

5.0 COMMERCIAL/INDUSTRIAL WORKERS

5.1 TM - HOURS PER DAY: Commercial/Industrial Workers

5.1.1 TM - Rationale for Probability Distribution

The information provided in the studies used for development of this distribution referred to combined commercial and industrial populations, as will be discussed. Therefore, the data did not allow separate commercial and industrial distributions to be developed.

Numerous references indicate that the average workday duration for a full-time commercial/industrial worker is near 8 hours/day or in the range between 7 and 9 hours/day, e.g., Szalai et al, 1972, and U.S. EPA, 1985. However, it is also clear that not every full-time worker spends exactly 8 hours/day or 40 hours/week at work. Furthermore, not all commercial/industrial workers are full-time workers. Many workers spend more than 40 hours/week, and some spend less than 40 hours/week. According to the Exposure Factors Handbook (EFH, U.S. EPA, 1989, Table 5C, pg. 5-64), at least one person worked 107 hours/week and more than 20% of the population work more than 40 hours per week.

Given the considerable variability in people's workday durations, it is clear that a distribution of workday durations is warranted for this population. The distribution reflects the percentage of the worker population works 5, 30, 60, etc. hours/week. Such a probability distribution explicitly incorporates the frequencies of different workday durations among the workers.

The Exposure Factors Handbook indicates the 10th, 20th, ..., and 90th percentiles and the "Max" of the hours/week for men and women combined spent in "Normal work." Similar distributional information is also given in EFH for "Lunch at work," "Coffee Breaks," and "Before/after work". This information is for people at least 18 years of age. The people who do not work at least four hours per week have been removed from the distributions developed from the following categories: Normal work, Lunch at work, Coffee Breaks, and Before/after work. Because <35% of the sample do not work at least 4 hours/week, removing the lower 35% of each of the distributions removed the people who do not work. The resulting four distributions were then combined to provide a final distribution of the duration of total time spent at work during a week for workers. The population of commercial/industrial workers was defined to represent workers who work at least 4 hours/week.

The probability distribution for the hours/week for commercial/industrial workers is the probability distribution for the sum of the hours/week spent in "Normal work", "Lunch at work," "Coffee Breaks," and "Before/after work." It is important to account for all the time spent at the worksite, not just working hours.

The work duration distribution is available from the EFH in units of hours/week, and much of the information on work frequency is available in units of weeks/year. This information must be converted to hours/day and days/week using a conversion factor indicating how many days

are implied by a "week" in the data sources. It is assumed that "weeks" referred to a typical work week, which is five days. This assumption has no impact on the product of TM*DW because

$$(X \text{ hours/week} / [5 \text{ days/week}]) * (Y \text{ weeks/year} * [5 \text{ days/week}]) = X*Y \text{ hours/year}$$

and is, therefore, independent of the value chosen for the conversion factor.

This assumption of five days/week does impact the DW distribution which is used separately from TM in some PPLV equations. However, it is believed that the assumption is realistic for the working population and enables accurate determination of the DW distribution for commercial and industrial workers developed in the next section.

5.1.2 TM - Probability Distribution

The probability distribution for the duration in hours/day of work for a commercial/industrial worker (TM) is a normal distribution with mean 7.42 hours/day, standard deviation 3.267 hours/day, and the following percentiles:

Probability (Duration ≤ 17.52 hours/day)	= 0.999
Probability (Duration ≤ 16.59 hours/day)	= 0.9975
Probability (Duration ≤ 15.84 hours/day)	= 0.995
Probability (Duration ≤ 15.02 hours/day)	= 0.99
Probability (Duration ≤ 13.82 hours/day)	= 0.975
Probability (Duration ≤ 12.79 hours/day)	= 0.95
Probability (Duration ≤ 12.12 hours/day)	= 0.925
Probability (Duration ≤ 11.61 hours/day)	= 0.90
Probability (Duration ≤ 10.17 hours/day)	= 0.80
Probability (Duration ≤ 9.62 hours/day)	= 0.75
Probability (Duration ≤ 9.13 hours/day)	= 0.70
Probability (Duration ≤ 8.25 hours/day)	= 0.60
Probability (Duration ≤ 7.42 hours/day)	= 0.50
Probability (Duration ≤ 6.59 hours/day)	= 0.40
Probability (Duration ≤ 5.71 hours/day)	= 0.30
Probability (Duration ≤ 5.22 hours/day)	= 0.25
Probability (Duration ≤ 4.67 hours/day)	= 0.20
Probability (Duration ≤ 3.23 hours/day)	= 0.10
Probability (Duration ≤ 2.72 hours/day)	= 0.075
Probability (Duration ≤ 2.05 hours/day)	= 0.05

This is the TM (hours/day) distribution for commercial/industrial workers at the Arsenal. The mathematical development of this distribution is given in Section 5.1.3.

5.1.3 TM - Mathematical Development

The Exposure Factors Handbook (EFH, U.S. EPA, 1989, Table 5C, pg. 5-64) indicates the following 10th, 20th, ..., and 90th percentiles and the "Max" of the hours/week for men and women combined spent in "Normal Work":

10th Percentile	=	0.00 hours/week
20th Percentile	=	0.06 hours/week
30th Percentile	=	0.34 hours/week
40th Percentile	=	8.31 hours/week
50th Percentile	=	20.22 hours/week
60th Percentile	=	32.08 hours/week
70th Percentile	=	37.68 hours/week
80th Percentile	=	41.33 hours/week
90th Percentile	=	46.88 hours/week
Max	=	107.00 hours/week.

To better approximate the distribution of total time at work, the hours/week for "Normal work," "Lunch at work," "Coffee breaks," and "Before/after work" were summed. As discussed more fully in Appendix E, the probability distribution for the sum is relatively sensitive to the upper percentiles of the four component probability distributions, particularly the percentiles between the 90th percentile and the "Max.". To estimate these percentiles, the information on the shape of the distribution contained in the given sample data was used. The given sample data was fit to the normal, lognormal, and gamma distributions, using a different weighted least squares criterion than that used for all other distribution fits and described in Section 3.1.3. Because the fits were only used to interpolate values for the percentiles between the 90th and the "Max", the weights were constructed to ensure that the fitted distribution fits most closely to the largest percentile increments, i.e., the upper tail. The remaining distribution fits to the EFH data presented below are all based on this same criterion.

The best fit for "Normal work" was obtained using the lognormal distribution. The best fitting distribution corresponds to the logarithm of a normal random variable with mean 3.2647 and standard deviation 0.4554 (the relatively large number of significant digits are provided to facilitate independent mathematical confirmation). The fitted 90th percentile was 46.9 which is very close to the sample 90th percentile. The fitted higher percentiles which supplement the sample percentiles are

92.5th Percentile	=	50.41 hours/week
95.0th Percentile	=	55.36 hours/week
97.5th Percentile	=	63.90 hours/week
99.0th Percentile	=	75.49 hours/week
99.5th Percentile	=	84.58 hours/week
99.75th Percentile	=	93.97 hours/week.

The sample information on the percentiles of "Normal work" is the original sample percentiles plus the fitted supplementary percentiles, namely:

10th	Percentile	=	0.00	hours/week
20th	Percentile	=	0.06	hours/week
30th	Percentile	=	0.34	hours/week
40th	Percentile	=	8.31	hours/week
50th	Percentile	=	20.22	hours/week
60th	Percentile	=	32.08	hours/week
70th	Percentile	=	37.68	hours/week
80th	Percentile	=	41.33	hours/week
90th	Percentile	=	46.88	hours/week
92.5th	Percentile	=	50.41	hours/week
95.0th	Percentile	=	55.36	hours/week
97.5th	Percentile	=	63.90	hours/week
99.0th	Percentile	=	75.49	hours/week
99.5th	Percentile	=	84.58	hours/week
99.75th	Percentile	=	93.97	hours/week
Max		=	107.00	hours/week.

The above information is for all people at least 18 years of age, excluding individuals in college dormitories, nursing homes, and other institutional settings. The sampled population includes adults who were not working. As discussed previously, to characterize the distribution for working adults only, the working population had to be defined based on a minimum number (four) of hours worked per week. The 35th percentile is approximately 4 hours/week; therefore, all non-workers are excluded if the lower 35% of the distribution is removed. By removing these individuals, the resulting sample data refer to the specified worker population. When 35% of the sample is removed, the individuals who made up 10% of the original sample represent approximately 15.4% of the remaining worker population ($10\% / (1 - .35) = 10\% / 0.65 = 15.4\%$). The sample percentiles (with the original percentage minus 35% divided by 0.65, e.g., $(95\% - 35\%) / 0.65 = 92.3\%$) for the worker population and "Normal work" are as follows:

0 th	Percentile	=	4.00	hours/week
7.7th	Percentile	=	8.31	hours/week
23.1th	Percentile	=	20.22	hours/week
38.5th	Percentile	=	32.08	hours/week
53.9th	Percentile	=	37.68	hours/week
69.3th	Percentile	=	41.33	hours/week
84.7th	Percentile	=	46.88	hours/week
88.5th	Percentile	=	50.41	hours/week
92.3th	Percentile	=	55.36	hours/week
96.2th	Percentile	=	63.90	hours/week
98.5th	Percentile	=	75.49	hours/week
99.2th	Percentile	=	84.58	hours/week

99.6th	Percentile	=	93.97	hours/week
Max		=	107.00	hours/week.

The EFH information on "Lunch at work", "Coffee breaks", and "Before/after work" was treated analogously.

The sample percentiles for "Lunch at work" are as follows:

10th	Percentile	=	0.00	hours/week
20th	Percentile	=	0.00	hours/week
30th	Percentile	=	0.00	hours/week
40th	Percentile	=	0.14	hours/week
50th	Percentile	=	0.30	hours/week
60th	Percentile	=	0.46	hours/week
70th	Percentile	=	1.07	hours/week
80th	Percentile	=	2.41	hours/week
90th	Percentile	=	3.16	hours/week
Max		=	9.00	hours/week.

The given sample data was fit to the normal, lognormal, and gamma distributions, again based on the weighted least squares criterion discussed earlier in this section. The best fit for "Lunch at work" was obtained using the gamma distribution. The best fitting distribution has mean 1.4223 and variance 1.7521. The fitted 90th percentile is identical to the sample 90th percentile. The fitted higher percentiles which supplement the sample percentiles are:

92.5th	Percentile	=	3.53	hours/week
95.0th	Percentile	=	4.05	hours/week
97.5th	Percentile	=	4.94	hours/week
99.0th	Percentile	=	6.10	hours/week
99.5th	Percentile	=	6.97	hours/week
99.75th	Percentile	=	7.85	hours/week.

All non-workers were excluded by removing the lower 35% of the sample. By removing these individuals, the resulting sample data refer to the worker population. When the lower 35% of the sample is removed, the sample percentiles for the worker population and "Lunch at work" are:

0 th	Percentile	=	0.00	hours/week
7.7th	Percentile	=	0.14	hours/week
23.1th	Percentile	=	0.30	hours/week
38.5th	Percentile	=	0.46	hours/week
53.9th	Percentile	=	1.07	hours/week
69.3th	Percentile	=	2.41	hours/week
84.7th	Percentile	=	3.16	hours/week

98.5th Percentile	=	3.53 hours/week
92.3th Percentile	=	4.05 hours/week
96.2th Percentile	=	4.94 hours/week
98.5th Percentile	=	6.10 hours/week
99.2th Percentile	=	6.97 hours/week
99.6th Percentile	=	7.85 hours/week
Max	=	9.00 hours/week.

The sample percentiles for "Coffee breaks" are as follows:

10th Percentile	=	0.00 hours/week
20th Percentile	=	0.00 hours/week
30th Percentile	=	0.00 hours/week
40th Percentile	=	0.03 hours/week
50th Percentile	=	0.16 hours/week
60th Percentile	=	0.29 hours/week
70th Percentile	=	0.43 hours/week
80th Percentile	=	0.83 hours/week
90th Percentile	=	1.74 hours/week
Max	=	12.00 hours/week.

The given sample data was fit to the normal, lognormal, and gamma distributions. The best fit for "Coffee breaks" is obtained using the gamma distribution. The best fitting distribution has mean 0.5756 and variance 1.6948. The fitted 90th percentile is identical to the sample 90th percentile. The fitted higher percentiles which supplement the sample percentiles are:

92.5th Percentile	=	2.23 hours/week
95.0th Percentile	=	2.98 hours/week
97.5th Percentile	=	4.39 hours/week
99.0th Percentile	=	6.42 hours/week
99.5th Percentile	=	8.04 hours/week
99.75th Percentile	=	9.72 hours/week.

All non-workers are excluded by removing the lower 35% of the sample. When the lower 35% of the sample was removed, the sample percentiles for the worker population and "Coffee breaks" are:

0 th Percentile	=	0.00 hours/week
7.7th Percentile	=	0.03 hours/week
23.1th Percentile	=	0.16 hours/week
38.5th Percentile	=	0.29 hours/week
53.9th Percentile	=	0.43 hours/week
69.3th Percentile	=	0.83 hours/week
84.7th Percentile	=	1.74 hours/week

88.5th Percentile	=	2.23 hours/week
92.3th Percentile	=	2.98 hours/week
96.2th Percentile	=	4.39 hours/week
98.5th Percentile	=	6.42 hours/week
99.2th Percentile	=	8.04 hours/week
99.6th Percentile	=	9.72 hours/week
Max	=	12.00 hours/week.

The sample percentiles for "Before/after work" are as follows:

10th Percentile	=	0.00 hours/week
20th Percentile	=	0.00 hours/week
30th Percentile	=	0.00 hours/week
40th Percentile	=	0.00 hours/week
50th Percentile	=	0.11 hours/week
60th Percentile	=	0.23 hours/week
70th Percentile	=	0.35 hours/week
80th Percentile	=	0.48 hours/week
90th Percentile	=	1.23 hours/week
Max	=	11.00 hours/week.

The given sample data was fit to the normal, lognormal, and gamma distributions. The best fit for "Before/after work" was obtained using the gamma distribution. The best fitting distribution has mean 0.4187 and variance 1.2400. The fitted 90th percentile is identical to the sample 90th percentile. The fitted higher percentiles which supplement the sample percentiles are:

92.5th Percentile	=	1.66 hours/week
95.0th Percentile	=	2.33 hours/week
97.5th Percentile	=	3.63 hours/week
99.0th Percentile	=	5.56 hours/week
99.5th Percentile	=	7.13 hours/week
99.75th Percentile	=	8.76 hours/week.

All non-workers were excluded by removing the lower 35% of the sample. When the lower 35% of the sample was removed, the sample percentiles for the worker population and "Before/after work" are:

0 th Percentile	=	0.00 hours/week
7.7th Percentile	=	0.00 hours/week
23.1th Percentile	=	0.11 hours/week
38.5th Percentile	=	0.23 hours/week
53.9th Percentile	=	0.35 hours/week
69.3th Percentile	=	0.48 hours/week
84.7th Percentile	=	1.23 hours/week

88.5th Percentile	=	1.66 hours/week
92.3th Percentile	=	2.33 hours/week
96.2th Percentile	=	3.63 hours/week
98.5th Percentile	=	5.56 hours/week
99.2th Percentile	=	7.13 hours/week
99.6th Percentile	=	8.76 hours/week
Max	=	11.00 hours/week.

The total time spent at work is the sum of the hours/week for "Normal work", "Lunch at work," "Coffee breaks", and "Before/after work". These variables are assumed to be independent of each other. Therefore, the probability distribution for the total time (hours/week) at work was determined using a standard Monte Carlo simulation method. This method proceeds by drawing one sample from each of the four component distributions, summing these four values to form a sample of total time, and repeating this process until a large number, N, of samples of total time are produced, e.g., N = 10,000. The percentiles of total time in hours/week are as follows:

Probability (Duration $\leq$ 104.30 hours/week)	=	0.999
Probability (Duration $\leq$ 100.00 hours/week)	=	0.9975
Probability (Duration $\leq$ 94.81 hours/week)	=	0.995
Probability (Duration $\leq$ 85.83 hours/week)	=	0.99
Probability (Duration $\leq$ 73.74 hours/week)	=	0.975
Probability (Duration $\leq$ 64.55 hours/week)	=	0.95
Probability (Duration $\leq$ 59.59 hours/week)	=	0.925
Probability (Duration $\leq$ 55.87 hours/week)	=	0.90
Probability (Duration $\leq$ 48.79 hours/week)	=	0.80
Probability (Duration $\leq$ 46.87 hours/week)	=	0.75
Probability (Duration $\leq$ 45.28 hours/week)	=	0.70
Probability (Duration $\leq$ 42.18 hours/week)	=	0.60
Probability (Duration $\leq$ 39.28 hours/week)	=	0.50
Probability (Duration $\leq$ 35.38 hours/week)	=	0.40
Probability (Duration $\leq$ 28.95 hours/week)	=	0.30
Probability (Duration $\leq$ 24.91 hours/week)	=	0.25
Probability (Duration $\leq$ 21.09 hours/week)	=	0.20
Probability (Duration $\leq$ 13.61 hours/week)	=	0.10
Probability (Duration $\leq$ 11.56 hours/week)	=	0.075
Probability (Duration $\leq$ 9.80 hours/week)	=	0.05

The N samples of total time in hours/week were then converted to hours/day by dividing by 5.0 days/week. As explained in Section 5.1.1, the factor of 5 days/week is a realistic assumption regarding the average work week of commercial and industrial workers. The final probability distribution for the hours/day at work for a commercial/industrial worker on a workday is:

Probability (Duration $\leq$ 20.86 hours/day)	=	0.999
Probability (Duration $\leq$ 20.00 hours/day)	=	0.9975
Probability (Duration $\leq$ 18.96 hours/day)	=	0.995
Probability (Duration $\leq$ 17.17 hours/day)	=	0.99
Probability (Duration $\leq$ 14.75 hours/day)	=	0.975
Probability (Duration $\leq$ 12.91 hours/day)	=	0.95
Probability (Duration $\leq$ 11.92 hours/day)	=	0.925
Probability (Duration $\leq$ 11.17 hours/day)	=	0.90
Probability (Duration $\leq$ 9.76 hours/day)	=	0.80
Probability (Duration $\leq$ 9.37 hours/day)	=	0.75
Probability (Duration $\leq$ 9.06 hours/day)	=	0.70
Probability (Duration $\leq$ 8.44 hours/day)	=	0.60
Probability (Duration $\leq$ 7.86 hours/day)	=	0.50
Probability (Duration $\leq$ 7.08 hours/day)	=	0.40
Probability (Duration $\leq$ 5.79 hours/day)	=	0.30
Probability (Duration $\leq$ 4.98 hours/day)	=	0.25
Probability (Duration $\leq$ 4.22 hours/day)	=	0.20
Probability (Duration $\leq$ 2.72 hours/day)	=	0.10
Probability (Duration $\leq$ 2.31 hours/day)	=	0.075
Probability (Duration $\leq$ 1.96 hours/day)	=	0.05

The normal and lognormal distributions were fit to these percentiles. Based on the weighted least squares criterion (Section 3.1.3, Step 5). The best fitting distribution for TM is a normal distribution with mean 7.42 and standard deviation 3.267. The fit is described as follows:

Percentage	Simulated Distribution (hours/day)	Normal Distribution (hours/day)
99	17.16	15.02
97.5	14.75	13.82
95	12.91	12.79
92.5	11.92	12.12
90	11.17	11.60
75	9.37	9.62
50	7.86	7.42
25	4.98	5.21
10	2.72	3.23
7.5	2.31	2.72
5	1.96	2.04

This normal distribution is the TM (hours/day) distribution for commercial/industrial workers at the Arsenal.

5.2 DW - DAYS PER YEAR: Commercial/Industrial Workers

5.2.1 DW - Rationale for Probability Distribution

The number of days per year worked by employees was derived by evaluating the data on the duration of vacation time, paid time-off (holidays) and unscheduled job absences. Sick leave was not included because of the lack of data on the utilization of sick leave by employees. While a number of sources exist for national or industry data, only information of geographical relevance and representative of the broad range of industries in the Metro Denver area was utilized. The information provided in each study referred to a combined population of workers from both commercial and industrial organizations, as discussed below. Therefore, the data did not allow separate commercial and industrial distributions to be developed for commercial and industrial populations.

Relevant quantitative data on the number of weeks of vacation was found in the Mountain States Employers Council 1990 Colorado Paid Time Off Policies Survey. Only that year's data were used as the values have not changed significantly over the years, according to MSEC. It is clear that some employees have very limited vacation, most have two weeks (Exposure Factors Handbook), and still others have "three weeks of vacation clustering around 10 years of service" in Colorado. (Joy Sandberg, MSEC, 7-15-91). Therefore, the number of weeks of vacation was estimated to be 1, 2, or 3 with probabilities 0.25, 0.50, and 0.25, respectively.

Data regarding company paid time-off (holidays) also varied, but not as widely as vacation time. The Mountain States Employers Council reports in the 1990 Colorado Paid Time Off Policies Survey, that holiday time and "other paid time off benefits do not change much over time", according to MSEC's Research Director (Joy Sandberg, MSEC, 7-15-91). The 1990 Survey, as well as earlier surveys, supports 8, 9 or 10 days paid time off. To account for the small number of workers who may receive fewer days, a distribution was fit to account for either one or two weeks of paid time off.

The Bureau of National Affairs has tracked unscheduled job absence nationally since 1974, and regionally since 1978. These data are collected as a part of the turnover survey discussed in Section 5.3.1. The data indicate that the probabilities of 0, 1, and 2 weeks of unscheduled job absences are approximately 0.17, 0.74 and 0.09, respectively. Colorado job absence data was tracked by the Department of Labor and Employment from 1971 to 1981 as a part of its turnover surveys. These data suggest that job absence rates were considerably higher during that time period. To avoid introduction of non-conservative elements which may have only historical note and about which no further explanation is available, these data were not included in the development of the DW distribution.

Sick time provided as a company benefit is reported in MSEC Colorado Paid Time Off Surveys over a number of years. However, data were not available on the utilization of sick time by workers. It is recognized that workers will occasionally miss work due to illness, but because

data are not available, no utilization of sick time was assumed in the development of this parameter.

The probability distribution for DW (days/year) worked by a commercial/industrial worker can be determined from the distribution of weeks/year worked. Because five days/week was used in Section 5.1.2 to transform hours/week to hours/day, the probability distribution in Section 5.2.1 for total weeks worked per year is transformed using 5 days/week to obtain the distribution of DW (days/year) for a commercial/industrial worker. Because five days/week was assumed for both transformations, the PPLV equations dependent on $TM \cdot DW$ will not be affected by the assumption of five days/week. However, this assumption does influence the distribution defined for DW. The assumption of an average work week consisting of five days is considered realistic for the commercial and industrial workers. It is believed that this assumption allows for an accurate characterization of DW.

5.2.2 DW - Probability Distribution

The probability distribution for DW (days/year) is a normal distribution with mean 236.31, standard deviation 2.777, and the following percentiles:

Probability (DW $\leq$ 244.87 days/year)	= 0.999
Probability (DW $\leq$ 244.09 days/year)	= 0.9975
Probability (DW $\leq$ 243.45 days/year)	= 0.995
Probability (DW $\leq$ 242.75 days/year)	= 0.99
Probability (DW $\leq$ 241.74 days/year)	= 0.975
Probability (DW $\leq$ 240.87 days/year)	= 0.95
Probability (DW $\leq$ 240.30 days/year)	= 0.925
Probability (DW $\leq$ 239.86 days/year)	= 0.90
Probability (DW $\leq$ 238.64 days/year)	= 0.80
Probability (DW $\leq$ 238.18 days/year)	= 0.75
Probability (DW $\leq$ 237.76 days/year)	= 0.70
Probability (DW $\leq$ 237.01 days/year)	= 0.60
Probability (DW $\leq$ 236.31 days/year)	= 0.50
Probability (DW $\leq$ 235.61 days/year)	= 0.40
Probability (DW $\leq$ 234.86 days/year)	= 0.30
Probability (DW $\leq$ 234.44 days/year)	= 0.25
Probability (DW $\leq$ 233.98 days/year)	= 0.20
Probability (DW $\leq$ 232.76 days/year)	= 0.10
Probability (DW $\leq$ 232.32 days/year)	= 0.075
Probability (DW $\leq$ 231.75 days/year)	= 0.05

The mathematical development of this distribution is given in Section 5.2.3.

5.2.3 DW - Mathematical Development

The number of weeks per year worked by employees was derived by evaluating three component probability distributions, the duration of vacation time, unscheduled job absence time and company paid time-off (holidays), and subtracting these time off durations from the 52 weeks in a year. To make the combination of holidays, vacation time and unscheduled absences mathematically tractable, the distributions for the components were defined for whole weeks rather than for days.

As stated above, the number of weeks of vacation was assumed to be 1, 2 or 3 with probabilities 0.25, 0.50, and 0.25, respectively, based on data on the number of weeks of vacation in 1990 found in the Mountain States Employers Council 1990 Colorado Paid Time Off Policies Survey. The MSEC Survey also reports holiday time. The 1990 Survey, as well as earlier surveys, supports 8, 9, or 10 days paid time off. Although the minimum number of days of paid time off for holidays is given as eight in the MSEC report, a distribution was fit which conservatively assumed 50 percent of the workers would have only one week (five days) of holiday time off. The distribution also assumed 50 percent of the workers would have two weeks (ten days) of holiday time off.

The Bureau of National Affairs, Inc. (1990) reports survey data on unscheduled job absences, which include absences for jury duty, disciplinary reasons, a death in the family, and excused absences for personal reasons. The BNA definition of unscheduled job absence excludes scheduled absences for vacation, holidays, or leave and absences for less than a full day. Furthermore, only the first four days of an absence from a long-term disability are counted. Hence, the BNA statistics on unscheduled job absences provide only a conservative lower bound on the number of weeks per year that a commercial/industrial worker would be absent from work.

The BNA defines job absence rates using the following formula:

$$\text{job absence rate} = 100 * (\# \text{ of worker days lost through job absence during month }) / [(\text{Average \# of Employees}) * (\# \text{ of workdays })].$$

The report provided both regional and national job absence rates. Regional (Western) data for the yearly average of the monthly median job absence rates (using the formula above) are:

1978	2.7
1979	2.6
1980	2.6
1981	2.3
1982	1.8
1983	1.9
1984	1.7

1985	1.9
1986	1.9
1987	1.8
1988	1.9
1989	1.8.

For each year, the probability of an unscheduled absence on a given workday equals the number of unscheduled absences for all workers divided by the number of scheduled workdays in a month for all workers. This probability equals the BNA job absence $\div$ 100. The average of the yearly absence averages since 1982 is approximately 1.8. Therefore, the average probability of an unscheduled absence on a given workday is equal to 0.018.

If a commonly accepted assumption of 250 scheduled workdays (two weeks of vacation) is made, and a probability of 0.018 of an absence on any given day, and on any day the outcome (presence or absence) is independent of the outcome of any other days, then the number of unscheduled absences follows a binomial distribution with parameters $n = 250$ and $p = 0.018$. That distribution implies the following probabilities:

Probability (0 days of unscheduled absence)	= 0.011
Probability (1 day of unscheduled absence)	= 0.049
Probability (2 days of unscheduled absence)	= 0.112
Probability (3 days of unscheduled absence)	= 0.169
Probability (4 days of unscheduled absence)	= 0.191
Probability (5 days of unscheduled absence)	= 0.172
Probability (6 days of unscheduled absence)	= 0.129
Probability (7 days of unscheduled absence)	= 0.082
Probability (8 days of unscheduled absence)	= 0.046
Probability (9 days of unscheduled absence)	= 0.023
Probability (10 days of unscheduled absence)	= 0.010
Probability (11 days of unscheduled absence)	= 0.004
Probability (12 days of unscheduled absence)	= 0.002.

Considering a 5 day workweek, 0-2 days corresponds to 0 weeks, 3-7 days corresponds to 1 week, and 8-12 days corresponds to 2 weeks. By summing the probabilities for the days corresponding to 0, 1, and 2 weeks of unscheduled absence, the following probability distribution was obtained:

Probability (0 weeks of unscheduled absences)	= 0.17 ^a
Probability (1 week of unscheduled absences)	= 0.74 ^b
Probability (2 weeks of unscheduled absences)	= 0.09 ^c .

- ^a 0.011 + 0.049 + 0.112
- ^b 0.169 + 0.191 + 0.172 + 0.129 + 0.082
- ^c 0.046 + 0.023 + 0.010 + 0.004 + 0.002

The probability distribution of the number of weeks worked was determined by explicitly evaluating the probability of each of the 18 possible combinations of three length of vacation possibilities, two number of holiday week possibilities, and three job absence probabilities:

Vacation		Holidays		Unscheduled Absence		Total	Product of 3 Probabilities
Wks	Prob	Wks	Prob	Wks	Prob	Weeks	Probability
1	0.25	1	0.50	0	0.17	2	0.02125
1	0.25	1	0.50	1	0.74	3	0.09250
1	0.25	1	0.50	2	0.09	4	0.01125
1	0.25	2	0.50	0	0.17	3	0.02125
1	0.25	2	0.50	1	0.74	4	0.09250
1	0.25	2	0.50	2	0.09	5	0.01125
2	0.50	1	0.50	0	0.17	3	0.04250
2	0.50	1	0.50	1	0.74	4	0.18500
2	0.50	1	0.50	2	0.09	5	0.02250
2	0.50	2	0.50	0	0.17	4	0.04250
2	0.50	2	0.50	1	0.74	5	0.18500
2	0.50	2	0.50	2	0.09	6	0.02250
3	0.25	1	0.50	0	0.17	4	0.02125
3	0.25	1	0.50	1	0.74	5	0.09250
3	0.25	1	0.50	2	0.09	6	0.01125
3	0.25	2	0.50	0	0.17	5	0.02125
3	0.25	2	0.50	1	0.74	6	0.09250
3	0.25	2	0.50	2	0.09	7	0.01125

For example, $0.02125 = 0.25 \times 0.50 \times 0.17$ is the probability of the combination of 1 week of vacation, 1 week of holidays, and 0 weeks of unscheduled job absences. The number of digits shown reflects only the actual arithmetic and not the underlying precision of the numbers, which is much less.

Adding the probabilities of combinations of events leading to the same number of weeks not worked and subtracting the number of weeks not worked from 52 weeks implies the following probability distribution on the number of weeks worked by a commercial/industrial worker in a year:

Weeks Not Worked	Weeks Worked	Probability
2	50	0.02125
3	49	0.15625
4	48	0.35250
5	47	0.33250

6	46	0.12625
7	45	0.01125

The probabilities of the number of weeks of vacation and holidays were roughly estimated and only some of the unscheduled job absences were accounted for. Therefore, the resulting distribution of the total number of weeks worker per year is expected to be generally conservative and does reflect the common knowledge that the number of weeks worked per year does vary from worker to worker and from year to year for the same worker.

The probability distribution for DW (days/year) worked by a commercial/industrial worker was determined from the above distribution for weeks/year by multiplying weeks/year by 5 days/week. As explained in Section 5.1.1, the factor of 5 days/week is canceled out when the distributions for TM and DW are multiplied together, and therefore does not change the PPLV outcome. The resulting probability distribution for DW (days/year) implies

Probability (DW = 250 days/year)	= 0.02125
Probability (DW = 245 days/year)	= 0.15625
Probability (DW = 240 days/year)	= 0.35250
Probability (DW = 235 days/year)	= 0.33250
Probability (DW = 230 days/year)	= 0.12625
Probability (DW = 225 days/year)	= 0.01125

and

Probability (DW ≤ 250 days/year)	= 1.00000
Probability (DW ≤ 245 days/year)	= 0.97875
Probability (DW ≤ 240 days/year)	= 0.82250
Probability (DW ≤ 235 days/year)	= 0.47000
Probability (DW ≤ 230 days/year)	= 0.13750
Probability (DW ≤ 225 days/year)	= 0.01125.

The normal and lognormal distributions were fit to these percentiles. The best fitting distribution for DW(days/year) is a normal distribution with mean 236.61 and standard deviation 2.777. The fit is described as follows:

Percentage	Estimated Distribution (days/year)	Normal Distribution (days/year)
100	250.00	257.14
97.875	245.00	241.94
82.25	240.00	238.88
47.00	235.00	236.10
13.75	230.00	233.28

1.125	225.00	229.97
0	220.00	215.48

This normal distribution is the DW (days/year) distribution for commercial/industrial workers at the Arsenal.

5.3 TE - YEARS PER LIFETIME: Commercial/Industrial Workers

5.3.1 TE - Rationale for Probability Distribution

The probability distribution for TE, the years/lifetime that a commercial/industrial worker would work at the Arsenal, was approximated by the probability distribution for the length of employment of commercial and industrial workers in the Metro Denver area. Information on the variability in commercial/industrial worker turnover (employer and occupational) is available from several Colorado and national sources including the Mountain States Employers Council, Inc., the State of Colorado, and the Bureau of Labor Statistics (BLS), United States Department of Labor. The relevant quantitative information provided by these sources refers to a combined population of workers from both commercial and industrial groups, as discussed below. Therefore, separate probability distributions were not individually developed for these populations. The years/lifetime that a commercial/industrial worker works at a given job for a given employer depends on the individual worker, salary issues, better opportunities, the economy, the worker's family considerations, the job, and a number of economic and other factors affecting the employer.

The probability distribution for TE for a commercial/industrial worker at the Arsenal was calculated from the distribution of job starting ages, i.e., the age at which the worker starts a job, and the age-dependent probabilities of leaving a job in the next year and each year thereafter. However, neither of these types of information was directly available. To derive this information, the following was obtained from the literature: national data regarding tenure at current job (used to obtain job starting age), national age-dependent pattern of occupational mobility, and job turnover rates specific to the Metro Denver area (the latter two being used to derive the age-dependent probability of leaving a job). The sources for these data are described below.

The job starting age distribution could have been estimated from past employment records for jobs at the Arsenal. However, most of the data is several years old, and the job types are not considered to be necessarily representative of the possible future types of jobs at the Arsenal. To obtain more timely information on the job starting age distribution and to include a greater diversity of job types, the data regarding tenure given in the Current Population Survey conducted by the Bureau of Census for the Bureau of Labor Statistics (BLS) were used. The starting age distributions for both sexes combined were averaged from two recent tenure tables (1981 and 1983) available from the BLS.

The probability that a current job holder will leave that job in the next year is influenced by the age of that worker. On the average, older workers are less likely to change occupations than younger workers. In a 1989 article in the Monthly Labor Review, J. P. Markey and W. Parks II of the Bureau of Labor Statistics report the occupational mobility rates for employed civilians by sex and age in selected years between 1965 and 1987. The occupational mobility rate (also known as the occupational separation rate) is defined by the BLS as the number of persons employed in a different occupation in the prior year as a proportion of the total employed in both years. The occupational mobility rates underestimate the age-dependent probability of leaving a job because job changes within an occupation are not included. However, the relative pattern of age-dependent occupational mobility was assumed to be similar to the age-dependent pattern for job mobility. This assumption of similarity allowed the age-dependent occupation mobility rates to be converted to job mobility rates by multiplying by a constant.

The derivation of the appropriate constant (2.4) is based on Mountain States Employer's Council data on job turnover in the Metro Denver area between 1983 and 1990, as explained in Section 5.3.3. The job turnover rate is defined by MSEC as the total number of separations during a year divided by the average number of employees during the same year. Separations include voluntary and non-voluntary termination of the job as well as transfers within the same company but to another location. Turnover does not track subsequent employment and is not an index of unemployment.

The derivation of the probability distribution for TE does not account for the relatively low number of workers who might have more than one job at the Arsenal. However, the TE distribution developed in Section 5.3.3 appears to provide a conservative characterization of job turnover when compared to the average job turnover rates for the manufacturing industry in the Metro Denver area, as will be discussed. The job duration distribution implies an average annual turnover rate of 25%, which is less than values reported by MSEC: 26.3% (1990), 28.1% (1989), and 27% (the average for 1983-1990). The average turnover rate implied by the job duration distribution is also much less than the turnover rates reported by the Labor Market Information Unit of the Colorado Division of Employment and Training for the manufacturing industry (both durable and non-durable goods sectors). These rates were tracked by the State between 1971 and 1981. As was mentioned in the discussion of job absence, no further information is available from the State of Colorado regarding the collection of this information. It is known that the data reflect a much narrower segment of the economy than do BLS or MSEC data. Therefore, these data have not been used quantitatively in the development of the distribution for TE. But their magnitude is of qualitative note, nonetheless. These rates are:

Total Separations	Separations Minus Layoffs
1971: 61.3 %	38.0 %
1972: 59.7 %	46.9 %
1973: 65.9 %	54.3 %
1974: 59.9 %	47.1 %

1975: 46.8 %	31.1 %
1976: 46.5 %	33.3 %
1977: 45.0 %	37.2 %
1978: 57.3 %	50.5 %
1979: 59.2 %	54.1 %
1980: 44.8 %	35.7 %
1981: 34.9 %	28.0 %

MSEC also reports the proportion of job durations less than or equal to 5 years among employees separated in a particular year. These proportions provide another indication of the conservatism in the job duration distribution relative to the Metro Denver area. The TE distribution's calculated probability of a job duration being less than or equal to 5 years is 0.75, which is less than the observed proportions in 1989 (0.82) and 1990 (0.88). Also, the TE distribution predicts 25% of the commercial/industrial workers at the Arsenal to work there for more than 5 years, whereas, 1989 Metro Denver observations, for example, indicate that only 18% of job durations ending in 1989 lasted more than 5 years. In 1990, even fewer (12%) job durations lasted more than five years.

The calculation of the percentage of job terminations in the Metro Denver area in 1989 with less than five years job duration is described in detail in order to illustrate how these observed proportions were determined. The calculation starts with the data provided by the Mountain States Employers Council. These data were reported as turnover rates for all employees, subcategorized as exempt and non-exempt employees, as follows:

1989 Turnover Rate

All Employees	28.1%
Exempt Employees	17.5%
Non-Exempt Employees	31.7%

and

Percent Job Durations ≤ 5 years

Employee Initiated Terminations	
Exempt Employees	70%
Non-exempt Employees	86%
Employer Initiated Terminations	
Exempt Employees	63%
Non-exempt Employees	86%.

The turnover rate data implies that the proportion of employees that were exempt and non-exempt (as defined by eligibility for overtime pay) were approximately 25% and 75% respectively (because $Section\ 4.2.1\ and\ 25\% * 17.5\% + 75\% * 31.7\% = 28.1\%$). It has also

been reported by Markey and Parks (1989) that about seven out of eight persons who change occupations do so voluntarily, i.e., approximately 87.5% of the above terminations were expected to be "Employee Initiated Terminations". The overall percentage of terminations with job durations not exceeding five years is calculated as follows:

$$0.875*[0.25*70\% + 0.75*86\%] + 0.125*[0.25*63\% + 0.75*86\%] = 82\%.$$

That is, as indicated above, 18% of jobs ending in 1989 had lasted more than 5 years.

The job duration probability distribution (adjusted to reflect the Metro Denver area) is used to approximate the probability distribution of TE, the years/lifetime that a commercial/industrial worker would work at the Arsenal.

5.3.2 TE - Probability Distribution

The probability distribution for TE (years/lifetime) for commercial/industrial workers at the Arsenal is a lognormal distribution with mean 4.374, standard deviation 6.974, and the following percentiles:

Probability (TE ≤ 75.08 years)	= 0.999
Probability (TE ≤ 54.60 years)	= 0.9975
Probability (TE ≤ 42.10 years)	= 0.995
Probability (TE ≤ 31.80 years)	= 0.99
Probability (TE ≤ 21.06 years)	= 0.975
Probability (TE ≤ 14.78 years)	= 0.95
Probability (TE ≤ 11.73 years)	= 0.925
Probability (TE ≤ 9.82 years)	= 0.90
Probability (TE ≤ 5.99 years)	= 0.80
Probability (TE ≤ 4.96 years)	= 0.75
Probability (TE ≤ 4.19 years)	= 0.70
Probability (TE ≤ 3.09 years)	= 0.60
Probability (TE ≤ 2.32 years)	= 0.50
Probability (TE ≤ 1.75 years)	= 0.40
Probability (TE ≤ 1.29 years)	= 0.30
Probability (TE ≤ 1.09 years)	= 0.25
Probability (TE ≤ 0.90 years)	= 0.20
Probability (TE ≤ 0.55 years)	= 0.10
Probability (TE ≤ 0.46 years)	= 0.075
Probability (TE ≤ 0.37 years)	= 0.05

Correspondingly, the $\ln(TE)$ is normally distributed with mean 0.8433 and standard deviation 1.1246. The mathematical development of this distribution is given in Section 5.3.3.

5.3.3 TE - Mathematical Development

The probability distribution for the number of years that a commercial/industrial worker at the Arsenal would be on a job was calculated from the probability distribution on the age at which the worker starts that job and the age-dependent probability that the worker leaves that job in each year thereafter. The job starting age distribution is based on the 1981 and 1983 job tenure data. The age-dependent probabilities of leaving a job were based on national age-dependent probabilities of leaving an occupation, adjusted to reflect the 1983-1990 Metro Denver job turnover statistics. These components are developed below.

The probability distribution of the commercial/industrial worker's age at the time a job is started can be estimated from tables prepared by the Bureau of Census for the Bureau of Labor Statistics. These tables show the probability distribution of age and tenure on the current job. Such tables were available for 1981 and 1983 and are reproduced in Appendix E along with the mathematical derivation of the job starting age distribution. The job starting age distribution was obtained from each table separately and then the results averaged. The specific results are tabled in Appendix E. Similar BLS data was reviewed for 1987 and found to be comparable to the data used.

The distribution among current job holders of the age at which they started their current jobs indicates the probability distributions for the starting age for workers taking such jobs. This distribution was assumed to describe the relative frequencies of starting ages for jobs at the Arsenal in a future commercial/industrial scenario. Of course, workers may take several jobs during their lifetime and their first job may or may not be at the Arsenal. Hence, the distribution of starting ages for Arsenal jobs was not assumed to be the same as the distribution of starting ages for an individual's first job.

The age-dependent probabilities of leaving an occupation were derived from the data on age-dependent occupational mobility, as described below. The number of persons employed in a different occupation in 1987 than in 1986 as a proportion of the total employed in both 1986 and 1987 (men and women combined) were reported in the Monthly Labor Review (BLS) as follows:

Ages 16 to 19 years:	0.2905
Ages 20 to 24 years:	0.2160
Ages 25 to 34 years:	0.1160
Ages 35 to 44 years:	0.0775
Ages 45 to 54 years:	0.0480
Ages 55 to 64 years:	0.0295
Ages 65 years and older:	0.0115.

These proportions provide information on the relative magnitude of age effects. However, the proportions will likely underestimate the absolute magnitudes of the age-dependent probability of leaving a job because job changes within an occupation were not included and because they do not include persons who left a job in 1986 but were not employed in 1987. For example,

if there are 100 workers on jobs in 1986, 50 workers leave in 1986, and 25 of those 50 workers take new jobs in 1987, then the above turnover rate is calculated to be 25/75 whereas 50/100 actually left their jobs in 1986. To adjust the absolute magnitudes of these proportions and to account for the differences between national and Denver area probabilities, these proportions were multiplied by the constant 2.4. As discussed below, this constant was derived from job turnover data in the Metro Denver area between 1983 and 1990.

For a given job starting age distribution and a given set of age-dependent probabilities of leaving a job, the probability distribution of the duration (years/lifetime) of a job for a commercial/industrial worker was calculated. Let

$PLJ_i =$ probability of a worker leaving a job during a year when the worker is age i years

and

$PSA_i =$ probability that the age of the worker starting a job is i years.

The probability that a worker starts a job at age i and leaves this job k years later is

$$PSA_i * [(1-PLJ_i) * (1-PLJ_{i+1}) * \dots * (1-PLJ_{i+k-1}) * PLJ_{i+k}]$$

which is simply the probability of starting a job at age i multiplied by the product of the probabilities of not leaving the job in first k years after starting the job at age i , multiplied by the probability of leaving the job in the $(k+1)$ th year.

The probability $P(k)$ that a worker's total duration in a job is k years is simply the sum of the above probabilities over all possible starting ages ($i = 5, 6, \dots, 69$ assuming mandatory retirement at age 70 years):

$$P(k) = \sum_{i=5,6,\dots,69} PSA_i * (1-PLJ_i) * (1-PLJ_{i+1}) * \dots * (1-PLJ_{i+k-1}) * (PLJ_{i+k})$$

This equation defines the probability distribution for TE (years of work at the Arsenal per lifetime) as estimated by job duration $P(k)$.

However, the age-dependent probabilities of leaving a job after i years (PLJ_i) are not available directly from the data. They are assumed to follow the same relative pattern as age-dependent probabilities of leaving an occupation (PLO_i) and therefore are equal to some constant times the age dependent probabilities of leaving an occupation. In the above equation $PLO_i * C$ was substituted for PLJ_i and the corresponding mean of this distribution was derived with C as an unknown.

The reciprocal of the mean job duration is the job turnover rate. For example, if the mean job duration is five years, then the average employee experiences one job change (separation) every five years, and, therefore, the probability of a separation in a given year is 1/5th. If a single worker experiences one separation out of every five years, then five workers will experience a total of one separation in a year, and 100 workers will experience a total of 20 separations in a year, etc, implying that the job turnover rate as defined by MSEC is 1/5, i.e., one separation per five workers per year.

The reciprocal of the mean job duration was equated to a Metro Denver job turnover rate based on the following job turnover rates between 1983 and 1990 reported by the Mountain States Employers Council, as follows:

Year	Turnover Rate
1990:	26.3%
1989:	28.1%
1988:	24.1%
1987:	23.3%
1986:	26.1%
1985:	27.4%
1984:	31.4%
1983:	27.9%
Average:	26.825%.

To assess whether prevailing economic conditions over the 1983-1990 time period may have influenced turnover, several economists were contacted. According to Richard Wobbekind, Director of the Research Division of the School of Business, Colorado University, economic conditions in the State of Colorado from 1982-1991 covered a broad spectrum of "boom and bust" (growth and recession) cycles. He described each year as follows:

Year	Economic Condition	MSEC Average Turnover
1982	boom	not given
1983	boom	27.9 %
1984	transition: stability→bust	31.4 %
1985	bust	27.4 %
1986	bust	26.1 %
1987	transition: bust→stability	23.3 %
1988	boom	24.1 %
1989	boom	28.1 %
1990	boom	26.3 %
1991	boom	not yet available

Boom or bust (growth or recession) determinations are based on several economic indices such as employment by industry sector and revenues, as provided in the annual Colorado University School of Business research publication, Business Economic Outlook. Dr. Wobbekind stated that the years 1988-1991 are being used to predict economic growth rate for 1992 through the year 2000. He reports that a 2% annual growth rate in the Colorado economy is predicted.

Turnover data used in development of the probability distribution for TE were compiled by the Mountain States Employers Council. This association of public and private employers provides member services to 1400 employer entities representing a broad industry spectrum, including manufacturing, oil & gas, financial services, health care, transportation, utilities, communications, government, insurance, retail/wholesale and mining. Member companies providing survey data are located throughout Colorado, but the majority are from the Metro Denver area. Data used in the development of TE include 1983-1990 average annual percent turnover. Data from each year were equally weighted in the development of TE.

The components of turnover rates are terminations initiated by employees and terminations initiated by employers. According to economists, in a boom (growth) economy, employee initiated terminations tend to increase as more favorable opportunities become available; employer initiated terminations tend to decrease. In a bust (recession) economy, employees tend to be less occupationally mobile and employer initiated terminations tend to increase (F. Ruppel, R. Gilbert, and W.R Reed of Texas A&M University, 1-7-92; R. Wobbekind, Colorado University, 1-7-92; J. Sandberg, MSEC, 1-8-92). These factors, therefore, buffer one another in the occurrence of turnover during growth or recession economic conditions.

It can be seen from the MSEC data above that turnover in boom years is not very different from turnover in bust years. On the other hand, unemployment would be expected to vary with prevailing economic conditions, but it is not synonymous with turnover.

The national age-dependent probabilities of an occupational change in a year imply a national occupational turnover rate of slightly more than 10%. If these age-dependent probabilities are multiplied by 2.4, then the turnover rate is 25% which is close to the average Metro Denver job turnover rate (26.825%) between 1983 and 1990 but still somewhat conservative. Thus, multiplying the national age-dependent probabilities of an occupational change by 2.4 effectively transforms them to probabilities of "Metro Denver job" changes instead of "national occupational" changes. The constant multiplier allows the data on age-dependence to be combined with local job turnover data.

After an appropriate value for C (2.4) was determined, this value was then inserted into the probability distribution formula for TE:

$$P(k) = \sum_{i=5,6,\dots,69} PSA_i * (1-PLO_{i1}C) * (1-PLO_{i+1}C) * \dots * (1-PLO_{i+k-1}C) * (PLO_{i+k}C)$$

These calculated values give the probability that the job duration is k years for k = 0, 1, 2 ...
The probability that the job duration is ≤ K years is the sum

$$P(0) + P(1) + P(2) + \dots + P(K).$$

These calculated cumulative probabilities represent the following job duration probabilities:

Probability (Job Duration ≤ 45 years)	= 1.0000
Probability (Job Duration ≤ 44 years)	= 0.9999
Probability (Job Duration ≤ 43 years)	= 0.9999
Probability (Job Duration ≤ 42 years)	= 0.9998
Probability (Job Duration ≤ 41 years)	= 0.9997
Probability (Job Duration ≤ 40 years)	= 0.9996
Probability (Job Duration ≤ 39 years)	= 0.9995
Probability (Job Duration ≤ 38 years)	= 0.9993
Probability (Job Duration ≤ 37 years)	= 0.9991
Probability (Job Duration ≤ 36 years)	= 0.9987
Probability (Job Duration ≤ 35 years)	= 0.9983
Probability (Job Duration ≤ 34 years)	= 0.9978
Probability (Job Duration ≤ 33 years)	= 0.9972
Probability (Job Duration ≤ 32 years)	= 0.9965
Probability (Job Duration ≤ 31 years)	= 0.9957
Probability (Job Duration ≤ 30 years)	= 0.9947
Probability (Job Duration ≤ 29 years)	= 0.9936
Probability (Job Duration ≤ 28 years)	= 0.9922
Probability (Job Duration ≤ 27 years)	= 0.9905
Probability (Job Duration ≤ 26 years)	= 0.9886
Probability (Job Duration ≤ 25 years)	= 0.9863
Probability (Job Duration ≤ 24 years)	= 0.9838
Probability (Job Duration ≤ 23 years)	= 0.9811
Probability (Job Duration ≤ 22 years)	= 0.9780
Probability (Job Duration ≤ 21 years)	= 0.9744
Probability (Job Duration ≤ 20 years)	= 0.9705
Probability (Job Duration ≤ 19 years)	= 0.9662
Probability (Job Duration ≤ 18 years)	= 0.9613
Probability (Job Duration ≤ 17 years)	= 0.9557
Probability (Job Duration ≤ 16 years)	= 0.9494
Probability (Job Duration ≤ 15 years)	= 0.9423
Probability (Job Duration ≤ 14 years)	= 0.9344
Probability (Job Duration ≤ 13 years)	= 0.9254

Probability (Job Duration $\leq$ 12 years) = 0.9150
 Probability (Job Duration $\leq$ 11 years) = 0.9031
 Probability (Job Duration $\leq$ 10 years) = 0.8891
 Probability (Job Duration $\leq$ 9 years) = 0.8725
 Probability (Job Duration $\leq$ 8 years) = 0.8522
 Probability (Job Duration $\leq$ 7 years) = 0.8270
 Probability (Job Duration $\leq$ 6 years) = 0.7952
 Probability (Job Duration $\leq$ 5 years) = 0.7544
 Probability (Job Duration $\leq$ 4 years) = 0.7007
 Probability (Job Duration $\leq$ 3 years) = 0.6267
 Probability (Job Duration $\leq$ 2 years) = 0.5181
 Probability (Job Duration $\leq$ 1 years) = 0.3407.

The normal and lognormal distributions were fit to these cumulative probabilities. The best fitting distribution for TE (years/lifetime) is a lognormal distribution with mean 4.374 and standard deviation 6.974. The corresponding probability distribution for $\ln(TE)$ is a normal distribution with mean 0.8453 and standard deviation 1.1246. The fit is described as follows:

Cumulative Probability	Calculated Probability (years/lifetime)	Lognormal Distribution (years/lifetime)
0.9905	27.00	32.50
0.9886	26.00	30.08
0.9863	25.00	27.77
0.9838	24.00	25.77
0.9811	23.00	24.03
0.9780	22.00	22.38
0.9744	21.00	20.82
0.9705	20.00	19.43
0.9662	19.00	18.15
0.9613	18.00	16.93
0.9557	17.00	15.77
0.9494	16.00	14.68
0.9423	15.00	13.65
0.9344	14.00	12.69
0.9254	13.00	11.77
0.9150	12.00	10.88
0.9031	11.00	10.02
0.8891	10.00	9.18
0.8725	9.00	8.36
0.8522	8.00	7.53
0.8270	7.00	6.71
0.7952	6.00	5.87

0.7544	5.00	5.04
0.7007	4.00	4.20
0.6267	3.00	3.34
0.5181	2.00	2.45
0.3407	1.00	1.46
0.0600	0.25	0.40

This lognormal distribution is the TE (years/lifetime) distribution for commercial/industrial workers at the Arsenal.

6.0 REFERENCES

- Bright, A. D., and Manfredo, M.J. User Preferences for Wildlife Viewing at the Rocky Mountain Arsenal, Denver, Colorado. Colorado State University in cooperation with USFWS, RMA. February 1, 1991.
- Bureau of the Census. Current Population Survey, Tenure with Current Employer by Age and Sex. Prepared for the Bureau of Labor Statistics. Washington, D.C. January, 1981, 1983, 1987.
- Bureau of Labor Statistics (BLS), United States Department of Labor (USDOL). News. Washington, D.C. June 26, 1990 and June 29, 1989 newsletters.
- Bureau of National Affairs, Personnel Policies Forum. Job Absence and Turnover Survey. Quarterly and annual surveys from 1974 to current. Western Region absence and turnover data, 1978 to current. Published by BNA. Washington, DC. 1974-1990.
- Carey, M. Occupational Tenure, Employer Tenure, and Occupational Mobility. Occupational Outlook Quarterly. US Government Printing Office (USGPO): 1990-262-226/20002. Summer, 1990.
- Colorado Division of Employment and Training. Labor Turnover Rates in Selected Industries. Annual Surveys, 1971 to 1980.
- Colorado Division of Parks and Outdoor Recreation (DPOR). 1989. 1988 Visitors Use Survey. Denver, CO. 1989.
- Colorado Division of Wildlife. Colorado Fishing Map, 1991.
- Colorado Division of Wildlife. Fisherman Questionnaire, 1989. State Project # F-85-R-3 covering July 1, 1989 to June 30, 1990.
- Colorado Economic and Demographic Information System. Colorado Department of Local Affairs. 1990.
- Commerce City Comprehensive Plan, 1985-1990. City of Commerce City, Colorado.
- Ebasco Services, Inc. Final Human Health Exposure Assessment for Rocky Mountain. Prepared for the U.S. Army Program Manager's Office for the Rocky Mountain Arsenal Contamination Cleanup. September, 1990.
- Eck, A. New Occupational Separation Data Improve Estimates of Job Replacement Needs. Monthly Labor Review. Published by the Bureau of Labor Statistics, USDOL. March, 1984.

- Feller, W. An Introduction to Probability Theory and Its Applications. Volume 1. John Wiley & Sons, Inc., New York. 1950.
- Israeli, M. and Nelson, C.B. *Distribution and Expected Time of Residence for U.S. Households.* Risk Analysis. Vol. 12, No. 1, 1992.
- Langer, G. Water Resources and Sport Fishery Management on the Rocky Mountain Arsenal. USFWS. 1990.
- Lindgren, B.W. Statistical theory. The MacMillan Company. New York. 1965.
- Markey, J.P. and Parks, W. *Occupational Change: Pursuing a different kind of work.* Monthly Labor Review. Published by the Bureau of Labor Statistics, USDOL. September, 1989.
- Mountain States Employers Council, Inc. (MSEC). Colorado Paid Time Off Policies. Denver, CO. 1990.
- Mountain States Employers Council., Inc. (MSEC). Colorado Turnover Survey. Annual all Colorado Survey, including Metro Denver. Denver, CO. 1989-90.
- Mountain States Employers Council, Inc. (MSEC). Metro Denver Turnover Surveys. Annual surveys from 1981 to current, incorporated into Colorado Turnover Survey data after 1989. Denver, CO. 1981-1990.
- National Park Service, U.S. Department of the Interior. 1982-1983. Nationwide Recreation Survey. Washington, DC. 1984.
- National Sporting Goods Association Sports Participation in 1988 - State by State. Mt. Prospect, IL. 1989.
- Sielken, R.L. Decision Analysis and Quantitative Risk Characterization. © 1990 Chemical Manufacturers Association, Inc. Bryan, Texas. August, 1990.
- Snedecor, G. W. and Cochran, W. G. Statistical Methods. The Iowa State University Press. Ames, Iowa. 1980.
- Taha, H. A. Operations Research: An Introduction. The MacMillan Company. New York. 1971.
- Telephone conference notes. Roy Fronczyk, THK Associates to Tim Moore, Commerce City. December 12, 1991.

- THK Associates, Inc.** Estimates of Visitation to Alternate Recreational Surface Uses Proposed for the Rocky Mountain Arsenal. Prepared for MK Environmental Services. February, 1990.
- THK Associates, Inc.** Memorandum entitled *Additional Population Data on Areas Adjacent to RMA, Estimate of housing units and population within one-quarter mile of perimeter of RMA.* March 13, 1992.
- THK Associates, Inc.** Prediction of Frequency of Recreational Visits to the Rocky Mountain Arsenal. Prepared for MK Environmental Services, July, 1991.
- Thomas, E.G.** *Administrative Management Survey: Turnover Reflects Improved Economy.* Management World. Oct., 1985.
- U.S. Bureau of the Census, Department of Commerce.** *Selected Population and Housing Characteristics, Denver-Boulder, CO CMSA.* 1990.
- U.S. Bureau of the Census, Department of Commerce.** *Colorado 1990 Population Totals.* 1990.
- U.S. Environmental Protection Agency (USEPA).** Exposure Factors Handbook. Office of Exposure Assessment. EPA/600/8-89/043. May 1989.
- U.S. Environmental Protection Agency (USEPA).** Risk Assessment Guidance for Superfund. Vol. 1. Human Health Evaluation Manual (Part A). Office of Emergency and Remedial Response. EPA/540/1-89/002. December, 1989.
- U.S. Environmental Protection Agency (USEPA).** OSWER Directive 9285.6-03 regarding Human Health Evaluation Manual, Supplemental Guidance: "Standard Default Exposure Factors". March 25, 1991.
- Walsh, R.G.** Recreation Economic Decisions. Comparing Benefits and Costs. Venture Publishing, Inc. State College, PA. 1986.
- Wilks, S.S.** Mathematical Statistics. John Wiley & Sons, Inc. New York. 1962.
- Personal communication.** Joy Sandberg, Director of Research, Mountain States Employers Council, Inc. July 15, 1991 and January 8, 1992.
- Personal communication.** Marvin Wojahn and Ken Anderson, Colorado Dept. of Labor and Employment, April 11, 1991.
- Personal communication.** Jim Worsham, Colorado Commission on Higher Education. June 5, 1991.

Personal communication. Greg Langer, Fisheries Biologist, USFWS. August 14, 1991.

Personal communication. Neal Paul, Public Service Company of Colorado Marketing Department. August 19, 1991.

Personal communication. Ron Fish, Public Service Company of Colorado Marketing Department. August 23, 1991 and May 23, 1992.

Personal communication. F. Ruppel, R. Gilbert, and W.R. Reed. Texas A & M University. January 7, 1992.

Personal communication. Tim Moore, Commerce City Athletic Coordinator. December 12, 1991 and January 14, 1992.

Personal communication. R Wobbekind, Director, School of Business, Colorado University. January 7, 1992.

Personal communication. T. Longnecker, Department of Statistics, Texas A & M University. June 30, 1992.

Personal communication. Dan Kasen, Research Analyst, National Sporting Goods Association. May 20, 1992.

Personal communication. Sue Piatt, Demographer, Denver Regional Council of Governments. July 1, 1992.

7.0 FIGURES

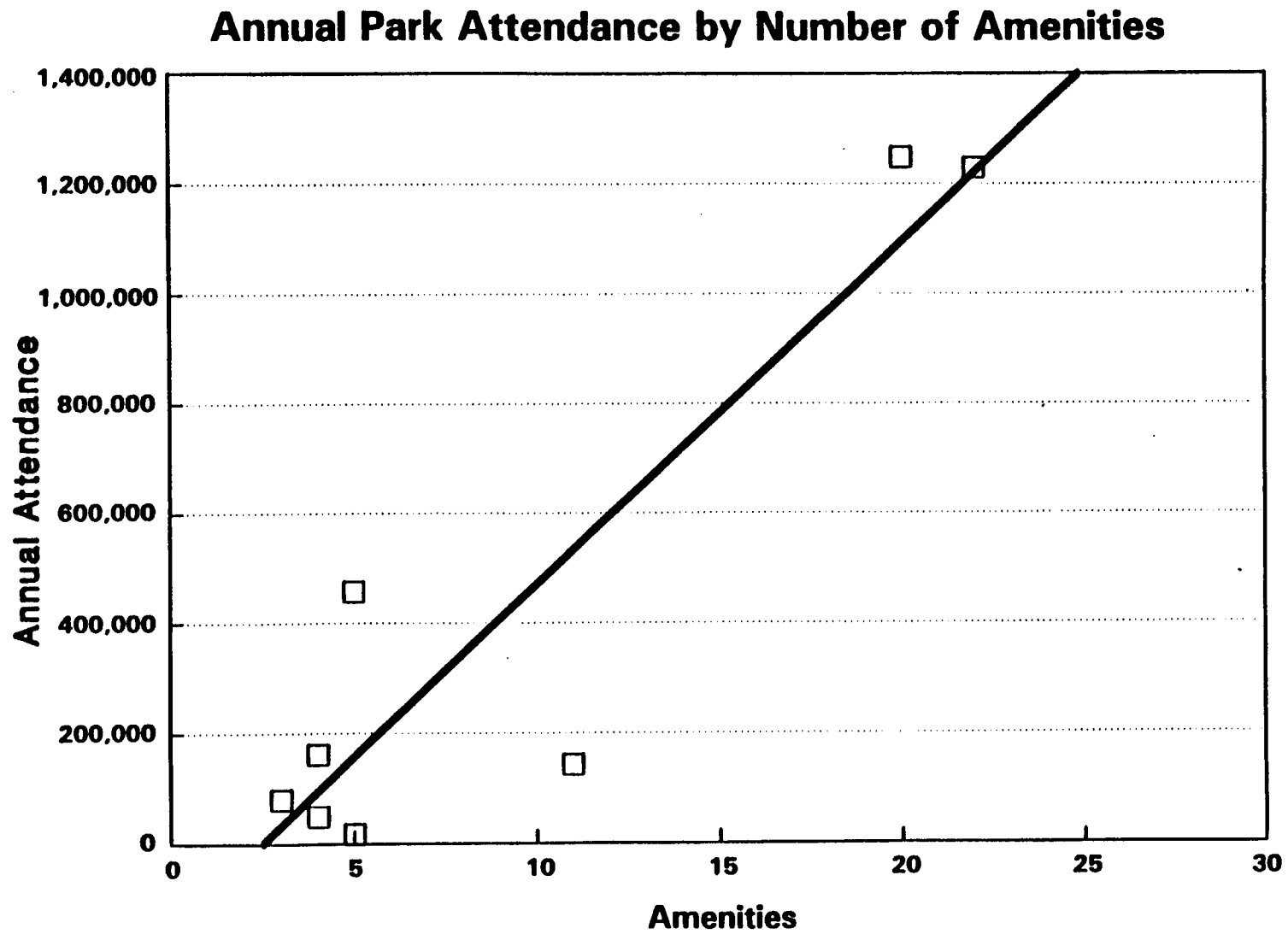


Figure 3-1

Annual Park Attendance by Park Size

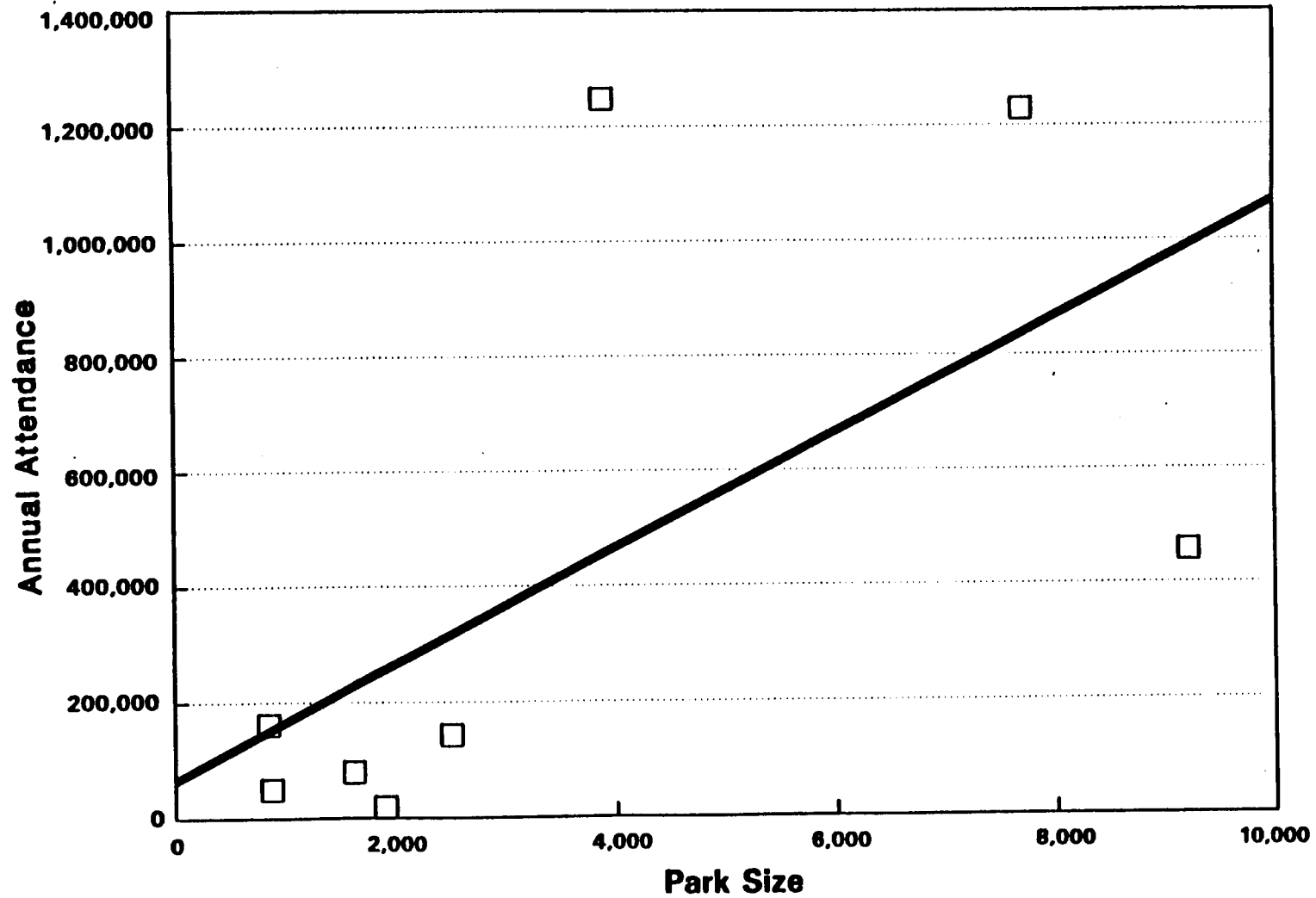


Figure 3-2

Annual Attendance at Denver Metropolitan Area Parks Versus Amenities and Size (Acres)

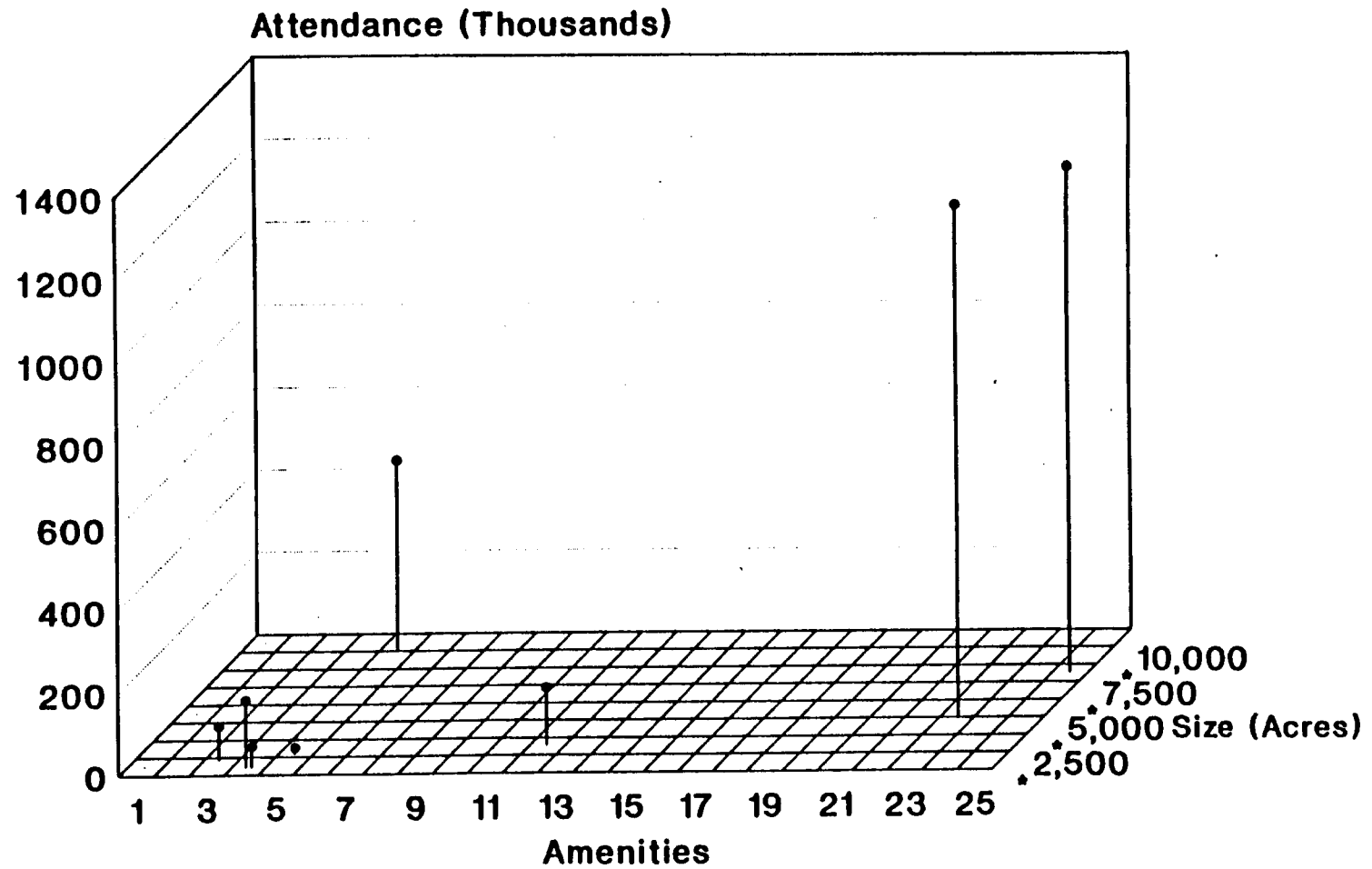


Figure 3-3

**Figure 3.1.3 Comparison of Simulated and Fitted Cumulative
Distribution Functions for Hours/Activity Day for Visitors
in the Regulated/Casual Visitor Population**

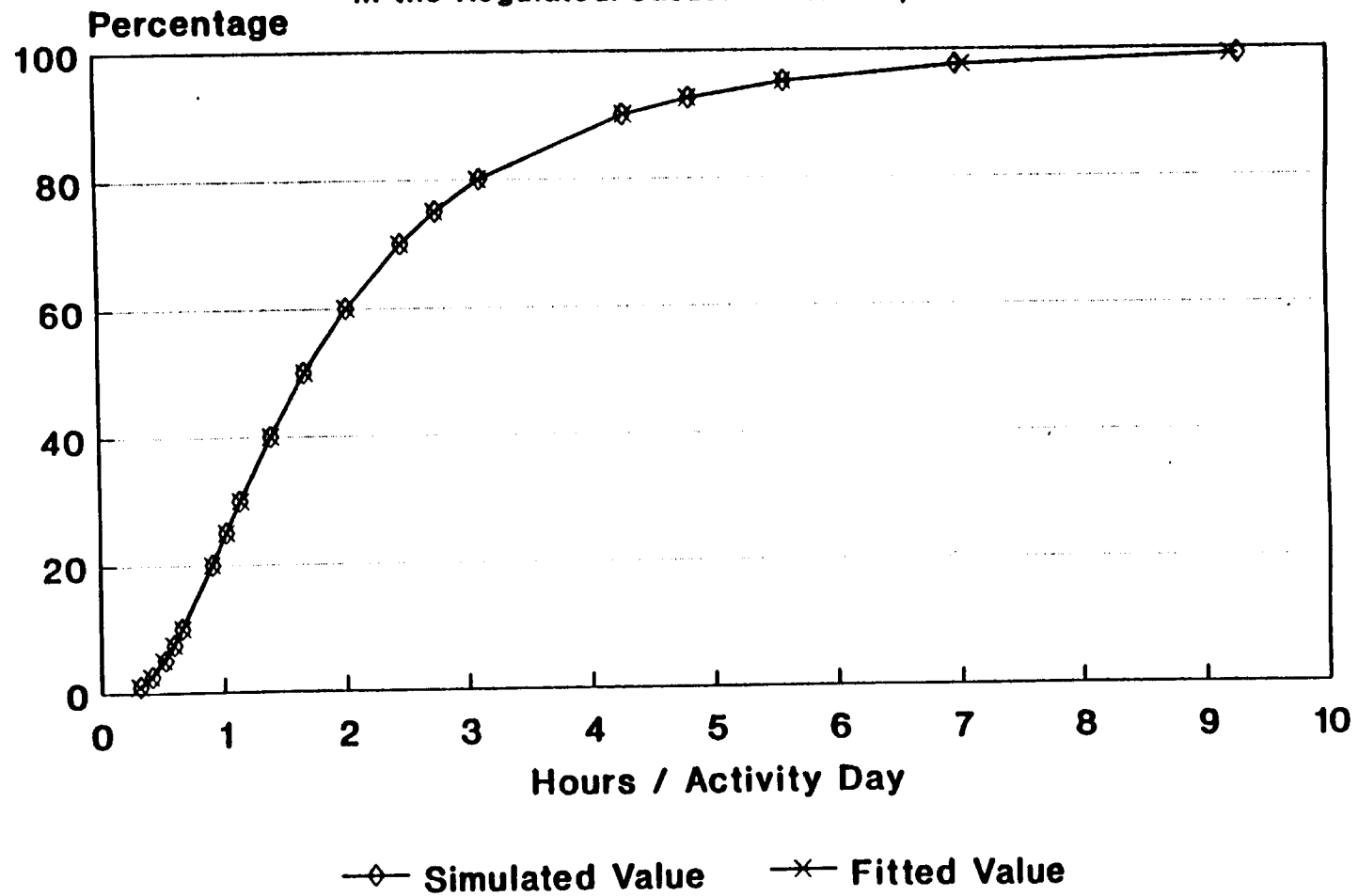


Figure 3.2.3.1 Comparison of Simulated and Fitted Cumulative Distribution Functions for Days/Year for Regulated/Casual Visitors in the Neighborhood Subpopulation

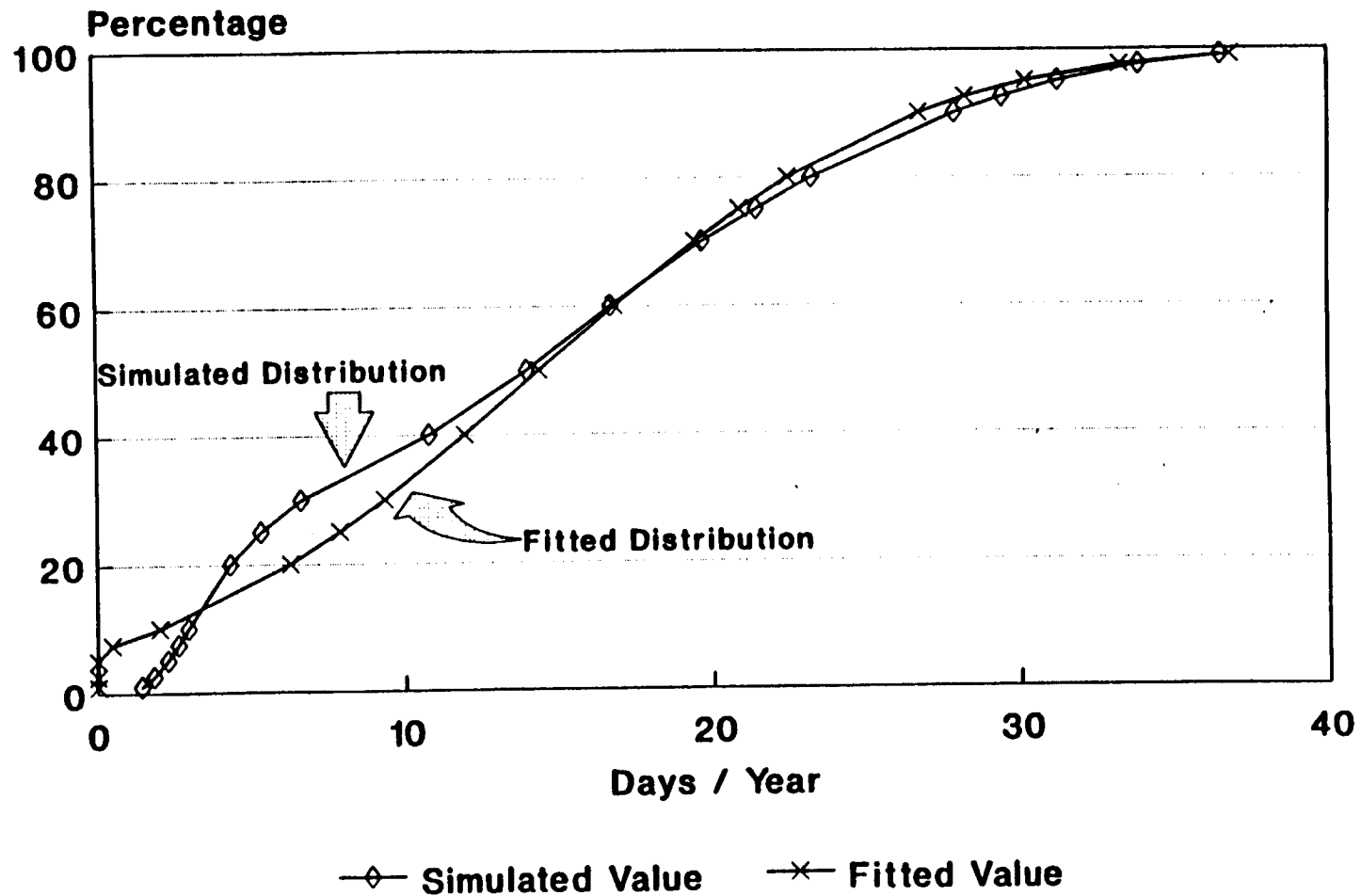


Figure 3.3.3 Comparison of Observed and Fitted Cumulative Distribution Functions for the PSCo Data Based on Total Residence Duration for Regulated/Casual Visitors

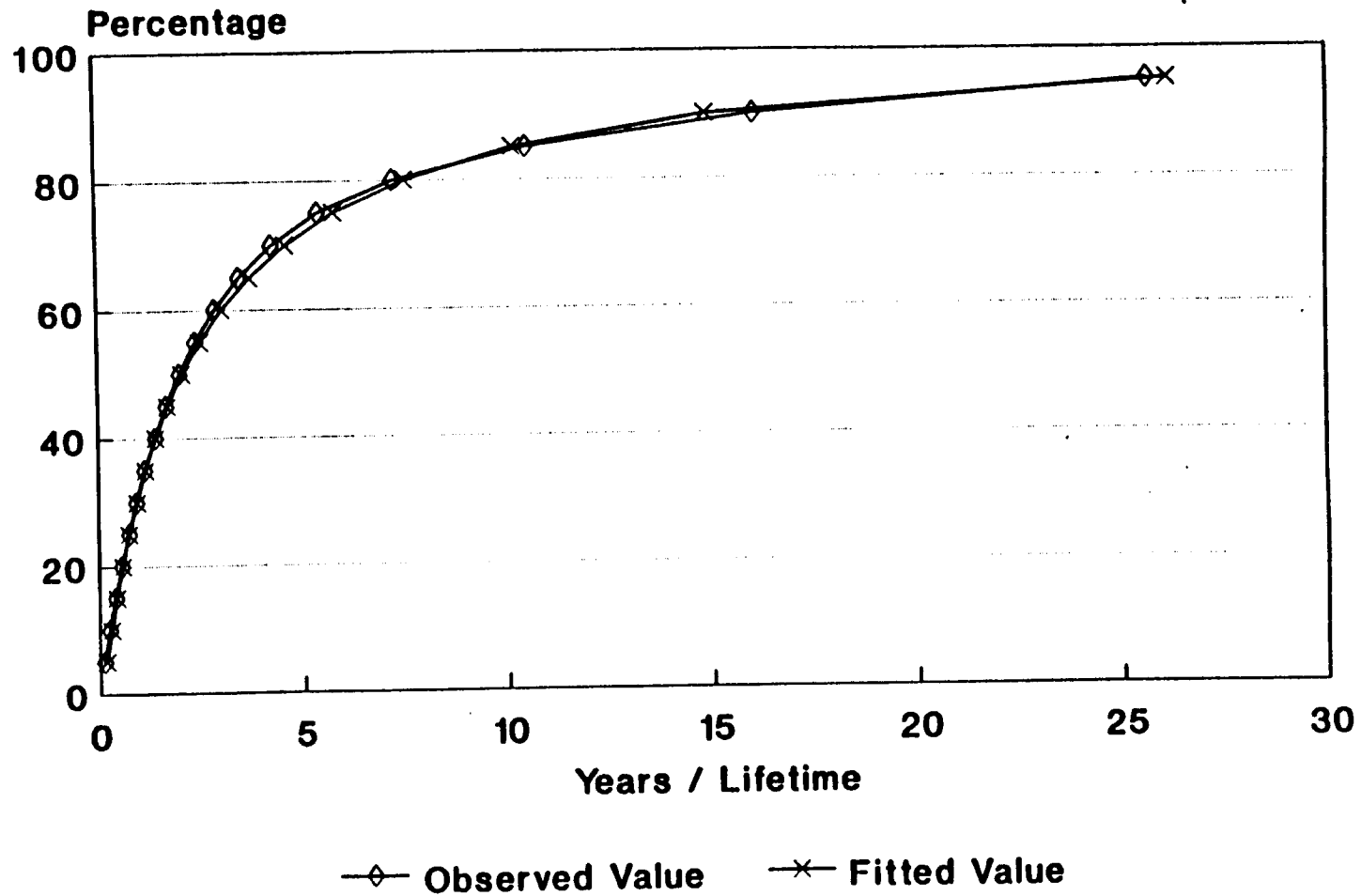


Figure 3.3.3.1 Comparison of Simulated and Fitted Cumulative Distribution Functions for Years/Lifetime for Regulated/Casual Visitors in the Neighborhood Subpopulation

