144.87	09.20	06.35	9.99E+09	.87
PECMMB	D0(LUMB)	003	-.38	144.87	02.30	01.59	9.99E+09	.87
PECMMT	SK(EL-I)	001	.71	122.58	35.71	29.13	9.99E+09	.84
PECMMT	PZ1(E/F)	003	-.43	122.58	07.14	05.82	9.99E+09	.84
PECMMT	DI(SK)	002	-.44	122.58	04.76	03.88	9.99E+09	.84
PECMSK	SK(EL-I)	001	.85	182.15	73.33	40.26	9.99E+09	.90
PECMSK	DI(SK)	002	-.39	182.15	06.67	03.66	9.99E+09	.90
PECMSK	VD(EL-I)	003	-.30	182.15	01.11	00.61	9.99E+09	.90
PECMTH	VD(EL-I)	004	-.30	107.61	12.82	11.91	9.99E+09	.78
PECMTH	ITC-THR	001	.37	107.61	08.97	08.34	9.99E+09	.78
PECMTH	PZ1(E/F)	003	-.33	107.61	02.56	02.38	9.99E+09	.78
PECMTH	ITC-BLAD	002	-.36	107.61	01.28	01.19	9.99E+09	.78
PLCMBM	RF(BM)	001	.89	152.25	69.57	45.69	9.99E+09	.92
PLCMBM	CSGR30Y	003	.35	152.25	09.78	06.42	9.99E+09	.92
PLCMBM	CSWB2-UL	002	-.40	152.25	05.43	03.57	9.99E+09	.92
PLCMMT	RF(RE)	001	.51	160.67	16.67	10.38	7.08E+01	.84
PLCMMT	ET2-STOM	002	-.46	160.67	15.48	09.63	7.08E+01	.84
PLCMMT	RF(LU)	003	.38	160.67	11.90	07.41	7.08E+01	.84
PLCMTH	RF(TH)	001	.97	145.32	90.72	62.43	9.99E+09	.97
PLCMTH	VD(EL-I)	002	-.43	145.32	03.09	02.13	9.99E+09	.97
PLCMTH	CNSRTMLK	003	.42	145.32	00.00	00.00	9.99E+09	.97
PLLVBM	RF(BM)	001	.80	145.57	55.68	38.25	9.99E+09	.88
PLLVBM	FMDC_CS	003	.41	145.57	13.64	09.37	9.99E+09	.88
PLLVBM	CSWB2-UL	002	-.43	145.57	07.95	05.46	9.99E+09	.88
PLLVMT	FMDC_CS	001	.51	126.15	16.67	13.21	5.89E+01	.84
PLLVMT	INTFACP	003	.38	126.15	09.52	07.55	5.89E+01	.84
PLLVMT	RF(RE)	002	.46	126.15	09.52	07.55	5.89E+01	.84
PLLVTH	RF(TH)	001	.91	132.59	65.26	49.22	9.99E+09	.95
PLLVTH	FMDC_I	002	.71	132.59	11.58	08.73	9.99E+09	.95
PLLVTH	INTFACP	003	.60	132.59	10.53	07.94	9.99E+09	.95
RECMLU1	PUTC-LIV	003	-.18	078.72	01.79	02.27	9.99E+09	.56
RECMLU1	CSGR30Y	002	-.18	078.72	00.00	00.00	9.99E+09	.56
RECMLU1	SRANY-AT	001	-.19	078.72	00.00	00.00	9.99E+09	.56
RECMMB1	SK(EL-I)	001	.65	160.17	50.00	31.22	9.99E+09	.78
RECMMB1	DI(SK)	002	-.38	160.17	11.54	07.20	9.99E+09	.78
RECMMB1	D0(LUMB)	003	-.25	160.17	00.00	00.00	9.99E+09	.78
RECMMB2	CSGR100D	001	.26	077.70	03.70	04.76	9.99E+09	.54
RECMMB2	CNSRTGVG	002	.24	077.70	01.85	02.38	9.99E+09	.54
RECMMB2	LFCLSHLT	003	.21	077.70	00.00	00.00	9.99E+09	.54
RECMMT1	SK(EL-I)	001	.64	172.78	53.25	30.82	9.99E+09	.77
RECMMT1	DI(SK)	002	-.36	172.78	11.69	06.77	9.99E+09	.77
RECMMT1	QZ1(D)	003	-.24	172.78	02.60	01.50	9.99E+09	.77
RECMMT2	CSGR100D	001	.26	075.85	03.70	04.88	9.99E+09	.54
RECMMT2	CNSRTGVG	002	.24	075.85	01.85	02.44	9.99E+09	.54
RECMMT2	LFCLSHLT	003	.21	075.85	00.00	00.00	9.99E+09	.54
RECMSK1	SK(EL-I)	001	.64	165.31	52.56	31.79	9.99E+09	.78
RECMSK1	SK(AER)	123	.04	165.31	16.67	10.08	9.99E+09	.78
RECMSK1	DI(SK)	002	-.37	165.31	11.54	06.98	9.99E+09	.78
RECMSK1	QZ1(D)	003	-.24	165.31	02.56	01.55	9.99E+09	.78
RECMSK2	CSGR100D	001	.26	077.70	03.70	04.76	9.99E+09	.54
RECMSK2	CNSRTGVG	002	.24	077.70	01.85	02.38	9.99E+09	.54
RECMSK2	LFCLSHLT	003	.21	077.70	00.00	00.00	9.99E+09	.54
RLCMBM2	RF(BM)	001	.84	233.79	47.83	20.46	9.99E+09	.92
RLCMBM2	VD(AER)	003	.37	233.79	32.61	13.95	9.99E+09	.92
RLCMBM2	QY1(E/F)	094	.07	233.79	29.35	12.55	9.99E+09	.92
RLCMBM2	CSGR30Y	002	.39	233.79	08.70	03.72	9.99E+09	.92
ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
RLCMBM3	RF(BM)	001	.87	204.45	54.84	26.82	9.99E+09	.93
RLCMBM3	VD(AER)	003	.37	204.45	24.73	12.10	9.99E+09	.93
RLCMBM3	QY1(E/F)	160	.01	204.45	21.51	10.52	9.99E+09	.93

RLCMBM3	CSGR30Y	002	.39	204.45	07.53	03.68	9.99E+09	.93
RLCMBM4	RF(BM)	001	.88	152.80	69.23	45.31	9.99E+09	.91
RLCMBM4	SMP12_CS	002	-.32	152.80	06.59	04.31	9.99E+09	.91
RLCMBM4	CSGR30Y	003	.31	152.80	05.49	03.59	9.99E+09	.91
RLCMMT2	VD(AER)	011	.22	227.65	24.14	10.60	3.02E+02	.87
RLCMMT2	ET2-STOM	001	-.52	227.65	17.24	07.57	3.02E+02	.87
RLCMMT2	RF(RE)	002	.38	227.65	08.05	03.54	3.02E+02	.87
RLCMMT2	PY1(E/F)	003	.34	227.65	03.45	01.52	3.02E+02	.87
RLCMMT3	ET2-STOM	001	-.50	193.00	16.28	08.44	1.07E+02	.86
RLCMMT3	RF(RE)	002	.47	193.00	15.12	07.83	1.07E+02	.86
RLCMMT3	RF(LU)	003	.38	193.00	09.30	04.82	1.07E+02	.86
RLCMMT4	ET2-STOM	001	-.45	145.21	14.29	09.84	1.00E+02	.84
RLCMMT4	RF(RE)	002	.42	145.21	14.29	09.84	1.00E+02	.84
RLCMMT4	RF(LU)	003	.40	145.21	13.10	09.02	1.00E+02	.84
RLCMTH2	RF(TH)	001	.94	195.82	75.26	38.43	9.99E+09	.97
RLCMTH2	CSGR30Y	002	.37	195.82	07.22	03.69	9.99E+09	.97
RLCMTH2	ITC-THR	003	.29	195.82	00.00	00.00	9.99E+09	.97
RLCMTH3	RF(TH)	001	.95	177.27	81.44	45.94	9.99E+09	.97
RLCMTH3	CSGR30Y	003	.35	177.27	07.22	04.07	9.99E+09	.97
RLCMTH3	VD(EL-I)	002	-.40	177.27	01.03	00.58	9.99E+09	.97
RLCMTH4	RF(TH)	001	.95	152.00	86.46	56.88	9.99E+09	.96
RLCMTH4	CSGR30Y	003	.35	152.00	07.29	04.80	9.99E+09	.96
RLCMTH4	VD(EL-I)	002	-.40	152.00	02.08	01.37	9.99E+09	.96
RLLVBM2	RF(BM)	001	.78	229.11	43.82	19.13	9.99E+09	.89
RLLVBM2	VD(AER)	002	.39	229.11	35.96	15.70	9.99E+09	.89
RLLVBM2	QY1(E/F)	148	-.02	229.11	32.58	14.22	9.99E+09	.89
RLLVBM2	SK(AER)	140	-.03	229.11	25.84	11.28	9.99E+09	.89
RLLVBM2	PY1(E/F)	003	.29	229.11	00.00	00.00	9.99E+09	.89
RLLVBM3	RF(BM)	001	.80	193.18	51.69	26.76	9.99E+09	.89
RLLVBM3	VD(AER)	003	.32	193.18	22.47	11.63	9.99E+09	.89
RLLVBM3	QY1(E/F)	116	-.04	193.18	20.22	10.47	9.99E+09	.89
RLLVBM3	CSWB2-UL	002	-.33	193.18	05.62	02.91	9.99E+09	.89
RLLVBM4	RF(BM)	001	.82	144.43	59.09	40.91	9.99E+09	.88
RLLVBM4	FMDC_CS	002	.36	144.43	09.09	06.29	9.99E+09	.88
RLLVBM4	INTFACP	003	.29	144.43	01.14	00.79	9.99E+09	.88
RLLVMT2	VD(AER)	003	.34	251.03	38.89	15.49	2.04E+02	.90
RLLVMT2	QY1(E/F)	078	.10	251.03	37.78	15.05	2.04E+02	.90
RLLVMT2	SK(AER)	060	-.12	251.03	30.00	11.95	2.04E+02	.90
RLLVMT2	QY1(D)	014	.24	251.03	26.67	10.62	2.04E+02	.90
RLLVMT2	RF(RE)	001	.42	251.03	05.56	02.21	2.04E+02	.90
RLLVMT2	RF(TH)	002	.41	251.03	04.44	01.77	2.04E+02	.90
RLLVMT3	VD(AER)	006	.26	195.30	20.93	10.72	1.58E+02	.86
RLLVMT3	QY1(E/F)	143	.03	195.30	19.77	10.12	1.58E+02	.86
RLLVMT3	RF(RE)	001	.45	195.30	09.30	04.76	1.58E+02	.86
RLLVMT3	FMDC_CS	002	.36	195.30	06.98	03.57	1.58E+02	.86
RLLVMT3	RF(TH)	003	.35	195.30	04.65	02.38	1.58E+02	.86
RLLVMT4	FMDC_CS	001	.41	124.53	08.64	06.94	7.76E+01	.81
RLLVMT4	RF(RE)	002	.36	124.53	07.41	05.95	7.76E+01	.81
RLLVMT4	RF(LU)	003	.31	124.53	06.17	04.95	7.76E+01	.81
RLLVTH2	RF(TH)	001	.89	179.67	57.45	31.98	9.99E+09	.94
RLLVTH2	INTFACP	003	.57	179.67	08.51	04.74	9.99E+09	.94
RLLVTH2	FMDC_I	002	.58	179.67	05.32	02.96	9.99E+09	.94
RLLVTH3	RF(TH)	001	.88	157.15	65.59	41.74	9.99E+09	.93
RLLVTH3	INTFACP	002	.54	157.15	08.60	05.47	9.99E+09	.93
RLLVTH3	FMDC_I	003	.53	157.15	05.38	03.42	9.99E+09	.93
RLLVTH4	RF(TH)	001	.87	134.86	64.13	47.55	9.99E+09	.92
RLLVTH4	VD(EL-I)	002	-.50	134.86	07.61	05.64	9.99E+09	.92
RLLVTH4	INTFACP	003	.49	134.86	06.52	04.83	9.99E+09	.92

Results for the 99th percentile of the endpoints for the CB2 source term

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
AEVAC	BBF-ET2	002	-.44	220.14	27.06	12.29	2.95E+02	.85
AEVAC	ET2-STOM	001	-.50	220.14	15.29	06.95	2.95E+02	.85
AEVAC	BRETHRAT	003	.32	220.14	03.53	01.60	2.95E+02	.85
AFBIBEE	FFBC_CS	003	.45	163.96	39.33	23.99	7.24E+01	.89
AFBIBEE	FFDC_CS	097	.05	163.96	29.21	17.82	7.24E+01	.89
AFBIBEE	INTFACP	001	.73	163.96	24.72	15.08	7.24E+01	.89
AFBIBEE	RTHS	002	.46	163.96	06.74	04.11	7.24E+01	.89
AFBIGRA	INTFACC	001	-.52	151.25	20.73	13.71	9.12E+02	.82
AFBIGRA	RTC_CS	002	.47	151.25	19.51	12.90	9.12E+02	.82
AFBIGRA	PLOSSC	003	-.33	151.25	06.10	04.03	9.12E+02	.82
AFBIMIL	INTFACP	002	.58	119.02	21.43	18.01	1.29E+01	.84
AFBIMIL	QY1(A/B)	003	.34	119.02	15.48	13.01	1.29E+01	.84
AFBIMIL	FMDC_CS	001	.58	119.02	10.71	09.00	1.29E+01	.84
AFBIVEG	SOLCONG	001	.82	126.87	57.30	45.16	9.33E+00	.89
AFBIVEG	QY1(A/B)	002	.31	126.87	11.24	08.86	9.33E+00	.89
AFBIVEG	VD(AER)	003	-.30	126.87	05.62	04.43	9.33E+00	.89
AFBTBEE	FFBC_CS	002	.54	184.66	47.25	25.59	9.77E+01	.91
AFBTBEE	FFDC_CS	140	-.02	184.66	36.26	19.64	9.77E+01	.91
AFBTBEE	RTHS	001	.59	184.66	10.99	05.95	9.77E+01	.91
AFBTBEE	INTFACHS	003	.49	184.66	07.69	04.16	9.77E+01	.91
AFBTGRA	INTFACC	001	-.58	182.46	34.12	18.70	6.92E+03	.85
AFBTGRA	RTC_CS	002	.56	182.46	29.41	16.12	6.92E+03	.85
AFBTGRA	PLOSSC	003	-.53	182.46	12.94	07.09	6.92E+03	.85
AFBTMIL	FMDC_CS	001	.82	134.40	45.56	33.90	3.89E+01	.90
AFBTMIL	RTHS	002	.54	134.40	08.89	06.61	3.89E+01	.90
AFBTMIL	RUP_CS	003	.42	134.40	06.67	04.96	3.89E+01	.90
AFBTVEG	SOLCONG	001	.87	139.24	53.19	38.20	9.51E+01	.94
AFBTVEG	RTC_CS	002	.76	139.24	24.47	17.57	9.51E+01	.94
AFBTVEG	INTFACC	003	-.62	139.24	09.57	06.87	9.51E+01	.94
AIOD	VD(EL-I)	001	-.84	195.67	72.53	37.07	2.09E+02	.91
AIOD	BRETHRAT	002	.41	195.67	08.79	04.49	2.09E+02	.91
AIOD	ITC-BLAD	003	-.37	195.67	01.10	00.56	2.09E+02	.91
ARELIN	BBF-ET2	002	-.43	223.67	27.06	12.10	2.95E+02	.85
ARELIN	ET2-STOM	001	-.50	223.67	15.29	06.84	2.95E+02	.85
ARELIN	BRETHRAT	003	.32	223.67	03.53	01.58	2.95E+02	.85
ARELTIM	AW(AER)	002	.29	167.61	19.48	11.62	1.29E+02	.77
ARELTIM	CSGR1Y	007	.24	167.61	19.48	11.62	1.29E+02	.77
ARELTIM	CSGR3Y	006	.25	167.61	19.48	11.62	1.29E+02	.77
ARELTIM	PZ1(E/F)	001	-.30	167.61	02.60	01.55	1.29E+02	.77
ARELTIM	AW(EL-I)	003	-.27	167.61	00.00	00.00	1.29E+02	.77
ASHEL	BBF-ET2	002	-.46	219.70	29.07	13.23	1.86E+02	.86
ASHEL	ET2-STOM	001	-.56	219.70	17.44	07.94	1.86E+02	.86
ASHEL	CSANY-BL	003	-.33	219.70	11.63	05.29	1.86E+02	.86
CACAE1	PZ1(E/F)	001	-.79	142.99	60.47	42.29	6.92E+00	.86
CACAE1	QZ1(E/F)	002	-.42	142.99	03.49	02.44	6.92E+00	.86
CACAE1	AW(EL-I)	003	-.27	142.99	00.00	00.00	6.92E+00	.86
CACAE2	VD(AER)	002	-.41	181.73	28.05	15.43	1.15E+01	.82
CACAE2	QY1(E/F)	151	.01	181.73	21.95	12.08	1.15E+01	.82
CACAE2	PZ1(E/F)	001	-.61	181.73	17.07	09.39	1.15E+01	.82
CACAE2	QZ1(E/F)	003	-.35	181.73	00.00	00.00	1.15E+01	.82
CACAE3	VD(AER)	002	-.51	259.81	52.87	20.35	1.74E+01	.87
CACAE3	QY1(E/F)	119	-.04	259.81	40.23	15.48	1.74E+01	.87
CACAE3	QY1(D)	047	-.12	259.81	32.18	12.39	1.74E+01	.87
CACAE3	SK(AER)	034	.14	259.81	29.89	11.50	1.74E+01	.87
CACAE3	PZ1(D)	003	-.34	259.81	05.75	02.21	1.74E+01	.87
CACAE3	QZ1(D)	001	-.54	259.81	02.30	00.89	1.74E+01	.87
CACAE4	VD(AER)	001	-.51	355.51	75.00	21.10	1.58E+01	.92
CACAE4	QY1(E/F)	011	-.19	355.51	68.48	19.26	1.58E+01	.92
CACAE4	SK(AER)	076	.07	355.51	54.35	15.29	1.58E+01	.92
CACAE4	QY1(D)	009	-.19	355.51	42.39	11.92	1.58E+01	.92
CACAE4	AW(AER)	003	-.27	355.51	08.70	02.45	1.58E+01	.92
CACAE4	IANY-AT	002	-.30	355.51	00.00	00.00	1.58E+01	.92
CAIOD1	VD(EL-I)	001	-.73	151.85	57.65	37.97	1.32E+01	.85
CAIOD1	PZ1(E/F)	002	-.57	151.85	18.82	12.39	1.32E+01	.85
CAIOD1	QZ1(E/F)	003	-.26	151.85	01.18	00.78	1.32E+01	.85
ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
CAIOD2	VD(EL-I)	001	-.85	176.61	81.11	45.93	7.94E+01	.90
CAIOD2	PZ1(E/F)	002	-.42	176.61	03.33	01.89	7.94E+01	.90
CAIOD2	QZ1(D)	003	-.29	176.61	01.11	00.63	7.94E+01	.90

CAIOD3	VD(EL-I)	001	-.92	170.08	90.43	53.17	1.17E+02	.94
CAIOD3	PUTV-RBM	002	.26	170.08	01.06	00.62	1.17E+02	.94
CAIOD3	PZ1(D)	003	-.24	170.08	01.06	00.62	1.17E+02	.94
CAIOD4	VD(EL-I)	001	-.96	183.45	93.81	51.14	2.51E+02	.97
CAIOD4	ITC-BLAD	002	.25	183.45	00.00	00.00	2.51E+02	.97
CAIOD4	SKMORT	003	.24	183.45	00.00	00.00	2.51E+02	.97
CDCMBM	CSGR30Y	002	.46	176.15	35.71	20.27	2.29E+01	.84
CDCMBM	CSGR100Y	045	.13	176.15	22.62	12.84	2.29E+01	.84
CDCMBM	SMP12_CS	006	-.28	176.15	20.24	11.49	2.29E+01	.84
CDCMBM	CSWB2-UL	001	-.46	176.15	07.14	04.05	2.29E+01	.84
CDCMBM	AW(AER)	003	.33	176.15	05.95	03.38	2.29E+01	.84
CDCMED	CSGR30Y	002	.33	145.64	17.72	12.17	2.54E+01	.79
CDCMED	SMP12_CS	001	-.33	145.64	11.39	07.82	2.54E+01	.79
CDCMED	BBF-ET2	003	-.32	145.64	06.33	04.35	2.54E+01	.79
CDCMTH	CSGR30Y	002	.40	158.30	27.38	17.30	1.48E+01	.84
CDCMTH	CSGR100Y	082	.09	158.30	19.05	12.03	1.48E+01	.84
CDCMTH	SMP12_CS	022	-.22	158.30	16.67	10.53	1.48E+01	.84
CDCMTH	VD(EL-I)	001	-.43	158.30	10.71	06.77	1.48E+01	.84
CDCMTH	CSWB2-UL	003	-.40	158.30	05.95	03.76	1.48E+01	.84
CDLVBM	FMDC_CS	001	.60	145.56	31.82	21.86	1.53E+02	.88
CDLVBM	CSWB2-UL	002	-.51	145.56	07.95	05.46	1.53E+02	.88
CDLVBM	CNSRTMLK	003	.44	145.56	05.68	03.90	1.53E+02	.88
CDLVED	FMDC_CS	003	.49	131.36	22.09	16.82	6.76E+01	.86
CDLVED	FMDC_I	004	.42	131.36	20.93	15.93	6.76E+01	.86
CDLVED	INTFACP	001	.56	131.36	16.28	12.39	6.76E+01	.86
CDLVED	CNSRTMLK	002	.49	131.36	08.14	06.20	6.76E+01	.86
CDLVTH	FMDC_I	001	.77	140.71	45.05	32.02	1.86E+02	.91
CDLVTH	INTFACP	002	.74	140.71	30.77	21.87	1.86E+02	.91
CDLVTH	CNSRTMLK	003	.55	140.71	04.40	03.13	1.86E+02	.91
CGCAE1	VD(AER)	001	.76	351.51	84.21	23.96	3.24E+02	.95
CGCAE1	QY1(E/F)	156	-.01	351.51	70.53	20.06	3.24E+02	.95
CGCAE1	SK(AER)	136	-.03	351.51	56.84	16.17	3.24E+02	.95
CGCAE1	QY1(D)	061	.10	351.51	36.84	10.48	3.24E+02	.95
CGCAE1	PZ1(E/F)	002	-.61	351.51	21.05	05.99	3.24E+02	.95
CGCAE1	PZ1(D)	003	-.30	351.51	02.11	00.60	3.24E+02	.95
CGCAE2	VD(AER)	001	.66	328.33	78.26	23.84	7.41E+01	.92
CGCAE2	QY1(E/F)	121	.04	328.33	65.22	19.86	7.41E+01	.92
CGCAE2	SK(AER)	119	-.04	328.33	54.35	16.55	7.41E+01	.92
CGCAE2	PZ1(E/F)	002	-.50	328.33	20.65	06.29	7.41E+01	.92
CGCAE2	PZ1(D)	003	-.39	328.33	01.09	00.33	7.41E+01	.92
CGCAE3	VD(AER)	001	.43	276.33	53.93	19.52	2.88E+01	.89
CGCAE3	QY1(E/F)	034	.15	276.33	50.56	18.30	2.88E+01	.89
CGCAE3	SK(AER)	154	.01	276.33	41.57	15.04	2.88E+01	.89
CGCAE3	AW(AER)	002	.39	276.33	22.47	08.13	2.88E+01	.89
CGCAE3	PZ1(D)	003	-.34	276.33	00.00	00.00	2.88E+01	.89
CGCAE4	AW(AER)	001	.54	191.41	51.81	27.07	1.07E+01	.83
CGCAE4	BW(AER)	061	.11	191.41	39.76	20.77	1.07E+01	.83
CGCAE4	PUCS-CM	002	-.29	191.41	00.00	00.00	1.07E+01	.83
CGCAE4	PUTC-LIV	003	-.29	191.41	00.00	00.00	1.07E+01	.83
CGIOD1	VD(EL-I)	001	.90	167.46	80.43	48.03	8.32E+01	.92
CGIOD1	PZ1(E/F)	002	-.46	167.46	07.61	04.54	8.32E+01	.92
CGIOD1	QZ1(E/F)	003	-.21	167.46	01.09	00.65	8.32E+01	.92
CGIOD2	VD(EL-I)	001	.43	129.88	10.45	08.05	1.95E+01	.67
CGIOD2	PZ1(E/F)	002	-.32	129.88	08.96	06.90	1.95E+01	.67
CGIOD2	QZ1(D)	003	-.26	129.88	05.97	04.60	1.95E+01	.67
CGIOD3	AW(EL-I)	012	.17	093.48	09.84	10.53	9.12E+00	.61
CGIOD3	BRETHRAT	003	.23	093.48	00.00	00.00	9.12E+00	.61
CGIOD3	RUANY-AT	002	.23	093.48	00.00	00.00	9.12E+00	.61
CGIOD3	RUANY-BL	001	-.24	093.48	00.00	00.00	9.12E+00	.61
CGIOD4	VD(EL-I)	001	-.58	124.66	53.42	42.85	1.02E+02	.73
CGIOD4	PUTC-ULI	003	-.19	124.66	01.37	01.10	1.02E+02	.73
CGIOD4	RUANY-BL	002	-.23	124.66	01.37	01.10	1.02E+02	.73
DECMBM1	PZ1(E/F)	001	-.70	189.45	17.44	09.21	8.91E+00	.86
DECMBM1	LFGRCAR	003	.39	189.45	10.47	05.53	8.91E+00	.86
DECMBM1	PY1(E/F)	002	-.41	189.45	01.16	00.61	8.91E+00	.86
ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
DECMBM2	QY1(E/F)	021	-.16	194.26	21.35	10.99	1.20E+01	.89
DECMBM2	PZ1(E/F)	001	-.74	194.26	11.24	05.79	1.20E+01	.89
DECMBM2	PY1(E/F)	002	-.45	194.26	01.12	00.58	1.20E+01	.89
DECMBM2	QZ1(E/F)	003	-.36	194.26	00.00	00.00	1.20E+01	.89
DECMBM3	LFCLNLIV	137	-.02	226.14	27.38	12.11	7.76E+00	.84
DECMBM3	LFCLSHLT	067	.09	226.14	26.19	11.58	7.76E+00	.84
DECMBM3	LFGRNLVE	004	.29	226.14	25.00	11.06	7.76E+00	.84
DECMBM3	QZ1(D)	001	-.46	226.14	05.95	02.63	7.76E+00	.84

