SANDIA NATIONAL LABORATORIES

WASTE ISOLATION PILOT PLANT

INPUT PARAMETER REPORT FOR THE 2026 COMPLIANCE RECERTIFICATION APPLICATION PERFORMANCE ASSESSMENT: INTERIM STATE REPOSITORY (CRA-2026 IS)

REVISION 0

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Executive Summary

The Waste Isolation Pilot Plant (WIPP) was initially certified as a repository consisting of 10 panels, which were excavated for the long-term storage and placement of transuranic waste (U.S. EPA 1998). However, due to operational constraints, the entire volume of the 10 panels is no longer available for waste disposal. In March 2024, the U.S. Department of Energy (DOE) submitted the Replacement Panels Planned Change Request (RPPCR) to the U.S. Environmental Protection Agency (EPA) for approval of waste emplacement in two new panels. These panels, referred to as replacement panels, are located to the west of the existing operations area. The EPA approved the RPPCR in July 2025 (U.S. EPA 2025).

The addition of the two replacement panels is not expected to provide adequate space for the disposal of the allowable waste volume designated for WIPP under the Land Withdrawal Act (LWA); thus, the 12-panel configuration is regarded as an interim state of the repository. The DOE may pursue approval for waste disposal in seven additional panels to accommodate the full allowable volume of waste. This hypothetical 19-panel configuration is considered the anticipated final state of the repository.

The DOE demonstrates compliance with containment requirements as outlined in the Certification Criteria of Title 40 Code of Federal Regulations (CFR) Part 191.13 through performance assessment (PA). PA calculations estimate the probability and consequences of potential radionuclide releases from the repository to the accessible environment over a regulatory period of 10,000 years following facility closure. WIPP PA models are utilized to support the periodic recertification of WIPP.

The 2026 Compliance Recertification Application (CRA-2026) represents the fifth recertification application submitted to the EPA. A PA has been carried out by Sandia National Laboratories(SNL) to support the DOE's submission of the CRA-2026. This report documents the input parameters of the CRA-2026 PA for the interim state repository.

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1.0 INTRODUCTION

The Waste Isolation Pilot Plant (WIPP), located in southeastern New Mexico, has been developed by the U.S. Department of Energy (DOE) for the geologic disposal of transuranic (TRU) waste. The containment of TRU waste at WIPP is regulated by the U.S. Environmental Protection Agency (EPA) under Title 40 of the Code of Federal Regulations (CFR), Part 191.

The DOE demonstrates compliance with the containment requirements of 40 CFR 191.13 by means of performance assessment (PA) as described in the Certification Criteria of Title 40 CFR Part 194. Sandia National Laboratories (SNL) conducts PAs at the request of the DOE. The PA calculations estimate the probability and consequences of potential radionuclide releases from the repository to the accessible environment over a regulatory period of 10,000 years following facility closure. The PA models are continuously maintained and updated with new information, which typically leads to refinements and modifications in both the models and their parameters. Additionally, planned changes to the repository and its components necessitate updates to the WIPP PA models.

All previous WIPP certifications have been based on a repository consisting of 10 panels. In March 2024, the DOE submitted the Replacement Panels Planned Change Request (RPPCR) to seek EPA approval for waste emplacement in two new panels, referred to as replacement panels, located to the west of the existing operations area (Bollinger 2024). The EPA approved the RPPCR in July 2025 (U.S. EPA 2025).

The addition of the two replacement panels is not expected to provide sufficient space for the disposal of the allowable waste volume designated for WIPP under the Land Withdrawal Act (LWA). The 12-panel configuration is thus regarded as an interim state of the repository. The DOE may seek approval for waste disposal in up to seven additional panels to accommodate the full allowable volume of waste. This 19-panel configuration is considered the anticipated final state of the repository.

The 2026 Compliance Recertification Application (CRA-2026) is the fifth recertification application for the WIPP submitted by the DOE for EPA approval. The PA executed by SNL in support of the CRA-2026 PA is described in the Analysis Plan for the 2026 WIPP Compliance Recertification Application Performance Assessment (AP-214) (Hansen et al. 2025). This report documents the input parameters for the CRA-2026 PA for the interim state repository.

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2.0 PARAMETER DEVELOPMENT PROCESS

The development of parameter values is controlled by the application of Nuclear Waste Management Program Procedure Parameters (NP 9-2) (Long 2025). The process includes documentation of parameter development by those responsible for completion of a particular experimental investigation, development of a system design, or by staff involved in the PA modeling process. All the references pertaining to parameter selection are contained within the three levels of parameter and data documentation: (1) Parameter Data Entry form NP 9-2-1, (2) analysis records packages, and (3) supporting data records packages.

The Parameter Data Entry form is the highest-level record documenting parameter development that includes application of statistics and interpretations. The Parameter Data Entry forms include a justification section, which is a pointer to supporting information including, where applicable, the analysis plan and source document. All values provided in this report were derived from the WIPP PA parameter database. The numbers from the WIPP PA parameter database may differ slightly from those contained in the Parameter Data Entry forms because of rounding.

The parameter supporting information package includes references to related information, such as analysis plans, SAND reports, analysis report, justifications, test plans, and related Enterprise Information Management Services (EIMS) FileNet or Electronic Records Management System (ERMS) file codes, and, where applicable, a summary on the experimental data collection (that is, method used, assumptions made in testing, and interpretation). The parameter supporting information packages point to the data records packages containing information such as the raw data, analysis, and data interpretation.

Each Parameter Data Entry form and parameter supporting information package are assigned unique EIMS or ERMS numbers. Copies of the Parameter Data Entry forms and parameter supporting information packages are maintained in the SNL WIPP Records Center.

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3.0 PARAMETER DISTRIBUTIONS

Probability distributions are used to characterize the uncertainty concerning the value of a parameter. Numbers that characterize a particular distribution include the range, the mean, median, and mode (only for triangular distributions).

- **Range:** The range of a distribution can be denoted by (a, b), a pair of numbers in which a and b are the minimum and maximum values of the parameter, respectively.
- **Mean:** The expectation of a random variable: i.e., the sum (or integral) of the product of the variable and the probability density function (PDF) over the range of the variable. There is distinction between the sample mean and the true mean of a distribution. The mean, $\boldsymbol{\mu}$, of a distribution is one measure of the central tendency of a distribution, analogous to the arithmetic average of a series of numbers. The sample mean, $\overline{\boldsymbol{X}}$, is the arithmetic average of value in an empirical data set.
- **Median:** The value of a random variable at which its cumulative distribution function (CDF) takes the value 0.5; i.e., the 50th percentile point.
- **Mode:** The value of a random variable at which its PDF takes its maximum value. The mode of a set of data is the value in the set that occurs most often.

Distributions used to characterize uncertainty in parameters of the PA include uniform, loguniform, cumulative, triangular, delta, normal, and Student's t. Constant is not a distribution type; however, the database accepts constant as an identifier.

3.1 Uniform Distribution

A uniform distribution is described by the following equations.

Probability density function (PDF):

$$f(x) = \frac{1}{b-a} \qquad a \le x \le b \qquad \text{Equation (3.1)}$$

Cumulative distribution function (CDF):

$$F(x) = \frac{x-a}{b-a} \qquad a \le x \le b \qquad \text{Equation (3.2)}$$

Expected value:

$$E(x) = \frac{a+b}{2} \qquad \text{Equation (3.3)}$$

Variance:

$$V(x) = \frac{(b-a)^2}{12} \qquad \text{Equation (3.4)}$$

Median:

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$$x_{0.5} = Expected\ Value(Mean)$$ Equation (3.5)

Use of the uniform distribution is appropriate when all that is known about a parameter is its range (a, b); the uniform distribution is the Maximum Entropy distribution under these circumstances (Tierney 1996).

3.2 Loguniform Distribution

If X has a loguniform distribution on the interval from a to b where b > a > 0, then $Y = \log_{10} X$ has a uniform distribution on the interval from $\log_{10} a$ to $\log_{10} b$ (Iman and Shortencarier 1984; Sandia WIPP Project 1992, Table 1.2-1). Although the program LHS uses base 10 logarithms, the following properties are stated in terms of natural logarithms in order to simplify the presentation.

Probability density function:

$$f(x) = \frac{1}{x(\ln b - \ln a)} \qquad a < x < b$$ Equation (3.6)

Cumulative distribution function:

$$F(x) = \frac{\ln x - \ln a}{\ln b - \ln a} \qquad a < x < b$$ Equation (3.7)

Expected value:

$$E(x) = \frac{b - a}{\ln b - \ln a}$$ Equation (3.8)

Variance:

$$V(x) = (b - a)\left[\frac{(\ln b - \ln a)(b + a) - 2(b - a)}{2(\ln b - \ln a)^2}\right]$$ Equation (3.9)

Median:

$$x_{0.5} = \sqrt{ab}$$ Equation (3.10)

Use of the loguniform distribution is appropriate when all that is known about a parameter is its range (a, b) and $b/a > 100$; that is, the range (a, b) spans more than two orders of magnitude.

3.3 Cumulative Distribution

A cumulative distribution (also called a constructed distribution) is described by a set of N ordered pairs:

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$$(x_1, 0), (x_2, P_2), (x_3, P_2), \cdots, (x_N, 1) \quad i.e., P_1 = 0 \; and \; P_N = 1 \; always \qquad \text{Equation (3.11)}$$

where $x_1 < x_2 < x_3 < \cdots < x_N$ and $P_1 = 0 < P_2 < P_3 < \cdots < P_{N-1} < P_N = 1$.

Because of the nature of the data, the PDF for this distribution takes the form:

$$P(\xi) = \begin{cases} 0 & if \; \xi < x_1 \\ \dfrac{P_n - P_{n-1}}{x_n - x_{n-1}} & if \; x_{n-1} \le \xi \le x_n, \quad n = 2,3,\cdots,N \\ 0 & if \; \xi > x_N \end{cases} \qquad \text{Equation (3.12)}$$

And the CDF takes the form:

$$P_n[x \le \xi] \approx \prod(\xi)$$
$$= \begin{cases} 0 & if \; \xi < x_1 \\ P_{n-1} + \dfrac{(P_n - P_{n-1})(\xi - x_{n-1})}{x_n - x_{n-1}} & if \; x_{n-1} \le \xi \le x_n, \quad n = 2,3,\cdots,N \\ 1 & if \; \xi > x_N \end{cases} \qquad \text{Equation (3.13)}$$

Expected value:

$$E(x) = \sum_{n=2}^{N} (P_n - P_{n-1}) \left(\frac{x_n + x_{n-1}}{2} \right) \qquad \text{Equation (3.14)}$$

Variance:

$$V(x) = \left[\sum_{n=2}^{N} (P_n - P_{n-1}) \left(\frac{{x_n}^2 + x_n x_{n-1} + {x_{n-1}}^2}{3} \right) \right] - \{E(X)\}^2 \qquad \text{Equation (3.15)}$$

Median:

$$x_{0.5} = x_{m-1} + (x_m - x_{m-1}) \frac{(0.50 - P_{m-1})}{(P_m - P_{m-1})} \quad \text{where } P_{m-1} \le 0.50 < P_m \qquad \text{Equation (3.16)}$$

The cumulative distribution takes its name from the fact that it closely resembles the empirical CDF obtained by plotting the empirical percentiles of the data set $(x_1, x_2, x_3, \cdots, x_N)$ (Blom 1989, p. 216). A simple form of the cumulative distribution is used when the range (a, c) of the parameter is known and the analyst believes that his or her best estimate value, b, is also the median (or 50th percentile) of the unknown distribution. In this case, the subjectively determined percentile points take the form: $(a, 0.0)$, $(b, 0.5)$, $(c, 1.0)$ (Tierney 1996).

The cumulative distribution is the Maximum Entropy distribution associated with a set of percentile points $(x_1, P_1), (x_2, P_2), (x_3, P_3), \cdots, (x_N, P_N)$, no matter how that set of percentile

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points is obtained (that is, independent of whether the points are empirically or subjectively derived) (Tierney 1996).

3.4 Triangular Distribution

The triangular distribution is defined on the range (a, c) and has mode b. The mode can equal either of two boundary values as described below (Iman and Shortencarier 1984).

Probability density function:

$$f(x) = \begin{cases} \frac{2(x-a)}{(c-a)(b-a)} & if\ a \le x \le b \\ \frac{2(c-x)}{(c-a)(c-b)} & if\ b \le x \le c \end{cases} \quad \text{Equation (3.17)}$$

Cumulative distribution function:

$$F(x) = \begin{cases} \frac{(x-a)^2}{(c-a)(b-a)} & if\ a \le x \le b \\ \frac{b-a}{c-a} - \frac{(x+b-2c)(x-b)}{(c-a)(c-b)} & if\ b \le x \le c \end{cases} \quad \text{Equation (3.18)}$$

Expected value:

$$E(x) = \frac{a+b+c}{3} \quad \text{Equation (3.19)}$$

Variance:

$$V(x) = \frac{a(a-b) + b(b-c) + c(c-a)}{18} \quad \text{Equation (3.20)}$$

Median:

$$x_{0.5} = \begin{cases} a + \sqrt{\frac{(c-a)(b-a)}{2}} & if\ b \ge \frac{a+c}{2} \\ c - \sqrt{\frac{(c-b)(c-a)}{2}} & if\ b \le \frac{a+c}{2} \end{cases} \quad \text{Equation (3.21)}$$

Use of the triangular distribution is appropriate when the range, (a, c), of the parameter is known and the analyst believes that his or her best estimate value, b, is also the mode (or most probable value) of the unknown distribution.

3.5 Delta Distribution

The delta distribution is used to assign probabilities to the elements of some set of objects (Tierney 1996). For example, if the set consists of four alternative mathematical models of some

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phenomena and each model is labeled with one of the integers $\{1, 2, 3, 4\}$ such that the mathematical models are identified as $M_1, M_2, M_3, and\ M_4$, then we might assign the vector of probabilities $\{p_1,\ p_2,\ p_3,\ p_4\}$, where each p_i is a number between 0 and 1 and

$$p_1 + p_2 + p_3 + p_4 = 1 \qquad \text{Equation (3.22)}$$

The CDF associated with this delta distribution can be symbolically expressed by

$$F(x) = \sum_{n=1}^{4} p_n u(x - n) \qquad \text{Equation (3.23)}$$

The function u is an indexing function that returns 0 if $(x - n)$ is negative. The graph of this CDF can be visualized as an ascending staircase starting at zero level for *x* less than one and having steps of height p_n at the points $x = n$, where $n = 1, 2, 3, 4$.

The notion of mean value and variance still apply to a delta distribution, but the meanings of these quantities may require careful interpretation. If the M_n represents four different functions (say, discharge as a function of pressure), then it makes sense to talk about mean and variance functions. For the example of the four alternative mathematical models, the mean mathematical model is the linear combination

$$\bar{M} = \sum_{n=1}^{4} p_n M_n \qquad \text{Equation (3.24)}$$

And the variance of the models is similarly defined as:

$$\Sigma^2 = \sum_{n=1}^{4} p_n (\bar{M} - M_n)^2 \qquad \text{Equation (3.25)}$$

3.6 Normal Distribution

A normal distribution is described by the following equations.

Probability density function:

$$f(x) = \frac{1}{\sqrt{2\pi\sigma^2}} e^{-\frac{(x-\mu)^2}{2\sigma^2}} \qquad -\infty \le x \le \infty \qquad \text{Equation (3.26)}$$

Cumulative distribution function:

$$F(x) = \frac{1}{2}\left[1 + erf\left(\frac{x - \mu}{\sqrt{2\sigma^2}}\right)\right] \qquad \text{Equation (3.27)}$$

where erf is the error function.

Expected value:

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$$E(x) = \mu \quad \text{Equation (3.28)}$$

Variance:

$$V(x) = \sigma^2 \quad \text{Equation (3.29)}$$

Median:

$$x_{0.5} = \mu \quad \text{Equation (3.30)}$$

Mu and sigma (μ and σ) are the mean and standard deviation of the distribution and are parameters of the distribution.

The WIPP PA Program employs a truncated normal distribution where data are concentrated within an interval (lowrange, hirange) (Iman and Shortencarier 1984). The parameters of the truncated distribution can be expressed as follows:

$$E(X) = \mu = \frac{lowrange + hirange}{2} \quad \text{Equation (3.31)}$$

and

$$V(X) = \sigma^2 = \left(\frac{hirange - lowrange}{4.66}\right)^2 \quad \text{Equation (3.32)}$$

where $lowrange = 0.01$ quantile and $hirange = 0.99$ quantile (Sandia WIPP Project 1992, Table 1.2-1).

Use of the normal distribution is appropriate when it is known that the parameter is the sum of independent, identically distributed random variables (this is seldom the case in practice) and there are a sufficient number of measurements of the parameter ($N > 10$) to make accurate, unbiased estimates of the mean (μ) and variance (σ^2) (Tierney 1996).

3.7 Student's Distribution

A Student's *t*-distribution is a distribution for the unknown mean value of a parameter. Its use is appropriate when one has measured values of the parameter available (in contrast to values obtained subjectively through elicitation of professional opinion). If N denotes the number of measurements available, and $x_1, x_2, x_3, \cdots, x_N$ denote the values of the measurements, then the expected value of the Student's *t*-distribution is the sample mean and the standard error is the standard deviation divided by $\sqrt{N}$; the median value is equal to the mean value (Martell 1996).

The Student's *t*-distribution applies when there are few measurements, say $3 < N < 10$. The *t*-distribution converges to the normal distribution as N becomes large, i.e., $N > 20$. WIPP PA employs a truncated Student's *t*-distribution where data are concentrated within an interval

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$(lowrange, hirange)$ similar to the implementation of the normal distribution as discussed in Section 3.6.

3.8 Constants

Parameters may also be assigned a constant value in the PA parameter database.

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4.0 PARAMETER CORRELATION

Parameter correlations affect only the LHS sampled parameters (Table 1). The program LHS is used to sample the subjective distributions of parameters using a Latin Hypercube sampling design. LHS treats each parameter independently but permits user-specified correlations (restricted pairings) between parameters. Two types of parameter correlations are used**.** They are defined as explicit parameter correlation and induced parameter correlation. Correlations can be induced by the assignment of a sampled parameter value to a non-sampled value or by limiting the range of one sampled value by the value selected for another. Range limiting of one sampled value by the value selected for another is implemented by the EDIT functionality in the LHS code (WIPP PA 2021). This section addresses the following criteria concerning parameter correlations, as specified in 40 CFR § 194.23(c)(6):

> (c) Documentation of all models and computer codes included, as part of any compliance application performance assessment calculation shall be provided. Such documentation shall include, but shall not be limited to:
>
> > (6) An explanation of the manner in which models and computer codes incorporate the effects of parameter correlation.

Explicit parameter correlations are introduced or prohibited in LHS by the restricted pairing technique of Iman and Conover (1982). Two parameter correlations are specified in this PA through this technique. These correlations are all related to rock compressibility and permeability. In the Salado Formation impure halite material region in BRAGFLO, rock compressibility (S_HALITE:COMP_RCK) and intrinsic permeability (S_HALITE:PRMX_LOG) are inverse correlated with a correlation coefficient of -0.99. In the Castile brine reservoir material region in BRAGFLO, rock compressibility (CASTILER:COMP_RCK) and intrinsic permeability (CASTILER:PRMX_LOG) are inverse correlated with a correlation coefficient of -0.75. Explicit parameter correlation is not used to correlate other sampled parameters.

Rock compressibilities and intrinsic permeabilities are correlated to be most consistent with interpretations of the hydraulic tests that have been performed in these units. In hydraulic testing, hydraulic diffusivity **(**the ratio of permeability to compressibility**)** is determined more precisely than either permeability or compressibility alone. Introducing the correlation of the permeability and compressibility parameters in PA better represents the knowledge of the formation gained from hydraulic testing than specifying no correlation whatsoever.

The LHS code is used to enforce a conditional relationship between three pairs of variables such that parameters WAS_AREA:GRATMICH ≤ WAS_AREA:GRATMICI (Clayton 2008, Nemer and Stein 2005) and PCS_T3:POROSITY ≤ PCS_T2:POROSITY ≤ PCS_T1:POROSITY (Camphouse 2013). For each pair of variables, LHS rescales the sampled value of the parameter to the left of the ≤ symbol (i.e., the “restricted” variable) to the new, conditioned value using the equation:

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$$v_i' = \frac{v_i - U_{V,lower}}{U_{V,upper} - U_{V,lower}} \times \left(min\left(x_i, U_{V,upper}\right) - U_{V,lower}\right) + U_{V,lower} \qquad \text{Equation (4.1)}$$

where v_i' is the conditioned value of the restricted variable, v_i is the sampled value of the restricted variable, x_i is the sampled value of the "controlling" variable (i.e., the parameter to the right of the ≤ symbol), and $U_{V,lower}$ and $U_{V,upper}$ are the bounds of the distribution assigned to the restricted variable. This method preserves the probability associated with the value of the left-hand variable.

An induced correlation in PA is created when a parameter sampled in LHS (the underlying variable) is used to define the values of other parameters (defined variables). This is a prevalent method of correlation in this PA. For example, uncertainty in dissolved actinide oxidation states is represented in LHS by sampling the OXSTAT parameter (GLOBAL:OXSTAT). The results of this sampling are used in part to determine actinide solubilities (NUTS, PANEL, and BRAGFLO), colloidal actinide concentrations (NUTS, PANEL, and BRAGFLO), and K_D values (SECOTP2D) used for a particular vector. Selected examples of other induced parameter correlations include:

- the underlying variable x-direction permeability and the defined variables y- and z-direction permeabilities in many materials (BRAGFLO),
- the underlying variable x-direction permeability and defined variable threshold pressure in many materials (BRAGFLO),
- the underlying variable Lower Salado Clay permeability and the defined variable permeabilities of other clay members of the shaft seal system (BRAGFLO),
- the underlying variable residual gas saturation (or other two-phase flow parameters) in many materials and the defined variable residual gas saturation (or other two-phase flow parameters) in other materials (BRAGFLO).

Induced correlations are also used to account for creep closure consolidation of the run-of-mine salt used in the panel closure system. As the panel closure run-of-mine salt reconsolidates, its permeability will not increase as time increases. Therefore, a conditional relationship is enforced in the first ALGEBRACDB step of the BRAGFLO calculation so that the permeability of material PCS_T2 (parameters PCS_T2:PRMX_LOG, PCS_T2:PRMY_LOG, and PCS_T2:PRMZ_LOG) is never greater than the permeability of material PCS_T1. Likewise, the permeability of material PCS_T3 is never greater than the permeability of material PCS_T2. Similarly, a relationship is implemented to enforce that the permeability of material DRZ_PCS is never greater than the permeability of material DRZ_1 (Camphouse 2013, Section 2.1.1).

No correlations were used in this PA for certain parameters used to describe transport in the Culebra for which the possibility of correlation might be suspected. The treatment in PA is most consistent with available information, because, as discussed in CCA Appendix MASS (U.S. DOE 1996, Attachments MASS 15-6, p. 14; 15-10), correlation of well-to-well transmissivity versus well-to-well advective porosity and matrix block length is not evident in existing data, nor is the correlation between advective porosity and matrix block length.

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The LHS sampled parameters are listed in Table 1. The table identifies the material name, property name, and the PA code(s) that used the parameter.

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Table 1. Index of LHS Sampled Parameters for CRA-2026 IS PA

Material [1]	Property [1]	Code
AM+3	MKD_AM	SECOTP2D [2]
BH_SAND	PRMX_LOG	BRAGFLO
BOREHOLE	DOMEGA	CUTTINGS_S
BOREHOLE	TAUFAIL	CUTTINGS_S
CASTILER	COMP_RCK	BRAGFLO
CASTILER	PRESSURE	BRAGFLO
CASTILER	PRMX_LOG	BRAGFLO
CONC_PLG	PRMX_LOG	BRAGFLO
CULEBRA	APOROS	SECOTP2D [2]
CULEBRA	DPOROS	SECOTP2D [2]
CULEBRA	HMBLKLT	SECOTP2D [2]
CULEBRA	MINP_FAC	MODFLOW6 [2], SECOTP2D [2]
DRZ_1	PRMX_LOG	BRAGFLO
DRZ_PCS	PRMX_LOG	BRAGFLO
GLOBAL	CLIMTIDX	SECOTP2D [2]
GLOBAL	GDEPFAC	BRAGFLO
GLOBAL	OXSTAT	BRAGFLO, PANEL, SECOTP2D [2]
GLOBAL	PBRINE	PRECCDFGF
GLOBAL	TRANSIDX	MODFLOW6 [2], SECOTP2D [2]
PCS_T1	PORE_DIS	BRAGFLO
PCS_T1	POROSITY	BRAGFLO
PCS_T1	PRMX_LOG	BRAGFLO
PCS_T1	SAT_RBRN	BRAGFLO
PCS_T1	SAT_RGAS	BRAGFLO
PCS_T2	POR2PERM	BRAGFLO
PCS_T2	POROSITY	BRAGFLO
PCS_T3	POROSITY	BRAGFLO
PU+3	MKD_PU	SECOTP2D [2]
PU+4	MKD_PU	SECOTP2D [2]
SHFTL_T1	PRMX_LOG	BRAGFLO
SHFTL_T2	PRMX_LOG	BRAGFLO
SHFTU	PRMX_LOG	BRAGFLO
SHFTU	SAT_RBRN	BRAGFLO
SHFTU	SAT_RGAS	BRAGFLO
SOLMOD3	SOLVAR	BRAGFLO, PANEL
SOLMOD4	SOLVAR	BRAGFLO, PANEL
SPALLMOD	PARTDIAM	DRSPALL [3]
SPALLMOD	REPIPERM	DRSPALL [3]

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Table 1. Index of LHS Sampled Parameters for CRA-2026 IS PA (cont.)

Material	Property	Code
SPALLMOD	REPIPOR	DRSPALL [3]
SPALLMOD	TENSLSTR	DRSPALL [3]
STEEL	CORRMCO2	BRAGFLO
STEEL	HUMCORR	BRAGFLO
S_HALITE	COMP_RCK	BRAGFLO
S_HALITE	POROSITY	BRAGFLO
S_HALITE	PRESSURE	BRAGFLO
S_HALITE	PRMX_LOG	BRAGFLO
S_MB139	PORE_DIS	BRAGFLO
S_MB139	PRMX_LOG	BRAGFLO
S_MB139	RELP_MOD	BRAGFLO
S_MB139	SAT_RBRN	BRAGFLO
TH+4	MKD_TH	SECOTP2D [2]
U+4	MKD_U	SECOTP2D [2]
U+6	MKD_U	SECOTP2D [2]
WAS_AREA	BIOGENFC	BRAGFLO
WAS_AREA	BRUCITEC	BRAGFLO
WAS_AREA	BRUCITEH	BRAGFLO
WAS_AREA	BRUCITES	BRAGFLO
WAS_AREA	GRATMICH	BRAGFLO
WAS_AREA	GRATMICI	BRAGFLO
WAS_AREA	HYMAGCON	BRAGFLO
WAS_AREA	PROBDEG	BRAGFLO, PANEL
WAS_AREA	SAT_RBRN	BRAGFLO
WAS_AREA	SAT_RGAS	BRAGFLO
WAS_AREA	SAT_WICK	BRAGFLO

Notes:

[1] Parameters are identified using the format Material:Property.

[2] The PA code MODFLOW6 and SECOTP2D were not executed as part of the CRA-2026 IS PA. The output results from CRA-2026 FS PA were used because the parameters and conceptual model was not impacted by any of the changes implemented in the CRA26 IS analysis.

[3] The PA code DRSPALL was not executed as part of the CRA-2026 IS PA. The output results from a previous run (Kirchner et al. 2015) were used as input to the CUTTINGS_S code in the CRA26 PA calculations. DRSPALL version 1.22 generated direct solids releases at repository pressures of 10, 12, 14, and 14.8 MPa. BRAGFLO calculates the repository pressures at the time of intrusion, the spallings volume is calculated by interpolation from these DRSPALL pressures in the CUTTINGS_S code.

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5.0 PARAMETER ADDITIONS AND MODIFICATIONS TO THE CRA-2026 IS

Several changes are incorporated in the CRA-2026 IS PA relative to the RPPCR that may impact the parameters used in PA calculation. These changes include:

- The repository design.
  - Parameters related to repository dimensions.
  - The Salado flow and transport computational grid.
- The waste inventory.
- Baseline actinide solubilities.
- Solubility uncertainty distributions.
- Colloid concentration parameters for humic and microbial colloids.
- MgO hydration parameters.
- A new lower bound on capillary pressure in the anhydrite marker beds.
- Revisions to the porosity-permeability parameter distribution.
- The minimum brine volume needed for a DBR.
- The drilling rate and probabilities of borehole plugging patterns.

Changes listed above are discussed in more detail in the sub-sections that follow. Compared with RPPCR PA, 164 parameters have been changed or added in CRA26_IS PA. Table 2 lists the changed and new parameters.

5.1 Repository Design

This analysis represents the 12-panel interim state repository consisting of ten original and two replacement panels. Figure 5-1 depicts the interim state repository. The RPPCR considered the anticipated final repository state, which included a total of 19 waste panels and the entire allowable inventory volume.

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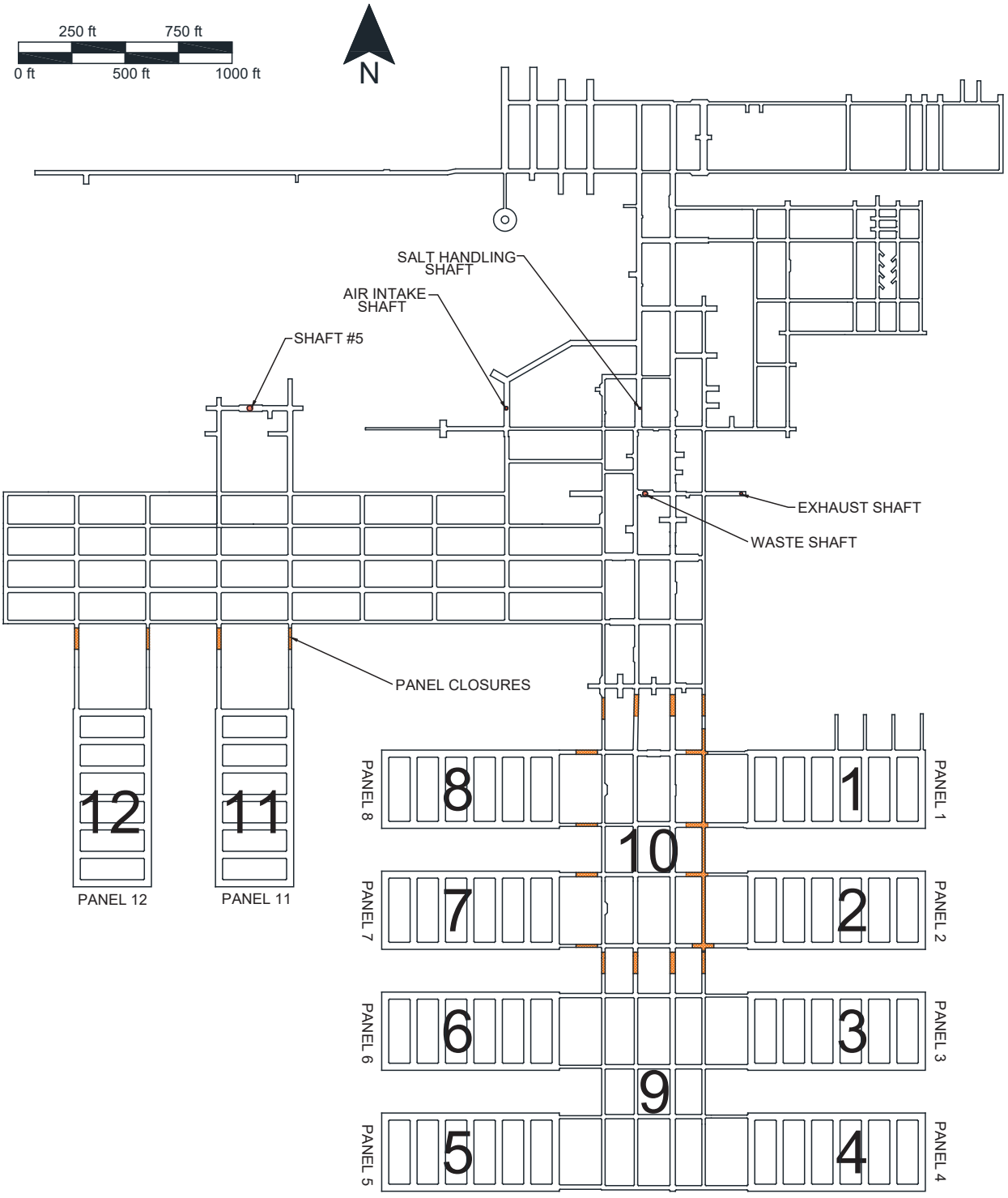

Figure 5-1. Interim State Repository Layout

The repository design requires changes to several parameters describing repository dimensions. Brunell (2025) revises four parameters to align with the dimensions used in the development of the Salado flow and transport grid. The parameters include:

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- the waste storage volume (REFCON:VREPOS).
- the area of the berm placed over the waste panels (REFCON:ABERM).
- the area allocated for contact-handled (CH) waste disposal (REFCON:AREA_CH).
- the fraction of the repository volume occupied by CH waste (REFCON:FVW).

Although not listed in AP-214 (Hansen et al. 2025) as an anticipated change, the area for emplaced remote-handled (RH) waste (REFCON:AREA_RH) is revised by King (2025c) due to the reduced inventory volume used in the CRA26_IS PA calculation.

Dimensions in the computational grid for the Salado flow (BRAGFLO) and transport (NUTS) calculation are changed to be consistent with the interim state repository dimensions. Day (2025a) modifies the computational grid based on as-built excavation footprint dimensions within the existing repository, plans for future excavations, and the planned change for alternative panel closure locations for Panels 1 and 2 (Knerr 2020). The Salado flow and transport computational grid is shown in Figure 5-2.

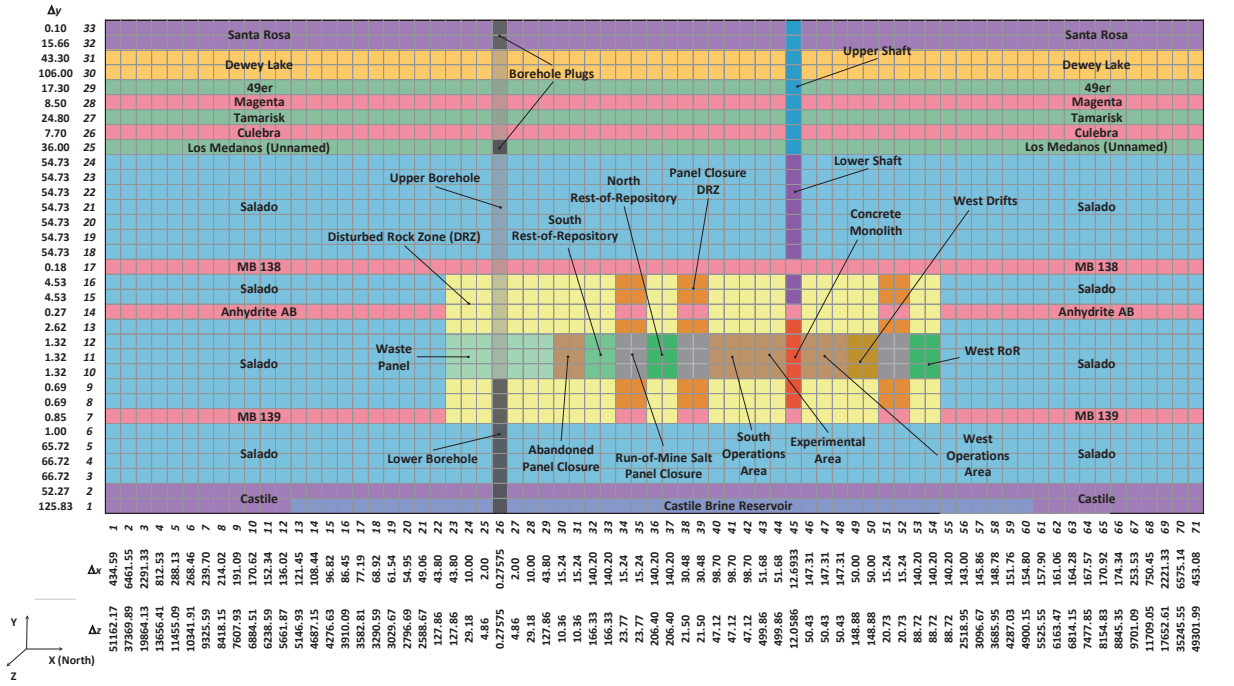

Figure 5-2. CRA26 IS Salado Flow and Transport Computational Grid

5.2 Waste Inventory

The LWA establishes a statutory limit on the volume of waste that can be disposed of in the WIPP repository, set at 175,564 m^3 (6,200,000 ft^3). Current assessments indicate that the interim state repository will accommodate less waste than the LWA volume. Ward (2025) provided an assessment of the projected waste storage capacity at 157,831.92 m^3, which includes 156,247.12 m^3 of Contact-Handled (CH) waste and 1,584.80 m^3 of Remote-Handled (RH) waste. Based on information collected up to December 31, 2023, the Interim State Performance Assessment Inventory Report – 2024 (ISPAIR-2024; Van Soest 2025) offers an inventory estimate scaled to

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the waste volume specified by Ward. Kicker (2025) conducted a screening analysis of the inventory estimates for the ISPAIR-2024 to define the inventory-related input parameters for the PA calculations.

5.3 Baseline Actinide Solubilities

Thermodynamic calculations are used to compute the baseline solubilities for actinides in the +III, +IV, and +V oxidation states in GWB and ERDA-6 brines for five multiples of the minimum brine volume for a DBR event. These baseline solubility calculations account for inventory components and thus are updated to be consistent with inventory estimates. Domski (2025b) reports the baseline solubility values based on the CRA26 IS inventory.

Currently there is no thermodynamic model for WIPP actinides in the +VI oxidation state. The Los Alamos National Laboratory Actinide Chemistry and Repository Science Program (LANL-ACRSP) has performed experimental investigations on U(VI) solubility under WIPP-relevant conditions. Based on this experimental work, Kaplan et al. (2025) recommends a solubility of 3×10^{-6} M for actinides in the +VI oxidation state in both Salado and Castile brines.

5.4 Solubility Uncertainty Distributions

Actinide solubility uncertainty distributions, which are independent of the repository inventory, are updated for CRA-2026, as documented in Domski (2025a). A literature review was conducted to identify relevant studies published prior to the CRA-2026 cutoff date. Based on this review, the uncertainty distribution for +III actinide solubilities (SOLMOD3:SOLVAR) is updated. No new literature was found for +IV actinide solubilities; therefore, no update to the +IV solubility uncertainty distribution is made.

5.5 Colloidal Enhancement Parameters

Based on updates to the thermodynamic model and baseline solubility values, Mariner (2025) reevaluated the proportionality constant for humic colloids. Mariner recommends updated values for radionuclides in the +III and +IV oxidation state for both Castile and Salado brines (PHUMOX3:PHUMCIM, PHUMOX3:PHUMSIM, PHUMOX4:PHUMCIM and PHUMOX4:PHUMSIM).

In previous WIPP PA calculations, microbial colloid enhancement parameters (PROPMIC and CAPMIC) have been specified for each element (parameter materials AM, NP, PU, TH, and U). For the CRA-2026 PA, the microbial enhancement parameters have been specified for each element-oxidation state (materials AM+3, NP+4, NP+5, PU+3, PU+4, U+4, and U+6), in order to more closely align to the experimental data used to derive the parameter values. Kaplan et al. (2025) recommends the microbial colloid parameter values for the CRA-2026 PA.

5.6 MgO Hydration Parameters

The rate of hydration of MgO to form brucite, $Mg(OH)_2$, in the Salado flow model is specified for humid (WAS_AREA:BRUCITEH), Castile brine inundated (WAS_AREA:BRUCITEC), and Salado brine inundated (WAS_AREA:BRUCITES) conditions. Although changes to the MgO hydration rate

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parameters were not anticipated in AP-214 (Hansen et al. 2025), Nemer (2025) recommends new parameter distributions for the Castile and Salado brine inundated conditions. King (2025a) redefines the recommended distributions to be compatible with the WIPP PA code LHS.

5.7 Lower Bound on Capillary Pressure in the Anhydrite Marker Beds

To improve numerical stability of the Salado flow model when using the modified van Genuchten-Parker capillary pressure function in the anhydrite marker beds, the PA code BRAGFLO was updated to Version 8.00 (WIPP PA 2025) to implement a new capillary pressure model which incorporates a lower bound on the capillary pressure. This lower bound is applied when brine saturations exceed one minus the residual gas saturation. Day (2025b) sets the lower bound on capillary pressure to 1 atm (101325 Pa), with the PO_MIN property of the S_MB139, S_ANH_AB, and S_MB138 materials, and applied the new capillary pressure model by setting the CAP_MOD property to 6 for the same materials.

5.8 Porosity-Permeability Parameter Distribution

King (2025a) redefines the distribution for the parameter representing the relationship between porosity and permeability in a run-of-mine salt panel closure system during the secondary time duration (PCS_T2:POR2PERM). Initially defined as a truncated normal distribution, this parameter is revised, along with the MgO hydration parameters, to a cumulative distribution characterized by discrete data points. This change constitutes a deviation from AP-214 (Hansen et al. 2025).

5.9 Minimum Brine Volume Needed for a DBR

The parameter representing minimum brine volume required for a direct brine release (DBR), GLOBAL:DBRMINBV, is revised (Brunell, 2025) to be consistent with geomechanical modeling that predicts repository porosity and with the repository geometry described in Section 5.1.

5.10 Drilling Rate and Borehole Plugging Pattern Probabilities

The DOE surveys drilling activity in the Delaware Basin to meet the requirements established in 40 CFR Part 194.33. Local well operators are surveyed annually to provide the WIPP project with information on drilling practices, encounters with Castile brine, and related data. Survey results through August 2024 are documented in the 2024 Waste Isolation Pilot Plant Delaware Basin Monitoring Annual Report (DBMAR) (U.S. DOE 2025).

Survey results are used in WIPP PA to define the frequency of hypothetical drilling intrusions into the WIPP repository (parameter GLOBAL:LAMBDAD) and to determine the probabilities associated with different plugging configurations used to seal the wellbore. The possible configurations are grouped into three plugging patterns for PA purposes; probabilities associated with each pattern are represented by the parameters GLOBAL:ONEPLG, GLOBAL:TWOPLG, and GLOBAL:THREEPLG. The methodology for updating these parameter values is provided in King (2025b).

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5.11 Parameters Not Updated as Anticipated in Analysis Plan AP-214

AP-214 (Hansen et al. 2025) indicates that several parameters were expected to be updated for CRA-2026. Specifically, the parameter specifying the likelihood of low or high oxidation state for an actinide (property OXCUTOFF for materials NP, PU, and U) and the parameters related to mineral and intrinsic colloids (properties CONCMIN and CONCINT for materials AM, NP, PU, TH, and U) were anticipated to undergo revisions. Kaplan et al. (2025) re-examines the basis for these parameter values and recommends the continued use of the RPPCR values. As a result, no changes were made to these parameters for CRA-2026.

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Table 2. Parameters Changed for the CRA-2026 IS PA

Material	Property	Code(s)	Modification
AM+3	CAPMIC	BRAGFLO, PANEL	New
AM+3	PROPMIC	BRAGFLO, PANEL	New
AM241	INVCHD	BRAGFLO, PANEL	Modified
AM241	INVRHD	BRAGFLO, PANEL	Modified
AM241L	INVCHD	PANEL	Modified
AM241L	INVRHD	PANEL	Modified
AM243	INVCHD	PANEL	Modified
AM243	INVRHD	PANEL	Modified
BOREHOLE	WUF	EPAUNI, NUTS, PANEL, PRECCDFGF	Modified
CF252	INVCHD	PANEL	Modified
CF252	INVRHD	PANEL	Modified
CM243	INVCHD	PANEL	Modified
CM243	INVRHD	PANEL	Modified
CM244	INVCHD	PANEL	Modified
CM244	INVRHD	PANEL	Modified
CM245	INVCHD	PANEL	Modified
CM245	INVRHD	PANEL	Modified
CM248	INVCHD	PANEL	Modified
CM248	INVRHD	PANEL	Modified
CS137	INVCHD	PANEL	Modified
CS137	INVRHD	PANEL	Modified
GLOBAL	DBRMINBV	PANEL	Modified
GLOBAL	LAMBDAD	PRECCDFGF	Modified
GLOBAL	ONEPLG	PRECCDFGF	Modified
GLOBAL	THREEPLG	PRECCDFGF	Modified
GLOBAL	TWOPLG	PRECCDFGF	Modified
NITRATE	QINIT	BRAGFLO	Modified
NP+4	CAPMIC	PANEL	New
NP+4	PROPMIC	PANEL	New
NP+5	CAPMIC	PANEL	New
NP+5	PROPMIC	PANEL	New
NP237	INVCHD	PANEL	Modified
NP237	INVRHD	PANEL	Modified
PA231	INVCHD	PANEL	Modified
PA231	INVRHD	PANEL	Modified
PB210	INVCHD	PANEL	Modified
PB210	INVRHD	PANEL	Modified
PCS_T2	POR2PERM	BRAGFLO [1]	Modified

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Table 2. Parameters Changed for the CRA-2026 IS PA (cont.)

Material	Property	Code(s)	Modification
PHUMOX3	PHUMCIM	BRAGFLO, PANEL	Modified
PHUMOX3	PHUMSIM	BRAGFLO, PANEL	Modified
PHUMOX4	PHUMCIM	BRAGFLO, PANEL	Modified
PHUMOX4	PHUMSIM	BRAGFLO, PANEL	Modified
PM147	INVCHD	PANEL	Modified
PM147	INVRHD	PANEL	Modified
PU+3	CAPMIC	BRAGFLO, PANEL	New
PU+3	PROPMIC	BRAGFLO, PANEL	New
PU+4	CAPMIC	BRAGFLO, PANEL	New
PU+4	PROPMIC	BRAGFLO, PANEL	New
PU238	INVCHD	BRAGFLO, PANEL	Modified
PU238	INVRHD	BRAGFLO, PANEL	Modified
PU238L	INVCHD	PANEL	Modified
PU238L	INVRHD	PANEL	Modified
PU239	INVCHD	BRAGFLO, PANEL	Modified
PU239	INVRHD	BRAGFLO, PANEL	Modified
PU239L	INVCHD	PANEL	Modified
PU239L	INVRHD	PANEL	Modified
PU240	INVCHD	BRAGFLO, PANEL	Modified
PU240	INVRHD	BRAGFLO, PANEL	Modified
PU241	INVCHD	PANEL	Modified
PU241	INVRHD	PANEL	Modified
PU242	INVCHD	BRAGFLO, PANEL	Modified
PU242	INVRHD	BRAGFLO, PANEL	Modified
PU244	INVCHD	PANEL	Modified
PU244	INVRHD	PANEL	Modified
RA226	INVCHD	PANEL	Modified
RA226	INVRHD	PANEL	Modified
RA228	INVCHD	PANEL	Modified
RA228	INVRHD	PANEL	Modified

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Table 2. Parameters Changed for the CRA-2026 IS PA (cont.)

Material	Property	Code(s)	Modification
REFCON	ABERM	PRECCDFGF	Modified
REFCON	AREA_CH	PRECCDFGF	Modified
REFCON	AREA_RH	PRECCDFGF	Modified
REFCON	FVW	PRECCDFGF	Modified
REFCON	VREPOS	BRAGFLO, PANEL, PRECCDFGF	Modified
SM147	INVCHD	PANEL	Modified
SM147	INVRHD	PANEL	Modified
SOLMOD3	SOLCOH	BRAGFLO, PANEL	Modified
SOLMOD3	SOLCOH2	PANEL	Modified
SOLMOD3	SOLCOH3	PANEL	Modified
SOLMOD3	SOLCOH4	PANEL	Modified
SOLMOD3	SOLCOH5	PANEL	Modified
SOLMOD3	SOLSOH	BRAGFLO, PANEL	Modified
SOLMOD3	SOLSOH2	PANEL	Modified
SOLMOD3	SOLSOH3	PANEL	Modified
SOLMOD3	SOLSOH4	PANEL	Modified
SOLMOD3	SOLSOH5	PANEL	Modified
SOLMOD3	SOLVAR	BRAGFLO, PANEL [1]	Modified
SOLMOD4	SOLCOH	BRAGFLO, PANEL	Modified
SOLMOD4	SOLCOH2	PANEL	Modified
SOLMOD4	SOLCOH3	PANEL	Modified
SOLMOD4	SOLCOH4	PANEL	Modified
SOLMOD4	SOLCOH5	PANEL	Modified
SOLMOD4	SOLSOH	BRAGFLO, PANEL	Modified
SOLMOD4	SOLSOH2	PANEL	Modified
SOLMOD4	SOLSOH3	PANEL	Modified
SOLMOD4	SOLSOH4	PANEL	Modified
SOLMOD4	SOLSOH5	PANEL	Modified
SOLMOD5	SOLCOH	PANEL	Modified
SOLMOD5	SOLCOH2	PANEL	Modified

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Table 2. Parameters Changed for the CRA-2026 IS PA (cont.)

Material	Property	Code(s)	Modification
SOLMOD5	SOLCOH3	PANEL	Modified
SOLMOD5	SOLCOH4	PANEL	Modified
SOLMOD5	SOLCOH5	PANEL	Modified
SOLMOD5	SOLSOH	PANEL	Modified
SOLMOD5	SOLSOH2	PANEL	Modified
SOLMOD5	SOLSOH3	PANEL	Modified
SOLMOD5	SOLSOH4	PANEL	Modified
SOLMOD5	SOLSOH5	PANEL	Modified
SOLMOD6	SOLCOH	PANEL	Modified
SOLMOD6	SOLSOH	PANEL	Modified
SR90	INVCHD	PANEL	Modified
SR90	INVRHD	PANEL	Modified
SULFATE	QINIT	BRAGFLO	Modified
S_ANH_AB	CAP_MOD	BRAGFLO	Modified
S_MB138	CAP_MOD	BRAGFLO	Modified
S_MB139	CAP_MOD	BRAGFLO	Modified
TH+4	CAPMIC	PANEL	New
TH+4	PROPMIC	PANEL	New
TH229	INVCHD	PANEL	Modified
TH229	INVRHD	PANEL	Modified
TH230	INVCHD	PANEL	Modified
TH230	INVRHD	PANEL	Modified
TH230L	INVCHD	PANEL	Modified
TH230L	INVRHD	PANEL	Modified
TH232	INVCHD	PANEL	Modified
TH232	INVRHD	PANEL	Modified
U+4	CAPMIC	PANEL	New
U+4	PROPMIC	PANEL	New
U+6	CAPMIC	PANEL	New
U+6	PROPMIC	PANEL	New

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Table 2. Parameters Changed for the CRA-2026 IS PA (cont.)

Material	Property	Code(s)	Modification
U233	INVCHD	PANEL	Modified
U233	INVRHD	PANEL	Modified
U234	INVCHD	PANEL	Modified
U234	INVRHD	PANEL	Modified
U234L	INVCHD	PANEL	Modified
U234L	INVRHD	PANEL	Modified
U235	INVCHD	PANEL	Modified
U235	INVRHD	PANEL	Modified
U236	INVCHD	PANEL	Modified
U236	INVRHD	PANEL	Modified
U238	INVCHD	PANEL	Modified
U238	INVRHD	PANEL	Modified
WAS_AREA	BRUCITEC	BRAGFLO [1]	Modified
WAS_AREA	BRUCITES	BRAGFLO [1]	Modified
WAS_AREA	CELCCHW	BRAGFLO	Modified
WAS_AREA	CELCRHW	BRAGFLO	Modified
WAS_AREA	CELECHW	BRAGFLO	Modified
WAS_AREA	CELERHW	BRAGFLO	Modified
WAS_AREA	CELLCHW	BRAGFLO	Modified
WAS_AREA	CELLRHW	BRAGFLO	Modified
WAS_AREA	IRNCCHW	BRAGFLO	Modified
WAS_AREA	IRNCRHW	BRAGFLO	Modified
WAS_AREA	IRONCHW	BRAGFLO	Modified
WAS_AREA	IRONRHW	BRAGFLO	Modified
WAS_AREA	PLASCHW	BRAGFLO	Modified
WAS_AREA	PLASRHW	BRAGFLO	Modified
WAS_AREA	PLSCCHW	BRAGFLO	Modified
WAS_AREA	PLSCRHW	BRAGFLO	Modified
WAS_AREA	PLSECHW	BRAGFLO	Modified
WAS_AREA	PLSERHW	BRAGFLO	Modified

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Table 2. Parameters Changed for the CRA-2026 IS PA (cont.)

Material	Property	Code(s)	Modification
WAS_AREA	RUBBCHW	BRAGFLO	Modified
WAS_AREA	RUBBRHW	BRAGFLO	Modified
WAS_AREA	RUBCCHW	BRAGFLO	Modified
WAS_AREA	RUBCRHW	BRAGFLO	Modified
WAS_AREA	RUBECHW	BRAGFLO	Modified
WAS_AREA	RUBERHW	BRAGFLO	Modified

Notes:
[1] This parameter was accessed by code PRELHS also.

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6.0 LIST OF DATABASE PARAMETERS USED IN THE CRA26_IS PA

The parameters used as input to the CRA26_IS PA are listed in this section. Parameter distribution values are developed based on experimental data, literature data obtained from journal articles, technical references from reference books, or other source information as documented in the PA parameter database. The CRA26_IS PA used a total of 1237 [1] parameters as follows:

- 64 parameters have an assigned distribution of values that are sampled using the LHS code.
- 22 parameters inherit a LHS sampled value.
- 50 parameters have an assigned distribution but use a default constant value for all vectors.
- 39 parameters have a constant value for all vectors and are used by PA code DRSPALL, which was not executed as part of the CRA26_IS. DRSPALL version 1.22 generated direct solids releases at repository pressures of 10, 12, 14, and 14.8 MPa. The generated DRSPALL results are used in the CRA26_IS. (Hansen *et al*. 2025)
- 1151 parameters, including those 50 have distribution but not sampled, have a constant value for all vectors and are used for PA codes executed for the CRA26_IS.

Each parameter is listed using its Version Name that identifies the associated analysis in which the parameter was added or changed. The CRA26_IS parameters include the following Version Names:

- CCA – 1996 Compliance Certification Application Performance Assessment
- TBM – 2002 Technical Baseline Migration
- AP106 – 2003 Testing of a Proposed BRAGFLO Grid to be Used for the Compliance Recertification Application Performance Assessment Calculations
- CRA1 – 2004 Compliance Recertification Application
- CRA1BC – 2004 Compliance Recertification Application Performance Assessment Baseline Calculation
- AP129 – 2006 Impact Assessment of the Redesigned Panel Closure System
- AP131 – 2006 Modification of the Waste Strength Parameter and Direct Brine Release Parameters
- AP132 – 2009 Compliance Recertification Application Performance Assessment
- PABC09 – 2009 Compliance Recertification Application Performance Assessment Baseline Calculation
- PC3R – 2011 Panel Closure Redesign and Repository Reconfiguration Performance Assessment

[1] Material:Property pair REFCON:LHSBLANK is a space holder rather than a parameter.

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- SDI – 2011 Impact Assessment of Salt Disposal Investigations Excavation on Long-Term WIPP Performance
- AP161 – 2012 WIPP Panel Closure System Performance Assessment
- CRA14BL – 2014 Compliance Recertification Application Performance Assessment Baseline Case
- CRA14 – 2014 Compliance Recertification Application Performance Assessment
- CRA14_SEN2 – 2016 Operations and Experimental Area Sensitivity Study in Support of CRA-2014 Completeness Determination and Compliance Decision
- CRA14_SEN3 – 2016 Panel Closure System Sensitivity Study in Support of CRA-2014 Completeness Determination and Compliance Decision
- CRA14_SEN4 – 2016 EPA-Requested Changes Sensitivity Study in Support of CRA-2014 Completeness Determination and Compliance Decision
- APCS – 2017 Assessment of Abandoned Panel Closures in the South End of Repository and Lack of Waste Emplacement in Panel 9
- CRA19 – 2019 Compliance Recertification Application Performance Assessment
- APPA – 2021 Additional Panels Performance Assessment
- RPPA – 2022 Replacement Panels Performance Assessment
- RPPCR – 2023 Replacement Panels Planned Change Request Performance Assessment
- CRA26_FS – CRA26 Final State Performance Assessment
- CRA26_IS – CRA26 Interim State Performance Assessment

6.1 Sampled Parameters

The uncertainty in several parameters is impactful to the predicted long-term performance of the WIPP repository. To account for this uncertainty, these parameters are specified with probability distributions. The code LHS is used to sample the distributions and provide 100 vectors for 3 replicates (King and Zeitler 2025). The sampled parameters used in the CRA26_IS, and their associated statistical summary values are listed in Table 3. The table identifies the parameter name, definition, version name, and the value and units for a range of attributes (which typically includes distribution type, maximum value, mean value, median value, minimum value, and standard deviation). The sampled values for each of the parameter distributions, tabulated over 3 replicates with 100 vectors in each replicate, are listed in Appendix A – Sampled Values For Parameter Distributions.

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6.2 Constant Parameters

The constant parameters used in the CRA26_IS (including the 50 parameters that have a distribution but not sampled) have been sorted according to the following categories and are presented as follows:

- Borehole, blowout, and drill mud parameters (Table 4)
- Borehole (concrete plug) parameters (Table 5)
- Borehole (open) parameters (Table 6)
- Borehole (silty sand) parameters (Table 7)
- Borehole (creep) parameters (Table 8)
- Spallings parameters (Table 9)
- Shaft material parameters (Table 10)
- Panel closure parameters (Table 11)
- Santa Rosa Formation parameters (Table 12)
- Dewey Lake Formation parameters (Table 13)
- Forty-Niner Member of the Rustler Formation parameters (Table 14)
- Magenta Member of the Rustler Formation parameters (Table 15)
- Tamarisk Member of the Rustler Formation parameters (Table 16)
- Culebra Member of the Rustler Formation parameters (Table 17)
- Los Medanos (Unnamed Lower) Member of the Rustler Formation parameters (Table 18)
- Salado Formation - intact halite - parameters (Table 19)
- Salado Formation - brine - parameters (Table 20)
- Salado Formation - Marker Bed 138 - parameters (Table 21)
- Salado Formation - Marker Bed 139 - parameters (Table 22)
- Salado Formation - anhydrite a and b, intact and fractured - parameters (Table 23)
- Disturbed rock zone parameters (Table 24)
- Waste area and waste material parameters (Table 25)
- Waste chemistry parameters (Table 26)
- Radionuclide parameters (Table 27)
- Isotope inventory parameters (Table 28)
- Stoichiometric gas generation model parameters (Table 29)
- Predisposal cavities (waste area) parameters (Table 30)
- Operations region parameters (Table 31)
- Area parameters (Table 32)
- Castile Formation parameters (Table 33)
- Castile brine reservoir parameters (Table 34)

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- Reference constants (Table 35)
- Global parameters (Table 36).

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Table 3. Distribution of Parameters Sampled by LHS Code

Parameter	Definition	Version	Attribute	Value	Unit
AM+3:MKD_AM	Americium III: Matrix Partition Coefficient for Americium	PABC09	Distribution	Loguniform	
			Maximum	4.00e-01	m^3/kg
			Mean	9.00e-02	m^3/kg
			Median	4.50e-02	m^3/kg
			Minimum	5.00e-03	m^3/kg
			Standard Deviation	1.00e-01	m^3/kg
BH_SAND:PRMX_LOG	Borehole filled with silty sand: Log of intrinsic permeability, X-direction	RPPCR	Distribution	Uniform	
			Maximum	-1.40e+01	$log(m^2)$
			Mean	-1.52e+01	$log(m^2)$
			Median	-1.52e+01	$log(m^2)$
			Minimum	-1.63e+01	$log(m^2)$
			Standard Deviation	6.64e-01	$log(m^2)$
BH_SAND:PRMY_LOG[1]	Borehole filled with silty sand: Log of intrinsic permeability, Y-direction	RPPCR	Distribution	Uniform	
			Maximum	-1.40e+01	$log(m^2)$
			Mean	-1.52e+01	$log(m^2)$
			Median	-1.52e+01	$log(m^2)$
			Minimum	-1.63e+01	$log(m^2)$
			Standard Deviation	6.64e-01	$log(m^2)$

Table 3. Distribution of Parameters Sampled by LHS Code (cont.)

BH_SAND:PRMZ_LOG[1]	Borehole filled with silty sand: Log of intrinsic permeability, Z-direction	RPPCR	Distribution	Uniform	
			Maximum	-1.40e+01	log(m^2)
			Mean	-1.52e+01	log(m^2)
			Median	-1.52e+01	log(m^2)
			Minimum	-1.63e+01	log(m^2)
			Standard Deviation	6.64e-01	log(m^2)
BOREHOLE:DOMEGA	Borehole and Fill: Drill string angular velocity (0)	CCA	Distribution	Cumulative	
			Maximum	2.30e+01	rad/s
			Mean	8.63e+00	rad/s
			Median	7.80e+00	rad/s
			Minimum	4.20e+00	rad/s
			Standard Deviation	3.16e+00	rad/s
BOREHOLE:TAUFAIL	Borehole and Fill: Effective shear strength for erosion (rfail)	CRA14_SEN4	Distribution	Uniform	
			Maximum	7.70e+01	Pa
			Mean	3.93e+01	Pa
			Median	3.93e+01	Pa
			Minimum	1.60e+00	Pa
			Standard Deviation	2.18e+01	Pa
CASTILER:COMP_RCK	Castile Brine Reservoir: Bulk Compressibility	TBM	Distribution	Triangular	
			Maximum	1.00e-10	Pa^{-1}
			Mean	5.30e-11	Pa^{-1}
			Minimum	2.00e-11	Pa^{-1}
			Mode	4.00e-11	Pa^{-1}
			Standard Deviation	1.70e-11	Pa^{-1}

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Table 3. Distribution of Parameters Sampled by LHS Code (cont.)

CASTILER:PRESSURE	Castile Brine Reservoir: Brine far-field pore pressure	CCA	Distribution	Triangular	
			Maximum	1.70e+07	Pa
			Mean	1.36e+07	Pa
			Minimum	1.11e+07	Pa
			Mode	1.27e+07	Pa
			Standard Deviation	1.25e+06	Pa
CASTILER:PRMX_LOG	Castile Brine Reservoir: Log of intrinsic permeability, X-direction	CCA	Distribution	Triangular	
			Maximum	-9.80e+00	log(m^2)
			Mean	-1.21e+01	log(m^2)
			Minimum	-1.47e+01	log(m^2)
			Mode	-1.18e+01	log(m^2)
			Standard Deviation	1.01e+00	log(m^2)
CASTILER:PRMY_LOG [1]	Castile Brine Reservoir: Log of intrinsic permeability, Y-direction	CCA	Distribution	Triangular	
			Maximum	-9.80e+00	log(m^2)
			Mean	-1.21e+01	log(m^2)
			Minimum	-1.47e+01	log(m^2)
			Mode	-1.18e+01	log(m^2)
			Standard Deviation	1.01e+00	log(m^2)
CASTILER:PRMZ_LOG [1]	Castile Brine Reservoir: Log of intrinsic permeability, Z-direction	CCA	Distribution	Triangular	
			Maximum	-9.80e+00	log(m^2)
			Mean	-1.21e+01	log(m^2)
			Minimum	-1.47e+01	log(m^2)
			Mode	-1.18e+01	log(m^2)
			Standard Deviation	1.01e+00	log(m^2)

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Table 3. Distribution of Parameters Sampled by LHS Code (cont.)

CONC_PLG:PRMX_LOG	Concrete Plug, surface and Rustler: Log of intrinsic permeability, X-direction	TBM	Distribution	Uniform	
			Maximum	-1.70e+01	log(m^2)
			Mean	-1.80e+01	log(m^2)
			Median	-1.80e+01	log(m^2)
			Minimum	-1.90e+01	log(m^2)
			Standard Deviation	5.80e-01	log(m^2)
CONC_PLG:PRMY_LOG [1]	Concrete Plug, surface and Rustler: Log of intrinsic permeability, Y-direction	TBM	Distribution	Uniform	
			Maximum	-1.70e+01	log(m^2)
			Mean	-1.80e+01	log(m^2)
			Median	-1.80e+01	log(m^2)
			Minimum	-1.90e+01	log(m^2)
			Standard Deviation	5.80e-01	log(m^2)
CONC_PLG:PRMZ_LOG [1]	Concrete Plug, surface and Rustler: Log of intrinsic permeability, Z-direction	TBM	Distribution	Uniform	
			Maximum	-1.70e+01	log(m^2)
			Mean	-1.80e+01	log(m^2)
			Median	-1.80e+01	log(m^2)
			Minimum	-1.90e+01	log(m^2)
			Standard Deviation	5.80e-01	log(m^2)

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Table 3. Distribution of Parameters Sampled by LHS Code (cont.)

CULEBRA:APOROS	Culebra member of the Rustler formation: Culebra Advective Porosity	CCA	Distribution	Loguniform	
			Maximum	1.00e-02	NONE
			Mean	2.10e-03	NONE
			Median	1.00e-03	NONE
			Minimum	1.00e-04	NONE
			Standard Deviation	2.50e-03	NONE
CULEBRA:DPOROS	Culebra member of the Rustler formation: Diffusive Porosity for Culebra Dolomite	CCA	Distribution	Cumulative	
			Maximum	2.50e-01	NONE
			Mean	1.60e-01	NONE
			Median	1.60e-01	NONE
			Minimum	1.00e-01	NONE
			Standard Deviation	3.50e-02	NONE
CULEBRA:HMBLKLT	Culebra member of the Rustler formation: Culebra Half Matrix-Block Length	CCA	Distribution	Uniform	
			Maximum	5.00e-01	m
			Mean	2.75e-01	m
			Median	2.75e-01	m
			Minimum	5.00e-02	m
			Standard Deviation	1.30e-01	m

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Table 3. Distribution of Parameters Sampled by LHS Code (cont.)

CULEBRA:MINP_FAC	Culebra member of the Rustler formation: Mining Transmissivity Multiplier	CCA	Distribution	Uniform	
			Maximum	1.00e+03	NONE
			Mean	5.01e+02	NONE
			Median	5.01e+02	NONE
			Minimum	1.00e+00	NONE
			Standard Deviation	2.88e+02	NONE
DRZ_1:PRMX_LOG	Disturbed rock zone during the time period that begins with facility closure (0 years) and ends when DRZ healing is complete: Log of intrinsic permeability, X-direction	TBM	Distribution	Uniform	
			Maximum	-1.25e+01	log(m^2)
			Mean	-1.60e+01	log(m^2)
			Median	-1.60e+01	log(m^2)
			Minimum	-1.94e+01	log(m^2)
			Standard Deviation	2.00e+00	log(m^2)
DRZ_1:PRMY_LOG [1]	Disturbed rock zone during the time period that begins with facility closure (0 years) and ends when DRZ healing is complete: Log of intrinsic permeability, Y-direction	TBM	Distribution	Uniform	
			Maximum	-1.25e+01	log(m^2)
			Mean	-1.60e+01	log(m^2)
			Median	-1.60e+01	log(m^2)
			Minimum	-1.94e+01	log(m^2)
			Standard Deviation	2.00e+00	log(m^2)

Table 3. Distribution of Parameters Sampled by LHS Code (cont.)

DRZ_1:PRMZ_LOG [1]	Disturbed rock zone during the time period that begins with facility closure (0 years) and ends when DRZ healing is complete: Log of intrinsic permeability, Z-direction	TBM	Distribution	Uniform	
			Maximum	-1.25e+01	log(m^2)
			Mean	-1.60e+01	log(m^2)
			Median	-1.60e+01	log(m^2)
			Minimum	-1.94e+01	log(m^2)
			Standard Deviation	2.00e+00	log(m^2)
DRZ_PCS:PRMX_LOG [2]	DRZ directly above the panel closure system: Log of intrinsic permeability, X-direction	SDI	Distribution	Triangular	
			Maximum	-1.70e+01	log(m^2)
			Mean	-1.88e+01	log(m^2)
			Minimum	-2.07e+01	log(m^2)
			Mode	-1.87e+01	log(m^2)
			Standard Deviation	7.55e-01	log(m^2)
DRZ_PCS:PRMY_LOG [1]	DRZ directly above the panel closure system: Log of intrinsic permeability, Y-direction	SDI	Distribution	Triangular	
			Maximum	-1.70e+01	log(m^2)
			Mean	-1.88e+01	log(m^2)
			Minimum	-2.07e+01	log(m^2)
			Mode	-1.87e+01	log(m^2)
			Standard Deviation	7.55e-01	log(m^2)

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Table 3. Distribution of Parameters Sampled by LHS Code (cont.)

DRZ_PCS:PRMZ_LOG [1]	DRZ directly above the panel closure system: Log of intrinsic permeability, Z-direction	SDI	Distribution	Triangular	
			Maximum	-1.70e+01	log(m^2)
			Mean	-1.88e+01	log(m^2)
			Minimum	-2.07e+01	log(m^2)
			Mode	-1.87e+01	log(m^2)
			Standard Deviation	7.55e-01	log(m^2)
GLOBAL:CLIMTIDX	Information that applies globally: Climate Index	CCA	Distribution	Cumulative	
			Maximum	2.25e+00	NONE
			Mean	1.31e+00	NONE
			Median	1.17e+00	NONE
			Minimum	1.00e+00	NONE
			Standard Deviation	3.48e-01	NONE
GLOBAL:GDEPFAC	Information that applies globally: Energy deposition probability for wetted solid radionuclides	CRA19	Distribution	Uniform	
			Maximum	5.00e-01	NONE
			Mean	2.50e-01	NONE
			Median	2.50e-01	NONE
			Minimum	0.00e+00	NONE
			Standard Deviation	1.44e-01	NONE

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Table 3. Distribution of Parameters Sampled by LHS Code (cont.)

GLOBAL:OXSTAT	Information that applies globally: Index for the Oxidation State	CCA	Distribution	Uniform	
			Maximum	1.00e+00	NONE
			Mean	5.00e-01	NONE
			Median	5.00e-01	NONE
			Minimum	0.00e+00	NONE
			Standard Deviation	2.89e-01	NONE
GLOBAL:PBRINE	Information that applies globally: Prob. that Drilling Intrusion In Excavated Area Encounteres Pressurized Brine	RPPCR	Distribution	Cumulative	
			Maximum	5.70e-01	NONE
			Mean	2.64e-01	NONE
			Median	2.45e-01	NONE
			Minimum	4.00e-02	NONE
			Standard Deviation	1.29e-01	NONE
GLOBAL:TRANSIDX	Information that applies globally: Index for selecting realizations of the Transmissivity Field	CCA	Distribution	Uniform	
			Maximum	1.00e+00	NONE
			Mean	5.00e-01	NONE
			Median	5.00e-01	NONE
			Minimum	0.00e+00	NONE
			Standard Deviation	2.89e-01	NONE

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Table 3. Distribution of Parameters Sampled by LHS Code (cont.)

PCS_T1:PORE_DIS	Panel Closure System for an initial time duration: Brooks-Corey pore distribution parameter	AP129	Distribution	Cumulative	
			Maximum	8.10e+00	NONE
			Mean	2.52e+00	NONE
			Median	9.40e-01	NONE
			Minimum	1.10e-01	NONE
			Standard Deviation	2.48e+00	NONE
PCS_T1:POROSITY	Panel Closure System for an initial time duration: Effective porosity	AP161	Distribution	Uniform	
			Maximum	1.87e-01	NONE
			Mean	1.27e-01	NONE
			Minimum	6.60e-02	NONE
PCS_T1:PRMX_LOG	Panel Closure System for an initial time duration: Log of intrinsic permeability, X-direction	CRA14BL	Distribution	Uniform	
			Maximum	-1.20e+01	log(m^2)
			Mean	-1.64e+01	log(m^2)
			Median	-1.64e+01	log(m^2)
			Minimum	-2.08e+01	log(m^2)
			Standard Deviation	2.55e+00	log(m^2)
PCS_T1:PRMY_LOG [1]	Panel Closure System for an initial time duration: Log of intrinsic permeability, Y-direction	CRA14BL	Distribution	Uniform	
			Maximum	-1.20e+01	log(m^2)
			Mean	-1.64e+01	log(m^2)
			Median	-1.64e+01	log(m^2)
			Minimum	-2.08e+01	log(m^2)
			Standard Deviation	2.55e+00	log(m^2)

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Table 3. Distribution of Parameters Sampled by LHS Code (cont.)

PCS_T1:PRMZ_LOG [1]	Panel Closure System for an initial time duration: Log of intrinsic permeability, Z-direction	CRA14BL	Distribution	Uniform	
			Maximum	-1.20e+01	log(m^2)
			Mean	-1.64e+01	log(m^2)
			Median	-1.64e+01	log(m^2)
			Minimum	-2.08e+01	log(m^2)
			Standard Deviation	2.55e+00	log(m^2)
PCS_T1:SAT_RBRN	Panel Closure System for an initial time duration: Residual Brine Saturation	AP129	Distribution	Cumulative	
			Maximum	6.00e-01	NONE
			Mean	2.50e-01	NONE
			Median	2.00e-01	NONE
			Minimum	0.00e+00	NONE
			Standard Deviation	1.76e-01	NONE
PCS_T1:SAT_RGAS	Panel Closure System for an initial time duration: Residual Gas Saturation	AP129	Distribution	Uniform	
			Maximum	4.00e-01	NONE
			Mean	2.00e-01	NONE
			Median	2.00e-01	NONE
			Minimum	0.00e+00	NONE
			Standard Deviation	1.16e-01	NONE

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Table 3. Distribution of Parameters Sampled by LHS Code (cont.)

PCS_T2:PORE_DIS[3]	Panel Closure System for a secondary time duration: Brooks-Corey pore distribution parameter	AP129	Distribution	Cumulative	
			Maximum	8.10e+00	NONE
			Mean	2.52e+00	NONE
			Median	9.40e-01	NONE
			Minimum	1.10e-01	NONE
			Standard Deviation	2.48e+00	NONE
PCS_T2:POR2PERM	Panel Closure System for a secondary time duration: Distribution used to calculate permeability from sampled porosity values	CRA26_FS	Distribution	Cumulative	
			Maximum	1.72e+00	NONE
			Mean	1.09e-16	NONE
			Median	0.00e+00	NONE
			Minimum	-1.72e+00	NONE
			Standard Deviation	7.57e-01	NONE
PCS_T2:POROSITY	Panel Closure System for a secondary time duration: Effective porosity	AP161	Distribution	Uniform	
			Maximum	7.50e-02	NONE
			Mean	5.00e-02	NONE
			Minimum	2.50e-02	NONE

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Table 3. Distribution of Parameters Sampled by LHS Code (cont.)

PCS_T2:SAT_RBRN [3]	Panel Closure System for a secondary time duration: Residual Brine Saturation	AP129	Distribution	Cumulative	
			Maximum	6.00e-01	NONE
			Mean	2.50e-01	NONE
			Median	2.00e-01	NONE
			Minimum	0.00e+00	NONE
			Standard Deviation	1.76e-01	NONE
PCS_T2:SAT_RGAS [3]	Panel Closure System for a secondary time duration: Residual Gas Saturation	AP129	Distribution	Uniform	
			Maximum	4.00e-01	NONE
			Mean	2.00e-01	NONE
			Median	2.00e-01	NONE
			Minimum	0.00e+00	NONE
			Standard Deviation	1.16e-01	NONE
PCS_T3:PORE_DIS [3]	Run-of-Mine Panel Closure System, Tertiary Time Period: Brooks-Corey pore distribution parameter	AP161	Distribution	Cumulative	
			Maximum	8.10e+00	NONE
			Mean	2.52e+00	NONE
			Median	9.40e-01	NONE
			Minimum	1.10e-01	NONE
			Standard Deviation	2.48e+00	NONE

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Table 3. Distribution of Parameters Sampled by LHS Code (cont.)

PCS_T3:POROSITY	Run-of-Mine Panel Closure System, Tertiary Time Period: Effective porosity	AP161	Distribution	Uniform	
			Maximum	5.19e-02	NONE
			Mean	2.65e-02	NONE
			Minimum	1.00e-03	NONE
PCS_T3:SAT_RBRN [3]	Run-of-Mine Panel Closure System, Tertiary Time Period: Residual Brine Saturation	AP161	Distribution	Cumulative	
			Maximum	6.00e-01	NONE
			Mean	2.50e-01	NONE
			Median	2.00e-01	NONE
			Minimum	0.00e+00	NONE
			Standard Deviation	1.76e-01	NONE
PCS_T3:SAT_RGAS [3]	Run-of-Mine Panel Closure System, Tertiary Time Period: Residual Gas Saturation	AP161	Distribution	Uniform	
			Maximum	4.00e-01	NONE
			Mean	2.00e-01	NONE
			Median	2.00e-01	NONE
			Minimum	0.00e+00	NONE
			Standard Deviation	1.16e-01	NONE
PU+3:MKD_PU	Plutonium III: Matrix Partition Coefficient for Plutonium	PABC09	Distribution	Loguniform	
			Maximum	4.00e-01	m^3/kg
			Mean	9.00e-02	m^3/kg
			Median	4.50e-02	m^3/kg
			Minimum	5.00e-03	m^3/kg
			Standard Deviation	1.00e-01	m^3/kg

Table 3. Distribution of Parameters Sampled by LHS Code (cont.)

PU+4:MKD_PU	Plutonium IV: Matrix Partition Coefficient for Plutonium	PABC09	Distribution	Loguniform	
			Maximum	1.00e+01	m^3/kg
			Mean	1.00e+00	m^3/kg
			Median	7.10e-02	m^3/kg
			Minimum	5.00e-04	m^3/kg
			Standard Deviation	2.00e+00	m^3/kg
SHFTL_T1:PRMX_LOG	Lower portion of simplified shaft from 0 - 200 years: Log of intrinsic permeability, X-direction	AP106	Distribution	Cumulative	
			Maximum	-1.65e+01	$log(m^2)$
			Mean	-1.80e+01	$log(m^2)$
			Median	-1.82e+01	$log(m^2)$
			Minimum	-2.00e+01	$log(m^2)$
			Standard Deviation	5.97e-01	$log(m^2)$
SHFTL_T2:PRMX_LOG	Lower portion of simplified shaft from 200 - 10,000 years: Log of intrinsic permeability, X-direction	AP106	Distribution	Cumulative	
			Maximum	-1.80e+01	$log(m^2)$
			Mean	-1.98e+01	$log(m^2)$
			Median	-2.01e+01	$log(m^2)$
			Minimum	-2.25e+01	$log(m^2)$
			Standard Deviation	9.37e-01	$log(m^2)$

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Table 3. Distribution of Parameters Sampled by LHS Code (cont.)

SHFTU:PRMX_LOG	Upper portion of simplified shaft: Log of intrinsic permeability, X-direction	AP106	Distribution	Cumulative	
			Maximum	-1.65e+01	log(m^2)
			Mean	-1.82e+01	log(m^2)
			Median	-1.83e+01	log(m^2)
			Minimum	-2.05e+01	log(m^2)
			Standard Deviation	7.94e-01	log(m^2)
SHFTU:SAT_RBRN	Upper portion of simplified shaft: Residual Brine Saturation	AP106	Distribution	Cumulative	
			Maximum	6.00e-01	NONE
			Mean	2.50e-01	NONE
			Median	2.00e-01	NONE
			Minimum	0.00e+00	NONE
			Standard Deviation	1.76e-01	NONE
SHFTU:SAT_RGAS	Upper portion of simplified shaft: Residual Gas Saturation	AP106	Distribution	Uniform	
			Maximum	4.00e-01	NONE
			Mean	2.00e-01	NONE
			Median	2.00e-01	NONE
			Minimum	0.00e+00	NONE
			Standard Deviation	1.16e-01	NONE
SOLMOD3:SOLVAR	Oxidation state III model: Solubility Multiplier	CRA26_FS	Distribution	Cumulative	
			Maximum	5.98e-01	NONE
			Mean	-4.73e-01	NONE
			Median	-2.76e-01	NONE
			Minimum	-2.76e+00	NONE
			Standard Deviation	7.97e-01	NONE

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Table 3. Distribution of Parameters Sampled by LHS Code (cont.)

SOLMOD4:SOLVAR	Oxidation state IV model: Solubility Multiplier	RPPCR	Distribution	Cumulative	
			Maximum	5.29e-01	NONE
			Mean	-7.61e-01	NONE
			Median	-9.47e-01	NONE
			Minimum	-2.01e+00	NONE
			Standard Deviation	6.82e-01	NONE
SPALLMOD:PARTDIAM	Material developed for DRSPALL: Particle diameter of disaggregated waste	CRA1	Distribution	Loguniform	
			Maximum	1.00e-01	m
			Mean	2.15e-02	m
			Median	1.00e-02	m
			Minimum	1.00e-03	m
			Standard Deviation	2.50e-02	m
SPALLMOD:REPIPERM	Material developed for DRSPALL: Waste permeability to gas local to intrusion borehole	CRA1	Distribution	Loguniform	
			Maximum	2.40e-12	m^2
			Mean	5.16e-13	m^2
			Median	2.40e-13	m^2
			Minimum	2.40e-14	m^2
			Standard Deviation	6.00e-13	m^2

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Table 3. Distribution of Parameters Sampled by LHS Code (cont.)

SPALLMOD:REPIPOR	Material developed for DRSPALL: Waste porosity at time of drilling intrusion	CRA1	Distribution	Uniform	
			Maximum	6.60e-01	NONE
			Mean	5.05e-01	NONE
			Median	5.05e-01	NONE
			Minimum	3.50e-01	NONE
			Standard Deviation	8.95e-02	NONE
SPALLMOD:TENSLSTR	Material developed for DRSPALL: Tensile strength of waste	CRA1	Distribution	Uniform	
			Maximum	1.70e+05	Pa
			Mean	1.45e+05	Pa
			Median	1.45e+05	Pa
			Minimum	1.20e+05	Pa
			Standard Deviation	1.44e+04	Pa
STEEL:CORRMCO2	Generic steel in waste: Inundated corrosion rate for steel without CO2 present	CRA19	Distribution	Cumulative	
			Maximum	7.92e-14	m/s
			Mean	1.33e-14	m/s
			Median	1.12e-14	m/s
			Minimum	0.00e+00	m/s
			Standard Deviation	1.08e-14	m/s

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Table 3. Distribution of Parameters Sampled by LHS Code (cont.)

STEEL:HUMCORR	Generic steel in waste: Humid corrosion rate for steel	CRA19	Distribution	Cumulative	
			Maximum	1.03e-15	m/s
			Mean	2.43e-16	m/s
			Median	1.90e-16	m/s
			Minimum	0.00e+00	m/s
			Standard Deviation	2.47e-16	m/s
S_HALITE:COMP_RCK	Salado halite, intact: Bulk Compressibility	CCA	Distribution	Uniform	
			Maximum	1.92e-10	Pa^{-1}
			Mean	9.75e-11	Pa^{-1}
			Median	9.75e-11	Pa^{-1}
			Minimum	2.94e-12	Pa^{-1}
			Standard Deviation	5.46e-11	Pa^{-1}
S_HALITE:POROSITY	Salado halite, intact: Effective porosity	AP132	Distribution	Cumulative	
			Maximum	5.19e-02	NONE
			Mean	1.82e-02	NONE
			Median	1.00e-02	NONE
			Minimum	1.00e-03	NONE
			Standard Deviation	1.54e-02	NONE
S_HALITE:PRESSURE	Salado halite, intact: Brine far-field pore pressure	CCA	Distribution	Uniform	
			Maximum	1.39e+07	Pa
			Mean	1.25e+07	Pa
			Median	1.25e+07	Pa
			Minimum	1.10e+07	Pa
			Standard Deviation	8.23e+05	Pa

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Table 3. Distribution of Parameters Sampled by LHS Code (cont.)

S_HALITE:PRMX_LOG	Salado halite, intact: Log of intrinsic permeability, X-direction	CCA	Distribution	Uniform	
			Maximum	-2.10e+01	log(m^2)
			Mean	-2.25e+01	log(m^2)
			Median	-2.25e+01	log(m^2)
			Minimum	-2.40e+01	log(m^2)
			Standard Deviation	8.66e-01	log(m^2)
S_HALITE:PRMY_LOG [1]	Salado halite, intact: Log of intrinsic permeability, Y-direction	CCA	Distribution	Uniform	
			Maximum	-2.10e+01	log(m^2)
			Mean	-2.25e+01	log(m^2)
			Median	-2.25e+01	log(m^2)
			Minimum	-2.40e+01	log(m^2)
			Standard Deviation	8.66e-01	log(m^2)
S_HALITE:PRMZ_LOG [1]	Salado halite, intact: Log of intrinsic permeability, Z-direction	CCA	Distribution	Uniform	
			Maximum	-2.10e+01	log(m^2)
			Mean	-2.25e+01	log(m^2)
			Median	-2.25e+01	log(m^2)
			Minimum	-2.40e+01	log(m^2)
			Standard Deviation	8.66e-01	log(m^2)

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Table 3. Distribution of Parameters Sampled by LHS Code (cont.)

S_MB139:PORE_DIS	Salado marker bed 139, intact and fractured: Brooks-Corey pore distribution parameter	CCA	Distribution	Student	
			Maximum	8.42e-01	NONE
			Mean	6.44e-01	NONE
			Median	6.44e-01	NONE
			Minimum	4.91e-01	NONE
			Population Standard Dev	1.09e-01	NONE
			Standard Deviation	1.19e-01	NONE
			Standard Error	4.86e-02	NONE
			Degrees of Freedom	5.00e+00	NONE
S_MB139:PRMX_LOG	Salado marker bed 139, intact and fractured: Log of intrinsic permeability, X-direction	CCA	Distribution	Student	
			Maximum	-1.71e+01	log(m^2)
			Mean	-1.89e+01	log(m^2)
			Median	-1.89e+01	log(m^2)
			Minimum	-2.10e+01	log(m^2)
			Population Standard Dev	1.20e+00	log(m^2)
			Standard Deviation	1.30e+00	log(m^2)
			Standard Error	5.30e-01	log(m^2)
			Degrees of Freedom	5.00e+00	NONE

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Table 3. Distribution of Parameters Sampled by LHS Code (cont.)

S_MB139:PRMY_LOG [1]	Salado marker bed 139, intact and fractured: Log of intrinsic permeability, Y-direction	CCA	Distribution	Student	
			Maximum	-1.71e+01	log(m^2)
			Mean	-1.89e+01	log(m^2)
			Median	-1.89e+01	log(m^2)
			Minimum	-2.10e+01	log(m^2)
			Population Standard Dev	1.20e+00	log(m^2)
			Standard Deviation	1.30e+00	log(m^2)
			Standard Error	5.30e-01	log(m^2)
			Degrees of Freedom	5.00e+00	NONE
S_MB139:PRMZ_LOG [1]	Salado marker bed 139, intact and fractured: Log of intrinsic permeability, Z-direction	CCA	Distribution	Student	
			Maximum	-1.71e+01	log(m^2)
			Mean	-1.89e+01	log(m^2)
			Median	-1.89e+01	log(m^2)
			Minimum	-2.10e+01	log(m^2)
			Population Standard Dev	1.20e+00	log(m^2)
			Standard Deviation	1.30e+00	log(m^2)
			Standard Error	5.30e-01	log(m^2)
			Degrees of Freedom	5.00e+00	NONE

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Table 3. Distribution of Parameters Sampled by LHS Code (cont.)

S_MB139:RELP_MOD	Salado marker bed 139, intact and fractured: Model number, relative permeability model	CCA	Distribution	Delta	
			Maximum	4.00e+00	NONE
			Mean	4.00e+00	NONE
			Median	4.00e+00	NONE
			Minimum	1.00e+00	NONE
			Standard Deviation	0.00e+00	NONE
S_MB139:SAT_RBRN	Salado marker bed 139, intact and fractured: Residual Brine Saturation	CCA	Distribution	Student	
			Maximum	1.74e-01	NONE
			Mean	8.36e-02	NONE
			Median	8.36e-02	NONE
			Minimum	7.78e-03	NONE
			Population Standard Dev	5.01e-02	NONE
			Standard Deviation	5.49e-02	NONE
			Standard Error	2.24e-02	NONE
			Degrees of Freedom	5.00e+00	NONE
TH+4:MKD_TH	Thorium IV: Matrix Partition Coefficient for Thorium	PABC09	Distribution	Loguniform	
			Maximum	1.00e+01	m^3/kg
			Mean	1.00e+00	m^3/kg
			Median	7.10e-02	m^3/kg
			Minimum	5.00e-04	m^3/kg
			Standard Deviation	2.00e+00	m^3/kg

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Table 3. Distribution of Parameters Sampled by LHS Code (cont.)

U+4:MKD_U	Uranium IV: Matrix Partition Coefficient for Uranium	PABC09	Distribution	Loguniform	
			Maximum	1.00e+01	m^3/kg
			Mean	1.00e+00	m^3/kg
			Median	7.10e-02	m^3/kg
			Minimum	5.00e-04	m^3/kg
			Standard Deviation	2.00e+00	m^3/kg
U+6:MKD_U	Uranium VI: Matrix Partition Coefficient for Uranium	TBM	Distribution	Loguniform	
			Maximum	2.00e-02	m^3/kg
			Mean	3.10e-03	m^3/kg
			Median	7.70e-04	m^3/kg
			Minimum	3.00e-05	m^3/kg
			Standard Deviation	4.60e-03	m^3/kg
WAS_AREA:BIOGENFC	Waste Panel and Waste: Probability of attaining sampled microbial-gas-generation rates	CRA1BC	Distribution	Uniform	
			Maximum	1.00e+00	NONE
			Mean	5.00e-01	NONE
			Median	5.00e-01	NONE
			Minimum	0.00e+00	NONE
			Standard Deviation	2.89e-01	NONE

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Table 3. Distribution of Parameters Sampled by LHS Code (cont.)

WAS_AREA:BRUCITEC	Waste Panel and Waste: MgO inundated hydration rate in ERDA-6 brine	CRA26_FS	Distribution	Cumulative	
			Maximum	8.80e-08	moles/(kg*s)
			Mean	8.20e-08	moles/(kg*s)
			Median	8.20e-08	moles/(kg*s)
			Minimum	7.60e-08	moles/(kg*s)
			Standard Deviation	1.99e-09	moles/(kg*s)
WAS_AREA:BRUCITEH	Waste Panel and Waste: MgO humid hydration rate	CRA14	Distribution	Normal	
			Maximum	2.19e-08	moles/(kg*s)
			Mean	2.00e-08	moles/(kg*s)
			Median	2.00e-08	moles/(kg*s)
			Minimum	1.81e-08	moles/(kg*s)
			Mode	2.00e-08	moles/(kg*s)
			Standard Deviation	8.15e-10	moles/(kg*s)
WAS_AREA:BRUCITES	Waste Panel and Waste: MgO inundated hydration rate in GWB brine	CRA26_FS	Distribution	Cumulative	
			Maximum	2.90e-07	moles/(kg*s)
			Mean	1.40e-07	moles/(kg*s)
			Median	1.40e-07	moles/(kg*s)
			Minimum	0.00e+00	moles/(kg*s)
			Standard Deviation	4.94e-08	moles/(kg*s)

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Table 3. Distribution of Parameters Sampled by LHS Code (cont.)