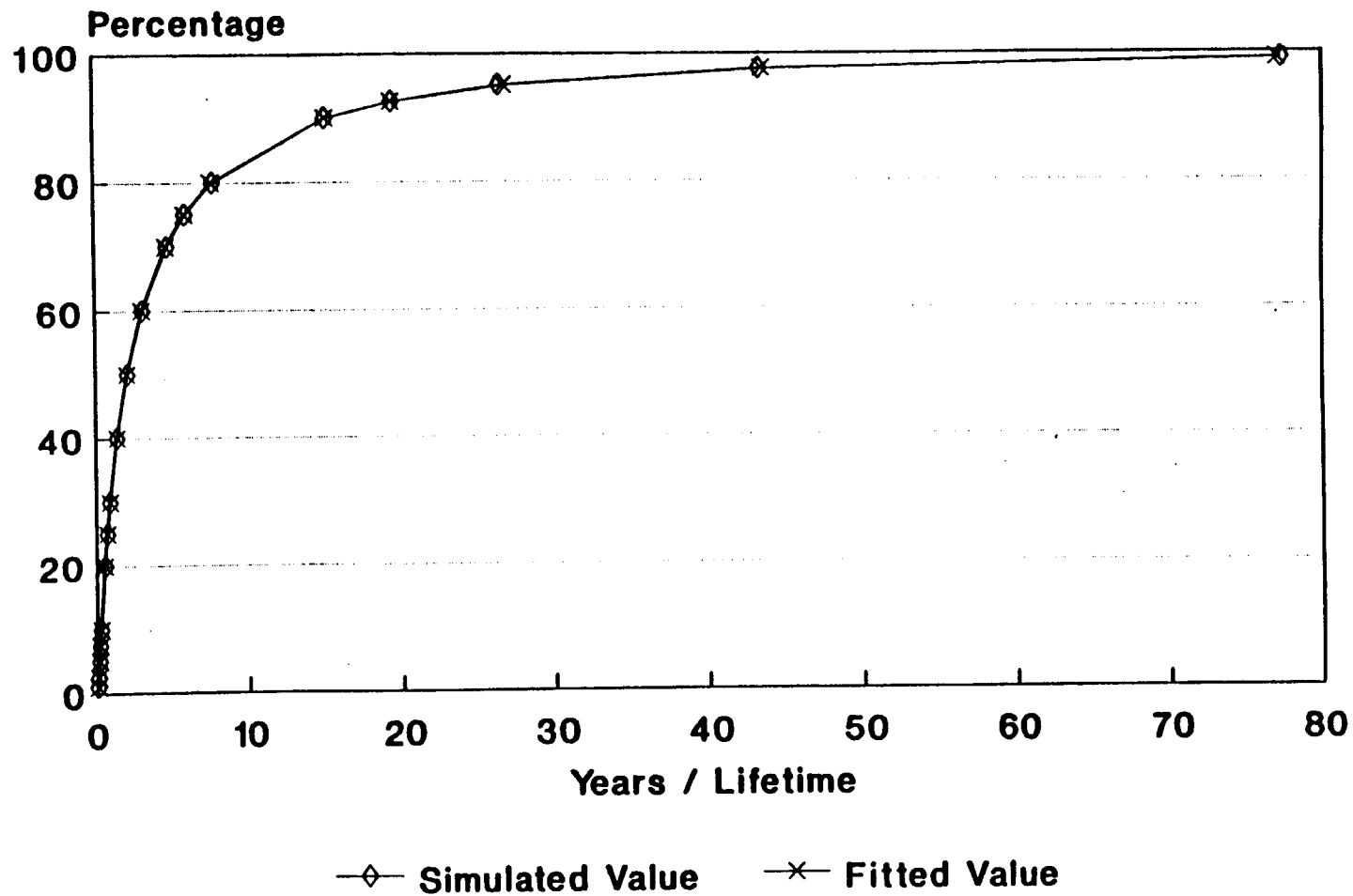
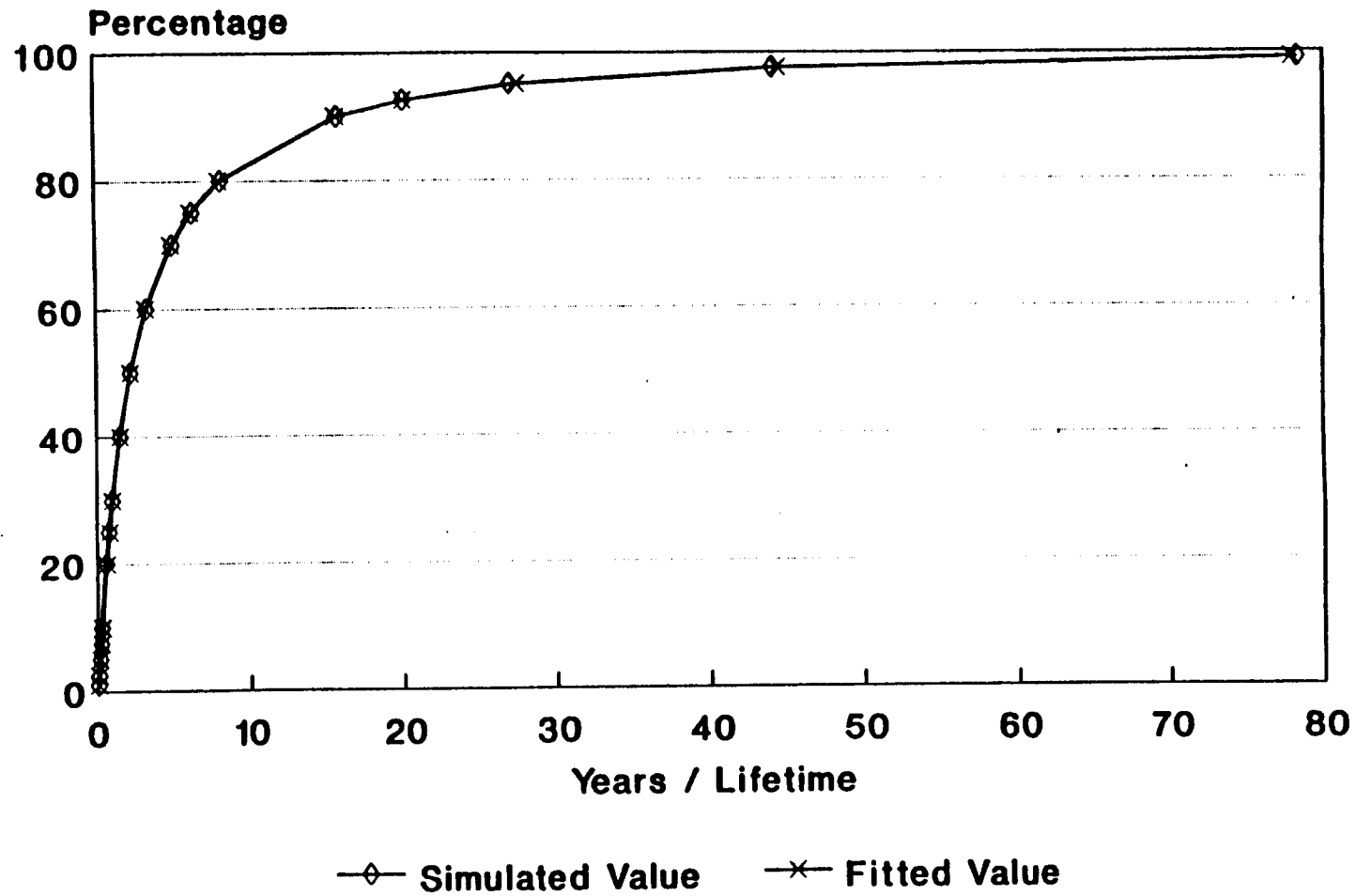


Figure 3.3.3.2 Comparison of Simulated and Fitted Cumulative Distribution Functions for Years/Lifetime for Regulated/Casual Visitors in the Regional Subpopulation



**Figure 3.3.3.3 Comparison of Simulated and Fitted Cumulative
Distribution Functions for Years/Lifetime for Visitors in
the Regulated/Casual Visitor Population**

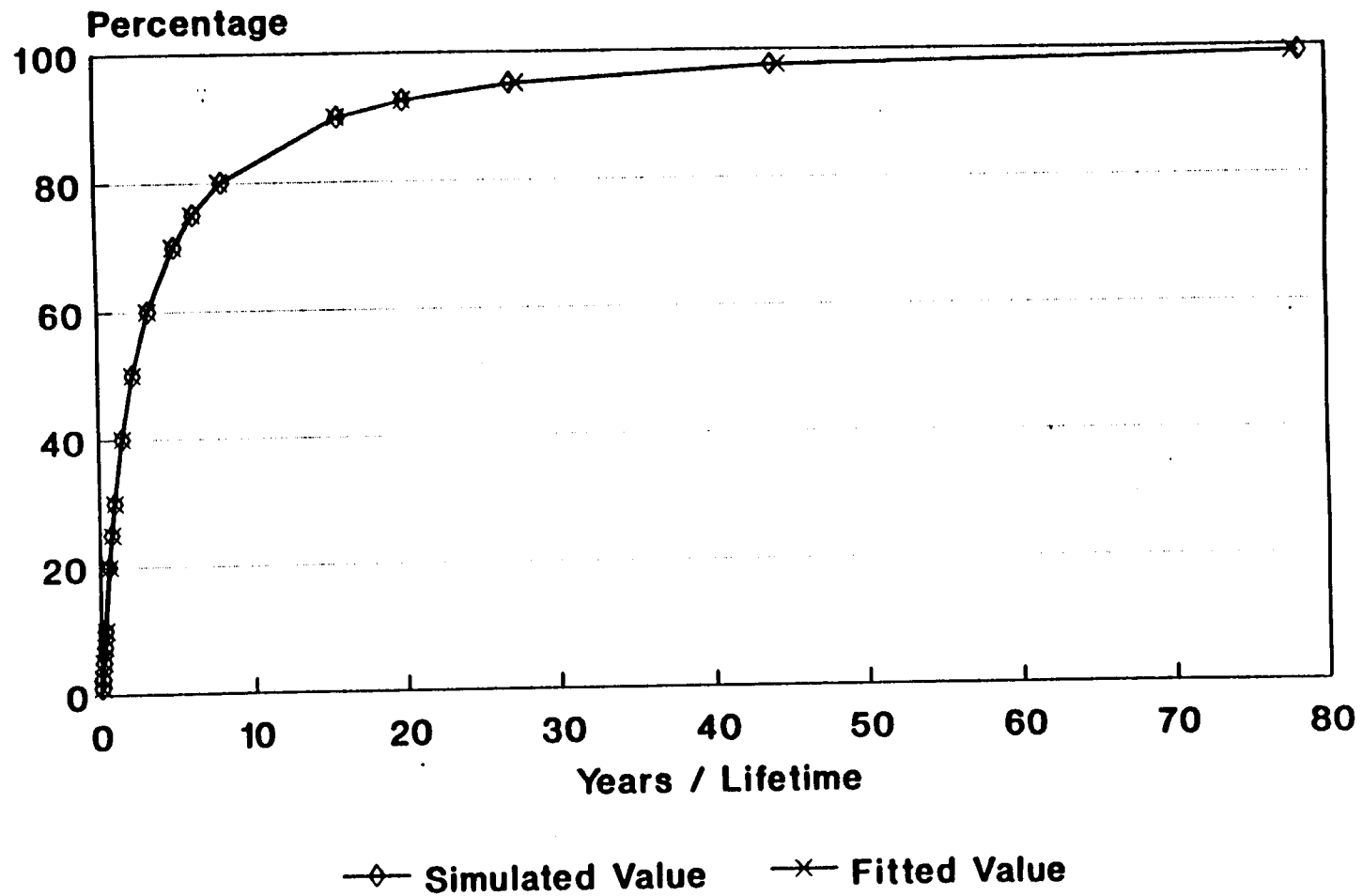
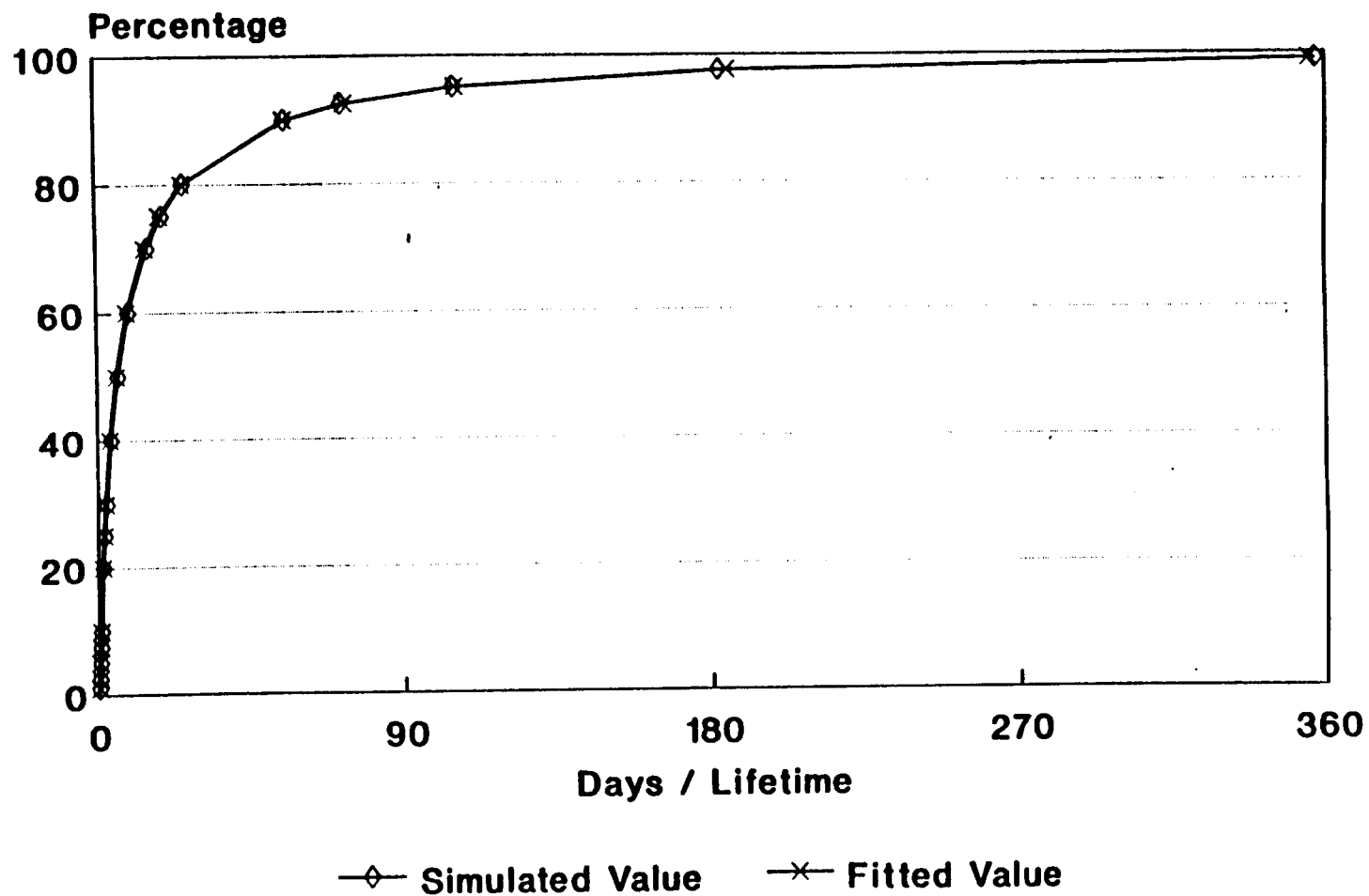


Figure 3.4.3 Comparison of Simulated and Fitted Cumulative Distribution Functions for Days/Lifetime for Visitors in the Regulated/Casual Visitor Population



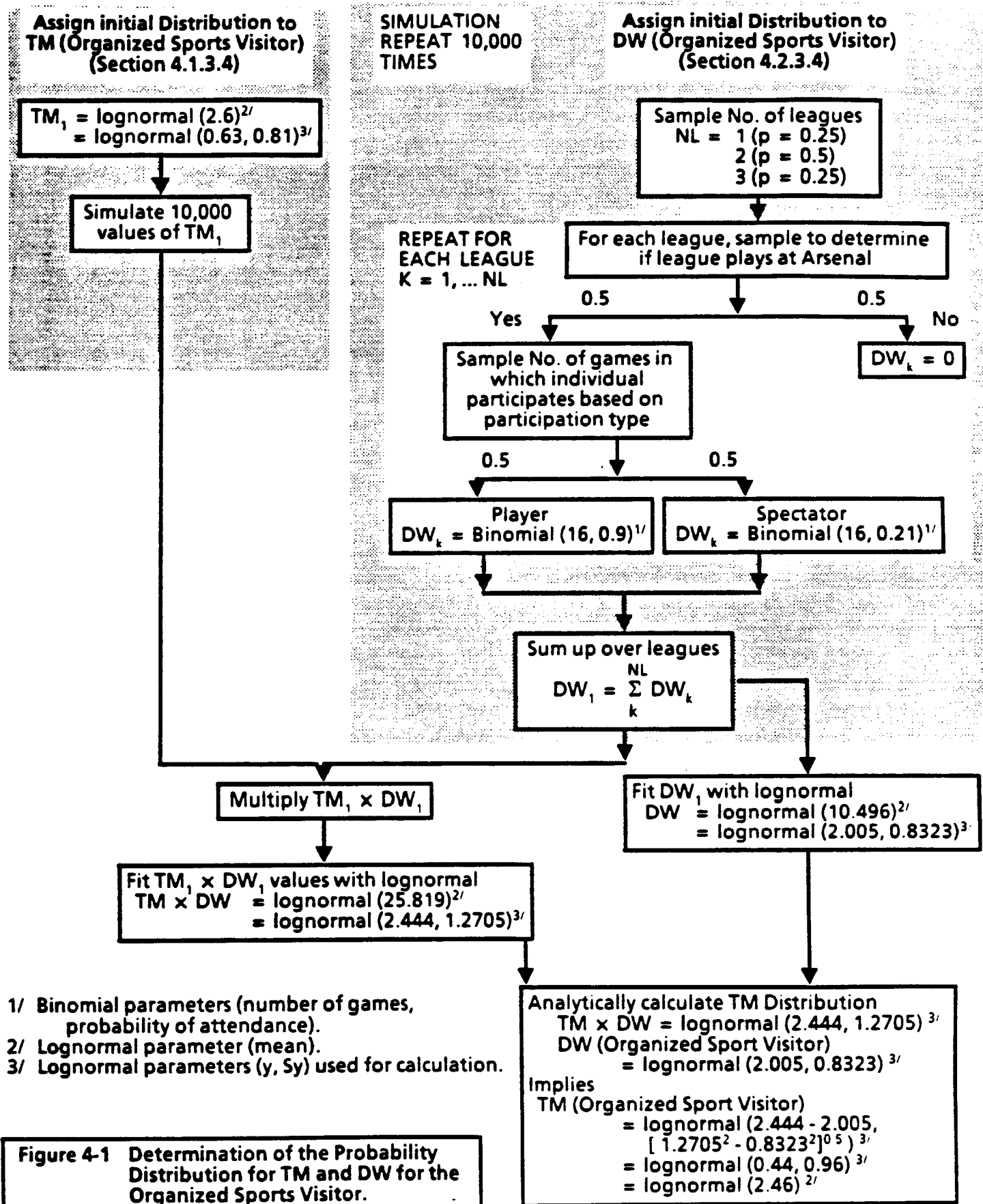


Figure 4.1.3.1 Comparison of Observed and Fitted Cumulative Distribution Functions for Hours/Activity Day for Anglers

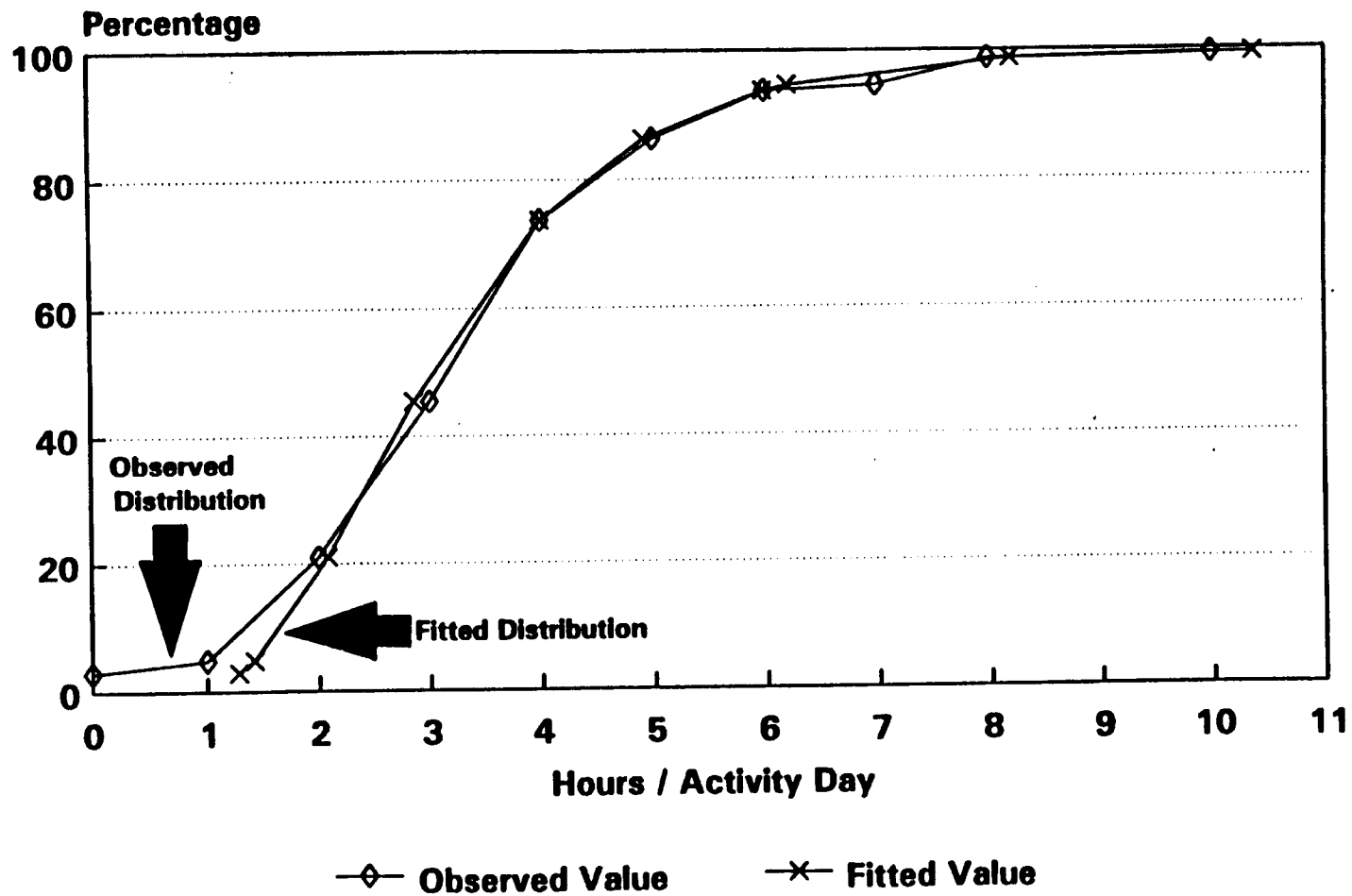


Figure 4.1.3.2 Comparison of Simulated and Fitted Cumulative Distribution Functions for Hours/Activity Day for General Recreational Visitors in the Neighborhood Subpopulation

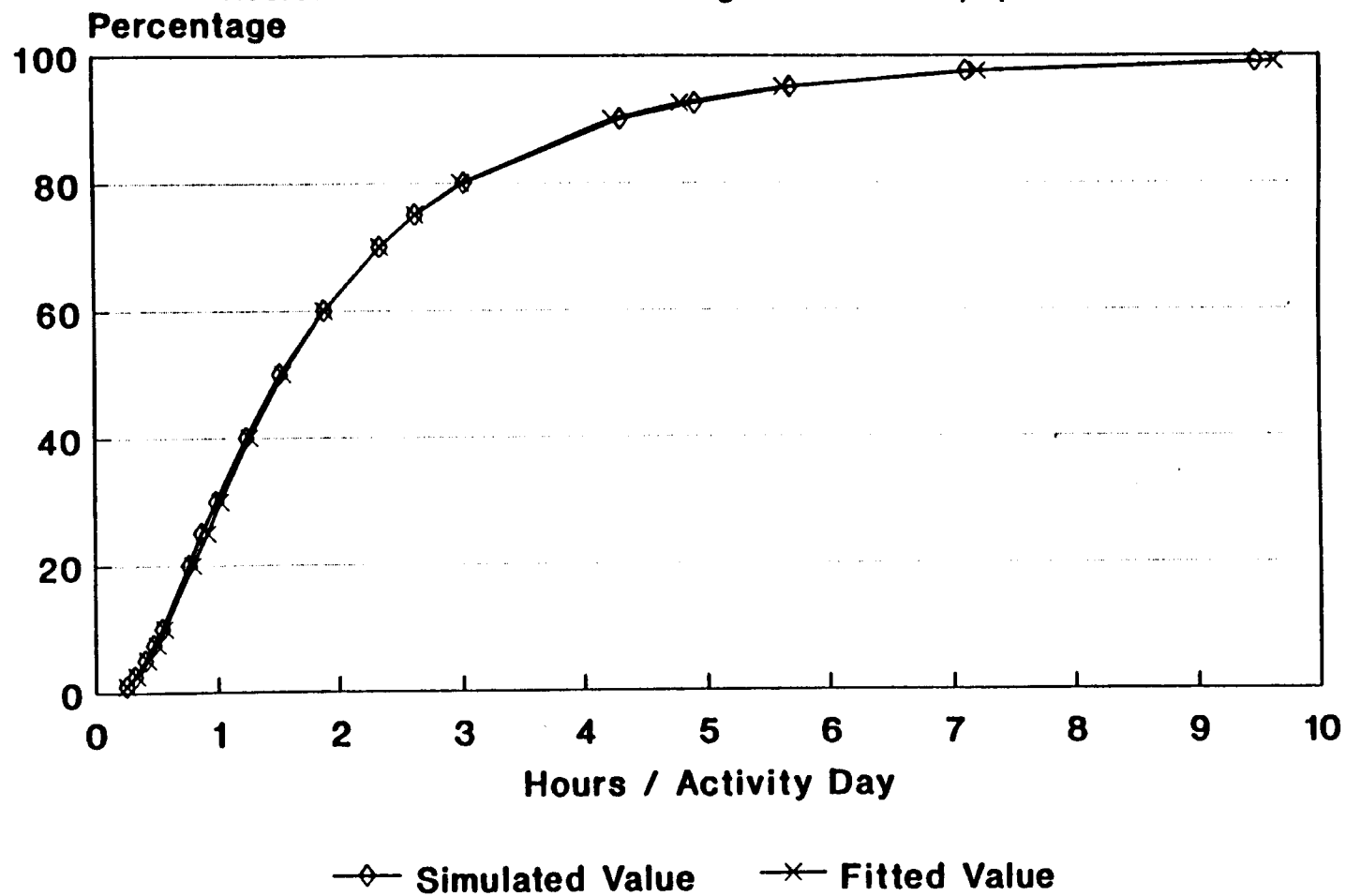


Figure 4.1.3.4 Comparison of Simulated and Fitted Cumulative Distribution Functions for Hours/Activity Day for Organized Sports Participants

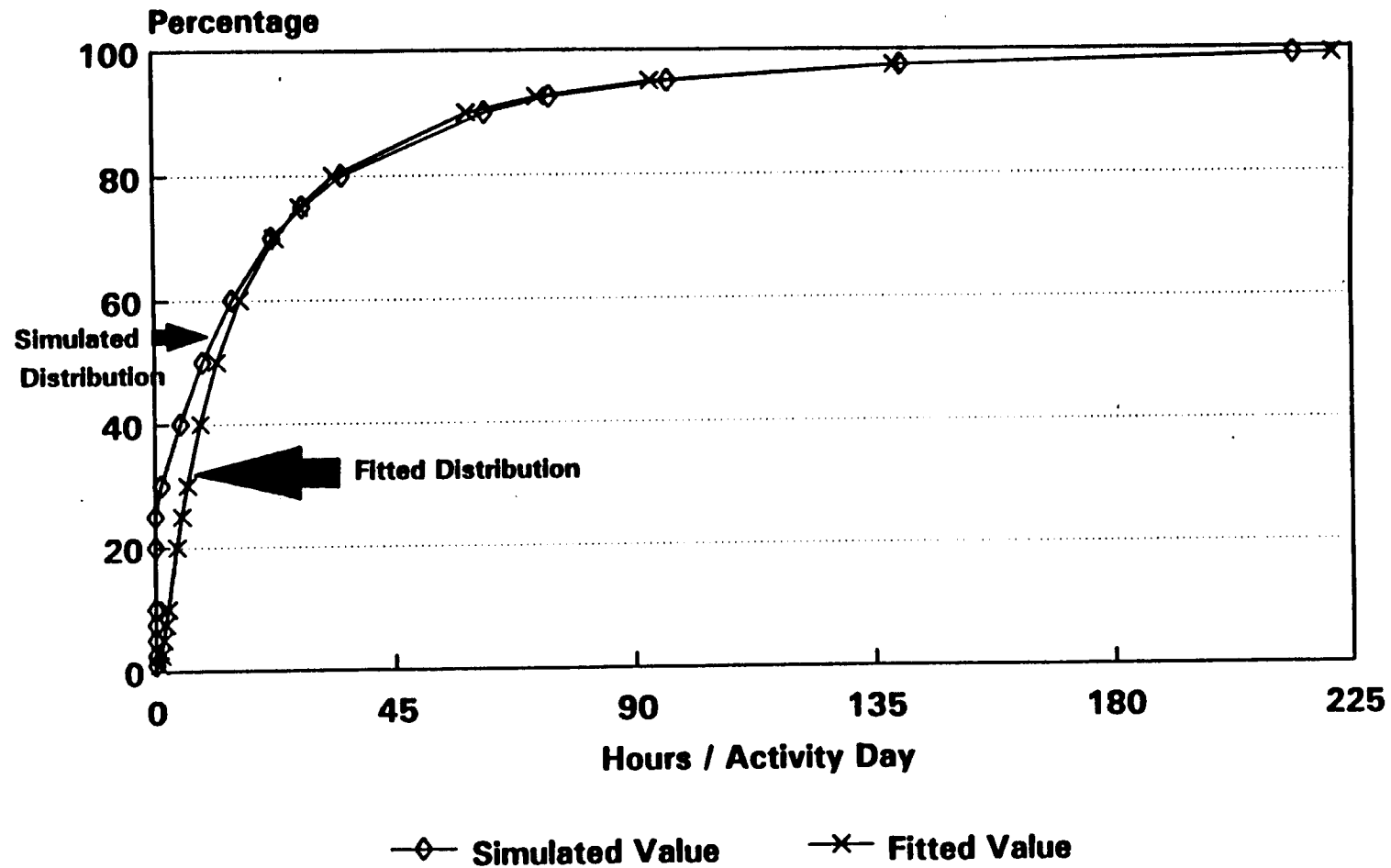


Figure 4.2.3.1 Comparison of Observed and Fitted Cumulative Distribution Functions for Days/Year for Anglers

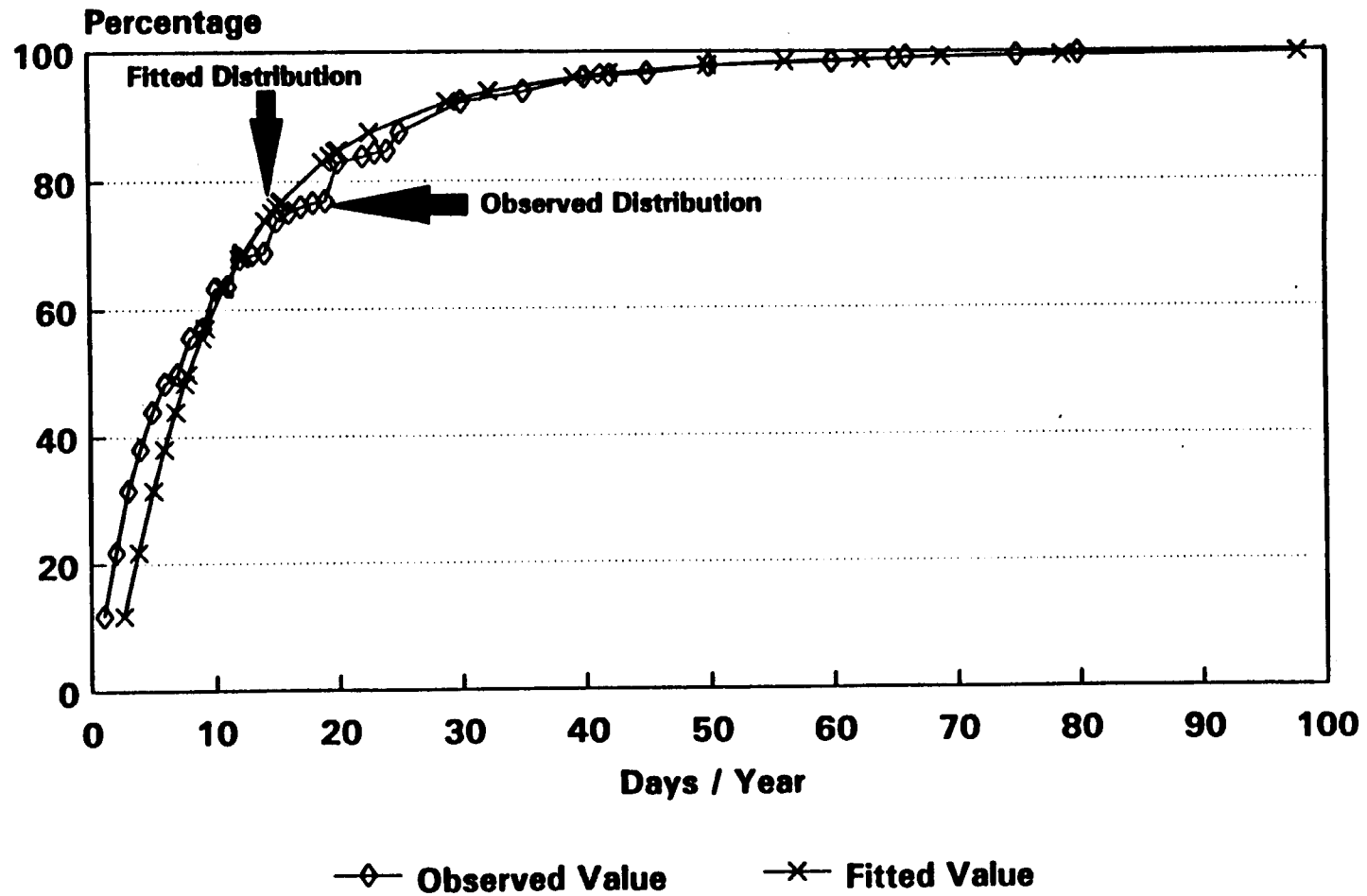


Figure 4.2.3.2 Comparison of Simulated and Fitted Cumulative Distribution Functions for Days/Year for General Recreational Visitors in the Neighborhood Subpopulation

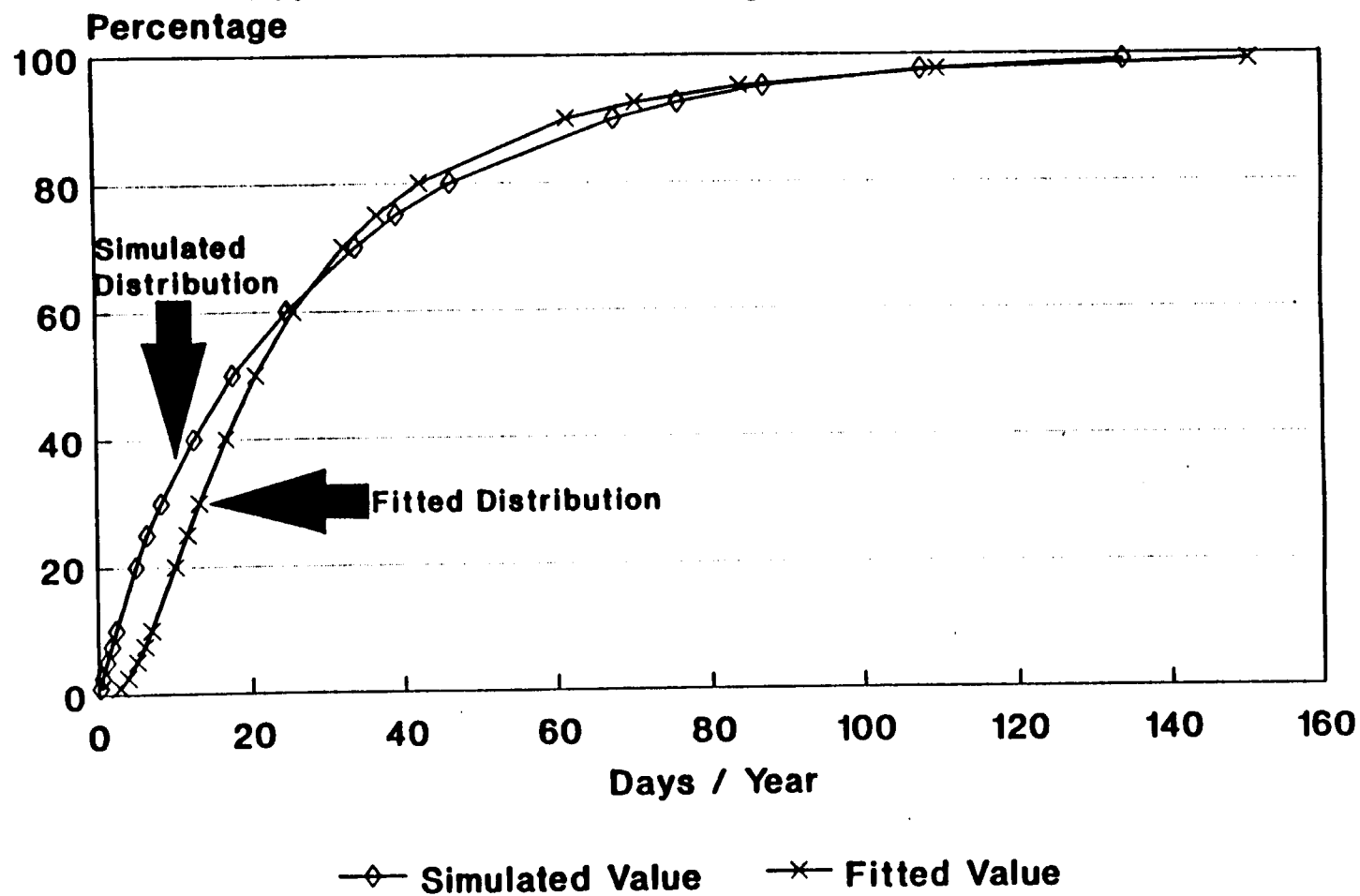


Figure 4.2.3.3 Comparison of Simulated and Fitted Cumulative Distribution Functions for Days/Year for General Recreational Visitors in the Regional Subpopulation

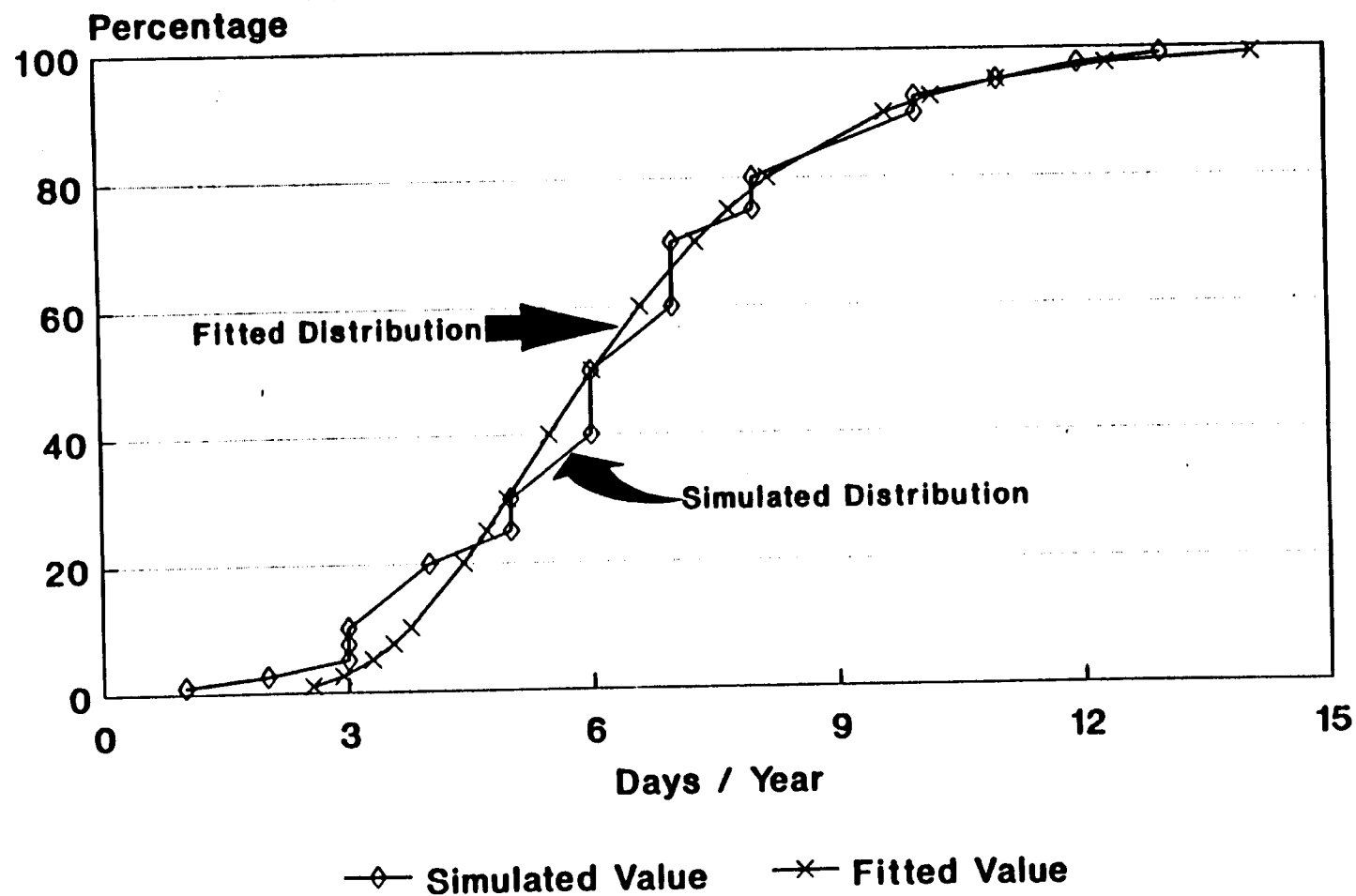
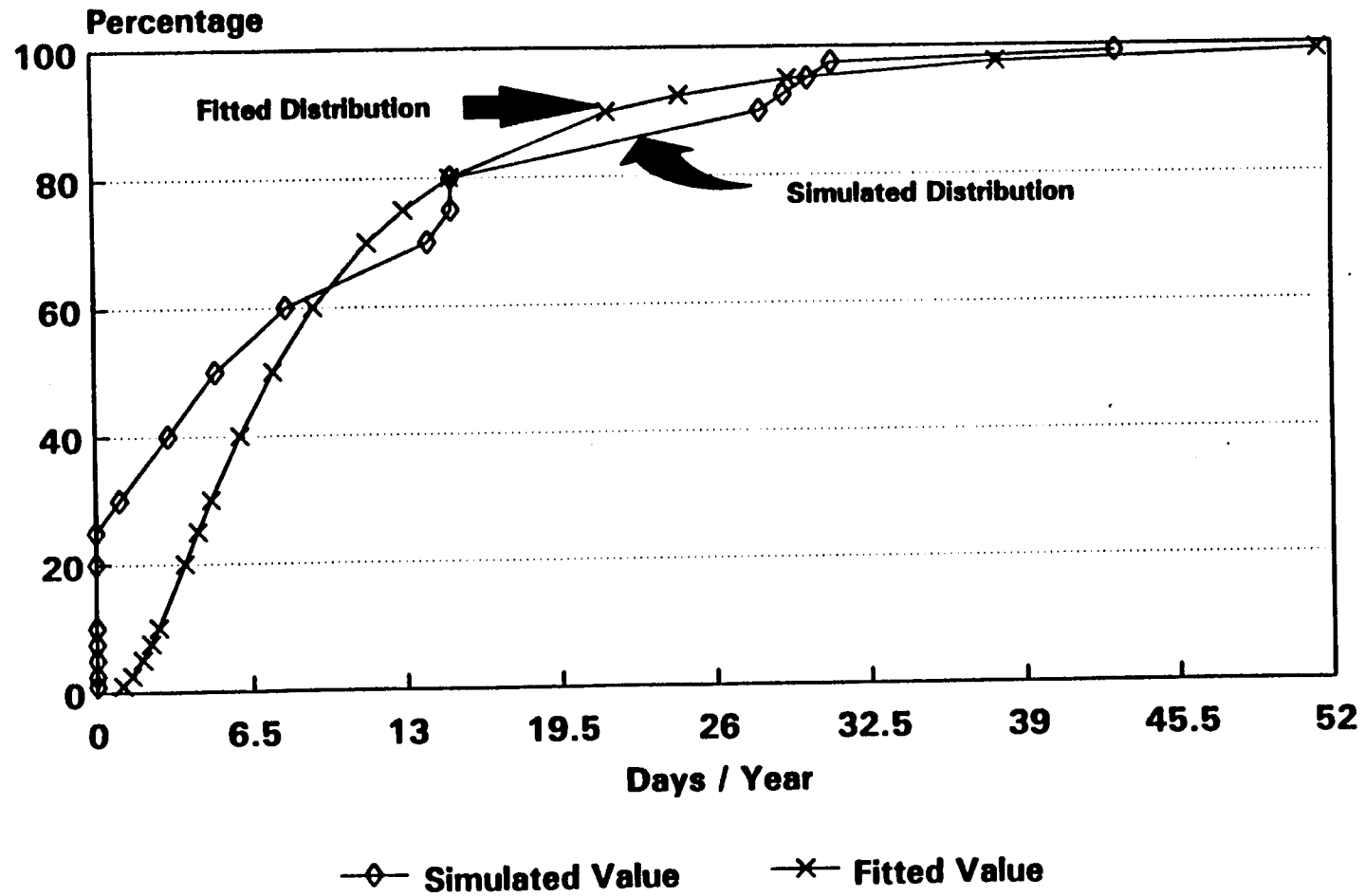
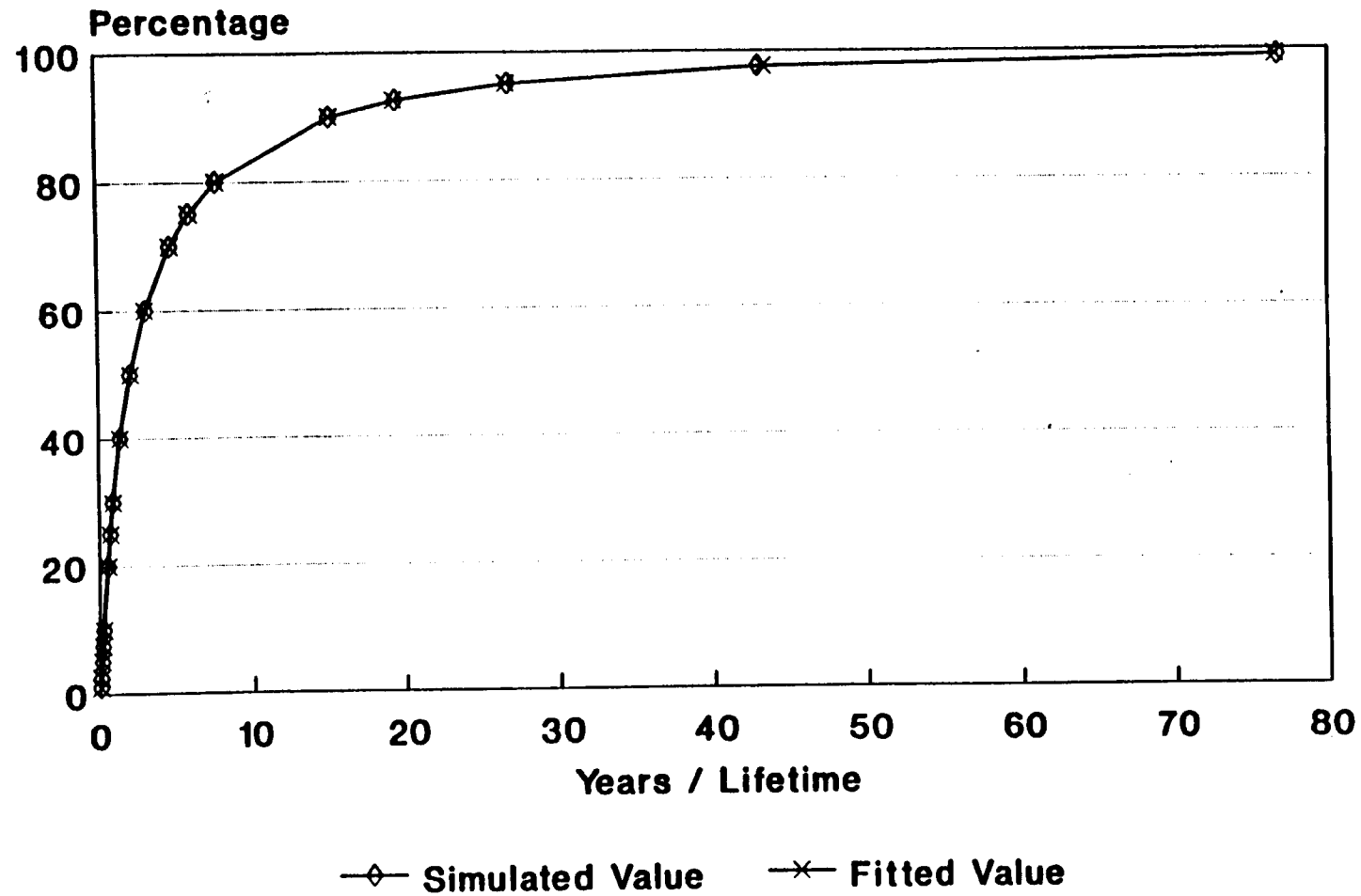


Figure 4.2.3.4 Comparison of Simulated and Fitted Cumulative Distribution Functions for Days/Year for Organized Sports Participants



**Figure 4.3.3.2 Comparison of Simulated and Fitted Cumulative
Distribution Functions for Years/Lifetime for General
Recreational Visitors in the Neighborhood Subpopulation**



**Figure 4.3.3.3 Comparison of Simulated and Fitted Cumulative
Distribution Functions for Years/Lifetime for Recreational
Visitors in the Regional General Visitor Subpopulation**

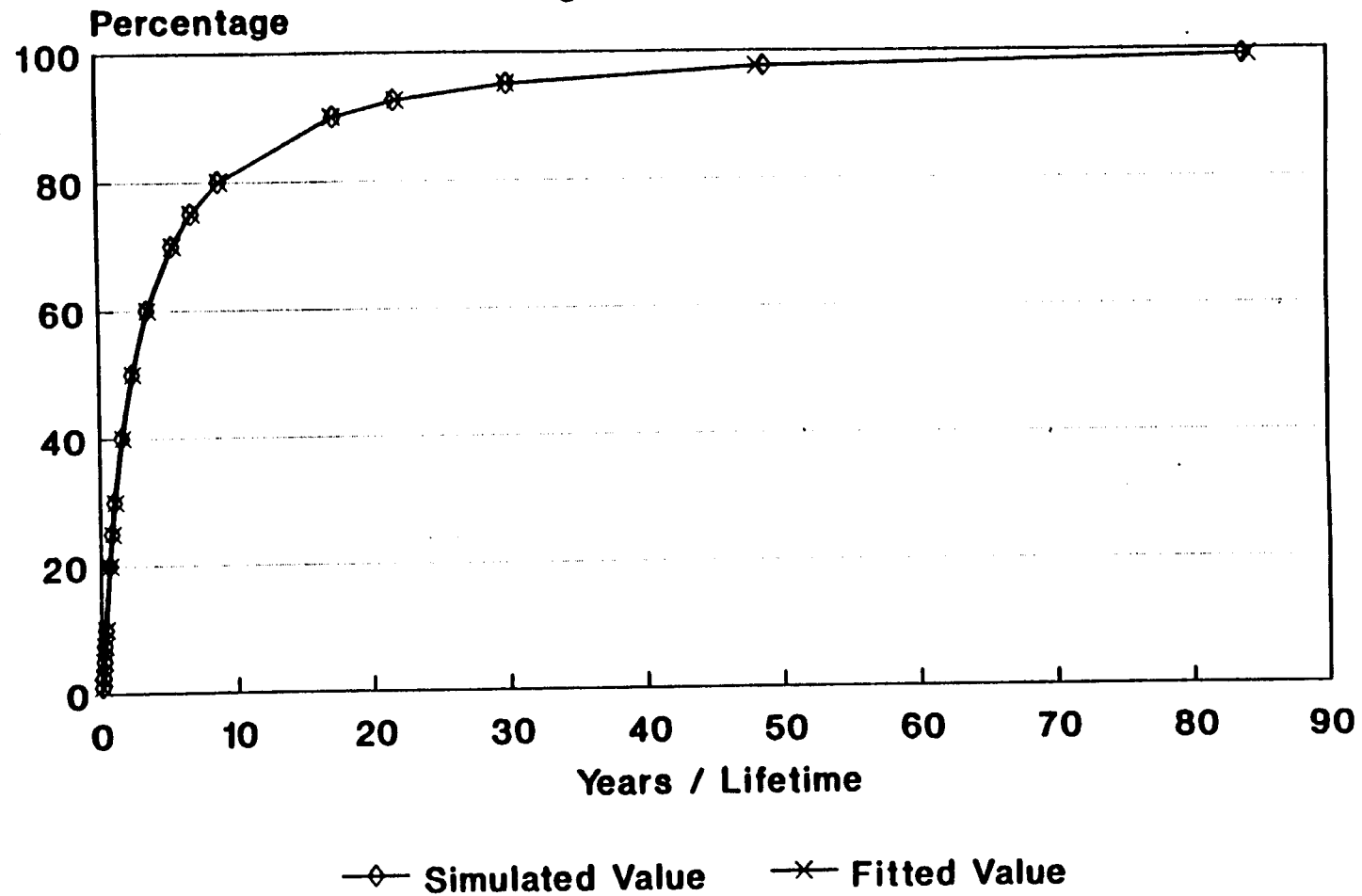
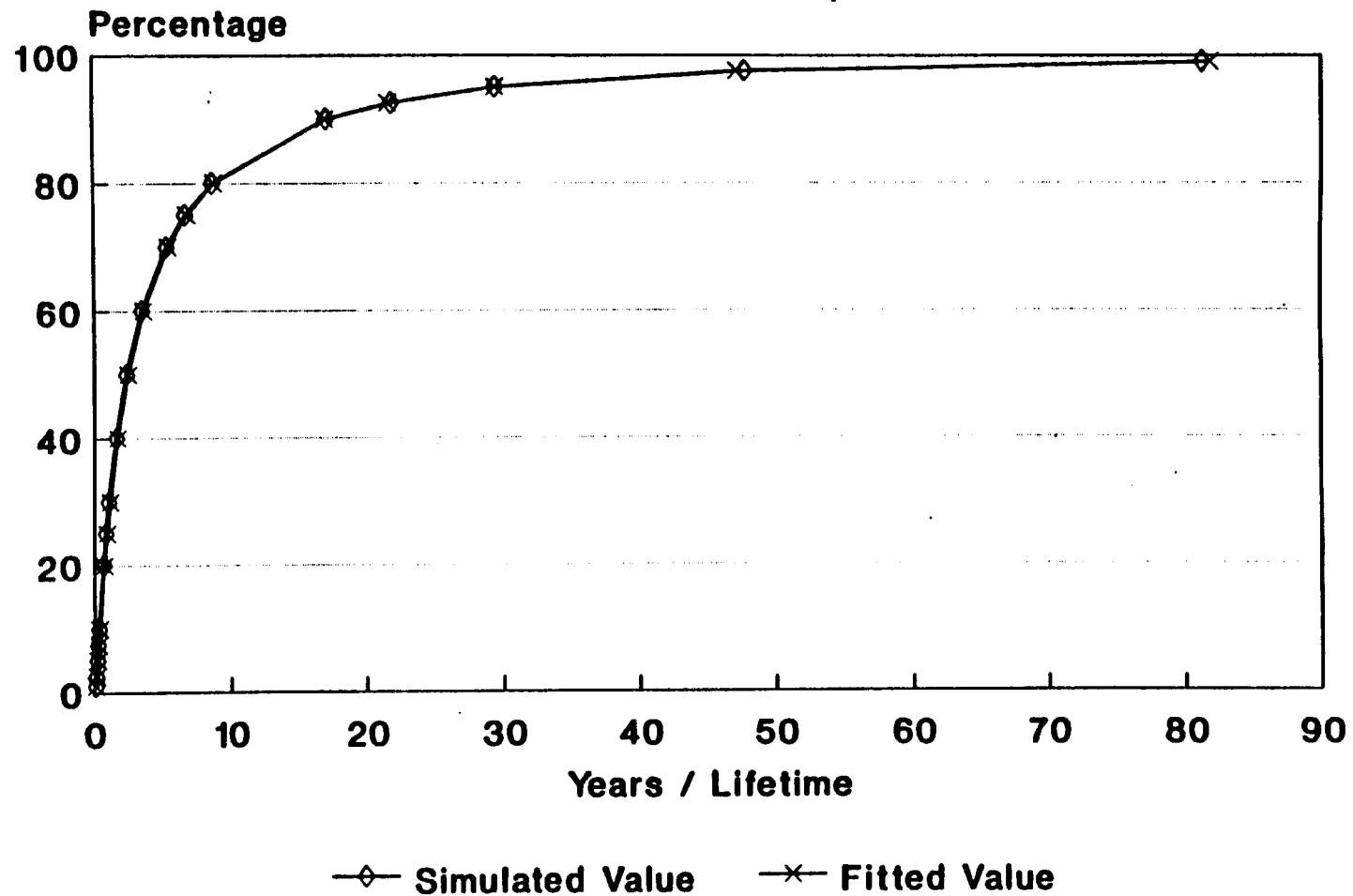
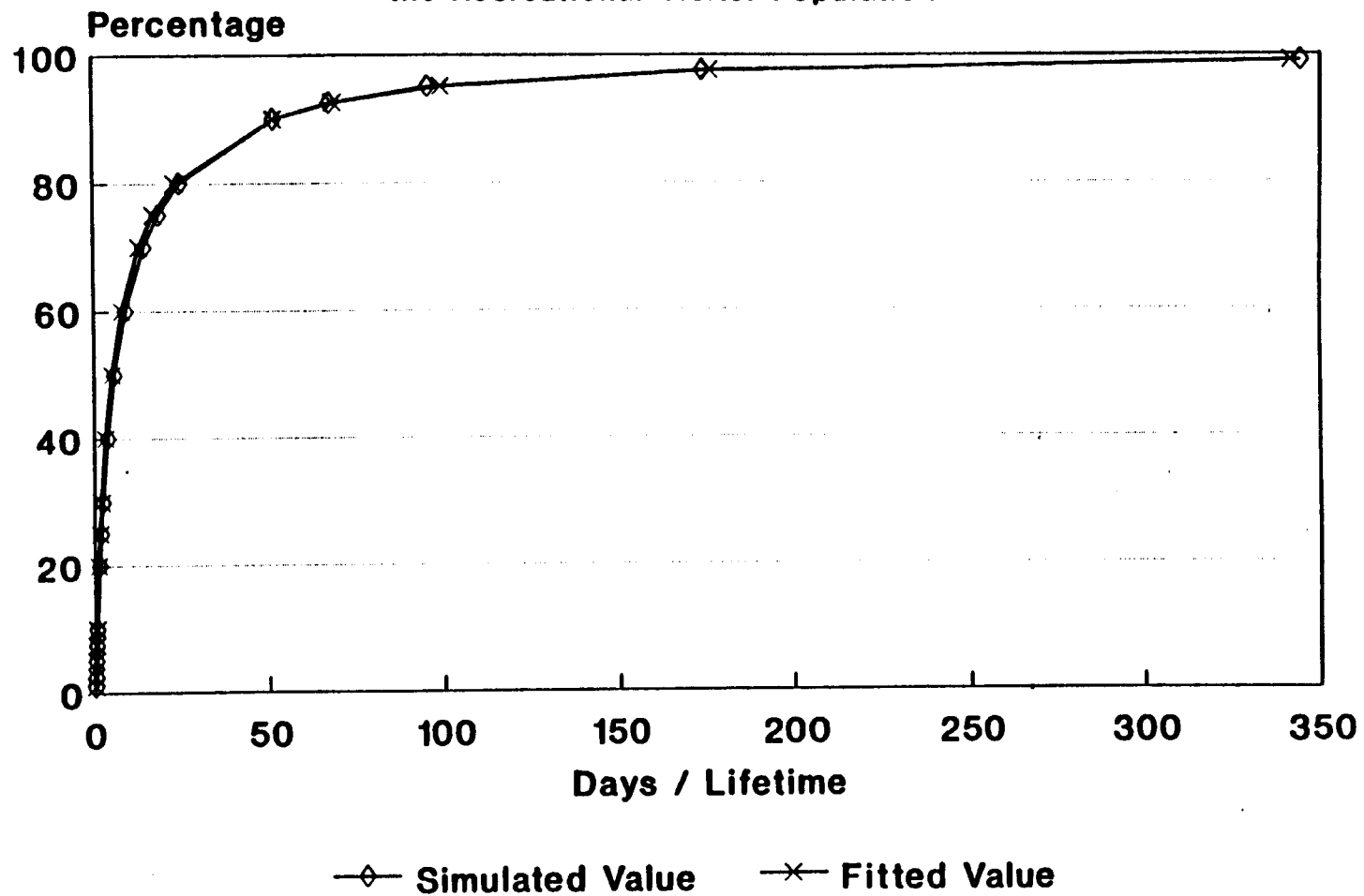


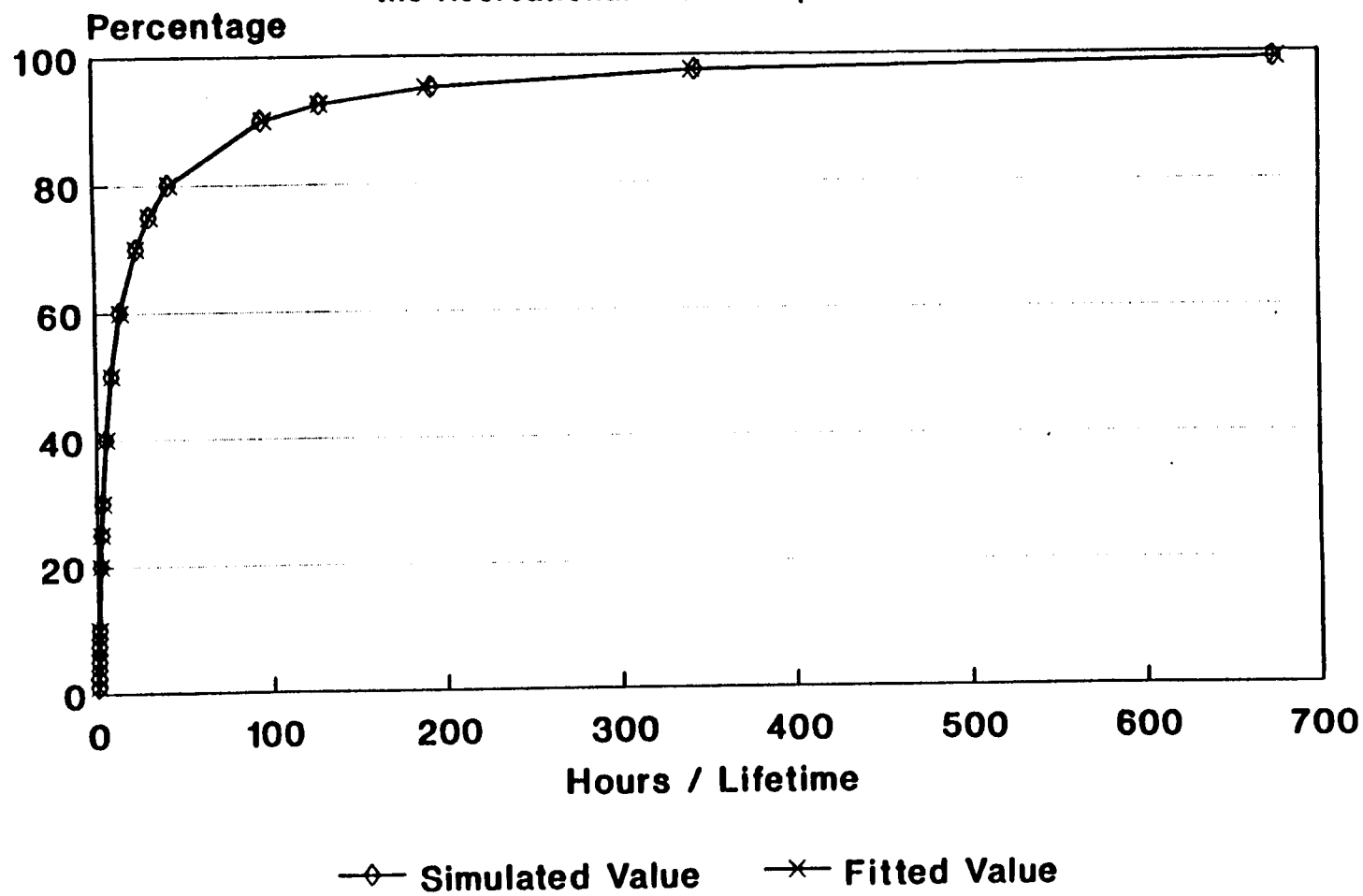
Figure 4.4.1.2 Comparison of Simulated and Fitted Cumulative Distribution Functions for Years/Lifetime for Visitors in the Recreational Visitor Population



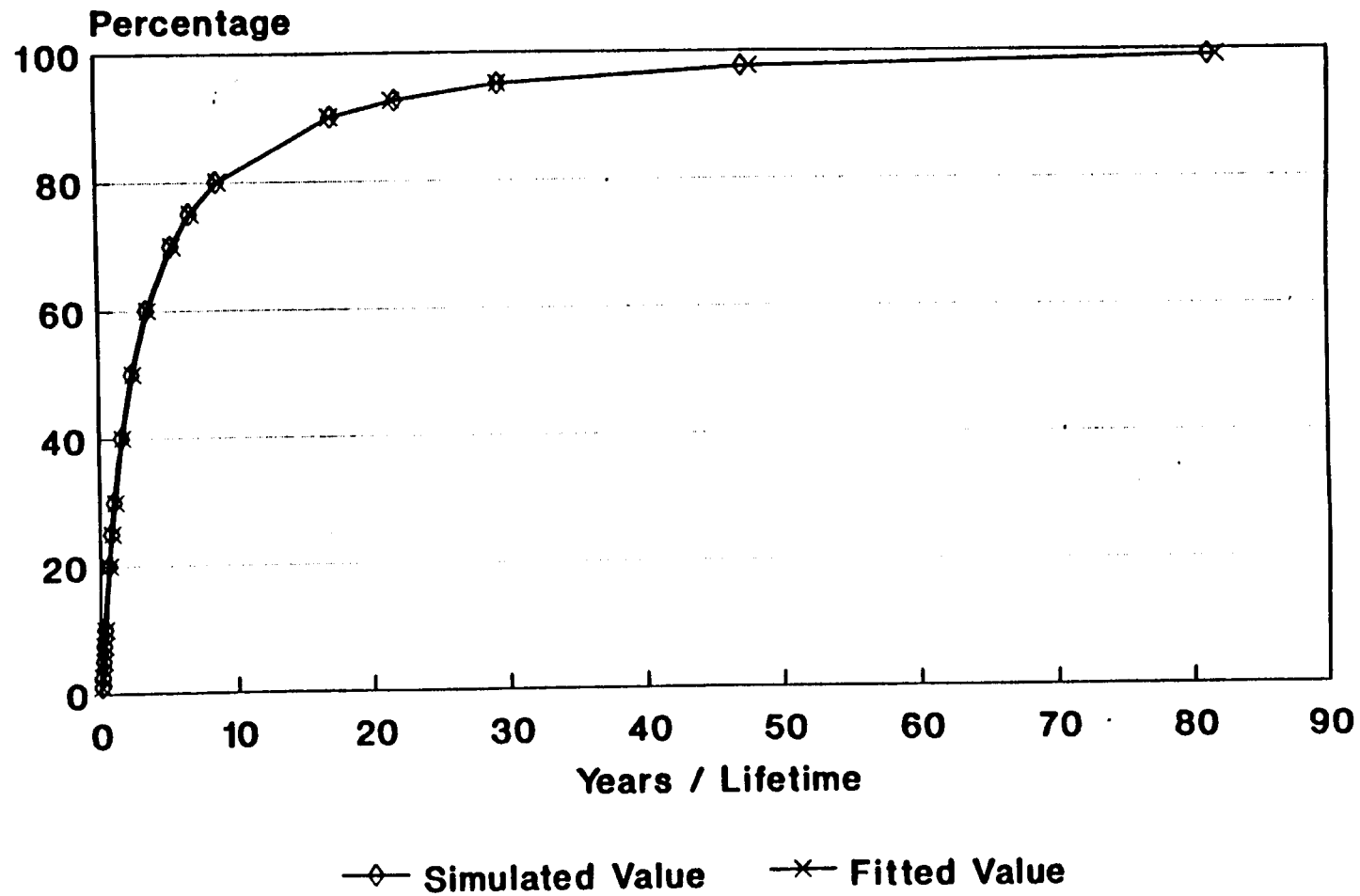
**Figure 4.4.2.2 Comparison of Simulated and Fitted Cumulative
Distribution Functions for Days/Lifetime for Visitors in
the Recreational Visitor Population**



**Figure 4.4.3.2 Comparison of Simulated and Fitted Cumulative
Distribution Functions for Hours/Lifetime for Visitors In
the Recreational Visitor Population**



**Figure 4.5.1.2 Comparison of Simulated and Fitted Cumulative
Distribution Functions for Years/Lifetime for Visitors in
the Expanded Recreational Visitor Population**



**Figure 4.5.2.2 Comparison of Simulated and Fitted Cumulative
Distribution Functions for Days/Lifetime for Visitors In
the Expanded Recreational Visitor Population**

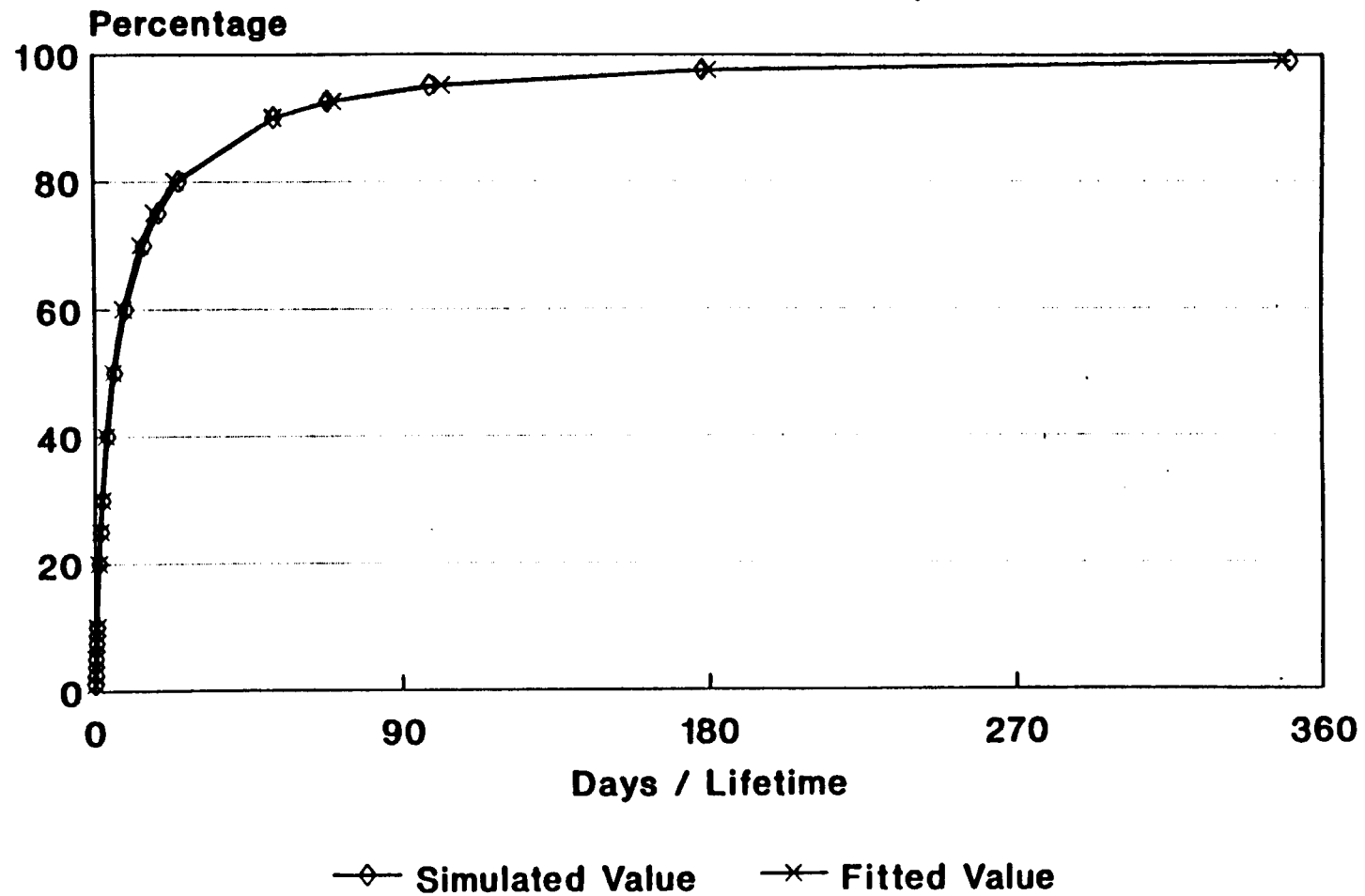
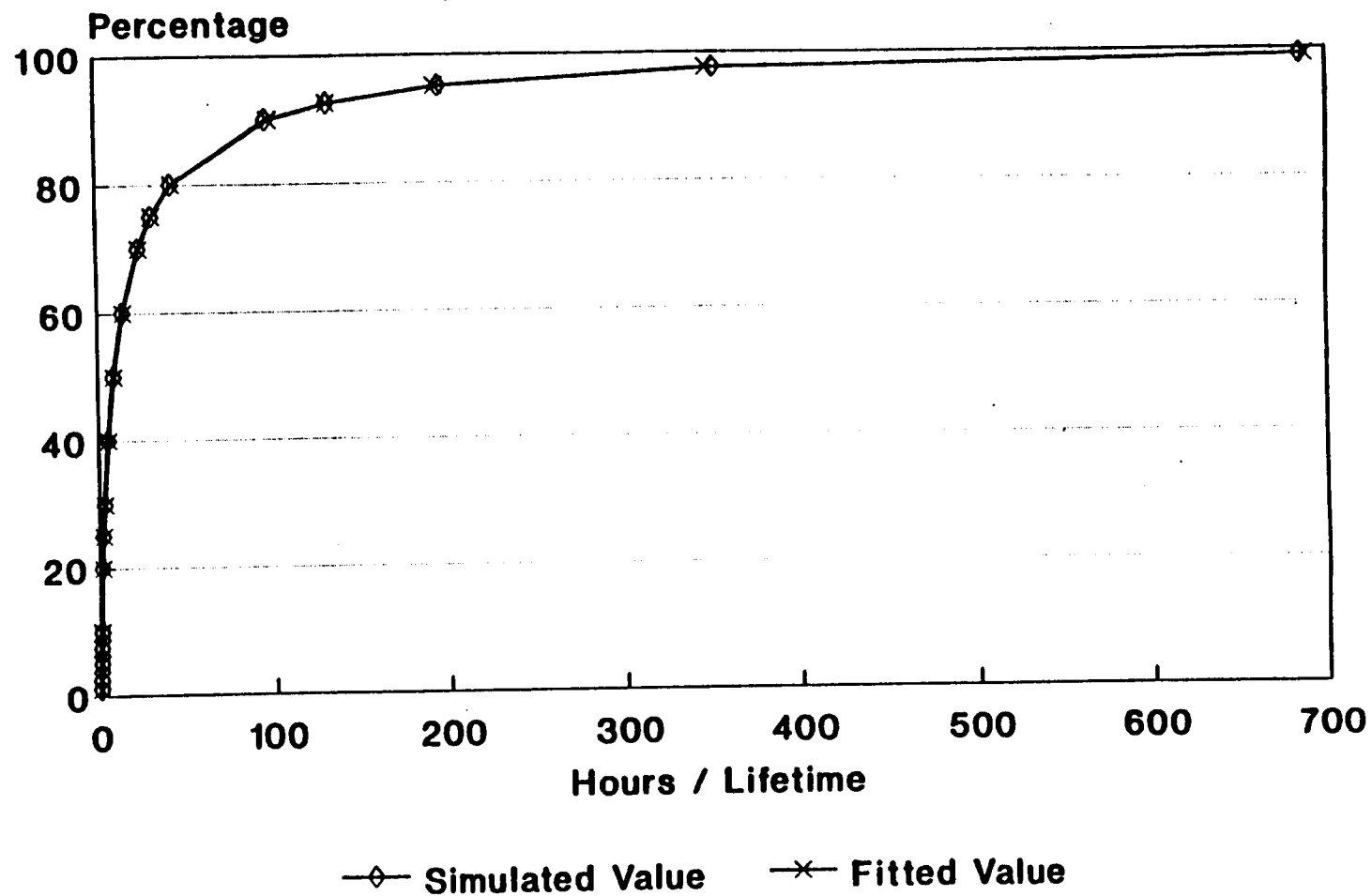


Figure 4.5.3.2 Comparison of Simulated and Fitted Cumulative Distribution Functions for Hours/Lifetime for Visitors in the Expanded Recreational Visitor Population



APPENDIX A
EQUIVALENT TIME SCALES IN DETERMINING LIFETIME RISK

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EQUIVALENT TIME SCALES IN DETERMINING LIFETIME RISKS

The development of risk-based soil criteria for contaminants of concern at the Arsenal using the PPLV methodology is based on lifetime risk. Lifetime risk is characterized in terms of "the increased risk per unit dose" times "the lifetime average daily dose (LADD)". The lifetime average daily dose is equal to "the total lifetime dose" divided by "the total number of days in a lifetime". In the PPLV methodology the "total lifetime dose" is calculated as a function of the total duration of exposure expressed in units of "hours of exposure per lifetime."

The hours of exposure per lifetime can be calculated in several equivalent ways such as

$$(\text{hours/year}) * (\text{years/lifetime})$$

or

$$(\text{hours/week}) * (\text{weeks/year}) * (\text{years/lifetime})$$

or

$$(\text{hours/day}) * (\text{days/year}) * (\text{years/lifetime})$$

where

hours = hours of exposure in a specified period

days = days in which exposure occurs

weeks = weeks in which exposure occurs

years = years in which exposure occurs.

Although these calculations are all equivalent, the calculation implemented in the PPLV methodology is

$$(\text{hours/day}) * (\text{days/year}) * (\text{years/lifetime})$$

which is parameterized as

$$TM * DW * TE$$

where

TM = hours of exposure in a day in which exposure occurs

DW = days in which exposure occurs in a year in which exposure occurs

TE = years in which exposure occurs in a lifetime.

The only way in which TM, DW, or TE enters into the PPLV methodology and equations is in the product $TM * DW * TE$. Hence, in deriving values for TM, DW, and TE the only thing that matters mathematically is that the product $TM * DW * TE$ is correct.

For example, the exposure information may be available in terms of "hours of exposure per week" and "weeks in which exposure occurs in a year in which exposure occurs". In this case, either TM and DW could be redefined as "hours of exposure in a week" and "weeks in which exposure occurs in a year in which exposure occurs" respectively or both the data for TM and

DW rescaled, using any convenient scaling factor, provided the scaling factor is applied to TM and inversely to DW. Although both alternatives are mathematically equivalent, the latter alternative (i.e., simultaneously rescaling both the data for both TM and DW) has the advantage of keeping the units of TM and DW the same in all discussions. This latter alternative is followed herein. Because the data on TM and DW are both rescaled by the same scaling factor, the scaling factor disappears in the product $TM * DW * TE$, and, hence, the particular scaling factor has no impact on the outcomes of the PPLV methodology. For example, if the exposure information is available in terms of "hours of exposure per week" and "weeks in which exposure occurs in a year in which exposure occurs", then a scaling factor of "7 days per week" could be used because with

$$\begin{aligned} TM &= \text{"hours of exposure per week"} / (7 \text{ days per week}) \\ DW &= \text{"weeks in which exposure occurs in a year in which} \\ &\quad \text{exposure occurs"} * (7 \text{ days per week}), \end{aligned}$$

the product

$$\begin{aligned} TM * DW * TE &= [(\text{hours/week}) / (7 \text{ days/week})] \\ &\quad * [(\text{weeks/year}) * (7 \text{ days/week})] * TE \\ &= [\text{hours/day}] * [\text{days/year}] * TE. \end{aligned}$$

The same result occurs if "5 days per week" is used as a scaling factor because with

$$\begin{aligned} TM &= \text{"hours of exposure per week"} / (5 \text{ days per week}) \\ DW &= \text{"weeks in which exposure occurs in a year in which exposure} \\ &\quad \text{occurs"} * (5 \text{ days per week}), \end{aligned}$$

the product

$$\begin{aligned} TM * DW * TE &= [(\text{hours/week}) / (5 \text{ days/week})] \\ &\quad * [(\text{weeks/year}) * (5 \text{ days/week})] * TE \\ &= [\text{hours/day}] * [\text{days/year}] * TE. \end{aligned}$$

Five days per week is used herein to convert data on hours per week to hours per day and to convert data on weeks per year to days per year.

APPENDIX B

MATHEMATICAL REASONS TO USE PROBABILITY DISTRIBUTIONS

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MATHEMATICAL REASONS TO USE PROBABILITY DISTRIBUTIONS

Discussion for the Non-Statistician

Even when only 2 or 3 parameters are involved in a calculation, it is important to know the probability distributions of the parameters in order to understand the probabilities of the different possible outcomes of the calculation. It is not sufficient to use only a single value to represent the probability distribution for a parameter. Some simplified examples may help illustrate this point.

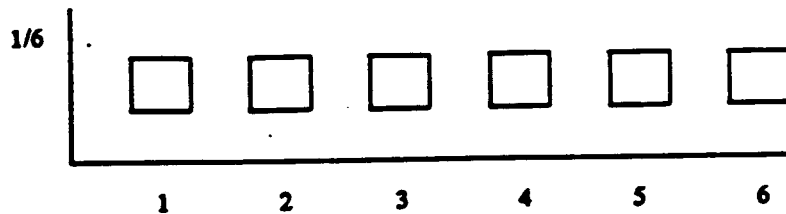
These examples involve simple experiments with only a few possible outcomes. The outcome of such an experiment is a discrete random variable, and the percentiles of discrete random variables are defined herein to be the smallest possible experimental outcome such that the probability of not exceeding that outcome is at least the specified percentage. For example, the 50th percentile would be the smallest possible experimental outcome such that the probability of not exceeding that outcome is at least 0.50.

Suppose that two fair coins are flipped, and that the probability of head appearing face up on a flip is 0.5. Then the 50th percentile of the number of heads on a single flip is 0. Suppose that the "calculation" of interest is the sum of the number of heads on a single flip of both coins. If each coin is characterized by its 50th percentile (namely, 0), then doing the "calculation" using the 50th percentiles would be $0 + 0 = 0$. Yet it is obvious that the 50th percentile of the calculation is greater than 0, namely one. Hence, doing a calculation with fixed numbers representing the probability distribution leads to a misrepresentation of the probabilities associated with a calculated value.

For a second simple example, consider two fair ten-sided dice where the probability of each side (numbered 1 to 10) of a die is $1/10$. Suppose the calculation of interest is the product of the numbers appearing on a single roll of both dice. A 9 is the 90th percentile. However, the product, 81, of the two 90th percentiles is not the 90th percentile of the product. The probability of the product exceeding 81 is the probability of the outcomes (10,9), (9,10), and (10,10) which is $3/100$ or .03. Hence, in this example, the product of two 90th percentiles is really the 97th percentile. The true 90th percentile in this example is 64 and not 81.