DECMBM3	PZ1(E/F)	003	-.35	226.14	04.76	02.10	7.76E+00	.84
DECMBM3	ET2-STOM	002	.36	226.14	02.38	01.05	7.76E+00	.84
DECMSK1	SK(EL-I)	001	.89	194.78	80.65	41.41	3.80E+03	.93
DECMSK1	SK(AER)	011	.16	194.78	20.43	10.49	3.80E+03	.93
DECMSK1	PZ1(E/F)	002	-.35	194.78	08.60	04.42	3.80E+03	.93
DECMSK1	VD(EL-I)	003	-.33	194.78	00.00	00.00	3.80E+03	.93
DECMSK2	SK(EL-I)	001	.86	173.68	72.53	41.76	4.37E+03	.91
DECMSK2	SK(AER)	003	.26	173.68	18.68	10.76	4.37E+03	.91
DECMSK2	VD(EL-I)	002	-.50	173.68	03.30	01.90	4.37E+03	.91
DECMSK3	SK(EL-I)	001	.84	192.36	69.23	35.99	3.31E+03	.91
DECMSK3	SK(AER)	004	.28	192.36	25.27	13.14	3.31E+03	.91
DECMSK3	QY1(E/F)	134	.02	192.36	19.78	10.28	3.31E+03	.91
DECMSK3	BBF-ET2	003	.28	192.36	03.30	01.72	3.31E+03	.91
DECMSK3	VD(EL-I)	002	-.50	192.36	01.10	00.57	3.31E+03	.91
DECMTH1	VD(EL-I)	001	-.57	150.15	25.00	16.65	6.17E+01	.88
DECMTH1	PZ1(E/F)	002	-.49	150.15	06.82	04.54	6.17E+01	.88
DECMTH1	ITC-BLAD	003	-.46	150.15	03.41	02.27	6.17E+01	.88
DECMTH2	VD(EL-I)	001	-.75	159.46	51.69	32.42	8.91E+01	.89
DECMTH2	ITC-BLAD	002	-.46	159.46	02.25	01.41	8.91E+01	.89
DECMTH2	PZ1(E/F)	003	-.42	159.46	02.25	01.41	8.91E+01	.89
DECMTH3	VD(EL-I)	001	-.79	145.98	57.30	39.25	4.27E+01	.89
DECMTH3	BRETHRAT	003	.38	145.98	05.62	03.85	4.27E+01	.89
DECMTH3	ITC-BLAD	002	-.39	145.98	02.25	01.54	4.27E+01	.89
DLCMBM2	CSGR30Y	001	.58	244.16	39.53	16.19	5.62E+01	.86
DLCMBM2	VD(AER)	002	.36	244.16	29.07	11.91	5.62E+01	.86
DLCMBM2	PZ1(E/F)	003	-.31	244.16	16.28	06.67	5.62E+01	.86
DLCMBM3	CSGR30Y	001	.53	251.75	32.18	12.78	3.63E+01	.87
DLCMBM3	VD(AER)	003	.32	251.75	31.03	12.33	3.63E+01	.87
DLCMBM3	QY1(E/F)	080	.07	251.75	27.59	10.96	3.63E+01	.87
DLCMBM3	AW(AER)	002	.38	251.75	13.79	05.48	3.63E+01	.87
DLCMBM4	CSGR30Y	001	.54	178.91	36.47	20.38	2.34E+01	.85
DLCMBM4	CSGR100Y	013	.22	178.91	22.35	12.49	2.34E+01	.85
DLCMBM4	AW(AER)	002	.50	178.91	16.47	09.21	2.34E+01	.85
DLCMBM4	CSWB2-UL	003	-.45	178.91	04.71	02.63	2.34E+01	.85
DLCMED2	BBF-ET2	001	-.43	147.37	25.64	17.40	1.23E+02	.78
DLCMED2	BBS-ET2	119	.04	147.37	17.95	12.18	1.23E+02	.78
DLCMED2	CSGR30Y	003	.28	147.37	10.26	06.96	1.23E+02	.78
DLCMED2	ET2-STOM	002	-.35	147.37	07.69	05.22	1.23E+02	.78
DLCMED3	BBF-ET2	001	-.39	152.73	21.05	13.78	4.57E+01	.76
DLCMED3	CSGR30Y	002	.31	152.73	14.47	09.47	4.57E+01	.76
DLCMED3	RF(BR)	003	.25	152.73	01.32	00.86	4.57E+01	.76
DLCMED4	CSGR30Y	001	.39	159.80	20.78	13.00	1.70E+01	.77
DLCMED4	BBF-ET2	002	-.31	159.80	12.99	08.13	1.70E+01	.77
DLCMED4	ET2-STOM	003	-.30	159.80	05.19	03.25	1.70E+01	.77
DLCMTH2	CSGR30Y	001	.46	184.17	28.92	15.70	3.55E+01	.83
DLCMTH2	PZ1(E/F)	002	-.37	184.17	16.87	09.16	3.55E+01	.83
DLCMTH2	ITC-BLAD	003	-.34	184.17	01.20	00.65	3.55E+01	.83
DLCMTH3	CSGR30Y	001	.50	215.07	31.40	14.60	1.91E+01	.86
DLCMTH3	VD(AER)	010	.24	215.07	23.26	10.82	1.91E+01	.86
DLCMTH3	AW(AER)	002	.36	215.07	09.30	04.32	1.91E+01	.86
DLCMTH3	PZ1(D)	003	-.35	215.07	00.00	00.00	1.91E+01	.86
DLCMTH4	CSGR30Y	001	.52	165.43	33.33	20.15	1.58E+01	.84
DLCMTH4	CSGR100Y	017	.22	165.43	21.43	12.95	1.58E+01	.84
DLCMTH4	AW(AER)	002	.49	165.43	11.90	07.19	1.58E+01	.84
DLCMTH4	VD(EL-I)	003	-.47	165.43	05.95	03.60	1.58E+01	.84
DLLVBM2	VD(AER)	002	.52	261.04	45.56	17.45	3.98E+02	.90
DLLVBM2	QY1(E/F)	116	-.05	261.04	38.89	14.90	3.98E+02	.90
DLLVBM2	SK(AER)	164	-.01	261.04	34.44	13.19	3.98E+02	.90
DLLVBM2	FMDC_CS	001	.56	261.04	21.11	08.09	3.98E+02	.90
DLLVBM2	PZ1(E/F)	003	-.41	261.04	13.33	05.11	3.98E+02	.90

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
DLLVBM3	VD(AER)	003	.39	220.14	29.21	13.27	2.14E+02	.89
DLLVBM3	QY1(E/F)	111	-.05	220.14	25.84	11.74	2.14E+02	.89
DLLVBM3	FMDC_CS	001	.56	220.14	24.72	11.23	2.14E+02	.89
DLLVBM3	SK(AER)	144	.03	220.14	23.60	10.72	2.14E+02	.89
DLLVBM3	CSWB2-UL	002	-.47	220.14	06.74	03.06	2.14E+02	.89
DLLVBM4	FMDC_CS	001	.53	164.42	27.59	16.78	1.41E+02	.87
DLLVBM4	CSWB2-UL	002	-.52	164.42	09.20	05.60	1.41E+02	.87
DLLVBM4	INTFACP	003	.43	164.42	04.60	02.80	1.41E+02	.87
DLLVED2	FMDC_I	001	.53	170.55	22.73	13.33	9.77E+01	.88
DLLVED2	FMDC_CS	003	.42	170.55	15.91	09.33	9.77E+01	.88
DLLVED2	INTFACP	002	.52	170.55	14.77	08.66	9.77E+01	.88
DLLVED3	FMDC_I	001	.48	162.76	22.09	13.57	7.59E+01	.86

DLLVED3	FMDC_CS	003	.43	162.76	18.60	11.43	7.59E+01	.86
DLLVED3	INTFACP	002	.47	162.76	15.12	09.29	7.59E+01	.86
DLLVED4	FMDC_CS	002	.44	132.12	21.43	16.22	6.61E+01	.84
DLLVED4	FMDC_I	004	.36	132.12	20.24	15.32	6.61E+01	.84
DLLVED4	INTFACP	001	.49	132.12	14.29	10.82	6.61E+01	.84
DLLVED4	CNSRTMLK	003	.41	132.12	07.14	05.40	6.61E+01	.84
DLLVTH2	FMDC_I	001	.75	157.71	43.33	27.47	3.16E+02	.90
DLLVTH2	INTFACP	002	.67	157.71	28.89	18.32	3.16E+02	.90
DLLVTH2	CNSRTMLK	003	.38	157.71	03.33	02.11	3.16E+02	.90
DLLVTH3	FMDC_I	001	.75	152.82	43.96	28.77	2.19E+02	.91
DLLVTH3	INTFACP	002	.68	152.82	28.57	18.70	2.19E+02	.91
DLLVTH3	CNSRTMLK	003	.44	152.82	04.40	02.88	2.19E+02	.91
DLLVTH4	FMDC_I	001	.65	138.76	36.36	26.20	1.78E+02	.88
DLLVTH4	INTFACP	002	.62	138.76	21.59	15.56	1.78E+02	.88
DLLVTH4	VD(EL-I)	003	-.48	138.76	06.82	04.91	1.78E+02	.88
PECMBM	PY1(E/F)	001	-.50	100.07	11.43	11.42	9.99E+09	.70
PECMBM	VD(EL-I)	002	.35	100.07	11.43	11.42	9.99E+09	.70
PECMBM	PZ1(E/F)	003	-.34	100.07	02.86	02.86	9.99E+09	.70
PECMLU	D0(LUMB)	001	-.52	157.85	20.99	13.30	9.99E+09	.81
PECMLU	INDEPET	002	-.35	157.85	06.17	03.91	9.99E+09	.81
PECMLU	PZ1(E/F)	003	-.26	157.85	02.47	01.56	9.99E+09	.81
PECMMB	SK(EL-I)	001	.77	131.38	52.33	39.83	9.99E+09	.86
PECMMB	PZ1(E/F)	002	-.40	131.38	08.14	06.20	9.99E+09	.86
PECMMB	D0(LUMB)	003	-.39	131.38	02.33	01.77	9.99E+09	.86
PECMMT	SK(EL-I)	001	.65	122.13	27.16	22.24	9.99E+09	.81
PECMMT	PZ1(E/F)	002	-.45	122.13	07.41	06.07	9.99E+09	.81
PECMMT	DI(SK)	003	-.39	122.13	03.70	03.03	9.99E+09	.81
PECMSK	SK(EL-I)	001	.86	176.99	72.53	40.98	9.99E+09	.91
PECMSK	DI(SK)	002	-.38	176.99	07.69	04.34	9.99E+09	.91
PECMSK	VD(EL-I)	003	-.32	176.99	01.10	00.62	9.99E+09	.91
PECMTH	VD(EL-I)	004	-.33	121.71	15.38	12.64	9.99E+09	.78
PECMTH	INDEPEXT	002	.34	121.71	06.41	05.27	9.99E+09	.78
PECMTH	ITC-BLAD	003	-.33	121.71	02.56	02.10	9.99E+09	.78
PECMTH	PZ1(E/F)	001	-.34	121.71	02.56	02.10	9.99E+09	.78
PLCMBM	RF(BM)	001	.88	153.34	67.39	43.95	9.99E+09	.92
PLCMBM	CSWB2-UL	002	-.42	153.34	06.52	04.25	9.99E+09	.92
PLCMBM	PUCS-CM	003	-.35	153.34	00.00	00.00	9.99E+09	.92
PLCMMT	ET2-STOM	002	-.45	166.62	15.48	09.29	8.51E+01	.84
PLCMMT	RF(RE)	001	.50	166.62	15.48	09.29	8.51E+01	.84
PLCMMT	RF(LU)	003	.36	166.62	10.71	06.43	8.51E+01	.84
PLCMTH	RF(TH)	001	.96	142.23	89.69	63.06	9.99E+09	.97
PLCMTH	VD(EL-I)	002	-.45	142.23	03.09	02.17	9.99E+09	.97
PLCMTH	CNSRTMLK	003	.41	142.23	00.00	00.00	9.99E+09	.97
PLLVBM	RF(BM)	001	.80	147.85	53.41	36.12	9.99E+09	.88
PLLVBM	FMDC_CS	003	.39	147.85	12.50	08.45	9.99E+09	.88
PLLVBM	CSWB2-UL	002	-.43	147.85	07.95	05.38	9.99E+09	.88
PLLVMT	FMDC_CS	001	.49	126.15	15.48	12.27	5.75E+01	.84
PLLVMT	INTFACP	003	.35	126.15	09.52	07.55	5.75E+01	.84
PLLVMT	RF(RE)	002	.43	126.15	08.33	06.60	5.75E+01	.84
PLLVTH	RF(TH)	001	.91	128.62	64.89	50.45	9.99E+09	.94
PLLVTH	FMDC_I	002	.68	128.62	10.64	08.27	9.99E+09	.94
PLLVTH	INTFACP	003	.58	128.62	10.64	08.27	9.99E+09	.94

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
RECMLU1	D0(LUMB)	001	-.26	125.35	10.45	08.34	9.99E+09	.67
RECMLU1	IGR3D	003	-.21	125.35	00.00	00.00	9.99E+09	.67
RECMLU1	SK(AER)	002	-.22	125.35	00.00	00.00	9.99E+09	.67
RECMLU2	D0(SK)	002	.19	084.54	01.69	02.00	9.99E+09	.59
RECMLU2	PULV-ULI	001	.22	084.54	01.69	02.00	9.99E+09	.59
RECMLU2	PY1(A/B)	003	.18	084.54	00.00	00.00	9.99E+09	.59
RECMMB1	SK(EL-I)	001	.73	180.53	65.85	36.48	9.99E+09	.82
RECMMB1	PZ1(E/F)	002	-.23	180.53	07.32	04.05	9.99E+09	.82
RECMMB1	STOM-SI	003	-.20	180.53	01.22	00.68	9.99E+09	.82
RECMMB2	SK(EL-I)	001	.53	097.24	32.39	33.31	9.99E+09	.71
RECMMB2	VD(EL-I)	002	-.28	097.24	05.63	05.79	9.99E+09	.71
RECMMB2	SKMORT	003	-.27	097.24	01.41	01.45	9.99E+09	.71
RECMMT1	SK(EL-I)	001	.66	142.24	48.72	34.25	9.99E+09	.78
RECMMT1	PZ1(E/F)	003	-.22	142.24	07.69	05.41	9.99E+09	.78
RECMMT1	DI(SK)	002	-.30	142.24	03.85	02.71	9.99E+09	.78
RECMMT2	SK(EL-I)	001	.52	107.21	34.29	31.98	9.99E+09	.70
RECMMT2	VD(EL-I)	002	-.29	107.21	05.71	05.33	9.99E+09	.70
RECMMT2	DI(SK)	003	-.27	107.21	04.29	04.00	9.99E+09	.70
RECMSK1	SK(EL-I)	001	.80	179.01	76.74	42.87	9.99E+09	.86
RECMSK1	DI(SK)	002	-.28	179.01	03.49	01.95	9.99E+09	.86
RECMSK1	IGR1D	003	-.22	179.01	00.00	00.00	9.99E+09	.86
RECMSK2	SK(EL-I)	001	.53	107.21	34.29	31.98	9.99E+09	.70
RECMSK2	VD(EL-I)	002	-.29	107.21	05.71	05.33	9.99E+09	.70
RECMSK2	DI(SK)	003	-.28	107.21	04.29	04.00	9.99E+09	.70
RECMTH1	VD(EL-I)	002	-.27	091.34	10.14	11.10	9.99E+09	.69
RECMTH1	D0(BM)	001	-.34	091.34	02.90	03.17	9.99E+09	.69
RECMTH1	ITC-THR	003	.27	091.34	02.90	03.17	9.99E+09	.69
RLCMBM2	RF(BM)	001	.86	185.91	53.26	28.65	9.99E+09	.92
RLCMBM2	CSGR30Y	002	.52	185.91	16.30	08.77	9.99E+09	.92
RLCMBM2	CSGR100Y	003	.35	185.91	07.61	04.09	9.99E+09	.92
RLCMBM3	RF(BM)	001	.87	185.10	59.14	31.95	9.99E+09	.93
RLCMBM3	CSGR30Y	002	.44	185.10	11.83	06.39	9.99E+09	.93
RLCMBM3	AW(AER)	003	.37	185.10	04.30	02.32	9.99E+09	.93
RLCMBM4	RF(BM)	001	.90	150.98	64.89	42.98	9.99E+09	.94
RLCMBM4	CSGR30Y	003	.45	150.98	09.57	06.34	9.99E+09	.94
RLCMBM4	AW(AER)	002	.49	150.98	05.32	03.52	9.99E+09	.94
RLCMMT2	ET2-STOM	001	-.52	146.78	24.69	16.82	8.91E+01	.81
RLCMMT2	RF(RE)	002	.37	146.78	11.11	07.57	8.91E+01	.81
RLCMMT2	BBF-ET2	003	-.34	146.78	09.88	06.73	8.91E+01	.81
RLCMMT3	ET2-STOM	001	-.44	150.43	18.07	12.01	1.15E+02	.83
RLCMMT3	RF(RE)	002	.44	150.43	14.46	09.61	1.15E+02	.83
RLCMMT3	RF(LU)	003	.32	150.43	09.64	06.41	1.15E+02	.83
RLCMMT4	ET2-STOM	001	-.51	151.86	18.82	12.39	7.59E+01	.85
RLCMMT4	RF(RE)	002	.46	151.86	17.65	11.62	7.59E+01	.85
RLCMMT4	RF(LU)	003	.46	151.86	14.12	09.30	7.59E+01	.85
RLCMTH2	RF(TH)	001	.95	159.32	84.38	52.96	9.99E+09	.96
RLCMTH2	CSGR30Y	003	.39	159.32	09.38	05.89	9.99E+09	.96
RLCMTH2	PZ1(E/F)	002	-.40	159.32	05.21	03.27	9.99E+09	.96
RLCMTH3	RF(TH)	001	.96	160.77	87.63	54.51	9.99E+09	.97
RLCMTH3	CSGR30Y	002	.40	160.77	09.28	05.77	9.99E+09	.97
RLCMTH3	PZ1(D)	003	-.28	160.77	00.00	00.00	9.99E+09	.97
RLCMTH4	RF(TH)	001	.95	144.29	88.66	61.45	9.99E+09	.97
RLCMTH4	CSGR30Y	002	.41	144.29	08.25	05.72	9.99E+09	.97
RLCMTH4	VD(EL-I)	003	-.40	144.29	02.06	01.43	9.99E+09	.97
RLLVBM2	RF(BM)	001	.79	184.20	48.31	26.23	8.32E+05	.89
RLLVBM2	VD(AER)	002	.37	184.20	23.60	12.81	8.32E+05	.89
RLLVBM2	QY1(E/F)	117	-.04	184.20	19.10	10.37	8.32E+05	.89
RLLVBM2	CSWB2-UL	003	-.34	184.20	05.62	03.05	8.32E+05	.89
RLLVBM3	RF(BM)	001	.80	171.83	53.93	31.39	9.99E+09	.89
RLLVBM3	FMDC_CS	003	.33	171.83	08.99	05.23	9.99E+09	.89
RLLVBM3	CSWB2-UL	002	-.36	171.83	05.62	03.27	9.99E+09	.89
RLLVBM4	RF(BM)	001	.82	142.60	56.18	39.40	9.99E+09	.89
RLLVBM4	CSWB2-UL	002	-.43	142.60	06.74	04.73	9.99E+09	.89
RLLVBM4	AW(AER)	003	.40	142.60	04.49	03.15	9.99E+09	.89

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
RLLVMT2	RF(RE)	001	.41	167.13	09.76	05.84	1.20E+01	.82
RLLVMT2	FMDC_CS	003	.34	167.13	08.54	05.11	1.20E+01	.82
RLLVMT2	RF(TH)	002	.39	167.13	04.88	02.92	1.20E+01	.82
RLLVMT3	FMDC_CS	001	.44	151.65	13.25	08.74	9.77E+01	.83
RLLVMT3	RF(RE)	002	.42	151.65	09.64	06.36	9.77E+01	.83
RLLVMT3	RF(TH)	003	.36	151.65	03.61	02.38	9.77E+01	.83
RLLVMT4	FMDC_CS	001	.46	132.10	14.29	10.82	9.55E+01	.84
RLLVMT4	RF(RE)	002	.41	132.10	09.52	07.21	9.55E+01	.84
RLLVMT4	RF(LU)	003	.35	132.10	07.14	05.40	9.55E+01	.84
RLLVTH2	RF(TH)	001	.90	133.95	60.64	45.27	1.05E+05	.94
RLLVTH2	INTFACP	003	.58	133.95	11.70	08.73	1.05E+05	.94
RLLVTH2	FMDC_I	002	.70	133.95	10.64	07.94	1.05E+05	.94
RLLVTH3	RF(TH)	001	.89	138.83	63.44	45.70	9.99E+09	.93
RLLVTH3	INTFACP	003	.55	138.83	11.83	08.52	9.99E+09	.93
RLLVTH3	FMDC_I	002	.65	138.83	10.75	07.74	9.99E+09	.93
RLLVTH4	RF(TH)	001	.87	129.43	66.30	51.22	9.99E+09	.92
RLLVTH4	FMDC_I	002	.56	129.43	07.61	05.88	9.99E+09	.92
RLLVTH4	INTFACP	003	.49	129.43	07.61	05.88	9.99E+09	.92

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

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
AFBIBEE	AW(AER)	004	.35	185.09	21.84	11.80	4.97E+02	.87
AFBIBEE	INTFACP	001	.68	185.09	21.84	11.80	4.97E+02	.87
AFBIBEE	VD(AER)	003	.38	185.09	16.09	08.69	4.97E+02	.87
AFBIBEE	RTHS	002	.52	185.09	08.05	04.35	4.97E+02	.87
AFBIGRA	INTFACC	001	-.54	229.54	30.59	13.33	9.99E+09	.85
AFBIGRA	RTC_CS	002	.38	229.54	23.53	10.25	9.99E+09	.85
AFBIGRA	PLOSSC	003	-.30	229.54	07.06	03.08	9.99E+09	.85
AFBIMIL	FMDC_I	001	.76	147.29	45.05	30.59	4.37E+02	.91
AFBIMIL	INTFACP	002	.74	147.29	38.46	26.11	4.37E+02	.91
AFBIMIL	RTHS	003	.52	147.29	07.69	05.22	4.37E+02	.91
AFBIVEG	SOLCONG	001	.92	152.86	91.40	59.79	5.91E+01	.93
AFBIVEG	INDEPTB	003	.19	152.86	00.00	00.00	5.91E+01	.93
AFBIVEG	SRANY-BL	002	-.20	152.86	00.00	00.00	5.91E+01	.93
AFBTBEE	VD(AER)	003	.42	219.58	24.14	10.99	1.42E+03	.87
AFBTBEE	RTHS	001	.58	219.58	11.49	05.23	1.42E+03	.87
AFBTBEE	INTFACP	002	.49	219.58	06.90	03.14	1.42E+03	.87
AFBTGRA	INTFACC	001	-.54	227.18	30.59	13.47	9.99E+09	.85
AFBTGRA	RTC_CS	002	.39	227.18	23.53	10.36	9.99E+09	.85
AFBTGRA	PLOSSC	003	-.31	227.18	07.06	03.11	9.99E+09	.85
AFBTMIL	FMDC_I	001	.67	163.28	38.89	23.82	1.92E+02	.90
AFBTMIL	INTFACP	002	.65	163.28	24.44	14.97	1.92E+02	.90
AFBTMIL	FMDC_CS	004	.51	163.28	17.78	10.89	1.92E+02	.90
AFBTMIL	RTHS	003	.58	163.28	11.11	06.80	1.92E+02	.90
AFBTVEG	SOLCONG	001	.92	157.18	88.17	56.09	6.02E+01	.93
AFBTVEG	PUCV-CM	003	-.23	157.18	01.08	00.69	6.02E+01	.93
AFBTVEG	INTFACC	002	-.24	157.18	00.00	00.00	6.02E+01	.93
ARELIN	ET2-STOM	002	-.24	105.55	01.82	01.72	9.99E+09	.55
ARELIN	INTFACHS	003	.18	105.55	01.82	01.72	9.99E+09	.55
ARELIN	TEBN-ULI	001	.25	105.55	01.82	01.72	9.99E+09	.55
ARELTIM	ET2-STOM	002	-.24	105.55	01.82	01.72	9.99E+09	.55
ARELTIM	INTFACHS	003	.18	105.55	01.82	01.72	9.99E+09	.55
ARELTIM	TEBN-ULI	001	.25	105.55	01.82	01.72	9.99E+09	.55
CACAE2	VD(AER)	003	-.40	180.80	35.23	19.49	9.05E+00	.88
CACAE2	QY1(E/F)	034	-.12	180.80	28.41	15.71	9.05E+00	.88
CACAE2	SK(AER)	138	.02	180.80	20.45	11.31	9.05E+00	.88
CACAE2	PZ1(E/F)	001	-.73	180.80	15.91	08.80	9.05E+00	.88
CACAE2	QZ1(D)	002	-.46	180.80	01.14	00.63	9.05E+00	.88
CACAE3	VD(AER)	001	-.51	272.96	67.42	24.70	1.66E+01	.89
CACAE3	QY1(E/F)	045	-.11	272.96	56.18	20.58	1.66E+01	.89
CACAE3	SK(AER)	134	.02	272.96	43.82	16.05	1.66E+01	.89
CACAE3	QY1(D)	082	-.07	272.96	30.34	11.12	1.66E+01	.89
CACAE3	PZ1(E/F)	002	-.50	272.96	00.00	00.00	1.66E+01	.89
CACAE3	QZ1(D)	003	-.42	272.96	00.00	00.00	1.66E+01	.89
CACAE4	VD(AER)	001	-.55	324.20	76.92	23.73	1.65E+01	.91
CACAE4	QY1(E/F)	018	-.15	324.20	65.93	20.34	1.65E+01	.91
CACAE4	SK(AER)	083	.06	324.20	52.75	16.27	1.65E+01	.91
CACAE4	QY1(D)	079	-.06	324.20	32.97	10.17	1.65E+01	.91
CACAE4	AW(AER)	003	-.28	324.20	10.99	03.39	1.65E+01	.91
CACAE4	QZ1(D)	002	-.29	324.20	00.00	00.00	1.65E+01	.91
CAIOD2	VD(EL-I)	001	-.91	166.83	82.80	49.63	4.01E+01	.93
CAIOD2	PZ1(E/F)	002	-.53	166.83	04.30	02.58	4.01E+01	.93
CAIOD2	QZ1(D)	003	-.35	166.83	01.08	00.65	4.01E+01	.93
CAIOD3	VD(EL-I)	001	-.96	171.09	92.78	54.23	6.33E+01	.97
CAIOD3	PZ1(E/F)	002	-.39	171.09	01.03	00.60	6.33E+01	.97
CAIOD3	QZ1(D)	003	-.28	171.09	00.00	00.00	6.33E+01	.97
CAIOD4	VD(EL-I)	001	-.97	188.74	94.90	50.28	6.37E+01	.98
CAIOD4	AW(EL-I)	002	-.34	188.74	05.10	02.70	6.37E+01	.98
CAIOD4	PZ1(E/F)	003	.29	188.74	01.02	00.54	6.37E+01	.98
CDCMBM	FMDC_CS	002	.43	190.45	20.24	10.63	7.09E+01	.84
CDCMBM	CSWB2-UL	001	-.46	190.45	07.14	03.75	7.09E+01	.84
CDCMBM	RTHS	003	.36	190.45	03.57	01.87	7.09E+01	.84
CDCMED	FMDC_CS	002	.30	130.38	14.47	11.10	2.84E+01	.76
CDCMED	CNSRTMLK	001	.33	130.38	10.53	08.08	2.84E+01	.76
CDCMED	INTFACP	003	.27	130.38	06.58	05.05	2.84E+01	.76
ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ

CDCMTH	FMDC_I	001	.65	139.11	32.18	23.13	3.72E+01	.87
CDCMTH	INTFACP	002	.58	139.11	19.54	14.05	3.72E+01	.87
CDCMTH	CNSRTMLK	003	.50	139.11	11.49	08.26	3.72E+01	.87
CGCAE2	VD(AER)	001	.62	325.05	77.17	23.74	5.32E+01	.92
CGCAE2	QY1(E/F)	153	.01	325.05	66.30	20.40	5.32E+01	.92
CGCAE2	SK(AER)	119	.03	325.05	54.35	16.72	5.32E+01	.92
CGCAE2	PZ1(E/F)	002	-.41	325.05	16.30	05.01	5.32E+01	.92
CGCAE2	PZ1(D)	003	-.33	325.05	01.09	00.34	5.32E+01	.92
CGCAE3	AW(AER)	001	.40	259.50	40.48	15.60	2.12E+01	.84
CGCAE3	VD(AER)	003	.30	259.50	38.10	14.68	2.12E+01	.84
CGCAE3	BW(AER)	097	-.05	259.50	35.71	13.76	2.12E+01	.84
CGCAE3	QY1(E/F)	068	.08	259.50	35.71	13.76	2.12E+01	.84
CGCAE3	SK(AER)	164	.00	259.50	28.57	11.01	2.12E+01	.84
CGCAE3	QZ1(D)	002	-.31	259.50	02.38	00.92	2.12E+01	.84
CGCAE4	AW(AER)	001	.48	195.06	68.35	35.04	1.01E+01	.79
CGCAE4	BW(AER)	152	-.01	195.06	50.63	25.96	1.01E+01	.79
CGCAE4	PUCS-CM	002	-.29	195.06	00.00	00.00	1.01E+01	.79
CGCAE4	QY1(A/B)	003	-.28	195.06	00.00	00.00	1.01E+01	.79
CGIOD2	VD(EL-I)	001	.47	134.31	22.39	16.67	1.85E+01	.67
CGIOD2	QZ1(D)	002	-.26	134.31	07.46	05.55	1.85E+01	.67
CGIOD2	PZ1(E/F)	003	-.23	134.31	05.97	04.44	1.85E+01	.67
CGIOD3	AW(EL-I)	001	.27	098.15	15.52	15.81	6.66E+00	.58
CGIOD3	SOLCONG	002	-.21	098.15	01.72	01.75	6.66E+00	.58
CGIOD3	TEANY-BL	003	.20	098.15	01.72	01.75	6.66E+00	.58
CGIOD4	VD(EL-I)	001	-.66	142.22	58.97	41.46	1.27E+01	.78
CGIOD4	AW(EL-I)	002	.35	142.22	07.69	05.41	1.27E+01	.78
CGIOD4	CSTC-WB2	003	-.19	142.22	00.00	00.00	1.27E+01	.78
DLCMBM2	VD(AER)	001	.45	270.17	48.28	17.87	9.20E+01	.87
DLCMBM2	QY1(E/F)	082	-.06	270.17	41.38	15.32	9.20E+01	.87
DLCMBM2	SK(AER)	119	.03	270.17	35.63	13.19	9.20E+01	.87
DLCMBM2	CSWB2-UL	002	-.41	270.17	04.60	01.70	9.20E+01	.87
DLCMBM2	RUP_CS	003	.35	270.17	04.60	01.70	9.20E+01	.87
DLCMBM3	VD(AER)	004	.32	210.67	25.88	12.28	8.11E+01	.85
DLCMBM3	QY1(E/F)	079	-.07	210.67	21.18	10.05	8.11E+01	.85
DLCMBM3	FMDC_CS	002	.43	210.67	17.65	08.38	8.11E+01	.85
DLCMBM3	CSWB2-UL	001	-.46	210.67	07.06	03.35	8.11E+01	.85
DLCMBM3	RTHS	003	.33	210.67	02.35	01.12	8.11E+01	.85
DLCMBM4	FMDC_CS	002	.46	161.87	21.43	13.24	7.06E+01	.84
DLCMBM4	AW(AER)	004	.37	161.87	16.67	10.30	7.06E+01	.84
DLCMBM4	CSWB2-UL	001	-.47	161.87	08.33	05.15	7.06E+01	.84
DLCMBM4	RTHS	003	.38	161.87	04.76	02.94	7.06E+01	.84
DLCMED2	VD(AER)	002	.28	166.59	16.00	09.60	4.37E+01	.75
DLCMED2	BBF-ET2	001	-.34	166.59	12.00	07.20	4.37E+01	.75
DLCMED2	SMP12_CS	003	-.27	166.59	04.00	02.40	4.37E+01	.75
DLCMED3	FMDC_CS	001	.30	140.89	11.84	08.40	3.34E+01	.76
DLCMED3	BBF-ET2	002	-.30	140.89	07.89	05.60	3.34E+01	.76
DLCMED3	CNSRTMLK	003	.29	140.89	07.89	05.60	3.34E+01	.76
DLCMED4	FMDC_I	003	.38	123.19	20.73	16.83	3.67E+01	.82
DLCMED4	INTFACP	001	.46	123.19	15.85	12.87	3.67E+01	.82
DLCMED4	FMDC_CS	004	.36	123.19	14.63	11.88	3.67E+01	.82
DLCMED4	CNSRTMLK	002	.39	123.19	09.76	07.92	3.67E+01	.82
DLCMTH2	CNSRTMLK	002	.37	170.00	12.50	07.35	1.34E+01	.80
DLCMTH2	ITC-BLAD	001	-.44	170.00	10.00	05.88	1.34E+01	.80
DLCMTH2	VD(EL-I)	003	-.35	170.00	05.00	02.94	1.34E+01	.80
DLCMTH3	FMDC_I	003	.49	152.35	17.86	11.72	2.05E+01	.84
DLCMTH3	CNSRTMLK	002	.49	152.35	16.67	10.94	2.05E+01	.84
DLCMTH3	INTFACP	001	.50	152.35	13.10	08.60	2.05E+01	.84
DLCMTH4	FMDC_I	001	.72	136.97	39.33	28.71	9.64E+01	.89
DLCMTH4	INTFACP	002	.65	136.97	24.72	18.05	9.64E+01	.89
DLCMTH4	CNSRTMLK	003	.48	136.97	07.87	05.75	9.64E+01	.89
DLOUBM2	VD(AER)	001	.49	263.75	47.73	18.10	1.24E+02	.88
DLOUBM2	QY1(E/F)	072	-.07	263.75	39.77	15.08	1.24E+02	.88
DLOUBM2	SK(AER)	146	.01	263.75	35.23	13.36	1.24E+02	.88
DLOUBM2	FMDC_CS	003	.36	263.75	13.64	05.17	1.24E+02	.88
DLOUBM2	CSWB2-UL	002	-.39	263.75	03.41	01.29	1.24E+02	.88
DLOUBM3	VD(AER)	004	.34	214.16	23.53	10.99	9.00E+01	.85
DLOUBM3	AW(AER)	003	.39	214.16	18.82	08.79	9.00E+01	.85
DLOUBM3	FMDC_CS	002	.40	214.16	16.47	07.69	9.00E+01	.85
DLOUBM3	CSWB2-UL	001	-.43	214.16	05.88	02.75	9.00E+01	.85

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
DLOUBM4	AW(AER)	001	.44	174.96	25.00	14.29	5.10E+01	.84
DLOUBM4	BW(AER)	042	.11	174.96	21.43	12.25	5.10E+01	.84
DLOUBM4	FMDC_CS	003	.35	174.96	15.48	08.85	5.10E+01	.84
DLOUBM4	CSWB2-UL	002	-.44	174.96	07.14	04.08	5.10E+01	.84
DLOUED2	FMDC_I	001	.60	169.42	28.41	16.77	6.42E+01	.88
DLOUED2	INTFACP	002	.59	169.42	19.32	11.40	6.42E+01	.88
DLOUED2	CNSRTMLK	003	.39	169.42	04.55	02.69	6.42E+01	.88
DLOUED3	FMDC_I	002	.50	141.25	29.41	20.82	4.06E+01	.85
DLOUED3	INTFACP	001	.51	141.25	18.82	13.32	4.06E+01	.85
DLOUED3	CNSRTMLK	003	.39	141.25	05.88	04.16	4.06E+01	.85
DLOUED4	FMDC_I	002	.45	138.40	25.30	18.28	3.92E+01	.83
DLOUED4	INTFACP	001	.47	138.40	18.07	13.06	3.92E+01	.83
DLOUED4	CNSRTMLK	003	.38	138.40	07.23	05.22	3.92E+01	.83
DLOUTH2	FMDC_I	001	.77	151.05	45.56	30.16	2.29E+02	.90
DLOUTH2	INTFACP	002	.69	151.05	28.89	19.13	2.29E+02	.90
DLOUTH2	CNSRTMLK	003	.45	151.05	03.33	02.20	2.29E+02	.90
DLOUTH3	FMDC_I	001	.78	156.11	48.35	30.97	1.49E+02	.91
DLOUTH3	INTFACP	002	.71	156.11	29.67	19.01	1.49E+02	.91
DLOUTH3	CNSRTMLK	003	.48	156.11	04.40	02.82	1.49E+02	.91
DLOUTH4	FMDC_I	001	.77	142.92	42.86	29.99	1.49E+02	.91
DLOUTH4	INTFACP	002	.69	142.92	26.37	18.45	1.49E+02	.91
DLOUTH4	VD(EL-I)	003	-.53	142.92	05.49	03.84	1.49E+02	.91
PLCMBM	RF(BM)	001	.84	163.28	58.89	36.07	2.53E+05	.90
PLCMBM	CSWB2-UL	002	-.38	163.28	06.67	04.09	2.53E+05	.90
PLCMBM	AW(AER)	003	.30	163.28	04.44	02.72	2.53E+05	.90
PLCMMT	RF(RE)	001	.48	130.00	15.00	11.54	6.41E+01	.80
PLCMMT	FMDC_CS	003	.32	130.00	06.25	04.81	6.41E+01	.80
PLCMMT	RF(TH)	002	.36	130.00	02.50	01.92	6.41E+01	.80
PLCMTH	RF(TH)	001	.94	132.24	80.21	60.65	1.61E+05	.96
PLCMTH	INTFACP	003	.50	132.24	04.17	03.15	1.61E+05	.96
PLCMTH	FMDC_I	002	.56	132.24	03.13	02.37	1.61E+05	.96
RLCMBM2	RF(BM)	001	.84	183.28	55.56	30.31	5.34E+05	.90
RLCMBM2	VD(AER)	002	.36	183.28	21.11	11.52	5.34E+05	.90
RLCMBM2	CSWB2-UL	003	-.34	183.28	05.56	03.03	5.34E+05	.90
RLCMBM3	RF(BM)	001	.83	169.95	57.78	34.00	2.83E+05	.90
RLCMBM3	CSWB2-UL	002	-.38	169.95	06.67	03.92	2.83E+05	.90
RLCMBM3	AW(AER)	003	.30	169.95	03.33	01.96	2.83E+05	.90
RLCMBM4	RF(BM)	001	.83	147.11	58.43	39.72	3.68E+05	.89
RLCMBM4	AW(AER)	003	.35	147.11	06.74	04.58	3.68E+05	.89
RLCMBM4	CSWB2-UL	002	-.38	147.11	06.74	04.58	3.68E+05	.89
RLCMMT2	RF(RE)	001	.45	154.13	16.05	10.41	9.59E+01	.81
RLCMMT2	ET2-STOM	003	-.32	154.13	12.35	08.01	9.59E+01	.81
RLCMMT2	RF(LU)	002	.37	154.13	12.35	08.01	9.59E+01	.81
RLCMMT3	RF(RE)	001	.46	130.00	15.00	11.54	7.51E+01	.80
RLCMMT3	FMDC_CS	003	.32	130.00	05.00	03.85	7.51E+01	.80
RLCMMT3	RF(TH)	002	.34	130.00	02.50	01.92	7.51E+01	.80
RLCMMT4	RF(RE)	001	.44	131.25	11.25	08.57	6.48E+01	.80
RLCMMT4	FMDC_CS	002	.37	131.25	08.75	06.67	6.48E+01	.80
RLCMMT4	RF(TH)	003	.36	131.25	03.75	02.86	6.48E+01	.80
RLCMTH2	RF(TH)	001	.96	139.13	87.63	62.98	1.73E+05	.97
RLCMTH2	ITC-BLAD	003	-.36	139.13	01.03	00.74	1.73E+05	.97
RLCMTH2	ITC-THR	002	.38	139.13	00.00	00.00	1.73E+05	.97
RLCMTH3	RF(TH)	001	.95	133.26	85.42	64.10	1.03E+05	.96
RLCMTH3	CNSRTMLK	003	.44	133.26	02.08	01.56	1.03E+05	.96
RLCMTH3	INTFACP	002	.44	133.26	02.08	01.56	1.03E+05	.96
RLCMTH4	RF(TH)	001	.91	131.83	70.21	53.26	2.90E+05	.94
RLCMTH4	FMDC_I	002	.61	131.83	07.45	05.65	2.90E+05	.94
RLCMTH4	INTFACP	003	.54	131.83	07.45	05.65	2.90E+05	.94
RLOUBM2	RF(BM)	001	.83	192.15	53.33	27.75	5.23E+05	.90
RLOUBM2	VD(AER)	002	.41	192.15	23.33	12.14	5.23E+05	.90
RLOUBM2	CSWB2-UL	003	-.32	192.15	04.44	02.31	5.23E+05	.90
RLOUBM3	RF(BM)	001	.84	168.85	57.78	34.22	3.07E+05	.90
RLOUBM3	AW(AER)	003	.35	168.85	06.67	03.95	3.07E+05	.90
RLOUBM3	CSWB2-UL	002	-.36	168.85	05.56	03.29	3.07E+05	.90

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
RLOUBM4	RF(BM)	001	.85	155.50	60.00	38.59	3.53E+05	.90
RLOUBM4	AW(AER)	003	.40	155.50	08.89	05.72	3.53E+05	.90
RLOUBM4	CSWB2-UL	002	-.40	155.50	05.56	03.58	3.53E+05	.90
RLOUMT2	RF(RE)	002	.48	157.09	11.90	07.58	9.55E+01	.84
RLOUMT2	PZ1(E/F)	003	-.39	157.09	08.33	05.30	9.55E+01	.84
RLOUMT2	RF(TH)	001	.49	157.09	08.33	05.30	9.55E+01	.84
RLOUMT3	RF(RE)	001	.46	129.32	12.20	09.43	6.25E+01	.82
RLOUMT3	RF(LU)	003	.30	129.32	06.10	04.72	6.25E+01	.82
RLOUMT3	RF(TH)	002	.43	129.32	06.10	04.72	6.25E+01	.82
RLOUMT4	RF(RE)	001	.44	130.54	10.98	08.41	4.28E+01	.82
RLOUMT4	RF(LU)	003	.33	130.54	08.54	06.54	4.28E+01	.82
RLOUMT4	RF(TH)	002	.35	130.54	03.66	02.80	4.28E+01	.82
RLOUTH2	RF(TH)	001	.90	129.70	61.70	47.57	2.08E+05	.94
RLOUTH2	FMDC_I	002	.70	129.70	11.70	09.02	2.08E+05	.94
RLOUTH2	INTFACP	003	.62	129.70	10.64	08.20	2.08E+05	.94
RLOUTH3	RF(TH)	001	.91	130.77	67.02	51.25	2.81E+05	.94
RLOUTH3	FMDC_I	002	.68	130.77	10.64	08.14	2.81E+05	.94
RLOUTH3	INTFACP	003	.61	130.77	10.64	08.14	2.81E+05	.94
RLOUTH4	RF(TH)	001	.90	130.75	65.96	50.45	3.73E+05	.94
RLOUTH4	FMDC_I	002	.64	130.75	09.57	07.32	3.73E+05	.94
RLOUTH4	INTFACP	003	.57	130.75	09.57	07.32	3.73E+05	.94

Results for the 95th percentile of the endpoints for the DBA source term

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
AFBIBEE	AW(AER)	003	.33	179.05	23.26	12.99	5.75E+02	.86
AFBIBEE	INTFACP	001	.66	179.05	23.26	12.99	5.75E+02	.86
AFBIBEE	BW(AER)	105	-.04	179.05	19.77	11.04	5.75E+02	.86
AFBIBEE	RTHS	002	.48	179.05	08.14	04.55	5.75E+02	.86
AFBIGRA	INTFACC	001	-.48	191.26	26.58	13.90	9.99E+09	.79
AFBIGRA	RTC_CS	002	.35	191.26	18.99	09.93	9.99E+09	.79
AFBIGRA	RUTC-WB2	003	-.28	191.26	00.00	00.00	9.99E+09	.79
AFBIMIL	FMDC_I	001	.78	145.70	45.65	31.33	4.90E+02	.92
AFBIMIL	INTFACP	002	.75	145.70	36.96	25.37	4.90E+02	.92
AFBIMIL	RTHS	003	.53	145.70	07.61	05.22	4.90E+02	.92
AFBIVEG	SOLCONG	001	.94	146.27	92.63	63.33	6.92E+01	.95
AFBIVEG	AW(EL-I)	002	.20	146.27	02.11	01.44	6.92E+01	.95
AFBIVEG	SRANY-BL	003	-.20	146.27	01.05	00.72	6.92E+01	.95
AFBTBEE	AW(AER)	004	.33	210.70	23.53	11.17	9.99E+09	.85
AFBTBEE	BW(AER)	142	-.01	210.70	21.18	10.05	9.99E+09	.85
AFBTBEE	VD(AER)	003	.35	210.70	18.82	08.93	9.99E+09	.85
AFBTBEE	RTHS	001	.54	210.70	11.76	05.58	9.99E+09	.85
AFBTBEE	INTFACP	002	.46	210.70	07.06	03.35	9.99E+09	.85
AFBTGRA	INTFACC	001	-.47	211.50	24.05	11.37	9.99E+09	.79
AFBTGRA	RTC_CS	002	.36	211.50	21.52	10.17	9.99E+09	.79
AFBTGRA	RUTC-WB2	003	-.26	211.50	00.00	00.00	9.99E+09	.79
AFBTMIL	FMDC_I	001	.67	153.30	40.00	26.09	1.74E+02	.90
AFBTMIL	INTFACP	002	.64	153.30	25.56	16.67	1.74E+02	.90
AFBTMIL	FMDC_CS	004	.49	153.30	15.56	10.15	1.74E+02	.90
AFBTMIL	RTHS	003	.57	153.30	12.22	07.97	1.74E+02	.90
AFBTVEG	SOLCONG	001	.93	148.37	90.53	61.02	6.76E+01	.95
AFBTVEG	PUCV-CM	002	-.26	148.37	01.05	00.71	6.76E+01	.95
AFBTVEG	INTFACC	003	-.23	148.37	00.00	00.00	6.76E+01	.95
ARELIN	ET2-STOM	001	-.24	085.86	03.57	04.16	9.99E+09	.56
ARELIN	QY1(C)	002	-.21	085.86	01.79	02.08	9.99E+09	.56
ARELIN	PULV-ULI	003	.18	085.86	00.00	00.00	9.99E+09	.56
CACAE2	QZ1(D)	001	-.59	149.98	20.24	13.50	1.62E+01	.84
CACAE2	QY1(D)	007	.22	149.98	15.48	10.32	1.62E+01	.84
CACAE2	PY1(E/F)	002	.51	149.98	13.10	08.73	1.62E+01	.84
CACAE2	PZ1(D)	003	-.44	149.98	01.19	00.79	1.62E+01	.84
CACAE3	QZ1(D)	001	-.40	109.15	11.69	10.71	8.71E+00	.77
CACAE3	VD(AER)	002	-.37	109.15	10.39	09.52	8.71E+00	.77
CACAE3	QZ1(A/B)	003	-.33	109.15	06.49	05.95	8.71E+00	.77
CACAE4	VD(AER)	001	-.39	202.33	33.33	16.47	4.07E+01	.81
CACAE4	AW(AER)	003	-.32	202.33	28.40	14.04	4.07E+01	.81
CACAE4	BW(AER)	146	.01	202.33	25.93	12.82	4.07E+01	.81
CACAE4	QY1(E/F)	039	-.11	202.33	24.69	12.20	4.07E+01	.81
CACAE4	SK(AER)	077	.06	202.33	20.99	10.37	4.07E+01	.81
CACAE4	QY1(D)	002	.32	202.33	01.23	00.61	4.07E+01	.81
CAIOD2	VD(EL-I)	001	-.85	130.24	50.56	38.82	4.37E+01	.89
CAIOD2	PY1(E/F)	003	.37	130.24	05.62	04.32	4.37E+01	.89
CAIOD2	QZ1(A/B)	002	-.37	130.24	02.25	01.73	4.37E+01	.89
CAIOD3	VD(EL-I)	001	-.92	135.69	76.34	56.26	7.59E+01	.93
CAIOD3	PY1(E/F)	003	.27	135.69	03.23	02.38	7.59E+01	.93
CAIOD3	QY1(D)	002	.29	135.69	03.23	02.38	7.59E+01	.93
CAIOD4	VD(EL-I)	001	-.94	142.04	81.05	57.06	7.24E+01	.95
CAIOD4	QY1(D)	002	.45	142.04	01.05	00.74	7.24E+01	.95
CAIOD4	PY1(D)	003	.37	142.04	00.00	00.00	7.24E+01	.95
CDCMBM	FMDC_CS	002	.47	170.20	21.43	12.59	8.71E+01	.84
CDCMBM	CSWB2-UL	001	-.47	170.20	08.33	04.89	8.71E+01	.84
CDCMBM	RTHS	003	.38	170.20	03.57	02.10	8.71E+01	.84
CDCMED	FMDC_CS	002	.34	125.58	15.38	12.25	3.24E+01	.78
CDCMED	FMDC_I	005	.26	125.58	14.10	11.23	3.24E+01	.78
CDCMED	CNSRTMLK	001	.38	125.58	11.54	09.19	3.24E+01	.78
CDCMED	INTFACP	003	.33	125.58	07.69	06.12	3.24E+01	.78
CDCMTH	FMDC_I	001	.71	135.34	34.09	25.19	4.68E+01	.88
CDCMTH	INTFACP	002	.59	135.34	19.32	14.28	4.68E+01	.88
CDCMTH	CNSRTMLK	003	.51	135.34	11.36	08.39	4.68E+01	.88
ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
CGCAE2	VD(AER)	001	.75	364.92	84.54	23.17	5.50E+02	.97
CGCAE2	QY1(E/F)	033	.15	364.92	79.38	21.75	5.50E+02	.97
CGCAE2	SK(AER)	096	.06	364.92	63.92	17.52	5.50E+02	.97

CGCAE2	QY1(D)	016	.18	364.92	44.33	12.15	5.50E+02	.97
CGCAE2	QZ1(D)	002	-.54	364.92	07.22	01.98	5.50E+02	.97
CGCAE2	PY1(E/F)	003	.52	364.92	03.09	00.85	5.50E+02	.97
CGCAE3	VD(AER)	001	.68	366.29	82.11	22.42	9.12E+01	.95
CGCAE3	QY1(E/F)	134	.03	366.29	76.84	20.98	9.12E+01	.95
CGCAE3	SK(AER)	083	.08	366.29	62.11	16.96	9.12E+01	.95
CGCAE3	QY1(D)	009	.23	366.29	49.47	13.51	9.12E+01	.95
CGCAE3	QZ1(D)	002	-.44	366.29	07.37	02.01	9.12E+01	.95
CGCAE3	PY1(E/F)	003	.41	366.29	01.05	00.29	9.12E+01	.95
CGCAE4	QY1(D)	001	.36	296.27	59.04	19.93	1.38E+02	.83
CGCAE4	QY1(E/F)	062	-.09	296.27	45.78	15.45	1.38E+02	.83
CGCAE4	VD(AER)	009	.20	296.27	44.58	15.05	1.38E+02	.83
CGCAE4	SK(AER)	012	.18	296.27	37.35	12.61	1.38E+02	.83
CGCAE4	QY1(C)	002	.28	296.27	33.73	11.38	1.38E+02	.83
CGCAE4	PUCS-CM	003	-.24	296.27	00.00	00.00	1.38E+02	.83
CGIOD2	QY1(E/F)	009	.18	292.66	54.22	18.53	8.71E+01	.83
CGIOD2	VD(AER)	108	.05	292.66	45.78	15.64	8.71E+01	.83
CGIOD2	QY1(D)	025	.14	292.66	42.17	14.41	8.71E+01	.83
CGIOD2	SK(AER)	136	-.02	292.66	39.76	13.59	8.71E+01	.83
CGIOD2	VD(EL-I)	001	.41	292.66	22.89	07.82	8.71E+01	.83
CGIOD2	QZ1(A/B)	002	-.27	292.66	02.41	00.82	8.71E+01	.83
CGIOD2	PY1(E/F)	003	.26	292.66	01.20	00.41	8.71E+01	.83
CGIOD3	QY1(D)	002	.22	250.57	48.00	19.16	2.75E+01	.75
CGIOD3	QY1(E/F)	046	.09	250.57	40.00	15.96	2.75E+01	.75
CGIOD3	VD(AER)	092	.05	250.57	33.33	13.30	2.75E+01	.75
CGIOD3	SK(AER)	162	.00	250.57	29.33	11.71	2.75E+01	.75
CGIOD3	RUANY-BL	003	-.20	250.57	00.00	00.00	2.75E+01	.75
CGIOD3	TPO51_SR	001	-.24	250.57	00.00	00.00	2.75E+01	.75
CGIOD4	VD(EL-I)	001	-.53	137.00	28.77	21.00	3.02E+01	.73
CGIOD4	QY1(D)	002	.32	137.00	17.81	13.00	3.02E+01	.73
CGIOD4	QY1(C)	052	.09	137.00	16.44	12.00	3.02E+01	.73
CGIOD4	TPO51_SR	003	-.22	137.00	00.00	00.00	3.02E+01	.73
DLCMBM2	VD(AER)	001	.52	325.31	68.13	20.94	2.82E+02	.91
DLCMBM2	QY1(E/F)	159	.01	325.31	63.74	19.59	2.82E+02	.91
DLCMBM2	SK(AER)	107	.05	325.31	52.75	16.22	2.82E+02	.91
DLCMBM2	QY1(D)	008	.24	325.31	38.46	11.82	2.82E+02	.91
DLCMBM2	FMDC_CS	003	.34	325.31	06.59	02.03	2.82E+02	.91
DLCMBM2	CSWB2-UL	002	-.37	325.31	02.20	00.68	2.82E+02	.91
DLCMBM3	VD(AER)	001	.44	285.33	53.41	18.72	2.00E+02	.88
DLCMBM3	QY1(E/F)	118	-.04	285.33	48.86	17.12	2.00E+02	.88
DLCMBM3	SK(AER)	132	.03	285.33	40.91	14.34	2.00E+02	.88
DLCMBM3	QY1(D)	016	.19	285.33	30.68	10.75	2.00E+02	.88
DLCMBM3	FMDC_CS	002	.43	285.33	12.50	04.38	2.00E+02	.88
DLCMBM3	CSWB2-UL	003	-.38	285.33	03.41	01.20	2.00E+02	.88
DLCMBM4	QY1(D)	002	.31	218.32	29.27	13.41	2.75E+02	.82
DLCMBM4	QY1(E/F)	049	-.11	218.32	24.39	11.17	2.75E+02	.82
DLCMBM4	VD(AER)	013	.19	218.32	23.17	10.61	2.75E+02	.82
DLCMBM4	SK(AER)	064	.09	218.32	21.95	10.05	2.75E+02	.82
DLCMBM4	FMDC_CS	001	.32	218.32	08.54	03.91	2.75E+02	.82
DLCMBM4	INTFACP	003	.30	218.32	03.66	01.68	2.75E+02	.82
DLCMED2	VD(AER)	001	.34	269.01	50.00	18.59	7.76E+01	.84
DLCMED2	QY1(E/F)	134	-.02	269.01	46.43	17.26	7.76E+01	.84
DLCMED2	SK(AER)	076	.07	269.01	39.29	14.61	7.76E+01	.84
DLCMED2	QY1(D)	029	.14	269.01	29.76	11.06	7.76E+01	.84
DLCMED2	BBF-ET2	002	-.31	269.01	05.95	02.21	7.76E+01	.84
DLCMED2	PY1(E/F)	003	.29	269.01	02.38	00.88	7.76E+01	.84
DLCMED3	QY1(E/F)	112	-.03	224.16	26.58	11.86	5.37E+01	.79
DLCMED3	VD(AER)	006	.25	224.16	26.58	11.86	5.37E+01	.79
DLCMED3	QY1(D)	050	.10	224.16	22.78	10.16	5.37E+01	.79
DLCMED3	SK(AER)	141	.01	224.16	22.78	10.16	5.37E+01	.79
DLCMED3	FMDC_CS	003	.25	224.16	08.86	03.95	5.37E+01	.79
DLCMED3	INTFACP	001	.32	224.16	07.59	03.39	5.37E+01	.79
DLCMED3	BBF-ET2	002	-.27	224.16	05.06	02.26	5.37E+01	.79
DLCMED4	INTFACP	001	.44	150.00	16.25	10.83	7.76E+01	.80
DLCMED4	FMDC_I	002	.29	150.00	12.50	08.33	7.76E+01	.80
DLCMED4	FMDC_CS	003	.28	150.00	06.25	04.17	7.76E+01	.80