WAS_AREA:GRATMICH	Waste Panel and Waste: Humid biodegradation rate for cellulose	CRA1BC	Distribution	Uniform	
			Maximum	1.03e-09	moles/(kg*s)
			Mean	5.14e-10	moles/(kg*s)
			Median	5.14e-10	moles/(kg*s)
			Minimum	0.00e+00	moles/(kg*s)
			Standard Deviation	2.97e-10	moles/(kg*s)
WAS_AREA:GRATMICI	Waste Panel and Waste: Inundated biodegradation rate for cellulose	CRA1BC	Distribution	Uniform	
			Maximum	5.57e-10	moles/(kg*s)
			Mean	2.94e-10	moles/(kg*s)
			Median	2.94e-10	moles/(kg*s)
			Minimum	3.08e-11	moles/(kg*s)
			Standard Deviation	1.52e-10	moles/(kg*s)
WAS_AREA:HYMAGCON	Waste Panel and Waste: Rate of conversion of hydromagnesite to magnesite	CRA19	Distribution	Uniform	
			Maximum	3.40e-10	moles/(kg*s)
			Mean	1.70e-10	moles/(kg*s)
			Median	1.70e-10	moles/(kg*s)
			Minimum	0.00e+00	moles/(kg*s)
			Standard Deviation	9.82e-11	moles/(kg*s)

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Table 3. Distribution of Parameters Sampled by LHS Code (cont.)

WAS_AREA:PROBDEG	Waste Panel and Waste: Probability of plastics and rubber biodegradation in event of microbial gas generation	CRA1BC	Distribution	Delta	
			Maximum	2.00e+00	NONE
			Mean	1.25e+00	NONE
			Median	1.25e+00	NONE
			Minimum	1.00e+00	NONE
			Standard Deviation	0.00e+00	NONE
WAS_AREA:SAT_RBRN	Waste Panel and Waste: Residual Brine Saturation	CCA	Distribution	Uniform	
			Maximum	5.52e-01	NONE
			Mean	2.76e-01	NONE
			Median	2.76e-01	NONE
			Minimum	0.00e+00	NONE
			Standard Deviation	1.59e-01	NONE
WAS_AREA:SAT_RGAS	Waste Panel and Waste: Residual Gas Saturation	CCA	Distribution	Uniform	
			Maximum	1.50e-01	NONE
			Mean	7.50e-02	NONE
			Median	7.50e-02	NONE
			Minimum	0.00e+00	NONE
			Standard Deviation	4.33e-02	NONE

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Table 3. Distribution of Parameters Sampled by LHS Code (cont.)

WAS_AREA:SAT_WICK	Waste Panel and Waste: Index for computing wicking	CCA	Distribution	Uniform	
			Maximum	1.00e+00	NONE
			Mean	5.00e-01	NONE
			Median	5.00e-01	NONE
			Minimum	0.00e+00	NONE
			Standard Deviation	2.89e-01	NONE

Notes:

[1] Only the x-direction property was sampled by LHS. The corresponding y- and z-direction properties were set equal to the x-direction values with code ALGEBRACDB.

[2] The sampled permeability value of material DRZ_PCS is compared to the sampled permeability value for DRZ_1. If the sampled value for DRZ_PCS is greater than that sampled for DRZ_1, then DRZ_PCS retains the sampled DRZ_1 value. Please refer to Section 4.0 for details.

[3] Only one time duration (initial time duration, T1) was sampled by LHS for this property. The corresponding properties for a secondary or Tertiary time duration (T2, T3) were set equal to the initial time duration.

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Table 4. Borehole, blowout, and drill mud parameters

Parameter	Definition	Version	Value	Units
BLOWOUT:GAS_MIN	Material for direct brine release calculations: Gas rate cut-off	CCA	1.00e+02	mscf/day
BLOWOUT:HREPO	Material for direct brine release calculations: Height of repository at burial time in CUTTINGS model	CCA	3.96e+00	m
BLOWOUT:MAXFLOW	Material for direct brine release calculations: Maximum blowout flow	AP131	3.89e+05	s
BLOWOUT:MINFLOW	Material for direct brine release calculations: Minimum blowout flow	CCA	2.59e+05	s
BLOWOUT:PARTDIA [1]	Material for direct brine release calculations: Waste Particle Diameter in CUTTINGS Model	CCA	2.80e-03	m
BLOWOUT:RE_CAST	Material for direct brine release calculations: External drainage radius for the Castile formation	CCA	1.14e+02	m
BLOWOUT:RGAS [2]	Material for direct brine release calculations: Gas Constant for Hydrogen	CCA	4.12e+03	N*m/kg/K
BLOWOUT:RHOS [2]	Material for direct brine release calculations: Waste Particle Density in CUTTINGS_S Model	CCA	2.65e+03	kg/m^3
BLOWOUT:THCK_CAS	Material for direct brine release calculations: Thickness of the Castile Brine Reservoir	CRA1	1.26e+02	m
BLOWOUT:TREPO [2]	Material for direct brine release calculations: Temperature of repository in CUTTINGS model	CCA	3.00e+02	K
BOREHOLE:CAP_MOD	Borehole and Fill: Model number, capillary pressure model	CCA	2.00e+00	NONE
BOREHOLE:COLDIA	Borehole and Fill: Drill collar diameter in CUTTINGS model	CCA	2.03e-01	m
BOREHOLE:COMP_RCK	Borehole and Fill: Bulk Compressibility	CCA	2.64e-09	Pa^{-1}
BOREHOLE:DIAMMOD	Borehole and Fill: Modern or current diameter	CCA	3.11e-01	m
BOREHOLE:KPT	Borehole and Fill: Flag for Permeability Determined Threshold	CCA	0.00e+00	NONE
BOREHOLE:L1 [2]	Borehole and Fill: Drill collar length in CUTTINGS model	CCA	1.83e+02	m

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Table 4. Borehole, blowout, and drill mud parameters (cont.)

Parameter	Definition	Version	Value	Units
BOREHOLE:PCT_A	Borehole and Fill: Threshold Pressure Linear Parameter	CCA	5.60e-01	Pa
BOREHOLE:PCT_EXP	Borehole and Fill: Threshold pressure exponential parameter	CCA	-3.46e-01	NONE
BOREHOLE:PC_MAX	Borehole and Fill: Maximum allowable capillary pressure	CCA	1.00e+08	Pa
BOREHOLE:PIPED [2]	Borehole and Fill: Drill pipe diameter in CUTTINGS model	CCA	1.14e-01	m
BOREHOLE:PORE_DIS	Borehole and Fill: Brooks-Corey pore distribution parameter	CCA	9.40e-01	NONE
BOREHOLE:POROSITY	Borehole and Fill: Effective porosity	CCA	5.00e-02	NONE
BOREHOLE:PO_MIN	Borehole and Fill: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	CCA	1.01e+05	Pa
BOREHOLE:PRMX_LOG [1]	Borehole and Fill: Log of intrinsic permeability, X-direction	CCA	-1.25e+01	$\log(m^2)$
BOREHOLE:PRMY_LOG [1]	Borehole and Fill: Log of intrinsic permeability, Y-direction	CCA	-1.25e+01	$\log(m^2)$
BOREHOLE:PRMZ_LOG [1]	Borehole and Fill: Log of intrinsic permeability, Z-direction	CCA	-1.25e+01	$\log(m^2)$
BOREHOLE:RELP_MOD	Borehole and Fill: Model number, relative permeability model	CCA	4.00e+00	NONE
BOREHOLE:SAT_RBRN	Borehole and Fill: Residual Brine Saturation	CCA	2.00e-01	NONE
BOREHOLE:SAT_RGAS	Borehole and Fill: Residual Gas Saturation	CCA	2.00e-01	NONE
BOREHOLE:WUF	Borehole and Fill: Unit of Waste	CRA26_IS	7.37e+00	NONE
DRILLMUD:DNSFLUID [1]	Drilling Mud: Brine Density	CCA	1.21e+03	kg/m^3
DRILLMUD:MUDFLWRT	Drilling Mud: drilling mud flow rate per unit length of the drillbit diameter for the cavings model in CUTTINGS_S	CRA1BC	9.94e-02	$m^3/(s*m)$
DRILLMUD:SHEARRT	Drilling Mud: Shear rate of drilling fluid for the CUTTINGS_S cavings model at which the Oldroyd and Bingham models predict similar shear stresses	CRA1BC	1.02e+03	1/s
DRILLMUD:VISCO [1]	Drilling Mud: Viscosity	CCA	9.17e-03	Pa*s
DRILLMUD:YLDSTRSS [1]	Drilling Mud: Yield Stress Point	CCA	4.40e+00	Pa

Notes:

[1] This parameter has an assigned distribution but uses the default constant value for all vectors.

[2] This parameter provided input to the DRSPALL model, which was not run in the CRA26_IS. No changes associated with DRSPALL were made since 2015 Code Migration (see footnote 2 in Table 1), and therefore the DRSPALL model results generated in 2015 Code Migration were used in CRA26_IS.

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Table 5. Borehole (concrete plug) parameters

Parameter	Definition	Version	Value	Units
CONC_PLG:CAP_MOD	Concrete Plug, surface and Rustler: Model number, capillary pressure model	CCA	1.00e+00	NONE
CONC_PLG:COMP_RCK	Concrete Plug, surface and Rustler: Bulk Compressibility	CRA1	3.80e-10	Pa^{-1}
CONC_PLG:KPT	Concrete Plug, surface and Rustler: Flag for Permeability Determined Threshold	CCA	0.00e+00	NONE
CONC_PLG:PCT_A	Concrete Plug, surface and Rustler: Threshold Pressure Linear Parameter	CCA	0.00e+00	Pa
CONC_PLG:PCT_EXP	Concrete Plug, surface and Rustler: Threshold pressure exponential parameter	CCA	0.00e+00	NONE
CONC_PLG:PC_MAX	Concrete Plug, surface and Rustler: Maximum allowable capillary pressure	CCA	1.00e+08	Pa
CONC_PLG:PORE_DIS	Concrete Plug, surface and Rustler: Brooks-Corey pore distribution parameter	CCA	9.40e-01	NONE
CONC_PLG:POROSITY	Concrete Plug, surface and Rustler: Effective porosity	CCA	3.20e-01	NONE
CONC_PLG:PO_MIN	Concrete Plug, surface and Rustler: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	CCA	1.01e+05	Pa
CONC_PLG:RELP_MOD	Concrete Plug, surface and Rustler: Model number, relative permeability model	CCA	4.00e+00	NONE
CONC_PLG:SAT_RBRN	Concrete Plug, surface and Rustler: Residual Brine Saturation	CCA	0.00e+00	NONE
CONC_PLG:SAT_RGAS	Concrete Plug, surface and Rustler: Residual Gas Saturation	CCA	0.00e+00	NONE

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Table 6. Borehole (open) parameters

Parameter	Definition	Version	Value	Units
BH_OPEN:CAP_MOD	Borehole Unrestricted: Model number, capillary pressure model	CCA	1.00e+00	NONE
BH_OPEN:COMP_RCK	Borehole Unrestricted: Bulk Compressibility	CCA	0.00e+00	Pa^{-1}
BH_OPEN:KPT	Borehole Unrestricted: Flag for Permeability Determined Threshold	CCA	0.00e+00	NONE
BH_OPEN:PCT_A	Borehole Unrestricted: Threshold Pressure Linear Parameter	CCA	0.00e+00	Pa
BH_OPEN:PCT_EXP	Borehole Unrestricted: Threshold pressure exponential parameter	CCA	0.00e+00	NONE
BH_OPEN:PC_MAX	Borehole Unrestricted: Maximum allowable capillary pressure	CCA	1.00e+08	Pa
BH_OPEN:PORE_DIS	Borehole Unrestricted: Brooks-Corey pore distribution parameter	CCA	7.00e-01	NONE
BH_OPEN:POROSITY	Borehole Unrestricted: Effective porosity	CCA	3.20e-01	NONE
BH_OPEN:PO_MIN	Borehole Unrestricted: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	CCA	1.01e+05	Pa
BH_OPEN:PRMX_LOG	Borehole Unrestricted: Log of intrinsic permeability, X-direction	CCA	-9.00e+00	$log(m^2)$
BH_OPEN:PRMY_LOG	Borehole Unrestricted: Log of intrinsic permeability, Y-direction	CCA	-9.00e+00	$log(m^2)$
BH_OPEN:PRMZ_LOG	Borehole Unrestricted: Log of intrinsic permeability, Z-direction	CCA	-9.00e+00	$log(m^2)$
BH_OPEN:RELP_MOD	Borehole Unrestricted: Model number, relative permeability model	CRA19	1.10e+01	NONE
BH_OPEN:SAT_RBRN	Borehole Unrestricted: Residual Brine Saturation	CCA	0.00e+00	NONE
BH_OPEN:SAT_RGAS	Borehole Unrestricted: Residual Gas Saturation	CCA	0.00e+00	NONE

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Table 7. Borehole (silty sand) parameters

Parameter	Definition	Version	Value	Units
BH_SAND:CAP_MOD	Borehole filled with silty sand: Model number, capillary pressure model	CCA	1.00e+00	NONE
BH_SAND:COMP_RCK	Borehole filled with silty sand: Bulk Compressibility	CCA	0.00e+00	Pa^{-1}
BH_SAND:KPT	Borehole filled with silty sand: Flag for Permeability Determined Threshold	CCA	0.00e+00	NONE
BH_SAND:PCT_A	Borehole filled with silty sand: Threshold Pressure Linear Parameter	CCA	0.00e+00	Pa
BH_SAND:PCT_EXP	Borehole filled with silty sand: Threshold pressure exponential parameter	CCA	0.00e+00	NONE
BH_SAND:PC_MAX	Borehole filled with silty sand: Maximum allowable capillary pressure	CCA	1.00e+08	Pa
BH_SAND:PORE_DIS	Borehole filled with silty sand: Brooks-Corey pore distribution parameter	CCA	9.40e-01	NONE
BH_SAND:POROSITY	Borehole filled with silty sand: Effective porosity	CCA	3.20e-01	NONE
BH_SAND:PO_MIN	Borehole filled with silty sand: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	CCA	1.01e+05	Pa
BH_SAND:RELP_MOD	Borehole filled with silty sand: Model number, relative permeability model	CCA	4.00e+00	NONE
BH_SAND:SAT_RBRN	Borehole filled with silty sand: Residual Brine Saturation	CCA	0.00e+00	NONE
BH_SAND:SAT_RGAS	Borehole filled with silty sand: Residual Gas Saturation	CCA	0.00e+00	NONE

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Table 8. Borehole (creep) parameters

Parameter	Definition	Version	Value	Units
BH_CREEP:CAP_MOD	Creep Borehole Fill: Model number, capillary pressure model	CCA	1.00e+00	NONE
BH_CREEP:COMP_RCK	Creep Borehole Fill: Bulk Compressibility	CCA	0.00e+00	Pa^{-1}
BH_CREEP:KPT	Creep Borehole Fill: Flag for Permeability Determined Threshold	CCA	0.00e+00	NONE
BH_CREEP:PCT_A	Creep Borehole Fill: Threshold Pressure Linear Parameter	CCA	0.00e+00	Pa
BH_CREEP:PCT_EXP	Creep Borehole Fill: Threshold pressure exponential parameter	CCA	0.00e+00	NONE
BH_CREEP:PC_MAX	Creep Borehole Fill: Maximum allowable capillary pressure	CCA	1.00e+08	Pa
BH_CREEP:PORE_DIS	Creep Borehole Fill: Brooks-Corey pore distribution parameter	CCA	9.40e-01	NONE
BH_CREEP:POROSITY	Creep Borehole Fill: Effective porosity	CCA	3.20e-01	NONE
BH_CREEP:PO_MIN	Creep Borehole Fill: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	CCA	1.01e+05	Pa
BH_CREEP:PRMX_LOG [1]	Creep Borehole Fill: Log of intrinsic permeability, X-direction	CCA	-1.35e+01	$log(m^2)$
BH_CREEP:PRMY_LOG [1]	Creep Borehole Fill: Log of intrinsic permeability, Y-direction	CCA	-1.35e+01	$log(m^2)$
BH_CREEP:PRMZ_LOG [1]	Creep Borehole Fill: Log of intrinsic permeability, Z-direction	CCA	-1.35e+01	$log(m^2)$
BH_CREEP:RELP_MOD	Creep Borehole Fill: Model number, relative permeability model	CCA	4.00e+00	NONE
BH_CREEP:SAT_RBRN	Creep Borehole Fill: Residual Brine Saturation	CCA	0.00e+00	NONE
BH_CREEP:SAT_RGAS	Creep Borehole Fill: Residual Gas Saturation	CCA	0.00e+00	NONE

[1] This parameter has an assigned distribution but uses the default constant value for all vectors.

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Table 9. Spallings parameters

Parameter	Definition	Version	Value	Units
SPALLMOD:ANNUROUG [1]	Material developed for DRSPALL: Absolute wall roughness of wellbore annulus	CRA1	5.00e-05	m
SPALLMOD:BIOTBETA [1]	Material developed for DRSPALL: Biot's beta for waste	CRA1	1.00e+00	NONE
SPALLMOD:COHESION [1]	Material developed for DRSPALL: Cohesion of waste	CRA1	1.40e+05	Pa
SPALLMOD:DDZPERM [1]	Material developed for DRSPALL: Permeability of drilling-damaged zone (DDZ)	CRA1	1.00e-14	m^2
SPALLMOD:DDZTHICK [1]	Material developed for DRSPALL: Thickness of drilling-damaged zone (DDZ)	CRA1	1.60e-01	m
SPALLMOD:DRILRATE [1]	Material developed for DRSPALL: Drill penetration rate through Salado	CRA1	4.45e-03	m/s
SPALLMOD:DRZPERM [1]	Material developed for DRSPALL: DRZ Permeability for DRSPALL	CRA1	1.00e-15	m^2
SPALLMOD:DRZTCK [1]	Material developed for DRSPALL: Thickness of DRZ above waste room in DRSPALL model	CRA1	8.50e-01	m
SPALLMOD:FFSTRESS [1]	Material developed for DRSPALL: Isotropic in-situ stress in waste area	CRA1	1.49e+07	Pa
SPALLMOD:FRCHBETA [1]	Material developed for DRSPALL: Forchheimer Beta	CRA1	1.15e-06	m^{-2}
SPALLMOD:FRICTANG [1]	Material developed for DRSPALL: Friction angle of waste	CRA1	4.58e+01	deg
SPALLMOD:MUDPRATE [1]	Material developed for DRSPALL: Typical volumetric mud pumping rate for drilling in Salado	CRA1	2.02e-02	m^3/s
SPALLMOD:MUDSOLMX [1]	Material developed for DRSPALL: Solids volume fraction in drill mud that causes choking of flow	CRA1	6.15e-01	NONE
SPALLMOD:MUDSOLVE [1]	Material developed for DRSPALL: Exponent on mud slurry viscosity power law	CRA1	-1.50e+00	NONE
SPALLMOD:PIPEID [1]	Material developed for DRSPALL: Inner diameter of drill pipe (where OD = 0.1143 m)	CRA1	9.72e-02	m

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Table 9. Spallings parameters (cont.)

Parameter	Definition	Version	Value	Units
SPALLMOD:PIPEROUG [1]	Material developed for DRSPALL: Absolute wall roughness of drill pipe	CRA1	5.00e-05	m
SPALLMOD:POISRAT [1]	Material developed for DRSPALL: Poisson's ratio for waste	CRA1	3.80e-01	NONE
SPALLMOD:REFPRS [1]	Material developed for DRSPALL: Atmospheric pressure at sea level	CRA1	1.02e+05	Pa
SPALLMOD:REPOSTCK [1]	Material developed for DRSPALL: Repository thickness	CRA1	0.00e+00	m
SPALLMOD:REPOSTOP [1]	Material developed for DRSPALL: Elevation of roof in excavated area	CRA1	3.85e+02	m
SPALLMOD:REPOTRAD [1]	Material developed for DRSPALL: Repository outer radius	CRA1	1.92e+01	m
SPALLMOD:SALTDENS [1]	Material developed for DRSPALL: Density of solid cuttings from the Salado	CRA1	2.18e+03	kg/m^3
SPALLMOD:SHAPEFAC [1]	Material developed for DRSPALL: Shape factor for disaggregated waste particles	CRA1	1.00e-01	NONE
SPALLMOD:STPDVOLR [1]	Material developed for DRSPALL: Mud ejection rate that turns off drilling	CRA1	1.00e+03	m^3/s
SPALLMOD:STPPVOLR [1]	Material developed for DRSPALL: Mud ejection rate that turns off mud pump	CRA1	1.00e+03	m^3/s
SPALLMOD:SURFELEV [1]	Material developed for DRSPALL: Elevation of land surface at WIPP site	CRA1	1.04e+03	m

[1] This parameter provided input to the DRSPALL model, which was not run in the CRA26_IS. No changes associated with DRSPALL were made since 2015 Code Migration (see footnote 2 in Table 1), and therefore the DRSPALL model results generated in 2015 Code Migration were used in CRA26_IS.

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Table 10. Shaft material parameters

Parameter	Definition	Version	Value	Units
CONC_MON:CAP_MOD	Concrete Monolith: Model number, capillary pressure model	PABC09	1.00e+00	NONE
CONC_MON:COMP_RCK	Concrete Monolith: Bulk Compressibility	CRA1	6.00e-11	Pa^{-1}
CONC_MON:KPT	Concrete Monolith: Flag for Permeability Determined Threshold	CCA	0.00e+00	NONE
CONC_MON:PCT_A	Concrete Monolith: Threshold Pressure Linear Parameter	PABC09	0.00e+00	Pa
CONC_MON:PCT_EXP	Concrete Monolith: Threshold pressure exponential parameter	PABC09	0.00e+00	NONE
CONC_MON:PC_MAX	Concrete Monolith: Maximum allowable capillary pressure	CCA	1.00e+08	Pa
CONC_MON:PORE_DIS [1]	Concrete Monolith: Brooks-Corey pore distribution parameter	CCA	9.40e-01	NONE
CONC_MON:POROSITY	Concrete Monolith: Effective porosity	CCA	5.00e-02	NONE
CONC_MON:PO_MIN	Concrete Monolith: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	CCA	1.01e+05	Pa
CONC_MON:PRMX_LOG	Concrete Monolith: Log of intrinsic permeability, X-direction	CCA	-1.40e+01	$log(m^2)$
CONC_MON:PRMY_LOG	Concrete Monolith: Log of intrinsic permeability, Y-direction	CCA	-1.40e+01	$log(m^2)$
CONC_MON:PRMZ_LOG	Concrete Monolith: Log of intrinsic permeability, Z-direction	CCA	-1.40e+01	$log(m^2)$
CONC_MON:RELP_MOD	Concrete Monolith: Model number, relative permeability model	CCA	4.00e+00	NONE
CONC_MON:SAT_IBRN	Concrete Monolith: Initial Brine Saturation	CCA	1.00e+00	NONE
CONC_MON:SAT_RBRN [2]	Concrete Monolith: Residual Brine Saturation	CCA	2.00e-01	NONE
CONC_MON:SAT_RGAS [2]	Concrete Monolith: Residual Gas Saturation	CCA	2.00e-01	NONE
SHFTL_T1:CAP_MOD	Lower portion of simplified shaft from 0 - 200 years: Model number, capillary pressure model	PABC09	1.00e+00	NONE
SHFTL_T1:COMP_POR	Lower portion of simplified shaft from 0 - 200 years: Pore volume compressibility	AP106	4.28e-09	Pa^{-1}
SHFTL_T1:KPT	Lower portion of simplified shaft from 0 - 200 years: Flag for Permeability Determined Threshold	AP106	0.00e+00	NONE

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Table 10. Shaft material parameters (cont.)

Parameter	Definition	Version	Value	Units
SHFTL_T1:PCT_A	Lower portion of simplified shaft from 0 - 200 years: Threshold Pressure Linear Parameter	PABC09	0.00e+00	Pa
SHFTL_T1:PCT_EXP	Lower portion of simplified shaft from 0 - 200 years: Threshold pressure exponential parameter	PABC09	0.00e+00	NONE
SHFTL_T1:PC_MAX	Lower portion of simplified shaft from 0 - 200 years: Maximum allowable capillary pressure	AP106	1.00e+08	Pa
SHFTL_T1:POROSITY	Lower portion of simplified shaft from 0 - 200 years: Effective porosity	AP106	1.13e-01	NONE
SHFTL_T1:PO_MIN	Lower portion of simplified shaft from 0 - 200 years: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	AP106	1.01e+05	Pa
SHFTL_T1:RELP_MOD	Lower portion of simplified shaft from 0 - 200 years: Model number, relative permeability model	AP106	4.00e+00	NONE
SHFTL_T1:SAT_IBRN	Lower portion of simplified shaft from 0 - 200 years: Initial Brine Saturation	AP106	5.34e-01	NONE
SHFTL_T2:CAP_MOD	Lower portion of simplified shaft from 200 - 10,000 years: Model number, capillary pressure model	PABC09	1.00e+00	NONE
SHFTL_T2:COMP_POR	Lower portion of simplified shaft from 200 - 10,000 years: Pore volume compressibility	AP106	4.28e-09	Pa^{-1}
SHFTL_T2:KPT	Lower portion of simplified shaft from 200 - 10,000 years: Flag for Permeability Determined Threshold	AP106	0.00e+00	NONE
SHFTL_T2:PCT_A	Lower portion of simplified shaft from 200 - 10,000 years: Threshold Pressure Linear Parameter	PABC09	0.00e+00	Pa
SHFTL_T2:PCT_EXP	Lower portion of simplified shaft from 200 - 10,000 years: Threshold pressure exponential parameter	PABC09	0.00e+00	NONE

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Table 10. Shaft material parameters (cont.)

Parameter	Definition	Version	Value	Units
SHFTL_T2:PC_MAX	Lower portion of simplified shaft from 200 - 10,000 years: Maximum allowable capillary pressure	AP106	1.00e+08	Pa
SHFTL_T2:POROSITY	Lower portion of simplified shaft from 200 - 10,000 years: Effective porosity	AP106	1.13e-01	NONE
SHFTL_T2:PO_MIN	Lower portion of simplified shaft from 200 - 10,000 years: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	AP106	1.01e+05	Pa
SHFTL_T2:RELP_MOD	Lower portion of simplified shaft from 200 - 10,000 years: Model number, relative permeability model	AP106	4.00e+00	NONE
SHFTL_T2:SAT_IBRN	Lower portion of simplified shaft from 200 - 10,000 years: Initial Brine Saturation	AP106	5.34e-01	NONE
SHFTU:CAP_MOD	Upper portion of simplified shaft: Model number, capillary pressure model	PABC09	1.00e+00	NONE
SHFTU:COMP_POR	Upper portion of simplified shaft: Pore volume compressibility	AP106	2.05e-08	Pa^{-1}
SHFTU:KPT	Upper portion of simplified shaft: Flag for Permeability Determined Threshold	AP106	0.00e+00	NONE
SHFTU:PCT_A	Upper portion of simplified shaft: Threshold Pressure Linear Parameter	PABC09	0.00e+00	Pa
SHFTU:PCT_EXP	Upper portion of simplified shaft: Threshold pressure exponential parameter	PABC09	0.00e+00	NONE
SHFTU:PC_MAX	Upper portion of simplified shaft: Maximum allowable capillary pressure	AP106	1.00e+08	Pa
SHFTU:POROSITY	Upper portion of simplified shaft: Effective porosity	AP106	2.91e-01	NONE

Table 10. Shaft material parameters (cont.)

Parameter	Definition	Version	Value	Units
SHFTU:PO_MIN	Upper portion of simplified shaft: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	AP106	1.01e+05	Pa
SHFTU:RELP_MOD	Upper portion of simplified shaft: Model number, relative permeability model	AP106	4.00e+00	NONE
SHFTU:SAT_IBRN	Upper portion of simplified shaft: Initial Brine Saturation	AP106	7.96e-01	NONE

[1] This parameter has an assigned distribution but uses the default constant value for all vectors.

[2] This parameter has an assigned distribution but was not sampled by LHS directly. It uses the corresponding LHS sampled property of material SHFTU.

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Table 11. Panel closure parameters

Parameter	Definition	Version	Value	Units
DRZ_PCS:CAP_MOD	DRZ directly above the panel closure system: Model number, capillary pressure model	TBM	1.00e+00	NONE
DRZ_PCS:COMP_RCK	DRZ directly above the panel closure system: Bulk Compressibility	TBM	7.41e-10	Pa^{-1}
DRZ_PCS:KPT	DRZ directly above the panel closure system: Flag for Permeability Determined Threshold	TBM	0.00e+00	NONE
DRZ_PCS:PCT_A	DRZ directly above the panel closure system: Threshold Pressure Linear Parameter	TBM	0.00e+00	Pa
DRZ_PCS:PCT_EXP	DRZ directly above the panel closure system: Threshold pressure exponential parameter	TBM	0.00e+00	NONE
DRZ_PCS:PC_MAX	DRZ directly above the panel closure system: Maximum allowable capillary pressure	TBM	1.00e+08	Pa
DRZ_PCS:PORE_DIS	DRZ directly above the panel closure system: Brooks-Corey pore distribution parameter	TBM	7.00e-01	NONE
DRZ_PCS:POROSITY [1]	DRZ directly above the panel closure system: Effective porosity	AP132	1.29e-02	NONE
DRZ_PCS:PO_MIN	DRZ directly above the panel closure system: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	TBM	1.01e+05	Pa
DRZ_PCS:RELP_MOD [1]	DRZ directly above the panel closure system: Model number, relative permeability model	CRA14BL	4.00e+00	NONE
DRZ_PCS:SAT_RBRN	DRZ directly above the panel closure system: Residual Brine Saturation	TBM	0.00e+00	NONE
DRZ_PCS:SAT_RGAS	DRZ directly above the panel closure system: Residual Gas Saturation	TBM	0.00e+00	NONE

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Table 11. Panel closure parameters (cont.)

Parameter	Definition	Version	Value	Units
PCS_NO:CAP_MOD	Abandoned panel closure areas: Model number, capillary pressure model	APCS	1.00e+00	NONE
PCS_NO:COMP_RCK	Abandoned panel closure areas: Bulk Compressibility	APCS	0.00e+00	Pa^{-1}
PCS_NO:KPT	Abandoned panel closure areas: Flag for Permeability Determined Threshold	APCS	0.00e+00	NONE
PCS_NO:PCT_A	Abandoned panel closure areas: Threshold Pressure Linear Parameter	APCS	0.00e+00	Pa
PCS_NO:PCT_EXP	Abandoned panel closure areas: Threshold pressure exponential parameter	APCS	0.00e+00	NONE
PCS_NO:PC_MAX	Abandoned panel closure areas: Maximum allowable capillary pressure	APCS	1.00e+08	Pa
PCS_NO:PORE_DIS	Abandoned panel closure areas: Brooks-Corey pore distribution parameter	APCS	7.00e-01	NONE
PCS_NO:POROSITY	Abandoned panel closure areas: Effective porosity	APCS	1.80e-01	NONE
PCS_NO:PO_MIN	Abandoned panel closure areas: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	APCS	1.01e+05	Pa
PCS_NO:PRESSURE	Abandoned panel closure areas: Brine far-field pore pressure	APCS	1.01e+05	Pa
PCS_NO:PRMX_LOG	Abandoned panel closure areas: Log of intrinsic permeability, X-direction	APCS	-1.10e+01	$log(m^2)$
PCS_NO:PRMY_LOG	Abandoned panel closure areas: Log of intrinsic permeability, Y-direction	APCS	-1.10e+01	$log(m^2)$

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Table 11. Panel closure parameters (cont.)

Parameter	Definition	Version	Value	Units
PCS_NO:PRMZ_LOG	Abandoned panel closure areas: Log of intrinsic permeability, Z-direction	APCS	-1.10e+01	log(m^2)
PCS_NO:RELP_MOD	Abandoned panel closure areas: Model number, relative permeability model	APCS	1.10e+01	NONE
PCS_NO:SAT_IBRN	Abandoned panel closure areas: Initial Brine Saturation	APCS	0.00e+00	NONE
PCS_NO:SAT_RBRN	Abandoned panel closure areas: Residual Brine Saturation	APCS	0.00e+00	NONE
PCS_NO:SAT_RGAS	Abandoned panel closure areas: Residual Gas Saturation	APCS	0.00e+00	NONE
PCS_T1:CAP_MOD	Panel Closure System for an initial time duration: Model number, capillary pressure model	PC3R	1.00e+00	NONE
PCS_T1:COMP_RCK	Panel Closure System for an initial time duration: Bulk Compressibility	AP129	8.00e-11	Pa^{-1}
PCS_T1:KPT	Panel Closure System for an initial time duration: Flag for Permeability Determined Threshold	AP129	0.00e+00	NONE
PCS_T1:PCT_A	Panel Closure System for an initial time duration: Threshold Pressure Linear Parameter	PC3R	0.00e+00	Pa
PCS_T1:PCT_EXP	Panel Closure System for an initial time duration: Threshold pressure exponential parameter	PC3R	0.00e+00	NONE
PCS_T1:PC_MAX	Panel Closure System for an initial time duration: Maximum allowable capillary pressure	AP129	1.00e+08	Pa
PCS_T1:PO_MIN	Panel Closure System for an initial time duration: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	AP129	1.01e+05	Pa
PCS_T1:RELP_MOD	Panel Closure System for an initial time duration: Model number, relative permeability model	AP129	4.00e+00	NONE

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Table 11. Panel closure parameters (cont.)

Parameter	Definition	Version	Value	Units
PCS_T2:CAP_MOD	Panel Closure System for a secondary time duration: Model number, capillary pressure model	PC3R	1.00e+00	NONE
PCS_T2:COMP_RCK	Panel Closure System for a secondary time duration: Bulk Compressibility	AP129	8.00e-11	Pa^{-1}
PCS_T2:KPT	Panel Closure System for a secondary time duration: Flag for Permeability Determined Threshold	AP129	0.00e+00	NONE
PCS_T2:PCT_A	Panel Closure System for a secondary time duration: Threshold Pressure Linear Parameter	PC3R	0.00e+00	Pa
PCS_T2:PCT_EXP	Panel Closure System for a secondary time duration: Threshold pressure exponential parameter	PC3R	0.00e+00	NONE
PCS_T2:PC_MAX	Panel Closure System for a secondary time duration: Maximum allowable capillary pressure	AP129	1.00e+08	Pa
PCS_T2:PO_MIN	Panel Closure System for a secondary time duration: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	AP129	1.01e+05	Pa
PCS_T2:PRMX_LOG [2]	Panel Closure System for a secondary time duration: Log of intrinsic permeability, X-direction	AP161	-1.86e+01	$\log(m^2)$
PCS_T2:PRMY_LOG [2]	Panel Closure System for a secondary time duration: Log of intrinsic permeability, Y-direction	AP161	-1.86e+01	$\log(m^2)$
PCS_T2:PRMZ_LOG [2]	Panel Closure System for a secondary time duration: Log of intrinsic permeability, Z-direction	AP161	-1.86e+01	$\log(m^2)$
PCS_T2:RELP_MOD	Panel Closure System for a secondary time duration: Model number, relative permeability model	AP129	4.00e+00	NONE
PCS_T3:CAP_MOD	Run-of-Mine Panel Closure System, Tertiary Time Period: Model number, capillary pressure model	AP161	1.00e+00	NONE

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Table 11. Panel closure parameters (cont.)

Parameter	Definition	Version	Value	Units
PCS_T3:COMP_RCK	Run-of-Mine Panel Closure System, Tertiary Time Period: Bulk Compressibility	AP161	8.00e-11	Pa^{-1}
PCS_T3:KPT	Run-of-Mine Panel Closure System, Tertiary Time Period: Flag for Permeability Determined Threshold	AP161	0.00e+00	NONE
PCS_T3:PCT_A	Run-of-Mine Panel Closure System, Tertiary Time Period: Threshold Pressure Linear Parameter	AP161	0.00e+00	Pa
PCS_T3:PCT_EXP	Run-of-Mine Panel Closure System, Tertiary Time Period: Threshold pressure exponential parameter	AP161	0.00e+00	NONE
PCS_T3:PC_MAX	Run-of-Mine Panel Closure System, Tertiary Time Period: Maximum allowable capillary pressure	AP161	1.00e+08	Pa
PCS_T3:PO_MIN	Run-of-Mine Panel Closure System, Tertiary Time Period: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	AP161	1.01e+05	Pa
PCS_T3:PRMX_LOG [2]	Run-of-Mine Panel Closure System, Tertiary Time Period: Log of intrinsic permeability, X-direction	AP161	-1.91e+01	$log(m^2)$
PCS_T3:PRMY_LOG [2]	Run-of-Mine Panel Closure System, Tertiary Time Period: Log of intrinsic permeability, Y-direction	AP161	-1.91e+01	$log(m^2)$
PCS_T3:PRMZ_LOG [2]	Run-of-Mine Panel Closure System, Tertiary Time Period: Log of intrinsic permeability, Z-direction	AP161	-1.91e+01	$log(m^2)$
PCS_T3:RELP_MOD	Run-of-Mine Panel Closure System, Tertiary Time Period: Model number, relative permeability model	AP161	4.00e+00	NONE

[1] This parameter has an assigned distribution but uses the default constant value for all vectors.

[2] Permeabilities of PCS_T2 and PCS_T3 in the X, Y, and Z directions are calculated from the sampled porosities of PCS_T2 and PCS_T3, respectively, as described in Camphouse et al. (2012). A constant default log-permeability is specified, however, to

allow for parameter traceability in CRA26-IS PA input files as compared to those used in the CRA-2014. The specified default value is the average of the minimum and maximum values listed in Camphouse et al. (2012, Table 5).

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Table 12. Santa Rosa Formation parameters

Parameter	Definition	Version	Value	Units
SANTAROS:CAP_MOD	Santa Rosa Formation: Model number, capillary pressure model	CCA	1.00e+00	NONE
SANTAROS:COMP_RCK	Santa Rosa Formation: Bulk Compressibility	CCA	1.00e-08	Pa^{-1}
SANTAROS:KPT	Santa Rosa Formation: Flag for Permeability Determined Threshold	CCA	0.00e+00	NONE
SANTAROS:PCT_A	Santa Rosa Formation: Threshold Pressure Linear Parameter	CCA	0.00e+00	Pa
SANTAROS:PCT_EXP	Santa Rosa Formation: Threshold pressure exponential parameter	CCA	0.00e+00	NONE
SANTAROS:PC_MAX	Santa Rosa Formation: Maximum allowable capillary pressure	CCA	1.00e+08	Pa
SANTAROS:PORE_DIS	Santa Rosa Formation: Brooks-Corey pore distribution parameter	CCA	6.44e-01	NONE
SANTAROS:POROSITY	Santa Rosa Formation: Effective porosity	CCA	1.75e-01	NONE
SANTAROS:PO_MIN	Santa Rosa Formation: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	CCA	1.01e+05	Pa
SANTAROS:PRESSURE	Santa Rosa Formation: Brine far-field pore pressure	CCA	1.01e+05	Pa
SANTAROS:PRMX_LOG	Santa Rosa Formation: Log of intrinsic permeability, X-direction	CCA	-1.00e+01	$log(m^2)$
SANTAROS:PRMY_LOG	Santa Rosa Formation: Log of intrinsic permeability, Y-direction	CCA	-1.00e+01	$log(m^2)$
SANTAROS:PRMZ_LOG	Santa Rosa Formation: Log of intrinsic permeability, Z-direction	CCA	-1.00e+01	$log(m^2)$
SANTAROS:RELP_MOD	Santa Rosa Formation: Model number, relative permeability model	CCA	4.00e+00	NONE
SANTAROS:SAT_IBRN	Santa Rosa Formation: Initial Brine Saturation	CCA	8.36e-02	NONE

Table 12. Santa Rosa Formation parameters (cont.)

Parameter	Definition	Version	Value	Units
SANTAROS:SAT_RBRN	Santa Rosa Formation: Residual Brine Saturation	CCA	8.36e-02	NONE
SANTAROS:SAT_RGAS	Santa Rosa Formation: Residual Gas Saturation	CCA	7.71e-02	NONE

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Table 13. Dewey Lake Formation parameters

Parameter	Definition	Version	Value	Units
DEWYLAKE:CAP_MOD	Dewey Lake Red Beds: Model number, capillary pressure model	PABC09	1.00e+00	NONE
DEWYLAKE:COMP_RCK	Dewey Lake Red Beds: Bulk Compressibility	CCA	1.00e-08	Pa^{-1}
DEWYLAKE:KPT	Dewey Lake Red Beds: Flag for Permeability Determined Threshold	CCA	0.00e+00	NONE
DEWYLAKE:PCT_A	Dewey Lake Red Beds: Threshold Pressure Linear Parameter	PABC09	0.00e+00	Pa
DEWYLAKE:PCT_EXP	Dewey Lake Red Beds: Threshold pressure exponential parameter	PABC09	0.00e+00	NONE
DEWYLAKE:PC_MAX	Dewey Lake Red Beds: Maximum allowable capillary pressure	CCA	1.00e+08	Pa
DEWYLAKE:PORE_DIS	Dewey Lake Red Beds: Brooks-Corey pore distribution parameter	CCA	6.44e-01	NONE
DEWYLAKE:POROSITY [1]	Dewey Lake Red Beds: Effective porosity	CCA	1.43e-01	NONE
DEWYLAKE:PO_MIN	Dewey Lake Red Beds: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	CCA	1.01e+05	Pa
DEWYLAKE:PRMX_LOG	Dewey Lake Red Beds: Log of intrinsic permeability, X-direction	CCA	-1.63e+01	$log(m^2)$
DEWYLAKE:PRMY_LOG	Dewey Lake Red Beds: Log of intrinsic permeability, Y-direction	CCA	-1.63e+01	$log(m^2)$
DEWYLAKE:PRMZ_LOG	Dewey Lake Red Beds: Log of intrinsic permeability, Z-direction	CCA	-1.63e+01	$log(m^2)$
DEWYLAKE:RELP_MOD	Dewey Lake Red Beds: Model number, relative permeability model	CCA	4.00e+00	NONE
DEWYLAKE:SAL_USAT	Dewey Lake Red Beds: Average saturation, unsaturated zones	CCA	8.36e-02	NONE
DEWYLAKE:SAT_IBRN	Dewey Lake Red Beds: Initial Brine Saturation	CCA	1.00e+00	NONE
DEWYLAKE:SAT_RBRN	Dewey Lake Red Beds: Residual Brine Saturation	CCA	8.36e-02	NONE
DEWYLAKE:SAT_RGAS	Dewey Lake Red Beds: Residual Gas Saturation	CCA	7.71e-02	NONE

[1] This parameter has an assigned distribution but uses the default constant value for all vectors.

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Table 14. Forty-Niner Member of the Rustler Formation parameters

Parameter	Definition	Version	Value	Units
FORTYNIN:CAP_MOD	Forty Niner Member: Model number, capillary pressure model	CCA	1.00e+00	NONE
FORTYNIN:COMP_RCK	Forty Niner Member: Bulk Compressibility	CCA	0.00e+00	Pa^{-1}
FORTYNIN:KPT	Forty Niner Member: Flag for Permeability Determined Threshold	CCA	0.00e+00	NONE
FORTYNIN:PCT_A	Forty Niner Member: Threshold Pressure Linear Parameter	CCA	0.00e+00	Pa
FORTYNIN:PCT_EXP	Forty Niner Member: Threshold pressure exponential parameter	CCA	0.00e+00	NONE
FORTYNIN:PC_MAX	Forty Niner Member: Maximum allowable capillary pressure	CCA	1.00e+08	Pa
FORTYNIN:PORE_DIS	Forty Niner Member: Brooks-Corey pore distribution parameter	CCA	7.00e-01	NONE
FORTYNIN:POROSITY [1]	Forty Niner Member: Effective porosity	CCA	8.20e-02	NONE
FORTYNIN:PO_MIN	Forty Niner Member: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	CCA	1.01e+05	Pa
FORTYNIN:PRMX_LOG	Forty Niner Member: Log of intrinsic permeability, X-direction	CCA	-3.50e+01	$log(m^2)$
FORTYNIN:PRMY_LOG	Forty Niner Member: Log of intrinsic permeability, Y-direction	CCA	-3.50e+01	$log(m^2)$
FORTYNIN:PRMZ_LOG	Forty Niner Member: Log of intrinsic permeability, Z-direction	CCA	-3.50e+01	$log(m^2)$
FORTYNIN:RELP_MOD	Forty Niner Member: Model number, relative permeability model	CCA	4.00e+00	NONE
FORTYNIN:SAT_RBRN	Forty Niner Member: Residual Brine Saturation	CCA	2.00e-01	NONE
FORTYNIN:SAT_RGAS	Forty Niner Member: Residual Gas Saturation	CCA	2.00e-01	NONE

[1] This parameter has an assigned distribution but uses the default constant value for all vectors.

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Table 15. Magenta Member of the Rustler Formation parameters

Parameter	Definition	Version	Value	Units
MAGENTA:CAP_MOD	Magenta member of the Rustler formation: Model number, capillary pressure model	CCA	2.00e+00	NONE
MAGENTA:COMP_RCK [1]	Magenta member of the Rustler formation: Bulk Compressibility	CCA	2.64e-10	Pa^{-1}
MAGENTA:KPT	Magenta member of the Rustler formation: Flag for Permeability Determined Threshold	CCA	0.00e+00	NONE
MAGENTA:PCT_A	Magenta member of the Rustler formation: Threshold Pressure Linear Parameter	CCA	2.60e-01	Pa
MAGENTA:PCT_EXP	Magenta member of the Rustler formation: Threshold pressure exponential parameter	CCA	-3.48e-01	NONE
MAGENTA:PC_MAX	Magenta member of the Rustler formation: Maximum allowable capillary pressure	CCA	1.00e+08	Pa
MAGENTA:PORE_DIS	Magenta member of the Rustler formation: Brooks-Corey pore distribution parameter	CCA	6.44e-01	NONE
MAGENTA:POROSITY [1]	Magenta member of the Rustler formation: Effective porosity	CCA	1.38e-01	NONE
MAGENTA:PO_MIN	Magenta member of the Rustler formation: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	CCA	1.01e+05	Pa
MAGENTA:PRESSURE	Magenta member of the Rustler formation: Brine far-field pore pressure	PABC09	9.63e+05	Pa
MAGENTA:PRMX_LOG	Magenta member of the Rustler formation: Log of intrinsic permeability, X-direction	PABC09	-1.47e+01	$log(m^2)$
MAGENTA:PRMY_LOG	Magenta member of the Rustler formation: Log of intrinsic permeability, Y-direction	PABC09	-1.47e+01	$log(m^2)$
MAGENTA:PRMZ_LOG	Magenta member of the Rustler formation: Log of intrinsic permeability, Z-direction	PABC09	-1.47e+01	$log(m^2)$

Table 15. Magenta Member of the Rustler Formation parameters (cont.)

Parameter	Definition	Version	Value	Units
MAGENTA:RELP_MOD	Magenta member of the Rustler formation: Model number, relative permeability model	CCA	4.00e+00	NONE
MAGENTA:SAT_RBRN	Magenta member of the Rustler formation: Residual Brine Saturation	CCA	8.36e-02	NONE
MAGENTA:SAT_RGAS	Magenta member of the Rustler formation: Residual Gas Saturation	CCA	7.71e-02	NONE

Notes:

[1] This parameter has an assigned distribution but uses the default constant value for all vectors.

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Table 16. Tamarisk Member of the Rustler Formation parameters

Parameter	Definition	Version	Value	Units
TAMARISK:CAP_MOD	Tamarisk Member: Model number, capillary pressure model	CCA	1.00e+00	NONE
TAMARISK:COMP_RCK	Tamarisk Member: Bulk Compressibility	CCA	0.00e+00	Pa^{-1}
TAMARISK:KPT	Tamarisk Member: Flag for Permeability Determined Threshold	CCA	0.00e+00	NONE
TAMARISK:PCT_A	Tamarisk Member: Threshold Pressure Linear Parameter	CCA	0.00e+00	Pa
TAMARISK:PCT_EXP	Tamarisk Member: Threshold pressure exponential parameter	CCA	0.00e+00	NONE
TAMARISK:PC_MAX	Tamarisk Member: Maximum allowable capillary pressure	CCA	1.00e+08	Pa
TAMARISK:PORE_DIS	Tamarisk Member: Brooks-Corey pore distribution parameter	CCA	7.00e-01	NONE
TAMARISK:POROSITY [1]	Tamarisk Member: Effective porosity	CCA	6.40e-02	NONE
TAMARISK:PO_MIN	Tamarisk Member: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	CCA	1.01e+05	Pa
TAMARISK:PRMX_LOG	Tamarisk Member: Log of intrinsic permeability, X-direction	CCA	-3.50e+01	$log(m^2)$
TAMARISK:PRMY_LOG	Tamarisk Member: Log of intrinsic permeability, Y-direction	CCA	-3.50e+01	$log(m^2)$
TAMARISK:PRMZ_LOG	Tamarisk Member: Log of intrinsic permeability, Z-direction	CCA	-3.50e+01	$log(m^2)$
TAMARISK:RELP_MOD	Tamarisk Member: Model number, relative permeability model	CCA	4.00e+00	NONE
TAMARISK:SAT_RBRN	Tamarisk Member: Residual Brine Saturation	CCA	2.00e-01	NONE
TAMARISK:SAT_RGAS	Tamarisk Member: Residual Gas Saturation	CCA	2.00e-01	NONE

Note:

[1] This parameter has an assigned distribution but uses the default constant value for all vectors.

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Table 17. Clulebra Member of the Rustler Formation parameters

Parameter	Definition	Version	Value	Units
CULEBRA:CAP_MOD	Culebra member of the Rustler formation: Model number, capillary pressure model	CCA	2.00e+00	NONE
CULEBRA:COMP_RCK	Culebra member of the Rustler formation: Bulk Compressibility	CCA	1.00e-10	Pa^{-1}
CULEBRA:DISPT_L [1]	Culebra member of the Rustler formation: Transverse dispersivity	CCA	0.00e+00	m
CULEBRA:DISP_L [1]	Culebra member of the Rustler formation: Longitudinal dispersivity	CCA	0.00e+00	m
CULEBRA:DNSGRAIN [1]	Culebra member of the Rustler formation: Material Grain Density	CCA	2.82e+03	kg/m^3
CULEBRA:DTORT [1]	Culebra member of the Rustler formation: Diffusive Tortuosity	CCA	1.10e-01	NONE
CULEBRA:FTORT [1]	Culebra member of the Rustler formation: Fracture Tortuosity	CCA	1.00e+00	NONE
CULEBRA:KPT	Culebra member of the Rustler formation: Flag for Permeability Determined Threshold	CCA	0.00e+00	NONE
CULEBRA:PCT_A	Culebra member of the Rustler formation: Threshold Pressure Linear Parameter	CCA	2.60e-01	Pa
CULEBRA:PCT_EXP	Culebra member of the Rustler formation: Threshold pressure exponential parameter	CCA	-3.48e-01	NONE
CULEBRA:PC_MAX	Culebra member of the Rustler formation: Maximum allowable capillary pressure	CCA	1.00e+08	Pa
CULEBRA:PORE_DIS	Culebra member of the Rustler formation: Brooks-Corey pore distribution parameter	CCA	6.44e-01	NONE
CULEBRA:POROSITY	Culebra member of the Rustler formation: Effective porosity	CCA	1.51e-01	NONE
CULEBRA:PO_MIN	Culebra member of the Rustler formation: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	CCA	1.01e+05	Pa

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Table 17. Clulebra Member of the Rustler Formation parameters (cont.)

Parameter	Definition	Version	Value	Units
CULEBRA:PRESSURE	Culebra member of the Rustler formation: Brine far-field pore pressure	PABC09	9.33e+05	Pa
CULEBRA:PRMX_LOG	Culebra member of the Rustler formation: Log of intrinsic permeability, X-direction	PABC09	-1.40e+01	log(m^2)
CULEBRA:PRMY_LOG	Culebra member of the Rustler formation: Log of intrinsic permeability, Y-direction	PABC09	-1.40e+01	log(m^2)
CULEBRA:PRMZ_LOG	Culebra member of the Rustler formation: Log of intrinsic permeability, Z-direction	PABC09	-1.40e+01	log(m^2)
CULEBRA:RELP_MOD	Culebra member of the Rustler formation: Model number, relative permeability model	CCA	4.00e+00	NONE
CULEBRA:SAT_IBRN	Culebra member of the Rustler formation: Initial Brine Saturation	CCA	1.00e+00	NONE
CULEBRA:SAT_RBRN	Culebra member of the Rustler formation: Residual Brine Saturation	CCA	8.36e-02	NONE
CULEBRA:SAT_RGAS	Culebra member of the Rustler formation: Residual Gas Saturation	CCA	7.71e-02	NONE
CULEBRA:SKIN_RES [1]	Culebra member of the Rustler formation: Skin Resistance	CCA	0.00e+00	NONE

[1] This parameter provided input to SECOTP2D, which was not run in the CRA26_IS. No changes associated with SECOTP2D were made between CRA26_FS and CRA26_IS, and therefore the SECOTP2D results generated CRA26_FS calculations were used in CRA26_IS.

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Table 18. Los Medanos (Unnamed Lower) Member of the Rustler Formation parameters

Parameter	Definition	Version	Value	Units
UNNAMED:CAP_MOD	Unnamed Lower Member of Rustler Formation: Model number, capillary pressure model	CCA	1.00e+00	NONE
UNNAMED:COMP_RCK	Unnamed Lower Member of Rustler Formation: Bulk Compressibility	CCA	0.00e+00	Pa^{-1}
UNNAMED:KPT	Unnamed Lower Member of Rustler Formation: Flag for Permeability Determined Threshold	CCA	0.00e+00	NONE
UNNAMED:PCT_A	Unnamed Lower Member of Rustler Formation: Threshold Pressure Linear Parameter	CCA	0.00e+00	Pa
UNNAMED:PCT_EXP	Unnamed Lower Member of Rustler Formation: Threshold pressure exponential parameter	CCA	0.00e+00	NONE
UNNAMED:PC_MAX	Unnamed Lower Member of Rustler Formation: Maximum allowable capillary pressure	CCA	1.00e+08	Pa
UNNAMED:PORE_DIS	Unnamed Lower Member of Rustler Formation: Brooks-Corey pore distribution parameter	CCA	7.00e-01	NONE
UNNAMED:POROSITY[1]	Unnamed Lower Member of Rustler Formation: Effective porosity	CCA	1.81e-01	NONE
UNNAMED:PO_MIN	Unnamed Lower Member of Rustler Formation: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	CCA	1.01e+05	Pa
UNNAMED:PRMX_LOG	Unnamed Lower Member of Rustler Formation: Log of intrinsic permeability, X-direction	CCA	-3.50e+01	$log(m^2)$
UNNAMED:PRMY_LOG	Unnamed Lower Member of Rustler Formation: Log of intrinsic permeability, Y-direction	CCA	-3.50e+01	$log(m^2)$
UNNAMED:PRMZ_LOG	Unnamed Lower Member of Rustler Formation: Log of intrinsic permeability, Z-direction	CCA	-3.50e+01	$log(m^2)$
UNNAMED:RELP_MOD	Unnamed Lower Member of Rustler Formation: Model number, relative permeability model	CCA	4.00e+00	NONE

Table 18. Los Medanos (Unnamed Lower) Member of the Rustler Formation parameters (cont.)

Parameter	Definition	Version	Value	Units
UNNAMED:SAT_RBRN	Unnamed Lower Member of Rustler Formation: Residual Brine Saturation	CCA	2.00e-01	NONE
UNNAMED:SAT_RGAS	Unnamed Lower Member of Rustler Formation: Residual Gas Saturation	CCA	2.00e-01	NONE

Notes:

[1] This parameter has an assigned distribution but uses the default constant value for all vectors.

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Table 19. Salado Formation - intact halite – parameters

Parameter	Definition	Version	Value	Units
S_HALITE:CAP_MOD	Salado halite, intact: Model number, capillary pressure model	CCA	2.00e+00	NONE
S_HALITE:KPT	Salado halite, intact: Flag for Permeability Determined Threshold	CCA	0.00e+00	NONE
S_HALITE:PCT_A	Salado halite, intact: Threshold Pressure Linear Parameter	CCA	5.60e-01	Pa
S_HALITE:PCT_EXP	Salado halite, intact: Threshold pressure exponential parameter	CCA	-3.46e-01	NONE
S_HALITE:PC_MAX	Salado halite, intact: Maximum allowable capillary pressure	CCA	1.00e+08	Pa
S_HALITE:PORE_DIS [1]	Salado halite, intact: Brooks-Corey pore distribution parameter	CCA	7.00e-01	NONE
S_HALITE:PO_MIN	Salado halite, intact: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	CCA	1.01e+05	Pa
S_HALITE:RELP_MOD [1]	Salado halite, intact: Model number, relative permeability model	CCA	4.00e+00	NONE
S_HALITE:SAT_RBRN [1]	Salado halite, intact: Residual Brine Saturation	CCA	3.00e-01	NONE
S_HALITE:SAT_RGAS [1]	Salado halite, intact: Residual Gas Saturation	CCA	2.00e-01	NONE

Notes:

[1] This parameter has an assigned distribution but uses the default constant value for all vectors.

Table 20. Salado Formation - brine – parameters

Parameter	Definition	Version	Value	Units
BRINESAL:COMPRES	Salado Brine: Brine Compressibility	CCA	3.10e-10	Pa^{-1}
BRINESAL:DNSFLUID	Salado Brine: Brine Density	CCA	1.22e+03	kg/m^3
BRINESAL:REF_PRES	Salado Brine: Reference pressure for porosity	CCA	1.01e+05	Pa
BRINESAL:REF_TEMP	Salado Brine: Reference Temperature	CCA	3.00e+02	K
BRINESAL:VISCO	Salado Brine: Viscosity	CCA	2.10e-03	Pa*s
BRINESAL:WTF [1]	Salado Brine: Mass fraction of salt in brine	CCA	3.24e-01	NONE

Notes:

[1] This parameter has an assigned distribution but uses the default constant value for all vectors.

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Table 21. Salado Formation - Marker Bed 138 - parameters

Parameter	Definition	Version	Value	Units
S_MB138:CAP_MOD	Salado marker bed 138, intact and fractured: Model number, capillary pressure model	CRA26_FS	6.00e+00	NONE
S_MB138:COMP_RCK	Salado marker bed 138, intact and fractured: Bulk Compressibility	CRA1BC	2.23e-11	Pa^{-1}
S_MB138:DPHIMAX	Salado marker bed 138, intact and fractured: Incremental increase in porosity relative to intact conditions	CCA	3.90e-02	NONE
S_MB138:IFRX	Salado marker bed 138, intact and fractured: Index for fracture perm. enhancement in X-direction	CCA	1.00e+00	NONE
S_MB138:IFRY	Salado marker bed 138, intact and fractured: Index for fracture perm. enhancement in Y-direction	CCA	1.00e+00	NONE
S_MB138:IFRZ	Salado marker bed 138, intact and fractured: Index for fracture perm. enhancement in Z-direction	CCA	0.00e+00	NONE
S_MB138:KMAXLOG	Salado marker bed 138, intact and fractured: Log of Maximum Permeability in Altered Anhydrite Flow Model Anhydrites	CCA	-9.00e+00	$log(m^2)$
S_MB138:KPT	Salado marker bed 138, intact and fractured: Flag for Permeability Determined Threshold	CCA	0.00e+00	NONE
S_MB138:PCT_A	Salado marker bed 138, intact and fractured: Threshold Pressure Linear Parameter	CCA	2.60e-01	Pa
S_MB138:PCT_EXP	Salado marker bed 138, intact and fractured: Threshold pressure exponential parameter	CCA	-3.48e-01	NONE
S_MB138:PC_MAX	Salado marker bed 138, intact and fractured: Maximum allowable capillary pressure	CCA	1.00e+08	Pa
S_MB138:PF_DELTA	Salado marker bed 138, intact and fractured: Incremental pressure for full fracture development	CCA	3.80e+06	Pa
S_MB138:PI_DELTA	Salado marker bed 138, intact and fractured: Fracture initiation pressure increment	CCA	2.00e+05	Pa

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Table 21. Salado Formation - Marker Bed 138 - parameters (cont.)

Parameter	Definition	Version	Value	Units
S_MB138:PORE_DIS [1]	Salado marker bed 138, intact and fractured: Brooks-Corey pore distribution parameter	CCA	6.44e-01	NONE
S_MB138:POROSITY [2]	Salado marker bed 138, intact and fractured: Effective porosity	CCA	1.10e-02	NONE
S_MB138:PO_MIN	Salado marker bed 138, intact and fractured: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	CCA	1.01e+05	Pa
S_MB138:PRMX_LOG [2]	Salado marker bed 138, intact and fractured: Log of intrinsic permeability, X-direction	CCA	-1.89e+01	log(m^2)
S_MB138:PRMY_LOG [2]	Salado marker bed 138, intact and fractured: Log of intrinsic permeability, Y-direction	CCA	-1.89e+01	log(m^2)
S_MB138:PRMZ_LOG [2]	Salado marker bed 138, intact and fractured: Log of intrinsic permeability, Z-direction	CCA	-1.89e+01	log(m^2)
S_MB138:RELP_MOD [1]	Salado marker bed 138, intact and fractured: Model number, relative permeability model	CCA	4.00e+00	NONE
S_MB138:SAT_RBRN [1]	Salado marker bed 138, intact and fractured: Residual Brine Saturation	CCA	8.36e-02	NONE
S_MB138:SAT_RGAS [3]	Salado marker bed 138, intact and fractured: Residual Gas Saturation	CRA1BC	5.50e-02	NONE

[1] This parameter has an assigned distribution but not sampled by LHS directly. However, it was set equal to the sampled corresponding parameter for S_MB139

[2] This parameter has an assigned distribution but uses the default constant value for all vectors.

[3] This parameter has a constant value for all vectors. It was set the value of the corresponding parameter for S_MB139, though S_MB138 and S_MB139 have the same value in the parameter database.

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Table 22. Salado Formation - Marker Bed 139 – parameters

Parameter	Definition	Version	Value	Units
S_MB139:BKLINK	Salado marker bed 139, intact and fractured: Klinkenberg B Correction Parameters for H2 gas	CCA	2.71e-01	Pa
S_MB139:CAP_MOD	Salado marker bed 139, intact and fractured: Model number, capillary pressure model	CRA26_FS	6.00e+00	NONE
S_MB139:COMP_RCK	Salado marker bed 139, intact and fractured: Bulk Compressibility	CRA1BC	2.23e-11	Pa^{-1}
S_MB139:DPHIMAX	Salado marker bed 139, intact and fractured: Incremental increase in porosity relative to intact conditions	CCA	3.90e-02	NONE
S_MB139:EXPKLINK	Salado marker bed 139, intact and fractured: Klinkenberg b correction parameters for H2 gas	CCA	-3.41e-01	NONE
S_MB139:IFRX	Salado marker bed 139, intact and fractured: Index for fracture perm. enhancement in X-direction	CCA	1.00e+00	NONE
S_MB139:IFRY	Salado marker bed 139, intact and fractured: Index for fracture perm. enhancement in Y-direction	CCA	1.00e+00	NONE
S_MB139:IFRZ	Salado marker bed 139, intact and fractured: Index for fracture perm. enhancement in Z-direction	CCA	0.00e+00	NONE
S_MB139:KMAXLOG	Salado marker bed 139, intact and fractured: Log of Maximum Permeability in Altered Anhydrite Flow Model Anhydrites	CCA	-9.00e+00	$log(m^2)$
S_MB139:KPT	Salado marker bed 139, intact and fractured: Flag for Permeability Determined Threshold	CCA	0.00e+00	NONE
S_MB139:PCT_A	Salado marker bed 139, intact and fractured: Threshold Pressure Linear Parameter	CCA	2.60e-01	Pa
S_MB139:PCT_EXP	Salado marker bed 139, intact and fractured: Threshold pressure exponential parameter	CCA	-3.48e-01	NONE
S_MB139:PC_MAX	Salado marker bed 139, intact and fractured: Maximum allowable capillary pressure	CCA	1.00e+08	Pa

Table 22. Salado Formation - Marker Bed 139 - parameters (cont.)

Parameter	Definition	Version	Value	Units
S_MB139:PF_DELTA	Salado marker bed 139, intact and fractured: Incremental pressure for full fracture development	CCA	3.80e+06	Pa
S_MB139:PI_DELTA	Salado marker bed 139, intact and fractured: Fracture initiation pressure increment	CCA	2.00e+05	Pa
S_MB139:POROSITY [1]	Salado marker bed 139, intact and fractured: Effective porosity	CCA	1.10e-02	NONE
S_MB139:PO_MIN	Salado marker bed 139, intact and fractured: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	CCA	1.01e+05	Pa
S_MB139:SAT_RGAS	Salado marker bed 139, intact and fractured: Residual Gas Saturation	CRA1BC	5.50e-02	NONE

Notes:

[1] This parameter has an assigned distribution but uses the default constant value for all vectors.

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Table 23. Salado Formation - anhydrite a and b, intact and fractured - parameters

Parameter	Definition	Version	Value	Units
S_ANH_AB:CAP_MOD	Salado anhydrite beds A and B, intact and fractured: Model number, capillary pressure model	CRA26_FS	6.00e+00	NONE
S_ANH_AB:COMP_RCK	Salado anhydrite beds A and B, intact and fractured: Bulk Compressibility	CRA1BC	2.23e-11	Pa^{-1}
S_ANH_AB:DPHIMAX	Salado anhydrite beds A and B, intact and fractured: Incremental increase in porosity relative to intact conditions	CCA	2.39e-01	NONE
S_ANH_AB:IFRX	Salado anhydrite beds A and B, intact and fractured: Index for fracture perm. enhancement in X-direction	CCA	1.00e+00	NONE
S_ANH_AB:IFRY	Salado anhydrite beds A and B, intact and fractured: Index for fracture perm. enhancement in Y-direction	CCA	1.00e+00	NONE
S_ANH_AB:IFRZ	Salado anhydrite beds A and B, intact and fractured: Index for fracture perm. enhancement in Z-direction	CCA	0.00e+00	NONE
S_ANH_AB:KMAXLOG	Salado anhydrite beds A and B, intact and fractured: Log of Maximum Permeability in Altered Anhydrite Flow Model Anhydrites	CCA	-9.00e+00	$\log(m^2)$
S_ANH_AB:KPT	Salado anhydrite beds A and B, intact and fractured: Flag for Permeability Determined Threshold	CCA	0.00e+00	NONE
S_ANH_AB:PCT_A	Salado anhydrite beds A and B, intact and fractured: Threshold Pressure Linear Parameter	CCA	2.60e-01	Pa
S_ANH_AB:PCT_EXP	Salado anhydrite beds A and B, intact and fractured: Threshold pressure exponential parameter	CCA	-3.48e-01	NONE
S_ANH_AB:PC_MAX	Salado anhydrite beds A and B, intact and fractured: Maximum allowable capillary pressure	CCA	1.00e+08	Pa
S_ANH_AB:PF_DELTA	Salado anhydrite beds A and B, intact and fractured: Incremental pressure for full fracture development	CCA	3.80e+06	Pa
S_ANH_AB:PI_DELTA	Salado anhydrite beds A and B, intact and fractured: Fracture initiation pressure increment	CCA	2.00e+05	Pa

Table 23. Salado Formation - anhydrite a and b, intact and fractured - parameters (cont.)

Parameter	Definition	Version	Value	Units
S_ANH_AB:PORE_DIS [1]	Salado anhydrite beds A and B, intact and fractured: Brooks-Corey pore distribution parameter	CCA	6.44e-01	NONE
S_ANH_AB:POROSITY [2]	Salado anhydrite beds A and B, intact and fractured: Effective porosity	CCA	1.10e-02	NONE
S_ANH_AB:PO_MIN	Salado anhydrite beds A and B, intact and fractured: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	CCA	1.01e+05	Pa
S_ANH_AB:PRMX_LOG [2]	Salado anhydrite beds A and B, intact and fractured: Log of intrinsic permeability, X-direction	CCA	-1.89e+01	log(m^2)
S_ANH_AB:PRMY_LOG [2]	Salado anhydrite beds A and B, intact and fractured: Log of intrinsic permeability, Y-direction	CCA	-1.89e+01	log(m^2)
S_ANH_AB:PRMZ_LOG [2]	Salado anhydrite beds A and B, intact and fractured: Log of intrinsic permeability, Z-direction	CCA	-1.89e+01	log(m^2)
S_ANH_AB:RELP_MOD [1]	Salado anhydrite beds A and B, intact and fractured: Model number, relative permeability model	CCA	4.00e+00	NONE
S_ANH_AB:SAT_RBRN [1]	Salado anhydrite beds A and B, intact and fractured: Residual Brine Saturation	CCA	8.36e-02	NONE
S_ANH_AB:SAT_RGAS [3]	Salado anhydrite beds A and B, intact and fractured: Residual Gas Saturation	CRA1BC	5.50e-02	NONE

[1] This parameter has an assigned distribution but not sampled by LHS directly. However, it was set equal to the sampled corresponding parameter for S_MB139.

[2] This parameter has an assigned distribution but uses the default constant value for all vectors.

[3] This parameter has a constant value for all vectors. It was set the value of the corresponding parameter for S_MB139, though S_ANH_AB and S_MB139 have the same value in the parameter database.

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Table 24. Disturbed rock zone parameters

Parameter	Definition	Version	Value	Units
DRZ_0:ADDPOR	Disturbed rock zone; time period -5 to 0 years: Additional porosity in the DRZ caused by fracturing.	PABC09	2.90e-03	NONE
DRZ_0:CAP_MOD	Disturbed rock zone; time period -5 to 0 years: Model number, capillary pressure model	CCA	1.00e+00	NONE
DRZ_0:COMP_RCK	Disturbed rock zone; time period -5 to 0 years: Bulk Compressibility	CCA	7.41e-10	Pa^{-1}
DRZ_0:DPHIMAX	Disturbed rock zone; time period -5 to 0 years: Incremental increase in porosity relative to intact conditions	PABC09	3.90e-02	NONE
DRZ_0:IFRX	Disturbed rock zone; time period -5 to 0 years: Index for fracture perm. enhancement in X-direction	PABC09	1.00e+00	NONE
DRZ_0:IFRY	Disturbed rock zone; time period -5 to 0 years: Index for fracture perm. enhancement in Y-direction	PABC09	1.00e+00	NONE
DRZ_0:IFRZ	Disturbed rock zone; time period -5 to 0 years: Index for fracture perm. enhancement in Z-direction	PABC09	0.00e+00	NONE
DRZ_0:KMAXLOG	Disturbed rock zone; time period -5 to 0 years: Log of Maximum Permeability in Altered Anhydrite Flow Model Anhydrites	PABC09	-9.00e+00	$log(m^2)$
DRZ_0:KPT	Disturbed rock zone; time period -5 to 0 years: Flag for Permeability Determined Threshold	CCA	0.00e+00	NONE
DRZ_0:PCT_A	Disturbed rock zone; time period -5 to 0 years: Threshold Pressure Linear Parameter	CCA	0.00e+00	Pa
DRZ_0:PCT_EXP	Disturbed rock zone; time period -5 to 0 years: Threshold pressure exponential parameter	CCA	0.00e+00	NONE
DRZ_0:PC_MAX	Disturbed rock zone; time period -5 to 0 years: Maximum allowable capillary pressure	CCA	1.00e+08	Pa
DRZ_0:PF_DELTA	Disturbed rock zone; time period -5 to 0 years: Incremental pressure for full fracture development	PABC09	3.80e+06	Pa

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Table 24. Disturbed rock zone parameters (cont.)

Parameter	Definition	Version	Value	Units
DRZ_0:PI_DELTA	Disturbed rock zone; time period -5 to 0 years: Fracture initiation pressure increment	PABC09	2.00e+05	Pa
DRZ_0:PORE_DIS	Disturbed rock zone; time period -5 to 0 years: Brooks-Corey pore distribution parameter	CCA	7.00e-01	NONE
DRZ_0:POROSITY [1]	Disturbed rock zone; time period -5 to 0 years: Effective porosity	AP132	1.29e-02	NONE
DRZ_0:PO_MIN	Disturbed rock zone; time period -5 to 0 years: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	CCA	1.01e+05	Pa
DRZ_0:PRMX_LOG	Disturbed rock zone; time period -5 to 0 years: Log of intrinsic permeability, X-direction	CCA	-1.70e+01	$\log(m^2)$
DRZ_0:PRMY_LOG	Disturbed rock zone; time period -5 to 0 years: Log of intrinsic permeability, Y-direction	CCA	-1.70e+01	$\log(m^2)$
DRZ_0:PRMZ_LOG	Disturbed rock zone; time period -5 to 0 years: Log of intrinsic permeability, Z-direction	CCA	-1.70e+01	$\log(m^2)$
DRZ_0:RELP_MOD [1]	Disturbed rock zone; time period -5 to 0 years: Model number, relative permeability model	CCA	4.00e+00	NONE
DRZ_0:SAT_RBRN	Disturbed rock zone; time period -5 to 0 years: Residual Brine Saturation	CCA	0.00e+00	NONE
DRZ_0:SAT_RGAS	Disturbed rock zone; time period -5 to 0 years: Residual Gas Saturation	CCA	0.00e+00	NONE
DRZ_1:CAP_MOD	Disturbed rock zone during the time period that begins with facility closure (0 years) and ends when DRZ healing is complete: Model number, capillary pressure model	CCA	1.00e+00	NONE
DRZ_1:COMP_RCK	Disturbed rock zone during the time period that begins with facility closure (0 years) and ends when DRZ healing is complete: Bulk Compressibility	CCA	7.41e-10	Pa^{-1}

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Table 24. Disturbed rock zone parameters (cont.)

Parameter	Definition	Version	Value	Units
DRZ_1:EHEIGHT	Disturbed rock zone during the time period that begins with facility closure (0 years) and ends when DRZ healing is complete: Effective height for DBR calculations.	SDI	4.35e+01	m
DRZ_1:KPT	Disturbed rock zone during the time period that begins with facility closure (0 years) and ends when DRZ healing is complete: Flag for Permeability Determined Threshold	CCA	0.00e+00	NONE
DRZ_1:PCT_A	Disturbed rock zone during the time period that begins with facility closure (0 years) and ends when DRZ healing is complete: Threshold Pressure Linear Parameter	CCA	0.00e+00	Pa
DRZ_1:PCT_EXP	Disturbed rock zone during the time period that begins with facility closure (0 years) and ends when DRZ healing is complete: Threshold pressure exponential parameter	CCA	0.00e+00	NONE
DRZ_1:PC_MAX	Disturbed rock zone during the time period that begins with facility closure (0 years) and ends when DRZ healing is complete: Maximum allowable capillary pressure	CCA	1.00e+08	Pa
DRZ_1:PORE_DIS	Disturbed rock zone during the time period that begins with facility closure (0 years) and ends when DRZ healing is complete: Brooks-Corey pore distribution parameter	CCA	7.00e-01	NONE
DRZ_1:POROSITY [1]	Disturbed rock zone during the time period that begins with facility closure (0 years) and ends when DRZ healing is complete: Effective porosity	AP132	1.29e-02	NONE
DRZ_1:PO_MIN	Disturbed rock zone during the time period that begins with facility closure (0 years) and ends when DRZ healing is complete: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	CCA	1.01e+05	Pa

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Table 24. Disturbed rock zone parameters (cont.)

Parameter	Definition	Version	Value	Units
DRZ_1:RELP_MOD [1]	Disturbed rock zone during the time period that begins with facility closure (0 years) and ends when DRZ healing is complete: Model number, relative permeability model	CCA	4.00e+00	NONE
DRZ_1:SAT_RBRN	Disturbed rock zone during the time period that begins with facility closure (0 years) and ends when DRZ healing is complete: Residual Brine Saturation	CCA	0.00e+00	NONE
DRZ_1:SAT_RGAS	Disturbed rock zone during the time period that begins with facility closure (0 years) and ends when DRZ healing is complete: Residual Gas Saturation	CCA	0.00e+00	NONE
DRZ_OE_0:CAP_MOD	Disturbed Rock Zone Around Operations/Experimental Area; -5 to 0 years: Model number, capillary pressure model	CRA14_SEN4	1.00e+00	NONE
DRZ_OE_0:COMP_RCK	Disturbed Rock Zone Around Operations/Experimental Area; -5 to 0 years: Bulk Compressibility	CRA14_SEN4	7.41e-10	Pa^{-1}
DRZ_OE_0:KPT	Disturbed Rock Zone Around Operations/Experimental Area; -5 to 0 years: Flag for Permeability Determined Threshold	CRA14_SEN2	0.00e+00	NONE
DRZ_OE_0:PCT_A	Disturbed Rock Zone Around Operations/Experimental Area; -5 to 0 years: Threshold Pressure Linear Parameter	CRA14_SEN4	0.00e+00	Pa
DRZ_OE_0:PCT_EXP	Disturbed Rock Zone Around Operations/Experimental Area; -5 to 0 years: Threshold pressure exponential parameter	CRA14_SEN4	0.00e+00	NONE
DRZ_OE_0:PC_MAX	Disturbed Rock Zone Around Operations/Experimental Area; -5 to 0 years: Maximum allowable capillary pressure	CRA14_SEN2	1.00e+08	Pa
DRZ_OE_0:PORE_DIS	Disturbed Rock Zone Around Operations/Experimental Area; -5 to 0 years: Brooks-Corey pore distribution parameter	CRA14_SEN2	7.00e-01	NONE

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Table 24. Disturbed rock zone parameters (cont.)

Parameter	Definition	Version	Value	Units
DRZ_OE_0:POROSITY	Disturbed Rock Zone Around Operations/Experimental Area; -5 to 0 years: Effective porosity	CRA14_SEN4	1.29e-02	NONE
DRZ_OE_0:PO_MIN	Disturbed Rock Zone Around Operations/Experimental Area; -5 to 0 years: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	CRA14_SEN2	1.01e+05	Pa
DRZ_OE_0:PRMX_LOG	Disturbed Rock Zone Around Operations/Experimental Area; -5 to 0 years: Log of intrinsic permeability, X-direction	CRA14_SEN4	-1.70e+01	$\log(m^2)$
DRZ_OE_0:PRMY_LOG	Disturbed Rock Zone Around Operations/Experimental Area; -5 to 0 years: Log of intrinsic permeability, Y-direction	CRA14_SEN4	-1.70e+01	$\log(m^2)$
DRZ_OE_0:PRMZ_LOG	Disturbed Rock Zone Around Operations/Experimental Area; -5 to 0 years: Log of intrinsic permeability, Z-direction	CRA14_SEN4	-1.70e+01	$\log(m^2)$
DRZ_OE_0:RELP_MOD	Disturbed Rock Zone Around Operations/Experimental Area; -5 to 0 years: Model number, relative permeability model	CRA14_SEN2	4.00e+00	NONE
DRZ_OE_0:SAT_IBRN	Disturbed Rock Zone Around Operations/Experimental Area; -5 to 0 years: Initial Brine Saturation	CRA14_SEN4	1.00e+00	NONE
DRZ_OE_0:SAT_RBRN	Disturbed Rock Zone Around Operations/Experimental Area; -5 to 0 years: Residual Brine Saturation	CRA14_SEN4	0.00e+00	NONE
DRZ_OE_0:SAT_RGAS	Disturbed Rock Zone Around Operations/Experimental Area; -5 to 0 years: Residual Gas Saturation	CRA14_SEN4	0.00e+00	NONE
DRZ_OE_1:CAP_MOD	Disturbed Rock Zone Around Operations/Experimental Area; 0 to 10,000 years: Model number, capillary pressure model	CRA14_SEN4	1.00e+00	NONE
DRZ_OE_1:COMP_RCK	Disturbed Rock Zone Around Operations/Experimental Area; 0 to 10,000 years: Bulk Compressibility	CRA14_SEN4	7.41e-10	Pa^{-1}

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Table 24. Disturbed rock zone parameters (cont.)

Parameter	Definition	Version	Value	Units
DRZ_OE_1:KPT	Disturbed Rock Zone Around Operations/Experimental Area; 0 to 10,000 years: Flag for Permeability Determined Threshold	CRA14_SEN2	0.00e+00	NONE
DRZ_OE_1:PCT_A	Disturbed Rock Zone Around Operations/Experimental Area; 0 to 10,000 years: Threshold Pressure Linear Parameter	CRA14_SEN4	0.00e+00	Pa
DRZ_OE_1:PCT_EXP	Disturbed Rock Zone Around Operations/Experimental Area; 0 to 10,000 years: Threshold pressure exponential parameter	CRA14_SEN4	0.00e+00	NONE
DRZ_OE_1:PC_MAX	Disturbed Rock Zone Around Operations/Experimental Area; 0 to 10,000 years: Maximum allowable capillary pressure	CRA14_SEN2	1.00e+08	Pa
DRZ_OE_1:PORE_DIS	Disturbed Rock Zone Around Operations/Experimental Area; 0 to 10,000 years: Brooks-Corey pore distribution parameter	CRA14_SEN2	7.00e-01	NONE
DRZ_OE_1:POROSITY	Disturbed Rock Zone Around Operations/Experimental Area; 0 to 10,000 years: Effective porosity	CRA14_SEN4	1.29e-02	NONE
DRZ_OE_1:PO_MIN	Disturbed Rock Zone Around Operations/Experimental Area; 0 to 10,000 years: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	CRA14_SEN2	1.01e+05	Pa
DRZ_OE_1:PRMX_LOG	Disturbed Rock Zone Around Operations/Experimental Area; 0 to 10,000 years: Log of intrinsic permeability, X-direction	CRA14_SEN4	-1.70e+01	$\log(m^2)$
DRZ_OE_1:PRMY_LOG	Disturbed Rock Zone Around Operations/Experimental Area; 0 to 10,000 years: Log of intrinsic permeability, Y-direction	CRA14_SEN4	-1.70e+01	$\log(m^2)$

Table 24. Disturbed rock zone parameters (cont.)

Parameter	Definition	Version	Value	Units
DRZ_OE_1:PRMZ_LOG	Disturbed Rock Zone Around Operations/Experimental Area; 0 to 10,000 years: Log of intrinsic permeability, Z-direction	CRA14_SEN4	-1.70e+01	$\log(m^2)$
DRZ_OE_1:RELP_MOD	Disturbed Rock Zone Around Operations/Experimental Area; 0 to 10,000 years: Model number, relative permeability model	CRA14_SEN2	4.00e+00	NONE
DRZ_OE_1:SAT_IBRN	Disturbed Rock Zone Around Operations/Experimental Area; 0 to 10,000 years: Initial Brine Saturation	CRA14_SEN4	1.00e+00	NONE
DRZ_OE_1:SAT_RBRN	Disturbed Rock Zone Around Operations/Experimental Area; 0 to 10,000 years: Residual Brine Saturation	CRA14_SEN4	0.00e+00	NONE
DRZ_OE_1:SAT_RGAS	Disturbed Rock Zone Around Operations/Experimental Area; 0 to 10,000 years: Residual Gas Saturation	CRA14_SEN4	0.00e+00	NONE
DRZ_PC_0:CAP_MOD	Disturbed Rock Zone Around PCS Areas; -5 to 0 years: Model number, capillary pressure model	CRA14_SEN4	1.00e+00	NONE
DRZ_PC_0:COMP_RCK	Disturbed Rock Zone Around PCS Areas; -5 to 0 years: Bulk Compressibility	CRA14_SEN4	7.41e-10	Pa^{-1}
DRZ_PC_0:KPT	Disturbed Rock Zone Around PCS Areas; -5 to 0 years: Flag for Permeability Determined Threshold	CRA14_SEN3	0.00e+00	NONE
DRZ_PC_0:PCT_A	Disturbed Rock Zone Around PCS Areas; -5 to 0 years: Threshold Pressure Linear Parameter	CRA14_SEN4	0.00e+00	Pa
DRZ_PC_0:PCT_EXP	Disturbed Rock Zone Around PCS Areas; -5 to 0 years: Threshold pressure exponential parameter	CRA14_SEN4	0.00e+00	NONE
DRZ_PC_0:PC_MAX	Disturbed Rock Zone Around PCS Areas; -5 to 0 years: Maximum allowable capillary pressure	CRA14_SEN3	1.00e+08	Pa
DRZ_PC_0:PORE_DIS	Disturbed Rock Zone Around PCS Areas; -5 to 0 years: Brooks-Corey pore distribution parameter	CRA14_SEN3	7.00e-01	NONE

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Table 24. Disturbed rock zone parameters (cont.)

Parameter	Definition	Version	Value	Units
DRZ_PC_0:POROSITY	Disturbed Rock Zone Around PCS Areas; -5 to 0 years: Effective porosity	CRA14_SEN4	1.29e-02	NONE
DRZ_PC_0:PO_MIN	Disturbed Rock Zone Around PCS Areas; -5 to 0 years: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	CRA14_SEN3	1.01e+05	Pa
DRZ_PC_0:PRMX_LOG	Disturbed Rock Zone Around PCS Areas; -5 to 0 years: Log of intrinsic permeability, X-direction	CRA14_SEN4	-1.70e+01	$\log(m^2)$
DRZ_PC_0:PRMY_LOG	Disturbed Rock Zone Around PCS Areas; -5 to 0 years: Log of intrinsic permeability, Y-direction	CRA14_SEN4	-1.70e+01	$\log(m^2)$
DRZ_PC_0:PRMZ_LOG	Disturbed Rock Zone Around PCS Areas; -5 to 0 years: Log of intrinsic permeability, Z-direction	CRA14_SEN4	-1.70e+01	$\log(m^2)$
DRZ_PC_0:RELP_MOD	Disturbed Rock Zone Around PCS Areas; -5 to 0 years: Model number, relative permeability model	CRA14_SEN3	4.00e+00	NONE
DRZ_PC_0:SAT_IBRN	Disturbed Rock Zone Around PCS Areas; -5 to 0 years: Initial Brine Saturation	CRA14_SEN4	1.00e+00	NONE
DRZ_PC_0:SAT_RBRN	Disturbed Rock Zone Around PCS Areas; -5 to 0 years: Residual Brine Saturation	CRA14_SEN4	0.00e+00	NONE
DRZ_PC_0:SAT_RGAS	Disturbed Rock Zone Around PCS Areas; -5 to 0 years: Residual Gas Saturation	CRA14_SEN4	0.00e+00	NONE
DRZ_PC_1:CAP_MOD	Disturbed Rock Zone Around PCS Areas; 0 to 10,000 years: Model number, capillary pressure model	CRA14_SEN4	1.00e+00	NONE
DRZ_PC_1:COMP_RCK	Disturbed Rock Zone Around PCS Areas; 0 to 10,000 years: Bulk Compressibility	CRA14_SEN4	7.41e-10	Pa^{-1}
DRZ_PC_1:KPT	Disturbed Rock Zone Around PCS Areas; 0 to 10,000 years: Flag for Permeability Determined Threshold	CRA14_SEN3	0.00e+00	NONE
DRZ_PC_1:PCT_A	Disturbed Rock Zone Around PCS Areas; 0 to 10,000 years: Threshold Pressure Linear Parameter	CRA14_SEN4	0.00e+00	Pa

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Table 24. Disturbed rock zone parameters (cont.)

Parameter	Definition	Version	Value	Units
DRZ_PC_1:PCT_EXP	Disturbed Rock Zone Around PCS Areas; 0 to 10,000 years: Threshold pressure exponential parameter	CRA14_SEN4	0.00e+00	NONE
DRZ_PC_1:PC_MAX	Disturbed Rock Zone Around PCS Areas; 0 to 10,000 years: Maximum allowable capillary pressure	CRA14_SEN3	1.00e+08	Pa
DRZ_PC_1:PORE_DIS	Disturbed Rock Zone Around PCS Areas; 0 to 10,000 years: Brooks-Corey pore distribution parameter	CRA14_SEN3	7.00e-01	NONE
DRZ_PC_1:POROSITY	Disturbed Rock Zone Around PCS Areas; 0 to 10,000 years: Effective porosity	CRA14_SEN4	1.29e-02	NONE
DRZ_PC_1:PO_MIN	Disturbed Rock Zone Around PCS Areas; 0 to 10,000 years: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	CRA14_SEN3	1.01e+05	Pa
DRZ_PC_1:PRMX_LOG	Disturbed Rock Zone Around PCS Areas; 0 to 10,000 years: Log of intrinsic permeability, X-direction	CRA14_SEN4	-1.70e+01	log(m^2)
DRZ_PC_1:PRMY_LOG	Disturbed Rock Zone Around PCS Areas; 0 to 10,000 years: Log of intrinsic permeability, Y-direction	CRA14_SEN4	-1.70e+01	log(m^2)
DRZ_PC_1:PRMZ_LOG	Disturbed Rock Zone Around PCS Areas; 0 to 10,000 years: Log of intrinsic permeability, Z-direction	CRA14_SEN4	-1.70e+01	log(m^2)
DRZ_PC_1:RELP_MOD	Disturbed Rock Zone Around PCS Areas; 0 to 10,000 years: Model number, relative permeability model	CRA14_SEN3	4.00e+00	NONE
DRZ_PC_1:SAT_IBRN	Disturbed Rock Zone Around PCS Areas; 0 to 10,000 years: Initial Brine Saturation	CRA14_SEN4	1.00e+00	NONE
DRZ_PC_1:SAT_RBRN	Disturbed Rock Zone Around PCS Areas; 0 to 10,000 years: Residual Brine Saturation	CRA14_SEN4	0.00e+00	NONE
DRZ_PC_1:SAT_RGAS	Disturbed Rock Zone Around PCS Areas; 0 to 10,000 years: Residual Gas Saturation	CRA14_SEN4	0.00e+00	NONE

[1] This parameter has an assigned distribution but uses the default constant value for all vectors.

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Table 25. Waste area and waste material parameters

Parameter	Definition	Version	Value	Units
WAS_AREA:ABSROUGH [1]	Waste Panel and Waste: Absolute roughness of material	CCA	2.50e-02	m
WAS_AREA:CAP_MOD	Waste Panel and Waste: Model number, capillary pressure model	CCA	1.00e+00	NONE
WAS_AREA:CELCCHW	Waste Panel and Waste: Mass of cellulosics in CH waste container materials	CRA26_IS	5.09e+06	kg
WAS_AREA:CELCRHW	Waste Panel and Waste: Mass of cellulosics in RH waste container materials	CRA26_IS	0.00e+00	kg
WAS_AREA:CELECHW	Waste Panel and Waste: Mass of cellulosics in CH waste emplacement materials	CRA26_IS	2.84e+05	kg
WAS_AREA:CELERHW	Waste Panel and Waste: Mass of cellulosics in RH waste emplacement materials	CRA26_IS	0.00e+00	kg
WAS_AREA:CELLCHW	Waste Panel and Waste: Mass of cellulosics in CH waste	CRA26_IS	4.30e+06	kg
WAS_AREA:CELLRHW	Waste Panel and Waste: Mass of cellulosics in RH waste	CRA26_IS	3.55e+04	kg
WAS_AREA:COMP_RCK	Waste Panel and Waste: Bulk Compressibility	CCA	0.00e+00	Pa^{-1}
WAS_AREA:EGRATMIC	Waste Panel and Waste: Moles of gas generated per kilogram of cellulose from early-time rapid CPR bio-degradation.	RPPA	1.41e-01	Moles per kg
WAS_AREA:IRNCCHW	Waste Panel and Waste: Mass of iron containers, CH waste	CRA26_IS	4.78e+07	kg
WAS_AREA:IRNCRHW	Waste Panel and Waste: Mass of iron containers, RH waste	CRA26_IS	3.44e+06	kg
WAS_AREA:IRONCHW	Waste Panel and Waste: Mass of iron-based material in CH waste.	CRA26_IS	1.97e+07	kg
WAS_AREA:IRONRHW	Waste Panel and Waste: Mass of iron-based material in RH waste.	CRA26_IS	1.58e+05	kg
WAS_AREA:KPT	Waste Panel and Waste: Flag for Permeability Determined Threshold	CCA	0.00e+00	NONE
WAS_AREA:MGO_EF	Waste Panel and Waste: MgO Excess Factor: ratio of MgO to organic carbon in CPR	AP132	1.20e+00	NONE

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Table 25. Waste area and waste material parameters (cont.)