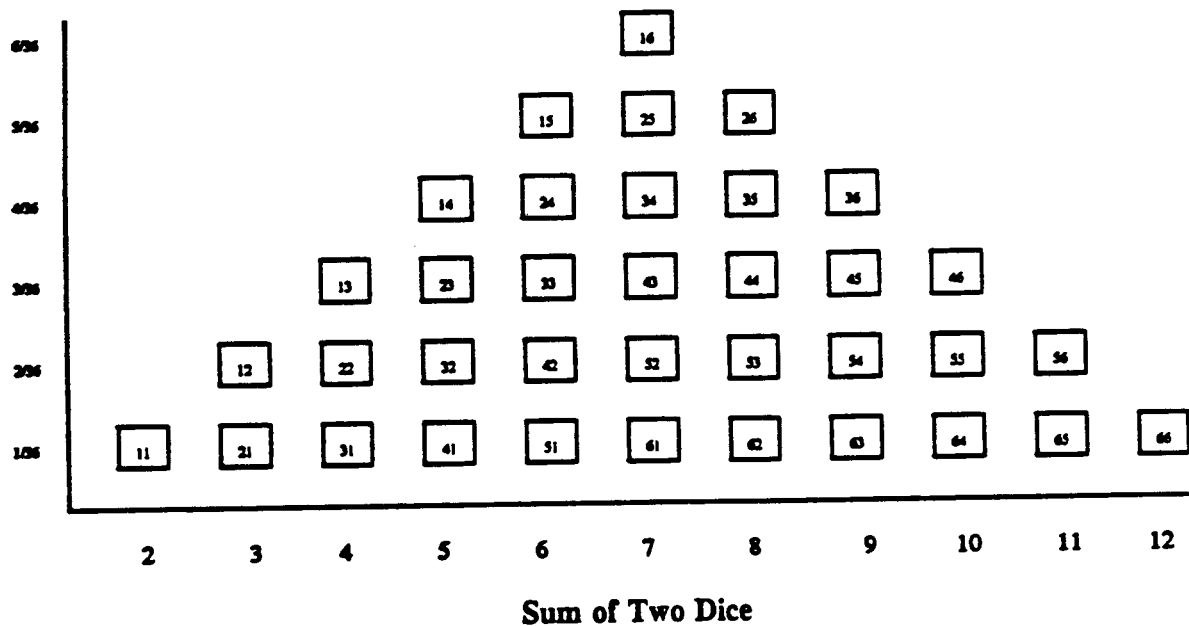
Calculations can not be done with 90 percentiles and have the result necessarily be the true 90th percentile. Similarly, calculations can not be done with the 95th percentiles and have the result necessarily be the true 95th percentile.

As a third example, suppose that two fair dice are rolled. The probability of each numbered side (1, 2, 3, 4, 5, or 6) landing face up is $1/6$. The distribution is uniform over 1 through 6, as follows:



The 80th percentile for a single toss of a die is 5. The 80th percentile is defined to be the number at which at least 80% of the outcomes fall at or below it, and at least 20% fall at or above it. In this case, 83.3% of the numbers fall at or below 5, and 33.3% at or above 5.

Suppose the calculation of interest is the sum of the numbers on the faces when two fair dice are rolled. The distribution of the sum looks like:



• NOTE: The two numbers within each box represent the numbers on the two individual die tossed for that roll, e.g., 16 = 1, 6 and 41 = 4, 1, and so on.

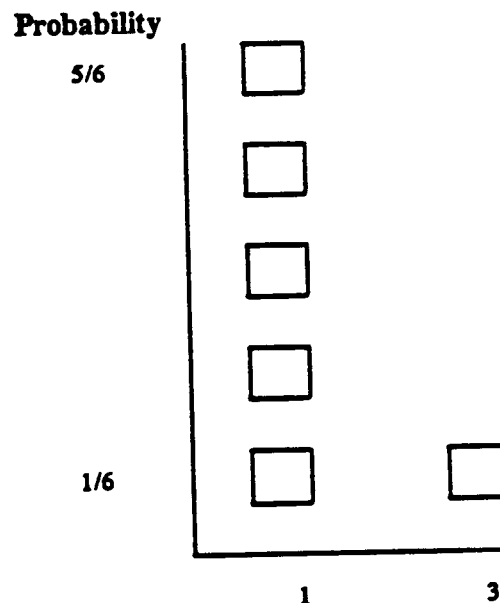
The 80th percentile for the sum of the distributions does NOT equal the sum of the 80th percentiles for each of the single die distributions. In this case the 80th percentile of the sum is 9, (% less than or equal to 9 is $30/36 = 83.3\%$, % greater than or equal to 9 is $10/36 = 27.7\%$). The sum of the individual 80th percentiles is 10, i.e., $5 + 5$.

In general, calculations done with specified percentiles on the individual parameters will not necessarily yield the same value as the true percentile of the corresponding distribution. Whenever combinations of distributions are formed (e.g., sums, products, etc), the shapes of

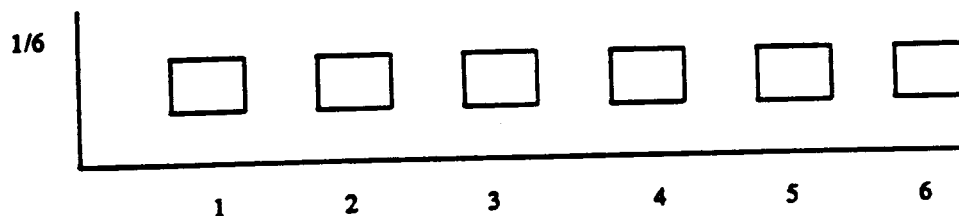
the resulting distributions are likely to change, and their corresponding percentiles will change as well. In the above dice example, the sum of the two distributions results in a distribution that has a triangular shape, whereas each of the original distribution started as rectangular in shape. These changes in distributional shape will cause corresponding changes in the percentile values.

To determine the probabilities or the percentiles of different calculated values, the probability distribution of the components of the calculation must be known. To avoid biased representations, the entire probability distribution of each parameter needs to be utilized. In the above example, the biased answer is 10 when the true 80th percentile is 9. In this case, the calculation yields a result that is higher. It is also possible to have a bias that is lower, as illustrated in the fourth and final example.

Suppose one of the dice is changed so that five sides are a 1 and the sixth side is a 3. The other die remains the same. The first die has a distribution that looks like:

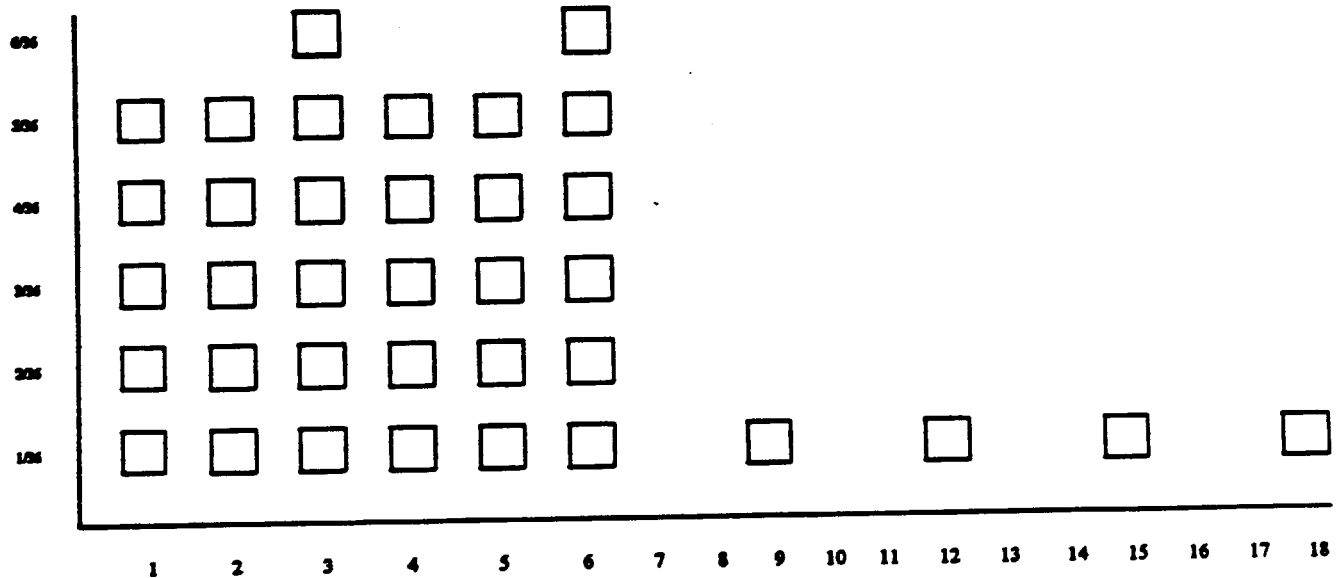


The 80th percentile of this distribution is 1 ($5/6 = 83.3\%$ of the numbers are less than or equal to 1, 100% are greater than or equal to 1). The second die has a distribution that looks like:



with an 80th percentile of 5 ($5/6 = 83.3\%$ of the numbers are less than or equal to 5 and $2/6 = 33.3\%$ of the numbers are greater than or equal to 5).

Suppose we are interested in the 80th percentile of the product of the two numbers on the faces of the dice when the pair of dice is thrown. The distribution of the product looks like:



Product of Two Faces

The correct 80th percentile is at 6, where 88.9% (32/36) of the products fall at or below 6 and 27.8% (10/36) fall at or above 6. The biased estimate constructed from the product of the two individual percentiles is 5, i.e., $1 * 5$. In this case the 80th percentile estimate, 5, underestimates the true 80th percentile, 6.

It is impossible to determine the direction or magnitude of the bias unless the probability distributions are incorporated. In simple terms, if a calculation is done with only a single percentile representing the distribution, the resulting calculation will, in general, have no interpretable meaning.

Doing a calculation with only a percentile of each component may either understate or overstate the true percentile of that calculated value. In the second example, performing the calculation with the 90th percentiles and referring to the result as a 90th percentile would understate the result's true percentile (the 97th percentile in the example). The probability of obtaining a larger value than that calculated value is only 3% and not 10%. The bias could be in the opposite direction if the example is modified just slightly. Suppose that the ten sides of each die are numbered 1,...,9 and 100 instead of 1,...,9 and 10. Then, 9 is still the 90th percentile of each

die, and the product of the 90th percentiles is still 81. However, 81 is now well below the true 90th percentile because the product exceeds 100 anytime at least one of the two dice rolls a 100 which happens 19% of the time. In fact, 81 is only the 81th percentile, and the true 90th percentile is 900.

In the original example, the probability of exceeding the value calculated using the 90th percentiles was 3%, and in the modified example it was 19%. In the original example, the value calculated using the 90th percentiles was 27% above the true 90th percentile whereas, in the modified example, the product of the 90th percentiles was 91% below the true 90th percentile.

Without information on the distributions, we have no way of knowing if the estimated percentile has been over- or underestimated. Even worse, it is likely that the resulting biased estimate will be used in subsequent calculations, further compounding the problem and leading ultimately to a misinterpretation of the results.

APPENDIX C
COMPONENT PROBABILITY DISTRIBUTIONS

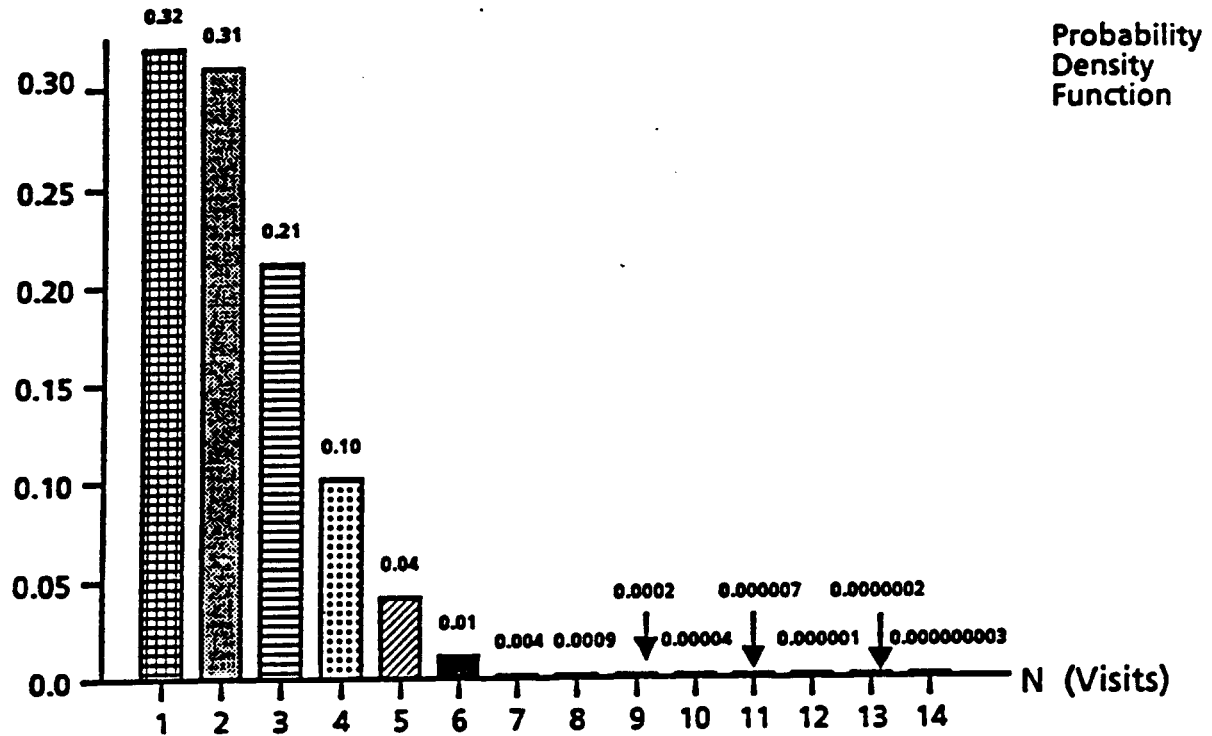
**Probability Distribution for the Number of Visits in a Year
for a Visitor with at least One Visit in a Year**

	Probability		
	Daily Fee	Annual Pass	Aspen Leaf
Number of Visits	Mean = 2.3 Parameter: m = 1.984	Mean = 4.63 Parameter: m = 4.583	Mean = 6.4 Parameter: m = 6.288
1	0.316338	0.047341	0.011708
2	0.313807	0.108483	0.036810
3	0.207531	0.165726	0.077153
4	0.102936	0.189880	0.121285
5	0.040845	0.174044	0.152528
6	0.013506	0.132941	0.159850
7	0.003828	0.087038	0.143591
8	0.000949	0.049862	0.112862
9	0.000209	0.025391	0.078853
10	0.000042	0.011637	0.049583
11	0.000007	0.004848	0.028343
12	0.000001	0.001852	0.014852
13	<0.000001	0.000653	0.007184
14	<0.000001	0.000214	0.003227
15	<0.000001	0.000065	0.001353
16	<0.000001	0.000019	0.000532
17	<0.000001	0.000005	0.000197
18	<0.000001	0.000001	0.000069
19	<0.000001	<0.000001	0.000023
20	<0.000001	<0.000001	<0.000001

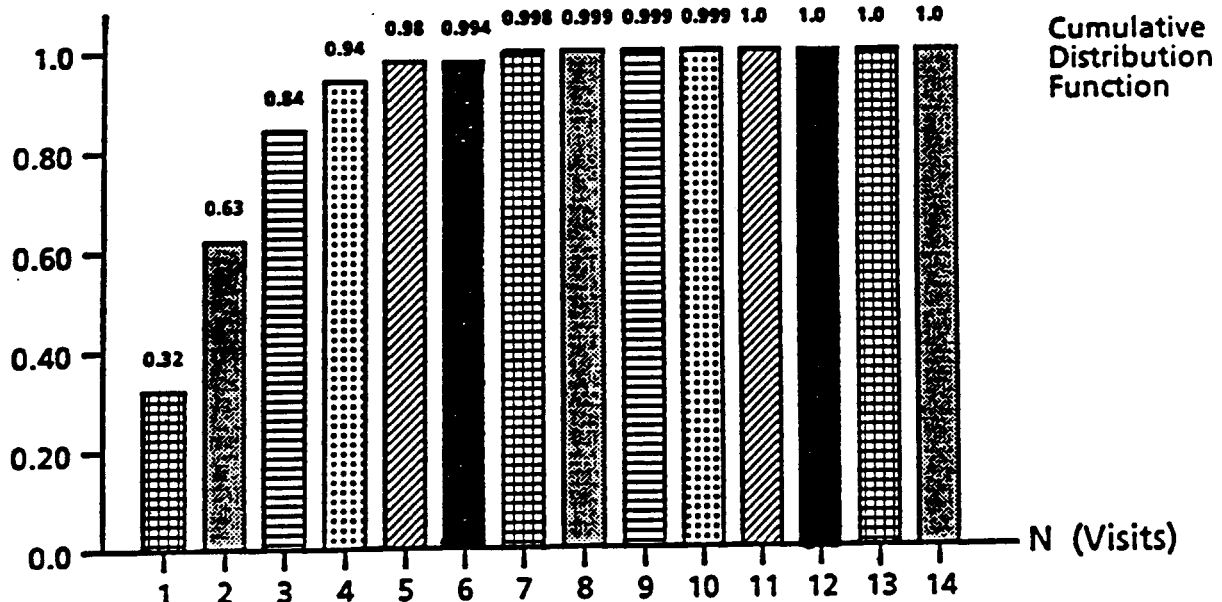
The probability distribution is a modified Poisson distribution. The probability distribution is modified to reflect the condition that the number of visits is at least 1.0. The parameter (m) in the modified Poisson distribution is chosen so that the mean of the modified Poisson distribution equals the specified mean number of visits.

**The Probability Distribution for the Number of Visits in a Year
for a Regulated or Casual or Recreational Visitor with a
DAILY FEE**

Probability (Number of Visits = N)



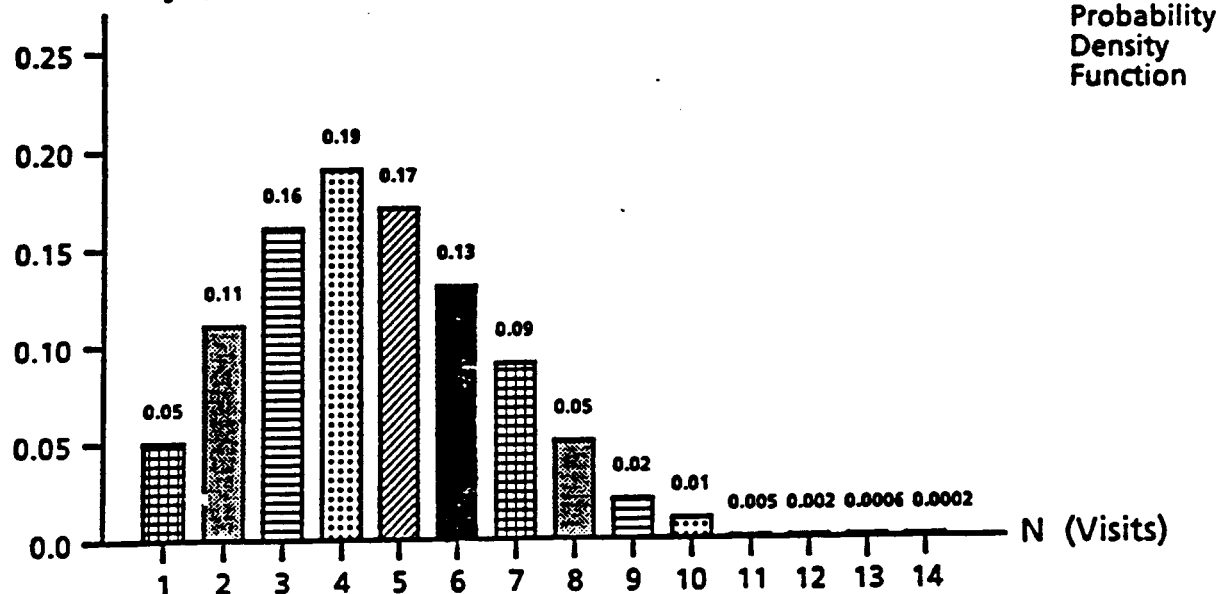
Probability (Number of Visits $\leq$ N)



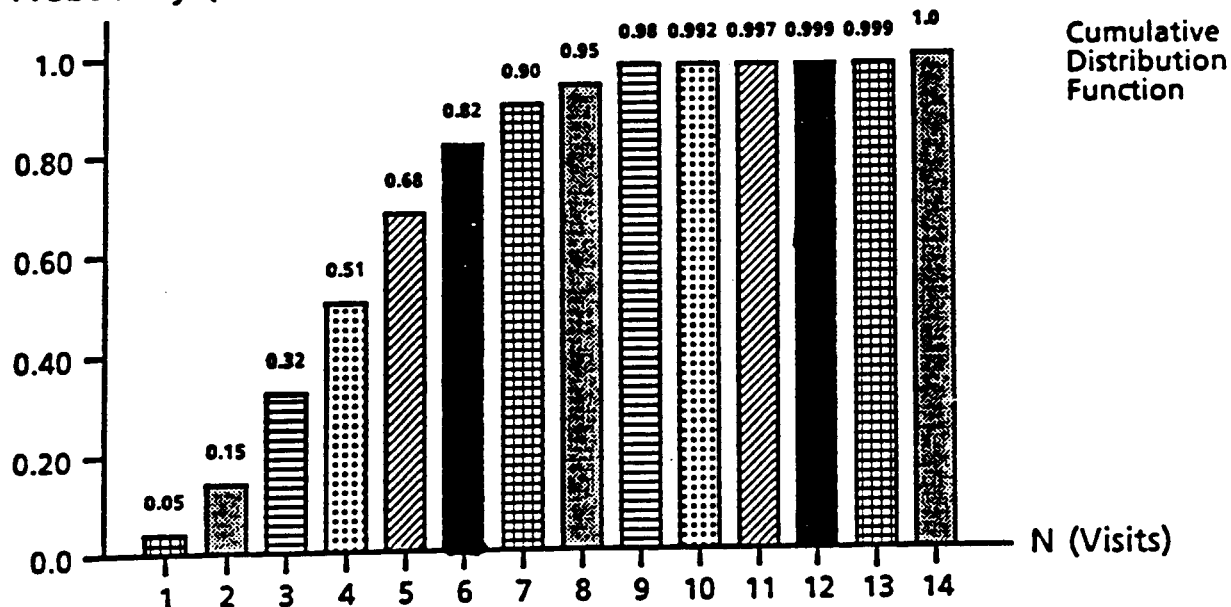
The probability distribution is a modified Poisson distribution. The probability distribution is modified to reflect the condition that the number of visits is at least 1.0. The parameter (m) in the modified Poisson distribution is chosen so that the mean of the modified Poisson distribution equals the specified mean number of visits. Here, $m = 1.984$

**The Probability Distribution for the Number of Visits in a Year
for a Regulated or Casual or Recreational Visitor with an
ANNUAL PASS**

Probability (Number of Visits = N)



Probability (Number of Visits $\leq$ N)

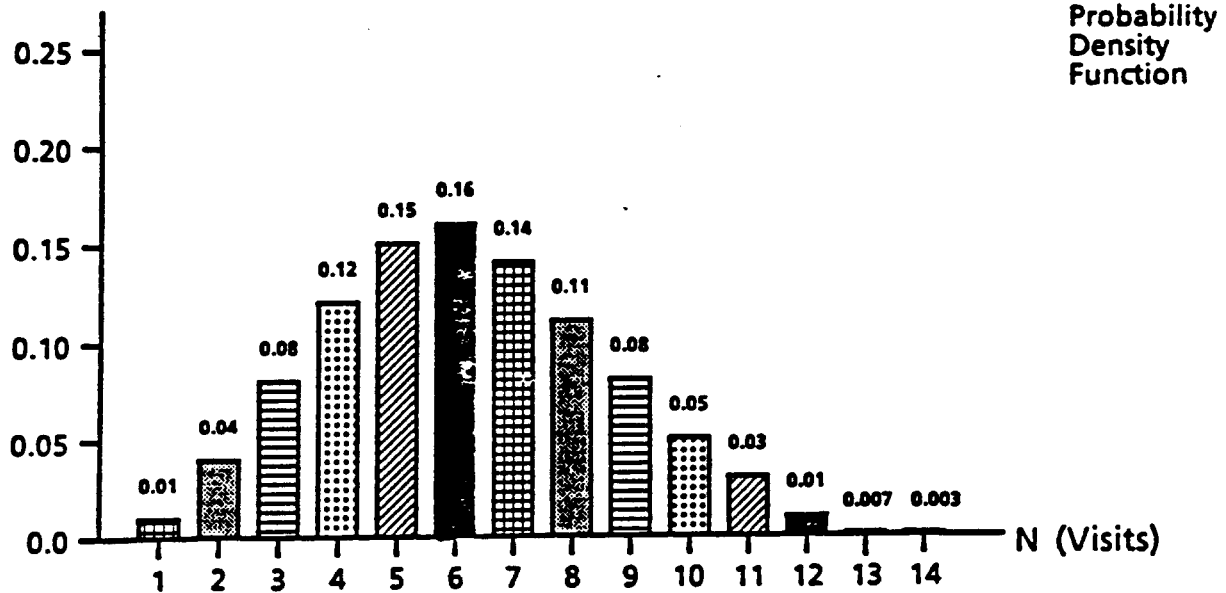


The probability distribution is a modified Poisson distribution. The probability distribution is modified to reflect the condition that the number of visits is at least 1.0. The parameter (m) in the modified Poisson distribution is chosen so that the mean of the modified Poisson distribution equals the specified mean number of visits. Here, $m = 4.583$.

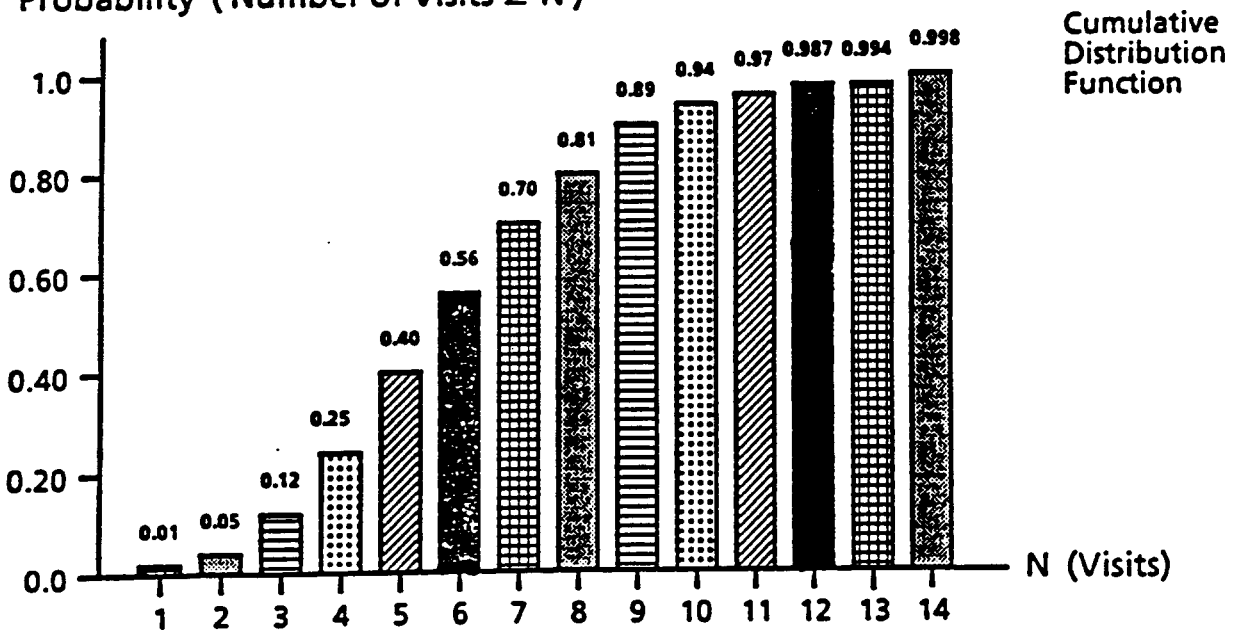
The Probability Distribution for the Number of Visits in a Year
for a Regulated or Casual or Recreational Visitor with an

ASPEN LEAF

Probability (Number of Visits = N)



Probability (Number of Visits $\leq$ N)



The probability distribution is a modified Poisson distribution. The probability distribution is modified to reflect the condition that the number of visits is at least 1.0. The parameter (m) in the modified Poisson distribution is chosen so that the mean of the modified Poisson distribution equals the specified mean number of visits. Here, $m = 6.288$

APPENDIX D

ESTIMATING THE PERCENTILES OF A PROBABILITY DISTRIBUTION

APPENDIX D

ESTIMATING THE PERCENTILES OF A PROBABILITY DISTRIBUTION

Estimating Upper Percentiles from Censored Reporting of the Data

In reviewing the available data for the development of probability distributions for certain time dependent exposure parameters, some censored reporting of the data was encountered. In order to specify the entire probability distribution, the percentiles in the censored portion of the data can be estimated using statistical procedures for extrapolating or interpolating sample percentiles. This appendix identifies the appropriate statistical procedures for completing the specification of an entire probability distribution. Censored reporting of the data was found in the development of the probability distribution for the parameter TM for Commercial/Industrial Workers.

Sample data are often described in terms of the sample percentiles. For example, in Table 5-C of the Exposure Factors Handbook the sample data is described in terms of the 10th, 20th, ..., 80th, 90th percentiles and the "Max." The probability distribution of the sum, product, or other function of exposure parameters can be estimated from such data. The upper percentiles (90th percentile, 95th percentile, etc.) of the probability distribution for the function of the component exposure parameters are sensitive to all of the sample percentiles of the component parameter probability distributions and particularly sensitive to the percentiles above the 90th percentile. Therefore, it is important to characterize the component parameter's percentiles between the largest sample percentile, e.g., the 90th, and the "Max." as well as possible.

The percentiles of the sample data provide information about the location of the upper percentiles. For example, the 95th percentile would be expected to be smaller if the 70th, 80th, and 90th percentiles were 5, 6, and 7 respectively than if the 70th, 80th, and 90th percentiles were 1, 2, and 7 respectively. The percentiles are changing much faster in the second case than in the first case, hence the upper percentiles would be expected to also be changing faster in the second case.

The information in the sample data percentiles about the upper percentiles can be elucidated by fitting a probability distribution to the observed percentiles and estimating the unknown percentiles by the percentiles of the fitted distribution. For example, a normal distribution can be fit to the data on a parameter's 10th, 20th, ..., 90th percentiles and "Max.", and then the supplementary 92.5th, 95th, 97.5th, 99th, etc. percentiles estimated by the corresponding percentiles of the fitted distribution. The percentiles of the parameter's distribution are then estimated to be the sample 10th, ..., 90th, and "Max." plus the fitted supplementary 92.5th, 95th, etc. percentiles.

In this report the supplementary upper percentiles are estimated by fitting normal, lognormal, and gamma distributions to the sample data. The best fitting distribution is used to estimate the supplementary percentiles.

The normal, lognormal, and gamma distributions collectively provide a very wide range of distributions, and in every case at least one of these three families of distributions provided a good fit to the sample data. If the upper percentiles are relatively close together, then the probability distribution is said to have a "short" upper tail. If the upper percentiles are relatively far apart, then the probability distribution is said to have a "long" tail. The normal distributions have relatively short tails compared to the lognormal distribution which has long tails. The gamma distribution is a standard family of statistical distributions often used to describe positive random variables with a wide variety of tails.

The best fit of the normal, lognormal, and gamma probability distributions to the sample data was determined using a weighted least squares criterion. The weights placed less emphasis on fitting the smaller percentiles and increasingly greater emphasis on fitting the larger percentiles. The criterion essentially required a near perfect fit to the largest sample percentile. For example, when the sample data was the 10th, 20th, ..., 90th percentiles and "Max.", the respective weights were 0.00001, 0.0001, 0.001, 0.01, .1, 1, 10, 100, 10000, and 330. Here, the 90th percentile received the greatest weight, 10000. The derivation of the weight, 330, on the "Max." is illustrated as follows. The sample percentiles in Table 5-C are based on a sample with sample size 975. The expected percentile of the 975th largest value in a sample of size 975 is $975/976$ which is approximately the 99.9th percentile. The ratio of the asymptotic variance of the 90th sample percentile to the asymptotic variance of the 99.9th sample percentile is approximately $330/10000$. Because the weights are proportional to reliability (inversely proportional to variability) and the variance of the 90th sample percentile is $330/10000$ times smaller than the variance of the "Max.", the weight assigned to the "Max." is $330/10000$ times the weight assigned to the 90th sample percentile.

Sensitivity Analysis of Estimating Distributions from Observed Means and Estimated Percentiles

For many of the distributions developed for human health risk assessment in this document, only mean values were available. For example, estimated lognormal distributions were developed from activity duration means given by Walsh (1986). There are no data available for estimating the standard deviations, however, reasonable estimates can be obtained by considering values of percentiles for each of the activities. The entire lognormal distribution is implied by the mean of the distribution and the value of any percentile (other than the 50th percentile). For example, the standard deviation of the lognormal distribution is implied by the distribution's mean and a percentile value. While only a single percentile is needed to estimate the standard deviation, it is informative to consider the entire distribution to determine if there is a match between the estimated distributions and what one could reasonably expect.

While it is true that the distributions surrounding these means are based on assumptions, they are not completely arbitrary and do represent reasonable distributions. In this Appendix, sensitivity analyses of three different standard deviations for TM distributions for each activity within the Regulated/Casual scenario are presented to illustrate the reasonableness of their respective estimated distributions.

For example, picnicking is reported to have an average duration of 2.7 hours per activity day. Suppose 30 minutes (0.5 hour) is assumed to be a near minimum length visit and the lognormal distribution is calculated such that 95% of the visits are greater than 30 minutes. This yields a standard deviation of 2.65. Calculating the standard deviation based on having 99% or 99.9% of the visits being greater than 30 minutes yields standard deviations of 1.9 and 1.45, respectively. Which, if any of these, makes the most sense can be further addressed by considering what happens across the distribution.

The values for these lognormal distributions at selected percentiles are:

	Percentiles for Picnicking, Lognormal (mean = 2.7; s = std.dev.)							
Standard Deviation	.001	.01	.05	.1	.5	.9	.95	.99
2.65	.15	.3	.5	.67	1.9	5.5	7.4	13
1.9	.3	.5	.8	.98	2.2	5	6.3	9.7
1.45	.5	.74	1	1.25	2.38	4.5	5.4	7.7

These distributions are illustrated in the plots following this discussion.

As the standard deviation becomes smaller, the tail values pull in toward the center, e.g., for $s = 2.65$, 95% of the picnics are less than 7.5 hours, whereas at $s = 1.45$, 95% of the picnics are less than 5.4 hours. A decision must be made regarding whether or not any of these distributions make sense and represent what could be reasonably expected for a distribution on picnic duration. Distributions with standard deviations larger than 2.65 are not considered reasonable, e.g., more than 5% of the picnics last longer than 7.4 hours and more than 5% of the picnics last for a shorter time than 30 minutes. Even though this distribution is based on data only through its mean, it seems to reasonably describe the activity.

For additional illustration, similar lognormal distributions are fit for walking, nature walks, bird watching, and bird photography. These are summarized in the following tables and illustrated in the associated plots at the end of the discussion in this Appendix.

Percentiles for Walking, Lognormal (mean = 1.9, s = std. dev.)								
Standard Deviation	.001	.01	.05	.1	.5	.9	.95	.99
1.42	.2	.3	.5	.65	1.52	3.5	4.5	7
1.05	.34	.5	.71	.86	1.66	3.22	3.89	5.53
.81	.5	.68	.9	1.04	1.75	2.93	3.4	4.48

Percentiles for Nature Walks, Lognormal (mean = 2.0; s = std. dev.)								
Standard Deviation	.001	.01	.05	.1	.5	.9	.95	.99
1.59	.2	.3	.5	.64	1.57	3.8	5	8
1.15	.33	.5	.72	.87	1.73	3.44	4.18	6.01
.88	.5	.69	.92	1.07	1.83	3.14	3.66	4.87

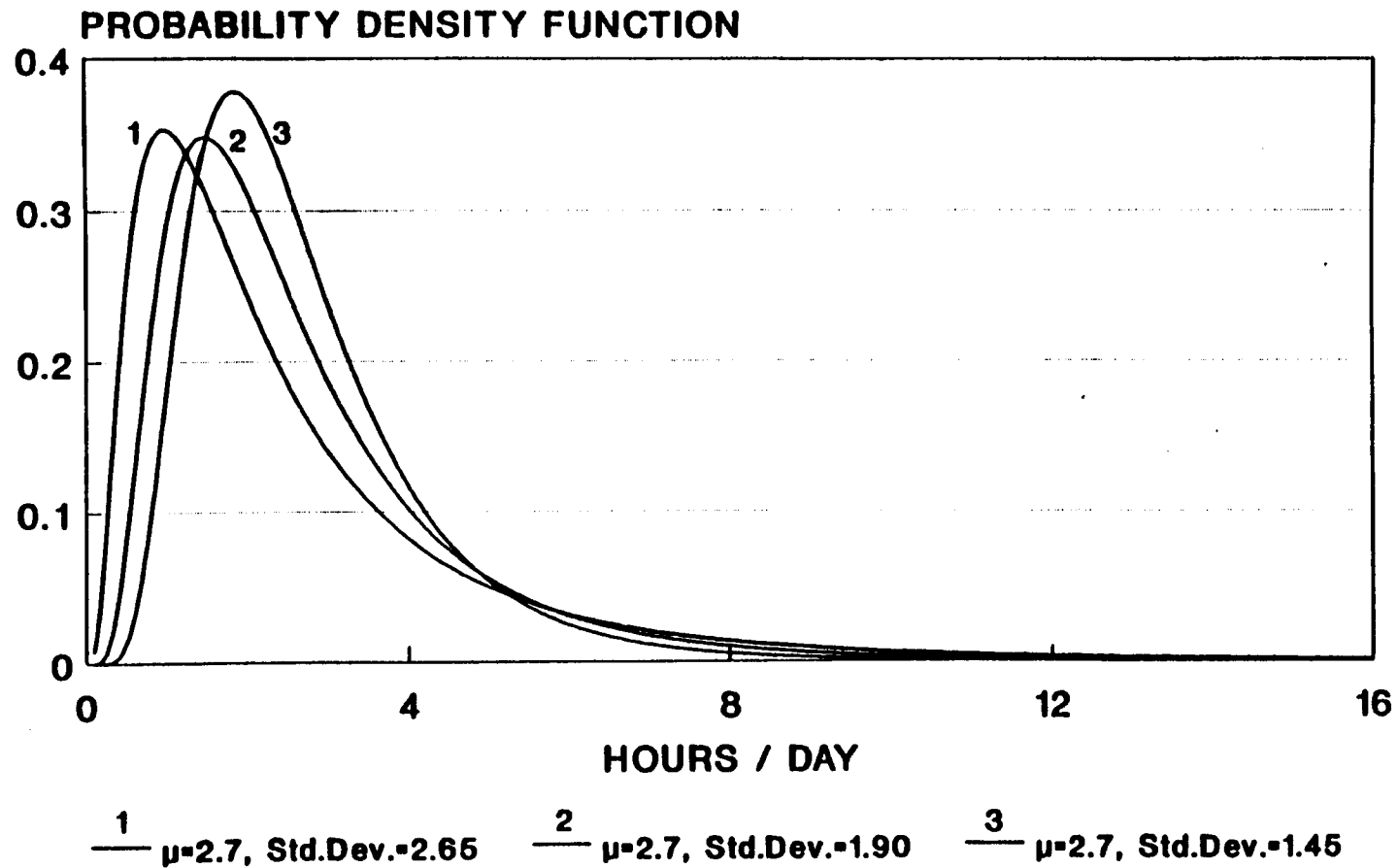
Percentiles for Bird Watching, Lognormal (mean = 2.1; s = std. dev.)								
Standard Deviation	.001	.01	.05	.1	.5	.9	.95	.99
1.74	.17	.3	.5	.64	1.62	4	5.5	8.7
1.26	.32	.5	.72	.88	1.8	3.67	4.48	6.54
.96	.5	.69	.93	1.09	1.91	3.34	3.91	5.26

	Percentiles for Bird Photography, Lognormal (mean = 1.6; s = std. dev.)							
Standard Deviation	.001	.01	.05	.1	.5	.9	.95	.99
1.05	.2	.3	.5	.62	1.34	2.9	3.6	5.4
.77	.35	.5	.68	.8	1.44	2.59	3.05	4.17
.59	.5	.65	.83	.95	1.50	2.37	2.7	3.44

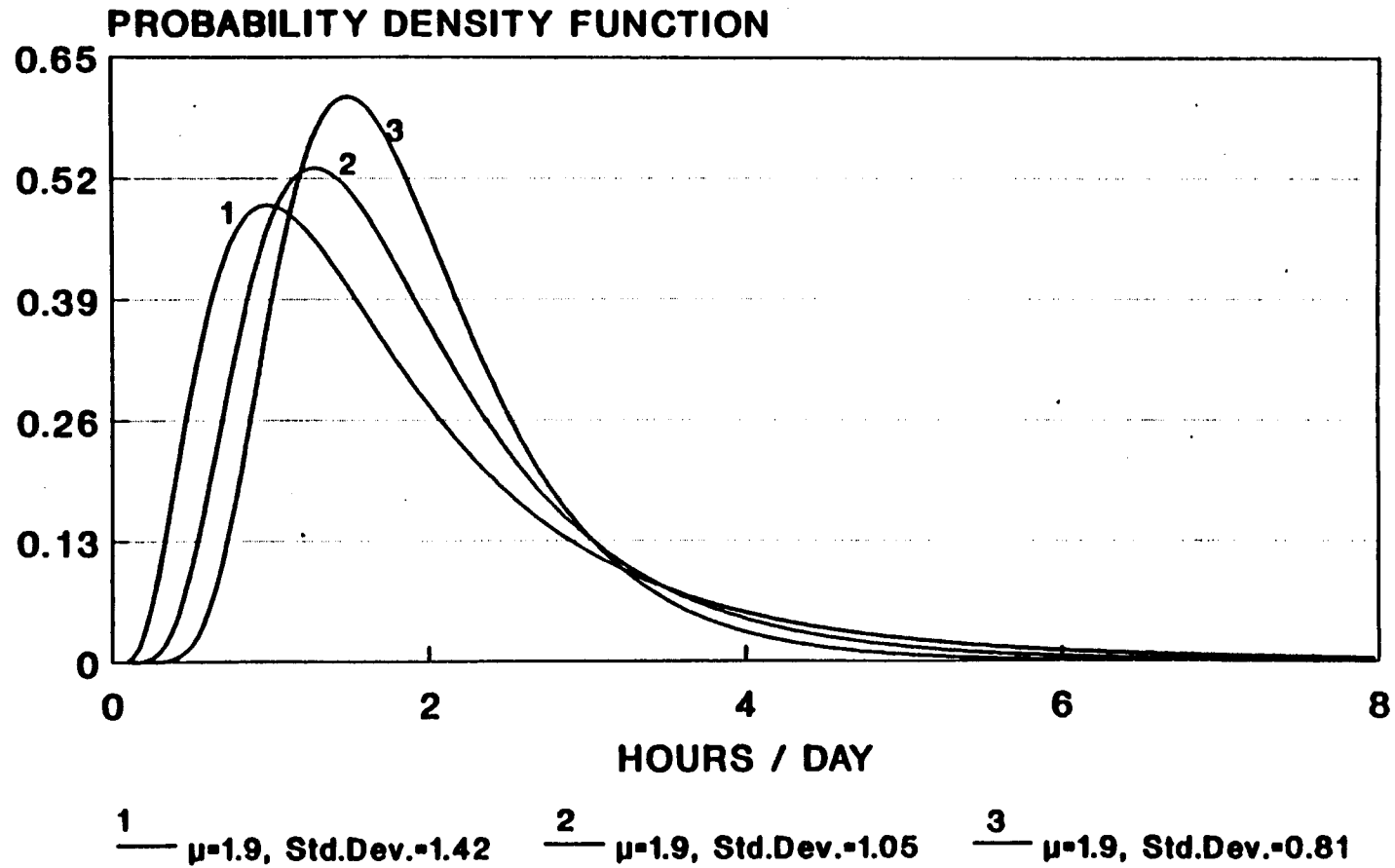
The lognormal distributions chosen to represent each of the five regulated or casual visitor activities are tabled below. While data dependent only through the means, these lognormal distributions give a reasonable estimated distribution for the associated activity duration.

	Lognormal	PERCENTILES						
ACTIVITY	(mean, s)	.99	.95	.90	.5	.05	.01	.001
Picnicking	(2.7, 2.65)	13	7.4	5.5	1.9	.5	.3	.2
Walking	(1.9, 1.42)	7	4.5	3.5	1.52	.5	.3	.2
Nature Walks	(2.0, 1.59)	8	5	3.8	1.57	.5	.3	.2
Bird Watching	(2.1, 1.74)	8.7	5.5	4	1.62	.5	.3	.17
Photography	(1.6, 1.05)	5.4	3.6	2.9	1.34	.5	.3	.2

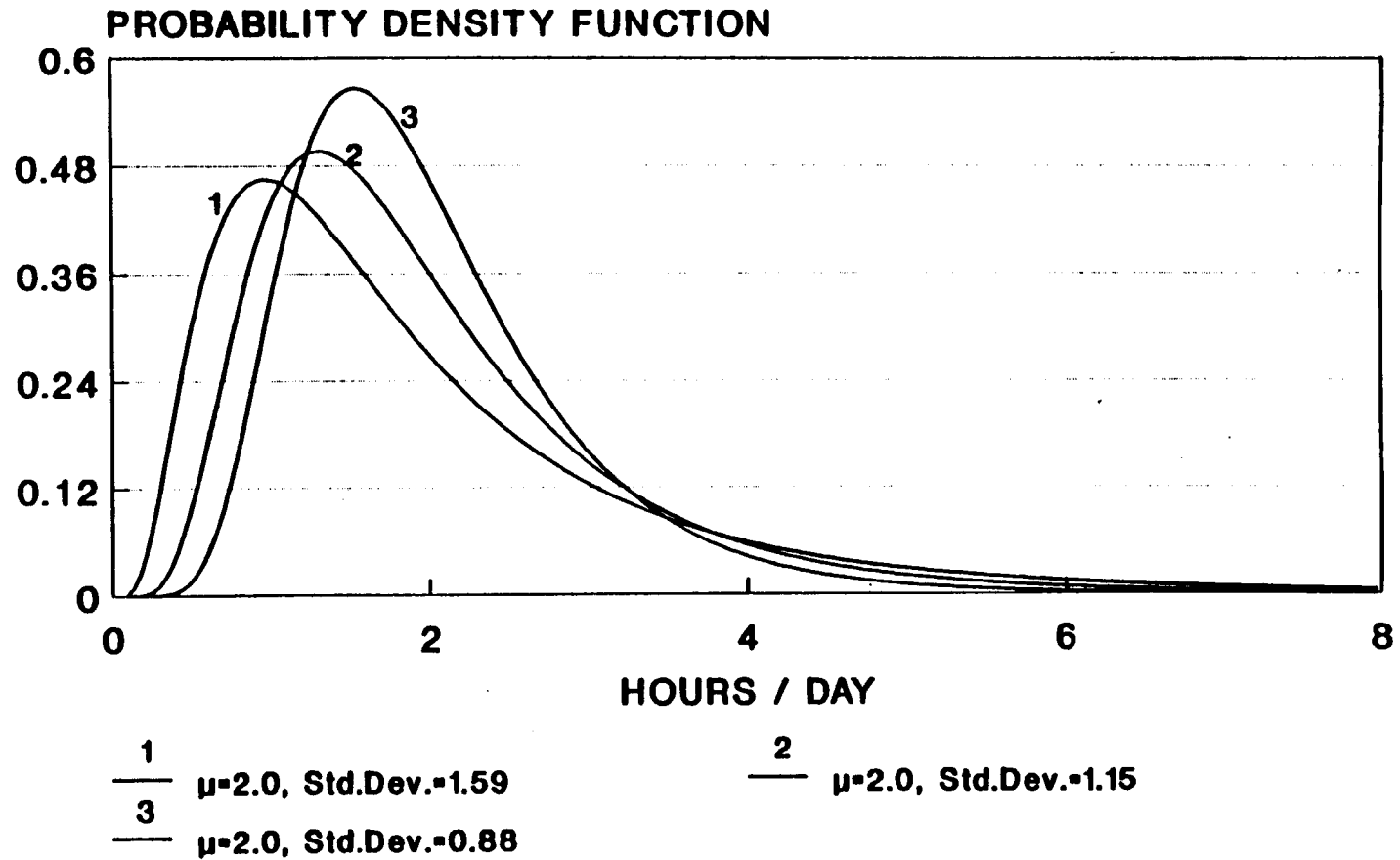
DISTRIBUTION OF PICNICKING DURATION LOGNORMAL FUNCTION



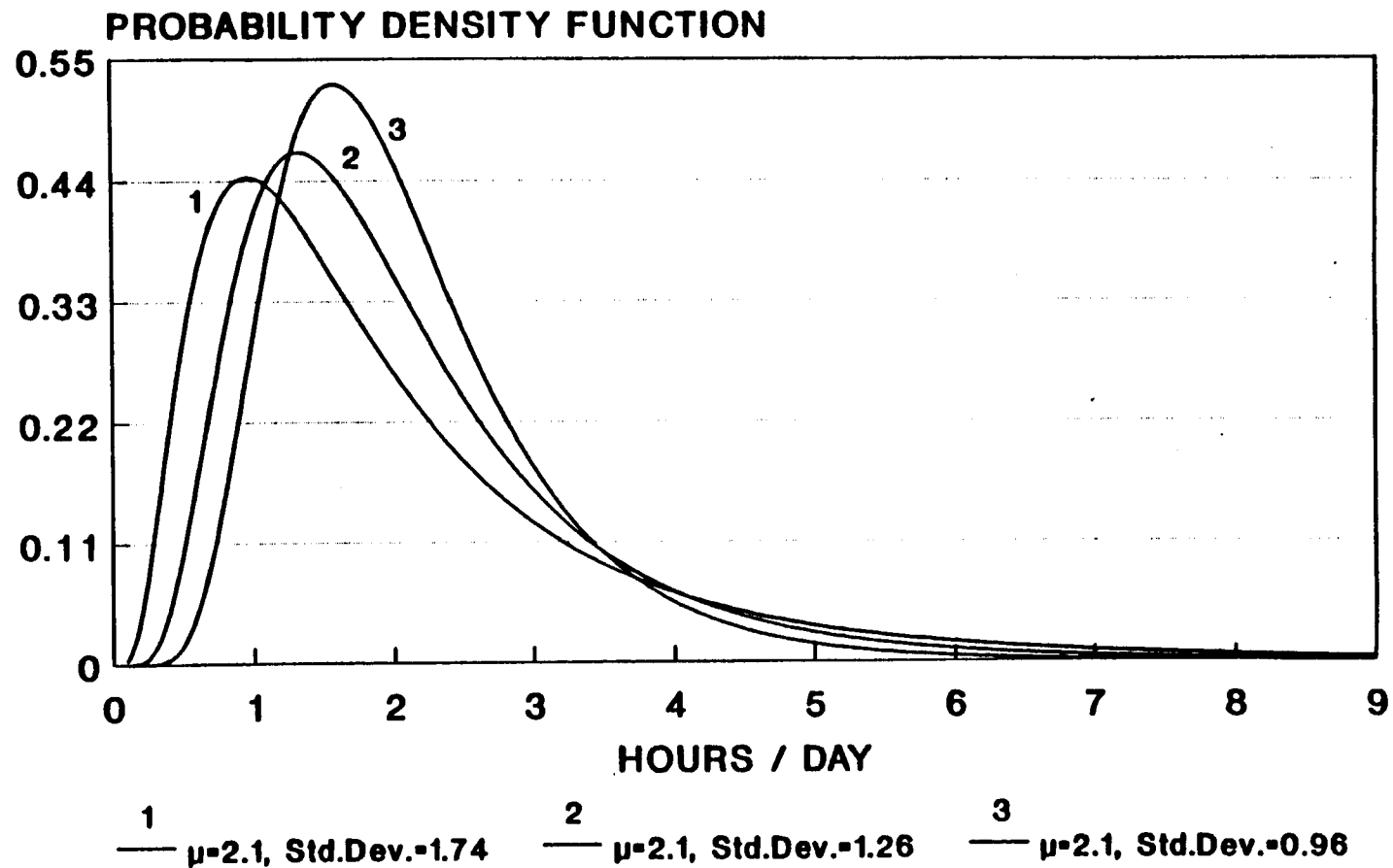
DISTRIBUTION OF WALKING DURATION LOGNORMAL FUNCTION



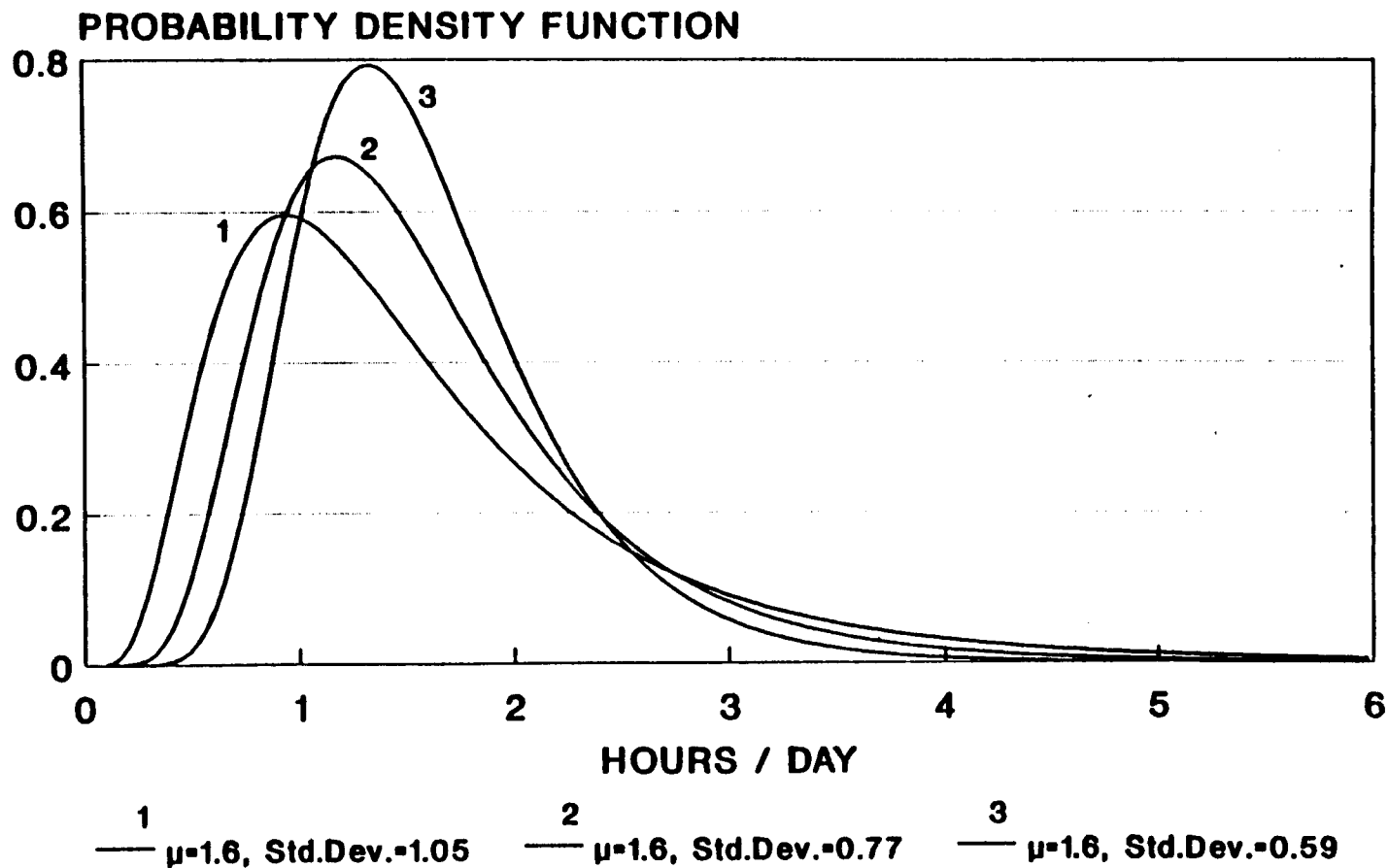
DISTRIBUTION OF NATURE-WALKING DURATION LOGNORMAL FUNCTION



DISTRIBUTION OF BIRD-WATCHING DURATION LOGNORMAL FUNCTION



DISTRIBUTION OF BIRD-PHOTOGRAPHY TIME LOGNORMAL FUNCTION



APPENDIX E

DERIVATION OF THE JOB STARTING AGE PROBABILITY DISTRIBUTION

APPENDIX E

DERIVATION OF THE JOB STARTING AGE PROBABILITY DISTRIBUTION

The Bureau of Labor Statistics supplementary tables on "Age: Tenure on the current job" are reproduced in Tables E.1 and E.2. These tables can be used to determine the job starting age distribution because each current job holder's age at the start of that job represents a sample from the job starting age distribution.

At first glance it might seem that the BLS tables would indicate the job duration distribution. However, "tenure on the current job" is not identical to "total job duration." This is because a current job holder's current tenure is only a lower bound on that worker's total lifetime duration in that job. Furthermore, the data on current job holders does not provide information on the job durations of former job holders, i.e., people who had jobs and left them.

The mathematical derivation of the job starting age distribution from the data in Tables E.1 and E.2 is as follows: The tables imply the proportion of people currently on the job who were between age $\text{Begin}(k)$ and age $\text{End}(k)$ where

$\text{Begin}(1)$	$= 16,$	$\text{End}(1)$	$= 17$
$\text{Begin}(2)$	$= 18,$	$\text{End}(2)$	$= 19$
$\text{Begin}(3)$	$= 20,$	$\text{End}(3)$	$= 24$
$\text{Begin}(4)$	$= 25,$	$\text{End}(4)$	$= 29$
$\text{Begin}(5)$	$= 30,$	$\text{End}(5)$	$= 34$
$\text{Begin}(6)$	$= 35,$	$\text{End}(6)$	$= 39$
$\text{Begin}(7)$	$= 40,$	$\text{End}(7)$	$= 44$
$\text{Begin}(8)$	$= 45,$	$\text{End}(8)$	$= 49$
$\text{Begin}(9)$	$= 50,$	$\text{End}(9)$	$= 54$
$\text{Begin}(10)$	$= 55,$	$\text{End}(10)$	$= 59$
$\text{Begin}(11)$	$= 60,$	$\text{End}(11)$	$= 64$
$\text{Begin}(12)$	$= 65,$	$\text{End}(12)$	$= 69.$

Assuming that each year in an interval is equally likely, e.g., $1/2$ the workers with ages between 16 and 17 are age 16, these proportions imply the probability (denoted by $P[\text{Current Age} = i]$ or, simply, $P[\text{CA}(i)]$) that a current job holder's age is i , for $i = 16, 17, \dots, 69$.

The tables also imply the conditional probability that the current job holder's tenure (TENURE) is in a specified interval $[\text{Tenure}(j), \text{Tenure}(j+1)]$ given the condition that the current age is in the interval $[\text{Begin}(k), \text{End}(k)]$ where:

Tenure(1)	=	0 years
Tenure(2)	=	1 year
Tenure(3)	=	2 years
Tenure(4)	=	3 years
Tenure(5)	=	5 years
Tenure(6)	=	10 years
Tenure(7)	=	15 years
Tenure(8)	=	20 years
Tenure(9)	=	25 years
Tenure(10)	=	30 years
Tenure(11)	≥	35 years.

Assuming that the conditional probability distribution is the same for each current age i between $\text{Begin}(k)$ and $\text{End}(k)$, the tables imply

$$P\{ \text{Tenure}(j) < \text{TENURE} \leq \text{Tenure}(j+1) \mid \text{CA}(i) \} \quad j = 1, 2, \dots, 11$$

where the condition following the conditioning symbol " $\mid$ " is the given condition. The probability that a worker's job tenure is in a specified interval and the worker's current age is i is the product of the above probabilities; i.e.,

$$\begin{aligned} P\{ \text{Tenure}(j) < \text{TENURE} \leq \text{Tenure}(j+1) \text{ and } \text{CA}(i) \} = \\ P\{ \text{Tenure}(j) < \text{TENURE} \leq \text{Tenure}(j+1) \mid \text{CA}(i) \} * P\{ \text{CA}(i) \} \\ i = 16, 17, \dots \text{ and } j = 0, 1, \dots, 11. \end{aligned}$$

If a worker's current age and tenure are both known, then the worker's starting age is known. That is, the probability

$$P\{ \text{Tenure}(j) < \text{TENURE} \leq \text{Tenure}(j+1) \text{ and } \text{CA}(i) \}$$

implies the proportion of workers whose current age is i and who started work at a particular age. For example, if

$$P\{ 0 < \text{TENURE} \leq 1 \text{ and Current Age} = 20 \} = 0.2,$$

then, the proportion of current job holders whose current age is 20 ($\text{CA}=20$) and whose starting age is 19 ($\text{SA}=19$) is 0.1 and the probability that $\text{CA}=20$ and $\text{SA}=19$ is 0.1. This assumes that the "current age" is equally likely to be anywhere between 20 years plus 0 days and 20 years plus 364 days; it also assumes that "tenure" is equally likely to be anywhere between 1 day and 365 days. Thus, the tables provide the probabilities that a worker's current age is i and his starting age is sa ; i.e., the tables provide

$$P(\text{CA} = i \text{ and } \text{SA} = sa).$$

If these probabilities are summed over all current ages, then the sum equals the probability that the starting age (SA) equals sa , $P(SA = sa)$. The $P(SA = sa)$ s for all values of sa are the probability distribution for a job of the starting age of commercial/industrial workers taking that job.

The job starting age probability distributions derived from the 1981 and 1983 data are given in Table E.3. Their average is also given in Table E.3.

Table E.1 Bureau of Labor Statistics supplementary table on Age and "Tenure on the Current Job" in 1981

Current Age	Percent of Current Job Holders	Tenure on Current Job (years)											Row Total
		0-1	1-2	2-3	3-5	5-10	10-15	15-20	20-25	25-30	30-35	>35	
16 to 17 years	2.7%	72.2%	14.8%	6.1%	4.7%	2.2%	.0%	.0%	.0%	.0%	.0%	.0%	100%
18 to 19 years	4.3%	67.7%	19.9%	7.7%	3.9%	.9%	.0%	.0%	.0%	.0%	.0%	.0%	100%
20 to 24 years	13.8%	49.0%	19.5%	13.9%	12.9%	4.4%	.3%	.0%	.0%	.0%	.0%	.0%	100%
25 to 29 years	14.1%	33.6%	15.3%	12.5%	16.8%	19.3%	2.5%	.1%	.0%	.0%	.0%	.0%	100%
30 to 34 years	13.6%	26.5%	12.8%	10.1%	15.5%	22.5%	11.5%	1.1%	.1%	.0%	.0%	.0%	100%
35 to 39 years	11.0%	21.8%	10.5%	8.7%	12.8%	21.2%	15.7%	8.0%	1.0%	.0%	.0%	.0%	100%
40 to 44 years	9.2%	17.8%	8.5%	8.4%	12.3%	20.0%	14.7%	10.4%	6.5%	1.2%	.2%	.0%	100%
45 to 49 years	8.5%	14.5%	7.6%	6.7%	10.8%	18.3%	14.8%	10.7%	9.3%	5.9%	1.2%	.2%	100%
50 to 54 years	8.4%	12.4%	6.0%	6.2%	9.2%	17.6%	14.8%	10.8%	8.1%	8.6%	5.4%	.9%	100%
55 to 59 years	7.1%	10.8%	5.1%	5.6%	8.0%	15.0%	14.4%	10.9%	8.6%	8.2%	8.8%	4.7%	100%
60 to 64 years	4.4%	9.0%	4.6%	5.1%	8.0%	15.1%	14.7%	11.1%	8.8%	7.9%	7.9%	7.9%	100%
65 to 69 years	2.9%	13.2%	4.4%	5.3%	9.4%	16.5%	11.7%	7.9%	8.9%	6.0%	4.7%	11.9%	100%

Table E.2 Bureau of Labor Statistics supplementary table on Age and "Tenure on the Current Job" in 1983

Current Age	Percent of Current Job Holders	Tenure on Current Job (years)									Row Total
		0-1	1-2	2-3	3-5	5-10	10-15	15-20	20-25	>25	
16 to 17 years	2.1%	74.5%	14.1%	5.6%	4.9%	.9%	.0%	.0%	.0%	.0%	100%
18 to 19 years	3.8%	71.1%	19.0%	5.7%	3.3%	.9%	.0%	.0%	.0%	.0%	100%
20 to 24 years	13.6%	49.4%	19.8%	13.5%	12.8%	4.1%	.4%	.0%	.0%	.0%	100%
25 to 29 years	14.8%	33.8%	14.8%	13.4%	18.6%	15.6%	3.6%	.1%	.0%	.0%	100%
30 to 34 years	14.1%	26.0%	12.0%	11.2%	15.8%	18.1%	15.1%	1.7%	.1%	.0%	100%
35 to 39 years	12.1%	21.7%	9.6%	9.0%	14.5%	15.6%	18.0%	10.1%	1.4%	.1%	100%
40 to 44 years	9.9%	18.0%	8.3%	8.3%	12.3%	14.6%	15.4%	13.7%	7.9%	1.6%	100%
45 to 49 years	8.2%	14.4%	6.8%	5.8%	11.5%	13.9%	15.3%	12.3%	10.9%	9.0%	100%
50 to 54 years	7.9%	11.5%	5.8%	5.9%	9.6%	12.2%	15.8%	12.2%	9.2%	17.7%	100%
55 to 59 years	7.0%	10.0%	5.2%	4.5%	8.5%	10.8%	15.7%	11.6%	8.8%	25.0%	100%
60 to 64 years	4.7%	9.2%	4.5%	4.9%	8.1%	11.0%	13.7%	12.4%	8.7%	27.6%	100%
65 to 69 years	1.7%	10.1%	6.7%	5.4%	7.0%	10.1%	15.5%	10.2%	7.3%	27.7%	100%

Table E.3 Job Starting Age Probability Distributions for 1981, 1983, and their Average

Age (Years)	1981	1983	Average
5	.0006	.0025	.0016
6	.0007	.0026	.0016
7	.0008	.0026	.0017
8	.0008	.0027	.0017
9	.0009	.0027	.0018
10	.0014	.0032	.0023
11	.0020	.0038	.0029
12	.0026	.0045	.0035
13	.0037	.0054	.0045
14	.0056	.0069	.0062
15	.0149	.0148	.0149
16	.0239	.0226	.0233
17	.0314	.0302	.0308
18	.0373	.0367	.0370
19	.0390	.0391	.0390
20	.0409	.0414	.0412
21	.0416	.0422	.0419
22	.0422	.0431	.0427
23	.0419	.0429	.0424
24	.0397	.0408	.0403
25	.0373	.0382	.0378
26	.0366	.0372	.0369
27	.0354	.0357	.0355
28	.0340	.0341	.0340
29	.0319	.0315	.0317
30	.0294	.0288	.0291
31	.0285	.0281	.0283
32	.0272	.0269	.0271
33	.0258	.0255	.0257
34	.0236	.0235	.0236
35	.0215	.0216	.0215
36	.0210	.0209	.0210
37	.0203	.0200	.0202
38	.0195	.0191	.0193
39	.0180	.0176	.0178
40	.0165	.0161	.0163
41	.0161	.0156	.0159
42	.0154	.0148	.0151
43	.0148	.0139	.0144
44	.0139	.0128	.0134
45	.0127	.0114	.0121
46	.0122	.0110	.0116
47	.0116	.0105	.0110
48	.0110	.0099	.0104
49	.0102	.0091	.0097
50	.0091	.0082	.0086
51	.0087	.0078	.0082
52	.0081	.0073	.0077
53	.0075	.0068	.0072
54	.0068	.0062	.0065

Table E.3 (Continued)

Age (Years)	1981	1983	Average
55	.0059	.0055	.0057
56	.0056	.0052	.0054
57	.0051	.0047	.0049
58	.0046	.0043	.0045
59	.0039	.0037	.0038
60	.0031	.0030	.0031
61	.0029	.0027	.0028
62	.0026	.0024	.0025
63	.0023	.0022	.0022
64	.0021	.0018	.0020
65	.0017	.0015	.0016
66	.0015	.0013	.0014
67	.0012	.0012	.0012
68	.0009	.0009	.0009
69	.0004	.0007	.0005

APPENDIX F

ADVANTAGES OF CHARACTERIZING A VARIABLE BY AN ESTIMATED PROBABILITY DISTRIBUTION RATHER THAN A FIXED CONSTANT

APPENDIX F

ADVANTAGES OF CHARACTERIZING A VARIABLE BY AN ESTIMATED PROBABILITY DISTRIBUTION RATHER THAN A FIXED CONSTANT

ADVANTAGES OF PROBABILITY DISTRIBUTIONS OVER FIXED CONSTANTS

There are several advantages to describing a component parameter in the PPLV equations in terms of a probability distribution instead of a fixed constant. Some of these advantages are identified in the following list. A few short paragraphs of discussion follow some of the advantages.

1. *A probability distribution can describe all of the possible values that a parameter takes on in the population and how frequently each of those values occurs. A constant cannot convey that information.*

Different people in the population have different values for many of the parameters in the PPLV equations. For example, different workers may have different durations of employment and work different numbers of hours per year. Different anglers may spend different numbers of hours per day fishing and fish different numbers of days per year. Constants cannot fully describe such variability.

2. *A probability distribution implies the relative frequency of all possible values of a population parameter as well as the mean, median, mode, range, standard deviation, variance, and every percentile (5th, 10th, 90th, 95th, 99th, etc.). A constant can describe only one such characteristic.*
3. *A probability distribution completely identifies the distribution of parameter values in a population. However, the same constant value can occur for several different distributions of population values, so that a constant value does not completely identify the distribution of parameter values in a population.*

For example, two different populations can have the same mean. If a population is comprised of 500 workers who work 150 days per year and 500 workers who work 250 days per year, then the population mean is 200 days per year. A population of 1000 workers who each work 200 days per year has exactly the same mean but definitely a different distribution of values.

Two populations can have the same range but different means and different probability distributions.

Two populations can have the same 95th percentiles but have different 90th percentiles, different 99th percentiles, different means, different ranges, different variances, and different probability distributions.

4. *If two populations have the same probability distributions for each PPLV parameter, then the risks and/or acceptable chemical concentrations are the same for the two populations. This is not necessarily true if the two populations only have the same fixed constants characterizing the PPLV parameter probability distributions.*

For example, if two populations have the same mean values for each PPLV parameter, they still do not necessarily have the same PPLV probability distributions or even the same mean PPLV value.

If two populations have the same 95th percentile values for each PPLV parameter, they still do not necessarily have the same PPLV probability distributions or even the same 95th percentile PPLV value.

The previous two examples referring to the PPLV probability distribution are analogous to the examples for an individual parameter distribution given in (3.) above.

In order to determine if two situations or populations have the same PPLV probability distributions, the probability distribution of each PPLV parameter in each situation/population has to be determined.

5. *In order to determine the characteristics of the PPLV's probability distribution, such as its 95th percentile, the probability distribution of each parameter entering into the PPLV calculation must be determined.*

The PPLV is a function of several component parameters. These component parameters are mostly variables with probability distributions. Therefore, the PPLV is a variable with a probability distribution.

Even if the true 95th percentile of each PPLV component parameter were known exactly, the 95th percentile of the PPLV's probability distribution would still be unknown. In order to determine such characteristics of the PPLV's probability distribution, the probability distribution of each component parameter must be identified.

Even an approximate probability distribution for each PPLV component parameter can provide more information about a target characteristic of the PPLV than fixed constant characterizations of each component parameter's probability distribution. This is true even if the fixed constants are known without error, let alone when the fixed constants are themselves estimates.

6. *A wide variety of probability distributions can be used to describe the relative frequencies of different possible parameter values. A constant allows only one type of relative frequency pattern; namely, 100% frequency at one value, and zero frequency elsewhere.*

The choice of probability distributions is not restricted to a single type such as normal or lognormal. Rather, several types of probability distributions can be used including some general approximating forms such as step-functions and piecewise linear functions.

Parameters, like time, which can take on a continuum of values can be described by continuous probability distributions. Parameters, like the number of recreational visits, which can only take on a finite or countable number of possible values can be described by discrete distributions.

Different parameters can be described by different types of probability distributions.

7. *The PPLV probability distribution determined from the probability distributions for the PPLV component parameters, gives the risk manager, the remediation manager, and the risk communicator more information on the relative likelihood of different values for the PPLV and, hence a greater opportunity to do their jobs more effectively.*

FEWER PROBLEMS SPECIFYING PROBABILITY DISTRIBUTIONS THAN CONSTANTS

Contrary to first appearances, specifying a probability distribution is really easier than specifying a fixed constant.

For example, suppose that 20% of the anglers fish ≤ 1 day per year, 75% fish ≤ 4 days per year, and 95% fish ≤ 15 days per year. What fixed constant describes this population? What constant describes the mean, the range, the number of fishing permit holders who fish 0 days per year, 1 day per year, 2 days per year, etc.? A probability distribution could describe all of these characteristics. If the fixed constant description is chosen to be 15 days per year (the 95th percentile), would this choice change if the 99th percentile is 30? Would the choice change if the 99th percentile is 100? When a constant is being used instead of a probability distribution, decisions must be made as to what information to focus on and what information should be omitted; when a probability distribution is used, such decisions are unnecessary. By using a probability distribution instead of a fixed constant, all of the available information is reflected.

There is generally much less error involved in specifying a probability distribution than in specifying a constant.

A constant implies that one particular value has probability 1.0 of occurring. In reality less than 100% of the population has this particular parameter value. A constant implies that all parameter values other than the constant value do not occur; however, many of these values do occur in the population and may even occur more frequently than the constant value. A probability distribution spreads the probability out over the possible parameter values. Therefore, even an approximate probability distribution tends to put at least some weight on the possible population values.

Because a probability distribution can have a non-zero range whereas a constant has a zero range, a probability distribution, even an estimated one, is more likely to provide a better indication of the parameter's actual range. A probability distribution can reflect the variability of a parameter's value in a population.

In the PPLV equations, the PPLV is a function of the parameter values. The variability in the PPLV is not indicated at all if all of the parameters are represented by constants. Even an approximate probability distribution of parameter values will give a better indication of the true variability in the PPLV across the population. For example, a relatively simple function like $1/x$ varies between 2 and 10 if x ranges between 0.1 and 0.5. This range is indicated by any probability distribution with range 0.1 to 0.5 regardless of whether or not the relative likelihoods between 0.1 and 0.5 are exactly correct. Even if an estimated probability distribution only ranges between 0.2 and 0.6, the corresponding range for $1/x$ is approximately from 1.7 to 5 is closer to the truth than the zero range corresponding to assuming that the parameter value is a constant.

In some instances a parameter actually is a constant but the numerical value of that constant is unknown (e.g., physical/chemical constants like molecular weight or Henry's law constant at a given temperature). In such instances, describing that parameter by a particular constant value implies absolute certainty that the unknown constant is in fact the specified value. An implication that may well be wrong. On the other hand, a probability distribution gives a more realistic expression of the current state of knowledge; namely, that the probability that the unknown constant is a particular value is so much and that the probability that the unknown constant is another value is so much, etc. That is, probability distributions quantify the likelihood, given the available information, that the unknown constant is different particular values. Probability distributions do not make the false suggestion that the current state of knowledge implies the unknown constant's value with certainty.

Fixed constants (e.g., age-specific breathing rates and body weights) are just as unknown as probability distributions. "Default" constants are of unknown relevance to specific situations, sites, or populations. Site-specific constants are not necessarily any more self-evident than the probability distributions. For example, if a fixed constant is to represent the 95th percentile, then how does one determine the 95th percentile without first gathering information about the relative frequency of different possible values, that is, without first gathering information about the probability distribution.

ADVANTAGES OF ESTIMATED PROBABILITY DISTRIBUTIONS OVER CONSTANTS

There are also several reasons why even an estimated probability distribution is better than an fixed constant.

Even estimated probability distributions give some idea of the interaction between the PPLV component parameters. For example, an estimated PPLV probability distribution determined from estimated probability distributions gives some indication of whether the variabilities in several parameters "average out", whether the variability in one parameter magnifies the effects of another parameter, or whether the variability in one parameter is so large that it completely overshadows another parameter.

The PPLV is determined as a function of several component parameters. The estimate of the probability distribution for a function may not be particularly sensitive to small errors in estimating the component parameter probability distributions. For example, sums of variables tend to be normally distributed regardless of whether the component probability distributions are normal, lognormal, exponential, or gamma distributions.

The probability distribution for the function of several component variables can be relatively unaffected by small errors in the component random variables even including errors corresponding to misspecifying the type of probability distribution. For example, the 5th, 25th, 50th, 75th, and 95th percentiles of the sum of five parameters when each parameter has a normal, lognormal, exponential, or uniform distribution are shown in the following table. (Each possible parameter distribution had mean 10 and standard deviation 10.) Regardless of which of these four underlying types of probability distributions the parameters have, the sum has roughly the same probability distribution. In fact, even a mixture of 1 normally distributed parameter, 1 lognormally distributed parameter, 1 exponentially distributed parameter, and 2 uniformly distributed parameters has roughly the same percentiles.

Perc.	Normal	Lognormal	Exp.	Uniform	Mixture
5th	13	24	20	13	16
25th	35	35	33	35	35
50th	50	46	47	50	49
75th	65	61	63	66	64
95th	87	91	92	86	88

MATHEMATICAL EXAMPLES

The PPLV methodology is such that the PPLV is calculated as a function of several parameters. Most of the PPLV parameters are variables because either there is limited knowledge concerning the parameter values, the parameter values vary according to the physical/chemical conditions, or the parameter values are different for different individuals in the population. Because the PPLV parameters are variable, the PPLV varies, and the PPLV has a probability distribution. In order to obtain an acceptable upper bound on the risk, an upper bound on the PPLV is often sought. For example, the 90th percentile of the PPLV may be sought. It is, unfortunately, misleadingly tempting to try to determine the 90th percentile of the PPLV probability distribution by replacing each of the PPLV parameters by its 90th percentile and then calculate the corresponding PPLV. The result is not the 90th percentile of the PPLV. The result may be greater than or less than the 90th percentile of the PPLV probability distribution. The only way to determine the percentiles of the PPLV distribution is to determine the PPLV probability distribution and that requires using the probability distributions for each of the component parameters in the PPLV equations.

Although much of discussion and several of the examples are in terms of 90th percentiles, similar discussions and examples could have been presented in terms of 95th percentiles, 50th percentiles, means, etc.

There are problems with replacing the PPLV component parameter values by estimates of their percentiles (e.g., the 95th percentile) instead of utilizing estimates of each PPLV parameter's probability distribution. The following three examples illustrate some of those problems. The PPLV is a relatively complex function of its component parameters; hence, for clarity, the examples are in terms of simpler target functions than the PPLV function. Also, the number of component parameters in the target function is reduced from several dozen for the PPLV to only 2 - 5 for the target functions in the examples. In each of these three examples, the target function is characterized in two different ways, and then the characterizations are compared. In the first characterization, which is like calculating the PPLV by replacing each of its component parameters by an RME value, each of the component parameters in the target function is replaced by its estimated 90th percentile, and the target characterized by the corresponding target function value. In the second characterization, which corresponds to estimating the probability distribution of the PPLV from estimates of the probability distributions of the component parameters, the relative frequency of different target function values is obtained by replacing the target function component parameters by their sample values, and the target characterized by the 90th percentile of these sample target function values. In the second characterization the frequency function of the sample values for a component parameter is an estimated probability distribution for that parameter.

In all three of the examples which follow, the second characterization using estimated probability distributions for the component parameters outperforms the first characterization which calculates the target value by replacing each of the component parameters by its estimated or actual 90th

percentile. In the first two examples the use of fixed constants overstates the target's 90th percentile while the use of fixed constants understates the target's 90th percentile in the third example. In all three examples, the use of estimated probability distributions for the component parameters resulted in estimates of the target's 90th percentile which were distributed more closely about the target's true 90th percentile.

The use of fixed constants to characterize the PPLV may even be worse than in these three examples because a "default" fixed constant may not be as representative of the PPLV component parameter's probability distribution as that distribution's 90th percentile or an estimate thereof.

In simple terms, using probability distributions (even estimated probability distributions) to describe the PPLV component parameters produces much more accurate and informative characterizations of the PPLV probability distribution than calculating a PPLV value with the component parameters replaced by their RME values, estimated percentiles, or even actual percentiles. The use of a single value for each parameter (RME, estimated percentile, or known percentile) results in a biased characterization of the PPLV. Furthermore, the direction of the bias (i.e., conservative or non-conservative) and the magnitude of the bias is not predictable.

Example 1:

The target function is $X+Y$, and the component parameters are X and Y . Both X and Y are normal random variables with mean 10 and variance 9. The probability distribution of $X+Y$ is as follows on the next page:

Probability ($X+Y \leq 13.02$)	= 0.05
Probability ($X+Y \leq 14.56$)	= 0.10
Probability ($X+Y \leq 17.14$)	= 0.25
Probability ($X+Y \leq 20.00$)	= 0.50
Probability ($X+Y \leq 22.86$)	= 0.75
Probability ($X+Y \leq 25.44$)	= 0.90
Probability ($X+Y \leq 26.98$)	= 0.95.

The value of the 90th percentile of $X+Y$ is 25.44.

The function $X+Y$ is analogous to the PPLV function, X and Y are analogous to the PPLV parameters, and the above probability distribution for $X+Y$ is analogous to the unknown PPLV probability distribution to be characterized. In particular, 25.44 is analogous to the unknown 90th percentile of the unknown PPLV probability distribution. For illustration purposes, two alternative characterizations of this 90th percentile of the target function $X+Y$ are investigated.

In order to characterize the PPLV probability distribution, data on the PPLV parameters are collected. In this example, that data collection corresponds to obtaining a random sample of 9 x values and 9 y values.

In the first characterization, the parameter X is replaced by the 9th largest sample x value, and the parameter Y is replaced by the 9th largest sample y value. The first target function characterization is the sum of these two 9th largest values. For any parameter probability distribution, the expected proportion of possible parameter values less than or equal to the largest sample value in a sample of n values is $n/(n+1)$. Thus, when $n=9$, the expected proportion is 90% [$9/(9+1)=0.90$]; i.e., the 9th largest x value and the 9th largest y value are estimates of the 90th percentiles of the probability distributions of X and Y, respectively.

In the second characterization, the parameter X is replaced by a sample x value, and the parameter Y is replaced by a sample y value. Each of the 81 ($9*9=81$) possible combinations of 9 x values and 9 y values is evaluated. The target function characterization is the 90th percentile of these 81 values. Thus, the second target function characterization is the 73rd largest value out of the 81 combinations ($0.90*81=72.9$).

The analog to characterizing the PPLV probability function is simulated 1000 times in order to bring out the behavior of the two alternative characterization procedures. Each of these two target function characterizations are computed 1000 times. Thus, 1000 values of the first characterization of the 90th percentile of the target function are calculated, and 1000 values of the second characterization of the 90th percentile are calculated. The 10th, 50th, and 90th percentiles of these two characterizations of the 90th percentile follow:

Summaries of the Probability Distributions of the Alternative Characterizations of the 90th Percentile of the Probability Distribution of the Target Function

First Characterization:		Second Characterization:
Replace X by its 90th percentile		Replace X by its sample probability distribution
Replace Y by its 90th percentile		Replace Y by its sample probability distribution
10th Percentile of 1000 Characterizations of the 90th Percentile	25.62	22.79
50th Percentile of 1000 Characterizations of the 90th Percentile	28.75	25.07
90th Percentile of 1000 Characterizations of the 90th Percentile	32.25	27.37

The 10th, 50th, and 90th percentiles of the first characterization of the 90th percentile of the target function, which corresponds to calculating the PPLV by replacing each of its component parameters by an RME value, all exceed the true 90th percentile of the target function. [In Example 3 (presented in detail later), the 10th, 50th, and 90th percentiles of the first characterization of the 90th percentile of the target function all are less than the true 90th percentile of the target function; so that, the conclusion is that the first characterization can be very biased (either in the conservative direction or the non-conservative direction).] On the other hand, for the second characterization, which corresponds to estimating the probability distribution of the PPLV from estimates of the probability distributions of the component parameters, the 10th, 50th, and 90th percentiles of the 1000 second characterizations of the 90th percentile of the target function are closely distributed about the true 90th percentile of the target function.

In this example, the superior characterization is the second characterization which is based on estimates of the component parameter probability distributions and not the exact probability distributions for these parameters. Furthermore, the estimated probability distributions were only relatively crude estimates based on the relative sample frequencies in a sample of size nine.

Example 2:

The target function is $X*Y*Z$, and the component parameters are X, Y, and Z. All three of X, Y, and Z are lognormal random variables with $\ln(X)$, $\ln(Y)$, and $\ln(Z)$ being normal random variables with mean 2 and variance 1. The probability distribution of $X*Y*Z$ is as follows:

Probability ($X*Y*Z \leq 23$)	= 0.05
Probability ($X*Y*Z \leq 44$)	= 0.10
Probability ($X*Y*Z \leq 125$)	= 0.25
Probability ($X*Y*Z \leq 403$)	= 0.50
Probability ($X*Y*Z \leq 1298$)	= 0.75
Probability ($X*Y*Z \leq 3714$)	= 0.90
Probability ($X*Y*Z \leq 6968$)	= 0.95.

The value of the 90th percentile of $X*Y*Z$ is 3,714.

In this example, data collection corresponds to obtaining a random sample of 9 x values, 9 y values, and 9 z values.

In the first characterization, the parameter X is replaced by the 9th largest sample x value, the parameter Y is replaced by the 9th largest sample Y value, and the parameter Z is replaced by the 9th largest sample z value. The first target function characterization is the product of these three 9th largest values. The 9th largest x value, the 9th largest y value, and the 9th largest z value are estimates of the 90th percentiles of the probability distributions of X, Y, and Z, respectively.