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
DLCMTH2	QY1(E/F)	059	.08	233.19	35.80	15.35	2.09E+01	.81
DLCMTH2	VD(AER)	027	.14	233.19	34.57	14.82	2.09E+01	.81
DLCMTH2	SK(AER)	067	.08	233.19	30.86	13.23	2.09E+01	.81
DLCMTH2	QY1(D)	144	.02	233.19	25.93	11.12	2.09E+01	.81
DLCMTH2	CNSRTMLK	002	.34	233.19	09.88	04.24	2.09E+01	.81
DLCMTH2	ITC-BLAD	001	-.44	233.19	07.41	03.18	2.09E+01	.81
DLCMTH2	ITC-THR	003	.33	233.19	03.70	01.59	2.09E+01	.81
DLCMTH3	FMDC_I	002	.47	178.17	19.28	10.82	5.75E+01	.83
DLCMTH3	INTFACP	001	.52	178.17	18.07	10.14	5.75E+01	.83
DLCMTH3	CNSRTMLK	003	.38	178.17	09.64	05.41	5.75E+01	.83
DLCMTH4	FMDC_I	002	.61	154.66	25.00	16.16	2.40E+02	.88
DLCMTH4	INTFACP	001	.64	154.66	22.73	14.70	2.40E+02	.88
DLCMTH4	VD(EL-I)	003	-.46	154.66	04.55	02.94	2.40E+02	.88
DLOUBM2	VD(AER)	001	.59	343.14	73.12	21.31	2.95E+02	.93
DLOUBM2	QY1(E/F)	117	.04	343.14	68.82	20.06	2.95E+02	.93
DLOUBM2	SK(AER)	134	.03	343.14	55.91	16.29	2.95E+02	.93
DLOUBM2	QY1(D)	008	.26	343.14	40.86	11.91	2.95E+02	.93
DLOUBM2	QZ1(D)	002	-.36	343.14	06.45	01.88	2.95E+02	.93
DLOUBM2	CSWB2-UL	003	-.34	343.14	01.08	00.31	2.95E+02	.93
DLOUBM3	VD(AER)	001	.49	308.90	60.67	19.64	1.32E+02	.89
DLOUBM3	QY1(E/F)	109	-.04	308.90	56.18	18.19	1.32E+02	.89
DLOUBM3	SK(AER)	119	.04	308.90	47.19	15.28	1.32E+02	.89
DLOUBM3	QY1(D)	013	.21	308.90	37.08	12.00	1.32E+02	.89
DLOUBM3	FMDC_CS	003	.32	308.90	08.99	02.91	1.32E+02	.89
DLOUBM3	CSWB2-UL	002	-.34	308.90	02.25	00.73	1.32E+02	.89
DLOUBM4	QY1(D)	001	.33	233.62	34.94	14.96	1.86E+02	.83
DLOUBM4	QY1(E/F)	041	-.12	233.62	27.71	11.86	1.86E+02	.83
DLOUBM4	VD(AER)	011	.20	233.62	27.71	11.86	1.86E+02	.83
DLOUBM4	SK(AER)	040	.12	233.62	24.10	10.32	1.86E+02	.83
DLOUBM4	CSGR30Y	002	.28	233.62	04.82	02.06	1.86E+02	.83
DLOUBM4	CSWB2-UL	003	-.27	233.62	02.41	01.03	1.86E+02	.83
DLOUED2	QY1(E/F)	078	.08	291.28	45.05	15.47	1.74E+02	.91
DLOUED2	VD(AER)	003	.40	291.28	42.86	14.71	1.74E+02	.91
DLOUED2	SK(AER)	062	-.10	291.28	34.07	11.70	1.74E+02	.91
DLOUED2	QY1(D)	011	.24	291.28	32.97	11.32	1.74E+02	.91
DLOUED2	FMDC_I	002	.46	291.28	09.89	03.40	1.74E+02	.91
DLOUED2	INTFACP	001	.50	291.28	08.79	03.02	1.74E+02	.91
DLOUED3	QY1(E/F)	148	-.01	232.10	28.57	12.31	6.61E+01	.84
DLOUED3	VD(AER)	003	.29	232.10	27.38	11.80	6.61E+01	.84
DLOUED3	QY1(D)	026	.15	232.10	25.00	10.77	6.61E+01	.84
DLOUED3	INTFACP	001	.47	232.10	13.10	05.64	6.61E+01	.84
DLOUED3	FMDC_I	002	.35	232.10	11.90	05.13	6.61E+01	.84
DLOUED4	INTFACP	001	.39	160.00	13.75	08.59	6.17E+01	.80
DLOUED4	FMDC_I	003	.28	160.00	11.25	07.03	6.17E+01	.80
DLOUED4	BBF-ET2	002	-.28	160.00	02.50	01.56	6.17E+01	.80
DLOUTH2	QY1(E/F)	028	.16	241.85	28.57	11.81	4.17E+02	.91
DLOUTH2	QY1(D)	026	.17	241.85	24.18	10.00	4.17E+02	.91
DLOUTH2	VD(AER)	015	.20	241.85	24.18	10.00	4.17E+02	.91
DLOUTH2	FMDC_I	001	.68	241.85	23.08	09.54	4.17E+02	.91
DLOUTH2	INTFACP	002	.67	241.85	18.68	07.72	4.17E+02	.91
DLOUTH2	ITC-BLAD	003	-.35	241.85	04.40	01.82	4.17E+02	.91
DLOUTH3	FMDC_I	002	.64	196.67	29.55	15.03	2.14E+02	.88
DLOUTH3	INTFACP	001	.65	196.67	23.86	12.13	2.14E+02	.88
DLOUTH3	CNSRTMLK	003	.34	196.67	04.55	02.31	2.14E+02	.88
DLOUTH4	FMDC_I	002	.60	159.21	23.86	14.99	1.55E+02	.88
DLOUTH4	INTFACP	001	.62	159.21	21.59	13.56	1.55E+02	.88
DLOUTH4	VD(EL-I)	003	-.47	159.21	04.55	02.86	1.55E+02	.88
PLCMBM	RF(BM)	001	.82	153.51	59.09	38.49	9.99E+09	.88
PLCMBM	CSWB2-UL	002	-.38	153.51	06.82	04.44	9.99E+09	.88
PLCMBM	AW(AER)	003	.31	153.51	04.55	02.96	9.99E+09	.88
PLCMMT	RF(RE)	001	.46	121.25	13.75	11.34	6.46E+01	.80
PLCMMT	FMDC_CS	003	.37	121.25	07.50	06.19	6.46E+01	.80
PLCMMT	RF(TH)	002	.37	121.25	02.50	02.06	6.46E+01	.80
PLCMTH	RF(TH)	001	.93	129.44	77.89	60.17	9.99E+09	.95
PLCMTH	INTFACP	003	.50	129.44	05.26	04.06	9.99E+09	.95
PLCMTH	FMDC_I	002	.61	129.44	04.21	03.25	9.99E+09	.95
RLCMBM2	RF(BM)	001	.81	225.50	46.67	20.70	9.99E+09	.90
RLCMBM2	VD(AER)	002	.39	225.50	35.56	15.77	9.99E+09	.90
RLCMBM2	QY1(E/F)	158	.01	225.50	32.22	14.29	9.99E+09	.90
RLCMBM2	SK(AER)	106	-.05	225.50	25.56	11.33	9.99E+09	.90
RLCMBM2	PY1(E/F)	003	.32	225.50	00.00	00.00	9.99E+09	.90

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
RLCMBM3	RF(BM)	001	.82	194.39	51.11	26.29	9.99E+09	.90
RLCMBM3	VD(AER)	002	.33	194.39	25.56	13.15	9.99E+09	.90
RLCMBM3	QY1(E/F)	135	-.03	194.39	22.22	11.43	9.99E+09	.90
RLCMBM3	RUP_CS	003	.29	194.39	00.00	00.00	9.99E+09	.90
RLCMBM4	RF(BM)	001	.78	173.58	51.72	29.80	9.99E+09	.87
RLCMBM4	QY1(D)	003	.32	173.58	16.09	09.27	9.99E+09	.87
RLCMBM4	INTFACP	002	.34	173.58	01.15	00.66	9.99E+09	.87
RLCMMT2	VD(AER)	005	.27	240.12	35.29	14.70	2.04E+02	.85
RLCMMT2	QY1(E/F)	064	.09	240.12	31.76	13.23	2.04E+02	.85
RLCMMT2	SK(AER)	078	-.08	240.12	25.88	10.78	2.04E+02	.85
RLCMMT2	RF(RE)	001	.42	240.12	10.59	04.41	2.04E+02	.85
RLCMMT2	ET2-STOM	003	-.29	240.12	07.06	02.94	2.04E+02	.85
RLCMMT2	RF(LU)	002	.32	240.12	05.88	02.45	2.04E+02	.85
RLCMMT3	RF(RE)	001	.45	193.76	12.05	06.22	1.17E+02	.83
RLCMMT3	FMDC_CS	003	.30	193.76	04.82	02.49	1.17E+02	.83
RLCMMT3	RF(TH)	002	.36	193.76	04.82	02.49	1.17E+02	.83
RLCMMT4	RF(RE)	002	.30	153.75	06.25	04.07	1.35E+02	.80
RLCMMT4	RF(TH)	003	.29	153.75	03.75	02.44	1.35E+02	.80
RLCMMT4	PUAT-BL	001	-.30	153.75	01.25	00.81	1.35E+02	.80
RLCMTH2	RF(TH)	001	.95	152.03	85.42	56.19	9.99E+09	.96
RLCMTH2	ITC-BLAD	002	-.37	152.03	01.04	00.68	9.99E+09	.96
RLCMTH2	ITC-THR	003	.36	152.03	01.04	00.68	9.99E+09	.96
RLCMTH3	RF(TH)	001	.93	141.03	77.89	55.23	9.99E+09	.95
RLCMTH3	INTFACP	002	.47	141.03	04.21	02.99	9.99E+09	.95
RLCMTH3	FMDC_I	003	.43	141.03	02.11	01.50	9.99E+09	.95
RLCMTH4	RF(TH)	001	.82	138.12	59.55	43.11	9.99E+09	.89
RLCMTH4	INTFACP	002	.48	138.12	07.87	05.70	9.99E+09	.89
RLCMTH4	FMDC_I	003	.40	138.12	05.62	04.07	9.99E+09	.89
RLOUBM2	RF(BM)	001	.82	235.23	43.96	18.69	9.99E+09	.91
RLOUBM2	VD(AER)	002	.41	235.23	39.56	16.82	9.99E+09	.91
RLOUBM2	QY1(E/F)	145	.02	235.23	35.16	14.95	9.99E+09	.91
RLOUBM2	SK(AER)	118	-.04	235.23	27.47	11.68	9.99E+09	.91
RLOUBM2	PY1(E/F)	003	.33	235.23	00.00	00.00	9.99E+09	.91
RLOUBM3	RF(BM)	001	.81	226.60	47.78	21.09	9.99E+09	.90
RLOUBM3	VD(AER)	002	.36	226.60	33.33	14.71	9.99E+09	.90
RLOUBM3	QY1(E/F)	121	-.04	226.60	30.00	13.24	9.99E+09	.90
RLOUBM3	SK(AER)	107	.05	226.60	24.44	10.79	9.99E+09	.90
RLOUBM3	RTHS	003	.29	226.60	01.11	00.49	9.99E+09	.90
RLOUBM4	RF(BM)	001	.62	166.25	37.50	22.56	9.99E+09	.80
RLOUBM4	QY1(D)	006	.24	166.25	18.75	11.28	9.99E+09	.80
RLOUBM4	CSGRINDR	003	.25	166.25	00.00	00.00	9.99E+09	.80
RLOUBM4	PZ1(E/F)	002	.29	166.25	00.00	00.00	9.99E+09	.80
RLOUMT2	QY1(E/F)	032	.16	262.70	41.76	15.90	1.91E+02	.91
RLOUMT2	VD(AER)	004	.35	262.70	41.76	15.90	1.91E+02	.91
RLOUMT2	SK(AER)	059	-.12	262.70	32.97	12.55	1.91E+02	.91
RLOUMT2	QY1(D)	022	.19	262.70	28.57	10.88	1.91E+02	.91
RLOUMT2	RF(RE)	001	.48	262.70	06.59	02.51	1.91E+02	.91
RLOUMT2	RF(TH)	002	.47	262.70	05.49	02.09	1.91E+02	.91
RLOUMT2	RF(LU)	003	.36	262.70	03.30	01.26	1.91E+02	.91
RLOUMT3	VD(AER)	007	.25	204.60	24.42	11.94	9.55E+01	.86
RLOUMT3	QY1(E/F)	103	.06	204.60	23.26	11.37	9.55E+01	.86
RLOUMT3	RF(RE)	001	.49	204.60	10.47	05.12	9.55E+01	.86
RLOUMT3	RF(TH)	002	.43	204.60	05.81	02.84	9.55E+01	.86
RLOUMT3	PUAT-BL	003	-.31	204.60	01.16	00.57	9.55E+01	.86
RLOUMT4	RF(RE)	002	.32	163.75	07.50	04.58	9.99E+09	.80
RLOUMT4	RF(LU)	003	.29	163.75	06.25	03.82	9.99E+09	.80
RLOUMT4	PUAT-BL	001	-.34	163.75	01.25	00.76	9.99E+09	.80
RLOUTH2	RF(TH)	001	.89	176.49	57.45	32.55	9.99E+09	.94
RLOUTH2	INTFACP	003	.57	176.49	08.51	04.82	9.99E+09	.94
RLOUTH2	FMDC_I	002	.58	176.49	05.32	03.01	9.99E+09	.94
RLOUTH3	RF(TH)	001	.86	152.79	63.74	41.72	9.99E+09	.91
RLOUTH3	INTFACP	002	.51	152.79	08.79	05.75	9.99E+09	.91
RLOUTH3	FMDC_I	003	.46	152.79	05.49	03.59	9.99E+09	.91
RLOUTH4	RF(TH)	001	.59	129.25	40.51	31.34	9.99E+09	.79
RLOUTH4	FMDC_I	003	.25	129.25	03.80	02.94	9.99E+09	.79
RLOUTH4	VD(EL-I)	002	-.32	129.25	01.27	00.98	9.99E+09	.79

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	.34	164.25	26.19	15.95	6.07E+02	.84
AFBIBEE	INTFACP	001	.65	164.25	25.00	15.22	6.07E+02	.84
AFBIBEE	BW(AER)	117	-.03	164.25	21.43	13.05	6.07E+02	.84
AFBIBEE	RTHS	002	.47	164.25	08.33	05.07	6.07E+02	.84
AFBIGRA	INTFACC	001	-.56	181.36	34.57	19.06	9.99E+09	.81
AFBIGRA	RTC_CS	002	.41	181.36	22.22	12.25	9.99E+09	.81
AFBIGRA	RUTC-WB2	003	-.29	181.36	00.00	00.00	9.99E+09	.81
AFBIMIL	FMDC_I	001	.77	147.29	46.15	31.33	4.17E+02	.91
AFBIMIL	INTFACP	002	.74	147.29	38.46	26.11	4.17E+02	.91
AFBIMIL	RTHS	003	.50	147.29	07.69	05.22	4.17E+02	.91
AFBIVEG	SOLCONG	001	.95	145.79	91.67	62.88	6.31E+01	.96
AFBIVEG	AW(EL-I)	002	.28	145.79	02.08	01.43	6.31E+01	.96
AFBIVEG	ZRGRINDR	003	.23	145.79	00.00	00.00	6.31E+01	.96
AFBTBEE	AW(AER)	003	.33	188.35	28.24	14.99	9.99E+09	.85
AFBTBEE	BW(AER)	108	-.04	188.35	23.53	12.49	9.99E+09	.85
AFBTBEE	RTHS	001	.54	188.35	12.94	06.87	9.99E+09	.85
AFBTBEE	INTFACP	002	.46	188.35	07.06	03.75	9.99E+09	.85
AFBTGRA	INTFACC	001	-.51	205.00	30.00	14.63	9.99E+09	.80
AFBTGRA	RTC_CS	002	.40	205.00	25.00	12.20	9.99E+09	.80
AFBTGRA	TETH-ULI	003	-.31	205.00	07.50	03.66	9.99E+09	.80
AFBTMIL	FMDC_I	001	.67	149.35	41.57	27.83	1.82E+02	.89
AFBTMIL	INTFACP	002	.64	149.35	24.72	16.55	1.82E+02	.89
AFBTMIL	FMDC_CS	004	.45	149.35	15.73	10.53	1.82E+02	.89
AFBTMIL	RTHS	003	.55	149.35	11.24	07.53	1.82E+02	.89
AFBTVEG	SOLCONG	001	.94	150.99	88.54	58.64	6.46E+01	.96
AFBTVEG	INTFACC	002	-.30	150.99	00.00	00.00	6.46E+01	.96
AFBTVEG	ZRGRINDR	003	.28	150.99	00.00	00.00	6.46E+01	.96
ARELIN	ET2-STOM	001	-.24	085.86	03.57	04.16	9.99E+09	.56
ARELIN	QY1(C)	002	-.21	085.86	01.79	02.08	9.99E+09	.56
ARELIN	PULV-ULI	003	.18	085.86	00.00	00.00	9.99E+09	.56
CACAE2	VD(AER)	003	-.37	178.85	28.40	15.88	1.15E+01	.81
CACAE2	QY1(E/F)	128	.03	178.85	22.22	12.42	1.15E+01	.81
CACAE2	PZ1(E/F)	001	-.58	178.85	16.05	08.97	1.15E+01	.81
CACAE2	PZ1(D)	002	-.38	178.85	03.70	02.07	1.15E+01	.81
CACAE3	VD(AER)	002	-.47	255.21	52.87	20.72	1.74E+01	.87
CACAE3	QY1(E/F)	101	-.05	255.21	40.23	15.76	1.74E+01	.87
CACAE3	QY1(D)	014	-.19	255.21	33.33	13.06	1.74E+01	.87
CACAE3	SK(AER)	034	.14	255.21	29.89	11.71	1.74E+01	.87
CACAE3	PZ1(D)	003	-.42	255.21	05.75	02.25	1.74E+01	.87
CACAE3	QZ1(D)	001	-.55	255.21	02.30	00.90	1.74E+01	.87
CACAE4	VD(AER)	001	-.46	346.19	73.63	21.27	1.55E+01	.91
CACAE4	QY1(E/F)	012	-.19	346.19	67.03	19.36	1.55E+01	.91
CACAE4	SK(AER)	061	.10	346.19	52.75	15.24	1.55E+01	.91
CACAE4	QY1(D)	006	-.25	346.19	42.86	12.38	1.55E+01	.91
CACAE4	QY1(A/B)	002	-.28	346.19	08.79	02.54	1.55E+01	.91
CACAE4	CSANY-AT	003	.27	346.19	00.00	00.00	1.55E+01	.91
CAIOD2	VD(EL-I)	001	-.86	172.17	80.00	46.47	6.17E+01	.90
CAIOD2	PZ1(E/F)	002	-.42	172.17	03.33	01.93	6.17E+01	.90
CAIOD2	PZ1(D)	003	-.35	172.17	01.11	00.64	6.17E+01	.90
CAIOD3	VD(EL-I)	001	-.93	171.52	88.42	51.55	7.59E+01	.95
CAIOD3	PZ1(D)	003	-.34	171.52	01.05	00.61	7.59E+01	.95
CAIOD3	QZ1(D)	002	-.36	171.52	00.00	00.00	7.59E+01	.95
CAIOD4	VD(EL-I)	001	-.96	188.47	93.75	49.74	9.77E+01	.96
CAIOD4	QY1(D)	003	-.22	188.47	07.29	03.87	9.77E+01	.96
CAIOD4	PZ1(E/F)	002	.23	188.47	01.04	00.55	9.77E+01	.96
CDCMBM	FMDC_CS	002	.45	157.37	23.17	14.72	6.46E+01	.82
CDCMBM	CSWB2-UL	001	-.47	157.37	08.54	05.43	6.46E+01	.82
CDCMBM	RTHS	003	.34	157.37	03.66	02.33	6.46E+01	.82
CDCMED	FMDC_I	004	.29	119.10	15.19	12.75	3.31E+01	.79
CDCMED	CNSRTMLK	001	.43	119.10	13.92	11.69	3.31E+01	.79
CDCMED	FMDC_CS	003	.33	119.10	13.92	11.69	3.31E+01	.79
CDCMED	INTFACP	002	.34	119.10	07.59	06.37	3.31E+01	.79
CDCMTH	FMDC_I	001	.74	134.21	36.36	27.09	4.57E+01	.88
CDCMTH	INTFACP	002	.62	134.21	21.59	16.09	4.57E+01	.88
CDCMTH	CNSRTMLK	003	.53	134.21	11.36	08.46	4.57E+01	.88
ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
CGCAE2	VD(AER)	001	.63	325.06	78.26	24.08	7.59E+01	.92
CGCAE2	QY1(E/F)	077	.07	325.06	65.22	20.06	7.59E+01	.92
CGCAE2	SK(AER)	097	-.05	325.06	54.35	16.72	7.59E+01	.92

CGCAE2	QY1(D)	069	.08	325.06	32.61	10.03	7.59E+01	.92
CGCAE2	PZ1(E/F)	002	-.44	325.06	20.65	06.35	7.59E+01	.92
CGCAE2	PZ1(D)	003	-.35	325.06	01.09	00.34	7.59E+01	.92
CGCAE3	VD(AER)	002	.39	283.05	54.55	19.27	2.88E+01	.88
CGCAE3	QY1(E/F)	021	.18	283.05	51.14	18.07	2.88E+01	.88
CGCAE3	SK(AER)	138	.01	283.05	42.05	14.86	2.88E+01	.88
CGCAE3	AW(AER)	001	.40	283.05	22.73	08.03	2.88E+01	.88
CGCAE3	RUWB-ULI	003	-.33	283.05	02.27	00.80	2.88E+01	.88
CGCAE4	AW(AER)	001	.36	223.80	40.79	18.23	1.10E+01	.76
CGCAE4	BW(AER)	144	.01	223.80	32.89	14.70	1.10E+01	.76
CGCAE4	VD(AER)	006	.20	223.80	23.68	10.58	1.10E+01	.76
CGCAE4	FFBC_CS	003	-.22	223.80	00.00	00.00	1.10E+01	.76
CGCAE4	INDEPTB	002	.25	223.80	00.00	00.00	1.10E+01	.76
CGIOD2	VD(EL-I)	001	.39	126.24	10.77	08.53	2.00E+01	.65
CGIOD2	PZ1(E/F)	002	-.29	126.24	09.23	07.31	2.00E+01	.65
CGIOD2	QZ1(D)	003	-.28	126.24	06.15	04.87	2.00E+01	.65
CGIOD3	AW(EL-I)	006	.20	098.41	10.00	10.16	8.71E+00	.60
CGIOD3	CSGRINDR	003	-.22	098.41	05.00	05.08	8.71E+00	.60
CGIOD3	QY1(D)	002	-.23	098.41	03.33	03.38	8.71E+00	.60
CGIOD3	BRETHRAT	001	.24	098.41	00.00	00.00	8.71E+00	.60
CGIOD4	VD(EL-I)	001	-.54	127.22	51.43	40.43	1.55E+01	.70
CGIOD4	AW(EL-I)	002	.21	127.22	04.29	03.37	1.55E+01	.70
CGIOD4	TPO51_SR	003	-.20	127.22	00.00	00.00	1.55E+01	.70
DLCMBM2	VD(AER)	001	.42	234.49	41.67	17.77	9.55E+01	.84
DLCMBM2	QY1(E/F)	143	-.01	234.49	34.52	14.72	9.55E+01	.84
DLCMBM2	SK(AER)	124	-.03	234.49	29.76	12.69	9.55E+01	.84
DLCMBM2	CSWB2-UL	002	-.37	234.49	05.95	02.54	9.55E+01	.84
DLCMBM2	RUP_CS	003	.35	234.49	04.76	02.03	9.55E+01	.84
DLCMBM3	VD(AER)	003	.35	223.62	31.76	14.20	9.77E+01	.85
DLCMBM3	QY1(E/F)	109	-.04	223.62	27.06	12.10	9.77E+01	.85
DLCMBM3	SK(AER)	134	.02	223.62	24.71	11.05	9.77E+01	.85
DLCMBM3	FMDC_CS	002	.43	223.62	17.65	07.89	9.77E+01	.85
DLCMBM3	CSWB2-UL	001	-.44	223.62	05.88	02.63	9.77E+01	.85
DLCMBM4	FMDC_CS	001	.44	176.96	20.48	11.57	9.55E+01	.83
DLCMBM4	CSWB2-UL	002	-.41	176.96	07.23	04.09	9.55E+01	.83
DLCMBM4	RTHS	003	.35	176.96	03.61	02.04	9.55E+01	.83
DLCMED2	BBF-ET2	001	-.33	143.11	11.11	07.76	5.50E+01	.72
DLCMED2	LFIHNLIV	003	.25	143.11	09.72	06.79	5.50E+01	.72
DLCMED2	SMP12_CS	002	-.27	143.11	04.17	02.91	5.50E+01	.72
DLCMED3	FMDC_CS	001	.34	155.93	14.29	09.16	3.63E+01	.77
DLCMED3	BBF-ET2	002	-.26	155.93	09.09	05.83	3.63E+01	.77
DLCMED3	CNSRTMLK	003	.26	155.93	06.49	04.16	3.63E+01	.77
DLCMED4	FMDC_I	002	.43	134.17	24.39	18.18	4.07E+01	.82
DLCMED4	INTFACP	001	.48	134.17	18.29	13.63	4.07E+01	.82
DLCMED4	FMDC_CS	004	.36	134.17	15.85	11.81	4.07E+01	.82
DLCMED4	CNSRTMLK	003	.36	134.17	08.54	06.37	4.07E+01	.82
DLCMTH2	ITC-BLAD	001	-.46	133.84	09.09	06.79	1.35E+01	.77
DLCMTH2	LFIHNLIV	003	.34	133.84	07.79	05.82	1.35E+01	.77
DLCMTH2	ITC-THR	002	.34	133.84	02.60	01.94	1.35E+01	.77
DLCMTH3	CNSRTMLK	001	.52	146.38	19.51	13.33	2.09E+01	.82
DLCMTH3	ITC-BLAD	002	-.49	146.38	12.20	08.33	2.09E+01	.82
DLCMTH3	ITC-THR	003	.47	146.38	06.10	04.17	2.09E+01	.82
DLCMTH4	FMDC_I	001	.72	139.92	40.91	29.24	1.29E+02	.88
DLCMTH4	INTFACP	002	.64	139.92	26.14	18.68	1.29E+02	.88
DLCMTH4	CNSRTMLK	003	.45	139.92	06.82	04.87	1.29E+02	.88
DLOUBM2	VD(AER)	001	.53	277.45	55.06	19.85	1.32E+02	.89
DLOUBM2	QY1(E/F)	147	-.01	277.45	46.07	16.60	1.32E+02	.89
DLOUBM2	SK(AER)	103	-.04	277.45	40.45	14.58	1.32E+02	.89
DLOUBM2	PZ1(E/F)	003	-.37	277.45	17.98	06.48	1.32E+02	.89
DLOUBM2	FMDC_CS	002	.37	277.45	13.48	04.86	1.32E+02	.89
DLOUBM3	VD(AER)	002	.40	240.65	37.21	15.46	8.13E+01	.86
DLOUBM3	QY1(E/F)	126	-.02	240.65	31.40	13.05	8.13E+01	.86
DLOUBM3	SK(AER)	133	.02	240.65	27.91	11.60	8.13E+01	.86
DLOUBM3	FMDC_CS	003	.39	240.65	15.12	06.28	8.13E+01	.86
DLOUBM3	CSWB2-UL	001	-.42	240.65	04.65	01.93	8.13E+01	.86