Parameter	Definition	Version	Value	Units
WAS_AREA:PCT_A	Waste Panel and Waste: Threshold Pressure Linear Parameter	CCA	0.00e+00	Pa
WAS_AREA:PCT_EXP	Waste Panel and Waste: Threshold pressure exponential parameter	CCA	0.00e+00	NONE
WAS_AREA:PC_MAX	Waste Panel and Waste: Maximum allowable capillary pressure	CCA	1.00e+08	Pa
WAS_AREA:PLASCHW	Waste Panel and Waste: Mass of plastics in CH waste	CRA26_IS	5.26e+06	kg
WAS_AREA:PLASRHW	Waste Panel and Waste: Mass of plastics in RH waste	CRA26_IS	1.36e+05	kg
WAS_AREA:PLSCCHW	Waste Panel and Waste: Mass of plastic liners, CH waste	CRA26_IS	4.17e+06	kg
WAS_AREA:PLSCRHW	Waste Panel and Waste: Mass of plastic liners, RH waste	CRA26_IS	1.52e+05	kg
WAS_AREA:PLSECHW	Waste Panel and Waste: Mass of plastic in CH waste emplacement materials	CRA26_IS	2.14e+06	kg
WAS_AREA:PLSERHW	Waste Panel and Waste: Mass of plastic in RH waste emplacement materials	CRA26_IS	0.00e+00	kg
WAS_AREA:PORE_DIS [1]	Waste Panel and Waste: Brooks-Corey pore distribution parameter	CCA	2.89e+00	NONE
WAS_AREA:POROSITY	Waste Panel and Waste: Effective porosity	CCA	8.48e-01	NONE
WAS_AREA:PO_MIN	Waste Panel and Waste: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	CCA	1.01e+05	Pa
WAS_AREA:PRMX_LOG	Waste Panel and Waste: Log of intrinsic permeability, X-direction	TBM	-1.26e+01	log(m^2)
WAS_AREA:PRMY_LOG	Waste Panel and Waste: Log of intrinsic permeability, Y-direction	TBM	-1.26e+01	log(m^2)
WAS_AREA:PRMZ_LOG	Waste Panel and Waste: Log of intrinsic permeability, Z-direction	TBM	-1.26e+01	log(m^2)

Table 25. Waste area and waste material parameters (cont.)

Parameter	Definition	Version	Value	Units
WAS_AREA:RELP_MOD	Waste Panel and Waste: Model number, relative permeability model	AP132	1.20e+01	NONE
WAS_AREA:RUBBCHW	Waste Panel and Waste: Mass of rubber in CH waste	CRA26_IS	1.02e+06	kg
WAS_AREA:RUBBRHW	Waste Panel and Waste: Mass of rubber in RH waste	CRA26_IS	1.14e+04	kg
WAS_AREA:RUBCCHW	Waste Panel and Waste: Mass of rubber in CH waste container materials	CRA26_IS	1.03e+05	kg
WAS_AREA:RUBCRHW	Waste Panel and Waste: Mass of rubber in RH waste container materials	CRA26_IS	1.20e+03	kg
WAS_AREA:RUBECHW	Waste Panel and Waste: Mass of rubber in CH waste emplacement materials	CRA26_IS	4.85e+03	kg
WAS_AREA:RUBERHW	Waste Panel and Waste: Mass of rubber in RH waste emplacement materials	CRA26_IS	0.00e+00	kg
WAS_AREA:SAT_IBRN	Waste Panel and Waste: Initial Brine Saturation	CCA	1.50e-02	NONE
WAS_AREA:SMIC_CO2	Waste Panel and Waste: Moles of CO2 produced per mole of organic carbon consumed.	PABC09	1.00e+00	NONE

Notes:

[1] This parameter has an assigned distribution but uses the default constant value for all vectors.

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Table 26. Waste chemistry parameters

Parameter	Definition	Version	Value	Units
AM:CAPHUM	Americium: Maximum Concentration of Actinide with Mobile Humic Colloids	CCA	1.10e-05	moles/liter
AM:CONCINT	Americium: Actinide Concentration with Mobile Actinide Intrinsic Colloids	RPPCR	6.70e-07	moles/liter
AM:CONCMIN	Americium: Actinide Concentration with Mobile Mineral Fragment Colloids	CCA	2.60e-08	moles/liter
AM+3:CAPMIC	Americium III: Maximum Concentration of Actinide on Microbe Colloids	CRA26_FS	4.97e-07	moles/liter
AM+3:MD0 [1]	Americium III: Molecular diffusion in pure fluid	CCA	3.00e-10	m^2/s
AM+3:PROPMIC	Americium III: Moles of Actinide Mobilized on Microbe Colloids per Moles Dissolved	CRA26_FS	2.92e+00	NONE
NP:CAPHUM	Neptunium: Maximum Concentration of Actinide with Mobile Humic Colloids	CCA	1.10e-05	moles/liter
NP:CONCINT	Neptunium: Actinide Concentration with Mobile Actinide Intrinsic Colloids	CRA19	4.30e-08	moles/liter
NP:CONCMIN	Neptunium: Actinide Concentration with Mobile Mineral Fragment Colloids	CCA	2.60e-08	moles/liter
NP:OXCUTOFF	Neptunium: Indicates the fractional value of the chance to take the lower oxidation state for each actinide.	RPPCR	5.00e-01	NONE
NP+4:CAPMIC	Neptunium IV: Maximum Concentration of Actinide on Microbe Colloids	CRA26_FS	1.52e-07	moles/liter
NP+4:PROPMIC	Neptunium IV: Moles of Actinide Mobilized on Microbe Colloids per Moles Dissolved	CRA26_FS	1.20e+01	NONE
NP+5:CAPMIC	Neptunium V: Maximum Concentration of Actinide on Microbe Colloids	CRA26_FS	1.52e-07	moles/liter
NP+5:PROPMIC	Neptunium V: Moles of Actinide Mobilized on Microbe Colloids per Moles Dissolved	CRA26_FS	1.20e+01	NONE

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Table 26. Waste chemistry parameters (cont.)

Parameter	Definition	Version	Value	Units
PHUMOX3:PHUMCIM	Proportionality constant with humic colloids for actinides in oxidation state III: Proportionality Const.,Humic Colloids, Castile Brine, MgO controlls pH	CRA26_IS	3.00e-01	NONE
PHUMOX3:PHUMSIM	Proportionality constant with humic colloids for actinides in oxidation state III: Proportionality Const. of Actinides in Salado Brine w/Humic Colloids, Inorganic	CRA26_IS	3.00e-01	NONE
PHUMOX4:PHUMCIM	Proportionality constant with humic colloids for actinides in oxidation state IV: Proportionality Const.,Humic Colloids, Castile Brine, MgO controlls pH	CRA26_IS	1.00e-02	NONE
PHUMOX4:PHUMSIM	Proportionality constant with humic colloids for actinides in oxidation state IV: Proportionality Const. of Actinides in Salado Brine w/Humic Colloids, Inorganic	CRA26_IS	2.00e-02	NONE
PHUMOX5:PHUMCIM	Proportionality constant with humic colloids for actinides in oxidation state V: Proportionality Const.,Humic Colloids, Castile Brine, MgO controlls pH	CCA	7.40e-03	NONE
PHUMOX5:PHUMSIM	Proportionality constant with humic colloids for actinides in oxidation state V: Proportionality Const. of Actinides in Salado Brine w/Humic Colloids, Inorganic	CCA	9.10e-04	NONE
PHUMOX6:PHUMCIM	Proportionality constant with humic colloids for actinides in oxidation state VI: Proportionality Const.,Humic Colloids, Castile Brine, MgO controlls pH	CCA	5.10e-01	NONE
PHUMOX6:PHUMSIM	Proportionality constant with humic colloids for actinides in oxidation state VI: Proportionality Const. of Actinides in Salado Brine w/Humic Colloids, Inorganic	CCA	1.20e-01	NONE
PU:CAPHUM	Plutonium: Maximum Concentration of Actinide with Mobile Humic Colloids	CCA	1.10e-05	moles/liter

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Table 26. Waste chemistry parameters (cont.)

Parameter	Definition	Version	Value	Units
PU:CONCINT	Plutonium: Actinide Concentration with Mobile Actinide Intrinsic Colloids	CRA19	4.30e-08	moles/liter
PU:CONCMIN	Plutonium: Actinide Concentration with Mobile Mineral Fragment Colloids	CCA	2.60e-08	moles/liter
PU:OXCUTOFF	Plutonium: Indicates the fractional value of the chance to take the lower oxidation state for each actinide.	RPPCR	2.50e-01	NONE
PU+3:CAPMIC	Plutonium III: Maximum Concentration of Actinide on Microbe Colloids	CRA26_FS	4.97e-07	moles/liter
PU+3:MD0 [1]	Plutonium III: Molecular diffusion in pure fluid	CCA	3.00e-10	m^2/s
PU+3:PROPMIC	Plutonium III: Moles of Actinide Mobilized on Microbe Colloids per Moles Dissolved	CRA26_FS	2.92e+00	NONE
PU+4:CAPMIC	Plutonium IV: Maximum Concentration of Actinide on Microbe Colloids	CRA26_FS	4.07e-09	moles/liter
PU+4:MD0 [1]	Plutonium IV: Molecular diffusion in pure fluid	CCA	1.53e-10	m^2/s
PU+4:PROPMIC	Plutonium IV: Moles of Actinide Mobilized on Microbe Colloids per Moles Dissolved	CRA26_FS	3.00e-01	NONE
SOLMOD3:SOLCOH	Oxidation state III model: Solubility in Castile Brine with Organics included Controlled by Mg(OH)2/Hydromagnisite buffer(5424)	CRA26_IS	1.44e-05	moles/liter
SOLMOD3:SOLCOH2	Oxidation state III model: Solubility in 2 X the minimum volume of Castile Brine with Organics included Controlled by Mg(OH)2/Hydromagnisite buffer(5424)	CRA26_IS	8.02e-06	M (mol/L)
SOLMOD3:SOLCOH3	Oxidation state III model: Solubility in 3 X the minimum volume of Castile Brine with Organics included Controlled by Mg(OH)2/Hydromagnisite buffer(5424)	CRA26_IS	5.59e-06	M (mol/L)

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Table 26. Waste chemistry parameters (cont.)

Parameter	Definition	Version	Value	Units
SOLMOD3:SOLCOH4	Oxidation state III model: Solubility in 4 X the minimum volume of Castile Brine with Organics included Controlled by Mg(OH)2/Hydromagnisite buffer(5424)	CRA26_IS	4.32e-06	M (mol/L)
SOLMOD3:SOLCOH5	Oxidation state III model: Solubility in 5 X the minimum volume of Castile Brine with Organics included Controlled by Mg(OH)2/Hydromagnisite buffer(5424)	CRA26_IS	3.54e-06	M (mol/L)
SOLMOD3:SOLSOH	Oxidation state III model: Solubiltiy in Salado Brine with Organics included Controlled by Mg(OH)2/Hydromagnisite buffer(5424)	CRA26_IS	1.45e-05	moles/liter
SOLMOD3:SOLSOH2	Oxidation state III model: Solubility in 2 X the minimum volume of Salado Brine with Organics included Controlled by Mg(OH)2/Hydromagnisite buffer(5424)	CRA26_IS	7.88e-06	M (mol/L)
SOLMOD3:SOLSOH3	Oxidation state III model: Solubility in 3 X the minimum volume of Salado Brine with Organics included Controlled by Mg(OH)2/Hydromagnisite buffer(5424)	CRA26_IS	5.45e-06	M (mol/L)
SOLMOD3:SOLSOH4	Oxidation state III model: Solubility in 4 X the minimum volume of Salado Brine with Organics included Controlled by Mg(OH)2/Hydromagnisite buffer(5424)	CRA26_IS	4.20e-06	M (mol/L)
SOLMOD3:SOLSOH5	Oxidation state III model: Solubility in 5 X the minimum volume of Salado Brine with Organics included Controlled by Mg(OH)2/Hydromagnisite buffer(5424)	CRA26_IS	3.43e-06	M (mol/L)
SOLMOD4:SOLCOH	Oxidation state IV model: Solubility in Castile Brine with Organics included Controlled by Mg(OH)2/Hydromagnisite buffer(5424)	CRA26_IS	5.63e-08	moles/liter
SOLMOD4:SOLCOH2	Oxidation state IV model: Solubility in 2 X the minimum volume of Castile Brine with Organics included Controlled by Mg(OH)2/Hydromagnisite buffer(5424)	CRA26_IS	5.69e-08	M (mol/L)

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Table 26. Waste chemistry parameters (cont.)

Parameter	Definition	Version	Value	Units
SOLMOD4:SOLCOH3	Oxidation state IV model: Solubility in 3 X the minimum volume of Castile Brine with Organics included Controlled by Mg(OH)2/Hydromagnisite buffer(5424)	CRA26_IS	5.71e-08	M (mol/L)
SOLMOD4:SOLCOH4	Oxidation state IV model: Solubility in 4 X the minimum volume of Castile Brine with Organics included Controlled by Mg(OH)2/Hydromagnisite buffer(5424)	CRA26_IS	5.72e-08	M (mol/L)
SOLMOD4:SOLCOH5	Oxidation state IV model: Solubility in 5 X the minimum volume of Castile Brine with Organics included Controlled by Mg(OH)2/Hydromagnisite buffer(5424)	CRA26_IS	5.73e-08	M (mol/L)
SOLMOD4:SOLSOH	Oxidation state IV model: Solubiltiy in Salado Brine with Organics included Controlled by Mg(OH)2/Hydromagnisite buffer(5424)	CRA26_IS	5.34e-08	moles/liter
SOLMOD4:SOLSOH2	Oxidation state IV model: Solubility in 2 X the minimum volume of Salado Brine with Organics included Controlled by Mg(OH)2/Hydromagnisite buffer(5424)	CRA26_IS	5.34e-08	M (mol/L)
SOLMOD4:SOLSOH3	Oxidation state IV model: Solubility in 3 X the minimum volume of Salado Brine with Organics included Controlled by Mg(OH)2/Hydromagnisite buffer(5424)	CRA26_IS	5.33e-08	M (mol/L)
SOLMOD4:SOLSOH4	Oxidation state IV model: Solubility in 4 X the minimum volume of Salado Brine with Organics included Controlled by Mg(OH)2/Hydromagnisite buffer(5424)	CRA26_IS	5.34e-08	M (mol/L)
SOLMOD4:SOLSOH5	Oxidation state IV model: Solubility in 5 X the minimum volume of Salado Brine with Organics included Controlled by Mg(OH)2/Hydromagnisite buffer(5424)	CRA26_IS	5.34e-08	M (mol/L)
SOLMOD5:SOLCOH	Oxidation state V model: Solubility in Castile Brine with Organics included Controlled by Mg(OH)2/Hydromagnisite buffer(5424)	CRA26_IS	4.01e-06	moles/liter

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Table 26. Waste chemistry parameters (cont.)

Parameter	Definition	Version	Value	Units
SOLMOD5:SOLCOH2	Oxidation state V model: Solubility in 2 X the minimum volume of Castile Brine with Organics included Controlled by Mg(OH)2/Hydromagnisite buffer(5424)	CRA26_IS	2.64e-06	M (mol/L)
SOLMOD5:SOLCOH3	Oxidation state V model: Solubility in 3 X the minimum volume of Castile Brine with Organics included Controlled by Mg(OH)2/Hydromagnisite buffer(5424)	CRA26_IS	2.17e-06	M (mol/L)
SOLMOD5:SOLCOH4	Oxidation state V model: Solubility in 4 X the minimum volume of Castile Brine with Organics included Controlled by Mg(OH)2/Hydromagnisite buffer(5424)	CRA26_IS	1.93e-06	M (mol/L)
SOLMOD5:SOLCOH5	Oxidation state V model: Solubility in 5 X the minimum volume of Castile Brine with Organics included Controlled by Mg(OH)2/Hydromagnisite buffer(5424)	CRA26_IS	1.79e-06	M (mol/L)
SOLMOD5:SOLSOH	Oxidation state V model: Solubiltiy in Salado Brine with Organics included Controlled by Mg(OH)2/Hydromagnisite buffer(5424)	CRA26_IS	9.75e-07	moles/liter
SOLMOD5:SOLSOH2	Oxidation state V model: Solubility in 2 X the minimum volume of Salado Brine with Organics included Controlled by Mg(OH)2/Hydromagnisite buffer(5424)	CRA26_IS	6.88e-07	M (mol/L)
SOLMOD5:SOLSOH3	Oxidation state V model: Solubility in 3 X the minimum volume of Salado Brine with Organics included Controlled by Mg(OH)2/Hydromagnisite buffer(5424)	CRA26_IS	5.81e-07	M (mol/L)
SOLMOD5:SOLSOH4	Oxidation state V model: Solubility in 4 X the minimum volume of Salado Brine with Organics included Controlled by Mg(OH)2/Hydromagnisite buffer(5424)	CRA26_IS	5.24e-07	M (mol/L)
SOLMOD5:SOLSOH5	Oxidation state V model: Solubility in 5 X the minimum volume of Salado Brine with Organics included Controlled by Mg(OH)2/Hydromagnisite buffer(5424)	CRA26_IS	4.90e-07	M (mol/L)

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Table 26. Waste chemistry parameters (cont.)

Parameter	Definition	Version	Value	Units
SOLMOD6:SOLCOH	Oxidation state VI model: Solubility in Castile Brine with Organics included Controlled by Mg(OH)2/Hydromagnisite buffer(5424)	CRA26_FS	3.00e-06	moles/liter
SOLMOD6:SOLSOH	Oxidation state VI model: Solubiltiy in Salado Brine with Organics included Controlled by Mg(OH)2/Hydromagnisite buffer(5424)	CRA26_FS	3.00e-06	moles/liter
TH:CAPHUM	Thorium: Maximum Concentration of Actinide with Mobile Humic Colloids	CCA	1.10e-05	moles/liter
TH:CONCINT	Thorium: Actinide Concentration with Mobile Actinide Intrinsic Colloids	RPPCR	4.80e-07	moles/liter
TH:CONCMIN	Thorium: Actinide Concentration with Mobile Mineral Fragment Colloids	CCA	2.60e-08	moles/liter
TH+4:CAPMIC	Thorium IV: Maximum Concentration of Actinide on Microbe Colloids	CRA26_FS	6.95e-04	moles/liter
TH+4:MD0 [1]	Thorium IV: Molecular diffusion in pure fluid	CCA	1.53e-10	m^2/s
TH+4:PROPMIC	Thorium IV: Moles of Actinide Mobilized on Microbe Colloids per Moles Dissolved	CRA26_FS	3.10e+00	NONE
U:CAPHUM	Uranium: Maximum Concentration of Actinide with Mobile Humic Colloids	CCA	1.10e-05	moles/liter
U:CONCINT	Uranium: Actinide Concentration with Mobile Actinide Intrinsic Colloids	CRA19	1.40e-06	moles/liter
U:CONCMIN	Uranium: Actinide Concentration with Mobile Mineral Fragment Colloids	CCA	2.60e-08	moles/liter
U:OXCUTOFF	Uranium: Indicates the fractional value of the chance to take the lower oxidation state for each actinide.	RPPCR	5.00e-01	NONE
U+4:CAPMIC	Uranium IV: Maximum Concentration of Actinide on Microbe Colloids	CRA26_FS	9.65e-06	moles/liter

Table 26. Waste chemistry parameters (cont.)

Parameter	Definition	Version	Value	Units
U+4:MD0 [1]	Uranium IV: Molecular diffusion in pure fluid	CCA	1.53e-10	m^2/s
U+4:PROPMIC	Uranium IV: Moles of Actinide Mobilized on Microbe Colloids per Moles Dissolved	CRA26_FS	2.10e-03	NONE
U+6:CAPMIC	Uranium VI: Maximum Concentration of Actinide on Microbe Colloids	CRA26_FS	9.65e-06	moles/liter
U+6:MD0 [1]	Uranium VI: Molecular diffusion in pure fluid	CCA	4.26e-10	m^2/s
U+6:PROPMIC	Uranium VI: Moles of Actinide Mobilized on Microbe Colloids per Moles Dissolved	CRA26_FS	2.10e-03	NONE

Notes:

[1] This parameter provided input to SECOTP2D, which was not run in the CRA26_IS. No changes associated with SECOTP2D were made between CRA26_FS and CRA26_IS, and therefore the SECOTP2D results generated CRA26_FS calculations were used in CRA26_IS.

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Table 27. Radionuclide parameters

Parameter	Definition	Version	Value	Units
AM241:ATWEIGHT	Americium 241: Atomic Weight in kg/mole	CCA	2.41e-01	kg/mole
AM241:DECAYNRG	Americium 241: Radionuclide disintegration energy	CRA19	5.64e+00	MeV
AM241:EPAREL	Americium 241: EPA Release Limit	CCA	1.00e+02	Curies/wuf
AM241:HALFLIFE	Americium 241: Halflife	CCA	1.36e+10	s
AM243:ATWEIGHT	Americium 243: Atomic Weight in kg/mole	CCA	2.43e-01	kg/mole
AM243:EPAREL	Americium 243: EPA Release Limit	CCA	1.00e+02	Curies/wuf
AM243:HALFLIFE	Americium 243: Halflife	CCA	2.33e+11	s
CF252:ATWEIGHT	Californium 252: Atomic Weight in kg/mole	CCA	2.52e-01	kg/mole
CF252:EPAREL	Californium 252: EPA Release Limit	CCA	0.00e+00	Curies/wuf
CF252:HALFLIFE	Californium 252: Halflife	CCA	8.33e+07	s
CM243:ATWEIGHT	Curium 243: Atomic Weight in kg/mole	CCA	2.43e-01	kg/mole
CM243:EPAREL	Curium 243: EPA Release Limit	CCA	1.00e+02	Curies/wuf
CM243:HALFLIFE	Curium 243: Halflife	CCA	8.99e+08	s
CM244:ATWEIGHT	Curium 244: Atomic Weight in kg/mole	CCA	2.44e-01	kg/mole
CM244:EPAREL	Curium 244: EPA Release Limit	CCA	0.00e+00	Curies/wuf
CM244:HALFLIFE	Curium 244: Halflife	CCA	5.72e+08	s
CM245:ATWEIGHT	Curium 245: Atomic Weight in kg/mole	CCA	2.45e-01	kg/mole
CM245:EPAREL	Curium 245: EPA Release Limit	CCA	1.00e+02	Curies/wuf
CM245:HALFLIFE	Curium 245: Halflife	CCA	2.68e+11	s
CM248:ATWEIGHT	Curium 248: Atomic Weight in kg/mole	CCA	2.48e-01	kg/mole
CM248:EPAREL	Curium 248: EPA Release Limit	CCA	1.00e+02	Curies/wuf
CM248:HALFLIFE	Curium 248: Halflife	CCA	1.07e+13	s
CS137:ATWEIGHT	Cesium 137: Atomic Weight in kg/mole	CCA	1.37e-01	kg/mole
CS137:EPAREL	Cesium 137: EPA Release Limit	CCA	1.00e+03	Curies/wuf

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Table 27. Radionuclide parameters (cont.)

Parameter	Definition	Version	Value	Units
CS137:HALFLIFE	Cesium 137: Halflife	CCA	9.47e+08	s
NP237:ATWEIGHT	Neptunium 237: Atomic Weight in kg/mole	CCA	2.37e-01	kg/mole
NP237:EPAREL	Neptunium 237: EPA Release Limit	CCA	1.00e+02	Curies/wuf
NP237:HALFLIFE	Neptunium 237: Halflife	CCA	6.75e+13	s
PA231:ATWEIGHT	Protactinium 231: Atomic Weight in kg/mole	CCA	2.31e-01	kg/mole
PA231:EPAREL	Protactinium 231: EPA Release Limit	CCA	1.00e+02	Curies/wuf
PA231:HALFLIFE	Protactinium 231: Halflife	CCA	1.03e+12	s
PB210:ATWEIGHT	Lead 210: Atomic Weight in kg/mole	CCA	2.10e-01	kg/mole
PB210:EPAREL	Lead 210: EPA Release Limit	CCA	1.00e+02	Curies/wuf
PB210:HALFLIFE	Lead 210: Halflife	CCA	7.04e+08	s
PM147:ATWEIGHT	Promethium 147: Atomic Weight in kg/mole	CCA	1.47e-01	kg/mole
PM147:EPAREL	Promethium 147: EPA Release Limit	CCA	0.00e+00	Curies/wuf
PM147:HALFLIFE	Promethium 147: Halflife	CCA	8.28e+07	s
PU238:ATWEIGHT	Plutonium 238: Atomic Weight in kg/mole	CCA	2.38e-01	kg/mole
PU238:DECAYNRG	Plutonium 238: Radionuclide disintegration energy	CRA19	5.59e+00	MeV
PU238:EPAREL	Plutonium 238: EPA Release Limit	CCA	1.00e+02	Curies/wuf
PU238:HALFLIFE	Plutonium 238: Halflife	CCA	2.77e+09	s
PU239:ATWEIGHT	Plutonium 239: Atomic Weight in kg/mole	CCA	2.39e-01	kg/mole
PU239:DECAYNRG	Plutonium 239: Radionuclide disintegration energy	CRA19	5.24e+00	MeV
PU239:EPAREL	Plutonium 239: EPA Release Limit	CCA	1.00e+02	Curies/wuf
PU239:HALFLIFE	Plutonium 239: Halflife	CCA	7.59e+11	s
PU240:ATWEIGHT	Plutonium 240: Atomic Weight in kg/mole	CCA	2.40e-01	kg/mole
PU240:DECAYNRG	Plutonium 240: Radionuclide disintegration energy	CRA19	5.26e+00	MeV
PU240:EPAREL	Plutonium 240: EPA Release Limit	CCA	1.00e+02	Curies/wuf

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Table 27. Radionuclide parameters (cont.)

Parameter	Definition	Version	Value	Units
PU240:HALFLIFE	Plutonium 240: Halflife	CCA	2.06e+11	S
PU241:ATWEIGHT	Plutonium 241: Atomic Weight in kg/mole	CCA	2.41e-01	kg/mole
PU241:EPAREL	Plutonium 241: EPA Release Limit	CCA	0.00e+00	Curies/wuf
PU241:HALFLIFE	Plutonium 241: Halflife	CCA	4.54e+08	s
PU242:ATWEIGHT	Plutonium 242: Atomic Weight in kg/mole	CCA	2.42e-01	kg/mole
PU242:DECAYNRG	Plutonium 242: Radionuclide disintegration energy	CRA19	4.99e+00	MeV
PU242:EPAREL	Plutonium 242: EPA Release Limit	CCA	1.00e+02	Curies/wuf
PU242:HALFLIFE	Plutonium 242: Halflife	CCA	1.22e+13	s
PU244:ATWEIGHT	Plutonium 244: Atomic Weight in kg/mole	CCA	2.44e-01	kg/mole
PU244:EPAREL	Plutonium 244: EPA Release Limit	CCA	1.00e+02	Curies/wuf
PU244:HALFLIFE	Plutonium 244: Halflife	CCA	2.61e+15	s
RA226:ATWEIGHT	Radium 226: Atomic Weight in kg/mole	CCA	2.26e-01	kg/mole
RA226:EPAREL	Radium 226: EPA Release Limit	CCA	1.00e+02	Curies/wuf
RA226:HALFLIFE	Radium 226: Halflife	CCA	5.05e+10	s
RA228:ATWEIGHT	Radium 228: Atomic Weight in kg/mole	CCA	2.28e-01	kg/mole
RA228:EPAREL	Radium 228: EPA Release Limit	CCA	0.00e+00	Curies/wuf
RA228:HALFLIFE	Radium 228: Halflife	CCA	2.11e+08	s
SM147:ATWEIGHT	Samarium 147: Atomic Weight in kg/mole	CCA	1.47e-01	kg/mole
SM147:EPAREL	Samarium 147: EPA Release Limit	CCA	1.00e+02	Curies/wuf
SM147:HALFLIFE	Samarium 147: Halflife	CCA	3.38e+18	s
SR90:ATWEIGHT	Strontium 90: Atomic Weight in kg/mole	CCA	8.99e-02	kg/mole
SR90:EPAREL	Strontium 90: EPA Release Limit	CCA	1.00e+03	Curies/wuf
SR90:HALFLIFE	Strontium 90: Halflife	CCA	9.19e+08	s
TH229:ATWEIGHT	Thorium 229: Atomic Weight in kg/mole	CCA	2.29e-01	kg/mole

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Table 27. Radionuclide parameters (cont.)

Parameter	Definition	Version	Value	Units
TH229:EPAREL	Thorium 229: EPA Release Limit	CCA	1.00e+02	Curies/wuf
TH229:HALFLIFE	Thorium 229: Halflife	CCA	2.32e+11	s
TH230:ATWEIGHT	Thorium 230: Atomic Weight in kg/mole	CCA	2.30e-01	kg/mole
TH230:EPAREL	Thorium 230: EPA Release Limit	CCA	1.00e+01	Curies/wuf
TH230:HALFLIFE	Thorium 230: Halflife	CCA	2.43e+12	s
TH232:ATWEIGHT	Thorium 232: Atomic Weight in kg/mole	CCA	2.32e-01	kg/mole
TH232:EPAREL	Thorium 232: EPA Release Limit	CCA	1.00e+01	Curies/wuf
TH232:HALFLIFE	Thorium 232: Halflife	CCA	4.43e+17	s
U233:ATWEIGHT	Uranium 233: Atomic Weight in kg/mole	CCA	2.33e-01	kg/mole
U233:EPAREL	Uranium 233: EPA Release Limit	CCA	1.00e+02	Curies/wuf
U233:HALFLIFE	Uranium 233: Halflife	CCA	5.00e+12	s
U234:ATWEIGHT	Uranium 234: Atomic Weight in kg/mole	CCA	2.34e-01	kg/mole
U234:EPAREL	Uranium 234: EPA Release Limit	CCA	1.00e+02	Curies/wuf
U234:HALFLIFE	Uranium 234: Halflife	CCA	7.72e+12	s
U235:ATWEIGHT	Uranium 235: Atomic Weight in kg/mole	CCA	2.35e-01	kg/mole
U235:EPAREL	Uranium 235: EPA Release Limit	CCA	1.00e+02	Curies/wuf
U235:HALFLIFE	Uranium 235: Halflife	CCA	2.22e+16	s
U236:ATWEIGHT	Uranium 236: Atomic Weight in kg/mole	CCA	2.36e-01	kg/mole
U236:EPAREL	Uranium 236: EPA Release Limit	CCA	1.00e+02	Curies/wuf
U236:HALFLIFE	Uranium 236: Halflife	CCA	7.39e+14	s
U238:ATWEIGHT	Uranium 238: Atomic Weight in kg/mole	CCA	2.38e-01	kg/mole
U238:EPAREL	Uranium 238: EPA Release Limit	CCA	1.00e+02	Curies/wuf
U238:HALFLIFE	Uranium 238: Halflife	CCA	1.41e+17	s

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Table 28. Isotope inventory parameters

Parameter	Definition	Version	Value	Units
AM241:INVCHD	Americium 241: Inventory of Contact Handled Design	CRA26_IS	1.55e+06	Curies
AM241:INVRHD	Americium 241: Inventory of Remote Handled Design	CRA26_IS	4.74e+03	Curies
AM241L:INVCHD	Americium 241 Lumped with Plutonium 241: Inventory of Contact Handled Design	CRA26_IS	1.57e+06	Curies
AM241L:INVRHD	Americium 241 Lumped with Plutonium 241: Inventory of Remote Handled Design	CRA26_IS	4.80e+03	Curies
AM243:INVCHD	Americium 243: Inventory of Contact Handled Design	CRA26_IS	3.04e+01	Curies
AM243:INVRHD	Americium 243: Inventory of Remote Handled Design	CRA26_IS	6.89e+01	Curies
CF252:INVCHD	Californium 252: Inventory of Contact Handled Design	CRA26_IS	1.44e-05	Curies
CF252:INVRHD	Californium 252: Inventory of Remote Handled Design	CRA26_IS	8.15e-06	Curies
CM243:INVCHD	Curium 243: Inventory of Contact Handled Design	CRA26_IS	3.31e+00	Curies
CM243:INVRHD	Curium 243: Inventory of Remote Handled Design	CRA26_IS	5.39e+00	Curies
CM244:INVCHD	Curium 244: Inventory of Contact Handled Design	CRA26_IS	1.67e+03	Curies
CM244:INVRHD	Curium 244: Inventory of Remote Handled Design	CRA26_IS	1.64e+03	Curies
CM245:INVCHD	Curium 245: Inventory of Contact Handled Design	CRA26_IS	4.10e+00	Curies
CM245:INVRHD	Curium 245: Inventory of Remote Handled Design	CRA26_IS	2.72e+00	Curies
CM248:INVCHD	Curium 248: Inventory of Contact Handled Design	CRA26_IS	1.36e+00	Curies
CM248:INVRHD	Curium 248: Inventory of Remote Handled Design	CRA26_IS	3.85e-01	Curies
CS137:INVCHD	Cesium 137: Inventory of Contact Handled Design	CRA26_IS	1.03e+02	Curies
CS137:INVRHD	Cesium 137: Inventory of Remote Handled Design	CRA26_IS	3.17e+04	Curies
NP237:INVCHD	Neptunium 237: Inventory of Contact Handled Design	CRA26_IS	6.95e+01	Curies
NP237:INVRHD	Neptunium 237: Inventory of Remote Handled Design	CRA26_IS	2.71e+00	Curies
PA231:INVCHD	Protactinium 231: Inventory of Contact Handled Design	CRA26_IS	2.14e+01	Curies
PA231:INVRHD	Protactinium 231: Inventory of Remote Handled Design	CRA26_IS	1.87e-03	Curies
PB210:INVCHD	Lead 210: Inventory of Contact Handled Design	CRA26_IS	1.82e+00	Curies

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Table 28. Isotope inventory parameters (cont.)

Parameter	Definition	Version	Value	Units
PB210:INVRHD	Lead 210: Inventory of Remote Handled Design	CRA26_IS	2.11e+00	Curies
PM147:INVCHD	Promethium 147: Inventory of Contact Handled Design	CRA26_IS	5.59e-05	Curies
PM147:INVRHD	Promethium 147: Inventory of Remote Handled Design	CRA26_IS	5.39e-06	Curies
PU238:INVCHD	Plutonium 238: Inventory of Contact Handled Design	CRA26_IS	1.37e+06	Curies
PU238:INVRHD	Plutonium 238: Inventory of Remote Handled Design	CRA26_IS	4.96e+03	Curies
PU238L:INVCHD	Plutonium 238 Equals Plutonium 238 Inventory: Inventory of Contact Handled Design	CRA26_IS	1.37e+06	Curies
PU238L:INVRHD	Plutonium 238 Equals Plutonium 238 Inventory: Inventory of Remote Handled Design	CRA26_IS	4.96e+03	Curies
PU239:INVCHD	Plutonium 239: Inventory of Contact Handled Design	CRA26_IS	3.51e+06	Curies
PU239:INVRHD	Plutonium 239: Inventory of Remote Handled Design	CRA26_IS	1.86e+03	Curies
PU239L:INVCHD	Plutonium 239 Lumped with Plutonium 240 and Plutonium 242: Inventory of Contact Handled Design	CRA26_IS	4.44e+06	Curies
PU239L:INVRHD	Plutonium 239 Lumped with Plutonium 240 and Plutonium 242: Inventory of Remote Handled Design	CRA26_IS	3.24e+03	Curies
PU240:INVCHD	Plutonium 240: Inventory of Contact Handled Design	CRA26_IS	9.28e+05	Curies
PU240:INVRHD	Plutonium 240: Inventory of Remote Handled Design	CRA26_IS	1.31e+03	Curies
PU241:INVCHD	Plutonium 241: Inventory of Contact Handled Design	CRA26_IS	4.87e+05	Curies
PU241:INVRHD	Plutonium 241: Inventory of Remote Handled Design	CRA26_IS	1.74e+03	Curies
PU242:INVCHD	Plutonium 242: Inventory of Contact Handled Design	CRA26_IS	2.45e+02	Curies
PU242:INVRHD	Plutonium 242: Inventory of Remote Handled Design	CRA26_IS	4.05e+00	Curies
PU244:INVCHD	Plutonium 244: Inventory of Contact Handled Design	CRA26_IS	5.84e-02	Curies
PU244:INVRHD	Plutonium 244: Inventory of Remote Handled Design	CRA26_IS	3.71e-06	Curies
RA226:INVCHD	Radium 226: Inventory of Contact Handled Design	CRA26_IS	2.14e+00	Curies

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Table 28. Isotope inventory parameters (cont.)

Parameter	Definition	Version	Value	Units
RA226:INVRHD	Radium 226: Inventory of Remote Handled Design	CRA26_IS	2.25e+00	Curies
RA228:INVCHD	Radium 228: Inventory of Contact Handled Design	CRA26_IS	1.07e-01	Curies
RA228:INVRHD	Radium 228: Inventory of Remote Handled Design	CRA26_IS	2.96e-03	Curies
SM147:INVCHD	Samarium 147: Inventory of Contact Handled Design	CRA26_IS	1.52e-08	Curies
SM147:INVRHD	Samarium 147: Inventory of Remote Handled Design	CRA26_IS	4.00e-08	Curies
SR90:INVCHD	Strontium 90: Inventory of Contact Handled Design	CRA26_IS	2.17e+02	Curies
SR90:INVRHD	Strontium 90: Inventory of Remote Handled Design	CRA26_IS	1.93e+04	Curies
TH229:INVCHD	Thorium 229: Inventory of Contact Handled Design	CRA26_IS	6.22e+00	Curies
TH229:INVRHD	Thorium 229: Inventory of Remote Handled Design	CRA26_IS	9.21e-02	Curies
TH230:INVCHD	Thorium 230: Inventory of Contact Handled Design	CRA26_IS	4.35e-01	Curies
TH230:INVRHD	Thorium 230: Inventory of Remote Handled Design	CRA26_IS	4.53e-03	Curies
TH230L:INVCHD	Thorium 230 Lumped with Thorium 229: Inventory of Contact Handled Design	CRA26_IS	6.66e+00	Curies
TH230L:INVRHD	Thorium 230 Lumped with Thorium 229: Inventory of Remote Handled Design	CRA26_IS	9.66e-02	Curies
TH232:INVCHD	Thorium 232: Inventory of Contact Handled Design	CRA26_IS	1.08e-01	Curies
TH232:INVRHD	Thorium 232: Inventory of Remote Handled Design	CRA26_IS	1.87e-03	Curies
U233:INVCHD	Uranium 233: Inventory of Contact Handled Design	CRA26_IS	3.13e+02	Curies
U233:INVRHD	Uranium 233: Inventory of Remote Handled Design	CRA26_IS	1.63e+01	Curies
U234:INVCHD	Uranium 234: Inventory of Contact Handled Design	CRA26_IS	6.48e+02	Curies
U234:INVRHD	Uranium 234: Inventory of Remote Handled Design	CRA26_IS	7.15e+00	Curies
U234L:INVCHD	Uranium 234 Lumped with Uranium 233: Inventory of Contact Handled Design	CRA26_IS	9.61e+02	Curies

Table 28. Isotope inventory parameters (cont.)

Parameter	Definition	Version	Value	Units
U234L:INVRHD	Uranium 234 Lumped with Uranium 233: Inventory of Remote Handled Design	CRA26_IS	2.34e+01	Curies
U235:INVCHD	Uranium 235: Inventory of Contact Handled Design	CRA26_IS	1.62e+00	Curies
U235:INVRHD	Uranium 235: Inventory of Remote Handled Design	CRA26_IS	1.17e+00	Curies
U236:INVCHD	Uranium 236: Inventory of Contact Handled Design	CRA26_IS	2.99e+00	Curies
U236:INVRHD	Uranium 236: Inventory of Remote Handled Design	CRA26_IS	1.11e-01	Curies
U238:INVCHD	Uranium 238: Inventory of Contact Handled Design	CRA26_IS	9.59e+01	Curies
U238:INVRHD	Uranium 238: Inventory of Remote Handled Design	CRA26_IS	1.77e+00	Curies

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Table 29. Stoichiometric gas generation model parameters

Parameter	Definition	Version	Value	Units
H2:VISCO	Hydrogen Gas: Viscosity	CCA	8.93e-06	Pa*s
NITRATE:QINIT	Nitrate: Initial quantity of material in waste	CRA26_IS	2.59e+07	moles
STEEL:STOIFX	Generic steel in waste: Stoichiometric factor - X	CCA	1.00e+00	NONE
SULFATE:QINIT	Sulfate: Initial quantity of material in waste	CRA26_IS	4.87e+06	moles

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Table 30. Predisposal Cavities (Waste Area) parameters

Parameter	Definition	Version	Value	Units
CAVITY_1:CAP_MOD	Cavity for Waste Panel: Model number, capillary pressure model	CCA	1.00e+00	NONE
CAVITY_1:COMP_RCK	Cavity for Waste Panel: Bulk Compressibility	CCA	0.00e+00	Pa^{-1}
CAVITY_1:KPT	Cavity for Waste Panel: Flag for Permeability Determined Threshold	CCA	0.00e+00	NONE
CAVITY_1:PCT_A	Cavity for Waste Panel: Threshold Pressure Linear Parameter	CCA	0.00e+00	Pa
CAVITY_1:PCT_EXP	Cavity for Waste Panel: Threshold pressure exponential parameter	CCA	0.00e+00	NONE
CAVITY_1:PC_MAX	Cavity for Waste Panel: Maximum allowable capillary pressure	CCA	1.00e+08	Pa
CAVITY_1:PORE_DIS	Cavity for Waste Panel: Brooks-Corey pore distribution parameter	CCA	7.00e-01	NONE
CAVITY_1:POROSITY	Cavity for Waste Panel: Effective porosity	CCA	1.00e+00	NONE
CAVITY_1:PO_MIN	Cavity for Waste Panel: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	CCA	1.01e+05	Pa
CAVITY_1:PRESSURE	Cavity for Waste Panel: Brine far-field pore pressure	RPPA	1.01e+05	Pa
CAVITY_1:PRMX_LOG	Cavity for Waste Panel: Log of intrinsic permeability, X-direction	CCA	-1.00e+01	$log(m^2)$
CAVITY_1:PRMY_LOG	Cavity for Waste Panel: Log of intrinsic permeability, Y-direction	CCA	-1.00e+01	$log(m^2)$
CAVITY_1:PRMZ_LOG	Cavity for Waste Panel: Log of intrinsic permeability, Z-direction	CCA	-1.00e+01	$log(m^2)$
CAVITY_1:RELP_MOD	Cavity for Waste Panel: Model number, relative permeability model	AP132	1.10e+01	NONE
CAVITY_1:SAT_IBRN	Cavity for Waste Panel: Initial Brine Saturation	CCA	0.00e+00	NONE
CAVITY_1:SAT_RBRN	Cavity for Waste Panel: Residual Brine Saturation	CCA	0.00e+00	NONE
CAVITY_1:SAT_RGAS	Cavity for Waste Panel: Residual Gas Saturation	CCA	0.00e+00	NONE
CAVITY_2:CAP_MOD	Cavity for Rest of Repository Waste Panels: Model number, capillary pressure model	CCA	1.00e+00	NONE

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Table 30 – Predisposal Cavities (Waste Area) Parameters (cont.)

Parameter	Definition	Version	Value	Units
CAVITY_2:COMP_RCK	Cavity for Rest of Repository Waste Panels: Bulk Compressibility	CCA	0.00e+00	Pa^{-1}
CAVITY_2:KPT	Cavity for Rest of Repository Waste Panels: Flag for Permeability Determined Threshold	CCA	0.00e+00	NONE
CAVITY_2:PCT_A	Cavity for Rest of Repository Waste Panels: Threshold Pressure Linear Parameter	CCA	0.00e+00	Pa
CAVITY_2:PCT_EXP	Cavity for Rest of Repository Waste Panels: Threshold pressure exponential parameter	CCA	0.00e+00	NONE
CAVITY_2:PC_MAX	Cavity for Rest of Repository Waste Panels: Maximum allowable capillary pressure	CCA	1.00e+08	Pa
CAVITY_2:PORE_DIS	Cavity for Rest of Repository Waste Panels: Brooks-Corey pore distribution parameter	CCA	7.00e-01	NONE
CAVITY_2:POROSITY	Cavity for Rest of Repository Waste Panels: Effective porosity	CCA	1.00e+00	NONE
CAVITY_2:PO_MIN	Cavity for Rest of Repository Waste Panels: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	CCA	1.01e+05	Pa
CAVITY_2:PRESSURE	Cavity for Rest of Repository Waste Panels: Brine far-field pore pressure	RPPA	1.01e+05	Pa
CAVITY_2:PRMX_LOG	Cavity for Rest of Repository Waste Panels: Log of intrinsic permeability, X-direction	CCA	-1.00e+01	$log(m^2)$
CAVITY_2:PRMY_LOG	Cavity for Rest of Repository Waste Panels: Log of intrinsic permeability, Y-direction	CCA	-1.00e+01	$log(m^2)$
CAVITY_2:PRMZ_LOG	Cavity for Rest of Repository Waste Panels: Log of intrinsic permeability, Z-direction	CCA	-1.00e+01	$log(m^2)$
CAVITY_2:RELP_MOD	Cavity for Rest of Repository Waste Panels: Model number, relative permeability model	AP132	1.10e+01	NONE

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Table 30 – Predisposal Cavities (Waste Area) Parameters (cont.)

Parameter	Definition	Version	Value	Units
CAVITY_2:SAT_IBRN	Cavity for Rest of Repository Waste Panels: Initial Brine Saturation	CCA	0.00e+00	NONE
CAVITY_2:SAT_RBRN	Cavity for Rest of Repository Waste Panels: Residual Brine Saturation	CCA	0.00e+00	NONE
CAVITY_2:SAT_RGAS	Cavity for Rest of Repository Waste Panels: Residual Gas Saturation	CCA	0.00e+00	NONE
CAVITY_3:CAP_MOD	Cavity for Operations and Experimental Areas: Model number, capillary pressure model	CCA	1.00e+00	NONE
CAVITY_3:COMP_RCK	Cavity for Operations and Experimental Areas: Bulk Compressibility	CCA	0.00e+00	Pa^{-1}
CAVITY_3:KPT	Cavity for Operations and Experimental Areas: Flag for Permeability Determined Threshold	CCA	0.00e+00	NONE
CAVITY_3:PCT_A	Cavity for Operations and Experimental Areas: Threshold Pressure Linear Parameter	CCA	0.00e+00	Pa
CAVITY_3:PCT_EXP	Cavity for Operations and Experimental Areas: Threshold pressure exponential parameter	CCA	0.00e+00	NONE
CAVITY_3:PC_MAX	Cavity for Operations and Experimental Areas: Maximum allowable capillary pressure	CCA	1.00e+08	Pa
CAVITY_3:PORE_DIS	Cavity for Operations and Experimental Areas: Brooks-Corey pore distribution parameter	CCA	7.00e-01	NONE
CAVITY_3:POROSITY	Cavity for Operations and Experimental Areas: Effective porosity	CCA	1.00e+00	NONE
CAVITY_3:PO_MIN	Cavity for Operations and Experimental Areas: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	CCA	1.01e+05	Pa
CAVITY_3:PRESSURE	Cavity for Operations and Experimental Areas: Brine far-field pore pressure	CCA	1.01e+05	Pa

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Table 30 – Predisposal Cavities (Waste Area) Parameters (cont.)

Parameter	Definition	Version	Value	Units
CAVITY_3:PRMX_LOG	Cavity for Operations and Experimental Areas: Log of intrinsic permeability, X-direction	CCA	-1.00e+01	$\log(m^2)$
CAVITY_3:PRMY_LOG	Cavity for Operations and Experimental Areas: Log of intrinsic permeability, Y-direction	CCA	-1.00e+01	$\log(m^2)$
CAVITY_3:PRMZ_LOG	Cavity for Operations and Experimental Areas: Log of intrinsic permeability, Z-direction	CCA	-1.00e+01	$\log(m^2)$
CAVITY_3:RELP_MOD	Cavity for Operations and Experimental Areas: Model number, relative permeability model	AP132	1.10e+01	NONE
CAVITY_3:SAT_IBRN	Cavity for Operations and Experimental Areas: Initial Brine Saturation	CCA	0.00e+00	NONE
CAVITY_3:SAT_RBRN	Cavity for Operations and Experimental Areas: Residual Brine Saturation	CCA	0.00e+00	NONE
CAVITY_3:SAT_RGAS	Cavity for Operations and Experimental Areas: Residual Gas Saturation	CCA	0.00e+00	NONE
CAVITY_4:CAP_MOD	Cavity for Panel Closures and Shaft: Model number, capillary pressure model	CCA	1.00e+00	NONE
CAVITY_4:COMP_RCK	Cavity for Panel Closures and Shaft: Bulk Compressibility	CCA	0.00e+00	Pa^{-1}
CAVITY_4:KPT	Cavity for Panel Closures and Shaft: Flag for Permeability Determined Threshold	CCA	0.00e+00	NONE
CAVITY_4:PCT_A	Cavity for Panel Closures and Shaft: Threshold Pressure Linear Parameter	CCA	0.00e+00	Pa
CAVITY_4:PCT_EXP	Cavity for Panel Closures and Shaft: Threshold pressure exponential parameter	CCA	0.00e+00	NONE
CAVITY_4:PC_MAX	Cavity for Panel Closures and Shaft: Maximum allowable capillary pressure	CCA	1.00e+08	Pa
CAVITY_4:PORE_DIS	Cavity for Panel Closures and Shaft: Brooks-Corey pore distribution parameter	CCA	7.00e-01	NONE

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Table 30 – Predisposal Cavities (Waste Area) Parameters (cont.)

Parameter	Definition	Version	Value	Units
CAVITY_4:POROSITY	Cavity for Panel Closures and Shaft: Effective porosity	CCA	1.00e+00	NONE
CAVITY_4:PO_MIN	Cavity for Panel Closures and Shaft: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	CCA	1.01e+05	Pa
CAVITY_4:PRESSURE	Cavity for Panel Closures and Shaft: Brine far-field pore pressure	CCA	1.01e+05	Pa
CAVITY_4:PRMX_LOG	Cavity for Panel Closures and Shaft: Log of intrinsic permeability, X-direction	CCA	-1.00e+01	$\log(m^2)$
CAVITY_4:PRMY_LOG	Cavity for Panel Closures and Shaft: Log of intrinsic permeability, Y-direction	CCA	-1.00e+01	$\log(m^2)$
CAVITY_4:PRMZ_LOG	Cavity for Panel Closures and Shaft: Log of intrinsic permeability, Z-direction	CCA	-1.00e+01	$\log(m^2)$
CAVITY_4:RELP_MOD	Cavity for Panel Closures and Shaft: Model number, relative permeability model	AP132	1.10e+01	NONE
CAVITY_4:SAT_IBRN	Cavity for Panel Closures and Shaft: Initial Brine Saturation	CCA	0.00e+00	NONE
CAVITY_4:SAT_RBRN	Cavity for Panel Closures and Shaft: Residual Brine Saturation	CCA	0.00e+00	NONE
CAVITY_4:SAT_RGAS	Cavity for Panel Closures and Shaft: Residual Gas Saturation	CCA	0.00e+00	NONE
CAVITY_5:CAP_MOD	Cavity for PCS; -5 to 0 years: Model number, capillary pressure model	CRA14_SEN4	1.00e+00	NONE
CAVITY_5:COMP_RCK	Cavity for PCS; -5 to 0 years: Bulk Compressibility	CRA14_SEN4	0.00e+00	Pa^{-1}
CAVITY_5:KPT	Cavity for PCS; -5 to 0 years: Flag for Permeability Determined Threshold	CRA14_SEN3	0.00e+00	NONE
CAVITY_5:PCT_A	Cavity for PCS; -5 to 0 years: Threshold Pressure Linear Parameter	CRA14_SEN4	0.00e+00	Pa
CAVITY_5:PCT_EXP	Cavity for PCS; -5 to 0 years: Threshold pressure exponential parameter	CRA14_SEN4	0.00e+00	NONE

Table 30 – Predisposal Cavities (Waste Area) Parameters (cont.)

Parameter	Definition	Version	Value	Units
CAVITY_5:PC_MAX	Cavity for PCS; -5 to 0 years: Maximum allowable capillary pressure	CRA14_SEN3	1.00e+08	Pa
CAVITY_5:PORE_DIS	Cavity for PCS; -5 to 0 years: Brooks-Corey pore distribution parameter	CRA14_SEN3	7.00e-01	NONE
CAVITY_5:POROSITY	Cavity for PCS; -5 to 0 years: Effective porosity	CRA14_SEN4	1.00e+00	NONE
CAVITY_5:PO_MIN	Cavity for PCS; -5 to 0 years: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	CRA14_SEN3	1.01e+05	Pa
CAVITY_5:PRESSURE	Cavity for PCS; -5 to 0 years: Brine far-field pore pressure	CRA14_SEN3	1.01e+05	Pa
CAVITY_5:PRMX_LOG	Cavity for PCS; -5 to 0 years: Log of intrinsic permeability, X-direction	CRA14_SEN4	-1.00e+01	log(m^2)
CAVITY_5:PRMY_LOG	Cavity for PCS; -5 to 0 years: Log of intrinsic permeability, Y-direction	CRA14_SEN4	-1.00e+01	log(m^2)
CAVITY_5:PRMZ_LOG	Cavity for PCS; -5 to 0 years: Log of intrinsic permeability, Z-direction	CRA14_SEN4	-1.00e+01	log(m^2)
CAVITY_5:RELP_MOD	Cavity for PCS; -5 to 0 years: Model number, relative permeability model	CRA14_SEN4	1.10e+01	NONE
CAVITY_5:SAT_IBRN	Cavity for PCS; -5 to 0 years: Initial Brine Saturation	CRA14_SEN4	0.00e+00	NONE
CAVITY_5:SAT_RBRN	Cavity for PCS; -5 to 0 years: Residual Brine Saturation	CRA14_SEN4	0.00e+00	NONE
CAVITY_5:SAT_RGAS	Cavity for PCS; -5 to 0 years: Residual Gas Saturation	CRA14_SEN4	0.00e+00	NONE

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Table 31. Operations region parameters

Parameter	Definition	Version	Value	Units
OPS_AREA:CAP_MOD	Operations Region: Model number, capillary pressure model	CCA	1.00e+00	NONE
OPS_AREA:COMP_RCK	Operations Region: Bulk Compressibility	CCA	0.00e+00	Pa^{-1}
OPS_AREA:KPT	Operations Region: Flag for Permeability Determined Threshold	CCA	0.00e+00	NONE
OPS_AREA:PCT_A	Operations Region: Threshold Pressure Linear Parameter	CCA	0.00e+00	Pa
OPS_AREA:PCT_EXP	Operations Region: Threshold pressure exponential parameter	CCA	0.00e+00	NONE
OPS_AREA:PC_MAX	Operations Region: Maximum allowable capillary pressure	CCA	1.00e+08	Pa
OPS_AREA:PORE_DIS	Operations Region: Brooks-Corey pore distribution parameter	CCA	7.00e-01	NONE
OPS_AREA:POROSITY	Operations Region: Effective porosity	CCA	1.80e-01	NONE
OPS_AREA:PO_MIN	Operations Region: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	CCA	1.01e+05	Pa
OPS_AREA:PRESSURE	Operations Region: Brine far-field pore pressure	CCA	1.01e+05	Pa
OPS_AREA:PRMX_LOG	Operations Region: Log of intrinsic permeability, X-direction	CCA	-1.10e+01	$log(m^2)$
OPS_AREA:PRMY_LOG	Operations Region: Log of intrinsic permeability, Y-direction	CCA	-1.10e+01	$log(m^2)$
OPS_AREA:PRMZ_LOG	Operations Region: Log of intrinsic permeability, Z-direction	CCA	-1.10e+01	$log(m^2)$
OPS_AREA:RELP_MOD	Operations Region: Model number, relative permeability model	AP132	1.10e+01	NONE
OPS_AREA:SAT_IBRN	Operations Region: Initial Brine Saturation	CCA	0.00e+00	NONE
OPS_AREA:SAT_RBRN	Operations Region: Residual Brine Saturation	CCA	0.00e+00	NONE
OPS_AREA:SAT_RGAS	Operations Region: Residual Gas Saturation	CCA	0.00e+00	NONE

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Table 32. Experimental Area Parameters

Parameter	Definition	Version	Value	Units
EXP_AREA:CAP_MOD	Experimental Area: Model number, capillary pressure model	CCA	1.00e+00	NONE
EXP_AREA:COMP_RCK	Experimental Area: Bulk Compressibility	CCA	0.00e+00	Pa^{-1}
EXP_AREA:KPT	Experimental Area: Flag for Permeability Determined Threshold	CCA	0.00e+00	NONE
EXP_AREA:PCT_A	Experimental Area: Threshold Pressure Linear Parameter	CCA	0.00e+00	Pa
EXP_AREA:PCT_EXP	Experimental Area: Threshold pressure exponential parameter	CCA	0.00e+00	NONE
EXP_AREA:PC_MAX	Experimental Area: Maximum allowable capillary pressure	CCA	1.00e+08	Pa
EXP_AREA:PORE_DIS	Experimental Area: Brooks-Corey pore distribution parameter	CCA	7.00e-01	NONE
EXP_AREA:POROSITY	Experimental Area: Effective porosity	CCA	1.80e-01	NONE
EXP_AREA:PO_MIN	Experimental Area: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	CCA	1.01e+05	Pa
EXP_AREA:PRESSURE	Experimental Area: Brine far-field pore pressure	CCA	1.01e+05	Pa
EXP_AREA:PRMX_LOG	Experimental Area: Log of intrinsic permeability, X-direction	CCA	-1.10e+01	$log(m^2)$
EXP_AREA:PRMY_LOG	Experimental Area: Log of intrinsic permeability, Y-direction	CCA	-1.10e+01	$log(m^2)$
EXP_AREA:PRMZ_LOG	Experimental Area: Log of intrinsic permeability, Z-direction	CCA	-1.10e+01	$log(m^2)$
EXP_AREA:RELP_MOD	Experimental Area: Model number, relative permeability model	AP132	1.10e+01	NONE
EXP_AREA:SAT_IBRN	Experimental Area: Initial Brine Saturation	CCA	0.00e+00	NONE
EXP_AREA:SAT_RBRN	Experimental Area: Residual Brine Saturation	CCA	0.00e+00	NONE
EXP_AREA:SAT_RGAS	Experimental Area: Residual Gas Saturation	CCA	0.00e+00	NONE

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Table 33. Castile Formation Parameters

Parameter	Definition	Version	Value	Units
IMPERM_Z:CAP_MOD	Impermeable Zones: Model number, capillary pressure model	CCA	1.00e+00	NONE
IMPERM_Z:COMP_RCK	Impermeable Zones: Bulk Compressibility	CCA	0.00e+00	Pa^{-1}
IMPERM_Z:KPT	Impermeable Zones: Flag for Permeability Determined Threshold	CCA	0.00e+00	NONE
IMPERM_Z:PCT_A	Impermeable Zones: Threshold Pressure Linear Parameter	CCA	0.00e+00	Pa
IMPERM_Z:PCT_EXP	Impermeable Zones: Threshold pressure exponential parameter	CCA	0.00e+00	NONE
IMPERM_Z:PC_MAX	Impermeable Zones: Maximum allowable capillary pressure	CCA	1.00e+08	Pa
IMPERM_Z:PORE_DIS	Impermeable Zones: Brooks-Corey pore distribution parameter	CCA	7.00e-01	NONE
IMPERM_Z:POROSITY	Impermeable Zones: Effective porosity	CCA	5.00e-03	NONE
IMPERM_Z:PO_MIN	Impermeable Zones: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	CCA	1.01e+05	Pa
IMPERM_Z:PRMX_LOG	Impermeable Zones: Log of intrinsic permeability, X-direction	CCA	-3.50e+01	$log(m^2)$
IMPERM_Z:PRMY_LOG	Impermeable Zones: Log of intrinsic permeability, Y-direction	CCA	-3.50e+01	$log(m^2)$
IMPERM_Z:PRMZ_LOG	Impermeable Zones: Log of intrinsic permeability, Z-direction	CCA	-3.50e+01	$log(m^2)$
IMPERM_Z:RELP_MOD	Impermeable Zones: Model number, relative permeability model	CCA	4.00e+00	NONE
IMPERM_Z:SAT_RBRN	Impermeable Zones: Residual Brine Saturation	CCA	0.00e+00	NONE
IMPERM_Z:SAT_RGAS	Impermeable Zones: Residual Gas Saturation	CCA	0.00e+00	NONE

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Table 34. Castile Brine Reservoir Parameters

Parameter	Definition	Version	Value	Units
CASTILER:CAP_MOD	Castile Brine Reservoir: Model number, capillary pressure model	CCA	2.00e+00	NONE
CASTILER:KPT	Castile Brine Reservoir: Flag for Permeability Determined Threshold	CCA	0.00e+00	NONE
CASTILER:PCT_A	Castile Brine Reservoir: Threshold Pressure Linear Parameter	CCA	5.60e-01	Pa
CASTILER:PCT_EXP	Castile Brine Reservoir: Threshold pressure exponential parameter	CCA	-3.46e-01	NONE
CASTILER:PC_MAX	Castile Brine Reservoir: Maximum allowable capillary pressure	CCA	1.00e+08	Pa
CASTILER:PORE_DIS	Castile Brine Reservoir: Brooks-Corey pore distribution parameter	CCA	7.00e-01	NONE
CASTILER:POROSITY [1]	Castile Brine Reservoir: Effective porosity	CCA	8.70e-03	NONE
CASTILER:PO_MIN	Castile Brine Reservoir: Minimum brine pressure for capillary model KPC=3 or minimum capillary pressure for capillary model KPC=6	CCA	1.01e+05	Pa
CASTILER:RELP_MOD	Castile Brine Reservoir: Model number, relative permeability model	CCA	4.00e+00	NONE
CASTILER:SAT_IBRN	Castile Brine Reservoir: Initial Brine Saturation	CCA	1.00e+00	NONE
CASTILER:SAT_RBRN	Castile Brine Reservoir: Residual Brine Saturation	CCA	2.00e-01	NONE
CASTILER:SAT_RGAS	Castile Brine Reservoir: Residual Gas Saturation	CCA	2.00e-01	NONE

Notes:

[1] This parameter has an assigned distribution but uses the default constant value for all vectors.

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Table 35. Reference Constants

Parameter	Definition	Version	Value	Units
REFCON:ABERM	Reference Constant: Area of Berm Placed Over Waste Panel	CRA26_IS	7.50e+05	m^2
REFCON:ACF_CH4	Reference Constant: Acentric Factors - CH4	CCA	1.00e-02	NONE
REFCON:ACF_CO2	Reference Constant: Acentric Factors - CO2	CCA	2.31e-01	NONE
REFCON:ACF_H2	Reference Constant: Acentric Factors - H2	CCA	0.00e+00	NONE
REFCON:ACF_H2S	Reference Constant: Acentric Factors - H2S	CCA	1.00e-01	NONE
REFCON:ACF_N2	Reference Constant: Acentric Factors - N2	CCA	4.50e-02	NONE
REFCON:ACF_O2	Reference Constant: Acentric Factors - O2	CCA	1.90e-02	NONE
REFCON:AL2	Reference Constant: Log2	CCA	6.93e-01	NONE
REFCON:AREA_CH	Reference Constant: Area For CH Waste Disposal in CCDFGF Model	CRA26_IS	1.42e+05	m^2
REFCON:AREA_RH	Reference Constant: Area for RH waste disposal in CCDFGF model	CRA26_IS	3.53e+03	m^2
REFCON:ATMPA	Reference Constant: Conversion from std. atmosphere to Pa	CCA	1.01e+05	Pa/atm
REFCON:AVOGADRO	Reference Constant: Avogadro's number	CCA	6.02e+23	$mole^{-1}$
REFCON:BIP_11	Reference Constant: H2:H2 - Binary Interaction Parameter	CRA1	0.00e+00	NONE
REFCON:BIP_12	Reference Constant: H2:CO2 - Binary Interaction Parameter	CRA1	-3.43e-01	NONE
REFCON:BIP_13	Reference Constant: H2:CH4 - Binary Interaction Parameter	CRA1	-2.22e-02	NONE
REFCON:BIP_14	Reference Constant: H2:N2 - Binary Interaction Parameter	CRA1	9.78e-02	NONE
REFCON:BIP_15	Reference Constant: H2:H2S - Binary Interaction Parameter	CRA1	0.00e+00	NONE
REFCON:BIP_16	Reference Constant: H2:O2 - Binary Interaction Parameter	CRA1	0.00e+00	NONE
REFCON:BIP_21	Reference Constant: CO2:H2 - Binary Interaction Parameter	CRA1	-3.43e-01	NONE
REFCON:BIP_22	Reference Constant: CO2:CO2 - Binary Interaction Parameter	CRA1	0.00e+00	NONE
REFCON:BIP_23	Reference Constant: CO2:CH4 - Binary Interaction Parameter	CRA1	9.33e-02	NONE

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Table 35. Reference Constants (cont.)

Parameter	Definition	Version	Value	Units
REFCON:BIP_24	Reference Constant: CO2:N2 - Binary Interaction Parameter	CRA1	-3.15e-02	NONE
REFCON:BIP_25	Reference Constant: CO2:H2S - Binary Interaction Parameter	CRA1	9.89e-02	NONE
REFCON:BIP_26	Reference Constant: CO2:O2 - Binary Interaction Parameter	CRA1	0.00e+00	NONE
REFCON:BIP_31	Reference Constant: CH4:H2 - Binary Interaction Parameter	CRA1	-2.22e-02	NONE
REFCON:BIP_32	Reference Constant: CH4:CO2 - Binary Interaction Parameter	CRA1	9.33e-02	NONE
REFCON:BIP_33	Reference Constant: CH4:CH4 - Binary Interaction Parameter	CRA1	0.00e+00	NONE
REFCON:BIP_34	Reference Constant: CH4:N2 - Binary Interaction Parameter	CRA1	2.78e-02	NONE
REFCON:BIP_35	Reference Constant: CH4:H2S - Binary Interaction Parameter	CRA1	8.50e-02	NONE
REFCON:BIP_36	Reference Constant: CH4:O2 - Binary Interaction Parameter	CRA1	0.00e+00	NONE
REFCON:BIP_41	Reference Constant: N2:H2 - Binary Interaction Parameter	CRA1	9.78e-02	NONE
REFCON:BIP_42	Reference Constant: N2:CO2 - Binary Interaction Parameter	CRA1	-3.15e-02	NONE
REFCON:BIP_43	Reference Constant: N2:CH4 - Binary Interaction Parameter	CRA1	2.78e-02	NONE
REFCON:BIP_44	Reference Constant: N2:N2 - Binary Interaction Parameter	CRA1	0.00e+00	NONE

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Table 35. Reference Constants (cont.)

Parameter	Definition	Version	Value	Units
REFCON:BIP_45	Reference Constant: N2:H2S - Binary Interaction Parameter	CRA1	1.70e-01	NONE
REFCON:BIP_46	Reference Constant: N2:O2 - Binary Interaction Parameter	CRA1	-7.80e-03	NONE
REFCON:BIP_51	Reference Constant: H2S:H2 - Binary Interaction Parameter	CRA1	0.00e+00	NONE
REFCON:BIP_52	Reference Constant: H2S:CO2 - Binary Interaction Parameter	CRA1	9.89e-02	NONE
REFCON:BIP_53	Reference Constant: H2S:CH4 - Binary Interaction Parameter	CRA1	8.50e-02	NONE
REFCON:BIP_54	Reference Constant: H2S:N2 - Binary Interaction Parameter	CRA1	1.70e-01	NONE
REFCON:BIP_55	Reference Constant: H2S:H2S - Binary Interaction Parameter	CRA1	0.00e+00	NONE
REFCON:BIP_56	Reference Constant: H2S:O2 - Binary Interaction Parameter	CRA1	0.00e+00	NONE
REFCON:BIP_61	Reference Constant: O2:H2 - Binary Interaction Parameter	CRA1	0.00e+00	NONE
REFCON:BIP_62	Reference Constant: O2:CO2 - Binary Interaction Parameter	CRA1	0.00e+00	NONE
REFCON:BIP_63	Reference Constant: O2:CH4 - Binary Interaction Parameter	CRA1	0.00e+00	NONE
REFCON:BIP_64	Reference Constant: O2:N2 - Binary Interaction Parameter	CRA1	-7.80e-03	NONE
REFCON:BIP_65	Reference Constant: O2:H2S - Binary Interaction Parameter	CRA1	0.00e+00	NONE

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Table 35. Reference Constants (cont.)

Parameter	Definition	Version	Value	Units
REFCON:BIP_66	Reference Constant: O2:O2 - Binary Interaction Parameter	CRA1	0.00e+00	NONE
REFCON:CITOBQ	Reference Constant: Curie to Becquerel Conversion	CCA	3.70e+10	Bq/Curies
REFCON:DARM2	Reference Constant: Conversion from darcy to m^2	CCA	9.87e-13	m^2/darcy
REFCON:DAYSEC	Reference Constant: Conversion from days to seconds	CCA	8.64e+04	s/day
REFCON:DIP1	Reference Constant: Down-dip angle or slope of the repository towards the panel modeled in BRAGFLO.	PABC09	1.00e+00	NONE
REFCON:DIP2	Reference Constant: Down-dip angle or slope of the Rustler Formation towards the panel modeled in BRAGFLO.	PABC09	0.00e+00	NONE
REFCON:DN_CELL	Reference Constant: Density of Cellulosics Materials for BRAGFLO	AP132	1.10e+03	kg/m^3
REFCON:DN_FE	Reference Constant: Density of Iron	AP132	7.87e+03	kg/m^3
REFCON:DN_FEOH2	Reference Constant: Density of Iron Hydroxide	AP132	3.40e+03	kg/m^3
REFCON:DN_FES	Reference Constant: Density of Iron Sulfide	AP132	4.70e+03	kg/m^3
REFCON:DN_HYDRO	Reference Constant: Density of Hydromagnesite	CRA14	2.30e+03	kg/m^3
REFCON:DN_MGCO3	Reference Constant: Density of Magnesium Carbonate	AP132	3.05e+03	kg/m^3
REFCON:DN_MGO	Reference Constant: Density of Magnesium Oxide	AP132	3.60e+03	kg/m^3
REFCON:DN_MGOH2	Reference Constant: Density of Magnesium Hydroxide	AP132	2.37e+03	kg/m^3
REFCON:DN_SALT	Reference Constant: Density of Salts for BRAGFLO	AP132	2.18e+03	kg/m^3
REFCON:F3M3	Reference Constant: Conversion from ft^3 to m^3	CCA	2.83e-02	m^3/ft^3
REFCON:FESAPKG	Reference Constant: Iron (Fe) surface area (m^2) per kilogram (kg) of iron inventory.	RPPA	1.05e-01	m^2 per kg
REFCON:FTM	Reference Constant: Conversion from feet to meter	CCA	3.05e-01	m/ft

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Table 35. Reference Constants (cont.)

Parameter	Definition	Version	Value	Units
REFCON:FVRW	Reference Constant: Fraction of Emplaced RH Volume Occupied by RH Waste in CCDFGF Model	CRA1	1.00e+00	NONE
REFCON:FVW	Reference Constant: Fraction of Repository Volume Occupied By Waste In CCDFGF Model	CRA26_IS	2.79e-01	NONE
REFCON:GRAVACC	Reference Constant: Standard gravitational acceleration	CCA	9.81e+00	m/s^2
REFCON:HRH	Reference Constant: Emplaced Height of Remote Handled Waste in CCDFGF Model	CCA	5.09e-01	m
REFCON:MW_CELL	Reference Constant: Carbon Normalized Molecular Weight of Cellulose	CRA1	2.70e-02	kg/mole
REFCON:MW_CH4	Reference Constant: Molecular Weight of CH4	CRA1	1.60e-02	kg/mole
REFCON:MW_CO2	Reference Constant: Molecular Weight of CO2	CRA1	4.40e-02	kg/mole
REFCON:MW_FE	Reference Constant: Molecular Weight - FE	CCA	5.58e-02	kg/mole
REFCON:MW_FEOH2	Reference Constant: Molecular Weight of Iron Hydroxide	AP132	8.99e-02	kg/mole
REFCON:MW_FES	Reference Constant: Molecular Weight of Iron Sulfide	AP132	8.79e-02	kg/mole
REFCON:MW_H2	Reference Constant: Molecular Weight - H2	CCA	2.02e-03	kg/mole
REFCON:MW_H2O	Reference Constant: Molecular Weight - H2O	CCA	1.80e-02	kg/mole
REFCON:MW_H2S	Reference Constant: Molecular Weight of H2S	CRA1	3.41e-02	kg/mole
REFCON:MW_HYDRO	Reference Constant: Molecular Weight of Hydromagnesite	CRA14	4.68e-01	kg/mol
REFCON:MW_MGCO3	Reference Constant: Molecular Weight of Magnesium Carbonate	AP132	8.43e-02	kg/mole
REFCON:MW_MGO	Reference Constant: Molecular Weight of Magnesium Oxide	AP132	4.03e-02	kg/mole
REFCON:MW_MGOH2	Reference Constant: Molecular Weight of Magnesium Hydroxide	AP132	5.83e-02	kg/mole

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Table 35. Reference Constants (cont.)

Parameter	Definition	Version	Value	Units
REFCON:MW_N2	Reference Constant: Molecular Weight of N2	CRA1	2.80e-02	kg/mole
REFCON:MW_NACL	Reference Constant: Molecular Weight of NaCl	CRA1	5.84e-02	kg/mole
REFCON:MW_O2	Reference Constant: Molecular Weight of O2	CRA1	3.20e-02	kg/mole
REFCON:OMEGAA	Reference Constant: Constants for RKS EOS	CCA	4.27e-01	NONE
REFCON:OMEGAB	Reference Constant: Constants for RDS EOS	CCA	8.66e-02	NONE
REFCON:PC_CH4	Reference Constant: Critical Pressure of CH4	CCA	4.62e+06	Pa
REFCON:PC_CO2	Reference Constant: Critical Pressure of CO2	CCA	7.38e+06	Pa
REFCON:PC_H2	Reference Constant: Critical Pressure of H2	CCA	2.05e+06	Pa
REFCON:PC_H2S	Reference Constant: Critical Pressure of H2S	CCA	9.01e+06	Pa
REFCON:PC_N2	Reference Constant: Critical Pressure of N2	CCA	3.39e+06	Pa
REFCON:PC_O2	Reference Constant: Critical Pressure of O2	CCA	5.08e+06	Pa
REFCON:PI	Reference Constant: Mathematical constant: PI	CCA	3.14e+00	NONE
REFCON:PLASFAC	Reference Constant: Mass ratio of plastics to equivalent carbon.	PABC09	1.70e+00	NONE
REFCON:PSIPA	Reference Constant: Conversion from psi to pascal	CCA	6.89e+03	$Pa*in^2/lb$
REFCON:R	Reference Constant: Gas constant R	CCA	8.31e+00	J/mole*K
REFCON:SECYR	Reference Constant: Seconds to years Conversion	CCA	3.17e-08	yr/s
REFCON:STCO_10	Reference Constant: Fe Corrosion: Hydromagnesite Stoichiometric Coefficient	CRA14	0.00e+00	NONE
REFCON:STCO_11	Reference Constant: Fe Corrosion:H2 Stoichiometric Coefficient	AP132	1.00e+00	NONE
REFCON:STCO_12	Reference Constant: Fe Corrosion:H2O Stoichiometric Coefficient	AP132	-2.00e+00	NONE

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Table 35. Reference Constants (cont.)

Parameter	Definition	Version	Value	Units
REFCON:STCO_13	Reference Constant: Fe Corrosion:Fe Stoichiometric Coefficient	AP132	-1.00e+00	NONE
REFCON:STCO_14	Reference Constant: Fe Corrosion:Cellulosics Stoichiometric Coefficient	AP132	0.00e+00	NONE
REFCON:STCO_15	Reference Constant: Fe Corrosion:FeOH2 Stoichiometric Coefficient	AP132	1.00e+00	NONE
REFCON:STCO_16	Reference Constant: Fe Corrosion:FeS Stoichiometric Coefficient	AP132	0.00e+00	NONE
REFCON:STCO_17	Reference Constant: Fe Corrosion:MgO Stoichiometric Coefficient	AP132	0.00e+00	NONE
REFCON:STCO_18	Reference Constant: Fe Corrosion:MgOH2 Stoichiometric Coefficient	AP132	0.00e+00	NONE
REFCON:STCO_19	Reference Constant: Fe Corrosion:MgCO3 Stoichiometric Coefficient	AP132	0.00e+00	NONE
REFCON:STCO_20	Reference Constant: Microbial Gas Generation: Hydromagnesite Stoichiometric Coefficient	CRA14	0.00e+00	NONE
REFCON:STCO_21	Reference Constant: Microbial Gas Generation:H2 Stoichiometric Coefficient	AP132	0.00e+00	NONE
REFCON:STCO_22	Reference Constant: Microbial Gas Generation:H2O Stoichiometric Coefficient	AP132	0.00e+00	NONE
REFCON:STCO_23	Reference Constant: Microbial Gas Generation:Fe Stoichiometric Coefficient	AP132	0.00e+00	NONE
REFCON:STCO_24	Reference Constant: Microbial Gas Generation:Cellulosics Stoichiometric Coefficient	AP132	-1.00e+00	NONE
REFCON:STCO_25	Reference Constant: Microbial Gas Generation:FeOH2 Stoichiometric Coefficient	AP132	0.00e+00	NONE

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Table 35. Reference Constants (cont.)

Parameter	Definition	Version	Value	Units
REFCON:STCO_26	Reference Constant: Microbial Gas Generation:FeS Stoichiometric Coefficient	AP132	0.00e+00	NONE
REFCON:STCO_27	Reference Constant: Microbial Gas Generation:MgO Stoichiometric Coefficient	AP132	0.00e+00	NONE
REFCON:STCO_28	Reference Constant: Microbial Gas Generation:MgOH2 Stoichiometric Coefficient	AP132	0.00e+00	NONE
REFCON:STCO_29	Reference Constant: Microbial Gas Generation:MgCO3 Stoichiometric Coefficient	AP132	0.00e+00	NONE
REFCON:STCO_30	Reference Constant: FeOH2 Sulfidation: Hydromagnesite Stoichiometric Coefficient	CRA14	0.00e+00	NONE
REFCON:STCO_31	Reference Constant: FeOH2 Sulfidation:H2 Stoichiometric Coefficient	CRA14_SEN4	0.00e+00	NONE
REFCON:STCO_32	Reference Constant: FeOH2 Sulfidation:H2O Stoichiometric Coefficient	CRA14_SEN4	0.00e+00	NONE
REFCON:STCO_33	Reference Constant: FeOH2 Sulfidation:Fe Stoichiometric Coefficient	AP132	0.00e+00	NONE
REFCON:STCO_34	Reference Constant: FeOH2 Sulfidation:Cellulosics Stoichiometric Coefficient	AP132	0.00e+00	NONE
REFCON:STCO_35	Reference Constant: FeOH2 Sulfidation:FeOH2 Stoichiometric Coefficient	CRA14_SEN4	0.00e+00	NONE
REFCON:STCO_36	Reference Constant: FeOH2 Sulfidation:FeS Stoichiometric Coefficient	CRA14_SEN4	0.00e+00	NONE
REFCON:STCO_37	Reference Constant: FeOH2 Sulfidation:MgO Stoichiometric Coefficient	AP132	0.00e+00	NONE
REFCON:STCO_38	Reference Constant: FeOH2 Sulfidation:MgOH2 Stoichiometric Coefficient	AP132	0.00e+00	NONE

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Table 35. Reference Constants (cont.)

Parameter	Definition	Version	Value	Units
REFCON:STCO_39	Reference Constant: FeOH2 Sulfidation:MgCO3 Stoichiometric Coefficient	AP132	0.00e+00	NONE
REFCON:STCO_40	Reference Constant: Metallic Fe Sulfidation: Hydromagnesite Stoichiometric Coefficient	CRA14	0.00e+00	NONE
REFCON:STCO_41	Reference Constant: Metallic Fe Sulfidation:H2 Stoichiometric Coefficient	AP132	0.00e+00	NONE
REFCON:STCO_42	Reference Constant: Metallic Fe Sulfidation:H2O Stoichiometric Coefficient	AP132	0.00e+00	NONE
REFCON:STCO_43	Reference Constant: Metallic Fe Sulfidation:Fe Stoichiometric Coefficient	CRA14_SEN4	0.00e+00	NONE
REFCON:STCO_44	Reference Constant: Metallic Fe Sulfidation:Cellulosics Stoichiometric Coefficient	AP132	0.00e+00	NONE
REFCON:STCO_45	Reference Constant: Metallic Fe Sulfidation:FeOH2 Stoichiometric Coefficient	AP132	0.00e+00	NONE
REFCON:STCO_46	Reference Constant: Metallic Fe Sulfidation:FeS Stoichiometric Coefficient	CRA14_SEN4	0.00e+00	NONE
REFCON:STCO_47	Reference Constant: Metallic Fe Sulfidation:MgO Stoichiometric Coefficient	AP132	0.00e+00	NONE
REFCON:STCO_48	Reference Constant: Metallic Fe Sulfidation:MgOH2 Stoichiometric Coefficient	AP132	0.00e+00	NONE
REFCON:STCO_49	Reference Constant: Metallic Fe Sulfidation:MgCO3 Stoichiometric Coefficient	AP132	0.00e+00	NONE
REFCON:STCO_50	Reference Constant: MgO Hydration: Hydromagnesite Stoichiometric Coefficient	CRA14	0.00e+00	NONE
REFCON:STCO_51	Reference Constant: MgO Hydration:H2 Stoichiometric Coefficient	AP132	0.00e+00	NONE

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Table 35. Reference Constants (cont.)

Parameter	Definition	Version	Value	Units
REFCON:STCO_52	Reference Constant: MgO Hydration:H2O Stoichiometric Coefficient	AP132	-1.00e+00	NONE
REFCON:STCO_53	Reference Constant: MgO Hydration:Fe Stoichiometric Coefficient	AP132	0.00e+00	NONE
REFCON:STCO_54	Reference Constant: MgO Hydration:Cellulosics Stoichiometric Coefficient	AP132	0.00e+00	NONE
REFCON:STCO_55	Reference Constant: MgO Hydration:FeOH2 Stoichiometric Coefficient	AP132	0.00e+00	NONE
REFCON:STCO_56	Reference Constant: MgO Hydration:FeS Stoichiometric Coefficient	AP132	0.00e+00	NONE
REFCON:STCO_57	Reference Constant: MgO Hydration:MgO Stoichiometric Coefficient	AP132	-1.00e+00	NONE
REFCON:STCO_58	Reference Constant: MgO Hydration:MgOH2 Stoichiometric Coefficient	AP132	1.00e+00	NONE
REFCON:STCO_59	Reference Constant: MgO Hydration:MgCO3 Stoichiometric Coefficient	AP132	0.00e+00	NONE
REFCON:STCO_60	Reference Constant: MgOH2 Carbonation: Hydromagnesite Stoichiometric Coefficient	CRA14	2.50e-01	NONE
REFCON:STCO_61	Reference Constant: MgOH2 Carbonation:H2 Stoichiometric Coefficient	AP132	0.00e+00	NONE
REFCON:STCO_62	Reference Constant: MgOH2 Carbonation:H2O Stoichiometric Coefficient	CRA14	0.00e+00	NONE
REFCON:STCO_63	Reference Constant: MgOH2 Carbonation:Fe Stoichiometric Coefficient	AP132	0.00e+00	NONE
REFCON:STCO_64	Reference Constant: MgOH2 Carbonation:Cellulosics Stoichiometric Coefficient	AP132	0.00e+00	NONE

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Table 35. Reference Constants (cont.)

Parameter	Definition	Version	Value	Units
REFCON:STCO_65	Reference Constant: MgOH2 Carbonation:FeOH2 Stoichiometric Coefficient	AP132	0.00e+00	NONE
REFCON:STCO_66	Reference Constant: MgOH2 Carbonation:FeS Stoichiometric Coefficient	AP132	0.00e+00	NONE
REFCON:STCO_67	Reference Constant: MgOH2 Carbonation:MgO Stoichiometric Coefficient	AP132	0.00e+00	NONE
REFCON:STCO_68	Reference Constant: MgOH2 Carbonation:MgOH2 Stoichiometric Coefficient	CRA14	-1.25e+00	NONE
REFCON:STCO_69	Reference Constant: MgOH2 Carbonation:MgCO3 Stoichiometric Coefficient	CRA14	0.00e+00	NONE
REFCON:STCO_70	Reference Constant: MgO Carbonation: Hydromagnesite Stoichiometric Coefficient	CRA14	0.00e+00	NONE
REFCON:STCO_71	Reference Constant: MgO Carbonation:H2 Stoichiometric Coefficient	AP132	0.00e+00	NONE
REFCON:STCO_72	Reference Constant: MgO Carbonation:H2O Stoichiometric Coefficient	AP132	0.00e+00	NONE
REFCON:STCO_73	Reference Constant: MgO Carbonation:Fe Stoichiometric Coefficient	AP132	0.00e+00	NONE
REFCON:STCO_74	Reference Constant: MgO Carbonation:Cellulosics Stoichiometric Coefficient	AP132	0.00e+00	NONE
REFCON:STCO_75	Reference Constant: MgO Carbonation:FeOH2 Stoichiometric Coefficient	AP132	0.00e+00	NONE
REFCON:STCO_76	Reference Constant: MgO Carbonation:FeS Stoichiometric Coefficient	AP132	0.00e+00	NONE
REFCON:STCO_77	Reference Constant: MgO Carbonation:MgO Stoichiometric Coefficient	AP132	-1.00e+00	NONE

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Table 35. Reference Constants (cont.)

Parameter	Definition	Version	Value	Units
REFCON:STCO_78	Reference Constant: MgO Carbonation:MgOH2 Stoichiometric Coefficient	AP132	0.00e+00	NONE
REFCON:STCO_79	Reference Constant: MgO Carbonation:MgCO3 Stoichiometric Coefficient	AP132	1.00e+00	NONE
REFCON:STCO_80	Reference Constant: Hydromagnesite Conversion: Hydromagnesite Stoichiometric Coefficient	CRA14	-1.00e+00	NONE
REFCON:STCO_81	Reference Constant: Hydromagnesite Conversion: H2 Stoichiometric Coefficient	CRA14	0.00e+00	NONE
REFCON:STCO_82	Reference Constant: Hydromagnesite Conversion: H2O Stoichiometric Coefficient	CRA14	4.00e+00	NONE
REFCON:STCO_83	Reference Constant: Hydromagnesite Conversion: Fe Stoichiometric Coefficient	CRA14	0.00e+00	NONE
REFCON:STCO_84	Reference Constant: Hydromagnesite Conversion: Cellulosics Stoichiometric Coefficient	CRA14	0.00e+00	NONE
REFCON:STCO_85	Reference Constant: Hydromagnesite Conversion: FeOH2 Stoichiometric Coefficient	CRA14	0.00e+00	NONE
REFCON:STCO_86	Reference Constant: Hydromagnesite Conversion: FeS Stoichiometric Coefficient	CRA14	0.00e+00	NONE
REFCON:STCO_87	Reference Constant: Hydromagnesite Conversion: MgO Stoichiometric Coefficient	CRA14	0.00e+00	NONE
REFCON:STCO_88	Reference Constant: Hydromagnesite Conversion: MgOH2 Stoichiometric Coefficient	CRA14	1.00e+00	NONE
REFCON:STCO_89	Reference Constant: Hydromagnesite Conversion: MgCO3 Stoichiometric Coefficient	CRA14	4.00e+00	NONE
REFCON:TC_CH4	Reference Constant: Critical temperature: Methane (CH4)	CCA	1.91e+02	K

Table 35. Reference Constants (cont.)

Parameter	Definition	Version	Value	Units
REFCON:TC_CO2	Reference Constant: Critical temperature: Carbon Dioxide (CO2)	CCA	3.04e+02	K
REFCON:TC_H2	Reference Constant: Critical temperature: Hydrogen (H2)	CCA	4.36e+01	K
REFCON:TC_H2S	Reference Constant: Critical temperature: Hydrogen Sulfide (H2S)	CCA	3.74e+02	K
REFCON:TC_N2	Reference Constant: Critical temperature: Nitrogen (N2)	CCA	1.26e+02	K
REFCON:TC_O2	Reference Constant: Critical temperature: Oxygen (O2)	CCA	1.55e+02	K
REFCON:VPANLEX	Reference Constant: Excavated volume of one panel	CCA	4.61e+04	m^3
REFCON:VREPOS	Reference Constant: Excavated storage volume of repository	CRA26_IS	5.61e+05	m^3
REFCON:YRSEC	Reference Constant: Conversion from mean solar or tropical year to seconds	CCA	3.16e+07	s/yr

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Table 36. Global Parameters

Parameter	Definition	Version	Value	Units
GLOBAL:DBRMINBV	Information that applies globally: Minimum volume of brine in the repository required for a direct brine release.	CRA26_IS	6.31e+03	m^3
GLOBAL:FPICD	Information that applies globally: PIC multiplicative factor for human intrusion by drilling	TBM	1.00e+00	NONE
GLOBAL:FPICM	Information that applies globally: PIC multiplicative factor for human intrusion by mining	TBM	1.00e+00	NONE
GLOBAL:GH2AVG	Information that applies globally: Brine Radiolysis G-value - G(H2)	CRA19	1.40e-02	molecule/eV
GLOBAL:LAMBDAD	Information that applies globally: Drilling Rate Per Unit Area	CRA26_FS	1.53e-02	$(km^{-2})(yr^{-1})$
GLOBAL:MINERT	Information that applies globally: Mining rate from 40 CFR 194	CCA	1.00e-04	yr^{-1}
GLOBAL:ONEPLG	Information that applies globally: Probability of having Plug Pattern 1	CRA26_FS	3.59e-01	NONE
GLOBAL:SRADO2	Information that applies globally: Stoichiometric coefficient for O2 from radiolysis	CRA19	0.00e+00	mol O_2/mol H_2
GLOBAL:TA	Information that applies globally: Time Active Institutional Controls at WIPP Site Are Effective	CCA	1.00e+02	yr
GLOBAL:THREEPLG	Information that applies globally: Probability of having Plug Pattern 3	CRA26_FS	1.77e-01	NONE
GLOBAL:TPICD	Information that applies globally: Time over which passive institutional controls reduce rate of drilling	CCA	6.00e+02	yr
GLOBAL:TPICM	Information that applies globally: Time over which passive institutional controls reduce rate of mining	CCA	6.00e+02	yr
GLOBAL:TWOPLG	Information that applies globally: Probability of having Plug Pattern 2	CRA26_FS	4.64e-01	NONE

7.0 WASTE STREAM INVENTORY DATA FOR THE CRA26_IS PA

The WIPP PA parameter database maintains an isotope inventory for each radionuclide (Table 28) along with associated radionuclide parameters (Table 27). This section provides details for the individual waste streams that comprise the total waste inventory. The WIPP repository radionuclide inventory build-up and decay are determined using the PA code EPAUNI as documented by Kim and Kicker (2025). The updated inventory information required for the CRA26_IS PA is provided by Van Soest (2025), which includes WIPP-scale activity (Ci) for both contact-handled (CH) and remote-handled (RH) TRU wastes.

Environmental radiation protection standards for management and disposal of spent nuclear fuel, high-level and transuranic radioactive wastes as defined in 40 CFR 191 require human intrusion scenarios to be included in the PA calculations for repositories. In WIPP PA, two types of human intrusions are considered, mining of potash causing subsidence in the Rustler Formation and deep drilling events intruding the repository. Two sub-scenarios of drilling intrusions are considered: 1) a borehole is drilled through a single waste panel and intersects a pressurized brine pocket located approximately 250 meters below the repository, and 2) a borehole is drilled into the repository but does not intersect a brine pocket. The impacts of previous drilling intrusions are considered.

For scenarios that involve a drilling intrusion into the repository, release mechanisms include cuttings, cavings and spallings. To calculate the extent of release from these mechanisms, an estimate of the radionuclide content, expressed as the EPA Unit of the waste encountered via drilling is required.

Determination of the radionuclide content of the waste encountered via drilling is problematic because the loading of waste streams is uncertain. The EPA has offered guidance about how to handle this uncertainty, stating that in the absence of a waste loading plan for the repository, random waste emplacement should be assumed (see 40 CFR 194.24). Therefore, following EPA guidance, it is assumed that waste is emplaced randomly in the repository and the probability of encountering any given waste stream in a drilling intrusion is directly proportional to the volume of that waste stream in the repository.