In the second characterization, the parameter X is replaced by a sample x value, the parameter Y is replaced by a sample y value, and the parameter Z is replaced by a sample z value. Each of the 729 ($9*9*9=729$) possible combinations of 9 x values, 9 y values, and 9 z values is evaluated. The target function characterization is the 90th percentile of these 729 values. Thus, the second target function characterization is the 656th largest value out of the 729 combinations ($0.90*729=656.1$).

Each of the two alternative target function characterizations are computed 1000 times. Thus, 1000 values of the first characterization of the 90th percentile of the target function are calculated, and 1000 values of the second characterization of the 90th percentile are calculated. The 10th, 50th, and 90th percentiles of these two characterizations of the 90th percentile are as follows:

Summaries of the Probability Distributions of the Alternative Characterizations of the 90th Percentile of the Probability Distribution of the Target Function

First Characterization:		Second Characterization:	
Replace X by its 90th percentile		Replace X by its sample probability distribution	
Replace Y by its 90th percentile		Replace Y by its sample probability distribution	
10th Percentile of 1000 Characterizations of the 90th Percentile	9,064		1,394
50th Percentile of 1000 Characterizations of the 90th Percentile	33,140		3,298
90th Percentile of 1000 Characterizations of the 90th Percentile	133,800		7,597

The 10th, 50th, and 90th percentiles of the first characterization of the 90th percentile of the target function, which corresponds to calculating the PPLV by replacing each of its component parameters by an RME value, all exceed the true 90th percentile of the target function. On the other hand, for the second characterization, which corresponds to estimating the probability distribution of the PPLV from estimates of the probability distributions of the component parameters, the 10th, 50th, and 90th percentiles of the 1000 second characterizations of the 90th percentile of the target function are closely distributed about the true 90th percentile of the target function.

The superior characterization is, again, the second characterization which utilizes probability distributions instead of fixed constants for the component parameter values. The superiority occurs even when the characterization is based on estimates of the component parameter probability distributions and not the exact probability distributions for these parameters. Furthermore, the estimated probability distributions were only relatively crude estimates based on the relative sample frequencies in a sample of size nine.

Example 3:

The target function is $R+S+T+U+V$, and the component parameters are R , S , T , U , and V . All five of R , S , T , U , and V are discrete random variables with three possible values 1, 10, and 100 with probabilities 0.1, 0.8, and 0.1, respectively. The probability distribution of $R+S+T+U+V$ is as follows:

Probability ($R+S+T+U+V = 500$)	= 0.00001
Probability ($R+S+T+U+V = 410$)	= 0.0004
Probability ($R+S+T+U+V = 401$)	= 0.00005
Probability ($R+S+T+U+V = 320$)	= 0.0064
Probability ($R+S+T+U+V = 311$)	= 0.0016
Probability ($R+S+T+U+V = 302$)	= 0.0001
Probability ($R+S+T+U+V = 230$)	= 0.0512
Probability ($R+S+T+U+V = 221$)	= 0.0192
Probability ($R+S+T+U+V = 212$)	= 0.0024
Probability ($R+S+T+U+V = 203$)	= 0.0001
Probability ($R+S+T+U+V = 140$)	= 0.2048
Probability ($R+S+T+U+V = 131$)	= 0.1024
Probability ($R+S+T+U+V = 122$)	= 0.0192
Probability ($R+S+T+U+V = 113$)	= 0.0016
Probability ($R+S+T+U+V = 104$)	= 0.00005
Probability ($R+S+T+U+V = 50$)	= 0.32768
Probability ($R+S+T+U+V = 41$)	= 0.2048
Probability ($R+S+T+U+V = 32$)	= 0.0512
Probability ($R+S+T+U+V = 23$)	= 0.0064
Probability ($R+S+T+U+V = 14$)	= 0.0004
Probability ($R+S+T+U+V = 5$)	= 0.00001.

The 90th percentile of $R+S+T+U+V$ is 140.

In this example, data collection corresponds to obtaining a random sample of 5 r values, 5 s values, 5 t values, 5 u values, and 5 v values.

In the first characterization, each parameter is replaced by its true 90th percentile, namely 10. The first target function characterization is the sum of the true 90th percentiles of the parameters, i.e., $10+10+10+10+10=50$. Thus, in this example, the sum of the true 90th percentiles of the component parameters is less than the true 90th percentile of the sum. This is in contrast to the first two examples in which evaluating the target function by replacing each parameter by its estimated 90th percentile overestimated the 90th percentile of the target.

In the second characterization, the parameter R is replaced by a sample r value, the parameter S is replaced by a sample s value, etc. Each of the 3125 ($5*5*5*5*5=3125$) possible

combinations of 5 r values, 5 s values, 5 t values, 5 u values, and 5 v values is evaluated. The target function characterization is the 90th percentile of these 3125 values. Thus, the second target function characterization is the 2813th largest value out of the 3125 combinations ($0.90 \times 3125 = 2812.5$).

The second characterization of the 90th percentile of the target function was computed 1000 times. The 10th, 50th, and 90th percentiles of the second target function characterizations are as follows:

Summary of the Probability Distribution of the Second Characterization of the 90th Percentile of the Probability Distribution of the Target Function

Second Characterization:

Replace R, S, T, U, and V by their sample probability distribution

10th Percentile of 1000 Characterizations of the 90th Percentile	50
50th Percentile of 1000 Characterizations of the 90th Percentile	140
90th Percentile of 1000 Characterizations of the 90th Percentile	230

In the first characterization, which corresponds to calculating the PPLV by replacing each of its component parameters by an RME value known with certainty, the calculated value (50) is less than the true 90th percentile of the target function. On the other hand, for the second characterization, which corresponds to estimating the probability distribution of the PPLV from estimates of the probability distributions of the component parameters, the 10th, 50th, and 90th percentiles of the 1000 second characterizations of the 90th percentile of the target function are closely distributed about the true 90th percentile of the target function.

The superior characterization is, again, the second characterization which utilizes estimated probability distributions instead of fixed constants for the component parameter values. The superiority occurs even when the fixed constants are the true 90th percentiles of the parameters and the second characterization is based on estimates of the component parameter probability distributions and not the exact probability distributions for these parameters. Furthermore, the estimated probability distributions were only relatively crude estimates based on the relative sample frequencies in a sample of size five.

APPENDIX G

ADVANTAGES OF CHARACTERIZING LIFETIME EXPOSURE DURATIONS USING SITE-SPECIFIC PROBABILITY DISTRIBUTIONS RATHER THAN DEFAULT RME CONSTANTS

APPENDIX G

ADVANTAGES OF CHARACTERIZING LIFETIME EXPOSURE DURATIONS USING SITE-SPECIFIC PROBABILITY DISTRIBUTIONS RATHER THAN DEFAULT RME CONSTANTS

Introduction

The probability distributions for TM, DW, and TE are entered separately into the PPLV equations. However, in the PPLV equations the three parameters almost always appear together as the product $TM \cdot DW \cdot TE$. The calculated PPLV value is inversely proportional to the product $TM \cdot DW \cdot TE$. Hence, if the product is doubled, the PPLV is halved. Therefore, the sensitivity of the PPLV to the characterizations of TM, DW, and TE can be ascertained by examining the sensitivity of the product $TM \cdot DW \cdot TE$ to the characterizations of TM, DW, and TE.

The probability distributions for TM, DW, and TE have been derived in the previous regulated/casual, recreational, and commercial/industrial discussions (Sections 3.0, 4.0, and 5.0). The resulting probability distributions for $TM \cdot DW \cdot TE$ and the percentiles of the product for each scenario and each population and subpopulation are given in Table 1 of this appendix. The 95th percentile of each of these probability distributions for $TM \cdot DW \cdot TE$ (hours/lifetime) is denoted by $(TM \cdot DW \cdot TE)_{95}$ and is reproduced for each population, for easy reference, in Table 2-1 of this appendix.

Results

The analyses in each of the following three sections for Regulated/Casual Visitors, Recreational Visitors, and Commercial/Industrial Workers indicate similar results, namely:

1. By using the probability distributions for TM, DW and TE instead of fixed values, the probability of different values of the lifetime exposure duration $(TM \cdot DW \cdot TE)$ and the probability of different PPLV impacts can be determined.
2. Representing TM, DW and TE solely in terms of their 95th percentiles (TM_{95} , DW_{95} , and TE_{95}) does not characterize the lifetime exposure duration $(TM \cdot DW \cdot TE)$ well. The product of the 95th percentiles ($TM_{95} \cdot DW_{95} \cdot TE_{95}$) substantially exceeds the 95th percentile of the lifetime exposure duration $(TM \cdot DW \cdot TE)_{95}$. Correspondingly, the PPLVs derived from TM_{95} , DW_{95} , and TE_{95} are much smaller than the correct PPLV derived from $(TM \cdot DW \cdot TE)_{95}$.
3. The use of probability distributions and site-specific data for TM, DW and TE provides considerably more information than using default fixed values for these time dependent exposure parameters. In the examples, the PPLVs derived from

site-specific data and probability distributions considerably exceeded those based on default fixed values.

Regulated/Casual Visitors

The 95th percentiles for TM, DW, and TE for regulated/casual visitors are 5.6 hours/day, 11.4 visits/year, and 27.4 years/lifetime, respectively, as indicated in Table 2-2 of this appendix. Thus, 95% of the time $TM \leq 5.6$ hours/day, 95% of the time $DW \leq 11.4$ visits/year, and 95% of the time $TE \leq 27.4$ years/lifetime. An interesting question is "how often is the product $TM \cdot DW \cdot TE > 5.6 \cdot 11.4 \cdot 27.4$ hours/lifetime?" The answer depends on the shapes of the probability distributions above and below their 95th percentiles and not just on the locations of the 95th percentiles. For the individual probability distributions for TM, DW, and TE, the probability that $TM \cdot DW \cdot TE > 5.6 \cdot 11.4 \cdot 27.4$ is the probability that $TM \cdot DW \cdot TE > 1,749.2$ which is approximately 0.003, not 0.05 (Tables 2-3 and 2-4). Clearly, multiplying 95th percentiles together does not result in the 95th percentile of the product.

Instead of there being a 5.0% probability of the total lifetime exposure duration exceeding the product of the 95th percentiles, there is really only a 0.3% probability, which is 17 fold less probability (Table 2-4). Thus, the lifetime exposure duration being as large as the product of three 95th percentiles is a much rarer event than would be implied by referring to the product as a 95th percentile.

By evaluating the probability distributions for TM, DW, TE for regulated/casual visitors and using those probability distributions to evaluate the probability distribution of the product, the true 95th percentile of $TM \cdot DW \cdot TE$ is found to be only 215.3 hours/lifetime instead of 1,749.2 hours/lifetime (Table 2-5). This means that the true 95th percentile of the total hours of exposure in a lifetime is about 1/6 of the answer obtained by only multiplying 95th percentiles together and ignoring the rest of the probability distributions ($273.7 / 1,749.2 = 1 / 6.4 = 0.16$) (Table 2-5).

If the PPLV value is calculated using fixed values (95th percentiles) for the time dependent exposure parameters for regulated/casual visitors, then that fixed PPLV value is smaller than the PPLV probability distribution implies. The fixed PPLV value is 6.4 times smaller than the 5th percentile of the PPLV distribution (Table 2-5).

By using the probability distributions for TM, DW, and TE instead of fixed values, it is possible to identify the probability of different values of the lifetime exposure duration ($TM \cdot DW \cdot TE$) and the probability of different PPLV impacts.

The use of probability distributions and site-specific data for TM, DW, and TE for regulated/casual visitors also provides considerably more information than using default fixed values for these time dependent exposure parameters. For example, if 8 hours/day, 52 days/year, and 25 years/lifetime are used as default values of TM, DW, and TE, then the total exposure hours in a lifetime would be characterized by the product $8 \cdot 52 \cdot 25 = 10,400$ (Table

2-6). Without considering the individual probability distributions for TM, DW, and TE, nothing would be known about the value 10,400. It would not be known what percentile of the lifetime exposure is represented by 10,400 hours/lifetime. It would not be known whether 10,400 understated or overstated the 90th percentile, the 95th percentile, etc.

By incorporating the probability distributions for TM, DW, and TE for regulated/casual visitors, it becomes known that, in this case, a default value such as that discussed above, exceeds the true 95th percentile by 48 fold ($10,400 / 215.3 = 48.3$) and exceeds the true 90th percentile by approximately 95 fold ($10,400 / 109.9 = 94.6$). This would imply that a PPLV value calculated using these fixed default values would be 48 fold smaller than implied by the 95th percentile (Table 2-7), 95 fold smaller than implied by the 90th percentile, etc.

Recreational Visitors

Two populations are considered within the recreational scenario. The "recreational population" consists of anglers and general visitors, participating in one or more defined activities. The "expanded recreational population" includes an organized sports scenario, wherein players and spectators would participate in league practice and play of baseball, softball or football. For the comparisons presented in this Appendix, the expanded recreational scenario (inclusive of organized sports) is used.

The 95th percentiles for TM, DW, and TE for the expanded recreational population are 3.7 hours/day, 10.9 days/year and 29.4 years/lifetime, respectively (Table 2-2). Thus, 95% of time $TM \leq 3.7$ hours/day, $DW \leq 10.9$ days/year, and 95% of the time $TE \leq 29.4$ years/lifetime. For the individual probability distributions for TM, DW, and TE, the probability that $TM \cdot DW \cdot TE > 3.7 \cdot 10.9 \cdot 29.4$ is the probability that $TM \cdot DW \cdot TE > 1,185.7$ which is approximately 0.0037, not 0.0500 (Tables 2-3 and 2-4). Again, multiplying 95th percentiles together does not result in the 95th percentile of the product.

By evaluating the probability distributions for TM, DW, TE for recreational visitors and using those probability distributions to evaluate the probability distribution of the product, the true 95th percentile of $TM \cdot DW \cdot TE$ is found to be only 201.2 hours/lifetime instead of 1,185.7 hours/lifetime (Table 2-5). This means that the true 95th percentile of the total hours of exposure in a lifetime is about 1/6 of the result obtained by only multiplying 95th percentiles together and ignoring the rest of the probability distributions ($201.2 / 1,185.7 = 1 / 5.9 = 0.17$) (Table 2-5).

If the PPLV value is calculated using fixed values (95th percentiles) for the time dependent exposure parameters for recreational visitors, then that fixed PPLV value is smaller than the PPLV probability distribution implies. The fixed PPLV value is 5.9 times smaller than the 5th percentile of the PPLV distribution (Table 2-5).

The use of probability distributions and site-specific data for TM, DW, and TE for recreational visitors provides much more information than using default fixed values for these time dependent

exposure parameters. As in the regulated/casual visitor discussion above, the total exposure hours/lifetime derived from fixed default values are 10,400 (Table 2-6). By incorporating the probability distributions for TM, DW, and TE, it becomes known that such a default value exceeds the true 95th percentile by 50 fold ($10,400 / 201.2 = 51.7$) and exceeds the true 90th percentile by approximately 100 fold ($10,400 / 100.3 = 103.7$). This would imply that a PPLV value calculated using these fixed default values would be 50 fold smaller than implied by the 95th percentile (Table 2-7), 100 fold smaller than implied by the 90th percentile, etc.

Commercial/Industrial Workers

The 95th percentiles for TM, DW, and TE for commercial/industrial workers are 12.8 hours/day, 240.9 days/year and 14.8 years/lifetime, respectively (Table 2-2). For the individual probability distributions for TM, DW, and TE, the probability that $TM \cdot DW \cdot TE > 12.8 \cdot 240.9 \cdot 14.8$ is the probability that $TM \cdot DW \cdot TE > 45,636.1$ which is approximately 0.02, not 0.05 (Tables 2-3 and 2-4).

By evaluating the probability distributions for TM, DW, TE and using those probability distributions to evaluate the probability distribution of the product, the true 95th percentile of $TM \cdot DW \cdot TE$ is found to be only 26,700 hours/lifetime instead of 45,636.1 hours/lifetime (Table 2-5). This means that the true 95th percentile of the total hours of exposure in a lifetime is about 1/2 of the answer obtained by only multiplying 95th percentiles together and ignoring the rest of the probability distributions ($26,700 / 45,636.1 = 1 / 1.7 = 0.59$) (Table 2-5).

If the PPLV value is calculated using fixed values (95th percentiles) for the time dependent exposure parameters, then that fixed PPLV value is smaller than the PPLV probability distribution implies. The fixed PPLV value is 1.7 times smaller than the 5th percentile of the PPLV distribution (Table 2-5).

The use of probability distributions and site-specific data for TM, DW, and TE for commercial/industrial workers provides much more information than using default fixed values for these time dependent exposure parameters. For example, if 8 hours/day, 250 days/year, and 25 years/lifetime are used as default values for TM, DW, and TE, then the total exposure hours/lifetime derived from fixed default values are 50,000 (Table 2-6). By incorporating the probability distributions for TM, DW, and TE, it becomes known that such a default value exceeds the true 95th percentile by 2 fold ($50,000 / 26,700 = 1.9$) and exceeds the true 90th percentile by approximately 3 fold ($50,000 / 17,370 = 2.9$). This would imply that a PPLV value calculated using these fixed default values would be 2 fold smaller than implied by the 95th percentile (Table 2-7), 3 fold smaller than implied by the 90th percentile, etc.

**TABLE 1. PROBABILITY DISTRIBUTIONS FOR TM*DW*TE (HOURS/LIFETIME)
DERIVED FROM DATA PROVIDED IN SECTIONS 3, 4, AND 5**

	REGULATED / CASUAL VISITOR			RECREATIONAL VISITOR						COMM./IN D. WORKER
	SUBPOPULATION		POP.	SUBPOPULATION				POPULATIONS		POP.
PERC.	NBR. GENERAL VISITOR	REG. GENERAL VISITOR		ANGLER	NBR. GENERAL VISITOR	REG. GENERAL VISITOR	ORGANIZED SPORTS VISITOR	RBC.	EXPANDED RBC.	
99.9	11330.0	2254.0	3371.0	17950.0	23680.0	1496.0	10410.0	3433.0	3489.0	144,300
99.75	7941.0	1576.0	1867.0	8646.0	12920.0	975.9	6225.0	1624.0	1653.0	109,300
99.5	4885.0	982.5	1346.0	5447.0	8379.0	709.8	4231.0	1025.0	1048.0	84,980
99	2891.0	592.5	864.1	3602.0	5615.0	486.6	2774.0	634.8	654.5	61,150
97.5	1528.0	317.9	419.9	1955.0	2903.0	249.3	1324.0	342.7	346.8	39,610
95	823.0	174.2	215.3	1138.0	1570.0	148.5	667.9	199.0	201.2	26,700
92.5	567.8	121.2	148.9	797.7	1067.0	102.2	412.4	128.6	131.1	21,080
90	433.8	93.7	109.9	581.0	780.5	77.9	288.4	99.4	100.3	17,370
80	197.5	43.1	48.1	264.6	333.6	34.7	105.3	43.4	43.9	10,370
75	146.2	32.3	34.9	191.0	239.0	25.1	69.4	31.0	31.4	8,549
70	108.5	24.4	25.7	146.5	174.5	19.0	47.7	23.6	23.9	7,153
60	64.2	15.0	15.4	90.5	102.7	11.3	22.8	14.1	14.2	5,113
50	38.7	9.4	9.4	57.1	61.9	7.1	10.4	8.8	8.9	3,670
40	23.9	6.0	5.7	35.5	37.8	4.3	3.8	5.5	5.5	2,639
30	13.7	3.6	3.4	21.2	21.8	2.6	0.3	3.3	3.3	1,846
25	10.1	2.7	2.5	16.2	16.1	1.9	0.0	2.5	2.5	1,540
20	7.2	2.0	1.9	11.7	11.4	1.4	0.0	1.8	1.8	1,249
10	2.9	0.9	0.8	5.1	4.3	0.6	0.0	0.8	0.8	676
5	1.3	0.5	0.4	2.4	1.8	0.3	0.0	0.4	0.4	373

Legend: PERC. = Percentage; NBR. = Neighborhood; REG. = Regional; POP. = Population

TABLE 2-1 (from TABLE 1)
95th PERCENTILE OF HOURS/LIFETIME (TM*DW*TE)₉₅
DERIVED FROM DATA PROVIDED IN SECTIONS 3.0, 4.0, AND 5.0

REGULATED/CASUAL VISITOR	RECREATIONAL VISITOR	COMMERCIAL/ INDUSTRIAL WORKER
215.3	201.2	26,700

TABLE 2-2
95th PERCENTILE OF INDIVIDUAL TM, DW, AND TE DISTRIBUTIONS
DERIVED FROM DATA PROVIDED IN SECTIONS 3.0, 4.0, AND 5.0

REGULATED/CASUAL VISITOR	RECREATIONAL VISITOR	COMMERCIAL/ INDUSTRIAL WORKER
TM ₉₅ = 5.6	TM ₉₅ = 3.7	TM ₉₅ = 12.8
DW ₉₅ = 11.4	DW ₉₅ = 10.9	DW ₉₅ = 240.9
TE ₉₅ = 27.4	TE ₉₅ = 29.4	TE ₉₅ = 14.8

TABLE 2-3
TM₉₅*DW₉₅*TE₉₅
DERIVED FROM DATA PROVIDED IN SECTIONS 3.0, 4.0, AND 5.0

REGULATED/CASUAL VISITOR	RECREATIONAL VISITOR	COMMERCIAL/ INDUSTRIAL WORKER
1,749.2	1,185.7	45,636.1

TABLE 2-4
PROBABILITY (TM*DW*TE ≥ TM₉₅*DW₉₅*TE₉₅)

REGULATED/CASUAL VISITOR	RECREATIONAL VISITOR	COMMERCIAL/ INDUSTRIAL WORKER
0.0029	0.0037	0.0198

TABLE 2-5
 $(TM_{.95} * DW_{.95} * TE_{.95}) / (TM * DW * TE)_{.95}$
RATIO: THE PRODUCT OF THE 95th PERCENTILES FOR TM, DW, AND TE :
THE 95th PERCENTILE OF TM*DW*TE
(TABLE 2-3 : TABLE 2-1)

REGULATED/CASUAL VISITOR	RECREATIONAL VISITOR	COMMERCIAL/ INDUSTRIAL WORKER
8.1	5.9	1.7

TABLE 2-6
TM*DW*TE
DERIVED FROM FIXED DEFAULT VALUES (NO DATA)

REGULATED/CASUAL VISITOR	RECREATIONAL VISITOR	COMMERCIAL/ INDUSTRIAL WORKER
$8 * 52 * 25 = 10,400$	$8 * 52 * 25 = 10,400$	$8 * 250 * 25 = 50,000$

TABLE 2-7
RATIO: TM*DW*TE DERIVED FROM FIXED DEFAULT VALUES :
 $(TM * DW * TE)_{.95}$ **DERIVED FROM DATA**
(TABLE 2-6 : TABLE 2-1)

REGULATED/CASUAL VISITOR	RECREATIONAL VISITOR	COMMERCIAL/ INDUSTRIAL WORKER
48.3	51.7	1.9

ATTACHMENT B.3-6

DERIVATION OF THE JOB STARTING AGE PROBABILITY DISTRIBUTION

The Bureau of Labor Statistics supplementary tables on "Age: Tenure on the current job" are reproduced in Tables 1 and 2. These tables can be used to determine the job-starting age distribution because each current job holder's age at the start of that job represents a sample from the job-starting age distribution.

Given a cursory glance, it might seem that the Bureau of Labor Statistics tables indicate the job duration distribution. However, "tenure on the current job" is not identical to "total job duration." This is because a current job holder's current tenure is only a lower bound on that worker's total lifetime duration in that job. Furthermore, the data on current job holders does not provide information on the job durations of former job holders, i.e., people who had jobs and left them.

The mathematical derivation of the job starting age distribution from the data in Tables 1 and 2 is as follows: The tables imply the proportion of people currently on the job who were between age intervals (Begin(k) and age End(k)) where:

Begin(1) = 16, End(1) = 17
 Begin(2) = 18, End(2) = 19
 Begin(3) = 20, End(3) = 24
 Begin(4) = 25, End(4) = 29
 Begin(5) = 30, End(5) = 34
 Begin(6) = 35, End(6) = 39
 Begin(7) = 40, End(7) = 44
 Begin(8) = 45, End(8) = 49
 Begin(9) = 50, End(9) = 54
 Begin(10) = 55, End(10) = 59
 Begin(11) = 60, End(11) = 64
 Begin(12) = 65, End(12) = 69

Assuming that each age in an interval is equally likely (e.g., one-half the workers with ages between 16 and 17 are age 16), these proportions imply the probability (denoted by $P[\text{Current Age} = i]$ or, simply, $P[\text{CA9i}]$) that a current job holder's age is i , for $i = 16, 17, \dots, 69$.

The tables also imply the conditional probability that the current job holder's tenure (TENURE) is in a specified interval $[\text{Tenure}(j), \text{Tenure}(j+1)]$ based on the assumption that the current age is in the interval $[\text{Begin}(k), \text{End}(k)]$ where:

Tenure(1) = 0 years
 Tenure(2) = 1 year
 Tenure(3) = 2 years
 Tenure(4) = 3 years
 Tenure(5) = 5 years
 Tenure(6) = 10 years
 Tenure(7) = 15 years

Tenure(8) = 20 years
 Tenure(9) = 25 years
 Tenure(10) = 30 years
 Tenure(11) = 35 years

Furthermore, it is assumed that the conditional probability distribution is the same for each current age i between $\text{Begin}(k)$ and $\text{End}(k)$, the tables imply the following:

$$P[\text{Tenure}(j) < \text{TENURE} \leq \text{Tenure}(j+1) \mid \text{CA}(i)] \quad j = 1, 2, \dots, 11$$

where the condition following the conditioning symbol " $\mid$ " is the given condition. The probability that a worker's job tenure is in a specified interval and the worker's current age is i is the product of the probabilities given above:

$$\begin{aligned}
 &P[\text{Tenure}(j) < \text{TENURE} \leq \text{Tenure}(j+1) \text{ and } \text{CA}(i)] \\
 &P[\text{Tenure}(j) < \text{TENURE} \leq \text{Tenure}(j+1) \mid \text{CA}(i)] * P[\text{CA}(i)] \\
 &i = 16, 17, \dots \text{ and } j = 0, 1, \dots, 11.
 \end{aligned}$$

If a worker's current age and tenure are both known, then the worker's starting age is known.

$$P[\text{Tenure}(j) < \text{TENURE} \leq \text{Tenure}(j+1) \text{ and } \text{CA}(i)]$$

The probability in this equation implies the proportion of workers whose current age is i and who started work at a particular age. For example, if $P[0 < \text{TENURE} \leq 1 \text{ and Current Age} = 20] = 0.2$, then the proportion of current job holders whose current age is 20 ($\text{CA}=20$) and whose starting age is 19 ($\text{SA}=19$) is 0.1 and the probability that $\text{CA}=20$ and $\text{SA}=19$ is 0.1. This assumes that the "current age" is equally likely to be anywhere between 20 years plus 0 days and 20 years plus 364 days; it also assumes that "tenure" is equally likely to be anywhere between 1 day and 365 days. Thus, the tables provide the probabilities that a worker's current age is i and his or her age is sa ; i.e., $P(\text{CA} = i \text{ and } \text{SA} = sa)$.

If these probabilities are summed for all current ages, then the sum equals the probability that the starting age (SA) equals sa , i.e., $P(\text{SA} = sa)$. The $P(\text{SA} = sa)$ s for all values of sa are the probability distribution for a job of the starting age of commercial/industrial workers taking that job.

The job-starting age probability distributions derived from the 1981 and 1983 data and their averages are given in Table 3.

Table 1(Att.B.3-6) Bureau of Labor Statistics Supplementary Table on Age and "Tenure on the Current Job" in 1981

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Current Age	% of Current Job Holders	Tenure on Current Job (years)											Total
		0-1	1-2	2-3	3-5	5-10	10-15	15-20	20-25	25-30	30-35	>35	
16 to 17 years	2.7	72.2	14.8	6.1	4.7	2.2	0.0	0.0	0.0	0.0	0.0	0.0	100
18 to 19 years	4.3	67.7	19.9	7.7	3.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	100
20 to 24 years	13.8	490.0	19.5	13.9	12.9	4.4	0.3	0.0	0.0	0.0	0.0	0.0	100
25 to 29 years	14.1	33.6	15.3	12.5	16.8	19.3	2.5	0.1	0.0	0.0	0.0	0.0	100
30 to 34 years	13.6	26.5	12.8	10.1	15.5	22.5	11.5	1.1	0.1	0.0	0.0	0.0	100
35 to 39 years	110.0	21.8	10.5	8.7	12.8	21.2	15.7	80.0	10.0	0.0	0.0	0.0	100
40 to 44 years	9.2	17.8	8.5	8.4	12.3	200.0	14.7	10.4	6.5	1.2	0.2	0.0	100
45 to 49 years	8.5	14.5	7.6	6.7	10.8	18.3	14.8	10.7	9.3	5.9	1.2	0.2	100
50 to 54 years	8.4	12.4	60.0	6.2	9.2	17.6	14.8	10.8	8.1	8.6	5.4	0.9	100
55 to 59 years	7.1	10.8	5.1	5.6	80.0	150.0	14.4	10.9	8.6	8.2	8.8	4.7	100
60 to 64 years	4.4	90.0	4.6	5.1	80.0	15.1	14.7	11.1	8.8	7.9	7.9	7.9	100
65 to 69 years	2.9	13.2	4.4	5.3	9.4	16.5	11.7	7.9	8.9	60.0	4.7	11.9	100

Table 2(Att.B.3-6) Bureau of Labor Statistics Supplementary Table on Age and "Tenure on the Current Job" in 1983

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Current Age	% of Current Job										Total
	Holders	0-1	1-2	2-3	3-5	5-10	10-15	15-20	20-25	>25	
16 to 17 years	2.1	74.5	14.1	5.6	4.9	0.9	0.0	0.0	0.0	0.0	100
18 to 19 years	3.8	71.1	190.0	5.7	3.3	0.9	0.0	0.0	0.0	0.0	100
20 to 24 years	13.6	49.4	19.8	13.5	12.8	4.1	0.4	0.0	0.0	0.0	100
25 to 29 years	14.8	33.8	14.8	13.4	18.6	15.6	3.6	0.1	0.0	0.0	100
30 to 34 years	14.1	260.0	120.0	11.2	15.8	18.1	15.1	1.7	0.1	0.0	100
35 to 39 years	12.1	21.7	9.6	90.0	14.5	15.6	180.0	10.1	1.4	.1	100
40 to 44 years	9.9	180.0	8.3	8.3	12.3	14.6	15.4	13.7	7.9	1.6	100
45 to 49 years	8.2	14.4	6.8	5.8	11.5	13.9	15.3	12.3	10.9	90.0	100
50 to 54 years	7.9	11.5	5.8	5.9	9.6	12.2	15.8	12.2	9.2	17.7	100
55 to 59 years	70.0	100.0	5.2	4.5	8.5	10.8	15.7	11.6	8.8	250.0	100
60 to 64 years	4.7	9.2	4.5	4.9	8.1	110.0	13.7	12.4	8.7	27.6	100
65 to 69 years	1.7	10.1	6.7	5.4	70.0	10.1	15.5	10.2	7.3	27.7	100

Table 3(Att.B.3-6) Job Starting Age Probability Distributions for 1981, 1983,
and their Average

Age (Years)	1981	1983	Average
5	0.0006	0.0025	0.0016
6	0.0007	0.0026	0.0016
7	0.0008	0.0026	0.0017
8	0.0008	0.0027	0.0017
9	0.0009	0.0027	0.0018
10	0.0014	0.0032	0.0023
11	0.0020	0.0038	0.0029
12	0.0026	0.0045	0.0035
13	0.0037	0.0054	0.0045
14	0.0056	0.0069	0.0062
15	0.0149	0.0148	0.0149
16	0.0239	0.0226	0.0233
17	0.0314	0.0302	0.0308
18	0.0373	0.0367	0.0370
19	0.0390	0.0391	0.0390
20	0.0409	0.0414	0.0412
21	0.0416	0.0422	0.0419
22	0.0422	0.0431	0.0427
23	0.0419	0.0429	0.0424
24	0.0397	0.0408	0.0403
25	0.0373	0.0382	0.0378
26	0.0366	0.0372	0.0369
27	0.0354	0.0357	0.0355
28	0.0340	0.0341	0.0340
29	0.0319	0.0315	0.0317
30	0.0294	0.0288	0.0291
31	0.0285	0.0281	0.0283
32	0.0272	0.0269	0.0271
33	0.0258	0.0255	0.0257
34	0.0236	0.0235	0.0236
35	0.0215	0.0216	0.0215
36	0.0210	0.0209	0.0210
37	0.0203	0.0200	0.0202
38	0.0195	0.0191	0.0193
39	0.0180	0.0176	0.0178
40	0.0165	0.0161	0.0163
41	0.0161	0.0156	0.0159
42	0.0154	0.0148	0.0151
43	0.0148	0.0139	0.0144
44	0.0139	0.0128	0.0134
45	0.0127	0.0114	0.0121
46	0.0122	0.0110	0.0116
47	0.0166	0.0105	0.0110
48	0.0110	0.0099	0.0104
49	0.0102	0.0091	0.0097
50	0.0091	0.0082	0.0086
51	0.0087	0.0078	0.0082
52	0.0081	0.0073	0.0077
53	0.0075	0.0068	0.0072
54	0.0068	0.0062	0.0065
55	0.0059	0.0055	0.0057
56	0.0056	0.0052	0.0054
57	0.0051	0.0047	0.0049
58	0.0046	0.0043	0.0045
59	0.0039	0.0037	0.0038
60	0.0031	0.0030	0.0031
61	0.0029	0.0027	0.0028
62	0.0026	0.0024	0.0025

**Table 3(Att.B.3-6) Job Starting Age Probability Distributions for 1981, 1983,
and their Average**

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Age (Years)	1981	1983	Average
63	0.0023	0.0022	0.0022
64	0.0021	0.0018	0.0020
65	0.0017	0.0015	0.0016
66	0.0015	0.0013	0.0014
67	0.0012	0.0012	0.0012
68	0.0009	0.0009	0.0009
69	0.0004	0.0007	0.0005

SECTION B.4.2

SUMMARY OF SITE-SPECIFIC Crep AND PPLV DATA

Table B.4.2-1 Site Data Summary for Aldrin: Crep and Indirect PPLV Estimates

Driving Direct PPLV: 7.16E-01 mg/kg (10-6 Carcinogenic Risk Endpoint, Biological Worker)

Bolded Crep concentrations exceed 10-4 Carcinogenic PPLV (=7.16E+01 mg/kg)

Descending Sort on Crep_0 (Horizon 0), Crep_1 and Crep_2

-- = No Data. Sites with no aldrin data (for all horizons) are not listed.

All Crep concentrations and PPLV values are in mg/kg.

Site	Aldrin Crep Concentrations			Bio Worker Indirect PPLV		Ind Worker Indirect PPLV	
	Horizon 0	Horizon 1	Horizon 2	Horizon 1	Horizon 2	Horizon 1	Horizon 2
SP3A	1.85E+03	8.89E+02	--	2.93E+05	--	1.44E-01	--
SP3B	4.82E+02	6.25E+02	--	3.35E+03	--	1.44E-01	--
SP1A	1.38E+02	3.51E+02	3.29E+02	5.73E+02	1.06E+05	1.43E-01	7.65E+03
SP4A	1.35E+02	7.69E+01	--	6.85E+03	--	1.44E-01	--
NC8A	9.18E+01	1.80E+01	--	2.97E+04	--	1.44E-01	--
SP8A	7.78E+01	3.65E+01	6.79E-02	7.44E+02	1.87E+02	1.43E-01	4.43E+00
SP3C	7.11E+01	2.27E+01	--	1.68E+03	--	1.44E-01	--
S2B	5.82E+01	2.51E+01	--	1.47E+02	--	1.42E-01	--
SP12B	5.01E+01	5.01E+01	--	6.04E+04	--	1.44E-01	--
SP1D	5.01E+01	5.01E+01	--	3.72E+04	--	1.44E-01	--
NC1B	3.25E+01	6.53E+01	--	7.60E+02	--	1.43E-01	--
NC1A	1.53E+01	9.16E+00	1.00E+01	8.42E+04	1.00E+06	1.44E-01	2.50E+02
SP2D	1.50E+01	8.12E+00	2.49E-02	3.03E+03	1.35E+03	1.44E-01	3.19E+00
S4	1.13E+01	3.59E+00	--	3.73E+02	--	1.43E-01	--
SP1E	6.92E+00	1.55E+00	--	5.85E+03	--	1.44E-01	--
NC4B	5.29E+00	3.23E+00	--	7.72E+04	--	1.44E-01	--
NC5C	4.14E+00	1.84E+00	--	1.12E+03	--	1.44E-01	--
SP8B	3.92E+00	2.90E+00	--	6.24E+02	--	1.43E-01	--
NC2A	3.74E+00	3.20E+00	--	2.91E+02	--	1.43E-01	--
NC4A	3.07E+00	2.21E+00	6.04E-02	1.09E+03	1.07E+03	1.44E-01	3.96E+00
C1B	3.04E+00	1.30E+00	--	2.20E+00	--	1.17E-01	--
SP1G	2.42E+00	1.05E+00	--	3.98E+00	--	1.41E-01	--
S2A	2.22E+00	1.72E+00	--	1.65E+00	--	1.36E-01	--
SP3E	1.88E+00	6.95E-01	--	1.69E+00	--	1.37E-01	--
NC2B	1.40E+00	5.90E-01	--	1.53E+02	--	1.42E-01	--
NC2D	1.20E+00	6.96E-01	--	1.29E+03	--	1.44E-01	--
SP1C	1.12E+00	4.08E-01	--	1.53E+02	--	1.42E-01	--
SP9A	9.02E-01	3.42E-01	--	1.81E+02	--	1.42E-01	--

Table B.4.2-1 Site Data Summary for Aldrin: Crep and Indirect PPLV Estimates

Driving Direct PPLV: 7.16E-01 mg/kg (10-6 Carcinogenic Risk Endpoint, Biological Worker)

Bolded Crep concentrations exceed 10-4 Carcinogenic PPLV (=7.16E+01 mg/kg)

Descending Sort on Crep_0 (Horizon 0), Crep_1 and Crep_2

-- = No Data. Sites with no aldrin data (for all horizons) are not listed.

All Crep concentrations and PPLV values are in mg/kg.

Site	Aldrin Crep Concentrations			Bio Worker Indirect PPLV		Ind Worker Indirect PPLV	
	Horizon 0	Horizon 1	Horizon 2	Horizon 1	Horizon 2	Horizon 1	Horizon 2
W1F	6.13E-01	3.56E-01	--	2.68E+03	--	1.44E-01	--
SP1F	6.00E-01	6.00E-01	--	3.40E+03	--	1.44E-01	--
C1A	5.97E-01	3.10E+01	5.37E+01	8.90E+04	1.00E+06	1.44E-01	1.34E+03
W2	4.41E-01	2.46E-01	--	1.60E+00	--	1.36E-01	--
NC8B	4.00E-01	1.60E-01	--	2.09E+00	--	1.38E-01	--
SP4B	3.87E-01	1.59E-01	--	3.26E+00	--	1.24E-01	--
SP9B	3.84E-01	2.74E-01	--	3.41E+00	--	1.32E-01	--
C2B	3.39E-01	1.89E-01	--	2.12E+00	--	1.38E-01	--
NC6A	2.93E-01	3.71E-01	6.99E-01	7.59E+02	9.47E+03	1.43E-01	1.74E+01
NC1D	2.75E-01	2.28E-01	--	1.18E+02	--	1.42E-01	--
SP3D	2.64E-01	1.73E-01	--	4.78E+02	--	1.43E-01	--
C2A	2.47E-01	9.40E-03	--	8.71E+03	--	1.44E-01	--
NC5B	2.36E-01	3.08E-01	--	5.30E+05	--	1.44E-01	--
NC5D	2.33E-01	1.17E-01	--	6.03E+02	--	1.43E-01	--
NC2C	1.98E-01	9.28E-04	--	1.99E+00	--	1.40E-01	--
SP12	1.87E-01	1.46E-01	--	1.47E+02	--	1.42E-01	--
SP12A	1.82E-01	1.33E-01	--	2.56E+00	--	1.39E-01	--
SP7C	1.55E-01	1.35E-01	--	2.93E+00	--	1.30E-01	--
SP2B	1.46E-01	1.38E-01	--	3.87E+00	--	1.33E-01	--
SP2E	1.33E-01	1.29E-01	--	3.82E+00	--	1.33E-01	--
SP6	1.29E-01	1.33E-01	--	2.50E+00	--	1.39E-01	--
SP2C	1.12E-01	4.51E-02	--	6.77E+00	--	1.34E-01	--
E6C	1.03E-01	5.79E-02	--	1.08E+03	--	1.44E-01	--
SP5B	9.86E-02	1.15E-01	--	7.48E-01	--	1.24E-01	--
NP6	9.50E-02	1.22E-01	--	2.60E+00	--	1.39E-01	--
SP2A	5.89E-02	3.47E-02	--	7.26E+00	--	1.35E-01	--
NC5A	5.80E-02	2.37E-02	--	1.85E+00	--	1.39E-01	--
SP7B	5.75E-02	7.19E-02	--	7.45E+01	--	1.41E-01	--

Table B.4.2-1 Site Data Summary for Aldrin: Crep and Indirect PPLV Estimates

Driving Direct PPLV: 7.16E-01 mg/kg (10-6 Carcinogenic Risk Endpoint, Biological Worker)

Bolded Crep concentrations exceed 10-4 Carcinogenic PPLV (=7.16E+01 mg/kg)

Descending Sort on Crep_0 (Horizon 0), Crep_1 and Crep_2

-- = No Data. Sites with no aldrin data (for all horizons) are not listed.

All Crep concentrations and PPLV values are in mg/kg.

Site	Aldrin Crep Concentrations			Bio Worker Indirect PPLV		Ind Worker Indirect PPLV	
	Horizon 0	Horizon 1	Horizon 2	Horizon 1	Horizon 2	Horizon 1	Horizon 2
C4	5.08E-02	2.37E-02	--	9.70E+00	--	1.37E-01	--
S5B	3.66E-02	1.01E-03	--	1.89E+04	--	1.44E-01	--
S2C	1.59E-02	5.90E-03	--	2.34E+00	--	1.34E-01	--
C1C	1.27E-02	1.35E-01	1.28E+00	3.04E+00	5.63E+02	1.31E-01	3.04E+01
NC1F	1.11E-02	6.49E-03	--	5.86E-01	--	1.14E-01	--
S3A	6.83E-03	6.44E-03	--	1.55E+00	--	1.29E-01	--
NC1C	6.53E-03	3.99E-03	--	2.70E+02	--	1.43E-01	--
S3B	6.46E-03	1.90E+00	1.37E-01	1.24E+02	2.37E+02	1.42E-01	6.03E+00
SP10	--	1.70E+03	1.09E+03	1.00E+06	1.00E+06	1.44E-01	2.65E+04
NC3	--	1.79E+02	2.35E+02	1.00E+06	1.00E+06	1.44E-01	5.84E+03
SP11	--	1.21E+00	--	1.19E+02	--	1.42E-01	--
NC1E	--	1.12E+00	--	5.75E+04	--	1.44E-01	--
C1D	--	5.14E-01	--	3.25E+04	--	1.44E-01	--
W5D	--	3.25E-01	--	6.10E+04	--	1.44E-01	--
C3	--	1.63E-01	--	1.00E+06	--	1.44E-01	--
SP1B	--	1.13E-01	--	1.03E+05	--	1.44E-01	--
NP5	--	7.78E-02	--	1.87E+00	--	1.40E-01	--
E2A4	--	1.62E-02	1.42E-03	1.22E+02	1.27E+01	1.42E-01	1.30E+00
E2B	--	--	2.45E-01	--	2.20E+02	--	9.14E+00
W6A	--	--	2.12E-01	--	1.43E+04	--	--

Program version: Gray Developmental, Smp. Arith. Mean, Bootstrap CL, Sep. Hz1, Hz2, Flx Ratio, No

Database version: Gray-1 Parameter Revisions, updated November 30, 1993.

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Variable Percentile: 5.00, 1.0e-006 Cancer Risk Level

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSR_0@0.@DR, HSSR_0@1.@DR, HSSR_0@2.@DR, HPPLVBCR.TXT, and HPPLVICR.TXT.

Table B.4.2-2 Site Data Summary for Benzene: Crep and Indirect PPLV Estimates

Driving Direct PPLV: 1.04E+01 mg/kg (10-6 Carcinogenic Risk Endpoint, Industrial Worker)

All Crep Concentrations are below 10-4 and 10-6 Carcinogenic PPLV .

Descending Sort on Crep_0 (Horizon 0), Crep_1 and Crep_2

-- = No Data. Sites with no benzene data (for all horizons) are not listed.

All Crep Concentrations and PPLV values in mg/kg.

Site	Benzene Crep Concentrations			Bio worker Indirect PPLV		Ind Worker Indirect PPLV	
	Horizon 0	Horizon 1	Horizon 2	Horizon 1	Horizon 2	Horizon 1	Horizon 2
SP2E	5.00E+00	8.36E-01	--	3.14E+01	--	2.92E+00	--
NC4B	7.85E-01	5.50E-01	--	2.57E+04	--	3.28E+00	--
NC8A	1.65E-01	2.05E-01	--	4.19E+03	--	3.27E+00	--
E3B	2.23E-02	7.69E-02	--	3.28E+01	--	2.93E+00	--
C1A	--	1.44E+00	5.18E-01	1.74E+04	1.32E+04	3.27E+00	1.84E+00
NP9D	--	1.10E+00	--	7.52E+03	--	3.27E+00	--
SP10	--	8.11E-01	3.73E-01	3.13E+03	3.70E+02	3.27E+00	5.67E-01
SP2A	--	6.32E-01	--	3.98E+02	--	3.24E+00	--
SP7C	--	5.67E-01	1.95E+00	7.55E+01	1.09E+01	3.12E+00	5.64E-01
SP1G	--	4.78E-01	1.07E+00	1.81E+02	1.38E+01	3.21E+00	4.35E-01
SP2D	--	3.75E-01	--	8.20E+02	--	3.26E+00	--
NP2	--	3.28E-01	--	2.31E+03	--	3.27E+00	--
SP2B	--	3.18E-01	1.02E+01	1.06E+02	1.93E+01	3.16E+00	7.95E-01
NC1B	--	2.75E-01	7.80E-02	6.62E+01	3.20E+01	3.09E+00	7.40E-01
NC1F	--	2.02E-01	--	2.18E+01	--	2.87E+00	--
NC1A	--	1.97E-01	1.28E-01	1.96E+04	5.77E+03	3.27E+00	4.57E-01
NP9A	--	1.76E-01	--	8.68E+03	--	3.27E+00	--
E2B	--	1.47E-01	1.46E-01	4.50E+01	1.49E+01	3.02E+00	5.29E-01
NC3	--	1.46E-01	--	2.76E+04	--	3.28E+00	--
E2A1	--	1.31E-01	1.07E-01	1.97E+02	1.30E+01	3.21E+00	5.07E-01
NP6	--	1.29E-01	1.84E-01	1.36E+02	3.93E+01	3.18E+00	6.55E-01
NP5	--	1.13E-01	1.24E-01	2.12E+01	7.24E+00	2.85E+00	5.83E-01
C1B	--	1.12E-01	1.84E-01	1.28E+01	4.38E+00	2.09E+00	1.11E+00
SP9A	--	1.10E-01	--	2.22E+02	--	3.22E+00	--
W1B	--	9.83E-02	--	9.35E+02	--	3.26E+00	--
E2A6	--	9.07E-02	--	5.01E+01	--	3.04E+00	--
SP1A	--	8.51E-02	5.83E-01	1.69E+01	8.94E+00	2.76E+00	6.03E-01
E2A4	--	5.96E-02	--	9.05E+01	--	3.14E+00	--

Table B.4.2-2 Site Data Summary for Benzene: Crep and Indirect PPLV Estimates

Page 2 of 2

Program version: Gray Developmental, Smp. Arith. Mean, Bootstrap CL, Sep. Hz1, Hz2, Flx Ratio, No

Database version: Gray-1 Parameter Revisions, updated November 30, 1993

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Variable Percentile: 5.00, 1.0e-006 Cancer Risk Level

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSR_1@0.@DR, HSSR_1@1.@DR, HSSR_1@2.@DR, HPPLVBCR.TXT, and HPPLVICR.TXT

Table B.4.2-3 Site Data Summary for Carbon Tetrachloride: Crep and Indirect PPLV Estimates

Driving Direct PPLV: 2.51E+00 mg/kg (10-6 Carcinogenic Risk Endpoint, Industrial Worker)

All Crep Concentrations are below 10-4 Carcinogenic PPLV (=2.51E+02 mg/kg).

Descending Sort on Crep_0 (Horizon 0), Crep_1 and Crep_2

-- = No Data. Sites with no carbon tetrachloride data (for all horizons) are not listed.

All Crep concentrations and PPLV values are in mg/kg.

Site	Carbon Tetrachloride Crep Concentrations			Bio Worker Indirect PPLV		Ind Worker Indirect PPLV	
	Horizon 0	Horizon 1	Horizon 2	Horizon 1	Horizon 2	Horizon 1	Horizon 2
SP10	--	6.15E+00	1.75E+00	1.41E+03	2.35E+02	5.41E+00	3.62E-01
SP1A	--	2.20E+00	--	1.87E+01	--	4.59E+00	--
C1A	--	7.12E-01	--	1.01E+04	--	1.07E+00	--
SSB	--	1.60E-01	--	6.53E+04	--	5.42E+00	--
W1B	--	8.40E-02	--	4.21E+02	--	5.37E+00	--

Program version: Gray Developmental, Smp. Arith. Mean, Bootstrap CL, Sep. Hz1, Hz2, Flx Ratio, No

Database version: Gray-1 Parameter Revisions, updated November 30, 1993.

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Variable Percentile: 5.00, 1.0e-006 Cancer Risk Level

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSR_2@0.@DR, HSSR_2@1.@DR, HSSR_2@2.@DR, HPPLVBCR.TXT, and HPPLVICR.TXT

Table B.4.2-4 Site Data Summary for Chlordane: Crep and Indirect PPLV Estimates

Driving Direct PPLV: 3.72E+00 mg/kg (10⁻⁶ Carcinogenic Risk Endpoint, Biological Worker)

Bolded Crep concentrations exceed 10⁻⁴ Carcinogenic PPLV (=3.72E+02 mg/kg)

Descending Sort on Crep_0 (Horizon 0), Crep_1 and Crep_2

-- = No Data. Sites with no chlordane data (for all horizons) are not listed.

All Crep concentrations and PPLV values are in mg/kg.

Site	Chlordane Crep Concentrations			Bio Worker Indirect PPLV		Ind Worker Indirect PPLV	
	Horizon 0	Horizon 1	Horizon 2	Horizon 1	Horizon 2	Horizon 1	Horizon 2
SP3A	4.02E+02	1.93E+02	--	4.25E+05	--	2.39E+00	--
SP1E	3.80E+02	1.06E+02	--	1.51E+05	--	2.39E+00	--
NC8A	6.36E+01	1.28E+01	--	7.79E+04	--	2.39E+00	--
SP8A	4.21E+01	1.46E+01	--	1.46E+03	--	2.39E+00	--
NC1A	1.96E+01	2.30E+01	--	4.16E+05	--	2.39E+00	--
SP1A	1.74E+01	3.03E+01	--	5.25E+02	--	2.39E+00	--
SP3B	1.68E+01	6.32E+00	--	1.05E+03	--	2.39E+00	--
C1B	5.66E+00	2.36E+00	--	4.24E+00	--	1.90E+00	--
C1C	4.25E+00	1.58E+00	--	3.24E+01	--	2.38E+00	--
NC5B	1.36E+00	1.40E+00	--	1.00E+06	--	2.39E+00	--
SP4A	1.33E+00	6.81E-01	--	2.01E+03	--	2.39E+00	--
SP2A	1.32E+00	1.09E+00	--	3.24E+02	--	2.39E+00	--
SP2C	1.25E+00	8.10E-01	--	2.61E+02	--	2.39E+00	--
NC1B	1.23E+00	7.66E+00	--	8.10E+02	--	2.39E+00	--
C4	1.23E+00	1.30E+00	--	4.73E+02	--	2.39E+00	--
NC4B	1.19E+00	1.07E+00	--	1.38E+05	--	2.39E+00	--
SP9B	1.17E+00	1.11E+00	--	2.26E+01	--	2.38E+00	--
NC2B	1.08E+00	9.00E-01	--	5.87E+02	--	2.39E+00	--
SP9A	1.06E+00	7.15E-01	--	8.15E+02	--	2.39E+00	--
NC1C	7.61E-01	1.11E-01	--	2.28E+03	--	2.39E+00	--
W6A	7.08E-01	7.32E-01	--	2.23E+03	--	2.39E+00	--
S4	6.94E-01	2.39E-01	--	3.00E+02	--	2.39E+00	--
SP2B	5.48E-01	5.68E-01	--	2.48E+01	--	2.38E+00	--
SP2E	5.03E-01	5.21E-01	--	2.34E+01	--	2.39E+00	--
NC2A	4.28E-01	5.41E-01	--	3.72E+02	--	2.39E+00	--
NC5A	4.12E-01	2.08E-01	--	2.99E+02	--	2.38E+00	--
SP5B	4.11E-01	6.28E-01	--	3.81E+01	--	2.38E+00	--
SP1G	3.98E-01	3.66E-01	--	2.55E+01	--	2.38E+00	--

Table B.4.2-4 Site Data Summary for Chlordane: Crep and Indirect PPLV Estimates

Driving Direct PPLV: 3.72E+00 mg/kg (10⁻⁶ Carcinogenic Risk Endpoint, Biological Worker)

Bolded Crep concentrations exceed 10⁻⁴ Carcinogenic PPLV (=3.72E+02 mg/kg)

Descending Sort on Crep_0 (Horizon 0), Crep_1 and Crep_2

-- = No Data. Sites with no chlordane data (for all horizons) are not listed.

All Crep concentrations and PPLV values are in mg/kg.

Site	Chlordane Crep Concentrations			Bio Worker Indirect PPLV		Ind Worker Indirect PPLV	
	Horizon 0	Horizon 1	Horizon 2	Horizon 1	Horizon 2	Horizon 1	Horizon 2
NC5C	3.41E-01	2.44E-01	--	1.27E+03	--	2.39E+00	--
S2C	3.12E-01	2.77E-01	--	3.00E+01	--	2.38E+00	--
S1B	3.05E-01	9.77E-01	--	6.38E+03	--	2.39E+00	--
S2B	2.79E-01	1.17E-01	--	1.69E+01	--	1.89E+00	--
SP1C	2.43E-01	3.34E-01	--	4.32E+02	--	2.39E+00	--
SP2D	2.37E-01	2.04E-01	--	1.49E+03	--	2.39E+00	--
NC1F	1.73E-01	7.53E-02	--	7.80E+00	--	1.15E+01	--
SP3D	1.56E-01	1.17E+00	--	3.88E+03	--	2.39E+00	--
NC1D	1.11E-01	1.11E-01	--	2.92E+02	--	2.39E+00	--
S5B	3.06E-02	9.78E-02	--	1.59E+05	--	2.39E+00	--
NC6A	--	8.78E-01	--	4.32E+05	--	2.39E+00	--
S3B	--	4.75E-01	--	8.47E+03	--	2.39E+00	--
SP7C	--	4.63E-01	--	2.31E+04	--	2.39E+00	--
NC1E	--	4.38E-01	--	1.43E+04	--	2.39E+00	--
NC4A	--	3.77E-01	--	1.27E+05	--	2.39E+00	--

Program version: Gray Developmental, Smp. Arith. Mean, Bootstrap CL, Sep. Hz1, Hz2, Flx Ratio, No

Database version: Gray-1 Parameter Revisions, revised November 30, 1993

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Variable Percentile: 5.00, 1.0e-006 Cancer Risk Level

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSR_3@0.@DR, HSSR_3@1.@DR, HSSR_3@2.@DR, HPPLVBCR.TXT, and HPPLVICR.TXT

Table B.4.2-5 Site Data Summary for Chloroacetic Acid: Crep and Indirect PPLV Estimates

Driving Direct PPLV: 7.71E+01mg/kg (Non-carcinogenic Risk Endpoint, Industrial Worker)

Bolded Crep Concentrations exceed a target HI of 1.0.

Descending Sort on Crep_0 (Horizon 0), Crep_1 and Crep_2

-- = No Data. Sites with no chloroacetic acid data (for all horizons) are not listed.

All Crep concentrations and PPLV values are in mg/kg.

Site	Chloroacetic Acid Crep Concentrations			Bio Worker Indirect PPLV		Ind Worker Indirect PPLV	
	Horizon 0	Horizon 1	Horizon 2	Horizon 1	Horizon 2	Horizon 1	Horizon 2
NP4	1.47E+02	8.23E+01	--	--	--	--	--
E3G	3.15E+01	1.63E+01	--	--	--	--	--
SP1E	1.67E+01	3.63E+01	--	--	--	--	--
E3F	1.08E+01	5.40E+00	--	--	--	--	--
C1B	3.20E+00	7.21E+00	--	--	--	--	--
NC1A	3.18E+00	3.14E+00	--	--	--	--	--
NC3	--	3.37E+02	4.26E+01	--	--	--	--
SP10	--	2.67E+01	--	--	--	--	--
SP1A	--	1.76E+01	--	--	--	--	--
E3A	--	1.54E+01	--	--	--	--	--
NP6	--	8.75E+00	--	--	--	--	--
E3D	--	1.14E-01	--	--	--	--	--

Program version: Gray Developmental, Smp. Arith. Mean, Bootstrap CL, Sep. Hz1, Hz2, Flx Ratio, No

Database version: Gray-1 Parameter Revisions, updated November 30, 1993.

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Variable Percentile: 5.00, 1.0e-006 Cancer Risk Level

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSR_4@0.@DR, HSSR_4@1.@DR, HSSR_4@2.@DR, HPPLVBNR.TXT, and HPPLVINR.TXT

Table B.4.2-6 Site Data Summary for Chlorobenzene: Crep and Indirect PPLV Estimates

Driving Direct PPLV: 8.45E+02 mg/kg (Non-carcinogenic Risk Endpoint, Industrial Worker)

All Crep Concentrations are below a target HI of 1.0.

Descending Sort on Crep_0 (Horizon 0), Crep_1 and Crep_2

--- =No Data. Sites with no chlorobenzene data (for all horizons) are not listed.

All Crep concentrations and PPLV values are in mg/kg.

Site	Chlorobenzene Crep Concentrations			Bio Worker Indirect PPLV		Ind Worker Indirect PPLV	
	Horizon 0	Horizon 1	Horizon 2	Horizon 1	Horizon 2	Horizon 1	Horizon 2
NC4B	6.28E-01	5.66E-01	--	2.80E+05	--	7.73E+00	--
NC5C	1.05E-01	1.04E-01	--	1.51E+03	--	7.67E+00	--
E3G	8.67E-02	2.10E-01	--	3.54E+04	--	7.98E+00	--
NC3	--	2.89E+00	--	4.26E+05	--	7.73E+00	--
SP10	--	1.38E+00	6.82E-01	3.41E+04	4.45E+03	7.72E+00	7.16E+00
SP1A	--	4.16E-01	6.85E-01	1.82E+02	9.47E+01	6.87E+00	6.85E+00
C1A	--	3.71E-01	--	8.34E+05	--	8.02E+00	--
NC1A	--	2.16E-01	2.00E-01	2.14E+05	8.59E+04	7.73E+00	6.65E+00
NC1F	--	2.04E-01	--	7.90E+01	--	5.82E+00	--
NC1B	--	1.99E-01	--	2.02E+02	--	7.02E+00	--

Program version: Gray Developmental, Smp. Arith. Mean, Bootstrap CL, Sep. Hz1, Hz2, Flx Ratio, No

Database version: Gray-1 Parameter Revisions, updated November 30, 1993.

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Variable Percentile: 5.00, 1.0e-006 Cancer Risk Level

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSR_5@0.@DR, HSSR_5@1.@DR, HSSR_5@2.@DR, HPPLVBNR.TXT, and HPPLVINR.TXT

Table B.4.2-7 Site Data Summary for Chloroform: Crep and Indirect PPLV Estimates

Driving Direct PPLV: 4.82E+01mg/kg (10-6 Carcinogenic Risk Endpoint, Biological Worker)

All Crep Concentrations are below 10-4 Carcinogenic PPLV (=4.82E+03 mg/kg).

Descending Sort on Crep_0 (Horizon 0), Crep_1 and Crep_2

-- = No Data. Sites with no chloroform data (for all horizons) are not listed.

All Crep concentrations and PPLV values are in mg/kg.

Site	Chloroform Crep Concentrations (mg/kg)			Bio Worker Indirect PPLV		Ind Worker Indirect PPLV	
	Horizon 0	Horizon 1	Horizon 2	Horizon 1	Horizon 2	Horizon 1	Horizon 2
SP1A	--	2.40E+02	9.92E-01	8.03E+00	2.45E+00	9.43E-01	1.64E-01
SP10	--	7.43E+00	2.05E+00	1.20E+03	1.04E+02	9.53E-01	1.58E-01
NC1B	--	1.25E+00	1.84E-01	1.84E+01	2.11E+01	9.19E-01	4.92E-01
C1A	--	9.49E-01	7.86E-01	5.64E+03	4.55E+03	9.53E-01	6.50E-01
NC3	--	8.93E-01	1.07E-01	1.06E+04	2.72E+03	9.53E-01	1.46E-01
S4	--	3.73E-01	--	1.39E+02	--	9.47E-01	--
SP3E	--	2.75E-01	3.47E-01	1.00E+01	2.57E+00	8.94E-01	1.49E-01
NP2	--	1.79E-01	--	2.14E+03	--	9.53E-01	--
W6A	--	1.12E-01	--	3.65E+02	--	9.51E-01	--
E2A7	--	9.86E-02	--	1.15E+02	--	9.46E-01	--
NC5C	--	5.69E-02	--	3.29E+02	--	9.51E-01	--
C1B	--	2.94E-02	1.09E-01	1.77E+00	1.54E+00	6.40E-01	3.91E-01
SP11	--	--	3.09E+00	--	1.04E+01	--	2.07E-01
NC6A	--	--	2.61E+00	--	1.34E+02	--	2.37E-01
SP1G	--	--	2.97E-01	--	5.63E+00	--	1.74E-01
NC8A	--	--	2.69E-01	--	6.41E+02	--	1.96E-01

Program version: Gray Developmental, Smp. Arith. Mean, Bootstrap CL, Sep. Hz1, Hz2, Flx Ratio, No

Database version: Gray-1 Parameter Revisions, updated November 30, 1993.

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Variable Percentile: 5.00, 1.0e-006 Cancer Risk Level

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSR_6@0.@DR, HSSR_6@1.@DR, HSSR_6@2.@DR, HPPLVBCR.TXT, and HPPLVICR.TXT

Table B.4.2-8 Site Data Summary for DDE: Crep and Indirect PPLV Estimates

Driving Direct PPLV: 1.25E+01 mg/kg (10-6 Carcinogenic Risk Endpoint, Biological Worker)

All Crep Concentrations are below 10-4 Carcinogenic PPLV (=1.25E+03 mg/kg).

Descending Sort on Crep_0 (Horizon 0), Crep_1 and Crep_2

-- = No Data. Sites with no DDE data (for all horizons) are not listed.

All Crep concentrations and PPLV values are in mg/kg.

Site	DDE Crep Concentrations			Bio Worker Indirect PPLV		Ind Worker Indirect PPLV	
	Horizon 0	Horizon 1	Horizon 2	Horizon 1	Horizon 2	Horizon 1	Horizon 2
SP1E	4.14E+01	1.18E+01	--	2.04E+05	--	1.07E+01	--
NC8A	4.00E+00	9.49E-01	--	8.63E+04	--	1.07E+01	--
SP1C	8.76E-01	2.62E-01	--	1.55E+03	--	1.07E+01	--
S4	7.74E-01	2.25E-01	--	1.18E+03	--	1.07E+01	--
SP1A	7.51E-01	6.18E-01	--	3.04E+02	--	1.06E+01	--
S2B	6.03E-01	2.36E-01	--	1.80E+02	--	1.04E+01	--
SP2A	5.62E-01	4.98E-01	--	8.92E+02	--	1.07E+01	--
SP4A	4.67E-01	2.52E-01	--	4.96E+03	--	1.07E+01	--
SP9A	4.55E-01	6.99E-01	--	3.27E+03	--	1.07E+01	--
SP8B	4.30E-01	3.60E-01	--	2.78E+03	--	1.07E+01	--
NC1A	3.78E-01	3.07E-01	--	1.95E+05	--	1.07E+01	--
NC1B	3.65E-01	6.54E-01	--	9.62E+02	--	1.07E+01	--
SP3B	3.33E-01	2.81E-01	--	8.99E+02	--	1.07E+01	--
SP8A	2.71E-01	4.80E-01	--	1.08E+03	--	1.07E+01	--
SP9B	2.69E-01	2.52E-01	--	2.20E+02	--	1.05E+01	--
S2C	2.68E-01	8.55E-02	--	3.41E+02	--	1.06E+01	--
NC8B	2.24E-01	2.22E-01	--	5.45E+02	--	1.06E+01	--
C1C	2.10E-01	3.66E-01	--	3.20E+02	--	1.06E+01	--
S2A	2.01E-01	1.66E-01	--	1.13E+02	--	1.03E+01	--
SP3E	1.88E-01	6.71E-02	--	1.17E+02	--	1.03E+01	--
SP3C	1.87E-01	1.73E-01	--	1.86E+03	--	1.07E+01	--
SP2E	1.87E-01	1.87E-01	--	2.87E+02	--	1.06E+01	--
SP2B	1.86E-01	1.95E-01	--	2.97E+02	--	1.06E+01	--
SP12A	1.83E-01	1.43E-01	--	5.90E+02	--	1.07E+01	--
SP4B	1.67E-01	1.53E-01	--	1.22E+02	--	1.03E+01	--
C4	1.55E-01	1.60E-01	--	6.76E+02	--	1.07E+01	--
NP6	1.54E-01	2.15E-01	--	7.66E+02	--	1.07E+01	--
NC4B	1.40E-01	1.21E-01	--	1.89E+05	--	1.07E+01	--
SP5B	1.34E-01	1.84E-01	--	1.54E+02	--	1.04E+01	--
NC5B	1.27E-01	9.92E-02	--	1.00E+06	--	1.07E+01	--
C2B	1.03E-01	5.78E-02	--	2.60E+02	--	1.05E+01	--

Table B.4.2-8 Site Data Summary for DDE: Crep and Indirect PPLV Estimates

Driving Direct PPLV: 1.25E+01 mg/kg (10-6 Carcinogenic Risk Endpoint, Biological Worker)

All Crep Concentrations are below 10-4 Carcinogenic PPLV (=1.25E+03 mg/kg).

Descending Sort on Crep_0 (Horizon 0), Crep_1 and Crep_2

-- = No Data. Sites with no DDE data (for all horizons) are not listed.

All Crep concentrations and PPLV values are in mg/kg.

Site	DDE Crep Concentrations			Bio Worker Indirect PPLV		Ind Worker Indirect PPLV	
	Horizon 0	Horizon 1	Horizon 2	Horizon 1	Horizon 2	Horizon 1	Horizon 2
SP2D	9.76E-02	2.09E-02	--	1.94E+03	--	1.07E+01	--
NC5A	8.79E-02	7.47E-02	--	7.28E+02	--	1.07E+01	--
NC5C	7.93E-02	3.49E-02	--	1.94E+03	--	1.07E+01	--
S5B	7.33E-02	7.71E-02	--	4.72E+05	--	1.07E+01	--
SP3D	7.17E-02	7.37E-03	--	1.25E+03	--	1.07E+01	--
C1B	7.06E-02	2.87E-02	--	1.42E+01	--	7.79E+00	--
SP7B	5.10E-02	1.01E-01	--	1.12E+03	--	1.07E+01	--
SP1G	4.44E-02	2.32E-02	--	1.31E+02	--	1.03E+01	--
SP2C	2.37E-02	7.87E-03	--	1.04E+02	--	1.02E+01	--
SP3A	1.98E-02	6.66E-03	--	1.02E+04	--	1.07E+01	--
NC2B	1.84E-02	7.73E-03	--	2.21E+02	--	1.05E+01	--
NC1C	1.53E-02	6.17E-03	--	1.91E+03	--	1.07E+01	--
NC4A	1.45E-02	9.97E-02	--	2.92E+03	--	1.07E+01	--
NC1D	1.38E-02	6.14E-03	--	2.44E+02	--	1.05E+01	--
NC1F	1.17E-02	3.58E-02	--	5.96E+01	--	9.86E+00	--
W6A	8.93E-03	2.22E-03	--	6.47E+02	--	1.07E+01	--
S3B	7.37E-03	4.07E-02	7.42E-02	2.30E+02	4.39E+04	1.05E+01	8.78E+02
NC2A	4.14E-03	3.60E-03	--	1.26E+02	--	1.04E+01	--
C1A	2.10E-03	1.02E-03	--	2.02E+04	--	1.07E+01	--
SP10	--	4.19E-01	7.33E+00	1.00E+06	1.00E+06	1.07E+01	8.16E+04
S3A	--	5.02E-03	--	7.10E+02	--	1.07E+01	--
NC6A	--	1.18E-03	--	7.23E+03	--	1.07E+01	--
E2A4	--	--	2.79E-02	--	1.73E+04	--	1.05E+03

Program version: Gray Developmental, Smp. Arith. Mean, Bootstrap CL, Sep. Hz1, Hz2, Flx Ratio, No

Database version: Gray-1 Parameter Revisions, updated November 30, 1993.

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Variable Percentile: 5.00, 1.0e-006 Cancer Risk Level

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSR_7@0.@DR, HSSR_7@1.@DR, HSSR_7@2.@DR, HPPLVBCR.TXT, and HPPLVICR.TXT

Table B.4.2-9 Site Data Summary for DDT: Crep and Indirect PPLV Estimates

Driving Direct PPLV: 1.35E+01 mg/kg (10⁻⁶ Carcinogenic Risk Endpoint, Biological Worker)

All Crep Concentrations are below 10⁻⁴ Carcinogenic PPLV (= 1.35E+03 mg/kg).

Descending Sort on Crep_0 (Horizon 0), Crep_1 and Crep_2

-- = No Data. Sites with no DDT data (for all horizons) are not listed.

All Crep concentrations and PPLV values are in mg/kg.

Site	DDT Crep Concentrations			Bio Worker Indirect PPLV		Ind Worker Indirect PPLV	
	Horizon 0	Horizon 1	Horizon 2	Horizon 1	Horizon 2	Horizon 1	Horizon 2
SP1E	7.30E+01	2.05E+01	--	1.00E+06	--	5.35E+01	--
S4	6.72E+00	2.11E+00	--	2.56E+04	--	5.35E+01	--
SP1A	4.99E+00	3.50E+00	--	5.13E+03	--	5.34E+01	--
SP8A	3.93E+00	4.25E+00	1.21E-01	2.27E+04	1.00E+06	5.35E+01	2.86E+04
SP1C	2.33E+00	9.37E-01	--	2.08E+04	--	5.35E+01	--
SP9A	1.99E+00	7.76E-01	5.82E-03	2.44E+04	3.20E+05	5.35E+01	2.33E+03
SP3E	1.63E+00	5.20E-01	--	2.30E+03	--	5.33E+01	--
NC1A	8.19E-01	7.58E-01	--	1.00E+06	--	5.35E+01	--
NC8A	8.08E-01	4.41E-01	--	4.17E+05	--	5.35E+01	--
SP8B	7.72E-01	6.10E-01	--	2.56E+04	--	5.35E+01	--
SP4A	4.92E-01	2.54E-01	--	3.53E+04	--	5.35E+01	--
S2B	4.86E-01	2.03E-01	--	1.18E+03	--	5.30E+01	--
NC5B	4.38E-01	3.33E-01	--	1.00E+06	--	5.35E+01	--
C1B	4.15E-01	1.70E-01	--	2.44E+02	--	5.11E+01	--
C1C	3.98E-01	1.07E+00	--	3.88E+03	--	5.34E+01	--
C4	3.48E-01	3.93E-01	--	7.49E+03	--	5.34E+01	--
SP12A	3.43E-01	2.55E-01	--	5.57E+03	--	5.34E+01	--
SP3D	3.32E-01	1.44E-01	--	3.91E+04	--	5.35E+01	--
SP3A	3.29E-01	1.33E-01	--	3.21E+05	--	5.35E+01	--
NC8B	3.08E-01	2.69E-01	--	4.25E+03	--	5.34E+01	--
NC5A	2.90E-01	2.54E-01	--	9.50E+03	--	5.35E+01	--
E6C	2.71E-01	1.51E-01	--	1.56E+05	--	5.35E+01	--
SP7C	2.58E-01	2.48E-01	--	1.80E+03	--	5.32E+01	--
SP2E	2.51E-01	2.41E-01	--	2.31E+03	--	5.33E+01	--
NC1B	2.48E-01	1.77E-01	--	3.54E+03	--	5.33E+01	--
SP4B	2.34E-01	6.79E-03	--	2.69E+02	--	5.04E+01	--
S2A	2.26E-01	2.99E-02	--	3.41E+02	--	5.18E+01	--
SP2B	2.24E-01	2.37E-01	--	2.32E+03	--	5.33E+01	--

Table B.4.2-9 Site Data Summary for DDT: Crep and Indirect PPLV Estimates

Driving Direct PPLV: 1.35E+01 mg/kg (10⁻⁶ Carcinogenic Risk Endpoint, Biological Worker)

All Crep Concentrations are below 10⁻⁴ Carcinogenic PPLV (= 1.35E+03 mg/kg).

Descending Sort on Crep_0 (Horizon 0), Crep_1 and Crep_2

-- = No Data. Sites with no DDT data (for all horizons) are not listed.

All Crep concentrations and PPLV values are in mg/kg.

Site	DDT Crep Concentrations			Bio Worker Indirect PPLV		Ind Worker Indirect PPLV	
	Horizon 0	Horizon 1	Horizon 2	Horizon 1	Horizon 2	Horizon 1	Horizon 2
SP6	2.14E-01	2.19E-01	--	5.05E+03	--	5.34E+01	--
SP1B	2.00E-01	1.90E-01	--	3.97E+04	--	5.35E+01	--
SP5B	1.94E-01	2.13E-01	--	1.18E+03	--	5.30E+01	--
NC1C	1.80E-01	2.21E-01	--	8.09E+04	--	5.35E+01	--
NP5	1.74E-01	1.38E-01	--	8.42E+02	--	5.28E+01	--
S2C	1.66E-01	6.98E-02	--	2.18E+03	--	5.32E+01	--
NP6	1.64E-01	2.11E-01	--	5.37E+03	--	5.34E+01	--
SP8C	1.62E-01	1.88E-01	--	1.18E+03	--	5.30E+01	--
SP3C	1.51E-01	1.71E-01	--	1.31E+04	--	5.35E+01	--
C2B	1.33E-01	7.50E-02	--	2.10E+03	--	5.32E+01	--
NC1D	1.27E-01	1.05E-01	--	7.14E+03	--	5.34E+01	--
SP7B	9.50E-02	1.75E-01	--	1.04E+04	--	5.35E+01	--
SP1G	9.21E-02	3.69E-02	--	1.17E+03	--	5.30E+01	--
SP2D	8.22E-02	2.15E-02	--	1.40E+04	--	5.35E+01	--
NC5C	7.26E-02	3.24E-02	--	1.33E+04	--	5.35E+01	--
SP2A	7.17E-02	4.27E-02	--	1.85E+03	--	5.32E+01	--
S5B	6.28E-02	7.25E-02	--	1.00E+06	--	5.35E+01	--
SP2C	3.03E-02	1.18E-02	--	1.01E+03	--	5.29E+01	--
NC4A	2.12E-02	8.92E-02	--	1.96E+04	--	5.35E+01	--
W6A	2.08E-02	5.34E-03	--	9.10E+03	--	5.34E+01	--
NC4B	1.92E-02	1.11E-02	--	4.68E+05	--	5.35E+01	--
NC2B	1.65E-02	6.98E-03	--	2.17E+03	--	5.31E+01	--
NC1F	1.59E-02	7.26E-02	--	6.01E+02	--	5.25E+01	--
S3B	9.87E-03	1.04E-01	--	2.60E+03	--	5.33E+01	--
C1A	8.29E-03	3.34E-03	--	1.74E+05	--	5.35E+01	--
S3A	4.72E-03	3.74E-03	--	6.38E+02	--	5.17E+01	--
NC2A	3.31E-03	2.89E-03	--	1.77E+03	--	5.27E+01	--
C2D	2.40E-03	1.79E-03	--	1.00E+06	--	5.35E+01	--

Table B.4.2-9 Site Data Summary for DDT: Crep and Indirect PPLV Estimates

Driving Direct PPLV: 1.35E+01 mg/kg (10⁻⁶ Carcinogenic Risk Endpoint, Biological Worker)

All Crep Concentrations are below 10⁻⁴ Carcinogenic PPLV (= 1.35E+03 mg/kg).

Descending Sort on Crep_0 (Horizon 0), Crep_1 and Crep_2

-- = No Data. Sites with no DDT data (for all horizons) are not listed.

All Crep concentrations and PPLV values are in mg/kg.

Site	DDT Crep Concentrations			Bio Worker Indirect PPLV		Ind Worker Indirect PPLV	
	Horizon 0	Horizon 1	Horizon 2	Horizon 1	Horizon 2	Horizon 1	Horizon 2
SP10	--	1.69E+01	1.07E+00	1.00E+06	1.00E+06	5.35E+01	1.95E+05
NC3	--	2.23E+00	--	1.00E+06	--	5.35E+01	--
SP3B	--	3.71E-01	--	1.00E+06	--	5.35E+01	--
NC6A	--	7.91E-03	--	1.00E+06	--	5.35E+01	--

Program version: Gray Developmental, Smp. Arith. Mean, Bootstrap CL, Sep. Hz1, Hz2, Flx Ratio, No

Database version: Gray-1 Parameter Revisions, updated November 30, 1993.

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Variable Percentile: 5.00, 1.0e-006 Cancer Risk Level

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSR_8@0.@DR, HSSR_8@1.@DR , HSSR_8@2.@DR, HPPLVBCR.TXT, and HPPLVICR.TXT

Table B.4.2-10 Site Data Summary for DBCP: Crep and Indirect PPLV Estimates

Driving Direct PPLV: 2.01E-01 mg/kg (10-6 Carcinogenic Risk Endpoint, Biological Worker)

Bolded Crep concentrations exceed 10-4 Carcinogenic PPLV (=2.01E+01 mg/kg).

Descending Sort on Crep_0 (Horizon 0), Crep_1 and Crep_2

-- = No Data. Sites with no DBCP data (for all horizons) are not listed.

All Crep concentrations and PPLV values are in mg/kg.

Site	DBCP Crep Concentrations			Bio Worker Indirect PPLV		Ind Worker Indirect PPLV	
	Horizon 0	Horizon 1	Horizon 2	Horizon 1	Horizon 2	Horizon 1	Horizon 2
SP1A	9.42E+01	5.93E+01	4.14E+00	7.30E+02	2.43E+02	1.20E+02	2.61E+01
NC1B	1.93E+00	1.20E-03	--	1.61E+03	--	1.14E+02	--
SP3B	8.32E-01	4.32E-01	--	2.30E+03	--	1.19E+02	--
W1E	4.49E-01	2.26E-01	--	3.12E+03	--	1.23E+02	--
SP3E	2.50E-01	3.13E-01	--	6.11E+02	--	8.95E+01	--
S5E	2.29E-01	1.41E-01	--	1.00E+06	--	1.36E+02	--
C1C	9.98E-02	3.53E-02	--	7.17E+02	--	9.43E+01	--
SP1G	9.13E-02	2.81E-01	--	1.17E+03	--	1.07E+02	--
NC1A	5.81E-02	7.43E-02	--	4.77E+05	--	1.36E+02	--
W6A	5.30E-02	9.12E-02	--	1.43E+04	--	1.33E+02	--
C1B	4.63E-02	1.02E-02	2.00E-01	1.13E+02	6.26E+01	3.60E+01	1.81E+01
S3B	1.80E-02	2.15E-02	--	1.55E+03	--	1.13E+02	--
C1A	1.57E-02	1.01E+01	3.61E+00	2.74E+05	1.88E+05	1.36E+02	2.47E+01
S5A	1.44E-02	7.25E-03	--	1.00E+06	--	1.36E+02	--
NC1D	4.40E-03	2.39E-02	--	4.22E+03	--	1.26E+02	--
SP10	--	1.54E+03	5.12E+02	1.00E+06	8.53E+05	1.40E+02	1.58E+03
SP2A	--	4.21E-01	--	4.19E+03	--	1.24E+02	--
NC3	--	2.61E-01	1.63E-01	1.00E+06	3.26E+05	1.36E+02	2.02E+01
NC1F	--	1.83E-01	--	1.79E+03	--	1.15E+02	--
NC6A	--	1.23E-01	--	4.09E+04	--	1.34E+02	--
NC4A	--	7.19E-02	--	2.17E+05	--	1.36E+02	--

Program version: Gray Developmental, Smp. Arith. Mean, Bootstrap CL, Sep. Hz1, Hz2, Flx Ratio, No

Database version: Gray-1 Parameter Revisions, updated November 30, 1993

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Variable Percentile: 5.00, 1.0e-006 Cancer Risk Level

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSR_9@0.@DR, HSSR_9@1.@DR, HSSR_9@2.@DR, HPPLVBCR.TXT, and HPPLVICR.TXT

Table B.4.2-11 Site Data Summary for 1,2-Dichloroethane: Crep and Indirect PPLV Estimates

Driving Direct PPLV: 3.23E+00 mg/kg (10⁻⁶ Carcinogenic Risk Endpoint, Biological Worker)

All Crep Concentrations are below 10⁻⁴ Carcinogenic PPLV (=3.23E+02 mg/kg).

Descending Sort on Crep_0 (Horizon 0), Crep_1 and Crep_2

-- = No Data. Sites with no 1,2-Dichloroethane data (for all horizons) are not listed.

All Crep concentrations and PPLV values are in mg/kg.

Site	1,2-Dichloroethane Crep Concentrations			Bio Worker Indirect PPLV		Ind Worker Indirect PPLV	
	Horizon 0	Horizon 1	Horizon 2	Horizon 1	Horizon 2	Horizon 1	Horizon 2
C1B	--	1.08E+00	--	2.83E+04	--	1.14E+00	--
NC3	--	2.94E-01	--	4.31E+01	--	1.11E+00	--
SP10	--	1.81E-01	1.25E+00	2.49E+04	3.00E+03	1.14E+00	4.60E+00
SP3B	--	1.02E-01	--	1.06E+01	--	9.43E-01	--
C1A	--	--	--	--	--	--	--

Program version: Gray Developmental, Smp. Arith. Mean, Bootstrap CL, Sep. Hz1, Hz2, Flx Ratio, No

Database version: Gray-1 Parameter Revisions, updated November 30, 1993.

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Variable Percentile: 5.00, 1.0e-006 Cancer Risk Level

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSR_10@0.@DR, HSSR_10@1.@DR, HSSR_10@2.@DR, HPPLVBCR.TXT, and HPPLVICR.TXT

Table B.4.2-12 Site Data Summary for 1,1-Dichloroethylene: Crep and Indirect PPLV Estimates

Driving Direct PPLV: 5.16E-01 mg/kg (10-6 Carcinogenic Risk Endpoint, Biological Worker)

All Crep Concentrations are below 10-4 Carcinogenic PPLV (= 5.16E+01 mg/kg).

Descending Sort on Crep_0 (Horizon 0), Crep_1 and Crep_2

-- = No Data. Sites with no 1,1-Dichloroethylene data (for all horizons) are not listed.

All Crep concentrations and PPLV values are in mg/kg.

Site	1,1-Dichloroethylene Crep Concentrations			Bio Worker Indirect PPLV		Ind Worker Indirect PPLV	
	Horizon 0	Horizon 1	Horizon 2	Horizon 1	Horizon 2	Horizon 1	Horizon 2
C1A	--	4.79E-01	--	1.29E+04	--	2.37E+00	--

Program version: Gray Developmental, Smp. Arith. Mean, Bootstrap CL, Sep. Hz1, Hz2, Flx Ratio, No

Database version: Gray-1 Parameter Revisions, updated November 30, 1993

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Variable Percentile: 5.00, 1.0e-006 Cancer Risk Level

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSR_11@0.@DR, HSSR_11@1.@DR, HSSR_11@2.@DR, HPPLVBCR.TXT, and HPPLVICR.TXT

Table B.4.2-13 Site Data Summary for Dicyclopentadiene: Crep and Indirect PPLV Estimates

Driving Direct PPLV: 3.69E+03 mg/kg (Non-carcinogenic Risk Endpoint, Biological Worker)

All Crep Concentrations are below a target HI of 1.0.