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
DLOUBM4	AW(AER)	001	.40	187.85	17.07	09.09	5.50E+01	.82
DLOUBM4	CSGR30Y	003	.36	187.85	08.54	04.55	5.50E+01	.82
DLOUBM4	CSWB2-UL	002	-.39	187.85	06.10	03.25	5.50E+01	.82
DLOUED2	FMDC_I	001	.57	167.86	27.59	16.44	7.59E+01	.87
DLOUED2	INTFACP	002	.57	167.86	18.39	10.96	7.59E+01	.87
DLOUED2	CNSRTMLK	003	.34	167.86	04.60	02.74	7.59E+01	.87
DLOUED3	FMDC_I	001	.52	153.43	27.91	18.19	5.13E+01	.86
DLOUED3	INTFACP	002	.49	153.43	18.60	12.12	5.13E+01	.86
DLOUED3	CNSRTMLK	003	.33	153.43	04.65	03.03	5.13E+01	.86
DLOUED4	FMDC_I	001	.45	139.05	26.83	19.30	3.63E+01	.82
DLOUED4	INTFACP	002	.44	139.05	17.07	12.28	3.63E+01	.82
DLOUED4	CNSRTMLK	003	.32	139.05	06.10	04.39	3.63E+01	.82
DLOUTH2	FMDC_I	001	.76	159.92	44.44	27.79	3.24E+02	.90
DLOUTH2	INTFACP	002	.69	159.92	28.89	18.07	3.24E+02	.90
DLOUTH2	CNSRTMLK	003	.42	159.92	03.33	02.08	3.24E+02	.90
DLOUTH3	FMDC_I	001	.77	157.22	46.15	29.35	2.09E+02	.91
DLOUTH3	INTFACP	002	.70	157.22	29.67	18.87	2.09E+02	.91
DLOUTH3	CNSRTMLK	003	.46	157.22	03.30	02.10	2.09E+02	.91
DLOUTH4	FMDC_I	001	.74	138.07	42.70	30.93	1.66E+02	.89
DLOUTH4	INTFACP	002	.65	138.07	26.97	19.53	1.66E+02	.89
DLOUTH4	VD(EL-I)	003	-.45	138.07	04.49	03.25	1.66E+02	.89
PLCMBM	RF(BM)	001	.82	148.95	60.23	40.44	9.99E+09	.88
PLCMBM	CSWB2-UL	002	-.40	148.95	06.82	04.58	9.99E+09	.88
PLCMBM	AW(AER)	003	.29	148.95	04.55	03.05	9.99E+09	.88
PLCMMT	RF(RE)	001	.45	121.25	12.50	10.31	6.61E+01	.80
PLCMMT	FMDC_CS	003	.34	121.25	06.25	05.15	6.61E+01	.80
PLCMMT	RF(TH)	002	.36	121.25	02.50	02.06	6.61E+01	.80
PLCMTH	RF(TH)	001	.93	128.39	76.84	59.85	9.99E+09	.95
PLCMTH	FMDC_I	002	.63	128.39	05.26	04.10	9.99E+09	.95
PLCMTH	INTFACP	003	.52	128.39	05.26	04.10	9.99E+09	.95
RLCMBM2	RF(BM)	001	.83	174.39	56.67	32.50	9.99E+09	.90
RLCMBM2	VD(AER)	002	.34	174.39	18.89	10.83	9.99E+09	.90
RLCMBM2	RUP_CS	003	.33	174.39	01.11	00.64	9.99E+09	.90
RLCMBM3	RF(BM)	001	.82	172.95	57.30	33.13	9.99E+09	.89
RLCMBM3	CSWB2-UL	002	-.35	172.95	05.62	03.25	9.99E+09	.89
RLCMBM3	AW(AER)	003	.29	172.95	03.37	01.95	9.99E+09	.89
RLCMBM4	RF(BM)	001	.84	148.84	58.89	39.57	9.99E+09	.90
RLCMBM4	AW(AER)	002	.37	148.84	04.44	02.98	9.99E+09	.90
RLCMBM4	INTFACP	003	.35	148.84	02.22	01.49	9.99E+09	.90
RLCMMT2	RF(RE)	001	.43	140.68	15.19	10.80	1.12E+02	.79
RLCMMT2	ET2-STOM	003	-.30	140.68	12.66	09.00	1.12E+02	.79
RLCMMT2	RF(LU)	002	.34	140.68	11.39	08.10	1.12E+02	.79
RLCMMT3	RF(RE)	001	.43	137.50	13.75	10.00	9.33E+01	.80
RLCMMT3	FMDC_CS	002	.33	137.50	06.25	04.55	9.33E+01	.80
RLCMMT3	RF(TH)	003	.32	137.50	01.25	00.91	9.33E+01	.80
RLCMMT4	RF(RE)	001	.42	130.00	11.25	08.65	6.76E+01	.80
RLCMMT4	FMDC_CS	003	.37	130.00	10.00	07.69	6.76E+01	.80
RLCMMT4	RF(TH)	002	.38	130.00	05.00	03.85	6.76E+01	.80
RLCMTH2	RF(TH)	001	.95	136.41	88.54	64.91	9.99E+09	.96
RLCMTH2	ITC-BLAD	003	-.37	136.41	01.04	00.76	9.99E+09	.96
RLCMTH2	ITC-THR	002	.37	136.41	00.00	00.00	9.99E+09	.96
RLCMTH3	RF(TH)	001	.95	136.38	86.46	63.40	9.99E+09	.96
RLCMTH3	CNSRTMLK	003	.45	136.38	02.08	01.53	9.99E+09	.96
RLCMTH3	ITC-THR	002	.47	136.38	01.04	00.76	9.99E+09	.96
RLCMTH4	RF(TH)	001	.88	129.41	67.39	52.07	9.99E+09	.92
RLCMTH4	FMDC_I	002	.59	129.41	08.70	06.72	9.99E+09	.92
RLCMTH4	INTFACP	003	.53	129.41	08.70	06.72	9.99E+09	.92
RLOUBM2	RF(BM)	001	.83	192.36	52.75	27.42	9.99E+09	.91
RLOUBM2	VD(AER)	002	.40	192.36	25.27	13.14	9.99E+09	.91
RLOUBM2	QY1(E/F)	138	-.02	192.36	19.78	10.28	9.99E+09	.91
RLOUBM2	CSWB2-UL	003	-.30	192.36	04.40	02.29	9.99E+09	.91
RLOUBM3	RF(BM)	001	.84	177.72	57.78	32.51	9.99E+09	.90
RLOUBM3	VD(AER)	003	.32	177.72	17.78	10.00	9.99E+09	.90
RLOUBM3	AW(AER)	002	.33	177.72	04.44	02.50	9.99E+09	.90

ENDP	INP.VAR	RK	PRCC	SUM%	%CON	%SCON	FAC1	RSQ
RLOUBM4	RF(BM)	001	.82	156.11	58.43	37.43	9.99E+09	.89
RLOUBM4	AW(AER)	002	.39	156.11	05.62	03.60	9.99E+09	.89
RLOUBM4	RTHS	003	.29	156.11	01.12	00.72	9.99E+09	.89
RLOUMT2	PZ1(E/F)	003	-.40	160.08	10.84	06.77	9.12E+01	.83
RLOUMT2	RF(RE)	001	.49	160.08	10.84	06.77	9.12E+01	.83
RLOUMT2	RF(TH)	002	.49	160.08	08.43	05.27	9.12E+01	.83
RLOUMT3	RF(RE)	001	.46	137.86	10.98	07.96	6.92E+01	.82
RLOUMT3	RF(TH)	002	.42	137.86	06.10	04.42	6.92E+01	.82
RLOUMT3	PZ1(D)	003	-.29	137.86	00.00	00.00	6.92E+01	.82
RLOUMT4	RF(RE)	001	.42	132.50	12.50	09.43	5.01E+01	.80
RLOUMT4	RF(LU)	003	.32	132.50	08.75	06.60	5.01E+01	.80
RLOUMT4	RF(TH)	002	.35	132.50	05.00	03.77	5.01E+01	.80
RLOUTH2	RF(TH)	001	.90	133.46	61.29	45.92	9.99E+09	.93
RLOUTH2	FMDC_I	002	.71	133.46	11.83	08.86	9.99E+09	.93
RLOUTH2	INTFACP	003	.62	133.46	11.83	08.86	9.99E+09	.93
RLOUTH3	RF(TH)	001	.89	132.40	64.52	48.73	9.99E+09	.93
RLOUTH3	INTFACP	003	.59	132.40	11.83	08.94	9.99E+09	.93
RLOUTH3	FMDC_I	002	.66	132.40	10.75	08.12	9.99E+09	.93
RLOUTH4	RF(TH)	001	.81	127.36	62.50	49.07	9.99E+09	.88
RLOUTH4	FMDC_I	002	.49	127.36	10.23	08.03	9.99E+09	.88
RLOUTH4	INTFACP	003	.41	127.36	09.09	07.14	9.99E+09	.88

Appendix E

Variation in Predicted Consequences due to Different Meteorological Sampling Schemes

Results of COSYMA runs are presented as probability distributions that show the probability of exceeding particular levels of consequences allowing for the range of atmospheric conditions that could occur at the time of the accident. The main parts of this study have examined the uncertainty on the probability distribution because of the uncertainty in the most appropriate value to assign to the many input parameters involved. Throughout the main parts of the study, the same set of sequences of atmospheric conditions was used to represent the range of possible conditions, and so the main part of the study has not considered any variation in the results that could arise from using different samples of conditions. This appendix presents the results of a limited investigation into the variation in the predicted consequences if different samples of conditions are adopted. Four different sampling schemes were considered, with five different sets of samples drawn from each scheme. In total, therefore, 20 runs of COSYMA were undertaken. These runs provided 20 estimates for each of the endpoints considered in the main part of the uncertainty analysis. The variation in the predictions of COSYMA was examined by considering the ratio of the maximum to the minimum value for each of the endpoints. In addition, for the UK1 source term calculations only, a set of results were obtained which considered every hour on the meteorological data file used in the analysis. In all the calculations presented here, default values were assigned to all the other input parameters.

E.1 Sampling schemes considered

COSYMA allows the sequences of atmospheric conditions for the analysis to be selected using either cyclic or stratified sampling schemes. Cyclic sampling selects starting times uniformly throughout the period of the data file, selecting every *nth* hour. Stratified sampling aims to identify groups of sequences that give roughly equal results for the different endpoints, and selects at random from each of the groups. In this analysis, two sets of cyclic samples and two sets of stratified samples were considered.

The sequences for the main uncertainty analysis were chosen by cyclic sampling, to give 144 sequences of conditions. The same set of sequences was used for all the module analyses and the overall analysis.

The first series of sequences was obtained by cyclic sampling with 144 sequences but using different "offsets" from the start of the data file. The sequences in these groups consider hour numbers

j, n+j, 2n+j, 3n+j, …

where j is the "offset" from the start of the start of the data file, and n is chosen so that 144 sequences are selected. Five sets of sequences were obtained in this way by choosing different values for j.

The second set of sequences was also obtained by cyclic sampling, but the value of n was altered to give different numbers of sequences in each of the samples. Calculations were undertaken with 72, 144, 288, 432 and 576 sequences.

The third and fourth sets of sequences were obtained from stratified sampling schemes. These considered the sampling scheme adopted with the UFOMOD program and one based on the PC COSYMA default sampling scheme. The UFOMOD scheme considers 12 patterns of variation of atmospheric conditions with distance from the site, in each of 12 30° sectors giving 144 groups of conditions. The scheme is summarised in Table E 2. Five different sets of sequences were obtained by sampling 1, 2, 3, 4 and 5 sequences from each group, giving 144, 288, 432, 576 and 720 sequences for consideration in the analysis. The PC COSYMA default sampling scheme considers 20 patterns of variation with distance and combines them with 6 60° sectors. This was slightly modified to adjust the numbers of sequences in each of the groups for the particular meteorological data file used in this project. The distance variation adopted here is summarised in Table E.3; it was combined with different angular sectors to produce samples having 60, 120, 240, 360 and 480 sequences of conditions.

E.2 Variation in predicted consequences for different sampling schemes

The full set of results are presented in Appendix F, which shows the minimum and maximum values from the different sampling schemes, together with their ratio. The table also shows the reference value. In addition, the UK1 results include the predicted consequences when all possible sequences on the meteorological data file are considered and the ratio of the maximum value to this quantity.

The results in Appendix F show that, for the vast majority of endpoints, the variation caused by different sampling schemes is less than a factor of 3. Larger differences are found for some of the individual risks, particularly for early health effects at the larger distances considered. Larger differences are also found for some threshold effects where some of the numbers are rather small; for example the 95th percentile on the numbers of early deaths for the CB2 source term ranges from 4.5 10^{-2} to 2.7 giving a ratio of about 60.

Some of the results are illustrated in Figure E.10 to Figure E.16, which show the results for some endpoints from particular sets of sampling schemes. The results for the numbers of early deaths, if countermeasures are taken, for the UK1 source term are shown in Figure E.10 to Figure E.23. The figures show the variation in the predicted number of effects for the different sets of sampling schemes separately. These figures show that there is only a small variation between the percentiles of the distribution derived from the different samples taken for each of the schemes. The four sets of results are combined in Figure E.24, which shows that there is little variation in the predicted consequences between the different sampling schemes. Figure E.25 shows the results for the initial area with milk restrictions predicted using the PC COSYMA scheme, with different numbers of sequences. There is seen to be very little variation between the different sets of predictions for this endpoint. Figure E.16 shows the number of fatal

cancers for the CB2 source term if countermeasures are taken, also predicted using the PC COSYMA sampling scheme with different numbers of sequences. This also shows that there is very little variation between the results for the different sets of samples.

Table E 2 The UFOMOD sampling scheme

Group number	Travel time to 20 km (h)	Total precipitation with 20 km (mm)
1	$0 < T \leq 3$	0
2	$0 < T \leq 3$	$0 < I < 1$
3	$0 < T \leq 3$	$1 \leq I < 3$
4	$0 < T \leq 3$	$I \geq 3$
5	$3 < T \leq 6$	0
6	$3 < T \leq 6$	$0 < I < 1$
7	$3 < T \leq 6$	$1 \leq I < 3$
8	$3 < T \leq 6$	$I \geq 3$
9	$T > 6$	0
10	$T > 6$	$0 < I < 1$
11	$T > 6$	$1 \leq I < 3$
12	$T > 6$	$I \geq 3$

Table E.3 The sampling scheme based on the PC COSYMA default scheme

Group	Definition		
	Groups defined using the ratio of washout coefficient to windspeed		
1	Ratio of washout coefficient to windspeed > $5\ 10^{-5}$ within 10 km		
2	Ratio of washout coefficient to windspeed > $5\ 10^{-5}$ within 25 km		
3	Ratio of washout coefficient to windspeed > $5\ 10^{-5}$ within 50 km		
4	Ratio of washout coefficient to windspeed > $5\ 10^{-5}$ within 75 km		
5	Ratio of washout coefficient to windspeed > $5\ 10^{-5}$ within 100 km		
6	Ratio of washout coefficient to windspeed > $5\ 10^{-6}$ within 10 km		
7	Ratio of washout coefficient to windspeed > $5\ 10^{-6}$ within 25 km		
8	Ratio of washout coefficient to windspeed > $5\ 10^{-6}$ within 50 km		
9	Ratio of washout coefficient to windspeed > $5\ 10^{-6}$ within 75 km		
10	Ratio of washout coefficient to windspeed > $5\ 10^{-6}$ within 100 km		
	Groups defined using initial stability category and travel times (hrs) to 20 and 60 km		
	Category	Travel time to 20 km	Travel time to 60 km
11	A/B	any	any
12	E/F	<2	<6
13	E/F	<2	>6
14	E/F	>2	<6
15	E/F	>2	>6
16	C/D	<1	<3
17	C/D	<1	>3
18	C/D	>1	<3
19	C/D	any	<5

20	C/D	any	any

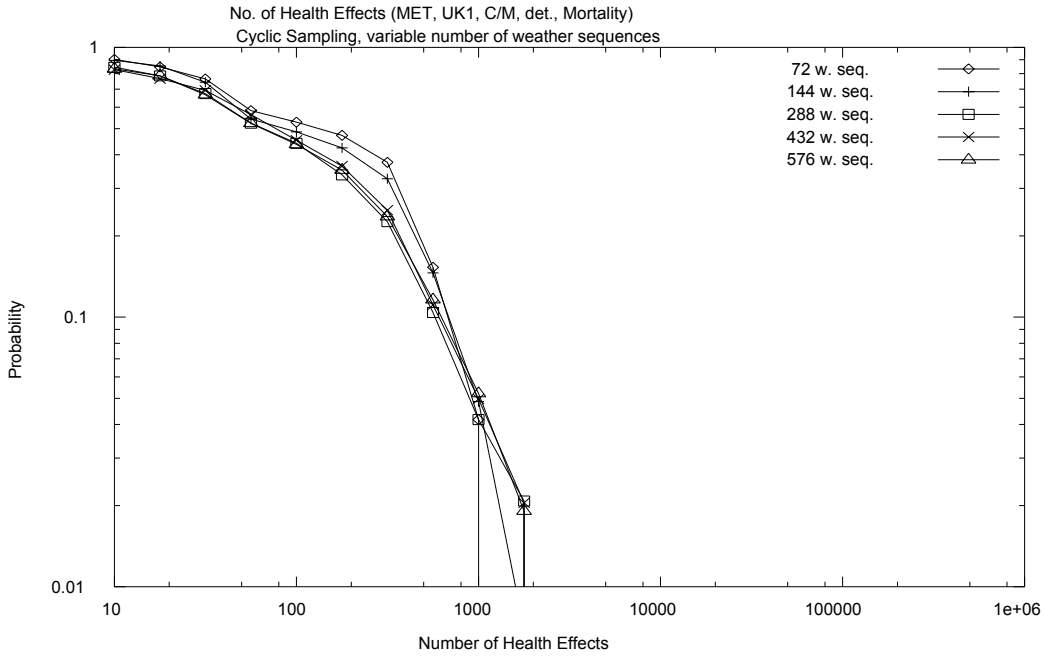

Figure E.10 Number of early deaths with countermeasures for the UK1 source term, predicted using a cyclic sampling scheme with different numbers of sequences

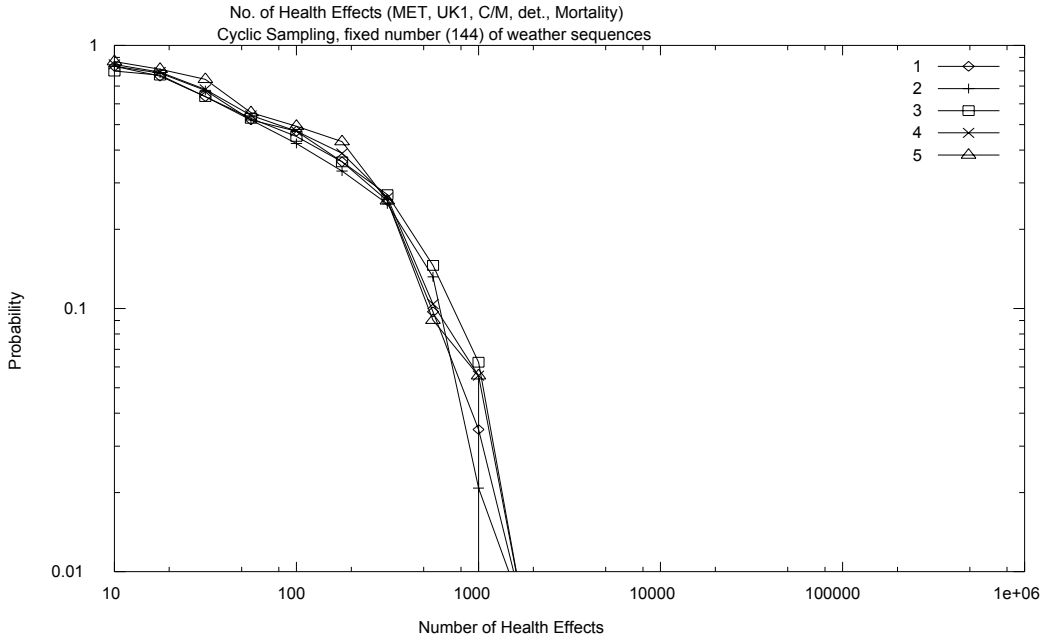

Figure E.11 Number of early deaths with countermeasures for the UK1 source term, predicted using a cyclic sampling scheme with different sets of 144 sequences

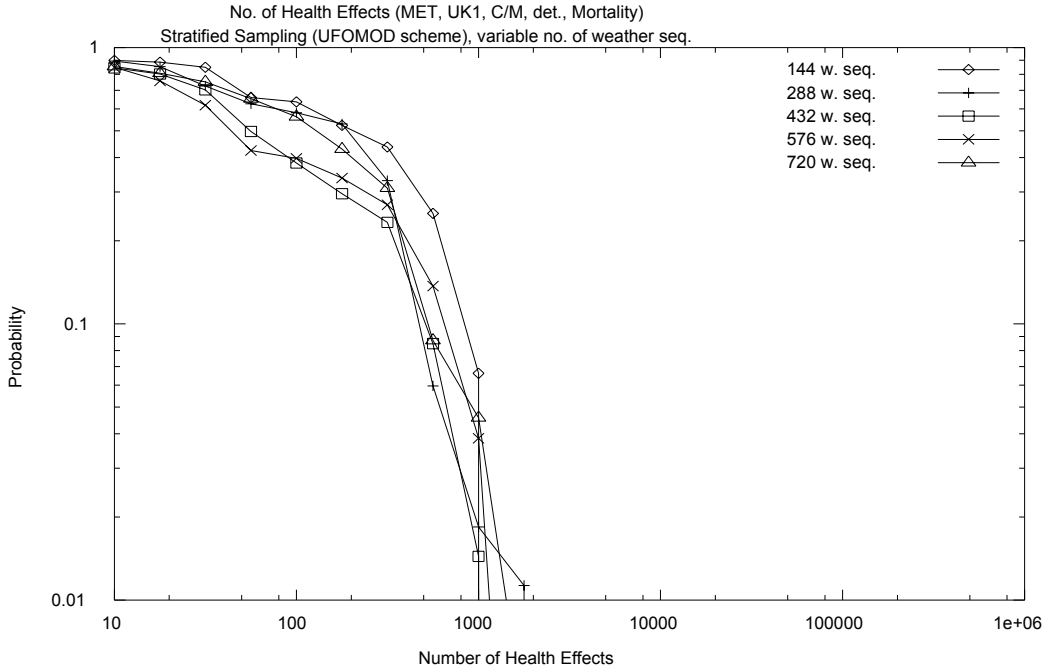

Figure E.12 Number of early deaths with countermeasures for the UK1 source term, predicted using the UFOMOD stratified sampling scheme with different numbers of sequences

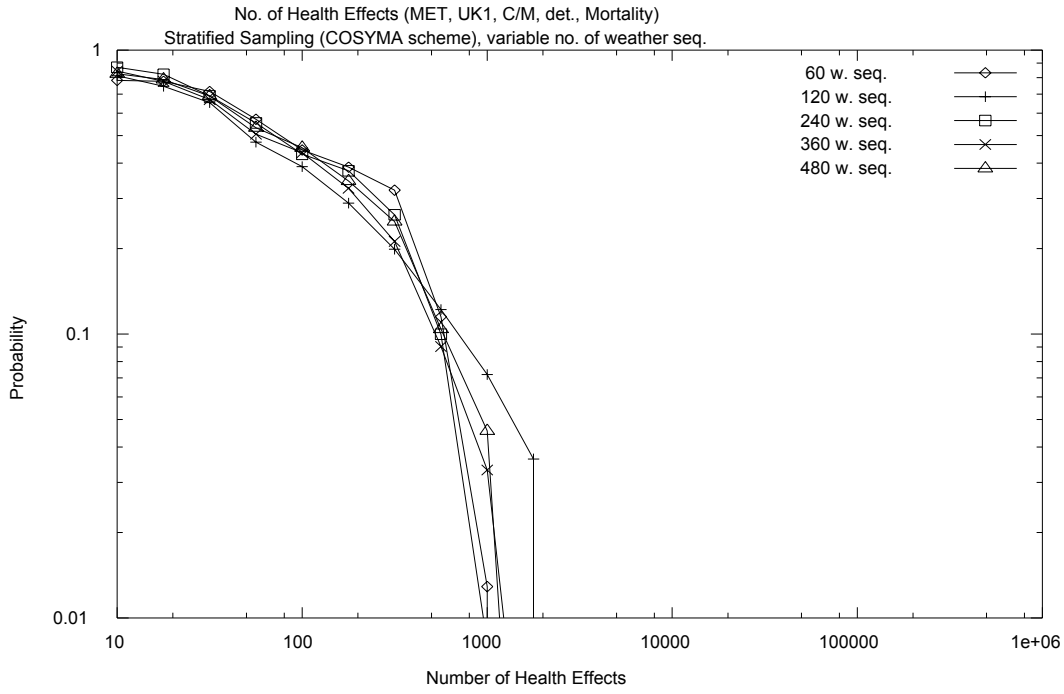

Figure E.13 Number of early deaths with countermeasures for the UK1 source term, predicted using the PC COSYMA stratified sampling scheme with different numbers of

sequences

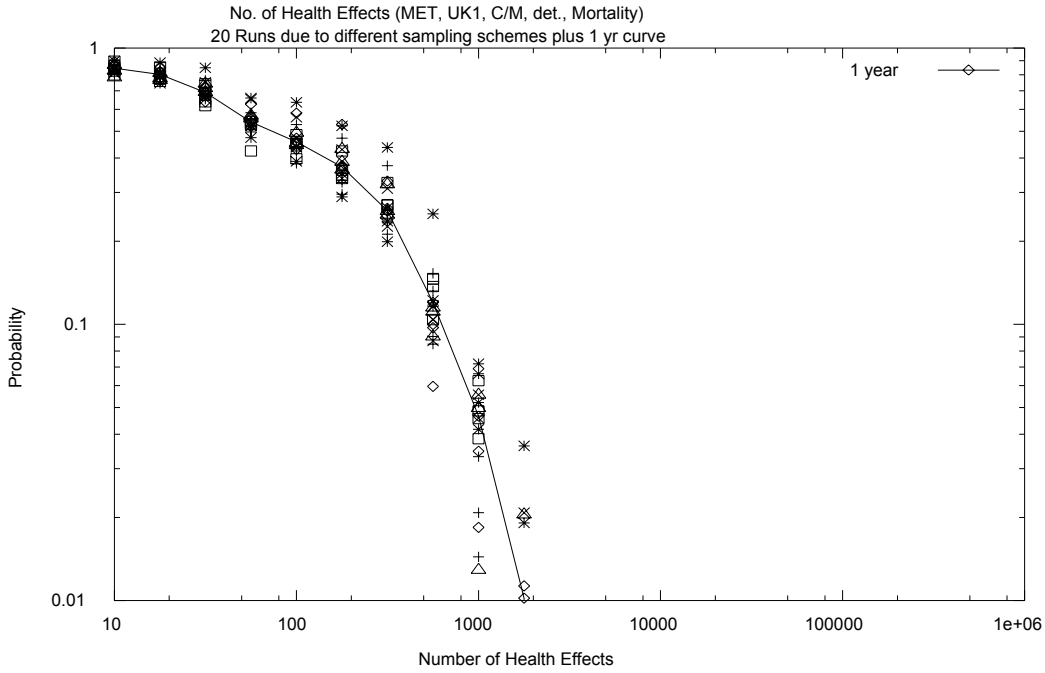

Figure E.14 Number of early deaths with countermeasures for the UK1 source term, predicted using all the sampling schemes considered, plus the results for all sequences on the data file