For the WIPP PA, information about the radionuclides that would be encountered during drilling is quantified using the metric of EPA Units. The activity in EPA Units for a radionuclide is the initial source term activity (in Ci) of that radionuclide divided by the product of the waste unit factor (WUF) and the release limit (in Ci/unit of waste) for the same radionuclide (Sanchez et al. 1997). The WUF, also referred to as the “unit of waste”, is defined by 40 CFR part 191.13 (Table 1) as the number of millions of curies of alpha-emitting TRU radionuclides with half-lives longer than 20 years destined for disposal in the WIPP repository (U.S. DOE 1996). Details for the calculation of the WUF are provided by Kicker (2025). Details for the calculation of EPA Units using the PA code EPAUNI are provided by Kim and Kicker (2025).

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APPENDIX A – SAMPLED VALUES FOR PARAMETER DISTRIBUTIONS

The uncertainty in several parameters is impactful to the predicted long-term performance of the WIPP repository. To account for this uncertainty, these parameters are specified with probability distributions. The PA LHS code is implemented to sample the distributions and provide 100 vectors for 3 replicates. The sampled values for parameters are listed in Appendix A tables. The sampled parameter values have been rounded in the tables. In the Appendix A tables, LHS variable number occasionally jumps such as variable 1 to variable 4, variable 5 to variable 8, and so on, because REFCON:LHSBLANK parameter – Blank placeholder parameter for LHS – is assigned to LHS variable 2, 3, 6, 7, 12, 13, 14, 17, 19, 20, and 21 for future uses. The sampled parameter values can be found in LHS output files or WIPP PA Results Database (PA_Results). LHS output files lhs2_CRA26_IS_r1_con.trn (replicate 1), lhs2_CRA26_IS_r2_con.trn (replicate 2), and lhs2_CRA26_IS_r3_con.trn (replicate 3) are archived in a CVS repository on the FWM Linux cluster (fwm.sandia.gov) running CentOS 7. In the FWM Linux cluster, the directory of the archived LHS output files is /data/cvs/CVSLIB/WIPP_ANALYSES/CRA26_IS/LHS/Output.

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Table A-1. Sampled Values for Parameter GLOBAL:PBRINE (LHS Variable 1)
Replicate 1

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	8.94e-02	35	2.46e-01	69	3.98e-01
2	1.68e-01	36	3.56e-01	70	1.46e-01
3	1.67e-01	37	2.11e-01	71	1.01e-01
4	4.92e-01	38	3.43e-01	72	3.94e-01
5	3.63e-01	39	3.24e-01	73	2.96e-01
6	2.40e-01	40	1.47e-01	74	4.58e-01
7	3.22e-01	41	8.01e-02	75	9.83e-02
8	1.80e-01	42	3.48e-01	76	2.91e-01
9	1.42e-01	43	4.43e-01	77	1.93e-01
10	1.50e-01	44	3.31e-01	78	4.04e-01
11	5.38e-01	45	4.26e-01	79	1.84e-01
12	4.74e-01	46	3.08e-01	80	3.37e-01
13	2.00e-01	47	1.13e-01	81	2.53e-01
14	1.79e-01	48	2.45e-01	82	1.05e-01
15	1.53e-01	49	9.43e-02	83	1.27e-01
16	1.62e-01	50	7.47e-02	84	1.43e-01
17	3.76e-01	51	3.72e-01	85	3.51e-01
18	4.06e-01	52	3.64e-01	86	4.20e-01
19	1.22e-01	53	3.11e-01	87	2.99e-01
20	4.18e-01	54	4.70e-01	88	1.76e-01
21	1.17e-01	55	1.72e-01	89	4.16e-01
22	2.70e-01	56	2.07e-01	90	4.28e-01
23	2.19e-01	57	5.09e-01	91	2.63e-01
24	1.33e-01	58	4.50e-01	92	1.37e-01
25	4.56e-01	59	1.08e-01	93	1.97e-01
26	1.59e-01	60	1.23e-01	94	4.39e-01
27	1.58e-01	61	2.57e-01	95	3.93e-01
28	9.49e-02	62	1.36e-01	96	1.28e-01
29	3.69e-01	63	2.78e-01	97	4.81e-01
30	3.81e-01	64	1.15e-01	98	6.36e-02
31	4.98e-01	65	2.28e-01	99	1.31e-01
32	1.90e-01	66	2.17e-01	100	3.16e-01
33	4.10e-01	67	8.44e-02		
34	2.73e-01	68	2.26e-01		

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Table A-1. Sampled Values for Parameter GLOBAL:PBRINE (LHS Variable 1)
Replicate 2

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	3.23e-01	35	1.49e-01	69	3.11e-01
2	2.20e-01	36	9.82e-02	70	3.36e-01
3	2.29e-01	37	1.12e-01	71	4.01e-01
4	1.27e-01	38	1.64e-01	72	3.75e-01
5	2.01e-01	39	1.39e-01	73	2.93e-01
6	4.37e-01	40	3.05e-01	74	4.53e-01
7	2.78e-01	41	2.07e-01	75	1.62e-01
8	4.07e-01	42	8.08e-02	76	3.31e-01
9	3.56e-01	43	2.67e-01	77	2.56e-01
10	1.74e-01	44	1.28e-01	78	3.54e-01
11	8.97e-02	45	4.15e-01	79	4.48e-01
12	2.23e-01	46	4.28e-01	80	2.86e-01
13	3.66e-01	47	4.23e-01	81	9.58e-02
14	3.04e-01	48	3.80e-01	82	1.09e-01
15	6.00e-02	49	4.42e-01	83	2.49e-01
16	4.91e-01	50	3.50e-01	84	1.18e-01
17	1.44e-01	51	5.15e-01	85	3.18e-01
18	1.65e-01	52	1.06e-01	86	4.62e-01
19	1.94e-01	53	2.12e-01	87	2.64e-01
20	1.22e-01	54	1.15e-01	88	1.85e-01
21	4.17e-01	55	1.00e-01	89	2.45e-01
22	1.37e-01	56	1.33e-01	90	5.35e-01
23	4.78e-01	57	1.79e-01	91	3.85e-01
24	1.70e-01	58	1.76e-01	92	1.36e-01
25	1.91e-01	59	4.11e-01	93	3.96e-01
26	3.60e-01	60	1.96e-01	94	1.30e-01
27	3.72e-01	61	7.51e-02	95	4.66e-01
28	2.81e-01	62	8.36e-02	96	4.25e-01
29	1.22e-01	63	5.00e-01	97	2.39e-01
30	3.43e-01	64	3.90e-01	98	1.51e-01
31	4.04e-01	65	3.24e-01	99	2.42e-01
32	1.58e-01	66	1.72e-01	100	9.43e-02
33	1.54e-01	67	4.76e-01		
34	1.45e-01	68	2.17e-01		

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Table A-1. Sampled Values for Parameter GLOBAL:PBRINE (LHS Variable 1)
Replicate 3

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	2.42e-01	35	2.82e-01	69	4.02e-01
2	1.75e-01	36	4.29e-01	70	4.49e-01
3	1.13e-01	37	4.35e-01	71	4.27e-01
4	3.12e-01	38	2.97e-01	72	6.62e-02
5	1.78e-01	39	3.90e-01	73	1.62e-01
6	8.14e-02	40	1.00e-01	74	4.16e-01
7	2.00e-01	41	3.24e-01	75	1.95e-01
8	5.22e-01	42	2.38e-01	76	2.19e-01
9	1.27e-01	43	3.75e-01	77	4.68e-01
10	9.68e-02	44	3.22e-01	78	3.37e-01
11	6.12e-02	45	3.98e-01	79	2.26e-01
12	3.94e-01	46	1.91e-01	80	1.17e-01
13	2.07e-01	47	1.23e-01	81	1.09e-01
14	3.59e-01	48	4.60e-01	82	4.83e-01
15	1.26e-01	49	3.16e-01	83	4.87e-01
16	2.67e-01	50	3.77e-01	84	3.67e-01
17	2.64e-01	51	4.19e-01	85	2.57e-01
18	5.03e-01	52	1.43e-01	86	1.84e-01
19	5.28e-01	53	3.32e-01	87	2.91e-01
20	1.35e-01	54	9.26e-02	88	1.33e-01
21	1.98e-01	55	1.04e-01	89	4.10e-01
22	4.45e-01	56	1.58e-01	90	1.41e-01
23	3.83e-01	57	3.06e-01	91	3.61e-01
24	3.47e-01	58	1.62e-01	92	3.53e-01
25	1.69e-01	59	1.48e-01	93	4.22e-01
26	8.56e-02	60	1.31e-01	94	4.05e-01
27	1.50e-01	61	1.81e-01	95	9.08e-02
28	4.53e-01	62	1.22e-01	96	1.65e-01
29	1.45e-01	63	2.48e-01	97	3.41e-01
30	2.14e-01	64	1.19e-01	98	2.16e-01
31	1.37e-01	65	4.74e-01	99	2.54e-01
32	9.82e-02	66	1.54e-01	100	2.99e-01
33	3.71e-01	67	2.27e-01		
34	1.72e-01	68	2.74e-01		

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Table A-2. Sampled Values for Parameter BOREHOLE:DOMEGA (LHS Variable 4)
Replicate 1

Vector	Value (rad/s)	Vector	Value (rad/s)	Vector	Value (rad/s)
1	9.82e+00	35	1.24e+01	69	5.72e+00
2	7.59e+00	36	1.21e+01	70	1.23e+01
3	2.16e+01	37	7.43e+00	71	7.25e+00
4	1.11e+01	38	7.72e+00	72	5.58e+00
5	9.16e+00	39	9.46e+00	73	8.12e+00
6	6.14e+00	40	6.74e+00	74	6.89e+00
7	6.84e+00	41	6.48e+00	75	1.16e+01
8	6.31e+00	42	1.89e+01	76	9.77e+00
9	8.36e+00	43	5.04e+00	77	7.08e+00
10	1.59e+01	44	7.21e+00	78	9.03e+00
11	1.01e+01	45	8.72e+00	79	6.35e+00
12	8.27e+00	46	1.13e+01	80	7.15e+00
13	5.21e+00	47	6.66e+00	81	7.78e+00
14	1.01e+01	48	6.44e+00	82	7.97e+00
15	1.36e+01	49	4.78e+00	83	4.63e+00
16	1.03e+01	50	9.53e+00	84	5.94e+00
17	8.08e+00	51	8.01e+00	85	7.54e+00
18	5.08e+00	52	1.18e+01	86	7.90e+00
19	8.33e+00	53	7.30e+00	87	7.62e+00
20	1.57e+01	54	4.34e+00	88	6.80e+00
21	7.91e+00	55	5.82e+00	89	6.55e+00
22	1.87e+01	56	8.02e+00	90	7.66e+00
23	1.28e+01	57	6.95e+00	91	6.55e+00
24	1.34e+01	58	8.42e+00	92	8.64e+00
25	1.45e+01	59	7.41e+00	93	5.45e+00
26	7.33e+00	60	1.07e+01	94	7.83e+00
27	7.10e+00	61	4.35e+00	95	7.74e+00
28	1.04e+01	62	6.38e+00	96	8.28e+00
29	4.59e+00	63	1.06e+01	97	6.70e+00
30	7.51e+00	64	8.20e+00	98	6.62e+00
31	8.87e+00	65	7.04e+00	99	1.14e+01
32	7.38e+00	66	9.30e+00	100	8.18e+00
33	1.40e+01	67	6.99e+00		
34	6.22e+00	68	6.86e+00		

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Table A-2. Sampled Values for Parameter BOREHOLE:DOMEGA (LHS Variable 4) Replicate 2

Vector	Value (rad/s)	Vector	Value (rad/s)	Vector	Value (rad/s)
1	6.96e+00	35	8.53e+00	69	1.95e+01
2	7.49e+00	36	7.68e+00	70	1.26e+01
3	2.27e+01	37	7.97e+00	71	1.04e+01
4	9.95e+00	38	8.24e+00	72	5.13e+00
5	7.92e+00	39	5.97e+00	73	1.06e+01
6	8.32e+00	40	1.64e+01	74	6.60e+00
7	1.14e+01	41	7.33e+00	75	1.68e+01
8	7.22e+00	42	7.09e+00	76	6.52e+00
9	7.36e+00	43	1.09e+01	77	6.64e+00
10	6.14e+00	44	7.04e+00	78	5.04e+00
11	8.55e+00	45	4.27e+00	79	7.30e+00
12	6.58e+00	46	8.15e+00	80	9.29e+00
13	5.22e+00	47	1.03e+01	81	7.99e+00
14	7.75e+00	48	6.23e+00	82	6.85e+00
15	7.18e+00	49	8.83e+00	83	1.16e+01
16	7.79e+00	50	9.23e+00	84	6.99e+00
17	7.46e+00	51	8.21e+00	85	1.32e+01
18	6.38e+00	52	4.60e+00	86	6.51e+00
19	8.31e+00	53	9.53e+00	87	5.56e+00
20	6.89e+00	54	8.11e+00	88	6.40e+00
21	5.44e+00	55	4.88e+00	89	7.71e+00
22	8.72e+00	56	9.79e+00	90	7.84e+00
23	6.69e+00	57	6.31e+00	91	1.36e+01
24	5.72e+00	58	1.52e+01	92	6.80e+00
25	1.24e+01	59	7.25e+00	93	1.42e+01
26	7.53e+00	60	5.75e+00	94	4.63e+00
27	7.42e+00	61	9.91e+00	95	1.19e+01
28	1.44e+01	62	8.04e+00	96	7.86e+00
29	7.62e+00	63	6.43e+00	97	1.22e+01
30	9.50e+00	64	9.02e+00	98	8.10e+00
31	4.38e+00	65	1.10e+01	99	1.02e+01
32	6.72e+00	66	8.36e+00	100	1.12e+01
33	1.20e+01	67	6.81e+00		
34	7.14e+00	68	7.60e+00		

Information Only

Table A-2. Sampled Values for Parameter BOREHOLE:DOMEGA (LHS Variable 4) Replicate 3

Vector	Value (rad/s)	Vector	Value (rad/s)	Vector	Value (rad/s)
1	6.53e+00	35	4.61e+00	69	6.02e+00
2	5.32e+00	36	7.62e+00	70	5.56e+00
3	7.14e+00	37	1.30e+01	71	1.33e+01
4	7.05e+00	38	9.51e+00	72	1.21e+01
5	1.43e+01	39	5.12e+00	73	6.32e+00
6	4.89e+00	40	7.00e+00	74	4.65e+00
7	6.11e+00	41	9.64e+00	75	8.71e+00
8	6.68e+00	42	2.30e+01	76	7.53e+00
9	7.07e+00	43	7.49e+00	77	8.39e+00
10	7.91e+00	44	7.97e+00	78	6.79e+00
11	4.40e+00	45	5.01e+00	79	1.13e+01
12	7.72e+00	46	1.01e+01	80	1.24e+01
13	7.67e+00	47	1.04e+01	81	7.25e+00
14	4.27e+00	48	8.12e+00	82	9.27e+00
15	6.66e+00	49	6.60e+00	83	6.81e+00
16	8.19e+00	50	5.71e+00	84	6.73e+00
17	6.44e+00	51	1.41e+01	85	1.09e+01
18	6.97e+00	52	1.06e+01	86	8.30e+00
19	1.36e+01	53	7.44e+00	87	1.84e+01
20	1.18e+01	54	7.60e+00	88	1.17e+01
21	1.23e+01	55	6.86e+00	89	6.48e+00
22	6.59e+00	56	7.78e+00	90	6.40e+00
23	1.93e+01	57	7.39e+00	91	7.89e+00
24	1.15e+01	58	7.77e+00	92	7.41e+00
25	7.13e+00	59	1.53e+01	93	7.22e+00
26	8.25e+00	60	5.23e+00	94	6.28e+00
27	1.08e+01	61	1.61e+01	95	6.35e+00
28	9.97e+00	62	7.30e+00	96	1.04e+01
29	7.33e+00	63	9.04e+00	97	8.16e+00
30	6.89e+00	64	8.35e+00	98	9.84e+00
31	8.10e+00	65	8.59e+00	99	8.48e+00
32	9.80e+00	66	8.03e+00	100	8.90e+00
33	7.85e+00	67	7.99e+00		
34	9.12e+00	68	5.87e+00		

Information Only

Table A-3. Sampled Values for Parameter BOREHOLE:TAUFAIL (LHS Variable 5)
Replicate 1

Vector	Value (Pa)	Vector	Value (Pa)	Vector	Value (Pa)
1	7.15e+01	35	2.89e+01	69	4.56e+01
2	1.61e+00	36	6.62e+01	70	4.42e+01
3	5.87e+01	37	3.74e+01	71	5.12e+01
4	5.05e+01	38	6.50e+01	72	5.78e+01
5	1.01e+01	39	6.31e+01	73	6.84e+01
6	1.98e+01	40	3.23e+01	74	4.84e+01
7	6.13e+01	41	1.94e+01	75	5.29e+00
8	5.70e+01	42	7.41e+01	76	1.47e+01
9	7.70e+01	43	2.86e+01	77	4.22e+01
10	2.77e+01	44	6.38e+01	78	4.33e+01
11	6.23e+01	45	3.40e+01	79	7.59e+01
12	7.51e+01	46	4.11e+00	80	2.87e+00
13	7.92e+00	47	2.98e+01	81	5.18e+01
14	6.49e+01	48	2.50e+01	82	1.26e+01
15	2.43e+01	49	4.77e+01	83	6.91e+01
16	2.37e+01	50	1.65e+01	84	4.13e+01
17	3.45e+01	51	5.64e+01	85	7.34e+01
18	4.74e+01	52	3.48e+00	86	2.30e+01
19	3.82e+01	53	3.04e+01	87	1.84e+01
20	3.27e+01	54	6.74e+00	88	6.74e+01
21	3.99e+01	55	4.98e+01	89	2.07e+01
22	7.19e+01	56	5.94e+01	90	1.15e+01
23	5.26e+01	57	2.69e+01	91	5.45e+01
24	3.55e+01	58	3.88e+01	92	6.08e+01
25	1.08e+01	59	4.05e+01	93	4.62e+01
26	3.17e+01	60	7.33e+00	94	7.07e+01
27	3.68e+01	61	1.36e+01	95	4.27e+01
28	2.19e+01	62	5.52e+01	96	6.68e+01
29	7.29e+01	63	1.69e+01	97	1.77e+01
30	5.93e+00	64	5.39e+01	98	7.01e+01
31	3.61e+01	65	5.99e+01	99	2.20e+01
32	8.40e+00	66	5.34e+01	100	1.38e+01
33	4.48e+01	67	2.62e+01		
34	1.54e+01	68	9.75e+00		

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Table A-3. Sampled Values for Parameter BOREHOLE:TAUFAIL (LHS Variable 5) Replicate 2

Vector	Value (Pa)	Vector	Value (Pa)	Vector	Value (Pa)
1	4.63e+01	35	7.22e+01	69	6.94e+01
2	2.05e+01	36	6.73e+01	70	3.74e+01
3	5.98e+01	37	3.30e+01	71	3.61e+01
4	3.02e+01	38	9.90e+00	72	1.97e+01
5	3.08e+01	39	6.23e+01	73	6.36e+01
6	3.34e+01	40	4.94e+01	74	2.38e+01
7	1.91e+01	41	4.06e+01	75	6.06e+01
8	2.80e+01	42	5.61e+01	76	7.80e+00
9	5.53e+01	43	4.39e+01	77	7.63e+01
10	6.52e+01	44	4.90e+01	78	2.55e+01
11	1.49e+01	45	6.60e+01	79	8.75e+00
12	4.76e+01	46	6.47e+01	80	4.69e+00
13	6.85e+00	47	1.71e+01	81	6.14e+01
14	7.13e+01	48	4.00e+01	82	2.90e+00
15	5.30e+01	49	1.26e+01	83	4.20e+01
16	6.82e+01	50	3.53e+01	84	4.75e+01
17	6.68e+01	51	4.13e+01	85	6.99e+01
18	5.68e+01	52	3.82e+01	86	1.58e+01
19	5.15e+01	53	2.25e+01	87	1.35e+01
20	1.11e+01	54	5.92e+01	88	5.78e+01
21	7.36e+01	55	3.69e+01	89	1.78e+01
22	2.58e+01	56	9.69e+00	90	2.71e+01
23	1.39e+01	57	7.09e+01	91	5.41e+01
24	1.15e+01	58	7.57e+01	92	2.73e+01
25	3.68e+00	59	5.08e+01	93	4.33e+01
26	3.91e+01	60	2.17e+01	94	5.49e+01
27	5.25e+01	61	2.34e+01	95	4.99e+01
28	4.35e+00	62	4.55e+01	96	7.45e+01
29	1.65e+01	63	5.69e+00	97	4.27e+01
30	3.47e+01	64	3.20e+01	98	6.97e+00
31	7.49e+01	65	7.26e+01	99	1.84e+01
32	2.46e+01	66	1.81e+00	100	5.88e+01
33	2.91e+01	67	4.49e+01		
34	6.28e+01	68	3.10e+01		

Information Only

Table A-3. Sampled Values for Parameter BOREHOLE:TAUFAIL (LHS Variable 5) Replicate 3

Vector	Value (Pa)	Vector	Value (Pa)	Vector	Value (Pa)
1	7.45e+01	35	3.10e+01	69	2.82e+01
2	3.99e+01	36	4.30e+01	70	4.44e+01
3	3.92e+00	37	6.27e+00	71	4.01e+01
4	1.97e+01	38	1.63e+01	72	4.48e+01
5	3.38e+01	39	6.73e+01	73	2.97e+01
6	5.42e+00	40	5.86e+01	74	1.03e+01
7	1.84e+00	41	3.85e+01	75	3.05e+01
8	6.42e+01	42	7.01e+01	76	8.62e+00
9	4.86e+01	43	2.75e+01	77	2.72e+00
10	4.83e+01	44	1.79e+01	78	5.94e+01
11	6.61e+01	45	4.61e+01	79	1.15e+01
12	1.44e+01	46	3.30e+01	80	2.72e+01
13	1.26e+01	47	5.67e+01	81	2.34e+01
14	4.58e+01	48	4.71e+01	82	4.19e+01
15	3.43e+01	49	1.59e+01	83	7.05e+01
16	6.82e+01	50	7.16e+01	84	4.38e+01
17	4.13e+01	51	5.02e+00	85	5.66e+01
18	5.50e+01	52	1.85e+01	86	2.91e+01
19	2.20e+01	53	3.59e+01	87	6.94e+01
20	5.80e+01	54	3.67e+01	88	6.28e+01
21	5.16e+01	55	2.35e+01	89	5.32e+01
22	1.35e+01	56	4.97e+01	90	7.61e+01
23	9.37e+00	57	5.26e+01	91	7.48e+01
24	5.40e+01	58	5.54e+01	92	2.49e+01
25	6.52e+01	59	7.67e+01	93	3.21e+00
26	2.54e+01	60	5.10e+01	94	7.22e+01
27	1.99e+01	61	2.07e+01	95	7.35e+00
28	5.01e+01	62	6.16e+01	96	2.16e+01
29	5.97e+01	63	1.09e+01	97	6.08e+01
30	3.77e+01	64	3.51e+01	98	6.69e+01
31	6.46e+01	65	7.29e+01	99	7.36e+01
32	3.90e+01	66	3.21e+01	100	7.64e+00
33	6.20e+01	67	2.60e+01		
34	1.71e+01	68	1.37e+01		

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Table A-4. Sampled Values for Parameter SPALLMOD:REPIPERM (LHS Variable 8) Replicate 1

Vector	Value (m^2)	Vector	Value (m^2)	Vector	Value (m^2)
1	5.12e-13	35	4.26e-13	69	2.76e-14
2	1.04e-13	36	3.27e-14	70	1.12e-13
3	6.20e-13	37	3.14e-14	71	2.00e-12
4	3.44e-13	38	7.59e-13	72	3.36e-14
5	4.70e-14	39	9.57e-14	73	5.06e-14
6	1.07e-13	40	1.88e-13	74	4.17e-13
7	6.92e-14	41	6.33e-13	75	2.90e-13
8	5.84e-13	42	3.51e-14	76	1.22e-13
9	1.92e-12	43	6.62e-13	77	4.42e-13
10	6.55e-14	44	5.28e-13	78	1.48e-12
11	3.93e-13	45	1.64e-13	79	9.18e-14
12	1.76e-13	46	1.69e-13	80	2.10e-13
13	5.67e-13	47	2.57e-13	81	1.12e-12
14	1.99e-13	48	9.52e-13	82	1.41e-12
15	2.24e-12	49	8.52e-14	83	1.72e-12
16	7.81e-13	50	1.07e-12	84	2.61e-14
17	6.94e-13	51	5.84e-14	85	1.38e-13
18	2.32e-12	52	1.18e-12	86	2.30e-13
19	9.73e-13	53	8.72e-13	87	1.55e-13
20	8.93e-14	54	1.31e-12	88	7.96e-13
21	2.08e-13	55	1.37e-13	89	4.58e-13
22	4.81e-14	56	1.16e-13	90	2.42e-14
23	1.05e-12	57	8.43e-13	91	1.59e-12
24	1.58e-12	58	5.58e-14	92	3.68e-13
25	1.38e-12	59	6.27e-14	93	1.47e-13
26	1.22e-12	60	2.65e-14	94	4.83e-13
27	2.81e-13	61	3.65e-14	95	1.80e-12
28	2.45e-13	62	5.43e-14	96	7.38e-14
29	2.28e-13	63	8.00e-14	97	3.99e-14
30	1.87e-12	64	3.29e-13	98	7.09e-14
31	3.52e-13	65	1.31e-13	99	4.19e-14
32	2.94e-14	66	2.72e-13	100	2.11e-12
33	7.81e-14	67	3.86e-14		
34	3.11e-13	68	4.46e-14		

Information Only

Table A-4. Sampled Values for Parameter SPALLMOD:REPIPERM (LHS Variable 8) Replicate 2

Vector	Value (m^2)	Vector	Value (m^2)	Vector	Value (m^2)
1	2.06e-13	35	6.41e-13	69	8.03e-14
2	8.36e-13	36	5.69e-14	70	1.40e-13
3	1.26e-13	37	5.10e-14	71	1.29e-13
4	2.94e-13	38	4.58e-14	72	7.17e-14
5	7.74e-13	39	9.26e-13	73	4.56e-14
6	6.13e-13	40	2.11e-12	74	1.83e-13
7	3.14e-14	41	3.33e-14	75	1.02e-12
8	3.20e-14	42	7.45e-14	76	1.14e-12
9	5.35e-14	43	3.42e-13	77	3.29e-13
10	1.51e-13	44	2.01e-12	78	2.11e-13
11	2.72e-13	45	2.38e-13	79	1.80e-12
12	3.94e-14	46	1.75e-13	80	1.71e-12
13	9.87e-14	47	4.22e-13	81	1.60e-12
14	8.83e-14	48	4.15e-14	82	3.49e-14
15	2.86e-14	49	5.82e-14	83	3.91e-13
16	5.59e-13	50	3.58e-13	84	1.40e-12
17	4.16e-13	51	3.01e-14	85	8.87e-13
18	1.99e-13	52	1.15e-13	86	9.39e-14
19	1.63e-13	53	1.55e-13	87	6.03e-14
20	7.66e-14	54	1.29e-12	88	1.23e-12
21	1.71e-13	55	6.93e-13	89	2.46e-13
22	2.29e-13	56	1.38e-12	90	4.23e-14
23	6.57e-14	57	5.01e-14	91	1.93e-12
24	8.16e-13	58	2.49e-14	92	1.19e-13
25	8.70e-14	59	2.37e-12	93	5.33e-13
26	4.60e-13	60	1.89e-12	94	1.52e-12
27	2.84e-13	61	4.57e-13	95	2.55e-13
28	2.52e-14	62	3.72e-13	96	1.47e-12
29	2.63e-14	63	5.09e-13	97	3.03e-13
30	1.05e-12	64	1.06e-13	98	1.33e-13
31	6.73e-14	65	4.99e-13	99	9.68e-13
32	7.30e-13	66	2.24e-12	100	3.75e-14
33	6.77e-13	67	1.19e-12		
34	1.01e-13	68	5.85e-13		

Information Only

Table A-4. Sampled Values for Parameter SPALLMOD:REPIPERM (LHS Variable 8) Replicate 3

Vector	Value (m^2)	Vector	Value (m^2)	Vector	Value (m^2)
1	6.36e-14	35	6.92e-14	69	4.07e-13
2	2.86e-13	36	4.77e-14	70	1.85e-13
3	2.14e-12	37	2.34e-13	71	5.58e-14
4	2.04e-12	38	9.01e-13	72	3.63e-14
5	7.75e-14	39	1.95e-12	73	3.23e-14
6	3.26e-13	40	1.25e-12	74	2.23e-13
7	1.06e-13	41	1.30e-13	75	1.23e-13
8	1.75e-13	42	7.98e-13	76	2.74e-13
9	3.09e-13	43	3.39e-13	77	1.34e-12
10	2.45e-14	44	4.97e-14	78	6.15e-13
11	2.49e-13	45	1.03e-12	79	5.17e-13
12	1.43e-12	46	1.48e-12	80	8.87e-14
13	2.99e-13	47	4.85e-13	81	5.26e-13
14	2.10e-13	48	1.55e-13	82	9.51e-14
15	7.07e-14	49	5.51e-13	83	1.63e-12
16	6.98e-13	50	3.07e-14	84	2.67e-14
17	1.67e-12	51	1.49e-13	85	1.38e-13
18	5.12e-14	52	1.02e-13	86	1.16e-12
19	6.91e-13	53	5.87e-13	87	3.85e-13
20	1.85e-12	54	7.55e-13	88	1.61e-13
21	4.01e-14	55	2.22e-12	89	2.89e-14
22	5.37e-14	56	8.35e-13	90	5.79e-14
23	2.54e-13	57	7.98e-14	91	9.24e-13
24	1.42e-13	58	6.49e-13	92	7.57e-14
25	2.78e-14	59	9.66e-13	93	4.78e-13
26	6.31e-14	60	4.44e-14	94	1.06e-12
27	2.58e-14	61	2.05e-13	95	1.15e-13
28	9.71e-14	62	2.40e-12	96	1.93e-13
29	1.54e-12	63	1.31e-12	97	1.14e-13
30	3.49e-13	64	3.64e-13	98	3.98e-14
31	3.35e-14	65	4.37e-13	99	1.81e-12
32	1.15e-12	66	4.20e-14	100	4.35e-13
33	7.68e-13	67	8.69e-14		
34	3.64e-14	68	1.73e-13		

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Table A-5. Sampled Values for Parameter SPALLMOD:TENSLSTR (LHS Variable 9) Replicate 1

Vector	Value (Pa)	Vector	Value (Pa)	Vector	Value (Pa)
1	1.35e+05	35	1.21e+05	69	1.67e+05
2	1.44e+05	36	1.65e+05	70	1.58e+05
3	1.34e+05	37	1.39e+05	71	1.43e+05
4	1.46e+05	38	1.64e+05	72	1.60e+05
5	1.54e+05	39	1.37e+05	73	1.42e+05
6	1.59e+05	40	1.64e+05	74	1.62e+05
7	1.43e+05	41	1.66e+05	75	1.30e+05
8	1.70e+05	42	1.60e+05	76	1.33e+05
9	1.56e+05	43	1.24e+05	77	1.49e+05
10	1.69e+05	44	1.53e+05	78	1.28e+05
11	1.69e+05	45	1.29e+05	79	1.22e+05
12	1.27e+05	46	1.38e+05	80	1.62e+05
13	1.53e+05	47	1.40e+05	81	1.46e+05
14	1.22e+05	48	1.23e+05	82	1.52e+05
15	1.45e+05	49	1.26e+05	83	1.25e+05
16	1.51e+05	50	1.44e+05	84	1.50e+05
17	1.41e+05	51	1.25e+05	85	1.23e+05
18	1.49e+05	52	1.59e+05	86	1.48e+05
19	1.63e+05	53	1.40e+05	87	1.51e+05
20	1.30e+05	54	1.68e+05	88	1.56e+05
21	1.50e+05	55	1.37e+05	89	1.31e+05
22	1.63e+05	56	1.65e+05	90	1.61e+05
23	1.58e+05	57	1.21e+05	91	1.68e+05
24	1.55e+05	58	1.61e+05	92	1.32e+05
25	1.35e+05	59	1.47e+05	93	1.27e+05
26	1.55e+05	60	1.42e+05	94	1.57e+05
27	1.32e+05	61	1.66e+05	95	1.39e+05
28	1.29e+05	62	1.34e+05	96	1.67e+05
29	1.48e+05	63	1.52e+05	97	1.20e+05
30	1.36e+05	64	1.26e+05	98	1.36e+05
31	1.33e+05	65	1.45e+05	99	1.24e+05
32	1.28e+05	66	1.47e+05	100	1.57e+05
33	1.41e+05	67	1.38e+05		
34	1.31e+05	68	1.54e+05		

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Table A-5. Sampled Values for Parameter SPALLMOD:TENSLSTR (LHS Variable 9) Replicate 2

Vector	Value (Pa)	Vector	Value (Pa)	Vector	Value (Pa)
1	1.24e+05	35	1.47e+05	69	1.53e+05
2	1.44e+05	36	1.28e+05	70	1.51e+05
3	1.37e+05	37	1.36e+05	71	1.65e+05
4	1.39e+05	38	1.56e+05	72	1.60e+05
5	1.62e+05	39	1.69e+05	73	1.58e+05
6	1.22e+05	40	1.33e+05	74	1.23e+05
7	1.68e+05	41	1.27e+05	75	1.43e+05
8	1.57e+05	42	1.24e+05	76	1.26e+05
9	1.23e+05	43	1.68e+05	77	1.63e+05
10	1.52e+05	44	1.41e+05	78	1.53e+05
11	1.47e+05	45	1.46e+05	79	1.42e+05
12	1.63e+05	46	1.61e+05	80	1.51e+05
13	1.64e+05	47	1.46e+05	81	1.66e+05
14	1.25e+05	48	1.29e+05	82	1.49e+05
15	1.26e+05	49	1.50e+05	83	1.45e+05
16	1.40e+05	50	1.40e+05	84	1.66e+05
17	1.67e+05	51	1.59e+05	85	1.22e+05
18	1.55e+05	52	1.21e+05	86	1.55e+05
19	1.31e+05	53	1.70e+05	87	1.29e+05
20	1.48e+05	54	1.45e+05	88	1.54e+05
21	1.36e+05	55	1.30e+05	89	1.48e+05
22	1.25e+05	56	1.50e+05	90	1.56e+05
23	1.20e+05	57	1.59e+05	91	1.35e+05
24	1.58e+05	58	1.39e+05	92	1.35e+05
25	1.54e+05	59	1.21e+05	93	1.34e+05
26	1.62e+05	60	1.34e+05	94	1.57e+05
27	1.31e+05	61	1.42e+05	95	1.65e+05
28	1.41e+05	62	1.60e+05	96	1.69e+05
29	1.52e+05	63	1.38e+05	97	1.28e+05
30	1.37e+05	64	1.49e+05	98	1.38e+05
31	1.64e+05	65	1.27e+05	99	1.32e+05
32	1.30e+05	66	1.67e+05	100	1.43e+05
33	1.33e+05	67	1.32e+05		
34	1.61e+05	68	1.44e+05		

Information Only

Table A-5. Sampled Values for Parameter SPALLMOD:TENSLSTR (LHS Variable 9) Replicate 3

Vector	Value (Pa)	Vector	Value (Pa)	Vector	Value (Pa)
1	1.57e+05	35	1.50e+05	69	1.25e+05
2	1.26e+05	36	1.64e+05	70	1.35e+05
3	1.40e+05	37	1.24e+05	71	1.61e+05
4	1.64e+05	38	1.62e+05	72	1.49e+05
5	1.40e+05	39	1.31e+05	73	1.47e+05
6	1.38e+05	40	1.26e+05	74	1.66e+05
7	1.42e+05	41	1.61e+05	75	1.70e+05
8	1.27e+05	42	1.25e+05	76	1.45e+05
9	1.23e+05	43	1.27e+05	77	1.58e+05
10	1.52e+05	44	1.21e+05	78	1.63e+05
11	1.39e+05	45	1.29e+05	79	1.43e+05
12	1.28e+05	46	1.36e+05	80	1.67e+05
13	1.21e+05	47	1.53e+05	81	1.37e+05
14	1.65e+05	48	1.29e+05	82	1.31e+05
15	1.43e+05	49	1.62e+05	83	1.58e+05
16	1.53e+05	50	1.59e+05	84	1.54e+05
17	1.33e+05	51	1.44e+05	85	1.22e+05
18	1.66e+05	52	1.68e+05	86	1.56e+05
19	1.44e+05	53	1.34e+05	87	1.60e+05
20	1.32e+05	54	1.65e+05	88	1.63e+05
21	1.23e+05	55	1.59e+05	89	1.68e+05
22	1.57e+05	56	1.49e+05	90	1.50e+05
23	1.37e+05	57	1.45e+05	91	1.48e+05
24	1.47e+05	58	1.52e+05	92	1.56e+05
25	1.48e+05	59	1.55e+05	93	1.51e+05
26	1.28e+05	60	1.20e+05	94	1.24e+05
27	1.55e+05	61	1.41e+05	95	1.51e+05
28	1.41e+05	62	1.54e+05	96	1.38e+05
29	1.69e+05	63	1.69e+05	97	1.30e+05
30	1.22e+05	64	1.67e+05	98	1.32e+05
31	1.30e+05	65	1.33e+05	99	1.46e+05
32	1.34e+05	66	1.42e+05	100	1.35e+05
33	1.60e+05	67	1.36e+05		
34	1.39e+05	68	1.46e+05		

Information Only

Table A-6. Sampled Values for Parameter SPALLMOD:PARTDIAM (LHS Variable 10) Replicate 1

Vector	Value (m)	Vector	Value (m)	Vector	Value (m)
1	4.63e-03	35	2.56e-03	69	8.13e-03
2	1.50e-03	36	1.53e-03	70	8.39e-02
3	1.78e-02	37	1.43e-03	71	1.27e-03
4	4.96e-02	38	2.38e-02	72	4.55e-03
5	7.33e-02	39	2.26e-02	73	6.83e-02
6	3.09e-02	40	7.02e-03	74	1.07e-03
7	2.86e-02	41	1.28e-02	75	1.08e-02
8	1.93e-03	42	3.47e-03	76	1.24e-03
9	2.69e-02	43	2.20e-03	77	3.49e-03
10	3.64e-02	44	2.39e-03	78	1.71e-03
11	1.81e-03	45	3.98e-03	79	1.64e-03
12	9.30e-02	46	2.40e-02	80	3.73e-03
13	6.36e-02	47	1.34e-03	81	5.95e-03
14	2.88e-03	48	1.00e-02	82	3.94e-02
15	4.29e-03	49	1.62e-02	83	1.15e-02
16	5.92e-02	50	3.46e-02	84	3.58e-02
17	6.10e-03	51	5.07e-03	85	7.26e-03
18	2.05e-02	52	7.63e-03	86	9.71e-03
19	1.93e-02	53	3.92e-03	87	3.09e-03
20	1.34e-02	54	9.52e-03	88	3.25e-02
21	6.98e-02	55	1.41e-02	89	8.83e-03
22	6.88e-03	56	2.11e-03	90	2.12e-02
23	1.01e-03	57	6.10e-02	91	4.69e-02
24	1.58e-02	58	4.30e-02	92	1.70e-02
25	1.21e-02	59	1.84e-03	93	2.60e-02
26	9.09e-02	60	5.60e-02	94	7.99e-02
27	5.15e-02	61	1.49e-02	95	7.92e-02
28	3.31e-03	62	9.65e-02	96	8.50e-03
29	2.07e-03	63	3.99e-02	97	5.42e-02
30	4.45e-02	64	6.39e-03	98	1.84e-02
31	5.51e-03	65	2.70e-03	99	2.96e-02
32	1.10e-03	66	5.40e-03	100	2.97e-03
33	2.47e-03	67	4.99e-03		
34	1.15e-03	68	1.13e-02		

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Table A-6. Sampled Values for Parameter SPALLMOD:PARTDIAM (LHS Variable 10) Replicate 2

Vector	Value (m)	Vector	Value (m)	Vector	Value (m)
1	5.51e-03	35	1.00e-03	69	6.57e-03
2	1.55e-02	36	4.97e-03	70	3.31e-03
3	8.23e-03	37	1.06e-02	71	1.24e-03
4	1.60e-02	38	1.46e-02	72	1.10e-02
5	7.84e-02	39	1.06e-03	73	2.29e-02
6	1.55e-03	40	2.40e-02	74	1.23e-02
7	7.13e-02	41	1.82e-03	75	2.95e-03
8	2.68e-03	42	8.48e-03	76	1.70e-03
9	1.78e-03	43	2.51e-02	77	4.49e-03
10	8.91e-02	44	6.91e-03	78	5.34e-03
11	2.14e-03	45	4.72e-03	79	3.98e-02
12	2.46e-03	46	3.67e-03	80	8.71e-02
13	1.67e-02	47	1.31e-02	81	3.40e-02
14	5.28e-02	48	6.44e-02	82	9.35e-03
15	2.71e-02	49	1.19e-02	83	3.88e-03
16	8.95e-03	50	1.94e-02	84	4.24e-02
17	2.61e-02	51	1.88e-02	85	4.12e-02
18	6.63e-02	52	4.74e-02	86	1.46e-03
19	7.38e-02	53	4.46e-02	87	3.62e-03
20	6.28e-02	54	3.00e-02	88	3.52e-02
21	9.76e-02	55	2.53e-03	89	3.15e-02
22	5.13e-03	56	1.75e-02	90	3.17e-02
23	6.18e-03	57	4.18e-03	91	1.03e-02
24	2.80e-03	58	1.34e-03	92	5.88e-03
25	1.99e-03	59	4.12e-03	93	1.37e-02
26	1.11e-03	60	1.62e-03	94	2.01e-02
27	2.39e-03	61	9.48e-02	95	3.19e-03
28	3.67e-02	62	2.23e-03	96	5.68e-02
29	7.34e-03	63	2.79e-02	97	7.89e-03
30	1.19e-03	64	4.99e-02	98	5.05e-02
31	2.18e-02	65	5.93e-02	99	8.09e-02
32	3.05e-03	66	1.41e-03	100	7.04e-03
33	2.01e-03	67	9.63e-03		
34	1.31e-03	68	1.39e-02		

Information Only

Table A-6. Sampled Values for Parameter SPALLMOD:PARTDIAM (LHS Variable 10) Replicate 3

Vector	Value (m)	Vector	Value (m)	Vector	Value (m)
1	1.57e-03	35	3.13e-02	69	4.82e-03
2	1.26e-03	36	2.88e-03	70	6.66e-02
3	8.85e-03	37	3.14e-03	71	6.69e-03
4	1.20e-03	38	6.12e-03	72	3.00e-03
5	1.49e-03	39	2.04e-03	73	5.39e-02
6	3.59e-03	40	2.21e-02	74	1.44e-02
7	1.83e-02	41	2.56e-02	75	1.46e-02
8	9.15e-03	42	4.18e-03	76	7.05e-02
9	1.13e-03	43	1.98e-02	77	8.44e-03
10	1.27e-02	44	2.01e-02	78	1.98e-03
11	8.01e-03	45	7.04e-03	79	1.09e-02
12	8.24e-02	46	2.23e-03	80	1.55e-02
13	1.00e-02	47	1.36e-02	81	9.52e-02
14	1.69e-02	48	4.91e-02	82	6.57e-03
15	2.67e-03	49	1.86e-03	83	7.87e-02
16	1.12e-02	50	3.74e-03	84	4.27e-02
17	3.01e-02	51	4.67e-03	85	1.74e-02
18	2.37e-02	52	5.16e-02	86	8.69e-02
19	7.55e-02	53	4.47e-03	87	1.08e-03
20	2.43e-02	54	3.23e-03	88	6.38e-02
21	1.60e-03	55	2.48e-03	89	2.88e-02
22	1.78e-03	56	3.95e-03	90	5.17e-03
23	4.06e-02	57	2.34e-03	91	3.44e-02
24	2.65e-02	58	4.52e-02	92	3.85e-02
25	1.40e-03	59	7.74e-03	93	1.36e-03
26	3.73e-02	60	5.79e-02	94	1.68e-03
27	7.58e-03	61	5.41e-03	95	1.17e-02
28	2.60e-03	62	3.99e-03	96	5.72e-03
29	9.82e-02	63	1.04e-03	97	1.65e-02
30	2.17e-02	64	6.25e-02	98	1.25e-02
31	3.50e-02	65	5.56e-02	99	2.12e-03
32	8.88e-02	66	4.75e-02	100	5.85e-03
33	3.29e-02	67	1.20e-03		
34	9.63e-03	68	3.31e-03		

Information Only

Table A-7. Sampled Values for Parameter SPALLMOD:REPIPOR (LHS Variable 11) Replicate 1

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	6.09e-01	35	4.32e-01	69	6.20e-01
2	4.46e-01	36	4.92e-01	70	5.06e-01
3	4.56e-01	37	6.15e-01	71	3.88e-01
4	3.51e-01	38	6.26e-01	72	4.47e-01
5	5.22e-01	39	5.35e-01	73	3.68e-01
6	4.54e-01	40	4.66e-01	74	6.02e-01
7	5.47e-01	41	4.78e-01	75	6.39e-01
8	5.67e-01	42	3.80e-01	76	5.92e-01
9	5.27e-01	43	6.17e-01	77	5.95e-01
10	3.76e-01	44	4.87e-01	78	4.01e-01
11	5.87e-01	45	5.49e-01	79	5.05e-01
12	5.57e-01	46	6.50e-01	80	5.78e-01
13	4.07e-01	47	4.95e-01	81	5.17e-01
14	6.33e-01	48	5.60e-01	82	4.96e-01
15	6.37e-01	49	6.01e-01	83	4.62e-01
16	5.65e-01	50	6.11e-01	84	3.72e-01
17	4.19e-01	51	5.72e-01	85	4.69e-01
18	5.26e-01	52	4.17e-01	86	5.40e-01
19	6.53e-01	53	3.54e-01	87	5.13e-01
20	6.07e-01	54	4.50e-01	88	5.91e-01
21	3.65e-01	55	4.11e-01	89	6.29e-01
22	4.77e-01	56	6.58e-01	90	4.38e-01
23	4.04e-01	57	4.73e-01	91	6.24e-01
24	3.83e-01	58	4.86e-01	92	3.73e-01
25	5.01e-01	59	4.41e-01	93	4.35e-01
26	3.62e-01	60	5.84e-01	94	5.61e-01
27	3.99e-01	61	3.85e-01	95	4.81e-01
28	3.57e-01	62	6.41e-01	96	5.52e-01
29	5.44e-01	63	5.75e-01	97	4.27e-01
30	5.37e-01	64	5.32e-01	98	5.18e-01
31	5.81e-01	65	4.29e-01	99	6.56e-01
32	4.60e-01	66	5.08e-01	100	4.12e-01
33	4.22e-01	67	3.95e-01		
34	3.91e-01	68	6.45e-01		

Information Only

Table A-7. Sampled Values for Parameter SPALLMOD:REPIPOR (LHS Variable 11) Replicate 2

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	4.54e-01	35	5.85e-01	69	6.40e-01
2	6.31e-01	36	4.48e-01	70	5.50e-01
3	5.61e-01	37	3.92e-01	71	3.57e-01
4	5.59e-01	38	3.99e-01	72	5.17e-01
5	3.89e-01	39	4.68e-01	73	3.75e-01
6	3.51e-01	40	4.09e-01	74	3.68e-01
7	4.02e-01	41	3.54e-01	75	4.87e-01
8	5.34e-01	42	3.82e-01	76	6.58e-01
9	6.07e-01	43	5.41e-01	77	4.72e-01
10	4.50e-01	44	6.35e-01	78	6.17e-01
11	5.53e-01	45	5.26e-01	79	5.57e-01
12	6.08e-01	46	5.08e-01	80	5.91e-01
13	4.23e-01	47	4.44e-01	81	4.11e-01
14	5.79e-01	48	6.46e-01	82	4.17e-01
15	4.99e-01	49	5.03e-01	83	4.83e-01
16	4.05e-01	50	4.81e-01	84	4.38e-01
17	3.71e-01	51	5.20e-01	85	4.21e-01
18	3.62e-01	52	5.28e-01	86	3.74e-01
19	5.44e-01	53	5.68e-01	87	6.11e-01
20	5.93e-01	54	6.28e-01	88	4.78e-01
21	5.30e-01	55	4.13e-01	89	4.64e-01
22	5.98e-01	56	4.30e-01	90	5.37e-01
23	5.23e-01	57	6.36e-01	91	4.56e-01
24	6.01e-01	58	5.65e-01	92	4.93e-01
25	4.65e-01	59	4.75e-01	93	5.78e-01
26	5.88e-01	60	4.24e-01	94	5.73e-01
27	4.36e-01	61	4.40e-01	95	5.47e-01
28	6.15e-01	62	6.43e-01	96	6.20e-01
29	4.61e-01	63	6.54e-01	97	5.75e-01
30	3.96e-01	64	5.98e-01	98	4.91e-01
31	3.63e-01	65	4.33e-01	99	5.13e-01
32	3.85e-01	66	3.80e-01	100	5.07e-01
33	6.25e-01	67	4.98e-01		
34	6.54e-01	68	6.50e-01		

Information Only

Table A-7. Sampled Values for Parameter SPALLMOD:REPIPOR (LHS Variable 11) Replicate 3

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	3.65e-01	35	4.93e-01	69	3.61e-01
2	4.15e-01	36	3.75e-01	70	6.17e-01
3	5.71e-01	37	6.32e-01	71	6.33e-01
4	6.22e-01	38	3.54e-01	72	4.78e-01
5	5.75e-01	39	5.13e-01	73	4.42e-01
6	5.87e-01	40	4.11e-01	74	4.07e-01
7	6.48e-01	41	6.42e-01	75	3.73e-01
8	4.47e-01	42	4.66e-01	76	4.89e-01
9	4.20e-01	43	4.03e-01	77	5.66e-01
10	4.97e-01	44	6.12e-01	78	4.30e-01
11	4.85e-01	45	6.47e-01	79	5.92e-01
12	3.67e-01	46	5.58e-01	80	5.33e-01
13	3.70e-01	47	5.76e-01	81	4.91e-01
14	4.37e-01	48	6.01e-01	82	4.32e-01
15	5.17e-01	49	6.40e-01	83	5.48e-01
16	6.35e-01	50	6.54e-01	84	3.52e-01
17	5.37e-01	51	3.89e-01	85	5.35e-01
18	5.60e-01	52	6.15e-01	86	5.11e-01
19	4.71e-01	53	3.84e-01	87	5.45e-01
20	6.02e-01	54	6.51e-01	88	3.79e-01
21	5.83e-01	55	5.21e-01	89	4.21e-01
22	5.91e-01	56	4.69e-01	90	5.00e-01
23	5.05e-01	57	6.29e-01	91	5.63e-01
24	5.42e-01	58	4.76e-01	92	5.98e-01
25	3.98e-01	59	4.27e-01	93	4.58e-01
26	4.15e-01	60	6.58e-01	94	3.91e-01
27	4.45e-01	61	4.00e-01	95	5.52e-01
28	5.29e-01	62	3.95e-01	96	4.60e-01
29	4.64e-01	63	5.69e-01	97	4.53e-01
30	5.49e-01	64	5.19e-01	98	6.23e-01
31	4.50e-01	65	5.25e-01	99	6.09e-01
32	4.39e-01	66	5.82e-01	100	3.86e-01
33	6.05e-01	67	4.83e-01		
34	5.08e-01	68	3.56e-01		

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Table A-8. Sampled Values for Parameter SOLMOD3:SOLVAR (LHS Variable 15)
Replicate 1

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	-1.13e-01	35	-2.59e+00	69	-5.38e-01
2	-2.52e-01	36	-1.88e+00	70	-6.78e-01
3	1.76e-01	37	-1.66e-01	71	5.32e-02
4	-3.68e-01	38	-1.21e-01	72	-5.49e-01
5	-2.11e+00	39	-2.30e+00	73	-4.92e-01
6	2.19e-01	40	-5.51e-01	74	1.27e-02
7	5.32e-01	41	-2.20e-01	75	-1.55e-01
8	3.88e-02	42	-3.42e-01	76	-2.12e-01
9	-1.94e+00	43	-1.02e+00	77	-9.87e-02
10	-2.48e+00	44	-7.54e-02	78	-4.48e-01
11	-2.73e+00	45	-1.89e+00	79	-8.11e-01
12	-4.69e-01	46	-1.39e-02	80	-3.03e-01
13	-7.86e-01	47	-2.62e+00	81	4.89e-01
14	-3.41e-01	48	-6.51e-01	82	3.12e-01
15	-1.60e+00	49	-7.19e-01	83	1.97e-01
16	-3.85e-01	50	-5.76e-01	84	-1.90e+00
17	1.82e-01	51	4.13e-01	85	-1.74e-01
18	-1.30e-01	52	-2.86e-01	86	-6.70e-01
19	-1.88e+00	53	-1.88e+00	87	-3.42e-01
20	-1.98e+00	54	-6.68e-01	88	-1.88e+00
21	-1.80e-01	55	-2.63e-01	89	-1.91e+00
22	1.11e-01	56	1.96e-01	90	3.27e-01
23	1.58e-01	57	-3.49e-01	91	-5.90e-01
24	-8.94e-01	58	-1.12e-01	92	3.20e-01
25	1.59e-01	59	1.64e-01	93	-3.36e-01
26	2.32e-01	60	5.87e-01	94	-1.63e-01
27	-6.76e-01	61	-4.27e-01	95	5.81e-01
28	-2.42e-01	62	-1.58e-01	96	2.80e-01
29	1.60e-01	63	6.54e-02	97	-1.96e-01
30	-1.40e-01	64	-9.18e-01	98	-4.99e-01
31	5.94e-01	65	-4.06e-01	99	-3.55e-01
32	-2.69e-01	66	4.36e-01	100	-2.92e-01
33	3.55e-01	67	3.22e-01		
34	1.24e-01	68	-5.14e-01		

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Table A-8. Sampled Values for Parameter SOLMOD3:SOLVAR (LHS Variable 15) Replicate 2

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	-3.38e-01	35	-1.88e+00	69	7.92e-02
2	-6.26e-01	36	-6.67e-01	70	-1.25e-01
3	-4.35e-01	37	-4.35e-02	71	-4.23e-01
4	3.81e-01	38	-7.58e-01	72	1.64e-01
5	1.15e-01	39	-3.71e-01	73	-2.01e+00
6	-5.53e-01	40	-2.38e+00	74	1.71e-01
7	-2.08e+00	41	-1.80e-01	75	-1.61e-01
8	5.80e-01	42	-5.48e-01	76	-5.59e-01
9	3.08e-01	43	-2.43e-01	77	-2.54e-01
10	1.28e-01	44	-1.88e+00	78	-3.51e-01
11	-2.64e-01	45	-3.60e-01	79	-2.77e-01
12	-1.88e+00	46	2.15e-01	80	-6.42e-03
13	-1.89e+00	47	2.42e-02	81	-3.91e-01
14	-6.71e-01	48	-5.34e-01	82	3.23e-01
15	1.89e-01	49	-4.48e-01	83	-2.20e-01
16	-1.96e+00	50	1.79e-01	84	1.58e-01
17	-5.98e-01	51	-1.00e+00	85	-1.12e-01
18	3.96e-01	52	-2.19e+00	86	-1.77e-01
19	-1.60e-01	53	-5.24e-01	87	-1.47e-01
20	-3.34e-01	54	2.52e-01	88	-6.74e-01
21	-2.70e+00	55	1.60e-01	89	-7.12e-01
22	-1.37e+00	56	-1.12e-01	90	-7.71e-01
23	-3.42e-01	57	3.42e-01	91	3.20e-01
24	-2.96e-01	58	1.57e-01	92	-1.65e+00
25	-1.66e-01	59	-2.05e-01	93	-1.19e-01
26	-3.42e-01	60	-1.13e-01	94	-2.58e+00
27	2.91e-01	61	-4.81e-01	95	-2.61e+00
28	-4.65e-01	62	-2.02e-01	96	4.47e-01
29	-9.03e-01	63	1.99e-01	97	-1.90e+00
30	-8.90e-02	64	-1.58e-01	98	5.40e-01
31	5.96e-01	65	-3.10e-01	99	4.87e-01
32	-8.53e-01	66	-4.99e-01	100	5.25e-02
33	-1.88e+00	67	-2.72e-01		
34	-8.34e-01	68	5.89e-01		

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Table A-8. Sampled Values for Parameter SOLMOD3:SOLVAR (LHS Variable 15) Replicate 3

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	-1.89e+00	35	-2.57e+00	69	-1.56e-01
2	1.61e-01	36	1.57e-01	70	-2.01e+00
3	1.79e-01	37	8.28e-02	71	1.74e-01
4	-2.59e-01	38	4.12e-01	72	2.59e-01
5	-2.21e+00	39	-3.48e-01	73	-8.11e-01
6	-1.88e+00	40	-5.14e-01	74	-1.84e-01
7	4.05e-02	41	-1.71e-01	75	-3.42e-01
8	1.59e-01	42	-5.59e-01	76	2.07e-01
9	-4.20e-01	43	-8.96e-01	77	-6.76e-01
10	-7.73e-01	44	3.55e-01	78	-1.88e+00
11	3.19e-01	45	-3.92e-01	79	-6.09e-01
12	-5.01e-01	46	-6.31e-01	80	4.20e-01
13	-2.36e+00	47	-2.34e-01	81	1.10e-02
14	-2.49e-01	48	-2.65e+00	82	-1.13e-01
15	-1.12e-01	49	5.27e-01	83	3.16e-01
16	-3.02e-01	50	-5.41e-01	84	-4.60e-02
17	1.92e-01	51	-1.74e-01	85	1.61e-01
18	2.70e-01	52	-2.75e+00	86	-1.88e+00
19	-5.74e-01	53	-2.20e-01	87	-3.62e-01
20	-5.38e-01	54	-1.95e-01	88	-3.15e-01
21	-6.87e-01	55	4.79e-01	89	-3.79e-01
22	-1.39e-01	56	-7.53e-01	90	-8.85e-01
23	-1.19e+00	57	-3.42e-01	91	-4.61e-01
24	-1.65e+00	58	-1.36e-01	92	-4.51e-01
25	-4.29e-01	59	3.40e-01	93	-1.90e+00
26	1.01e-01	60	-1.13e-01	94	-1.96e+00
27	-8.73e-02	61	-6.72e-01	95	-3.41e-01
28	-2.17e-01	62	-4.92e-01	96	-2.12e+00
29	-1.60e-01	63	-2.75e-01	97	3.22e-01
30	-1.62e-01	64	-1.57e+00	98	-6.60e-01
31	2.10e-01	65	5.90e-01	99	4.68e-02
32	-1.89e+00	66	1.52e-01	100	5.92e-01
33	-1.13e-01	67	-3.22e-01		
34	5.79e-01	68	-2.83e-01		

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Table A-9. Sampled Values for Parameter SOLMOD4:SOLVAR (LHS Variable 16)
Replicate 1

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	-2.96e-01	35	-1.50e+00	69	3.66e-01
2	-4.95e-02	36	-1.68e+00	70	-1.32e-01
3	-6.42e-01	37	-9.23e-01	71	-1.73e+00
4	-2.79e-02	38	-4.76e-01	72	-7.84e-01
5	-1.66e+00	39	-1.84e+00	73	-1.80e+00
6	-1.74e+00	40	-1.32e+00	74	-1.99e+00
7	2.03e-01	41	-1.06e+00	75	-5.16e-01
8	-1.23e+00	42	3.03e-01	76	6.78e-02
9	-2.09e-01	43	-3.86e-01	77	1.62e-01
10	-1.05e+00	44	2.58e-01	78	-3.64e-01
11	-6.42e-02	45	-9.56e-01	79	-1.25e+00
12	-1.61e+00	46	-9.54e-01	80	-1.59e+00
13	-9.78e-01	47	-1.47e+00	81	-1.44e+00
14	-7.16e-01	48	-5.27e-01	82	9.93e-03
15	-1.06e-01	49	3.65e-02	83	-1.37e+00
16	-8.43e-01	50	-1.10e+00	84	-1.00e+00
17	4.65e-01	51	-9.98e-01	85	1.97e-01
18	-9.94e-01	52	-1.29e+00	86	-1.78e+00
19	8.05e-02	53	4.06e-01	87	-7.36e-01
20	4.23e-01	54	-1.22e+00	88	-1.53e+00
21	-1.01e+00	55	-9.92e-01	89	-9.50e-01
22	-8.69e-01	56	-1.01e+00	90	-1.88e+00
23	-9.68e-01	57	-1.39e-01	91	-5.68e-01
24	-9.63e-01	58	-6.00e-01	92	-3.29e-01
25	-9.81e-01	59	-1.96e+00	93	3.20e-01
26	-4.03e-01	60	-2.27e-01	94	-1.90e+00
27	-1.16e+00	61	5.13e-01	95	-1.01e+00
28	-1.40e+00	62	-6.72e-01	96	2.72e-01
29	-1.19e+00	63	-1.55e+00	97	-9.67e-01
30	-7.84e-01	64	-1.87e-01	98	-9.06e-01
31	-1.14e+00	65	-9.85e-01	99	-1.95e+00
32	-9.75e-01	66	-2.63e-01	100	1.39e-01
33	-2.89e-01	67	-4.51e-01		
34	-1.35e+00	68	4.82e-01		

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Table A-9. Sampled Values for Parameter SOLMOD4:SOLVAR (LHS Variable 16) Replicate 2

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	-1.22e-01	35	-1.86e+00	69	-4.62e-02
2	3.54e-01	36	-2.43e-01	70	-1.54e+00
3	-9.72e-01	37	-6.19e-01	71	8.21e-02
4	4.99e-01	38	-1.77e+00	72	-4.85e-01
5	-4.56e-01	39	-2.58e-02	73	2.40e-01
6	-1.07e+00	40	-4.12e-01	74	-1.51e+00
7	-1.00e+00	41	-8.37e-01	75	-1.99e+00
8	-7.76e-01	42	-9.85e-01	76	-9.95e-01
9	-2.36e-01	43	4.67e-01	77	-9.83e-01
10	-1.02e+00	44	-7.50e-02	78	2.21e-01
11	-5.28e-01	45	-7.22e-01	79	-6.28e-01
12	-1.58e+00	46	-8.11e-01	80	-1.35e+00
13	-1.29e+00	47	-2.89e-01	81	-8.93e-01
14	-9.49e-01	48	2.96e-01	82	-1.58e-01
15	-1.54e+00	49	1.81e-01	83	-1.46e+00
16	-1.21e+00	50	-1.00e+00	84	-1.19e+00
17	-7.08e-01	51	-1.95e+00	85	-1.01e+00
18	-1.71e+00	52	2.68e-01	86	-5.06e-01
19	1.42e-01	53	-1.38e+00	87	-1.27e+00
20	-1.14e+00	54	-1.09e+00	88	-1.64e+00
21	-1.44e+00	55	-9.62e-01	89	-3.11e-01
22	-1.24e+00	56	-1.79e+00	90	-3.24e-01
23	-9.78e-01	57	-1.69e+00	91	-6.71e-01
24	-9.86e-02	58	5.04e-01	92	1.35e-01
25	-1.76e+00	59	-8.76e-01	93	-1.83e+00
26	-9.92e-01	60	-9.54e-01	94	-9.35e-01
27	-1.05e+00	61	4.30e-01	95	4.47e-02
28	-1.40e+00	62	-1.01e+00	96	3.23e-01
29	-1.15e+00	63	-3.75e-01	97	-9.64e-01
30	-5.70e-01	64	-1.62e+00	98	-1.64e-01
31	-2.07e-01	65	-9.71e-01	99	-9.57e-01
32	-1.32e+00	66	2.43e-03	100	6.08e-02
33	4.08e-01	67	-3.56e-01		
34	-1.93e+00	68	-1.90e+00		

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Table A-9. Sampled Values for Parameter SOLMOD4:SOLVAR (LHS Variable 16) Replicate 3

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	-2.43e-01	35	-1.02e+00	69	-4.44e-01
2	-5.56e-01	36	2.60e-01	70	-1.32e-01
3	-6.15e-02	37	-1.99e+00	71	-9.84e-01
4	-7.71e-01	38	-1.17e+00	72	-9.99e-01
5	4.26e-01	39	-1.70e-01	73	-1.30e+00
6	-1.71e+00	40	3.34e-01	74	-6.01e-01
7	5.27e-01	41	-9.80e-01	75	2.08e-01
8	-1.36e+00	42	-1.59e+00	76	-1.06e+00
9	-3.07e-01	43	-9.57e-01	77	-3.35e-01
10	-3.60e-01	44	4.37e-02	78	-1.88e+00
11	-9.72e-01	45	-1.75e+00	79	-8.80e-01
12	-4.98e-01	46	-1.46e+00	80	-8.48e-02
13	-5.64e-01	47	-6.75e-01	81	-1.10e+00
14	-3.87e-01	48	-1.92e-01	82	-1.41e+00
15	-1.39e+00	49	-9.84e-01	83	3.77e-01
16	5.23e-02	50	-1.23e+00	84	-9.67e-01
17	-8.97e-01	51	-1.51e+00	85	1.67e-01
18	2.58e-01	52	-8.21e-01	86	-1.68e+00
19	-9.91e-01	53	-1.70e-02	87	-1.32e+00
20	4.63e-01	54	-4.08e-01	88	1.58e-02
21	-1.04e+00	55	-4.61e-01	89	-2.31e-01
22	-1.78e+00	56	-6.54e-01	90	-1.28e+00
23	-1.13e+00	57	-4.19e-02	91	3.83e-01
24	-9.48e-01	58	-1.66e+00	92	-1.62e+00
25	-1.89e+00	59	-1.43e+00	93	-1.56e+00
26	-9.95e-01	60	-1.01e+00	94	-9.52e-01
27	-8.15e-01	61	4.82e-01	95	-1.00e+00
28	-9.63e-01	62	-1.15e+00	96	-7.43e-01
29	-1.97e+00	63	-7.15e-01	97	1.04e-01
30	1.31e-01	64	-1.56e-01	98	-2.79e-01
31	-1.85e+00	65	-1.82e+00	99	-9.21e-01
32	-1.92e+00	66	-1.01e+00	100	-1.53e+00
33	-1.22e+00	67	-9.75e-01		
34	3.01e-01	68	1.83e-01		

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Table A-10. Sampled Values for Parameter GLOBAL:OXSTAT (LHS Variable 18)
Replicate 1

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	7.30e-01	35	3.20e-01	69	2.18e-01
2	4.65e-01	36	9.54e-01	70	7.47e-01
3	2.29e-01	37	4.11e-01	71	7.71e-01
4	2.00e-01	38	9.01e-02	72	4.42e-01
5	8.67e-01	39	1.75e-01	73	8.72e-01
6	7.91e-01	40	8.37e-01	74	6.61e-01
7	4.75e-01	41	7.05e-02	75	9.80e-01
8	5.71e-01	42	1.45e-01	76	5.30e-01
9	7.14e-01	43	2.87e-01	77	7.21e-01
10	4.01e-01	44	5.82e-01	78	1.66e-01
11	4.31e-01	45	8.85e-01	79	1.39e-01
12	6.78e-01	46	8.10e-01	80	4.38e-03
13	6.47e-01	47	2.70e-01	81	5.83e-02
14	7.53e-01	48	9.05e-01	82	3.55e-01
15	1.24e-01	49	3.65e-01	83	7.09e-01
16	1.10e-01	50	3.57e-02	84	6.40e-01
17	3.41e-01	51	5.11e-01	85	2.05e-01
18	2.47e-01	52	8.99e-01	86	5.59e-01
19	3.90e-01	53	6.95e-01	87	9.46e-01
20	3.23e-01	54	9.27e-01	88	9.37e-01
21	1.63e-02	55	1.88e-01	89	2.12e-02
22	2.97e-01	56	9.87e-01	90	6.29e-01
23	8.17e-01	57	7.85e-01	91	4.88e-02
24	6.19e-01	58	1.53e-01	92	9.95e-01
25	3.36e-01	59	6.69e-02	93	6.59e-01
26	9.13e-01	60	5.29e-01	94	5.48e-01
27	7.67e-01	61	1.01e-01	95	2.56e-01
28	8.41e-02	62	4.57e-01	96	8.25e-01
29	2.75e-01	63	2.30e-01	97	4.98e-01
30	5.99e-01	64	3.87e-01	98	6.90e-01
31	4.21e-01	65	8.40e-01	99	5.63e-01
32	4.81e-01	66	5.06e-01	100	9.64e-01
33	3.80e-01	67	6.01e-01		
34	3.05e-01	68	8.51e-01		

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Table A-10. Sampled Values for Parameter GLOBAL:OXSTAT (LHS Variable 18) Replicate 2

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	6.80e-01	35	1.58e-01	69	1.05e-01
2	8.49e-01	36	6.57e-01	70	1.49e-01
3	7.79e-01	37	2.40e-01	71	2.06e-01
4	6.22e-01	38	5.50e-01	72	9.27e-01
5	2.83e-01	39	8.06e-01	73	5.10e-01
6	7.49e-01	40	1.38e-01	74	7.69e-01
7	9.06e-02	41	4.36e-01	75	4.74e-01
8	3.21e-01	42	3.37e-01	76	8.93e-01
9	2.42e-01	43	4.78e-02	77	2.78e-01
10	9.80e-01	44	3.64e-01	78	5.28e-02
11	5.97e-01	45	9.89e-01	79	2.18e-01
12	8.61e-01	46	3.10e-01	80	4.28e-01
13	8.15e-01	47	8.81e-01	81	7.07e-01
14	4.69e-01	48	7.29e-01	82	8.48e-02
15	4.84e-01	49	5.40e-01	83	3.75e-01
16	7.96e-01	50	7.88e-01	84	1.86e-01
17	8.53e-01	51	7.89e-03	85	3.59e-01
18	8.74e-01	52	2.64e-01	86	1.27e-01
19	2.50e-01	53	6.36e-01	87	4.20e-01
20	3.92e-01	54	4.07e-01	88	9.39e-01
21	2.23e-01	55	7.40e-02	89	3.05e-01
22	5.00e-01	56	6.05e-01	90	6.66e-01
23	1.69e-01	57	5.11e-01	91	4.52e-01
24	6.92e-01	58	9.09e-01	92	1.98e-01
25	5.27e-01	59	2.04e-02	93	6.50e-01
26	8.30e-01	60	6.16e-01	94	1.17e-01
27	9.92e-01	61	2.97e-01	95	8.22e-01
28	9.11e-01	62	3.46e-01	96	7.13e-01
29	5.80e-01	63	5.42e-01	97	1.74e-01
30	6.92e-02	64	5.77e-01	98	4.49e-01
31	3.88e-02	65	9.48e-01	99	9.67e-01
32	7.32e-01	66	7.58e-01	100	9.59e-01
33	6.87e-01	67	5.65e-01		
34	3.81e-01	68	1.73e-02		

Information Only

Table A-10. Sampled Values for Parameter GLOBAL:OXSTAT (LHS Variable 18) Replicate 3

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	5.16e-01	35	4.41e-01	69	5.29e-01
2	2.01e-01	36	9.11e-01	70	1.76e-01
3	1.27e-01	37	6.54e-01	71	3.00e-01
4	5.88e-01	38	2.66e-01	72	2.85e-01
5	8.10e-04	39	8.61e-01	73	5.79e-01
6	9.67e-01	40	8.09e-01	74	2.26e-02
7	8.14e-01	41	3.38e-01	75	3.94e-01
8	2.60e-01	42	7.14e-01	76	3.17e-01
9	3.61e-01	43	4.20e-01	77	9.55e-02
10	3.26e-01	44	8.94e-01	78	1.82e-01
11	7.92e-01	45	5.90e-01	79	4.30e-01
12	6.94e-01	46	9.03e-01	80	1.32e-01
13	4.99e-01	47	8.36e-01	81	3.02e-01
14	1.63e-01	48	4.66e-01	82	2.46e-01
15	7.86e-02	49	5.44e-01	83	9.36e-01
16	5.52e-01	50	6.74e-01	84	6.25e-01
17	3.43e-01	51	7.22e-01	85	8.47e-01
18	6.15e-01	52	9.56e-01	86	8.96e-02
19	6.45e-01	53	2.20e-01	87	4.89e-01
20	5.28e-02	54	2.39e-01	88	9.77e-01
21	3.55e-01	55	5.32e-01	89	7.06e-01
22	7.63e-01	56	4.04e-02	90	4.38e-01
23	8.28e-01	57	1.02e-01	91	9.47e-01
24	1.72e-02	58	7.38e-01	92	7.85e-01
25	7.60e-01	59	6.05e-01	93	4.73e-01
26	6.41e-02	60	2.18e-01	94	7.45e-01
27	7.77e-01	61	4.52e-01	95	9.90e-01
28	1.97e-01	62	3.78e-01	96	8.83e-01
29	1.45e-01	63	9.94e-01	97	8.53e-01
30	3.89e-01	64	3.50e-02	98	8.79e-01
31	1.11e-01	65	5.00e-01	99	4.09e-01
32	9.26e-01	66	2.73e-01	100	6.85e-01
33	6.38e-01	67	1.56e-01		
34	6.62e-01	68	5.64e-01		

Information Only

Table A-11. Sampled Values for Parameter STEEL:HUMCORR (LHS Variable 22)
Replicate 1

Vector	Value (m/s)	Vector	Value (m/s)	Vector	Value (m/s)
1	2.22e-16	35	2.99e-16	69	9.37e-16
2	2.08e-16	36	5.63e-17	70	2.70e-19
3	1.96e-19	37	1.23e-17	71	6.66e-16
4	4.22e-16	38	3.59e-19	72	4.34e-16
5	2.89e-16	39	4.29e-16	73	4.65e-17
6	9.41e-16	40	3.63e-17	74	1.25e-16
7	3.36e-17	41	4.39e-16	75	3.18e-16
8	2.51e-16	42	3.06e-16	76	1.91e-16
9	3.72e-16	43	4.94e-17	77	7.87e-16
10	7.05e-19	44	5.18e-20	78	2.01e-17
11	2.80e-16	45	4.43e-17	79	3.16e-16
12	5.57e-16	46	3.23e-20	80	2.73e-16
13	3.30e-16	47	9.09e-17	81	2.34e-19
14	8.76e-16	48	3.16e-19	82	8.29e-16
15	1.69e-16	49	3.78e-16	83	2.66e-17
16	3.95e-16	50	1.03e-16	84	2.14e-18
17	5.82e-16	51	1.28e-19	85	4.55e-16
18	1.84e-16	52	1.02e-15	86	5.36e-17
19	2.01e-16	53	4.14e-16	87	2.92e-17
20	2.56e-16	54	3.87e-19	88	2.15e-16
21	2.34e-16	55	2.43e-16	89	1.70e-19
22	4.59e-16	56	4.05e-16	90	8.52e-18
23	2.42e-17	57	1.58e-17	91	4.11e-16
24	1.32e-16	58	4.11e-17	92	8.67e-17
25	4.37e-18	59	1.72e-17	93	9.88e-20
26	6.18e-17	60	5.79e-17	94	6.34e-17
27	1.47e-16	61	1.71e-16	95	3.83e-16
28	3.91e-17	62	7.69e-17	96	4.13e-19
29	1.12e-16	63	3.58e-16	97	6.70e-16
30	3.34e-16	64	5.16e-17	98	1.54e-16
31	4.50e-16	65	3.47e-16	99	7.21e-16
32	1.15e-17	66	3.02e-17	100	2.67e-16
33	3.89e-16	67	3.57e-16		
34	4.41e-16	68	4.99e-16		

Information Only

Table A-11. Sampled Values for Parameter STEEL:HUMCORR (LHS Variable 22) Replicate 2

Vector	Value (m/s)	Vector	Value (m/s)	Vector	Value (m/s)
1	2.79e-16	35	3.28e-16	69	3.40e-16
2	2.04e-17	36	2.46e-16	70	8.76e-16
3	3.65e-16	37	7.79e-21	71	1.10e-16
4	2.38e-16	38	8.69e-17	72	7.07e-20
5	1.32e-16	39	1.99e-16	73	3.94e-16
6	7.66e-17	40	4.52e-17	74	3.61e-17
7	7.74e-18	41	3.80e-17	75	4.58e-16
8	5.43e-16	42	2.54e-16	76	3.99e-16
9	5.04e-17	43	4.03e-17	77	8.56e-20
10	4.19e-16	44	4.90e-18	78	2.23e-16
11	2.93e-16	45	7.70e-16	79	6.00e-17
12	2.91e-16	46	1.56e-16	80	4.30e-16
13	4.45e-16	47	2.88e-17	81	1.40e-19
14	1.08e-16	48	1.58e-17	82	6.14e-17
15	4.48e-19	49	3.42e-17	83	3.78e-19
16	5.71e-17	50	4.40e-16	84	9.46e-16
17	3.73e-16	51	4.08e-16	85	3.20e-16
18	8.06e-16	52	2.75e-16	86	1.78e-16
19	5.27e-16	53	2.30e-18	87	1.25e-16
20	4.52e-16	54	1.46e-16	88	3.07e-16
21	3.00e-19	55	3.89e-16	89	2.41e-19
22	3.15e-17	56	1.07e-17	90	3.79e-16
23	6.88e-16	57	1.73e-17	91	5.35e-17
24	9.35e-16	58	2.64e-17	92	4.15e-16
25	3.15e-16	59	3.50e-16	93	2.08e-19
26	1.67e-16	60	5.76e-16	94	4.34e-17
27	2.75e-19	61	4.59e-16	95	7.29e-16
28	1.97e-16	62	2.32e-17	96	4.82e-17
29	1.89e-16	63	1.54e-19	97	2.37e-16
30	1.35e-17	64	4.04e-16	98	2.16e-16
31	3.48e-16	65	9.88e-16	99	3.98e-19
32	3.41e-19	66	9.75e-17	100	6.46e-16
33	4.29e-16	67	2.63e-16		
34	6.88e-17	68	2.11e-16		

Information Only

Table A-11. Sampled Values for Parameter STEEL:HUMCORR (LHS Variable 22) Replicate 3

Vector	Value (m/s)	Vector	Value (m/s)	Vector	Value (m/s)
1	2.35e-16	35	1.55e-16	69	1.32e-16
2	9.20e-20	36	3.13e-16	70	4.12e-16
3	5.87e-17	37	5.59e-16	71	3.23e-16
4	3.02e-16	38	4.53e-16	72	7.30e-16
5	3.16e-17	39	3.66e-16	73	4.43e-16
6	1.56e-18	40	5.35e-17	74	5.25e-16
7	3.80e-16	41	7.41e-17	75	8.42e-16
8	1.83e-16	42	4.51e-16	76	1.19e-17
9	2.64e-16	43	1.31e-19	77	1.14e-16
10	1.45e-16	44	1.58e-19	78	2.03e-17
11	9.03e-16	45	2.87e-16	79	3.95e-17
12	2.11e-16	46	4.03e-16	80	2.48e-17
13	3.89e-16	47	2.96e-17	81	3.61e-17
14	3.92e-19	48	1.67e-16	82	1.11e-17
15	3.90e-16	49	1.56e-20	83	3.30e-16
16	6.31e-16	50	2.18e-16	84	2.05e-19
17	9.46e-16	51	2.99e-16	85	2.16e-19
18	1.01e-15	52	4.88e-17	86	4.59e-16
19	5.98e-16	53	5.11e-20	87	3.54e-16
20	2.45e-16	54	1.21e-16	88	8.11e-17
21	1.72e-16	55	2.79e-16	89	2.59e-16
22	3.25e-17	56	1.94e-16	90	8.95e-17
23	4.31e-19	57	4.65e-18	91	2.77e-16
24	6.12e-17	58	2.51e-16	92	6.54e-17
25	3.64e-16	59	4.19e-16	93	4.30e-16
26	4.68e-17	60	8.84e-16	94	2.01e-16
27	8.71e-18	61	6.93e-16	95	4.25e-16
28	3.45e-16	62	3.43e-19	96	5.70e-17
29	2.53e-19	63	2.31e-17	97	3.07e-19
30	4.28e-17	64	4.02e-17	98	1.02e-16
31	2.28e-16	65	4.20e-18	99	5.21e-17
32	4.07e-16	66	1.80e-17	100	4.39e-16
33	1.58e-17	67	7.78e-16		
34	3.34e-16	68	3.99e-16		

Information Only

Table A-12. Sampled Values for Parameter CULEBRA:MINP_FAC (LHS Variable 23) Replicate 1

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	9.83e+02	35	8.11e+02	69	9.21e+02
2	9.09e+02	36	2.48e+02	70	3.57e+02
3	5.32e+02	37	7.52e+02	71	1.36e+01
4	5.84e+02	38	3.63e+02	72	5.93e+02
5	3.74e+02	39	1.70e+02	73	9.69e+02
6	8.03e+02	40	4.85e+02	74	3.25e+02
7	3.85e+02	41	8.70e+02	75	8.47e+02
8	7.44e+02	42	6.03e+02	76	6.26e+02
9	7.83e+02	43	9.77e+02	77	4.79e+02
10	7.05e+02	44	8.57e+02	78	9.13e+02
11	5.79e+02	45	7.97e+02	79	1.24e+02
12	5.44e+02	46	6.16e+02	80	8.01e+01
13	1.12e+02	47	9.56e+02	81	4.14e+02
14	5.89e+01	48	2.73e+02	82	1.04e+02
15	8.89e+02	49	1.96e+02	83	6.63e+02
16	2.99e+02	50	3.99e+02	84	6.59e+02
17	4.42e+01	51	2.58e+02	85	4.99e+02
18	2.40e+02	52	8.32e+02	86	8.73e+02
19	1.80e+02	53	2.61e+02	87	8.45e+01
20	3.08e+01	54	9.18e+01	88	3.94e+01
21	1.02e+00	55	6.97e+02	89	5.66e+02
22	3.41e+02	56	5.06e+02	90	2.31e+02
23	3.09e+02	57	2.18e+02	91	8.22e+02
24	7.21e+02	58	2.90e+02	92	6.48e+02
25	1.49e+02	59	6.82e+02	93	4.44e+02
26	9.38e+02	60	4.55e+02	94	7.18e+02
27	1.53e+02	61	5.14e+02	95	9.95e+02
28	5.52e+02	62	3.21e+02	96	6.71e+01
29	4.35e+02	63	3.37e+02	97	6.72e+02
30	7.74e+02	64	1.86e+02	98	7.32e+02
31	5.30e+02	65	4.67e+02	99	4.05e+02
32	2.04e+02	66	8.98e+02	100	1.37e+02
33	7.66e+02	67	6.37e+02		
34	4.25e+02	68	9.47e+02		

Information Only

Table A-12. Sampled Values for Parameter CULEBRA:MINP_FAC (LHS Variable 23) Replicate 2

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	2.49e+02	35	6.83e+02	69	4.32e+02
2	8.65e+02	36	6.65e+02	70	9.58e+02
3	6.21e+01	37	7.05e+02	71	3.73e+02
4	9.36e+02	38	4.15e+02	72	5.97e+01
5	7.29e+02	39	8.31e+02	73	8.27e+02
6	1.95e+02	40	8.99e+02	74	1.70e+02
7	6.57e+02	41	7.37e+02	75	5.73e+02
8	3.18e+02	42	7.71e+01	76	4.43e+02
9	4.51e+02	43	2.20e+02	77	7.81e+02
10	2.71e+02	44	3.92e+02	78	2.87e+02
11	8.52e+02	45	2.53e+02	79	3.45e+02
12	3.38e+02	46	3.84e+02	80	5.04e+02
13	7.98e+02	47	7.57e+02	81	4.96e+02
14	4.02e+02	48	7.48e+02	82	6.21e+02
15	5.52e+02	49	1.25e+02	83	5.69e+02
16	9.11e+02	50	1.19e+02	84	9.13e+01
17	2.44e+01	51	6.91e+02	85	2.29e+02
18	9.81e+02	52	7.70e+02	86	8.06e+02
19	6.14e+02	53	8.12e+02	87	1.36e+02
20	4.69e+02	54	9.80e+02	88	1.62e+01
21	1.03e+02	55	8.88e+02	89	5.41e+02
22	5.15e+02	56	1.83e+02	90	5.82e+02
23	6.74e+02	57	8.48e+02	91	1.56e+02
24	7.79e+02	58	1.44e+02	92	9.05e+02
25	4.91e+01	59	6.06e+02	93	9.63e+02
26	8.65e+01	60	6.34e+02	94	3.23e+02
27	9.96e+02	61	5.28e+02	95	9.27e+02
28	4.80e+02	62	3.57e+02	96	4.88e+02
29	6.00e+02	63	6.49e+02	97	2.91e+02
30	2.07e+02	64	1.79e+02	98	2.37e+02
31	3.63e+01	65	7.14e+02	99	3.65e+02
32	2.62e+02	66	4.26e+02	100	8.76e+02
33	5.56e+00	67	9.48e+02		
34	3.07e+02	68	5.39e+02		

Information Only

Table A-12. Sampled Values for Parameter CULEBRA:MINP_FAC (LHS Variable 23) Replicate 3

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	6.39e+02	35	4.34e+00	69	8.86e+02
2	7.28e+02	36	1.78e+01	70	5.35e+02
3	2.14e+02	37	5.75e+02	71	9.37e+02
4	1.26e+02	38	6.99e+02	72	1.39e+02
5	3.47e+02	39	7.07e+02	73	5.62e+02
6	9.22e+02	40	7.57e+02	74	2.09e+02
7	6.89e+02	41	7.88e+02	75	2.21e+02
8	3.32e+02	42	5.88e+02	76	6.76e+02
9	5.17e+02	43	3.77e+02	77	5.30e+02
10	5.49e+02	44	2.99e+02	78	9.60e+02
11	1.54e+02	45	2.66e+02	79	3.87e+01
12	9.12e+01	46	4.39e+02	80	3.11e+02
13	9.54e+02	47	4.30e+01	81	2.50e+02
14	9.77e+02	48	1.92e+02	82	4.16e+02
15	6.56e+02	49	9.19e+02	83	7.17e+02
16	7.75e+02	50	2.81e+02	84	8.91e+02
17	6.69e+02	51	4.44e+02	85	3.84e+02
18	8.68e+02	52	8.38e+02	86	4.53e+02
19	7.95e+02	53	3.02e+02	87	1.63e+02
20	8.02e+02	54	9.92e+02	88	8.52e+02
21	2.53e+02	55	2.81e+01	89	1.89e+02
22	8.66e+01	56	3.91e+02	90	5.99e+01
23	5.93e+02	57	1.72e+02	91	4.88e+02
24	7.25e+01	58	6.27e+02	92	4.23e+02
25	5.58e+02	59	7.66e+02	93	2.37e+02
26	4.61e+02	60	6.02e+02	94	1.13e+02
27	8.29e+02	61	4.02e+02	95	2.75e+02
28	9.03e+02	62	4.71e+02	96	8.13e+02
29	5.05e+02	63	3.26e+02	97	1.08e+02
30	4.92e+02	64	3.55e+02	98	9.47e+02
31	6.16e+02	65	1.43e+02	99	8.43e+02
32	3.64e+02	66	7.38e+02	100	7.48e+02
33	6.49e+02	67	8.75e+02		
34	6.79e+01	68	9.83e+02		

Information Only

Table A-13. Sampled Values for Parameter GLOBAL:TRANSIDX (LHS Variable 24)
Replicate 1

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	4.56e-01	35	1.27e-01	69	2.79e-01
2	7.86e-01	36	6.97e-01	70	7.28e-01
3	9.26e-01	37	2.10e-01	71	3.29e-01
4	2.97e-01	38	5.94e-01	72	8.70e-01
5	8.76e-01	39	6.21e-02	73	3.31e-01
6	3.57e-01	40	3.48e-02	74	3.94e-01
7	9.56e-01	41	1.61e-01	75	2.04e-01
8	8.05e-01	42	5.71e-01	76	7.91e-01
9	9.42e-01	43	6.31e-01	77	4.85e-01
10	5.05e-01	44	1.39e-01	78	6.67e-01
11	4.16e-01	45	1.42e-01	79	8.34e-02
12	8.47e-01	46	2.42e-01	80	9.00e-01
13	3.85e-01	47	7.34e-01	81	4.94e-01
14	2.57e-01	48	9.88e-01	82	5.80e-02
15	9.37e-01	49	8.96e-01	83	5.84e-01
16	8.22e-01	50	7.05e-01	84	8.12e-01
17	7.74e-01	51	3.44e-01	85	3.70e-01
18	1.82e-01	52	4.78e-01	86	6.03e-01
19	6.80e-01	53	5.29e-01	87	3.08e-01
20	3.10e-01	54	7.43e-01	88	1.15e-01
21	6.12e-01	55	4.06e-01	89	6.42e-01
22	1.60e-01	56	4.35e-01	90	3.77e-01
23	2.86e-01	57	9.68e-02	91	7.69e-02
24	7.70e-01	58	2.32e-01	92	8.87e-01
25	2.58e-02	59	1.03e-01	93	1.41e-02
26	1.98e-01	60	5.52e-01	94	9.98e-01
27	6.72e-01	61	5.47e-01	95	5.36e-01
28	7.95e-03	62	6.24e-01	96	4.66e-01
29	1.78e-01	63	5.61e-01	97	4.40e-01
30	2.62e-01	64	8.30e-01	98	5.12e-01
31	9.65e-01	65	8.57e-01	99	4.26e-01
32	9.12e-01	66	2.28e-01	100	6.58e-01
33	7.55e-01	67	7.12e-01		
34	9.72e-01	68	4.08e-02		

Information Only

Table A-13. Sampled Values for Parameter GLOBAL:TRANSIDX (LHS Variable 24) Replicate 2

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	7.26e-01	35	4.22e-01	69	3.10e-01
2	8.52e-01	36	9.50e-01	70	9.36e-01
3	9.05e-01	37	5.92e-01	71	1.67e-01
4	7.42e-01	38	5.11e-01	72	5.78e-01
5	2.33e-01	39	1.90e-01	73	3.93e-01
6	4.07e-01	40	2.25e-01	74	7.50e-02
7	7.62e-01	41	9.17e-01	75	6.16e-01
8	6.88e-01	42	5.80e-01	76	5.21e-01
9	3.51e-01	43	8.43e-01	77	7.33e-01
10	6.83e-03	44	1.43e-01	78	4.64e-01
11	7.94e-01	45	7.53e-01	79	6.34e-01
12	6.91e-01	46	4.72e-01	80	8.54e-02
13	6.56e-01	47	2.06e-01	81	3.11e-01
14	9.72e-02	48	5.00e-01	82	5.39e-01
15	5.48e-01	49	2.60e-02	83	8.16e-01
16	3.73e-01	50	3.60e-01	84	8.81e-01
17	7.84e-01	51	6.61e-02	85	5.42e-02
18	9.92e-01	52	4.39e-01	86	3.46e-01
19	8.67e-01	53	4.84e-01	87	9.64e-01
20	6.75e-01	54	1.89e-01	88	8.27e-01
21	7.07e-01	55	2.80e-01	89	6.67e-01
22	3.62e-02	56	8.01e-01	90	4.53e-01
23	6.43e-01	57	2.74e-01	91	7.76e-01
24	1.70e-02	58	2.63e-01	92	8.40e-01
25	4.94e-01	59	6.23e-01	93	3.24e-01
26	1.24e-01	60	4.14e-01	94	3.39e-01
27	5.69e-01	61	3.82e-01	95	9.43e-01
28	1.34e-01	62	1.17e-01	96	8.74e-01
29	2.16e-01	63	9.79e-01	97	7.12e-01
30	9.24e-01	64	9.88e-01	98	4.10e-02
31	1.71e-01	65	2.43e-01	99	8.92e-01
32	6.10e-01	66	1.59e-01	100	2.53e-01
33	5.56e-01	67	1.04e-01		
34	4.47e-01	68	2.97e-01		