Descending Sort on Crep_0 (Horizon 0), Crep_1 and Crep_2

-- = No Data. Sites with no dicyclopentadiene data (for all horizons) are not listed.

All Crep concentrations and PPLV values are in mg/kg.

Site	Dicyclopentadiene Crep Concentrations			Bio Worker Indirect PPLV		Ind Worker Indirect PPLV	
	Horizon 0	Horizon 1	Horizon 2	Horizon 1	Horizon 2	Horizon 1	Horizon 2
SP1E	9.36E+02	4.29E+02	--	2.50E+03	--	2.14E-01	--
SP2A	6.57E+01	6.62E+01	--	1.79E+01	--	2.05E-01	--
NC1B	9.81E+00	8.05E-01	--	7.29E+00	--	2.01E-01	--
SP1A	5.21E+00	1.22E+01	6.06E+00	2.81E+00	1.52E+01	1.91E-01	6.37E-01
NC1A	1.89E+00	6.76E-02	--	4.77E+03	--	2.06E-01	--
SP2B	1.87E+00	1.23E+01	2.50E+00	4.89E+00	2.42E+01	1.99E-01	5.96E-01
NC3	--	2.94E+02	2.19E+02	1.23E+05	2.81E+05	2.14E-01	8.20E+00
C1A	--	9.45E+00	5.76E+01	8.67E+03	3.16E+04	2.06E-01	2.79E+00
SP3B	--	8.05E+00	--	3.30E+01	--	2.05E-01	--
C1B	--	1.22E+00	--	1.98E+00	--	1.74E-01	--
S4	--	9.98E-01	--	3.10E+01	--	2.05E-01	--
SP5B	--	7.30E-01	--	6.80E+00	--	2.02E-01	--
SP10	--	5.72E-01	--	6.50E+02	--	2.06E-01	--
SP3E	--	--	1.75E+00	--	2.13E+01	--	1.08E+00
SP12	--	--	6.67E-01	--	2.28E+02	--	1.10E+00
W5D	--	--	3.92E-01	--	9.12E+01	--	9.11E-01

Program version: Gray Developmental, Smp. Arith. Mean, Bootstrap CL, Sep. Hz1, Hz2, Flx Ratio, No

Database version: Gray-1 Parameter Revisions, updated November 30, 1993

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Variable Percentile: 5.00, 1.0e-006 Cancer Risk Level

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSR_12@0.@DR, HSSR_12@1.@DR, HSSR_12@2.@DR, HPPLVBNR.TXT, and HPPLVINR.TXT

Table B.4.2-14 Site Data Summary for Dieldrin: Crep and Indirect PPLV Estimates

Driving Direct PPLV: 4.14E-01 mg/kg (10⁻⁶ Carcinogenic Risk Endpoint, Biological Worker)

Bolded Crep concentrations exceed 10⁻⁴ Carcinogenic PPLV (=7.16E+01 mg/kg).

Descending Sort on Crep_0 (Horizon 0), Crep_1 and Crep_2

-- = No Data. Sites with no dieldrin data (for all horizons) are not listed.

All Crep concentrations and PPLV values are in mg/kg.

Site	Dieldrin Crep Concentrations			Bio Worker Indirect PPLV		Ind Worker Indirect PPLV	
	Horizon 0	Horizon 1	Horizon 2	Horizon 1	Horizon 2	Horizon 1	Horizon 2
NC8A	3.23E+02	6.20E+01	--	2.76E+04	--	6.78E-01	--
SP3A	2.45E+02	1.17E+02	--	5.32E+04	--	6.78E-01	--
SP8A	1.91E+02	8.19E+01	6.65E-02	5.57E+02	1.82E+03	6.78E-01	4.62E+01
SP3B	1.17E+02	4.90E+01	--	4.69E+02	--	6.78E-01	--
SP1A	9.61E+01	1.43E+02	1.42E+00	1.83E+02	9.69E+03	6.77E-01	9.70E+02
SP4A	3.86E+01	2.43E+01	--	1.93E+03	--	6.78E-01	--
S4	3.79E+01	1.22E+01	--	3.44E+02	--	6.78E-01	--
NC1A	2.89E+01	3.07E+01	4.11E+01	7.71E+04	1.00E+06	6.78E-01	2.70E+04
S2B	2.34E+01	1.07E+01	--	4.78E+01	--	6.76E-01	--
SP3C	2.16E+01	7.61E+00	1.33E-01	4.87E+02	1.05E+04	6.78E-01	9.30E+01
SP1F	2.00E+01	2.00E+01	--	9.82E+03	--	6.78E-01	--
SP8B	1.58E+01	1.19E+01	--	6.32E+02	--	6.78E-01	--
NC5C	9.71E+00	4.38E+00	--	8.62E+02	--	6.78E-01	--
SP1E	9.35E+00	2.10E+00	--	3.40E+03	--	6.78E-01	--
NC2A	8.33E+00	7.10E+00	--	2.17E+02	--	6.77E-01	--
SP9A	8.30E+00	3.39E+00	9.68E-03	2.85E+02	1.25E+03	6.77E-01	1.40E+01
C1B	6.53E+00	2.75E+00	7.52E-03	5.49E+00	2.12E+01	6.59E-01	1.17E+01
NC4B	5.89E+00	3.60E+00	--	4.07E+04	--	6.78E-01	--
NC1B	5.76E+00	3.00E+01	--	2.58E+02	--	6.77E-01	--
SP1D	5.56E+00	5.56E+00	--	6.20E+03	--	6.78E-01	--
SP1C	5.15E+00	1.81E+00	--	1.62E+02	--	6.77E-01	--
SP3E	5.02E+00	1.80E+00	1.84E-01	2.39E+01	1.46E+03	6.73E-01	1.26E+02
SP12B	4.30E+00	4.30E+00	--	8.85E+03	--	6.78E-01	--
NC4A	4.00E+00	1.75E+00	1.27E-01	4.85E+02	2.07E+04	6.78E-01	8.85E+01
SP1G	3.16E+00	1.35E+00	--	3.95E+01	--	6.75E-01	--
C1A	3.08E+00	1.75E+01	2.52E+01	3.34E+04	1.00E+06	6.78E-01	1.67E+04
W1F	2.01E+00	1.01E+00	--	2.27E+03	--	6.78E-01	--
SP3D	1.85E+00	7.65E-01	--	5.03E+02	--	6.78E-01	--

Table B.4.2-14 Site Data Summary for Dieldrin: Crep and Indirect PPLV Estimates

Driving Direct PPLV: 4.14E-01 mg/kg (10⁻⁶ Carcinogenic Risk Endpoint, Biological Worker)

Bolded Crep concentrations exceed 10⁻⁴ Carcinogenic PPLV (=7.16E+01 mg/kg).

Descending Sort on Crep_0 (Horizon 0), Crep_1 and Crep_2

-- = No Data. Sites with no dieldrin data (for all horizons) are not listed.

All Crep concentrations and PPLV values are in mg/kg.

Site	Dieldrin Crep Concentrations			Bio Worker Indirect PPLV		Ind Worker Indirect PPLV	
	Horizon 0	Horizon 1	Horizon 2	Horizon 1	Horizon 2	Horizon 1	Horizon 2
SP9B	1.71E+00	9.77E-01	--	1.71E+01	--	6.72E-01	--
NC5B	1.62E+00	1.26E+00	--	5.36E+05	--	6.78E-01	--
SP12	1.57E+00	6.60E-01	--	1.56E+02	--	6.77E-01	--
SP2A	1.48E+00	7.36E-01	--	4.29E+01	--	6.75E-01	--
W2	1.26E+00	6.00E-01	--	2.19E+01	--	6.73E-01	--
SP4B	1.25E+00	5.79E-01	--	9.41E+00	--	6.67E-01	--
NC2D	1.21E+00	6.88E-01	--	6.42E+02	--	6.78E-01	--
SP5A	1.10E+00	2.88E-01	--	7.42E+01	--	6.76E-01	--
NC6A	1.02E+00	6.09E-01	1.03E+00	4.86E+02	2.85E+05	6.78E-01	7.17E+02
NC5A	9.68E-01	4.22E-01	--	6.84E+01	--	6.76E-01	--
SP5B	9.18E-01	3.65E-01	--	8.61E+00	--	6.66E-01	--
SP2D	8.94E-01	5.66E-01	5.40E-02	4.00E+02	1.46E+04	6.78E-01	3.88E+01
NC1E	7.70E-01	3.14E+00	--	2.20E+02	--	6.77E-01	--
C2A	7.58E-01	3.03E-01	--	1.71E+04	--	6.78E-01	--
SP2C	7.06E-01	3.60E-01	4.62E-02	2.79E+01	1.11E+03	6.74E-01	3.85E+01
S2A	6.69E-01	4.12E-01	1.05E-01	7.07E+00	5.14E+02	6.63E-01	7.09E+01
C4	6.24E-01	2.86E-01	--	3.57E+01	--	6.75E-01	--
NC1C	5.12E-01	3.01E-01	1.12E-01	5.28E+02	4.80E+04	6.78E-01	7.83E+01
NC2B	4.97E-01	2.13E-01	--	4.58E+01	--	6.76E-01	--
NC1F	3.86E-01	2.15E-01	--	5.78E+00	--	6.60E-01	--
SP6	3.82E-01	1.25E-01	--	2.12E+01	--	6.73E-01	--
NC8B	3.78E-01	2.10E-01	--	2.09E+01	--	6.73E-01	--
C2B	3.46E-01	1.72E-01	--	1.77E+01	--	6.72E-01	--
SP7A	3.33E-01	2.19E-01	--	2.26E+02	--	6.77E-01	--
SP2E	3.17E-01	2.32E-01	--	1.26E+01	--	6.70E-01	--
C1D	3.16E-01	4.02E-01	--	1.76E+01	--	6.72E-01	--
SP2B	2.93E-01	1.14E-01	--	8.98E+00	--	6.66E-01	--
C1C	2.77E-01	1.74E-01	7.24E-01	8.71E+00	6.74E+03	6.66E-01	4.97E+02

Table B.4.2-14 Site Data Summary for Dieldrin: Crep and Indirect PPLV Estimates

Driving Direct PPLV: 4.14E-01 mg/kg (10-6 Carcinogenic Risk Endpoint, Biological Worker)

Bolded Crep concentrations exceed 10-4 Carcinogenic PPLV (=7.16E+01 mg/kg).

Descending Sort on Crep_0 (Horizon 0), Crep_1 and Crep_2

-- = No Data. Sites with no dieldrin data (for all horizons) are not listed.

All Crep concentrations and PPLV values are in mg/kg.

Site	Dieldrin Crep Concentrations			Bio Worker Indirect PPLV		Ind Worker Indirect PPLV	
	Horizon 0	Horizon 1	Horizon 2	Horizon 1	Horizon 2	Horizon 1	Horizon 2
NP6	2.74E-01	7.97E-02	--	1.84E+01	--	6.72E-01	--
SP12A	2.65E-01	1.18E-01	--	2.11E+01	--	6.73E-01	--
NC1D	2.46E-01	2.14E-01	--	5.70E+01	--	6.76E-01	--
S2C	2.18E-01	8.71E-02	--	1.36E+01	--	6.70E-01	--
SP1B	2.09E-01	1.60E-01	--	2.03E+02	--	6.77E-01	--
SP7C	2.08E-01	8.13E-02	--	5.75E+00	--	6.60E-01	--
E2C	1.81E-01	1.64E-01	--	4.66E+01	--	6.76E-01	--
NC5D	1.45E-01	7.31E-02	--	2.39E+02	--	6.77E-01	--
S3A	1.31E-01	3.96E-02	--	5.83E+00	--	6.60E-01	--
NP3	1.31E-01	1.26E-01	--	1.30E+01	--	6.70E-01	--
S3B	1.10E-01	3.10E+00	8.90E-02	7.94E+01	1.79E+03	6.77E-01	6.17E+01
E3G	1.09E-01	1.06E-01	--	2.33E+02	--	6.77E-01	--
NP5	1.07E-01	8.44E-02	--	3.68E+00	--	6.50E-01	--
NC2C	1.05E-01	4.37E-02	--	2.81E+01	--	6.74E-01	--
NP8C	9.54E-02	5.18E-02	--	2.63E+02	--	6.77E-01	--
SP8C	9.10E-02	1.06E-01	--	4.92E+00	--	6.57E-01	--
E6C	8.10E-02	3.26E-02	--	4.04E+02	--	6.78E-01	--
W6A	6.80E-02	1.98E-02	--	5.88E+01	--	6.76E-01	--
SP7B	6.11E-02	1.12E-02	--	1.47E+01	--	6.72E-01	--
E2A4	3.99E-02	3.29E-03	2.90E-03	1.89E+00	1.75E+02	6.49E-01	8.05E+00
C2D	3.78E-02	1.57E-02	--	1.95E+04	--	6.78E-01	--
S5B	4.13E-03	2.83E-03	--	4.67E+03	--	6.78E-01	--
NC3	--	9.75E+01	8.59E+00	1.00E+06	1.00E+06	6.78E-01	5.76E+03
SP10	--	1.87E+01	5.09E-01	1.00E+06	1.63E+05	6.78E-01	3.56E+02
W5D	--	5.75E-01	--	1.92E+04	--	6.78E-01	--
NC1G	--	1.75E-01	--	2.58E+03	--	6.78E-01	--
SP11	--	1.69E-01	--	2.22E+01	--	6.73E-01	--
E3A	--	9.18E-02	--	3.12E+02	--	6.78E-01	--

Table B.4.2-14 Site Data Summary for Dieldrin: Crep and Indirect PPLV Estimates

Driving Direct PPLV: 4.14E-01 mg/kg (10-6 Carcinogenic Risk Endpoint, Biological Worker)

Bolded Crep concentrations exceed 10-4 Carcinogenic PPLV (=7.16E+01 mg/kg).

Descending Sort on Crep_0 (Horizon 0), Crep_1 and Crep_2

-- = No Data. Sites with no dieldrin data (for all horizons) are not listed.

All Crep concentrations and PPLV values are in mg/kg.

Site	Dieldrin Crep Concentrations			Bio Worker Indirect PPLV		Ind Worker Indirect PPLV	
	Horizon 0	Horizon 1	Horizon 2	Horizon 1	Horizon 2	Horizon 1	Horizon 2
E2B	--	--	1.12E+00	--	1.58E+04	--	8.84E+02

Program version: Gray Developmental, Smp. Arith. Mean, Bootstrap CL, Sep. Hz1, Hz2, Flx Ratio, No

Database version: Gray-1 Parameter Revisions, updated November 30, 1993

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Variable Percentile: 5.00, 1.0e-006 Cancer Risk Level

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSR_13@0.@DR, HSSR_13@1.@DR, HSSR_13@2.@DR, HPPLVBCR.TXT, and HPPLVICR.TXT

Table B.4.2-15 Site Data Summary for Endrin: Crep and Indirect PPLV Estimates

Driving Direct PPLV: 2.32E+02 mg/kg (Non-carcinogenic Risk Endpoint, Biological Worker)

Bolded Crep Concentrations exceed a target HI of 1.0.

Descending Sort on Crep_0 (Horizon 0), Crep_1 and Crep_2

-- = No Data. Sites with no endrin data (for all horizons) are not listed.

All Crep concentrations and PPLV values are in mg/kg.

Site	Endrin Crep Concentrations			Bio Worker Indirect PPLV		Ind Worker Indirect PPLV	
	Horizon 0	Horizon 1	Horizon 2	Horizon 1	Horizon 2	Horizon 1	Horizon 2
NC8A	2.60E+02	5.01E+01	--	1.00E+06	--	3.93E+04	--
SP1E	1.17E+02	5.83E-02	--	3.16E+05	--	3.63E+04	--
SP1A	1.05E+01	3.68E+01	2.74E+00	2.79E+04	1.00E+06	1.76E+04	4.97E+05
SP1F	9.00E+00	9.00E+00	--	1.00E+06	--	3.93E+04	--
NC1A	8.74E+00	1.87E+01	3.48E+00	1.00E+06	1.00E+06	3.93E+04	5.00E+05
SP8A	5.15E+00	3.73E+00	--	3.57E+04	--	2.01E+04	--
S4	4.63E+00	1.47E+00	--	3.59E+04	--	2.01E+04	--
NC1B	3.44E+00	1.23E+01	--	4.96E+04	--	2.34E+04	--
C1B	1.82E+00	7.42E-01	8.12E-03	3.26E+02	1.37E+05	9.25E+02	2.19E+04
NC4A	1.21E+00	8.10E-01	9.16E-02	9.91E+04	1.00E+06	2.98E+04	6.06E+04
SP8B	1.16E+00	9.01E-01	--	5.23E+04	--	2.39E+04	--
NC4B	1.15E+00	6.92E-01	--	1.00E+06	--	3.93E+04	--
NC2C	6.88E-01	6.44E-01	--	3.24E+04	--	1.91E+04	--
C1A	6.24E-01	2.39E+01	5.42E+01	1.00E+06	1.00E+06	3.93E+04	5.00E+05
SP3B	6.20E-01	9.27E-01	--	1.94E+04	--	1.41E+04	--
NC2A	6.08E-01	5.37E-01	--	1.79E+04	--	1.33E+04	--
NC6A	5.09E-01	3.34E-01	2.14E+00	1.08E+05	1.00E+06	3.05E+04	4.35E+05
E6C	4.91E-01	2.42E-01	--	3.31E+05	--	3.68E+04	--
SP12A	4.60E-01	2.73E-01	--	9.67E+03	--	1.17E+03	--
SP9A	4.37E-01	1.53E-01	--	2.08E+04	--	1.39E+04	--
SP4A	4.32E-01	2.24E-01	--	5.56E+04	--	2.45E+04	--
NC5B	3.79E-01	3.19E-01	--	1.00E+06	--	3.93E+04	--
SP9B	3.47E-01	3.34E-01	--	3.01E+03	--	1.07E+03	--
NC8B	3.19E-01	2.65E-01	--	7.08E+03	--	1.15E+03	--
W6A	2.91E-01	2.51E-01	--	6.29E+04	--	2.57E+04	--
SP3A	2.68E-01	9.26E-02	--	6.61E+05	--	3.85E+04	--
NC1C	2.56E-01	1.52E-01	6.68E-01	1.29E+05	1.00E+06	3.12E+04	1.94E+05
C2B	2.48E-01	1.39E-01	--	5.75E+03	--	1.12E+03	--

Table B.4.2-15 Site Data Summary for Endrin: Crep and Indirect PPLV Estimates

Driving Direct PPLV: 2.32E+02 mg/kg (Non-carcinogenic Risk Endpoint, Biological Worker)

Bolded Crep Concentrations exceed a target HI of 1.0.

Descending Sort on Crep_0 (Horizon 0), Crep_1 and Crep_2

-- = No Data. Sites with no endrin data (for all horizons) are not listed.

All Crep concentrations and PPLV values are in mg/kg.

Endrin Crep Concentrations				Bio Worker Indirect PPLV		Ind Worker Indirect PPLV	
Site	Horizon 0	Horizon 1	Horizon 2	Horizon 1	Horizon 2	Horizon 1	Horizon 2
SP6	2.03E-01	2.11E-01	--	8.32E+03	--	1.16E+03	--
SP2E	2.00E-01	1.85E-01	--	3.53E+03	--	1.09E+03	--
C2A	1.81E-01	7.50E-02	--	1.00E+06	--	3.93E+04	--
NC5D	1.79E-01	8.97E-02	--	1.19E+05	--	3.05E+04	--
SP2C	1.78E-01	7.16E-02	--	6.26E+03	--	1.10E+03	--
SP1B	1.73E-01	1.62E-01	--	6.84E+04	--	2.57E+04	--
SP2B	1.69E-01	1.75E-01	--	3.58E+03	--	1.09E+03	--
S2A	1.67E-01	2.23E-02	2.12E-01	1.36E+04	1.00E+06	1.45E+03	1.04E+05
SP4B	1.51E-01	1.41E-01	--	1.58E+04	--	4.32E+02	--
SP3C	1.48E-01	1.45E-01	--	2.38E+04	--	1.52E+04	--
S3A	1.42E-01	2.95E-03	--	3.94E+03	--	1.84E+03	--
C1C	1.37E-01	4.34E-02	5.02E-01	2.81E+03	1.00E+06	1.79E+03	1.53E+05
NP5	1.33E-01	1.07E-01	--	1.56E+04	--	4.42E+02	--
NP6	1.33E-01	1.84E-01	--	8.77E+03	--	1.16E+03	--
SP2D	1.31E-01	7.07E-02	1.43E-02	7.14E+04	1.00E+06	2.62E+04	2.34E+04
SP5B	1.29E-01	1.73E-01	--	2.01E+04	--	1.95E+03	--
NC5A	1.24E-01	5.55E-02	--	1.42E+04	--	1.06E+04	--
S2C	1.15E-01	1.05E-01	--	6.19E+03	--	1.12E+03	--
SP3D	1.02E-01	5.78E-01	--	1.32E+05	--	3.19E+04	--
SP1G	1.00E-01	4.50E-02	--	4.58E+03	--	4.17E+03	--
C4	7.82E-02	3.62E-02	--	8.97E+03	--	7.45E+03	--
S2B	7.49E-02	3.39E-02	--	1.81E+04	--	8.05E+02	--
E2A4	6.71E-02	4.84E-02	--	3.66E+03	--	1.96E+03	--
S5B	6.49E-02	6.71E-02	--	1.00E+06	--	3.93E+04	--
SP2A	6.13E-02	3.58E-02	--	6.71E+03	--	8.76E+02	--
SP3E	4.41E-02	1.89E-02	--	2.20E+04	--	2.29E+03	--
NC1F	2.94E-02	1.45E-02	--	1.54E+04	--	1.32E+03	--
NC5C	2.66E-02	1.39E-02	--	5.54E+04	--	2.37E+04	--

Table B.4.2-15 Site Data Summary for Endrin: Crep and Indirect PPLV Estimates

Driving Direct PPLV: 2.32E+02 mg/kg (Non-carcinogenic Risk Endpoint, Biological Worker)

Bolded Crep Concentrations exceed a target HI of 1.0.

Descending Sort on Crep_0 (Horizon 0), Crep_1 and Crep_2

-- = No Data. Sites with no endrin data (for all horizons) are not listed.

All Crep concentrations and PPLV values are in mg/kg.

Site	Endrin Crep Concentrations			Bio Worker Indirect PPLV		Ind Worker Indirect PPLV	
	Horizon 0	Horizon 1	Horizon 2	Horizon 1	Horizon 2	Horizon 1	Horizon 2
NC1D	2.55E-02	3.64E-02	--	1.66E+04	--	1.19E+04	--
NC2B	7.94E-03	4.03E-03	--	1.34E+04	--	1.02E+04	--
NC3	--	4.52E+01	1.17E+01	1.00E+06	1.00E+06	3.93E+04	5.00E+05
NC1E	--	7.80E-01	--	1.00E+06	--	3.93E+04	--
C1D	--	7.16E-01	--	1.00E+06	--	3.93E+04	--
W2	--	4.26E-01	--	1.00E+06	--	3.93E+04	--
S3B	--	2.30E-01	--	1.00E+06	--	3.93E+04	--
SP1C	--	1.50E-01	--	1.00E+06	--	3.93E+04	--

Program version: Gray Developmental, Smp. Arith. Mean, Bootstrap CL, Sep. Hz1, Hz2, Flx Ratio, No

Database version: Gray-1 Parameter Revisions, updated November 30, 1993

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Variable Percentile: 5.00, 1.0e-006 Cancer Risk Level

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSR_14@0.@DR, HSSR_14@1.@DR, HSSR_14@2.@DR, HPPLVBNR.TXT, and HPPLVINR.TXT

Table B.4.2-16 Site Data Summary for Hexachlorocyclopentadiene: Crep and Indirect PPLV Estimates

Driving Direct PPLV: 1.06E+03 mg/kg (Non-carcinogenic Risk Endpoint, Biological Worker)

All Crep Concentrations are below a target HI of 1.0.

Descending Sort on Crep_0 (Horizon 0), Crep_1 and Crep_2

-- = No Data. Sites with no hexachlorocyclopentadiene data (for all horizons) are not listed.

All Crep concentrations and PPLV values are in mg/kg.

Site	Hexachlorocyclopentadiene Crep Concentrations			Bio Worker Indirect PPLV		Ind Worker Indirect PPLV	
	Horizon 0	Horizon 1	Horizon 2	Horizon 1	Horizon 2	Horizon 1	Horizon 2
SP1E	1.79E+02	4.03E+01	--	1.05E+04	--	8.58E-02	--
SP8A	1.50E+02	5.47E+01	--	4.88E+01	--	8.57E-02	--
SP1F	1.00E+01	1.00E+01	--	6.61E+02	--	8.57E-02	--
SP1A	3.68E+00	2.34E+01	1.02E+01	7.94E+00	1.77E+02	8.50E-02	5.69E+00
SP1G	1.14E+00	4.50E-01	--	3.23E+00	--	8.04E-02	--
NC1A	1.13E+00	6.21E-01	2.91E-01	7.70E+03	8.37E+03	8.27E-02	3.48E-01
NC8A	1.03E+00	4.14E-01	--	3.31E+02	--	8.26E-02	--
SP3B	9.09E-01	1.40E+00	--	9.23E+00	--	8.20E-02	--
SP12A	8.04E-01	4.42E-01	--	5.83E+00	--	8.14E-02	--
SP2A	6.97E-01	6.00E-01	--	4.75E+00	--	8.13E-02	--
W2	6.82E-01	3.94E-01	--	2.68E+00	--	7.98E-02	--
C4	4.56E-01	4.45E-01	--	6.32E+00	--	8.15E-02	--
NC4B	4.38E-01	4.60E-01	--	1.61E+03	--	8.27E-02	--
C1C	4.11E-01	8.71E-01	7.45E-01	2.40E+00	2.25E+01	8.00E-02	5.72E-01
NC1D	3.01E-01	2.51E-01	--	1.04E+01	--	8.18E-02	--
SP3E	2.57E-01	3.21E-01	--	1.69E+00	--	7.77E-02	--
SP9A	2.57E-01	2.43E-01	--	1.29E+01	--	8.20E-02	--
SP2B	2.48E-01	2.18E-01	--	2.10E+00	--	7.86E-02	--
SP2E	2.35E-01	2.14E-01	--	2.05E+00	--	7.85E-02	--
S2A	2.25E-01	2.75E-01	--	9.76E-01	--	7.44E-02	--
NC1F	2.25E-01	1.80E-03	--	9.33E-01	--	7.46E-02	--
C1A	2.00E-01	9.35E+02	--	1.09E+05	--	8.58E-02	--
NC5C	1.92E-01	1.61E-01	--	3.08E+01	--	8.24E-02	--
SP4B	1.65E-01	1.53E-01	--	9.28E-01	--	7.46E-02	--
SP5B	1.35E-01	2.06E-01	--	1.09E+00	--	7.56E-02	--
SP3D	1.18E-01	5.96E-01	--	5.46E+01	--	8.25E-02	--
NC2A	1.04E-01	1.29E-01	--	6.10E+00	--	8.12E-02	--
NC4A	3.82E-02	1.19E-01	--	2.74E+01	--	8.23E-02	--

Table B.4.2-16 Site Data Summary for Hexachlorocyclopentadiene: Crep and Indirect PPLV Estimates

Driving Direct PPLV: 1.06E+03 mg/kg (Non-carcinogenic Risk Endpoint, Biological Worker)

All Crep Concentrations are below a target HI of 1.0.

Descending Sort on Crep_0 (Horizon 0), Crep_1 and Crep_2

-- = No Data. Sites with no hexachlorocyclopentadiene data (for all horizons) are not listed.

All Crep concentrations and PPLV values are in mg/kg.

Site	Hexachlorocyclopentadiene Crep Concentrations			Bio Worker Indirect PPLV		Ind Worker Indirect PPLV	
	Horizon 0	Horizon 1	Horizon 2	Horizon 1	Horizon 2	Horizon 1	Horizon 2
S4	3.27E-02	1.07E-02	--	7.37E+00	--	8.15E-02	--
S2B	2.46E-02	1.05E-02	--	1.10E+00	--	7.57E-02	--
SP3A	2.23E-02	9.49E-03	--	3.65E+02	--	8.26E-02	--
SP4A	2.22E-02	1.07E-02	--	2.93E+01	--	8.24E-02	--
C1B	1.79E-02	7.25E-03	--	2.48E-01	--	5.76E-02	--
NC1B	5.19E-03	2.48E-03	--	3.52E+00	--	8.02E-02	--
SP10	--	5.92E+00	1.89E+02	4.72E+03	1.54E+05	8.56E-02	1.07E+02
NC1E	--	8.96E-02	--	1.50E+01	--	8.19E-02	--
S3B	--	1.45E-02	--	5.92E+00	--	8.10E-02	--
E2A4	--	--	1.16E-03	--	3.14E+01	--	1.70E+00

Program version: Gray Developmental, Smp. Arith. Mean, Bootstrap CL, Sep. Hz1, Hz2, Flx Ratio, No

Database version: Gray-1 Parameter Revisions, updated November 30, 1993

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Variable Percentile: 5.00, 1.0e-006 Cancer Risk Level

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSR_16@0.@DR, HSSR_16@1.@DR, HSSR_16@2.@DR, HPPLVBNR.TXT, and HPPLVINR.TXT

Table B.4.2-17 Site Data Summary for Isodrin: Crep and Indirect PPLV Estimates

Driving Direct PPLV: 5.24E+01 mg/kg (Non-carcinogenic Risk Endpoint, Biological Worker)

Bolded Crep concentrations exceed a target HI of 1.0.

Descending Sort on Crep_0 (Horizon 0), Crep_1 and Crep_2

-- = No Data. Sites with no isodrin data (for all horizons) are not listed.

All Crep concentrations and PPLV values are in mg/kg.

Site	Isodrin Crep Concentrations			Bio Worker Indirect PPLV		Ind Worker Indirect PPLV	
	Horizon 0	Horizon 1	Horizon 2	Horizon 1	Horizon 2	Horizon 1	Horizon 2
SP1E	4.24E+01	3.22E-01	--	1.57E+05	--	8.71E+00	--
NC1B	3.34E+01	1.42E+01	--	2.09E+04	--	8.69E+00	--
SP8A	2.81E+01	1.47E+01	--	2.77E+04	--	8.70E+00	--
SP3B	2.21E+01	3.46E+01	--	4.64E+04	--	8.70E+00	--
SP1A	8.14E+00	1.09E+01	1.31E+01	5.94E+03	9.00E+05	8.63E+00	3.54E+04
SP12B	4.30E+00	4.30E+00	--	1.00E+06	--	8.71E+00	--
NC8A	3.08E+00	7.18E-01	--	3.49E+05	--	8.71E+00	--
SP4A	2.76E+00	1.44E+00	--	5.52E+04	--	8.71E+00	--
SP3A	2.76E+00	1.30E+00	--	6.59E+05	--	8.71E+00	--
NC1A	2.63E+00	2.21E+00	--	1.00E+06	--	8.71E+00	--
SP1F	2.00E+00	2.00E+00	--	3.65E+05	--	8.71E+00	--
C1A	9.25E-01	3.11E+01	9.74E+01	1.00E+06	1.00E+06	8.71E+00	2.28E+05
C1B	7.58E-01	3.12E-01	--	2.44E+01	--	6.41E+00	--
SP2D	5.96E-01	2.79E-01	2.69E-03	3.30E+04	6.91E+04	8.70E+00	6.73E+01
SP1D	5.73E-01	5.73E-01	--	2.34E+05	--	8.71E+00	--
S2B	5.41E-01	2.12E-01	--	3.96E+02	--	8.13E+00	--
SP1C	4.93E-01	2.48E-01	--	7.03E+03	--	8.64E+00	--
SP8B	4.08E-01	3.25E-01	--	1.23E+04	--	8.67E+00	--
NC4A	3.47E-01	3.71E-01	2.72E-03	2.62E+04	4.81E+04	8.70E+00	6.73E+01
S4	2.41E-01	7.95E-02	--	3.27E+03	--	8.56E+00	--
NC4B	1.96E-01	1.20E-01	--	8.76E+05	--	8.71E+00	--
NC8B	1.91E-01	1.59E-01	--	5.23E+02	--	8.49E+00	--
SP12A	1.81E-01	1.32E-01	--	2.63E+03	--	8.53E+00	--
C4	1.68E-01	1.75E-01	--	3.29E+03	--	8.56E+00	--
SP9A	1.42E-01	2.83E-02	--	4.36E+03	--	8.55E+00	--
S2A	1.32E-01	1.01E-01	--	3.92E+01	--	7.64E+00	--
SP2E	1.30E-01	1.28E-01	--	1.34E+03	--	8.28E+00	--
NC2B	1.29E-01	1.13E-01	--	3.93E+03	--	8.59E+00	--

Table B.4.2-17 Site Data Summary for Isodrin: Crep and Indirect PPLV Estimates

Driving Direct PPLV: 5.24E+01 mg/kg (Non-carcinogenic Risk Endpoint, Biological Worker)

Bolded Crep concentrations exceed a target HI of 1.0.

Descending Sort on Crep_0 (Horizon 0), Crep_1 and Crep_2

-- = No Data. Sites with no isodrin data (for all horizons) are not listed.

All Crep concentrations and PPLV values are in mg/kg.

Site	Isodrin Crep Concentrations			Bio Worker Indirect PPLV		Ind Worker Indirect PPLV	
	Horizon 0	Horizon 1	Horizon 2	Horizon 1	Horizon 2	Horizon 1	Horizon 2
SP3C	1.28E-01	1.15E-01	--	7.05E+03	--	8.64E+00	--
SP4B	1.28E-01	1.22E-01	--	2.94E+02	--	7.83E+00	--
SP6	1.26E-01	1.30E-01	--	2.55E+03	--	8.52E+00	--
S3A	1.04E-01	1.03E-01	--	3.83E+02	--	8.28E+00	--
SP2C	1.01E-01	4.12E-02	--	1.35E+03	--	8.29E+00	--
SP5B	9.99E-02	1.18E-01	--	5.25E+02	--	7.92E+00	--
S2C	9.70E-02	9.13E-02	--	5.27E+02	--	8.42E+00	--
NC5A	9.28E-02	8.29E-02	--	3.57E+03	--	8.58E+00	--
NP6	9.08E-02	1.21E-01	--	2.67E+03	--	8.53E+00	--
NC1D	9.04E-02	7.54E-02	--	3.98E+03	--	8.59E+00	--
C2A	8.43E-02	3.51E-02	--	8.74E+05	--	8.71E+00	--
SP3D	6.20E-02	5.34E-01	--	4.95E+04	--	8.70E+00	--
SP3E	6.17E-02	2.65E-02	--	1.70E+02	--	7.46E+00	--
E2A4	3.90E-02	1.48E-02	1.23E-02	8.56E+01	5.21E+03	7.59E+00	1.88E+02
NC2A	3.65E-02	3.13E-02	--	2.35E+03	--	8.43E+00	--
S5B	3.61E-02	4.16E-02	--	1.00E+06	--	8.71E+00	--
SP1G	2.10E-02	2.78E-02	--	5.52E+01	--	8.03E+00	--
NC5C	1.52E-02	6.45E-03	--	1.16E+04	--	8.59E+00	--
NC1C	8.16E-03	4.75E-03	--	2.71E+04	--	8.66E+00	--
SP2A	7.56E-03	4.59E-03	--	1.32E+02	--	7.73E+00	--
NC1F	4.10E-03	1.82E-03	--	2.73E+01	--	5.92E+00	--
NC3	--	1.52E+02	2.42E+01	1.00E+06	1.00E+06	8.71E+00	6.82E+04
SP10	--	3.10E+01	2.82E+01	1.00E+06	1.00E+06	8.71E+00	7.86E+04
W5D	--	2.84E+00	--	1.00E+06	--	8.71E+00	--
C1C	--	3.97E-01	2.01E-01	1.90E+05	2.46E+04	8.71E+00	6.68E+02

Table B.4.2-17 Site Data Summary for Isodrin: Crep and Indirect PPLV Estimates

Driving Direct PPLV: 5.24E+01 mg/kg (Non-carcinogenic Risk Endpoint, Biological Worker)

Bolded Crep concentrations exceed a target HI of 1.0.

Descending Sort on Crep_0 (Horizon 0), Crep_1 and Crep_2

-- = No Data. Sites with no isodrin data (for all horizons) are not listed.

All Crep concentrations and PPLV values are in mg/kg.

Site	Isodrin Crep Concentrations			Bio Worker Indirect PPLV		Ind Worker Indirect PPLV	
	Horizon 0	Horizon 1	Horizon 2	Horizon 1	Horizon 2	Horizon 1	Horizon 2
NC1E	--	2.91E-01	--	1.51E+05	--	8.71E+00	--
C1D	--	1.96E-01	--	2.28E+04	--	8.70E+00	--
NC6A	--	1.83E-01	6.27E-01	1.00E+06	1.00E+06	8.71E+00	1.96E+03
C2B	--	6.42E-02	--	1.16E+04	--	8.69E+00	--
S3B	--	1.75E-02	3.73E-02	1.63E+04	1.41E+04	8.67E+00	2.93E+02

Program version: Gray Developmental, Smp. Arith. Mean, Bootstrap CL, Sep. Hz1, Hz2, Flx Ratio, No

Database version: Gray-1 Parameter Revisions, updated November 30, 1993

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Variable Percentile: 5.00, 1.0e-006 Cancer Risk Level

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSR_17@0.@DR, HSSR_17@1.@DR, HSSR_17@2.@DR, HPPLVBNR.TXT, and HPPLVINR.TXT

Table B.4.2-18 Site Data Summary for Methylene Chloride: Crep and Indirect PPLV Estimates

Driving Direct PPLV: 3.53E+01 mg/kg (10-6 Carcinogenic Risk Endpoint, Biological Worker)

All Crep Concentrations are below 10-4 and 10-6 Carcinogenic PPLV.

Descending Sort on Crep_0 (Horizon 0), Crep_1 and Crep_2

-- = No Data. Sites with no methylene chloride data (for all horizons) are not listed.

All Crep concentrations and PPLV values are in mg/kg.

Site	Methylene Chloride Crep Concentrations			Bio Worker Indirect PPLV		Ind Worker Indirect PPLV	
	Horizon 0	Horizon 1	Horizon 2	Horizon 1	Horizon 2	Horizon 1	Horizon 2
SP1E	3.39E+00	1.96E+00	--	6.25E+04	--	2.45E+02	--
S5B	3.07E+00	4.26E+00	--	1.00E+06	--	2.46E+02	--
SP1A	1.85E+00	1.34E+00	6.53E+00	4.07E+02	1.32E+02	1.45E+02	8.92E+00
NC4B	1.75E+00	1.38E+00	--	5.72E+05	--	2.46E+02	--
E3A	--	1.58E+01	--	4.92E+02	--	1.56E+02	--
W5C	--	7.39E+00	--	6.31E+04	--	2.45E+02	--
W1G	--	4.00E+00	1.80E+00	3.75E+04	3.86E+03	2.44E+02	4.00E+00
SP7C	--	3.94E+00	1.64E+00	8.14E+02	1.57E+02	1.83E+02	8.45E+00
NC4A	--	3.46E+00	3.55E-01	1.86E+04	2.38E+03	2.43E+02	7.19E+00
SP3E	--	3.18E+00	--	8.24E+02	--	1.83E+02	--
W3B	--	3.10E+00	--	1.86E+05	--	2.46E+02	--
NC3	--	3.07E+00	3.21E+00	7.70E+05	1.34E+05	2.46E+02	7.29E+00
SP2A	--	3.04E+00	--	1.61E+03	--	2.09E+02	--
SP8C	--	2.17E+00	--	6.20E+02	--	1.69E+02	--
SP2B	--	1.84E+00	--	1.09E+03	--	1.96E+02	--
S2A	--	1.66E+00	--	3.91E+03	--	2.30E+02	--
SP7B	--	1.51E+00	1.68E+00	6.43E+03	1.53E+03	2.36E+02	1.25E+01
SP2E	--	1.45E+00	--	1.08E+03	--	1.95E+02	--
SP2C	--	1.44E+00	--	8.26E+03	--	2.38E+02	--
W4B	--	1.43E+00	--	1.36E+05	--	2.46E+02	--
NC8B	--	1.37E+00	--	2.03E+03	--	2.16E+02	--
W1C	--	1.33E+00	3.00E+00	8.69E+03	2.09E+03	2.38E+02	9.51E+00
W3C	--	1.12E+00	1.15E+00	7.88E+03	5.40E+02	2.38E+02	3.46E+00
NC8A	--	1.06E+00	7.38E-01	2.36E+05	2.28E+04	2.46E+02	7.29E+00
E2B	--	9.83E-01	6.62E-01	1.42E+03	2.22E+02	2.05E+02	8.14E+00
SP10	--	9.25E-01	7.84E-01	2.42E+04	5.36E+03	2.43E+02	8.51E+00
SP1B	--	8.71E-01	--	3.47E+04	--	2.44E+02	--
S2C	--	8.55E-01	--	1.89E+03	--	2.14E+02	--
C1C	--	8.52E-01	2.41E-01	6.55E+02	5.58E+02	1.72E+02	2.78E+01

Table B.4.2-18 Site Data Summary for Methylene Chloride: Crep and Indirect PPLV Estimates

Driving Direct PPLV: 3.53E+01 mg/kg (10-6 Carcinogenic Risk Endpoint, Biological Worker)

All Crep Concentrations are below 10-4 and 10-6 Carcinogenic PPLV.

Descending Sort on Crep_0 (Horizon 0), Crep_1 and Crep_2

-- = No Data. Sites with no methylene chloride data (for all horizons) are not listed.

All Crep concentrations and PPLV values are in mg/kg.

Site	Methylene Chloride Crep Concentrations			Bio Worker Indirect PPLV		Ind Worker Indirect PPLV	
	Horizon 0	Horizon 1	Horizon 2	Horizon 1	Horizon 2	Horizon 1	Horizon 2
SP5B	--	8.22E-01	--	6.59E+02	--	1.72E+02	--
SP4B	--	7.98E-01	--	4.39E+03	--	2.31E+02	--
SP1C	--	7.75E-01	6.80E-01	4.92E+03	1.14E+03	2.33E+02	1.08E+01
SP1G	--	7.40E-01	--	1.62E+03	--	2.10E+02	--
NC1B	--	6.89E-01	--	1.93E+03	--	2.15E+02	--
W6D	--	6.79E-01	--	7.41E+04	--	2.45E+02	--
W7A	--	6.75E-01	--	1.93E+04	--	2.43E+02	--
NC5A	--	6.03E-01	--	4.00E+03	--	2.30E+02	--
C2C	--	5.35E-01	--	6.19E+03	--	2.35E+02	--
SP8A	--	5.13E-01	--	2.85E+03	--	2.24E+02	--
NC1C	--	4.58E-01	--	7.32E+04	--	2.45E+02	--
NC6A	--	4.36E-01	--	2.37E+04	--	2.43E+02	--
NC5B	--	3.93E-01	--	1.00E+06	--	2.46E+02	--
C1B	--	3.36E-01	2.74E-01	8.83E+01	7.66E+01	6.20E+01	1.87E+01
NC1A	--	2.95E-01	3.92E-01	4.36E+05	9.39E+04	2.46E+02	7.70E+00
C1A	--	2.54E-01	9.68E-01	3.87E+05	2.31E+05	2.46E+02	3.19E+01
NC2C	--	1.82E-01	2.38E-01	5.50E+03	1.12E+03	2.34E+02	9.48E+00
NC2A	--	1.74E-01	2.38E-01	3.33E+03	6.19E+02	2.27E+02	8.58E+00
SP3C	--	--	1.53E+00	--	2.23E+03	--	1.43E+01
W1D	--	--	9.69E-01	--	2.63E+03	--	3.47E+00
W1F	--	--	7.58E-01	--	1.24E+04	--	6.10E+00
C1D	--	--	3.69E-01	--	1.07E+03	--	4.08E+01

Program version: Gray Developmental, Smp. Arith. Mean, Bootstrap CL, Sep. Hz1, Hz2, Flx Ratio, No

Database version: Gray-1 Parameter Revisions, updated November 30, 1993

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Variable Percentile: 5.00, 1.0e-006 Cancer Risk Level

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSR_18@0.@DR, HSSR_18@1.@DR, HSSR_18@2.@DR, HPPLVBCR.TXT, and HPPLVICR.TXT

Table B.4.2-19 Site Data Summary for 1,1,2,2-Tetrachloroethane: Crep and Indirect PPLV Estimates

Driving Direct PPLV: 1.45E+00 mg/kg (10-6 Carcinogenic Risk Endpoint, Biological Worker)

All Crep Concentrations are below 10-4 and 10-6 Carcinogenic PPLV.

Descending Sort on Crep_0 (Horizon 0), Crep_1 and Crep_2

-- = No Data. Sites with no 1,1,2,2-Tetrachloroethylene data (for all horizons) are not listed.

All Crep concentrations and PPLV values are in mg/kg.

Site	1,1,2,2-Tetrachloroethane Crep Concentrations			Bio Worker Indirect PPLV		Ind Worker Indirect PPLV	
	Horizon 0	Horizon 1	Horizon 2	Horizon 1	Horizon 2	Horizon 1	Horizon 2
NC4B	--	3.25E-01	--	5.04E+04	--	3.57E-01	--
C1B	--	6.67E-03	--	1.31E+01	--	3.50E-01	--

Program version: Gray Developmental, Smp. Arith. Mean, Models correction

Database version: Gray-1 parameter revisions, updated November 30, 1993

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Variable Percentile: 5.00, 1.0e-006 Cancer Risk Level

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSR_19@0.@DR, HSSR_19@1.@DR, HSSR_19@2.@DR, HPPLVBCR.TXT, and HPPLVICR.TXT

Table B.4.2-20 Site Data Summary for Tetrachloroethylene: Crep and Indirect PPLV Estimates

Driving Direct PPLV: 5.43E+00 mg/kg (10-6 Carcinogenic Risk Endpoint, Biological Worker)

All Crep Concentrations are below 10-4 and 10-6 Carcinogenic PPLV.

Descending Sort on Crep_0 (Horizon 0), Crep_1 and Crep_2

-- = No Data. Sites with no PCE data (for all horizons) are not listed.

All Crep concentrations and PPLV values are in mg/kg.

Site	PCE Crep Concentrations			Bio Worker Indirect PPLV		Ind Worker Indirect PPLV	
	Horizon 0	Horizon 1	Horizon 2	Horizon 1	Horizon 2	Horizon 1	Horizon 2
SP12A	1.41E-01	1.38E-01	--	1.30E+03	--	1.43E+02	--
E3G	7.32E-02	5.01E-02	--	1.51E+04	--	1.74E+02	--
SP10	--	5.61E+00	1.93E+00	2.70E+04	8.26E+03	1.76E+02	1.18E+01
C1A	--	5.26E+00	2.73E-01	2.34E+05	2.09E+05	1.78E+02	2.98E+01
SP1A	--	1.09E+00	2.28E-01	3.68E+02	1.70E+02	9.54E+01	1.15E+01
NC3	--	1.05E+00	7.76E-01	4.85E+05	3.54E+05	1.78E+02	1.93E+01
SP1B	--	2.44E-01	--	1.81E+04	--	1.75E+02	--
NP2	--	2.24E-01	--	9.83E+04	--	1.78E+02	--
W2	--	1.69E-01	1.34E-01	8.22E+02	2.30E+02	1.28E+02	8.40E+00
E2A5	--	1.67E-01	--	6.74E+02	--	1.21E+02	--
W3C	--	1.66E-01	1.91E-01	6.23E+03	1.18E+03	1.69E+02	7.25E+00
NC1A	--	1.66E-01	8.53E-02	3.45E+05	2.96E+05	1.78E+02	2.38E+01
W1B	--	1.61E-01	--	1.64E+04	--	1.75E+02	--
W4B	--	1.60E-01	1.58E-01	2.69E+04	2.76E+03	1.76E+02	3.56E+00
C1C	--	1.56E-01	--	1.76E+03	--	1.51E+02	--
NP3	--	1.54E-01	--	1.35E+03	--	1.44E+02	--
SP2B	--	1.51E-01	--	1.87E+03	--	1.52E+02	--
NP8B	--	1.49E-01	--	1.00E+06	--	1.78E+02	--
W5D	--	1.49E-01	--	1.27E+04	--	1.74E+02	--
SP7C	--	1.48E-01	--	7.08E+03	--	1.70E+02	--
NC1B	--	1.47E-01	--	1.88E+03	--	1.52E+02	--
SP4B	--	1.46E-01	--	3.47E+03	--	1.63E+02	--
NC4A	--	1.37E-01	--	3.85E+04	--	1.77E+02	--
SP1G	--	1.33E-01	1.33E-01	9.56E+03	3.59E+02	1.72E+02	1.14E+01
C1B	--	9.64E-02	--	4.64E+02	--	1.06E+02	--
E3D	--	9.13E-02	--	1.78E+03	--	1.51E+02	--
SP12	--	--	7.79E-01	--	3.03E+03	--	1.73E+01

Table B.4.2-20 Site Data Summary for Tetrachloroethylene: Crep and Indirect PPLV Estimates

Driving Direct PPLV: 5.43E+00 mg/kg (10-6 Carcinogenic Risk Endpoint, Biological Worker)

All Crep Concentrations are below 10-4 and 10-6 Carcinogenic PPLV.

Descending Sort on Crep_0 (Horizon 0), Crep_1 and Crep_2

-- = No Data. Sites with no PCE data (for all horizons) are not listed.

All Crep concentrations and PPLV values are in mg/kg.

Site	PCE Crep Concentrations			Bio Worker Indirect PPLV		Ind Worker Indirect PPLV	
	Horizon 0	Horizon 1	Horizon 2	Horizon 1	Horizon 2	Horizon 1	Horizon 2
W5A	--	--	3.40E-01	--	3.44E+02	--	7.00E+00
W6A	--	--	1.54E-01	--	1.83E+03	--	5.44E+00

Program version: Gray Developmental, Smp. Arith. Mean, Bootstrap CL, Sep. Hz1, Hz2, Flx Ratio, No

Database version: Gray-1 Parameter Revisions, updated November 30, 1993

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Variable Percentile: 5.00, 1.0e-006 Cancer Risk Level

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSR_20@0.@DR, HSSR_20@1.@DR, HSSR_20@2.@DR, HPPLVBCR.TXT, and HPPLVICR.TXT

Table B.4.2-21 Site Data Summary for Toluene: Crep and Indirect PPLV Estimates

Driving Direct PPLV: 7.22E+03 mg/kg (Non-carcinogenic Risk Endpoint, Industrial Worker)

All Crep Concentrations are below a target HI of 1.0.

Descending Sort on Crep_0 (Horizon 0), Crep_1 and Crep_2

-- = No Data. Sites with no Toluene data (for all horizons) are not listed.

All Crep concentrations and PPLV values are in mg/kg.

Site	Toluene Crep Concentrations			Bio Worker Indirect PPLV		Ind Worker Indirect PPLV	
	Horizon 0	Horizon 1	Horizon 2	Horizon 1	Horizon 2	Horizon 1	Horizon 2
W6A	1.37E+00	2.18E-01	--	9.05E+04	--	1.70E+02	--
E6C	7.30E-01	6.85E-01	--	6.43E+05	--	1.72E+02	--
E3G	7.13E-02	4.96E-02	--	2.06E+05	--	1.71E+02	--
SP1G	5.77E-02	6.62E-01	--	2.17E+03	--	1.50E+02	--
E3B	2.07E-02	7.63E-02	--	1.74E+03	--	1.45E+02	--
NC3	--	4.47E+01	9.05E+00	1.00E+06	1.00E+06	1.72E+02	3.56E+02
C1A	--	1.90E+01	9.12E+00	1.00E+06	1.00E+06	1.72E+02	3.81E+02
SP10	--	7.48E+00	2.73E+00	7.50E+05	1.41E+05	1.72E+02	1.55E+02
SP1A	--	2.25E+00	3.47E+00	2.11E+03	3.60E+03	1.56E+02	1.78E+02
SP1E	--	8.62E-01	--	1.00E+06	--	1.72E+02	--
W6B	--	3.35E-01	--	6.61E+03	--	1.66E+02	--
NC1F	--	2.03E-01	--	1.37E+03	--	1.41E+02	--
E3D	--	1.71E-01	1.20E+00	5.10E+03	5.47E+03	1.64E+02	1.24E+02
S2A	--	1.51E-01	--	1.03E+03	--	1.33E+02	--
SP2B	--	1.51E-01	1.67E-01	5.37E+03	2.07E+03	1.61E+02	6.74E+01
SP8C	--	1.27E-01	--	1.40E+03	--	1.43E+02	--
NC1B	--	1.18E-01	--	5.40E+03	--	1.64E+02	--
C1B	--	8.74E-02	--	1.34E+03	--	1.25E+02	--
NC1A	--	3.47E-02	5.97E-02	1.00E+06	1.00E+06	1.72E+02	7.79E+01
SP5B	--	--	2.09E-01	--	1.25E+03	--	7.30E+01

Program version: Gray Developmental, Smp. Arith. Mean, Bootstrap CL, Sep. Hz1, Hz2, Flx Ratio, No

Database version: Gray-1 Parameter Revisions, updated November 30, 1993

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Variable Percentile: 5.00, 1.0e-006 Cancer Risk Level

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSR_21@0.@DR, HSSR_21@1.@DR, HSSR_21@2.@DR, HPPLVBNR.TXT, and HPPLVINR.TXT

Table B.4.2-22 Site Data Summary for Trichloroethylene: Crep and Indirect PPLV Estimates

Driving Direct PPLV: 2.84E+01 mg/kg (10-6 Carcinogenic Risk Endpoint, Biological Worker)

All Crep Concentrations are below 10-4 and 10-6 Carcinogenic PPLV.

Descending Sort on Crep_0 (Horizon 0), Crep_1 and Crep_2

-- = No Data. Sites with no TCE data (for all horizons) are not listed.

All Crep concentrations and PPLV values are in mg/kg.

Site	TCE Crep Concentrations			Bio Worker Indirect PPLV		Ind Worker Indirect PPLV	
	Horizon 0	Horizon 1	Horizon 2	Horizon 1	Horizon 2	Horizon 1	Horizon 2
C1C	1.51E+00	8.73E-01	--	1.01E+02	--	3.38E+01	--
E3G	6.38E-02	8.40E-02	--	3.45E+03	--	1.22E+01	--
W2	--	1.16E+00	--	1.88E+02	--	1.14E+01	--
E3C	--	3.06E-01	--	4.41E+03	--	1.22E+01	--
SP10	--	2.42E-01	--	2.47E+04	--	1.23E+01	--
SP5B	--	2.23E-01	--	1.14E+03	--	1.21E+01	--
W6A	--	2.07E-01	--	2.67E+03	--	1.22E+01	--
NC1B	--	1.88E-01	--	4.32E+02	--	1.19E+01	--
NC1A	--	1.57E-01	--	1.92E+05	--	1.23E+01	--
C1A	--	1.55E-01	2.29E-01	8.56E+04	3.09E+05	1.23E+01	4.27E+01
E3I	--	3.65E-02	--	3.01E+04	--	1.23E+01	--
E2B	--	--	2.82E-01	--	2.46E+02	--	8.74E+00
W3C	--	--	1.91E-01	--	1.00E+03	--	6.51E+00
W4B	--	--	1.63E-01	--	1.18E+04	--	1.71E+01

Program version: Gray Developmental, Smp. Arith. Mean, Bootstrap CL, Sep. Hz1, Hz2, Flx Ratio, No

Database version: Gray-1 Parameter Revisions, updated November 30, 1993

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Variable Percentile: 5.00, 1.0e-006 Cancer Risk Level

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSR_22@0.@DR, HSSR_22@1.@DR, HSSR_22@2.@DR, HPPLVBCR.TXT, and HPPLVICR.TXT

Driving Direct PPLV: 4.17E+00 mg/kg (10-6 Carcinogenic Risk Endpoint, Biological Worker)

Bolded Crep Concentrations exceed 10-4 Carcinogenic PPLV (=4.17E+02 mg/kg). Indicator level for arsenic is 1

Descending Sort on Crep_0 (Horizon 0) and Crep_1

-- = No Data. Sites with no arsenic data (for all horizons) are not listed.

All Crep concentrations values are in mg/kg.

Site	Arsenic Crep Concentrations	
	Horizon 0	Horizon 1
SP1E	2.93E+03	1.54E+04
NP5	7.40E+02	3.71E+02
NC1A	5.02E+02	2.95E+02
NP6	4.53E+02	1.62E+02
SP1A	2.37E+02	1.22E+02
E3B	1.55E+02	7.40E+01
NC5B	4.94E+01	1.87E+01
NC5A	4.94E+01	3.42E+01
NC1E	3.64E+01	1.82E+02
NC1B	3.37E+01	4.81E+01
NC8A	2.93E+01	1.03E+01
SP8A	2.89E+01	1.73E+01
S4	1.96E+01	6.57E+00
NP8C	1.77E+01	1.33E+01
E6C	1.60E+01	1.19E+01
NP9F	1.30E+01	6.76E+00
NC2A	1.24E+01	8.15E+00
NC1C	1.23E+01	1.66E+01
NC2B	1.16E+01	7.53E+00
C1C	1.06E+01	2.84E+01
NC2D	8.34E+00	5.58E+00
W6D	7.69E+00	3.81E+00
NC9L	7.34E+00	7.34E+00
C1B	7.21E+00	4.86E+00
E2A3	5.92E+00	4.92E+00
NC9K	5.86E+00	5.86E+00
SP1G	5.56E+00	3.18E+00
NC1G	5.49E+00	4.22E+00
NC1D	5.48E+00	5.00E+00
NC9R	5.24E+00	5.26E+00
E2A2	5.00E+00	3.33E+00
NC9O	4.89E+00	3.37E+00
SP3B	4.71E+00	2.19E+00
NC8B	4.50E+00	3.52E+00
NC2C	4.49E+00	4.59E+00
NC1F	4.33E+00	4.43E+00
SP1D	4.15E+00	4.15E+00
C1A	4.11E+00	3.72E+00
NC9P	4.08E+00	5.66E+00
NP3	4.04E+00	2.91E+00
E2C	3.99E+00	3.47E+00
E4B	3.97E+00	3.34E+00
SP9A	3.93E+00	2.92E+00

Driving Direct PPLV: 4.17E+00 mg/kg (10-6 Carcinogenic Risk Endpoint, Biological Worker)

Bolded Crep Concentrations exceed 10-4 Carcinogenic PPLV (=4.17E+02 mg/kg). Indicator level for arsenic is 1

Descending Sort on Crep_0 (Horizon 0) and Crep_1

- = No Data. Sites with no arsenic data (for all horizons) are not listed.

All Crep concentrations values are in mg/kg.

Site	Arsenic Crep Concentrations	
	Horizon 0	Horizon 1
SP5A	3.86E+00	2.12E+00
E1D	3.72E+00	3.23E+00
C4	3.71E+00	3.47E+00
S2B	3.57E+00	2.35E+00
E1A	3.55E+00	3.08E+00
E6B	3.53E+00	2.74E+00
E3E	3.51E+00	3.88E+00
S2C	3.46E+00	2.18E+00
E3D	3.28E+00	3.58E+00
SP2E	3.24E+00	3.99E+00
NC5C	3.24E+00	2.68E+00
W6A	3.21E+00	1.88E+00
E5	3.14E+00	2.30E+00
NC4B	3.13E+00	3.35E+00
NC9H	3.09E+00	3.42E+00
E4A	3.06E+00	3.03E+00
E3F	2.98E+00	3.50E+00
C1D	2.97E+00	3.00E+00
E3C	2.87E+00	3.06E+00
E2A1	2.82E+00	3.39E+00
C2A	2.74E+00	2.59E+00
E2A4	2.73E+00	1.79E+00
SP1B	2.56E+00	2.57E+00
NP8B	2.55E+00	2.44E+00
SP4B	2.54E+00	2.64E+00
NC6A	2.54E+00	2.47E+00
E3I	2.50E+00	3.28E+00
E2B	2.47E+00	2.46E+00
S3B	2.44E+00	2.63E+00
SP2A	2.38E+00	2.29E+00
SP5B	2.35E+00	2.34E+00
SP9B	2.28E+00	1.50E+00
SP4A	2.26E+00	1.84E+00
SP7C	2.11E+00	1.84E+00
E3G	2.08E+00	2.35E+00
W6B	1.83E+00	1.53E+00
SP6	1.64E+00	1.58E+00
E3J	1.62E+00	1.90E+00
E3A	1.46E+00	2.38E+00
SP10	--	7.49E+01
W5D	--	7.00E+00
NC3	--	6.15E+00
E2A7	--	5.31E+00

Driving Direct PPLV: 4.17E+00 mg/kg (10-6 Carcinogenic Risk Endpoint, Biological Worker)

Bolded Crep Concentrations exceed 10-4 Carcinogenic PPLV (=4.17E+02 mg/kg). Indicator level for arsenic is 1

Descending Sort on Crep_0 (Horizon 0) and Crep_1

-- = No Data. Sites with no arsenic data (for all horizons) are not listed.

All Crep concentrations values are in mg/kg.

Site	Arsenic Crep Concentrations	
	Horizon 0	Horizon 1
E2A5	--	4.98E+00
E2A6	--	4.89E+00
NP9C	--	3.54E+00
SP1C	--	3.25E+00
E1C	--	3.25E+00
SP7B	--	3.21E+00
E1B	--	3.02E+00
C2C	--	3.01E+00
C3	--	3.00E+00
S2A	--	2.94E+00
W2	--	2.66E+00
W6E	--	2.63E+00
NC4A	--	2.62E+00
NP2	--	2.26E+00
NP9B	--	2.04E+00
W6C	--	1.93E+00
W1A	--	1.83E+00
W5A	--	1.73E+00
E6A	--	1.66E+00
SP11	--	1.60E+00
SP3C	--	1.56E+00
S5B	--	1.36E+00

Program version: Gray Developmental, Smp. Arith. Mean, Bootstrap CL, Sep. Hz1, Hz2, Flx Ratio, No

Database version: Gray-1 Parameter Revisions, updated November 30, 1993

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Variable Percentile: 5.00, 1.0e-006 Cancer Risk Level

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSR_23@0.@DR, HSSR_23@1.@DR

Driving Direct PPLV: 5.01E+01 mg/kg (10-6 Carcinogenic Risk Endpoint, Biological Worker)

All Crep Concentrations are below 10-4 and 10-6 Carcinogenic PPLV. Indicator level for cadmium is 2.0 ppm.

Descending Sort on Crep_0 (Horizon 0), Crep_1 and Crep_2

- = No Data. Sites with no Cadmium data (for all horizons) are not listed.

All Crep concentrations are in mg/kg.

Site	Cadmium Crep Concentrations	
	Horizon 0	Horizon 1
W3C	8.68E+01	2.70E+01
E2A7	2.67E+01	1.64E+01
E2A4	1.57E+01	1.15E+01
SP1A	9.56E+00	3.49E+00
E2A6	5.20E+00	3.72E+00
E2A5	4.95E+00	2.04E+00
NC9B	4.49E+00	4.49E+00
NP5	3.72E+00	2.01E+00
NC9D	3.67E+00	3.67E+00
W3A	3.20E+00	1.31E+00
NC9C	2.83E+00	2.83E+00
SP6	2.34E+00	9.27E-01
SP1G	2.27E+00	3.29E-01
NC6B	2.16E+00	1.74E+00
NC5D	2.12E+00	1.10E+00
NC9H	2.12E+00	1.51E+00
E1C	2.07E+00	1.04E+00
E1B	1.99E+00	1.12E+00
W6A	1.88E+00	1.04E+00
E3B	1.86E+00	9.86E-01
SP1E	1.80E+00	2.19E+02
NP3	1.77E+00	9.21E-01
C2A	1.69E+00	1.69E+00
W6D	1.39E+00	7.04E-01
E1D	1.36E+00	7.08E-01
NP6	1.10E+00	6.59E-01
NC5A	1.09E+00	7.75E-01
C1A	1.01E+00	8.56E-01
NC1A	9.66E-01	9.12E-01
NC9Q	9.61E-01	7.06E-01
E1A	9.38E-01	5.27E-01
SP1B	8.88E-01	6.06E-01
NC5B	8.86E-01	8.49E-01
NC1E	8.77E-01	2.57E+00
SP4A	8.44E-01	6.05E-01
NC9S	7.63E-01	6.58E-01
NP8C	7.62E-01	7.16E-01
SP8A	6.99E-01	6.10E-01
C1D	6.41E-01	3.90E-01
NC1D	6.12E-01	5.71E-01
E4C	5.95E-01	4.87E-01
NC1B	5.81E-01	5.49E-01
C1C	5.80E-01	1.69E+00

Driving Direct PPLV: 5.01E+01 mg/kg (10-6 Carcinogenic Risk Endpoint, Biological Worker)

All Crep Concentrations are below 10-4 and 10-6 Carcinogenic PPLV. Indicator level for cadmium is 2.0 ppm.

Descending Sort on Crep_0 (Horizon 0), Crep_1 and Crep_2

-- = No Data. Sites with no Cadmium data (for all horizons) are not listed.

All Crep concentrations are in mg/kg.

Site	Cadmium Crep Concentrations	
	Horizon 0	Horizon 1
SP3B	5.61E-01	5.41E-01
C2B	5.60E-01	5.25E-01
SP9B	5.37E-01	4.53E-01
C4	5.10E-01	4.45E-01
NC5C	5.10E-01	5.31E-01
W8B	5.10E-01	4.43E-01
E4B	5.08E-01	3.96E-01
NC8B	5.05E-01	4.58E-01
NP8B	5.04E-01	4.22E-01
S2C	4.86E-01	4.99E-01
NC2C	4.54E-01	7.02E-01
S5B	4.54E-01	4.08E-01
NC2B	4.47E-01	3.78E-01
NC1C	4.35E-01	5.95E-01
NC2A	4.24E-01	4.05E-01
C1B	4.17E-01	4.15E-01
E3C	3.84E-01	3.68E-01
E3D	3.81E-01	3.63E-01
SP2C	3.74E-01	3.27E-01
SP7C	3.67E-01	3.56E-01
NC4B	3.48E-01	3.13E-01
SP10	--	3.18E+00
W5D	--	1.16E+00
NC1F	--	8.24E-01
S3B	--	5.85E-01
W2	--	5.69E-01
NC1G	--	5.52E-01
C3	--	5.33E-01
S2B	--	4.64E-01
NC3	--	4.41E-01
SP3E	--	4.38E-01
SP4B	--	3.94E-01
SP3C	--	3.90E-01

Program version: Gray Developmental, Smp. Arith. Mean, Bootstrap CL, Sep. Hz1, Hz2, Flx Ratio, No

Database version: Gray-1 Parameter Revisions, updated November 30, 1993

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Variable Percentile: 5.00, 1.0e-006 Cancer Risk Level

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSR_24@0.@DR, HSSR_24@1.@DR

Driving Direct PPLV: 7.52E+00 mg/kg (10-6 Carcinogenic Risk Endpoint, Biological Worker)

All Crep Concentrations are below 10-4 and 10-6 Carcinogenic PPLV. Indicator level for chromium is 40 ppm.

Descending Sort on Crep_0 (Horizon 0) and Crep_1

-- = No Data. Sites with no chromium data (for all horizons) are not listed.

All Crep concentrations are in mg/kg.

Site	Chromium Crep Concentrations	
	Horizon 0	Horizon 1
SP1G	1.59E+02	7.04E+01
NP9B	5.73E+01	3.41E+01
W6A	5.69E+01	2.99E+01
E1C	3.71E+01	2.59E+01
E2A3	3.50E+01	2.97E+01
E1B	3.21E+01	2.21E+01
NP8A	2.94E+01	2.43E+01
NP2	2.93E+01	2.67E+01
E2A4	2.89E+01	2.75E+01
E2A5	2.80E+01	2.21E+01
NP4	2.80E+01	2.53E+01
E2A2	2.73E+01	2.50E+01
SP3C	2.72E+01	2.38E+01
SP4A	2.62E+01	1.83E+01
E3I	2.58E+01	2.68E+01
NP9E	2.53E+01	1.95E+01
E1D	2.48E+01	1.89E+01
E3E	2.47E+01	1.99E+01
NP5	2.45E+01	2.35E+01
E1A	2.41E+01	1.91E+01
NP9D	2.40E+01	2.39E+01
E2A6	2.38E+01	2.61E+01
SP9B	2.37E+01	1.89E+01
NP3	2.37E+01	2.45E+01
NP8B	2.28E+01	2.22E+01
E6C	2.26E+01	1.96E+01
E2A7	2.26E+01	2.65E+01
E3B	2.23E+01	1.69E+01
E2A1	2.22E+01	2.08E+01
NC9G	2.12E+01	2.12E+01
SP12B	2.12E+01	2.12E+01
E6A	2.10E+01	2.27E+01
E4C	2.06E+01	1.90E+01
NC5A	2.01E+01	1.55E+01
C2C	1.99E+01	1.92E+01
E6D	1.98E+01	1.98E+01
NC8B	1.96E+01	1.80E+01
S2B	1.89E+01	1.68E+01
SP10	1.88E+01	1.20E+01
E4B	1.88E+01	1.50E+01
SP6	1.87E+01	1.59E+01
NC9D	1.85E+01	1.85E+01
E3D	1.83E+01	1.85E+01
E3C	1.82E+01	1.90E+01

Driving Direct PPLV: 7.52E+00 mg/kg (10-6 Carcinogenic Risk Endpoint, Biological Worker)

All Crep Concentrations are below 10-4 and 10-6 Carcinogenic PPLV. Indicator level for chromium is 40 ppm.

Descending Sort on Crep_0 (Horizon 0) and Crep_1

-- = No Data. Sites with no chromium data (for all horizons) are not listed.

All Crep concentrations are in mg/kg.

Site	Chromium Crep Concentrations	
	Horizon 0	Horizon 1
NC9F	1.81E+01	1.81E+01
SP9A	1.78E+01	1.67E+01
NP6	1.78E+01	1.92E+01
NC9E	1.76E+01	1.76E+01
E6B	1.76E+01	1.09E+01
E4A	1.73E+01	1.35E+01
E5	1.72E+01	1.36E+01
SP1B	1.68E+01	1.48E+01
W6B	1.66E+01	1.37E+01
NC9O	1.64E+01	1.64E+01
NP9F	1.64E+01	1.64E+01
E2C	1.64E+01	1.12E+01
E3G	1.63E+01	1.69E+01
NC5B	1.62E+01	1.54E+01
S5B	1.62E+01	1.55E+01
W3A	1.60E+01	1.14E+01
NP8C	1.54E+01	1.83E+01
NC9J	1.53E+01	1.53E+01
NC9R	1.52E+01	1.60E+01
SP3B	1.51E+01	1.36E+01
C1B	1.50E+01	1.40E+01
NC1A	1.47E+01	1.45E+01
W7B	1.46E+01	1.42E+01
C1C	1.45E+01	4.04E+01
NC4B	1.44E+01	1.39E+01
SP1E	1.43E+01	2.27E+01
C2D	1.41E+01	1.56E+01
E2B	1.39E+01	1.53E+01
NC1E	1.38E+01	2.20E+01
NC2A	1.37E+01	1.41E+01
NC9C	1.36E+01	1.36E+01
NC9Q	1.33E+01	1.06E+01
SP5B	1.31E+01	1.25E+01
C2B	1.30E+01	1.37E+01
W8E	1.30E+01	1.30E+01
W5C	1.30E+01	1.02E+01
W2	1.28E+01	1.64E+01
C1A	1.27E+01	1.18E+01
NC9H	1.27E+01	1.28E+01
NC4A	1.25E+01	1.81E+01
SP1A	1.24E+01	1.27E+01
NC1G	1.23E+01	1.12E+01
E3A	1.23E+01	1.53E+01
SP3D	1.21E+01	1.43E+01

Driving Direct PPLV: 7.52E+00 mg/kg (10⁻⁶ Carcinogenic Risk Endpoint, Biological Worker)

All Crep Concentrations are below 10⁻⁴ and 10⁻⁶ Carcinogenic PPLV. Indicator level for chromium is 40 ppm.

Descending Sort on Crep_0 (Horizon 0) and Crep_1

– = No Data. Sites with no chromium data (for all horizons) are not listed.

All Crep concentrations are in mg/kg.

Site	Chromium Crep Concentrations	
	Horizon 0	Horizon 1
W8C	1.20E+01	1.20E+01
C4	1.18E+01	1.09E+01
SP2E	1.16E+01	2.12E+01
NC2D	1.13E+01	1.20E+01
NC8A	1.13E+01	1.33E+01
NC1D	1.12E+01	1.09E+01
NC1B	1.11E+01	1.06E+01
S5D	1.11E+01	1.50E+01
NC2B	1.11E+01	1.14E+01
C1D	1.10E+01	1.19E+01
W3D	1.10E+01	1.37E+01
SP2A	1.10E+01	9.44E+00
NC9L	1.09E+01	1.09E+01
SP8A	1.09E+01	1.14E+01
NC9M	1.07E+01	9.63E+00
W3C	1.06E+01	1.08E+01
NC6A	1.05E+01	1.14E+01
SP12	1.05E+01	9.31E+00
C2A	1.03E+01	1.03E+01
NC9I	1.02E+01	1.02E+01
NC5C	9.89E+00	1.13E+01
SP2D	9.60E+00	8.10E+00
W8D	9.50E+00	9.50E+00
S4	9.35E+00	1.14E+01
W8B	9.35E+00	1.62E+01
W4B	9.25E+00	1.10E+01
W8F	9.19E+00	9.19E+00
SP4B	9.11E+00	9.33E+00
S5A	9.10E+00	9.10E+00
S3B	8.97E+00	9.71E+00
NC9K	8.90E+00	8.90E+00
S2A	8.85E+00	9.18E+00
NC9S	8.83E+00	9.54E+00
S3A	8.60E+00	1.01E+01
NC2C	8.54E+00	1.10E+01
SP3E	8.51E+00	1.36E+01
NC9P	8.46E+00	9.61E+00
NC1F	8.37E+00	1.05E+01
NP9A	8.24E+00	1.29E+01
NC5D	8.16E+00	9.37E+00
S5C	8.10E+00	8.10E+00
NC9A	8.08E+00	8.08E+00
SP2B	7.99E+00	7.22E+00
W6D	7.71E+00	5.44E+00

Driving Direct PPLV: 7.52E+00 mg/kg (10-6 Carcinogenic Risk Endpoint, Biological Worker)

All Crep Concentrations are below 10-4 and 10-6 Carcinogenic PPLV. Indicator level for chromium is 40 ppm.

Descending Sort on Crep_0 (Horizon 0) and Crep_1

-- = No Data. Sites with no chromium data (for all horizons) are not listed.

All Crep concentrations are in mg/kg.

Site	Chromium Crep Concentrations	
	Horizon 0	Horizon 1
SP7C	7.27E+00	6.44E+00
SP12A	6.96E+00	5.69E+00
SP8B	6.70E+00	4.65E+00
NC1C	6.54E+00	1.01E+01
S2C	6.52E+00	6.66E+00
SP1D	6.49E+00	6.49E+00
SP3A	6.48E+00	8.43E+00
S5E	5.45E+00	5.45E+00
W8A	5.15E+00	5.13E+00
W1C	5.03E+00	6.07E+00
SP2C	4.60E+00	6.34E+00
SP1C	4.36E+00	9.14E+00
SP8C	4.25E+00	4.35E+00
W5D	--	2.03E+02
NP9C	--	1.99E+01
NP7	--	1.81E+01
NC3	--	1.75E+01
W6C	--	1.69E+01
C3	--	1.46E+01
SP5A	--	1.33E+01
W5B	--	1.32E+01
W5A	--	1.30E+01
W3B	--	1.18E+01
W1A	--	1.11E+01
SP7B	--	8.53E+00
W1B	--	7.63E+00
W4A	--	7.52E+00
W7A	--	7.33E+00
W6E	--	7.13E+00
SP11	--	6.05E+00
SP7A	--	4.55E+00
W1G	--	4.43E+00
W1D	--	4.20E+00
W1F	--	3.90E+00

Program version: Gray Developmental, Smp. Arith. Mean, Bootstrap CL, Sep. Hz1, Hz2, Flx Ratio, No

Database version: Gray-1 Parameter Revisions, updated November 30, 1993

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Variable Percentile: 5.00, 1.0e-006 Cancer Risk Level

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSR_25@0.@DR, HSSR_25@1.@DR

Driving Direct PPLV: 2.17E+03 mg/kg (Non-carcinogenic Risk Endpoint, Biological Worker)

All Crep Concentrations are below a target HI of 1.0. Indicator level for lead is 40 ppm.

Descending Sort on Crep_0 (Horizon 0) and Crep_1

-- = No Data. Sites with no lead data (for all horizons) are not listed.

All Crep concentrations are in mg/kg.

Site	Lead Crep Concentrations	
	Horizon 0	Horizon 1
E2A6	8.80E+02	4.75E+02
W6D	4.31E+02	1.47E+02
E2A7	4.19E+02	3.79E+02
E2A5	3.53E+02	1.33E+02
SP3C	3.51E+02	2.32E+02
S2B	2.84E+02	1.15E+02
W6A	2.82E+02	1.19E+02
SP4A	2.52E+02	1.16E+02
SP1A	1.79E+02	8.77E+01
NC5C	1.52E+02	7.25E+01
E2A4	1.38E+02	3.53E+02
NC2B	8.64E+01	4.17E+01
SP1G	8.29E+01	3.71E+01
W6E	6.40E+01	8.10E+01
S5C	6.10E+01	6.10E+01
E6A	6.04E+01	3.53E+01
C2A	6.03E+01	6.03E+01
SP1B	5.85E+01	2.93E+01
E1C	5.38E+01	2.62E+01
SP12B	5.35E+01	5.35E+01
NP5	4.79E+01	2.83E+01
E1B	4.74E+01	2.73E+01
NP6	4.68E+01	2.59E+01
NP8A	4.56E+01	2.49E+01
E4C	4.42E+01	2.82E+01
SP9B	4.31E+01	2.50E+01
SP9A	4.22E+01	2.06E+01
W6B	4.20E+01	1.78E+01
W3C	4.16E+01	2.04E+01
NC9Q	4.06E+01	2.46E+01
NC2D	4.05E+01	2.25E+01
W7B	3.90E+01	2.16E+01
S5B	3.86E+01	1.94E+01
NP3	3.84E+01	2.51E+01
S5D	3.82E+01	2.43E+01
NP9A	3.82E+01	1.79E+01
E6C	3.59E+01	3.09E+01
SP6	3.34E+01	1.86E+01
NP4	3.26E+01	1.84E+01
NC5A	3.11E+01	2.08E+01
NC1D	2.98E+01	2.64E+01
NP2	2.98E+01	2.02E+01
SP3D	2.95E+01	1.83E+01

Driving Direct PPLV: 2.17E+03 mg/kg (Non-carcinogenic Risk Endpoint, Biological Worker)

All Crep Concentrations are below a target HI of 1.0. Indicator level for lead is 40 ppm.

Descending Sort on Crep_0 (Horizon 0) and Crep_1

-- = No Data. Sites with no lead data (for all horizons) are not listed.

All Crep concentrations are in mg/kg.

Site	Lead Crep Concentrations	
	Horizon 0	Horizon 1
NC5B	2.78E+01	2.35E+01
S4	2.77E+01	1.55E+01
E4A	2.73E+01	2.36E+01
E2A2	2.73E+01	1.56E+01
E1D	2.68E+01	1.89E+01
E3B	2.66E+01	1.72E+01
SP8B	2.50E+01	1.58E+01
W3A	2.50E+01	1.41E+01
NC6A	2.48E+01	2.00E+01
NC2A	2.46E+01	1.56E+01
NC9E	2.44E+01	2.44E+01
E3D	2.44E+01	1.82E+01
NC9P	2.41E+01	1.55E+01
E3C	2.41E+01	1.83E+01
E6D	2.36E+01	2.36E+01
NC9S	2.33E+01	2.05E+01
NC1E	2.32E+01	4.98E+01
NC8A	2.31E+01	5.15E+00
W1F	2.30E+01	1.20E+01
NC9H	2.29E+01	2.15E+01
S5E	2.27E+01	2.27E+01
E3I	2.23E+01	2.37E+01
SP1D	2.22E+01	2.22E+01
NP9D	2.22E+01	1.32E+01
NP8B	2.22E+01	1.38E+01
SP3E	2.20E+01	9.79E+01
SP1E	2.19E+01	3.84E+01
E2A1	2.18E+01	1.72E+01
C1A	2.15E+01	1.79E+01
C2B	2.10E+01	1.65E+01
NC1A	2.04E+01	1.93E+01
SP8A	1.98E+01	2.46E+01
NC9D	1.97E+01	1.97E+01
NC4A	1.96E+01	6.16E+00
SP5B	1.96E+01	1.40E+01
W8B	1.95E+01	2.27E+01
SP3B	1.95E+01	1.43E+01
NP8C	1.95E+01	1.98E+01
SP1F	1.90E+01	1.90E+01
NC8B	1.87E+01	1.59E+01
E2B	1.86E+01	1.44E+01
E3E	1.84E+01	1.30E+01
E4B	1.83E+01	1.28E+01

Driving Direct PPLV: 2.17E+03 mg/kg (Non-carcinogenic Risk Endpoint, Biological Worker)

All Crep Concentrations are below a target HI of 1.0. Indicator level for lead is 40 ppm.

Descending Sort on Crep_0 (Horizon 0) and Crep_1

-- = No Data. Sites with no lead data (for all horizons) are not listed.

All Crep concentrations are in mg/kg.

Site	Lead Crep Concentrations	
	Horizon 0	Horizon 1
NC9R	1.81E+01	1.94E+01
NC4B	1.75E+01	1.59E+01
NC9N	1.74E+01	1.74E+01
C1C	1.71E+01	1.59E+02
NC1F	1.70E+01	1.31E+01
S5A	1.70E+01	1.70E+01
W3D	1.70E+01	1.17E+01
C4	1.64E+01	1.32E+01
E1A	1.62E+01	1.11E+01
NC1C	1.61E+01	1.50E+01
E2C	1.61E+01	1.35E+01
NC1B	1.55E+01	1.49E+01
SP3A	1.52E+01	1.27E+01
C1B	1.48E+01	1.18E+01
SP7C	1.46E+01	8.98E+00
W8C	1.40E+01	1.40E+01
W8E	1.40E+01	1.40E+01
W4A	1.40E+01	1.01E+01
NP9E	1.39E+01	1.09E+01
W2	1.38E+01	4.13E+01
SP12	1.35E+01	7.42E+00
W8D	1.30E+01	1.30E+01
SP2E	1.29E+01	1.17E+01
NC1G	1.27E+01	1.29E+01
SP2C	1.26E+01	9.40E+00
SP2B	1.25E+01	1.13E+01
SP12A	1.25E+01	8.23E+00
SP5A	1.25E+01	6.96E+00
E6B	1.24E+01	1.48E+01
NC2C	1.21E+01	1.21E+01
SP2A	1.19E+01	1.11E+01
SP4B	1.17E+01	8.55E+00
S2A	1.10E+01	1.04E+01
W8A	1.05E+01	9.80E+00
SP8C	1.04E+01	8.64E+00
S2C	1.04E+01	7.39E+00
NC5D	1.02E+01	9.09E+00
W5D	9.75E+00	4.45E+02
W1C	8.75E+00	6.94E+00
W4B	7.92E+00	1.18E+01
S3A	7.44E+00	1.14E+01
C1D	7.35E+00	1.10E+01
S3B	6.10E+00	8.66E+00

Driving Direct PPLV: 2.17E+03 mg/kg (Non-carcinogenic Risk Endpoint, Biological Worker)

All Crep Concentrations are below a target HI of 1.0. Indicator level for lead is 40 ppm.

Descending Sort on Crep_0 (Horizon 0) and Crep_1

-- = No Data. Sites with no lead data (for all horizons) are not listed.

All Crep concentrations are in mg/kg.

Site	Lead Crep Concentrations	
	Horizon 0	Horizon 1
E3A	6.01E+00	1.04E+01
W5B	--	3.44E+01
SP10	--	2.47E+01
W5A	--	2.10E+01
W7A	--	1.32E+01
NC3	--	1.23E+01
W3B	--	1.11E+01
C3	--	1.10E+01
E2A3	--	9.55E+00
W1A	--	9.40E+00
NC6B	--	7.44E+00
NP9C	--	6.93E+00
SP7B	--	6.27E+00
SP1C	--	6.09E+00

Program version: Gray Developmental, Smp. Arith. Mean, Bootstrap CL, Sep. Hz1, Hz2, Flx Ratio, No

Database version: Gray-1 Parameter Revisions, updated November 30, 1993

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Variable Percentile: 5.00, 1.0e-006 Cancer Risk Level

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSR_26@0.@DR, HSSR_26@1.@DR

Driving Direct PPLV: 5.74E+02 mg/kg (Non-carcinogenic Risk Endpoint, Biological Worker)
Bolded Crep Concentrations exceed a target HI of 1.0. Indicator level for mercury is 0.1 ppm.
 Descending Sort on Crep_0 (Horizon 0) and Crep_1
 -- = No Data. Sites with no mercury data (for all horizons) are not listed.
 All Crep concentrations are in mg/kg.