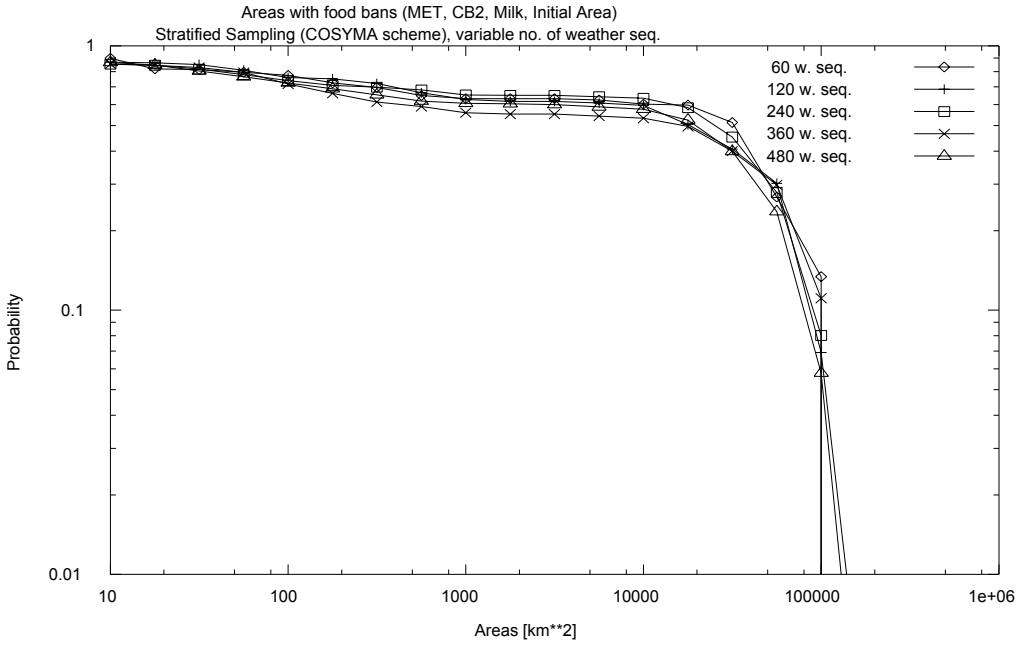

Figure E.15 Initial area with milk restrictions, for the CB2 source term, predicted

using the PC COSYMA sampling scheme with different numbers of sequences

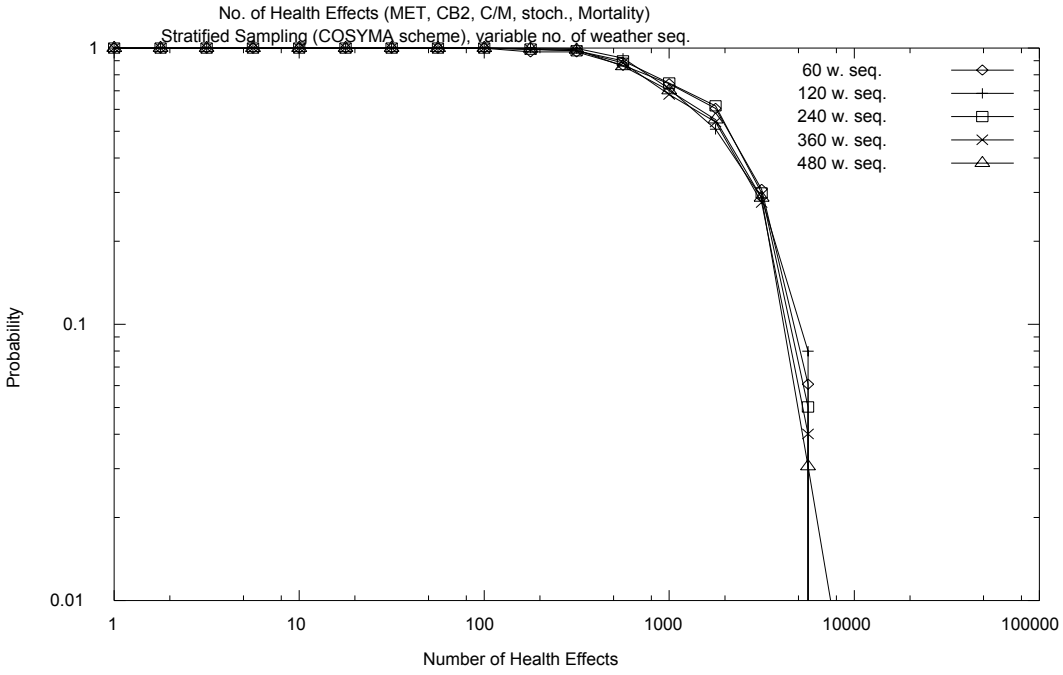

Figure E.16 Number of fatal cancers with countermeasures, for the CB2 source term, predicted using the PC COSYMA sampling scheme with different numbers of sequences

Appendix F

10.1.1 Detailed Results from the Meteorological Sampling Analysis

The results given in the following tables show the following quantities

ENDP	Short name for the endpoint considered
REF	The value obtained using the sampling scheme adopted for the remainder of the uncertainty analysis, using 144 sequences selected from cyclic sampling
MIN	The minimum value of the endpoint found in the 20 runs in the meteorological sampling analysis
MAX	The maximum value of the endpoint found in the 20 runs in the meteorological sampling analysis
MAX/MIN	The ratio of the maximum to minimum values from the analysis
1 YEAR	The value obtained by considering every sequence of conditions on the data file covering a period of 1 year.
MAX/1Y	The ratio of the maximum value from the analysis to that considering every hour in the meteorological data file.

The calculations leading to the ccfd for every sequence of conditions on the data file over the period of 1 year were only undertaken for the UK1 source term. Therefore the last two quantities on the list above are only presented in the results tables for the UK1 source term.

Table F.1 Variation in results from different meteorological sampling schemes

Results for the mean value of the endpoints for UK1

ENDP	REF	MIN	MAX	1 YEAR	MAX/MIN	MAX/1Y
CGIOD1	3.67E+10	3.36E+10	4.35E+10	3.82E+10	1.29E+00	1.14E+00
CGIOD2	1.20E+09	9.72E+08	1.54E+09	1.33E+09	1.58E+00	1.16E+00
CGIOD3	1.26E+08	1.09E+08	1.55E+08	1.22E+08	1.42E+00	1.27E+00
CGCAE1	2.72E+08	2.61E+08	3.23E+08	2.87E+08	1.23E+00	1.13E+00
CGCAE2	2.08E+07	1.83E+07	2.74E+07	2.21E+07	1.49E+00	1.24E+00
CGCAE3	2.82E+06	2.69E+06	4.80E+06	3.16E+06	1.79E+00	1.52E+00
CAIOD1	3.63E+12	3.31E+12	4.29E+12	3.76E+12	1.30E+00	1.14E+00
CAIOD2	1.08E+11	8.48E+10	1.42E+11	1.21E+11	1.68E+00	1.17E+00
CAIOD3	1.04E+10	8.74E+09	1.08E+10	9.69E+09	1.23E+00	1.11E+00
CACAE1	2.27E+11	2.05E+11	2.72E+11	2.34E+11	1.33E+00	1.16E+00
CACAE2	1.22E+10	8.09E+09	1.57E+10	1.30E+10	1.94E+00	1.21E+00
CACAE3	1.11E+09	1.02E+09	1.29E+09	1.13E+09	1.26E+00	1.14E+00
DECMBM1	9.15E-01	8.55E-01	1.11E+00	9.53E-01	1.29E+00	1.16E+00
DECMBM2	5.13E-02	3.01E-02	6.27E-02	5.36E-02	2.08E+00	1.17E+00
DECMBM3	3.04E-03	1.40E-03	3.80E-03	2.51E-03	2.72E+00	1.51E+00
DECMTH1	3.12E+01	2.84E+01	3.69E+01	3.24E+01	1.30E+00	1.14E+00
DECMTH2	9.07E-01	5.46E-01	1.12E+00	9.77E-01	2.05E+00	1.15E+00
DECMTH3	4.14E-02	1.91E-02	4.97E-02	3.43E-02	2.60E+00	1.45E+00
DECMSK1	1.11E+02	1.02E+02	1.32E+02	1.16E+02	1.30E+00	1.14E+00
DECMSK2	3.59E+00	2.18E+00	4.40E+00	3.85E+00	2.02E+00	1.14E+00
DECMSK3	1.88E-01	8.62E-02	2.29E-01	1.55E-01	2.65E+00	1.48E+00
DELVBM1	2.40E+00	2.23E+00	2.85E+00	2.50E+00	1.28E+00	1.14E+00
DELVBM2	1.02E-01	8.23E-02	1.25E-01	1.11E-01	1.51E+00	1.13E+00
DELVBM3	1.08E-02	9.79E-03	1.48E-02	1.11E-02	1.52E+00	1.33E+00
DELVTH1	7.70E+01	7.02E+01	9.10E+01	7.98E+01	1.30E+00	1.14E+00
DELVTH2	2.36E+00	1.82E+00	3.05E+00	2.62E+00	1.68E+00	1.16E+00
DELVTH3	2.18E-01	1.86E-01	2.28E-01	2.05E-01	1.22E+00	1.11E+00
DELVSK1	6.11E+02	5.57E+02	7.22E+02	6.32E+02	1.30E+00	1.14E+00
DELVSK2	1.92E+01	1.46E+01	2.48E+01	2.13E+01	1.70E+00	1.16E+00
DELVSK3	1.77E+00	1.51E+00	1.82E+00	1.66E+00	1.20E+00	1.10E+00
DEOUBM1	1.53E+01	1.42E+01	1.82E+01	1.60E+01	1.28E+00	1.14E+00
DEOUBM2	6.37E-01	5.27E-01	7.83E-01	6.93E-01	1.49E+00	1.13E+00
DEOUBM3	6.93E-02	6.26E-02	9.74E-02	7.15E-02	1.55E+00	1.36E+00
DEOUTH1	1.53E+02	1.40E+02	1.81E+02	1.58E+02	1.30E+00	1.15E+00
DEOUTH2	4.82E+00	3.75E+00	6.20E+00	5.34E+00	1.66E+00	1.16E+00
DEOUTH3	4.55E-01	3.91E-01	4.97E-01	4.32E-01	1.27E+00	1.15E+00
DEOUSK1	1.11E+03	1.01E+03	1.31E+03	1.15E+03	1.30E+00	1.14E+00
DEOUSK2	3.49E+01	2.65E+01	4.50E+01	3.87E+01	1.70E+00	1.16E+00
DEOUSK3	3.21E+00	2.75E+00	3.31E+00	3.02E+00	1.20E+00	1.10E+00
RECMMT1	4.78E-02	4.42E-02	6.02E-02	5.01E-02	1.36E+00	1.20E+00
RECMMT2	3.00E-03	1.44E-03	3.87E-03	3.03E-03	2.70E+00	1.28E+00
RECMMT3	7.71E-05	1.27E-05	1.09E-04	4.31E-05	8.52E+00	2.53E+00
RECMBM1	4.27E-02	3.88E-02	5.50E-02	4.47E-02	1.42E+00	1.23E+00
RECMBM2	9.92E-04	9.94E-05	1.88E-03	1.05E-03	1.89E+01	1.79E+00
RECMBM3	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
RECMMB1	1.31E-01	1.27E-01	1.66E-01	1.35E-01	1.31E+00	1.23E+00
RECMMB2	3.77E-02	2.32E-02	4.68E-02	3.73E-02	2.02E+00	1.25E+00
RECMMB3	1.49E-03	2.49E-04	2.09E-03	8.32E-04	8.41E+00	2.51E+00
RECMLU1	5.26E-04	4.83E-04	1.06E-03	7.94E-04	2.19E+00	1.34E+00
RECMLU2	8.62E-04	2.12E-04	1.29E-03	8.66E-04	6.07E+00	1.49E+00
RECMLU3	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
RECMTH1	1.95E-02	1.77E-02	2.11E-02	1.95E-02	1.19E+00	1.08E+00
RECMTH2	9.75E-04	5.16E-04	1.38E-03	1.17E-03	2.67E+00	1.18E+00
RECMTH3	.00E+00	.00E+00	1.58E-06	1.42E-07	9.99E+99	1.11E+01
RECMSK1	9.75E-02	9.37E-02	1.28E-01	1.03E-01	1.37E+00	1.24E+00
RECMSK2	3.50E-02	2.15E-02	4.37E-02	3.42E-02	2.03E+00	1.28E+00
RECMSK3	1.49E-03	2.49E-04	2.09E-03	8.32E-04	8.42E+00	2.51E+00
RELVMT1	7.75E-02	7.23E-02	8.94E-02	7.96E-02	1.24E+00	1.12E+00
RELVMT2	6.14E-03	5.18E-03	7.81E-03	6.98E-03	1.51E+00	1.12E+00
RELVMT3	1.13E-03	9.74E-04	1.18E-03	1.05E-03	1.21E+00	1.12E+00
RELVBM1	7.24E-02	6.66E-02	8.28E-02	7.38E-02	1.24E+00	1.12E+00
RELVBM2	1.88E-03	1.09E-03	3.77E-03	2.66E-03	3.46E+00	1.42E+00
RELVBM3	.00E+00	.00E+00	5.41E-05	9.48E-07	9.99E+99	5.71E+01
RELVMB1	1.30E-01	1.28E-01	1.79E-01	1.45E-01	1.39E+00	1.23E+00
RELVMB2	7.98E-02	6.93E-02	9.77E-02	8.23E-02	1.41E+00	1.19E+00
RELVMB3	1.28E-02	9.83E-03	1.42E-02	1.14E-02	1.45E+00	1.25E+00
RELVLU1	.00E+00	.00E+00	1.42E-06	4.13E-08	9.99E+99	3.44E+01
RELVLU2	4.46E-06	.00E+00	1.61E-05	5.45E-06	9.99E+99	2.95E+00
RELVLU3	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
RELVTH1	1.87E-02	1.71E-02	2.61E-02	2.02E-02	1.52E+00	1.29E+00

RELVTH2	4.95E-03	3.04E-03	7.00E-03	5.66E-03	2.30E+00	1.24E+00
RELVTH3	1.28E-05	3.02E-06	3.05E-05	1.70E-05	1.01E+01	1.79E+00
RELVSK1	8.87E-02	8.70E-02	1.20E-01	1.00E-01	1.38E+00	1.20E+00
RELVSK2	6.65E-02	6.18E-02	8.05E-02	6.76E-02	1.30E+00	1.19E+00
RELVSK3	1.28E-02	9.65E-03	1.42E-02	1.13E-02	1.47E+00	1.26E+00
REOUMT1	1.31E-01	1.29E-01	1.67E-01	1.38E-01	1.29E+00	1.21E+00
REOUMT2	3.40E-02	3.03E-02	4.46E-02	3.56E-02	1.47E+00	1.25E+00
REOUMT3	2.84E-03	2.31E-03	4.88E-03	2.99E-03	2.11E+00	1.63E+00
REOUBM1	1.27E-01	1.26E-01	1.64E-01	1.35E-01	1.30E+00	1.21E+00
REOUBM2	3.03E-02	2.66E-02	3.99E-02	3.18E-02	1.50E+00	1.25E+00
REOUBM3	1.00E-03	6.18E-04	3.19E-03	1.25E-03	5.16E+00	2.55E+00
REOUMB1	7.35E-02	6.61E-02	1.19E-01	8.29E-02	1.80E+00	1.44E+00
REOUMB2	8.03E-02	7.31E-02	9.31E-02	7.92E-02	1.27E+00	1.18E+00
REOUMB3	2.87E-02	2.60E-02	3.00E-02	2.74E-02	1.15E+00	1.09E+00
REOULU1	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
REOULU2	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
REOULU3	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
REOUTH1	1.89E-03	1.62E-03	2.99E-03	2.10E-03	1.85E+00	1.42E+00
REOUTH2	1.39E-03	1.10E-03	1.52E-03	1.25E-03	1.39E+00	1.22E+00
REOUTH3	1.66E-04	3.87E-05	1.66E-04	1.23E-04	4.30E+00	1.35E+00
REOUSK1	4.77E-02	4.33E-02	8.21E-02	5.50E-02	1.90E+00	1.49E+00
REOUSK2	5.79E-02	5.41E-02	7.05E-02	5.87E-02	1.30E+00	1.20E+00
REOUSK3	2.35E-02	2.04E-02	2.42E-02	2.20E-02	1.19E+00	1.10E+00
PECMMT	2.60E+02	1.83E+02	3.45E+02	2.38E+02	1.89E+00	1.45E+00
PECMBM	6.62E+01	3.05E+01	1.15E+02	6.19E+01	3.79E+00	1.86E+00
PECMMB	3.77E+03	2.49E+03	4.40E+03	3.45E+03	1.77E+00	1.28E+00
PECMLU	1.77E+01	2.89E+00	2.95E+01	1.94E+01	1.02E+01	1.52E+00
PECMTH	5.14E+01	3.32E+01	7.71E+01	6.00E+01	2.32E+00	1.28E+00
PECMSK	3.67E+03	2.41E+03	4.27E+03	3.33E+03	1.78E+00	1.28E+00
PELVMT	2.32E+03	1.94E+03	2.75E+03	2.22E+03	1.41E+00	1.24E+00
PELVBM	1.61E+02	9.93E+01	2.21E+02	1.55E+02	2.23E+00	1.43E+00
PELVMB	2.32E+04	1.98E+04	2.81E+04	2.16E+04	1.42E+00	1.30E+00
PELVLU	1.62E-03	.00E+00	7.63E-02	3.51E-02	9.99E+99	2.17E+00
PELVTH	2.64E+02	1.75E+02	4.84E+02	2.66E+02	2.76E+00	1.82E+00
PELVSK	2.26E+04	1.90E+04	2.75E+04	2.09E+04	1.45E+00	1.32E+00

Results for the 95th percentile of the endpoints for the UK1 source term

ENDP	REF	MIN	MAX	1 YEAR	MAX/MIN	MAX/1Y
CGIOD1	1.58E+11	1.32E+11	2.45E+11	1.58E+11	1.86E+00	1.55E+00
CGIOD2	5.50E+09	4.90E+09	6.76E+09	5.01E+09	1.38E+00	1.35E+00
CGIOD3	5.25E+08	3.98E+08	7.41E+08	5.01E+08	1.86E+00	1.48E+00
CGCAE1	1.05E+09	9.33E+08	1.70E+09	1.12E+09	1.82E+00	1.52E+00
CGCAE2	5.89E+07	4.37E+07	9.33E+07	5.01E+07	2.14E+00	1.86E+00
CGCAE3	8.13E+06	7.08E+06	1.02E+07	7.94E+06	1.45E+00	1.28E+00
CAIOD1	1.41E+13	1.00E+13	2.51E+13	1.41E+13	2.51E+00	1.78E+00
CAIOD2	4.90E+11	4.17E+11	6.46E+11	4.47E+11	1.55E+00	1.45E+00
CAIOD3	4.47E+10	3.47E+10	6.76E+10	3.98E+10	1.95E+00	1.70E+00
CACAE1	8.71E+11	6.61E+11	1.29E+12	7.94E+11	1.95E+00	1.62E+00
CACAE2	3.24E+10	2.69E+10	5.13E+10	3.16E+10	1.91E+00	1.62E+00
CACAE3	4.68E+09	3.55E+09	6.31E+09	3.98E+09	1.78E+00	1.59E+00
DECMBM1	3.98E+00	3.55E+00	6.31E+00	3.98E+00	1.78E+00	1.59E+00
DECMBM2	1.55E-01	9.33E-02	2.19E-01	1.41E-01	2.34E+00	1.55E+00
DECMBM3	4.07E-03	2.69E-03	5.01E-03	3.55E-03	1.86E+00	1.41E+00
DECMTH1	1.29E+02	1.12E+02	2.29E+02	1.26E+02	2.04E+00	1.82E+00
DECMTH2	3.89E+00	1.82E+00	5.13E+00	3.55E+00	2.82E+00	1.45E+00
DECMTH3	4.27E-02	1.95E-02	7.94E-02	3.16E-02	4.07E+00	2.51E+00
DECMSK1	4.57E+02	4.07E+02	7.94E+02	4.47E+02	1.95E+00	1.78E+00
DECMSK2	1.38E+01	6.76E+00	1.86E+01	1.26E+01	2.75E+00	1.48E+00
DECMSK3	1.78E-01	9.33E-02	3.16E-01	1.58E-01	3.39E+00	2.00E+00
DELVBM1	1.07E+01	9.12E+00	1.62E+01	1.00E+01	1.78E+00	1.62E+00
DELVBM2	4.17E-01	3.39E-01	5.50E-01	3.98E-01	1.62E+00	1.38E+00
DELVBM3	4.90E-02	3.24E-02	5.62E-02	3.98E-02	1.74E+00	1.41E+00
DELVTH1	2.95E+02	2.69E+02	5.25E+02	3.16E+02	1.95E+00	1.66E+00
DELVTH2	1.05E+01	8.71E+00	1.41E+01	1.00E+01	1.62E+00	1.41E+00
DELVTH3	9.33E-01	7.24E-01	1.32E+00	7.94E-01	1.82E+00	1.66E+00
DELVSK1	2.34E+03	2.09E+03	4.17E+03	2.51E+03	2.00E+00	1.66E+00
DELVSK2	8.13E+01	6.76E+01	1.10E+02	7.94E+01	1.62E+00	1.39E+00
DELVSK3	7.59E+00	5.62E+00	1.07E+01	7.08E+00	1.91E+00	1.51E+00
DEOUBM1	6.92E+01	5.75E+01	1.05E+02	7.08E+01	1.82E+00	1.48E+00
DEOUBM2	2.63E+00	2.19E+00	3.39E+00	2.51E+00	1.55E+00	1.35E+00
DEOUBM3	3.02E-01	2.04E-01	3.55E-01	2.51E-01	1.74E+00	1.41E+00
DEOUTH1	6.31E+02	5.37E+02	1.05E+03	6.31E+02	1.95E+00	1.66E+00
DEOUTH2	2.19E+01	1.86E+01	2.82E+01	2.00E+01	1.51E+00	1.41E+00
DEOUTH3	1.95E+00	1.51E+00	2.75E+00	1.78E+00	1.82E+00	1.54E+00
DEOUSK1	4.27E+03	3.80E+03	7.59E+03	4.47E+03	2.00E+00	1.70E+00
DEOUSK2	1.48E+02	1.23E+02	2.00E+02	1.41E+02	1.62E+00	1.42E+00
DEOUSK3	1.38E+01	1.02E+01	1.95E+01	1.26E+01	1.91E+00	1.55E+00
RECMMT1	1.29E-01	8.32E-02	8.13E-01	1.58E-01	9.77E+00	5.15E+00
RECMMT2	4.07E-03	.00E+00	1.55E-02	3.16E-03	9.99E+99	4.91E+00
RECMMT3	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
RECMBM1	8.13E-02	3.47E-02	7.94E-01	1.26E-01	2.29E+01	6.30E+00
RECMBM2	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
RECMBM3	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
RECMMB1	1.07E+00	1.02E+00	1.20E+00	1.00E+00	1.17E+00	1.20E+00
RECMMB2	8.13E-02	.00E+00	3.09E-01	5.62E-02	9.99E+99	5.50E+00
RECMMB3	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
RECMLU1	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
RECMLU2	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
RECMLU3	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
RECMTH1	1.20E-01	1.20E-01	1.41E-01	1.26E-01	1.17E+00	1.12E+00
RECMTH2	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
RECMTH3	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
RECMSK1	9.50E-01	9.50E-01	9.50E-01	8.91E-01	1.00E+00	1.07E+00
RECMSK2	8.13E-02	.00E+00	3.09E-01	5.62E-02	9.99E+99	5.50E+00
RECMSK3	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
RELVMT1	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00
RELVMT2	5.01E-02	5.01E-02	5.01E-02	4.47E-02	1.00E+00	1.12E+00
RELVMT3	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
RELVBM1	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00
RELVBM2	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
RELVBM3	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
RELVMB1	1.02E+00	1.00E+00	1.15E+00	1.00E+00	1.15E+00	1.15E+00
RELVMB2	9.55E-01	9.55E-01	9.55E-01	8.91E-01	1.00E+00	1.07E+00
RELVMB3	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
RELVLU1	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
RELVLU2	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
RELVLU3	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
RELVTH1	8.13E-02	5.75E-02	1.95E-01	1.00E-01	3.39E+00	1.95E+00
RELVTH2	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
RELVTH3	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
RELVSK1	9.50E-01	9.50E-01	9.50E-01	8.91E-01	1.00E+00	1.07E+00
RELVSK2	9.50E-01	9.50E-01	9.50E-01	8.91E-01	1.00E+00	1.07E+00
RELVSK3	.00E+00	.00E+00	.00E+00	.00E+00	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

REOUMT2	5.01E-02	5.01E-02	5.01E-02	4.47E-02	1.00E+00	1.12E+00
REOUMT3	.00E+00	.00E+00	9.77E-03	.00E+00	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
REOUBM2	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
REOUBM3	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
REOUMB1	6.61E-01	4.68E-01	1.07E+00	8.91E-01	2.29E+00	1.20E+00
REOUMB2	9.55E-01	9.55E-01	9.55E-01	8.91E-01	1.00E+00	1.07E+00
REOUMB3	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
REOULU1	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
REOULU2	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
REOULU3	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
REOUTH1	.00E+00	.00E+00	1.38E-02	.00E+00	9.99E+99	9.99E+99
REOUTH2	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
REOUTH3	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
REOUSK1	4.68E-01	2.69E-01	9.50E-01	7.08E-01	3.53E+00	1.34E+00
REOUSK2	9.33E-01	8.32E-01	9.50E-01	8.91E-01	1.14E+00	1.07E+00
REOUSK3	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
PECMMT	1.00E+03	5.75E+02	1.07E+03	8.91E+02	1.86E+00	1.20E+00
PECMBM	3.31E+02	1.70E+02	9.55E+02	3.16E+02	5.62E+00	3.02E+00
PECMMB	1.38E+04	1.00E+04	2.00E+04	1.41E+04	2.00E+00	1.42E+00
PECMLU	1.23E+02	1.23E+01	2.34E+02	1.00E+02	1.91E+01	2.34E+00
PECMTH	2.57E+02	1.20E+02	3.47E+02	2.82E+02	2.88E+00	1.23E+00
PECMSK	1.38E+04	9.55E+03	1.95E+04	1.41E+04	2.04E+00	1.38E+00
PELVMT	6.76E+03	5.01E+03	1.02E+04	6.31E+03	2.04E+00	1.62E+00
PELVBM	7.59E+02	5.50E+02	1.35E+03	7.94E+02	2.45E+00	1.70E+00
PELVMB	6.76E+04	5.50E+04	1.12E+05	7.08E+04	2.04E+00	1.58E+00
PELVLU	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
PELVTH	1.32E+03	6.76E+02	2.69E+03	1.12E+03	3.98E+00	2.40E+00
PELVSK	6.76E+04	5.50E+04	1.10E+05	7.08E+04	2.00E+00	1.55E+00