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Table A-13. Sampled Values for Parameter GLOBAL:TRANSIDX (LHS Variable 24) Replicate 3

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	4.67e-01	35	6.80e-01	69	1.24e-01
2	7.50e-01	36	4.12e-01	70	8.92e-01
3	6.99e-01	37	5.47e-01	71	9.03e-01
4	2.25e-01	38	4.77e-01	72	4.25e-01
5	8.64e-01	39	3.31e-01	73	5.91e-01
6	5.05e-01	40	4.06e-01	74	7.73e-02
7	4.97e-01	41	8.48e-01	75	7.70e-01
8	5.22e-01	42	7.38e-01	76	2.35e-01
9	9.32e-01	43	9.92e-01	77	1.69e-01
10	1.57e-01	44	4.49e-01	78	5.37e-01
11	2.95e-01	45	7.93e-01	79	3.52e-02
12	7.71e-01	46	1.81e-02	80	9.49e-01
13	8.06e-01	47	9.77e-01	81	6.70e-01
14	9.42e-02	48	7.18e-01	82	6.41e-01
15	4.87e-01	49	2.42e-01	83	1.36e-01
16	8.73e-01	50	3.77e-01	84	6.58e-01
17	9.64e-01	51	5.73e-01	85	2.56e-01
18	9.54e-01	52	3.52e-01	86	1.14e-01
19	2.04e-02	53	8.59e-01	87	4.26e-02
20	6.30e-02	54	7.27e-01	88	1.72e-01
21	3.28e-01	55	8.39e-01	89	7.08e-01
22	6.40e-01	56	5.40e-02	90	1.88e-01
23	3.05e-01	57	3.89e-01	91	6.25e-01
24	7.56e-01	58	9.86e-01	92	1.46e-01
25	8.14e-01	59	2.13e-01	93	6.60e-01
26	4.40e-01	60	2.75e-01	94	1.03e-01
27	6.61e-03	61	8.80e-01	95	3.13e-01
28	5.82e-01	62	3.97e-01	96	9.28e-01
29	4.50e-01	63	9.18e-01	97	3.49e-01
30	1.97e-01	64	5.20e-01	98	5.58e-01
31	7.87e-01	65	5.62e-01	99	2.86e-01
32	6.06e-01	66	2.07e-01	100	6.11e-01
33	8.26e-01	67	2.67e-01		
34	8.10e-02	68	3.63e-01		

Information Only

Table A-14. Sampled Values for Parameter GLOBAL:CLIMTIDX (LHS Variable 25)
Replicate 1

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	1.09e+00	35	1.19e+00	69	1.21e+00
2	1.17e+00	36	1.54e+00	70	1.57e+00
3	1.20e+00	37	1.10e+00	71	1.98e+00
4	1.01e+00	38	2.15e+00	72	2.02e+00
5	1.04e+00	39	1.22e+00	73	1.66e+00
6	1.59e+00	40	1.03e+00	74	2.18e+00
7	1.19e+00	41	1.03e+00	75	2.08e+00
8	1.12e+00	42	1.16e+00	76	1.15e+00
9	1.17e+00	43	1.05e+00	77	1.22e+00
10	1.13e+00	44	1.03e+00	78	1.07e+00
11	1.15e+00	45	1.02e+00	79	1.02e+00
12	1.24e+00	46	1.05e+00	80	1.50e+00
13	1.07e+00	47	1.15e+00	81	1.18e+00
14	1.24e+00	48	1.08e+00	82	1.04e+00
15	1.21e+00	49	1.06e+00	83	1.91e+00
16	1.03e+00	50	1.06e+00	84	2.11e+00
17	1.16e+00	51	1.11e+00	85	1.12e+00
18	1.75e+00	52	1.21e+00	86	1.10e+00
19	1.16e+00	53	1.02e+00	87	1.08e+00
20	1.62e+00	54	1.05e+00	88	1.08e+00
21	1.07e+00	55	1.09e+00	89	1.84e+00
22	1.01e+00	56	1.00e+00	90	1.12e+00
23	1.14e+00	57	1.94e+00	91	2.20e+00
24	1.71e+00	58	1.22e+00	92	1.23e+00
25	1.24e+00	59	1.19e+00	93	1.19e+00
26	1.13e+00	60	1.11e+00	94	1.14e+00
27	1.18e+00	61	1.23e+00	95	1.10e+00
28	2.07e+00	62	1.00e+00	96	2.24e+00
29	1.13e+00	63	1.22e+00	97	1.78e+00
30	1.88e+00	64	1.81e+00	98	1.70e+00
31	1.11e+00	65	1.07e+00	99	1.16e+00
32	1.17e+00	66	1.04e+00	100	1.20e+00
33	1.24e+00	67	1.25e+00		
34	1.10e+00	68	2.01e+00		

Information Only

Table A-14. Sampled Values for Parameter GLOBAL:CLIMTIDX (LHS Variable 25) Replicate 2

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	1.01e+00	35	1.19e+00	69	1.09e+00
2	1.05e+00	36	1.08e+00	70	1.19e+00
3	1.90e+00	37	1.20e+00	71	1.05e+00
4	1.06e+00	38	1.74e+00	72	1.00e+00
5	2.14e+00	39	1.08e+00	73	1.79e+00
6	1.23e+00	40	1.18e+00	74	1.19e+00
7	1.07e+00	41	1.12e+00	75	1.74e+00
8	1.99e+00	42	2.05e+00	76	1.11e+00
9	1.14e+00	43	1.15e+00	77	1.70e+00
10	1.11e+00	44	2.02e+00	78	1.10e+00
11	1.25e+00	45	1.67e+00	79	2.19e+00
12	1.07e+00	46	1.00e+00	80	1.03e+00
13	1.04e+00	47	1.12e+00	81	1.11e+00
14	1.23e+00	48	1.20e+00	82	1.24e+00
15	1.21e+00	49	1.53e+00	83	1.13e+00
16	1.18e+00	50	1.61e+00	84	1.07e+00
17	1.13e+00	51	1.16e+00	85	1.15e+00
18	1.14e+00	52	1.97e+00	86	2.12e+00
19	1.12e+00	53	1.10e+00	87	1.07e+00
20	1.58e+00	54	1.22e+00	88	2.19e+00
21	1.20e+00	55	1.02e+00	89	1.22e+00
22	1.21e+00	56	1.16e+00	90	1.18e+00
23	1.17e+00	57	1.81e+00	91	1.55e+00
24	2.08e+00	58	1.25e+00	92	1.12e+00
25	1.84e+00	59	1.24e+00	93	1.05e+00
26	1.08e+00	60	1.09e+00	94	1.01e+00
27	1.93e+00	61	1.16e+00	95	2.25e+00
28	1.03e+00	62	1.64e+00	96	1.23e+00
29	1.20e+00	63	1.22e+00	97	1.03e+00
30	1.10e+00	64	1.02e+00	98	1.86e+00
31	1.15e+00	65	1.01e+00	99	1.24e+00
32	1.05e+00	66	1.14e+00	100	1.04e+00
33	1.06e+00	67	1.02e+00		
34	1.15e+00	68	1.17e+00		

Information Only

Table A-14. Sampled Values for Parameter GLOBAL:CLIMTIDX (LHS Variable 25) Replicate 3

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	1.11e+00	35	1.12e+00	69	1.08e+00
2	1.69e+00	36	1.04e+00	70	1.03e+00
3	1.23e+00	37	1.19e+00	71	1.21e+00
4	1.20e+00	38	1.04e+00	72	1.05e+00
5	1.17e+00	39	1.25e+00	73	1.17e+00
6	1.65e+00	40	1.15e+00	74	2.24e+00
7	1.01e+00	41	1.22e+00	75	1.79e+00
8	1.01e+00	42	1.21e+00	76	1.08e+00
9	1.08e+00	43	1.02e+00	77	1.02e+00
10	1.16e+00	44	1.55e+00	78	1.24e+00
11	1.66e+00	45	1.19e+00	79	1.07e+00
12	2.17e+00	46	1.14e+00	80	1.13e+00
13	1.12e+00	47	1.95e+00	81	1.01e+00
14	1.75e+00	48	1.14e+00	82	1.53e+00
15	1.11e+00	49	1.24e+00	83	1.93e+00
16	1.19e+00	50	1.07e+00	84	1.04e+00
17	1.62e+00	51	1.15e+00	85	1.71e+00
18	1.20e+00	52	1.57e+00	86	1.17e+00
19	1.10e+00	53	1.18e+00	87	1.16e+00
20	1.17e+00	54	1.23e+00	88	1.90e+00
21	1.86e+00	55	1.18e+00	89	1.10e+00
22	1.20e+00	56	1.09e+00	90	1.11e+00
23	2.20e+00	57	2.10e+00	91	1.00e+00
24	1.19e+00	58	1.21e+00	92	1.03e+00
25	2.15e+00	59	1.09e+00	93	1.23e+00
26	1.12e+00	60	1.22e+00	94	1.14e+00
27	1.11e+00	61	2.10e+00	95	1.06e+00
28	1.87e+00	62	1.01e+00	96	1.13e+00
29	2.01e+00	63	1.06e+00	97	1.25e+00
30	1.82e+00	64	1.07e+00	98	1.09e+00
31	1.13e+00	65	2.05e+00	99	1.06e+00
32	1.16e+00	66	1.04e+00	100	1.02e+00
33	1.07e+00	67	1.05e+00		
34	1.22e+00	68	1.98e+00		

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Table A-15. Sampled Values for Parameter CULEBRA:HMBLKLT (LHS Variable 26) Replicate 1

Vector	Value (m)	Vector	Value (m)	Vector	Value (m)
1	2.73e-01	35	2.16e-01	69	1.46e-01
2	1.73e-01	36	1.14e-01	70	4.72e-01
3	4.27e-01	37	4.05e-01	71	2.19e-01
4	2.10e-01	38	2.05e-01	72	4.74e-01
5	4.37e-01	39	6.34e-02	73	7.48e-02
6	2.50e-01	40	2.47e-01	74	4.91e-01
7	3.47e-01	41	4.44e-01	75	8.65e-02
8	3.67e-01	42	3.82e-01	76	4.82e-01
9	5.26e-02	43	3.56e-01	77	1.62e-01
10	3.98e-01	44	1.02e-01	78	1.26e-01
11	2.34e-01	45	2.60e-01	79	3.56e-01
12	3.38e-01	46	2.56e-01	80	5.64e-02
13	2.99e-01	47	1.13e-01	81	1.65e-01
14	4.21e-01	48	3.09e-01	82	1.71e-01
15	1.07e-01	49	2.83e-01	83	2.89e-01
16	4.66e-01	50	1.42e-01	84	4.11e-01
17	1.97e-01	51	3.12e-01	85	9.59e-02
18	4.64e-01	52	3.84e-01	86	1.84e-01
19	4.99e-01	53	2.29e-01	87	4.53e-01
20	3.63e-01	54	2.37e-01	88	7.10e-02
21	3.20e-01	55	2.78e-01	89	1.93e-01
22	2.86e-01	56	2.68e-01	90	6.59e-02
23	4.16e-01	57	3.77e-01	91	1.85e-01
24	4.90e-01	58	1.35e-01	92	9.39e-02
25	4.08e-01	59	4.48e-01	93	1.21e-01
26	2.65e-01	60	8.39e-02	94	3.36e-01
27	3.73e-01	61	3.31e-01	95	3.47e-01
28	4.86e-01	62	4.38e-01	96	1.38e-01
29	2.93e-01	63	1.57e-01	97	4.31e-01
30	1.52e-01	64	1.78e-01	98	3.88e-01
31	2.40e-01	65	3.93e-01	99	2.23e-01
32	8.01e-02	66	3.28e-01	100	2.03e-01
33	3.21e-01	67	1.28e-01		
34	3.03e-01	68	4.56e-01		

Information Only

Table A-15. Sampled Values for Parameter CULEBRA:HMBLKLT (LHS Variable 26) Replicate 2

Vector	Value (m)	Vector	Value (m)	Vector	Value (m)
1	2.37e-01	35	1.24e-01	69	3.56e-01
2	7.37e-02	36	4.82e-01	70	4.49e-01
3	3.13e-01	37	4.60e-01	71	3.58e-01
4	2.70e-01	38	4.16e-01	72	1.03e-01
5	1.14e-01	39	4.58e-01	73	2.43e-01
6	4.91e-01	40	4.06e-01	74	3.31e-01
7	1.64e-01	41	1.93e-01	75	6.96e-02
8	4.82e-01	42	1.76e-01	76	2.28e-01
9	2.31e-01	43	3.76e-01	77	1.07e-01
10	1.70e-01	44	4.31e-01	78	1.96e-01
11	4.40e-01	45	3.17e-01	79	4.52e-01
12	2.82e-01	46	1.31e-01	80	2.18e-01
13	4.96e-01	47	8.44e-02	81	1.61e-01
14	1.84e-01	48	2.87e-01	82	2.45e-01
15	3.86e-01	49	1.55e-01	83	3.07e-01
16	1.52e-01	50	4.35e-01	84	5.86e-02
17	3.35e-01	51	1.40e-01	85	3.01e-01
18	8.94e-02	52	1.21e-01	86	4.87e-01
19	3.05e-01	53	3.97e-01	87	3.20e-01
20	3.69e-01	54	1.39e-01	88	2.51e-01
21	3.25e-01	55	2.09e-01	89	3.70e-01
22	3.92e-01	56	1.48e-01	90	2.23e-01
23	9.21e-02	57	4.25e-01	91	3.45e-01
24	2.59e-01	58	5.97e-02	92	8.14e-02
25	5.39e-02	59	9.79e-02	93	3.63e-01
26	2.73e-01	60	2.79e-01	94	3.96e-01
27	1.32e-01	61	3.51e-01	95	2.14e-01
28	2.02e-01	62	3.42e-01	96	1.11e-01
29	6.58e-02	63	2.97e-01	97	3.80e-01
30	2.05e-01	64	4.71e-01	98	2.89e-01
31	4.02e-01	65	4.74e-01	99	4.43e-01
32	1.74e-01	66	2.64e-01	100	4.68e-01
33	1.88e-01	67	4.22e-01		
34	4.11e-01	68	2.53e-01		

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Table A-15. Sampled Values for Parameter CULEBRA:HMBLKLT (LHS Variable 26) Replicate 3

Vector	Value (m)	Vector	Value (m)	Vector	Value (m)
1	4.45e-01	35	1.57e-01	69	5.41e-02
2	2.93e-01	36	3.17e-01	70	3.13e-01
3	3.62e-01	37	7.08e-02	71	3.38e-01
4	1.98e-01	38	2.72e-01	72	1.50e-01
5	1.23e-01	39	2.01e-01	73	2.56e-01
6	2.92e-01	40	4.94e-01	74	3.53e-01
7	3.33e-01	41	4.69e-01	75	7.33e-02
8	3.05e-01	42	4.89e-01	76	9.49e-02
9	1.27e-01	43	4.22e-01	77	3.72e-01
10	1.83e-01	44	1.85e-01	78	2.13e-01
11	1.72e-01	45	4.80e-01	79	8.82e-02
12	3.79e-01	46	4.54e-01	80	4.12e-01
13	8.53e-02	47	5.84e-02	81	4.84e-01
14	2.41e-01	48	3.28e-01	82	3.60e-01
15	1.42e-01	49	3.47e-01	83	3.90e-01
16	1.11e-01	50	2.07e-01	84	1.64e-01
17	1.67e-01	51	1.16e-01	85	1.62e-01
18	4.09e-01	52	4.02e-01	86	3.23e-01
19	4.48e-01	53	2.09e-01	87	2.36e-01
20	9.53e-02	54	4.19e-01	88	1.05e-01
21	3.86e-01	55	4.35e-01	89	2.26e-01
22	1.76e-01	56	2.17e-01	90	3.69e-01
23	3.95e-01	57	2.70e-01	91	2.64e-01
24	2.45e-01	58	2.59e-01	92	2.32e-01
25	4.96e-01	59	1.34e-01	93	1.90e-01
26	4.74e-01	60	2.87e-01	94	4.55e-01
27	4.39e-01	61	4.29e-01	95	2.23e-01
28	1.38e-01	62	2.81e-01	96	1.45e-01
29	1.19e-01	63	2.98e-01	97	3.97e-01
30	2.76e-01	64	3.11e-01	98	5.92e-02
31	2.48e-01	65	8.08e-02	99	9.97e-02
32	6.79e-02	66	4.25e-01	100	3.44e-01
33	4.67e-01	67	4.61e-01		
34	3.74e-01	68	3.36e-01		

Information Only

Table A-16. Sampled Values for Parameter CULEBRA:APOROS (LHS Variable 27)
Replicate 1

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	3.47e-04	35	2.30e-04	69	2.56e-03
2	1.17e-04	36	4.80e-03	70	1.10e-03
3	3.08e-04	37	2.84e-04	71	4.26e-04
4	2.76e-03	38	2.65e-04	72	1.98e-04
5	7.70e-03	39	5.27e-04	73	1.07e-04
6	1.51e-03	40	1.28e-04	74	4.01e-04
7	2.13e-03	41	2.28e-04	75	3.68e-04
8	9.46e-04	42	8.95e-04	76	1.33e-03
9	8.13e-04	43	4.14e-03	77	8.20e-03
10	4.18e-03	44	4.67e-03	78	6.13e-03
11	5.22e-04	45	5.92e-04	79	3.81e-03
12	2.58e-04	46	1.01e-03	80	1.77e-03
13	1.65e-04	47	7.56e-04	81	3.04e-03
14	8.58e-03	48	5.64e-03	82	2.00e-04
15	1.82e-04	49	3.64e-03	83	3.19e-03
16	4.95e-04	50	3.49e-03	84	2.50e-04
17	1.46e-04	51	3.35e-04	85	1.37e-04
18	4.46e-04	52	9.82e-03	86	4.68e-04
19	7.08e-04	53	2.04e-03	87	1.44e-04
20	6.26e-04	54	1.44e-03	88	1.53e-03
21	1.66e-03	55	7.61e-04	89	2.44e-03
22	2.26e-03	56	4.39e-03	90	3.39e-03
23	1.20e-04	57	2.90e-03	91	1.18e-03
24	1.61e-03	58	3.28e-04	92	3.93e-04
25	8.64e-04	59	1.24e-03	93	6.39e-03
26	5.27e-03	60	6.83e-04	94	1.84e-03
27	1.26e-03	61	1.91e-03	95	7.31e-03
28	6.98e-03	62	1.01e-04	96	6.63e-03
29	9.67e-04	63	8.75e-03	97	6.56e-04
30	1.13e-04	64	9.37e-03	98	1.56e-04
31	2.10e-04	65	2.37e-03	99	2.98e-04
32	1.09e-03	66	5.85e-03	100	1.72e-04
33	1.83e-04	67	5.22e-03		
34	5.73e-04	68	2.64e-03		

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Table A-16. Sampled Values for Parameter CULEBRA:APOROS (LHS Variable 27)
Replicate 2

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	4.47e-04	35	2.25e-04	69	1.16e-03
2	3.59e-03	36	1.80e-03	70	6.89e-03
3	6.14e-03	37	1.73e-03	71	1.93e-03
4	2.71e-04	38	1.48e-04	72	3.03e-04
5	7.17e-03	39	9.44e-04	73	1.48e-03
6	2.40e-04	40	3.40e-04	74	7.55e-03
7	1.91e-04	41	3.27e-04	75	3.16e-03
8	2.85e-03	42	6.40e-03	76	1.10e-03
9	7.52e-04	43	2.76e-04	77	1.05e-03
10	2.47e-04	44	1.65e-03	78	1.27e-03
11	9.99e-04	45	1.10e-04	79	4.77e-04
12	9.51e-03	46	1.40e-04	80	7.69e-04
13	9.58e-03	47	3.87e-03	81	1.20e-03
14	1.09e-04	48	8.81e-03	82	1.65e-04
15	3.59e-04	49	2.36e-03	83	2.57e-03
16	1.58e-03	50	2.01e-04	84	2.93e-04
17	8.29e-03	51	8.22e-04	85	6.72e-04
18	4.98e-04	52	4.34e-04	86	1.24e-04
19	3.35e-03	53	5.63e-04	87	1.19e-04
20	4.69e-03	54	1.10e-03	88	3.29e-03
21	7.10e-04	55	4.22e-03	89	4.94e-03
22	1.26e-04	56	5.10e-04	90	2.94e-03
23	1.32e-03	57	5.35e-04	91	3.76e-03
24	5.63e-03	58	2.21e-03	92	1.02e-04
25	1.89e-04	59	4.14e-03	93	6.35e-04
26	2.12e-03	60	3.63e-04	94	8.34e-04
27	5.26e-03	61	4.50e-03	95	1.32e-04
28	8.89e-04	62	4.01e-04	96	2.16e-04
29	5.07e-03	63	1.39e-03	97	5.80e-03
30	2.05e-03	64	5.82e-04	98	3.89e-04
31	2.46e-03	65	1.70e-04	99	1.54e-04
32	7.63e-03	66	2.59e-04	100	2.70e-03
33	6.20e-04	67	1.83e-03		
34	1.80e-04	68	8.61e-03		

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Table A-16. Sampled Values for Parameter CULEBRA:APOROS (LHS Variable 27) Replicate 3

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	4.72e-04	35	5.03e-04	69	7.07e-03
2	2.01e-03	36	3.53e-04	70	1.73e-04
3	1.35e-04	37	5.43e-04	71	3.67e-04
4	5.82e-03	38	3.18e-03	72	1.27e-04
5	8.13e-03	39	1.49e-03	73	2.28e-03
6	7.47e-03	40	4.18e-04	74	6.32e-04
7	1.99e-03	41	2.68e-03	75	1.28e-03
8	3.08e-04	42	6.08e-03	76	9.70e-03
9	7.68e-04	43	8.48e-03	77	5.36e-03
10	1.39e-03	44	4.14e-04	78	1.01e-04
11	1.40e-04	45	2.17e-03	79	1.01e-03
12	5.56e-03	46	2.62e-04	80	4.97e-03
13	1.50e-04	47	3.93e-04	81	1.05e-04
14	3.06e-03	48	1.80e-04	82	3.69e-03
15	1.60e-03	49	7.01e-04	83	4.08e-03
16	2.02e-04	50	1.06e-03	84	2.23e-04
17	4.65e-03	51	6.24e-04	85	2.83e-03
18	9.39e-03	52	5.96e-04	86	2.93e-04
19	1.62e-04	53	1.22e-04	87	4.41e-03
20	2.76e-04	54	1.13e-04	88	1.15e-03
21	1.88e-04	55	8.35e-04	89	1.17e-04
22	4.35e-03	56	2.41e-03	90	8.97e-03
23	9.87e-04	57	2.13e-04	91	2.31e-03
24	5.01e-03	58	1.56e-03	92	3.41e-04
25	1.74e-03	59	6.91e-03	93	1.10e-03
26	6.54e-03	60	7.59e-03	94	3.53e-03
27	3.86e-03	61	2.52e-03	95	1.73e-03
28	1.56e-04	62	9.02e-04	96	1.89e-03
29	1.34e-03	63	2.39e-04	97	2.50e-04
30	2.75e-04	64	2.96e-03	98	3.34e-03
31	6.67e-04	65	1.93e-04	99	1.25e-03
32	9.37e-04	66	7.25e-04	100	4.42e-04
33	4.98e-04	67	3.20e-04		
34	5.54e-04	68	8.25e-04		

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Table A-17. Sampled Values for Parameter CULEBRA:DPOROS (LHS Variable 28)
Replicate 1

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	1.44e-01	35	1.52e-01	69	1.54e-01
2	2.20e-01	36	1.21e-01	70	1.11e-01
3	1.33e-01	37	1.17e-01	71	1.28e-01
4	1.74e-01	38	1.19e-01	72	1.78e-01
5	1.97e-01	39	1.76e-01	73	1.80e-01
6	1.07e-01	40	1.73e-01	74	2.46e-01
7	1.93e-01	41	1.48e-01	75	1.88e-01
8	1.49e-01	42	1.66e-01	76	1.64e-01
9	2.08e-01	43	1.68e-01	77	1.87e-01
10	1.77e-01	44	1.09e-01	78	1.61e-01
11	1.72e-01	45	1.19e-01	79	1.42e-01
12	1.89e-01	46	2.28e-01	80	1.25e-01
13	1.74e-01	47	1.46e-01	81	1.19e-01
14	1.62e-01	48	1.39e-01	82	2.33e-01
15	1.36e-01	49	1.65e-01	83	1.79e-01
16	1.85e-01	50	1.69e-01	84	1.63e-01
17	1.03e-01	51	1.82e-01	85	2.22e-01
18	1.90e-01	52	1.84e-01	86	1.88e-01
19	1.84e-01	53	1.53e-01	87	1.17e-01
20	1.57e-01	54	1.30e-01	88	1.34e-01
21	1.63e-01	55	1.10e-01	89	1.23e-01
22	1.15e-01	56	1.06e-01	90	1.83e-01
23	1.79e-01	57	1.10e-01	91	1.12e-01
24	1.02e-01	58	1.12e-01	92	1.14e-01
25	1.61e-01	59	1.86e-01	93	1.38e-01
26	1.76e-01	60	1.73e-01	94	1.17e-01
27	1.04e-01	61	1.68e-01	95	1.08e-01
28	1.58e-01	62	1.28e-01	96	1.82e-01
29	1.70e-01	63	1.40e-01	97	1.71e-01
30	1.81e-01	64	2.38e-01	98	1.59e-01
31	1.67e-01	65	2.03e-01	99	1.00e-01
32	1.13e-01	66	1.86e-01	100	1.16e-01
33	1.24e-01	67	1.45e-01		
34	1.15e-01	68	1.03e-01		

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Table A-17. Sampled Values for Parameter CULEBRA:DPOROS (LHS Variable 28) Replicate 2

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	1.81e-01	35	1.20e-01	69	1.31e-01
2	1.99e-01	36	1.76e-01	70	1.45e-01
3	1.09e-01	37	1.12e-01	71	2.19e-01
4	1.19e-01	38	1.16e-01	72	1.06e-01
5	1.32e-01	39	1.09e-01	73	1.49e-01
6	1.84e-01	40	1.03e-01	74	1.46e-01
7	1.84e-01	41	1.68e-01	75	2.48e-01
8	1.13e-01	42	1.18e-01	76	1.61e-01
9	1.00e-01	43	1.24e-01	77	1.06e-01
10	1.15e-01	44	1.88e-01	78	1.11e-01
11	1.77e-01	45	1.71e-01	79	1.86e-01
12	2.04e-01	46	1.80e-01	80	1.12e-01
13	1.08e-01	47	1.79e-01	81	1.40e-01
14	1.17e-01	48	1.75e-01	82	1.82e-01
15	1.75e-01	49	1.65e-01	83	1.28e-01
16	1.22e-01	50	1.04e-01	84	1.48e-01
17	1.87e-01	51	1.43e-01	85	1.60e-01
18	1.38e-01	52	2.11e-01	86	1.83e-01
19	2.27e-01	53	1.56e-01	87	1.68e-01
20	1.11e-01	54	1.85e-01	88	1.36e-01
21	2.24e-01	55	1.82e-01	89	1.78e-01
22	1.64e-01	56	1.51e-01	90	1.61e-01
23	1.64e-01	57	1.73e-01	91	1.66e-01
24	1.16e-01	58	1.69e-01	92	1.58e-01
25	1.53e-01	59	1.01e-01	93	1.90e-01
26	2.42e-01	60	1.79e-01	94	1.55e-01
27	1.72e-01	61	1.14e-01	95	1.35e-01
28	1.29e-01	62	1.20e-01	96	1.63e-01
29	1.33e-01	63	1.67e-01	97	1.71e-01
30	1.62e-01	64	1.18e-01	98	2.34e-01
31	1.86e-01	65	1.91e-01	99	1.41e-01
32	1.02e-01	66	1.89e-01	100	1.70e-01
33	1.25e-01	67	1.15e-01		
34	1.74e-01	68	1.88e-01		

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Table A-17. Sampled Values for Parameter CULEBRA:DPOROS (LHS Variable 28) Replicate 3

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	1.56e-01	35	1.66e-01	69	1.17e-01
2	1.80e-01	36	1.35e-01	70	1.77e-01
3	1.89e-01	37	1.99e-01	71	2.36e-01
4	1.53e-01	38	1.77e-01	72	1.61e-01
5	1.76e-01	39	1.01e-01	73	1.43e-01
6	1.48e-01	40	1.23e-01	74	1.58e-01
7	1.75e-01	41	1.15e-01	75	1.39e-01
8	1.73e-01	42	1.16e-01	76	1.64e-01
9	1.18e-01	43	1.79e-01	77	1.14e-01
10	2.22e-01	44	1.71e-01	78	1.69e-01
11	1.68e-01	45	1.09e-01	79	1.83e-01
12	1.78e-01	46	1.33e-01	80	1.14e-01
13	1.74e-01	47	1.62e-01	81	1.25e-01
14	1.29e-01	48	1.03e-01	82	1.19e-01
15	1.87e-01	49	1.82e-01	83	1.62e-01
16	2.14e-01	50	1.72e-01	84	1.45e-01
17	1.20e-01	51	1.58e-01	85	1.10e-01
18	2.04e-01	52	1.11e-01	86	1.86e-01
19	1.81e-01	53	1.54e-01	87	1.41e-01
20	1.02e-01	54	1.60e-01	88	1.87e-01
21	1.71e-01	55	2.13e-01	89	1.12e-01
22	1.00e-01	56	1.19e-01	90	1.89e-01
23	2.28e-01	57	1.49e-01	91	1.80e-01
24	1.82e-01	58	1.20e-01	92	1.06e-01
25	1.27e-01	59	1.13e-01	93	1.42e-01
26	1.51e-01	60	1.64e-01	94	2.49e-01
27	1.91e-01	61	1.05e-01	95	1.84e-01
28	1.24e-01	62	1.85e-01	96	2.44e-01
29	1.83e-01	63	1.09e-01	97	1.90e-01
30	1.31e-01	64	1.30e-01	98	1.46e-01
31	1.06e-01	65	1.65e-01	99	1.68e-01
32	1.17e-01	66	1.08e-01	100	1.66e-01
33	1.85e-01	67	1.70e-01		
34	1.12e-01	68	1.37e-01		

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Table A-18. Sampled Values for Parameter U+6:MKD_U (LHS Variable 29)
Replicate 1

Vector	Value (m^3/kg)	Vector	Value (m^3/kg)	Vector	Value (m^3/kg)
1	3.33e-03	35	2.56e-04	69	2.16e-04
2	9.05e-05	36	3.77e-03	70	1.50e-04
3	6.68e-03	37	8.64e-03	71	4.00e-04
4	1.78e-04	38	5.20e-05	72	6.18e-03
5	3.68e-03	39	2.82e-03	73	1.16e-03
6	6.62e-05	40	7.35e-03	74	9.83e-05
7	2.96e-04	41	2.32e-03	75	3.41e-04
8	1.52e-03	42	2.64e-04	76	1.20e-02
9	1.31e-04	43	1.99e-04	77	4.51e-05
10	4.68e-04	44	8.66e-04	78	5.61e-05
11	2.62e-03	45	9.95e-04	79	5.52e-04
12	2.98e-03	46	3.20e-05	80	1.40e-02
13	4.95e-03	47	1.87e-04	81	3.11e-03
14	4.43e-04	48	5.19e-04	82	7.86e-04
15	4.60e-03	49	1.45e-02	83	6.19e-04
16	4.11e-04	50	6.02e-05	84	1.11e-02
17	8.51e-03	51	1.86e-02	85	1.74e-04
18	2.18e-03	52	7.82e-03	86	9.18e-03
19	3.64e-05	53	5.79e-03	87	7.12e-05
20	1.34e-03	54	1.85e-03	88	1.44e-03
21	4.95e-05	55	3.25e-04	89	1.12e-02
22	7.74e-04	56	4.28e-03	90	7.65e-05
23	4.09e-05	57	2.84e-04	91	5.61e-04
24	1.28e-03	58	7.06e-04	92	6.62e-03
25	6.35e-05	59	6.60e-04	93	1.62e-03
26	1.05e-04	60	1.55e-02	94	3.66e-05
27	1.61e-04	61	3.73e-04	95	2.39e-03
28	1.97e-02	62	8.91e-04	96	5.41e-03
29	1.04e-03	63	2.28e-04	97	1.14e-04
30	1.69e-02	64	1.11e-03	98	4.29e-05
31	1.97e-03	65	1.03e-02	99	1.79e-03
32	3.14e-05	66	1.29e-02	100	4.13e-03
33	8.31e-05	67	1.34e-04		
34	9.51e-05	68	1.19e-04		

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Table A-18. Sampled Values for Parameter U+6:MKD_U (LHS Variable 29)
Replicate 2

Vector	Value (m^3/kg)	Vector	Value (m^3/kg)	Vector	Value (m^3/kg)
1	6.33e-05	35	1.32e-04	69	1.85e-03
2	9.95e-03	36	1.51e-02	70	6.57e-03
3	1.60e-04	37	3.69e-03	71	3.51e-05
4	4.05e-05	38	1.86e-02	72	2.79e-04
5	8.69e-04	39	3.78e-04	73	1.22e-02
6	7.24e-03	40	3.31e-04	74	4.62e-05
7	4.39e-04	41	3.64e-03	75	1.00e-04
8	6.71e-04	42	2.21e-03	76	1.40e-02
9	8.75e-03	43	1.69e-03	77	3.11e-05
10	1.80e-03	44	2.11e-03	78	4.15e-04
11	1.82e-04	45	4.22e-03	79	5.38e-03
12	3.51e-04	46	5.05e-03	80	4.94e-05
13	2.57e-03	47	1.11e-03	81	1.99e-02
14	1.85e-04	48	3.34e-05	82	8.62e-05
15	3.27e-03	49	1.38e-04	83	7.31e-04
16	6.79e-03	50	4.78e-04	84	9.48e-04
17	2.62e-04	51	2.19e-04	85	3.07e-03
18	2.54e-04	52	6.29e-04	86	7.23e-05
19	5.07e-05	53	5.05e-04	87	5.77e-03
20	1.69e-04	54	2.43e-03	88	1.23e-04
21	6.87e-04	55	9.36e-04	89	7.93e-05
22	9.54e-05	56	2.08e-04	90	3.09e-04
23	1.05e-04	57	3.76e-05	91	5.27e-04
24	1.32e-02	58	1.12e-02	92	4.03e-04
25	1.33e-03	59	9.71e-03	93	1.56e-02
26	1.17e-03	60	5.88e-05	94	2.81e-03
27	2.26e-04	61	4.17e-03	95	5.97e-04
28	7.87e-04	62	4.19e-05	96	7.62e-03
29	1.75e-02	63	1.41e-03	97	1.26e-03
30	1.49e-03	64	6.19e-03	98	8.31e-03
31	1.06e-02	65	8.39e-05	99	1.50e-04
32	6.58e-05	66	1.99e-03	100	1.16e-04
33	5.60e-05	67	4.60e-03		
34	1.03e-03	68	2.96e-03		

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Table A-18. Sampled Values for Parameter U+6:MKD_U (LHS Variable 29)
Replicate 3

Vector	Value (m^3/kg)	Vector	Value (m^3/kg)	Vector	Value (m^3/kg)
1	7.67e-04	35	9.67e-05	69	2.65e-04
2	1.05e-04	36	6.48e-05	70	8.80e-04
3	7.46e-05	37	4.77e-04	71	2.13e-04
4	5.22e-05	38	2.25e-03	72	6.09e-05
5	8.75e-05	39	3.72e-05	73	3.78e-03
6	9.94e-03	40	1.81e-02	74	1.39e-02
7	7.37e-05	41	5.82e-03	75	2.05e-03
8	4.17e-05	42	1.16e-04	76	2.36e-03
9	1.45e-03	43	5.34e-04	77	1.19e-02
10	7.99e-03	44	1.30e-02	78	3.43e-04
11	3.29e-04	45	1.46e-04	79	1.78e-03
12	8.22e-03	46	2.04e-04	80	1.52e-02
13	1.60e-02	47	2.29e-04	81	4.11e-05
14	9.79e-05	48	9.33e-04	82	3.85e-04
15	1.80e-04	49	3.66e-04	83	6.65e-04
16	1.12e-03	50	1.39e-03	84	1.36e-04
17	1.18e-04	51	6.78e-05	85	2.75e-03
18	3.16e-03	52	3.47e-05	86	1.62e-04
19	2.97e-04	53	2.62e-03	87	7.77e-04
20	1.89e-04	54	1.17e-02	88	4.53e-05
21	3.97e-03	55	1.27e-03	89	4.81e-03
22	5.72e-04	56	3.38e-03	90	4.78e-03
23	6.28e-04	57	4.20e-04	91	3.54e-03
24	1.86e-03	58	2.86e-04	92	7.49e-03
25	7.00e-03	59	5.22e-04	93	5.24e-03
26	3.40e-05	60	1.72e-04	94	2.41e-04
27	7.13e-04	61	4.39e-04	95	1.75e-02
28	1.10e-02	62	1.88e-02	96	3.06e-05
29	5.51e-05	63	1.27e-04	97	2.15e-03
30	1.65e-03	64	2.86e-03	98	1.21e-03
31	1.54e-03	65	4.40e-03	99	8.75e-03
32	6.51e-03	66	4.90e-05	100	9.68e-03
33	5.74e-03	67	1.03e-03		
34	9.60e-04	68	8.29e-05		

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Table A-19. Sampled Values for Parameter U+4:MKD_U (LHS Variable 30)
Replicate 1

Vector	Value (m^3/kg)	Vector	Value (m^3/kg)	Vector	Value (m^3/kg)
1	3.09e-01	35	9.31e-01	69	1.77e+00
2	2.39e-01	36	2.98e-02	70	6.44e+00
3	6.87e-03	37	2.19e-02	71	2.01e+00
4	7.19e-01	38	1.52e-03	72	3.19e+00
5	2.20e+00	39	4.79e-01	73	1.23e-02
6	1.92e-03	40	1.23e-01	74	8.70e-02
7	6.44e-04	41	2.70e-02	75	1.89e-01
8	1.43e+00	42	4.24e-03	76	6.28e-01
9	5.61e-01	43	1.79e-03	77	5.65e+00
10	3.47e+00	44	8.53e-04	78	1.17e+00
11	3.07e-03	45	1.38e-02	79	7.64e-02
12	1.73e-02	46	2.07e-02	80	5.74e-04
13	6.86e-04	47	6.59e-02	81	1.86e-02
14	2.50e+00	48	8.28e+00	82	2.48e-02
15	3.95e+00	49	3.43e-01	83	4.92e-02
16	7.64e-04	50	2.85e-03	84	1.07e-03
17	3.53e-02	51	3.05e+00	85	6.16e-02
18	1.14e-02	52	3.93e-02	86	3.56e-02
19	1.49e-02	53	2.60e-03	87	5.48e+00
20	1.32e-03	54	1.03e-01	88	4.97e-03
21	6.74e+00	55	1.54e+00	89	1.65e-01
22	3.49e-03	56	6.20e-01	90	8.28e-01
23	8.24e-02	57	3.99e-03	91	1.95e-01
24	1.33e-01	58	9.42e+00	92	1.03e-02
25	1.43e-03	59	3.83e-01	93	4.31e+00
26	1.13e-03	60	9.14e-03	94	5.68e-02
27	4.43e-02	61	1.27e+00	95	1.46e-01
28	2.20e-01	62	4.61e+00	96	2.73e-01
29	2.05e-03	63	9.16e-01	97	3.51e-01
30	7.72e+00	64	5.43e-03	98	6.36e-03
31	1.10e+00	65	5.45e-04	99	9.69e-04
32	4.84e-03	66	2.72e+00	100	1.10e-01
33	8.06e-03	67	7.62e-03		
34	4.21e-01	68	2.23e-03		

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Table A-19. Sampled Values for Parameter U+4:MKD_U (LHS Variable 30)
Replicate 2

Vector	Value (m^3/kg)	Vector	Value (m^3/kg)	Vector	Value (m^3/kg)
1	1.42e-01	35	1.96e-03	69	1.26e+00
2	9.96e-02	36	7.23e-02	70	3.43e+00
3	1.99e-02	37	8.98e-03	71	4.78e-01
4	7.07e-03	38	1.56e-02	72	1.40e-02
5	3.75e+00	39	1.30e-03	73	8.56e-02
6	6.10e-03	40	4.74e-02	74	1.01e-02
7	2.90e-03	41	4.96e-03	75	1.14e+00
8	6.07e-04	42	4.33e-01	76	1.20e-03
9	1.12e+00	43	3.54e-03	77	8.18e-01
10	1.84e-02	44	6.24e+00	78	5.80e-02
11	2.26e-02	45	3.20e-01	79	1.26e-02
12	1.01e+00	46	8.30e-03	80	1.77e+00
13	9.74e+00	47	9.05e-04	81	7.93e+00
14	1.88e-01	48	6.53e-04	82	2.72e-01
15	5.91e-03	49	2.00e-01	83	2.03e-03
16	2.28e+00	50	3.86e-02	84	2.69e-02
17	1.68e-03	51	3.05e-03	85	9.85e-04
18	2.67e-03	52	1.62e-01	86	2.65e+00
19	1.63e+00	53	2.37e-01	87	5.50e-01
20	2.26e-03	54	1.63e-02	88	1.01e-03
21	6.70e-02	55	3.74e-01	89	2.97e-01
22	3.98e-01	56	5.95e+00	90	2.21e+00
23	3.14e-02	57	1.10e-02	91	9.47e-02
24	8.77e+00	58	3.49e-02	92	3.16e+00
25	3.90e-02	59	6.21e-01	93	2.14e-01
26	2.41e-02	60	7.55e-03	94	7.10e-04
27	6.54e-01	61	4.75e-03	95	3.72e-03
28	4.55e+00	62	7.11e-01	96	1.14e-01
29	1.63e-03	63	9.18e-01	97	4.33e-03
30	1.30e-01	64	2.83e+00	98	1.20e-01
31	6.94e+00	65	5.07e+00	99	4.97e-02
32	4.49e+00	66	1.47e-03	100	5.72e-02
33	2.03e+00	67	5.20e-04		
34	1.48e+00	68	7.67e-04		

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Table A-19. Sampled Values for Parameter U+4:MKD_U (LHS Variable 30)
Replicate 3

Vector	Value (m^3/kg)	Vector	Value (m^3/kg)	Vector	Value (m^3/kg)
1	2.36e-03	35	1.83e+00	69	7.44e-03
2	1.96e+00	36	3.36e+00	70	5.01e+00
3	7.22e-02	37	6.18e+00	71	2.29e+00
4	4.36e-03	38	8.23e-02	72	1.28e-01
5	2.71e+00	39	5.65e-02	73	3.95e-03
6	7.37e+00	40	4.65e+00	74	1.67e-02
7	1.90e-01	41	2.83e-03	75	9.05e-01
8	4.91e-02	42	8.82e+00	76	4.47e-03
9	2.07e+00	43	1.74e-03	77	1.38e+00
10	8.87e-02	44	5.07e-04	78	3.15e-02
11	8.03e+00	45	9.78e-04	79	7.30e-04
12	6.37e-01	46	2.29e-02	80	6.05e-01
13	1.24e-03	47	4.63e-02	81	1.90e-02
14	3.42e+00	48	3.88e+00	82	2.76e+00
15	1.01e+00	49	5.86e-03	83	1.64e-01
16	1.96e-03	50	1.04e-03	84	9.83e-02
17	1.45e-03	51	6.20e-04	85	3.64e-01
18	3.79e-02	52	8.59e-03	86	1.61e-03
19	1.52e-02	53	2.50e-03	87	1.42e-01
20	1.27e-02	54	3.50e-02	88	3.38e-01
21	5.57e-04	55	1.17e-03	89	2.48e-01
22	3.97e-02	56	2.66e-01	90	7.09e-01
23	9.88e+00	57	1.95e-01	91	2.59e-02
24	7.66e-04	58	6.95e-03	92	4.56e-01
25	3.27e-03	59	1.15e-02	93	4.43e+00
26	7.64e-01	60	5.33e-01	94	4.89e-03
27	2.03e-03	61	9.88e-03	95	6.99e-02
28	2.22e-01	62	5.93e-02	96	3.95e-01
29	1.10e-01	63	2.08e-02	97	5.07e-01
30	9.66e-03	64	1.09e+00	98	3.47e-03
31	6.42e-03	65	1.63e+00	99	5.72e+00
32	1.34e-02	66	3.06e-01	100	1.16e+00
33	1.37e+00	67	1.39e-01		
34	2.68e-02	68	8.28e-04		

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Table A-20. Sampled Values for Parameter PU+3:MKD_PU (LHS Variable 31)
Replicate 1

Vector	Value (m^3/kg)	Vector	Value (m^3/kg)	Vector	Value (m^3/kg)
1	7.24e-02	35	3.04e-02	69	5.13e-02
2	1.59e-01	36	2.43e-01	70	4.92e-02
3	6.52e-02	37	2.29e-01	71	2.10e-01
4	4.79e-02	38	1.87e-01	72	1.28e-02
5	7.58e-02	39	1.25e-02	73	1.45e-02
6	3.01e-02	40	1.25e-01	74	2.78e-02
7	9.35e-03	41	1.84e-02	75	1.40e-02
8	9.37e-02	42	6.36e-03	76	9.89e-02
9	2.66e-02	43	1.22e-01	77	6.97e-02
10	2.66e-01	44	1.51e-02	78	2.56e-02
11	1.51e-01	45	3.69e-02	79	2.98e-01
12	7.41e-03	46	3.79e-01	80	1.94e-01
13	2.81e-01	47	1.34e-02	81	1.88e-02
14	3.22e-01	48	8.44e-03	82	8.01e-02
15	1.72e-01	49	1.18e-02	83	2.20e-01
16	1.10e-01	50	8.85e-02	84	3.44e-01
17	1.57e-02	51	7.77e-03	85	3.48e-02
18	7.70e-03	52	3.37e-02	86	6.03e-03
19	5.57e-02	53	3.79e-02	87	1.46e-01
20	1.03e-02	54	5.02e-03	88	2.24e-02
21	2.50e-02	55	6.82e-03	89	8.55e-03
22	9.42e-02	56	1.68e-02	90	9.96e-03
23	5.49e-03	57	1.76e-01	91	1.34e-01
24	6.02e-02	58	3.96e-01	92	2.89e-01
25	1.07e-02	59	4.30e-02	93	3.26e-02
26	4.18e-02	60	2.21e-02	94	9.10e-03
27	2.06e-02	61	8.40e-02	95	3.59e-01
28	5.79e-03	62	1.75e-02	96	4.51e-02
29	2.06e-01	63	6.87e-02	97	2.55e-01
30	1.32e-01	64	2.33e-02	98	5.53e-02
31	3.96e-02	65	3.18e-01	99	1.14e-02
32	1.64e-01	66	1.15e-01	100	6.09e-02
33	1.04e-01	67	6.57e-03		
34	2.00e-02	68	5.28e-03		

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Table A-20. Sampled Values for Parameter PU+3:MKD_PU (LHS Variable 31) Replicate 2

Vector	Value (m^3/kg)	Vector	Value (m^3/kg)	Vector	Value (m^3/kg)
1	8.09e-03	35	1.07e-01	69	5.58e-03
2	3.58e-01	36	2.12e-01	70	1.54e-01
3	1.43e-02	37	4.48e-02	71	1.81e-01
4	3.07e-02	38	1.16e-02	72	2.42e-01
5	1.26e-02	39	3.00e-02	73	5.00e-02
6	3.69e-01	40	3.95e-01	74	2.19e-02
7	7.90e-02	41	1.01e-02	75	8.67e-02
8	3.38e-01	42	1.10e-01	76	5.91e-02
9	2.24e-02	43	1.21e-02	77	3.16e-02
10	6.63e-03	44	1.73e-01	78	7.15e-02
11	6.69e-02	45	4.43e-02	79	6.16e-03
12	8.16e-02	46	1.86e-01	80	3.35e-02
13	2.04e-02	47	1.90e-02	81	7.41e-02
14	9.20e-02	48	1.42e-01	82	2.65e-01
15	1.83e-02	49	1.28e-01	83	1.01e-01
16	1.58e-02	50	3.03e-01	84	2.82e-01
17	1.14e-01	51	2.24e-01	85	1.64e-01
18	3.98e-02	52	1.10e-02	86	1.12e-02
19	5.59e-02	53	1.26e-01	87	2.64e-02
20	1.69e-02	54	1.52e-01	88	1.50e-02
21	5.24e-02	55	2.41e-02	89	2.65e-02
22	1.18e-01	56	8.57e-02	90	8.11e-03
23	2.01e-01	57	8.74e-03	91	9.52e-02
24	2.80e-01	58	5.56e-02	92	3.53e-02
25	7.05e-03	59	3.70e-02	93	5.06e-03
26	4.85e-02	60	2.00e-02	94	3.83e-02
27	2.36e-01	61	1.45e-02	95	6.43e-03
28	1.77e-02	62	3.15e-01	96	6.51e-02
29	3.33e-01	63	2.52e-01	97	4.15e-02
30	5.78e-03	64	1.91e-01	98	2.48e-02
31	2.80e-02	65	1.34e-01	99	6.13e-02
32	5.35e-03	66	9.60e-03	100	1.05e-02
33	1.35e-02	67	9.02e-03		
34	7.72e-03	68	7.19e-03		

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Table A-20. Sampled Values for Parameter PU+3:MKD_PU (LHS Variable 31) Replicate 3

Vector	Value (m^3/kg)	Vector	Value (m^3/kg)	Vector	Value (m^3/kg)
1	7.06e-02	35	1.73e-02	69	1.25e-02
2	1.88e-02	36	1.05e-02	70	2.96e-01
3	1.26e-01	37	7.42e-02	71	4.87e-02
4	3.24e-02	38	5.02e-02	72	2.60e-01
5	2.45e-01	39	5.48e-03	73	7.40e-03
6	4.04e-02	40	8.78e-02	74	4.13e-02
7	3.50e-02	41	1.35e-01	75	1.72e-01
8	2.91e-02	42	5.40e-02	76	3.43e-01
9	2.38e-02	43	1.31e-02	77	1.67e-02
10	2.10e-01	44	2.42e-02	78	4.39e-02
11	1.62e-01	45	5.83e-02	79	3.34e-01
12	9.40e-02	46	2.81e-02	80	1.08e-01
13	1.46e-01	47	9.74e-03	81	1.87e-01
14	9.72e-02	48	2.75e-01	82	1.15e-01
15	9.35e-03	49	2.20e-01	83	1.39e-02
16	8.73e-03	50	3.11e-02	84	1.19e-01
17	4.00e-01	51	6.75e-03	85	6.84e-02
18	2.12e-02	52	5.66e-02	86	3.15e-01
19	1.19e-02	53	6.54e-02	87	2.03e-02
20	1.79e-02	54	6.95e-03	88	6.16e-02
21	3.33e-02	55	7.87e-02	89	2.00e-02
22	2.59e-02	56	6.34e-03	90	1.31e-01
23	1.13e-02	57	1.60e-02	91	1.74e-01
24	9.08e-03	58	6.12e-03	92	9.96e-02
25	8.06e-02	59	3.80e-01	93	2.84e-01
26	8.08e-03	60	1.28e-02	94	2.28e-01
27	1.58e-01	61	8.35e-02	95	2.69e-02
28	3.64e-02	62	5.74e-03	96	1.54e-02
29	3.91e-02	63	3.59e-01	97	2.24e-02
30	2.02e-01	64	5.04e-03	98	5.26e-02
31	1.93e-01	65	1.05e-01	99	2.54e-01
32	7.60e-03	66	4.48e-02	100	8.35e-03
33	1.08e-02	67	1.43e-02		
34	5.35e-03	68	1.48e-01		

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Table A-21. Sampled Values for Parameter PU+4:MKD_PU (LHS Variable 32)
Replicate 1

Vector	Value (m^3/kg)	Vector	Value (m^3/kg)	Vector	Value (m^3/kg)
1	7.50e-03	35	8.25e-03	69	4.56e-03
2	6.40e-03	36	1.51e+00	70	4.54e-02
3	2.27e+00	37	2.36e-01	71	1.40e-03
4	1.98e-03	38	1.90e-02	72	2.23e-02
5	2.89e-03	39	3.61e-02	73	6.84e-01
6	2.79e-01	40	2.15e+00	74	2.58e-03
7	5.54e-02	41	1.57e-02	75	5.14e+00
8	5.51e-01	42	3.88e-03	76	4.77e+00
9	2.22e-01	43	1.36e+00	77	1.71e-02
10	7.05e+00	44	2.11e-03	78	8.17e-01
11	7.58e-02	45	6.19e-04	79	1.05e-03
12	3.50e-01	46	2.06e-02	80	1.06e-02
13	4.18e+00	47	1.15e-01	81	2.99e-02
14	1.96e-01	48	3.11e-03	82	5.59e+00
15	7.09e-04	49	9.73e-01	83	6.17e+00
16	9.06e-02	50	2.49e-02	84	5.72e-03
17	3.44e-03	51	3.27e-01	85	8.86e+00
18	1.76e+00	52	1.19e+00	86	5.00e-01
19	9.39e-04	53	4.77e-02	87	1.60e+00
20	5.82e-02	54	1.24e-02	88	4.20e-02
21	8.36e-02	55	7.51e+00	89	3.61e+00
22	3.12e+00	56	1.12e+00	90	5.90e-04
23	5.78e-01	57	3.91e-01	91	4.38e-01
24	3.02e+00	58	1.27e-01	92	3.22e-02
25	8.80e-01	59	8.79e-04	93	2.24e-03
26	6.72e-02	60	5.17e-03	94	1.89e-01
27	1.71e-01	61	3.91e+00	95	4.32e-03
28	9.65e-03	62	1.14e-02	96	2.67e+00
29	2.86e-01	63	1.52e-01	97	1.44e-02
30	1.13e-03	64	1.34e-03	98	1.79e-03
31	1.87e+00	65	1.62e-03	99	9.64e-02
32	9.69e+00	66	7.53e-01	100	7.64e-04
33	5.19e-04	67	7.05e-03		
34	1.31e-01	68	2.87e-02		

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Table A-21. Sampled Values for Parameter PU+4:MKD_PU (LHS Variable 32) Replicate 2

Vector	Value (m^3/kg)	Vector	Value (m^3/kg)	Vector	Value (m^3/kg)
1	2.81e+00	35	2.66e+00	69	3.17e-01
2	1.20e-03	36	8.21e-04	70	8.85e-01
3	2.34e-01	37	8.21e-02	71	1.03e-01
4	5.68e-02	38	1.13e-02	72	3.64e+00
5	5.71e-01	39	2.05e-01	73	1.29e-01
6	3.23e+00	40	2.77e-01	74	1.65e-03
7	6.82e-02	41	8.82e-03	75	1.65e-01
8	4.61e-01	42	7.00e-01	76	7.12e-04
9	3.91e-02	43	5.57e-04	77	2.73e-02
10	1.37e-03	44	5.14e+00	78	1.52e-01
11	1.68e-02	45	1.48e-02	79	4.67e+00
12	1.51e+00	46	2.97e-02	80	3.89e+00
13	3.28e-03	47	6.38e-01	81	3.35e-02
14	7.19e-03	48	4.01e-03	82	3.93e-03
15	9.55e+00	49	1.17e-01	83	4.56e-02
16	1.21e-02	50	1.02e-03	84	2.71e-03
17	6.45e-03	51	6.24e-04	85	3.89e-02
18	6.89e+00	52	1.43e-02	86	9.28e-04
19	1.37e+00	53	1.66e+00	87	4.73e-01
20	1.98e+00	54	1.27e-03	88	4.84e-03
21	2.23e-01	55	7.77e-03	89	5.21e-04
22	2.10e-02	56	1.83e-03	90	5.89e+00
23	8.06e+00	57	5.04e-02	91	5.72e-03
24	7.93e-01	58	1.14e-01	92	2.56e-03
25	8.82e-02	59	1.03e-02	93	2.04e-03
26	7.76e-04	60	2.23e-03	94	2.20e+00
27	1.94e-02	61	8.90e-03	95	2.51e-02
28	7.50e-02	62	2.50e+00	96	4.13e+00
29	1.21e+00	63	5.16e-01	97	9.28e-01
30	1.78e+00	64	1.52e-03	98	3.67e-01
31	4.19e-01	65	1.13e+00	99	1.80e-01
32	6.11e-02	66	8.91e+00	100	5.10e-03
33	2.36e-02	67	6.38e+00		
34	2.84e-01	68	3.54e-03		

Information Only

Table A-21. Sampled Values for Parameter PU+4:MKD_PU (LHS Variable 32) Replicate 3

Vector	Value (m^3/kg)	Vector	Value (m^3/kg)	Vector	Value (m^3/kg)
1	2.69e+00	35	9.89e-03	69	3.67e+00
2	1.45e-03	36	5.87e-03	70	2.42e-03
3	9.19e-01	37	4.57e-01	71	5.65e-01
4	5.38e-04	38	2.16e-01	72	6.85e+00
5	2.59e-01	39	3.85e-01	73	4.53e+00
6	5.02e-02	40	8.32e-04	74	1.25e-01
7	3.04e+00	41	8.88e-03	75	7.51e-04
8	9.61e-04	42	3.14e-01	76	1.10e-02
9	2.03e+00	43	5.64e-02	77	1.70e-02
10	6.34e-04	44	3.51e-01	78	2.04e-01
11	3.28e+00	45	6.56e+00	79	8.51e+00
12	7.72e+00	46	1.93e-02	80	1.23e+00
13	6.91e-01	47	1.27e-03	81	4.93e-03
14	2.96e-03	48	2.45e-01	82	1.03e+00
15	7.60e-03	49	1.48e+00	83	6.43e-02
16	2.11e-03	50	1.01e+00	84	5.12e+00
17	6.98e-04	51	3.76e-02	85	1.50e-02
18	8.71e-02	52	6.34e-03	86	1.06e-01
19	8.01e-03	53	7.06e-03	87	4.00e+00
20	1.77e+00	54	4.61e+00	88	1.57e+00
21	1.15e-03	55	1.68e-01	89	3.06e-01
22	8.09e-02	56	4.94e-01	90	6.81e-01
23	1.36e+00	57	3.33e-03	91	5.72e+00
24	3.40e-02	58	9.64e+00	92	1.87e-03
25	1.41e-02	59	2.48e-03	93	9.52e-02
26	5.99e-01	60	4.60e-02	94	2.23e-02
27	1.96e-02	61	4.62e-03	95	4.06e-02
28	2.93e-02	62	1.01e-03	96	3.70e-03
29	1.21e-02	63	5.83e-02	97	1.33e-01
30	3.23e-03	64	2.19e+00	98	1.70e-03
31	2.54e-02	65	8.21e-01	99	7.45e-02
32	4.30e-03	66	1.63e-03	100	5.89e-04
33	1.55e-01	67	1.79e-01		
34	2.75e-02	68	2.27e+00		

Information Only

Table A-22. Sampled Values for Parameter TH+4:MKD_TH (LHS Variable 33)
Replicate 1

Vector	Value (m^3/kg)	Vector	Value (m^3/kg)	Vector	Value (m^3/kg)
1	5.64e+00	35	3.45e-01	69	2.93e-01
2	3.10e-03	36	8.98e-04	70	9.69e+00
3	1.16e-03	37	7.44e-03	71	1.18e-01
4	1.86e-02	38	1.99e-01	72	3.68e-02
5	1.44e-03	39	1.42e+00	73	5.60e-03
6	2.10e-02	40	2.18e-01	74	1.11e-01
7	3.89e-03	41	9.16e-03	75	2.32e+00
8	8.03e+00	42	2.24e+00	76	9.97e-03
9	1.25e-02	43	9.67e-04	77	3.38e+00
10	3.29e-02	44	4.36e+00	78	1.28e-03
11	4.30e-02	45	7.58e-02	79	5.20e-04
12	1.17e+00	46	1.07e+00	80	5.71e-01
13	6.29e+00	47	2.73e-03	81	1.49e-02
14	2.01e+00	48	8.46e-03	82	4.57e-02
15	2.66e-01	49	2.21e-03	83	7.20e-01
16	5.44e-01	50	1.67e-02	84	1.68e-01
17	1.80e+00	51	3.04e+00	85	6.60e-01
18	4.58e-03	52	1.38e+00	86	2.28e-02
19	1.84e-03	53	5.58e-02	87	4.02e+00
20	6.66e-02	54	3.27e-01	88	1.57e-03
21	1.80e-03	55	4.63e+00	89	5.43e+00
22	1.50e-01	56	1.37e-02	90	3.89e-01
23	1.10e-03	57	7.37e-04	91	7.83e-01
24	4.24e-01	58	5.04e-02	92	6.10e-02
25	1.34e-01	59	2.54e-01	93	3.27e+00
26	8.25e-02	60	6.63e-03	94	2.76e-02
27	1.01e+00	61	4.07e-03	95	3.39e-03
28	9.06e-02	62	8.67e-01	96	5.82e-04
29	1.56e+00	63	2.47e-02	97	1.78e-01
30	6.24e-04	64	8.33e+00	98	7.46e-04
31	1.11e-02	65	7.02e+00	99	6.43e-03
32	1.03e-01	66	2.36e-03	100	2.65e-03
33	2.67e+00	67	3.07e-02		
34	5.03e-01	68	5.30e-03		

Information Only

Table A-22. Sampled Values for Parameter TH+4:MKD_TH (LHS Variable 33)
Replicate 2

Vector	Value (m^3/kg)	Vector	Value (m^3/kg)	Vector	Value (m^3/kg)
1	2.00e-03	35	4.68e-01	69	4.75e-02
2	1.47e-01	36	1.92e-03	70	9.00e-03
3	4.44e-03	37	5.28e-02	71	2.32e-02
4	1.09e-01	38	4.05e+00	72	5.51e-01
5	7.98e-02	39	7.47e-04	73	2.01e+00
6	3.64e-03	40	3.53e-02	74	4.81e+00
7	2.58e-02	41	1.28e-02	75	3.73e-01
8	9.35e-01	42	1.27e-01	76	1.76e+00
9	9.49e-02	43	5.80e+00	77	9.98e-02
10	9.89e-03	44	5.84e-02	78	3.91e-01
11	7.25e-02	45	1.20e-03	79	5.25e-04
12	6.45e-04	46	3.19e-01	80	2.53e-01
13	7.38e-01	47	5.22e-02	81	1.58e+00
14	2.63e-01	48	8.22e-03	82	3.00e-01
15	8.75e-04	49	1.44e+00	83	6.05e-01
16	2.83e-02	50	1.06e+00	84	1.30e-03
17	4.36e-01	51	5.85e-04	85	2.82e-03
18	6.43e+00	52	8.15e+00	86	1.30e+00
19	1.12e-02	53	8.97e-01	87	6.58e-02
20	6.49e-01	54	1.45e-02	88	2.45e-03
21	1.19e+00	55	2.99e+00	89	1.43e-03
22	6.86e-04	56	1.51e-03	90	8.04e-01
23	1.64e-01	57	2.51e+00	91	3.15e+00
24	2.18e+00	58	1.76e-01	92	5.89e-03
25	1.69e-02	59	2.94e-02	93	6.78e-03
26	8.34e+00	60	4.04e-03	94	1.84e-02
27	1.67e-03	61	3.02e-03	95	1.31e-01
28	1.08e-03	62	2.06e-01	96	3.45e-03
29	2.39e+00	63	6.44e-03	97	4.28e+00
30	3.57e+00	64	1.34e-02	98	2.25e-01
31	1.00e-03	65	9.76e+00	99	7.39e+00
32	3.87e-02	66	7.52e-03	100	2.26e-03
33	5.27e-03	67	2.15e-02		
34	5.05e+00	68	4.00e-02		

Information Only

Table A-22. Sampled Values for Parameter TH+4:MKD_TH (LHS Variable 33) Replicate 3

Vector	Value (m^3/kg)	Vector	Value (m^3/kg)	Vector	Value (m^3/kg)
1	1.82e-03	35	7.04e+00	69	1.03e-01
2	8.79e-04	36	5.36e-02	70	5.91e-01
3	4.72e-02	37	2.48e-03	71	4.72e-03
4	3.26e-03	38	9.71e-03	72	1.32e-01
5	1.05e+00	39	3.49e-01	73	5.24e-04
6	1.26e-01	40	1.48e-01	74	4.09e-03
7	6.74e-01	41	9.75e+00	75	1.29e+00
8	8.85e-02	42	2.09e-02	76	3.62e-03
9	1.06e-03	43	3.40e-01	77	2.71e-02
10	2.95e+00	44	6.18e+00	78	4.71e+00
11	3.95e-02	45	1.62e+00	79	2.99e-02
12	2.43e-01	46	1.57e-01	80	2.84e-03
13	7.64e-04	47	3.91e-03	81	6.43e-03
14	1.81e-01	48	8.70e-01	82	5.62e-01
15	2.07e-01	49	8.31e-03	83	4.35e-01
16	5.79e-03	50	1.16e-02	84	2.06e-03
17	4.99e-02	51	8.03e+00	85	2.21e-01
18	1.38e-03	52	1.14e-03	86	8.30e-02
19	2.34e-03	53	1.39e+00	87	4.94e-01
20	3.26e-02	54	5.86e-02	88	1.91e+00
21	7.43e-01	55	7.97e-01	89	1.82e-02
22	6.83e-03	56	6.65e-04	90	1.82e+00
23	2.77e-01	57	1.41e-02	91	2.37e+00
24	1.70e-02	58	9.54e-01	92	9.53e-04
25	7.34e-02	59	6.83e-02	93	1.15e+00
26	1.08e-01	60	2.36e-02	94	1.68e-03
27	7.36e-03	61	4.93e-03	95	6.02e+00
28	3.52e+00	62	4.14e-01	96	1.05e-02
29	4.13e+00	63	1.23e-03	97	7.40e-04
30	5.68e-04	64	2.60e-02	98	3.19e+00
31	3.61e-02	65	1.24e-02	99	2.75e+00
32	1.57e-03	66	2.94e-01	100	3.80e+00
33	1.52e-02	67	5.13e+00		
34	2.25e+00	68	8.55e+00		

Information Only

Table A-23. Sampled Values for Parameter AM+3:MKD_AM (LHS Variable 34) Replicate 1

Vector	Value (m^3/kg)	Vector	Value (m^3/kg)	Vector	Value (m^3/kg)
1	9.72e-02	35	3.51e-02	69	1.59e-01
2	4.37e-02	36	3.25e-02	70	3.97e-01
3	3.69e-02	37	6.25e-03	71	5.91e-02
4	1.42e-01	38	1.14e-02	72	8.40e-03
5	1.08e-02	39	1.28e-02	73	2.07e-01
6	1.59e-02	40	6.56e-02	74	8.45e-02
7	7.19e-02	41	6.09e-02	75	1.88e-02
8	1.72e-01	42	5.51e-03	76	2.18e-01
9	3.13e-02	43	2.08e-01	77	6.92e-03
10	7.90e-03	44	9.35e-03	78	5.06e-02
11	2.30e-01	45	1.28e-01	79	1.22e-01
12	2.02e-02	46	2.26e-02	80	3.34e-01
13	1.04e-02	47	7.37e-02	81	6.74e-03
14	1.41e-02	48	1.22e-02	82	1.34e-01
15	6.89e-02	49	1.76e-01	83	8.89e-02
16	3.00e-02	50	4.48e-02	84	5.27e-02
17	5.91e-03	51	1.29e-01	85	2.38e-01
18	6.21e-03	52	2.07e-02	86	5.64e-02
19	8.78e-03	53	3.32e-02	87	2.82e-01
20	7.65e-02	54	1.66e-02	88	4.06e-02
21	9.23e-02	55	5.02e-03	89	5.39e-03
22	8.04e-02	56	2.40e-02	90	1.86e-01
23	7.70e-03	57	8.94e-03	91	2.95e-01
24	3.58e-01	58	7.27e-03	92	1.17e-02
25	2.82e-01	59	1.79e-02	93	3.08e-01
26	1.50e-02	60	5.40e-02	94	3.73e-01
27	2.13e-02	61	4.16e-02	95	3.92e-02
28	2.61e-01	62	1.04e-01	96	2.50e-01
29	1.98e-01	63	1.77e-02	97	1.12e-01
30	1.33e-02	64	4.75e-02	98	9.65e-03
31	1.63e-01	65	2.45e-02	99	2.58e-02
32	2.66e-02	66	2.78e-02	100	3.41e-01
33	1.44e-02	67	1.51e-01		
34	1.13e-01	68	1.01e-01		

Information Only

Table A-23. Sampled Values for Parameter AM+3:MKD_AM (LHS Variable 34) Replicate 2

Vector	Value (m^3/kg)	Vector	Value (m^3/kg)	Vector	Value (m^3/kg)
1	1.48e-02	35	4.72e-02	69	5.91e-02
2	6.49e-03	36	1.24e-01	70	2.47e-02
3	9.00e-02	37	3.21e-02	71	1.80e-01
4	2.11e-01	38	7.35e-03	72	2.40e-02
5	1.59e-02	39	2.04e-02	73	8.12e-02
6	4.13e-02	40	3.65e-02	74	1.08e-02
7	6.20e-02	41	3.42e-02	75	5.58e-03
8	9.30e-03	42	4.42e-02	76	6.96e-03
9	1.29e-02	43	9.96e-02	77	3.19e-01
10	2.24e-01	44	5.46e-02	78	2.25e-02
11	4.57e-02	45	1.40e-01	79	2.48e-01
12	6.40e-02	46	3.89e-01	80	1.04e-02
13	1.39e-01	47	5.00e-02	81	3.09e-02
14	2.02e-02	48	1.06e-01	82	8.15e-03
15	1.11e-02	49	1.24e-02	83	1.62e-01
16	2.15e-02	50	7.30e-02	84	1.65e-02
17	1.82e-02	51	6.90e-02	85	2.07e-01
18	1.74e-01	52	9.72e-03	86	1.83e-01
19	2.93e-01	53	5.85e-03	87	1.17e-01
20	2.36e-01	54	8.44e-02	88	3.83e-02
21	1.15e-02	55	3.50e-02	89	1.51e-02
22	2.76e-02	56	3.70e-01	90	2.54e-02
23	5.73e-02	57	2.79e-01	91	6.62e-03
24	2.62e-01	58	1.20e-01	92	1.34e-02
25	2.99e-02	59	9.81e-02	93	1.91e-01
26	2.45e-01	60	1.87e-02	94	7.73e-02
27	7.06e-02	61	2.95e-01	95	9.15e-03
28	6.17e-03	62	7.51e-03	96	8.71e-03
29	3.61e-01	63	3.47e-01	97	1.47e-01
30	2.84e-02	64	4.01e-02	98	3.31e-01
31	5.17e-03	65	1.29e-01	99	1.40e-02
32	5.16e-02	66	9.34e-02	100	5.39e-03
33	1.55e-01	67	8.07e-03		
34	1.12e-01	68	1.75e-02		

Information Only

Table A-23. Sampled Values for Parameter AM+3:MKD_AM (LHS Variable 34) Replicate 3

Vector	Value (m^3/kg)	Vector	Value (m^3/kg)	Vector	Value (m^3/kg)
1	1.93e-02	35	6.94e-03	69	1.85e-02
2	7.98e-03	36	1.11e-01	70	1.42e-01
3	2.49e-01	37	1.50e-01	71	2.59e-01
4	1.00e-01	38	1.76e-02	72	1.09e-02
5	6.67e-03	39	7.58e-02	73	1.99e-01
6	1.16e-01	40	9.19e-03	74	5.97e-02
7	1.18e-02	41	2.11e-01	75	1.38e-02
8	1.23e-02	42	4.13e-02	76	1.03e-02
9	3.25e-01	43	3.88e-02	77	6.26e-02
10	1.32e-01	44	2.99e-01	78	3.41e-02
11	5.01e-02	45	7.50e-02	79	4.78e-02
12	1.93e-01	46	1.23e-01	80	8.06e-02
13	5.21e-03	47	1.70e-02	81	5.17e-02
14	3.16e-01	48	9.40e-02	82	7.62e-03
15	4.44e-02	49	1.85e-01	83	5.49e-03
16	1.04e-01	50	5.44e-03	84	2.86e-01
17	2.20e-01	51	1.61e-01	85	3.63e-02
18	1.61e-02	52	7.11e-03	86	4.48e-02
19	1.59e-01	53	1.21e-01	87	9.24e-03
20	8.56e-02	54	1.56e-02	88	9.57e-02
21	5.69e-02	55	2.02e-02	89	3.93e-01
22	3.45e-01	56	2.34e-02	90	3.81e-01
23	1.75e-01	57	2.49e-02	91	3.23e-02
24	2.74e-01	58	1.46e-02	92	3.06e-02
25	4.03e-02	59	2.37e-01	93	6.07e-03
26	2.06e-02	60	5.47e-02	94	2.61e-02
27	1.30e-02	61	8.95e-02	95	8.81e-03
28	5.73e-03	62	6.36e-02	96	1.73e-01
29	8.25e-03	63	2.14e-02	97	2.80e-02
30	7.09e-02	64	3.53e-02	98	2.22e-02
31	2.90e-02	65	6.32e-03	99	3.57e-01
32	2.31e-01	66	1.11e-02	100	1.33e-02
33	9.69e-03	67	1.38e-01		
34	2.70e-02	68	6.93e-02		

Information Only

Table A-24. Sampled Values for Parameter GLOBAL:GDEPFAC (LHS Variable 35)
Replicate 1

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	6.38e-03	35	3.13e-01	69	9.22e-02
2	4.01e-01	36	4.56e-01	70	3.98e-01
3	4.18e-01	37	4.64e-01	71	1.10e-01
4	3.90e-01	38	1.59e-01	72	1.51e-01
5	9.67e-02	39	3.30e-01	73	4.14e-01
6	5.71e-02	40	1.29e-01	74	3.94e-01
7	3.66e-01	41	3.38e-01	75	1.78e-01
8	4.74e-01	42	1.42e-01	76	4.42e-01
9	2.26e-01	43	2.71e-01	77	4.66e-01
10	4.20e-02	44	3.75e-01	78	3.20e-01
11	4.05e-01	45	4.67e-02	79	2.41e-01
12	4.23e-01	46	5.07e-02	80	3.80e-02
13	4.84e-01	47	2.08e-01	81	4.86e-01
14	4.50e-01	48	1.63e-02	82	4.26e-01
15	2.10e-01	49	2.16e-01	83	6.23e-02
16	2.69e-01	50	3.19e-01	84	1.64e-01
17	2.64e-01	51	2.60e-02	85	4.21e-03
18	1.38e-01	52	3.37e-02	86	3.08e-01
19	1.47e-01	53	1.31e-01	87	2.77e-01
20	1.25e-02	54	3.03e-01	88	1.98e-01
21	4.91e-01	55	2.36e-01	89	2.97e-01
22	8.49e-02	56	1.74e-01	90	4.40e-01
23	1.90e-01	57	2.93e-01	91	2.02e-01
24	4.51e-01	58	1.04e-01	92	2.33e-01
25	1.10e-01	59	2.37e-02	93	4.32e-01
26	2.58e-01	60	1.86e-01	94	1.15e-01
27	7.89e-02	61	8.55e-02	95	6.51e-02
28	2.22e-01	62	3.45e-01	96	7.25e-02
29	1.82e-01	63	3.61e-01	97	3.27e-01
30	3.56e-01	64	3.82e-01	98	2.88e-01
31	2.83e-01	65	3.78e-01	99	3.48e-01
32	3.54e-01	66	4.77e-01	100	2.48e-01
33	2.53e-01	67	1.21e-01		
34	1.69e-01	68	4.99e-01		

Information Only

Table A-24. Sampled Values for Parameter GLOBAL:GDEPFAC (LHS Variable 35) Replicate 2

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	1.79e-01	35	6.54e-02	69	4.80e-01
2	2.71e-01	36	4.00e-01	70	1.61e-01
3	4.38e-01	37	1.33e-01	71	2.25e-01
4	1.12e-01	38	4.16e-01	72	3.13e-01
5	4.61e-01	39	3.21e-01	73	3.28e-01
6	8.38e-02	40	4.47e-02	74	4.12e-01
7	3.88e-01	41	3.60e-01	75	1.24e-01
8	2.60e-01	42	4.79e-01	76	2.02e-01
9	1.91e-01	43	2.94e-03	77	2.86e-01
10	2.83e-02	44	1.55e-02	78	4.49e-01
11	2.62e-01	45	3.67e-01	79	7.78e-02
12	1.42e-01	46	4.41e-01	80	2.34e-02
13	1.86e-01	47	1.12e-02	81	3.79e-01
14	2.79e-01	48	1.08e-01	82	2.37e-01
15	1.03e-01	49	4.31e-01	83	3.80e-02
16	2.09e-01	50	4.96e-01	84	2.16e-01
17	8.87e-02	51	2.25e-01	85	2.52e-01
18	9.48e-02	52	2.47e-01	86	5.93e-02
19	4.74e-01	53	3.80e-01	87	5.34e-02
20	7.46e-02	54	4.09e-01	88	1.98e-01
21	1.45e-01	55	5.00e-02	89	3.94e-01
22	2.31e-01	56	1.81e-01	90	9.74e-02
23	3.07e-01	57	3.44e-01	91	1.39e-01
24	3.35e-02	58	8.90e-03	92	2.82e-01
25	1.66e-01	59	4.29e-01	93	1.52e-01
26	4.25e-01	60	1.71e-01	94	3.49e-01
27	4.94e-01	61	4.54e-01	95	2.14e-01
28	3.32e-01	62	3.15e-01	96	3.39e-01
29	2.66e-01	63	3.03e-01	97	2.41e-01
30	3.63e-01	64	6.01e-02	98	3.71e-01
31	1.18e-01	65	4.00e-01	99	2.94e-01
32	1.27e-01	66	4.85e-01	100	1.59e-01
33	2.97e-01	67	4.59e-01		
34	4.70e-01	68	3.51e-01		

Information Only

Table A-24. Sampled Values for Parameter GLOBAL:GDEPFAC (LHS Variable 35) Replicate 3

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	3.98e-01	35	3.88e-01	69	4.08e-01
2	3.58e-01	36	2.78e-01	70	4.76e-01
3	6.67e-02	37	3.68e-01	71	3.53e-01
4	2.70e-01	38	1.54e-01	72	7.01e-02
5	4.53e-01	39	3.31e-01	73	1.12e-01
6	1.31e-01	40	3.10e-01	74	3.02e-01
7	8.59e-02	41	2.18e-01	75	1.73e-02
8	6.35e-02	42	8.21e-02	76	1.24e-01
9	1.08e-01	43	3.21e-03	77	9.92e-02
10	2.98e-02	44	4.42e-01	78	2.20e-01
11	3.21e-01	45	2.28e-02	79	3.46e-01
12	3.62e-01	46	4.16e-01	80	4.61e-01
13	1.56e-01	47	4.31e-01	81	1.44e-01
14	9.51e-03	48	4.70e-01	82	4.91e-01
15	1.99e-01	49	4.48e-01	83	3.80e-01
16	1.28e-01	50	2.43e-01	84	2.01e-01
17	3.37e-01	51	1.78e-01	85	4.69e-02
18	2.37e-01	52	9.40e-02	86	1.46e-01
19	3.72e-01	53	2.93e-01	87	5.85e-02
20	2.27e-01	54	1.71e-01	88	3.50e-02
21	1.39e-01	55	3.05e-01	89	4.27e-01
22	2.89e-01	56	4.59e-01	90	2.95e-01
23	4.15e-02	57	7.94e-02	91	2.09e-01
24	2.49e-01	58	4.37e-01	92	2.68e-01
25	2.57e-01	59	3.81e-01	93	1.02e-01
26	4.24e-01	60	2.62e-01	94	1.88e-01
27	4.96e-01	61	4.15e-01	95	4.72e-01
28	3.94e-01	62	4.01e-01	96	4.82e-01
29	4.86e-01	63	1.91e-01	97	1.18e-01
30	2.11e-01	64	5.24e-02	98	2.32e-01
31	1.68e-01	65	1.22e-02	99	1.63e-01
32	2.84e-01	66	3.30e-01	100	3.16e-01
33	1.83e-01	67	3.40e-01		
34	3.21e-02	68	2.53e-01		

Information Only

Table A-25. Sampled Values for Parameter WAS_AREA:BRUCITEC (LHS Variable 36) Replicate 1

Vector	Value (moles/(kg*s))	Vector	Value (moles/(kg*s))	Vector	Value (moles/(kg*s))
1	8.43e-08	35	8.41e-08	69	8.23e-08
2	8.02e-08	36	8.31e-08	70	8.50e-08
3	8.12e-08	37	8.25e-08	71	8.26e-08
4	8.45e-08	38	8.00e-08	72	8.58e-08
5	8.14e-08	39	8.16e-08	73	7.83e-08
6	8.11e-08	40	8.36e-08	74	8.13e-08
7	8.01e-08	41	8.42e-08	75	7.94e-08
8	8.26e-08	42	8.17e-08	76	8.34e-08
9	8.40e-08	43	8.15e-08	77	8.07e-08
10	8.27e-08	44	8.09e-08	78	8.03e-08
11	8.51e-08	45	7.95e-08	79	8.19e-08
12	8.25e-08	46	8.56e-08	80	8.39e-08
13	8.04e-08	47	8.28e-08	81	8.46e-08
14	8.38e-08	48	8.20e-08	82	8.47e-08
15	7.98e-08	49	7.97e-08	83	8.31e-08
16	8.11e-08	50	8.18e-08	84	8.00e-08
17	8.29e-08	51	8.08e-08	85	8.39e-08
18	8.49e-08	52	8.18e-08	86	7.96e-08
19	8.14e-08	53	8.30e-08	87	7.81e-08
20	8.32e-08	54	8.20e-08	88	7.70e-08
21	8.12e-08	55	8.15e-08	89	8.32e-08
22	8.09e-08	56	8.21e-08	90	8.78e-08
23	8.08e-08	57	8.34e-08	91	7.93e-08
24	8.05e-08	58	7.79e-08	92	8.62e-08
25	8.05e-08	59	8.37e-08	93	8.17e-08
26	8.24e-08	60	8.22e-08	94	8.36e-08
27	8.21e-08	61	7.99e-08	95	8.23e-08
28	8.24e-08	62	8.35e-08	96	8.16e-08
29	8.19e-08	63	8.13e-08	97	8.06e-08
30	8.22e-08	64	7.90e-08	98	8.28e-08
31	8.27e-08	65	8.04e-08	99	8.10e-08
32	8.53e-08	66	7.92e-08	100	8.33e-08
33	7.88e-08	67	8.29e-08		
34	7.87e-08	68	8.44e-08		

Information Only

Table A-25. Sampled Values for Parameter WAS_AREA:BRUCITEC (LHS Variable 36) Replicate 2

Vector	Value (moles/(kg*s))	Vector	Value (moles/(kg*s))	Vector	Value (moles/(kg*s))
1	8.23e-08	35	8.73e-08	69	8.10e-08
2	8.24e-08	36	8.48e-08	70	8.20e-08
3	8.07e-08	37	8.25e-08	71	8.38e-08
4	8.05e-08	38	8.02e-08	72	8.60e-08
5	8.56e-08	39	8.05e-08	73	8.13e-08
6	8.36e-08	40	8.12e-08	74	8.02e-08
7	8.51e-08	41	7.89e-08	75	8.15e-08
8	8.40e-08	42	8.17e-08	76	8.26e-08
9	8.06e-08	43	8.00e-08	77	8.31e-08
10	8.04e-08	44	7.94e-08	78	7.91e-08
11	8.34e-08	45	8.28e-08	79	8.46e-08
12	7.83e-08	46	8.29e-08	80	8.47e-08
13	8.39e-08	47	8.08e-08	81	7.97e-08
14	8.30e-08	48	8.14e-08	82	8.64e-08
15	8.19e-08	49	8.32e-08	83	8.25e-08
16	8.39e-08	50	8.12e-08	84	7.80e-08
17	8.27e-08	51	7.62e-08	85	8.23e-08
18	8.15e-08	52	8.24e-08	86	8.12e-08
19	8.10e-08	53	8.22e-08	87	7.76e-08
20	7.98e-08	54	8.17e-08	88	8.37e-08
21	8.32e-08	55	8.32e-08	89	7.87e-08
22	8.14e-08	56	8.03e-08	90	8.26e-08
23	8.21e-08	57	8.28e-08	91	8.11e-08
24	7.99e-08	58	8.07e-08	92	8.37e-08
25	8.20e-08	59	8.44e-08	93	8.43e-08
26	8.49e-08	60	8.09e-08	94	8.16e-08
27	8.22e-08	61	8.35e-08	95	8.21e-08
28	8.08e-08	62	8.04e-08	96	8.29e-08
29	8.19e-08	63	8.16e-08	97	8.18e-08
30	7.89e-08	64	8.54e-08	98	8.42e-08
31	8.29e-08	65	7.92e-08	99	7.95e-08
32	8.33e-08	66	7.96e-08	100	8.41e-08
33	8.45e-08	67	8.01e-08		
34	8.17e-08	68	8.34e-08		

Information Only

Table A-25. Sampled Values for Parameter WAS_AREA:BRUCITEC (LHS Variable 36) Replicate 3

Vector	Value (moles/(kg*s))	Vector	Value (moles/(kg*s))	Vector	Value (moles/(kg*s))
1	8.38e-08	35	8.46e-08	69	8.54e-08
2	7.91e-08	36	8.15e-08	70	8.11e-08
3	7.91e-08	37	8.16e-08	71	8.12e-08
4	8.00e-08	38	7.77e-08	72	7.93e-08
5	8.44e-08	39	8.13e-08	73	8.27e-08
6	8.37e-08	40	7.83e-08	74	8.21e-08
7	8.28e-08	41	7.97e-08	75	7.86e-08
8	8.08e-08	42	8.38e-08	76	8.35e-08
9	8.07e-08	43	7.92e-08	77	8.34e-08
10	8.01e-08	44	8.06e-08	78	8.30e-08
11	8.15e-08	45	8.09e-08	79	8.12e-08
12	8.28e-08	46	8.18e-08	80	8.16e-08
13	8.00e-08	47	8.19e-08	81	8.52e-08
14	8.22e-08	48	8.10e-08	82	8.45e-08
15	8.65e-08	49	8.18e-08	83	7.89e-08
16	8.49e-08	50	7.99e-08	84	8.20e-08
17	8.24e-08	51	8.03e-08	85	8.23e-08
18	8.40e-08	52	8.32e-08	86	8.55e-08
19	8.25e-08	53	8.26e-08	87	8.40e-08
20	8.27e-08	54	8.27e-08	88	7.96e-08
21	8.25e-08	55	8.30e-08	89	8.42e-08
22	8.04e-08	56	7.83e-08	90	8.02e-08
23	8.14e-08	57	8.17e-08	91	8.05e-08
24	8.20e-08	58	8.24e-08	92	8.11e-08
25	8.33e-08	59	8.14e-08	93	8.23e-08
26	8.06e-08	60	8.05e-08	94	8.22e-08
27	7.95e-08	61	8.51e-08	95	8.47e-08
28	7.61e-08	62	8.41e-08	96	8.17e-08
29	8.09e-08	63	8.21e-08	97	8.74e-08
30	8.32e-08	64	8.11e-08	98	8.36e-08
31	8.33e-08	65	8.31e-08	99	8.60e-08
32	7.98e-08	66	8.29e-08	100	8.37e-08
33	8.19e-08	67	8.07e-08		
34	8.43e-08	68	8.34e-08		

Information Only

Table A-26. Sampled Values for Parameter WAS_AREA:BRUCITES (LHS Variable 37) Replicate 1

Vector	Value (moles/(kg*s))	Vector	Value (moles/(kg*s))	Vector	Value (moles/(kg*s))
1	1.76e-07	35	2.04e-07	69	1.74e-07
2	7.09e-08	36	2.38e-07	70	1.53e-07
3	1.30e-07	37	1.31e-07	71	8.38e-08
4	1.05e-07	38	1.28e-07	72	1.85e-07
5	1.10e-07	39	1.50e-07	73	5.88e-08
6	1.60e-07	40	1.90e-07	74	1.56e-07
7	2.48e-07	41	8.54e-08	75	1.59e-07
8	1.15e-07	42	1.86e-07	76	1.47e-07
9	6.95e-08	43	1.05e-07	77	2.06e-07
10	1.55e-07	44	1.46e-07	78	1.12e-07
11	1.25e-07	45	1.43e-07	79	1.01e-07
12	1.07e-07	46	9.36e-08	80	1.37e-07
13	1.49e-07	47	1.88e-07	81	1.13e-07
14	8.95e-08	48	1.42e-07	82	2.23e-07
15	1.78e-07	49	1.41e-07	83	3.47e-08
16	1.62e-07	50	1.17e-07	84	2.29e-07
17	5.18e-08	51	9.68e-08	85	1.69e-07
18	1.33e-07	52	1.44e-07	86	8.85e-08
19	2.01e-07	53	1.48e-07	87	7.50e-08
20	8.00e-08	54	1.61e-07	88	1.64e-07
21	1.70e-07	55	2.12e-07	89	1.03e-07
22	1.35e-07	56	9.15e-08	90	1.10e-07
23	1.21e-07	57	1.38e-07	91	1.40e-07
24	6.49e-08	58	1.95e-07	92	1.66e-07
25	2.68e-07	59	9.84e-08	93	2.15e-07
26	7.82e-08	60	1.23e-07	94	1.97e-07
27	1.52e-07	61	1.60e-08	95	2.21e-07
28	1.66e-07	62	1.18e-07	96	9.56e-08
29	1.20e-07	63	6.05e-08	97	1.26e-07
30	1.71e-07	64	1.79e-07	98	1.58e-07
31	2.08e-07	65	1.26e-07	99	1.36e-07
32	1.81e-07	66	1.82e-07	100	1.93e-07
33	4.75e-08	67	1.30e-07		
34	1.72e-07	68	1.16e-07		

Information Only

Table A-26. Sampled Values for Parameter WAS_AREA:BRUCITES (LHS Variable 37) Replicate 2

Vector	Value (moles/(kg*s))	Vector	Value (moles/(kg*s))	Vector	Value (moles/(kg*s))
1	5.47e-08	35	1.12e-07	69	6.97e-08
2	1.79e-07	36	2.71e-07	70	1.36e-07
3	2.21e-07	37	8.31e-08	71	1.47e-07
4	1.77e-07	38	1.55e-07	72	1.51e-07
5	1.84e-07	39	9.48e-08	73	1.17e-07
6	9.23e-08	40	4.98e-08	74	1.63e-07
7	1.31e-07	41	1.99e-07	75	1.60e-07
8	1.41e-07	42	9.37e-08	76	1.06e-07
9	2.06e-07	43	1.22e-07	77	1.15e-07
10	1.01e-07	44	7.13e-08	78	1.90e-07
11	1.46e-07	45	7.91e-08	79	1.08e-07
12	1.71e-07	46	7.51e-08	80	2.15e-07
13	1.09e-07	47	2.27e-07	81	1.32e-07
14	2.44e-07	48	4.03e-08	82	1.25e-07
15	1.19e-07	49	1.21e-07	83	2.11e-07
16	5.92e-08	50	2.80e-08	84	1.13e-07
17	1.67e-07	51	1.48e-07	85	2.01e-07
18	9.74e-08	52	1.27e-07	86	2.08e-07
19	8.43e-08	53	1.50e-07	87	1.35e-07
20	1.61e-07	54	1.92e-07	88	2.38e-07
21	1.28e-07	55	1.44e-07	89	1.43e-07
22	1.96e-07	56	1.65e-07	90	2.28e-07
23	1.22e-07	57	1.69e-07	91	1.05e-07
24	1.36e-07	58	8.09e-08	92	1.24e-07
25	6.33e-08	59	1.87e-07	93	1.53e-07
26	1.11e-07	60	1.83e-07	94	1.40e-07
27	8.90e-08	61	9.93e-08	95	1.38e-07
28	8.81e-08	62	1.81e-07	96	1.75e-07
29	1.89e-07	63	1.52e-07	97	1.95e-07
30	1.30e-07	64	1.42e-07	98	1.66e-07
31	1.73e-07	65	1.59e-07	99	1.33e-07
32	1.02e-07	66	1.57e-07	100	1.18e-07
33	1.68e-07	67	1.77e-07		
34	1.55e-07	68	5.42e-09		