Site	Mercury Crep Concentrations	
	Horizon 0	Horizon 1
SP1E	6.38E+01	3.41E+03
NC1A	4.43E+01	5.95E+01
SP1A	3.91E+00	5.54E+01
E3B	3.81E+00	1.59E+00
NC8A	3.20E+00	6.53E-01
SP9A	2.57E+00	1.13E+00
SP12B	1.95E+00	1.95E+00
NC5B	8.21E-01	2.15E-01
S1B	7.67E-01	4.30E-01
S4	7.19E-01	2.31E-01
NP6	5.39E-01	2.71E-01
SP5A	5.06E-01	1.86E-01
W7B	4.15E-01	2.20E-01
SP8A	3.97E-01	7.76E-01
NC1E	3.88E-01	8.25E+00
SP3B	3.61E-01	1.36E-01
SP9B	3.20E-01	1.83E-01
NP1	3.10E-01	1.20E-01
SP1G	2.99E-01	1.53E-01
SP4A	2.87E-01	1.56E-01
C2B	2.80E-01	1.86E-01
E6C	2.73E-01	1.89E-01
NC5A	2.73E-01	1.39E-01
S1C	2.41E-01	1.67E-01
NC1C	2.24E-01	1.13E-01
S2B	2.02E-01	7.89E-02
NC1F	2.01E-01	9.54E-02
NC1B	1.94E-01	1.45E+00
C1B	1.80E-01	1.01E+00
NC2B	1.80E-01	8.28E-02
SP1F	1.80E-01	1.80E-01
W2	1.68E-01	2.52E-01
NC9Q	1.65E-01	9.50E-02
SP3C	1.45E-01	1.30E-01
C1C	1.41E-01	3.23E+00
SP2D	1.39E-01	9.73E-02
SP1D	1.38E-01	1.38E-01
W6A	1.20E-01	4.90E-02
SP12	1.18E-01	3.22E-02
NC1D	1.14E-01	8.62E-02
NC9S	1.04E-01	7.82E-02

Driving Direct PPLV: 5.74E+02 mg/kg (Non-carcinogenic Risk Endpoint, Biological Worker)
Bolded Crep Concentrations exceed a target HI of 1.0. Indicator level for mercury is 0.1 ppm.
 Descending Sort on Crep_0 (Horizon 0) and Crep_1
 -- = No Data. Sites with no mercury data (for all horizons) are not listed.
 All Crep concentrations are in mg/kg.

Site	Mercury Crep Concentrations	
	Horizon 0	Horizon 1
NP8A	9.86E-02	6.18E-02
E4B	9.59E-02	6.63E-02
SP1B	9.30E-02	4.61E-02
NP8C	9.15E-02	6.08E-02
C2C	8.60E-02	6.81E-02
NP9A	8.32E-02	5.11E-02
S3B	8.27E-02	3.41E-01
C1A	8.17E-02	8.15E-02
S2A	7.97E-02	5.07E-02
SP4B	7.42E-02	8.96E-02
NP5	7.17E-02	4.38E-02
C4	6.95E-02	4.45E-02
NC1G	6.92E-02	4.51E-02
S3A	6.89E-02	1.67E-01
NC4A	6.74E-02	4.14E-02
W6E	6.40E-02	1.47E-01
NP8B	6.02E-02	3.97E-02
NC8B	5.58E-02	4.00E-02
NC2D	5.18E-02	4.13E-02
SP1C	4.81E-02	4.47E-02
NC9J	4.73E-02	3.77E-02
C2A	4.64E-02	3.47E-02
SP12A	4.62E-02	3.66E-02
E3I	4.56E-02	3.34E-02
NC9P	4.55E-02	3.63E-02
S2C	4.33E-02	3.73E-02
NP3	4.14E-02	3.00E-02
SP5B	4.02E-02	2.12E-02
SP6	3.74E-02	2.94E-02
NC2A	3.71E-02	2.82E-02
NC6A	3.68E-02	3.97E-02
SP2C	3.65E-02	2.77E-02
SP7C	3.63E-02	1.71E-02
SP3E	3.59E-02	2.70E-02
NC2C	3.54E-02	3.15E-02
E1D	3.19E-02	3.22E-02
NC5C	3.01E-02	2.72E-02
NC4B	3.00E-02	2.58E-02
SP2E	2.91E-02	3.66E-02
SP3D	2.86E-02	2.56E-02
E3D	2.64E-02	2.02E-02

Driving Direct PPLV: 5.74E+02 mg/kg (Non-carcinogenic Risk Endpoint, Biological Worker)
 Bolded Crep Concentrations exceed a target HI of 1.0. Indicator level for mercury is 0.1 ppm.
 Descending Sort on Crep_0 (Horizon 0) and Crep_1
 -- = No Data. Sites with no mercury data (for all horizons) are not listed.
 All Crep concentrations are in mg/kg.

Site	Mercury Crep Concentrations	
	Horizon 0	Horizon 1
C1D	2.61E-02	7.21E-02
SP10	--	1.12E+00
W5D	--	4.90E-01
C3	--	1.13E-01
W1G	--	8.33E-02
W5B	--	8.00E-02
W4B	--	4.15E-02
W5A	--	3.09E-02
NC3	--	2.99E-02
E6B	--	2.97E-02
E4A	--	2.91E-02
SP2A	--	2.64E-02
E3C	--	2.62E-02
E3J	--	--
E3K	--	--

Program version: Gray Developmental, Smp. Arith. Mean, Bootstrap CL, Sep. Hz1, Hz2, Flx Ratio, No
 Database version: Gray-1 Parameter Revisions, updated, July 15, 1993
 Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean
 Variable Percentile: 5.00, 1.0e-006 Cancer Risk Level
 Random Seed: 0, Unc. Sample Size: 100
 HHRC Code Source Files: HSSR27@1.@DR and HSSR27@0.@DR

SECTION B.4.3

SITE IDENTIFICATION SUMMARY

Table B.4.3-1 Summary of Site Designations Used in Characterizing HHRC Results:
Sorted by Designation

Sorted on HHRC Site Designation, (FS) Medium Group, Subgroup

** : Site not classified in the FS; --: No subgroup assigned.

Subgroup designations may be used in interpreting some HHRC results, in particular the boring-by-boring

Site	Site Designation Used in the HHRC	FS Classification	
		Medium Group	Subgroup
NP2	Agent Storage	**	**
E3J	Agent Storage	**	**
E3K	Agent Storage	**	**
NP3	Agent Storage	Agent Storage	North Plants
NP5	Agent Storage	Agent Storage	North Plants
NP6	Agent Storage	Agent Storage	North Plants
E3A	Agent Storage	Agent Storage	Toxic Storage Yards
E3B	Agent Storage	Agent Storage	Toxic Storage Yards
E3C	Agent Storage	Agent Storage	Toxic Storage Yards
E3D	Agent Storage	Agent Storage	Toxic Storage Yards
E3E	Agent Storage	Agent Storage	Toxic Storage Yards
E3F	Agent Storage	Agent Storage	Toxic Storage Yards
E3G	Agent Storage	Agent Storage	Toxic Storage Yards
E3H	Agent Storage	Agent Storage	Toxic Storage Yards
E3I	Agent Storage	Agent Storage	Toxic Storage Yards
NC1A	Basins (A-F)	Basin A	--
NC1E	Basins (A-F)	Basin A	--
NC4A	Basins (A-F)	Secondary Basins	Basin F Exterior
NC4B	Basins (A-F)	Secondary Basins	Basin F Exterior
NC3	Basins (A-F)	Secondary Basins	Former Basin F
NC2A	Basins (A-F)	Secondary Basins	Secondary Basins
NC2B	Basins (A-F)	Secondary Basins	Secondary Basins
NC5A	Basins (A-F)	Secondary Basins	Secondary Basins
NC2C	Basins (A-F) /1/	**	**
E2A1	Burial Trenches	Undifferentiated	Burial Trenches
E2A2	Burial Trenches	Undifferentiated	Burial Trenches
E2A3	Burial Trenches	Undifferentiated	Burial Trenches
E2A4	Burial Trenches	Undifferentiated	Burial Trenches
E2A5	Burial Trenches	Undifferentiated	Burial Trenches
E2A6	Burial Trenches	Undifferentiated	Burial Trenches
E2A7	Burial Trenches	Undifferentiated	Burial Trenches
E2C	Burial Trenches	Undifferentiated	Burial Trenches
S3A	Buried Sediments/Ditches	Buried Sediments/Ditches	Buried Sediments
S3B	Buried Sediments/Ditches	Buried Sediments/Ditches	Buried Sediments
NC5B	Buried Sediments/Ditches	Buried Sediments/Ditches	Sand Creek Lateral
NC5C	Buried Sediments/Ditches	Buried Sediments/Ditches	Sand Creek Lateral
NP4	Buried Sediments/Ditches	Buried Sediments/Ditches	Sand Creek Lateral
S2B	Buried Sediments/Ditches	Buried Sediments/Ditches	Sand Creek Lateral
W6A	Buried Sediments/Ditches	Buried Sediments/Ditches	Sand Creek Lateral
C1A	Disposal Trenches	Disposal Trenches	Shell Trenches
SP1F	Disposal Trenches	Disposal Trenches	Hex Pit
C1C	Disposal Trenches	Disposal Trenches	Complex Trenches
S5E	Ditches/Drainage Areas	**	**

Table B.4.3-1 Summary of Site Designations Used in Characterizing HHRC Results:
Sorted by Designation

Sorted on HHRC Site Designation, (FS) Medium Group, Subgroup

****** : Site not classified in the FS; **--**: No subgroup assigned.

Subgroup designations may be used in interpreting some HHRC results, in particular the boring-by-boring

Site	Site Designation Used in the HHRC	FS Classification	
		Medium Group	Subgroup
C2B	Ditches/Drainage Areas	Ditches/Drainage Areas	--
E6C	Ditches/Drainage Areas	Ditches/Drainage Areas	--
NC1C	Ditches/Drainage Areas	Ditches/Drainage Areas	--
NC1D	Ditches/Drainage Areas	Ditches/Drainage Areas	--
NC1F	Ditches/Drainage Areas	Ditches/Drainage Areas	--
NC2D	Ditches/Drainage Areas	Ditches/Drainage Areas	--
NC5D	Ditches/Drainage Areas	Ditches/Drainage Areas	--
NC8B	Ditches/Drainage Areas	Ditches/Drainage Areas	--
NC8C	Ditches/Drainage Areas	Ditches/Drainage Areas	--
NP9F	Ditches/Drainage Areas	Ditches/Drainage Areas	--
S2A	Ditches/Drainage Areas	Ditches/Drainage Areas	--
S2C	Ditches/Drainage Areas	Ditches/Drainage Areas	--
W1F	Ditches/Drainage Areas	Ditches/Drainage Areas	--
SP1E	Lime Basins	Lime Basins	Buried M-1 Pits
NC1B	Lime Basins	Lime Basins	Section 36 Lime Basins
E4C	Munitions Testing	**	**
E5	Munitions Testing	**	**
C2C	Munitions Testing	Munitions Testing	--
C2D	Munitions Testing	Munitions Testing	--
E1A	Munitions Testing	Munitions Testing	--
E1B	Munitions Testing	Munitions Testing	--
E1C	Munitions Testing	Munitions Testing	--
E1D	Munitions Testing	Munitions Testing	--
E4A	Munitions Testing	Munitions Testing	--
E4B	Munitions Testing	Munitions Testing	--
S1D	None (lake site) /2/	**	**
S1F	None (lake site) /2/	**	**
NC7	None (lake site) /2/	Lake Sediments	--
S1B	None (lake site) /2/	Lake Sediments	--
S1C	None (lake site) /2/	Lake Sediments	--
S1E	None (lake site) /2/	Lake Sediments	--
NP8A	RMA: Balance of Areas	**	**
NP8B	RMA: Balance of Areas	**	**
E6A	RMA: Balance of Areas	**	**
E6B	RMA: Balance of Areas	**	**
E6D	RMA: Balance of Areas	**	**
NC1G	RMA: Balance of Areas	**	**
NC9A	RMA: Balance of Areas	**	**
NC9B	RMA: Balance of Areas	**	**
NC9C	RMA: Balance of Areas	**	**
NC9D	RMA: Balance of Areas	**	**
NC9E	RMA: Balance of Areas	**	**
NC9F	RMA: Balance of Areas	**	**

APPENDIX B
(SECTION B.4)

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B.4.0 INTRODUCTION

This appendix presents summary tables of results for the Human Health Risk Characterization (HHRC). The results contained herein represent a subset of the results available from the HHRC computer code. The results chosen for inclusion in this appendix provide the reader with a summary of the major findings of the HHRC. To keep tables at a manageable size, portions of this appendix focus on the areas of highest contamination and the receptor groups of most concern (biological worker and industrial worker). All tables in each appendix have undergone a 10 percent QA/QC check. The eight sections of this appendix are described briefly below:

Appendix Section B.4.1: Summary of Single Pathway Preliminary Pollutant Limit Values:

This appendix section contains five tables, one for each receptor population/subpopulation. Each table lists 5th percentile single pathway preliminary pollutant limit values (SPPPLVs) for the soil ingestion, particulate inhalation, and dermal absorption pathways. The 5th percentile cumulative direct PPLVs, which combine the three direct exposure pathways, are also listed on each table for all carcinogenic and noncarcinogenic chemicals of concern (COCs). Values listed in these tables represent a 10^{-6} risk level for carcinogenic endpoints and a hazard index of 1.0 for noncarcinogenic endpoints. The information provided in these tables is available in the PPLV module of the HHRC code. Code results are displayed directly on the computer screen.

Appendix Section B.4.2: Summary of Site-Specific C_{rep} and PPLV Data: This appendix section contains 27 tables, one for each chemical of concern. Each table lists the $C_{rep,mean}$ concentrations for the given chemical detected in soil Horizon 0 (0-1 foot), Horizon 1 (0-10 feet), and Horizon 2 (10 feet-groundwater). Any C_{rep} concentration that exceeds its cumulative direct PPLV is bolded in these tables. Tables for each organic chemical of concern also list the 5th percentile indirect PPLVs based on a 10^{-6} risk level for the biological and industrial workers. For chemicals with both a carcinogenic and noncarcinogenic endpoint, the carcinogenic results are shown. The HHRC source files for the C_{rep} portion of the tables can be saved to a file from the additivity module. The HHRC source files for the indirect PPLV portions of the table can be saved to a file from the PPLV module of the code.

Appendix Section B.4.3: Site Identification Summary: This appendix section contains two tables, which can be used to assist in interpreting HHRC code results. The first table lists RMA site designations for the HHRC, and is sorted by site designation (e.g., disposal trenches, ditches, etc.). The second table also lists site designations, but it is sorted by site number.

Appendix Section B.4.4: Site Risk Summary Tables: C_{rep} Mean: This appendix section contains 26 tables that summarize the 5th percentile site cancer risks and hazard indices for each of the potentially exposed populations. Risks and hazard indices are listed for each horizon that is relevant to a given population. The following information is provided on each table: background, incremental, and total cancer risks or hazard indices; percentage contribution of background chemical concentrations to the total cancer risk or hazard index; results sorted in descending order on the incremental column; and ranks for the sites. Sites are ranked in one of three ways: (1) rank on descending incremental risk; (2) rank on descending background risk for sites with zero incremental risk; or (3) rank used as a count of the number of sites for which risks were not quantified. The HHRC source files for these tables can be saved from the additivity module of the code.

Appendix Section B.4.5: Summary of Confidence Limits for Site-Specific C_{rep} Mean Estimates: This appendix section contains six tables. The first table lists 5th percentile total cancer risks for the biological worker from exposure to Horizon 1 under the following C_{rep} cases: $C_{rep,mean}$; $C_{rep,lower}$ 95th percentile confidence limit (LCL); and $C_{rep,upper}$ 95th percentile confidence limit (UCL). This table also lists the ratio of the UCL over the LCL. The second table lists the same information for total hazard indices. The remainder of the tables list $C_{rep,mean}$; $C_{rep,LCL}$; and $C_{rep,UCL}$ for the following risk-driving chemicals: aldrin, dieldrin, DBCP, and arsenic. The HHRC sources files for these tables can be saved from the additivity module of the code for each of the code cases needed (i.e., $C_{rep,mean}$; $C_{rep,LCL}$; $C_{rep,UCL}$).

Appendix Section B.4.6: Additivity Summaries for Selected Sites: This appendix section contains four tables. The first table provides a summary of the risk-driving chemicals for the 20 sites with the highest 5th percentile total cancer risks for the biological worker in Horizon 1. The second table provides similar information for the risk-driving noncarcinogens. The third and forth tables provide similar information for the industrial worker cancer risks and

hazard indices in Horizon 2. The information provided in these tables is available in the additivity module of the HHRC code. Code results are displayed directly on the computer screen.

Appendix Section B.4.7: Sample-specific Risk Summaries for Surficial and Subsurface Soil Borings: This appendix section contains six tables. The first three tables summarize 5th percentile total and incremental cancer risks which exceed 10^{-4} or 10^{-6} for the biological worker for surficial soils, Horizon 0 soil borings, and Horizon 1 soil borings. The remaining tables summarize similar information for noncarcinogens which exceed a hazard index of 1.0. The sites in all tables in this section are ranked in descending order according to incremental risk or hazard index. The HHRC source files can be saved to a disk from the boring analysis portion of the additivity module.

Appendix Section B.4.8: Supplementary Maps and Figures: This appendix section contains four maps of cancer risks and hazard indices for the biological worker for Horizons 0 and 2.

SECTION B.4.1

SUMMARY OF SINGLE PATHWAY PRELIMINARY POLLUTANT LIMIT VALUES

Table B.4.1-1 Summary of 5th Percentile Direct SPPLVs for the Biological Worker Subpopulation *

Chemical Name	Soil Ingestion SPPLV	Soil Inhalation SPPLV	Dermal Absorption SPPLV	Cumulative ** Direct PPLV-CARC	Cumulative ** Direct PPLV-NONCARC
Aldrin	7.64E-01	9.56E+01	1.30E+01	7.16E-01	7.12E+01
Benzene	1.29E+02	1.02E+04	1.30E+01	1.18E+01	NA
Carbon Tetrachloride	8.14E+01	1.20E+04	2.59E+00	2.51E+00	3.63E+01
Chlordane	2.71E+01	7.18E+02	4.34E+00	3.72E+00	5.51E+01
Chloracetic Acid	3.98E+03	3.74E+05	1.04E+02	NA	1.01E+02
Chlorobenzene	4.12E+04	9.36E+05	9.91E+02	NA	9.66E+02
Chloroform	4.58E+03	1.12E+04	4.90E+01	4.82E+01	4.41E+02
DDE	1.96E+01	1.88E+03	3.53E+01	1.25E+01	NA
DDT	3.02E+01	1.84E+03	2.47E+01	1.35E+01	4.09E+02
DBCP	2.96E+00	1.27E+05	2.16E-01	2.01E-01	9.75E+00
1,2-Dichloroethane	1.13E+02	6.97E+03	3.32E+00	3.23E+00	NA
1,1-Dichloroethylene	1.84E+01	3.61E+03	5.31E-01	5.16E-01	4.52E+02
Dicyclopentadiene	3.72E+04	4.24E+03	1.20E+05	NA	3.69E+03
Diieldrin	5.90E-01	4.02E+01	1.43E+00	4.14E-01	5.77E+01
Endrin	2.43E+02	3.76E+04	6.47E+03	NA	2.32E+02
Hexachlorocyclopentadiene	9.74E+03	1.41E+03	7.48E+03	NA	1.06E+03
Isodrin	1.02E+02	4.42E+03	1.10E+02	NA	5.24E+01
Methylene Chloride	9.51E+02	3.95E+05	3.66E+01	3.53E+01	3.11E+03
1,1,2,2-Tetrachloroethane	2.30E+01	1.51E+03	1.55E+00	1.45E+00	NA
Tetrachloroethylene	6.05E+02	5.13E+05	5.48E+00	5.43E+00	5.47E+02
Toluene	4.69E+05	1.00E+06	9.75E+03	NA	9.46E+03
Trichloroethylene	1.41E+03	1.08E+05	2.90E+01	2.84E+01	NA
Arsenic	4.36E+00	9.56E+01	0.00E+00	4.17E+00	4.76E+02
Cadmium	3.47E+04	5.01E+01	0.00E+00	5.01E+01	5.29E+02
Chromium	3.47E+05	7.52E+00	0.00E+00	7.52E+00	3.87E+01
Lead	2.22E+03	9.28E+04	0.00E+00	NA	2.17E+03
Mercury	6.24E+02	7.17E+03	0.00E+00	NA	5.74E+02

* Values reported as mg/kg. Values are 5th percentile PPLVs, based on a 10⁻⁶ risk level for carcinogens, and a hazard index of 1.0 for noncarcinogens.

** Where a chemical is both a carcinogen (CARC) and noncarcinogen (NONCARC), the SPPLVs summarized represent the carcinogenic endpoint.

Shaded values represent the dominant exposure pathway.

Table B.4.1-2 Summary of 5th Percentile Direct SPPLVs for the Recreational Visitor Subpopulation *

Chemical Name	Soil Ingestion SPPLV	Soil Inhalation SPPLV	Dermal Absorption SPPLV	Cumulative ** Direct PPLV-CARC	Cumulative ** Direct PPLV-NONCARC
Aldrin	6.36E+00	4.79E+02	6.93E+00	3.29E+00	4.63E+02
Benzene	5.74E+03	8.62E+04	1.30E+01	1.30E+01	NA
Carbon Tetrachloride	3.29E+03	1.91E+05	2.69E+00	2.69E+00	8.65E+01
Chlordane	5.14E+01	5.67E+02	1.41E+01	1.09E+01	1.59E+02
Chloracetic Acid	5.30E+04	1.00E+06	2.35E+02	NA	2.34E+02
Chlorobenzene	6.36E+05	1.00E+06	2.56E+03	NA	2.55E+03
Chloroform	8.26E+04	1.21E+05	8.39E+01	8.91E+01	1.17E+03
DDE	4.48E+02	7.35E+03	3.29E+01	3.05E+01	NA
DDT	7.98E+02	1.93E+04	3.78E+01	3.60E+01	1.62E+03
DBCP	1.50E+02	1.00E+06	2.52E-01	2.52E-01	2.32E+01
1,2-Dichloroethane	5.57E+03	1.11E+05	3.75E+00	3.75E+00	NA
1,1-Dichloroethylene	5.05E+01	5.65E+03	7.44E-01	7.33E-01	1.06E+03
Dicyclopentadiene	3.85E+05	4.49E+04	1.05E+05	NA	2.91E+04
Dieldrin	3.48E+01	6.24E+02	2.08E+00	1.96E+00	4.70E+02
Endrin	9.83E+03	1.43E+05	9.55E+02	NA	8.65E+02
Hexachlorocyclopentadiene	7.88E+04	1.50E+04	1.21E+04	NA	6.16E+03
Isodrin	2.02E+03	1.07E+05	2.41E+02	NA	2.15E+02
Methylene Chloride	2.17E+04	1.00E+06	4.59E+01	4.58E+01	7.30E+03
1,1,2,2-Tetrachloroethane	2.70E+03	5.03E+04	1.94E+00	9.61E+00	NA
Tetrachloroethylene	9.93E+03	1.00E+06	6.27E+00	6.26E+00	1.28E+03
Toluene	1.00E+06	1.00E+06	2.21E+04	NA	2.11E+04
Trichloroethylene	2.06E+04	4.31E+05	3.99E+01	3.98E+01	NA
Arsenic	6.16E+01	9.15E+01	0.00E+00	3.68E+01	5.84E+03
Cadmium	3.96E+04	2.19E+02	0.00E+00	2.17E+02	6.53E+03
Chromium	3.96E+05	3.28E+01	0.00E+00	3.28E+01	3.55E+02
Lead	2.75E+04	7.08E+05	0.00E+00	NA	2.65E+04
Mercury	5.91E+03	7.70E+04	0.00E+00	NA	5.49E+03

* Values reported as mg/kg. Values are 5th percentile PPLVs, based on a 10⁻⁶ risk level for carcinogens and a hazard index of 1 for noncarcinogens.

** Where a chemical is both a carcinogen (CARC) and noncarcinogen (NONCARC), the SPPLVs summarized represent the carcinogenic endpoint.
Shaded values represent the dominant exposure pathway.

Table B.4.1-3 Summary of 5th Percentile Direct SPPLVs for the Regulated/Casual Visitor Subpopulation *

Chemical Name	Soil Ingestion SPPLV	Soil Inhalation SPPLV	Dermal Absorption SPPLV	Cumulative ** Direct PPLV-CARC	Cumulative ** Direct PPLV-NONCARC
Aldrin	2.32E+01	3.68E+02	2.48E+01	1.16E+01	1.09E+03
Benzene	4.05E+03	1.36E+05	5.85E+01	5.76E+01	NA
Carbon Tetrachloride	1.17E+03	9.73E+04	1.34E+01	1.32E+01	2.86E+02
Chlordane	2.91E+02	5.99E+03	6.69E+01	5.39E+01	5.82E+02
Chloracetic Acid	5.62E+04	1.00E+06	8.25E+02	NA	8.13E+02
Chlorobenzene	7.37E+05	1.00E+06	7.07E+03	NA	6.95E+03
Chloroform	2.34E+04	7.49E+04	3.29E+02	3.23E+02	4.41E+03
DDE	3.66E+02	1.16E+04	3.52E+02	1.77E+02	NA
DDT	1.11E+03	1.56E+04	1.77E+02	1.51E+02	5.89E+03
DBCP	7.20E+01	1.00E+06	1.19E+00	1.17E+00	7.76E+01
1,2-Dichloroethane	1.24E+03	4.40E+04	1.77E+01	1.74E+01	NA
1,1-Dichloroethylene	2.05E+02	2.28E+04	2.86E+00	2.82E+00	3.49E+03
Dicyclopentadiene	1.00E+06	7.81E+04	3.91E+05	NA	6.11E+04
Dieldrin	9.24E+00	3.17E+02	2.28E+01	6.45E+00	9.39E+02
Endrin	1.15E+04	3.43E+05	4.09E+03	NA	2.99E+03
Hexachlorocyclopentadiene	2.48E+05	2.24E+04	5.18E+04	NA	1.47E+04
Isodrin	3.04E+03	3.27E+05	6.17E+02	NA	6.43E+02
Methylene Chloride	1.33E+04	1.00E+06	2.09E+02	2.06E+02	2.37E+04
1,1,2,2-Tetrachloroethane	5.74E+02	2.00E+04	9.78E+00	1.94E+00	NA
Tetrachloroethylene	2.52E+03	1.00E+06	3.62E+01	3.57E+01	3.82E+03
Toluene	1.00E+06	1.00E+06	7.44E+04	NA	6.48E+04
Trichloroethylene	1.25E+04	6.80E+05	1.80E+02	1.78E+02	NA
Arsenic	1.03E+02	3.43E+02	0.00E+00	7.91E+01	9.97E+03
Cadmium	2.90E+04	8.80E+02	0.00E+00	8.55E+02	1.30E+04
Chromium	1.00E+06	1.29E+02	0.00E+00	1.29E+02	7.38E+02
Lead	5.01E+04	1.00E+06	0.00E+00	NA	4.77E+04
Mercury	1.05E+04	1.58E+05	0.00E+00	NA	9.85E+03

* Values reported as mg/kg. Values are 5th percentile PPLVs, based on 10⁻⁶ risk level for carcinogens and a hazard index of 1 for noncarcinogens.

** Where a chemical is both a carcinogen (CARC) and noncarcinogen (NONCARC), the SPPLVs summarized represent the carcinogenic endpoint.

Shaded values represent the dominant exposure pathway.

Table B.4.1-4 Summary of 5th Percentile Direct PPLVs for the Industrial Worker Population *

Chemical Name	Soil Ingestion SPPLV	Soil Inhalation SPPLV	Dermal Absorption SPPLV	Cumulative ** Direct PPLV-CARC	Cumulative ** Direct PPLV-NONCARC
Aldrin	9.96E+00	1.29E+02	4.50E+00	3.02E+00	1.19E+02
Benzene	3.25E+03	7.59E+04	1.04E+01	1.04E+01	NA
Carbon Tetrachloride	8.19E+02	2.18E+04	2.33E+00	2.33E+00	2.96E+01
Chlordane	1.04E+02	3.06E+03	8.20E+00	7.58E+00	6.23E+01
Chloracetic Acid	5.99E+04	6.82E+05	7.72E+01	NA	7.71E+01
Chlorobenzene	5.77E+04	1.00E+06	8.58E+02	NA	8.45E+02
Chloroform	1.52E+04	2.68E+04	4.87E+01	4.84E+01	3.73E+02
DDE	6.58E+01	3.57E+03	2.64E+01	1.87E+01	NA
DDT	3.49E+02	6.48E+03	4.06E+01	3.61E+01	4.70E+02
DBCP	6.98E+01	4.81E+05	2.37E-01	2.36E-01	7.99E+00
1,2-Dichloroethane	1.12E+03	1.26E+04	3.40E+00	3.39E+00	NA
1,1-Dichloroethylene	1.10E+02	1.25E+04	5.23E-01	5.21E-01	3.28E+02
Dicyclopentadiene	3.60E+05	7.84E+03	4.95E+04	NA	6.65E+03
Dieldrin	8.94E+00	9.10E+01	1.69E+00	1.40E+00	1.06E+02
Endrin	4.78E+03	2.22E+05	3.41E+02	NA	3.18E+02
Hexachlorocyclopentadiene	1.71E+05	2.38E+03	7.44E+03	NA	1.78E+03
Isodrin	1.62E+03	8.32E+03	7.82E+01	NA	7.39E+01
Methylene Chloride	1.53E+04	6.99E+05	4.44E+01	4.43E+01	2.25E+03
1,1,2,2-Tetrachloroethane	5.42E+02	1.12E+04	1.49E+00	1.49E+00	NA
Tetrachloroethylene	2.39E+03	6.30E+05	5.88E+00	5.87E+00	4.05E+02
Toluene	1.00E+06	1.00E+06	7.32E+03	NA	7.22E+03
Trichloroethylene	2.19E+03	2.09E+05	2.94E+01	2.90E+01	NA
Arsenic	3.03E+01	1.83E+02	0.00E+00	2.60E+01	8.67E+02
Cadmium	1.28E+04	2.15E+02	0.00E+00	2.12E+02	1.05E+03
Chromium	1.28E+05	3.23E+01	0.00E+00	3.23E+01	7.30E+01
Lead	4.60E+03	1.52E+05	0.00E+00	NA	4.46E+03
Mercury	1.43E+03	8.95E+03	0.00E+00	NA	1.24E+03

* Values reported as mg/kg. Values are 5th percentile PPLVs, based on a 10-6 risk level for carcinogens, and a hazard index of 1.0 for noncarcinogens.

** Where a chemical is both a carcinogen (CARC) and noncarcinogen (NONCARC), the SPPLVs summarized represent the carcinogenic endpoint.

Shaded values represent the dominant exposure pathway.

Table B.4.1-5 Summary of 5th Percentile Direct SPPLVs for the Commercial Worker Population *

Chemical Name	Soil Ingestion SPPLV	Soil Inhalation SPPLV	Dermal Absorption SPPLV	Cumulative ** Direct PPLV-CARC	Cumulative ** Direct PPLV-NONCARC
Aldrin	4.81E+00	5.76E+03	2.43E+02	4.71E+00	2.04E+02
Benzene	9.47E+02	2.36E+05	2.97E+02	2.26E+02	NA
Carbon Tetrachloride	1.11E+03	2.30E+05	5.40E+01	5.14E+01	6.24E+02
Chlordane	4.96E+01	1.77E+04	5.75E+01	2.66E+01	2.16E+02
Chloroacetic Acid	1.38E+04	1.00E+06	2.19E+03	NA	1.88E+03
Chlorobenzene	8.24E+04	1.00E+06	2.15E+04	NA	1.68E+04
Chloroform	1.33E+04	9.56E+04	1.23E+03	1.11E+03	8.93E+03
DDE	1.43E+02	2.83E+05	1.07E+03	1.26E+02	NA
DDT	1.06E+02	2.83E+05	9.87E+02	9.58E+01	1.92E+03
DBCP	4.72E+01	1.00E+06	4.98E+00	4.51E+00	1.84E+02
1,2-Dichloroethane	5.78E+02	8.76E+04	8.06E+01	7.07E+01	NA
1,1-Dichloroethylene	8.66E+01	4.36E+04	1.16E+01	1.02E+01	7.74E+03
Dicyclopentadiene	9.55E+04	1.79E+05	9.20E+05	NA	5.83E+04
Dieldrin	2.58E+00	7.75E+03	1.75E+02	2.54E+00	2.26E+02
Endrin	1.16E+03	1.00E+06	2.96E+04	NA	1.12E+03
Hexachlorocyclopentadiene	2.02E+05	2.08E+04	1.47E+05	NA	1.67E+04
Isodrin	2.57E+02	4.75E+05	1.09E+04	NA	2.51E+02
Methylene Chloride	6.51E+03	1.00E+06	8.84E+02	7.78E+02	5.06E+04
1,1,2,2-Tetrachloroethane	3.20E+02	3.83E+04	3.69E+01	3.31E+01	NA
Tetrachloroethylene	1.32E+03	1.00E+06	1.44E+02	1.30E+02	8.75E+03
Toluene	1.00E+06	1.00E+06	1.91E+05	NA	1.38E+05
Trichloroethylene	1.18E+04	1.00E+06	6.63E+02	6.27E+02	NA
Arsenic	2.61E+01	8.38E+03	0.00E+00	2.60E+01	1.30E+03
Cadmium	5.56E+04	1.93E+03	0.00E+00	1.87E+03	1.70E+03
Chromium	6.15E+04	1.28E+02	0.00E+00	3.26E+02	7.82E+02
Lead	7.11E+03	1.00E+06	0.00E+00	NA	7.06E+03
Mercury	1.36E+03	2.39E+05	0.00E+00	NA	1.35E+03

* Values reported as mg/kg. Values are 5th percentile PPLVs, based on a 10⁻⁶ risk level for carcinogens, and a hazard index of 1.0 for noncarcinogens.

** Where a chemical is both a carcinogen (CARC) and noncarcinogen (NONCARC), the SPPLVs summarized represent the carcinogenic endpoint.

Table B.4.3-1 Summary of Site Designations Used in Characterizing HHRC Results:
Sorted by Designation

Sorted on HHRC Site Designation, (FS) Medium Group, Subgroup

****** : Site not classified in the FS; **--**: No subgroup assigned.

Subgroup designations may be used in interpreting some HHRC results, in particular the boring-by-boring

Site	Site Designation Used in the HHRC	FS Classification	
		Medium Group	Subgroup
NC9G	RMA: Balance of Areas	**	**
NC9H	RMA: Balance of Areas	**	**
NC9I	RMA: Balance of Areas	**	**
NC9J	RMA: Balance of Areas	**	**
NC9K	RMA: Balance of Areas	**	**
NC9L	RMA: Balance of Areas	**	**
NC9M	RMA: Balance of Areas	**	**
NC9N	RMA: Balance of Areas	**	**
NC9O	RMA: Balance of Areas	**	**
NC9P	RMA: Balance of Areas	**	**
NC9Q	RMA: Balance of Areas	**	**
NC9R	RMA: Balance of Areas	**	**
NC9S	RMA: Balance of Areas	**	**
NP7	RMA: Balance of Areas	**	**
NP9A	RMA: Balance of Areas	**	**
NP9B	RMA: Balance of Areas	**	**
NP9C	RMA: Balance of Areas	**	**
NP9D	RMA: Balance of Areas	**	**
NP9E	RMA: Balance of Areas	**	**
S5A	RMA: Balance of Areas	**	**
S5C	RMA: Balance of Areas	**	**
S5D	RMA: Balance of Areas	**	**
W1A	RMA: Balance of Areas	**	**
W1B	RMA: Balance of Areas	**	**
W1C	RMA: Balance of Areas	**	**
W1D	RMA: Balance of Areas	**	**
W1E	RMA: Balance of Areas	**	**
W1G	RMA: Balance of Areas	**	**
W4A	RMA: Balance of Areas	**	**
W4B	RMA: Balance of Areas	**	**
W6B	RMA: Balance of Areas	**	**
W6C	RMA: Balance of Areas	**	**
W6D	RMA: Balance of Areas	**	**
W6E	RMA: Balance of Areas	**	**
W8A	RMA: Balance of Areas	**	**
W8B	RMA: Balance of Areas	**	**
W8C	RMA: Balance of Areas	**	**
W8D	RMA: Balance of Areas	**	**
W8E	RMA: Balance of Areas	**	**
W8F	RMA: Balance of Areas	**	**
S1A	RMA: Balance of Areas /2/	**	**
S5B	RMA: Balance of Areas /3/	Lake Sediments	--
W3A	Sanitary Landfills	**	**

Table B.4.3-1 Summary of Site Designations Used in Characterizing HHRC Results:
Sorted by Designation

Sorted on HHRC Site Designation, (FS) Medium Group, Subgroup

** : Site not classified in the FS; --: No subgroup assigned.

Subgroup designations may be used in interpreting some HHRC results, in particular the boring-by-bor

Site	Site Designation Used in the HHRC	FS Classification	
		Medium Group	Subgroup
W3B	Sanitary Landfills	**	**
W3D	Sanitary Landfills	**	**
W5B	Sanitary Landfills	**	**
C1D	Sanitary Landfills	Sanitary Landfills	--
E2B	Sanitary Landfills	Sanitary Landfills	--
S4	Sanitary Landfills	Sanitary Landfills	--
W2	Sanitary Landfills	Sanitary Landfills	--
W3C	Sanitary Landfills	Sanitary Landfills	--
W5A	Sanitary Landfills	Sanitary Landfills	--
W5C	Sanitary Landfills	Sanitary Landfills	--
W5D	Sanitary Landfills	Sanitary Landfills	--
C1B	Section 36: Balance of Areas	Undifferentiated	Section 36: Balance of Areas
C2A	Section 36: Balance of Areas	Undifferentiated	Section 36: Balance of Areas
C4	Section 36: Balance of Areas	Undifferentiated	Section 36: Balance of Areas
W7B	Sewer Systems	**	**
NP8C	Sewer Systems	**	--
C3	Sewer Systems	Sewer Systems	Chemical Sewers
NC6A	Sewer Systems	Sewer Systems	Chemical Sewers
NC6B	Sewer Systems	Sewer Systems	Chemical Sewers
NP1	Sewer Systems	Sewer Systems	Chemical Sewers
SP10	Sewer Systems	Sewer Systems	Chemical Sewers
NC8A	Sewer Systems	Sewer Systems	Sanitary/Process Water Sewers
SP11	Sewer Systems	Sewer Systems	Sanitary/Process Water Sewers
SP12	Sewer Systems	Sewer Systems	Sanitary/Process Water Sewers
W7A	Sewer Systems	Sewer Systems	Sanitary/Process Water Sewers
SP6	South Plants	**	**
SP7A	South Plants	**	**
SP8C	South Plants	**	**
SP12A	South Plants	South Plants	Balance of Areas
SP12B	South Plants	South Plants	Balance of Areas
SP1B	South Plants	South Plants	Balance of Areas
SP1C	South Plants	South Plants	Balance of Areas
SP1G	South Plants	South Plants	Balance of Areas
SP2C	South Plants	South Plants	Balance of Areas
SP2E	South Plants	South Plants	Balance of Areas
SP3B	South Plants	South Plants	Balance of Areas
SP3C	South Plants	South Plants	Balance of Areas
SP3D	South Plants	South Plants	Balance of Areas
SP3E	South Plants	South Plants	Balance of Areas
SP4B	South Plants	South Plants	Balance of Areas
SP5B	South Plants	South Plants	Balance of Areas
SP7B	South Plants	South Plants	Balance of Areas
SP7C	South Plants	South Plants	Balance of Areas

Sorted on HHRC Site Designation, (FS) Medium Group, Subgroup

**** : Site not classified in the FS; --: No subgroup assigned.**

Subgroup designations may be used in interpreting some HHRC results, in particular the boring-by-boring

Site	Site Designation Used in the HHRC	FS Classification	
		Medium Group	Subgroup
SP8A	South Plants	South Plants	Balance of Areas
SP9B	South Plants	South Plants	Balance of Areas
SP1A	South Plants	South Plants	Central Processing Area
SP1D	South Plants	South Plants	Ditches
SP2D	South Plants	South Plants	Ditches
SP3A	South Plants	South Plants	Ditches
SP4A	South Plants	South Plants	Ditches
SP5A	South Plants	South Plants	Ditches
SP8B	South Plants	South Plants	Ditches
SP9A	South Plants	South Plants	Ditches
SP2A	South Plants	South Plants	Tank Farm
SP2B	South Plants	South Plants	Tank Farm

Note:

- /1/ Site NCSA-2C is Basin E, which is designated a no-action site for the FS, but was quantitatively evaluated for the HHRC.
- /2/ With the exception of S1A (Eastern Upper Derby Lake), which is predominantly dry, lake sites were not quantitatively evaluated in the HHRC.
- /3/ Even though classified as a lake sediments site, S5B was retained in the HHRC quantitative evaluation because for most of the season, this site is dry (soil vs. sediment).

Table B.4.3-2 Summary of Site Designations Used in Characterizing HHRC Results:
Sorted by Site ID

Sorted on Site, HHRC Designation, (FS) Subgroup

****** : Site not classified in the FS; **--**: No subgroup assigned.

Subgroup designations may be used in interpreting some HHRC results, in particular the boring-by-bor

Site	Site Designation Used in the HHRC	FS Classification	
		Medium Group	Subgroup
C1A	Disposal Trenches	Disposal Trenches	Shell Trenches
C1B	Section 36: Balance of Areas	Undifferentiated	Section 36: Balance of Areas
C1C	Disposal Trenches	Disposal Trenches	Complex Trenches
C1D	Sanitary Landfills	Sanitary Landfills	--
C2A	Section 36: Balance of Areas	Undifferentiated	Section 36: Balance of Areas
C2B	Ditches/Drainage Areas	Ditches/Drainage Areas	--
C2C	Munitions Testing	Munitions Testing	--
C2D	Munitions Testing	Munitions Testing	--
C3	Sewer Systems	Sewer Systems	Chemical Sewers
C4	Section 36: Balance of Areas	Undifferentiated	Section 36: Balance of Areas
E1A	Munitions Testing	Munitions Testing	--
E1B	Munitions Testing	Munitions Testing	--
E1C	Munitions Testing	Munitions Testing	--
E1D	Munitions Testing	Munitions Testing	--
E2A1	Burial Trenches	Undifferentiated	Burial Trenches
E2A2	Burial Trenches	Undifferentiated	Burial Trenches
E2A3	Burial Trenches	Undifferentiated	Burial Trenches
E2A4	Burial Trenches	Undifferentiated	Burial Trenches
E2A5	Burial Trenches	Undifferentiated	Burial Trenches
E2A6	Burial Trenches	Undifferentiated	Burial Trenches
E2A7	Burial Trenches	Undifferentiated	Burial Trenches
E2B	Sanitary Landfills	Sanitary Landfills	--
E2C	Burial Trenches	Undifferentiated	Burial Trenches
E3A	Agent Storage	Agent Storage	Toxic Storage Yards
E3B	Agent Storage	Agent Storage	Toxic Storage Yards
E3C	Agent Storage	Agent Storage	Toxic Storage Yards
E3D	Agent Storage	Agent Storage	Toxic Storage Yards
E3E	Agent Storage	Agent Storage	Toxic Storage Yards
E3F	Agent Storage	Agent Storage	Toxic Storage Yards
E3G	Agent Storage	Agent Storage	Toxic Storage Yards
E3H	Agent Storage	Agent Storage	Toxic Storage Yards
E3I	Agent Storage	Agent Storage	Toxic Storage Yards
E3J	Agent Storage	**	**
E3K	Agent Storage	**	**
E4A	Munitions Testing	Munitions Testing	--
E4B	Munitions Testing	Munitions Testing	--
E4C	Munitions Testing	**	**
E5	Munitions Testing	**	**
E6A	RMA: Balance of Areas	**	**
E6B	RMA: Balance of Areas	**	**
E6C	Ditches/Drainage Areas	Ditches/Drainage Areas	--
E6D	RMA: Balance of Areas	**	**
NC1A	Basins (A-F)	Basin A	--

Table B.4.3-2 Summary of Site Designations Used in Characterizing HHRC Results:
Sorted by Site ID

Sorted on Site, HHRC Designation, (FS) Subgroup

****** : Site not classified in the FS; **--**: No subgroup assigned.

Subgroup designations may be used in interpreting some HHRC results, in particular the boring-by-boring

Site	Site Designation Used in the HHRC	FS Classification	
		Medium Group	Subgroup
NC1B	Lime Basins	Lime Basins	Section 36 Lime Basins
NC1C	Ditches/Drainage Areas	Ditches/Drainage Areas	--
NC1D	Ditches/Drainage Areas	Ditches/Drainage Areas	--
NC1E	Basins (A-F)	Basin A	--
NC1F	Ditches/Drainage Areas	Ditches/Drainage Areas	--
NC1G	RMA: Balance of Areas	**	**
NC2A	Basins (A-F)	Secondary Basins	Secondary Basins
NC2B	Basins (A-F)	Secondary Basins	Secondary Basins
NC2C	Basins (A-F)	**	**
NC2D	Ditches/Drainage Areas	Ditches/Drainage Areas	--
NC3	Basins (A-F)	Secondary Basins	Former Basin F
NC4A	Basins (A-F)	Secondary Basins	Basin F Exterior
NC4B	Basins (A-F)	Secondary Basins	Basin F Exterior
NC5A	Basins (A-F)	Secondary Basins	Secondary Basins
NC5B	Buried Sediments/Ditches	Buried Sediments/Ditches	Sand Creek Lateral
NC5C	Buried Sediments/Ditches	Buried Sediments/Ditches	Sand Creek Lateral
NC5D	Ditches/Drainage Areas	Ditches/Drainage Areas	--
NC6A	Sewer Systems	Sewer Systems	Chemical Sewers
NC6B	Sewer Systems	Sewer Systems	Chemical Sewers
NC7	None (lake site)	Lake Sediments	--
NC8A	Sewer Systems	Sewer Systems	Sanitary/Process Water Sewers
NC8B	Ditches/Drainage Areas	Ditches/Drainage Areas	--
NC8C	Ditches/Drainage Areas	Ditches/Drainage Areas	--
NC9A	RMA: Balance of Areas	**	**
NC9B	RMA: Balance of Areas	**	**
NC9C	RMA: Balance of Areas	**	**
NC9D	RMA: Balance of Areas	**	**
NC9E	RMA: Balance of Areas	**	**
NC9F	RMA: Balance of Areas	**	**
NC9G	RMA: Balance of Areas	**	**
NC9H	RMA: Balance of Areas	**	**
NC9I	RMA: Balance of Areas	**	**
NC9J	RMA: Balance of Areas	**	**
NC9K	RMA: Balance of Areas	**	**
NC9L	RMA: Balance of Areas	**	**
NC9M	RMA: Balance of Areas	**	**
NC9N	RMA: Balance of Areas	**	**
NC9O	RMA: Balance of Areas	**	**
NC9P	RMA: Balance of Areas	**	**
NC9Q	RMA: Balance of Areas	**	**
NC9R	RMA: Balance of Areas	**	**
NC9S	RMA: Balance of Areas	**	**
NP1	Sewer Systems	Sewer Systems	Chemical Sewers

Table B.4.3-2 Summary of Site Designations Used in Characterizing HHRC Results:
Sorted by Site ID

Sorted on Site, HHRC Designation, (FS) Subgroup

**** : Site not classified in the FS; --: No subgroup assigned.**

Subgroup designations may be used in interpreting some HHRC results, in particular the boring-by-boring

Site	Site Designation Used in the HHRC	FS Classification	
		Medium Group	Subgroup
NP2	Agent Storage	**	**
NP3	Agent Storage	Agent Storage	North Plants
NP4	Buried Sediments/Ditches	Buried Sediments/Ditches	Sand Creek Lateral
NP5	Agent Storage	Agent Storage	North Plants
NP6	Agent Storage	Agent Storage	North Plants
NP7	RMA: Balance of Areas	**	**
NP8A	RMA: Balance of Areas	**	**
NP8B	RMA: Balance of Areas	**	**
NP8C	Sewer Systems	**	--
NP9A	RMA: Balance of Areas	**	**
NP9B	RMA: Balance of Areas	**	**
NP9C	RMA: Balance of Areas	**	**
NP9D	RMA: Balance of Areas	**	**
NP9E	RMA: Balance of Areas	**	**
NP9F	Ditches/Drainage Areas	Ditches/Drainage Areas	--
S1A	RMA: Balance of Areas	**	**
S1B	None (lake site)	Lake Sediments	--
S1C	None (lake site)	Lake Sediments	--
S1D	None (lake site)	**	**
S1E	None (lake site)	Lake Sediments	--
S1F	None (lake site)	**	**
S2A	Ditches/Drainage Areas	Ditches/Drainage Areas	--
S2B	Buried Sediments/Ditches	Buried Sediments/Ditches	Sand Creek Lateral
S2C	Ditches/Drainage Areas	Ditches/Drainage Areas	--
S3A	Buried Sediments/Ditches	Buried Sediments/Ditches	Buried Sediments
S3B	Buried Sediments/Ditches	Buried Sediments/Ditches	Buried Sediments
S4	Sanitary Landfills	Sanitary Landfills	--
S5A	RMA: Balance of Areas	**	**
S5B	RMA: Balance of Areas	Lake Sediments	--
S5C	RMA: Balance of Areas	**	**
S5D	RMA: Balance of Areas	**	**
S5E	Ditches/Drainage Areas	**	**
SP10	Sewer Systems	Sewer Systems	Chemical Sewers
SP11	Sewer Systems	Sewer Systems	Sanitary/Process Water Sewers
SP12	Sewer Systems	Sewer Systems	Sanitary/Process Water Sewers
SP12A	South Plants	South Plants	Balance of Areas
SP12B	South Plants	South Plants	Balance of Areas
SP1A	South Plants	South Plants	Central Processing Area
SP1B	South Plants	South Plants	Balance of Areas
SP1C	South Plants	South Plants	Balance of Areas
SP1D	South Plants	South Plants	Ditches
SP1E	Lime Basins	Lime Basins	Buried M-1 Pits
SP1F	Disposal Trenches	Disposal Trenches	Hex Pit

Table B.4.3-2 Summary of Site Designations Used in Characterizing HHRC Results:
Sorted by Site ID

Sorted on Site, HHRC Designation, (FS) Subgroup

****** : Site not classified in the FS; **--**: No subgroup assigned.

Subgroup designations may be used in interpreting some HHRC results, in particular the boring-by-boring

Site	Site Designation Used in the HHRC	FS Classification	
		Medium Group	Subgroup
SP1G	South Plants	South Plants	Balance of Areas
SP2A	South Plants	South Plants	Tank Farm
SP2B	South Plants	South Plants	Tank Farm
SP2C	South Plants	South Plants	Balance of Areas
SP2D	South Plants	South Plants	Ditches
SP2E	South Plants	South Plants	Balance of Areas
SP3A	South Plants	South Plants	Ditches
SP3B	South Plants	South Plants	Balance of Areas
SP3C	South Plants	South Plants	Balance of Areas
SP3D	South Plants	South Plants	Balance of Areas
SP3E	South Plants	South Plants	Balance of Areas
SP4A	South Plants	South Plants	Ditches
SP4B	South Plants	South Plants	Balance of Areas
SP5A	South Plants	South Plants	Ditches
SP5B	South Plants	South Plants	Balance of Areas
SP6	South Plants	**	**
SP7A	South Plants	**	**
SP7B	South Plants	South Plants	Balance of Areas
SP7C	South Plants	South Plants	Balance of Areas
SP8A	South Plants	South Plants	Balance of Areas
SP8B	South Plants	South Plants	Ditches
SP8C	South Plants	**	**
SP9A	South Plants	South Plants	Ditches
SP9B	South Plants	South Plants	Balance of Areas
W1A	RMA: Balance of Areas	**	**
W1B	RMA: Balance of Areas	**	**
W1C	RMA: Balance of Areas	**	**
W1D	RMA: Balance of Areas	**	**
W1E	RMA: Balance of Areas	**	**
W1F	Ditches/Drainage Areas	Ditches/Drainage Areas	--
W1G	RMA: Balance of Areas	**	**
W2	Sanitary Landfills	Sanitary Landfills	--
W3A	Sanitary Landfills	**	**
W3B	Sanitary Landfills	**	**
W3C	Sanitary Landfills	Sanitary Landfills	--
W3D	Sanitary Landfills	**	**
W4A	RMA: Balance of Areas	**	**
W4B	RMA: Balance of Areas	**	**
W5A	Sanitary Landfills	Sanitary Landfills	--
W5B	Sanitary Landfills	**	**
W5C	Sanitary Landfills	Sanitary Landfills	--
W5D	Sanitary Landfills	Sanitary Landfills	--
W6A	Buried Sediments/Ditches	Buried Sediments/Ditches	Sand Creek Lateral

Table B.4.3-2 Summary of Site Designations Used in Characterizing HHRC Results:
Sorted by Site ID

Sorted on Site, HHRC Designation, (FS) Subgroup

****** : Site not classified in the FS; **--**: No subgroup assigned.

Subgroup designations may be used in interpreting some HHRC results, in particular the boring-by-boring

Site	Site Designation Used in the HHRC	FS Classification	
		Medium Group	Subgroup
W6B	RMA: Balance of Areas	**	**
W6C	RMA: Balance of Areas	**	**
W6D	RMA: Balance of Areas	**	**
W6E	RMA: Balance of Areas	**	**
W7A	Sewer Systems	Sewer Systems	Sanitary/Process Water Sewers
W7B	Sewer Systems	**	**
W8A	RMA: Balance of Areas	**	**
W8B	RMA: Balance of Areas	**	**
W8C	RMA: Balance of Areas	**	**
W8D	RMA: Balance of Areas	**	**
W8E	RMA: Balance of Areas	**	**
W8F	RMA: Balance of Areas	**	**

SECTION B.4.4

SITE RISK SUMMARY TABLES: Crep MEAN

/

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals

Descending Sort on Incremental Cancer Risk

Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
SP3A	3.28E-03	3.28E-03	1.00E-06	1	<0.01%
SP3B	9.67E-04	9.64E-04	3.10E-06	2	0.3%
SP1A	9.57E-04	9.53E-04	4.00E-06	3	0.4%
NC8A	9.36E-04	9.32E-04	3.90E-06	4	0.4%
SP1E	8.49E-04	8.45E-04	4.40E-06	5	0.5%
SP8A	5.90E-04	5.86E-04	3.90E-06	6	0.7%
SP4A	2.87E-04	2.83E-04	4.00E-06	7	1.4%
NC1A	2.19E-04	2.15E-04	4.40E-06	8	2.0%
NP5	1.81E-04	1.76E-04	5.70E-06	9	3.1%
SP3C	1.55E-04	1.52E-04	3.60E-06	10	2.3%
S2B	1.41E-04	1.38E-04	3.40E-06	11	2.4%
S4	1.14E-04	1.10E-04	3.70E-06	12	3.2%
NP6	1.12E-04	1.07E-04	4.80E-06	13	4.3%
SP1D	8.52E-05	8.33E-05	1.86E-06	14	2.2%
SP12B	8.31E-05	8.03E-05	2.81E-06	15	3.4%
NC1B	7.88E-05	7.49E-05	3.89E-06	16	4.9%
SP1F	4.92E-05	4.92E-05	0.00E+00	17	<0.01%
SP8B	4.46E-05	4.37E-05	8.90E-07	18	2.0%
E3B	4.02E-05	3.48E-05	5.39E-06	19	13.4%
NC5C	3.14E-05	2.93E-05	2.10E-06	20	6.7%
SP1G	3.41E-05	2.74E-05	6.69E-06	21	19.6%
NC2A	3.03E-05	2.60E-05	4.23E-06	22	14.0%
SP2D	2.44E-05	2.31E-05	1.28E-06	23	5.2%
NC4B	2.47E-05	2.21E-05	2.68E-06	24	10.8%
C1B	2.55E-05	2.18E-05	3.73E-06	25	14.6%
SP9A	2.51E-05	2.18E-05	3.32E-06	26	13.2%
SP3E	1.73E-05	1.61E-05	1.13E-06	27	6.5%
SP1C	1.49E-05	1.43E-05	5.80E-07	28	3.9%
NC5B	1.87E-05	1.41E-05	4.57E-06	29	24.5%
NC4A	1.56E-05	1.40E-05	1.66E-06	30	10.6%
NC5A	1.71E-05	1.20E-05	5.09E-06	31	29.8%
C1A	1.11E-05	8.36E-06	2.70E-06	32	24.4%
NC1E	1.25E-05	8.20E-06	4.25E-06	33	34.1%
W1F	5.72E-06	5.72E-06	0.00E+00	34	<0.01%
SP9B	8.72E-06	5.01E-06	3.71E-06	35	42.6%
SP3D	6.53E-06	4.92E-06	1.61E-06	36	24.6%
S2A	5.93E-06	4.75E-06	1.18E-06	37	19.8%
NC2D	8.11E-06	4.60E-06	3.51E-06	38	43.2%
SP2A	6.10E-06	4.07E-06	2.03E-06	39	33.3%
SP12	5.45E-06	4.05E-06	1.40E-06	40	25.7%
NC2B	7.71E-06	3.83E-06	3.89E-06	41	50.4%
W2	5.37E-06	3.67E-06	1.70E-06	42	31.6%
SP4B	5.41E-06	3.59E-06	1.82E-06	43	33.6%
W6A	9.00E-06	2.87E-06	6.13E-06	44	68.1%
NC6A	4.87E-06	2.86E-06	2.01E-06	45	41.3%

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals
 Descending Sort on Incremental Cancer Risk
 Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
SP5A	3.59E-06	2.66E-06	9.26E-07	46	25.8%
C1C	6.90E-06	2.57E-06	4.33E-06	47	62.8%
SP5B	4.79E-06	2.49E-06	2.30E-06	48	48.0%
NP9B	7.62E-06	2.30E-06	5.32E-06	49	69.8%
W1E	2.23E-06	2.23E-06	0.00E+00	50	<0.01%
SP2C	2.82E-06	2.20E-06	6.19E-07	51	21.9%
C2A	4.24E-06	2.18E-06	2.07E-06	52	48.7%
NP8C	6.54E-06	2.07E-06	4.47E-06	53	68.4%
NC1C	5.29E-06	2.02E-06	3.28E-06	54	61.9%
C4	4.42E-06	1.95E-06	2.47E-06	55	55.9%
E6C	7.21E-06	1.81E-06	5.40E-06	56	74.9%
W3C	3.14E-06	1.69E-06	1.44E-06	57	46.0%
SP2E	3.87E-06	1.54E-06	2.32E-06	58	60.1%
NC8B	5.21E-06	1.51E-06	3.70E-06	59	71.0%
C2B	3.07E-06	1.33E-06	1.74E-06	60	56.7%
S5E	1.86E-06	1.14E-06	7.24E-07	61	38.8%
SP6	4.04E-06	1.13E-06	2.92E-06	62	72.1%
SP2B	2.15E-06	1.09E-06	1.06E-06	63	49.3%
NC1D	3.86E-06	1.04E-06	2.82E-06	64	73.1%
NC1F	3.15E-06	9.97E-07	2.15E-06	65	68.3%
SP12A	1.89E-06	9.61E-07	9.25E-07	66	49.1%
SP7A	8.06E-07	8.06E-07	0.00E+00	67	<0.0%
C1D	2.96E-06	7.65E-07	2.19E-06	68	74.1%
SP7C	2.22E-06	7.38E-07	1.48E-06	69	66.8%
NP9F	5.30E-06	7.15E-07	4.58E-06	70	86.5%
NC5D	1.80E-06	6.78E-07	1.12E-06	71	62.4%
S2C	2.37E-06	6.65E-07	1.71E-06	72	71.9%
NC2C	2.75E-06	5.29E-07	2.22E-06	73	80.8%
SP1B	3.38E-06	5.19E-07	2.86E-06	74	84.6%
E2A7	3.54E-06	4.92E-07	3.04E-06	75	86.1%
E2C	3.57E-06	4.38E-07	3.13E-06	76	87.7%
E2A4	4.91E-06	3.70E-07	4.54E-06	77	92.5%
S3B	2.14E-06	3.66E-07	1.78E-06	78	82.9%
S3A	1.47E-06	3.28E-07	1.14E-06	79	77.7%
NP3	4.47E-06	3.16E-07	4.15E-06	80	92.9%
E3G	2.95E-06	2.79E-07	2.67E-06	81	90.5%
SP7B	2.39E-07	2.39E-07	0.00E+00	82	<0.01%
SP8C	7.97E-07	2.32E-07	5.65E-07	83	70.9%
S5B	2.33E-06	1.67E-07	2.16E-06	84	92.8%
C2D	1.97E-06	9.15E-08	1.87E-06	85	95.3%
S5A	1.28E-06	7.14E-08	1.21E-06	86	94.4%
E2A6	3.26E-06	6.38E-08	3.20E-06	87	98.0%
E2A5	3.83E-06	5.90E-08	3.77E-06	88	98.5%
NC9B	8.97E-08	4.97E-08	3.99E-08	89	44.5%
NC9D	2.53E-06	3.34E-08	2.50E-06	90	98.7%

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals

Descending Sort on Incremental Cancer Risk

Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
W3A	2.19E-06	2.40E-08	2.17E-06	91	98.9%
NC9C	1.87E-06	1.66E-08	1.85E-06	92	99.1%
NC6B	4.31E-08	3.20E-09	3.99E-08	93	92.6%
NC9H	2.47E-06	2.35E-09	2.47E-06	94	99.9%
E1C	4.97E-06	1.33E-09	4.97E-06	95	99.9%
E2A3	6.07E-06	0.00E+00	6.07E-06	1	100.0%
E2A2	4.83E-06	0.00E+00	4.83E-06	2	100.0%
E1B	4.31E-06	0.00E+00	4.31E-06	3	100.0%
E1D	4.22E-06	0.00E+00	4.22E-06	4	100.0%
E3E	4.13E-06	0.00E+00	4.13E-06	5	100.0%
E1A	4.07E-06	0.00E+00	4.07E-06	6	100.0%
E3I	4.02E-06	0.00E+00	4.02E-06	7	100.0%
NP8A	3.91E-06	0.00E+00	3.91E-06	8	100.0%
NP2	3.90E-06	0.00E+00	3.90E-06	9	100.0%
NP4	3.72E-06	0.00E+00	3.72E-06	10	100.0%
NP8B	3.65E-06	0.00E+00	3.65E-06	11	100.0%
E2A1	3.63E-06	0.00E+00	3.63E-06	12	100.0%
E4B	3.46E-06	0.00E+00	3.46E-06	13	100.0%
NP9E	3.36E-06	0.00E+00	3.36E-06	14	100.0%
NC9O	3.35E-06	0.00E+00	3.35E-06	15	100.0%
NC9R	3.28E-06	0.00E+00	3.28E-06	16	100.0%
E3D	3.23E-06	0.00E+00	3.23E-06	17	100.0%
NC9L	3.21E-06	0.00E+00	3.21E-06	18	100.0%
NP9D	3.19E-06	0.00E+00	3.19E-06	19	100.0%
E6B	3.18E-06	0.00E+00	3.18E-06	20	100.0%
E3C	3.12E-06	0.00E+00	3.12E-06	21	100.0%
E4A	3.04E-06	0.00E+00	3.04E-06	22	100.0%
E5	3.03E-06	0.00E+00	3.03E-06	23	100.0%
NC1G	2.95E-06	0.00E+00	2.95E-06	24	100.0%
W6D	2.90E-06	0.00E+00	2.90E-06	25	100.0%
NC9G	2.82E-06	0.00E+00	2.82E-06	26	100.0%
E6A	2.79E-06	0.00E+00	2.79E-06	27	100.0%
E4C	2.75E-06	0.00E+00	2.75E-06	28	100.0%
W6B	2.65E-06	0.00E+00	2.65E-06	29	100.0%
C2C	2.64E-06	0.00E+00	2.64E-06	30	100.0%
E6D	2.63E-06	0.00E+00	2.63E-06	31	100.0%
NC9K	2.59E-06	0.00E+00	2.59E-06	32	100.0%
SP10	2.50E-06	0.00E+00	2.50E-06	33	100.0%
E2B	2.44E-06	0.00E+00	2.44E-06	34	100.0%
NC9F	2.41E-06	0.00E+00	2.41E-06	35	100.0%
NC9E	2.34E-06	0.00E+00	2.34E-06	36	100.0%
NC9P	2.10E-06	0.00E+00	2.10E-06	37	100.0%
NC9J	2.03E-06	0.00E+00	2.03E-06	38	100.0%
E3A	1.98E-06	0.00E+00	1.98E-06	39	100.0%
W7B	1.94E-06	0.00E+00	1.94E-06	40	100.0%

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals

Descending Sort on Incremental Cancer Risk

Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
NC9Q	1.79E-06	0.00E+00	1.79E-06	41	100.0%
W5C	1.73E-06	0.00E+00	1.73E-06	42	100.0%
W8E	1.73E-06	0.00E+00	1.73E-06	43	100.0%
W8C	1.60E-06	0.00E+00	1.60E-06	44	100.0%
S5D	1.48E-06	0.00E+00	1.48E-06	45	100.0%
W3D	1.46E-06	0.00E+00	1.46E-06	46	100.0%
NC9M	1.42E-06	0.00E+00	1.42E-06	47	100.0%
NC9I	1.36E-06	0.00E+00	1.36E-06	48	100.0%
W8D	1.26E-06	0.00E+00	1.26E-06	49	100.0%
W8B	1.25E-06	0.00E+00	1.25E-06	50	100.0%
W4B	1.23E-06	0.00E+00	1.23E-06	51	100.0%
W8F	1.22E-06	0.00E+00	1.22E-06	52	100.0%
NC9S	1.19E-06	0.00E+00	1.19E-06	53	100.0%
NP9A	1.10E-06	0.00E+00	1.10E-06	54	100.0%
S5C	1.08E-06	0.00E+00	1.08E-06	55	100.0%
NC9A	1.07E-06	0.00E+00	1.07E-06	56	100.0%
E3F	7.15E-07	0.00E+00	7.15E-07	57	100.0%
W8A	6.84E-07	0.00E+00	6.84E-07	58	100.0%
W1C	6.68E-07	0.00E+00	6.68E-07	59	100.0%
E3J	3.89E-07	0.00E+00	3.89E-07	60	100.0%
C3	0.00E+00	0.00E+00	0.00E+00	1	NA
E3H	0.00E+00	0.00E+00	0.00E+00	2	NA
E3K	0.00E+00	0.00E+00	0.00E+00	3	NA
NC3	0.00E+00	0.00E+00	0.00E+00	4	NA
NC8C	0.00E+00	0.00E+00	0.00E+00	5	NA
NC9N	0.00E+00	0.00E+00	0.00E+00	6	NA
NP1	0.00E+00	0.00E+00	0.00E+00	7	NA
NP7	0.00E+00	0.00E+00	0.00E+00	8	NA
NP9C	0.00E+00	0.00E+00	0.00E+00	9	NA
S1A	0.00E+00	0.00E+00	0.00E+00	10	NA
SP11	0.00E+00	0.00E+00	0.00E+00	11	NA
W1A	0.00E+00	0.00E+00	0.00E+00	12	NA
W1B	0.00E+00	0.00E+00	0.00E+00	13	NA
W1D	0.00E+00	0.00E+00	0.00E+00	14	NA
W1G	0.00E+00	0.00E+00	0.00E+00	15	NA
W3B	0.00E+00	0.00E+00	0.00E+00	16	NA
W4A	0.00E+00	0.00E+00	0.00E+00	17	NA
W5A	0.00E+00	0.00E+00	0.00E+00	18	NA
W5B	0.00E+00	0.00E+00	0.00E+00	19	NA
W5D	0.00E+00	0.00E+00	0.00E+00	20	NA
W6C	0.00E+00	0.00E+00	0.00E+00	21	NA
W6E	0.00E+00	0.00E+00	0.00E+00	22	NA
W7A	0.00E+00	0.00E+00	0.00E+00	23	NA

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals

Descending Sort on Incremental Cancer Risk

Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
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Program version: Gray Developmental, Smp. Arith. Mean, Models correction

Database version: Gray-1 parameter revisions, updated, November 30, 1993

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSRI5CO.BDK, HSSRT5CO.BDK

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals
 Descending Sort on Incremental Cancer Risk
 Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
SP10	1.01E-02	1.01E-02	0.00E+00	1	<0.01 %
SP1E	3.75E-03	3.75E-03	5.00E-06	2	0.1 %
SP3A	1.58E-03	1.58E-03	1.00E-06	3	0.1 %
SP1A	1.21E-03	1.20E-03	4.00E-06	4	0.3 %
SP3B	9.98E-04	9.96E-04	2.30E-06	5	0.2 %
NC3	4.91E-04	4.87E-04	3.80E-06	6	0.8 %
SP8A	2.59E-04	2.55E-04	3.90E-06	7	1.5 %
NC8A	1.83E-04	1.79E-04	4.10E-06	8	2.2 %
NC1B	1.79E-04	1.75E-04	3.80E-06	9	2.1 %
SP4A	1.69E-04	1.66E-04	2.90E-06	10	1.7 %
NC1A	1.66E-04	1.62E-04	4.40E-06	11	2.6 %
C1A	1.41E-04	1.38E-04	2.50E-06	12	1.8 %
NP5	9.26E-05	8.71E-05	5.56E-06	13	6.0 %
SP1D	8.52E-05	8.33E-05	1.86E-06	14	2.2 %
SP12B	8.31E-05	8.03E-05	2.81E-06	15	3.4 %
S2B	6.40E-05	6.12E-05	2.81E-06	16	4.4 %
NC1E	5.59E-05	5.06E-05	5.36E-06	17	9.6 %
SP3C	5.36E-05	5.01E-05	3.55E-06	18	6.6 %
SP1F	4.92E-05	4.92E-05	0.00E+00	19	<0.01 %
NP6	4.20E-05	3.70E-05	4.97E-06	20	11.8 %
S4	3.79E-05	3.48E-05	3.09E-06	21	8.2 %
SP8B	3.35E-05	3.29E-05	6.10E-07	22	1.8 %
W5D	3.05E-05	2.35E-05	7.02E-06	23	23.0 %
NC2A	2.57E-05	2.18E-05	3.84E-06	24	15.0 %
E3B	2.00E-05	1.54E-05	4.66E-06	25	23.3 %
NC4B	1.65E-05	1.38E-05	2.67E-06	26	16.2 %
NC5C	1.54E-05	1.32E-05	2.16E-06	27	14.0 %
SP2D	1.39E-05	1.28E-05	1.08E-06	28	7.8 %
C1B	1.47E-05	1.17E-05	3.03E-06	29	20.6 %
S3B	1.24E-05	1.05E-05	1.93E-06	30	15.6 %
SP1G	1.65E-05	1.04E-05	6.09E-06	31	36.9 %
SP9A	1.19E-05	9.01E-06	2.93E-06	32	24.5 %
NC4A	1.10E-05	7.93E-06	3.03E-06	33	27.6 %
SP3E	9.19E-06	7.37E-06	1.82E-06	34	19.8 %
NC5A	1.15E-05	6.97E-06	4.48E-06	35	39.1 %
C1C	1.38E-05	6.01E-06	7.75E-06	36	56.3 %
NC5B	1.05E-05	5.99E-06	4.46E-06	37	42.7 %
SP1C	7.16E-06	5.17E-06	2.00E-06	38	27.9 %
SP2A	6.24E-06	4.44E-06	1.80E-06	39	28.9 %
S2A	6.11E-06	4.19E-06	1.93E-06	40	31.5 %
SP9B	6.21E-06	3.33E-06	2.88E-06	41	46.3 %
W1F	3.47E-06	2.95E-06	5.19E-07	42	15.0 %
NC6A	4.95E-06	2.85E-06	2.11E-06	43	42.5 %
NC2D	5.57E-06	2.64E-06	2.93E-06	44	52.7 %

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals
 Descending Sort on Incremental Cancer Risk
 Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
SP3D	4.32E-06	2.42E-06	1.90E-06	45	44.0%
NC1C	6.12E-06	2.37E-06	3.75E-06	46	61.3%
SP11	3.31E-06	2.12E-06	1.19E-06	47	36.0%
W2	4.82E-06	2.00E-06	2.82E-06	48	58.6%
SP4B	3.76E-06	1.88E-06	1.88E-06	49	49.9%
SP12	3.04E-06	1.81E-06	1.24E-06	50	40.7%
C1D	4.02E-06	1.71E-06	2.31E-06	51	57.4%
NC2B	4.92E-06	1.59E-06	3.33E-06	52	67.7%
NC1F	4.02E-06	1.55E-06	2.47E-06	53	61.4%
SP5B	3.67E-06	1.45E-06	2.22E-06	54	60.5%
SP2C	2.08E-06	1.23E-06	8.49E-07	55	40.8%
SP2E	4.94E-06	1.17E-06	3.77E-06	56	76.4%
C4	3.43E-06	1.14E-06	2.29E-06	57	66.9%
W1E	1.12E-06	1.12E-06	0.00E+00	58	<0.01%
NC1D	3.65E-06	9.99E-07	2.65E-06	59	72.6%
NP8C	5.77E-06	9.28E-07	4.84E-06	60	83.9%
SP2B	1.84E-06	8.79E-07	9.59E-07	61	52.2%
NC8B	4.11E-06	8.59E-07	3.25E-06	62	79.1%
SP7C	2.14E-06	8.38E-07	1.30E-06	63	60.9%
C2B	2.57E-06	7.46E-07	1.82E-06	64	71.0%
C2A	2.77E-06	7.45E-07	2.03E-06	65	73.1%
W6A	5.15E-06	7.09E-07	4.44E-06	66	86.2%
E3A	3.30E-06	7.03E-07	2.60E-06	67	78.7%
SP5A	2.97E-06	6.99E-07	2.27E-06	68	76.5%
S5E	1.42E-06	6.99E-07	7.24E-07	69	50.9%
E6C	5.64E-06	6.36E-07	5.01E-06	70	88.7%
SP1B	3.22E-06	6.29E-07	2.59E-06	71	80.5%
W3C	2.04E-06	5.63E-07	1.48E-06	72	72.4%
SP12A	1.31E-06	5.54E-07	7.56E-07	73	57.7%
SP6	3.04E-06	5.32E-07	2.51E-06	74	82.5%
SP7A	1.14E-06	5.30E-07	6.05E-07	75	53.3%
NC1G	2.93E-06	4.24E-07	2.51E-06	76	85.5%
E2C	2.73E-06	4.00E-07	2.33E-06	77	85.3%
SP8C	9.35E-07	3.56E-07	5.79E-07	78	61.9%
S2C	1.76E-06	3.46E-07	1.42E-06	79	80.4%
NP3	4.32E-06	3.42E-07	3.97E-06	80	92.1%
NC5D	1.61E-06	3.40E-07	1.27E-06	81	78.8%
E2A7	5.13E-06	2.91E-07	4.84E-06	82	94.3%
E3G	3.07E-06	2.69E-07	2.80E-06	83	91.2%
E2A4	4.36E-06	2.34E-07	4.13E-06	84	94.6%
S5B	2.62E-06	2.31E-07	2.39E-06	85	91.2%
C3	2.89E-06	2.27E-07	2.66E-06	86	92.1%
W5C	1.57E-06	2.10E-07	1.36E-06	87	86.6%
SP7B	2.10E-06	1.93E-07	1.90E-06	88	90.8%

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals
 Descending Sort on Incremental Cancer Risk
 Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
S3A	1.47E-06	1.20E-07	1.35E-06	89	91.8%
NC2C	2.69E-06	1.14E-07	2.57E-06	90	95.8%
W1G	7.03E-07	1.14E-07	5.89E-07	91	83.8%
NP9D	3.26E-06	9.32E-08	3.17E-06	92	97.1%
W3B	1.66E-06	8.79E-08	1.57E-06	93	94.7%
NP2	4.17E-06	7.29E-08	4.10E-06	94	98.3%
W1B	1.09E-06	7.17E-08	1.01E-06	95	93.4%
W4B	1.53E-06	7.01E-08	1.46E-06	96	95.4%
NC9B	8.97E-08	4.97E-08	3.99E-08	97	44.5%
E2B	2.67E-06	4.43E-08	2.62E-06	98	98.3%
E2A6	4.73E-06	4.39E-08	4.68E-06	99	99.1%
C2D	2.12E-06	3.80E-08	2.08E-06	100	98.2%
W1C	8.45E-07	3.80E-08	8.07E-07	101	95.5%
S5A	1.25E-06	3.60E-08	1.21E-06	102	97.1%
NC9D	2.53E-06	3.34E-08	2.50E-06	103	98.7%
E2A5	4.20E-06	3.18E-08	4.17E-06	104	99.2%
NP8B	3.57E-06	2.75E-08	3.55E-06	105	99.2%
W6D	1.67E-06	1.93E-08	1.65E-06	106	98.8%
W7A	9.94E-07	1.92E-08	9.75E-07	107	98.1%
E3D	3.34E-06	1.69E-08	3.32E-06	108	99.5%
NC9C	1.87E-06	1.66E-08	1.85E-06	109	99.1%
C2C	3.28E-06	1.53E-08	3.27E-06	110	99.5%
NP9A	1.73E-06	1.49E-08	1.72E-06	111	99.1%
E2A1	3.60E-06	1.18E-08	3.58E-06	112	99.7%
E3C	3.28E-06	1.08E-08	3.27E-06	113	99.7%
E3I	4.35E-06	1.29E-09	4.35E-06	114	99.9%
E2A3	5.12E-06	0.00E+00	5.12E-06	1	100.0%
NP9B	5.02E-06	0.00E+00	5.02E-06	2	100.0%
E1C	4.25E-06	0.00E+00	4.25E-06	3	100.0%
E2A2	4.12E-06	0.00E+00	4.12E-06	4	100.0%
NP9F	3.80E-06	0.00E+00	3.80E-06	5	100.0%
E1B	3.68E-06	0.00E+00	3.68E-06	6	100.0%
E3E	3.58E-06	0.00E+00	3.58E-06	7	100.0%
NP9C	3.49E-06	0.00E+00	3.49E-06	8	100.0%
NC9R	3.42E-06	0.00E+00	3.42E-06	9	100.0%
E6A	3.42E-06	0.00E+00	3.42E-06	10	100.0%
NP4	3.36E-06	0.00E+00	3.36E-06	11	100.0%
E1D	3.30E-06	0.00E+00	3.30E-06	12	100.0%
E1A	3.29E-06	0.00E+00	3.29E-06	13	100.0%
NP8A	3.22E-06	0.00E+00	3.22E-06	14	100.0%
NC9L	3.21E-06	0.00E+00	3.21E-06	15	100.0%
NC9O	2.99E-06	0.00E+00	2.99E-06	16	100.0%
NC9G	2.82E-06	0.00E+00	2.82E-06	17	100.0%
E4B	2.80E-06	0.00E+00	2.80E-06	18	100.0%

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals
 Descending Sort on Incremental Cancer Risk
 Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
W6C	2.71E-06	0.00E+00	2.71E-06	19	100.0%
NC9P	2.64E-06	0.00E+00	2.64E-06	20	100.0%
E6D	2.63E-06	0.00E+00	2.63E-06	21	100.0%
NC9K	2.59E-06	0.00E+00	2.59E-06	22	100.0%
NP9E	2.59E-06	0.00E+00	2.59E-06	23	100.0%
NC9H	2.56E-06	0.00E+00	2.56E-06	24	100.0%
E4C	2.53E-06	0.00E+00	2.53E-06	25	100.0%
E4A	2.53E-06	0.00E+00	2.53E-06	26	100.0%
NC9F	2.41E-06	0.00E+00	2.41E-06	27	100.0%
NP7	2.40E-06	0.00E+00	2.40E-06	28	100.0%
E5	2.35E-06	0.00E+00	2.35E-06	29	100.0%
NC9E	2.34E-06	0.00E+00	2.34E-06	30	100.0%
W6B	2.19E-06	0.00E+00	2.19E-06	31	100.0%
W8B	2.16E-06	0.00E+00	2.16E-06	32	100.0%
W5A	2.15E-06	0.00E+00	2.15E-06	33	100.0%
E6B	2.11E-06	0.00E+00	2.11E-06	34	100.0%
NC9J	2.03E-06	0.00E+00	2.03E-06	35	100.0%
S5D	2.00E-06	0.00E+00	2.00E-06	36	100.0%
W1A	1.91E-06	0.00E+00	1.91E-06	37	100.0%
W7B	1.89E-06	0.00E+00	1.89E-06	38	100.0%
W3D	1.82E-06	0.00E+00	1.82E-06	39	100.0%
W5B	1.76E-06	0.00E+00	1.76E-06	40	100.0%
W8E	1.73E-06	0.00E+00	1.73E-06	41	100.0%
W8C	1.60E-06	0.00E+00	1.60E-06	42	100.0%
W6E	1.58E-06	0.00E+00	1.58E-06	43	100.0%
W3A	1.54E-06	0.00E+00	1.54E-06	44	100.0%
NC9Q	1.43E-06	0.00E+00	1.43E-06	45	100.0%
NC9I	1.36E-06	0.00E+00	1.36E-06	46	100.0%
NC9M	1.28E-06	0.00E+00	1.28E-06	47	100.0%
NC9S	1.28E-06	0.00E+00	1.28E-06	48	100.0%
W8D	1.26E-06	0.00E+00	1.26E-06	49	100.0%
W8F	1.22E-06	0.00E+00	1.22E-06	50	100.0%
S5C	1.08E-06	0.00E+00	1.08E-06	51	100.0%
NC9A	1.07E-06	0.00E+00	1.07E-06	52	100.0%
W4A	9.99E-07	0.00E+00	9.99E-07	53	100.0%
E3F	8.40E-07	0.00E+00	8.40E-07	54	100.0%
W8A	6.82E-07	0.00E+00	6.82E-07	55	100.0%
W1D	5.58E-07	0.00E+00	5.58E-07	56	100.0%
E3J	4.56E-07	0.00E+00	4.56E-07	57	100.0%
NC6B	3.47E-08	0.00E+00	3.47E-08	58	100.0%
E3H	0.00E+00	0.00E+00	0.00E+00	1	NA
E3K	0.00E+00	0.00E+00	0.00E+00	2	NA
NC8C	0.00E+00	0.00E+00	0.00E+00	3	NA
NC9N	0.00E+00	0.00E+00	0.00E+00	4	NA

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals
Descending Sort on Incremental Cancer Risk
Rank on Incremental Cancer Risk

<u>Site Name</u>	<u>Total Cancer Risk</u>	<u>Incremental Cancer Risk</u>	<u>Background Cancer Risk</u>	<u>Rank</u>	<u>Background Contribution (%)</u>
NP1	0.00E+00	0.00E+00	0.00E+00	5	NA
S1A	0.00E+00	0.00E+00	0.00E+00	6	NA

Program version: Gray Developmental, Smp. Arith. Mean, Models correction

Database version: Gray-1 parameter revisions, updated, November 30, 1993

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSRI5C1.BDK, HSSRT5C1.BDK

Table B.4.4-3 Site Cancer Risk Summary for Biological Worker, Horizon 2

Additive 5th Percentile Total Risk for Carcinogenic Chemicals

Descending Sort on Total Indirect Cancer Risk

Indirect cancer risks were not calculated for 134 sites given BCRL data.