Results for the 99th percentile of the endpoints for the UK1 source term

ENDP	REF	MIN	MAX	1 YEAR	MAX/MIN	MAX/1Y
CGIOD1	1.00E+12	8.51E+11	1.00E+12	8.91E+11	1.17E+00	1.12E+00
CGIOD2	3.31E+10	2.00E+10	4.37E+10	3.55E+10	2.19E+00	1.23E+00
CGIOD3	3.39E+09	2.63E+09	3.72E+09	2.82E+09	1.41E+00	1.32E+00
CGCAE1	8.32E+09	6.92E+09	9.12E+09	7.94E+09	1.32E+00	1.15E+00
CGCAE2	5.50E+08	3.63E+08	6.76E+08	5.62E+08	1.86E+00	1.20E+00
CGCAE3	6.17E+07	5.37E+07	9.33E+07	6.31E+07	1.74E+00	1.48E+00
CAIOD1	1.00E+14	1.00E+13	1.00E+14	8.91E+13	1.00E+01	1.12E+00
CAIOD2	2.82E+12	2.00E+12	4.07E+12	3.16E+12	2.04E+00	1.29E+00
CAIOD3	2.63E+11	1.95E+11	2.63E+11	2.24E+11	1.35E+00	1.17E+00
CACAE1	6.31E+12	5.50E+12	9.12E+12	5.62E+12	1.66E+00	1.62E+00
CACAE2	3.98E+11	2.29E+11	4.79E+11	3.55E+11	2.09E+00	1.35E+00
CACAE3	2.51E+10	1.95E+10	3.55E+10	2.24E+10	1.82E+00	1.58E+00
DECMBM1	2.57E+01	2.00E+01	3.09E+01	2.51E+01	1.55E+00	1.23E+00
DECMBM2	1.29E+00	6.31E-01	1.70E+00	1.26E+00	2.69E+00	1.35E+00
DECMBM3	7.76E-02	3.47E-02	1.20E-01	6.31E-02	3.47E+00	1.90E+00
DECMTH1	9.55E+02	7.08E+02	1.07E+03	8.91E+02	1.51E+00	1.20E+00
DECMTH2	2.69E+01	1.38E+01	3.47E+01	2.82E+01	2.51E+00	1.23E+00
DECMTH3	1.15E+00	5.89E-01	1.38E+00	1.00E+00	2.34E+00	1.38E+00
DECMSK1	3.39E+03	2.51E+03	3.80E+03	3.16E+03	1.51E+00	1.20E+00
DECMSK2	1.05E+02	5.25E+01	1.35E+02	1.12E+02	2.57E+00	1.21E+00
DECMSK3	4.79E+00	2.29E+00	6.46E+00	3.98E+00	2.82E+00	1.62E+00
DELVBM1	6.61E+01	5.37E+01	8.32E+01	6.31E+01	1.55E+00	1.32E+00
DELVBM2	2.88E+00	1.74E+00	3.55E+00	2.82E+00	2.04E+00	1.26E+00
DELVBM3	2.69E-01	2.34E-01	3.31E-01	2.51E-01	1.41E+00	1.32E+00
DELVTH1	2.29E+03	1.74E+03	2.75E+03	2.24E+03	1.58E+00	1.23E+00
DELVTH2	6.03E+01	4.17E+01	8.91E+01	7.08E+01	2.14E+00	1.26E+00
DELVTH3	5.37E+00	4.17E+00	5.75E+00	4.47E+00	1.38E+00	1.29E+00
DELVSK1	1.82E+04	1.38E+04	2.19E+04	1.78E+04	1.58E+00	1.23E+00
DELVSK2	5.13E+02	3.47E+02	7.41E+02	5.62E+02	2.14E+00	1.32E+00
DELVSK3	4.27E+01	3.39E+01	4.79E+01	3.55E+01	1.41E+00	1.35E+00
DEOUBM1	4.27E+02	3.47E+02	5.25E+02	3.98E+02	1.51E+00	1.32E+00
DEOUBM2	1.86E+01	1.10E+01	2.24E+01	1.78E+01	2.04E+00	1.26E+00
DEOUBM3	1.66E+00	1.48E+00	2.09E+00	1.58E+00	1.41E+00	1.32E+00
DEOUTH1	4.47E+03	3.47E+03	5.37E+03	3.98E+03	1.55E+00	1.35E+00
DEOUTH2	1.20E+02	8.32E+01	1.78E+02	1.41E+02	2.14E+00	1.26E+00
DEOUTH3	1.17E+01	8.91E+00	1.29E+01	1.00E+01	1.45E+00	1.29E+00
DEOUSK1	3.31E+04	2.51E+04	3.98E+04	3.16E+04	1.58E+00	1.26E+00
DEOUSK2	9.33E+02	6.31E+02	1.35E+03	1.12E+03	2.14E+00	1.21E+00
DEOUSK3	7.76E+01	6.17E+01	8.71E+01	6.31E+01	1.41E+00	1.38E+00
RECMMT1	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	5.01E-02	4.47E-02	1.00E+00	1.12E+00
RECMMT3	.00E+00	.00E+00	.00E+00	.00E+00	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
RECMBM2	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
RECMBM3	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
RECMMB1	1.82E+00	1.70E+00	1.95E+00	1.58E+00	1.15E+00	1.23E+00
RECMMB2	1.00E+00	9.55E-01	1.02E+00	8.91E-01	1.07E+00	1.14E+00
RECMMB3	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
RECMLU1	.00E+00	.00E+00	4.27E-02	.00E+00	9.99E+99	9.99E+99
RECMLU2	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
RECMLU3	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
RECMTH1	5.13E-01	4.90E-01	5.50E-01	4.47E-01	1.12E+00	1.23E+00
RECMTH2	3.24E-02	.00E+00	5.37E-02	3.98E-02	9.99E+99	1.35E+00
RECMTH3	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
RECMSK1	9.50E-01	9.50E-01	9.50E-01	8.91E-01	1.00E+00	1.07E+00
RECMSK2	9.50E-01	9.50E-01	9.50E-01	8.91E-01	1.00E+00	1.07E+00
RECMSK3	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
RELVMT1	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00
RELVMT2	5.01E-02	5.01E-02	5.01E-02	4.47E-02	1.00E+00	1.12E+00
RELVMT3	5.00E-02	5.00E-02	5.01E-02	4.47E-02	1.00E+00	1.12E+00
RELVBM1	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00
RELVBM2	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
RELVBM3	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
RELVMB1	2.34E+00	2.14E+00	2.40E+00	2.24E+00	1.12E+00	1.07E+00
RELVMB2	1.48E+00	1.07E+00	1.78E+00	1.41E+00	1.66E+00	1.26E+00
RELVMB3	8.91E-01	3.55E-01	9.55E-01	6.31E-01	2.69E+00	1.51E+00
RELVLU1	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
RELVLU2	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
RELVLU3	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
RELVTH1	5.62E-01	5.25E-01	6.46E-01	5.62E-01	1.23E+00	1.15E+00
RELVTH2	1.62E-01	7.76E-02	2.82E-01	2.00E-01	3.63E+00	1.41E+00
RELVTH3	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
RELVSK1	9.50E-01	9.50E-01	9.50E-01	8.91E-01	1.00E+00	1.07E+00
RELVSK2	9.50E-01	9.50E-01	9.50E-01	8.91E-01	1.00E+00	1.07E+00
RELVSK3	8.91E-01	3.47E-01	9.50E-01	6.31E-01	2.74E+00	1.51E+00
REOUMT1	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
REOUMT3	5.01E-02	5.01E-02	5.01E-02	4.47E-02	1.00E+00	1.12E+00
REOUBM1	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
REOUBM3	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
REOUMB1	1.91E+00	1.82E+00	1.91E+00	1.78E+00	1.05E+00	1.07E+00
REOUMB2	1.86E+00	1.70E+00	1.86E+00	1.78E+00	1.10E+00	1.04E+00
REOUMB3	9.77E-01	9.55E-01	9.77E-01	8.91E-01	1.02E+00	1.10E+00
REOULU1	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
REOULU2	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
REOULU3	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
REOUTH1	6.46E-02	6.03E-02	1.00E-01	7.08E-02	1.66E+00	1.41E+00
REOUTH2	5.37E-02	3.98E-02	5.89E-02	4.47E-02	1.48E+00	1.32E+00
REOUTH3	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
REOUSK1	9.50E-01	9.50E-01	9.50E-01	8.91E-01	1.00E+00	1.07E+00
REOUSK2	9.50E-01	9.50E-01	9.50E-01	8.91E-01	1.00E+00	1.07E+00
REOUSK3	9.50E-01	9.50E-01	9.50E-01	8.91E-01	1.00E+00	1.07E+00
PECMMT	1.51E+03	9.77E+02	2.24E+03	1.78E+03	2.29E+00	1.26E+00
PECMBM	1.32E+03	3.16E+02	1.38E+03	1.00E+03	4.37E+00	1.38E+00
PECMMB	2.88E+04	1.45E+04	4.40E+04	3.16E+04	3.04E+00	1.39E+00
PECMLU	2.57E+02	9.77E+01	6.92E+02	3.98E+02	7.08E+00	1.74E+00
PECMTH	4.87E+02	2.95E+02	1.50E+03	5.62E+02	5.07E+00	2.67E+00
PECMSK	2.88E+04	1.45E+04	4.27E+04	3.16E+04	2.95E+00	1.35E+00
PELVMT	1.12E+04	7.41E+03	1.58E+04	1.12E+04	2.14E+00	1.41E+00
PELVBM	1.91E+03	7.76E+02	2.75E+03	1.58E+03	3.55E+00	1.74E+00
PELVMB	1.48E+05	7.94E+04	2.05E+05	1.26E+05	2.58E+00	1.63E+00
PELVLU	.00E+00	.00E+00	.00E+00	.00E+00	9.99E+99	9.99E+99
PELVTH	2.63E+03	1.66E+03	6.32E+03	2.24E+03	3.81E+00	2.82E+00
PELVSK	1.45E+05	7.24E+04	2.05E+05	1.26E+05	2.83E+00	1.63E+00

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

MEAN VAL	REF	MIN	MAX	MAX/MIN
CGIOD1	1.05E+08	9.63E+07	1.25E+08	1.29E+00
CGIOD2	3.44E+06	2.78E+06	4.40E+06	1.58E+00
CGIOD3	3.59E+05	3.12E+05	4.43E+05	1.42E+00
CGIOD4	2.30E+04	1.06E+04	3.26E+04	3.08E+00
CGCAE1	4.35E+06	4.18E+06	5.17E+06	1.23E+00
CGCAE2	3.32E+05	2.94E+05	4.39E+05	1.49E+00
CGCAE3	4.52E+04	4.30E+04	7.68E+04	1.79E+00
CGCAE4	6.38E+03	4.19E+03	7.77E+03	1.85E+00
CAIOD1	1.03E+10	9.38E+09	1.22E+10	1.30E+00
CAIOD2	3.05E+08	2.39E+08	4.00E+08	1.67E+00
CAIOD3	2.93E+07	2.45E+07	3.03E+07	1.24E+00
CAIOD4	1.56E+06	7.73E+05	2.29E+06	2.96E+00
CACAE1	3.64E+09	3.28E+09	4.35E+09	1.33E+00
CACAE2	1.95E+08	1.29E+08	2.51E+08	1.94E+00
CACAE3	1.77E+07	1.63E+07	2.06E+07	1.26E+00
CACAE4	1.40E+06	9.39E+05	1.91E+06	2.04E+00
DECMBM1	3.21E-03	2.96E-03	3.88E-03	1.31E+00
DECMBM2	1.83E-04	1.60E-04	2.22E-04	1.38E+00
DECMBM3	2.99E-05	2.70E-05	3.75E-05	1.39E+00
DECMTH1	1.03E-01	9.24E-02	1.24E-01	1.35E+00
DECMTH2	3.15E-03	2.41E-03	4.11E-03	1.71E+00
DECMTH3	4.99E-04	4.40E-04	5.71E-04	1.30E+00
DECMSK1	3.58E-01	3.22E-01	4.33E-01	1.34E+00
DECMSK2	1.34E-02	1.10E-02	1.70E-02	1.55E+00
DECMSK3	3.17E-03	2.90E-03	4.14E-03	1.43E+00
DLCMED2	2.09E-02	1.87E-02	2.72E-02	1.45E+00
DLCMED3	4.23E-03	3.81E-03	6.48E-03	1.70E+00
DLCMED4	7.69E-04	4.81E-04	9.09E-04	1.89E+00
DLCMBM2	2.01E-02	1.80E-02	2.62E-02	1.46E+00
DLCMBM3	4.07E-03	3.66E-03	6.25E-03	1.71E+00
DLCMBM4	7.42E-04	4.65E-04	8.77E-04	1.89E+00
DLCMTH2	2.65E-02	2.43E-02	3.36E-02	1.38E+00
DLCMTH3	5.16E-03	4.78E-03	7.52E-03	1.57E+00
DLCMTH4	8.52E-04	5.36E-04	1.01E-03	1.88E+00
DLLVED2	1.53E-01	1.21E-01	2.09E-01	1.72E+00
DLLVED3	2.01E-02	1.69E-02	3.39E-02	2.01E+00
DLLVED4	2.75E-03	1.78E-03	3.69E-03	2.07E+00
DLLVBM2	1.36E-01	1.05E-01	1.88E-01	1.79E+00
DLLVBM3	1.82E-02	1.50E-02	3.13E-02	2.08E+00
DLLVBM4	2.58E-03	1.68E-03	3.47E-03	2.06E+00
DLLVTH2	3.69E-01	3.18E-01	4.83E-01	1.52E+00
DLLVTH3	4.25E-02	3.92E-02	6.15E-02	1.57E+00
DLLVTH4	4.14E-03	2.47E-03	5.37E-03	2.17E+00
AEVAC	6.08E+00	5.30E+00	8.81E+00	1.66E+00
ASHEL	4.31E+01	3.11E+01	4.77E+01	1.53E+00
AIOD	1.82E+01	1.36E+01	2.19E+01	1.62E+00
ARELIN	6.08E+00	5.30E+00	8.81E+00	1.66E+00
ARELTIM	9.51E+00	8.71E+00	1.34E+01	1.54E+00
AFBIMIL	3.23E+04	2.34E+04	4.65E+04	1.99E+00
AFBIGRA	2.52E+04	1.83E+04	3.72E+04	2.03E+00
AFBIVEG	4.10E+04	3.85E+04	4.74E+04	1.23E+00
AFBIBEE	3.20E+04	2.37E+04	4.74E+04	2.00E+00
AFBTMIL	7.99E+03	6.25E+03	1.03E+04	1.65E+00
AFBTGRA	4.69E+04	3.42E+04	6.99E+04	2.04E+00
AFBTVEG	6.08E+03	4.81E+03	6.89E+03	1.43E+00
AFBTBEE	2.67E+04	2.01E+04	3.71E+04	1.85E+00
RECMMT1	6.85E-05	4.46E-05	8.60E-05	1.93E+00
RECMMT2	.00E+00	.00E+00	.00E+00	9.99E+99
RECMMT3	.00E+00	.00E+00	.00E+00	9.99E+99
RECMBM1	.00E+00	.00E+00	.00E+00	9.99E+99
RECMBM2	.00E+00	.00E+00	.00E+00	9.99E+99
RECMBM3	.00E+00	.00E+00	.00E+00	9.99E+99
RECMMB1	1.35E-03	8.83E-04	1.70E-03	1.93E+00
RECMMB2	.00E+00	.00E+00	.00E+00	9.99E+99
RECMMB3	.00E+00	.00E+00	.00E+00	9.99E+99
RECMLU1	.00E+00	.00E+00	.00E+00	9.99E+99
RECMLU2	.00E+00	.00E+00	.00E+00	9.99E+99
RECMLU3	.00E+00	.00E+00	.00E+00	9.99E+99
RECMTH1	.00E+00	.00E+00	.00E+00	9.99E+99
RECMTH2	.00E+00	.00E+00	.00E+00	9.99E+99
RECMTH3	.00E+00	.00E+00	.00E+00	9.99E+99
RECMSK1	1.35E-03	8.83E-04	1.70E-03	1.93E+00
RECMSK2	.00E+00	.00E+00	.00E+00	9.99E+99
RECMSK3	.00E+00	.00E+00	.00E+00	9.99E+99
RLCMMT2	1.01E-03	9.03E-04	1.31E-03	1.45E+00

RLCMMT3	2.05E-04	1.85E-04	3.13E-04	1.69E+00
RLCMMT4	3.75E-05	2.35E-05	4.44E-05	1.89E+00
RLCMBM2	1.04E-04	9.28E-05	1.35E-04	1.46E+00
RLCMBM3	2.10E-05	1.89E-05	3.23E-05	1.71E+00
RLCMBM4	3.83E-06	2.40E-06	4.53E-06	1.89E+00
RLCMTH2	4.70E-05	4.30E-05	5.94E-05	1.38E+00
RLCMTH3	9.13E-06	8.46E-06	1.33E-05	1.57E+00
RLCMTH4	1.51E-06	9.48E-07	1.78E-06	1.88E+00
RLLVMT2	6.21E-03	4.95E-03	8.32E-03	1.68E+00
RLLVMT3	9.33E-04	7.83E-04	1.52E-03	1.94E+00
RLLVMT4	1.32E-04	8.63E-05	1.78E-04	2.06E+00
RLLVBM2	7.04E-04	5.43E-04	9.71E-04	1.79E+00
RLLVBM3	9.38E-05	7.76E-05	1.61E-04	2.08E+00
RLLVBM4	1.33E-05	8.68E-06	1.79E-05	2.06E+00
RLLVTH2	6.53E-04	5.64E-04	8.55E-04	1.52E+00
RLLVTH3	7.51E-05	6.94E-05	1.09E-04	1.57E+00
RLLVTH4	7.33E-06	4.38E-06	9.50E-06	2.17E+00
CDCMED	4.78E+04	4.23E+04	5.77E+04	1.36E+00
CDCMBM	4.61E+04	4.08E+04	5.56E+04	1.36E+00
CDCMTH	5.34E+04	4.76E+04	6.33E+04	1.33E+00
CDLVED	1.57E+05	1.38E+05	1.79E+05	1.29E+00
CDLVBM	1.46E+05	1.29E+05	1.67E+05	1.30E+00
CDLVTH	2.56E+05	2.30E+05	2.87E+05	1.25E+00
PECMMT	1.07E-01	3.47E-02	2.33E-01	6.71E+00
PECMBM	.00E+00	.00E+00	.00E+00	9.99E+99
PECMMB	2.08E+00	6.76E-01	4.51E+00	6.67E+00
PECMLU	.00E+00	.00E+00	.00E+00	9.99E+99
PECMTH	.00E+00	.00E+00	.00E+00	9.99E+99
PECMSK	2.08E+00	6.76E-01	4.51E+00	6.67E+00
PLCMMT	2.33E+03	2.06E+03	2.81E+03	1.36E+00
PLCMBM	2.38E+02	2.10E+02	2.87E+02	1.36E+00
PLCMTH	9.44E+01	8.42E+01	1.12E+02	1.33E+00
PLLVMT	7.39E+03	6.58E+03	8.48E+03	1.29E+00
PLLVBM	7.54E+02	6.64E+02	8.60E+02	1.30E+00
PLLVTH	4.52E+02	4.06E+02	5.08E+02	1.25E+00

Results for the 95th percentile of the endpoints for the CB2 source term

95 %-FRT	REF	MIN	MAX	MAX/MIN
CGIOD1	4.57E+08	3.80E+08	7.08E+08	1.86E+00
CGIOD2	1.55E+07	1.38E+07	1.95E+07	1.41E+00
CGIOD3	1.51E+06	1.12E+06	2.09E+06	1.86E+00
CGIOD4	6.03E+04	4.17E+04	8.91E+04	2.14E+00
CGCAE1	1.66E+07	1.48E+07	2.75E+07	1.86E+00
CGCAE2	9.33E+05	7.08E+05	1.51E+06	2.14E+00
CGCAE3	1.32E+05	1.12E+05	1.66E+05	1.48E+00
CGCAE4	2.04E+04	1.35E+04	2.69E+04	2.00E+00
CAIOD1	3.98E+10	3.55E+10	7.08E+10	2.00E+00
CAIOD2	1.41E+09	1.17E+09	1.82E+09	1.55E+00
CAIOD3	1.23E+08	9.55E+07	1.91E+08	2.00E+00
CAIOD4	4.37E+06	3.16E+06	6.61E+06	2.09E+00
CACAE1	1.38E+10	1.05E+10	2.09E+10	2.00E+00
CACAE2	5.13E+08	4.27E+08	8.32E+08	1.95E+00
CACAE3	7.41E+07	5.62E+07	1.00E+08	1.78E+00
CACAE4	6.61E+06	4.27E+06	8.13E+06	1.91E+00
DECMBM1	1.41E-02	1.23E-02	2.24E-02	1.82E+00
DECMBM2	1.10E-03	8.71E-04	1.45E-03	1.66E+00
DECMBM3	1.38E-04	9.33E-05	1.62E-04	1.74E+00
DECMTH1	4.07E-01	3.63E-01	7.59E-01	2.09E+00
DECMTH2	2.19E-02	1.58E-02	2.45E-02	1.55E+00
DECMTH3	2.45E-03	1.91E-03	3.55E-03	1.86E+00
DECMSK1	1.41E+00	1.23E+00	2.63E+00	2.14E+00
DECMSK2	8.32E-02	7.24E-02	9.77E-02	1.35E+00
DECMSK3	1.86E-02	1.45E-02	2.63E-02	1.82E+00
DLCMED2	7.76E-02	6.03E-02	1.05E-01	1.74E+00
DLCMED3	1.20E-02	9.33E-03	1.45E-02	1.55E+00
DLCMED4	2.95E-03	2.04E-03	3.72E-03	1.82E+00
DLCMBM2	7.41E-02	5.75E-02	1.00E-01	1.74E+00
DLCMBM3	1.15E-02	8.91E-03	1.38E-02	1.55E+00
DLCMBM4	2.88E-03	1.95E-03	3.55E-03	1.82E+00
DLCMTH2	1.07E-01	9.33E-02	1.51E-01	1.62E+00
DLCMTH3	1.74E-02	1.38E-02	2.19E-02	1.58E+00
DLCMTH4	3.31E-03	2.63E-03	4.07E-03	1.55E+00
DLLVED2	3.31E-01	2.57E-01	5.01E-01	1.95E+00
DLLVED3	5.37E-02	3.80E-02	6.92E-02	1.82E+00
DLLVED4	7.94E-03	4.27E-03	1.12E-02	2.63E+00
DLLVBM2	2.63E-01	2.09E-01	4.17E-01	2.00E+00
DLLVBM3	4.79E-02	3.31E-02	6.03E-02	1.82E+00
DLLVBM4	7.24E-03	3.72E-03	1.07E-02	2.88E+00
DLLVTH2	1.20E+00	1.00E+00	1.78E+00	1.78E+00
DLLVTH3	1.35E-01	1.26E-01	2.14E-01	1.70E+00
DLLVTH4	1.29E-02	7.41E-03	1.86E-02	2.51E+00
AEVAC	1.86E+01	1.74E+01	2.34E+01	1.35E+00
ASHEL	1.41E+02	9.12E+01	1.62E+02	1.78E+00
AIOD	6.17E+01	3.72E+01	6.17E+01	1.66E+00
ARELIN	1.86E+01	1.74E+01	2.34E+01	1.35E+00
ARELTIM	3.89E+01	2.88E+01	5.89E+01	2.04E+00
AFBIMIL	9.33E+04	9.33E+04	1.24E+05	1.33E+00
AFBIGRA	7.59E+04	6.76E+04	1.05E+05	1.56E+00
AFBIVEG	7.41E+04	7.41E+04	9.55E+04	1.29E+00
AFBIBEE	9.55E+04	9.55E+04	1.23E+05	1.29E+00
AFBTMIL	2.09E+04	1.58E+04	2.45E+04	1.55E+00
AFBTGRA	1.48E+05	1.35E+05	1.88E+05	1.39E+00
AFBTVEG	1.38E+04	1.02E+04	1.62E+04	1.58E+00
AFBTBEE	6.92E+04	6.92E+04	8.09E+04	1.17E+00
RECMMT1	.00E+00	.00E+00	.00E+00	9.99E+99
RECMMT2	.00E+00	.00E+00	.00E+00	9.99E+99
RECMMT3	.00E+00	.00E+00	.00E+00	9.99E+99
RECMBM1	.00E+00	.00E+00	.00E+00	9.99E+99
RECMBM2	.00E+00	.00E+00	.00E+00	9.99E+99
RECMBM3	.00E+00	.00E+00	.00E+00	9.99E+99
RECMMB1	.00E+00	.00E+00	.00E+00	9.99E+99
RECMMB2	.00E+00	.00E+00	.00E+00	9.99E+99
RECMMB3	.00E+00	.00E+00	.00E+00	9.99E+99
RECMLU1	.00E+00	.00E+00	.00E+00	9.99E+99
RECMLU2	.00E+00	.00E+00	.00E+00	9.99E+99
RECMLU3	.00E+00	.00E+00	.00E+00	9.99E+99
RECMTH1	.00E+00	.00E+00	.00E+00	9.99E+99
RECMTH2	.00E+00	.00E+00	.00E+00	9.99E+99
RECMTH3	.00E+00	.00E+00	.00E+00	9.99E+99
RECMSK1	.00E+00	.00E+00	.00E+00	9.99E+99
RECMSK2	.00E+00	.00E+00	.00E+00	9.99E+99
RECMSK3	.00E+00	.00E+00	.00E+00	9.99E+99
RLCMMT2	3.80E-03	2.95E-03	5.13E-03	1.74E+00

RLCMMT3	5.89E-04	4.57E-04	7.08E-04	1.55E+00
RLCMMT4	1.45E-04	1.00E-04	1.82E-04	1.82E+00
RLCMBM2	3.80E-04	2.95E-04	5.25E-04	1.78E+00
RLCMBM3	5.89E-05	4.57E-05	7.08E-05	1.55E+00
RLCMBM4	1.48E-05	1.00E-05	1.82E-05	1.82E+00
RLCMTH2	1.91E-04	1.62E-04	2.69E-04	1.66E+00
RLCMTH3	3.02E-05	2.45E-05	3.89E-05	1.58E+00
RLCMTH4	5.89E-06	4.57E-06	7.24E-06	1.58E+00
RLLVMT2	1.51E-02	1.20E-02	2.34E-02	1.95E+00
RLLVMT3	2.51E-03	1.86E-03	3.24E-03	1.74E+00
RLLVMT4	3.80E-04	2.04E-04	5.37E-04	2.63E+00
RLLVBM2	1.38E-03	1.07E-03	2.19E-03	2.04E+00
RLLVBM3	2.45E-04	1.70E-04	3.16E-04	1.86E+00
RLLVBM4	3.80E-05	1.91E-05	5.50E-05	2.88E+00
RLLVTH2	2.14E-03	1.78E-03	3.16E-03	1.78E+00
RLLVTH3	2.40E-04	2.24E-04	3.80E-04	1.70E+00
RLLVTH4	2.29E-05	1.32E-05	3.24E-05	2.45E+00
CDCMED	1.00E+05	8.91E+04	1.35E+05	1.51E+00
CDCMBM	9.77E+04	8.71E+04	1.29E+05	1.48E+00
CDCMTH	1.10E+05	9.12E+04	1.45E+05	1.58E+00
CDLVED	4.17E+05	3.24E+05	5.37E+05	1.66E+00
CDLVBM	3.89E+05	3.09E+05	5.13E+05	1.66E+00
CDLVTH	6.31E+05	4.79E+05	6.92E+05	1.45E+00
PECMMT	9.55E-01	4.47E-02	2.70E+00	6.04E+01
PECMBM	.00E+00	.00E+00	.00E+00	9.99E+99
PECMMB	1.86E+01	8.91E-01	5.21E+01	5.84E+01
PECMLU	.00E+00	.00E+00	.00E+00	9.99E+99
PECMTH	.00E+00	.00E+00	.00E+00	9.99E+99
PECMSK	1.86E+01	8.91E-01	5.21E+01	5.84E+01
PLCMMT	4.90E+03	4.37E+03	6.61E+03	1.51E+00
PLCMBM	5.01E+02	4.47E+02	6.76E+02	1.51E+00
PLCMTH	1.95E+02	1.62E+02	2.51E+02	1.55E+00
PLLVMT	1.95E+04	1.55E+04	2.40E+04	1.55E+00
PLLVBM	2.04E+03	1.58E+03	2.63E+03	1.66E+00
PLLVTH	1.12E+03	8.51E+02	1.23E+03	1.45E+00