Information Only

Table A-26. Sampled Values for Parameter WAS_AREA:BRUCITES (LHS Variable 37) Replicate 3

Vector	Value (moles/(kg*s))	Vector	Value (moles/(kg*s))	Vector	Value (moles/(kg*s))
1	1.51e-07	35	1.41e-07	69	1.36e-07
2	1.80e-07	36	1.36e-07	70	1.10e-07
3	1.69e-07	37	1.64e-07	71	1.23e-07
4	9.73e-08	38	1.56e-07	72	8.83e-08
5	2.00e-07	39	1.77e-07	73	1.09e-07
6	6.96e-08	40	1.50e-07	74	1.28e-07
7	1.18e-07	41	8.30e-08	75	1.65e-07
8	1.15e-07	42	1.57e-07	76	2.03e-07
9	1.07e-07	43	9.42e-08	77	3.29e-08
10	1.39e-07	44	2.13e-07	78	1.02e-07
11	1.44e-07	45	1.96e-07	79	1.25e-07
12	4.53e-08	46	1.25e-07	80	1.89e-07
13	1.34e-07	47	1.11e-07	81	1.73e-07
14	2.42e-07	48	8.49e-08	82	2.84e-07
15	1.48e-07	49	9.57e-08	83	1.22e-07
16	2.32e-07	50	9.05e-08	84	1.62e-07
17	1.34e-07	51	1.91e-07	85	1.06e-07
18	6.11e-08	52	1.96e-07	86	1.69e-07
19	1.30e-07	53	1.59e-07	87	2.05e-07
20	1.16e-07	54	2.20e-07	88	1.04e-07
21	6.36e-08	55	1.82e-07	89	1.72e-07
22	2.07e-07	56	7.51e-08	90	2.35e-07
23	1.47e-07	57	5.00e-08	91	1.85e-07
24	1.14e-07	58	7.91e-08	92	1.78e-07
25	1.01e-07	59	5.65e-08	93	1.45e-07
26	1.29e-07	60	1.86e-07	94	1.66e-07
27	1.40e-07	61	2.23e-07	95	1.41e-07
28	1.92e-07	62	1.52e-07	96	9.20e-08
29	9.96e-08	63	1.19e-07	97	1.20e-07
30	1.32e-07	64	1.54e-07	98	1.59e-07
31	1.85e-09	65	1.74e-07	99	7.21e-08
32	2.16e-07	66	1.46e-07	100	1.82e-07
33	1.53e-07	67	1.62e-07		
34	8.14e-08	68	1.27e-07		

Information Only

Table A-27. Sampled Values for Parameter WAS_AREA:BRUCITEH (LHS Variable 38) Replicate 1

Vector	Value (moles/(kg*s))	Vector	Value (moles/(kg*s))	Vector	Value (moles/(kg*s))
1	1.91e-08	35	1.94e-08	69	1.95e-08
2	2.07e-08	36	1.94e-08	70	2.07e-08
3	1.96e-08	37	2.01e-08	71	1.89e-08
4	2.09e-08	38	1.82e-08	72	2.18e-08
5	1.93e-08	39	2.03e-08	73	1.99e-08
6	1.96e-08	40	2.07e-08	74	2.06e-08
7	2.05e-08	41	2.12e-08	75	2.14e-08
8	1.90e-08	42	2.06e-08	76	2.08e-08
9	2.13e-08	43	2.09e-08	77	2.06e-08
10	1.97e-08	44	1.91e-08	78	1.92e-08
11	1.98e-08	45	2.16e-08	79	2.04e-08
12	1.90e-08	46	2.02e-08	80	2.02e-08
13	2.11e-08	47	1.86e-08	81	1.98e-08
14	1.98e-08	48	2.03e-08	82	1.97e-08
15	1.99e-08	49	1.92e-08	83	2.01e-08
16	2.04e-08	50	2.00e-08	84	1.92e-08
17	2.06e-08	51	1.87e-08	85	1.91e-08
18	1.93e-08	52	1.88e-08	86	2.03e-08
19	1.93e-08	53	1.98e-08	87	2.10e-08
20	1.97e-08	54	1.95e-08	88	1.96e-08
21	2.02e-08	55	2.02e-08	89	2.05e-08
22	2.02e-08	56	2.01e-08	90	1.98e-08
23	1.99e-08	57	2.14e-08	91	2.12e-08
24	1.97e-08	58	2.03e-08	92	2.10e-08
25	1.97e-08	59	2.00e-08	93	1.99e-08
26	1.95e-08	60	1.99e-08	94	2.08e-08
27	2.03e-08	61	1.94e-08	95	2.07e-08
28	2.04e-08	62	1.89e-08	96	2.11e-08
29	2.04e-08	63	2.00e-08	97	1.86e-08
30	1.83e-08	64	2.10e-08	98	2.01e-08
31	2.01e-08	65	2.00e-08	99	2.08e-08
32	1.95e-08	66	1.95e-08	100	1.96e-08
33	1.94e-08	67	2.05e-08		
34	2.05e-08	68	1.88e-08		

Information Only

Table A-27. Sampled Values for Parameter WAS_AREA:BRUCITEH (LHS Variable 38) Replicate 2

Vector	Value (moles/(kg*s))	Vector	Value (moles/(kg*s))	Vector	Value (moles/(kg*s))
1	1.99e-08	35	2.01e-08	69	2.05e-08
2	1.97e-08	36	1.99e-08	70	1.97e-08
3	2.15e-08	37	2.02e-08	71	1.91e-08
4	2.13e-08	38	1.95e-08	72	1.97e-08
5	2.08e-08	39	1.85e-08	73	1.98e-08
6	2.17e-08	40	2.05e-08	74	2.03e-08
7	2.04e-08	41	1.86e-08	75	1.93e-08
8	2.09e-08	42	1.99e-08	76	2.14e-08
9	2.00e-08	43	1.93e-08	77	2.11e-08
10	2.06e-08	44	2.02e-08	78	2.10e-08
11	2.04e-08	45	2.00e-08	79	1.94e-08
12	2.06e-08	46	1.95e-08	80	1.93e-08
13	2.01e-08	47	1.98e-08	81	1.99e-08
14	1.95e-08	48	1.84e-08	82	1.89e-08
15	2.00e-08	49	2.02e-08	83	2.09e-08
16	2.03e-08	50	1.94e-08	84	2.07e-08
17	2.08e-08	51	2.02e-08	85	1.94e-08
18	1.92e-08	52	2.01e-08	86	2.04e-08
19	2.04e-08	53	2.10e-08	87	2.12e-08
20	1.98e-08	54	2.06e-08	88	1.91e-08
21	1.98e-08	55	2.12e-08	89	2.05e-08
22	1.96e-08	56	1.90e-08	90	1.96e-08
23	1.93e-08	57	2.02e-08	91	1.95e-08
24	1.87e-08	58	2.07e-08	92	2.06e-08
25	2.00e-08	59	1.96e-08	93	1.96e-08
26	2.03e-08	60	2.01e-08	94	1.89e-08
27	1.92e-08	61	2.03e-08	95	2.06e-08
28	1.97e-08	62	2.00e-08	96	2.01e-08
29	1.97e-08	63	2.04e-08	97	1.90e-08
30	1.82e-08	64	1.95e-08	98	2.08e-08
31	1.99e-08	65	2.12e-08	99	1.90e-08
32	2.15e-08	66	2.09e-08	100	1.88e-08
33	1.92e-08	67	1.99e-08		
34	1.88e-08	68	2.07e-08		

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Table A-27. Sampled Values for Parameter WAS_AREA:BRUCITEH (LHS Variable 38) Replicate 3

Vector	Value (moles/(kg*s))	Vector	Value (moles/(kg*s))	Vector	Value (moles/(kg*s))
1	1.98e-08	35	2.00e-08	69	1.95e-08
2	2.14e-08	36	1.92e-08	70	2.01e-08
3	2.05e-08	37	2.04e-08	71	2.08e-08
4	1.99e-08	38	1.89e-08	72	2.00e-08
5	2.02e-08	39	2.13e-08	73	1.91e-08
6	1.94e-08	40	1.97e-08	74	1.85e-08
7	1.98e-08	41	2.03e-08	75	1.97e-08
8	1.96e-08	42	1.88e-08	76	2.00e-08
9	1.86e-08	43	2.11e-08	77	2.17e-08
10	1.97e-08	44	1.93e-08	78	1.90e-08
11	2.04e-08	45	1.96e-08	79	2.07e-08
12	2.06e-08	46	1.96e-08	80	1.95e-08
13	2.01e-08	47	1.84e-08	81	1.93e-08
14	1.98e-08	48	1.93e-08	82	1.94e-08
15	2.05e-08	49	1.94e-08	83	1.91e-08
16	2.12e-08	50	2.01e-08	84	2.15e-08
17	1.91e-08	51	1.87e-08	85	2.04e-08
18	1.95e-08	52	1.99e-08	86	1.98e-08
19	2.06e-08	53	2.02e-08	87	2.03e-08
20	2.02e-08	54	1.95e-08	88	2.01e-08
21	2.09e-08	55	2.04e-08	89	2.11e-08
22	2.05e-08	56	1.93e-08	90	2.02e-08
23	1.92e-08	57	2.09e-08	91	2.03e-08
24	1.82e-08	58	2.06e-08	92	1.92e-08
25	2.07e-08	59	2.09e-08	93	2.07e-08
26	1.99e-08	60	2.04e-08	94	2.02e-08
27	2.07e-08	61	2.16e-08	95	2.08e-08
28	1.97e-08	62	1.96e-08	96	2.00e-08
29	2.13e-08	63	1.98e-08	97	1.87e-08
30	2.00e-08	64	2.03e-08	98	1.89e-08
31	2.02e-08	65	2.10e-08	99	1.96e-08
32	2.10e-08	66	1.90e-08	100	2.00e-08
33	1.99e-08	67	2.06e-08		
34	2.09e-08	68	1.97e-08		

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Table A-28. Sampled Values for Parameter STEEL:CORRMCO2 (LHS Variable 39) Replicate 1

Vector	Value (m/s)	Vector	Value (m/s)	Vector	Value (m/s)
1	2.57e-14	35	4.50e-15	69	7.42e-15
2	8.37e-15	36	6.67e-15	70	8.30e-15
3	3.17e-14	37	8.87e-15	71	7.99e-15
4	8.54e-15	38	5.88e-15	72	1.19e-14
5	1.08e-14	39	1.56e-14	73	2.01e-15
6	1.39e-14	40	1.53e-14	74	1.07e-14
7	9.32e-15	41	2.94e-14	75	1.59e-14
8	1.12e-14	42	6.79e-15	76	1.08e-14
9	1.31e-14	43	1.36e-14	77	1.42e-14
10	3.18e-15	44	3.71e-14	78	3.98e-15
11	3.39e-14	45	9.34e-15	79	8.16e-15
12	1.22e-14	46	8.63e-15	80	7.94e-15
13	1.94e-14	47	3.64e-14	81	1.16e-14
14	1.28e-14	48	1.96e-14	82	4.90e-15
15	7.74e-15	49	6.48e-15	83	6.79e-15
16	3.59e-15	50	1.37e-14	84	1.73e-14
17	5.71e-15	51	1.29e-14	85	5.74e-14
18	2.81e-14	52	6.89e-15	86	8.78e-15
19	1.26e-14	53	1.13e-14	87	1.32e-14
20	1.27e-14	54	9.07e-15	88	8.40e-15
21	3.01e-14	55	7.12e-16	89	9.85e-15
22	1.45e-14	56	1.18e-14	90	7.36e-14
23	6.59e-15	57	7.55e-15	91	6.44e-15
24	1.81e-14	58	5.20e-14	92	9.44e-15
25	1.50e-14	59	5.37e-16	93	5.15e-15
26	1.19e-14	60	5.70e-15	94	7.50e-15
27	1.07e-14	61	1.47e-14	95	1.31e-14
28	1.45e-14	62	2.84e-15	96	9.07e-15
29	6.09e-15	63	1.83e-14	97	1.36e-14
30	1.15e-14	64	9.49e-15	98	1.65e-14
31	1.05e-14	65	1.13e-14	99	1.49e-14
32	7.24e-15	66	1.27e-14	100	8.05e-15
33	1.23e-14	67	1.62e-14		
34	1.14e-14	68	6.46e-15		

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Table A-28. Sampled Values for Parameter STEEL:CORRMCO2 (LHS Variable 39) Replicate 2

Vector	Value (m/s)	Vector	Value (m/s)	Vector	Value (m/s)
1	8.58e-15	35	4.40e-15	69	1.11e-14
2	1.36e-14	36	5.17e-15	70	3.64e-14
3	6.47e-15	37	8.79e-15	71	1.05e-15
4	9.45e-15	38	8.23e-15	72	1.39e-14
5	1.80e-14	39	9.32e-15	73	1.16e-14
6	1.45e-14	40	2.63e-14	74	1.07e-14
7	6.78e-15	41	1.13e-14	75	1.34e-14
8	3.08e-15	42	3.24e-14	76	2.94e-14
9	7.49e-15	43	8.94e-15	77	1.63e-14
10	1.12e-14	44	5.71e-15	78	1.48e-14
11	6.56e-14	45	8.04e-15	79	1.58e-14
12	7.71e-15	46	5.35e-14	80	1.15e-14
13	1.12e-14	47	1.27e-14	81	1.29e-14
14	3.74e-15	48	1.18e-14	82	1.22e-14
15	1.02e-14	49	1.13e-14	83	2.75e-14
16	7.42e-15	50	1.41e-14	84	6.79e-15
17	1.29e-14	51	5.86e-15	85	1.95e-14
18	8.31e-15	52	6.61e-15	86	3.86e-14
19	1.26e-14	53	1.58e-14	87	1.53e-14
20	1.93e-14	54	6.47e-15	88	1.07e-14
21	1.72e-14	55	1.36e-14	89	1.23e-14
22	5.26e-14	56	1.38e-14	90	1.31e-14
23	1.07e-14	57	9.07e-15	91	4.82e-15
24	6.65e-15	58	8.42e-15	92	5.75e-15
25	6.08e-15	59	6.89e-15	93	7.27e-15
26	1.27e-14	60	1.44e-14	94	8.60e-15
27	1.19e-14	61	8.05e-15	95	1.71e-14
28	1.50e-14	62	7.95e-15	96	3.23e-14
29	1.84e-14	63	2.04e-15	97	7.61e-15
30	1.49e-14	64	2.10e-15	98	9.32e-15
31	1.31e-14	65	8.37e-15	99	3.71e-15
32	6.41e-15	66	5.88e-16	100	1.01e-14
33	3.04e-14	67	1.20e-14		
34	9.45e-15	68	9.07e-15		

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Table A-28. Sampled Values for Parameter STEEL:CORRMCO2 (LHS Variable 39) Replicate 3

Vector	Value (m/s)	Vector	Value (m/s)	Vector	Value (m/s)
1	1.73e-14	35	6.47e-15	69	1.27e-14
2	8.34e-15	36	1.52e-14	70	1.17e-14
3	1.48e-14	37	7.42e-15	71	1.15e-14
4	5.53e-15	38	6.53e-15	72	2.33e-14
5	1.98e-14	39	1.44e-14	73	1.55e-14
6	1.19e-14	40	7.66e-15	74	3.67e-15
7	1.13e-14	41	7.95e-15	75	9.36e-15
8	8.98e-15	42	1.39e-16	76	2.12e-15
9	9.45e-15	43	6.24e-15	77	8.21e-15
10	1.67e-14	44	1.27e-14	78	1.03e-14
11	1.43e-15	45	8.41e-15	79	1.11e-15
12	3.11e-14	46	6.58e-15	80	1.19e-14
13	5.71e-15	47	6.98e-15	81	3.43e-14
14	1.59e-14	48	1.45e-14	82	7.15e-15
15	6.79e-15	49	1.39e-14	83	1.86e-14
16	1.13e-14	50	5.75e-15	84	1.27e-14
17	9.32e-15	51	1.07e-14	85	1.79e-14
18	1.19e-14	52	9.07e-15	86	9.14e-15
19	8.50e-15	53	3.77e-15	87	3.66e-14
20	1.36e-14	54	1.29e-14	88	6.75e-15
21	1.31e-14	55	1.32e-14	89	4.29e-15
22	1.13e-14	56	1.38e-14	90	7.58e-15
23	1.12e-14	57	1.24e-14	91	9.55e-15
24	7.10e-14	58	1.07e-14	92	3.69e-14
25	1.41e-14	59	6.25e-14	93	4.92e-14
26	8.37e-15	60	1.62e-14	94	1.86e-14
27	6.79e-15	61	5.77e-15	95	2.96e-14
28	1.10e-14	62	1.25e-14	96	1.51e-14
29	8.72e-15	63	1.49e-14	97	8.05e-15
30	1.36e-14	64	8.82e-15	98	4.95e-15
31	8.00e-15	65	2.94e-14	99	3.15e-15
32	1.20e-14	66	9.64e-15	100	2.90e-14
33	7.54e-15	67	1.07e-14		
34	6.06e-15	68	1.31e-14		

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Table A-29. Sampled Values for Parameter WAS_AREA:PROBDEG (LHS Variable 40) Replicate 1

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	1.00e+00	35	1.00e+00	69	1.00e+00
2	2.00e+00	36	1.00e+00	70	1.00e+00
3	2.00e+00	37	2.00e+00	71	1.00e+00
4	1.00e+00	38	2.00e+00	72	1.00e+00
5	2.00e+00	39	1.00e+00	73	1.00e+00
6	2.00e+00	40	1.00e+00	74	1.00e+00
7	1.00e+00	41	1.00e+00	75	1.00e+00
8	1.00e+00	42	1.00e+00	76	1.00e+00
9	2.00e+00	43	1.00e+00	77	1.00e+00
10	1.00e+00	44	2.00e+00	78	1.00e+00
11	1.00e+00	45	1.00e+00	79	1.00e+00
12	2.00e+00	46	1.00e+00	80	1.00e+00
13	1.00e+00	47	1.00e+00	81	1.00e+00
14	2.00e+00	48	1.00e+00	82	1.00e+00
15	2.00e+00	49	1.00e+00	83	1.00e+00
16	1.00e+00	50	1.00e+00	84	2.00e+00
17	1.00e+00	51	1.00e+00	85	1.00e+00
18	1.00e+00	52	1.00e+00	86	2.00e+00
19	1.00e+00	53	2.00e+00	87	2.00e+00
20	2.00e+00	54	2.00e+00	88	1.00e+00
21	1.00e+00	55	1.00e+00	89	1.00e+00
22	1.00e+00	56	1.00e+00	90	1.00e+00
23	1.00e+00	57	1.00e+00	91	1.00e+00
24	1.00e+00	58	2.00e+00	92	1.00e+00
25	2.00e+00	59	2.00e+00	93	1.00e+00
26	1.00e+00	60	1.00e+00	94	2.00e+00
27	1.00e+00	61	1.00e+00	95	1.00e+00
28	2.00e+00	62	1.00e+00	96	1.00e+00
29	1.00e+00	63	2.00e+00	97	1.00e+00
30	1.00e+00	64	1.00e+00	98	1.00e+00
31	1.00e+00	65	1.00e+00	99	1.00e+00
32	1.00e+00	66	1.00e+00	100	2.00e+00
33	1.00e+00	67	1.00e+00		
34	1.00e+00	68	2.00e+00		

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Table A-29. Sampled Values for Parameter WAS_AREA:PROBDEG (LHS Variable 40) Replicate 2

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	2.00e+00	35	1.00e+00	69	1.00e+00
2	1.00e+00	36	1.00e+00	70	1.00e+00
3	1.00e+00	37	1.00e+00	71	1.00e+00
4	1.00e+00	38	2.00e+00	72	1.00e+00
5	1.00e+00	39	1.00e+00	73	2.00e+00
6	1.00e+00	40	1.00e+00	74	1.00e+00
7	2.00e+00	41	1.00e+00	75	2.00e+00
8	1.00e+00	42	1.00e+00	76	2.00e+00
9	1.00e+00	43	2.00e+00	77	1.00e+00
10	1.00e+00	44	2.00e+00	78	1.00e+00
11	1.00e+00	45	1.00e+00	79	1.00e+00
12	1.00e+00	46	2.00e+00	80	1.00e+00
13	2.00e+00	47	1.00e+00	81	1.00e+00
14	2.00e+00	48	1.00e+00	82	1.00e+00
15	2.00e+00	49	1.00e+00	83	1.00e+00
16	1.00e+00	50	1.00e+00	84	2.00e+00
17	1.00e+00	51	1.00e+00	85	1.00e+00
18	1.00e+00	52	1.00e+00	86	2.00e+00
19	2.00e+00	53	1.00e+00	87	1.00e+00
20	2.00e+00	54	2.00e+00	88	1.00e+00
21	2.00e+00	55	1.00e+00	89	1.00e+00
22	1.00e+00	56	1.00e+00	90	1.00e+00
23	2.00e+00	57	2.00e+00	91	1.00e+00
24	2.00e+00	58	1.00e+00	92	1.00e+00
25	2.00e+00	59	1.00e+00	93	1.00e+00
26	1.00e+00	60	1.00e+00	94	1.00e+00
27	1.00e+00	61	1.00e+00	95	1.00e+00
28	1.00e+00	62	1.00e+00	96	1.00e+00
29	1.00e+00	63	1.00e+00	97	1.00e+00
30	1.00e+00	64	1.00e+00	98	2.00e+00
31	1.00e+00	65	1.00e+00	99	1.00e+00
32	1.00e+00	66	1.00e+00	100	2.00e+00
33	1.00e+00	67	2.00e+00		
34	1.00e+00	68	1.00e+00		

Information Only

Table A-29. Sampled Values for Parameter WAS_AREA:PROBDEG (LHS Variable 40) Replicate 3

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	1.00e+00	35	1.00e+00	69	2.00e+00
2	1.00e+00	36	2.00e+00	70	1.00e+00
3	1.00e+00	37	1.00e+00	71	2.00e+00
4	1.00e+00	38	1.00e+00	72	2.00e+00
5	1.00e+00	39	2.00e+00	73	2.00e+00
6	1.00e+00	40	2.00e+00	74	1.00e+00
7	1.00e+00	41	1.00e+00	75	2.00e+00
8	2.00e+00	42	2.00e+00	76	1.00e+00
9	2.00e+00	43	1.00e+00	77	1.00e+00
10	2.00e+00	44	2.00e+00	78	1.00e+00
11	1.00e+00	45	1.00e+00	79	1.00e+00
12	1.00e+00	46	2.00e+00	80	1.00e+00
13	1.00e+00	47	1.00e+00	81	1.00e+00
14	1.00e+00	48	1.00e+00	82	1.00e+00
15	1.00e+00	49	2.00e+00	83	1.00e+00
16	1.00e+00	50	2.00e+00	84	1.00e+00
17	1.00e+00	51	1.00e+00	85	2.00e+00
18	1.00e+00	52	2.00e+00	86	1.00e+00
19	2.00e+00	53	1.00e+00	87	1.00e+00
20	1.00e+00	54	1.00e+00	88	1.00e+00
21	1.00e+00	55	1.00e+00	89	1.00e+00
22	1.00e+00	56	1.00e+00	90	2.00e+00
23	1.00e+00	57	2.00e+00	91	1.00e+00
24	1.00e+00	58	2.00e+00	92	1.00e+00
25	1.00e+00	59	1.00e+00	93	2.00e+00
26	2.00e+00	60	1.00e+00	94	1.00e+00
27	1.00e+00	61	1.00e+00	95	1.00e+00
28	1.00e+00	62	1.00e+00	96	1.00e+00
29	1.00e+00	63	1.00e+00	97	1.00e+00
30	1.00e+00	64	1.00e+00	98	1.00e+00
31	1.00e+00	65	1.00e+00	99	2.00e+00
32	1.00e+00	66	1.00e+00	100	1.00e+00
33	1.00e+00	67	1.00e+00		
34	1.00e+00	68	1.00e+00		

Information Only

Table A-30. Sampled Values for Parameter WAS_AREA:GRATMICI (LHS Variable 41) Replicate 1

Vector	Value (moles/(kg*s))	Vector	Value (moles/(kg*s))	Vector	Value (moles/(kg*s))
1	2.39e-10	35	2.50e-10	69	3.94e-10
2	7.82e-11	36	1.51e-10	70	1.64e-10
3	3.28e-10	37	4.59e-10	71	5.50e-10
4	7.93e-11	38	3.89e-10	72	2.42e-10
5	5.27e-10	39	3.59e-10	73	4.76e-10
6	4.09e-10	40	3.54e-10	74	3.44e-10
7	5.09e-10	41	4.20e-10	75	2.97e-10
8	3.04e-10	42	1.61e-10	76	5.55e-10
9	5.45e-10	43	4.47e-10	77	1.76e-10
10	3.32e-10	44	5.18e-10	78	1.44e-10
11	5.35e-10	45	8.36e-11	79	1.33e-10
12	1.21e-10	46	2.52e-10	80	7.02e-11
13	3.19e-10	47	1.03e-10	81	3.68e-10
14	1.31e-10	48	2.29e-10	82	1.18e-10
15	1.83e-10	49	3.25e-10	83	2.04e-10
16	1.72e-10	50	5.03e-10	84	5.26e-11
17	2.61e-10	51	2.72e-10	85	4.79e-10
18	3.26e-11	52	5.37e-10	86	5.76e-11
19	1.92e-10	53	3.49e-10	87	4.94e-10
20	2.85e-10	54	2.90e-10	88	2.74e-10
21	4.89e-10	55	4.84e-10	89	4.27e-10
22	2.25e-10	56	5.06e-11	90	1.87e-10
23	2.08e-10	57	4.56e-10	91	3.11e-10
24	3.95e-11	58	3.09e-10	92	1.55e-10
25	4.44e-10	59	4.22e-10	93	4.35e-10
26	1.14e-10	60	5.23e-10	94	4.63e-10
27	2.33e-10	61	1.07e-10	95	3.84e-10
28	4.36e-10	62	3.63e-10	96	3.76e-10
29	4.32e-11	63	1.41e-10	97	3.40e-10
30	3.81e-10	64	6.74e-11	98	4.12e-10
31	9.19e-11	65	5.12e-10	99	2.17e-10
32	2.65e-10	66	9.68e-11	100	2.13e-10
33	4.72e-10	67	1.95e-10		
34	4.04e-10	68	2.83e-10		

Information Only

Table A-30. Sampled Values for Parameter WAS_AREA:GRATMICI (LHS Variable 41) Replicate 2

Vector	Value (moles/(kg*s))	Vector	Value (moles/(kg*s))	Vector	Value (moles/(kg*s))
1	4.46e-10	35	2.33e-10	69	3.06e-10
2	1.66e-10	36	4.40e-10	70	2.87e-10
3	3.94e-10	37	5.33e-10	71	2.79e-10
4	2.21e-10	38	3.64e-10	72	4.06e-10
5	5.45e-10	39	1.06e-10	73	3.83e-10
6	7.54e-11	40	1.18e-10	74	1.79e-10
7	5.68e-11	41	5.00e-10	75	2.69e-10
8	5.08e-10	42	4.73e-10	76	4.88e-10
9	3.40e-11	43	3.92e-10	77	3.40e-10
10	4.86e-11	44	5.26e-10	78	3.10e-10
11	3.76e-10	45	1.84e-10	79	4.24e-10
12	8.73e-11	46	4.17e-10	80	2.04e-10
13	4.57e-10	47	5.50e-10	81	5.12e-10
14	1.59e-10	48	4.79e-10	82	1.31e-10
15	6.43e-11	49	8.03e-11	83	3.53e-10
16	5.21e-10	50	3.31e-10	84	2.97e-10
17	1.52e-10	51	4.97e-10	85	5.41e-10
18	4.69e-10	52	1.14e-10	86	2.08e-10
19	2.58e-10	53	2.75e-10	87	1.72e-10
20	9.68e-11	54	9.00e-11	88	3.01e-10
21	2.90e-10	55	1.90e-10	89	1.22e-10
22	5.19e-10	56	1.41e-10	90	3.60e-10
23	2.56e-10	57	4.04e-10	91	2.37e-10
24	2.63e-10	58	3.47e-10	92	5.53e-10
25	3.71e-10	59	2.14e-10	93	1.02e-10
26	1.26e-10	60	4.55e-10	94	3.19e-10
27	3.73e-11	61	4.47e-11	95	6.78e-11
28	4.12e-10	62	2.29e-10	96	2.19e-10
29	1.49e-10	63	4.26e-10	97	1.46e-10
30	6.14e-11	64	1.77e-10	98	3.85e-10
31	2.42e-10	65	4.63e-10	99	2.47e-10
32	3.27e-10	66	4.32e-10	100	4.48e-10
33	3.42e-10	67	1.95e-10		
34	4.91e-10	68	3.25e-10		

Information Only

Table A-30. Sampled Values for Parameter WAS_AREA:GRATMICI (LHS Variable 41) Replicate 3

Vector	Value (moles/(kg*s))	Vector	Value (moles/(kg*s))	Vector	Value (moles/(kg*s))
1	1.86e-10	35	1.73e-10	69	3.52e-10
2	2.28e-10	36	5.27e-10	70	4.69e-11
3	1.95e-10	37	3.89e-10	71	1.57e-10
4	1.64e-10	38	4.28e-10	72	8.11e-11
5	5.76e-11	39	1.36e-10	73	1.05e-10
6	3.35e-10	40	1.14e-10	74	3.08e-10
7	4.19e-10	41	2.56e-10	75	1.48e-10
8	2.40e-10	42	3.62e-10	76	9.57e-11
9	3.11e-10	43	3.48e-10	77	2.73e-10
10	1.37e-10	44	3.38e-10	78	2.88e-10
11	4.54e-10	45	1.89e-10	79	4.07e-10
12	5.20e-11	46	2.10e-10	80	3.45e-10
13	5.32e-10	47	1.24e-10	81	4.86e-10
14	5.52e-10	48	5.46e-10	82	2.94e-10
15	3.94e-10	49	4.33e-10	83	4.47e-10
16	4.46e-10	50	3.04e-10	84	7.45e-11
17	2.31e-10	51	1.27e-10	85	8.36e-11
18	2.75e-10	52	1.02e-10	86	3.30e-10
19	1.17e-10	53	4.61e-11	87	2.23e-10
20	1.56e-10	54	1.73e-10	88	2.61e-10
21	5.24e-10	55	5.14e-10	89	4.83e-10
22	3.82e-10	56	9.23e-11	90	2.67e-10
23	5.37e-10	57	2.92e-10	91	4.63e-10
24	3.70e-10	58	5.03e-10	92	2.81e-10
25	3.24e-10	59	4.58e-10	93	3.85e-10
26	4.13e-10	60	2.42e-10	94	4.40e-10
27	3.60e-10	61	4.99e-10	95	2.51e-10
28	5.17e-10	62	5.05e-10	96	4.93e-10
29	2.15e-10	63	2.03e-10	97	4.08e-11
30	4.72e-10	64	5.51e-10	98	4.21e-10
31	4.77e-10	65	3.74e-10	99	2.09e-10
32	6.85e-11	66	3.99e-10	100	1.80e-10
33	3.15e-11	67	6.58e-11		
34	3.19e-10	68	1.43e-10		

Information Only

Table A-31. Sampled Values for Parameter WAS_AREA:GRATMICH (LHS Variable 42) Replicate 1

Vector	Value (moles/(kg*s))	Vector	Value (moles/(kg*s))	Vector	Value (moles/(kg*s))
1	3.39e-11	35	2.46e-10	69	3.39e-10
2	5.51e-11	36	9.72e-11	70	2.97e-11
3	2.92e-10	37	3.51e-10	71	4.94e-10
4	7.01e-11	38	1.89e-10	72	2.18e-10
5	4.04e-10	39	3.41e-10	73	3.45e-10
6	3.84e-10	40	2.49e-10	74	2.01e-10
7	4.60e-10	41	1.01e-10	75	1.56e-10
8	2.83e-10	42	1.36e-10	76	5.54e-10
9	4.21e-10	43	4.27e-10	77	4.57e-11
10	1.76e-10	44	5.00e-10	78	6.38e-11
11	5.57e-12	45	2.53e-11	79	9.12e-11
12	6.80e-11	46	1.68e-10	80	5.21e-11
13	1.40e-10	47	3.94e-11	81	1.83e-10
14	7.99e-11	48	8.28e-11	82	1.03e-10
15	9.35e-11	49	1.74e-10	83	7.85e-11
16	1.49e-10	50	3.63e-10	84	3.45e-11
17	1.03e-11	51	2.64e-10	85	2.43e-10
18	1.98e-11	52	1.38e-10	86	1.84e-11
19	1.60e-10	53	2.00e-10	87	3.45e-10
20	2.09e-10	54	1.55e-10	88	1.09e-10
21	2.13e-10	55	2.78e-10	89	1.82e-10
22	6.66e-11	56	4.13e-11	90	1.15e-10
23	1.29e-10	57	3.45e-10	91	2.44e-10
24	3.28e-11	58	1.63e-10	92	1.25e-10
25	4.51e-11	59	1.10e-10	93	2.29e-10
26	7.81e-11	60	3.77e-10	94	3.87e-10
27	1.48e-10	61	5.98e-11	95	2.10e-10
28	2.95e-10	62	2.17e-10	96	3.23e-10
29	3.09e-11	63	1.12e-10	97	1.75e-10
30	1.29e-10	64	2.73e-11	98	3.77e-10
31	3.80e-11	65	2.36e-11	99	1.44e-10
32	1.98e-10	66	4.56e-11	100	9.65e-11
33	2.65e-10	67	1.76e-10		
34	1.89e-10	68	6.04e-11		

Information Only

Table A-31. Sampled Values for Parameter WAS_AREA:GRATMICH (LHS Variable 42) Replicate 2

Vector	Value (moles/(kg*s))	Vector	Value (moles/(kg*s))	Vector	Value (moles/(kg*s))
1	3.79e-10	35	1.30e-10	69	2.18e-10
2	9.58e-11	36	2.75e-10	70	2.66e-10
3	1.35e-10	37	4.21e-10	71	2.62e-10
4	1.59e-10	38	2.12e-10	72	3.53e-10
5	4.44e-10	39	1.04e-10	73	3.70e-10
6	1.69e-11	40	3.59e-11	74	1.43e-10
7	3.91e-11	41	1.14e-10	75	1.53e-10
8	3.67e-10	42	3.66e-10	76	3.19e-10
9	1.80e-11	43	1.93e-10	77	2.09e-10
10	4.07e-11	44	3.33e-10	78	7.12e-11
11	1.64e-10	45	5.45e-11	79	3.09e-10
12	2.07e-11	46	2.82e-10	80	1.87e-10
13	7.99e-11	47	2.65e-12	81	3.77e-10
14	1.04e-10	48	4.47e-11	82	3.21e-11
15	3.36e-11	49	1.43e-11	83	2.91e-10
16	2.29e-11	50	3.29e-10	84	1.26e-10
17	1.22e-10	51	3.12e-10	85	5.31e-10
18	1.67e-10	52	5.40e-11	86	1.38e-10
19	1.78e-10	53	1.79e-10	87	7.76e-11
20	3.31e-11	54	4.21e-11	88	2.28e-10
21	2.64e-10	55	7.65e-11	89	1.17e-10
22	5.50e-11	56	2.14e-11	90	3.13e-10
23	1.32e-10	57	3.81e-10	91	1.41e-10
24	1.95e-10	58	3.26e-10	92	4.82e-10
25	1.46e-10	59	1.84e-10	93	2.90e-11
26	7.62e-11	60	3.37e-10	94	1.91e-10
27	2.64e-11	61	8.85e-12	95	2.59e-11
28	4.08e-10	62	2.09e-10	96	1.27e-10
29	9.97e-11	63	3.77e-10	97	2.51e-11
30	2.45e-11	64	7.41e-11	98	3.25e-10
31	8.28e-11	65	2.52e-10	99	1.21e-10
32	2.64e-10	66	1.91e-10	100	9.62e-11
33	1.71e-10	67	1.75e-10		
34	3.77e-10	68	1.08e-10		

Information Only

Table A-31. Sampled Values for Parameter WAS_AREA:GRATMICH (LHS Variable 42) Replicate 3

Vector	Value (moles/(kg*s))	Vector	Value (moles/(kg*s))	Vector	Value (moles/(kg*s))
1	3.65e-11	35	1.17e-10	69	1.15e-10
2	1.15e-10	36	5.11e-10	70	2.20e-11
3	1.22e-10	37	1.55e-10	71	7.72e-11
4	1.16e-10	38	3.57e-10	72	1.36e-11
5	5.19e-11	39	9.27e-11	73	1.37e-11
6	2.40e-10	40	1.08e-10	74	1.74e-10
7	2.15e-10	41	2.46e-10	75	6.00e-11
8	1.92e-10	42	2.60e-10	76	3.07e-11
9	2.45e-10	43	1.92e-10	77	1.05e-10
10	9.35e-11	44	2.13e-10	78	2.59e-10
11	3.07e-11	45	1.62e-10	79	3.52e-10
12	4.75e-11	46	1.95e-10	80	3.41e-10
13	4.68e-10	47	7.84e-11	81	3.69e-10
14	4.02e-10	48	2.16e-10	82	1.61e-10
15	3.88e-10	49	2.00e-10	83	8.49e-11
16	2.61e-10	50	2.66e-10	84	6.17e-11
17	1.13e-10	51	6.28e-11	85	6.32e-11
18	1.83e-10	52	6.34e-11	86	2.30e-10
19	5.14e-11	53	1.37e-11	87	4.96e-11
20	1.00e-10	54	1.68e-10	88	1.38e-10
21	2.83e-10	55	3.02e-10	89	4.28e-10
22	1.70e-10	56	4.32e-11	90	1.09e-10
23	1.47e-10	57	1.05e-10	91	3.55e-10
24	2.26e-10	58	4.83e-10	92	2.27e-10
25	2.50e-10	59	3.71e-10	93	3.16e-10
26	2.35e-10	60	1.88e-10	94	3.28e-10
27	3.04e-10	61	3.28e-10	95	1.81e-10
28	5.16e-10	62	4.01e-10	96	2.93e-10
29	1.15e-10	63	7.60e-11	97	3.82e-11
30	2.97e-10	64	6.73e-13	98	5.77e-11
31	3.21e-10	65	1.78e-10	99	1.27e-10
32	5.48e-11	66	1.67e-10	100	1.31e-10
33	8.49e-12	67	2.27e-11		
34	2.36e-10	68	6.04e-11		

Information Only

Table A-32. Sampled Values for Parameter WAS_AREA:HYMAGCON (LHS Variable 43) Replicate 1

Vector	Value (moles/(kg*s))	Vector	Value (moles/(kg*s))	Vector	Value (moles/(kg*s))
1	3.24e-10	35	4.74e-11	69	7.73e-11
2	1.32e-10	36	1.11e-10	70	2.70e-10
3	1.27e-10	37	3.17e-11	71	1.18e-10
4	8.32e-11	38	1.08e-11	72	1.24e-10
5	1.57e-10	39	3.04e-10	73	1.02e-10
6	7.10e-11	40	9.00e-12	74	3.16e-10
7	8.65e-11	41	1.41e-10	75	6.53e-11
8	2.54e-10	42	1.80e-10	76	3.27e-10
9	1.37e-10	43	2.26e-10	77	1.06e-10
10	1.86e-10	44	2.47e-10	78	2.03e-10
11	2.81e-10	45	8.13e-11	79	1.83e-10
12	3.49e-13	46	2.05e-10	80	1.51e-10
13	1.63e-10	47	1.67e-10	81	2.18e-10
14	1.75e-10	48	2.01e-11	82	2.12e-10
15	2.00e-10	49	2.94e-10	83	2.09e-10
16	2.16e-10	50	2.86e-10	84	3.19e-10
17	1.55e-10	51	7.36e-11	85	5.62e-11
18	2.75e-10	52	3.49e-11	86	3.02e-10
19	3.68e-12	53	3.30e-10	87	6.33e-11
20	2.85e-10	54	1.15e-10	88	2.28e-10
21	9.37e-11	55	3.36e-10	89	1.57e-11
22	2.14e-11	56	3.08e-10	90	9.77e-11
23	1.93e-10	57	2.65e-10	91	1.22e-10
24	1.43e-10	58	3.40e-10	92	5.38e-11
25	2.50e-10	59	2.90e-10	93	3.78e-11
26	3.20e-10	60	1.88e-10	94	2.58e-10
27	2.40e-10	61	3.04e-11	95	4.09e-11
28	2.72e-11	62	2.31e-10	96	2.57e-10
29	1.49e-10	63	1.96e-10	97	2.76e-10
30	3.12e-10	64	2.97e-10	98	1.73e-10
31	2.23e-10	65	6.00e-11	99	1.66e-10
32	1.36e-10	66	5.08e-11	100	9.10e-11
33	2.65e-10	67	2.44e-10		
34	1.01e-10	68	2.38e-10		

Information Only

Table A-32. Sampled Values for Parameter WAS_AREA:HYMAGCON (LHS Variable 43) Replicate 2

Vector	Value (moles/(kg*s))	Vector	Value (moles/(kg*s))	Vector	Value (moles/(kg*s))
1	2.55e-10	35	2.33e-10	69	2.05e-10
2	1.21e-10	36	9.11e-11	70	3.24e-10
3	1.22e-11	37	2.42e-10	71	2.01e-11
4	2.61e-10	38	2.35e-10	72	5.78e-11
5	2.79e-10	39	3.09e-10	73	2.33e-11
6	2.48e-10	40	1.08e-10	74	1.74e-10
7	6.49e-11	41	3.37e-10	75	1.17e-10
8	5.09e-11	42	5.83e-11	76	1.56e-11
9	1.97e-10	43	8.46e-11	77	3.29e-10
10	1.25e-10	44	1.09e-10	78	2.40e-10
11	1.72e-10	45	2.14e-10	79	9.63e-12
12	3.81e-11	46	7.72e-11	80	2.90e-10
13	1.54e-10	47	2.73e-10	81	8.02e-11
14	2.95e-11	48	1.39e-10	82	3.27e-11
15	2.72e-11	49	2.21e-10	83	2.23e-10
16	5.23e-11	50	2.66e-10	84	1.88e-10
17	1.60e-10	51	1.04e-10	85	1.49e-10
18	3.49e-11	52	2.70e-10	86	8.62e-11
19	3.11e-10	53	2.48e-10	87	2.93e-10
20	1.35e-10	54	2.11e-10	88	3.33e-10
21	1.94e-10	55	1.93e-10	89	1.41e-10
22	3.23e-10	56	1.59e-10	90	1.43e-10
23	2.84e-10	57	1.26e-10	91	2.97e-10
24	1.82e-10	58	2.76e-10	92	2.55e-10
25	2.87e-10	59	1.68e-10	93	1.14e-10
26	3.16e-10	60	3.10e-12	94	3.05e-10
27	2.09e-10	61	1.01e-10	95	2.25e-10
28	2.02e-10	62	4.12e-11	96	1.30e-10
29	1.63e-10	63	1.52e-10	97	3.35e-10
30	4.19e-12	64	3.01e-10	98	1.79e-10
31	2.65e-10	65	6.83e-11	99	1.85e-10
32	7.20e-11	66	3.15e-10	100	2.31e-10
33	4.46e-11	67	6.14e-11		
34	9.65e-11	68	9.25e-11		

Information Only

Table A-32. Sampled Values for Parameter WAS_AREA:HYMAGCON (LHS Variable 43) Replicate 3

Vector	Value (moles/(kg*s))	Vector	Value (moles/(kg*s))	Vector	Value (moles/(kg*s))
1	1.83e-10	35	7.58e-11	69	3.16e-10
2	2.50e-10	36	2.53e-10	70	3.12e-10
3	3.05e-10	37	1.44e-10	71	5.17e-11
4	2.35e-10	38	3.78e-11	72	2.13e-10
5	2.38e-11	39	2.85e-10	73	9.22e-11
6	1.47e-11	40	6.18e-11	74	3.32e-10
7	2.92e-10	41	7.40e-11	75	2.87e-10
8	2.35e-10	42	2.29e-10	76	2.10e-10
9	3.16e-10	43	2.60e-10	77	2.69e-10
10	3.20e-10	44	1.12e-10	78	9.66e-12
11	2.87e-11	45	7.06e-11	79	2.38e-10
12	1.65e-10	46	1.94e-10	80	5.50e-11
13	2.74e-10	47	2.95e-10	81	1.78e-10
14	7.88e-11	48	3.08e-10	82	2.19e-10
15	1.55e-10	49	2.80e-10	83	1.12e-10
16	1.49e-10	50	4.82e-11	84	1.50e-10
17	5.60e-13	51	1.08e-10	85	1.34e-10
18	1.41e-10	52	1.25e-10	86	1.61e-10
19	2.01e-10	53	1.05e-11	87	2.56e-10
20	8.16e-11	54	3.27e-10	88	3.00e-10
21	8.96e-11	55	2.97e-10	89	4.63e-11
22	2.67e-10	56	3.64e-11	90	2.17e-10
23	1.04e-10	57	2.26e-11	91	1.22e-10
24	2.24e-10	58	1.68e-10	92	8.77e-11
25	3.39e-10	59	1.60e-10	93	1.18e-10
26	6.51e-11	60	2.42e-10	94	4.48e-12
27	6.02e-11	61	2.25e-10	95	1.72e-10
28	1.86e-10	62	2.05e-10	96	1.37e-10
29	3.26e-10	63	4.24e-11	97	1.77e-10
30	2.45e-10	64	1.99e-11	98	1.98e-10
31	1.92e-10	65	1.00e-10	99	2.76e-10
32	1.32e-10	66	3.35e-10	100	9.60e-11
33	2.65e-10	67	1.88e-10		
34	3.25e-11	68	1.26e-10		

Information Only

Table A-33. Sampled Values for Parameter WAS_AREA:SAT_RGAS (LHS Variable 44) Replicate 1

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	1.65e-02	35	8.95e-02	69	1.44e-01
2	8.10e-02	36	1.41e-01	70	4.27e-02
3	8.67e-02	37	1.15e-01	71	1.04e-01
4	1.26e-01	38	6.82e-02	72	6.91e-02
5	6.17e-02	39	1.44e-01	73	2.66e-02
6	7.02e-03	40	8.23e-02	74	1.11e-01
7	5.11e-02	41	1.37e-01	75	1.21e-01
8	2.86e-02	42	2.92e-03	76	9.27e-02
9	6.14e-02	43	1.49e-02	77	1.64e-02
10	3.09e-02	44	7.52e-02	78	4.59e-02
11	3.57e-02	45	1.16e-01	79	8.69e-03
12	5.80e-02	46	5.90e-02	80	7.71e-02
13	7.72e-04	47	4.15e-02	81	1.31e-02
14	1.35e-01	48	1.22e-01	82	1.05e-02
15	5.52e-02	49	6.33e-02	83	1.12e-01
16	4.05e-02	50	1.34e-01	84	1.48e-01
17	9.75e-02	51	3.61e-02	85	1.39e-01
18	7.40e-02	52	5.34e-02	86	5.68e-02
19	1.28e-01	53	1.49e-01	87	8.31e-02
20	1.00e-02	54	1.41e-01	88	4.36e-02
21	1.06e-01	55	7.31e-02	89	6.60e-02
22	8.46e-02	56	3.33e-02	90	3.17e-02
23	1.13e-01	57	8.81e-02	91	1.08e-01
24	9.40e-02	58	1.85e-02	92	1.23e-01
25	1.20e-01	59	6.73e-02	93	2.43e-02
26	1.46e-01	60	1.32e-01	94	1.00e-01
27	2.36e-02	61	9.57e-02	95	7.94e-02
28	4.98e-02	62	1.25e-01	96	4.86e-02
29	1.02e-01	63	4.68e-02	97	2.05e-02
30	3.82e-02	64	1.33e-01	98	2.77e-02
31	1.09e-01	65	2.21e-02	99	9.62e-02
32	7.10e-02	66	1.17e-01	100	3.24e-03
33	1.29e-01	67	4.66e-03		
34	9.02e-02	68	1.03e-01		

Information Only

Table A-33. Sampled Values for Parameter WAS_AREA:SAT_RGAS (LHS Variable 44) Replicate 2

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	7.43e-03	35	1.01e-01	69	2.03e-02
2	1.73e-02	36	4.98e-02	70	1.09e-01
3	1.34e-01	37	7.95e-02	71	5.54e-02
4	7.85e-02	38	1.14e-01	72	1.25e-01
5	8.11e-02	39	8.63e-02	73	9.52e-02
6	9.70e-02	40	3.57e-02	74	4.70e-03
7	5.57e-02	41	1.28e-01	75	5.95e-02
8	4.46e-02	42	9.23e-02	76	2.13e-02
9	2.68e-03	43	3.82e-02	77	8.75e-02
10	1.84e-02	44	1.30e-01	78	7.70e-03
11	6.34e-04	45	7.61e-02	79	2.28e-02
12	5.26e-02	46	1.31e-01	80	3.62e-02
13	5.72e-02	47	1.05e-01	81	7.20e-02
14	3.39e-02	48	1.18e-01	82	1.04e-01
15	9.14e-02	49	1.39e-01	83	4.06e-02
16	8.40e-02	50	6.93e-02	84	6.51e-02
17	9.90e-03	51	2.96e-02	85	9.98e-02
18	4.01e-02	52	9.32e-02	86	1.48e-01
19	1.28e-02	53	3.12e-02	87	1.13e-01
20	1.40e-01	54	1.26e-01	88	1.37e-01
21	5.19e-02	55	1.50e-01	89	1.45e-01
22	1.09e-02	56	1.60e-02	90	1.11e-01
23	6.37e-02	57	4.83e-02	91	6.61e-02
24	8.49e-02	58	1.02e-01	92	7.45e-02
25	1.22e-01	59	7.75e-02	93	7.33e-02
26	1.12e-01	60	9.85e-02	94	1.21e-01
27	6.02e-02	61	1.16e-01	95	4.54e-02
28	1.47e-01	62	1.43e-01	96	1.33e-01
29	1.45e-02	63	6.21e-02	97	8.92e-02
30	6.80e-02	64	1.36e-01	98	2.50e-02
31	2.79e-02	65	1.41e-01	99	4.22e-02
32	3.25e-02	66	2.56e-02	100	4.67e-02
33	1.07e-01	67	1.24e-01		
34	4.36e-03	68	1.20e-01		

Information Only

Table A-33. Sampled Values for Parameter WAS_AREA:SAT_RGAS (LHS Variable 44) Replicate 3

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	5.32e-02	35	1.45e-01	69	8.96e-02
2	1.46e-01	36	1.21e-01	70	7.76e-02
3	9.75e-02	37	8.19e-02	71	9.30e-02
4	1.08e-01	38	4.72e-03	72	1.36e-01
5	9.52e-02	39	8.37e-02	73	2.47e-02
6	7.22e-02	40	4.45e-02	74	1.49e-01
7	1.29e-01	41	1.03e-01	75	4.60e-02
8	7.07e-04	42	1.18e-01	76	2.90e-02
9	7.57e-02	43	6.78e-02	77	3.44e-02
10	8.53e-02	44	4.81e-02	78	8.04e-02
11	2.05e-02	45	1.33e-01	79	4.78e-02
12	4.26e-02	46	1.62e-02	80	5.95e-02
13	1.19e-01	47	1.40e-02	81	1.80e-02
14	1.07e-01	48	1.16e-01	82	5.52e-02
15	2.28e-03	49	3.94e-02	83	1.82e-02
16	9.97e-02	50	1.27e-01	84	1.04e-01
17	1.42e-01	51	6.03e-02	85	1.39e-01
18	1.30e-01	52	1.22e-01	86	1.12e-01
19	9.15e-02	53	9.31e-02	87	1.37e-01
20	2.81e-02	54	6.68e-02	88	3.55e-02
21	3.62e-02	55	3.17e-02	89	5.70e-02
22	6.28e-02	56	5.03e-02	90	6.59e-02
23	1.34e-01	57	6.25e-03	91	1.14e-01
24	5.81e-02	58	7.41e-02	92	1.18e-02
25	2.22e-02	59	1.40e-01	93	7.74e-03
26	1.11e-01	60	4.47e-03	94	2.36e-02
27	1.02e-01	61	9.83e-03	95	9.87e-02
28	6.40e-02	62	1.43e-01	96	8.66e-02
29	5.16e-02	63	7.09e-02	97	4.14e-02
30	1.48e-01	64	3.00e-02	98	2.56e-02
31	1.25e-01	65	6.91e-02	99	3.81e-02
32	1.24e-01	66	8.84e-02	100	1.32e-01
33	7.87e-02	67	1.15e-01		
34	1.06e-01	68	1.34e-02		

Information Only

Table A-34. Sampled Values for Parameter WAS_AREA:SAT_RBRN (LHS Variable 45) Replicate 1

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	1.78e-01	35	4.11e-01	69	1.47e-01
2	3.29e-02	36	3.33e-02	70	4.81e-01
3	5.42e-01	37	2.56e-01	71	3.30e-01
4	2.35e-01	38	7.22e-02	72	9.35e-02
5	4.00e-01	39	3.84e-01	73	4.45e-01
6	1.87e-01	40	1.09e-01	74	1.13e-01
7	2.60e-01	41	9.95e-02	75	1.77e-01
8	4.18e-01	42	8.00e-02	76	1.42e-01
9	4.07e-01	43	5.04e-01	77	5.37e-01
10	4.70e-02	44	6.71e-02	78	2.97e-01
11	4.37e-01	45	3.05e-01	79	2.24e-01
12	8.64e-02	46	2.29e-01	80	2.74e-01
13	3.34e-01	47	2.54e-01	81	2.71e-03
14	5.14e-01	48	4.93e-01	82	2.19e-01
15	1.55e-01	49	9.71e-03	83	1.65e-02
16	4.73e-01	50	2.04e-01	84	5.51e-01
17	2.46e-01	51	1.37e-01	85	9.76e-02
18	5.30e-01	52	3.42e-01	86	3.11e-01
19	1.95e-01	53	3.73e-01	87	1.24e-01
20	6.61e-02	54	2.13e-01	88	2.09e-01
21	3.48e-01	55	3.20e-01	89	5.33e-01
22	3.69e-01	56	2.65e-01	90	2.81e-01
23	4.90e-01	57	5.52e-02	91	4.24e-01
24	5.85e-02	58	1.90e-01	92	2.67e-02
25	2.91e-01	59	4.63e-01	93	3.64e-01
26	2.84e-01	60	4.64e-01	94	1.19e-01
27	3.91e-01	61	3.78e-01	95	4.26e-01
28	1.60e-01	62	3.54e-01	96	5.00e-01
29	5.23e-01	63	1.81e-02	97	1.52e-01
30	3.01e-01	64	4.32e-02	98	2.39e-01
31	3.43e-01	65	3.15e-01	99	4.52e-01
32	4.77e-01	66	3.94e-01	100	4.32e-01
33	4.53e-01	67	5.09e-01		
34	1.30e-01	68	1.69e-01		

Information Only

Table A-34. Sampled Values for Parameter WAS_AREA:SAT_RBRN (LHS Variable 45) Replicate 2

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	3.63e-01	35	5.71e-02	69	5.22e-01
2	4.42e-01	36	3.51e-01	70	4.95e-01
3	3.08e-01	37	1.52e-01	71	3.83e-01
4	4.59e-01	38	4.98e-01	72	3.73e-01
5	4.18e-01	39	3.80e-01	73	6.63e-04
6	3.45e-01	40	3.00e-01	74	4.69e-01
7	4.57e-01	41	2.32e-01	75	1.77e-01
8	1.22e-01	42	5.12e-01	76	9.31e-02
9	1.33e-01	43	3.57e-01	77	2.21e-01
10	6.66e-02	44	2.79e-01	78	5.47e-02
11	1.63e-02	45	4.22e-01	79	2.85e-01
12	3.25e-01	46	4.37e-01	80	1.19e-01
13	4.84e-01	47	5.04e-01	81	7.83e-02
14	5.16e-01	48	2.97e-01	82	1.61e-01
15	4.31e-01	49	1.87e-01	83	5.26e-01
16	1.41e-01	50	3.12e-01	84	1.45e-01
17	4.11e-01	51	9.97e-02	85	4.77e-01
18	1.14e-01	52	5.47e-01	86	2.00e-01
19	1.73e-01	53	3.16e-01	87	2.90e-01
20	1.09e-01	54	2.12e-01	88	1.90e-02
21	2.57e-01	55	1.59e-01	89	1.95e-01
22	6.59e-02	56	5.39e-01	90	2.48e-01
23	3.37e-01	57	4.69e-01	91	4.49e-01
24	5.44e-01	58	2.16e-01	92	3.94e-01
25	3.66e-01	59	4.38e-02	93	1.67e-01
26	4.65e-02	60	4.02e-01	94	7.18e-02
27	2.38e-01	61	2.72e-01	95	3.31e-01
28	8.59e-02	62	2.06e-01	96	4.28e-01
29	2.66e-01	63	3.79e-02	97	2.53e-01
30	8.77e-03	64	2.62e-01	98	2.74e-02
31	2.29e-01	65	1.31e-01	99	9.45e-02
32	1.88e-01	66	3.36e-01	100	2.84e-02
33	4.07e-01	67	4.89e-01		
34	3.89e-01	68	5.34e-01		

Information Only

Table A-34. Sampled Values for Parameter WAS_AREA:SAT_RBRN (LHS Variable 45) Replicate 3

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	1.06e-01	35	3.01e-02	69	1.60e-01
2	5.19e-01	36	2.68e-01	70	3.79e-01
3	3.46e-01	37	3.49e-01	71	7.01e-02
4	4.58e-01	38	3.29e-01	72	5.44e-01
5	2.21e-01	39	1.01e-01	73	4.64e-01
6	4.18e-01	40	1.86e-01	74	4.23e-02
7	3.61e-01	41	4.44e-01	75	2.69e-02
8	5.20e-01	42	4.59e-01	76	2.43e-01
9	7.54e-02	43	1.61e-02	77	2.51e-01
10	2.80e-01	44	3.14e-01	78	4.37e-01
11	1.67e-01	45	6.49e-02	79	2.56e-01
12	5.48e-01	46	2.09e-01	80	4.26e-01
13	5.40e-01	47	9.78e-02	81	1.63e-01
14	4.86e-01	48	3.84e-01	82	2.45e-01
15	8.21e-02	49	9.25e-03	83	2.72e-01
16	5.27e-01	50	4.94e-01	84	3.48e-02
17	5.28e-02	51	4.08e-01	85	1.19e-01
18	3.20e-01	52	3.02e-01	86	3.64e-01
19	9.20e-02	53	3.98e-01	87	2.92e-01
20	1.47e-01	54	1.33e-01	88	3.35e-01
21	3.87e-01	55	5.81e-02	89	2.24e-01
22	5.34e-01	56	4.86e-02	90	3.70e-01
23	2.04e-02	57	2.61e-01	91	3.07e-01
24	2.86e-01	58	3.23e-01	92	3.41e-01
25	4.51e-01	59	1.42e-01	93	1.76e-01
26	5.13e-01	60	2.34e-01	94	1.27e-01
27	1.54e-01	61	2.98e-01	95	8.80e-02
28	1.93e-01	62	4.10e-01	96	1.99e-01
29	4.98e-01	63	4.25e-01	97	4.83e-01
30	5.07e-01	64	3.94e-01	98	2.14e-01
31	3.97e-03	65	1.25e-01	99	4.35e-01
32	1.91e-01	66	2.26e-01	100	4.71e-01
33	1.79e-01	67	1.13e-01		
34	3.58e-01	68	4.75e-01		

Information Only

Table A-35. Sampled Values for Parameter WAS_AREA:SAT_WICK (LHS Variable 46) Replicate 1

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	3.22e-01	35	3.52e-01	69	7.78e-01
2	3.37e-01	36	2.32e-01	70	2.22e-02
3	9.08e-01	37	5.57e-01	71	1.23e-01
4	9.46e-01	38	6.81e-01	72	8.84e-01
5	5.93e-01	39	6.54e-01	73	3.06e-03
6	7.55e-01	40	6.44e-01	74	3.61e-01
7	4.89e-01	41	1.41e-01	75	7.06e-01
8	3.93e-01	42	1.66e-01	76	2.44e-01
9	6.79e-01	43	1.14e-01	77	3.77e-01
10	8.68e-01	44	9.36e-01	78	8.37e-01
11	3.83e-01	45	9.60e-01	79	5.91e-02
12	5.86e-01	46	2.78e-01	80	8.00e-01
13	9.88e-01	47	6.60e-01	81	5.04e-01
14	9.65e-01	48	2.66e-01	82	1.56e-01
15	8.28e-01	49	8.47e-01	83	4.93e-01
16	4.46e-02	50	6.08e-01	84	1.75e-01
17	1.08e-01	51	5.11e-01	85	7.58e-02
18	3.48e-01	52	5.40e-01	86	3.05e-01
19	4.14e-01	53	4.08e-01	87	8.19e-01
20	5.29e-01	54	4.45e-01	88	1.83e-02
21	7.45e-01	55	7.15e-01	89	3.43e-02
22	5.41e-01	56	3.19e-01	90	9.92e-02
23	7.39e-01	57	2.92e-01	91	2.60e-01
24	4.68e-01	58	1.96e-01	92	8.54e-02
25	2.82e-01	59	5.63e-01	93	8.74e-01
26	8.93e-01	60	4.21e-01	94	9.27e-01
27	4.55e-01	61	2.30e-01	95	6.07e-02
28	6.12e-01	62	6.21e-01	96	9.71e-01
29	9.92e-01	63	4.74e-01	97	7.66e-01
30	9.18e-01	64	1.87e-01	98	8.02e-01
31	7.26e-01	65	6.36e-01	99	7.88e-01
32	6.90e-01	66	2.15e-01	100	8.52e-01
33	5.75e-01	67	4.36e-01		
34	1.34e-01	68	2.07e-01		

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Table A-35. Sampled Values for Parameter WAS_AREA:SAT_WICK (LHS Variable 46) Replicate 2

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	2.72e-01	35	5.35e-01	69	4.87e-01
2	4.90e-02	36	2.29e-02	70	9.44e-01
3	9.67e-02	37	4.33e-01	71	5.93e-01
4	5.75e-01	38	2.05e-01	72	3.74e-01
5	2.51e-01	39	2.99e-01	73	1.39e-01
6	8.68e-01	40	1.46e-02	74	9.17e-01
7	9.99e-01	41	8.15e-01	75	7.17e-01
8	7.66e-01	42	4.91e-01	76	6.84e-01
9	8.33e-01	43	7.82e-01	77	7.89e-02
10	3.17e-01	44	5.84e-02	78	9.79e-01
11	8.47e-01	45	3.49e-01	79	6.29e-01
12	4.28e-01	46	9.10e-01	80	6.93e-02
13	6.05e-01	47	4.57e-01	81	5.67e-01
14	2.39e-01	48	8.06e-01	82	3.30e-01
15	5.01e-01	49	1.77e-01	83	4.75e-01
16	7.72e-01	50	1.63e-01	84	6.93e-01
17	6.74e-01	51	1.99e-01	85	7.57e-01
18	2.41e-01	52	6.59e-01	86	7.30e-01
19	4.44e-01	53	1.52e-01	87	1.86e-01
20	1.41e-01	54	9.56e-01	88	9.22e-01
21	8.22e-01	55	3.96e-01	89	3.95e-02
22	5.52e-01	56	5.25e-01	90	6.31e-01
23	2.32e-03	57	1.11e-01	91	2.89e-01
24	9.66e-01	58	6.19e-01	92	5.82e-01
25	6.42e-01	59	7.26e-01	93	5.20e-01
26	1.08e-01	60	1.25e-01	94	7.46e-01
27	4.68e-01	61	8.56e-01	95	7.07e-01
28	7.97e-01	62	9.88e-01	96	3.20e-01
29	2.27e-01	63	8.86e-01	97	3.57e-01
30	2.15e-01	64	8.01e-02	98	2.61e-01
31	4.12e-01	65	9.39e-01	99	8.97e-01
32	8.80e-01	66	3.07e-01	100	6.68e-01
33	5.49e-01	67	4.02e-01		
34	3.84e-01	68	3.67e-01		

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Table A-35. Sampled Values for Parameter WAS_AREA:SAT_WICK (LHS Variable 46) Replicate 3

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	3.41e-01	35	8.02e-01	69	5.93e-01
2	2.01e-01	36	4.41e-01	70	7.10e-02
3	4.78e-02	37	5.29e-01	71	8.53e-01
4	6.13e-01	38	1.54e-01	72	9.58e-01
5	6.01e-01	39	6.77e-01	73	1.27e-01
6	7.05e-01	40	3.10e-01	74	3.80e-01
7	6.48e-01	41	2.18e-01	75	6.95e-01
8	5.41e-01	42	8.41e-01	76	3.89e-01
9	9.73e-01	43	2.62e-01	77	5.10e-01
10	3.52e-01	44	9.37e-01	78	2.32e-01
11	3.36e-02	45	3.37e-01	79	7.26e-01
12	1.69e-01	46	3.30e-01	80	9.85e-01
13	7.18e-01	47	5.57e-01	81	7.94e-01
14	9.43e-01	48	9.28e-01	82	2.93e-02
15	9.66e-01	49	7.83e-01	83	8.66e-01
16	6.89e-01	50	2.96e-01	84	4.64e-01
17	9.16e-01	51	7.53e-01	85	1.88e-01
18	4.74e-01	52	1.44e-01	86	6.56e-01
19	8.72e-01	53	5.62e-01	87	4.00e-01
20	4.84e-01	54	4.06e-01	88	4.58e-01
21	8.81e-01	55	5.67e-02	89	8.64e-02
22	7.35e-01	56	4.17e-01	90	4.35e-01
23	2.87e-01	57	5.37e-01	91	5.71e-01
24	4.40e-03	58	2.78e-01	92	5.06e-01
25	6.26e-01	59	3.09e-01	93	7.64e-01
26	7.75e-01	60	1.99e-01	94	9.09e-01
27	2.52e-01	61	4.24e-01	95	8.21e-01
28	4.95e-01	62	8.11e-01	96	9.14e-02
29	8.97e-01	63	6.07e-02	97	7.41e-01
30	2.42e-01	64	2.28e-01	98	1.04e-01
31	6.31e-01	65	1.17e-01	99	1.37e-01
32	8.31e-01	66	1.75e-01	100	1.38e-02
33	9.93e-01	67	3.62e-01		
34	5.87e-01	68	6.69e-01		

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Table A-36. Sampled Values for Parameter DRZ_PCS:PRMX_LOG (LHS Variable 47) Replicate 1

Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)
1	-1.98e+01	35	-1.72e+01	69	-1.87e+01
2	-1.92e+01	36	-1.99e+01	70	-1.77e+01
3	-1.89e+01	37	-1.79e+01	71	-1.91e+01
4	-1.95e+01	38	-1.84e+01	72	-1.82e+01
5	-1.84e+01	39	-1.89e+01	73	-2.02e+01
6	-1.79e+01	40	-1.97e+01	74	-1.85e+01
7	-1.92e+01	41	-1.87e+01	75	-1.78e+01
8	-1.81e+01	42	-1.84e+01	76	-1.86e+01
9	-1.84e+01	43	-1.84e+01	77	-1.93e+01
10	-1.87e+01	44	-2.00e+01	78	-1.86e+01
11	-1.86e+01	45	-2.00e+01	79	-1.86e+01
12	-1.79e+01	46	-1.93e+01	80	-1.85e+01
13	-1.74e+01	47	-1.83e+01	81	-1.85e+01
14	-1.92e+01	48	-1.76e+01	82	-1.98e+01
15	-1.94e+01	49	-1.75e+01	83	-1.95e+01
16	-1.91e+01	50	-1.88e+01	84	-1.94e+01
17	-1.88e+01	51	-1.96e+01	85	-1.83e+01
18	-1.89e+01	52	-1.91e+01	86	-1.92e+01
19	-2.05e+01	53	-2.00e+01	87	-1.92e+01
20	-1.87e+01	54	-1.80e+01	88	-1.81e+01
21	-1.98e+01	55	-1.97e+01	89	-2.04e+01
22	-1.77e+01	56	-1.97e+01	90	-1.89e+01
23	-1.87e+01	57	-1.78e+01	91	-1.90e+01
24	-1.82e+01	58	-1.82e+01	92	-1.83e+01
25	-1.80e+01	59	-1.75e+01	93	-1.86e+01
26	-1.82e+01	60	-1.77e+01	94	-1.94e+01
27	-1.99e+01	61	-1.88e+01	95	-1.90e+01
28	-2.02e+01	62	-1.87e+01	96	-1.93e+01
29	-1.83e+01	63	-1.94e+01	97	-2.01e+01
30	-1.90e+01	64	-1.81e+01	98	-1.88e+01
31	-1.93e+01	65	-1.96e+01	99	-1.95e+01
32	-1.90e+01	66	-1.73e+01	100	-1.85e+01
33	-1.80e+01	67	-1.88e+01		
34	-1.89e+01	68	-1.90e+01		

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Table A-36. Sampled Values for Parameter DRZ_PCS:PRMX_LOG (LHS Variable 47) Replicate 2

Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)
1	-1.82e+01	35	-1.87e+01	69	-1.86e+01
2	-1.82e+01	36	-1.91e+01	70	-1.77e+01
3	-1.96e+01	37	-1.83e+01	71	-1.91e+01
4	-1.93e+01	38	-1.93e+01	72	-2.03e+01
5	-1.93e+01	39	-1.84e+01	73	-1.92e+01
6	-1.90e+01	40	-2.02e+01	74	-1.92e+01
7	-1.88e+01	41	-1.97e+01	75	-1.88e+01
8	-1.81e+01	42	-2.00e+01	76	-1.93e+01
9	-1.90e+01	43	-1.98e+01	77	-1.82e+01
10	-1.99e+01	44	-1.79e+01	78	-1.89e+01
11	-1.79e+01	45	-1.85e+01	79	-1.88e+01
12	-1.86e+01	46	-1.88e+01	80	-1.89e+01
13	-1.85e+01	47	-1.85e+01	81	-1.84e+01
14	-1.72e+01	48	-1.83e+01	82	-1.91e+01
15	-1.95e+01	49	-1.84e+01	83	-1.80e+01
16	-1.95e+01	50	-1.76e+01	84	-1.89e+01
17	-1.89e+01	51	-1.85e+01	85	-1.94e+01
18	-1.85e+01	52	-1.87e+01	86	-1.86e+01
19	-2.04e+01	53	-1.81e+01	87	-1.90e+01
20	-1.82e+01	54	-1.92e+01	88	-1.89e+01
21	-1.86e+01	55	-1.87e+01	89	-1.77e+01
22	-2.06e+01	56	-1.77e+01	90	-2.01e+01
23	-1.81e+01	57	-1.97e+01	91	-1.89e+01
24	-1.99e+01	58	-1.87e+01	92	-1.87e+01
25	-1.75e+01	59	-1.79e+01	93	-1.80e+01
26	-1.95e+01	60	-1.97e+01	94	-1.83e+01
27	-1.96e+01	61	-1.94e+01	95	-1.91e+01
28	-1.92e+01	62	-1.88e+01	96	-1.90e+01
29	-1.78e+01	63	-1.94e+01	97	-1.96e+01
30	-1.94e+01	64	-2.02e+01	98	-1.73e+01
31	-1.84e+01	65	-1.78e+01	99	-1.80e+01
32	-1.86e+01	66	-1.98e+01	100	-1.83e+01
33	-1.74e+01	67	-1.76e+01		
34	-1.92e+01	68	-2.00e+01		

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Table A-36. Sampled Values for Parameter DRZ_PCS:PRMX_LOG (LHS Variable 47) Replicate 3

Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)
1	-1.91e+01	35	-1.97e+01	69	-1.96e+01
2	-1.93e+01	36	-1.97e+01	70	-1.82e+01
3	-1.81e+01	37	-1.86e+01	71	-1.92e+01
4	-1.88e+01	38	-2.01e+01	72	-2.00e+01
5	-1.87e+01	39	-1.74e+01	73	-1.89e+01
6	-1.75e+01	40	-1.91e+01	74	-1.98e+01
7	-1.94e+01	41	-1.87e+01	75	-1.84e+01
8	-1.94e+01	42	-1.95e+01	76	-2.03e+01
9	-1.88e+01	43	-1.84e+01	77	-1.98e+01
10	-1.76e+01	44	-1.89e+01	78	-1.98e+01
11	-1.91e+01	45	-2.06e+01	79	-1.75e+01
12	-2.00e+01	46	-1.72e+01	80	-1.93e+01
13	-1.79e+01	47	-1.89e+01	81	-1.99e+01
14	-1.83e+01	48	-1.88e+01	82	-1.91e+01
15	-1.82e+01	49	-1.87e+01	83	-1.92e+01
16	-1.94e+01	50	-1.79e+01	84	-1.85e+01
17	-1.77e+01	51	-1.89e+01	85	-1.87e+01
18	-1.83e+01	52	-1.89e+01	86	-1.80e+01
19	-1.89e+01	53	-1.86e+01	87	-1.86e+01
20	-1.93e+01	54	-1.99e+01	88	-1.90e+01
21	-1.95e+01	55	-1.84e+01	89	-1.86e+01
22	-1.85e+01	56	-1.77e+01	90	-1.90e+01
23	-1.85e+01	57	-2.04e+01	91	-1.86e+01
24	-1.83e+01	58	-1.78e+01	92	-1.80e+01
25	-1.90e+01	59	-1.96e+01	93	-1.91e+01
26	-1.77e+01	60	-1.87e+01	94	-1.87e+01
27	-1.95e+01	61	-1.84e+01	95	-1.94e+01
28	-1.92e+01	62	-1.93e+01	96	-2.02e+01
29	-1.84e+01	63	-1.81e+01	97	-1.73e+01
30	-1.90e+01	64	-1.81e+01	98	-1.92e+01
31	-1.85e+01	65	-1.78e+01	99	-1.96e+01
32	-2.01e+01	66	-1.79e+01	100	-1.80e+01
33	-1.81e+01	67	-1.82e+01		
34	-1.88e+01	68	-1.83e+01		

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Table A-37. Sampled Values for Parameter PCS_T1:PRMX_LOG (LHS Variable 48) Replicate 1

Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)
1	-1.73e+01	35	-1.56e+01	69	-1.95e+01
2	-1.92e+01	36	-1.82e+01	70	-1.94e+01
3	-1.36e+01	37	-1.50e+01	71	-1.55e+01
4	-1.23e+01	38	-1.77e+01	72	-1.90e+01
5	-1.26e+01	39	-1.88e+01	73	-2.07e+01
6	-1.49e+01	40	-1.31e+01	74	-1.46e+01
7	-1.43e+01	41	-1.38e+01	75	-1.52e+01
8	-1.26e+01	42	-1.76e+01	76	-1.98e+01
9	-1.87e+01	43	-1.24e+01	77	-1.86e+01
10	-1.66e+01	44	-2.00e+01	78	-1.44e+01
11	-1.59e+01	45	-2.01e+01	79	-1.76e+01
12	-1.40e+01	46	-1.99e+01	80	-1.57e+01
13	-1.89e+01	47	-1.48e+01	81	-1.51e+01
14	-1.93e+01	48	-1.54e+01	82	-1.28e+01
15	-1.72e+01	49	-1.80e+01	83	-1.35e+01
16	-1.59e+01	50	-1.67e+01	84	-1.21e+01
17	-1.32e+01	51	-1.28e+01	85	-1.62e+01
18	-2.08e+01	52	-1.68e+01	86	-1.77e+01
19	-1.75e+01	53	-1.83e+01	87	-1.33e+01
20	-1.69e+01	54	-2.02e+01	88	-1.96e+01
21	-1.51e+01	55	-1.70e+01	89	-1.29e+01
22	-1.61e+01	56	-1.34e+01	90	-1.56e+01
23	-1.22e+01	57	-1.79e+01	91	-1.38e+01
24	-2.05e+01	58	-1.39e+01	92	-1.41e+01
25	-1.66e+01	59	-1.47e+01	93	-1.22e+01
26	-1.41e+01	60	-1.82e+01	94	-1.45e+01
27	-1.54e+01	61	-1.85e+01	95	-1.89e+01
28	-2.05e+01	62	-2.06e+01	96	-1.63e+01
29	-1.91e+01	63	-1.64e+01	97	-1.61e+01
30	-1.78e+01	64	-1.30e+01	98	-1.44e+01
31	-1.71e+01	65	-1.98e+01	99	-1.36e+01
32	-2.04e+01	66	-2.03e+01	100	-1.74e+01
33	-1.64e+01	67	-1.95e+01		
34	-1.84e+01	68	-1.25e+01		

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Table A-37. Sampled Values for Parameter PCS_T1:PRMX_LOG (LHS Variable 48) Replicate 2

Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)
1	-2.04e+01	35	-1.39e+01	69	-1.27e+01
2	-2.07e+01	36	-1.33e+01	70	-1.62e+01
3	-1.93e+01	37	-2.06e+01	71	-1.35e+01
4	-1.71e+01	38	-1.50e+01	72	-1.63e+01
5	-1.38e+01	39	-1.22e+01	73	-1.97e+01
6	-1.57e+01	40	-1.73e+01	74	-2.01e+01
7	-1.51e+01	41	-1.89e+01	75	-1.77e+01
8	-1.45e+01	42	-1.28e+01	76	-1.24e+01
9	-1.23e+01	43	-1.78e+01	77	-1.69e+01
10	-1.39e+01	44	-1.21e+01	78	-1.67e+01
11	-1.73e+01	45	-2.05e+01	79	-2.02e+01
12	-2.04e+01	46	-1.99e+01	80	-1.82e+01
13	-1.57e+01	47	-1.22e+01	81	-2.08e+01
14	-1.83e+01	48	-1.49e+01	82	-1.72e+01
15	-1.64e+01	49	-1.61e+01	83	-1.91e+01
16	-1.41e+01	50	-1.99e+01	84	-1.45e+01
17	-1.60e+01	51	-1.80e+01	85	-1.53e+01
18	-1.26e+01	52	-1.92e+01	86	-1.42e+01
19	-1.89e+01	53	-1.47e+01	87	-1.31e+01
20	-2.03e+01	54	-1.37e+01	88	-1.74e+01
21	-1.24e+01	55	-1.87e+01	89	-1.28e+01
22	-1.66e+01	56	-1.30e+01	90	-1.65e+01
23	-1.35e+01	57	-1.78e+01	91	-1.98e+01
24	-1.94e+01	58	-1.90e+01	92	-1.55e+01
25	-1.70e+01	59	-1.76e+01	93	-1.87e+01
26	-1.32e+01	60	-1.80e+01	94	-2.00e+01
27	-1.68e+01	61	-1.30e+01	95	-1.85e+01
28	-1.44e+01	62	-1.95e+01	96	-1.38e+01
29	-1.53e+01	63	-1.46e+01	97	-1.61e+01
30	-1.48e+01	64	-1.95e+01	98	-1.86e+01
31	-1.42e+01	65	-1.58e+01	99	-1.33e+01
32	-1.68e+01	66	-1.75e+01	100	-1.54e+01
33	-1.51e+01	67	-1.85e+01		
34	-1.55e+01	68	-1.81e+01		

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Table A-37. Sampled Values for Parameter PCS_T1:PRMX_LOG (LHS Variable 48) Replicate 3

Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)
1	-1.50e+01	35	-1.48e+01	69	-2.04e+01
2	-1.41e+01	36	-1.73e+01	70	-1.92e+01
3	-2.06e+01	37	-1.68e+01	71	-1.36e+01
4	-1.79e+01	38	-1.63e+01	72	-1.93e+01
5	-1.79e+01	39	-1.87e+01	73	-1.85e+01
6	-1.95e+01	40	-2.05e+01	74	-1.96e+01
7	-1.39e+01	41	-1.94e+01	75	-1.60e+01
8	-1.86e+01	42	-1.78e+01	76	-1.72e+01
9	-1.61e+01	43	-1.66e+01	77	-1.31e+01
10	-1.29e+01	44	-1.40e+01	78	-1.61e+01
11	-1.26e+01	45	-1.33e+01	79	-1.57e+01
12	-1.82e+01	46	-1.54e+01	80	-1.39e+01
13	-1.37e+01	47	-1.76e+01	81	-1.54e+01
14	-1.97e+01	48	-1.55e+01	82	-1.99e+01
15	-1.88e+01	49	-1.29e+01	83	-1.77e+01
16	-2.07e+01	50	-1.56e+01	84	-1.74e+01
17	-1.33e+01	51	-1.81e+01	85	-1.27e+01
18	-1.42e+01	52	-1.89e+01	86	-1.45e+01
19	-1.74e+01	53	-1.76e+01	87	-1.51e+01
20	-1.67e+01	54	-1.35e+01	88	-1.64e+01
21	-2.08e+01	55	-1.98e+01	89	-1.32e+01
22	-1.89e+01	56	-1.56e+01	90	-1.83e+01
23	-1.47e+01	57	-1.35e+01	91	-1.62e+01
24	-1.53e+01	58	-1.91e+01	92	-1.70e+01
25	-1.21e+01	59	-2.00e+01	93	-1.67e+01
26	-1.30e+01	60	-1.49e+01	94	-1.24e+01
27	-2.01e+01	61	-1.58e+01	95	-2.02e+01
28	-1.69e+01	62	-1.21e+01	96	-1.84e+01
29	-1.22e+01	63	-1.44e+01	97	-1.91e+01
30	-1.70e+01	64	-1.95e+01	98	-1.48e+01
31	-2.03e+01	65	-1.64e+01	99	-1.46e+01
32	-1.23e+01	66	-1.43e+01	100	-1.24e+01
33	-2.03e+01	67	-1.81e+01		
34	-1.44e+01	68	-1.28e+01		

Information Only

Table A-38. Sampled Values for Parameter PCS_T1:SAT_RGAS (LHS Variable 49) Replicate 1

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	2.23e-01	35	1.21e-01	69	8.33e-02
2	3.86e-01	36	3.40e-01	70	2.17e-01
3	3.98e-01	37	6.82e-02	71	2.39e-01
4	2.41e-01	38	1.25e-01	72	3.95e-01
5	1.77e-01	39	3.79e-01	73	8.50e-02
6	3.23e-01	40	1.62e-02	74	1.04e-01
7	9.44e-02	41	2.74e-01	75	5.54e-02
8	2.33e-01	42	1.35e-02	76	3.09e-01
9	1.70e-01	43	2.22e-02	77	3.33e-01
10	3.51e-01	44	3.72e-01	78	2.51e-01
11	1.16e-01	45	3.75e-01	79	2.78e-01
12	2.70e-01	46	2.62e-01	80	2.90e-01
13	1.52e-01	47	2.60e-01	81	1.46e-01
14	5.35e-03	48	2.96e-01	82	2.66e-01
15	2.82e-02	49	5.19e-02	83	2.03e-01
16	2.09e-01	50	3.42e-02	84	1.85e-01
17	1.61e-01	51	2.31e-01	85	1.17e-01
18	3.45e-01	52	2.87e-01	86	4.77e-02
19	4.23e-02	53	1.33e-01	87	3.65e-01
20	1.76e-01	54	2.47e-02	88	3.83e-01
21	2.94e-01	55	9.66e-02	89	3.89e-01
22	3.27e-01	56	3.14e-01	90	8.44e-03
23	6.21e-02	57	7.84e-02	91	2.81e-01
24	6.73e-02	58	7.42e-02	92	1.60e-01
25	3.56e-01	59	3.07e-01	93	1.91e-01
26	2.26e-01	60	2.55e-01	94	1.68e-01
27	9.61e-04	61	1.42e-01	95	1.52e-01
28	3.91e-02	62	3.03e-01	96	1.11e-01
29	9.06e-02	63	1.97e-01	97	3.63e-01
30	1.03e-01	64	3.55e-01	98	3.17e-01
31	1.83e-01	65	2.07e-01	99	5.69e-02
32	1.95e-01	66	1.36e-01	100	3.31e-01
33	1.29e-01	67	2.15e-01		
34	2.47e-01	68	3.41e-01		

Information Only

Table A-38. Sampled Values for Parameter PCS_T1:SAT_RGAS (LHS Variable 49) Replicate 2

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	4.39e-02	35	2.09e-01	69	1.97e-01
2	3.44e-01	36	2.17e-01	70	3.18e-01
3	2.87e-01	37	2.38e-01	71	7.04e-02
4	2.46e-02	38	9.38e-03	72	1.54e-01
5	3.21e-01	39	3.51e-01	73	3.61e-01
6	2.35e-01	40	1.09e-01	74	2.95e-01
7	3.08e-01	41	1.76e-01	75	3.66e-01
8	8.38e-02	42	1.81e-01	76	2.71e-01
9	1.49e-01	43	3.88e-01	77	2.31e-01
10	2.63e-01	44	3.07e-01	78	2.45e-01
11	8.76e-02	45	3.36e-01	79	1.64e-01
12	6.40e-02	46	7.40e-02	80	1.32e-01
13	3.00e-01	47	9.75e-02	81	5.83e-02
14	2.77e-01	48	1.14e-01	82	1.60e-01
15	3.26e-01	49	3.89e-01	83	3.99e-01
16	2.78e-03	50	3.48e-01	84	1.92e-02
17	4.71e-02	51	2.83e-01	85	2.55e-01
18	3.16e-01	52	3.84e-02	86	1.47e-01
19	1.23e-01	53	1.37e-02	87	3.83e-01
20	3.12e-02	54	3.55e-01	88	1.93e-01
21	2.06e-01	55	1.84e-01	89	3.59e-02
22	1.27e-01	56	3.02e-01	90	3.93e-01
23	1.58e-01	57	5.09e-02	91	2.66e-01
24	1.17e-01	58	6.03e-02	92	3.78e-01
25	7.76e-02	59	7.67e-03	93	2.27e-02
26	8.95e-02	60	1.70e-01	94	3.40e-01
27	3.30e-01	61	2.41e-01	95	1.01e-01
28	1.76e-01	62	2.01e-01	96	2.15e-01
29	1.31e-01	63	1.39e-01	97	1.41e-01
30	2.91e-01	64	1.90e-01	98	3.71e-01
31	1.05e-01	65	2.22e-01	99	9.56e-02
32	3.73e-01	66	2.50e-01	100	3.60e-01
33	5.35e-02	67	2.27e-01		
34	2.58e-01	68	2.75e-01		

Information Only

Table A-38. Sampled Values for Parameter PCS_T1:SAT_RGAS (LHS Variable 49) Replicate 3

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	1.81e-01	35	6.62e-02	69	7.14e-02
2	3.47e-01	36	1.66e-01	70	3.94e-01
3	1.78e-01	37	8.42e-02	71	2.12e-01
4	3.89e-01	38	2.94e-01	72	2.60e-01
5	1.61e-01	39	1.07e-01	73	1.92e-01
6	3.51e-01	40	5.87e-02	74	2.17e-01
7	8.86e-02	41	2.62e-01	75	2.50e-01
8	3.42e-01	42	3.28e-02	76	2.22e-02
9	1.58e-01	43	2.40e-01	77	5.45e-02
10	5.06e-02	44	6.16e-02	78	1.29e-01
11	2.22e-01	45	3.32e-01	79	1.13e-01
12	2.63e-02	46	7.93e-02	80	3.27e-01
13	3.72e-01	47	3.03e-01	81	1.97e-01
14	2.26e-01	48	8.20e-03	82	3.70e-01
15	1.24e-01	49	3.10e-01	83	2.88e-01
16	5.95e-04	50	9.94e-02	84	1.69e-01
17	1.24e-02	51	3.86e-02	85	2.69e-01
18	2.47e-01	52	4.69e-02	86	3.64e-01
19	3.39e-01	53	1.32e-01	87	2.75e-01
20	3.99e-01	54	1.54e-01	88	1.10e-01
21	3.63e-01	55	1.94e-02	89	2.06e-01
22	2.10e-01	56	6.01e-03	90	3.80e-01
23	3.28e-01	57	4.36e-02	91	3.18e-01
24	3.23e-01	58	1.37e-01	92	1.01e-01
25	3.08e-02	59	1.86e-01	93	3.56e-01
26	1.72e-01	60	2.28e-01	94	1.43e-01
27	9.32e-02	61	3.53e-01	95	3.79e-01
28	1.17e-01	62	2.33e-01	96	2.54e-01
29	2.77e-01	63	2.84e-01	97	3.04e-01
30	2.03e-01	64	7.36e-02	98	2.85e-01
31	2.44e-01	65	8.02e-02	99	1.26e-01
32	2.96e-01	66	1.47e-01	100	1.49e-01
33	2.67e-01	67	1.92e-01		
34	3.85e-01	68	3.16e-01		

Information Only

Table A-39. Sampled Values for Parameter PCS_T1:SAT_RBRN (LHS Variable 50) Replicate 1

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	5.66e-01	35	4.88e-01	69	3.45e-01
2	1.81e-01	36	3.01e-01	70	6.00e-03
3	1.36e-01	37	1.51e-01	71	2.62e-01
4	3.98e-01	38	3.73e-01	72	2.07e-01
5	1.81e-02	39	7.68e-02	73	2.19e-01
6	1.32e-01	40	1.59e-01	74	8.18e-02
7	4.63e-01	41	3.40e-01	75	4.09e-02
8	3.80e-01	42	5.71e-01	76	1.55e-02
9	4.04e-01	43	2.15e-01	77	4.47e-02
10	5.54e-01	44	2.26e-01	78	5.09e-02
11	4.12e-01	45	2.44e-01	79	1.47e-01
12	6.77e-02	46	1.91e-01	80	2.65e-01
13	4.51e-01	47	3.59e-01	81	1.04e-01
14	5.06e-01	48	5.87e-01	82	4.16e-01
15	1.05e-02	49	1.24e-01	83	2.87e-01
16	5.39e-01	50	4.42e-01	84	1.67e-01
17	1.75e-01	51	3.85e-01	85	1.24e-01
18	3.10e-01	52	1.69e-01	86	1.96e-01
19	9.71e-02	53	3.70e-02	87	5.95e-01
20	1.96e-03	54	2.33e-01	88	2.54e-01
21	1.08e-01	55	9.54e-02	89	3.36e-01
22	8.85e-02	56	7.44e-02	90	1.35e-01
23	8.76e-02	57	5.51e-01	91	2.20e-02
24	1.17e-01	58	5.03e-01	92	6.30e-02
25	5.96e-02	59	1.86e-01	93	3.14e-02
26	2.91e-01	60	1.54e-01	94	3.25e-01
27	6.92e-02	61	1.15e-01	95	1.09e-01
28	5.22e-01	62	3.62e-01	96	5.80e-01
29	2.66e-02	63	1.42e-01	97	3.15e-01
30	1.78e-01	64	4.93e-01	98	3.57e-02
31	2.74e-01	65	5.60e-02	99	5.33e-01
32	1.60e-01	66	4.72e-01	100	4.34e-01
33	4.67e-01	67	1.97e-01		
34	4.26e-01	68	5.13e-01		

Information Only

Table A-39. Sampled Values for Parameter PCS_T1:SAT_RBRN (LHS Variable 50) Replicate 2