Site Name	Total Indirect Cancer Risk	Rank
SP1A	5.41E-07	1
SP2B	5.27E-07	2
SP11	2.97E-07	3
SP7C	1.89E-07	4
SP3E	1.35E-07	5
SP1G	1.31E-07	6
C1B	1.20E-07	7
SP10	3.07E-08	8
NC6A	1.96E-08	9
NP5	1.71E-08	10
E2B	1.51E-08	11
NC1B	1.11E-08	12
E2A1	8.27E-09	13
NP6	4.69E-09	14
C1C	2.82E-09	15
W3C	2.48E-09	16
W1C	1.44E-09	17
SP7B	1.09E-09	18
W5A	9.87E-10	19
SP3C	6.98E-10	20
S3B	6.30E-10	21
SP1C	5.96E-10	22
W2	5.84E-10	23
W1G	4.66E-10	24
NC8A	4.53E-10	25
SP8A	4.00E-10	26
NC2A	3.85E-10	27
W1D	3.68E-10	28
C1D	3.44E-10	29
C1A	3.16E-10	30
NC3	3.10E-10	31
SP12	2.57E-10	32
NC2C	2.12E-10	33
NC4A	2.12E-10	34
S2A	2.04E-10	35
E2A4	1.30E-10	36
W6A	9.90E-11	37
NC1A	7.77E-11	38
W4B	7.10E-11	39
W1F	6.11E-11	40
SP2C	4.16E-11	41
SP2D	2.22E-11	42
SP9A	7.75E-12	43
NC1C	2.34E-12	44

Program version: Gray Developmental, Smp. Arith. Mean,
Models correction

Database version: Gray-1 parameter revisions, updated, 11/30/93

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source File: HSSRT5C2.BDK

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals
 Descending Sort on Incremental Hazard Index
 Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
SP3A	3.78E+01	3.76E+01	1.70E-01	1	0.45 %
SP1E	1.59E+01	1.55E+01	4.00E-01	2	2.52 %
SP1A	1.47E+01	1.44E+01	3.60E-01	3	2.45 %
SP3B	1.00E+01	9.63E+00	4.10E-01	4	4.08 %
NC8A	9.61E+00	9.28E+00	3.22E-01	5	3.35 %
SP8A	6.24E+00	5.92E+00	3.13E-01	6	5.02 %
SP1G	4.28E+00	3.21E+00	1.07E+00	7	24.96 %
SP4A	3.45E+00	2.75E+00	7.01E-01	8	20.31 %
NC1A	2.72E+00	2.31E+00	4.12E-01	9	15.14 %
NP5	2.22E+00	1.54E+00	6.77E-01	10	30.50 %
SP3C	2.24E+00	1.52E+00	7.20E-01	11	32.10 %
NC1B	1.80E+00	1.48E+00	3.17E-01	12	17.63 %
NP4	2.19E+00	1.45E+00	7.39E-01	13	33.78 %
S2B	1.87E+00	1.36E+00	5.14E-01	14	27.50 %
NP6	1.45E+00	9.44E-01	5.02E-01	15	34.74 %
S4	1.17E+00	8.91E-01	2.75E-01	16	23.61 %
SP12B	1.44E+00	8.71E-01	5.65E-01	17	39.37 %
SP1D	9.99E-01	8.12E-01	1.87E-01	18	18.69 %
W6A	1.63E+00	5.70E-01	1.06E+00	19	65.10 %
NP9B	1.48E+00	4.47E-01	1.03E+00	20	69.81 %
SP1F	4.51E-01	4.42E-01	8.90E-03	21	1.97 %
E2A6	1.03E+00	3.94E-01	6.36E-01	22	61.78 %
SP8B	5.28E-01	3.44E-01	1.85E-01	23	34.95 %
C1B	7.28E-01	3.18E-01	4.10E-01	24	56.26 %
E3G	7.39E-01	3.13E-01	4.26E-01	25	57.59 %
E3B	9.24E-01	3.11E-01	6.13E-01	26	66.35 %
NC5C	5.67E-01	2.85E-01	2.82E-01	27	49.70 %
SP2D	4.91E-01	2.43E-01	2.48E-01	28	50.57 %
E2A7	8.27E-01	2.21E-01	6.06E-01	29	73.25 %
NC2A	6.00E-01	2.13E-01	3.87E-01	30	64.49 %
NC4B	5.96E-01	2.08E-01	3.88E-01	31	65.06 %
SP9A	6.79E-01	1.91E-01	4.88E-01	32	71.86 %
W6D	4.17E-01	1.80E-01	2.37E-01	33	56.74 %
W3C	4.56E-01	1.61E-01	2.95E-01	34	64.70 %
E2A5	8.97E-01	1.50E-01	7.47E-01	35	83.26 %
SP3E	3.75E-01	1.45E-01	2.30E-01	36	61.39 %
NC5B	5.98E-01	1.43E-01	4.55E-01	37	76.12 %
SP1C	2.37E-01	1.25E-01	1.13E-01	38	47.49 %
NC4A	4.56E-01	1.25E-01	3.32E-01	39	72.72 %
NC5A	6.68E-01	1.11E-01	5.57E-01	40	83.37 %
E3F	1.13E-01	1.07E-01	6.20E-03	41	5.49 %
C1C	4.99E-01	9.54E-02	4.04E-01	42	80.88 %
C1A	4.33E-01	8.40E-02	3.49E-01	43	80.58 %
NC2B	4.03E-01	7.54E-02	3.28E-01	44	81.30 %

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals
 Descending Sort on Incremental Hazard Index
 Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
E2A4	8.48E-01	7.30E-02	7.75E-01	45	91.39 %
SP2A	3.64E-01	6.96E-02	2.94E-01	46	80.87 %
NC1E	4.58E-01	6.93E-02	3.89E-01	47	84.87 %
SP9B	6.97E-01	5.96E-02	6.37E-01	48	91.44 %
S2A	2.81E-01	4.69E-02	2.34E-01	49	83.29 %
W1E	4.60E-02	4.60E-02	0.00E+00	50	<0.01 %
W1F	5.42E-02	4.35E-02	1.06E-02	51	19.59 %
SP3D	3.68E-01	4.12E-02	3.26E-01	52	88.79 %
SP2C	1.65E-01	3.93E-02	1.25E-01	53	76.14 %
C4	3.60E-01	3.86E-02	3.21E-01	54	89.27 %
NC2D	3.67E-01	3.82E-02	3.29E-01	55	89.60 %
SP4B	2.77E-01	3.09E-02	2.46E-01	56	88.84 %
SP12	3.09E-01	2.98E-02	2.79E-01	57	90.33 %
NC1C	2.28E-01	2.95E-02	1.98E-01	58	87.06 %
W2	3.66E-01	2.89E-02	3.37E-01	59	92.10 %
C2A	3.23E-01	2.84E-02	2.95E-01	60	91.21 %
SP5B	3.80E-01	2.78E-02	3.52E-01	61	92.68 %
NC6A	3.13E-01	2.39E-02	2.89E-01	62	92.36 %
S5E	1.75E-01	2.35E-02	1.51E-01	63	86.54 %
SP2E	3.34E-01	2.07E-02	3.13E-01	64	93.81 %
SP5A	3.38E-02	1.98E-02	1.41E-02	65	41.52 %
SP2B	2.31E-01	1.91E-02	2.12E-01	66	91.75 %
E6C	6.41E-01	1.87E-02	6.22E-01	67	97.08 %
NC8B	5.44E-01	1.80E-02	5.26E-01	68	96.70 %
NP8C	4.48E-01	1.77E-02	4.31E-01	69	96.04 %
SP12A	2.00E-01	1.45E-02	1.86E-01	70	92.78 %
SP1B	4.72E-01	1.34E-02	4.59E-01	71	97.16 %
NC1D	3.29E-01	1.30E-02	3.16E-01	72	96.04 %
SP6	5.18E-01	1.29E-02	5.06E-01	73	97.52 %
C2B	3.60E-01	1.25E-02	3.47E-01	74	96.53 %
S2C	1.94E-01	1.24E-02	1.82E-01	75	93.61 %
W6E	2.97E-02	1.11E-02	1.86E-02	76	62.63 %
NC1F	2.44E-01	1.06E-02	2.33E-01	77	95.65 %
S5C	2.38E-01	9.69E-03	2.28E-01	78	95.92 %
E6A	5.70E-01	9.43E-03	5.61E-01	79	98.34 %
NC2C	2.44E-01	7.56E-03	2.37E-01	80	96.91 %
NC5D	2.26E-01	6.80E-03	2.19E-01	81	96.99 %
E1C	9.87E-01	6.50E-03	9.81E-01	82	99.34 %
SP7C	2.06E-01	6.42E-03	2.00E-01	83	96.89 %
NP9F	4.51E-01	6.25E-03	4.45E-01	84	98.61 %
SP7A	5.78E-03	5.78E-03	0.00E+00	85	<0.01 %
C1D	3.01E-01	5.49E-03	2.96E-01	86	98.18 %
S3A	2.31E-01	4.97E-03	2.26E-01	87	97.85 %
NC9B	8.49E-03	4.71E-03	3.78E-03	88	44.55 %

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals
 Descending Sort on Incremental Hazard Index
 Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
S3B	2.44E-01	3.87E-03	2.40E-01	89	98.41 %
E1B	8.56E-01	3.42E-03	8.52E-01	90	99.60 %
S5B	4.41E-01	3.26E-03	4.37E-01	91	99.26 %
NC9D	4.94E-01	3.16E-03	4.91E-01	92	99.36 %
E2C	4.42E-01	3.15E-03	4.39E-01	93	99.29 %
NP8A	7.81E-01	2.59E-03	7.78E-01	94	99.67 %
W3A	4.31E-01	2.27E-03	4.29E-01	95	99.47 %
NP3	6.44E-01	2.27E-03	6.42E-01	96	99.65 %
SP7B	2.10E-03	2.10E-03	0.00E+00	97	<0.01 %
SP8C	1.17E-01	1.98E-03	1.15E-01	98	98.31 %
E4C	5.54E-01	1.95E-03	5.52E-01	99	99.65 %
NC9C	3.57E-01	1.57E-03	3.55E-01	100	99.56 %
S5A	2.45E-01	1.47E-03	2.43E-01	101	99.40 %
W6B	4.52E-01	9.23E-04	4.51E-01	102	99.80 %
C2D	3.65E-01	6.62E-04	3.64E-01	103	99.82 %
W7B	3.96E-01	5.49E-04	3.95E-01	104	99.86 %
NC9Q	3.65E-01	3.90E-04	3.64E-01	105	99.89 %
NP1	5.40E-04	3.66E-04	1.74E-04	106	32.25 %
NC6B	4.08E-03	3.03E-04	3.78E-03	107	92.59 %
NC9H	3.49E-01	2.23E-04	3.48E-01	108	99.94 %
NC9S	2.41E-01	6.43E-06	2.40E-01	109	99.99 %
E2A3	9.17E-01	0.00E+00	9.17E-01	1	100.00 %
NP2	7.71E-01	0.00E+00	7.71E-01	2	100.00 %
E2A2	7.29E-01	0.00E+00	7.29E-01	3	100.00 %
E3I	6.81E-01	0.00E+00	6.81E-01	4	100.00 %
E1D	6.65E-01	0.00E+00	6.65E-01	5	100.00 %
NP9E	6.60E-01	0.00E+00	6.60E-01	6	100.00 %
E3E	6.55E-01	0.00E+00	6.55E-01	7	100.00 %
E1A	6.39E-01	0.00E+00	6.39E-01	8	100.00 %
NP9D	6.31E-01	0.00E+00	6.31E-01	9	100.00 %
NP8B	6.05E-01	0.00E+00	6.05E-01	10	100.00 %
E2A1	5.91E-01	0.00E+00	5.91E-01	11	100.00 %
NC9G	5.48E-01	0.00E+00	5.48E-01	12	100.00 %
E6D	5.23E-01	0.00E+00	5.23E-01	13	100.00 %
C2C	5.13E-01	0.00E+00	5.13E-01	14	100.00 %
E4B	5.04E-01	0.00E+00	5.04E-01	15	100.00 %
E3D	4.93E-01	0.00E+00	4.93E-01	16	100.00 %
E3C	4.89E-01	0.00E+00	4.89E-01	17	100.00 %
SP10	4.86E-01	0.00E+00	4.86E-01	18	100.00 %
NC9F	4.68E-01	0.00E+00	4.68E-01	19	100.00 %
E6B	4.67E-01	0.00E+00	4.67E-01	20	100.00 %
E4A	4.66E-01	0.00E+00	4.66E-01	21	100.00 %
NC9E	4.66E-01	0.00E+00	4.66E-01	22	100.00 %

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals

Descending Sort on Incremental Hazard Index

Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
E5	4.50E-01	0.00E+00	4.50E-01	23	100.00 %
NC9O	4.34E-01	0.00E+00	4.34E-01	24	100.00 %
NC9R	4.12E-01	0.00E+00	4.12E-01	25	100.00 %
NC9J	3.96E-01	0.00E+00	3.96E-01	26	100.00 %
E2B	3.73E-01	0.00E+00	3.73E-01	27	100.00 %
W8E	3.42E-01	0.00E+00	3.42E-01	28	100.00 %
W5C	3.36E-01	0.00E+00	3.36E-01	29	100.00 %
NC1G	3.35E-01	0.00E+00	3.35E-01	30	100.00 %
E3A	3.23E-01	0.00E+00	3.23E-01	31	100.00 %
W8C	3.17E-01	0.00E+00	3.17E-01	32	100.00 %
S5D	3.05E-01	0.00E+00	3.05E-01	33	100.00 %
NC9L	2.97E-01	0.00E+00	2.97E-01	34	100.00 %
W3D	2.92E-01	0.00E+00	2.92E-01	35	100.00 %
NC9M	2.77E-01	0.00E+00	2.77E-01	36	100.00 %
NC9I	2.64E-01	0.00E+00	2.64E-01	37	100.00 %
W8B	2.52E-01	0.00E+00	2.52E-01	38	100.00 %
W8D	2.52E-01	0.00E+00	2.52E-01	39	100.00 %
W4B	2.43E-01	0.00E+00	2.43E-01	40	100.00 %
NC9K	2.42E-01	0.00E+00	2.42E-01	41	100.00 %
NC9P	2.38E-01	0.00E+00	2.38E-01	42	100.00 %
W8F	2.38E-01	0.00E+00	2.38E-01	43	100.00 %
NP9A	2.31E-01	0.00E+00	2.31E-01	44	100.00 %
NC9A	2.09E-01	0.00E+00	2.09E-01	45	100.00 %
W8A	1.38E-01	0.00E+00	1.38E-01	46	100.00 %
W1C	1.34E-01	0.00E+00	1.34E-01	47	100.00 %
NC9N	8.03E-03	0.00E+00	8.03E-03	48	100.00 %
W4A	6.46E-03	0.00E+00	6.46E-03	49	100.00 %
W5D	4.50E-03	0.00E+00	4.50E-03	50	100.00 %
E3J	3.40E-03	0.00E+00	3.40E-03	51	100.00 %
C3	0.00E+00	0.00E+00	0.00E+00	1	NA
E3H	0.00E+00	0.00E+00	0.00E+00	2	NA
E3K	0.00E+00	0.00E+00	0.00E+00	3	NA
NC3	0.00E+00	0.00E+00	0.00E+00	4	NA
NC8C	0.00E+00	0.00E+00	0.00E+00	5	NA
NP7	0.00E+00	0.00E+00	0.00E+00	6	NA
NP9C	0.00E+00	0.00E+00	0.00E+00	7	NA
S1A	0.00E+00	0.00E+00	0.00E+00	8	NA
SP11	0.00E+00	0.00E+00	0.00E+00	9	NA
W1A	0.00E+00	0.00E+00	0.00E+00	10	NA
W1B	0.00E+00	0.00E+00	0.00E+00	11	NA
W1D	0.00E+00	0.00E+00	0.00E+00	12	NA
W1G	0.00E+00	0.00E+00	0.00E+00	13	NA
W3B	0.00E+00	0.00E+00	0.00E+00	14	NA

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals

Descending Sort on Incremental Hazard Index

Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
W5A	0.00E+00	0.00E+00	0.00E+00	15	NA
W5B	0.00E+00	0.00E+00	0.00E+00	16	NA
W6C	0.00E+00	0.00E+00	0.00E+00	17	NA
W7A	0.00E+00	0.00E+00	0.00E+00	18	NA

Program version: Gray Developmental, Smp. Arith. Mean, Models correction

Database version: Gray-1 parameter revisions, updated, November 30, 1993

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSRI5H0.BDK, HSSRT5H0.BDK

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals
 Descending Sort on Incremental Hazard Index
 Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
SP10	1.83E+02	1.83E+02	3.00E-01	1	0.16 %
SP1E	4.21E+01	4.15E+01	6.30E-01	2	1.50 %
SP1A	3.25E+01	3.21E+01	3.70E-01	3	1.14 %
SP3A	1.83E+01	1.81E+01	2.20E-01	4	1.20 %
SP3B	1.13E+01	1.10E+01	3.60E-01	5	3.18 %
NC3	1.12E+01	1.07E+01	4.80E-01	6	4.28 %
W5D	5.53E+00	4.47E+00	1.07E+00	7	19.32 %
SP2A	4.22E+00	3.97E+00	2.54E-01	8	6.01 %
SP8A	4.02E+00	3.69E+00	3.28E-01	9	8.16 %
C1A	3.72E+00	3.40E+00	3.23E-01	10	8.68 %
SP2B	2.83E+00	2.64E+00	1.92E-01	11	6.78 %
NC1B	2.41E+00	2.11E+00	3.03E-01	12	12.56 %
NC1A	2.35E+00	1.94E+00	4.07E-01	13	17.31 %
NC8A	2.16E+00	1.80E+00	3.68E-01	14	17.01 %
SP4A	2.08E+00	1.58E+00	4.95E-01	15	23.86 %
SP1G	2.20E+00	1.14E+00	1.06E+00	16	48.09 %
C1B	1.39E+00	1.01E+00	3.79E-01	17	27.25 %
SP12B	1.44E+00	8.71E-01	5.65E-01	18	39.37 %
NP4	1.47E+00	8.12E-01	6.61E-01	19	44.85 %
SP1D	9.99E-01	8.12E-01	1.87E-01	20	18.69 %
NP5	1.41E+00	7.62E-01	6.45E-01	21	45.82 %
SP3E	9.91E-01	6.19E-01	3.72E-01	22	37.50 %
S2B	1.06E+00	5.99E-01	4.59E-01	23	43.38 %
C1C	1.63E+00	5.55E-01	1.08E+00	24	66.00 %
SP3C	1.18E+00	5.43E-01	6.39E-01	25	54.06 %
NC1E	1.09E+00	4.74E-01	6.12E-01	26	56.34 %
SP1F	4.62E-01	4.53E-01	9.00E-03	27	1.95 %
NP6	9.44E-01	4.14E-01	5.31E-01	28	56.19 %
S2A	5.79E-01	3.31E-01	2.48E-01	29	42.84 %
SP5B	6.59E-01	3.25E-01	3.34E-01	30	50.69 %
S4	6.30E-01	3.15E-01	3.15E-01	31	50.04 %
SP8B	3.86E-01	2.59E-01	1.27E-01	32	32.99 %
E2A6	9.11E-01	2.04E-01	7.07E-01	33	77.62 %
NC2A	5.93E-01	2.03E-01	3.90E-01	34	65.79 %
SP4B	4.36E-01	1.84E-01	2.51E-01	35	57.69 %
E2A7	9.03E-01	1.84E-01	7.19E-01	36	79.64 %
W2	6.14E-01	1.66E-01	4.48E-01	37	72.94 %
E2A4	9.01E-01	1.64E-01	7.38E-01	38	81.86 %
E3G	6.03E-01	1.63E-01	4.40E-01	39	73.01 %
E3A	5.64E-01	1.60E-01	4.04E-01	40	71.69 %
E3B	6.04E-01	1.37E-01	4.67E-01	41	77.31 %
NC4B	5.09E-01	1.34E-01	3.75E-01	42	73.67 %
SP2D	3.43E-01	1.34E-01	2.10E-01	43	61.06 %
SP2E	6.88E-01	1.27E-01	5.61E-01	44	81.52 %

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals
 Descending Sort on Incremental Hazard Index
 Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
NC5C	4.45E-01	1.27E-01	3.18E-01	45	71.42 %
S3B	3.67E-01	1.05E-01	2.62E-01	46	71.39 %
C4	4.00E-01	1.04E-01	2.96E-01	47	73.98 %
SP9A	5.48E-01	1.01E-01	4.48E-01	48	81.65 %
NC4A	5.68E-01	9.24E-02	4.76E-01	49	83.73 %
SP12A	2.36E-01	8.52E-02	1.51E-01	50	63.91 %
NC5B	5.03E-01	7.24E-02	4.31E-01	51	85.61 %
NC1F	3.56E-01	6.90E-02	2.87E-01	52	80.64 %
NC5A	4.99E-01	6.51E-02	4.34E-01	53	86.95 %
W6A	8.59E-01	6.21E-02	7.97E-01	54	92.77 %
SP3D	4.39E-01	6.11E-02	3.78E-01	55	86.09 %
W1E	5.35E-02	5.35E-02	0.00E+00	56	<0.01 %
E3F	6.07E-02	5.33E-02	7.34E-03	57	12.10 %
SP1C	2.97E-01	5.14E-02	2.46E-01	58	82.71 %
SP9B	5.53E-01	5.03E-02	5.03E-01	59	90.90 %
W6D	2.18E-01	4.95E-02	1.68E-01	60	77.28 %
NC6A	3.58E-01	4.95E-02	3.09E-01	61	86.17 %
W3C	3.40E-01	4.81E-02	2.92E-01	62	85.88 %
E2A5	6.48E-01	4.40E-02	6.04E-01	63	93.21 %
NC1D	3.44E-01	3.98E-02	3.04E-01	64	88.44 %
NC2B	3.60E-01	3.16E-02	3.29E-01	65	91.24 %
SP2C	1.93E-01	2.43E-02	1.69E-01	66	87.43 %
W1F	1.29E-01	2.26E-02	1.06E-01	67	82.47 %
NC1C	3.12E-01	2.25E-02	2.89E-01	68	92.77 %
NC2D	3.54E-01	2.17E-02	3.32E-01	69	93.85 %
C1D	3.40E-01	2.12E-02	3.19E-01	70	93.78 %
SP11	1.81E-01	2.09E-02	1.60E-01	71	88.41 %
W6E	2.27E-01	1.90E-02	2.08E-01	72	91.64 %
C2A	3.10E-01	1.57E-02	2.94E-01	73	94.92 %
SP7C	1.90E-01	1.51E-02	1.75E-01	74	92.05 %
S5E	1.66E-01	1.44E-02	1.51E-01	75	91.30 %
SP12	2.58E-01	1.36E-02	2.44E-01	76	94.73 %
NC8B	4.93E-01	1.19E-02	4.81E-01	77	97.58 %
S2C	1.91E-01	9.89E-03	1.81E-01	78	94.82 %
S5C	2.38E-01	9.69E-03	2.28E-01	79	95.92 %
S5B	4.21E-01	8.89E-03	4.12E-01	80	97.89 %
C2B	3.70E-01	8.55E-03	3.61E-01	81	97.69 %
SP6	4.33E-01	8.40E-03	4.24E-01	82	98.06 %
NP8C	5.11E-01	7.92E-03	5.03E-01	83	98.45 %
E6C	5.49E-01	7.09E-03	5.42E-01	84	98.71 %
SP1B	4.08E-01	6.27E-03	4.02E-01	85	98.46 %
SP5A	3.56E-01	5.16E-03	3.51E-01	86	98.55 %
NC9B	8.49E-03	4.71E-03	3.78E-03	87	44.55 %
SP7A	1.21E-01	3.80E-03	1.18E-01	88	96.87 %

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals
 Descending Sort on Incremental Hazard Index
 Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
NC2C	3.04E-01	3.63E-03	3.00E-01	89	98.80 %
NC5D	2.52E-01	3.31E-03	2.48E-01	90	98.69 %
SP8C	1.20E-01	3.28E-03	1.16E-01	91	97.26 %
S3A	2.70E-01	3.20E-03	2.67E-01	92	98.82 %
NC9D	4.94E-01	3.16E-03	4.91E-01	93	99.36 %
NC1G	3.08E-01	3.04E-03	3.05E-01	94	99.01 %
W1B	2.00E-01	2.92E-03	1.97E-01	95	98.54 %
NP3	6.55E-01	2.88E-03	6.52E-01	96	99.56 %
E2C	3.07E-01	2.87E-03	3.04E-01	97	99.07 %
W5C	2.66E-01	2.39E-03	2.64E-01	98	99.10 %
C3	3.91E-01	2.31E-03	3.89E-01	99	99.41 %
SP7B	2.32E-01	2.20E-03	2.30E-01	100	99.05 %
NC9C	3.57E-01	1.57E-03	3.55E-01	101	99.56 %
E3D	4.96E-01	1.47E-03	4.94E-01	102	99.70 %
W1G	1.16E-01	1.30E-03	1.15E-01	103	98.88 %
W3B	3.12E-01	1.00E-03	3.10E-01	104	99.68 %
NP2	7.06E-01	8.17E-04	7.05E-01	105	99.88 %
W4B	2.90E-01	7.58E-04	2.89E-01	106	99.74 %
S5A	2.44E-01	7.43E-04	2.43E-01	107	99.70 %
W1C	1.61E-01	4.32E-04	1.60E-01	108	99.73 %
E2B	4.07E-01	3.37E-04	4.07E-01	109	99.92 %
C2D	4.04E-01	2.76E-04	4.04E-01	110	99.93 %
NP8B	5.87E-01	2.73E-04	5.86E-01	111	99.95 %
W7A	1.96E-01	2.19E-04	1.96E-01	112	99.89 %
W7B	3.77E-01	2.09E-04	3.77E-01	113	99.94 %
C2C	5.02E-01	1.73E-04	5.01E-01	114	99.97 %
W6B	3.66E-01	7.04E-05	3.65E-01	115	99.98 %
NP1	2.09E-04	3.48E-05	1.74E-04	116	83.34 %
NP9B	8.85E-01	0.00E+00	8.85E-01	1	100.00 %
E2A3	7.81E-01	0.00E+00	7.81E-01	2	100.00 %
E3I	7.10E-01	0.00E+00	7.10E-01	3	100.00 %
E1C	6.91E-01	0.00E+00	6.91E-01	4	100.00 %
E2A2	6.59E-01	0.00E+00	6.59E-01	5	100.00 %
NP8A	6.38E-01	0.00E+00	6.38E-01	6	100.00 %
NP9D	6.22E-01	0.00E+00	6.22E-01	7	100.00 %
E6A	6.07E-01	0.00E+00	6.07E-01	8	100.00 %
E1B	5.92E-01	0.00E+00	5.92E-01	9	100.00 %
E2A1	5.54E-01	0.00E+00	5.54E-01	10	100.00 %
NC9G	5.48E-01	0.00E+00	5.48E-01	11	100.00 %
E3E	5.29E-01	0.00E+00	5.29E-01	12	100.00 %
NP9C	5.25E-01	0.00E+00	5.25E-01	13	100.00 %
E6D	5.23E-01	0.00E+00	5.23E-01	14	100.00 %
NP9E	5.08E-01	0.00E+00	5.08E-01	15	100.00 %
E3C	5.07E-01	0.00E+00	5.07E-01	16	100.00 %

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals
 Descending Sort on Incremental Hazard Index
 Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
E1A	5.06E-01	0.00E+00	5.06E-01	17	100.00%
E1D	5.05E-01	0.00E+00	5.05E-01	18	100.00%
E4C	5.04E-01	0.00E+00	5.04E-01	19	100.00%
NC9F	4.68E-01	0.00E+00	4.68E-01	20	100.00%
NP7	4.67E-01	0.00E+00	4.67E-01	21	100.00%
NC9E	4.66E-01	0.00E+00	4.66E-01	22	100.00%
W6C	4.41E-01	0.00E+00	4.41E-01	23	100.00%
NP9F	4.38E-01	0.00E+00	4.38E-01	24	100.00%
NC9R	4.37E-01	0.00E+00	4.37E-01	25	100.00%
NC9O	4.31E-01	0.00E+00	4.31E-01	26	100.00%
W8B	4.29E-01	0.00E+00	4.29E-01	27	100.00%
E4B	4.01E-01	0.00E+00	4.01E-01	28	100.00%
S5D	3.99E-01	0.00E+00	3.99E-01	29	100.00%
NC9J	3.96E-01	0.00E+00	3.96E-01	30	100.00%
E4A	3.67E-01	0.00E+00	3.67E-01	31	100.00%
W3D	3.59E-01	0.00E+00	3.59E-01	32	100.00%
W5B	3.58E-01	0.00E+00	3.58E-01	33	100.00%
E5	3.55E-01	0.00E+00	3.55E-01	34	100.00%
NC9H	3.52E-01	0.00E+00	3.52E-01	35	100.00%
W5A	3.50E-01	0.00E+00	3.50E-01	36	100.00%
W8E	3.42E-01	0.00E+00	3.42E-01	37	100.00%
NP9A	3.42E-01	0.00E+00	3.42E-01	38	100.00%
W8C	3.17E-01	0.00E+00	3.17E-01	39	100.00%
W3A	3.04E-01	0.00E+00	3.04E-01	40	100.00%
NC9L	2.97E-01	0.00E+00	2.97E-01	41	100.00%
W1A	2.95E-01	0.00E+00	2.95E-01	42	100.00%
E6B	2.94E-01	0.00E+00	2.94E-01	43	100.00%
NC9Q	2.87E-01	0.00E+00	2.87E-01	44	100.00%
NC9P	2.68E-01	0.00E+00	2.68E-01	45	100.00%
NC9I	2.64E-01	0.00E+00	2.64E-01	46	100.00%
NC9S	2.57E-01	0.00E+00	2.57E-01	47	100.00%
W8D	2.52E-01	0.00E+00	2.52E-01	48	100.00%
NC9M	2.49E-01	0.00E+00	2.49E-01	49	100.00%
NC9K	2.42E-01	0.00E+00	2.42E-01	50	100.00%
W8F	2.38E-01	0.00E+00	2.38E-01	51	100.00%
NC9A	2.09E-01	0.00E+00	2.09E-01	52	100.00%
W4A	1.99E-01	0.00E+00	1.99E-01	53	100.00%
W8A	1.37E-01	0.00E+00	1.37E-01	54	100.00%
W1D	1.09E-01	0.00E+00	1.09E-01	55	100.00%
NC9N	8.03E-03	0.00E+00	8.03E-03	56	100.00%
NC6B	6.72E-03	0.00E+00	6.72E-03	57	100.00%
E3J	3.99E-03	0.00E+00	3.99E-03	58	100.00%
E3H	0.00E+00	0.00E+00	0.00E+00	1	NA
E3K	0.00E+00	0.00E+00	0.00E+00	2	NA

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals

Descending Sort on Incremental Hazard Index

Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
NC8C	0.00E+00	0.00E+00	0.00E+00	3	NA
S1A	0.00E+00	0.00E+00	0.00E+00	4	NA

Program version: Gray Developmental, Smp. Arith. Mean, Models correction

Database version: Gray-1 parameter revisions, updated, November 30, 1993

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSRI5H1.BDK, HSSRT5H1.BDK

Additive 5th Percentile Total Hazard Index Noncarcinogenic Chemicals

Descending Sort on Total Indirect Hazard Index

Indirect hazard indices were not calculated for 134 sites given BCRL data.

Site Name	Total Indirect Hazard Index	Rank
SP1A	1.22E+00	1
C1B	3.84E-01	2
SP2B	1.03E-01	3
SP3E	8.78E-02	4
SP10	3.87E-02	5
C1C	3.31E-02	6
SP11	1.33E-02	7
W5D	4.30E-03	8
SP12	3.46E-03	9
C1A	3.28E-03	10
SP1G	2.58E-03	11
W5A	1.25E-03	12
W2	1.23E-03	13
NC3	1.13E-03	14
NC6A	9.54E-04	15
NC1B	5.50E-04	16
SP7C	3.83E-04	17
W3C	3.29E-04	18
E3D	2.19E-04	19
SP5B	1.68E-04	20
E2B	1.26E-04	21
NC1A	9.29E-05	22
W6A	7.78E-05	23
W4B	5.63E-05	24
W1C	4.86E-05	25
E2A4	4.09E-05	26
SP7B	4.03E-05	27
SP3C	2.54E-05	28
SP1C	2.20E-05	29
S3B	1.57E-05	30
NC8A	1.50E-05	31
NC2A	1.41E-05	32
C1D	1.29E-05	33
W1G	1.20E-05	34
W1D	8.11E-06	35
NC2C	7.78E-06	36
SP8A	6.29E-06	37
NC4A	5.88E-06	38
S2A	1.90E-06	39
W1F	1.63E-06	40
NC1C	7.80E-07	41
SP2D	4.83E-07	42
SP2C	3.83E-07	43
SP9A	5.74E-08	44

Program version: Gray Developmental, Smp. Arith. Mean,
Models correction

Database version: Gray-1 parameter revisions, updated, 11/30/93

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source File: HSSRT5H2.BDK

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals

Descending Sort on Incremental Cancer Risk

Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
SP3A	7.24E-04	7.24E-04	2.00E-07	1	<0.01%
SP1A	4.74E-04	4.73E-04	7.00E-07	2	0.1%
SP3B	2.12E-04	2.11E-04	6.00E-07	3	0.3%
NC8A	2.00E-04	2.00E-04	6.00E-07	4	0.3%
SP8A	1.26E-04	1.26E-04	6.00E-07	5	0.5%
SP1E	1.25E-04	1.25E-04	7.00E-07	6	0.6%
SP4A	6.18E-05	6.09E-05	8.70E-07	7	1.4%
NC1A	3.55E-05	3.48E-05	7.20E-07	8	2.0%
SP3C	3.35E-05	3.26E-05	8.30E-07	9	2.5%
S2B	3.04E-05	2.97E-05	6.80E-07	10	2.2%
S4	2.39E-05	2.33E-05	5.50E-07	11	2.3%
NC1B	2.19E-05	2.12E-05	6.10E-07	12	2.8%
NP5	2.09E-05	1.99E-05	1.03E-06	13	4.9%
SP1D	1.84E-05	1.80E-05	3.10E-07	14	1.7%
SP12B	1.80E-05	1.74E-05	6.40E-07	15	3.5%
NP6	1.30E-05	1.22E-05	8.20E-07	16	6.3%
SP1F	1.04E-05	1.04E-05	0.00E+00	17	<0.01%
SP8B	9.49E-06	9.29E-06	2.04E-07	18	2.1%
SP1G	7.77E-06	6.39E-06	1.38E-06	19	17.8%
NC5C	6.64E-06	6.25E-06	3.92E-07	20	5.9%
NC2A	6.18E-06	5.49E-06	6.92E-07	21	11.2%
SP2D	5.32E-06	5.03E-06	2.93E-07	22	5.5%
C1B	5.63E-06	4.98E-06	6.54E-07	23	11.6%
NC4B	5.35E-06	4.83E-06	5.26E-07	24	9.8%
SP9A	5.33E-06	4.68E-06	6.51E-07	25	12.2%
SP3E	4.44E-06	4.18E-06	2.59E-07	26	5.8%
E3B	4.90E-06	3.94E-06	9.60E-07	27	19.6%
SP1C	3.22E-06	3.09E-06	1.33E-07	28	4.1%
NC4A	3.36E-06	2.98E-06	3.81E-07	29	11.3%
NC5B	2.88E-06	2.11E-06	7.70E-07	30	26.7%
C1A	2.32E-06	1.82E-06	5.04E-07	31	21.7%
W1E	1.78E-06	1.78E-06	0.00E+00	32	<0.01%
NC5A	2.52E-06	1.63E-06	8.90E-07	33	35.3%
W1F	1.21E-06	1.21E-06	0.00E+00	34	<0.01%
NC1E	1.81E-06	1.11E-06	6.95E-07	35	38.5%
SP9B	1.90E-06	1.11E-06	7.88E-07	36	41.6%
SP3D	1.42E-06	1.05E-06	3.69E-07	37	26.0%
S2A	1.30E-06	1.03E-06	2.70E-07	38	20.8%
C1C	1.72E-06	1.01E-06	7.15E-07	39	41.6%
NC2D	1.56E-06	9.83E-07	5.72E-07	40	36.8%
SP2A	1.32E-06	9.18E-07	3.99E-07	41	30.3%
S5E	1.08E-06	9.11E-07	1.66E-07	42	15.4%
SP12	1.18E-06	8.56E-07	3.22E-07	43	27.3%
W6A	2.14E-06	8.27E-07	1.32E-06	44	61.4%

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals
 Descending Sort on Incremental Cancer Risk
 Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
NC2B	1.44E-06	8.23E-07	6.12E-07	45	42.7 %
W2	1.17E-06	7.79E-07	3.90E-07	46	33.3 %
SP4B	1.11E-06	7.67E-07	3.47E-07	47	31.1 %
SP2E	1.09E-06	6.46E-07	4.43E-07	48	40.7 %
NC6A	9.98E-07	6.07E-07	3.91E-07	49	39.1 %
SP5A	6.67E-07	5.62E-07	1.05E-07	50	15.7 %
SP5B	1.01E-06	5.46E-07	4.63E-07	51	45.9 %
NP9B	1.75E-06	5.28E-07	1.22E-06	52	69.8 %
SP2C	6.53E-07	5.12E-07	1.42E-07	53	21.7 %
C2A	8.60E-07	4.62E-07	3.98E-07	54	46.2 %
C4	9.25E-07	4.62E-07	4.63E-07	55	50.1 %
NC1C	8.74E-07	4.01E-07	4.73E-07	56	54.1 %
W3C	7.21E-07	3.90E-07	3.31E-07	57	45.9 %
NC8B	1.05E-06	3.30E-07	7.23E-07	58	68.6 %
C2B	6.86E-07	2.87E-07	3.99E-07	59	58.2 %
SP2B	5.01E-07	2.57E-07	2.44E-07	60	48.7 %
NP8C	1.00E-06	2.57E-07	7.46E-07	61	74.4 %
E6C	1.21E-06	2.44E-07	9.61E-07	62	79.7 %
SP6	8.65E-07	2.42E-07	6.24E-07	63	72.1 %
NC1D	7.34E-07	2.41E-07	4.94E-07	64	67.2 %
SP12A	4.41E-07	2.29E-07	2.12E-07	65	48.1 %
NC1F	5.90E-07	2.17E-07	3.73E-07	66	63.2 %
SP7A	1.70E-07	1.70E-07	0.00E+00	67	<0.01 %
C1D	5.82E-07	1.62E-07	4.20E-07	68	72.2 %
SP7C	4.41E-07	1.60E-07	2.81E-07	69	63.7 %
S2C	4.53E-07	1.58E-07	2.95E-07	70	65.1 %
NC5D	4.03E-07	1.45E-07	2.58E-07	71	64.0 %
S3B	4.70E-07	1.30E-07	3.40E-07	72	72.3 %
NC2C	4.98E-07	1.14E-07	3.85E-07	73	77.2 %
E2A7	8.12E-07	1.13E-07	6.98E-07	74	86.0 %
SP1B	6.97E-07	1.12E-07	5.85E-07	75	83.9 %
E2C	7.00E-07	9.26E-08	6.08E-07	76	86.8 %
S5B	5.84E-07	8.73E-08	4.96E-07	77	85.0 %
E2A4	1.05E-06	8.33E-08	9.65E-07	78	92.1 %
NP9F	8.53E-07	8.09E-08	7.72E-07	79	90.5 %
S3A	3.32E-07	6.93E-08	2.62E-07	80	79.1 %
E3G	6.23E-07	6.89E-08	5.54E-07	81	88.9 %
NP3	9.07E-07	6.67E-08	8.41E-07	82	92.7 %
S5A	3.35E-07	5.71E-08	2.78E-07	83	82.9 %
SP7B	5.30E-08	5.30E-08	0.00E+00	84	<0.01 %
SP8C	1.81E-07	5.10E-08	1.30E-07	85	71.8 %
C2D	4.50E-07	1.94E-08	4.30E-07	86	95.7 %
E2A6	7.48E-07	1.47E-08	7.34E-07	87	98.0 %
E2A5	8.78E-07	1.36E-08	8.64E-07	88	98.5 %

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals
 Descending Sort on Incremental Cancer Risk
 Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
NC9B	2.07E-08	1.15E-08	9.21E-09	89	44.6%
NC9D	5.81E-07	7.68E-09	5.74E-07	90	98.7%
W3A	5.03E-07	5.52E-09	4.97E-07	91	98.9%
NC9C	4.28E-07	3.82E-09	4.24E-07	92	99.1%
NC6B	9.94E-09	7.36E-10	9.20E-09	93	92.6%
NC9H	4.80E-07	5.42E-10	4.80E-07	94	99.9%
E1C	1.14E-06	3.06E-10	1.14E-06	95	99.9%
E2A3	1.23E-06	0.00E+00	1.23E-06	1	100.0%
E1B	9.89E-07	0.00E+00	9.89E-07	2	100.0%
E2A2	9.69E-07	0.00E+00	9.69E-07	3	100.0%
NP8A	8.97E-07	0.00E+00	8.97E-07	4	100.0%
NP2	8.94E-07	0.00E+00	8.94E-07	5	100.0%
E1D	8.65E-07	0.00E+00	8.65E-07	6	100.0%
NP4	8.54E-07	0.00E+00	8.54E-07	7	100.0%
E3I	8.53E-07	0.00E+00	8.53E-07	8	100.0%
E3E	8.49E-07	0.00E+00	8.49E-07	9	100.0%
E1A	8.35E-07	0.00E+00	8.35E-07	10	100.0%
NP9E	7.72E-07	0.00E+00	7.72E-07	11	100.0%
NP8B	7.66E-07	0.00E+00	7.66E-07	12	100.0%
E2A1	7.55E-07	0.00E+00	7.55E-07	13	100.0%
NP9D	7.32E-07	0.00E+00	7.32E-07	14	100.0%
E4B	6.83E-07	0.00E+00	6.83E-07	15	100.0%
E3D	6.50E-07	0.00E+00	6.50E-07	16	100.0%
NC9G	6.47E-07	0.00E+00	6.47E-07	17	100.0%
E6A	6.40E-07	0.00E+00	6.40E-07	18	100.0%
E3C	6.36E-07	0.00E+00	6.36E-07	19	100.0%
NC9O	6.33E-07	0.00E+00	6.33E-07	20	100.0%
E6B	6.32E-07	0.00E+00	6.32E-07	21	100.0%
E4C	6.31E-07	0.00E+00	6.31E-07	22	100.0%
E4A	6.11E-07	0.00E+00	6.11E-07	23	100.0%
E5	6.08E-07	0.00E+00	6.08E-07	24	100.0%
NC9R	6.06E-07	0.00E+00	6.06E-07	25	100.0%
C2C	6.06E-07	0.00E+00	6.06E-07	26	100.0%
E6D	6.04E-07	0.00E+00	6.04E-07	27	100.0%
SP10	5.74E-07	0.00E+00	5.74E-07	28	100.0%
W6B	5.56E-07	0.00E+00	5.56E-07	29	100.0%
NC9F	5.52E-07	0.00E+00	5.52E-07	30	100.0%
NC9E	5.37E-07	0.00E+00	5.37E-07	31	100.0%
NC9L	5.32E-07	0.00E+00	5.32E-07	32	100.0%
NC1G	5.24E-07	0.00E+00	5.24E-07	33	100.0%
E2B	4.91E-07	0.00E+00	4.91E-07	34	100.0%
NC9J	4.67E-07	0.00E+00	4.67E-07	35	100.0%
W6D	4.51E-07	0.00E+00	4.51E-07	36	100.0%
W7B	4.45E-07	0.00E+00	4.45E-07	37	100.0%

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals

Descending Sort on Incremental Cancer Risk

Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
NC9K	4.31E-07	0.00E+00	4.31E-07	38	100.0%
E3A	4.14E-07	0.00E+00	4.14E-07	39	100.0%
NC9Q	4.10E-07	0.00E+00	4.10E-07	40	100.0%
W5C	3.97E-07	0.00E+00	3.97E-07	41	100.0%
W8E	3.97E-07	0.00E+00	3.97E-07	42	100.0%
NC9P	3.69E-07	0.00E+00	3.69E-07	43	100.0%
W8C	3.66E-07	0.00E+00	3.66E-07	44	100.0%
S5D	3.39E-07	0.00E+00	3.39E-07	45	100.0%
W3D	3.36E-07	0.00E+00	3.36E-07	46	100.0%
NC9M	3.26E-07	0.00E+00	3.26E-07	47	100.0%
NC9I	3.11E-07	0.00E+00	3.11E-07	48	100.0%
W8D	2.90E-07	0.00E+00	2.90E-07	49	100.0%
W8B	2.88E-07	0.00E+00	2.88E-07	50	100.0%
W4B	2.82E-07	0.00E+00	2.82E-07	51	100.0%
W8F	2.80E-07	0.00E+00	2.80E-07	52	100.0%
NC9S	2.73E-07	0.00E+00	2.73E-07	53	100.0%
NP9A	2.51E-07	0.00E+00	2.51E-07	54	100.0%
S5C	2.47E-07	0.00E+00	2.47E-07	55	100.0%
NC9A	2.47E-07	0.00E+00	2.47E-07	56	100.0%
W8A	1.57E-07	0.00E+00	1.57E-07	57	100.0%
W1C	1.53E-07	0.00E+00	1.53E-07	58	100.0%
E3F	8.10E-08	0.00E+00	8.10E-08	59	100.0%
E3J	4.40E-08	0.00E+00	4.40E-08	60	100.0%
C3	0.00E+00	0.00E+00	0.00E+00	1	NA
E3H	0.00E+00	0.00E+00	0.00E+00	2	NA
E3K	0.00E+00	0.00E+00	0.00E+00	3	NA
NC3	0.00E+00	0.00E+00	0.00E+00	4	NA
NC8C	0.00E+00	0.00E+00	0.00E+00	5	NA
NC9N	0.00E+00	0.00E+00	0.00E+00	6	NA
NP1	0.00E+00	0.00E+00	0.00E+00	7	NA
NP7	0.00E+00	0.00E+00	0.00E+00	8	NA
NP9C	0.00E+00	0.00E+00	0.00E+00	9	NA
S1A	0.00E+00	0.00E+00	0.00E+00	10	NA
SP11	0.00E+00	0.00E+00	0.00E+00	11	NA
W1A	0.00E+00	0.00E+00	0.00E+00	12	NA
W1B	0.00E+00	0.00E+00	0.00E+00	13	NA
W1D	0.00E+00	0.00E+00	0.00E+00	14	NA
W1G	0.00E+00	0.00E+00	0.00E+00	15	NA
W3B	0.00E+00	0.00E+00	0.00E+00	16	NA
W4A	0.00E+00	0.00E+00	0.00E+00	17	NA
W5A	0.00E+00	0.00E+00	0.00E+00	18	NA
W5B	0.00E+00	0.00E+00	0.00E+00	19	NA
W5D	0.00E+00	0.00E+00	0.00E+00	20	NA
W6C	0.00E+00	0.00E+00	0.00E+00	21	NA

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals
Descending Sort on Incremental Cancer Risk
Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
W6E	0.00E+00	0.00E+00	0.00E+00	22	NA
W7A	0.00E+00	0.00E+00	0.00E+00	23	NA

Program version: Gray Developmental, Smp. Arith. Mean, Models correction
Database version: Gray-1 parameter revisions, updated, November 30, 1993
Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean
Random Seed: 0, Unc. Sample Size: 100
HHRC Code Source Files: HSSRI5CO.FDK, HSSRT5CO.FDK

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals
 Descending Sort on Incremental Cancer Risk
 Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
SP10	6.64E-03	6.64E-03	1.00E-06	1	<0.01%
SP1A	4.41E-04	4.40E-04	7.00E-07	2	0.2%
SP1E	4.34E-04	4.33E-04	1.00E-06	3	0.2%
SP3A	3.48E-04	3.48E-04	2.00E-07	4	0.1%
SP3B	2.19E-04	2.18E-04	5.00E-07	5	0.2%
NC3	1.06E-04	1.06E-04	7.00E-07	6	0.7%
C1A	6.08E-05	6.03E-05	4.70E-07	7	0.8%
SP8A	5.55E-05	5.48E-05	6.20E-07	8	1.1%
NC8A	3.91E-05	3.84E-05	6.80E-07	9	1.7%
NC1B	3.80E-05	3.74E-05	6.00E-07	10	1.6%
SP4A	3.65E-05	3.59E-05	6.10E-07	11	1.7%
NC1A	2.94E-05	2.87E-05	7.20E-07	12	2.4%
SP1D	1.84E-05	1.81E-05	3.10E-07	13	1.7%
SP12B	1.81E-05	1.74E-05	6.50E-07	14	3.6%
S2B	1.47E-05	1.41E-05	5.70E-07	15	3.9%
SP3C	1.16E-05	1.08E-05	7.80E-07	16	6.7%
SP1F	1.04E-05	1.04E-05	0.00E+00	17	<0.01%
NP5	1.09E-05	9.91E-06	1.00E-06	18	9.2%
S4	7.97E-06	7.45E-06	5.25E-07	19	6.6%
SP8B	7.14E-06	7.00E-06	1.42E-07	20	2.0%
NC1E	7.61E-06	6.66E-06	9.52E-07	21	12.5%
W5D	6.80E-06	5.38E-06	1.42E-06	22	20.8%
NC2A	5.35E-06	4.70E-06	6.54E-07	23	12.2%
NP6	5.12E-06	4.26E-06	8.60E-07	24	16.8%
SP1G	4.59E-06	3.28E-06	1.31E-06	25	28.5%
NC4B	3.68E-06	3.16E-06	5.18E-07	26	14.1%
C1B	3.61E-06	3.05E-06	5.60E-07	27	15.5%
NC5C	3.25E-06	2.83E-06	4.21E-07	28	13.0%
SP2D	3.06E-06	2.81E-06	2.48E-07	29	8.1%
SP3E	3.07E-06	2.66E-06	4.18E-07	30	13.6%
S3B	2.76E-06	2.39E-06	3.71E-07	31	13.4%
SP2A	2.66E-06	2.31E-06	3.50E-07	32	13.1%
NC4A	2.62E-06	2.00E-06	6.23E-07	33	23.8%
SP9A	2.56E-06	1.97E-06	5.89E-07	34	23.0%
E3B	2.54E-06	1.75E-06	7.90E-07	35	31.2%
S2A	1.59E-06	1.23E-06	3.60E-07	36	22.7%
SP1C	1.52E-06	1.15E-06	3.67E-07	37	24.2%
NC5B	1.87E-06	1.12E-06	7.44E-07	38	39.9%
C1C	2.61E-06	1.11E-06	1.50E-06	39	57.4%
NC6A	1.42E-06	1.00E-06	4.14E-07	40	29.2%
NC5A	1.68E-06	9.28E-07	7.50E-07	41	44.7%
W1E	8.96E-07	8.96E-07	0.00E+00	42	<0.01%
NC1F	1.32E-06	8.75E-07	4.43E-07	43	33.6%

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals

Descending Sort on Incremental Cancer Risk

Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
SP9B	1.43E-06	8.07E-07	6.18E-07	44	43.4%
W1F	7.45E-07	6.26E-07	1.19E-07	45	16.0%
NC2D	1.08E-06	5.64E-07	5.17E-07	46	47.8%
S5E	7.25E-07	5.59E-07	1.66E-07	47	22.9%
SP3D	9.93E-07	5.57E-07	4.36E-07	48	43.9%
SP11	7.48E-07	5.20E-07	2.28E-07	49	30.5%
W2	1.08E-06	5.07E-07	5.74E-07	50	53.1%
SP4B	8.24E-07	4.66E-07	3.58E-07	51	43.5%
W6A	1.42E-06	4.48E-07	9.67E-07	52	68.3%
E3A	9.30E-07	4.00E-07	5.30E-07	53	57.0%
NC2B	9.51E-07	3.98E-07	5.53E-07	54	58.1%
SP12	6.71E-07	3.87E-07	2.84E-07	55	42.3%
SP5B	8.31E-07	3.87E-07	4.45E-07	56	53.5%
SP2E	1.12E-06	3.69E-07	7.54E-07	57	67.2%
C1D	8.08E-07	3.63E-07	4.45E-07	58	55.1%
NC1C	9.42E-07	3.60E-07	5.82E-07	59	61.8%
SP7C	5.85E-07	3.37E-07	2.48E-07	60	42.4%
SP2C	5.20E-07	3.25E-07	1.95E-07	61	37.5%
SP2B	5.27E-07	3.07E-07	2.20E-07	62	41.8%
C4	7.33E-07	3.04E-07	4.29E-07	63	58.5%
NC1D	7.70E-07	3.00E-07	4.69E-07	64	61.0%
NC8B	8.85E-07	2.38E-07	6.47E-07	65	73.1%
C2B	6.11E-07	1.93E-07	4.19E-07	66	68.5%
SP1B	7.03E-07	1.79E-07	5.23E-07	67	74.5%
S5B	6.78E-07	1.68E-07	5.11E-07	68	75.3%
W3C	5.05E-07	1.66E-07	3.39E-07	69	67.1%
W5C	4.73E-07	1.62E-07	3.11E-07	70	65.8%
SP12A	3.33E-07	1.59E-07	1.73E-07	71	52.2%
C2A	5.51E-07	1.58E-07	3.93E-07	72	71.4%
SP5A	6.10E-07	1.47E-07	4.63E-07	73	75.9%
SP6	6.67E-07	1.35E-07	5.32E-07	74	79.7%
NP8C	9.49E-07	1.17E-07	8.32E-07	75	87.6%
SP7A	2.51E-07	1.12E-07	1.39E-07	76	55.4%
SP8C	2.41E-07	1.08E-07	1.33E-07	77	55.1%
S2C	3.66E-07	1.01E-07	2.65E-07	78	72.4%
E6C	9.61E-07	9.13E-08	8.70E-07	79	90.5%
NC1G	5.48E-07	8.96E-08	4.58E-07	80	83.6%
NP3	9.19E-07	8.91E-08	8.30E-07	81	90.3%
W1G	2.23E-07	8.74E-08	1.35E-07	82	60.7%
NP9D	8.12E-07	8.45E-08	7.27E-07	83	89.6%
E2C	5.21E-07	8.38E-08	4.37E-07	84	83.9%
SP7B	4.23E-07	7.61E-08	3.47E-07	85	82.0%
NC5D	3.64E-07	7.35E-08	2.91E-07	86	79.8%

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals
 Descending Sort on Incremental Cancer Risk
 Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
E2A7	1.03E-06	6.83E-08	9.63E-07	87	93.4%
W3B	4.28E-07	6.78E-08	3.60E-07	88	84.2%
W1B	2.97E-07	6.44E-08	2.33E-07	89	78.3%
E3G	6.42E-07	6.44E-08	5.78E-07	90	90.0%
NP2	9.40E-07	6.30E-08	8.77E-07	91	93.3%
E2A4	9.56E-07	5.81E-08	8.98E-07	92	93.9%
W4B	3.92E-07	5.68E-08	3.35E-07	93	85.5%
C3	5.77E-07	4.94E-08	5.28E-07	94	91.4%
E2B	5.66E-07	3.35E-08	5.33E-07	95	94.1%
W1C	2.14E-07	2.92E-08	1.85E-07	96	86.4%
S5A	3.06E-07	2.88E-08	2.78E-07	97	90.6%
E2A5	8.45E-07	2.69E-08	8.18E-07	98	96.8%
NC2C	4.89E-07	2.68E-08	4.62E-07	99	94.5%
S3A	3.35E-07	2.60E-08	3.09E-07	100	92.2%
NP8B	7.70E-07	2.39E-08	7.46E-07	101	96.9%
E2A6	9.53E-07	1.52E-08	9.38E-07	102	98.4%
W6D	2.88E-07	1.48E-08	2.73E-07	103	94.8%
W7A	2.38E-07	1.48E-08	2.24E-07	104	93.8%
E3D	6.77E-07	1.46E-08	6.63E-07	105	97.8%
NP9A	4.07E-07	1.35E-08	3.94E-07	106	96.7%
C2C	6.78E-07	1.17E-08	6.66E-07	107	98.3%
NC9B	2.07E-08	1.15E-08	9.21E-09	108	44.6%
E2A1	7.38E-07	1.02E-08	7.28E-07	109	98.6%
C2D	4.85E-07	8.05E-09	4.76E-07	110	98.3%
E3C	6.72E-07	7.69E-09	6.65E-07	111	98.9%
NC9D	5.81E-07	7.68E-09	5.74E-07	112	98.7%
NC9C	4.28E-07	3.82E-09	4.24E-07	113	99.1%
E3I	9.07E-07	9.19E-10	9.06E-07	114	99.9%
NP9B	1.10E-06	0.00E+00	1.10E-06	1	100.0%
E2A3	1.04E-06	0.00E+00	1.04E-06	2	100.0%
E1C	8.84E-07	0.00E+00	8.84E-07	3	100.0%
E2A2	8.52E-07	0.00E+00	8.52E-07	4	100.0%
NP4	7.70E-07	0.00E+00	7.70E-07	5	100.0%
E1B	7.61E-07	0.00E+00	7.61E-07	6	100.0%
NP8A	7.40E-07	0.00E+00	7.40E-07	7	100.0%
E6A	7.38E-07	0.00E+00	7.38E-07	8	100.0%
E3E	7.14E-07	0.00E+00	7.14E-07	9	100.0%
NP9C	7.03E-07	0.00E+00	7.03E-07	10	100.0%
NP9F	6.84E-07	0.00E+00	6.84E-07	11	100.0%
E1A	6.68E-07	0.00E+00	6.68E-07	12	100.0%
E1D	6.67E-07	0.00E+00	6.67E-07	13	100.0%
NC9G	6.47E-07	0.00E+00	6.47E-07	14	100.0%
NC9R	6.38E-07	0.00E+00	6.38E-07	15	100.0%

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals
 Descending Sort on Incremental Cancer Risk
 Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
E6D	6.04E-07	0.00E+00	6.04E-07	16	100.0%
NP9E	5.94E-07	0.00E+00	5.94E-07	17	100.0%
NC9O	5.92E-07	0.00E+00	5.92E-07	18	100.0%
E4C	5.81E-07	0.00E+00	5.81E-07	19	100.0%
W6C	5.68E-07	0.00E+00	5.68E-07	20	100.0%
NC9F	5.52E-07	0.00E+00	5.52E-07	21	100.0%
NP7	5.51E-07	0.00E+00	5.51E-07	22	100.0%
E4B	5.49E-07	0.00E+00	5.49E-07	23	100.0%
NC9E	5.37E-07	0.00E+00	5.37E-07	24	100.0%
NC9L	5.32E-07	0.00E+00	5.32E-07	25	100.0%
W8B	4.96E-07	0.00E+00	4.96E-07	26	100.0%
E4A	4.95E-07	0.00E+00	4.95E-07	27	100.0%
NC9H	4.92E-07	0.00E+00	4.92E-07	28	100.0%
E5	4.76E-07	0.00E+00	4.76E-07	29	100.0%
NC9J	4.67E-07	0.00E+00	4.67E-07	30	100.0%
W6B	4.59E-07	0.00E+00	4.59E-07	31	100.0%
S5D	4.58E-07	0.00E+00	4.58E-07	32	100.0%
NC9P	4.47E-07	0.00E+00	4.47E-07	33	100.0%
W5A	4.44E-07	0.00E+00	4.44E-07	34	100.0%
W7B	4.33E-07	0.00E+00	4.33E-07	35	100.0%
NC9K	4.31E-07	0.00E+00	4.31E-07	36	100.0%
W3D	4.17E-07	0.00E+00	4.17E-07	37	100.0%
E6B	4.07E-07	0.00E+00	4.07E-07	38	100.0%
W5B	4.04E-07	0.00E+00	4.04E-07	39	100.0%
W8E	3.97E-07	0.00E+00	3.97E-07	40	100.0%
W1A	3.88E-07	0.00E+00	3.88E-07	41	100.0%
W8C	3.66E-07	0.00E+00	3.66E-07	42	100.0%
W3A	3.54E-07	0.00E+00	3.54E-07	43	100.0%
NC9Q	3.27E-07	0.00E+00	3.27E-07	44	100.0%
NC9I	3.11E-07	0.00E+00	3.11E-07	45	100.0%
NC9S	2.94E-07	0.00E+00	2.94E-07	46	100.0%
NC9M	2.94E-07	0.00E+00	2.94E-07	47	100.0%
W8D	2.90E-07	0.00E+00	2.90E-07	48	100.0%
W6E	2.89E-07	0.00E+00	2.89E-07	49	100.0%
W8F	2.80E-07	0.00E+00	2.80E-07	50	100.0%
S5C	2.47E-07	0.00E+00	2.47E-07	51	100.0%
NC9A	2.47E-07	0.00E+00	2.47E-07	52	100.0%
W4A	2.29E-07	0.00E+00	2.29E-07	53	100.0%
W8A	1.56E-07	0.00E+00	1.56E-07	54	100.0%
W1D	1.28E-07	0.00E+00	1.28E-07	55	100.0%
E3F	9.50E-08	0.00E+00	9.50E-08	56	100.0%
E3J	5.17E-08	0.00E+00	5.17E-08	57	100.0%
NC6B	7.99E-09	0.00E+00	7.99E-09	58	100.0%

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals
Descending Sort on Incremental Cancer Risk
Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
E3H	0.00E+00	0.00E+00	0.00E+00	1	NA
E3K	0.00E+00	0.00E+00	0.00E+00	2	NA
NC8C	0.00E+00	0.00E+00	0.00E+00	3	NA
NC9N	0.00E+00	0.00E+00	0.00E+00	4	NA
NP1	0.00E+00	0.00E+00	0.00E+00	5	NA
S1A	0.00E+00	0.00E+00	0.00E+00	6	NA

Program version: Gray Developmental, Smp. Arith. Mean, Models correction
Database version: Gray-1 parameter revisions, updated, November 30, 1993
Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean
Random Seed: 0, Unc. Sample Size: 100
HHRC Code Source Files: HSSRI5C1.FDK, HSSRT5C1.FDK

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals
 Descending Sort on Incremental Hazard Index
 Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
SP3A	7.08E+00	7.06E+00	1.90E-02	1	0.27 %
SP1A	4.82E+00	4.78E+00	3.90E-02	2	0.81 %
SP1E	3.48E+00	3.44E+00	4.30E-02	3	1.23 %
NC8A	1.64E+00	1.61E+00	3.40E-02	4	2.07 %
SP3B	1.58E+00	1.54E+00	4.40E-02	5	2.78 %
SP8A	1.04E+00	1.01E+00	3.30E-02	6	3.18 %
NP4	7.08E-01	6.28E-01	8.00E-02	7	11.30 %
SP4A	4.80E-01	4.05E-01	7.57E-02	8	15.76 %
SP1G	4.72E-01	3.56E-01	1.15E-01	9	24.46 %
NC1A	3.93E-01	3.49E-01	4.39E-02	10	11.18 %
NC1B	3.71E-01	3.37E-01	3.38E-02	11	9.11 %
SP3C	2.90E-01	2.12E-01	7.80E-02	12	26.88 %
S2B	2.45E-01	1.89E-01	5.54E-02	13	22.63 %
SP12B	1.99E-01	1.38E-01	6.11E-02	14	30.66 %
E3G	1.81E-01	1.35E-01	4.62E-02	15	25.47 %
NP5	1.99E-01	1.26E-01	7.26E-02	16	36.52 %
SP1D	1.43E-01	1.23E-01	1.98E-02	17	13.89 %
S4	1.51E-01	1.22E-01	2.91E-02	18	19.30 %
NP6	1.31E-01	7.78E-02	5.36E-02	19	40.81 %
C1B	1.22E-01	7.76E-02	4.40E-02	20	36.21 %
SP1F	6.59E-02	6.52E-02	7.40E-04	21	1.12 %
W6A	1.79E-01	6.41E-02	1.15E-01	22	64.22 %
NP9B	1.61E-01	4.87E-02	1.13E-01	23	69.80 %
E3F	4.68E-02	4.63E-02	5.10E-04	24	1.09 %
SP8B	6.56E-02	4.58E-02	1.98E-02	25	30.21 %
SP2D	6.58E-02	3.87E-02	2.71E-02	26	41.14 %
NC5C	6.62E-02	3.62E-02	3.00E-02	27	45.33 %
NC4B	7.61E-02	3.42E-02	4.19E-02	28	55.02 %
E2A6	1.01E-01	3.22E-02	6.87E-02	29	68.05 %
C1C	7.53E-02	3.22E-02	4.32E-02	30	57.32 %
NC2A	7.11E-02	2.98E-02	4.13E-02	31	58.11 %
SP9A	8.17E-02	2.93E-02	5.24E-02	32	64.19 %
SP3E	5.17E-02	2.69E-02	2.48E-02	33	47.94 %
E3B	9.13E-02	2.55E-02	6.58E-02	34	72.04 %
NC5B	6.87E-02	2.01E-02	4.86E-02	35	70.75 %
W1E	1.94E-02	1.94E-02	0.00E+00	36	<0.01 %
SP1C	3.09E-02	1.86E-02	1.23E-02	37	39.73 %
NC4A	5.41E-02	1.82E-02	3.59E-02	38	66.40 %
E2A7	8.35E-02	1.81E-02	6.54E-02	39	78.33 %
W6D	3.95E-02	1.48E-02	2.48E-02	40	62.62 %
SP2A	4.59E-02	1.41E-02	3.18E-02	41	69.25 %
C1A	5.10E-02	1.36E-02	3.75E-02	42	73.37 %
NC2B	4.81E-02	1.35E-02	3.46E-02	43	71.87 %
W3C	4.46E-02	1.31E-02	3.15E-02	44	70.73 %

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals
 Descending Sort on Incremental Hazard Index
 Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
SP9B	8.11E-02	1.24E-02	6.88E-02	45	84.75 %
NC5A	7.20E-02	1.23E-02	5.96E-02	46	82.89 %
E2A5	9.30E-02	1.23E-02	8.07E-02	47	86.79 %
C4	4.49E-02	1.03E-02	3.46E-02	48	77.04 %
SP2C	2.38E-02	1.03E-02	1.35E-02	49	56.71 %
S5E	2.61E-02	9.91E-03	1.62E-02	50	62.04 %
S2A	3.26E-02	7.21E-03	2.53E-02	51	77.84 %
NC1C	2.76E-02	6.74E-03	2.08E-02	52	75.54 %
NC1E	4.77E-02	6.22E-03	4.15E-02	53	86.96 %
E2A4	8.98E-02	6.16E-03	8.37E-02	54	93.14 %
SP3D	4.13E-02	6.12E-03	3.52E-02	55	85.19 %
W1F	6.47E-03	5.61E-03	8.69E-04	56	13.42 %
SP5B	4.35E-02	5.50E-03	3.80E-02	57	87.35 %
NC2D	4.00E-02	5.19E-03	3.48E-02	58	87.03 %
SP2E	3.89E-02	5.15E-03	3.38E-02	59	86.78 %
SP2B	2.78E-02	4.82E-03	2.30E-02	60	82.66 %
SP4B	3.10E-02	4.43E-03	2.65E-02	61	85.68 %
W2	4.03E-02	3.76E-03	3.65E-02	62	90.66 %
SP12	3.39E-02	3.74E-03	3.02E-02	63	88.99 %
C2A	3.49E-02	3.51E-03	3.13E-02	64	89.92 %
NC6A	3.44E-02	3.38E-03	3.11E-02	65	90.18 %
S2C	2.26E-02	3.14E-03	1.94E-02	66	86.09 %
NC8B	5.99E-02	3.12E-03	5.68E-02	67	94.80 %
SP12A	2.29E-02	2.79E-03	2.01E-02	68	87.82 %
NC1D	3.63E-02	2.58E-03	3.37E-02	69	92.88 %
SP5A	3.57E-03	2.41E-03	1.15E-03	70	32.32 %
E6C	6.90E-02	2.23E-03	6.67E-02	71	96.76 %
SP6	5.66E-02	2.10E-03	5.45E-02	72	96.30 %
NC1F	2.70E-02	2.05E-03	2.50E-02	73	92.43 %
C2B	3.94E-02	1.87E-03	3.75E-02	74	95.25 %
NP8C	4.76E-02	1.52E-03	4.61E-02	75	96.81 %
SP1B	5.08E-02	1.47E-03	4.93E-02	76	97.11 %
NC2C	2.68E-02	1.45E-03	2.54E-02	77	94.61 %
NC5D	2.47E-02	1.04E-03	2.37E-02	78	95.80 %
S3B	2.70E-02	1.03E-03	2.59E-02	79	96.18 %
S5B	4.81E-02	9.83E-04	4.71E-02	80	97.96 %
S3A	2.55E-02	9.43E-04	2.45E-02	81	96.30 %
SP7C	2.24E-02	9.37E-04	2.15E-02	82	95.82 %
W6E	2.43E-03	9.07E-04	1.52E-03	83	62.68 %
S5C	2.51E-02	7.94E-04	2.43E-02	84	96.84 %
E6A	6.14E-02	7.73E-04	6.06E-02	85	98.74 %
SP7A	7.09E-04	7.09E-04	0.00E+00	86	<0.01 %
C1D	3.26E-02	6.73E-04	3.19E-02	87	97.93 %
S5A	2.69E-02	6.21E-04	2.63E-02	88	97.69 %

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals
 Descending Sort on Incremental Hazard Index
 Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
E1C	1.07E-01	5.32E-04	1.06E-01	89	99.50 %
NP9F	4.84E-02	5.10E-04	4.79E-02	90	98.95 %
E2C	4.78E-02	3.86E-04	4.74E-02	91	99.19 %
NC9B	6.88E-04	3.81E-04	3.06E-04	92	44.54 %
SP7B	3.13E-04	3.13E-04	0.00E+00	93	<0.01 %
SP8C	1.27E-02	2.94E-04	1.24E-02	94	97.68 %
E1B	9.25E-02	2.80E-04	9.22E-02	95	99.70 %
NP3	6.94E-02	2.78E-04	6.91E-02	96	99.60 %
NC9D	5.34E-02	2.56E-04	5.31E-02	97	99.52 %
NP8A	8.45E-02	2.12E-04	8.43E-02	98	99.75 %
W3A	4.65E-02	1.84E-04	4.63E-02	99	99.60 %
E4C	5.98E-02	1.60E-04	5.96E-02	100	99.73 %
NC9C	3.87E-02	1.27E-04	3.86E-02	101	99.67 %
C2D	3.98E-02	8.19E-05	3.97E-02	102	99.79 %
W6B	4.86E-02	7.56E-05	4.86E-02	103	99.84 %
W7B	4.27E-02	5.74E-05	4.26E-02	104	99.87 %
NP1	5.65E-05	3.82E-05	1.82E-05	105	32.26 %
NC9Q	3.92E-02	3.45E-05	3.91E-02	106	99.91 %
NC6B	3.31E-04	2.45E-05	3.06E-04	107	92.59 %
NC9H	3.74E-02	1.80E-05	3.74E-02	108	99.95 %
NC9S	2.59E-02	6.72E-07	2.59E-02	109	99.99 %
E2A3	9.96E-02	0.00E+00	9.96E-02	1	100.00 %
NP2	8.36E-02	0.00E+00	8.36E-02	2	100.00 %
E2A2	7.88E-02	0.00E+00	7.88E-02	3	100.00 %
E3I	7.38E-02	0.00E+00	7.38E-02	4	100.00 %
E1D	7.18E-02	0.00E+00	7.18E-02	5	100.00 %
NP9E	7.18E-02	0.00E+00	7.18E-02	6	100.00 %
E3E	7.09E-02	0.00E+00	7.09E-02	7	100.00 %
E1A	6.92E-02	0.00E+00	6.92E-02	8	100.00 %
NP9D	6.84E-02	0.00E+00	6.84E-02	9	100.00 %
NP8B	6.55E-02	0.00E+00	6.55E-02	10	100.00 %
E2A1	6.39E-02	0.00E+00	6.39E-02	11	100.00 %
NC9G	5.97E-02	0.00E+00	5.97E-02	12	100.00 %
E6D	5.66E-02	0.00E+00	5.66E-02	13	100.00 %
C2C	5.59E-02	0.00E+00	5.59E-02	14	100.00 %
E4B	5.44E-02	0.00E+00	5.44E-02	15	100.00 %
E3D	5.32E-02	0.00E+00	5.32E-02	16	100.00 %
SP10	5.29E-02	0.00E+00	5.29E-02	17	100.00 %
E3C	5.28E-02	0.00E+00	5.28E-02	18	100.00 %
NC9F	5.10E-02	0.00E+00	5.10E-02	19	100.00 %
E6B	5.05E-02	0.00E+00	5.05E-02	20	100.00 %
NC9E	5.05E-02	0.00E+00	5.05E-02	21	100.00 %
E4A	5.03E-02	0.00E+00	5.03E-02	22	100.00 %
E5	4.88E-02	0.00E+00	4.88E-02	23	100.00 %

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals
 Descending Sort on Incremental Hazard Index
 Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
NC9O	4.70E-02	0.00E+00	4.70E-02	24	100.00%
NC9R	4.44E-02	0.00E+00	4.44E-02	25	100.00%
NC9J	4.31E-02	0.00E+00	4.31E-02	26	100.00%
E2B	4.02E-02	0.00E+00	4.02E-02	27	100.00%
W8E	3.71E-02	0.00E+00	3.71E-02	28	100.00%
W5C	3.66E-02	0.00E+00	3.66E-02	29	100.00%
NC1G	3.60E-02	0.00E+00	3.60E-02	30	100.00%
E3A	3.50E-02	0.00E+00	3.50E-02	31	100.00%
W8C	3.43E-02	0.00E+00	3.43E-02	32	100.00%
S5D	3.27E-02	0.00E+00	3.27E-02	33	100.00%
NC9L	3.20E-02	0.00E+00	3.20E-02	34	100.00%
W3D	3.16E-02	0.00E+00	3.16E-02	35	100.00%
NC9M	3.01E-02	0.00E+00	3.01E-02	36	100.00%
NC9I	2.87E-02	0.00E+00	2.87E-02	37	100.00%
W8D	2.72E-02	0.00E+00	2.72E-02	38	100.00%
W8B	2.71E-02	0.00E+00	2.71E-02	39	100.00%
W4B	2.63E-02	0.00E+00	2.63E-02	40	100.00%
NC9K	2.61E-02	0.00E+00	2.61E-02	41	100.00%
W8F	2.59E-02	0.00E+00	2.59E-02	42	100.00%
NC9P	2.54E-02	0.00E+00	2.54E-02	43	100.00%
NP9A	2.47E-02	0.00E+00	2.47E-02	44	100.00%
NC9A	2.28E-02	0.00E+00	2.28E-02	45	100.00%
W8A	1.49E-02	0.00E+00	1.49E-02	46	100.00%
W1C	1.45E-02	0.00E+00	1.45E-02	47	100.00%
NC9N	6.58E-04	0.00E+00	6.58E-04	48	100.00%
W4A	5.29E-04	0.00E+00	5.29E-04	49	100.00%
W5D	3.69E-04	0.00E+00	3.69E-04	50	100.00%
E3J	2.78E-04	0.00E+00	2.78E-04	51	100.00%
C3	0.00E+00	0.00E+00	0.00E+00	1	NA
E3H	0.00E+00	0.00E+00	0.00E+00	2	NA
E3K	0.00E+00	0.00E+00	0.00E+00	3	NA
NC3	0.00E+00	0.00E+00	0.00E+00	4	NA
NC8C	0.00E+00	0.00E+00	0.00E+00	5	NA
NP7	0.00E+00	0.00E+00	0.00E+00	6	NA
NP9C	0.00E+00	0.00E+00	0.00E+00	7	NA
S1A	0.00E+00	0.00E+00	0.00E+00	8	NA
SP11	0.00E+00	0.00E+00	0.00E+00	9	NA
W1A	0.00E+00	0.00E+00	0.00E+00	10	NA
W1B	0.00E+00	0.00E+00	0.00E+00	11	NA
W1D	0.00E+00	0.00E+00	0.00E+00	12	NA
W1G	0.00E+00	0.00E+00	0.00E+00	13	NA
W3B	0.00E+00	0.00E+00	0.00E+00	14	NA
W5A	0.00E+00	0.00E+00	0.00E+00	15	NA
W5B	0.00E+00	0.00E+00	0.00E+00	16	NA

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals
Descending Sort on Incremental Hazard Index
Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
W6C	0.00E+00	0.00E+00	0.00E+00	17	NA
W7A	0.00E+00	0.00E+00	0.00E+00	18	NA

Program version: Gray Developmental, Smp. Arith. Mean, Models correction

Database version: Gray-1 parameter revisions, updated, November 30, 1993

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSRI5H0.FDK, HSSRT5H0.FDK

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals
 Descending Sort on Incremental Hazard Index
 Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
SP10	7.05E+01	7.05E+01	4.00E-02	1	0.06%
SP1A	7.60E+00	7.56E+00	3.90E-02	2	0.51%
SP1E	4.27E+00	4.20E+00	6.80E-02	3	1.59%
SP3A	3.41E+00	3.39E+00	2.50E-02	4	0.73%
NC3	2.87E+00	2.82E+00	5.10E-02	5	1.78%
SP3B	1.80E+00	1.76E+00	3.90E-02	6	2.17%
C1A	9.15E-01	8.81E-01	3.46E-02	7	3.78%
SP2A	7.90E-01	7.63E-01	2.74E-02	8	3.47%
SP8A	7.10E-01	6.75E-01	3.48E-02	9	4.90%
W5D	6.05E-01	4.89E-01	1.16E-01	10	19.12%
SP2B	4.33E-01	4.12E-01	2.07E-02	11	4.78%
NC1B	3.92E-01	3.60E-01	3.22E-02	12	8.21%
NP4	4.24E-01	3.52E-01	7.18E-02	13	16.95%
NC1A	3.82E-01	3.38E-01	4.35E-02	14	11.39%
NC8A	3.53E-01	3.13E-01	3.95E-02	15	11.20%
SP4A	2.86E-01	2.32E-01	5.34E-02	16	18.69%
C1B	2.21E-01	1.80E-01	4.07E-02	17	18.46%
SP1G	2.68E-01	1.53E-01	1.15E-01	18	42.81%
SP12B	1.99E-01	1.38E-01	6.10E-02	19	30.61%
SP1D	1.43E-01	1.23E-01	1.99E-02	20	13.96%
C1C	2.32E-01	1.16E-01	1.16E-01	21	50.11%
S2B	1.49E-01	1.00E-01	4.94E-02	22	33.08%
SP3E	1.37E-01	9.73E-02	4.00E-02	23	29.13%
SP3C	1.43E-01	7.35E-02	6.90E-02	24	48.42%
S2A	9.84E-02	7.16E-02	2.67E-02	25	27.19%
E3G	1.18E-01	6.99E-02	4.79E-02	26	40.64%
E3A	1.13E-01	6.87E-02	4.38E-02	27	38.93%
SP1F	6.91E-02	6.83E-02	7.40E-04	28	1.07%
NP6	1.22E-01	6.51E-02	5.68E-02	29	46.61%
NP5	1.32E-01	6.26E-02	6.92E-02	30	52.51%
SP5B	9.75E-02	6.14E-02	3.61E-02	31	37.02%
NC1E	1.12E-01	4.68E-02	6.55E-02	32	58.29%
S4	7.81E-02	4.43E-02	3.38E-02	33	43.22%
SP4B	6.37E-02	3.66E-02	2.71E-02	34	42.55%
W2	8.38E-02	3.57E-02	4.81E-02	35	57.41%
SP8B	4.84E-02	3.47E-02	1.37E-02	36	28.29%
NC2A	7.30E-02	3.12E-02	4.18E-02	37	57.24%
SP2E	8.83E-02	2.75E-02	6.08E-02	38	68.84%
C4	5.76E-02	2.57E-02	3.19E-02	39	55.37%
NC4B	6.37E-02	2.32E-02	4.05E-02	40	63.53%
E3F	2.37E-02	2.31E-02	6.00E-04	41	2.53%
SP2D	4.43E-02	2.15E-02	2.28E-02	42	51.51%
SP12A	3.51E-02	1.88E-02	1.63E-02	43	46.53%

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals

Descending Sort on Incremental Hazard Index

Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
NC4A	6.99E-02	1.83E-02	5.16E-02	44	73.88 %
SP9A	6.63E-02	1.79E-02	4.83E-02	45	72.94 %
S3B	4.61E-02	1.78E-02	2.82E-02	46	61.30 %
NC5C	5.13E-02	1.74E-02	3.39E-02	47	66.13 %
E2A6	9.28E-02	1.67E-02	7.61E-02	48	82.02 %
E2A7	9.26E-02	1.51E-02	7.75E-02	49	83.67 %
SP3D	5.60E-02	1.51E-02	4.10E-02	50	73.10 %
W1E	1.49E-02	1.49E-02	0.00E+00	51	<0.01 %
NC1F	4.54E-02	1.46E-02	3.09E-02	52	67.92 %
NC6A	4.76E-02	1.43E-02	3.32E-02	53	69.86 %
NC5B	6.03E-02	1.43E-02	4.60E-02	54	76.32 %
E2A4	9.32E-02	1.35E-02	7.97E-02	55	85.51 %
W6A	9.84E-02	1.23E-02	8.61E-02	56	87.55 %
SP9B	6.59E-02	1.16E-02	5.44E-02	57	82.47 %
E3B	6.13E-02	1.13E-02	5.00E-02	58	81.64 %
SP1C	3.58E-02	9.21E-03	2.65E-02	59	74.23 %
NC1D	4.17E-02	9.20E-03	3.25E-02	60	77.94 %
NC2B	4.33E-02	8.41E-03	3.49E-02	61	80.56 %
NC5A	5.36E-02	7.21E-03	4.64E-02	62	86.54 %
SP2C	2.50E-02	6.76E-03	1.83E-02	63	72.98 %
S5E	2.23E-02	6.07E-03	1.62E-02	64	72.73 %
SP7C	2.35E-02	4.63E-03	1.88E-02	65	80.26 %
W3C	3.56E-02	4.14E-03	3.15E-02	66	88.39 %
W6D	2.17E-02	4.13E-03	1.76E-02	67	80.98 %
C1D	3.83E-02	3.89E-03	3.44E-02	68	89.84 %
SP11	2.11E-02	3.80E-03	1.73E-02	69	81.98 %
E2A5	6.86E-02	3.75E-03	6.49E-02	70	94.54 %
S5B	4.80E-02	3.37E-03	4.46E-02	71	92.97 %
NC2D	3.85E-02	2.98E-03	3.55E-02	72	92.26 %
W1F	1.44E-02	2.93E-03	1.14E-02	73	79.60 %
NC1C	3.36E-02	2.88E-03	3.07E-02	74	91.44 %
S2C	2.23E-02	2.83E-03	1.95E-02	75	87.34 %
NC8B	5.45E-02	2.51E-03	5.20E-02	76	95.39 %
SP12	2.83E-02	1.84E-03	2.65E-02	77	93.52 %
SP6	4.76E-02	1.75E-03	4.59E-02	78	96.32 %
C2A	3.30E-02	1.68E-03	3.13E-02	79	94.91 %
C2B	4.08E-02	1.62E-03	3.92E-02	80	96.03 %
W6E	2.36E-02	1.56E-03	2.20E-02	81	93.40 %
SP1B	4.45E-02	1.21E-03	4.33E-02	82	97.29 %
W1B	2.26E-02	1.13E-03	2.15E-02	83	95.02 %
W5C	2.97E-02	1.02E-03	2.87E-02	84	96.57 %
E6C	5.91E-02	9.51E-04	5.81E-02	85	98.39 %
NC2C	3.31E-02	8.80E-04	3.22E-02	86	97.34 %
S5C	2.51E-02	7.94E-04	2.43E-02	87	96.84 %

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals
 Descending Sort on Incremental Hazard Index
 Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
SP8C	1.34E-02	7.74E-04	1.26E-02	88	94.20 %
NP8C	5.47E-02	6.85E-04	5.40E-02	89	98.75 %
S3A	2.96E-02	6.82E-04	2.89E-02	90	97.70 %
SP5A	3.87E-02	6.59E-04	3.80E-02	91	98.30 %
E3D	5.40E-02	6.25E-04	5.34E-02	92	98.84 %
SP7B	2.54E-02	5.58E-04	2.48E-02	93	97.80 %
NP3	7.11E-02	5.56E-04	7.06E-02	94	99.22 %
W1G	1.31E-02	5.52E-04	1.25E-02	95	95.77 %
NC5D	2.74E-02	5.17E-04	2.69E-02	96	98.11 %
SP7A	1.33E-02	4.73E-04	1.28E-02	97	96.44 %
W3B	3.41E-02	4.28E-04	3.37E-02	98	98.75 %
NC9B	6.88E-04	3.81E-04	3.06E-04	99	44.54 %
E2C	3.31E-02	3.77E-04	3.28E-02	100	98.86 %
NC1G	3.31E-02	3.74E-04	3.28E-02	101	98.87 %
C3	4.24E-02	3.54E-04	4.20E-02	102	99.16 %
NP2	7.68E-02	3.28E-04	7.64E-02	103	99.57 %
W4B	3.17E-02	3.23E-04	3.14E-02	104	98.98 %
S5A	2.66E-02	3.13E-04	2.63E-02	105	98.82 %
NC9D	5.34E-02	2.56E-04	5.31E-02	106	99.52 %
W1C	1.75E-02	1.84E-04	1.74E-02	107	98.95 %
E2B	4.41E-02	1.40E-04	4.40E-02	108	99.68 %
NC9C	3.87E-02	1.27E-04	3.86E-02	109	99.67 %
NP8B	6.37E-02	1.17E-04	6.36E-02	110	99.82 %
W7A	2.12E-02	9.32E-05	2.11E-02	111	99.56 %
C2C	5.45E-02	7.40E-05	5.44E-02	112	99.86 %
C2D	4.40E-02	3.45E-05	4.40E-02	113	99.92 %
W7B	4.08E-02	2.19E-05	4.08E-02	114	99.95 %
W6B	3.95E-02	2.11E-05	3.95E-02	115	99.95 %
NP1	2.19E-05	3.64E-06	1.82E-05	116	83.33 %
NP9B	9.63E-02	0.00E+00	9.63E-02	1	100.00 %
E2A3	8.47E-02	0.00E+00	8.47E-02	2	100.00 %
E3I	7.68E-02	0.00E+00	7.68E-02	3	100.00 %
E1C	7.47E-02	0.00E+00	7.47E-02	4	100.00 %
E2A2	7.15E-02	0.00E+00	7.15E-02	5	100.00 %
NP8A	6.92E-02	0.00E+00	6.92E-02	6	100.00 %
NP9D	6.77E-02	0.00E+00	6.77E-02	7	100.00 %
E6A	6.56E-02	0.00E+00	6.56E-02	8	100.00 %
E1B	6.39E-02	0.00E+00	6.39E-02	9	100.00 %
E2A1	5.99E-02	0.00E+00	5.99E-02	10	100.00 %
NC9G	5.97E-02	0.00E+00	5.97E-02	11	100.00 %
E3E	5.73E-02	0.00E+00	5.73E-02	12	100.00 %
NP9C	5.69E-02	0.00E+00	5.69E-02	13	100.00 %
E6D	5.66E-02	0.00E+00	5.66E-02	14	100.00 %
NP9E	5.52E-02	0.00E+00	5.52E-02	15	100.00 %