Results for the 99th percentile of the endpoints for the CB2 source term

99 %-FRT	REF	MIN	MAX	MAX/MIN
CGIOD1	1.00E+09	1.00E+09	1.00E+09	1.00E+00
CGIOD2	9.33E+07	5.75E+07	1.26E+08	2.19E+00
CGIOD3	9.77E+06	7.59E+06	1.05E+07	1.38E+00
CGIOD4	6.17E+05	2.45E+05	7.94E+05	3.24E+00
CGCAE1	1.32E+08	1.12E+08	1.45E+08	1.29E+00
CGCAE2	8.71E+06	5.89E+06	1.07E+07	1.82E+00
CGCAE3	1.00E+06	8.71E+05	1.48E+06	1.70E+00
CGCAE4	1.23E+05	7.24E+04	1.86E+05	2.57E+00
CAIOD1	1.00E+11	1.00E+11	1.00E+11	1.00E+00
CAIOD2	7.94E+09	5.50E+09	1.15E+10	2.09E+00
CAIOD3	7.41E+08	5.50E+08	7.41E+08	1.35E+00
CAIOD4	4.27E+07	1.86E+07	5.75E+07	3.09E+00
CACAE1	1.00E+11	8.71E+10	1.00E+11	1.15E+00
CACAE2	6.31E+09	3.72E+09	7.76E+09	2.09E+00
CACAE3	3.98E+08	3.09E+08	5.75E+08	1.86E+00
CACAE4	2.75E+07	1.86E+07	4.37E+07	2.34E+00
DECMBM1	8.71E-02	6.92E-02	1.07E-01	1.55E+00
DECMBM2	3.80E-03	3.31E-03	4.79E-03	1.45E+00
DECMBM3	7.24E-04	6.61E-04	8.51E-04	1.29E+00
DECMTH1	3.16E+00	2.34E+00	3.63E+00	1.55E+00
DECMTH2	6.61E-02	4.57E-02	9.12E-02	2.00E+00
DECMTH3	1.29E-02	1.02E-02	1.38E-02	1.35E+00
DECMSK1	1.12E+01	8.13E+00	1.26E+01	1.55E+00
DECMSK2	2.45E-01	2.19E-01	3.47E-01	1.58E+00
DECMSK3	7.76E-02	6.92E-02	8.91E-02	1.29E+00
DLCMED2	5.37E-01	4.68E-01	7.41E-01	1.58E+00
DLCMED3	7.94E-02	6.03E-02	1.07E-01	1.78E+00
DLCMED4	9.77E-03	6.03E-03	1.74E-02	2.88E+00
DLCMBM2	5.37E-01	4.47E-01	7.24E-01	1.62E+00
DLCMBM3	7.59E-02	5.75E-02	1.05E-01	1.82E+00
DLCMBM4	9.55E-03	5.75E-03	1.66E-02	2.88E+00
DLCMTH2	6.61E-01	5.37E-01	8.71E-01	1.62E+00
DLCMTH3	1.00E-01	7.76E-02	1.29E-01	1.66E+00
DLCMTH4	1.12E-02	7.59E-03	1.91E-02	2.51E+00
DLLVED2	4.68E+00	2.63E+00	5.75E+00	2.19E+00
DLLVED3	4.07E-01	2.40E-01	5.25E-01	2.19E+00
DLLVED4	4.68E-02	3.02E-02	7.94E-02	2.63E+00
DLLVBM2	3.89E+00	2.29E+00	5.25E+00	2.29E+00
DLLVBM3	3.63E-01	1.91E-01	4.68E-01	2.45E+00
DLLVBM4	4.17E-02	2.57E-02	7.41E-02	2.88E+00
DLLVTH2	1.00E+01	7.08E+00	1.48E+01	2.09E+00
DLLVTH3	8.91E-01	6.92E-01	1.26E+00	1.82E+00
DLLVTH4	7.24E-02	4.68E-02	1.32E-01	2.82E+00
AEVAC	2.68E+01	2.33E+01	3.31E+01	1.42E+00
ASHEL	2.40E+02	1.29E+02	2.57E+02	2.00E+00
AIOD	1.32E+02	4.27E+01	1.67E+02	3.91E+00
ARELIN	2.68E+01	2.33E+01	3.31E+01	1.42E+00
ARELTIM	1.02E+02	6.03E+01	1.41E+02	2.34E+00
AFBIMIL	1.17E+05	1.16E+05	1.71E+05	1.48E+00
AFBIGRA	1.00E+05	8.71E+04	1.12E+05	1.29E+00
AFBIVEG	9.77E+04	8.31E+04	1.26E+05	1.51E+00
AFBIBEE	1.26E+05	1.06E+05	1.51E+05	1.43E+00
AFBTMIL	2.69E+04	2.09E+04	3.09E+04	1.48E+00
AFBTGRA	1.91E+05	1.66E+05	2.09E+05	1.26E+00
AFBTVEG	1.78E+04	1.32E+04	2.07E+04	1.57E+00
AFBTBEE	8.13E+04	7.08E+04	9.68E+04	1.37E+00
RECMMT1	1.15E-03	.00E+00	2.34E-03	9.99E+99
RECMMT2	.00E+00	.00E+00	.00E+00	9.99E+99
RECMMT3	.00E+00	.00E+00	.00E+00	9.99E+99
RECMBM1	.00E+00	.00E+00	.00E+00	9.99E+99
RECMBM2	.00E+00	.00E+00	.00E+00	9.99E+99
RECMBM3	.00E+00	.00E+00	.00E+00	9.99E+99
RECMMB1	2.29E-02	.00E+00	4.68E-02	9.99E+99
RECMMB2	.00E+00	.00E+00	.00E+00	9.99E+99
RECMMB3	.00E+00	.00E+00	.00E+00	9.99E+99
RECMLU1	.00E+00	.00E+00	.00E+00	9.99E+99
RECMLU2	.00E+00	.00E+00	.00E+00	9.99E+99
RECMLU3	.00E+00	.00E+00	.00E+00	9.99E+99
RECMTH1	.00E+00	.00E+00	.00E+00	9.99E+99
RECMTH2	.00E+00	.00E+00	.00E+00	9.99E+99
RECMTH3	.00E+00	.00E+00	.00E+00	9.99E+99
RECMSK1	2.29E-02	.00E+00	4.68E-02	9.99E+99
RECMSK2	.00E+00	.00E+00	.00E+00	9.99E+99
RECMSK3	.00E+00	.00E+00	.00E+00	9.99E+99
RLCMMT2	2.63E-02	2.24E-02	3.55E-02	1.58E+00

RLCMMT3	3.80E-03	2.95E-03	5.25E-03	1.78E+00
RLCMMT4	4.79E-04	2.95E-04	8.51E-04	2.88E+00
RLCMBM2	2.75E-03	2.34E-03	3.72E-03	1.58E+00
RLCMBM3	3.89E-04	2.95E-04	5.37E-04	1.82E+00
RLCMBM4	4.90E-05	3.02E-05	8.51E-05	2.82E+00
RLCMTH2	1.17E-03	9.55E-04	1.55E-03	1.62E+00
RLCMTH3	1.78E-04	1.38E-04	2.29E-04	1.66E+00
RLCMTH4	2.00E-05	1.32E-05	3.39E-05	2.57E+00
RLLVMT2	2.00E-01	1.20E-01	2.51E-01	2.09E+00
RLLVMT3	1.91E-02	1.12E-02	2.51E-02	2.24E+00
RLLVMT4	2.29E-03	1.48E-03	3.80E-03	2.57E+00
RLLVBM2	2.04E-02	1.17E-02	2.69E-02	2.29E+00
RLLVBM3	1.86E-03	1.00E-03	2.40E-03	2.40E+00
RLLVBM4	2.19E-04	1.32E-04	3.89E-04	2.95E+00
RLLVTH2	1.78E-02	1.26E-02	2.63E-02	2.09E+00
RLLVTH3	1.58E-03	1.23E-03	2.24E-03	1.82E+00
RLLVTH4	1.29E-04	8.32E-05	2.34E-04	2.82E+00
CDCMED	1.41E+05	1.10E+05	1.66E+05	1.51E+00
CDCMBM	1.35E+05	1.05E+05	1.62E+05	1.55E+00
CDCMTH	1.48E+05	1.15E+05	1.74E+05	1.51E+00
CDLVED	4.57E+05	4.30E+05	8.91E+05	2.07E+00
CDLVBM	4.37E+05	4.09E+05	8.51E+05	2.08E+00
CDLVTH	6.76E+05	6.31E+05	1.12E+06	1.78E+00
PECMMT	2.45E+00	3.31E-01	2.70E+00	8.15E+00
PECMBM	.00E+00	.00E+00	.00E+00	9.99E+99
PECMMB	4.68E+01	6.46E+00	5.21E+01	8.07E+00
PECMLU	.00E+00	.00E+00	.00E+00	9.99E+99
PECMTH	.00E+00	.00E+00	.00E+00	9.99E+99
PECMSK	4.68E+01	6.46E+00	5.21E+01	8.07E+00
PLCMMT	6.76E+03	5.25E+03	8.13E+03	1.55E+00
PLCMBM	6.92E+02	5.37E+02	8.32E+02	1.55E+00
PLCMTH	2.57E+02	2.04E+02	3.09E+02	1.51E+00
PLLVMT	2.19E+04	2.09E+04	4.27E+04	2.04E+00
PLLVBM	2.24E+03	2.11E+03	4.47E+03	2.12E+00
PLLVTH	1.20E+03	1.12E+03	1.95E+03	1.74E+00

Results for the mean value of the endpoints for the DBA source term

MEAN VAL	REF	MIN	MAX	MAX/MIN
CGIOD2	9.57E+02	7.73E+02	1.22E+03	1.58E+00
CGIOD3	9.98E+01	8.65E+01	1.23E+02	1.42E+00
CGIOD4	6.31E+00	2.94E+00	9.00E+00	3.06E+00
CGCAE2	4.89E+01	4.31E+01	6.46E+01	1.50E+00
CGCAE3	6.58E+00	6.14E+00	1.12E+01	1.82E+00
CGCAE4	8.34E-01	4.88E-01	1.04E+00	2.13E+00
CAIOD2	8.62E+04	6.74E+04	1.13E+05	1.68E+00
CAIOD3	8.30E+03	6.93E+03	8.58E+03	1.24E+00
CAIOD4	4.37E+02	2.22E+02	6.49E+02	2.93E+00
CACAE2	2.87E+04	1.90E+04	3.70E+04	1.94E+00
CACAE3	2.60E+03	2.35E+03	2.97E+03	1.26E+00
CACAE4	1.81E+02	1.23E+02	2.62E+02	2.12E+00
DLCMED2	1.63E-05	1.28E-05	2.20E-05	1.71E+00
DLCMED3	2.36E-06	2.07E-06	3.80E-06	1.84E+00
DLCMED4	2.75E-07	1.58E-07	3.65E-07	2.31E+00
DLCMBM2	1.45E-05	1.10E-05	1.99E-05	1.81E+00
DLCMBM3	1.97E-06	1.66E-06	3.34E-06	2.01E+00
DLCMBM4	2.48E-07	1.40E-07	3.28E-07	2.34E+00
DLCMTH2	4.18E-05	3.82E-05	4.93E-05	1.29E+00
DLCMTH3	8.56E-06	7.74E-06	1.07E-05	1.38E+00
DLCMTH4	6.67E-07	3.88E-07	8.87E-07	2.29E+00
DLOUED2	2.93E-05	2.55E-05	3.88E-05	1.52E+00
DLOUED3	3.76E-06	3.46E-06	6.20E-06	1.79E+00
DLOUED4	4.46E-07	2.62E-07	5.79E-07	2.21E+00
DLOUBM2	2.52E-05	2.15E-05	3.39E-05	1.57E+00
DLOUBM3	3.32E-06	3.00E-06	5.63E-06	1.87E+00
DLOUBM4	4.15E-07	2.40E-07	5.37E-07	2.24E+00
DLOUTH2	9.49E-05	8.14E-05	1.21E-04	1.48E+00
DLOUTH3	1.06E-05	9.73E-06	1.46E-05	1.50E+00
DLOUTH4	8.73E-07	5.25E-07	1.15E-06	2.19E+00
ARELIN	.00E+00	.00E+00	.00E+00	9.99E+99
ARELTIM	.00E+00	.00E+00	.00E+00	9.99E+99
AFBIMIL	6.45E+00	4.21E+00	7.87E+00	1.87E+00
AFBIGRA	1.80E-01	1.50E-01	2.68E-01	1.79E+00
AFBIVEG	1.48E+01	1.19E+01	1.79E+01	1.51E+00
AFBIBEE	5.63E-01	4.41E-01	7.68E-01	1.74E+00
AFBTMIL	5.37E-01	3.57E-01	6.49E-01	1.82E+00
AFBTGRA	3.33E-01	2.80E-01	5.07E-01	1.81E+00
AFBTVEG	3.86E-01	3.27E-01	4.72E-01	1.44E+00
AFBTBEE	1.77E-01	1.45E-01	2.41E-01	1.67E+00
RLCMMT2	7.82E-07	6.09E-07	1.06E-06	1.73E+00
RLCMMT3	1.11E-07	9.62E-08	1.81E-07	1.88E+00
RLCMMT4	1.32E-08	7.52E-09	1.74E-08	2.32E+00
RLCMBM2	7.49E-08	5.68E-08	1.03E-07	1.81E+00
RLCMBM3	1.02E-08	8.57E-09	1.72E-08	2.01E+00
RLCMBM4	1.28E-09	7.23E-10	1.69E-09	2.34E+00
RLCMTH2	7.40E-08	6.75E-08	8.73E-08	1.29E+00
RLCMTH3	1.52E-08	1.37E-08	1.89E-08	1.38E+00
RLCMTH4	1.18E-09	6.87E-10	1.57E-09	2.29E+00
RLOUMT2	1.39E-06	1.21E-06	1.86E-06	1.53E+00
RLOUMT3	1.80E-07	1.65E-07	2.99E-07	1.81E+00
RLOUMT4	2.16E-08	1.26E-08	2.81E-08	2.22E+00
RLOUBM2	1.30E-07	1.11E-07	1.75E-07	1.57E+00
RLOUBM3	1.71E-08	1.55E-08	2.90E-08	1.87E+00
RLOUBM4	2.14E-09	1.24E-09	2.77E-09	2.24E+00
RLOUTH2	1.68E-07	1.44E-07	2.14E-07	1.48E+00
RLOUTH3	1.87E-08	1.72E-08	2.59E-08	1.50E+00
RLOUTH4	1.55E-09	9.29E-10	2.03E-09	2.19E+00
CDCMED	1.04E+01	8.23E+00	1.16E+01	1.41E+00
CDCMBM	9.11E+00	7.02E+00	1.02E+01	1.46E+00
CDCMTH	3.09E+01	2.76E+01	3.25E+01	1.18E+00
CDOUED	1.76E+01	1.42E+01	1.92E+01	1.35E+00
CDOUBM	1.59E+01	1.25E+01	1.74E+01	1.39E+00
CDOUTH	4.39E+01	3.87E+01	4.66E+01	1.20E+00
PLCMMT	4.96E-01	3.88E-01	5.53E-01	1.42E+00
PLCMBM	4.70E-02	3.62E-02	5.28E-02	1.46E+00
PLCMTH	5.48E-02	4.88E-02	5.75E-02	1.18E+00
PLOUMT	8.49E-01	6.80E-01	9.23E-01	1.36E+00
PLOUBM	8.21E-02	6.45E-02	8.99E-02	1.39E+00
PLOUTH	7.77E-02	6.85E-02	8.25E-02	1.20E+00

Results for the 95th percentile of the endpoints for the DBA source term

95 %-FRT	REF	MIN	MAX	MAX/MIN
CGIOD2	4.37E+03	3.89E+03	5.37E+03	1.38E+00
CGIOD3	4.17E+02	3.16E+02	5.89E+02	1.86E+00
CGIOD4	1.62E+01	1.02E+01	2.40E+01	2.34E+00
CGCAE2	1.38E+02	1.02E+02	2.24E+02	2.19E+00
CGCAE3	1.95E+01	1.66E+01	2.45E+01	1.48E+00
CGCAE4	2.14E+00	1.20E+00	2.63E+00	2.19E+00
CAIOD2	3.89E+05	3.31E+05	5.13E+05	1.55E+00
CAIOD3	3.55E+04	2.75E+04	5.37E+04	1.95E+00
CAIOD4	1.20E+03	8.13E+02	1.86E+03	2.29E+00
CACAE2	7.59E+04	6.31E+04	1.20E+05	1.91E+00
CACAE3	1.10E+04	8.32E+03	1.48E+04	1.78E+00
CACAE4	8.13E+02	4.90E+02	1.10E+03	2.24E+00
DLCMED2	4.57E-05	3.72E-05	6.61E-05	1.78E+00
DLCMED3	6.92E-06	5.75E-06	9.12E-06	1.58E+00
DLCMED4	6.76E-07	4.37E-07	8.32E-07	1.91E+00
DLCMBM2	3.24E-05	2.57E-05	5.01E-05	1.95E+00
DLCMBM3	5.37E-06	4.27E-06	6.76E-06	1.58E+00
DLCMBM4	5.50E-07	3.47E-07	6.92E-07	2.00E+00
DLCMTH2	2.19E-04	2.04E-04	3.39E-04	1.66E+00
DLCMTH3	3.02E-05	2.57E-05	5.25E-05	2.04E+00
DLCMTH4	1.86E-06	1.41E-06	2.82E-06	2.00E+00
DLOUED2	8.32E-05	6.61E-05	1.17E-04	1.78E+00
DLOUED3	1.15E-05	9.55E-06	1.45E-05	1.51E+00
DLOUED4	1.20E-06	7.76E-07	1.51E-06	1.95E+00
DLOUBM2	6.76E-05	5.37E-05	1.05E-04	1.95E+00
DLOUBM3	9.55E-06	7.94E-06	1.20E-05	1.51E+00
DLOUBM4	1.07E-06	6.17E-07	1.32E-06	2.14E+00
DLOUTH2	3.31E-04	2.82E-04	5.01E-04	1.78E+00
DLOUTH3	3.80E-05	3.16E-05	6.03E-05	1.91E+00
DLOUTH4	2.57E-06	1.86E-06	3.47E-06	1.86E+00
ARELIN	.00E+00	.00E+00	.00E+00	9.99E+99
ARELTIM	.00E+00	.00E+00	.00E+00	9.99E+99
AFBIMIL	3.02E+01	1.82E+01	3.31E+01	1.82E+00
AFBIGRA	1.23E+00	8.91E-01	1.23E+00	1.38E+00
AFBIVEG	5.13E+01	3.63E+01	5.50E+01	1.51E+00
AFBIBEE	2.63E+00	2.19E+00	2.75E+00	1.26E+00
AFBTMIL	2.51E+00	1.62E+00	2.69E+00	1.66E+00
AFBTGRA	2.29E+00	1.78E+00	2.45E+00	1.38E+00
AFBTVEG	1.10E+00	8.91E-01	1.17E+00	1.32E+00
AFBTBEE	1.10E+00	9.33E-01	1.10E+00	1.17E+00
RLCMMT2	2.09E-06	1.70E-06	3.09E-06	1.82E+00
RLCMMT3	3.16E-07	2.63E-07	4.17E-07	1.58E+00
RLCMMT4	3.16E-08	2.00E-08	3.89E-08	1.95E+00
RLCMBM2	1.66E-07	1.35E-07	2.57E-07	1.91E+00
RLCMBM3	2.82E-08	2.24E-08	3.47E-08	1.55E+00
RLCMBM4	2.82E-09	1.78E-09	3.55E-09	2.00E+00
RLCMTH2	3.89E-07	3.63E-07	6.03E-07	1.66E+00
RLCMTH3	5.37E-08	4.57E-08	9.12E-08	2.00E+00
RLCMTH4	3.24E-09	2.45E-09	4.90E-09	2.00E+00
RLOUMT2	3.89E-06	3.02E-06	5.62E-06	1.86E+00
RLOUMT3	5.37E-07	4.57E-07	6.76E-07	1.48E+00
RLOUMT4	5.89E-08	3.63E-08	7.24E-08	2.00E+00
RLOUBM2	3.47E-07	2.75E-07	5.37E-07	1.95E+00
RLOUBM3	4.90E-08	4.07E-08	6.17E-08	1.51E+00
RLOUBM4	5.50E-09	3.24E-09	6.92E-09	2.14E+00
RLOUTH2	5.89E-07	4.90E-07	8.91E-07	1.82E+00
RLOUTH3	6.76E-08	5.62E-08	1.07E-07	1.91E+00
RLOUTH4	4.57E-09	3.31E-09	6.03E-09	1.82E+00
CDCMED	3.39E+01	2.75E+01	5.50E+01	2.00E+00
CDCMBM	3.16E+01	2.45E+01	5.13E+01	2.09E+00
CDCMTH	8.91E+01	6.31E+01	1.00E+02	1.58E+00
CDOUED	5.01E+01	4.37E+01	8.32E+01	1.91E+00
CDOUBM	4.79E+01	3.98E+01	7.76E+01	1.95E+00
CDOUTH	1.12E+02	8.32E+01	1.29E+02	1.55E+00
PLCMMT	1.62E+00	1.32E+00	2.69E+00	2.04E+00
PLCMBM	1.62E-01	1.26E-01	2.63E-01	2.09E+00
PLCMTH	1.58E-01	1.12E-01	1.78E-01	1.58E+00
PLOUMT	2.45E+00	2.09E+00	3.98E+00	1.91E+00
PLOUBM	2.45E-01	2.04E-01	3.98E-01	1.95E+00
PLOUTH	2.00E-01	1.48E-01	2.29E-01	1.55E+00

Results for the 99th percentile of the endpoints for the DBA source term

99 %-FRT	REF	MIN	MAX	MAX/MIN
CGIOD2	2.63E+04	1.58E+04	3.47E+04	2.19E+00
CGIOD3	2.69E+03	2.09E+03	2.95E+03	1.41E+00
CGIOD4	1.70E+02	6.61E+01	2.24E+02	3.39E+00
CGCAE2	1.29E+03	8.71E+02	1.58E+03	1.82E+00
CGCAE3	1.45E+02	1.29E+02	2.19E+02	1.70E+00
CGCAE4	1.82E+01	9.12E+00	2.75E+01	3.02E+00
CAIOD2	2.24E+06	1.58E+06	3.24E+06	2.04E+00
CAIOD3	2.09E+05	1.55E+05	2.09E+05	1.35E+00
CAIOD4	1.20E+04	5.37E+03	1.62E+04	3.02E+00
CACAE2	9.33E+05	5.37E+05	1.12E+06	2.09E+00
CACAE3	5.89E+04	4.57E+04	8.51E+04	1.86E+00
CACAE4	3.98E+03	2.51E+03	6.46E+03	2.57E+00
DLCMED2	4.57E-04	2.69E-04	5.75E-04	2.14E+00
DLCMED3	4.79E-05	3.31E-05	6.46E-05	1.95E+00
DLCMED4	5.25E-06	3.31E-06	8.51E-06	2.57E+00
DLCMBM2	3.98E-04	2.45E-04	5.37E-04	2.19E+00
DLCMBM3	3.89E-05	2.51E-05	5.37E-05	2.14E+00
DLCMBM4	4.68E-06	2.75E-06	8.13E-06	2.95E+00
DLCMTH2	9.12E-04	7.76E-04	1.12E-03	1.45E+00
DLCMTH3	1.95E-04	1.58E-04	2.40E-04	1.51E+00
DLCMTH4	1.41E-05	9.33E-06	2.04E-05	2.19E+00
DLOUED2	8.51E-04	4.90E-04	1.00E-03	2.04E+00
DLOUED3	7.76E-05	6.61E-05	1.07E-04	1.62E+00
DLOUED4	8.51E-06	5.25E-06	1.55E-05	2.95E+00
DLOUBM2	6.76E-04	4.37E-04	8.51E-04	1.95E+00
DLOUBM3	6.61E-05	5.89E-05	9.55E-05	1.62E+00
DLOUBM4	8.13E-06	4.68E-06	1.35E-05	2.88E+00
DLOUTH2	2.45E-03	1.82E-03	3.80E-03	2.09E+00
DLOUTH3	2.29E-04	1.91E-04	3.02E-04	1.58E+00
DLOUTH4	1.91E-05	1.17E-05	2.75E-05	2.34E+00
ARELIN	.00E+00	.00E+00	.00E+00	9.99E+99
ARELTIM	.00E+00	.00E+00	.00E+00	9.99E+99
AFBIMIL	4.90E+01	2.63E+01	5.37E+01	2.04E+00
AFBIGRA	2.04E+00	1.23E+00	6.31E+00	5.13E+00
AFBIVEG	9.22E+01	4.79E+01	9.22E+01	1.93E+00
AFBIBEE	4.07E+00	2.75E+00	6.46E+00	2.34E+00
AFBTMIL	4.07E+00	2.14E+00	4.30E+00	2.01E+00
AFBTGRA	4.07E+00	2.40E+00	9.77E+00	4.07E+00
AFBTVEG	1.88E+00	1.07E+00	1.88E+00	1.75E+00
AFBTBEE	1.86E+00	1.10E+00	4.37E+00	3.98E+00
RLCMMT2	2.19E-05	1.32E-05	2.82E-05	2.14E+00
RLCMMT3	2.19E-06	1.45E-06	3.02E-06	2.09E+00
RLCMMT4	2.51E-07	1.58E-07	4.07E-07	2.57E+00
RLCMBM2	2.09E-06	1.29E-06	2.75E-06	2.14E+00
RLCMBM3	2.00E-07	1.32E-07	2.75E-07	2.09E+00
RLCMBM4	2.40E-08	1.45E-08	4.17E-08	2.88E+00
RLCMTH2	1.62E-06	1.38E-06	2.00E-06	1.45E+00
RLCMTH3	3.47E-07	2.75E-07	4.27E-07	1.55E+00
RLCMTH4	2.51E-08	1.66E-08	3.55E-08	2.14E+00
RLOUMT2	3.98E-05	2.29E-05	4.79E-05	2.09E+00
RLOUMT3	3.72E-06	3.24E-06	5.13E-06	1.58E+00
RLOUMT4	4.17E-07	2.57E-07	7.59E-07	2.95E+00
RLOUBM2	3.55E-06	2.24E-06	4.37E-06	1.95E+00
RLOUBM3	3.39E-07	3.02E-07	5.01E-07	1.66E+00
RLOUBM4	4.17E-08	2.45E-08	7.08E-08	2.88E+00
RLOUTH2	4.37E-06	3.16E-06	6.76E-06	2.14E+00
RLOUTH3	4.07E-07	3.39E-07	5.37E-07	1.58E+00
RLOUTH4	3.39E-08	2.09E-08	4.90E-08	2.34E+00
CDCMED	4.79E+01	4.57E+01	9.55E+01	2.09E+00
CDCMBM	4.27E+01	4.14E+01	8.91E+01	2.15E+00
CDCMTH	1.15E+02	8.51E+01	1.51E+02	1.78E+00
CDOUED	6.92E+01	6.65E+01	1.41E+02	2.12E+00
CDOUBM	6.31E+01	6.17E+01	1.35E+02	2.19E+00
CDOUTH	1.45E+02	1.17E+02	2.09E+02	1.78E+00
PLCMMT	2.29E+00	2.19E+00	4.57E+00	2.09E+00
PLCMBM	2.19E-01	2.14E-01	4.68E-01	2.19E+00
PLCMTH	2.04E-01	1.51E-01	2.69E-01	1.78E+00
PLOUMT	3.31E+00	3.22E+00	6.92E+00	2.15E+00
PLOUBM	3.31E-01	3.19E-01	6.92E-01	2.17E+00
PLOUTH	2.51E-01	2.09E-01	3.72E-01	1.78E+00