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	1.37e-01	35	2.97e-01	69	2.44e-01
2	4.50e-01	36	7.91e-02	70	1.51e-01
3	2.52e-01	37	1.16e-01	71	2.97e-02
4	3.44e-02	38	3.10e-01	72	1.91e-01
5	8.87e-02	39	2.40e-01	73	1.44e-01
6	2.05e-01	40	5.53e-01	74	1.15e-01
7	2.21e-02	41	7.24e-02	75	1.26e-01
8	2.80e-01	42	4.77e-01	76	8.71e-02
9	5.46e-01	43	5.27e-01	77	5.08e-01
10	6.93e-04	44	9.85e-02	78	2.27e-01
11	3.12e-01	45	2.43e-02	79	3.45e-01
12	3.90e-01	46	5.81e-01	80	1.40e-01
13	1.86e-01	47	4.08e-01	81	3.98e-02
14	5.73e-01	48	8.05e-02	82	1.62e-01
15	3.95e-01	49	9.52e-02	83	4.49e-02
16	1.01e-01	50	6.25e-02	84	4.87e-01
17	1.67e-01	51	3.61e-01	85	2.93e-01
18	3.41e-01	52	3.80e-01	86	4.96e-01
19	2.14e-01	53	5.63e-01	87	1.06e-01
20	1.22e-01	54	9.55e-03	88	5.89e-01
21	1.32e-01	55	3.28e-01	89	1.78e-01
22	1.69e-02	56	2.67e-01	90	5.39e-01
23	7.07e-02	57	1.35e-02	91	6.58e-02
24	2.24e-01	58	4.17e-01	92	2.63e-01
25	1.35e-01	59	1.98e-01	93	1.70e-01
26	3.69e-01	60	4.71e-01	94	3.54e-01
27	5.95e-01	61	4.32e-01	95	4.20e-02
28	4.03e-01	62	5.30e-02	96	5.69e-02
29	5.09e-02	63	1.96e-01	97	2.78e-01
30	5.62e-03	64	1.76e-01	98	5.32e-01
31	1.56e-01	65	3.23e-01	99	4.26e-01
32	1.83e-01	66	5.02e-01	100	4.42e-01
33	1.10e-01	67	1.53e-01		
34	5.15e-01	68	4.58e-01		

Information Only

Table A-39. Sampled Values for Parameter PCS_T1:SAT_RBRN (LHS Variable 50) Replicate 3

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	4.97e-01	35	3.40e-01	69	1.97e-01
2	3.10e-01	36	1.10e-01	70	1.63e-01
3	3.66e-01	37	8.03e-02	71	1.98e-02
4	4.62e-01	38	1.07e-01	72	3.85e-01
5	2.05e-01	39	5.94e-01	73	6.04e-02
6	5.47e-01	40	1.19e-01	74	1.27e-01
7	8.71e-02	41	2.96e-01	75	3.55e-02
8	1.82e-01	42	3.87e-02	76	5.85e-01
9	1.96e-01	43	1.91e-01	77	3.35e-01
10	2.21e-01	44	2.53e-01	78	3.75e-01
11	3.98e-01	45	1.51e-01	79	9.62e-02
12	1.41e-01	46	4.63e-02	80	5.18e-01
13	2.30e-01	47	4.81e-01	81	1.53e-01
14	6.71e-02	48	2.70e-01	82	5.72e-02
15	2.53e-02	49	2.16e-01	83	1.66e-01
16	3.77e-01	50	2.72e-01	84	2.90e-01
17	3.27e-01	51	5.74e-01	85	5.47e-02
18	2.39e-01	52	1.68e-01	86	4.08e-01
19	5.07e-01	53	1.51e-02	87	9.01e-03
20	3.47e-01	54	3.57e-01	88	1.87e-01
21	1.04e-01	55	1.33e-01	89	4.53e-01
22	2.93e-02	56	1.31e-01	90	4.17e-01
23	3.15e-01	57	2.91e-03	91	9.10e-02
24	4.37e-01	58	7.69e-02	92	2.46e-01
25	5.28e-01	59	4.48e-01	93	5.59e-01
26	5.39e-01	60	6.90e-02	94	4.01e-01
27	1.14e-01	61	1.73e-01	95	1.47e-01
28	5.68e-01	62	2.03e-02	96	4.80e-01
29	4.14e-02	63	9.49e-02	97	2.81e-01
30	1.58e-01	64	4.29e-01	98	1.21e-01
31	5.12e-02	65	4.89e-01	99	5.22e-01
32	7.55e-02	66	4.68e-01	100	1.39e-01
33	2.63e-01	67	1.76e-01		
34	5.79e-01	68	7.67e-03		

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Table A-40. Sampled Values for Parameter PCS_T1:PORE_DIS (LHS Variable 51)
Replicate 1

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	8.72e-01	35	1.83e+00	69	2.95e-01
2	5.73e+00	36	4.70e+00	70	5.61e+00
3	3.44e-01	37	2.88e-01	71	4.48e+00
4	1.26e+00	38	9.19e-01	72	4.09e-01
5	3.44e+00	39	8.06e+00	73	7.52e-01
6	1.15e+00	40	3.22e+00	74	2.99e+00
7	4.10e+00	41	5.85e+00	75	1.01e+00
8	1.77e+00	42	3.23e+00	76	4.71e-01
9	9.38e-01	43	2.68e+00	77	4.19e-01
10	4.04e+00	44	3.91e+00	78	8.53e-01
11	4.86e-01	45	7.23e-01	79	4.38e-01
12	4.34e+00	46	7.40e+00	80	6.84e-01
13	2.52e+00	47	7.78e+00	81	5.40e+00
14	8.40e-01	48	3.73e+00	82	2.02e-01
15	4.44e-01	49	7.30e+00	83	6.92e-01
16	1.55e+00	50	6.27e-01	84	7.69e-01
17	7.90e+00	51	5.86e-01	85	8.22e-01
18	1.49e+00	52	5.34e-01	86	1.39e-01
19	5.03e+00	53	2.12e+00	87	2.74e-01
20	1.88e-01	54	1.20e-01	88	2.32e-01
21	7.31e-01	55	7.77e-01	89	6.48e-01
22	3.63e+00	56	6.99e+00	90	5.61e-01
23	2.46e+00	57	7.11e+00	91	6.51e+00
24	6.04e-01	58	8.78e-01	92	3.38e-01
25	4.92e+00	59	2.45e-01	93	6.68e-01
26	2.19e-01	60	6.78e+00	94	5.32e+00
27	6.65e+00	61	9.03e-01	95	1.52e-01
28	8.06e-01	62	5.02e-01	96	2.82e+00
29	6.12e+00	63	3.21e-01	97	6.32e+00
30	5.23e+00	64	3.83e-01	98	1.62e-01
31	6.16e-01	65	5.99e+00	99	5.56e-01
32	3.68e-01	66	7.55e+00	100	2.01e+00
33	5.20e-01	67	6.87e+00		
34	4.53e+00	68	2.31e+00		

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Table A-40. Sampled Values for Parameter PCS_T1:PORE_DIS (LHS Variable 51) Replicate 2

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	3.56e-01	35	7.24e+00	69	3.07e+00
2	7.68e+00	36	1.67e-01	70	2.10e-01
3	7.90e-01	37	5.51e-01	71	3.24e+00
4	2.95e-01	38	3.83e+00	72	2.00e-01
5	7.39e+00	39	1.92e+00	73	6.11e+00
6	6.03e+00	40	2.92e-01	74	6.29e+00
7	4.24e-01	41	5.36e+00	75	3.39e-01
8	7.42e-01	42	1.33e-01	76	3.65e-01
9	7.60e-01	43	4.73e+00	77	6.50e-01
10	2.54e-01	44	1.07e+00	78	3.40e+00
11	4.31e-01	45	7.14e-01	79	8.32e-01
12	6.85e+00	46	3.24e-01	80	2.61e+00
13	8.08e-01	47	2.70e-01	81	2.34e-01
14	4.47e+00	48	6.58e+00	82	7.37e-01
15	2.33e+00	49	4.91e-01	83	7.15e+00
16	7.90e+00	50	4.88e+00	84	8.02e+00
17	5.85e+00	51	1.10e-01	85	7.64e+00
18	1.98e+00	52	8.78e-01	86	6.77e+00
19	5.16e+00	53	9.38e-01	87	3.12e+00
20	2.83e+00	54	5.15e-01	88	1.77e-01
21	5.04e-01	55	6.79e-01	89	6.73e-01
22	7.01e+00	56	3.55e+00	90	5.91e-01
23	3.77e-01	57	1.44e+00	91	1.50e-01
24	5.73e-01	58	4.11e+00	92	3.70e+00
25	8.62e-01	59	4.09e+00	93	4.50e-01
26	4.61e+00	60	8.57e-01	94	5.92e-01
27	7.02e-01	61	4.25e+00	95	3.98e-01
28	5.67e+00	62	1.74e+00	96	6.41e+00
29	5.54e+00	63	2.48e+00	97	9.02e-01
30	1.61e+00	64	5.04e+00	98	6.26e-01
31	5.30e-01	65	4.59e-01	99	2.69e+00
32	1.36e+00	66	6.11e-01	100	2.15e+00
33	7.94e-01	67	5.43e+00		
34	9.17e-01	68	1.12e+00		

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Table A-40. Sampled Values for Parameter PCS_T1:PORE_DIS (LHS Variable 51) Replicate 3

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	5.32e+00	35	2.62e-01	69	2.56e-01
2	1.26e-01	36	5.79e-01	70	4.07e-01
3	3.74e-01	37	4.61e+00	71	6.40e-01
4	5.78e+00	38	1.70e-01	72	6.12e+00
5	1.05e+00	39	8.14e-01	73	3.29e-01
6	5.65e-01	40	3.43e+00	74	7.63e+00
7	5.37e-01	41	2.77e-01	75	2.19e-01
8	2.01e+00	42	3.03e+00	76	5.07e+00
9	3.60e+00	43	4.89e+00	77	3.67e+00
10	5.11e+00	44	7.80e-01	78	7.54e-01
11	4.74e-01	45	6.65e+00	79	6.15e-01
12	8.72e-01	46	6.78e+00	80	4.86e-01
13	7.44e+00	47	8.94e-01	81	1.81e+00
14	7.91e+00	48	1.60e+00	82	2.69e+00
15	3.77e-01	49	1.41e+00	83	5.63e+00
16	5.50e+00	50	2.01e-01	84	8.06e-01
17	5.18e-01	51	8.76e-01	85	7.03e+00
18	4.10e+00	52	2.37e-01	86	3.37e+00
19	1.86e-01	53	2.17e+00	87	2.56e+00
20	6.49e-01	54	7.36e-01	88	3.16e+00
21	3.13e-01	55	6.90e-01	89	6.86e+00
22	7.58e-01	56	2.30e+00	90	8.44e-01
23	1.49e-01	57	4.07e+00	91	4.30e-01
24	4.35e+00	58	8.29e-01	92	4.57e-01
25	3.56e-01	59	4.20e-01	93	9.16e-01
26	2.85e+00	60	6.95e-01	94	3.82e+00
27	1.76e+00	61	4.99e-01	95	7.36e+00
28	4.39e+00	62	1.32e-01	96	8.06e+00
29	7.70e+00	63	5.84e+00	97	1.14e+00
30	6.02e-01	64	5.97e+00	98	6.45e+00
31	4.71e+00	65	7.11e-01	99	5.53e-01
32	9.34e-01	66	6.67e-01	100	6.28e+00
33	1.28e+00	67	7.22e+00		
34	2.49e+00	68	2.95e-01		

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Table A-41. Sampled Values for Parameter S_HALITE:POROSITY (LHS Variable 52) Replicate 1

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	4.48e-03	35	9.46e-03	69	4.88e-02
2	3.96e-02	36	7.64e-03	70	2.16e-02
3	2.95e-02	37	3.36e-03	71	1.45e-03
4	1.91e-03	38	8.74e-03	72	8.18e-03
5	5.09e-02	39	9.90e-03	73	7.69e-03
6	4.71e-02	40	3.76e-03	74	5.60e-03
7	5.95e-03	41	3.48e-02	75	2.33e-02
8	4.43e-02	42	4.26e-03	76	2.58e-03
9	9.76e-03	43	4.14e-03	77	1.90e-03
10	9.30e-03	44	2.86e-02	78	3.68e-02
11	1.77e-02	45	8.53e-03	79	4.59e-02
12	2.20e-02	46	2.39e-02	80	3.05e-02
13	2.91e-03	47	3.05e-03	81	4.48e-02
14	3.57e-02	48	1.94e-02	82	4.65e-02
15	6.10e-03	49	3.62e-03	83	4.91e-03
16	2.70e-03	50	4.33e-02	84	5.05e-03
17	1.25e-02	51	3.11e-02	85	7.98e-03
18	3.36e-02	52	1.72e-02	86	2.84e-02
19	6.26e-03	53	3.91e-02	87	2.64e-02
20	6.44e-03	54	2.19e-03	88	1.01e-02
21	5.84e-03	55	7.22e-03	89	8.24e-03
22	1.20e-03	56	3.30e-03	90	7.32e-03
23	4.04e-02	57	2.57e-02	91	3.26e-02
24	3.27e-02	58	4.82e-02	92	3.82e-02
25	1.48e-02	59	5.32e-03	93	1.35e-02
26	6.62e-03	60	4.72e-03	94	7.01e-03
27	4.16e-02	61	1.63e-02	95	3.91e-03
28	4.25e-02	62	1.86e-02	96	9.12e-03
29	6.82e-03	63	1.13e-03	97	2.34e-03
30	1.61e-03	64	2.51e-02	98	3.75e-02
31	5.00e-02	65	5.11e-02	99	2.76e-02
32	1.13e-02	66	1.58e-02	100	9.00e-03
33	5.29e-03	67	1.18e-02		
34	8.64e-03	68	2.01e-02		

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Table A-41. Sampled Values for Parameter S_HALITE:POROSITY (LHS Variable 52) Replicate 2

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	1.65e-02	35	4.65e-02	69	8.73e-03
2	2.23e-03	36	3.75e-03	70	1.48e-02
3	3.26e-02	37	2.41e-02	71	9.24e-03
4	3.09e-02	38	2.94e-02	72	1.05e-03
5	3.02e-03	39	7.67e-03	73	8.16e-03
6	3.89e-03	40	3.95e-02	74	7.41e-03
7	9.82e-03	41	1.38e-02	75	3.36e-03
8	2.77e-03	42	2.74e-02	76	1.98e-02
9	3.17e-03	43	3.78e-02	77	4.11e-03
10	2.83e-02	44	6.87e-03	78	4.60e-02
11	2.26e-02	45	4.81e-02	79	1.54e-02
12	7.10e-03	46	6.67e-03	80	4.70e-02
13	4.49e-02	47	1.80e-02	81	9.51e-03
14	2.02e-02	48	6.33e-03	82	3.55e-02
15	1.30e-02	49	2.58e-02	83	1.73e-02
16	4.34e-02	50	5.12e-03	84	2.87e-02
17	6.55e-03	51	2.94e-03	85	8.88e-03
18	4.48e-03	52	7.65e-03	86	1.02e-02
19	7.15e-03	53	1.79e-03	87	2.57e-03
20	3.58e-03	54	5.33e-03	88	4.19e-02
21	1.10e-02	55	2.20e-02	89	4.15e-02
22	1.97e-03	56	1.85e-02	90	6.03e-03
23	9.35e-03	57	1.18e-02	91	3.89e-02
24	1.30e-03	58	9.66e-03	92	3.71e-02
25	2.37e-03	59	1.41e-03	93	4.79e-03
26	6.10e-03	60	8.22e-03	94	1.70e-03
27	4.91e-02	61	4.28e-03	95	5.23e-03
28	3.18e-02	62	3.46e-02	96	3.32e-02
29	5.12e-02	63	5.02e-02	97	4.99e-02
30	7.90e-03	64	5.76e-03	98	8.45e-03
31	4.42e-02	65	3.62e-02	99	5.61e-03
32	4.75e-03	66	2.46e-02	100	9.06e-03
33	2.61e-02	67	3.39e-02		
34	2.14e-02	68	4.08e-02		

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Table A-41. Sampled Values for Parameter S_HALITE:POROSITY (LHS Variable 52) Replicate 3

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	4.12e-03	35	1.68e-03	69	1.38e-02
2	2.59e-02	36	8.03e-03	70	4.49e-02
3	2.31e-03	37	1.97e-03	71	8.52e-03
4	7.13e-03	38	6.18e-03	72	9.70e-03
5	5.52e-03	39	2.68e-02	73	2.79e-02
6	3.19e-03	40	2.07e-02	74	1.87e-02
7	4.38e-02	41	5.16e-02	75	3.32e-02
8	1.11e-03	42	3.64e-02	76	8.60e-03
9	7.76e-03	43	3.96e-03	77	5.96e-03
10	9.40e-03	44	3.44e-03	78	2.98e-03
11	6.29e-03	45	1.42e-02	79	3.24e-02
12	1.72e-02	46	8.01e-03	80	5.02e-03
13	4.92e-02	47	3.57e-02	81	4.53e-02
14	3.11e-03	48	3.72e-03	82	3.13e-02
15	3.82e-02	49	3.01e-02	83	3.51e-02
16	4.85e-02	50	6.61e-03	84	4.06e-02
17	4.11e-02	51	1.32e-02	85	1.26e-03
18	1.45e-03	52	1.80e-02	86	5.40e-03
19	2.16e-03	53	4.70e-03	87	1.19e-02
20	6.49e-03	54	7.34e-03	88	7.60e-03
21	1.78e-03	55	2.56e-03	89	9.21e-03
22	5.02e-02	56	2.23e-02	90	2.14e-02
23	3.02e-02	57	4.69e-02	91	1.10e-02
24	4.35e-02	58	8.78e-03	92	6.89e-03
25	5.74e-03	59	2.33e-02	93	3.92e-02
26	8.28e-03	60	4.86e-03	94	4.68e-02
27	1.08e-02	61	2.67e-03	95	1.53e-02
28	1.64e-02	62	2.63e-02	96	3.38e-02
29	9.85e-03	63	6.95e-03	97	2.38e-02
30	3.68e-03	64	5.28e-03	98	4.37e-03
31	9.62e-03	65	3.94e-02	99	3.73e-02
32	4.50e-03	66	2.91e-02	100	1.97e-02
33	9.06e-03	67	4.20e-02		
34	5.06e-02	68	2.46e-02		

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Table A-42. Sampled Values for Parameter S_HALITE:PRMX_LOG (LHS Variable 53) Replicate 1

Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)
1	-2.27e+01	35	-2.10e+01	69	-2.30e+01
2	-2.29e+01	36	-2.16e+01	70	-2.25e+01
3	-2.21e+01	37	-2.39e+01	71	-2.38e+01
4	-2.19e+01	38	-2.21e+01	72	-2.33e+01
5	-2.12e+01	39	-2.31e+01	73	-2.38e+01
6	-2.34e+01	40	-2.13e+01	74	-2.29e+01
7	-2.28e+01	41	-2.22e+01	75	-2.34e+01
8	-2.39e+01	42	-2.38e+01	76	-2.13e+01
9	-2.14e+01	43	-2.26e+01	77	-2.15e+01
10	-2.17e+01	44	-2.34e+01	78	-2.18e+01
11	-2.37e+01	45	-2.26e+01	79	-2.37e+01
12	-2.39e+01	46	-2.35e+01	80	-2.38e+01
13	-2.21e+01	47	-2.36e+01	81	-2.10e+01
14	-2.30e+01	48	-2.31e+01	82	-2.24e+01
15	-2.36e+01	49	-2.27e+01	83	-2.25e+01
16	-2.15e+01	50	-2.28e+01	84	-2.30e+01
17	-2.14e+01	51	-2.18e+01	85	-2.16e+01
18	-2.11e+01	52	-2.32e+01	86	-2.24e+01
19	-2.21e+01	53	-2.25e+01	87	-2.23e+01
20	-2.24e+01	54	-2.20e+01	88	-2.15e+01
21	-2.40e+01	55	-2.22e+01	89	-2.32e+01
22	-2.33e+01	56	-2.31e+01	90	-2.12e+01
23	-2.37e+01	57	-2.40e+01	91	-2.17e+01
24	-2.20e+01	58	-2.16e+01	92	-2.23e+01
25	-2.26e+01	59	-2.23e+01	93	-2.29e+01
26	-2.35e+01	60	-2.20e+01	94	-2.19e+01
27	-2.33e+01	61	-2.26e+01	95	-2.28e+01
28	-2.23e+01	62	-2.35e+01	96	-2.19e+01
29	-2.11e+01	63	-2.19e+01	97	-2.17e+01
30	-2.34e+01	64	-2.32e+01	98	-2.11e+01
31	-2.36e+01	65	-2.12e+01	99	-2.14e+01
32	-2.27e+01	66	-2.27e+01	100	-2.18e+01
33	-2.13e+01	67	-2.31e+01		
34	-2.14e+01	68	-2.16e+01		

Information Only

Table A-42. Sampled Values for Parameter S_HALITE:PRMX_LOG (LHS Variable 53) Replicate 2

Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)
1	-2.11e+01	35	-2.32e+01	69	-2.29e+01
2	-2.23e+01	36	-2.18e+01	70	-2.32e+01
3	-2.16e+01	37	-2.39e+01	71	-2.29e+01
4	-2.27e+01	38	-2.29e+01	72	-2.18e+01
5	-2.14e+01	39	-2.14e+01	73	-2.35e+01
6	-2.25e+01	40	-2.20e+01	74	-2.35e+01
7	-2.13e+01	41	-2.12e+01	75	-2.20e+01
8	-2.11e+01	42	-2.30e+01	76	-2.22e+01
9	-2.33e+01	43	-2.15e+01	77	-2.33e+01
10	-2.12e+01	44	-2.19e+01	78	-2.39e+01
11	-2.13e+01	45	-2.36e+01	79	-2.15e+01
12	-2.22e+01	46	-2.18e+01	80	-2.21e+01
13	-2.35e+01	47	-2.34e+01	81	-2.28e+01
14	-2.36e+01	48	-2.28e+01	82	-2.31e+01
15	-2.37e+01	49	-2.11e+01	83	-2.24e+01
16	-2.21e+01	50	-2.15e+01	84	-2.13e+01
17	-2.39e+01	51	-2.39e+01	85	-2.34e+01
18	-2.34e+01	52	-2.19e+01	86	-2.30e+01
19	-2.24e+01	53	-2.24e+01	87	-2.17e+01
20	-2.33e+01	54	-2.36e+01	88	-2.28e+01
21	-2.25e+01	55	-2.31e+01	89	-2.12e+01
22	-2.31e+01	56	-2.15e+01	90	-2.13e+01
23	-2.38e+01	57	-2.14e+01	91	-2.32e+01
24	-2.27e+01	58	-2.17e+01	92	-2.26e+01
25	-2.17e+01	59	-2.11e+01	93	-2.27e+01
26	-2.37e+01	60	-2.16e+01	94	-2.23e+01
27	-2.23e+01	61	-2.28e+01	95	-2.32e+01
28	-2.33e+01	62	-2.20e+01	96	-2.38e+01
29	-2.17e+01	63	-2.26e+01	97	-2.10e+01
30	-2.37e+01	64	-2.38e+01	98	-2.25e+01
31	-2.22e+01	65	-2.20e+01	99	-2.30e+01
32	-2.21e+01	66	-2.38e+01	100	-2.25e+01
33	-2.40e+01	67	-2.21e+01		
34	-2.18e+01	68	-2.26e+01		

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Table A-42. Sampled Values for Parameter S_HALITE:PRMX_LOG (LHS Variable 53) Replicate 3

Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)
1	-2.12e+01	35	-2.33e+01	69	-2.27e+01
2	-2.14e+01	36	-2.34e+01	70	-2.36e+01
3	-2.33e+01	37	-2.21e+01	71	-2.26e+01
4	-2.22e+01	38	-2.15e+01	72	-2.32e+01
5	-2.27e+01	39	-2.29e+01	73	-2.17e+01
6	-2.19e+01	40	-2.20e+01	74	-2.22e+01
7	-2.15e+01	41	-2.26e+01	75	-2.18e+01
8	-2.24e+01	42	-2.39e+01	76	-2.24e+01
9	-2.15e+01	43	-2.35e+01	77	-2.25e+01
10	-2.25e+01	44	-2.13e+01	78	-2.22e+01
11	-2.39e+01	45	-2.26e+01	79	-2.40e+01
12	-2.11e+01	46	-2.29e+01	80	-2.33e+01
13	-2.29e+01	47	-2.24e+01	81	-2.31e+01
14	-2.30e+01	48	-2.23e+01	82	-2.32e+01
15	-2.18e+01	49	-2.29e+01	83	-2.23e+01
16	-2.21e+01	50	-2.10e+01	84	-2.36e+01
17	-2.20e+01	51	-2.30e+01	85	-2.37e+01
18	-2.39e+01	52	-2.34e+01	86	-2.12e+01
19	-2.27e+01	53	-2.16e+01	87	-2.15e+01
20	-2.12e+01	54	-2.37e+01	88	-2.11e+01
21	-2.37e+01	55	-2.19e+01	89	-2.13e+01
22	-2.17e+01	56	-2.38e+01	90	-2.33e+01
23	-2.14e+01	57	-2.16e+01	91	-2.19e+01
24	-2.36e+01	58	-2.31e+01	92	-2.38e+01
25	-2.31e+01	59	-2.25e+01	93	-2.14e+01
26	-2.22e+01	60	-2.17e+01	94	-2.21e+01
27	-2.28e+01	61	-2.13e+01	95	-2.26e+01
28	-2.30e+01	62	-2.27e+01	96	-2.34e+01
29	-2.20e+01	63	-2.16e+01	97	-2.18e+01
30	-2.37e+01	64	-2.30e+01	98	-2.28e+01
31	-2.11e+01	65	-2.35e+01	99	-2.32e+01
32	-2.35e+01	66	-2.10e+01	100	-2.20e+01
33	-2.23e+01	67	-2.13e+01		
34	-2.38e+01	68	-2.40e+01		

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Table A-43. Sampled Values for Parameter S_HALITE:COMP_RCK (LHS Variable 54) Replicate 1

Vector	Value (Pa^{-1})	Vector	Value (Pa^{-1})	Vector	Value (Pa^{-1})
1	1.15e-10	35	3.77e-12	69	1.36e-10
2	9.99e-11	36	5.71e-11	70	1.06e-10
3	7.86e-11	37	1.74e-10	71	1.81e-10
4	5.35e-11	38	7.22e-11	72	1.46e-10
5	1.88e-11	39	1.30e-10	73	1.71e-10
6	1.55e-10	40	2.17e-11	74	1.18e-10
7	1.26e-10	41	9.85e-11	75	1.60e-10
8	1.87e-10	42	1.83e-10	76	1.63e-11
9	2.67e-11	43	1.22e-10	77	4.14e-11
10	6.02e-11	44	1.62e-10	78	6.32e-11
11	1.69e-10	45	1.19e-10	79	1.78e-10
12	1.86e-10	46	1.58e-10	80	1.76e-10
13	8.44e-11	47	1.51e-10	81	5.06e-12
14	1.20e-10	48	1.28e-10	82	9.29e-11
15	1.80e-10	49	1.08e-10	83	1.05e-10
16	5.17e-11	50	8.83e-11	84	1.32e-10
17	2.79e-11	51	4.99e-11	85	3.91e-11
18	1.50e-11	52	1.49e-10	86	9.47e-11
19	6.52e-11	53	1.03e-10	87	8.72e-11
20	7.44e-11	54	5.90e-11	88	3.31e-11
21	1.92e-10	55	7.07e-11	89	1.44e-10
22	1.40e-10	56	1.38e-10	90	1.29e-11
23	1.72e-10	57	1.89e-10	91	2.23e-11
24	6.64e-11	58	4.41e-11	92	7.50e-11
25	1.14e-10	59	8.12e-11	93	1.27e-10
26	1.58e-10	60	7.76e-11	94	4.70e-11
27	1.47e-10	61	1.09e-10	95	9.68e-11
28	9.10e-11	62	1.64e-10	96	5.50e-11
29	1.16e-11	63	6.80e-11	97	3.87e-11
30	1.53e-10	64	1.41e-10	98	9.12e-12
31	1.67e-10	65	7.42e-12	99	3.12e-11
32	1.12e-10	66	8.27e-11	100	4.46e-11
33	2.47e-11	67	1.35e-10		
34	3.55e-11	68	3.46e-11		

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Table A-43. Sampled Values for Parameter S_HALITE:COMP_RCK (LHS Variable 54) Replicate 2

Vector	Value (Pa^{-1})	Vector	Value (Pa^{-1})	Vector	Value (Pa^{-1})
1	1.10e-11	35	1.42e-10	69	1.37e-10
2	9.00e-11	36	4.98e-11	70	1.23e-10
3	3.52e-11	37	1.90e-10	71	1.26e-10
4	1.20e-10	38	1.14e-10	72	4.82e-11
5	3.26e-11	39	3.01e-11	73	1.56e-10
6	9.56e-11	40	7.39e-11	74	1.65e-10
7	2.52e-11	41	1.50e-11	75	6.19e-11
8	7.30e-12	42	1.29e-10	76	8.68e-11
9	1.54e-10	43	4.00e-11	77	1.50e-10
10	1.25e-11	44	6.86e-11	78	1.86e-10
11	1.88e-11	45	1.67e-10	79	4.24e-11
12	8.40e-11	46	4.32e-11	80	5.48e-11
13	1.61e-10	47	1.70e-10	81	1.18e-10
14	1.51e-10	48	1.00e-10	82	1.47e-10
15	1.59e-10	49	5.60e-12	83	7.93e-11
16	7.21e-11	50	4.52e-11	84	2.12e-11
17	1.87e-10	51	1.81e-10	85	1.57e-10
18	1.36e-10	52	5.86e-11	86	1.21e-10
19	8.21e-11	53	8.98e-11	87	5.06e-11
20	1.72e-10	54	1.68e-10	88	1.31e-10
21	9.87e-11	55	1.47e-10	89	1.77e-11
22	1.32e-10	56	2.67e-11	90	2.24e-11
23	1.84e-10	57	2.87e-11	91	1.35e-10
24	1.04e-10	58	3.78e-11	92	9.34e-11
25	6.08e-11	59	9.25e-12	93	1.13e-10
26	1.64e-10	60	3.35e-11	94	7.80e-11
27	9.39e-11	61	1.06e-10	95	1.39e-10
28	1.44e-10	62	6.41e-11	96	1.74e-10
29	5.69e-11	63	1.09e-10	97	3.20e-12
30	1.76e-10	64	1.80e-10	98	1.09e-10
31	8.59e-11	65	7.58e-11	99	1.25e-10
32	7.02e-11	66	1.78e-10	100	1.15e-10
33	1.90e-10	67	6.66e-11		
34	5.25e-11	68	1.02e-10		

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Table A-43. Sampled Values for Parameter S_HALITE:COMP_RCK (LHS Variable 54) Replicate 3

Vector	Value (Pa^{-1})	Vector	Value (Pa^{-1})	Vector	Value (Pa^{-1})
1	1.50e-11	35	1.31e-10	69	1.43e-10
2	3.30e-11	36	1.53e-10	70	1.75e-10
3	1.52e-10	37	5.80e-11	71	1.09e-10
4	9.70e-11	38	3.85e-11	72	1.33e-10
5	1.17e-10	39	1.30e-10	73	4.56e-11
6	8.96e-11	40	7.05e-11	74	8.45e-11
7	2.99e-11	41	8.70e-11	75	5.67e-11
8	7.26e-11	42	1.85e-10	76	7.78e-11
9	3.50e-11	43	1.64e-10	77	1.01e-10
10	9.29e-11	44	2.29e-11	78	7.33e-11
11	1.82e-10	45	1.09e-10	79	1.89e-10
12	8.97e-12	46	1.05e-10	80	1.38e-10
13	1.13e-10	47	1.04e-10	81	1.55e-10
14	1.23e-10	48	9.78e-11	82	1.35e-10
15	6.75e-11	49	1.16e-10	83	8.28e-11
16	7.59e-11	50	3.46e-12	84	1.66e-10
17	5.44e-11	51	1.21e-10	85	1.68e-10
18	1.87e-10	52	1.49e-10	86	1.88e-11
19	1.27e-10	53	3.94e-11	87	3.62e-11
20	1.34e-11	54	1.70e-10	88	1.19e-11
21	1.74e-10	55	5.09e-11	89	1.74e-11
22	4.24e-11	56	1.77e-10	90	1.60e-10
23	2.90e-11	57	4.66e-11	91	6.58e-11
24	1.63e-10	58	1.25e-10	92	1.80e-10
25	1.41e-10	59	8.12e-11	93	2.50e-11
26	9.03e-11	60	4.29e-11	94	6.14e-11
27	1.19e-10	61	2.18e-11	95	9.43e-11
28	1.45e-10	62	1.01e-10	96	1.47e-10
29	7.89e-11	63	6.39e-11	97	4.94e-11
30	1.56e-10	64	1.41e-10	98	1.12e-10
31	8.55e-12	65	1.72e-10	99	1.36e-10
32	1.60e-10	66	5.29e-12	100	6.33e-11
33	5.25e-11	67	2.66e-11		
34	1.84e-10	68	1.91e-10		

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Table A-44. Sampled Values for Parameter S_MB139:PRMX_LOG (LHS Variable 55) Replicate 1

Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)
1	-1.90e+01	35	-1.86e+01	69	-1.84e+01
2	-1.78e+01	36	-1.84e+01	70	-1.90e+01
3	-1.88e+01	37	-1.85e+01	71	-1.96e+01
4	-1.98e+01	38	-1.91e+01	72	-1.86e+01
5	-1.90e+01	39	-1.90e+01	73	-1.87e+01
6	-1.93e+01	40	-1.89e+01	74	-2.00e+01
7	-1.87e+01	41	-2.04e+01	75	-1.82e+01
8	-1.83e+01	42	-1.87e+01	76	-1.81e+01
9	-1.91e+01	43	-1.92e+01	77	-1.88e+01
10	-1.97e+01	44	-1.84e+01	78	-1.88e+01
11	-1.90e+01	45	-1.94e+01	79	-1.80e+01
12	-1.86e+01	46	-1.94e+01	80	-1.86e+01
13	-1.82e+01	47	-1.85e+01	81	-1.83e+01
14	-1.91e+01	48	-1.88e+01	82	-1.94e+01
15	-1.98e+01	49	-2.02e+01	83	-1.79e+01
16	-1.76e+01	50	-1.95e+01	84	-1.96e+01
17	-1.93e+01	51	-1.92e+01	85	-1.85e+01
18	-1.89e+01	52	-1.86e+01	86	-2.01e+01
19	-1.82e+01	53	-1.71e+01	87	-1.88e+01
20	-1.89e+01	54	-1.90e+01	88	-1.93e+01
21	-1.89e+01	55	-1.99e+01	89	-1.95e+01
22	-1.94e+01	56	-1.88e+01	90	-1.86e+01
23	-1.87e+01	57	-1.91e+01	91	-1.81e+01
24	-1.92e+01	58	-1.85e+01	92	-1.89e+01
25	-1.89e+01	59	-1.75e+01	93	-1.81e+01
26	-1.85e+01	60	-1.97e+01	94	-1.80e+01
27	-1.84e+01	61	-1.88e+01	95	-1.95e+01
28	-1.91e+01	62	-1.86e+01	96	-1.87e+01
29	-1.94e+01	63	-1.83e+01	97	-1.92e+01
30	-1.83e+01	64	-1.92e+01	98	-1.99e+01
31	-1.93e+01	65	-1.91e+01	99	-1.78e+01
32	-1.96e+01	66	-1.88e+01	100	-1.90e+01
33	-1.89e+01	67	-1.92e+01		
34	-1.87e+01	68	-1.92e+01		

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Table A-44. Sampled Values for Parameter S_MB139:PRMX_LOG (LHS Variable 55) Replicate 2

Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)
1	-1.87e+01	35	-1.96e+01	69	-1.99e+01
2	-1.84e+01	36	-1.91e+01	70	-1.85e+01
3	-1.91e+01	37	-1.90e+01	71	-1.92e+01
4	-1.89e+01	38	-1.83e+01	72	-1.94e+01
5	-1.92e+01	39	-1.87e+01	73	-1.90e+01
6	-1.89e+01	40	-1.88e+01	74	-1.82e+01
7	-1.90e+01	41	-1.90e+01	75	-1.95e+01
8	-1.90e+01	42	-1.84e+01	76	-1.92e+01
9	-1.89e+01	43	-1.77e+01	77	-1.91e+01
10	-1.89e+01	44	-1.87e+01	78	-1.97e+01
11	-1.94e+01	45	-1.86e+01	79	-1.78e+01
12	-1.93e+01	46	-1.91e+01	80	-1.93e+01
13	-1.86e+01	47	-1.83e+01	81	-1.99e+01
14	-1.89e+01	48	-1.85e+01	82	-1.79e+01
15	-1.86e+01	49	-1.81e+01	83	-1.90e+01
16	-1.92e+01	50	-1.89e+01	84	-1.80e+01
17	-1.87e+01	51	-1.85e+01	85	-1.94e+01
18	-1.87e+01	52	-2.07e+01	86	-2.01e+01
19	-1.82e+01	53	-1.72e+01	87	-1.86e+01
20	-1.88e+01	54	-1.85e+01	88	-1.84e+01
21	-1.87e+01	55	-1.80e+01	89	-1.96e+01
22	-1.86e+01	56	-1.96e+01	90	-1.91e+01
23	-1.94e+01	57	-1.84e+01	91	-1.96e+01
24	-1.89e+01	58	-1.89e+01	92	-1.75e+01
25	-1.88e+01	59	-1.77e+01	93	-1.82e+01
26	-1.85e+01	60	-2.00e+01	94	-2.02e+01
27	-1.88e+01	61	-1.91e+01	95	-1.93e+01
28	-1.94e+01	62	-1.81e+01	96	-1.91e+01
29	-1.95e+01	63	-1.93e+01	97	-1.87e+01
30	-1.85e+01	64	-1.95e+01	98	-1.92e+01
31	-1.90e+01	65	-1.84e+01	99	-1.97e+01
32	-1.88e+01	66	-1.88e+01	100	-1.93e+01
33	-1.81e+01	67	-1.83e+01		
34	-1.86e+01	68	-1.98e+01		

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Table A-44. Sampled Values for Parameter S_MB139:PRMX_LOG (LHS Variable 55) Replicate 3

Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)
1	-1.83e+01	35	-1.73e+01	69	-1.96e+01
2	-1.86e+01	36	-1.90e+01	70	-1.92e+01
3	-1.93e+01	37	-2.01e+01	71	-1.88e+01
4	-1.94e+01	38	-1.88e+01	72	-1.91e+01
5	-2.00e+01	39	-1.87e+01	73	-1.91e+01
6	-1.90e+01	40	-1.87e+01	74	-1.81e+01
7	-1.95e+01	41	-1.83e+01	75	-1.95e+01
8	-1.86e+01	42	-1.90e+01	76	-1.85e+01
9	-1.77e+01	43	-1.97e+01	77	-1.76e+01
10	-1.83e+01	44	-1.82e+01	78	-1.92e+01
11	-1.89e+01	45	-1.92e+01	79	-1.80e+01
12	-1.88e+01	46	-1.89e+01	80	-1.93e+01
13	-1.89e+01	47	-1.82e+01	81	-1.94e+01
14	-1.91e+01	48	-1.96e+01	82	-1.89e+01
15	-1.89e+01	49	-1.93e+01	83	-1.88e+01
16	-1.83e+01	50	-2.03e+01	84	-1.89e+01
17	-1.85e+01	51	-1.87e+01	85	-1.94e+01
18	-1.87e+01	52	-1.92e+01	86	-1.86e+01
19	-1.92e+01	53	-1.91e+01	87	-1.82e+01
20	-1.84e+01	54	-1.85e+01	88	-1.94e+01
21	-1.86e+01	55	-1.97e+01	89	-1.95e+01
22	-1.92e+01	56	-1.94e+01	90	-1.84e+01
23	-1.84e+01	57	-1.90e+01	91	-1.79e+01
24	-1.96e+01	58	-1.87e+01	92	-1.80e+01
25	-1.92e+01	59	-1.87e+01	93	-1.88e+01
26	-1.86e+01	60	-1.81e+01	94	-1.97e+01
27	-1.86e+01	61	-1.88e+01	95	-2.03e+01
28	-1.98e+01	62	-1.90e+01	96	-1.76e+01
29	-1.88e+01	63	-1.79e+01	97	-1.91e+01
30	-1.85e+01	64	-1.88e+01	98	-1.91e+01
31	-1.90e+01	65	-1.81e+01	99	-1.98e+01
32	-2.00e+01	66	-1.89e+01	100	-1.85e+01
33	-1.85e+01	67	-1.90e+01		
34	-1.93e+01	68	-1.84e+01		

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Table A-45. Sampled Values for Parameter S_MB139:RELP_MOD (LHS Variable 56) Replicate 1

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	4.00e+00	35	1.00e+00	69	1.00e+00
2	1.00e+00	36	4.00e+00	70	4.00e+00
3	4.00e+00	37	4.00e+00	71	1.00e+00
4	1.00e+00	38	1.00e+00	72	1.00e+00
5	4.00e+00	39	4.00e+00	73	1.00e+00
6	1.00e+00	40	1.00e+00	74	4.00e+00
7	1.00e+00	41	4.00e+00	75	1.00e+00
8	1.00e+00	42	4.00e+00	76	1.00e+00
9	4.00e+00	43	4.00e+00	77	4.00e+00
10	4.00e+00	44	4.00e+00	78	4.00e+00
11	1.00e+00	45	1.00e+00	79	4.00e+00
12	1.00e+00	46	1.00e+00	80	4.00e+00
13	1.00e+00	47	4.00e+00	81	1.00e+00
14	1.00e+00	48	1.00e+00	82	4.00e+00
15	4.00e+00	49	4.00e+00	83	1.00e+00
16	1.00e+00	50	1.00e+00	84	4.00e+00
17	4.00e+00	51	1.00e+00	85	4.00e+00
18	4.00e+00	52	4.00e+00	86	4.00e+00
19	4.00e+00	53	1.00e+00	87	4.00e+00
20	4.00e+00	54	4.00e+00	88	1.00e+00
21	1.00e+00	55	1.00e+00	89	1.00e+00
22	1.00e+00	56	1.00e+00	90	4.00e+00
23	4.00e+00	57	4.00e+00	91	1.00e+00
24	1.00e+00	58	1.00e+00	92	1.00e+00
25	1.00e+00	59	1.00e+00	93	4.00e+00
26	1.00e+00	60	1.00e+00	94	4.00e+00
27	1.00e+00	61	1.00e+00	95	4.00e+00
28	1.00e+00	62	4.00e+00	96	4.00e+00
29	1.00e+00	63	4.00e+00	97	4.00e+00
30	1.00e+00	64	1.00e+00	98	4.00e+00
31	1.00e+00	65	4.00e+00	99	4.00e+00
32	1.00e+00	66	4.00e+00	100	4.00e+00
33	4.00e+00	67	4.00e+00		
34	4.00e+00	68	1.00e+00		

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Table A-45. Sampled Values for Parameter S_MB139:RELP_MOD (LHS Variable 56) Replicate 2

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	4.00e+00	35	1.00e+00	69	4.00e+00
2	1.00e+00	36	1.00e+00	70	4.00e+00
3	4.00e+00	37	1.00e+00	71	4.00e+00
4	4.00e+00	38	4.00e+00	72	4.00e+00
5	4.00e+00	39	1.00e+00	73	1.00e+00
6	4.00e+00	40	4.00e+00	74	1.00e+00
7	1.00e+00	41	1.00e+00	75	1.00e+00
8	1.00e+00	42	1.00e+00	76	4.00e+00
9	4.00e+00	43	1.00e+00	77	4.00e+00
10	1.00e+00	44	4.00e+00	78	1.00e+00
11	4.00e+00	45	4.00e+00	79	4.00e+00
12	4.00e+00	46	4.00e+00	80	4.00e+00
13	1.00e+00	47	1.00e+00	81	4.00e+00
14	1.00e+00	48	4.00e+00	82	4.00e+00
15	1.00e+00	49	4.00e+00	83	4.00e+00
16	1.00e+00	50	4.00e+00	84	4.00e+00
17	4.00e+00	51	1.00e+00	85	4.00e+00
18	4.00e+00	52	4.00e+00	86	1.00e+00
19	1.00e+00	53	1.00e+00	87	1.00e+00
20	1.00e+00	54	4.00e+00	88	4.00e+00
21	4.00e+00	55	1.00e+00	89	4.00e+00
22	1.00e+00	56	1.00e+00	90	1.00e+00
23	1.00e+00	57	4.00e+00	91	4.00e+00
24	4.00e+00	58	1.00e+00	92	4.00e+00
25	4.00e+00	59	1.00e+00	93	4.00e+00
26	4.00e+00	60	1.00e+00	94	1.00e+00
27	1.00e+00	61	1.00e+00	95	1.00e+00
28	4.00e+00	62	1.00e+00	96	1.00e+00
29	4.00e+00	63	1.00e+00	97	1.00e+00
30	4.00e+00	64	1.00e+00	98	1.00e+00
31	1.00e+00	65	4.00e+00	99	1.00e+00
32	1.00e+00	66	4.00e+00	100	4.00e+00
33	1.00e+00	67	1.00e+00		
34	4.00e+00	68	1.00e+00		

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Table A-45. Sampled Values for Parameter S_MB139:RELP_MOD (LHS Variable 56) Replicate 3

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	4.00e+00	35	1.00e+00	69	4.00e+00
2	4.00e+00	36	1.00e+00	70	1.00e+00
3	1.00e+00	37	4.00e+00	71	1.00e+00
4	4.00e+00	38	1.00e+00	72	1.00e+00
5	4.00e+00	39	1.00e+00	73	1.00e+00
6	1.00e+00	40	4.00e+00	74	4.00e+00
7	4.00e+00	41	1.00e+00	75	1.00e+00
8	4.00e+00	42	1.00e+00	76	1.00e+00
9	1.00e+00	43	4.00e+00	77	1.00e+00
10	4.00e+00	44	1.00e+00	78	4.00e+00
11	1.00e+00	45	4.00e+00	79	1.00e+00
12	1.00e+00	46	4.00e+00	80	1.00e+00
13	1.00e+00	47	1.00e+00	81	4.00e+00
14	1.00e+00	48	4.00e+00	82	1.00e+00
15	4.00e+00	49	4.00e+00	83	1.00e+00
16	1.00e+00	50	1.00e+00	84	4.00e+00
17	4.00e+00	51	4.00e+00	85	1.00e+00
18	4.00e+00	52	1.00e+00	86	4.00e+00
19	1.00e+00	53	1.00e+00	87	1.00e+00
20	4.00e+00	54	1.00e+00	88	4.00e+00
21	4.00e+00	55	4.00e+00	89	4.00e+00
22	4.00e+00	56	4.00e+00	90	4.00e+00
23	4.00e+00	57	4.00e+00	91	1.00e+00
24	1.00e+00	58	1.00e+00	92	4.00e+00
25	1.00e+00	59	4.00e+00	93	1.00e+00
26	4.00e+00	60	4.00e+00	94	1.00e+00
27	1.00e+00	61	1.00e+00	95	4.00e+00
28	4.00e+00	62	4.00e+00	96	1.00e+00
29	1.00e+00	63	4.00e+00	97	1.00e+00
30	4.00e+00	64	4.00e+00	98	4.00e+00
31	1.00e+00	65	4.00e+00	99	4.00e+00
32	1.00e+00	66	1.00e+00	100	1.00e+00
33	4.00e+00	67	1.00e+00		
34	4.00e+00	68	4.00e+00		

Information Only

Table A-46. Sampled Values for Parameter S_MB139:SAT_RBRN (LHS Variable 57) Replicate 1

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	7.30e-02	35	6.23e-02	69	8.94e-02
2	6.95e-02	36	9.76e-02	70	1.10e-01
3	1.04e-01	37	1.02e-01	71	8.84e-02
4	8.52e-02	38	8.42e-02	72	8.04e-02
5	5.99e-02	39	1.06e-01	73	9.71e-02
6	1.57e-01	40	6.44e-02	74	4.03e-02
7	6.10e-02	41	4.72e-02	75	1.08e-01
8	1.50e-02	42	9.27e-02	76	7.81e-02
9	8.23e-02	43	6.86e-02	77	6.77e-02
10	6.51e-02	44	7.64e-02	78	7.05e-02
11	1.21e-01	45	1.03e-01	79	8.99e-02
12	5.73e-02	46	7.86e-02	80	6.54e-02
13	4.92e-02	47	7.35e-02	81	9.90e-02
14	9.08e-02	48	9.61e-02	82	1.24e-01
15	7.50e-02	49	1.11e-01	83	9.25e-02
16	1.21e-01	50	8.60e-02	84	8.66e-02
17	8.58e-02	51	1.18e-01	85	1.07e-01
18	5.77e-02	52	8.31e-02	86	6.34e-02
19	9.53e-02	53	8.26e-02	87	1.00e-01
20	4.45e-02	54	1.39e-01	88	2.50e-02
21	9.45e-02	55	7.98e-02	89	1.10e-01
22	7.91e-02	56	7.15e-02	90	8.74e-02
23	9.06e-02	57	9.99e-02	91	7.41e-02
24	1.38e-01	58	1.03e-01	92	5.43e-02
25	6.69e-02	59	1.33e-01	93	5.21e-02
26	7.71e-02	60	8.09e-02	94	1.05e-01
27	5.19e-02	61	6.81e-02	95	7.22e-02
28	2.97e-02	62	4.16e-02	96	5.52e-02
29	1.14e-01	63	8.78e-02	97	8.14e-02
30	1.13e-01	64	9.35e-02	98	9.84e-02
31	7.76e-02	65	1.15e-01	99	7.54e-02
32	5.88e-02	66	9.16e-02	100	8.38e-02
33	3.82e-02	67	1.28e-01		
34	7.11e-02	68	9.43e-02		

Information Only

Table A-46. Sampled Values for Parameter S_MB139:SAT_RBRN (LHS Variable 57) Replicate 2

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	8.99e-02	35	7.95e-02	69	1.04e-01
2	1.03e-01	36	8.18e-02	70	1.15e-01
3	7.42e-02	37	4.57e-02	71	7.87e-02
4	9.20e-02	38	1.17e-01	72	9.28e-02
5	7.35e-02	39	5.60e-02	73	5.29e-02
6	8.36e-02	40	8.22e-02	74	8.57e-02
7	6.95e-02	41	1.09e-01	75	6.16e-02
8	2.72e-02	42	7.79e-02	76	6.74e-02
9	1.20e-01	43	9.92e-02	77	7.55e-02
10	1.01e-01	44	1.03e-01	78	7.97e-02
11	4.00e-02	45	6.78e-02	79	8.27e-02
12	8.93e-02	46	8.12e-02	80	5.06e-02
13	6.54e-02	47	3.65e-02	81	9.49e-02
14	4.18e-02	48	9.62e-02	82	1.11e-01
15	7.28e-02	49	8.63e-02	83	9.98e-02
16	9.71e-02	50	7.21e-02	84	5.47e-02
17	1.09e-01	51	7.50e-02	85	8.45e-02
18	1.57e-01	52	2.91e-02	86	8.53e-02
19	4.81e-02	53	8.04e-02	87	5.91e-02
20	9.44e-02	54	7.19e-02	88	6.91e-02
21	1.13e-01	55	4.85e-02	89	1.06e-01
22	8.70e-02	56	6.25e-02	90	9.33e-02
23	1.05e-01	57	8.80e-02	91	8.71e-02
24	6.68e-02	58	9.05e-02	92	7.75e-02
25	6.33e-02	59	1.33e-01	93	6.48e-02
26	7.11e-02	60	1.25e-01	94	9.82e-02
27	8.39e-02	61	5.62e-02	95	1.23e-01
28	7.07e-02	62	1.44e-01	96	6.04e-02
29	9.76e-02	63	7.60e-02	97	1.01e-01
30	2.13e-02	64	7.70e-02	98	1.35e-01
31	9.11e-02	65	9.16e-02	99	8.88e-02
32	9.56e-02	66	1.19e-01	100	1.07e-01
33	1.10e-01	67	6.44e-02		
34	5.79e-02	68	1.27e-01		

Information Only

Table A-46. Sampled Values for Parameter S_MB139:SAT_RBRN (LHS Variable 57) Replicate 3

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	8.81e-02	35	1.15e-01	69	6.57e-02
2	6.02e-02	36	6.39e-02	70	3.28e-02
3	8.87e-02	37	7.91e-02	71	8.97e-02
4	5.96e-02	38	8.12e-02	72	7.44e-02
5	8.17e-02	39	1.01e-01	73	6.17e-02
6	5.53e-02	40	8.41e-02	74	7.08e-02
7	1.19e-01	41	8.93e-02	75	7.20e-02
8	9.62e-02	42	6.94e-02	76	8.59e-02
9	1.03e-01	43	6.73e-02	77	1.12e-01
10	1.06e-01	44	9.39e-02	78	9.29e-02
11	9.98e-02	45	6.35e-02	79	7.52e-02
12	8.52e-02	46	6.18e-02	80	6.92e-02
13	1.08e-01	47	4.37e-02	81	9.01e-02
14	9.33e-02	48	7.37e-02	82	1.28e-01
15	9.88e-02	49	9.48e-02	83	1.01e-01
16	5.17e-02	50	7.97e-02	84	1.05e-01
17	9.76e-02	51	6.49e-02	85	3.75e-02
18	1.09e-01	52	1.13e-01	86	7.83e-02
19	7.73e-02	53	9.23e-02	87	6.85e-02
20	7.71e-02	54	8.34e-02	88	1.21e-01
21	1.32e-01	55	7.28e-02	89	2.14e-02
22	9.54e-02	56	1.03e-01	90	1.46e-01
23	8.22e-02	57	6.67e-02	91	4.85e-02
24	1.24e-01	58	1.10e-01	92	7.86e-02
25	5.44e-02	59	8.30e-02	93	4.58e-02
26	5.77e-02	60	9.12e-02	94	8.60e-02
27	5.31e-02	61	1.05e-01	95	8.67e-02
28	1.37e-01	62	7.60e-02	96	7.06e-02
29	8.75e-02	63	1.45e-01	97	1.07e-01
30	8.07e-02	64	5.67e-02	98	4.04e-02
31	9.15e-02	65	4.81e-02	99	1.17e-01
32	1.17e-01	66	8.44e-02	100	9.84e-02
33	7.21e-02	67	7.55e-02		
34	9.70e-02	68	2.84e-02		

Information Only

Table A-47. Sampled Values for Parameter S_MB139:PORE_DIS (LHS Variable 58) Replicate 1

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	6.88e-01	35	6.41e-01	69	6.80e-01
2	5.61e-01	36	6.63e-01	70	6.41e-01
3	6.22e-01	37	6.47e-01	71	6.05e-01
4	6.07e-01	38	6.74e-01	72	6.99e-01
5	6.31e-01	39	6.95e-01	73	5.92e-01
6	7.02e-01	40	5.85e-01	74	5.82e-01
7	6.25e-01	41	6.78e-01	75	6.71e-01
8	6.02e-01	42	6.15e-01	76	6.92e-01
9	6.68e-01	43	6.52e-01	77	6.24e-01
10	7.11e-01	44	6.59e-01	78	5.32e-01
11	5.97e-01	45	6.48e-01	79	6.83e-01
12	7.04e-01	46	6.67e-01	80	5.65e-01
13	6.36e-01	47	6.27e-01	81	6.35e-01
14	6.53e-01	48	6.30e-01	82	6.56e-01
15	6.84e-01	49	5.95e-01	83	5.90e-01
16	6.77e-01	50	7.58e-01	84	6.96e-01
17	7.13e-01	51	7.25e-01	85	6.12e-01
18	5.81e-01	52	5.71e-01	86	6.56e-01
19	5.58e-01	53	6.21e-01	87	6.17e-01
20	6.39e-01	54	6.45e-01	88	7.06e-01
21	6.86e-01	55	6.51e-01	89	5.99e-01
22	5.25e-01	56	6.64e-01	90	6.43e-01
23	6.60e-01	57	6.13e-01	91	6.72e-01
24	6.02e-01	58	4.99e-01	92	6.38e-01
25	7.18e-01	59	7.37e-01	93	6.45e-01
26	6.35e-01	60	5.40e-01	94	6.49e-01
27	6.69e-01	61	8.02e-01	95	6.26e-01
28	6.10e-01	62	5.49e-01	96	6.66e-01
29	5.88e-01	63	7.22e-01	97	6.75e-01
30	6.33e-01	64	5.74e-01	98	5.77e-01
31	7.30e-01	65	6.54e-01	99	6.17e-01
32	6.61e-01	66	7.69e-01	100	7.49e-01
33	6.89e-01	67	6.08e-01		
34	6.29e-01	68	6.19e-01		

Information Only

Table A-47. Sampled Values for Parameter S_MB139:PORE_DIS (LHS Variable 58) Replicate 2

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	6.19e-01	35	5.18e-01	69	5.82e-01
2	5.44e-01	36	6.81e-01	70	5.78e-01
3	6.32e-01	37	5.68e-01	71	6.40e-01
4	6.66e-01	38	6.35e-01	72	5.59e-01
5	6.08e-01	39	6.43e-01	73	6.57e-01
6	6.15e-01	40	6.32e-01	74	6.74e-01
7	6.95e-01	41	6.28e-01	75	6.82e-01
8	6.51e-01	42	7.02e-01	76	5.72e-01
9	6.78e-01	43	7.14e-01	77	6.68e-01
10	5.88e-01	44	7.99e-01	78	5.67e-01
11	6.97e-01	45	7.10e-01	79	5.27e-01
12	6.40e-01	46	7.40e-01	80	7.06e-01
13	7.74e-01	47	6.46e-01	81	5.85e-01
14	6.25e-01	48	6.01e-01	82	6.89e-01
15	6.75e-01	49	6.45e-01	83	6.87e-01
16	6.38e-01	50	6.07e-01	84	6.61e-01
17	6.29e-01	51	6.16e-01	85	6.47e-01
18	5.78e-01	52	6.72e-01	86	5.97e-01
19	6.55e-01	53	6.51e-01	87	6.22e-01
20	6.58e-01	54	6.26e-01	88	6.37e-01
21	6.04e-01	55	5.49e-01	89	5.99e-01
22	7.21e-01	56	5.92e-01	90	6.64e-01
23	6.91e-01	57	5.95e-01	91	6.65e-01
24	5.55e-01	58	6.85e-01	92	6.49e-01
25	6.20e-01	59	7.61e-01	93	6.72e-01
26	7.18e-01	60	6.78e-01	94	7.28e-01
27	6.11e-01	61	5.90e-01	95	6.69e-01
28	6.53e-01	62	6.55e-01	96	7.00e-01
29	7.42e-01	63	6.60e-01	97	5.00e-01
30	6.42e-01	64	6.18e-01	98	6.13e-01
31	6.23e-01	65	6.30e-01	99	7.04e-01
32	6.88e-01	66	6.34e-01	100	6.49e-01
33	6.10e-01	67	6.63e-01		
34	6.03e-01	68	7.31e-01		

Information Only

Table A-47. Sampled Values for Parameter S_MB139:PORE_DIS (LHS Variable 58) Replicate 3

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	5.83e-01	35	7.19e-01	69	5.95e-01
2	6.74e-01	36	6.19e-01	70	7.36e-01
3	7.22e-01	37	6.03e-01	71	6.41e-01
4	6.12e-01	38	6.44e-01	72	6.59e-01
5	5.61e-01	39	6.54e-01	73	6.49e-01
6	7.16e-01	40	6.41e-01	74	6.52e-01
7	5.10e-01	41	5.03e-01	75	6.37e-01
8	6.98e-01	42	6.86e-01	76	7.62e-01
9	5.52e-01	43	6.13e-01	77	5.75e-01
10	6.82e-01	44	6.43e-01	78	6.09e-01
11	5.38e-01	45	5.67e-01	79	6.45e-01
12	6.33e-01	46	6.97e-01	80	6.17e-01
13	6.07e-01	47	5.51e-01	81	6.70e-01
14	5.99e-01	48	7.02e-01	82	6.72e-01
15	6.28e-01	49	7.95e-01	83	6.76e-01
16	6.22e-01	50	6.78e-01	84	6.61e-01
17	7.34e-01	51	6.38e-01	85	5.72e-01
18	6.89e-01	52	6.10e-01	86	6.14e-01
19	5.85e-01	53	6.65e-01	87	7.61e-01
20	6.56e-01	54	6.69e-01	88	7.25e-01
21	6.25e-01	55	6.21e-01	89	6.32e-01
22	6.48e-01	56	6.00e-01	90	5.89e-01
23	6.31e-01	57	7.09e-01	91	6.85e-01
24	6.57e-01	58	6.89e-01	92	6.05e-01
25	6.66e-01	59	6.27e-01	93	6.81e-01
26	6.54e-01	60	6.47e-01	94	5.97e-01
27	5.91e-01	61	6.59e-01	95	6.28e-01
28	6.63e-01	62	6.92e-01	96	6.69e-01
29	5.36e-01	63	6.62e-01	97	6.40e-01
30	6.34e-01	64	7.03e-01	98	6.50e-01
31	6.76e-01	65	5.94e-01	99	6.16e-01
32	6.94e-01	66	5.69e-01	100	5.79e-01
33	6.24e-01	67	7.10e-01		
34	7.49e-01	68	6.36e-01		

Information Only

Table A-48. Sampled Values for Parameter S_HALITE:PRESSURE (LHS Variable 59) Replicate 1

Vector	Value (Pa)	Vector	Value (Pa)	Vector	Value (Pa)
1	1.22e+07	35	1.14e+07	69	1.12e+07
2	1.12e+07	36	1.28e+07	70	1.27e+07
3	1.16e+07	37	1.37e+07	71	1.13e+07
4	1.37e+07	38	1.28e+07	72	1.26e+07
5	1.15e+07	39	1.14e+07	73	1.28e+07
6	1.35e+07	40	1.18e+07	74	1.36e+07
7	1.11e+07	41	1.17e+07	75	1.26e+07
8	1.38e+07	42	1.24e+07	76	1.38e+07
9	1.22e+07	43	1.25e+07	77	1.11e+07
10	1.27e+07	44	1.35e+07	78	1.28e+07
11	1.11e+07	45	1.37e+07	79	1.27e+07
12	1.22e+07	46	1.33e+07	80	1.26e+07
13	1.30e+07	47	1.32e+07	81	1.12e+07
14	1.30e+07	48	1.37e+07	82	1.39e+07
15	1.19e+07	49	1.23e+07	83	1.17e+07
16	1.24e+07	50	1.23e+07	84	1.16e+07
17	1.31e+07	51	1.13e+07	85	1.38e+07
18	1.17e+07	52	1.34e+07	86	1.13e+07
19	1.24e+07	53	1.21e+07	87	1.11e+07
20	1.20e+07	54	1.30e+07	88	1.36e+07
21	1.33e+07	55	1.23e+07	89	1.35e+07
22	1.15e+07	56	1.20e+07	90	1.29e+07
23	1.35e+07	57	1.13e+07	91	1.32e+07
24	1.21e+07	58	1.36e+07	92	1.25e+07
25	1.21e+07	59	1.15e+07	93	1.19e+07
26	1.16e+07	60	1.22e+07	94	1.31e+07
27	1.16e+07	61	1.29e+07	95	1.20e+07
28	1.32e+07	62	1.25e+07	96	1.34e+07
29	1.29e+07	63	1.19e+07	97	1.27e+07
30	1.33e+07	64	1.34e+07	98	1.30e+07
31	1.19e+07	65	1.31e+07	99	1.32e+07
32	1.17e+07	66	1.14e+07	100	1.18e+07
33	1.38e+07	67	1.21e+07		
34	1.18e+07	68	1.25e+07		

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Table A-48. Sampled Values for Parameter S_HALITE:PRESSURE (LHS Variable 59) Replicate 2

Vector	Value (Pa)	Vector	Value (Pa)	Vector	Value (Pa)
1	1.14e+07	35	1.21e+07	69	1.25e+07
2	1.38e+07	36	1.20e+07	70	1.11e+07
3	1.26e+07	37	1.38e+07	71	1.33e+07
4	1.15e+07	38	1.19e+07	72	1.12e+07
5	1.12e+07	39	1.31e+07	73	1.13e+07
6	1.23e+07	40	1.15e+07	74	1.14e+07
7	1.24e+07	41	1.30e+07	75	1.12e+07
8	1.33e+07	42	1.34e+07	76	1.21e+07
9	1.32e+07	43	1.20e+07	77	1.19e+07
10	1.26e+07	44	1.27e+07	78	1.13e+07
11	1.37e+07	45	1.35e+07	79	1.18e+07
12	1.29e+07	46	1.29e+07	80	1.34e+07
13	1.25e+07	47	1.20e+07	81	1.37e+07
14	1.24e+07	48	1.17e+07	82	1.32e+07
15	1.11e+07	49	1.26e+07	83	1.30e+07
16	1.13e+07	50	1.24e+07	84	1.23e+07
17	1.27e+07	51	1.23e+07	85	1.27e+07
18	1.16e+07	52	1.12e+07	86	1.28e+07
19	1.20e+07	53	1.27e+07	87	1.17e+07
20	1.31e+07	54	1.29e+07	88	1.18e+07
21	1.39e+07	55	1.35e+07	89	1.11e+07
22	1.28e+07	56	1.25e+07	90	1.35e+07
23	1.38e+07	57	1.37e+07	91	1.22e+07
24	1.22e+07	58	1.30e+07	92	1.19e+07
25	1.36e+07	59	1.28e+07	93	1.17e+07
26	1.11e+07	60	1.33e+07	94	1.16e+07
27	1.31e+07	61	1.38e+07	95	1.32e+07
28	1.36e+07	62	1.14e+07	96	1.34e+07
29	1.14e+07	63	1.21e+07	97	1.36e+07
30	1.22e+07	64	1.18e+07	98	1.15e+07
31	1.25e+07	65	1.34e+07	99	1.28e+07
32	1.33e+07	66	1.31e+07	100	1.18e+07
33	1.16e+07	67	1.17e+07		
34	1.22e+07	68	1.36e+07		

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Table A-48. Sampled Values for Parameter S_HALITE:PRESSURE (LHS Variable 59) Replicate 3

Vector	Value (Pa)	Vector	Value (Pa)	Vector	Value (Pa)
1	1.10e+07	35	1.32e+07	69	1.30e+07
2	1.13e+07	36	1.12e+07	70	1.28e+07
3	1.27e+07	37	1.14e+07	71	1.32e+07
4	1.38e+07	38	1.16e+07	72	1.35e+07
5	1.16e+07	39	1.34e+07	73	1.22e+07
6	1.11e+07	40	1.29e+07	74	1.19e+07
7	1.12e+07	41	1.12e+07	75	1.15e+07
8	1.14e+07	42	1.21e+07	76	1.23e+07
9	1.31e+07	43	1.30e+07	77	1.25e+07
10	1.35e+07	44	1.14e+07	78	1.33e+07
11	1.26e+07	45	1.38e+07	79	1.23e+07
12	1.36e+07	46	1.13e+07	80	1.31e+07
13	1.25e+07	47	1.29e+07	81	1.21e+07
14	1.20e+07	48	1.24e+07	82	1.17e+07
15	1.39e+07	49	1.20e+07	83	1.38e+07
16	1.16e+07	50	1.28e+07	84	1.23e+07
17	1.22e+07	51	1.18e+07	85	1.13e+07
18	1.27e+07	52	1.23e+07	86	1.13e+07
19	1.28e+07	53	1.36e+07	87	1.36e+07
20	1.34e+07	54	1.25e+07	88	1.35e+07
21	1.28e+07	55	1.20e+07	89	1.37e+07
22	1.32e+07	56	1.14e+07	90	1.20e+07
23	1.32e+07	57	1.19e+07	91	1.18e+07
24	1.31e+07	58	1.15e+07	92	1.34e+07
25	1.24e+07	59	1.19e+07	93	1.19e+07
26	1.39e+07	60	1.21e+07	94	1.30e+07
27	1.37e+07	61	1.30e+07	95	1.37e+07
28	1.26e+07	62	1.26e+07	96	1.17e+07
29	1.12e+07	63	1.27e+07	97	1.17e+07
30	1.33e+07	64	1.22e+07	98	1.25e+07
31	1.24e+07	65	1.34e+07	99	1.29e+07
32	1.16e+07	66	1.33e+07	100	1.36e+07
33	1.18e+07	67	1.17e+07		
34	1.11e+07	68	1.27e+07		

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Table A-49. Sampled Values for Parameter CASTILER:PRESSURE (LHS Variable 60) Replicate 1

Vector	Value (Pa)	Vector	Value (Pa)	Vector	Value (Pa)
1	1.33e+07	35	1.40e+07	69	1.29e+07
2	1.39e+07	36	1.41e+07	70	1.25e+07
3	1.12e+07	37	1.28e+07	71	1.20e+07
4	1.27e+07	38	1.34e+07	72	1.52e+07
5	1.24e+07	39	1.54e+07	73	1.47e+07
6	1.29e+07	40	1.18e+07	74	1.14e+07
7	1.51e+07	41	1.41e+07	75	1.19e+07
8	1.46e+07	42	1.31e+07	76	1.35e+07
9	1.35e+07	43	1.56e+07	77	1.23e+07
10	1.40e+07	44	1.44e+07	78	1.22e+07
11	1.27e+07	45	1.18e+07	79	1.21e+07
12	1.33e+07	46	1.48e+07	80	1.32e+07
13	1.30e+07	47	1.28e+07	81	1.17e+07
14	1.55e+07	48	1.30e+07	82	1.27e+07
15	1.26e+07	49	1.31e+07	83	1.36e+07
16	1.25e+07	50	1.49e+07	84	1.32e+07
17	1.58e+07	51	1.34e+07	85	1.30e+07
18	1.47e+07	52	1.45e+07	86	1.51e+07
19	1.38e+07	53	1.26e+07	87	1.38e+07
20	1.43e+07	54	1.27e+07	88	1.33e+07
21	1.39e+07	55	1.22e+07	89	1.36e+07
22	1.56e+07	56	1.53e+07	90	1.42e+07
23	1.50e+07	57	1.25e+07	91	1.21e+07
24	1.64e+07	58	1.44e+07	92	1.31e+07
25	1.48e+07	59	1.57e+07	93	1.65e+07
26	1.30e+07	60	1.37e+07	94	1.42e+07
27	1.21e+07	61	1.36e+07	95	1.49e+07
28	1.26e+07	62	1.24e+07	96	1.37e+07
29	1.34e+07	63	1.29e+07	97	1.28e+07
30	1.62e+07	64	1.43e+07	98	1.60e+07
31	1.32e+07	65	1.46e+07	99	1.45e+07
32	1.41e+07	66	1.23e+07	100	1.38e+07
33	1.15e+07	67	1.19e+07		
34	1.61e+07	68	1.23e+07		

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Table A-49. Sampled Values for Parameter CASTILER:PRESSURE (LHS Variable 60) Replicate 2

Vector	Value (Pa)	Vector	Value (Pa)	Vector	Value (Pa)
1	1.41e+07	35	1.59e+07	69	1.39e+07
2	1.42e+07	36	1.44e+07	70	1.30e+07
3	1.48e+07	37	1.53e+07	71	1.46e+07
4	1.21e+07	38	1.26e+07	72	1.39e+07
5	1.25e+07	39	1.38e+07	73	1.15e+07
6	1.32e+07	40	1.35e+07	74	1.61e+07
7	1.43e+07	41	1.30e+07	75	1.33e+07
8	1.25e+07	42	1.42e+07	76	1.34e+07
9	1.51e+07	43	1.62e+07	77	1.57e+07
10	1.28e+07	44	1.20e+07	78	1.19e+07
11	1.37e+07	45	1.48e+07	79	1.53e+07
12	1.52e+07	46	1.25e+07	80	1.33e+07
13	1.36e+07	47	1.27e+07	81	1.35e+07
14	1.19e+07	48	1.67e+07	82	1.16e+07
15	1.18e+07	49	1.38e+07	83	1.33e+07
16	1.37e+07	50	1.21e+07	84	1.27e+07
17	1.14e+07	51	1.28e+07	85	1.49e+07
18	1.34e+07	52	1.40e+07	86	1.26e+07
19	1.29e+07	53	1.55e+07	87	1.43e+07
20	1.41e+07	54	1.40e+07	88	1.46e+07
21	1.22e+07	55	1.31e+07	89	1.44e+07
22	1.36e+07	56	1.23e+07	90	1.27e+07
23	1.37e+07	57	1.23e+07	91	1.28e+07
24	1.35e+07	58	1.27e+07	92	1.52e+07
25	1.30e+07	59	1.31e+07	93	1.29e+07
26	1.32e+07	60	1.47e+07	94	1.22e+07
27	1.24e+07	61	1.49e+07	95	1.28e+07
28	1.34e+07	62	1.45e+07	96	1.37e+07
29	1.65e+07	63	1.18e+07	97	1.20e+07
30	1.50e+07	64	1.40e+07	98	1.46e+07
31	1.56e+07	65	1.59e+07	99	1.56e+07
32	1.17e+07	66	1.45e+07	100	1.24e+07
33	1.25e+07	67	1.23e+07		
34	1.30e+07	68	1.32e+07		

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Table A-49. Sampled Values for Parameter CASTILER:PRESSURE (LHS Variable 60) Replicate 3

Vector	Value (Pa)	Vector	Value (Pa)	Vector	Value (Pa)
1	1.19e+07	35	1.46e+07	69	1.30e+07
2	1.54e+07	36	1.39e+07	70	1.31e+07
3	1.42e+07	37	1.57e+07	71	1.23e+07
4	1.44e+07	38	1.46e+07	72	1.27e+07
5	1.18e+07	39	1.32e+07	73	1.50e+07
6	1.26e+07	40	1.28e+07	74	1.45e+07
7	1.17e+07	41	1.29e+07	75	1.22e+07
8	1.16e+07	42	1.41e+07	76	1.26e+07
9	1.25e+07	43	1.23e+07	77	1.58e+07
10	1.48e+07	44	1.50e+07	78	1.26e+07
11	1.28e+07	45	1.39e+07	79	1.16e+07
12	1.21e+07	46	1.28e+07	80	1.53e+07
13	1.35e+07	47	1.28e+07	81	1.48e+07
14	1.22e+07	48	1.45e+07	82	1.44e+07
15	1.51e+07	49	1.15e+07	83	1.37e+07
16	1.47e+07	50	1.43e+07	84	1.61e+07
17	1.25e+07	51	1.34e+07	85	1.62e+07
18	1.51e+07	52	1.33e+07	86	1.38e+07
19	1.19e+07	53	1.40e+07	87	1.22e+07
20	1.56e+07	54	1.27e+07	88	1.34e+07
21	1.38e+07	55	1.52e+07	89	1.21e+07
22	1.32e+07	56	1.40e+07	90	1.31e+07
23	1.41e+07	57	1.24e+07	91	1.41e+07
24	1.30e+07	58	1.29e+07	92	1.33e+07
25	1.32e+07	59	1.36e+07	93	1.37e+07
26	1.25e+07	60	1.26e+07	94	1.59e+07
27	1.27e+07	61	1.24e+07	95	1.36e+07
28	1.35e+07	62	1.23e+07	96	1.42e+07
29	1.43e+07	63	1.53e+07	97	1.36e+07
30	1.20e+07	64	1.45e+07	98	1.35e+07
31	1.34e+07	65	1.31e+07	99	1.49e+07
32	1.38e+07	66	1.65e+07	100	1.14e+07
33	1.30e+07	67	1.55e+07		
34	1.30e+07	68	1.68e+07		

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Table A-50. Sampled Values for Parameter CASTILER:PRMX_LOG (LHS Variable 61) Replicate 1

Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)
1	-1.16e+01	35	-1.19e+01	69	-1.11e+01
2	-1.18e+01	36	-1.34e+01	70	-1.10e+01
3	-1.04e+01	37	-1.03e+01	71	-1.18e+01
4	-1.21e+01	38	-1.28e+01	72	-1.20e+01
5	-1.10e+01	39	-1.15e+01	73	-1.08e+01
6	-1.15e+01	40	-1.05e+01	74	-1.15e+01
7	-1.08e+01	41	-1.18e+01	75	-1.21e+01
8	-1.18e+01	42	-1.40e+01	76	-1.35e+01
9	-1.26e+01	43	-1.30e+01	77	-1.13e+01
10	-1.06e+01	44	-1.17e+01	78	-1.09e+01
11	-1.28e+01	45	-1.21e+01	79	-1.15e+01
12	-1.19e+01	46	-1.33e+01	80	-1.08e+01
13	-1.25e+01	47	-1.30e+01	81	-1.27e+01
14	-1.14e+01	48	-1.32e+01	82	-1.32e+01
15	-1.33e+01	49	-1.27e+01	83	-1.30e+01
16	-9.94e+00	50	-1.06e+01	84	-1.28e+01
17	-1.21e+01	51	-1.20e+01	85	-1.10e+01
18	-1.23e+01	52	-1.39e+01	86	-1.41e+01
19	-1.29e+01	53	-1.29e+01	87	-1.37e+01
20	-1.19e+01	54	-1.12e+01	88	-1.24e+01
21	-1.45e+01	55	-1.14e+01	89	-1.24e+01
22	-1.25e+01	56	-1.02e+01	90	-1.16e+01
23	-1.12e+01	57	-1.06e+01	91	-1.31e+01
24	-1.12e+01	58	-1.26e+01	92	-1.35e+01
25	-1.23e+01	59	-1.36e+01	93	-1.16e+01
26	-1.22e+01	60	-1.26e+01	94	-1.20e+01
27	-1.38e+01	61	-1.11e+01	95	-1.17e+01
28	-1.13e+01	62	-1.26e+01	96	-1.17e+01
29	-1.38e+01	63	-1.23e+01	97	-1.17e+01
30	-1.14e+01	64	-1.07e+01	98	-1.23e+01
31	-1.24e+01	65	-1.24e+01	99	-1.31e+01
32	-1.22e+01	66	-1.43e+01	100	-1.17e+01
33	-1.20e+01	67	-1.20e+01		
34	-1.11e+01	68	-1.34e+01		

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Table A-50. Sampled Values for Parameter CASTILER:PRMX_LOG (LHS Variable 61) Replicate 2

Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)
1	-1.27e+01	35	-1.21e+01	69	-1.12e+01
2	-1.31e+01	36	-1.13e+01	70	-1.26e+01
3	-1.31e+01	37	-1.20e+01	71	-1.40e+01
4	-1.33e+01	38	-1.35e+01	72	-1.23e+01
5	-1.25e+01	39	-1.18e+01	73	-1.18e+01
6	-1.43e+01	40	-1.04e+01	74	-1.27e+01
7	-1.06e+01	41	-1.10e+01	75	-1.13e+01
8	-1.25e+01	42	-1.17e+01	76	-1.16e+01
9	-1.25e+01	43	-1.22e+01	77	-1.22e+01
10	-1.29e+01	44	-1.41e+01	78	-1.25e+01
11	-1.08e+01	45	-1.16e+01	79	-1.17e+01
12	-1.29e+01	46	-1.39e+01	80	-1.15e+01
13	-1.24e+01	47	-1.19e+01	81	-1.21e+01
14	-1.07e+01	48	-1.08e+01	82	-1.18e+01
15	-1.14e+01	49	-1.34e+01	83	-1.10e+01
16	-1.12e+01	50	-1.15e+01	84	-1.31e+01
17	-1.01e+01	51	-1.26e+01	85	-1.22e+01
18	-1.22e+01	52	-1.27e+01	86	-1.17e+01
19	-1.26e+01	53	-1.32e+01	87	-1.05e+01
20	-1.07e+01	54	-1.20e+01	88	-1.36e+01
21	-1.21e+01	55	-1.38e+01	89	-1.14e+01
22	-1.37e+01	56	-1.30e+01	90	-1.16e+01
23	-1.16e+01	57	-1.18e+01	91	-1.13e+01
24	-1.12e+01	58	-1.15e+01	92	-1.24e+01
25	-1.11e+01	59	-1.05e+01	93	-1.19e+01
26	-1.03e+01	60	-1.14e+01	94	-1.23e+01
27	-1.18e+01	61	-1.19e+01	95	-1.45e+01
28	-1.11e+01	62	-1.09e+01	96	-1.12e+01
29	-1.37e+01	63	-1.20e+01	97	-1.24e+01
30	-1.33e+01	64	-1.28e+01	98	-1.28e+01
31	-1.09e+01	65	-1.10e+01	99	-1.32e+01
32	-1.19e+01	66	-1.02e+01	100	-1.30e+01
33	-1.33e+01	67	-1.23e+01		
34	-1.21e+01	68	-1.35e+01		

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Table A-50. Sampled Values for Parameter CASTILER:PRMX_LOG (LHS Variable 61) Replicate 3

Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)
1	-1.07e+01	35	-1.09e+01	69	-1.19e+01
2	-1.20e+01	36	-1.33e+01	70	-1.13e+01
3	-1.23e+01	37	-1.10e+01	71	-1.32e+01
4	-1.22e+01	38	-1.14e+01	72	-9.90e+00
5	-1.28e+01	39	-1.12e+01	73	-1.33e+01
6	-1.41e+01	40	-1.10e+01	74	-1.17e+01
7	-1.25e+01	41	-1.21e+01	75	-1.14e+01
8	-1.34e+01	42	-1.30e+01	76	-1.24e+01
9	-1.18e+01	43	-1.30e+01	77	-1.15e+01
10	-1.32e+01	44	-1.16e+01	78	-1.39e+01
11	-1.38e+01	45	-1.09e+01	79	-1.44e+01
12	-1.11e+01	46	-1.01e+01	80	-1.22e+01
13	-1.25e+01	47	-1.29e+01	81	-1.17e+01
14	-1.13e+01	48	-1.37e+01	82	-1.35e+01
15	-1.14e+01	49	-1.08e+01	83	-1.37e+01
16	-1.23e+01	50	-1.04e+01	84	-1.17e+01
17	-1.24e+01	51	-1.21e+01	85	-1.27e+01
18	-1.24e+01	52	-1.21e+01	86	-1.31e+01
19	-1.15e+01	53	-1.19e+01	87	-1.30e+01
20	-1.42e+01	54	-1.26e+01	88	-1.31e+01
21	-1.27e+01	55	-1.28e+01	89	-1.36e+01
22	-1.22e+01	56	-1.19e+01	90	-1.21e+01
23	-1.07e+01	57	-1.29e+01	91	-1.15e+01
24	-1.11e+01	58	-1.23e+01	92	-1.11e+01
25	-1.26e+01	59	-1.26e+01	93	-1.20e+01
26	-1.19e+01	60	-1.18e+01	94	-1.28e+01
27	-1.21e+01	61	-1.03e+01	95	-1.17e+01
28	-1.16e+01	62	-1.16e+01	96	-1.13e+01
29	-1.08e+01	63	-1.20e+01	97	-1.09e+01
30	-1.19e+01	64	-1.06e+01	98	-1.05e+01
31	-1.13e+01	65	-1.16e+01	99	-1.05e+01
32	-1.27e+01	66	-1.36e+01	100	-1.24e+01
33	-1.34e+01	67	-1.40e+01		
34	-1.18e+01	68	-1.12e+01		

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Table A-51. Sampled Values for Parameter CASTILER:COMP_RCK (LHS Variable 62) Replicate 1

Vector	Value (Pa^{-1})	Vector	Value (Pa^{-1})	Vector	Value (Pa^{-1})
1	4.64e-11	35	3.94e-11	69	6.31e-11
2	3.67e-11	36	5.57e-11	70	3.33e-11
3	2.94e-11	37	3.06e-11	71	5.51e-11
4	5.84e-11	38	5.42e-11	72	4.40e-11
5	3.06e-11	39	4.01e-11	73	4.31e-11
6	4.81e-11	40	4.21e-11	74	3.75e-11
7	5.27e-11	41	3.85e-11	75	8.44e-11
8	6.91e-11	42	7.11e-11	76	8.65e-11
9	6.44e-11	43	6.21e-11	77	3.42e-11
10	3.56e-11	44	3.65e-11	78	5.92e-11
11	4.43e-11	45	4.83e-11	79	4.35e-11
12	5.17e-11	46	8.45e-11	80	3.83e-11
13	5.13e-11	47	8.90e-11	81	7.52e-11
14	5.02e-11	48	6.74e-11	82	6.00e-11
15	5.72e-11	49	4.54e-11	83	4.87e-11
16	2.47e-11	50	2.83e-11	84	7.36e-11
17	6.04e-11	51	4.95e-11	85	2.77e-11
18	6.16e-11	52	6.63e-11	86	9.10e-11
19	5.78e-11	53	8.28e-11	87	7.46e-11
20	4.62e-11	54	3.92e-11	88	4.76e-11
21	9.36e-11	55	5.51e-11	89	5.65e-11
22	7.19e-11	56	2.07e-11	90	4.72e-11
23	4.20e-11	57	4.12e-11	91	5.08e-11
24	4.55e-11	58	5.23e-11	92	6.76e-11
25	7.02e-11	59	8.08e-11	93	3.19e-11
26	3.29e-11	60	5.88e-11	94	4.48e-11
27	6.11e-11	61	4.27e-11	95	5.34e-11
28	3.49e-11	62	7.69e-11	96	4.97e-11
29	7.31e-11	63	7.73e-11	97	5.37e-11
30	2.63e-11	64	4.11e-11	98	6.38e-11
31	3.98e-11	65	6.50e-11	99	6.85e-11
32	3.51e-11	66	7.86e-11	100	7.93e-11
33	4.06e-11	67	3.73e-11		
34	3.25e-11	68	6.54e-11		

Information Only

Table A-51. Sampled Values for Parameter CASTILER:COMP_RCK (LHS Variable 62) Replicate 2

Vector	Value (Pa^{-1})	Vector	Value (Pa^{-1})	Vector	Value (Pa^{-1})
1	7.12e-11	35	7.26e-11	69	3.55e-11
2	5.20e-11	36	4.08e-11	70	4.86e-11
3	6.51e-11	37	5.29e-11	71	6.10e-11
4	8.48e-11	38	8.12e-11	72	3.63e-11
5	4.65e-11	39	5.56e-11	73	6.07e-11
6	6.34e-11	40	3.24e-11	74	8.95e-11
7	4.24e-11	41	3.35e-11	75	5.04e-11
8	5.59e-11	42	5.37e-11	76	4.90e-11
9	6.78e-11	43	4.02e-11	77	4.39e-11
10	4.33e-11	44	9.48e-11	78	5.74e-11
11	2.96e-11	45	4.62e-11	79	4.31e-11
12	5.31e-11	46	9.15e-11	80	3.48e-11
13	3.67e-11	47	4.56e-11	81	4.42e-11
14	3.41e-11	48	3.74e-11	82	6.73e-11
15	3.86e-11	49	7.80e-11	83	7.52e-11
16	4.26e-11	50	4.78e-11	84	6.57e-11
17	2.54e-11	51	5.99e-11	85	3.99e-11
18	5.69e-11	52	5.46e-11	86	3.76e-11
19	6.21e-11	53	8.40e-11	87	2.73e-11
20	2.88e-11	54	5.24e-11	88	7.84e-11
21	4.47e-11	55	7.50e-11	89	5.64e-11
22	7.22e-11	56	4.98e-11	90	4.76e-11
23	3.14e-11	57	6.87e-11	91	3.11e-11
24	6.92e-11	58	3.53e-11	92	4.14e-11
25	3.79e-11	59	3.32e-11	93	4.54e-11
26	2.57e-11	60	5.87e-11	94	7.05e-11
27	4.68e-11	61	4.12e-11	95	8.25e-11
28	5.08e-11	62	2.28e-11	96	4.93e-11
29	7.97e-11	63	5.14e-11	97	6.63e-11
30	6.46e-11	64	7.65e-11	98	6.15e-11
31	5.46e-11	65	4.17e-11	99	7.33e-11
32	5.82e-11	66	3.02e-11	100	6.29e-11
33	8.74e-11	67	3.96e-11		
34	3.90e-11	68	5.92e-11		

Information Only

Table A-51. Sampled Values for Parameter CASTILER:COMP_RCK (LHS Variable 62) Replicate 3

Vector	Value (Pa^{-1})	Vector	Value (Pa^{-1})	Vector	Value (Pa^{-1})
1	5.27e-11	35	4.52e-11	69	4.02e-11
2	6.12e-11	36	7.42e-11	70	4.25e-11
3	4.11e-11	37	3.68e-11	71	8.44e-11
4	7.04e-11	38	4.55e-11	72	2.63e-11
5	4.39e-11	39	3.87e-11	73	7.38e-11
6	8.68e-11	40	3.53e-11	74	3.75e-11
7	5.37e-11	41	5.65e-11	75	5.45e-11
8	6.32e-11	42	8.21e-11	76	4.45e-11
9	5.80e-11	43	5.69e-11	77	4.78e-11
10	8.02e-11	44	4.20e-11	78	5.55e-11
11	6.70e-11	45	3.41e-11	79	9.49e-11
12	4.24e-11	46	2.14e-11	80	4.07e-11
13	3.81e-11	47	6.02e-11	81	4.91e-11
14	3.60e-11	48	7.70e-11	82	6.63e-11
15	2.71e-11	49	4.15e-11	83	7.82e-11
16	5.14e-11	50	3.01e-11	84	4.69e-11
17	3.90e-11	51	4.73e-11	85	6.81e-11
18	5.85e-11	52	6.38e-11	86	9.10e-11
19	3.72e-11	53	6.16e-11	87	5.22e-11
20	8.81e-11	54	7.54e-11	88	6.86e-11
21	6.03e-11	55	7.60e-11	89	6.48e-11
22	8.48e-11	56	4.82e-11	90	3.94e-11
23	2.55e-11	57	4.65e-11	91	2.92e-11
24	3.18e-11	58	6.42e-11	92	4.29e-11
25	3.34e-11	59	4.87e-11	93	4.61e-11
26	6.93e-11	60	5.16e-11	94	8.15e-11
27	4.97e-11	61	3.56e-11	95	5.33e-11
28	7.22e-11	62	5.48e-11	96	5.57e-11
29	2.84e-11	63	3.30e-11	97	3.50e-11
30	4.00e-11	64	3.07e-11	98	3.24e-11
31	6.21e-11	65	5.78e-11	99	4.49e-11
32	5.01e-11	66	5.94e-11	100	7.25e-11
33	6.56e-11	67	7.08e-11		
34	4.35e-11	68	5.09e-11		

Information Only

Table A-52. Sampled Values for Parameter BH_SAND:PRMX_LOG (LHS Variable 63) Replicate 1

Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)
1	-1.49e+01	35	-1.52e+01	69	-1.48e+01
2	-1.47e+01	36	-1.40e+01	70	-1.46e+01
3	-1.44e+01	37	-1.59e+01	71	-1.51e+01
4	-1.63e+01	38	-1.55e+01	72	-1.57e+01
5	-1.56e+01	39	-1.55e+01	73	-1.61e+01
6	-1.49e+01	40	-1.55e+01	74	-1.50e+01
7	-1.41e+01	41	-1.53e+01	75	-1.58e+01
8	-1.47e+01	42	-1.61e+01	76	-1.47e+01
9	-1.42e+01	43	-1.52e+01	77	-1.53e+01
10	-1.59e+01	44	-1.53e+01	78	-1.42e+01
11	-1.49e+01	45	-1.40e+01	79	-1.44e+01
12	-1.41e+01	46	-1.48e+01	80	-1.47e+01
13	-1.46e+01	47	-1.52e+01	81	-1.61e+01
14	-1.48e+01	48	-1.58e+01	82	-1.44e+01
15	-1.60e+01	49	-1.60e+01	83	-1.45e+01
16	-1.52e+01	50	-1.41e+01	84	-1.49e+01
17	-1.40e+01	51	-1.57e+01	85	-1.59e+01
18	-1.62e+01	52	-1.50e+01	86	-1.48e+01
19	-1.54e+01	53	-1.57e+01	87	-1.56e+01
20	-1.45e+01	54	-1.45e+01	88	-1.56e+01
21	-1.62e+01	55	-1.43e+01	89	-1.45e+01
22	-1.42e+01	56	-1.63e+01	90	-1.49e+01
23	-1.48e+01	57	-1.60e+01	91	-1.59e+01
24	-1.52e+01	58	-1.45e+01	92	-1.58e+01
25	-1.54e+01	59	-1.54e+01	93	-1.51e+01
26	-1.50e+01	60	-1.54e+01	94	-1.55e+01
27	-1.42e+01	61	-1.53e+01	95	-1.58e+01
28	-1.44e+01	62	-1.51e+01	96	-1.56e+01
29	-1.51e+01	63	-1.46e+01	97	-1.51e+01
30	-1.43e+01	64	-1.61e+01	98	-1.43e+01
31	-1.58e+01	65	-1.63e+01	99	-1.62e+01
32	-1.61e+01	66	-1.42e+01	100	-1.60e+01
33	-1.56e+01	67	-1.43e+01		
34	-1.46e+01	68	-1.57e+01		

Information Only

Table A-52. Sampled Values for Parameter BH_SAND:PRMX_LOG (LHS Variable 63) Replicate 2

Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)
1	-1.57e+01	35	-1.50e+01	69	-1.60e+01
2	-1.56e+01	36	-1.40e+01	70	-1.57e+01
3	-1.47e+01	37	-1.46e+01	71	-1.56e+01
4	-1.41e+01	38	-1.49e+01	72	-1.47e+01
5	-1.63e+01	39	-1.51e+01	73	-1.57e+01
6	-1.45e+01	40	-1.41e+01	74	-1.45e+01
7	-1.59e+01	41	-1.46e+01	75	-1.47e+01
8	-1.50e+01	42	-1.60e+01	76	-1.63e+01
9	-1.54e+01	43	-1.52e+01	77	-1.49e+01
10	-1.49e+01	44	-1.54e+01	78	-1.58e+01
11	-1.50e+01	45	-1.62e+01	79	-1.45e+01
12	-1.56e+01	46	-1.54e+01	80	-1.51e+01
13	-1.57e+01	47	-1.58e+01	81	-1.55e+01
14	-1.51e+01	48	-1.45e+01	82	-1.59e+01
15	-1.62e+01	49	-1.58e+01	83	-1.53e+01
16	-1.48e+01	50	-1.46e+01	84	-1.51e+01
17	-1.42e+01	51	-1.53e+01	85	-1.60e+01
18	-1.49e+01	52	-1.47e+01	86	-1.58e+01
19	-1.55e+01	53	-1.57e+01	87	-1.52e+01
20	-1.54e+01	54	-1.48e+01	88	-1.60e+01
21	-1.43e+01	55	-1.44e+01	89	-1.53e+01
22	-1.52e+01	56	-1.46e+01	90	-1.44e+01
23	-1.59e+01	57	-1.61e+01	91	-1.60e+01
24	-1.42e+01	58	-1.61e+01	92	-1.50e+01
25	-1.44e+01	59	-1.52e+01	93	-1.62e+01
26	-1.46e+01	60	-1.62e+01	94	-1.56e+01
27	-1.53e+01	61	-1.59e+01	95	-1.42e+01
28	-1.41e+01	62	-1.55e+01	96	-1.42e+01
29	-1.48e+01	63	-1.43e+01	97	-1.61e+01
30	-1.43e+01	64	-1.61e+01	98	-1.41e+01
31	-1.45e+01	65	-1.52e+01	99	-1.58e+01
32	-1.49e+01	66	-1.55e+01	100	-1.48e+01
33	-1.44e+01	67	-1.43e+01		
34	-1.41e+01	68	-1.40e+01		

Information Only

Table A-52. Sampled Values for Parameter BH_SAND:PRMX_LOG (LHS Variable 63) Replicate 3

Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)
1	-1.62e+01	35	-1.55e+01	69	-1.42e+01
2	-1.52e+01	36	-1.59e+01	70	-1.58e+01
3	-1.52e+01	37	-1.43e+01	71	-1.53e+01
4	-1.63e+01	38	-1.50e+01	72	-1.51e+01
5	-1.52e+01	39	-1.54e+01	73	-1.48e+01
6	-1.62e+01	40	-1.44e+01	74	-1.49e+01
7	-1.53e+01	41	-1.52e+01	75	-1.50e+01
8	-1.55e+01	42	-1.41e+01	76	-1.59e+01
9	-1.59e+01	43	-1.51e+01	77	-1.44e+01
10	-1.47e+01	44	-1.44e+01	78	-1.46e+01
11	-1.49e+01	45	-1.44e+01	79	-1.46e+01
12	-1.61e+01	46	-1.56e+01	80	-1.61e+01
13	-1.62e+01	47	-1.40e+01	81	-1.54e+01
14	-1.43e+01	48	-1.61e+01	82	-1.60e+01
15	-1.57e+01	49	-1.41e+01	83	-1.54e+01
16	-1.58e+01	50	-1.47e+01	84	-1.48e+01
17	-1.53e+01	51	-1.60e+01	85	-1.57e+01
18	-1.50e+01	52	-1.54e+01	86	-1.41e+01
19	-1.58e+01	53	-1.42e+01	87	-1.59e+01
20	-1.56e+01	54	-1.61e+01	88	-1.49e+01
21	-1.47e+01	55	-1.62e+01	89	-1.49e+01
22	-1.51e+01	56	-1.47e+01	90	-1.58e+01
23	-1.62e+01	57	-1.57e+01	91	-1.43e+01
24	-1.45e+01	58	-1.46e+01	92	-1.60e+01
25	-1.45e+01	59	-1.42e+01	93	-1.40e+01
26	-1.48e+01	60	-1.51e+01	94	-1.55e+01
27	-1.57e+01	61	-1.44e+01	95	-1.45e+01
28	-1.46e+01	62	-1.47e+01	96	-1.42e+01
29	-1.59e+01	63	-1.52e+01	97	-1.43e+01
30	-1.41e+01	64	-1.50e+01	98	-1.56e+01
31	-1.63e+01	65	-1.55e+01	99	-1.60e+01
32	-1.50e+01	66	-1.41e+01	100	-1.55e+01
33	-1.45e+01	67	-1.48e+01		
34	-1.53e+01	68	-1.56e+01		

Information Only

Table A-53. Sampled Values for Parameter DRZ_1:PRMX_LOG (LHS Variable 64) Replicate 1

Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)
1	-1.79e+01	35	-1.69e+01	69	-1.49e+01
2	-1.66e+01	36	-1.83e+01	70	-1.92e+01
3	-1.57e+01	37	-1.62e+01	71	-1.66e+01
4	-1.93e+01	38	-1.38e+01	72	-1.44e+01
5	-1.90e+01	39	-1.40e+01	73	-1.42e+01
6	-1.76e+01	40	-1.37e+01	74	-1.34e+01
7	-1.94e+01	41	-1.88e+01	75	-1.53e+01
8	-1.31e+01	42	-1.63e+01	76	-1.65e+01
9	-1.84e+01	43	-1.72e+01	77	-1.60e+01
10	-1.27e+01	44	-1.71e+01	78	-1.33e+01
11	-1.35e+01	45	-1.56e+01	79	-1.50e+01
12	-1.39e+01	46	-1.55e+01	80	-1.87e+01
13	-1.85e+01	47	-1.68e+01	81	-1.80e+01
14	-1.76e+01	48	-1.43e+01	82	-1.46e+01
15	-1.84e+01	49	-1.34e+01	83	-1.75e+01
16	-1.27e+01	50	-1.25e+01	84	-1.59e+01
17	-1.40e+01	51	-1.83e+01	85	-1.78e+01
18	-1.30e+01	52	-1.63e+01	86	-1.41e+01
19	-1.60e+01	53	-1.36e+01	87	-1.42e+01
20	-1.54e+01	54	-1.49e+01	88	-1.90e+01
21	-1.39e+01	55	-1.79e+01	89	-1.61e+01
22	-1.68e+01	56	-1.36e+01	90	-1.58e+01
23	-1.92e+01	57	-1.64e+01	91	-1.70e+01
24	-1.74e+01	58	-1.59e+01	92	-1.28e+01
25	-1.56e+01	59	-1.82e+01	93	-1.26e+01
26	-1.77e+01	60	-1.29e+01	94	-1.47e+01
27	-1.52e+01	61	-1.86e+01	95	-1.74e+01
28	-1.53e+01	62	-1.91e+01	96	-1.73e+01
29	-1.48e+01	63	-1.52e+01	97	-1.48e+01
30	-1.89e+01	64	-1.81e+01	98	-1.31e+01
31	-1.44e+01	65	-1.81e+01	99	-1.73e+01
32	-1.88e+01	66	-1.51e+01	100	-1.46e+01
33	-1.29e+01	67	-1.32e+01		
34	-1.65e+01	68	-1.70e+01		

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Table A-53. Sampled Values for Parameter DRZ_1:PRMX_LOG (LHS Variable 64) Replicate 2

Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)
1	-1.31e+01	35	-1.47e+01	69	-1.60e+01
2	-1.73e+01	36	-1.63e+01	70	-1.49e+01
3	-1.37e+01	37	-1.92e+01	71	-1.74e+01
4	-1.94e+01	38	-1.81e+01	72	-1.42e+01
5	-1.91e+01	39	-1.40e+01	73	-1.28e+01
6	-1.70e+01	40	-1.65e+01	74	-1.62e+01
7	-1.81e+01	41	-1.86e+01	75	-1.84e+01
8	-1.78e+01	42	-1.35e+01	76	-1.71e+01
9	-1.50e+01	43	-1.70e+01	77	-1.93e+01
10	-1.52e+01	44	-1.68e+01	78	-1.72e+01
11	-1.57e+01	45	-1.82e+01	79	-1.53e+01
12	-1.48e+01	46	-1.33e+01	80	-1.79e+01
13	-1.54e+01	47	-1.56e+01	81	-1.54e+01
14	-1.71e+01	48	-1.62e+01	82	-1.31e+01
15	-1.86e+01	49	-1.89e+01	83	-1.26e+01
16	-1.65e+01	50	-1.67e+01	84	-1.77e+01
17	-1.80e+01	51	-1.42e+01	85	-1.41e+01
18	-1.44e+01	52	-1.26e+01	86	-1.76e+01
19	-1.82e+01	53	-1.43e+01	87	-1.87e+01
20	-1.32e+01	54	-1.51e+01	88	-1.67e+01
21	-1.76e+01	55	-1.43e+01	89	-1.52e+01
22	-1.29e+01	56	-1.27e+01	90	-1.61e+01
23	-1.69e+01	57	-1.44e+01	91	-1.39e+01
24	-1.84e+01	58	-1.59e+01	92	-1.34e+01
25	-1.46e+01	59	-1.75e+01	93	-1.86e+01
26	-1.30e+01	60	-1.90e+01	94	-1.88e+01
27	-1.74e+01	61	-1.45e+01	95	-1.35e+01
28	-1.64e+01	62	-1.37e+01	96	-1.55e+01
29	-1.92e+01	63	-1.28e+01	97	-1.39e+01
30	-1.66e+01	64	-1.59e+01	98	-1.56e+01
31	-1.31e+01	65	-1.62e+01	99	-1.48e+01
32	-1.38e+01	66	-1.49e+01	100	-1.58e+01
33	-1.90e+01	67	-1.33e+01		
34	-1.85e+01	68	-1.78e+01		

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Table A-53. Sampled Values for Parameter DRZ_1:PRMX_LOG (LHS Variable 64) Replicate 3

Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)
1	-1.78e+01	35	-1.56e+01	69	-1.40e+01
2	-1.53e+01	36	-1.64e+01	70	-1.76e+01
3	-1.90e+01	37	-1.93e+01	71	-1.80e+01
4	-1.44e+01	38	-1.33e+01	72	-1.28e+01
5	-1.57e+01	39	-1.84e+01	73	-1.32e+01
6	-1.39e+01	40	-1.58e+01	74	-1.70e+01
7	-1.72e+01	41	-1.45e+01	75	-1.91e+01
8	-1.32e+01	42	-1.45e+01	76	-1.82e+01
9	-1.91e+01	43	-1.29e+01	77	-1.50e+01
10	-1.33e+01	44	-1.54e+01	78	-1.92e+01
11	-1.27e+01	45	-1.71e+01	79	-1.38e+01
12	-1.42e+01	46	-1.60e+01	80	-1.50e+01
13	-1.79e+01	47	-1.55e+01	81	-1.66e+01
14	-1.35e+01	48	-1.41e+01	82	-1.69e+01
15	-1.37e+01	49	-1.42e+01	83	-1.66e+01
16	-1.26e+01	50	-1.62e+01	84	-1.36e+01
17	-1.56e+01	51	-1.81e+01	85	-1.48e+01
18	-1.83e+01	52	-1.59e+01	86	-1.52e+01
19	-1.31e+01	53	-1.29e+01	87	-1.34e+01
20	-1.41e+01	54	-1.68e+01	88	-1.88e+01
21	-1.93e+01	55	-1.47e+01	89	-1.72e+01
22	-1.64e+01	56	-1.47e+01	90	-1.77e+01
23	-1.27e+01	57	-1.85e+01	91	-1.89e+01
24	-1.62e+01	58	-1.73e+01	92	-1.74e+01
25	-1.38e+01	59	-1.46e+01	93	-1.81e+01
26	-1.85e+01	60	-1.36e+01	94	-1.75e+01
27	-1.86e+01	61	-1.51e+01	95	-1.49e+01
28	-1.26e+01	62	-1.67e+01	96	-1.52e+01
29	-1.44e+01	63	-1.30e+01	97	-1.62e+01
30	-1.66e+01	64	-1.83e+01	98	-1.63e+01
31	-1.57e+01	65	-1.87e+01	99	-1.79e+01
32	-1.86e+01	66	-1.90e+01	100	-1.74e+01
33	-1.60e+01	67	-1.55e+01		
34	-1.69e+01	68	-1.76e+01		

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Table A-54. Sampled Values for Parameter CONC_PLG:PRMX_LOG (LHS Variable 65) Replicate 1

Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)
1	-1.78e+01	35	-1.88e+01	69	-1.83e+01
2	-1.75e+01	36	-1.77e+01	70	-1.75e+01
3	-1.85e+01	37	-1.89e+01	71	-1.79e+01
4	-1.82e+01	38	-1.73e+01	72	-1.72e+01
5	-1.76e+01	39	-1.74e+01	73	-1.74e+01
6	-1.75e+01	40	-1.83e+01	74	-1.81e+01
7	-1.86e+01	41	-1.79e+01	75	-1.73e+01
8	-1.77e+01	42	-1.75e+01	76	-1.77e+01
9	-1.79e+01	43	-1.84e+01	77	-1.84e+01
10	-1.87e+01	44	-1.85e+01	78	-1.73e+01
11	-1.72e+01	45	-1.88e+01	79	-1.80e+01
12	-1.87e+01	46	-1.86e+01	80	-1.86e+01
13	-1.81e+01	47	-1.70e+01	81	-1.75e+01
14	-1.76e+01	48	-1.71e+01	82	-1.77e+01
15	-1.81e+01	49	-1.90e+01	83	-1.76e+01
16	-1.72e+01	50	-1.85e+01	84	-1.78e+01
17	-1.71e+01	51	-1.74e+01	85	-1.85e+01
18	-1.90e+01	52	-1.83e+01	86	-1.85e+01
19	-1.78e+01	53	-1.87e+01	87	-1.80e+01
20	-1.71e+01	54	-1.75e+01	88	-1.80e+01
21	-1.80e+01	55	-1.77e+01	89	-1.89e+01
22	-1.88e+01	56	-1.74e+01	90	-1.81e+01
23	-1.81e+01	57	-1.82e+01	91	-1.78e+01
24	-1.87e+01	58	-1.79e+01	92	-1.89e+01
25	-1.83e+01	59	-1.89e+01	93	-1.79e+01
26	-1.70e+01	60	-1.72e+01	94	-1.86e+01
27	-1.88e+01	61	-1.84e+01	95	-1.71e+01
28	-1.70e+01	62	-1.83e+01	96	-1.83e+01
29	-1.72e+01	63	-1.86e+01	97	-1.73e+01
30	-1.87e+01	64	-1.84e+01	98	-1.77e+01
31	-1.80e+01	65	-1.80e+01	99	-1.76e+01
32	-1.73e+01	66	-1.74e+01	100	-1.82e+01
33	-1.89e+01	67	-1.90e+01		
34	-1.82e+01	68	-1.87e+01		

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Table A-54. Sampled Values for Parameter CONC_PLG:PRMX_LOG (LHS Variable 65) Replicate 2

Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)
1	-1.77e+01	35	-1.83e+01	69	-1.90e+01
2	-1.75e+01	36	-1.75e+01	70	-1.76e+01
3	-1.76e+01	37	-1.75e+01	71	-1.83e+01
4	-1.78e+01	38	-1.86e+01	72	-1.88e+01
5	-1.74e+01	39	-1.83e+01	73	-1.88e+01
6	-1.86e+01	40	-1.81e+01	74	-1.81e+01
7	-1.71e+01	41	-1.89e+01	75	-1.73e+01
8	-1.86e+01	42	-1.80e+01	76	-1.84e+01
9	-1.71e+01	43	-1.85e+01	77	-1.79e+01
10	-1.76e+01	44	-1.80e+01	78	-1.86e+01
11	-1.79e+01	45	-1.81e+01	79	-1.84e+01
12	-1.85e+01	46	-1.77e+01	80	-1.87e+01
13	-1.72e+01	47	-1.71e+01	81	-1.77e+01
14	-1.71e+01	48	-1.82e+01	82	-1.83e+01
15	-1.84e+01	49	-1.75e+01	83	-1.81e+01
16	-1.74e+01	50	-1.74e+01	84	-1.72e+01
17	-1.85e+01	51	-1.87e+01	85	-1.70e+01
18	-1.77e+01	52	-1.87e+01	86	-1.79e+01
19	-1.73e+01	53	-1.85e+01	87	-1.77e+01
20	-1.83e+01	54	-1.89e+01	88	-1.84e+01
21	-1.82e+01	55	-1.80e+01	89	-1.78e+01
22	-1.88e+01	56	-1.88e+01	90	-1.90e+01
23	-1.74e+01	57	-1.79e+01	91	-1.89e+01
24	-1.77e+01	58	-1.79e+01	92	-1.85e+01
25	-1.82e+01	59	-1.88e+01	93	-1.85e+01
26	-1.73e+01	60	-1.76e+01	94	-1.75e+01
27	-1.86e+01	61	-1.80e+01	95	-1.70e+01
28	-1.72e+01	62	-1.71e+01	96	-1.87e+01
29	-1.89e+01	63	-1.72e+01	97	-1.72e+01
30	-1.72e+01	64	-1.78e+01	98	-1.73e+01
31	-1.74e+01	65	-1.90e+01	99	-1.82e+01
32	-1.80e+01	66	-1.78e+01	100	-1.81e+01
33	-1.87e+01	67	-1.78e+01		
34	-1.73e+01	68	-1.83e+01		

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Table A-54. Sampled Values for Parameter CONC_PLG:PRMX_LOG (LHS Variable 65) Replicate 3

Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)
1	-1.79e+01	35	-1.78e+01	69	-1.73e+01
2	-1.87e+01	36	-1.89e+01	70	-1.87e+01
3	-1.80e+01	37	-1.76e+01	71	-1.77e+01
4	-1.84e+01	38	-1.86e+01	72	-1.85e+01
5	-1.89e+01	39	-1.87e+01	73	-1.72e+01
6	-1.79e+01	40	-1.70e+01	74	-1.78e+01
7	-1.72e+01	41	-1.85e+01	75	-1.71e+01
8	-1.77e+01	42	-1.89e+01	76	-1.83e+01
9	-1.74e+01	43	-1.76e+01	77	-1.81e+01
10	-1.84e+01	44	-1.90e+01	78	-1.88e+01
11	-1.77e+01	45	-1.81e+01	79	-1.86e+01
12	-1.80e+01	46	-1.76e+01	80	-1.71e+01
13	-1.88e+01	47	-1.83e+01	81	-1.89e+01
14	-1.87e+01	48	-1.72e+01	82	-1.71e+01
15	-1.75e+01	49	-1.74e+01	83	-1.80e+01
16	-1.77e+01	50	-1.85e+01	84	-1.79e+01
17	-1.83e+01	51	-1.73e+01	85	-1.79e+01
18	-1.81e+01	52	-1.75e+01	86	-1.71e+01
19	-1.80e+01	53	-1.71e+01	87	-1.78e+01
20	-1.84e+01	54	-1.75e+01	88	-1.88e+01
21	-1.72e+01	55	-1.80e+01	89	-1.82e+01
22	-1.74e+01	56	-1.89e+01	90	-1.85e+01
23	-1.82e+01	57	-1.80e+01	91	-1.70e+01
24	-1.84e+01	58	-1.84e+01	92	-1.78e+01
25	-1.78e+01	59	-1.74e+01	93	-1.86e+01
26	-1.71e+01	60	-1.82e+01	94	-1.73e+01
27	-1.86e+01	61	-1.89e+01	95	-1.87e+01
28	-1.75e+01	62	-1.85e+01	96	-1.76e+01
29	-1.72e+01	63	-1.77e+01	97	-1.76e+01
30	-1.74e+01	64	-1.81e+01	98	-1.75e+01
31	-1.88e+01	65	-1.81e+01	99	-1.83e+01
32	-1.82e+01	66	-1.82e+01	100	-1.83e+01
33	-1.90e+01	67	-1.73e+01		
34	-1.74e+01	68	-1.86e+01		

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Table A-55. Sampled Values for Parameter SHFTU:SAT_RBRN (LHS Variable 66) Replicate 1

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	1.28e-01	35	6.73e-02	69	5.15e-01
2	4.78e-01	36	3.12e-01	70	5.49e-01
3	5.62e-01	37	3.01e-02	71	4.45e-01
4	5.79e-01	38	1.90e-02	72	3.86e-01
5	1.32e-01	39	1.37e-01	73	1.95e-01
6	1.02e-01	40	6.15e-02	74	2.27e-02
7	1.59e-01	41	4.58e-01	75	5.31e-01
8	4.15e-01	42	2.98e-01	76	1.07e-01
9	3.75e-02	43	2.81e-01	77	7.82e-02
10	4.19e-02	44	3.99e-01	78	3.50e-02
11	1.46e-01	45	1.16e-01	79	2.41e-01
12	9.10e-02	46	4.19e-01	80	8.72e-02
13	1.81e-01	47	4.53e-01	81	5.58e-01
14	5.06e-01	48	5.62e-02	82	8.83e-03
15	1.33e-01	49	5.24e-01	83	3.43e-01
16	5.89e-01	50	4.31e-01	84	4.03e-01
17	1.10e-01	51	7.41e-02	85	4.67e-01
18	1.88e-01	52	6.00e-01	86	5.72e-01
19	2.77e-01	53	1.79e-03	87	1.19e-01
20	1.84e-01	54	5.36e-01	88	4.95e-01
21	8.29e-02	55	1.68e-01	89	3.06e-01
22	2.39e-01	56	1.98e-01	90	7.04e-02
23	3.67e-01	57	2.30e-01	91	1.76e-01
24	7.02e-03	58	3.50e-01	92	3.83e-01
25	3.36e-01	59	1.41e-01	93	4.82e-01
26	2.51e-02	60	4.47e-02	94	1.68e-01
27	1.49e-01	61	1.00e-01	95	5.44e-02
28	2.71e-01	62	2.03e-01	96	2.56e-01
29	3.21e-01	63	2.57e-01	97	3.57e-01
30	1.72e-01	64	1.49e-02	98	5.02e-01
31	2.89e-01	65	1.55e-01	99	9.26e-02
32	2.08e-01	66	1.22e-01	100	3.74e-01
33	4.38e-01	67	1.61e-01		
34	2.22e-01	68	4.81e-02		

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Table A-55. Sampled Values for Parameter SHFTU:SAT_RBRN (LHS Variable 66) Replicate 2

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	1.36e-01	35	1.92e-01	69	4.28e-02
2	3.46e-01	36	6.38e-02	70	8.36e-02
3	1.21e-01	37	1.80e-01	71	1.73e-01
4	5.69e-01	38	5.31e-01	72	1.41e-01
5	4.97e-01	39	5.63e-01	73	1.71e-01
6	2.07e-02	40	4.71e-01	74	6.03e-03
7	1.17e-01	41	1.31e-01	75	3.91e-01
8	5.19e-01	42	7.96e-02	76	1.46e-01
9	1.66e-01	43	3.23e-01	77	3.73e-01
10	3.64e-01	44	1.11e-01	78	3.52e-01
11	1.50e-01	45	1.56e-01	79	5.51e-01
12	2.05e-01	46	4.81e-01	80	2.76e-03
13	4.92e-01	47	1.09e-02	81	5.45e-02
14	2.42e-01	48	9.48e-02	82	1.30e-02
15	4.39e-01	49	1.96e-01	83	3.44e-01
16	1.98e-01	50	1.38e-01	84	3.28e-02
17	5.07e-01	51	2.77e-01	85	9.00e-02
18	7.09e-02	52	2.55e-01	86	4.87e-02
19	2.30e-01	53	8.64e-02	87	4.52e-02
20	3.81e-02	54	9.74e-02	88	4.17e-01
21	2.81e-01	55	3.76e-01	89	1.56e-01
22	5.37e-01	56	2.93e-01	90	2.21e-01
23	5.97e-01	57	1.82e-01	91	2.65e-01
24	3.10e-01	58	6.66e-02	92	3.29e-01
25	3.98e-01	59	1.26e-01	93	4.64e-01
26	4.54e-01	60	5.55e-01	94	3.15e-02
27	7.25e-02	61	1.87e-01	95	2.52e-02
28	5.78e-01	62	4.73e-01	96	4.27e-01
29	4.41e-01	63	1.13e-01	97	5.23e-01
30	3.20e-01	64	2.62e-01	98	4.04e-01
31	3.00e-01	65	2.38e-01	99	5.88e-01
32	4.15e-01	66	1.04e-01	100	1.62e-01
33	1.04e-01	67	2.11e-01		
34	1.69e-02	68	5.76e-02		

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Table A-55. Sampled Values for Parameter SHFTU:SAT_RBRN (LHS Variable 66) Replicate 3

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	3.98e-01	35	3.69e-01	69	2.23e-01
2	3.42e-01	36	4.02e-01	70	4.84e-01
3	9.80e-02	37	3.07e-01	71	1.69e-01
4	3.90e-01	38	7.44e-02	72	1.22e-01
5	1.79e-01	39	8.83e-02	73	5.79e-01
6	3.14e-02	40	5.45e-01	74	6.84e-02
7	1.56e-01	41	5.29e-01	75	6.00e-02
8	1.18e-01	42	3.93e-02	76	3.31e-01
9	2.28e-01	43	5.42e-01	77	6.53e-02
10	2.70e-01	44	5.62e-01	78	4.97e-01
11	5.89e-01	45	8.69e-02	79	1.35e-01
12	4.77e-01	46	5.55e-01	80	4.47e-01
13	1.58e-01	47	1.16e-01	81	1.46e-01
14	2.05e-01	48	4.10e-01	82	1.25e-01
15	5.93e-01	49	4.30e-01	83	3.48e-01
16	1.67e-01	50	1.11e-01	84	1.44e-01
17	1.50e-01	51	7.63e-02	85	2.93e-01
18	3.67e-01	52	1.86e-01	86	4.32e-01
19	3.17e-01	53	6.26e-03	87	5.70e-01
20	4.93e-02	54	2.41e-01	88	3.84e-01
21	2.73e-01	55	1.28e-01	89	4.34e-02
22	5.28e-01	56	1.82e-01	90	4.72e-02
23	1.51e-02	57	9.23e-03	91	5.56e-02
24	1.98e-01	58	2.78e-02	92	9.67e-04
25	2.03e-02	59	9.46e-02	93	5.15e-01
26	1.61e-01	60	3.33e-02	94	1.07e-01
27	3.20e-01	61	2.64e-01	95	1.62e-02
28	1.74e-01	62	2.55e-01	96	4.17e-01
29	1.02e-01	63	2.87e-01	97	6.22e-02
30	2.38e-01	64	4.64e-01	98	2.16e-01
31	2.96e-01	65	4.66e-01	99	1.89e-01
32	5.12e-01	66	3.59e-01	100	1.39e-01
33	4.89e-01	67	8.06e-02		
34	4.49e-01	68	1.93e-01		

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Table A-56. Sampled Values for Parameter SHFTU:SAT_RGAS (LHS Variable 67)
Replicate 1

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	1.22e-01	35	8.32e-02	69	1.63e-01
2	1.59e-01	36	3.36e-01	70	1.07e-01
3	1.96e-01	37	2.83e-01	71	9.93e-03
4	3.73e-01	38	8.79e-02	72	1.81e-01
5	3.06e-01	39	2.04e-01	73	2.00e-01
6	3.35e-01	40	3.64e-01	74	1.73e-01
7	1.19e-01	41	3.84e-02	75	5.41e-02
8	2.34e-01	42	3.79e-01	76	3.81e-01
9	5.94e-02	43	9.45e-02	77	3.46e-01
10	6.21e-02	44	1.39e-01	78	3.29e-01
11	2.90e-01	45	1.89e-01	79	6.74e-03
12	1.41e-01	46	6.63e-02	80	3.26e-01
13	4.42e-02	47	2.50e-01	81	1.45e-01
14	2.80e-01	48	3.12e-01	82	2.44e-01
15	3.41e-01	49	1.50e-02	83	3.98e-01
16	3.35e-02	50	3.93e-01	84	2.87e-01
17	2.98e-01	51	1.69e-02	85	3.53e-01
18	3.21e-01	52	1.03e-01	86	2.66e-01
19	2.64e-01	53	9.09e-04	87	2.25e-01
20	1.28e-01	54	4.18e-02	88	3.15e-01
21	1.51e-01	55	2.45e-01	89	1.64e-01
22	1.35e-01	56	3.01e-01	90	1.70e-01
23	1.00e-01	57	3.90e-01	91	2.15e-01
24	1.93e-01	58	9.17e-02	92	7.09e-02
25	3.52e-01	59	3.19e-01	93	2.93e-01
26	2.55e-01	60	2.30e-01	94	7.89e-02
27	2.60e-01	61	2.39e-01	95	2.14e-02
28	1.76e-01	62	3.86e-01	96	1.14e-01
29	7.33e-02	63	2.17e-01	97	1.56e-01
30	1.27e-01	64	5.16e-02	98	2.11e-01
31	1.11e-01	65	3.57e-01	99	1.88e-01
32	2.97e-02	66	2.69e-01	100	3.64e-01
33	2.24e-01	67	3.71e-01		
34	2.74e-01	68	2.50e-02		

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Table A-56. Sampled Values for Parameter SHFTU:SAT_RGAS (LHS Variable 67) Replicate 2

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	4.34e-03	35	3.72e-01	69	1.10e-01
2	2.46e-01	36	3.90e-01	70	1.82e-01
3	6.56e-02	37	5.44e-02	71	2.19e-01
4	3.09e-01	38	7.65e-02	72	2.32e-01
5	1.35e-01	39	2.40e-01	73	3.30e-01
6	2.55e-01	40	6.02e-02	74	3.85e-01
7	3.46e-01	41	2.21e-01	75	3.17e-02
8	2.19e-02	42	2.75e-01	76	2.58e-01
9	4.36e-02	43	1.59e-01	77	3.95e-01
10	1.39e-01	44	1.19e-01	78	3.54e-01
11	2.62e-01	45	6.83e-02	79	1.70e-01
12	3.83e-01	46	8.52e-02	80	1.40e-01
13	2.95e-01	47	2.77e-01	81	2.27e-01
14	1.12e-01	48	5.81e-02	82	1.24e-01
15	3.98e-01	49	3.40e-01	83	2.68e-01
16	1.49e-01	50	3.76e-01	84	3.62e-01
17	1.22e-02	51	1.73e-01	85	4.94e-02
18	2.51e-01	52	9.52e-02	86	4.61e-02
19	8.15e-02	53	9.63e-02	87	8.84e-02
20	3.16e-01	54	2.05e-03	88	2.04e-01
21	3.51e-01	55	1.77e-01	89	1.24e-01
22	3.34e-01	56	1.62e-01	90	1.46e-01
23	1.85e-01	57	1.03e-01	91	3.66e-01
24	3.56e-01	58	3.17e-01	92	2.13e-01
25	2.96e-01	59	2.30e-01	93	3.21e-01
26	2.44e-01	60	3.72e-01	94	2.62e-02
27	3.43e-02	61	2.66e-01	95	2.00e-01
28	1.95e-01	62	7.38e-02	96	2.12e-01
29	1.88e-02	63	3.42e-01	97	3.02e-01
30	1.08e-01	64	3.84e-02	98	1.91e-01
31	2.01e-01	65	2.89e-01	99	2.88e-01
32	1.13e-02	66	1.30e-01	100	2.84e-01
33	1.66e-01	67	3.07e-01		
34	1.53e-01	68	3.27e-01		

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Table A-56. Sampled Values for Parameter SHFTU:SAT_RGAS (LHS Variable 67) Replicate 3

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	1.90e-01	35	1.58e-01	69	1.07e-01
2	3.83e-01	36	1.44e-01	70	1.83e-01
3	9.76e-02	37	1.31e-01	71	3.91e-01
4	1.63e-01	38	1.03e-02	72	2.68e-01
5	3.80e-02	39	2.86e-01	73	3.98e-01
6	1.09e-01	40	2.65e-01	74	2.56e-01
7	1.13e-01	41	2.04e-01	75	1.66e-01
8	6.66e-02	42	2.53e-01	76	2.98e-01
9	3.48e-01	43	3.11e-01	77	1.85e-01
10	1.80e-02	44	5.26e-02	78	3.28e-01
11	2.31e-01	45	5.00e-02	79	2.89e-01
12	3.21e-01	46	3.29e-01	80	1.51e-01
13	2.19e-01	47	2.28e-01	81	3.61e-01
14	3.68e-01	48	2.77e-01	82	1.48e-01
15	9.32e-02	49	1.38e-01	83	7.66e-03
16	2.13e-02	50	2.50e-01	84	2.75e-01
17	3.02e-01	51	3.71e-01	85	1.54e-01
18	3.73e-01	52	1.03e-01	86	2.62e-01
19	3.00e-02	53	2.01e-01	87	3.47e-01
20	3.54e-01	54	1.43e-02	88	2.13e-01
21	2.36e-01	55	3.85e-01	89	5.67e-02
22	7.49e-02	56	6.27e-02	90	2.21e-01
23	2.37e-01	57	2.93e-01	91	2.46e-01
24	1.93e-01	58	1.35e-01	92	3.77e-01
25	7.83e-02	59	1.98e-01	93	8.59e-02
26	3.50e-02	60	2.11e-01	94	1.18e-01
27	3.14e-01	61	3.18e-01	95	3.58e-01
28	3.94e-01	62	2.42e-01	96	1.26e-01
29	2.82e-01	63	4.64e-02	97	9.13e-02
30	2.45e-02	64	8.23e-02	98	3.41e-01
31	2.70e-03	65	1.74e-01	99	1.79e-01
32	4.01e-02	66	3.38e-01	100	1.68e-01
33	3.08e-01	67	1.21e-01		
34	3.34e-01	68	6.95e-02		

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Table A-57. Sampled Values for Parameter SHFTU:PRMX_LOG (LHS Variable 68) Replicate 1

Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)
1	-1.84e+01	35	-1.69e+01	69	-1.79e+01
2	-1.81e+01	36	-1.90e+01	70	-1.81e+01
3	-1.75e+01	37	-1.89e+01	71	-2.00e+01
4	-1.77e+01	38	-1.78e+01	72	-1.84e+01
5	-1.97e+01	39	-1.93e+01	73	-1.77e+01
6	-1.88e+01	40	-1.77e+01	74	-1.82e+01
7	-1.76e+01	41	-1.89e+01	75	-1.80e+01
8	-1.86e+01	42	-1.86e+01	76	-1.88e+01
9	-1.77e+01	43	-1.86e+01	77	-1.85e+01
10	-1.90e+01	44	-1.88e+01	78	-1.80e+01
11	-1.72e+01	45	-1.94e+01	79	-1.76e+01
12	-1.95e+01	46	-1.70e+01	80	-1.79e+01
13	-1.79e+01	47	-1.84e+01	81	-1.86e+01
14	-1.78e+01	48	-1.92e+01	82	-1.83e+01
15	-1.89e+01	49	-1.76e+01	83	-1.82e+01
16	-2.03e+01	50	-1.99e+01	84	-1.74e+01
17	-1.74e+01	51	-1.82e+01	85	-1.96e+01
18	-1.81e+01	52	-1.72e+01	86	-2.05e+01
19	-1.83e+01	53	-1.86e+01	87	-1.80e+01
20	-1.90e+01	54	-1.76e+01	88	-1.73e+01
21	-1.79e+01	55	-1.80e+01	89	-1.88e+01
22	-2.00e+01	56	-1.71e+01	90	-1.95e+01
23	-1.90e+01	57	-1.83e+01	91	-1.83e+01
24	-1.84e+01	58	-1.89e+01	92	-1.93e+01
25	-1.81e+01	59	-1.82e+01	93	-1.87e+01
26	-1.85e+01	60	-1.76e+01	94	-1.78e+01
27	-1.85e+01	61	-1.75e+01	95	-1.92e+01
28	-1.77e+01	62	-1.92e+01	96	-1.99e+01
29	-1.91e+01	63	-1.73e+01	97	-1.93e+01
30	-1.87e+01	64	-1.82e+01	98	-1.75e+01
31	-1.71e+01	65	-1.87e+01	99	-1.78e+01
32	-1.97e+01	66	-1.91e+01	100	-1.95e+01
33	-1.78e+01	67	-1.79e+01		
34	-1.84e+01	68	-1.98e+01		

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Table A-57. Sampled Values for Parameter SHFTU:PRMX_LOG (LHS Variable 68) Replicate 2

Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)
1	-1.86e+01	35	-1.77e+01	69	-1.81e+01
2	-1.89e+01	36	-1.82e+01	70	-1.87e+01
3	-1.77e+01	37	-1.86e+01	71	-1.77e+01
4	-1.83e+01	38	-1.75e+01	72	-1.78e+01
5	-1.85e+01	39	-1.96e+01	73	-1.68e+01
6	-1.84e+01	40	-1.84e+01	74	-1.94e+01
7	-1.87e+01	41	-1.77e+01	75	-1.79e+01
8	-2.04e+01	42	-1.94e+01	76	-1.72e+01
9	-1.80e+01	43	-1.92e+01	77	-1.71e+01
10	-1.78e+01	44	-1.91e+01	78	-1.92e+01
11	-1.76e+01	45	-1.73e+01	79	-1.84e+01
12	-1.82e+01	46	-1.79e+01	80	-1.84e+01
13	-1.80e+01	47	-1.75e+01	81	-1.99e+01
14	-1.85e+01	48	-1.72e+01	82	-1.74e+01
15	-1.94e+01	49	-1.84e+01	83	-1.88e+01
16	-2.03e+01	50	-1.93e+01	84	-1.85e+01
17	-1.75e+01	51	-1.88e+01	85	-1.79e+01
18	-1.99e+01	52	-1.89e+01	86	-1.86e+01
19	-1.79e+01	53	-1.76e+01	87	-1.81e+01
20	-1.98e+01	54	-1.93e+01	88	-1.82e+01
21	-1.83e+01	55	-1.83e+01	89	-1.81e+01
22	-1.87e+01	56	-1.80e+01	90	-1.97e+01
23	-1.82e+01	57	-1.95e+01	91	-1.97e+01
24	-1.71e+01	58	-1.92e+01	92	-1.90e+01
25	-1.76e+01	59	-1.75e+01	93	-1.89e+01
26	-2.00e+01	60	-1.90e+01	94	-1.90e+01
27	-1.91e+01	61	-1.93e+01	95	-1.87e+01
28	-1.95e+01	62	-1.78e+01	96	-1.80e+01
29	-1.86e+01	63	-1.89e+01	97	-1.78e+01
30	-1.88e+01	64	-1.81e+01	98	-1.81e+01
31	-1.78e+01	65	-1.79e+01	99	-1.70e+01
32	-1.74e+01	66	-1.85e+01	100	-1.83e+01
33	-1.99e+01	67	-1.76e+01		
34	-1.77e+01	68	-1.73e+01		

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Table A-57. Sampled Values for Parameter SHFTU:PRMX_LOG (LHS Variable 68) Replicate 3

Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)
1	-1.82e+01	35	-1.94e+01	69	-1.88e+01
2	-1.88e+01	36	-1.70e+01	70	-1.95e+01
3	-1.76e+01	37	-2.04e+01	71	-1.73e+01
4	-1.85e+01	38	-1.97e+01	72	-1.80e+01
5	-1.74e+01	39	-1.82e+01	73	-1.85e+01
6	-1.87e+01	40	-1.78e+01	74	-1.79e+01
7	-1.83e+01	41	-1.78e+01	75	-1.80e+01
8	-1.86e+01	42	-1.83e+01	76	-1.77e+01
9	-1.91e+01	43	-1.97e+01	77	-1.85e+01
10	-1.98e+01	44	-1.79e+01	78	-1.83e+01
11	-1.82e+01	45	-1.90e+01	79	-1.81e+01
12	-1.78e+01	46	-1.95e+01	80	-2.00e+01
13	-1.82e+01	47	-1.94e+01	81	-1.83e+01
14	-1.91e+01	48	-1.90e+01	82	-1.85e+01
15	-1.72e+01	49	-1.93e+01	83	-1.87e+01
16	-2.00e+01	50	-1.78e+01	84	-1.90e+01
17	-1.87e+01	51	-1.86e+01	85	-1.85e+01
18	-1.77e+01	52	-1.99e+01	86	-1.81e+01
19	-1.77e+01	53	-1.76e+01	87	-2.03e+01
20	-1.78e+01	54	-1.80e+01	88	-1.84e+01
21	-1.95e+01	55	-1.80e+01	89	-1.99e+01
22	-1.71e+01	56	-1.88e+01	90	-1.86e+01
23	-1.76e+01	57	-1.90e+01	91	-1.92e+01
24	-1.92e+01	58	-1.77e+01	92	-1.75e+01
25	-1.75e+01	59	-1.79e+01	93	-1.76e+01
26	-1.79e+01	60	-1.86e+01	94	-1.75e+01
27	-1.93e+01	61	-1.88e+01	95	-1.89e+01
28	-1.84e+01	62	-1.84e+01	96	-1.81e+01
29	-1.79e+01	63	-1.76e+01	97	-1.92e+01
30	-1.71e+01	64	-1.73e+01	98	-1.66e+01
31	-1.89e+01	65	-1.82e+01	99	-1.81e+01
32	-1.74e+01	66	-1.89e+01	100	-1.88e+01
33	-1.76e+01	67	-1.72e+01		
34	-1.83e+01	68	-1.96e+01		

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Table A-58. Sampled Values for Parameter SHFTL_T1:PRMX_LOG (LHS Variable 69) Replicate 1

Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)
1	-1.88e+01	35	-1.90e+01	69	-1.82e+01
2	-1.86e+01	36	-1.81e+01	70	-1.94e+01
3	-1.83e+01	37	-1.82e+01	71	-1.83e+01
4	-1.80e+01	38	-1.95e+01	72	-1.80e+01
5	-1.78e+01	39	-1.90e+01	73	-1.74e+01
6	-1.93e+01	40	-1.83e+01	74	-1.76e+01
7	-1.71e+01	41	-1.88e+01	75	-1.82e+01
8	-1.78e+01	42	-1.89e+01	76	-1.84e+01
9	-1.70e+01	43	-2.00e+01	77	-1.88e+01
10	-1.76e+01	44	-1.75e+01	78	-1.92e+01
11	-1.81e+01	45	-1.89e+01	79	-1.79e+01
12	-1.84e+01	46	-1.79e+01	80	-1.77e+01
13	-1.84e+01	47	-1.77e+01	81	-1.81e+01
14	-1.85e+01	48	-1.69e+01	82	-1.76e+01
15	-1.71e+01	49	-1.78e+01	83	-1.91e+01
16	-1.73e+01	50	-1.85e+01	84	-1.82e+01
17	-1.74e+01	51	-1.78e+01	85	-1.80e+01
18	-1.77e+01	52	-1.81e+01	86	-1.85e+01
19	-1.85e+01	53	-1.90e+01	87	-1.79e+01
20	-1.85e+01	54	-1.87e+01	88	-1.83e+01
21	-1.92e+01	55	-1.82e+01	89	-1.92e+01
22	-1.79e+01	56	-1.86e+01	90	-1.84e+01
23	-1.80e+01	57	-1.77e+01	91	-1.72e+01
24	-1.73e+01	58	-1.82e+01	92	-1.88e+01
25	-1.80e+01	59	-1.80e+01	93	-1.73e+01
26	-1.84e+01	60	-1.89e+01	94	-1.87e+01
27	-1.75e+01	61	-1.83e+01	95	-1.76e+01
28	-1.83e+01	62	-1.86e+01	96	-1.93e+01
29	-1.77e+01	63	-1.74e+01	97	-1.82e+01
30	-1.83e+01	64	-1.86e+01	98	-1.81e+01
31	-1.87e+01	65	-1.86e+01	99	-1.81e+01
32	-1.72e+01	66	-1.84e+01	100	-1.89e+01
33	-1.78e+01	67	-1.76e+01		
34	-1.87e+01	68	-1.75e+01		

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Table A-58. Sampled Values for Parameter SHFTL_T1:PRMX_LOG (LHS Variable 69) Replicate 2

Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)
1	-1.84e+01	35	-1.78e+01	69	-1.90e+01
2	-1.87e+01	36	-1.76e+01	70	-1.91e+01
3	-1.92e+01	37	-1.84e+01	71	-1.87e+01
4	-1.77e+01	38	-1.93e+01	72	-1.89e+01
5	-1.70e+01	39	-1.91e+01	73	-1.83e+01
6	-1.75e+01	40	-1.80e+01	74	-1.87e+01
7	-1.94e+01	41	-1.77e+01	75	-1.80e+01
8	-1.78e+01	42	-1.82e+01	76	-1.83e+01
9	-1.77e+01	43	-1.76e+01	77	-1.88e+01
10	-1.79e+01	44	-1.90e+01	78	-1.78e+01
11	-1.89e+01	45	-1.81e+01	79	-1.85e+01
12	-1.70e+01	46	-1.74e+01	80	-1.79e+01
13	-1.80e+01	47	-1.83e+01	81	-1.89e+01
14	-1.76e+01	48	-1.81e+01	82	-1.73e+01
15	-1.83e+01	49	-1.95e+01	83	-1.84e+01
16	-1.82e+01	50	-1.75e+01	84	-1.99e+01
17	-1.93e+01	51	-1.85e+01	85	-1.81e+01
18	-1.82e+01	52	-1.94e+01	86	-1.87e+01
19	-1.75e+01	53	-1.71e+01	87	-1.83e+01
20	-1.88e+01	54	-1.83e+01	88	-1.81e+01
21	-1.72e+01	55	-1.80e+01	89	-1.72e+01
22	-1.87e+01	56	-1.82e+01	90	-1.83e+01
23	-1.90e+01	57	-1.79e+01	91	-1.71e+01
24	-1.76e+01	58	-1.83e+01	92	-1.74e+01
25	-1.72e+01	59	-1.86e+01	93	-1.84e+01
26	-1.78e+01	60	-1.85e+01	94	-1.73e+01
27	-1.85e+01	61	-1.76e+01	95	-1.77e+01
28	-1.80e+01	62	-1.79e+01	96	-1.86e+01
29	-1.75e+01	63	-1.86e+01	97	-1.86e+01
30	-1.77e+01	64	-1.88e+01	98	-1.89e+01
31	-1.84e+01	65	-1.81e+01	99	-1.82e+01
32	-1.85e+01	66	-1.79e+01	100	-1.88e+01
33	-1.82e+01	67	-1.81e+01		
34	-1.84e+01	68	-1.80e+01		

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Table A-58. Sampled Values for Parameter SHFTL_T1:PRMX_LOG (LHS Variable 69) Replicate 3

Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)
1	-1.75e+01	35	-1.81e+01	69	-1.93e+01
2	-1.94e+01	36	-1.86e+01	70	-1.76e+01
3	-1.93e+01	37	-1.78e+01	71	-1.88e+01
4	-1.70e+01	38	-1.80e+01	72	-1.88e+01
5	-1.76e+01	39	-1.80e+01	73	-1.78e+01
6	-1.84e+01	40	-1.79e+01	74	-1.86e+01
7	-1.73e+01	41	-1.81e+01	75	-1.81e+01
8	-1.78e+01	42	-1.80e+01	76	-1.83e+01
9	-1.84e+01	43	-1.88e+01	77	-1.75e+01
10	-1.87e+01	44	-1.77e+01	78	-1.83e+01
11	-1.78e+01	45	-1.89e+01	79	-1.82e+01
12	-1.82e+01	46	-1.73e+01	80	-1.83e+01
13	-1.77e+01	47	-1.77e+01	81	-1.72e+01
14	-1.82e+01	48	-1.87e+01	82	-1.80e+01
15	-1.85e+01	49	-1.83e+01	83	-1.84e+01
16	-1.82e+01	50	-1.83e+01	84	-1.71e+01
17	-1.90e+01	51	-1.74e+01	85	-1.86e+01
18	-1.71e+01	52	-1.85e+01	86	-1.85e+01
19	-1.91e+01	53	-1.72e+01	87	-1.81e+01
20	-1.89e+01	54	-1.76e+01	88	-1.77e+01
21	-1.84e+01	55	-1.83e+01	89	-1.82e+01
22	-1.85e+01	56	-1.90e+01	90	-1.80e+01
23	-1.76e+01	57	-1.79e+01	91	-1.93e+01
24	-1.86e+01	58	-1.81e+01	92	-1.89e+01
25	-1.87e+01	59	-1.70e+01	93	-1.78e+01
26	-1.75e+01	60	-1.77e+01	94	-1.88e+01
27	-1.85e+01	61	-1.89e+01	95	-1.78e+01
28	-1.79e+01	62	-1.73e+01	96	-1.95e+01
29	-1.90e+01	63	-1.87e+01	97	-1.84e+01
30	-1.72e+01	64	-1.80e+01	98	-1.84e+01
31	-1.83e+01	65	-1.75e+01	99	-1.92e+01
32	-1.81e+01	66	-1.82e+01	100	-1.96e+01
33	-1.88e+01	67	-1.79e+01		
34	-1.91e+01	68	-1.82e+01		

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Table A-59. Sampled Values for Parameter SHFTL_T2:PRMX_LOG (LHS Variable 70) Replicate 1

Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)
1	-1.97e+01	35	-2.04e+01	69	-2.05e+01
2	-1.86e+01	36	-2.00e+01	70	-2.13e+01
3	-2.03e+01	37	-2.07e+01	71	-2.01e+01
4	-2.17e+01	38	-2.24e+01	72	-1.92e+01
5	-1.93e+01	39	-2.01e+01	73	-1.94e+01
6	-1.91e+01	40	-2.06e+01	74	-2.16e+01
7	-2.12e+01	41	-1.98e+01	75	-2.01e+01
8	-2.02e+01	42	-1.95e+01	76	-1.94e+01
9	-2.09e+01	43	-1.98e+01	77	-2.08e+01
10	-1.98e+01	44	-2.12e+01	78	-1.82e+01
11	-1.88e+01	45	-2.19e+01	79	-2.03e+01
12	-1.92e+01	46	-1.86e+01	80	-1.97e+01
13	-1.95e+01	47	-2.20e+01	81	-2.01e+01
14	-1.91e+01	48	-2.10e+01	82	-2.04e+01
15	-1.87e+01	49	-2.03e+01	83	-2.11e+01
16	-2.09e+01	50	-2.05e+01	84	-2.02e+01
17	-2.00e+01	51	-1.80e+01	85	-1.95e+01
18	-2.06e+01	52	-2.18e+01	86	-2.14e+01
19	-1.90e+01	53	-2.04e+01	87	-2.15e+01
20	-2.21e+01	54	-1.85e+01	88	-1.96e+01
21	-1.97e+01	55	-1.98e+01	89	-1.91e+01
22	-1.87e+01	56	-2.05e+01	90	-2.05e+01
23	-2.08e+01	57	-2.02e+01	91	-1.99e+01
24	-2.11e+01	58	-2.07e+01	92	-2.03e+01
25	-1.93e+01	59	-2.10e+01	93	-1.97e+01
26	-1.87e+01	60	-2.17e+01	94	-1.88e+01
27	-1.95e+01	61	-2.08e+01	95	-1.99e+01
28	-1.96e+01	62	-2.00e+01	96	-1.90e+01
29	-1.90e+01	63	-1.96e+01	97	-2.09e+01
30	-2.04e+01	64	-1.92e+01	98	-1.93e+01
31	-2.13e+01	65	-2.07e+01	99	-2.02e+01
32	-2.03e+01	66	-1.99e+01	100	-1.89e+01
33	-1.83e+01	67	-2.01e+01		
34	-1.92e+01	68	-1.94e+01		

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Table A-59. Sampled Values for Parameter SHFTL_T2:PRMX_LOG (LHS Variable 70) Replicate 2

Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)
1	-1.89e+01	35	-1.93e+01	69	-1.90e+01
2	-2.18e+01	36	-1.86e+01	70	-2.12e+01
3	-2.10e+01	37	-2.04e+01	71	-1.98e+01
4	-2.10e+01	38	-1.83e+01	72	-2.11e+01
5	-1.91e+01	39	-1.97e+01	73	-2.17e+01
6	-2.05e+01	40	-2.12e+01	74	-2.14e+01
7	-2.02e+01	41	-1.98e+01	75	-2.13e+01
8	-1.99e+01	42	-2.02e+01	76	-1.85e+01
9	-2.16e+01	43	-1.90e+01	77	-1.96e+01
10	-2.10e+01	44	-2.19e+01	78	-2.21e+01
11	-2.05e+01	45	-2.14e+01	79	-2.01e+01
12	-1.92e+01	46	-2.06e+01	80	-1.94e+01
13	-2.00e+01	47	-1.97e+01	81	-1.94e+01
14	-2.00e+01	48	-2.03e+01	82	-1.92e+01
15	-1.96e+01	49	-1.97e+01	83	-1.90e+01
16	-2.01e+01	50	-2.01e+01	84	-1.95e+01
17	-2.06e+01	51	-1.82e+01	85	-1.93e+01
18	-2.09e+01	52	-1.96e+01	86	-2.03e+01
19	-1.88e+01	53	-2.07e+01	87	-1.86e+01
20	-2.02e+01	54	-2.15e+01	88	-2.03e+01
21	-1.96e+01	55	-1.92e+01	89	-2.13e+01
22	-2.02e+01	56	-2.03e+01	90	-2.04e+01
23	-2.08e+01	57	-2.06e+01	91	-1.99e+01
24	-1.88e+01	58	-2.03e+01	92	-2.20e+01
25	-2.15e+01	59	-2.01e+01	93	-2.08e+01
26	-1.95e+01	60	-2.04e+01	94	-1.95e+01
27	-1.81e+01	61	-2.05e+01	95	-1.84e+01
28	-1.98e+01	62	-1.89e+01	96	-1.91e+01
29	-2.00e+01	63	-1.99e+01	97	-2.05e+01
30	-1.93e+01	64	-2.07e+01	98	-1.87e+01
31	-2.04e+01	65	-1.97e+01	99	-1.92e+01
32	-1.90e+01	66	-2.08e+01	100	-2.00e+01
33	-1.94e+01	67	-1.99e+01		
34	-2.23e+01	68	-2.09e+01		

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Table A-59. Sampled Values for Parameter SHFTL_T2:PRMX_LOG (LHS Variable 70) Replicate 3

Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)	Vector	Value ($log(m^2)$)
1	-1.87e+01	35	-1.91e+01	69	-1.97e+01
2	-2.08e+01	36	-2.05e+01	70	-2.02e+01
3	-2.01e+01	37	-2.06e+01	71	-1.82e+01
4	-2.02e+01	38	-2.05e+01	72	-2.06e+01
5	-2.00e+01	39	-1.94e+01	73	-2.09e+01
6	-1.88e+01	40	-2.01e+01	74	-1.87e+01
7	-1.98e+01	41	-2.08e+01	75	-1.91e+01
8	-1.85e+01	42	-2.08e+01	76	-2.11e+01
9	-2.11e+01	43	-2.04e+01	77	-2.02e+01
10	-1.99e+01	44	-2.12e+01	78	-2.19e+01
11	-2.09e+01	45	-1.91e+01	79	-1.96e+01
12	-1.95e+01	46	-1.89e+01	80	-1.80e+01
13	-1.99e+01	47	-2.02e+01	81	-1.84e+01
14	-2.01e+01	48	-2.13e+01	82	-2.07e+01
15	-1.99e+01	49	-2.18e+01	83	-1.96e+01
16	-1.97e+01	50	-1.90e+01	84	-2.00e+01
17	-1.95e+01	51	-2.05e+01	85	-1.97e+01
18	-2.19e+01	52	-2.13e+01	86	-1.93e+01
19	-2.15e+01	53	-2.03e+01	87	-1.97e+01
20	-1.99e+01	54	-2.16e+01	88	-1.92e+01
21	-1.93e+01	55	-2.04e+01	89	-2.03e+01
22	-1.94e+01	56	-1.93e+01	90	-2.04e+01
23	-1.96e+01	57	-2.10e+01	91	-2.10e+01
24	-2.04e+01	58	-1.86e+01	92	-2.17e+01
25	-1.92e+01	59	-2.07e+01	93	-2.03e+01
26	-2.17e+01	60	-2.01e+01	94	-2.14e+01
27	-1.86e+01	61	-2.10e+01	95	-2.13e+01
28	-1.88e+01	62	-2.03e+01	96	-1.91e+01
29	-2.21e+01	63	-2.00e+01	97	-2.04e+01
30	-1.90e+01	64	-1.98e+01	98	-1.98e+01
31	-2.23e+01	65	-1.95e+01	99	-1.86e+01
32	-1.92e+01	66	-1.90e+01	100	-1.96e+01
33	-2.01e+01	67	-2.01e+01		
34	-2.06e+01	68	-1.94e+01		

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Table A-60. Sampled Values for Parameter WAS_AREA:BIOGENFC (LHS Variable 71)
Replicate 1

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	7.26e-01	35	2.27e-01	69	7.69e-01
2	6.07e-01	36	9.16e-01	70	6.16e-01
3	2.32e-01	37	9.97e-01	71	1.81e-01
4	4.46e-01	38	8.34e-01	72	4.18e-01
5	9.80e-01	39	6.56e-01	73	7.00e-01
6	3.53e-01	40	3.39e-01	74	4.68e-01
7	3.43e-01	41	2.71e-01	75	1.02e-01
8	3.96e-01	42	6.86e-01	76	2.11e-01
9	4.59e-01	43	7.56e-01	77	8.81e-01
10	7.29e-02	44	8.98e-02	78	3.29e-01
11	3.74e-01	45	5.15e-01	79	6.26e-01
12	3.61e-01	46	9.82e-01	80	3.81e-01
13	5.28e-01	47	9.05e-01	81	7.33e-01
14	1.18e-01	48	5.49e-01	82	1.50e-01
15	1.80e-01	49	5.85e-01	83	1.21e-01
16	7.72e-01	50	8.19e-01	84	6.32e-01
17	7.88e-01	51	7.05e-01	85	9.45e-01
18	8.51e-01	52	8.46e-01	86	1.52e-01
19	3.88e-02	53	4.03e-01	87	8.76e-01
20	4.28e-01	54	2.98e-01	88	2.48e-01
21	8.64e-01	55	9.21e-01	89	2.53e-01
22	2.03e-01	56	6.62e-02	90	1.34e-01
23	5.51e-01	57	1.70e-01	91	5.73e-01
24	7.94e-01	58	2.69e-01	92	6.62e-01
25	4.82e-01	59	9.94e-02	93	4.98e-01
26	8.28e-01	60	1.94e-01	94	1.99e-02
27	4.77e-01	61	2.82e-03	95	6.47e-01
28	6.71e-01	62	5.93e-01	96	9.58e-01
29	9.40e-01	63	9.68e-01	97	4.90e-02
30	5.39e-01	64	5.64e-01	98	3.17e-01
31	8.07e-01	65	2.88e-01	99	4.38e-01
32	5.60e-02	66	2.34e-02	100	7.46e-01
33	3.06e-01	67	5.06e-01		
34	8.95e-01	68	7.13e-01		

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Table A-60. Sampled Values for Parameter WAS_AREA:BIOGENFC (LHS Variable 71) Replicate 2

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	9.97e-01	35	4.31e-01	69	2.07e-01
2	6.07e-01	36	6.93e-01	70	6.83e-01
3	5.01e-01	37	2.59e-01	71	9.60e-01
4	3.87e-02	38	9.03e-01	72	1.34e-01
5	7.79e-01	39	8.17e-01	73	1.80e-03
6	7.56e-01	40	8.25e-01	74	2.39e-01
7	2.44e-01	41	4.65e-01	75	8.06e-01
8	1.79e-02	42	8.38e-01	76	5.18e-01
9	1.98e-01	43	6.20e-01	77	8.49e-01
10	8.86e-01	44	3.32e-01	78	9.78e-01
11	6.45e-01	45	1.23e-01	79	2.99e-01
12	5.45e-01	46	2.74e-01	80	1.64e-01
13	6.30e-01	47	5.73e-01	81	5.52e-01
14	9.45e-01	48	5.82e-01	82	9.32e-01
15	4.49e-01	49	4.80e-01	83	7.64e-01
16	2.16e-01	50	5.29e-01	84	1.12e-01
17	3.94e-01	51	4.25e-01	85	2.90e-02
18	7.37e-01	52	4.19e-01	86	8.56e-01
19	6.77e-01	53	4.90e-01	87	3.11e-01
20	4.58e-01	54	9.53e-01	88	7.43e-01
21	3.69e-01	55	7.48e-02	89	1.04e-01
22	5.61e-01	56	4.03e-02	90	3.57e-01
23	1.82e-01	57	2.88e-01	91	3.48e-01
24	3.88e-01	58	9.13e-01	92	6.36e-02
25	9.26e-01	59	7.90e-01	93	1.54e-01
26	3.70e-01	60	6.70e-01	94	3.03e-01
27	5.79e-02	61	7.30e-01	95	1.47e-01
28	6.33e-01	62	9.40e-02	96	8.71e-01
29	5.98e-01	63	9.86e-01	97	2.24e-01
30	6.55e-01	64	8.91e-01	98	5.36e-01
31	8.75e-02	65	7.86e-01	99	3.30e-01
32	4.01e-01	66	2.61e-01	100	4.97e-01
33	1.76e-01	67	8.63e-01		
34	7.07e-01	68	7.15e-01		

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Table A-60. Sampled Values for Parameter WAS_AREA:BIOGENFC (LHS Variable 71) Replicate 3

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	4.46e-01	35	1.22e-01	69	6.95e-01
2	4.80e-01	36	7.99e-01	70	2.87e-01
3	8.78e-01	37	2.80e-01	71	6.45e-01
4	8.40e-01	38	8.59e-01	72	5.61e-01
5	7.31e-01	39	6.89e-01	73	3.79e-02
6	3.36e-01	40	5.44e-01	74	2.96e-01
7	8.26e-01	41	9.05e-01	75	5.99e-01
8	2.06e-01	42	1.75e-01	76	9.66e-01
9	4.06e-01	43	3.49e-01	77	3.28e-01
10	3.96e-01	44	5.74e-01	78	1.69e-01
11	9.35e-01	45	6.77e-01	79	1.01e-01
12	4.66e-01	46	9.19e-01	80	1.59e-01
13	7.44e-01	47	1.81e-01	81	2.46e-01
14	4.18e-01	48	7.08e-01	82	4.97e-02
15	3.87e-01	49	2.54e-01	83	7.80e-01
16	3.63e-01	50	8.15e-02	84	7.74e-01
17	5.53e-01	51	7.91e-02	85	4.52e-01
18	8.99e-01	52	6.53e-01	86	9.20e-01
19	1.39e-01	53	9.88e-01	87	9.99e-01
20	6.69e-01	54	1.47e-01	88	1.85e-02
21	8.65e-01	55	2.60e-01	89	7.55e-01
22	6.32e-01	56	3.10e-01	90	3.71e-01
23	6.07e-01	57	5.89e-01	91	4.34e-01
24	4.90e-01	58	8.11e-01	92	9.42e-01
25	8.88e-01	59	5.44e-02	93	6.23e-01
26	5.30e-01	60	4.21e-01	94	2.10e-01
27	5.31e-01	61	6.39e-02	95	3.58e-01
28	7.28e-01	62	7.62e-01	96	9.77e-01
29	3.07e-01	63	2.98e-02	97	9.59e-01
30	2.65e-04	64	5.12e-01	98	2.34e-01
31	7.19e-01	65	2.22e-01	99	6.16e-01
32	8.08e-01	66	8.45e-01	100	1.15e-01
33	4.81e-01	67	1.92e-01		
34	9.11e-02	68	5.04e-01		

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Table A-61. Sampled Values for Parameter PCS_T1:POROSITY (LHS Variable 72)
Replicate 1

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	1.34e-01	35	1.61e-01	69	1.60e-01
2	1.40e-01	36	1.26e-01	70	9.90e-02
3	7.78e-02	37	1.21e-01	71	6.62e-02
4	1.65e-01	38	8.58e-02	72	1.05e-01
5	7.91e-02	39	1.87e-01	73	1.19e-01
6	1.06e-01	40	8.80e-02	74	1.80e-01
7	1.20e-01	41	1.65e-01	75	1.39e-01
8	1.46e-01	42	9.81e-02	76	9.41e-02
9	7.62e-02	43	1.22e-01	77	1.11e-01
10	9.06e-02	44	1.68e-01	78	1.56e-01
11	1.72e-01	45	8.07e-02	79	1.82e-01
12	1.54e-01	46	9.51e-02	80	1.14e-01
13	1.33e-01	47	6.79e-02	81	1.44e-01
14	1.15e-01	48	1.85e-01	82	1.49e-01
15	1.55e-01	49	1.58e-01	83	1.77e-01
16	1.74e-01	50	1.02e-01	84	1.50e-01
17	8.25e-02	51	1.03e-01	85	1.04e-01
18	9.18e-02	52	1.63e-01	86	7.35e-02
19	1.29e-01	53	7.25e-02	87	1.76e-01
20	1.38e-01	54	8.73e-02	88	1.23e-01
21	8.32e-02	55	1.83e-01	89	1.58e-01
22	9.74e-02	56	8.44e-02	90	1.36e-01
23	1.52e-01	57	7.10e-02	91	7.46e-02
24	1.43e-01	58	1.28e-01	92	1.74e-01
25	1.64e-01	59	9.34e-02	93	6.94e-02
26	1.07e-01	60	1.79e-01	94	1.51e-01
27	1.70e-01	61	1.70e-01	95	1.67e-01
28	1.28e-01	62	1.25e-01	96	1.76e-01
29	1.10e-01	63	1.46e-01	97	8.90e-02
30	1.42e-01	64	8.03e-02	98	1.16e-01
31	7.08e-02	65	1.35e-01	99	1.10e-01
32	1.48e-01	66	1.01e-01	100	1.84e-01
33	1.31e-01	67	1.32e-01		
34	1.13e-01	68	1.18e-01		

Information Only

Table A-61. Sampled Values for Parameter PCS_T1:POROSITY (LHS Variable 72) Replicate 2

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	8.02e-02	35	1.14e-01	69	1.51e-01
2	6.96e-02	36	1.57e-01	70	1.80e-01
3	1.49e-01	37	1.67e-01	71	1.52e-01
4	7.22e-02	38	7.62e-02	72	1.25e-01
5	1.17e-01	39	6.65e-02	73	9.64e-02
6	1.22e-01	40	1.11e-01	74	8.83e-02
7	1.39e-01	41	1.29e-01	75	9.91e-02
8	1.08e-01	42	9.86e-02	76	1.33e-01
9	1.47e-01	43	1.61e-01	77	1.79e-01
10	1.75e-01	44	1.31e-01	78	1.01e-01
11	7.52e-02	45	1.16e-01	79	1.41e-01
12	1.25e-01	46	1.42e-01	80	9.45e-02
13	1.54e-01	47	8.39e-02	81	8.68e-02
14	1.00e-01	48	1.55e-01	82	1.72e-01
15	1.06e-01	49	8.92e-02	83	1.15e-01
16	1.71e-01	50	1.68e-01	84	1.84e-01
17	1.70e-01	51	7.79e-02	85	1.21e-01
18	7.19e-02	52	1.75e-01	86	8.56e-02
19	8.45e-02	53	1.87e-01	87	1.48e-01
20	1.20e-01	54	1.83e-01	88	1.19e-01
21	1.04e-01	55	1.28e-01	89	8.28e-02
22	1.35e-01	56	9.33e-02	90	1.63e-01
23	1.62e-01	57	1.45e-01	91	1.82e-01
24	1.30e-01	58	1.28e-01	92	1.13e-01
25	1.51e-01	59	7.92e-02	93	1.07e-01
26	9.19e-02	60	1.86e-01	94	1.56e-01
27	1.60e-01	61	9.55e-02	95	1.03e-01
28	1.59e-01	62	8.12e-02	96	1.36e-01
29	1.35e-01	63	1.45e-01	97	1.77e-01
30	1.64e-01	64	7.04e-02	98	1.73e-01
31	9.05e-02	65	7.40e-02	99	1.09e-01
32	1.10e-01	66	1.24e-01	100	1.66e-01
33	1.38e-01	67	1.77e-01		
34	1.43e-01	68	6.75e-02		

Information Only

Table A-61. Sampled Values for Parameter PCS_T1:POROSITY (LHS Variable 72) Replicate 3

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	1.41e-01	35	1.36e-01	69	1.44e-01
2	1.41e-01	36	6.98e-02	70	1.73e-01
3	1.30e-01	37	7.49e-02	71	1.86e-01
4	1.12e-01	38	1.52e-01	72	1.72e-01
5	8.42e-02	39	7.99e-02	73	9.19e-02
6	1.67e-01	40	1.65e-01	74	1.61e-01
7	1.84e-01	41	1.04e-01	75	1.19e-01
8	1.62e-01	42	1.69e-01	76	1.49e-01
9	1.55e-01	43	1.10e-01	77	1.00e-01
10	1.23e-01	44	1.68e-01	78	1.82e-01
11	8.35e-02	45	1.03e-01	79	1.64e-01
12	8.14e-02	46	1.77e-01	80	1.56e-01
13	8.76e-02	47	6.79e-02	81	7.71e-02
14	1.13e-01	48	9.28e-02	82	1.18e-01
15	1.25e-01	49	6.89e-02	83	1.45e-01
16	1.46e-01	50	9.13e-02	84	7.58e-02
17	8.94e-02	51	1.23e-01	85	1.16e-01
18	1.19e-01	52	1.37e-01	86	7.33e-02
19	1.32e-01	53	1.51e-01	87	9.83e-02
20	1.26e-01	54	9.64e-02	88	1.15e-01
21	8.63e-02	55	1.66e-01	89	1.78e-01
22	1.48e-01	56	1.75e-01	90	1.07e-01
23	9.94e-02	57	7.89e-02	91	9.53e-02
24	1.80e-01	58	1.01e-01	92	1.28e-01
25	1.31e-01	59	1.39e-01	93	1.11e-01
26	1.33e-01	60	1.10e-01	94	1.60e-01
27	7.11e-02	61	1.70e-01	95	1.74e-01
28	1.22e-01	62	1.58e-01	96	1.79e-01
29	1.38e-01	63	1.53e-01	97	1.06e-01
30	1.08e-01	64	7.24e-02	98	1.34e-01
31	1.52e-01	65	1.87e-01	99	8.19e-02
32	1.43e-01	66	1.82e-01	100	6.71e-02
33	9.46e-02	67	8.78e-02		
34	1.58e-01	68	1.29e-01		

Information Only

Table A-62. Sampled Values for Parameter PCS_T2:POROSITY (LHS Variable 73)
Replicate 1

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	3.09e-02	35	2.51e-02	69	5.35e-02
2	3.47e-02	36	3.26e-02	70	5.72e-02
3	6.09e-02	37	4.97e-02	71	5.38e-02
4	3.68e-02	38	6.56e-02	72	3.84e-02
5	4.06e-02	39	7.07e-02	73	3.62e-02
6	6.31e-02	40	5.53e-02	74	5.00e-02
7	5.79e-02	41	7.42e-02	75	4.02e-02
8	3.57e-02	42	7.00e-02	76	7.24e-02
9	4.71e-02	43	5.48e-02	77	5.60e-02
10	7.19e-02	44	5.41e-02	78	7.38e-02
11	6.12e-02	45	3.40e-02	79	4.55e-02
12	3.95e-02	46	6.45e-02	80	4.17e-02
13	4.38e-02	47	4.46e-02	81	3.88e-02
14	6.50e-02	48	6.51e-02	82	3.97e-02
15	2.56e-02	49	3.70e-02	83	4.29e-02
16	4.89e-02	50	3.33e-02	84	5.96e-02
17	5.63e-02	51	4.76e-02	85	6.28e-02
18	4.35e-02	52	3.43e-02	86	6.89e-02
19	6.36e-02	53	4.81e-02	87	6.65e-02
20	3.11e-02	54	4.43e-02	88	7.27e-02
21	2.61e-02	55	3.22e-02	89	3.18e-02
22	5.06e-02	56	2.81e-02	90	2.91e-02
23	6.24e-02	57	2.97e-02	91	5.27e-02
24	4.24e-02	58	4.13e-02	92	7.00e-02
25	3.00e-02	59	5.17e-02	93	6.72e-02
26	3.79e-02	60	4.67e-02	94	6.16e-02
27	5.88e-02	61	5.21e-02	95	4.93e-02
28	6.90e-02	62	5.85e-02	96	2.66e-02
29	5.68e-02	63	7.34e-02	97	5.14e-02
30	7.47e-02	64	6.82e-02	98	2.73e-02
31	6.79e-02	65	4.63e-02	99	6.65e-02
32	6.01e-02	66	2.79e-02	100	5.94e-02
33	3.53e-02	67	7.13e-02		
34	2.87e-02	68	4.59e-02		

Information Only

Table A-62. Sampled Values for Parameter PCS_T2:POROSITY (LHS Variable 73) Replicate 2

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	6.03e-02	35	6.29e-02	69	7.40e-02
2	6.87e-02	36	6.70e-02	70	4.06e-02
3	2.92e-02	37	5.18e-02	71	2.55e-02
4	6.09e-02	38	7.47e-02	72	5.26e-02
5	3.88e-02	39	2.96e-02	73	4.89e-02
6	5.71e-02	40	4.13e-02	74	6.69e-02
7	6.35e-02	41	2.78e-02	75	3.36e-02
8	4.60e-02	42	4.25e-02	76	3.09e-02
9	2.65e-02	43	2.71e-02	77	6.48e-02
10	6.30e-02	44	7.08e-02	78	3.59e-02
11	6.56e-02	45	5.37e-02	79	3.50e-02
12	4.81e-02	46	6.79e-02	80	5.46e-02
13	2.66e-02	47	5.30e-02	81	2.55e-02
14	4.32e-02	48	6.11e-02	82	5.21e-02
15	3.24e-02	49	3.63e-02	83	4.74e-02
16	5.56e-02	50	5.90e-02	84	3.84e-02
17	4.16e-02	51	5.77e-02	85	5.98e-02
18	4.54e-02	52	3.28e-02	86	6.85e-02
19	6.21e-02	53	5.61e-02	87	4.64e-02
20	5.55e-02	54	4.91e-02	88	6.96e-02
21	4.67e-02	55	3.69e-02	89	3.14e-02
22	3.33e-02	56	5.41e-02	90	6.51e-02
23	4.78e-02	57	3.03e-02	91	7.10e-02
24	5.82e-02	58	5.67e-02	92	6.19e-02
25	5.08e-02	59	3.49e-02	93	5.90e-02
26	5.12e-02	60	7.29e-02	94	4.43e-02
27	3.79e-02	61	7.01e-02	95	3.99e-02
28	4.02e-02	62	7.19e-02	96	3.70e-02
29	6.63e-02	63	7.21e-02	97	4.37e-02
30	7.34e-02	64	3.95e-02	98	2.81e-02
31	6.85e-02	65	4.21e-02	99	2.89e-02
32	6.93e-02	66	5.03e-02	100	6.43e-02
33	3.17e-02	67	4.48e-02		
34	4.96e-02	68	3.43e-02		

Information Only

Table A-62. Sampled Values for Parameter PCS_T2:POROSITY (LHS Variable 73) Replicate 3

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	5.84e-02	35	7.26e-02	69	7.20e-02
2	6.68e-02	36	4.49e-02	70	3.17e-02
3	4.59e-02	37	7.31e-02	71	3.98e-02
4	7.01e-02	38	2.59e-02	72	6.21e-02
5	4.96e-02	39	2.50e-02	73	6.85e-02
6	4.35e-02	40	3.30e-02	74	4.22e-02
7	2.89e-02	41	6.51e-02	75	7.09e-02
8	4.71e-02	42	2.68e-02	76	5.04e-02
9	5.37e-02	43	6.59e-02	77	2.92e-02
10	3.08e-02	44	6.89e-02	78	3.22e-02
11	3.45e-02	45	6.34e-02	79	5.97e-02
12	3.59e-02	46	6.06e-02	80	3.52e-02
13	6.40e-02	47	4.05e-02	81	5.48e-02
14	6.97e-02	48	5.17e-02	82	5.59e-02
15	4.51e-02	49	2.82e-02	83	7.21e-02
16	5.11e-02	50	2.70e-02	84	3.61e-02
17	5.32e-02	51	2.63e-02	85	4.14e-02
18	4.75e-02	52	4.89e-02	86	3.81e-02
19	6.63e-02	53	6.76e-02	87	3.90e-02
20	4.29e-02	54	6.45e-02	88	6.94e-02
21	3.26e-02	55	5.08e-02	89	4.95e-02
22	3.03e-02	56	5.54e-02	90	4.30e-02
23	4.66e-02	57	5.69e-02	91	4.05e-02
24	5.30e-02	58	7.11e-02	92	7.38e-02
25	6.01e-02	59	6.45e-02	93	5.62e-02
26	6.72e-02	60	6.13e-02	94	3.76e-02
27	5.86e-02	61	5.76e-02	95	4.19e-02
28	3.68e-02	62	5.94e-02	96	5.22e-02
29	3.12e-02	63	6.28e-02	97	4.64e-02
30	3.00e-02	64	4.43e-02	98	3.43e-02
31	2.78e-02	65	5.71e-02	99	7.47e-02
32	3.95e-02	66	4.81e-02	100	3.71e-02
33	5.45e-02	67	7.44e-02		
34	6.20e-02	68	3.36e-02		

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Table A-63. Sampled Values for Parameter PCS_T3:POROSITY (LHS Variable 74) Replicate 1

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	2.35e-02	35	1.25e-02	69	1.96e-03
2	3.41e-02	36	2.95e-02	70	4.49e-02
3	1.31e-02	37	2.48e-02	71	2.20e-02
4	2.87e-02	38	3.11e-02	72	2.66e-02
5	2.44e-02	39	9.95e-03	73	1.43e-02
6	4.57e-02	40	5.05e-02	74	1.14e-02
7	9.41e-03	41	4.09e-02	75	3.93e-02
8	1.36e-02	42	5.03e-02	76	4.03e-02
9	3.71e-02	43	1.51e-02	77	1.19e-02
10	1.05e-02	44	3.54e-02	78	1.83e-02
11	3.63e-02	45	2.97e-02	79	4.40e-02
12	3.83e-02	46	8.62e-03	80	2.19e-02
13	4.26e-03	47	4.45e-02	81	2.82e-02
14	4.89e-02	48	2.54e-02	82	3.06e-02
15	1.30e-02	49	3.06e-02	83	1.69e-02
16	2.75e-02	50	3.00e-02	84	3.57e-02
17	3.68e-03	51	4.38e-02	85	1.44e-03
18	4.33e-02	52	2.30e-02	86	8.12e-03
19	3.45e-03	53	3.34e-02	87	4.27e-02
20	2.54e-02	54	2.32e-02	88	3.22e-02
21	8.85e-03	55	2.71e-02	89	1.74e-02
22	4.15e-02	56	2.86e-03	90	1.92e-02
23	3.28e-02	57	1.86e-02	91	2.80e-02
24	1.94e-02	58	5.99e-03	92	6.54e-03
25	1.99e-02	59	1.09e-02	93	4.85e-02
26	7.06e-03	60	4.48e-02	94	4.31e-02
27	3.89e-02	61	4.18e-02	95	4.83e-02
28	2.47e-03	62	1.55e-02	96	1.80e-02
29	1.39e-02	63	2.09e-02	97	2.95e-02
30	3.72e-02	64	3.79e-02	98	1.60e-02
31	3.04e-02	65	2.25e-02	99	1.65e-02
32	2.04e-02	66	5.05e-03	100	5.47e-03
33	3.13e-02	67	7.30e-03		
34	1.78e-02	68	1.91e-02		

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Table A-63. Sampled Values for Parameter PCS_T3:POROSITY (LHS Variable 74) Replicate 2

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	3.95e-02	35	1.85e-02	69	1.75e-02
2	3.55e-02	36	2.51e-02	70	7.02e-03
3	2.37e-02	37	2.96e-02	71	1.80e-02
4	2.31e-02	38	2.71e-02	72	3.16e-02
5	2.95e-02	39	1.35e-02	73	1.47e-02
6	1.13e-02	40	1.51e-02	74	1.63e-02
7	1.95e-02	41	2.54e-02	75	2.55e-02
8	2.69e-02	42	4.25e-02	76	1.41e-02
9	9.12e-03	43	1.74e-02	77	3.67e-02
10	3.04e-02	44	4.02e-02	78	3.51e-02
11	4.89e-02	45	4.88e-02	79	3.19e-02
12	2.18e-02	46	9.56e-03	80	1.10e-02
13	5.99e-03	47	4.30e-02	81	1.87e-03
14	6.51e-03	48	1.72e-02	82	3.90e-02
15	3.01e-02	49	1.30e-02	83	3.14e-02
16	4.46e-02	50	4.40e-02	84	2.86e-02
17	2.20e-03	51	3.46e-02	85	2.88e-02
18	1.59e-02	52	1.90e-02	86	2.41e-02
19	1.23e-02	53	4.06e-02	87	3.88e-03
20	4.08e-02	54	4.90e-02	88	5.46e-03
21	4.16e-02	55	3.09e-02	89	9.91e-03
22	2.75e-03	56	5.12e-02	90	2.25e-02
23	3.23e-02	57	4.86e-03	91	3.57e-02
24	3.74e-02	58	3.33e-02	92	4.27e-03
25	1.46e-03	59	2.56e-02	93	2.08e-02
26	4.97e-02	60	1.54e-02	94	2.81e-02
27	8.51e-03	61	7.34e-03	95	3.48e-02
28	3.89e-02	62	2.24e-02	96	1.82e-02
29	2.10e-02	63	3.19e-03	97	2.62e-02
30	8.06e-03	64	3.52e-02	98	2.38e-02
31	3.09e-02	65	2.77e-02	99	1.96e-02
32	4.64e-02	66	3.39e-02	100	2.01e-02
33	1.21e-02	67	2.48e-02		
34	4.58e-02	68	1.04e-02		

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Table A-63. Sampled Values for Parameter PCS_T3:POROSITY (LHS Variable 74) Replicate 3

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	2.17e-02	35	1.93e-02	69	1.49e-03
2	4.30e-02	36	1.28e-02	70	3.14e-03
3	1.72e-02	37	4.45e-02	71	1.34e-02
4	2.11e-02	38	2.20e-02	72	2.99e-02
5	3.45e-02	39	2.44e-02	73	4.52e-02
6	4.20e-02	40	8.99e-03	74	3.89e-02
7	2.88e-02	41	1.49e-02	75	4.22e-02
8	4.39e-02	42	1.70e-02	76	1.53e-02
9	1.39e-02	43	4.14e-02	77	1.26e-02
10	1.05e-02	44	3.62e-02	78	6.31e-03
11	1.86e-02	45	2.60e-02	79	2.52e-02
12	3.35e-02	46	1.47e-02	80	5.72e-03
13	4.72e-03	47	3.52e-02	81	1.74e-02
14	1.19e-02	48	4.94e-02	82	2.29e-02
15	3.98e-02	49	2.11e-02	83	7.88e-03
16	4.36e-02	50	5.11e-03	84	1.59e-02
17	3.04e-02	51	1.91e-03	85	8.41e-03
18	1.96e-02	52	2.24e-02	86	4.04e-03
19	2.23e-02	53	4.59e-02	87	2.95e-02
20	2.42e-02	54	3.09e-02	88	2.85e-02
21	3.23e-02	55	1.13e-02	89	3.40e-02
22	2.51e-03	56	1.07e-02	90	3.70e-02
23	7.12e-03	57	2.95e-03	91	2.00e-02
24	4.65e-02	58	2.46e-02	92	5.10e-02
25	1.00e-02	59	2.58e-02	93	3.58e-02
26	2.79e-02	60	4.54e-03	94	3.47e-02
27	5.01e-02	61	9.46e-03	95	1.78e-02
28	2.91e-02	62	2.83e-02	96	2.04e-02
29	1.90e-02	63	2.67e-02	97	7.07e-03
30	2.20e-02	64	2.39e-02	98	2.65e-02
31	1.58e-02	65	3.19e-02	99	3.31e-02
32	3.07e-02	66	4.69e-02	100	1.63e-02
33	3.76e-02	67	2.74e-02		
34	3.85e-02	68	3.17e-02		

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Table A-64. Sampled Values for Parameter PCS_T2:POR2PERM (LHS Variable 75) Replicate 1

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	-1.54e+00	35	4.59e-01	69	9.48e-01
2	2.95e-01	36	5.54e-01	70	1.17e+00
3	2.44e-02	37	4.12e-01	71	-8.95e-01
4	-7.71e-01	38	-1.26e+00	72	-5.96e-01
5	-4.97e-01	39	4.05e-01	73	5.07e-01
6	2.76e-01	40	9.34e-01	74	9.83e-03
7	-3.57e-02	41	3.36e-01	75	5.17e-02
8	-9.58e-01	42	8.08e-01	76	-4.68e-01
9	8.53e-01	43	1.04e+00	77	1.62e-01
10	7.27e-01	44	1.45e+00	78	-7.30e-02
11	-7.33e-01	45	-7.45e-01	79	-1.40e-01
12	2.32e-01	46	-8.36e-01	80	1.41e-01
13	6.56e-01	47	3.75e-01	81	-2.39e-01
14	-5.50e-01	48	6.84e-01	82	5.36e-01
15	7.11e-02	49	2.58e-01	83	1.37e+00
16	-1.04e+00	50	7.79e-01	84	-8.52e-02
17	1.01e+00	51	-5.28e-02	85	-3.84e-01
18	-1.59e-01	52	-8.20e-01	86	-3.74e-01
19	4.41e-01	53	1.87e-01	87	-4.33e-01
20	-3.31e-01	54	1.24e+00	88	-5.05e-01
21	1.79e-01	55	-1.40e+00	89	-2.16e-01
22	8.97e-02	56	6.29e-01	90	-9.91e-01
23	-1.19e-01	57	-1.20e+00	91	-6.15e-01
24	-2.58e-01	58	5.90e-01	92	-9.12e-01
25	6.26e-01	59	1.13e+00	93	-6.35e-01
26	-5.46e-01	60	-3.43e-01	94	-1.30e+00
27	4.87e-01	61	-1.67e+00	95	1.70e+00
28	-9.36e-03	62	3.55e-01	96	1.30e+00
29	-2.81e-01	63	2.19e-01	97	1.57e+00
30	-1.11e+00	64	-3.07e-01	98	-6.55e-01
31	1.06e+00	65	1.12e-01	99	-1.08e+00
32	-2.01e-01	66	-1.42e+00	100	-1.84e-01
33	7.48e-01	67	-4.09e-01		
34	-7.00e-01	68	8.99e-01		

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Table A-64. Sampled Values for Parameter PCS_T2:POR2PERM (LHS Variable 75) Replicate 2

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	8.66e-01	35	-8.26e-01	69	8.29e-01
2	-4.88e-01	36	-5.32e-01	70	4.61e-01
3	1.05e+00	37	2.04e-01	71	-1.63e-02
4	-1.40e-01	38	-5.73e-01	72	1.07e+00
5	5.59e-01	39	2.33e-01	73	6.27e-02
6	-7.07e-01	40	5.15e-02	74	-3.23e-01
7	6.85e-01	41	8.42e-02	75	3.81e-01
8	-2.75e-01	42	-7.51e-01	76	3.70e-02
9	-1.40e+00	43	-8.42e-01	77	-2.67e-01
10	4.88e-01	44	-3.97e-02	78	-6.47e-01
11	5.38e-01	45	-9.20e-01	79	3.15e-01
12	4.21e-01	46	-3.10e-01	80	-1.43e+00
13	2.79e-01	47	-2.23e-01	81	-8.81e-01
14	1.71e+00	48	-7.82e-01	82	6.19e-01
15	-1.21e+00	49	-3.85e-01	83	3.62e-04
16	-2.46e-01	50	-7.83e-02	84	1.11e+00
17	-5.13e-01	51	-1.09e+00	85	-4.63e-01
18	1.43e-01	52	-1.28e+00	86	6.72e-01
19	-1.14e+00	53	-1.05e-01	87	8.80e-01
20	1.32e+00	54	7.58e-01	88	-4.55e-02
21	7.71e-01	55	3.36e-01	89	-1.74e-01
22	1.43e+00	56	-1.51e+00	90	-1.91e-01
23	1.07e-01	57	-1.00e+00	91	5.00e-01
24	1.20e+00	58	7.21e-01	92	1.24e+00
25	-1.64e+00	59	-4.09e-01	93	3.92e-01
26	2.66e-01	60	-6.64e-01	94	1.45e-01
27	9.24e-01	61	-1.01e-01	95	3.56e-01
28	-7.30e-01	62	-1.03e+00	96	-1.17e+00
29	9.80e-01	63	-3.57e-01	97	4.43e-01
30	1.76e-01	64	-4.33e-01	98	-9.58e-01
31	9.76e-01	65	-3.76e-01	99	1.50e+00
32	2.24e-01	66	5.97e-01	100	-6.08e-01
33	6.29e-01	67	-1.55e-01		
34	-5.98e-01	68	1.34e+00		

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Table A-64. Sampled Values for Parameter PCS_T2:POR2PERM (LHS Variable 75) Replicate 3

Vector	Value (dimensionless)	Vector	Value (dimensionless)	Vector	Value (dimensionless)
1	4.09e-01	35	1.90e-01	69	6.07e-02
2	-8.28e-01	36	9.25e-01	70	5.69e-01
3	5.33e-01	37	3.25e-01	71	9.67e-01
4	-5.23e-01	38	1.68e+00	72	-7.47e-01
5	-2.85e-01	39	1.18e+00	73	1.03e+00
6	-1.46e+00	40	-1.54e+00	74	-3.43e-01
7	-5.70e-01	41	1.31e+00	75	-1.02e+00
8	-8.52e-01	42	-1.20e-01	76	1.36e-01
9	-1.32e-01	43	1.00e+00	77	-6.33e-01
10	6.88e-02	44	-9.23e-01	78	-6.87e-01
11	-1.28e+00	45	-8.96e-01	79	-2.94e-01
12	-4.49e-02	46	2.80e-01	80	5.79e-01
13	-9.53e-02	47	1.69e-01	81	-9.56e-01
14	1.08e+00	48	5.18e-01	82	-2.91e-02
15	-2.23e-01	49	-1.02e+00	83	-4.24e-01
16	-1.63e+00	50	-4.69e-01	84	-1.07e+00
17	7.14e-01	51	3.47e-01	85	-2.41e-01
18	-1.35e+00	52	-2.53e-01	86	4.36e-01
19	-1.51e-01	53	6.57e-01	87	3.93e-01
20	-7.72e-01	54	1.14e+00	88	2.22e-01
21	-1.96e-01	55	-4.92e-01	89	3.21e-02
22	-1.14e+00	56	-1.78e-01	90	-3.23e-01
23	-6.09e-01	57	3.67e-01	91	-3.67e-01
24	-1.23e+00	58	-5.28e-01	92	-5.82e-01
25	2.33e-01	59	-6.80e-01	93	-3.84e-01
26	9.33e-02	60	1.39e+00	94	8.56e-01
27	3.04e-01	61	-7.19e-01	95	1.56e+00
28	7.89e-01	62	2.61e-01	96	6.10e-01
29	-9.69e-03	63	1.22e+00	97	8.99e-01
30	1.44e+00	64	4.54e-01	98	-4.45e-01
31	4.99e-01	65	7.09e-01	99	7.46e-01
32	1.46e-01	66	6.28e-01	100	-1.17e+00
33	1.11e-01	67	1.32e-02		
34	8.03e-01	68	-7.52e-02		

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