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals
 Descending Sort on Incremental Hazard Index
 Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
E3C	5.48E-02	0.00E+00	5.48E-02	16	100.00%
E1A	5.48E-02	0.00E+00	5.48E-02	17	100.00%
E1D	5.45E-02	0.00E+00	5.45E-02	18	100.00%
E4C	5.45E-02	0.00E+00	5.45E-02	19	100.00%
NC9F	5.10E-02	0.00E+00	5.10E-02	20	100.00%
NP7	5.09E-02	0.00E+00	5.09E-02	21	100.00%
NC9E	5.05E-02	0.00E+00	5.05E-02	22	100.00%
W6C	4.79E-02	0.00E+00	4.79E-02	23	100.00%
NP9F	4.73E-02	0.00E+00	4.73E-02	24	100.00%
NC9R	4.69E-02	0.00E+00	4.69E-02	25	100.00%
NC9O	4.68E-02	0.00E+00	4.68E-02	26	100.00%
W8B	4.65E-02	0.00E+00	4.65E-02	27	100.00%
E4B	4.33E-02	0.00E+00	4.33E-02	28	100.00%
S5D	4.32E-02	0.00E+00	4.32E-02	29	100.00%
NC9J	4.31E-02	0.00E+00	4.31E-02	30	100.00%
E4A	3.95E-02	0.00E+00	3.95E-02	31	100.00%
W3D	3.89E-02	0.00E+00	3.89E-02	32	100.00%
W5B	3.86E-02	0.00E+00	3.86E-02	33	100.00%
E5	3.85E-02	0.00E+00	3.85E-02	34	100.00%
NC9H	3.78E-02	0.00E+00	3.78E-02	35	100.00%
W5A	3.78E-02	0.00E+00	3.78E-02	36	100.00%
W8E	3.71E-02	0.00E+00	3.71E-02	37	100.00%
NP9A	3.71E-02	0.00E+00	3.71E-02	38	100.00%
W8C	3.43E-02	0.00E+00	3.43E-02	39	100.00%
W3A	3.29E-02	0.00E+00	3.29E-02	40	100.00%
NC9L	3.20E-02	0.00E+00	3.20E-02	41	100.00%
W1A	3.19E-02	0.00E+00	3.19E-02	42	100.00%
E6B	3.17E-02	0.00E+00	3.17E-02	43	100.00%
NC9Q	3.10E-02	0.00E+00	3.10E-02	44	100.00%
NC9I	2.87E-02	0.00E+00	2.87E-02	45	100.00%
NC9P	2.86E-02	0.00E+00	2.86E-02	46	100.00%
NC9S	2.77E-02	0.00E+00	2.77E-02	47	100.00%
W8D	2.72E-02	0.00E+00	2.72E-02	48	100.00%
NC9M	2.71E-02	0.00E+00	2.71E-02	49	100.00%
NC9K	2.61E-02	0.00E+00	2.61E-02	50	100.00%
W8F	2.59E-02	0.00E+00	2.59E-02	51	100.00%
NC9A	2.28E-02	0.00E+00	2.28E-02	52	100.00%
W4A	2.15E-02	0.00E+00	2.15E-02	53	100.00%
W8A	1.48E-02	0.00E+00	1.48E-02	54	100.00%
W1D	1.18E-02	0.00E+00	1.18E-02	55	100.00%
NC9N	6.58E-04	0.00E+00	6.58E-04	56	100.00%
NC6B	5.47E-04	0.00E+00	5.47E-04	57	100.00%
E3J	3.26E-04	0.00E+00	3.26E-04	58	100.00%
E3H	0.00E+00	0.00E+00	0.00E+00	1	NA

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals

Descending Sort on Incremental Hazard Index

Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
E3K	0.00E+00	0.00E+00	0.00E+00	2	NA
NC8C	0.00E+00	0.00E+00	0.00E+00	3	NA
S1A	0.00E+00	0.00E+00	0.00E+00	4	NA

Program version: Gray Developmental, Smp. Arith. Mean, Models correction

Database version: Gray-1 parameter revisions, updated, November 30, 1993

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSRI5H1.FDK, HSSRT5H1.FDK

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals
 Descending Sort on Incremental Cancer Risk
 Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
SP3A	2.05E-04	2.05E-04	0.00E+00	1	<0.01 %
SP1A	1.11E-04	1.11E-04	2.00E-07	2	0.2 %
SP3B	6.09E-05	6.07E-05	1.80E-07	3	0.3 %
NC8A	5.97E-05	5.95E-05	2.10E-07	4	0.4 %
SP1E	4.70E-05	4.68E-05	2.40E-07	5	0.5 %
SP8A	3.76E-05	3.74E-05	2.10E-07	6	0.6 %
SP4A	1.79E-05	1.77E-05	2.30E-07	7	1.3 %
NC1A	1.27E-05	1.24E-05	2.40E-07	8	1.9 %
SP3C	9.70E-06	9.49E-06	2.10E-07	9	2.2 %
NP5	9.57E-06	9.25E-06	3.18E-07	10	3.3 %
S2B	8.86E-06	8.66E-06	1.91E-07	11	2.2 %
S4	7.23E-06	7.03E-06	1.98E-07	12	2.7 %
NC1B	5.88E-06	5.67E-06	2.13E-07	13	3.6 %
NP6	5.92E-06	5.65E-06	2.66E-07	14	4.5 %
SP1D	5.28E-06	5.18E-06	1.03E-07	15	1.9 %
SP12B	5.15E-06	4.99E-06	1.63E-07	16	3.2 %
SP1F	3.15E-06	3.15E-06	0.00E+00	17	<0.01 %
SP8B	2.85E-06	2.79E-06	5.20E-08	18	1.8 %
NC5C	1.99E-06	1.87E-06	1.18E-07	19	5.9 %
E3B	2.13E-06	1.83E-06	3.01E-07	20	14.1 %
SP1G	2.09E-06	1.71E-06	3.82E-07	21	18.3 %
NC2A	1.88E-06	1.65E-06	2.33E-07	22	12.4 %
SP2D	1.51E-06	1.44E-06	7.40E-08	23	4.9 %
C1B	1.63E-06	1.42E-06	2.07E-07	24	12.7 %
NC4B	1.57E-06	1.41E-06	1.52E-07	25	9.7 %
SP9A	1.59E-06	1.40E-06	1.87E-07	26	11.8 %
SP3E	1.23E-06	1.17E-06	6.60E-08	27	5.4 %
SP1C	9.54E-07	9.20E-07	3.37E-08	28	3.5 %
NC4A	9.82E-07	8.85E-07	9.65E-08	29	9.8 %
NC5B	1.05E-06	7.98E-07	2.53E-07	30	24.1 %
NC5A	9.46E-07	6.63E-07	2.83E-07	31	29.9 %
C1A	6.94E-07	5.43E-07	1.51E-07	32	21.8 %
NC1E	6.87E-07	4.53E-07	2.34E-07	33	34.0 %
W1E	3.84E-07	3.84E-07	0.00E+00	34	<0.01 %
W1F	3.65E-07	3.65E-07	0.00E+00	35	<0.01 %
SP9B	5.35E-07	3.22E-07	2.13E-07	36	39.8 %
SP3D	4.09E-07	3.16E-07	9.35E-08	37	22.9 %
S2A	3.67E-07	2.98E-07	6.84E-08	38	18.7 %
NC2D	4.84E-07	2.91E-07	1.93E-07	39	39.8 %
SP2A	3.78E-07	2.63E-07	1.15E-07	40	30.4 %
SP12	3.40E-07	2.59E-07	8.14E-08	41	23.9 %
NC2B	4.51E-07	2.38E-07	2.13E-07	42	47.2 %
W2	3.33E-07	2.34E-07	9.88E-08	43	29.7 %
SP4B	3.32E-07	2.30E-07	1.03E-07	44	30.9 %

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals
 Descending Sort on Incremental Cancer Risk
 Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
C1C	4.67E-07	2.28E-07	2.39E-07	45	51.2%
W6A	5.52E-07	2.00E-07	3.52E-07	46	63.8%
S5E	2.38E-07	1.96E-07	4.21E-08	47	17.7%
NC6A	2.96E-07	1.83E-07	1.14E-07	48	38.3%
SP5A	2.19E-07	1.71E-07	4.88E-08	49	22.2%
SP5B	2.91E-07	1.61E-07	1.31E-07	50	44.9%
SP2E	2.90E-07	1.59E-07	1.31E-07	51	45.1%
SP2C	1.79E-07	1.43E-07	3.59E-08	52	20.1%
C2A	2.55E-07	1.39E-07	1.17E-07	53	45.6%
NP9B	4.43E-07	1.34E-07	3.09E-07	54	69.8%
C4	2.66E-07	1.27E-07	1.39E-07	55	52.2%
NC1C	3.02E-07	1.24E-07	1.77E-07	56	58.8%
NP8C	3.58E-07	1.12E-07	2.47E-07	57	68.8%
E6C	4.01E-07	9.96E-08	3.01E-07	58	75.1%
W3C	1.83E-07	9.92E-08	8.40E-08	59	45.8%
NC8B	3.06E-07	9.64E-08	2.09E-07	60	68.5%
C2B	1.86E-07	8.44E-08	1.01E-07	61	54.5%
SP6	2.40E-07	7.22E-08	1.67E-07	62	69.9%
SP2B	1.33E-07	7.08E-08	6.18E-08	63	46.6%
NC1D	2.25E-07	6.85E-08	1.57E-07	64	69.6%
NC1F	1.84E-07	6.42E-08	1.19E-07	65	65.0%
SP12A	1.18E-07	6.41E-08	5.38E-08	66	45.7%
SP7A	5.17E-08	5.17E-08	0.00E+00	67	<0.01%
C1D	1.73E-07	4.91E-08	1.24E-07	68	71.6%
SP7C	1.31E-07	4.73E-08	8.33E-08	69	63.8%
S2C	1.38E-07	4.35E-08	9.46E-08	70	68.5%
NC5D	1.08E-07	4.27E-08	6.54E-08	71	60.5%
NP9F	2.91E-07	3.76E-08	2.53E-07	72	87.1%
SP1B	1.97E-07	3.37E-08	1.63E-07	73	82.9%
NC2C	1.57E-07	3.33E-08	1.23E-07	74	78.7%
S3B	1.33E-07	3.31E-08	1.00E-07	75	75.2%
E2A7	2.06E-07	2.89E-08	1.77E-07	76	86.0%
E2C	2.05E-07	2.81E-08	1.77E-07	77	86.3%
E2A4	2.82E-07	2.22E-08	2.60E-07	78	92.1%
S3A	8.75E-08	2.10E-08	6.65E-08	79	76.0%
NP3	2.57E-07	2.03E-08	2.36E-07	80	92.1%
S5B	1.46E-07	2.01E-08	1.26E-07	81	86.2%
E3G	1.72E-07	1.93E-08	1.52E-07	82	88.8%
SP7B	1.54E-08	1.54E-08	0.00E+00	83	<0.01%
SP8C	4.80E-08	1.52E-08	3.29E-08	84	68.4%
S5A	8.26E-08	1.23E-08	7.03E-08	85	85.1%
C2D	1.15E-07	5.88E-09	1.09E-07	86	94.9%
E2A6	1.90E-07	3.74E-09	1.86E-07	87	98.0%
E2A5	2.22E-07	3.46E-09	2.19E-07	88	98.4%
NC9B	5.25E-09	2.91E-09	2.34E-09	89	44.5%

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals
 Descending Sort on Incremental Cancer Risk
 Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
NC9D	1.47E-07	1.95E-09	1.45E-07	90	98.7%
W3A	1.27E-07	1.40E-09	1.26E-07	91	98.9%
NC9C	1.08E-07	9.71E-10	1.07E-07	92	99.1%
NC6B	2.53E-09	1.87E-10	2.34E-09	93	92.6%
NC9H	1.40E-07	1.38E-10	1.39E-07	94	99.9%
E1C	2.89E-07	7.77E-11	2.89E-07	95	99.97%
E2A3	3.45E-07	0.00E+00	3.45E-07	1	100.0%
E2A2	2.74E-07	0.00E+00	2.74E-07	2	100.0%
E1B	2.51E-07	0.00E+00	2.51E-07	3	100.0%
E1D	2.41E-07	0.00E+00	2.41E-07	4	100.0%
E3E	2.35E-07	0.00E+00	2.35E-07	5	100.0%
E1A	2.32E-07	0.00E+00	2.32E-07	6	100.0%
E3I	2.31E-07	0.00E+00	2.31E-07	7	100.0%
NP8A	2.27E-07	0.00E+00	2.27E-07	8	100.0%
NP2	2.27E-07	0.00E+00	2.27E-07	9	100.0%
NP4	2.16E-07	0.00E+00	2.16E-07	10	100.0%
NP8B	2.09E-07	0.00E+00	2.09E-07	11	100.0%
E2A1	2.08E-07	0.00E+00	2.08E-07	12	100.0%
E4B	1.96E-07	0.00E+00	1.96E-07	13	100.0%
NP9E	1.96E-07	0.00E+00	1.96E-07	14	100.0%
NC9O	1.89E-07	0.00E+00	1.89E-07	15	100.0%
NP9D	1.86E-07	0.00E+00	1.86E-07	16	100.0%
NC9R	1.84E-07	0.00E+00	1.84E-07	17	100.0%
E3D	1.84E-07	0.00E+00	1.84E-07	18	100.0%
E6B	1.80E-07	0.00E+00	1.80E-07	19	100.0%
E3C	1.78E-07	0.00E+00	1.78E-07	20	100.0%
NC9L	1.77E-07	0.00E+00	1.77E-07	21	100.0%
E4A	1.72E-07	0.00E+00	1.72E-07	22	100.0%
E5	1.72E-07	0.00E+00	1.72E-07	23	100.0%
NC1G	1.64E-07	0.00E+00	1.64E-07	24	100.0%
NC9G	1.64E-07	0.00E+00	1.64E-07	25	100.0%
E6A	1.62E-07	0.00E+00	1.62E-07	26	100.0%
E4C	1.60E-07	0.00E+00	1.60E-07	27	100.0%
W6D	1.58E-07	0.00E+00	1.58E-07	28	100.0%
C2C	1.53E-07	0.00E+00	1.53E-07	29	100.0%
E6D	1.53E-07	0.00E+00	1.53E-07	30	100.0%
W6B	1.51E-07	0.00E+00	1.51E-07	31	100.0%
SP10	1.45E-07	0.00E+00	1.45E-07	32	100.0%
NC9K	1.43E-07	0.00E+00	1.43E-07	33	100.0%
NC9F	1.40E-07	0.00E+00	1.40E-07	34	100.0%
E2B	1.39E-07	0.00E+00	1.39E-07	35	100.0%
NC9E	1.36E-07	0.00E+00	1.36E-07	36	100.0%
NC9J	1.18E-07	0.00E+00	1.18E-07	37	100.0%
NC9P	1.17E-07	0.00E+00	1.17E-07	38	100.0%

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals
 Descending Sort on Incremental Cancer Risk
 Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
E3A	1.13E-07	0.00E+00	1.13E-07	39	100.0%
W7B	1.13E-07	0.00E+00	1.13E-07	40	100.0%
NC9Q	1.04E-07	0.00E+00	1.04E-07	41	100.0%
W5C	1.01E-07	0.00E+00	1.01E-07	42	100.0%
W8E	1.01E-07	0.00E+00	1.01E-07	43	100.0%
W8C	9.28E-08	0.00E+00	9.28E-08	44	100.0%
S5D	8.59E-08	0.00E+00	8.59E-08	45	100.0%
W3D	8.50E-08	0.00E+00	8.50E-08	46	100.0%
NC9M	8.27E-08	0.00E+00	8.27E-08	47	100.0%
NC9I	7.89E-08	0.00E+00	7.89E-08	48	100.0%
W8D	7.34E-08	0.00E+00	7.34E-08	49	100.0%
W8B	7.29E-08	0.00E+00	7.29E-08	50	100.0%
W4B	7.15E-08	0.00E+00	7.15E-08	51	100.0%
W8F	7.10E-08	0.00E+00	7.10E-08	52	100.0%
NC9S	6.91E-08	0.00E+00	6.91E-08	53	100.0%
NP9A	6.37E-08	0.00E+00	6.37E-08	54	100.0%
S5C	6.26E-08	0.00E+00	6.26E-08	55	100.0%
NC9A	6.25E-08	0.00E+00	6.25E-08	56	100.0%
W8A	3.98E-08	0.00E+00	3.98E-08	57	100.0%
W1C	3.88E-08	0.00E+00	3.88E-08	58	100.0%
E3F	3.77E-08	0.00E+00	3.77E-08	59	100.0%
E3J	2.05E-08	0.00E+00	2.05E-08	60	100.0%
C3	0.00E+00	0.00E+00	0.00E+00	1	NA
E3H	0.00E+00	0.00E+00	0.00E+00	2	NA
E3K	0.00E+00	0.00E+00	0.00E+00	3	NA
NC3	0.00E+00	0.00E+00	0.00E+00	4	NA
NC8C	0.00E+00	0.00E+00	0.00E+00	5	NA
NC9N	0.00E+00	0.00E+00	0.00E+00	6	NA
NP1	0.00E+00	0.00E+00	0.00E+00	7	NA
NP7	0.00E+00	0.00E+00	0.00E+00	8	NA
NP9C	0.00E+00	0.00E+00	0.00E+00	9	NA
S1A	0.00E+00	0.00E+00	0.00E+00	10	NA
SP11	0.00E+00	0.00E+00	0.00E+00	11	NA
W1A	0.00E+00	0.00E+00	0.00E+00	12	NA
W1B	0.00E+00	0.00E+00	0.00E+00	13	NA
W1D	0.00E+00	0.00E+00	0.00E+00	14	NA
W1G	0.00E+00	0.00E+00	0.00E+00	15	NA
W3B	0.00E+00	0.00E+00	0.00E+00	16	NA
W4A	0.00E+00	0.00E+00	0.00E+00	17	NA
W5A	0.00E+00	0.00E+00	0.00E+00	18	NA
W5B	0.00E+00	0.00E+00	0.00E+00	19	NA
W5D	0.00E+00	0.00E+00	0.00E+00	20	NA
W6C	0.00E+00	0.00E+00	0.00E+00	21	NA
W6E	0.00E+00	0.00E+00	0.00E+00	22	NA

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals
 Descending Sort on Incremental Cancer Risk
 Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
W7A	0.00E+00	0.00E+00	0.00E+00	23	NA

Program version: Gray Developmental, Smp. Arith. Mean, Models correction
 Database version: Gray-1 parameter revisions, updated, November 30, 1993
 Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean
 Random Seed: 0, Unc. Sample Size: 100
 HHRC Code Source Files: HSSRICO.RDK, HSSRT5CO.RDK

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals
Descending Sort on Incremental Cancer Risk
Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
SP10	1.47E-03	1.47E-03	0.00E+00	1	<0.01 %
SP1E	1.98E-04	1.98E-04	3.00E-07	2	0.2 %
SP1A	1.10E-04	1.10E-04	2.00E-07	3	0.2 %
SP3A	9.85E-05	9.84E-05	7.00E-08	4	0.1 %
SP3B	6.23E-05	6.22E-05	1.30E-07	5	0.2 %
NC3	3.11E-05	3.09E-05	2.10E-07	6	0.7 %
SP8A	1.65E-05	1.63E-05	2.20E-07	7	1.3 %
C1A	1.46E-05	1.44E-05	1.40E-07	8	1.0 %
NC8A	1.17E-05	1.14E-05	2.30E-07	9	2.0 %
NC1B	1.12E-05	1.10E-05	2.10E-07	10	1.9 %
SP4A	1.06E-05	1.04E-05	1.60E-07	11	1.5 %
NC1A	9.90E-06	9.66E-06	2.40E-07	12	2.4 %
SP1D	5.28E-06	5.18E-06	1.03E-07	13	1.9 %
SP12B	5.15E-06	4.99E-06	1.64E-07	14	3.2 %
NP5	4.90E-06	4.59E-06	3.10E-07	15	6.3 %
S2B	4.13E-06	3.97E-06	1.60E-07	16	3.9 %
SP1F	3.15E-06	3.15E-06	0.00E+00	17	<0.01 %
SP3C	3.35E-06	3.15E-06	2.04E-07	18	6.1 %
NC1E	3.07E-06	2.77E-06	2.99E-07	19	9.8 %
S4	2.40E-06	2.23E-06	1.71E-07	20	7.1 %
SP8B	2.14E-06	2.10E-06	3.60E-08	21	1.7 %
NP6	2.23E-06	1.96E-06	2.75E-07	22	12.3 %
NC2A	1.61E-06	1.40E-06	2.12E-07	23	13.2 %
W5D	1.78E-06	1.38E-06	3.99E-07	24	22.4 %
C1B	✓ 1.13E-06	9.63E-07	1.70E-07	25	15.0 %
NC4B	✓ 1.06E-06	9.08E-07	1.51E-07	26	14.2 %
NC5C	9.67E-07	8.45E-07	1.22E-07	27	12.6 %
SP1G	✓ 1.17E-06	8.20E-07	3.50E-07	28	29.9 %
E3B	✓ 1.07E-06	8.10E-07	2.58E-07	29	24.1 %
SP2D	8.64E-07	8.01E-07	6.26E-08	30	7.2 %
S3B	7.99E-07	6.90E-07	1.09E-07	31	13.6 %
SP3E	7.70E-07	6.64E-07	1.06E-07	32	13.8 %
SP9A	7.48E-07	5.82E-07	1.66E-07	33	22.2 %
NC4A	7.28E-07	5.55E-07	1.73E-07	34	23.8 %
SP2A	6.32E-07	5.30E-07	1.02E-07	35	16.1 %
NC5A	6.30E-07	3.83E-07	2.47E-07	36	39.2 %
C1C	8.11E-07	3.74E-07	4.38E-07	37	53.9 %
NC5B	6.09E-07	3.63E-07	2.46E-07	38	40.4 %
SP1C	4.49E-07	3.37E-07	1.12E-07	39	24.9 %
S2A	4.21E-07	3.13E-07	1.08E-07	40	25.7 %
NC6A	3.69E-07	2.50E-07	1.19E-07	41	32.3 %
SP9B	3.84E-07	2.19E-07	1.65E-07	42	43.0 %
NC1F	3.46E-07	2.08E-07	1.38E-07	43	39.9 %
W1E	1.93E-07	1.93E-07	0.00E+00	44	<0.01 %

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals
 Descending Sort on Incremental Cancer Risk
 Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
W1F	2.18E-07	1.88E-07	3.01E-08	45	13.8%
NC2D	3.30E-07	1.67E-07	1.63E-07	46	49.4%
SP3D	2.67E-07	1.57E-07	1.11E-07	47	41.4%
SP4B	2.49E-07	1.43E-07	1.06E-07	48	42.5%
SP11	2.08E-07	1.41E-07	6.70E-08	49	32.2%
NC1C	3.41E-07	1.36E-07	2.05E-07	50	60.1%
W2	2.95E-07	1.35E-07	1.61E-07	51	54.4%
S5E	1.62E-07	1.20E-07	4.21E-08	52	25.9%
SP12	1.88E-07	1.16E-07	7.19E-08	53	38.3%
SP5B	2.38E-07	1.12E-07	1.26E-07	54	53.0%
C1D	2.38E-07	1.08E-07	1.30E-07	55	54.6%
NC2B	2.88E-07	1.04E-07	1.83E-07	56	63.7%
W6A	3.52E-07	9.63E-08	2.56E-07	57	72.7%
E3A	2.44E-07	9.60E-08	1.48E-07	58	60.7%
SP2E	3.09E-07	9.50E-08	2.14E-07	59	69.3%
SP2C	1.35E-07	8.54E-08	4.94E-08	60	36.6%
SP7C	1.55E-07	8.18E-08	7.34E-08	61	47.3%
NC1D	2.25E-07	7.77E-08	1.48E-07	62	65.5%
C4	2.05E-07	7.59E-08	1.29E-07	63	62.9%
SP2B	1.29E-07	7.27E-08	5.58E-08	64	43.4%
NC8B	2.44E-07	5.93E-08	1.84E-07	65	75.7%
NP8C	3.19E-07	5.03E-08	2.68E-07	66	84.2%
C2A	1.62E-07	4.78E-08	1.15E-07	67	70.6%
C2B	1.54E-07	4.76E-08	1.06E-07	68	69.0%
SP1B	1.94E-07	4.69E-08	1.47E-07	69	75.9%
SP5A	1.74E-07	4.48E-08	1.29E-07	70	74.3%
W3C	1.25E-07	3.94E-08	8.59E-08	71	68.5%
SP12A	8.19E-08	3.80E-08	4.40E-08	72	53.7%
S5B	1.73E-07	3.61E-08	1.37E-07	73	79.2%
W5C	1.15E-07	3.59E-08	7.89E-08	74	68.7%
E6C	3.14E-07	3.56E-08	2.78E-07	75	88.7%
SP6	1.78E-07	3.41E-08	1.44E-07	76	80.8%
SP7A	6.92E-08	3.40E-08	3.52E-08	77	50.9%
SP8C	6.68E-08	3.31E-08	3.36E-08	78	50.4%
NC1G	1.68E-07	2.72E-08	1.40E-07	79	83.8%
S2C	1.06E-07	2.61E-08	7.96E-08	80	75.3%
E2C	1.56E-07	2.56E-08	1.31E-07	81	83.6%
NP3	2.52E-07	2.53E-08	2.27E-07	82	90.0%
NC5D	9.52E-08	2.15E-08	7.37E-08	83	77.4%
W1G	5.37E-08	1.95E-08	3.43E-08	84	63.8%
NP9D	2.04E-07	1.91E-08	1.84E-07	85	90.6%
E3G	1.78E-07	1.84E-08	1.60E-07	86	89.7%
SP7B	1.24E-07	1.75E-08	1.06E-07	87	85.9%
E2A7	2.92E-07	1.73E-08	2.75E-07	88	94.1%
W3B	1.06E-07	1.51E-08	9.13E-08	89	85.8%

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals

Descending Sort on Incremental Cancer Risk

Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
E2A4	2.52E-07	1.45E-08	2.38E-07	90	94.2%
C3	1.65E-07	1.40E-08	1.51E-07	91	91.5%
W1B	7.15E-08	1.26E-08	5.89E-08	92	82.4%
NP2	2.48E-07	1.25E-08	2.35E-07	93	94.9%
W4B	9.64E-08	1.14E-08	8.49E-08	94	88.1%
S3A	8.73E-08	9.06E-09	7.82E-08	95	89.6%
NC2C	1.51E-07	7.84E-09	1.43E-07	96	94.8%
E2B	1.57E-07	7.83E-09	1.49E-07	97	95.0%
W1C	5.34E-08	6.50E-09	4.69E-08	98	87.8%
S5A	7.65E-08	6.20E-09	7.03E-08	99	91.9%
E2A5	2.41E-07	4.76E-09	2.36E-07	100	98.0%
NP8B	2.07E-07	4.18E-09	2.03E-07	101	98.0%
E2A6	2.70E-07	3.82E-09	2.66E-07	102	98.6%
W6D	9.44E-08	3.30E-09	9.11E-08	103	96.5%
W7A	6.00E-08	3.29E-09	5.67E-08	104	94.5%
NP9A	1.03E-07	3.06E-09	9.98E-08	105	97.0%
NC9B	5.25E-09	2.91E-09	2.34E-09	106	44.5%
C2C	1.89E-07	2.61E-09	1.86E-07	107	98.6%
E3D	1.91E-07	2.56E-09	1.88E-07	108	98.7%
C2D	1.23E-07	2.44E-09	1.21E-07	109	98.0%
E2A1	2.06E-07	2.36E-09	2.04E-07	110	98.9%
NC9D	1.47E-07	1.95E-09	1.45E-07	111	98.7%
E3C	1.88E-07	1.73E-09	1.86E-07	112	99.1%
NC9C	1.08E-07	9.71E-10	1.07E-07	113	99.1%
E3I	2.49E-07	2.06E-10	2.48E-07	114	99.9%
E2A3	2.91E-07	0.00E+00	2.91E-07	1	100.0%
NP9B	2.89E-07	0.00E+00	2.89E-07	2	100.0%
E1C	2.43E-07	0.00E+00	2.43E-07	3	100.0%
E2A2	2.35E-07	0.00E+00	2.35E-07	4	100.0%
NP9F	2.12E-07	0.00E+00	2.12E-07	5	100.0%
E1B	2.10E-07	0.00E+00	2.10E-07	6	100.0%
E3E	2.03E-07	0.00E+00	2.03E-07	7	100.0%
NP9C	1.98E-07	0.00E+00	1.98E-07	8	100.0%
E6A	1.97E-07	0.00E+00	1.97E-07	9	100.0%
NP4	1.95E-07	0.00E+00	1.95E-07	10	100.0%
NC9R	1.92E-07	0.00E+00	1.92E-07	11	100.0%
E1D	1.88E-07	0.00E+00	1.88E-07	12	100.0%
NP8A	1.88E-07	0.00E+00	1.88E-07	13	100.0%
E1A	1.87E-07	0.00E+00	1.87E-07	14	100.0%
NC9L	1.77E-07	0.00E+00	1.77E-07	15	100.0%
NC9O	1.69E-07	0.00E+00	1.69E-07	16	100.0%
NC9G	1.64E-07	0.00E+00	1.64E-07	17	100.0%
E4B	1.58E-07	0.00E+00	1.58E-07	18	100.0%
W6C	1.55E-07	0.00E+00	1.55E-07	19	100.0%
E6D	1.53E-07	0.00E+00	1.53E-07	20	100.0%

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals
 Descending Sort on Incremental Cancer Risk
 Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
NP9E	1.51E-07	0.00E+00	1.51E-07	21	100.0%
E4C	1.47E-07	0.00E+00	1.47E-07	22	100.0%
NC9P	1.46E-07	0.00E+00	1.46E-07	23	100.0%
NC9H	1.44E-07	0.00E+00	1.44E-07	24	100.0%
E4A	1.43E-07	0.00E+00	1.43E-07	25	100.0%
NC9K	1.43E-07	0.00E+00	1.43E-07	26	100.0%
NC9F	1.40E-07	0.00E+00	1.40E-07	27	100.0%
NP7	1.40E-07	0.00E+00	1.40E-07	28	100.0%
NC9E	1.36E-07	0.00E+00	1.36E-07	29	100.0%
E5	1.34E-07	0.00E+00	1.34E-07	30	100.0%
W8B	1.26E-07	0.00E+00	1.26E-07	31	100.0%
W6B	1.25E-07	0.00E+00	1.25E-07	32	100.0%
W5A	1.22E-07	0.00E+00	1.22E-07	33	100.0%
E6B	1.19E-07	0.00E+00	1.19E-07	34	100.0%
NC9J	1.18E-07	0.00E+00	1.18E-07	35	100.0%
S5D	1.16E-07	0.00E+00	1.16E-07	36	100.0%
W7B	1.10E-07	0.00E+00	1.10E-07	37	100.0%
W1A	1.09E-07	0.00E+00	1.09E-07	38	100.0%
W3D	1.06E-07	0.00E+00	1.06E-07	39	100.0%
W5B	1.02E-07	0.00E+00	1.02E-07	40	100.0%
W8E	1.01E-07	0.00E+00	1.01E-07	41	100.0%
W8C	9.28E-08	0.00E+00	9.28E-08	42	100.0%
W3A	8.98E-08	0.00E+00	8.98E-08	43	100.0%
W6E	8.83E-08	0.00E+00	8.83E-08	44	100.0%
NC9Q	8.30E-08	0.00E+00	8.30E-08	45	100.0%
NC9I	7.89E-08	0.00E+00	7.89E-08	46	100.0%
NC9S	7.45E-08	0.00E+00	7.45E-08	47	100.0%
NC9M	7.45E-08	0.00E+00	7.45E-08	48	100.0%
W8D	7.34E-08	0.00E+00	7.34E-08	49	100.0%
W8F	7.10E-08	0.00E+00	7.10E-08	50	100.0%
S5C	6.26E-08	0.00E+00	6.26E-08	51	100.0%
NC9A	6.25E-08	0.00E+00	6.25E-08	52	100.0%
W4A	5.81E-08	0.00E+00	5.81E-08	53	100.0%
E3F	4.42E-08	0.00E+00	4.42E-08	54	100.0%
W8A	3.96E-08	0.00E+00	3.96E-08	55	100.0%
W1D	3.25E-08	0.00E+00	3.25E-08	56	100.0%
E3J	2.40E-08	0.00E+00	2.40E-08	57	100.0%
NC6B	2.03E-09	0.00E+00	2.03E-09	58	100.0%
E3H	0.00E+00	0.00E+00	0.00E+00	1	NA
E3K	0.00E+00	0.00E+00	0.00E+00	2	NA
NC8C	0.00E+00	0.00E+00	0.00E+00	3	NA
NC9N	0.00E+00	0.00E+00	0.00E+00	4	NA
NP1	0.00E+00	0.00E+00	0.00E+00	5	NA
S1A	0.00E+00	0.00E+00	0.00E+00	6	NA

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals

Descending Sort on Incremental Cancer Risk

Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
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Program version: Gray Developmental, Smp. Arith. Mean, Models correction

Database version: Gray-1 parameter revisions, updated, November 30, 1993

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSRI5C1.RDK, HSSRT5C1.RDK

Table B.4.4-13 Site Hazard Index Summary for Regulated/Casual Visitor, Horizon 0 Page 1 of 4

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals
 Descending Sort on Incremental Hazard Index
 Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
SP3A	2.67E+00	2.66E+00	1.00E-02	1	0.38 %
SP1A	1.54E+00	1.52E+00	1.90E-02	2	1.24 %
SP1E	1.16E+00	1.13E+00	2.10E-02	3	1.82 %
SP3B	6.63E-01	6.41E-01	2.14E-02	4	3.23 %
NC8A	6.48E-01	6.32E-01	1.67E-02	5	2.58 %
SP8A	4.21E-01	4.05E-01	1.63E-02	6	3.87 %
NP4	2.19E-01	1.81E-01	3.86E-02	7	17.61 %
SP4A	2.13E-01	1.77E-01	3.66E-02	8	17.18 %
SP1G	2.26E-01	1.70E-01	5.57E-02	9	24.67 %
NC1A	1.66E-01	1.44E-01	2.14E-02	10	12.93 %
NC1B	1.35E-01	1.19E-01	1.65E-02	11	12.22 %
SP3C	1.33E-01	9.51E-02	3.76E-02	12	28.36 %
S2B	1.12E-01	8.49E-02	2.68E-02	13	24.01 %
NP5	1.09E-01	7.38E-02	3.53E-02	14	32.34 %
SP12B	8.72E-02	5.77E-02	2.95E-02	15	33.82 %
S4	7.02E-02	5.59E-02	1.43E-02	16	20.34 %
SP1D	6.25E-02	5.28E-02	9.68E-03	17	15.50 %
NP6	7.13E-02	4.53E-02	2.61E-02	18	36.54 %
E3G	6.12E-02	3.89E-02	2.23E-02	19	36.40 %
W6A	8.56E-02	3.01E-02	5.55E-02	20	64.84 %
SP1F	2.90E-02	2.86E-02	4.00E-04	21	1.38 %
C1B	4.72E-02	2.59E-02	2.13E-02	22	45.21 %
NP9B	7.76E-02	2.34E-02	5.42E-02	23	69.81 %
SP8B	3.11E-02	2.15E-02	9.60E-03	24	30.84 %
E2A6	5.10E-02	1.78E-02	3.32E-02	25	65.03 %
NC5C	3.17E-02	1.71E-02	1.46E-02	26	46.03 %
SP2D	2.91E-02	1.61E-02	1.30E-02	27	44.71 %
E3B	4.68E-02	1.49E-02	3.19E-02	28	68.15 %
NC4B	3.43E-02	1.40E-02	2.02E-02	29	59.04 %
NC2A	3.36E-02	1.35E-02	2.01E-02	30	59.80 %
E3F	1.36E-02	1.33E-02	3.00E-04	31	2.21 %
SP9A	3.79E-02	1.25E-02	2.54E-02	32	67.02 %
SP3E	2.27E-02	1.07E-02	1.20E-02	33	52.87 %
E2A7	4.14E-02	9.83E-03	3.16E-02	34	76.27 %
C1C	3.01E-02	9.10E-03	2.10E-02	35	69.77 %
NC5B	3.21E-02	8.50E-03	2.36E-02	36	73.54 %
W6D	2.04E-02	8.19E-03	1.22E-02	37	59.75 %
SP1C	1.40E-02	8.08E-03	5.91E-03	38	42.24 %
NC4A	2.54E-02	8.02E-03	1.73E-02	39	68.37 %
E2A5	4.57E-02	6.79E-03	3.90E-02	40	85.16 %
W3C	2.19E-02	6.55E-03	1.53E-02	41	70.02 %
NC5A	3.50E-02	5.99E-03	2.90E-02	42	82.86 %
W1E	5.78E-03	5.78E-03	0.00E+00	43	<0.01 %
C1A	2.38E-02	5.69E-03	1.82E-02	44	76.14 %
SP2A	2.04E-02	5.07E-03	1.54E-02	45	75.17 %
NC2B	2.20E-02	5.02E-03	1.69E-02	46	77.14 %

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals
 Descending Sort on Incremental Hazard Index
 Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
SP9B	3.76E-02	4.39E-03	3.32E-02	47	88.34 %
NC1E	2.37E-02	3.50E-03	2.02E-02	48	85.23 %
E2A4	4.37E-02	3.24E-03	4.04E-02	49	92.58 %
SP2C	9.75E-03	3.23E-03	6.52E-03	50	66.89 %
C4	1.99E-02	3.20E-03	1.67E-02	51	83.97 %
S2A	1.53E-02	3.07E-03	1.22E-02	52	79.93 %
S5E	1.08E-02	2.96E-03	7.85E-03	53	72.65 %
W1F	3.18E-03	2.70E-03	4.81E-04	54	15.11 %
SP3D	1.97E-02	2.67E-03	1.70E-02	55	86.42 %
NC2D	1.94E-02	2.40E-03	1.70E-02	56	87.64 %
NC1C	1.25E-02	2.23E-03	1.02E-02	57	82.12 %
SP5B	2.04E-02	2.01E-03	1.84E-02	58	90.12 %
SP4B	1.48E-02	1.98E-03	1.28E-02	59	86.63 %
SP12	1.64E-02	1.84E-03	1.46E-02	60	88.80 %
W2	1.94E-02	1.80E-03	1.76E-02	61	90.73 %
SP2E	1.80E-02	1.65E-03	1.63E-02	62	90.82 %
C2A	1.69E-02	1.65E-03	1.52E-02	63	90.24 %
SP2B	1.26E-02	1.53E-03	1.11E-02	64	87.87 %
NC6A	1.66E-02	1.52E-03	1.51E-02	65	90.84 %
NC8B	2.87E-02	1.23E-03	2.75E-02	66	95.73 %
SP5A	1.87E-03	1.21E-03	6.60E-04	67	35.29 %
SP12A	1.07E-02	1.03E-03	9.70E-03	68	90.36 %
E6C	3.34E-02	1.03E-03	3.24E-02	69	96.93 %
S2C	1.04E-02	9.99E-04	9.43E-03	70	90.42 %
NC1D	1.74E-02	9.54E-04	1.64E-02	71	94.51 %
NP8C	2.33E-02	8.70E-04	2.24E-02	72	96.26 %
SP6	2.72E-02	8.50E-04	2.63E-02	73	96.87 %
C2B	1.89E-02	8.03E-04	1.81E-02	74	95.75 %
NC1F	1.29E-02	7.62E-04	1.21E-02	75	94.10 %
SP1B	2.46E-02	7.02E-04	2.39E-02	76	97.14 %
NC2C	1.28E-02	5.22E-04	1.23E-02	77	95.93 %
W6E	1.35E-03	5.03E-04	8.44E-04	78	62.67 %
S5C	1.23E-02	4.40E-04	1.18E-02	79	96.41 %
NC5D	1.19E-02	4.37E-04	1.14E-02	80	96.31 %
E6A	2.97E-02	4.28E-04	2.93E-02	81	98.56 %
SP7C	1.08E-02	4.07E-04	1.04E-02	82	96.23 %
S3B	1.29E-02	3.56E-04	1.25E-02	83	97.24 %
S3A	1.22E-02	3.55E-04	1.18E-02	84	97.08 %
SP7A	3.54E-04	3.54E-04	0.00E+00	85	<0.01 %
C1D	1.58E-02	3.36E-04	1.54E-02	86	97.87 %
S5B	2.31E-02	3.09E-04	2.28E-02	87	98.66 %
NP9F	2.35E-02	2.99E-04	2.32E-02	88	98.73 %
E1C	5.15E-02	2.94E-04	5.12E-02	89	99.43 %
E2C	2.31E-02	1.93E-04	2.29E-02	90	99.17 %
NC9B	3.45E-04	1.91E-04	1.54E-04	91	44.55 %
S5A	1.29E-02	1.85E-04	1.27E-02	92	98.56 %
E1B	4.46E-02	1.55E-04	4.45E-02	93	99.65 %

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals

Descending Sort on Incremental Hazard Index

Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
NP3	3.36E-02	1.39E-04	3.34E-02	94	99.59 %
SP7B	1.34E-04	1.34E-04	0.00E+00	95	<0.01 %
NC9D	2.58E-02	1.28E-04	2.56E-02	96	99.50 %
SP8C	6.10E-03	1.24E-04	5.97E-03	97	97.96 %
NP8A	4.08E-02	1.17E-04	4.07E-02	98	99.71 %
W3A	2.24E-02	9.23E-05	2.23E-02	99	99.59 %
E4C	2.89E-02	8.84E-05	2.88E-02	100	99.69 %
NC9C	1.86E-02	6.38E-05	1.86E-02	101	99.66 %
W6B	2.36E-02	4.19E-05	2.35E-02	102	99.82 %
C2D	1.91E-02	4.06E-05	1.91E-02	103	99.79 %
W7B	2.06E-02	3.20E-05	2.06E-02	104	99.85 %
NP1	3.15E-05	2.13E-05	1.02E-05	105	32.26 %
NC9Q	1.90E-02	1.92E-05	1.89E-02	106	99.90 %
NC6B	1.66E-04	1.23E-05	1.54E-04	107	92.59 %
NC9H	1.81E-02	9.05E-06	1.81E-02	108	99.95 %
NC9S	1.25E-02	3.75E-07	1.25E-02	109	99.997 %
E2A3	4.80E-02	0.00E+00	4.80E-02	1	100.00 %
NP2	4.03E-02	0.00E+00	4.03E-02	2	100.00 %
E2A2	3.81E-02	0.00E+00	3.81E-02	3	100.00 %
E3I	3.56E-02	0.00E+00	3.56E-02	4	100.00 %
E1D	3.47E-02	0.00E+00	3.47E-02	5	100.00 %
NP9E	3.46E-02	0.00E+00	3.46E-02	6	100.00 %
E3E	3.42E-02	0.00E+00	3.42E-02	7	100.00 %
E1A	3.34E-02	0.00E+00	3.34E-02	8	100.00 %
NP9D	3.30E-02	0.00E+00	3.30E-02	9	100.00 %
NP8B	3.16E-02	0.00E+00	3.16E-02	10	100.00 %
E2A1	3.09E-02	0.00E+00	3.09E-02	11	100.00 %
NC9G	2.87E-02	0.00E+00	2.87E-02	12	100.00 %
E6D	2.73E-02	0.00E+00	2.73E-02	13	100.00 %
C2C	2.69E-02	0.00E+00	2.69E-02	14	100.00 %
E4B	2.63E-02	0.00E+00	2.63E-02	15	100.00 %
E3D	2.57E-02	0.00E+00	2.57E-02	16	100.00 %
E3C	2.55E-02	0.00E+00	2.55E-02	17	100.00 %
SP10	2.55E-02	0.00E+00	2.55E-02	18	100.00 %
NC9F	2.45E-02	0.00E+00	2.45E-02	19	100.00 %
E6B	2.44E-02	0.00E+00	2.44E-02	20	100.00 %
NC9E	2.44E-02	0.00E+00	2.44E-02	21	100.00 %
E4A	2.43E-02	0.00E+00	2.43E-02	22	100.00 %
E5	2.36E-02	0.00E+00	2.36E-02	23	100.00 %
NC9O	2.27E-02	0.00E+00	2.27E-02	24	100.00 %
NC9R	2.15E-02	0.00E+00	2.15E-02	25	100.00 %
NC9J	2.07E-02	0.00E+00	2.07E-02	26	100.00 %
E2B	1.95E-02	0.00E+00	1.95E-02	27	100.00 %
W8E	1.79E-02	0.00E+00	1.79E-02	28	100.00 %
W5C	1.76E-02	0.00E+00	1.76E-02	29	100.00 %
NC1G	1.75E-02	0.00E+00	1.75E-02	30	100.00 %

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals

Descending Sort on Incremental Hazard Index

Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
E3A	1.69E-02	0.00E+00	1.69E-02	31	100.00 %
W8C	1.66E-02	0.00E+00	1.66E-02	32	100.00 %
S5D	1.59E-02	0.00E+00	1.59E-02	33	100.00 %
NC9L	1.55E-02	0.00E+00	1.55E-02	34	100.00 %
W3D	1.53E-02	0.00E+00	1.53E-02	35	100.00 %
NC9M	1.45E-02	0.00E+00	1.45E-02	36	100.00 %
NC9I	1.38E-02	0.00E+00	1.38E-02	37	100.00 %
W8D	1.31E-02	0.00E+00	1.31E-02	38	100.00 %
W8B	1.31E-02	0.00E+00	1.31E-02	39	100.00 %
W4B	1.27E-02	0.00E+00	1.27E-02	40	100.00 %
NC9K	1.26E-02	0.00E+00	1.26E-02	41	100.00 %
W8F	1.25E-02	0.00E+00	1.25E-02	42	100.00 %
NC9P	1.24E-02	0.00E+00	1.24E-02	43	100.00 %
NP9A	1.20E-02	0.00E+00	1.20E-02	44	100.00 %
NC9A	1.09E-02	0.00E+00	1.09E-02	45	100.00 %
W8A	7.19E-03	0.00E+00	7.19E-03	46	100.00 %
W1C	6.99E-03	0.00E+00	6.99E-03	47	100.00 %
NC9N	3.65E-04	0.00E+00	3.65E-04	48	100.00 %
W4A	2.93E-04	0.00E+00	2.93E-04	49	100.00 %
W5D	2.04E-04	0.00E+00	2.04E-04	50	100.00 %
E3J	1.63E-04	0.00E+00	1.63E-04	51	100.00 %
C3	0.00E+00	0.00E+00	0.00E+00	1	NA
E3H	0.00E+00	0.00E+00	0.00E+00	2	NA
E3K	0.00E+00	0.00E+00	0.00E+00	3	NA
NC3	0.00E+00	0.00E+00	0.00E+00	4	NA
NC8C	0.00E+00	0.00E+00	0.00E+00	5	NA
NP7	0.00E+00	0.00E+00	0.00E+00	6	NA
NP9C	0.00E+00	0.00E+00	0.00E+00	7	NA
S1A	0.00E+00	0.00E+00	0.00E+00	8	NA
SP11	0.00E+00	0.00E+00	0.00E+00	9	NA
W1A	0.00E+00	0.00E+00	0.00E+00	10	NA
W1B	0.00E+00	0.00E+00	0.00E+00	11	NA
W1D	0.00E+00	0.00E+00	0.00E+00	12	NA
W1G	0.00E+00	0.00E+00	0.00E+00	13	NA
W3B	0.00E+00	0.00E+00	0.00E+00	14	NA
W5A	0.00E+00	0.00E+00	0.00E+00	15	NA
W5B	0.00E+00	0.00E+00	0.00E+00	16	NA
W6C	0.00E+00	0.00E+00	0.00E+00	17	NA
W7A	0.00E+00	0.00E+00	0.00E+00	18	NA

Program version: Gray Developmental, Smp. Arith. Mean, Models correction

Database version: Gray-1 parameter revisions, updated, November 30, 1993

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSRI5H0.RDK, HSSRT5H0.RDK

Table B.4.4-14 Site Hazard Index Summary for Regulated/Casual Visitor, Horizon 1 Page 1 of 4

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals
 Descending Sort on Incremental Hazard Index
 Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
SP10	2.15E+01	2.15E+01	1.00E-02	1	0.05 %
SP1A	2.78E+00	2.76E+00	1.90E-02	2	0.68 %
SP1E	2.21E+00	2.18E+00	3.30E-02	3	1.49 %
SP3A	1.29E+00	1.28E+00	1.20E-02	4	0.93 %
NC3	9.69E-01	9.44E-01	2.46E-02	5	2.54 %
SP3B	7.57E-01	7.38E-01	1.90E-02	6	2.51 %
C1A	3.20E-01	3.03E-01	1.68E-02	7	5.25 %
SP8A	3.02E-01	2.85E-01	1.70E-02	8	5.62 %
SP2A	2.71E-01	2.58E-01	1.33E-02	9	4.91 %
W5D	2.90E-01	2.35E-01	5.58E-02	10	19.22 %
NC1B	1.61E-01	1.45E-01	1.57E-02	11	9.75 %
SP2B	1.55E-01	1.45E-01	1.00E-02	12	6.46 %
NC1A	1.51E-01	1.30E-01	2.12E-02	13	14.02 %
NC8A	1.42E-01	1.23E-01	1.92E-02	14	13.52 %
SP4A	1.28E-01	1.02E-01	2.58E-02	15	20.22 %
NP4	1.36E-01	1.01E-01	3.46E-02	16	25.48 %
C1B	1.07E-01	8.70E-02	1.97E-02	17	18.46 %
SP1G	1.26E-01	7.07E-02	5.54E-02	18	43.90 %
SP12B	8.73E-02	5.78E-02	2.95E-02	19	33.80 %
SP1D	6.25E-02	5.28E-02	9.67E-03	20	15.47 %
C1C	1.04E-01	4.74E-02	5.62E-02	21	54.21 %
SP3E	6.63E-02	4.69E-02	1.94E-02	22	29.19 %
S2B	6.49E-02	4.09E-02	2.39E-02	23	36.88 %
NP5	7.00E-02	3.65E-02	3.35E-02	24	47.89 %
SP3C	6.68E-02	3.34E-02	3.33E-02	25	49.91 %
S2A	4.39E-02	3.09E-02	1.30E-02	26	29.53 %
SP1F	3.06E-02	3.02E-02	4.10E-04	27	1.34 %
SP5B	4.65E-02	2.90E-02	1.75E-02	28	37.55 %
NP6	5.43E-02	2.66E-02	2.76E-02	29	50.91 %
NC1E	5.66E-02	2.48E-02	3.18E-02	30	56.22 %
S4	3.71E-02	2.07E-02	1.64E-02	31	44.17 %
E3G	4.32E-02	2.02E-02	2.31E-02	32	53.34 %
E3A	4.09E-02	1.98E-02	2.11E-02	33	51.67 %
SP4B	2.97E-02	1.65E-02	1.31E-02	34	44.23 %
SP8B	2.29E-02	1.63E-02	6.63E-03	35	28.90 %
W2	3.86E-02	1.53E-02	2.33E-02	36	60.42 %
NC2A	3.41E-02	1.38E-02	2.03E-02	37	59.49 %
SP2E	4.07E-02	1.14E-02	2.93E-02	38	72.05 %
C4	2.51E-02	9.67E-03	1.54E-02	39	61.49 %
NC4B	2.88E-02	9.24E-03	1.96E-02	40	67.93 %
E2A6	4.61E-02	9.24E-03	3.68E-02	41	79.95 %
SP2D	1.99E-02	8.92E-03	1.10E-02	42	55.18 %
E2A7	4.57E-02	8.23E-03	3.75E-02	43	81.99 %
NC5C	2.45E-02	8.01E-03	1.65E-02	44	67.29 %
SP12A	1.58E-02	7.94E-03	7.88E-03	45	49.82 %
E2A4	4.58E-02	7.37E-03	3.85E-02	46	83.93 %

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals
 Descending Sort on Incremental Hazard Index
 Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
SP9A	3.07E-02	7.36E-03	2.34E-02	47	76.05 %
S3B	2.09E-02	7.27E-03	1.37E-02	48	65.27 %
NC4A	3.19E-02	6.96E-03	2.49E-02	49	78.14 %
E3F	7.00E-03	6.64E-03	3.51E-04	50	5.02 %
E3B	3.09E-02	6.58E-03	2.43E-02	51	78.70 %
NC1F	2.15E-02	6.51E-03	1.50E-02	52	69.70 %
W1E	5.52E-03	5.52E-03	0.00E+00	53	<0.01 %
NC5B	2.75E-02	5.10E-03	2.24E-02	54	81.46 %
SP3D	2.48E-02	5.01E-03	1.98E-02	55	79.77 %
NC6A	2.06E-02	4.55E-03	1.61E-02	56	77.96 %
W6A	4.60E-02	4.41E-03	4.16E-02	57	90.42 %
SP9B	3.04E-02	4.16E-03	2.63E-02	58	86.32 %
NC1D	1.95E-02	3.65E-03	1.58E-02	59	81.25 %
SP1C	1.64E-02	3.59E-03	1.28E-02	60	78.17 %
NC5A	2.61E-02	3.51E-03	2.26E-02	61	86.53 %
NC2B	1.97E-02	2.63E-03	1.70E-02	62	86.61 %
W6D	1.09E-02	2.27E-03	8.64E-03	63	79.22 %
SP2C	1.09E-02	2.05E-03	8.81E-03	64	81.12 %
E2A5	3.35E-02	2.04E-03	3.14E-02	65	93.90 %
W3C	1.72E-02	2.02E-03	1.52E-02	66	88.29 %
S5E	9.67E-03	1.81E-03	7.85E-03	67	81.25 %
SP11	9.83E-03	1.48E-03	8.35E-03	68	84.92 %
C1D	1.81E-02	1.47E-03	1.66E-02	69	91.91 %
SP7C	1.06E-02	1.45E-03	9.12E-03	70	86.32 %
W1F	6.94E-03	1.41E-03	5.53E-03	71	79.73 %
NC2D	1.86E-02	1.38E-03	1.73E-02	72	92.60 %
NC1C	1.63E-02	1.29E-03	1.50E-02	73	92.08 %
S5B	2.25E-02	1.02E-03	2.15E-02	74	95.49 %
NC8B	2.61E-02	9.47E-04	2.51E-02	75	96.37 %
W6E	1.16E-02	8.64E-04	1.08E-02	76	92.57 %
SP12	1.36E-02	8.57E-04	1.28E-02	77	93.71 %
S2C	1.03E-02	8.54E-04	9.44E-03	78	91.70 %
C2A	1.61E-02	8.35E-04	1.52E-02	79	94.80 %
SP6	2.28E-02	6.64E-04	2.21E-02	80	97.09 %
C2B	1.95E-02	6.40E-04	1.89E-02	81	96.72 %
SP1B	2.14E-02	4.63E-04	2.09E-02	82	97.84 %
S5C	1.23E-02	4.40E-04	1.18E-02	83	96.41 %
E6C	2.86E-02	4.10E-04	2.82E-02	84	98.57 %
NP8C	2.66E-02	3.91E-04	2.62E-02	85	98.53 %
W1B	1.07E-02	3.38E-04	1.03E-02	86	96.83 %
W5C	1.41E-02	3.20E-04	1.38E-02	87	97.74 %
SP5A	1.87E-02	3.17E-04	1.84E-02	88	98.30 %
SP8C	6.35E-03	2.74E-04	6.08E-03	89	95.69 %
NC2C	1.59E-02	2.73E-04	1.56E-02	90	98.28 %
S3A	1.42E-02	2.63E-04	1.40E-02	91	98.15 %
SP7A	6.40E-03	2.33E-04	6.16E-03	92	96.35 %
NC5D	1.32E-02	2.19E-04	1.30E-02	93	98.34 %

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals

Descending Sort on Incremental Hazard Index

Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
NP3	3.43E-02	2.02E-04	3.41E-02	94	99.41 %
SP7B	1.22E-02	1.98E-04	1.20E-02	95	98.38 %
NC9B	3.45E-04	1.91E-04	1.54E-04	96	44.55 %
NC1G	1.61E-02	1.87E-04	1.59E-02	97	98.84 %
E3D	2.60E-02	1.81E-04	2.58E-02	98	99.30 %
E2C	1.60E-02	1.77E-04	1.59E-02	99	98.90 %
W1G	6.19E-03	1.73E-04	6.01E-03	100	97.20 %
C3	2.04E-02	1.51E-04	2.03E-02	101	99.26 %
W3B	1.64E-02	1.34E-04	1.62E-02	102	99.18 %
NC9D	2.58E-02	1.28E-04	2.56E-02	103	99.50 %
W4B	1.52E-02	1.04E-04	1.51E-02	104	99.32 %
NP2	3.70E-02	9.96E-05	3.69E-02	105	99.73 %
S5A	1.28E-02	9.34E-05	1.27E-02	106	99.27 %
NC9C	1.86E-02	6.38E-05	1.86E-02	107	99.66 %
W1C	8.43E-03	5.77E-05	8.37E-03	108	99.32 %
E2B	2.13E-02	4.25E-05	2.12E-02	109	99.80 %
NP8B	3.07E-02	3.93E-05	3.07E-02	110	99.87 %
W7A	1.02E-02	2.92E-05	1.02E-02	111	99.71 %
C2C	2.63E-02	2.31E-05	2.62E-02	112	99.91 %
C2D	2.12E-02	1.70E-05	2.12E-02	113	99.92 %
W7B	1.97E-02	1.22E-05	1.97E-02	114	99.94 %
W6B	1.91E-02	7.15E-06	1.91E-02	115	99.96 %
NP1	1.22E-05	2.03E-06	1.02E-05	116	83.33 %
NP9B	4.64E-02	0.00E+00	4.64E-02	1	100.00 %
E2A3	4.09E-02	0.00E+00	4.09E-02	2	100.00 %
E3I	3.71E-02	0.00E+00	3.71E-02	3	100.00 %
E1C	3.61E-02	0.00E+00	3.61E-02	4	100.00 %
E2A2	3.45E-02	0.00E+00	3.45E-02	5	100.00 %
NP8A	3.34E-02	0.00E+00	3.34E-02	6	100.00 %
NP9D	3.26E-02	0.00E+00	3.26E-02	7	100.00 %
E6A	3.17E-02	0.00E+00	3.17E-02	8	100.00 %
E1B	3.09E-02	0.00E+00	3.09E-02	9	100.00 %
E2A1	2.89E-02	0.00E+00	2.89E-02	10	100.00 %
NC9G	2.87E-02	0.00E+00	2.87E-02	11	100.00 %
E3E	2.77E-02	0.00E+00	2.77E-02	12	100.00 %
NP9C	2.74E-02	0.00E+00	2.74E-02	13	100.00 %
E6D	2.73E-02	0.00E+00	2.73E-02	14	100.00 %
NP9E	2.66E-02	0.00E+00	2.66E-02	15	100.00 %
E3C	2.65E-02	0.00E+00	2.65E-02	16	100.00 %
E1A	2.64E-02	0.00E+00	2.64E-02	17	100.00 %
E1D	2.64E-02	0.00E+00	2.64E-02	18	100.00 %
E4C	2.63E-02	0.00E+00	2.63E-02	19	100.00 %
NC9F	2.45E-02	0.00E+00	2.45E-02	20	100.00 %
NP7	2.45E-02	0.00E+00	2.45E-02	21	100.00 %
NC9E	2.44E-02	0.00E+00	2.44E-02	22	100.00 %
W6C	2.31E-02	0.00E+00	2.31E-02	23	100.00 %

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals

Descending Sort on Incremental Hazard Index

Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
NP9F	2.29E-02	0.00E+00	2.29E-02	24	100.00 %
NC9R	2.27E-02	0.00E+00	2.27E-02	25	100.00 %
NC9O	2.26E-02	0.00E+00	2.26E-02	26	100.00 %
W8B	2.24E-02	0.00E+00	2.24E-02	27	100.00 %
E4B	2.09E-02	0.00E+00	2.09E-02	28	100.00 %
S5D	2.09E-02	0.00E+00	2.09E-02	29	100.00 %
NC9J	2.07E-02	0.00E+00	2.07E-02	30	100.00 %
E4A	1.91E-02	0.00E+00	1.91E-02	31	100.00 %
W3D	1.88E-02	0.00E+00	1.88E-02	32	100.00 %
W5B	1.87E-02	0.00E+00	1.87E-02	33	100.00 %
E5	1.86E-02	0.00E+00	1.86E-02	34	100.00 %
NC9H	1.83E-02	0.00E+00	1.83E-02	35	100.00 %
W5A	1.83E-02	0.00E+00	1.83E-02	36	100.00 %
W8E	1.79E-02	0.00E+00	1.79E-02	37	100.00 %
NP9A	1.79E-02	0.00E+00	1.79E-02	38	100.00 %
W8C	1.66E-02	0.00E+00	1.66E-02	39	100.00 %
W3A	1.59E-02	0.00E+00	1.59E-02	40	100.00 %
NC9L	1.55E-02	0.00E+00	1.55E-02	41	100.00 %
W1A	1.54E-02	0.00E+00	1.54E-02	42	100.00 %
E6B	1.53E-02	0.00E+00	1.53E-02	43	100.00 %
NC9Q	1.50E-02	0.00E+00	1.50E-02	44	100.00 %
NC9P	1.39E-02	0.00E+00	1.39E-02	45	100.00 %
NC9I	1.38E-02	0.00E+00	1.38E-02	46	100.00 %
NC9S	1.34E-02	0.00E+00	1.34E-02	47	100.00 %
W8D	1.31E-02	0.00E+00	1.31E-02	48	100.00 %
NC9M	1.31E-02	0.00E+00	1.31E-02	49	100.00 %
NC9K	1.26E-02	0.00E+00	1.26E-02	50	100.00 %
W8F	1.25E-02	0.00E+00	1.25E-02	51	100.00 %
NC9A	1.09E-02	0.00E+00	1.09E-02	52	100.00 %
W4A	1.04E-02	0.00E+00	1.04E-02	53	100.00 %
W8A	7.15E-03	0.00E+00	7.15E-03	54	100.00 %
W1D	5.69E-03	0.00E+00	5.69E-03	55	100.00 %
NC9N	3.65E-04	0.00E+00	3.65E-04	56	100.00 %
NC6B	2.90E-04	0.00E+00	2.90E-04	57	100.00 %
E3J	1.91E-04	0.00E+00	1.91E-04	58	100.00 %
E3H	0.00E+00	0.00E+00	0.00E+00	1	NA
E3K	0.00E+00	0.00E+00	0.00E+00	2	NA
NC8C	0.00E+00	0.00E+00	0.00E+00	3	NA
S1A	0.00E+00	0.00E+00	0.00E+00	4	NA

Program version: Gray Developmental, Smp. Arith. Mean, Models correction

Database version: Gray-1 parameter revisions, updated, November 30, 1993

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSRI5H1.RDK, HSSRT5H1.RDK

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals
 Descending Sort on Incremental Cancer Risk
 Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
SP3A	8.40E-04	8.40E-04	2.00E-07	1	<0.01%
SP1A	5.25E-04	5.24E-04	7.00E-07	2	0.1%
NC8A	2.71E-04	2.71E-04	7.00E-07	3	0.3%
SP3B	2.49E-04	2.49E-04	7.00E-07	4	0.3%
SP1E	1.77E-04	1.76E-04	8.00E-07	5	0.5%
SP8A	1.69E-04	1.69E-04	8.00E-07	6	0.5%
SP4A	7.34E-05	7.25E-05	9.00E-07	7	1.2%
NC1A	4.83E-05	4.75E-05	8.50E-07	8	1.8%
SP3C	3.98E-05	3.90E-05	8.40E-07	9	2.1%
S2B	3.68E-05	3.61E-05	7.30E-07	10	2.0%
S4	3.21E-05	3.15E-05	6.70E-07	11	2.1%
NP5	2.94E-05	2.82E-05	1.15E-06	12	3.9%
NC1B	2.48E-05	2.41E-05	7.30E-07	13	2.9%
SP1D	2.09E-05	2.05E-05	3.70E-07	14	1.8%
SP12B	2.03E-05	1.96E-05	6.60E-07	15	3.3%
NP6	1.83E-05	1.73E-05	9.40E-07	16	5.2%
SP1F	1.45E-05	1.45E-05	0.00E+00	17	<0.01%
SP8B	1.28E-05	1.26E-05	2.10E-07	18	1.6%
NC5C	8.78E-06	8.35E-06	4.33E-07	19	4.9%
NC2A	8.14E-06	7.33E-06	8.12E-07	20	10.0%
SP1G	8.65E-06	7.19E-06	1.46E-06	21	16.9%
C1B	7.37E-06	6.62E-06	7.42E-07	22	10.1%
SP9A	7.15E-06	6.45E-06	7.04E-07	23	9.8%
NC4B	6.80E-06	6.23E-06	5.69E-07	24	8.4%
SP2D	5.92E-06	5.62E-06	2.98E-07	25	5.0%
E3B	6.67E-06	5.58E-06	1.08E-06	26	16.2%
SP3E	5.58E-06	5.32E-06	2.63E-07	27	4.7%
SP1C	4.33E-06	4.19E-06	1.35E-07	28	3.1%
NC4A	4.26E-06	3.87E-06	3.86E-07	29	9.1%
NC5B	3.84E-06	2.95E-06	8.91E-07	30	23.2%
C1A	3.02E-06	2.47E-06	5.57E-07	31	18.4%
NC5A	3.31E-06	2.29E-06	1.01E-06	32	30.6%
W1E	1.90E-06	1.90E-06	0.00E+00	33	<0.01%
W1F	1.64E-06	1.64E-06	0.00E+00	34	<0.01%
NC1E	2.38E-06	1.57E-06	8.15E-07	35	34.2%
SP9B	2.34E-06	1.52E-06	8.24E-07	36	35.2%
SP3D	1.82E-06	1.44E-06	3.75E-07	37	20.6%
SP2A	1.72E-06	1.29E-06	4.32E-07	38	25.2%
C1C	2.12E-06	1.28E-06	8.36E-07	39	39.5%
NC2D	1.93E-06	1.26E-06	6.71E-07	40	34.7%
S2A	1.50E-06	1.23E-06	2.74E-07	41	18.2%
SP12	1.51E-06	1.18E-06	3.26E-07	42	21.6%
W2	1.44E-06	1.05E-06	3.96E-07	43	27.4%
SP4B	1.42E-06	1.04E-06	3.80E-07	44	26.9%
NC2B	1.75E-06	1.02E-06	7.31E-07	45	41.7%
S5E	1.14E-06	9.70E-07	1.69E-07	46	14.8%

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals

Descending Sort on Incremental Cancer Risk

Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
W6A	2.26E-06	8.91E-07	1.37E-06	47	60.6%
SP2E	1.32E-06	8.33E-07	4.85E-07	48	36.8%
NC6A	1.25E-06	8.22E-07	4.24E-07	49	34.1%
SP5A	9.34E-07	7.86E-07	1.49E-07	50	15.9%
SP5B	1.25E-06	7.54E-07	4.96E-07	51	39.6%
SP2C	8.53E-07	7.09E-07	1.44E-07	52	16.9%
C4	1.15E-06	6.42E-07	5.11E-07	53	44.3%
C2A	1.06E-06	6.23E-07	4.34E-07	54	41.1%
NC1C	1.15E-06	5.62E-07	5.90E-07	55	51.2%
NP9B	1.77E-06	5.36E-07	1.24E-06	56	69.8%
NC8B	1.21E-06	4.22E-07	7.83E-07	57	64.9%
W3C	7.37E-07	4.00E-07	3.36E-07	58	45.7%
C2B	7.74E-07	3.69E-07	4.05E-07	59	52.4%
NP8C	1.23E-06	3.63E-07	8.67E-07	60	70.5%
SP2B	5.94E-07	3.46E-07	2.47E-07	61	41.7%
E6C	1.42E-06	3.32E-07	1.08E-06	62	76.6%
SP6	9.74E-07	3.23E-07	6.51E-07	63	66.8%
NC1D	8.65E-07	3.04E-07	5.61E-07	64	64.9%
NC1F	7.29E-07	3.03E-07	4.26E-07	65	58.4%
SP12A	5.08E-07	2.93E-07	2.16E-07	66	42.4%
SP7A	2.38E-07	2.38E-07	0.00E+00	67	<0.01%
C1D	6.85E-07	2.26E-07	4.59E-07	68	67.0%
S2C	5.58E-07	2.21E-07	3.37E-07	69	60.5%
SP7C	5.15E-07	2.07E-07	3.08E-07	70	59.8%
NC5D	4.43E-07	1.81E-07	2.62E-07	71	59.1%
S3B	5.29E-07	1.57E-07	3.72E-07	72	70.2%
SP1B	7.76E-07	1.55E-07	6.21E-07	73	80.1%
NC2C	5.80E-07	1.40E-07	4.39E-07	74	75.8%
E2C	7.90E-07	1.30E-07	6.60E-07	75	83.6%
E2A7	8.25E-07	1.16E-07	7.09E-07	76	85.9%
NP9F	1.01E-06	1.15E-07	8.92E-07	77	88.6%
S3A	3.63E-07	9.63E-08	2.66E-07	78	73.5%
S5B	5.98E-07	9.41E-08	5.04E-07	79	84.3%
NP3	9.91E-07	9.32E-08	8.97E-07	80	90.6%
E2A4	1.10E-06	9.31E-08	1.01E-06	81	91.6%
E3G	6.77E-07	9.24E-08	5.85E-07	82	86.4%
SP8C	2.01E-07	6.95E-08	1.32E-07	83	65.4%
SP7B	6.80E-08	6.80E-08	0.00E+00	84	<0.01%
S5A	3.43E-07	6.08E-08	2.82E-07	85	82.2%
C2D	4.64E-07	2.71E-08	4.37E-07	86	94.2%
E2A6	7.60E-07	1.51E-08	7.45E-07	87	98.0%
E2A5	8.91E-07	1.39E-08	8.77E-07	88	98.4%
NC9B	2.12E-08	1.18E-08	9.44E-09	89	44.5%
NC9D	5.90E-07	7.89E-09	5.82E-07	90	98.7%
W3A	5.11E-07	5.67E-09	5.05E-07	91	98.9%
NC9C	4.34E-07	3.92E-09	4.30E-07	92	99.1%

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals

Descending Sort on Incremental Cancer Risk

Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
NC6B	1.02E-08	7.55E-10	9.44E-09	93	92.6%
NC9H	5.21E-07	5.56E-10	5.21E-07	94	99.9%
E1C	1.16E-06	3.14E-10	1.16E-06	95	99.9%
E2A3	1.31E-06	0.00E+00	1.31E-06	1	100.0%
E2A2	1.04E-06	0.00E+00	1.04E-06	2	100.0%
E1B	1.00E-06	0.00E+00	1.00E-06	3	100.0%
E1D	9.19E-07	0.00E+00	9.19E-07	4	100.0%
NP8A	9.10E-07	0.00E+00	9.10E-07	5	100.0%
NP2	9.07E-07	0.00E+00	9.07E-07	6	100.0%
E3E	9.01E-07	0.00E+00	9.01E-07	7	100.0%
E3I	8.93E-07	0.00E+00	8.93E-07	8	100.0%
E1A	8.87E-07	0.00E+00	8.87E-07	9	100.0%
NP4	8.67E-07	0.00E+00	8.67E-07	10	100.0%
NP8B	8.06E-07	0.00E+00	8.06E-07	11	100.0%
E2A1	7.97E-07	0.00E+00	7.97E-07	12	100.0%
NP9E	7.83E-07	0.00E+00	7.83E-07	13	100.0%
NP9D	7.43E-07	0.00E+00	7.43E-07	14	100.0%
E4B	7.37E-07	0.00E+00	7.37E-07	15	100.0%
NC9O	6.96E-07	0.00E+00	6.96E-07	16	100.0%
E3D	6.95E-07	0.00E+00	6.95E-07	17	100.0%
E6B	6.80E-07	0.00E+00	6.80E-07	18	100.0%
E3C	6.77E-07	0.00E+00	6.77E-07	19	100.0%
NC9R	6.72E-07	0.00E+00	6.72E-07	20	100.0%
NC9G	6.56E-07	0.00E+00	6.56E-07	21	100.0%
E4A	6.54E-07	0.00E+00	6.54E-07	22	100.0%
E5	6.52E-07	0.00E+00	6.52E-07	23	100.0%
E6A	6.50E-07	0.00E+00	6.50E-07	24	100.0%
E4C	6.41E-07	0.00E+00	6.41E-07	25	100.0%
NC9L	6.20E-07	0.00E+00	6.20E-07	26	100.0%
C2C	6.15E-07	0.00E+00	6.15E-07	27	100.0%
E6D	6.13E-07	0.00E+00	6.13E-07	28	100.0%
NC1G	5.92E-07	0.00E+00	5.92E-07	29	100.0%
W6B	5.84E-07	0.00E+00	5.84E-07	30	100.0%
SP10	5.82E-07	0.00E+00	5.82E-07	31	100.0%
NC9F	5.60E-07	0.00E+00	5.60E-07	32	100.0%
NC9E	5.45E-07	0.00E+00	5.45E-07	33	100.0%
W6D	5.41E-07	0.00E+00	5.41E-07	34	100.0%
E2B	5.25E-07	0.00E+00	5.25E-07	35	100.0%
NC9K	5.01E-07	0.00E+00	5.01E-07	36	100.0%
NC9J	4.74E-07	0.00E+00	4.74E-07	37	100.0%
W7B	4.52E-07	0.00E+00	4.52E-07	38	100.0%
E3A	4.36E-07	0.00E+00	4.36E-07	39	100.0%
NC9P	4.19E-07	0.00E+00	4.19E-07	40	100.0%
NC9Q	4.16E-07	0.00E+00	4.16E-07	41	100.0%
W5C	4.03E-07	0.00E+00	4.03E-07	42	100.0%
W8E	4.03E-07	0.00E+00	4.03E-07	43	100.0%
W8C	3.72E-07	0.00E+00	3.72E-07	44	100.0%

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals
 Descending Sort on Incremental Cancer Risk
 Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
S5D	3.44E-07	0.00E+00	3.44E-07	45	100.0%
W3D	3.41E-07	0.00E+00	3.41E-07	46	100.0%
NC9M	3.31E-07	0.00E+00	3.31E-07	47	100.0%
NC9I	3.16E-07	0.00E+00	3.16E-07	48	100.0%
W8D	2.94E-07	0.00E+00	2.94E-07	49	100.0%
W8B	2.92E-07	0.00E+00	2.92E-07	50	100.0%
W4B	2.86E-07	0.00E+00	2.86E-07	51	100.0%
W8F	2.85E-07	0.00E+00	2.85E-07	52	100.0%
NC9S	2.77E-07	0.00E+00	2.77E-07	53	100.0%
NP9A	2.55E-07	0.00E+00	2.55E-07	54	100.0%
S5C	2.51E-07	0.00E+00	2.51E-07	55	100.0%
NC9A	2.50E-07	0.00E+00	2.50E-07	56	100.0%
W8A	1.59E-07	0.00E+00	1.59E-07	57	100.0%
W1C	1.56E-07	0.00E+00	1.56E-07	58	100.0%
E3F	1.15E-07	0.00E+00	1.15E-07	59	100.0%
E3J	6.24E-08	0.00E+00	6.24E-08	60	100.0%
C3	0.00E+00	0.00E+00	0.00E+00	1	NA
E3H	0.00E+00	0.00E+00	0.00E+00	2	NA
E3K	0.00E+00	0.00E+00	0.00E+00	3	NA
NC3	0.00E+00	0.00E+00	0.00E+00	4	NA
NC8C	0.00E+00	0.00E+00	0.00E+00	5	NA
NC9N	0.00E+00	0.00E+00	0.00E+00	6	NA
NP1	0.00E+00	0.00E+00	0.00E+00	7	NA
NP7	0.00E+00	0.00E+00	0.00E+00	8	NA
NP9C	0.00E+00	0.00E+00	0.00E+00	9	NA
S1A	0.00E+00	0.00E+00	0.00E+00	10	NA
SP11	0.00E+00	0.00E+00	0.00E+00	11	NA
W1A	0.00E+00	0.00E+00	0.00E+00	12	NA
W1B	0.00E+00	0.00E+00	0.00E+00	13	NA
W1D	0.00E+00	0.00E+00	0.00E+00	14	NA
W1G	0.00E+00	0.00E+00	0.00E+00	15	NA
W3B	0.00E+00	0.00E+00	0.00E+00	16	NA
W4A	0.00E+00	0.00E+00	0.00E+00	17	NA
W5A	0.00E+00	0.00E+00	0.00E+00	18	NA
W5B	0.00E+00	0.00E+00	0.00E+00	19	NA
W5D	0.00E+00	0.00E+00	0.00E+00	20	NA
W6C	0.00E+00	0.00E+00	0.00E+00	21	NA
W6E	0.00E+00	0.00E+00	0.00E+00	22	NA
W7A	0.00E+00	0.00E+00	0.00E+00	23	NA

Program version: Gray Developmental, Smp. Arith. Mean, Models correction
 Database version: Gray-1 parameter revisions, updated, November 30, 1993
 Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean
 Random Seed: 0, Unc. Sample Size: 100
 HHRC Code Source Files: HSSRI5CO.IDK, HSSRT5CO.IDK

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals
 Descending Sort on Incremental Cancer Risk
 Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
SP10	1.90E-02	1.90E-02	0.00E+00	1	<0.01%
SP3A	7.07E-03	7.07E-03	0.00E+00	2	<0.01%
SP3B	4.77E-03	4.77E-03	0.00E+00	3	<0.01%
SP1A	3.69E-03	3.69E-03	1.00E-06	4	<0.01%
NC3	1.71E-03	1.71E-03	1.00E-06	5	0.1%
SP1E	6.76E-04	6.75E-04	1.10E-06	6	0.2%
SP4A	6.62E-04	6.61E-04	6.00E-07	7	0.1%
SP8A	6.14E-04	6.13E-04	8.00E-07	8	0.1%
NC1B	6.09E-04	6.08E-04	8.00E-07	9	0.1%
NC8A	3.95E-04	3.94E-04	8.00E-07	10	0.2%
SP1D	3.88E-04	3.88E-04	4.00E-07	11	0.1%
SP12B	3.83E-04	3.83E-04	7.00E-07	12	0.2%
C1A	3.47E-04	3.46E-04	5.00E-07	13	0.1%
S2B	2.29E-04	2.29E-04	7.00E-07	14	0.3%
NC1A	2.18E-04	2.17E-04	9.00E-07	15	0.4%
SP3C	1.98E-04	1.97E-04	8.00E-07	16	0.4%
SP1F	8.68E-05	8.68E-05	0.00E+00	17	<0.01%
S4	7.77E-05	7.71E-05	6.00E-07	18	0.8%
SP8B	7.04E-05	7.02E-05	1.50E-07	19	0.2%
SP2D	6.21E-05	6.19E-05	2.50E-07	20	0.4%
NC2A	5.37E-05	5.30E-05	7.50E-07	21	1.4%
NC4B	4.08E-05	4.02E-05	5.60E-07	22	1.4%
NC5C	3.21E-05	3.17E-05	4.60E-07	23	1.4%
NC1E	2.91E-05	2.80E-05	1.08E-06	24	3.7%
S3B	2.76E-05	2.72E-05	4.00E-07	25	1.5%
C1B	2.52E-05	2.45E-05	6.30E-07	26	2.5%
NC4A	2.47E-05	2.41E-05	6.60E-07	27	2.7%
SP9A	1.77E-05	1.70E-05	6.30E-07	28	3.6%
SP1G	1.73E-05	1.60E-05	1.36E-06	29	7.8%
S2A	1.54E-05	1.50E-05	4.00E-07	30	2.6%
NP5	1.60E-05	1.49E-05	1.12E-06	31	7.0%
SP3E	1.50E-05	1.45E-05	4.30E-07	32	2.9%
SP1C	1.12E-05	1.08E-05	4.10E-07	33	3.7%
W5D	1.13E-05	9.81E-06	1.51E-06	34	13.4%
SP11	9.89E-06	9.64E-06	2.49E-07	35	2.5%
NC5B	9.43E-06	8.56E-06	8.64E-07	36	9.2%
NC2D	8.50E-06	7.91E-06	5.86E-07	37	6.9%
NP6	8.19E-06	7.20E-06	9.83E-07	38	12.0%
SP9B	7.47E-06	6.83E-06	6.43E-07	39	8.6%
W1F	6.89E-06	6.77E-06	1.20E-07	40	1.7%
NC6A	6.68E-06	6.23E-06	4.48E-07	41	6.7%
SP2A	6.49E-06	6.11E-06	3.80E-07	42	5.9%
NC2B	6.35E-06	5.71E-06	6.44E-07	43	10.1%
C1D	5.89E-06	5.41E-06	4.84E-07	44	8.2%
SP3D	5.50E-06	5.06E-06	4.43E-07	45	8.1%
W2	5.11E-06	4.50E-06	6.11E-07	46	12.0%

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals
 Descending Sort on Incremental Cancer Risk
 Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
SP4B	4.20E-06	3.81E-06	3.92E-07	47	9.3 %
SP12	4.09E-06	3.80E-06	2.88E-07	48	7.0 %
C1C	5.38E-06	3.75E-06	1.63E-06	49	30.3 %
NC5A	3.87E-06	3.00E-06	8.70E-07	50	22.5 %
SP5B	3.38E-06	2.90E-06	4.77E-07	51	14.1 %
NC1D	3.27E-06	2.74E-06	5.31E-07	52	16.3 %
SP2E	3.53E-06	2.72E-06	8.09E-07	53	22.9 %
E3B	3.41E-06	2.50E-06	9.12E-07	54	26.7 %
SP2C	2.53E-06	2.33E-06	1.98E-07	55	7.8 %
NC8B	2.86E-06	2.17E-06	6.95E-07	56	24.3 %
C2B	2.58E-06	2.15E-06	4.25E-07	57	16.5 %
SP2B	2.35E-06	2.13E-06	2.24E-07	58	9.5 %
SP7C	2.37E-06	2.10E-06	2.71E-07	59	11.4 %
C4	2.57E-06	2.10E-06	4.74E-07	60	18.4 %
NC1F	2.37E-06	1.87E-06	4.98E-07	61	21.0 %
NC1C	2.31E-06	1.61E-06	7.00E-07	62	30.3 %
SP1B	2.12E-06	1.57E-06	5.59E-07	63	26.3 %
SP12A	1.71E-06	1.54E-06	1.76E-07	64	10.3 %
SP6	2.08E-06	1.52E-06	5.57E-07	65	26.8 %
C2A	1.74E-06	1.32E-06	4.28E-07	66	24.5 %
C3	1.76E-06	1.19E-06	5.68E-07	67	32.4 %
SP5A	1.68E-06	1.19E-06	4.93E-07	68	29.4 %
NC5D	1.45E-06	1.16E-06	2.95E-07	69	20.3 %
W6A	2.01E-06	1.00E-06	1.00E-06	70	50.0 %
E3A	1.55E-06	9.90E-07	5.64E-07	71	36.3 %
W1E	9.56E-07	9.56E-07	0.00E+00	72	<0.01 %
SP7A	1.04E-06	9.01E-07	1.41E-07	73	13.5 %
NC1G	1.23E-06	7.23E-07	5.11E-07	74	41.4 %
E2C	1.16E-06	6.76E-07	4.82E-07	75	41.6 %
SP7B	1.04E-06	6.54E-07	3.88E-07	76	37.2 %
E6C	1.63E-06	6.38E-07	9.92E-07	77	60.8 %
S2C	8.93E-07	6.00E-07	2.92E-07	78	32.8 %
S5E	7.65E-07	5.96E-07	1.69E-07	79	22.1 %
NP3	1.42E-06	5.47E-07	8.75E-07	80	61.5 %
SP8C	6.66E-07	5.31E-07	1.35E-07	81	20.2 %
NP9D	1.20E-06	4.56E-07	7.39E-07	82	61.8 %
E3G	1.07E-06	4.54E-07	6.12E-07	83	57.4 %
S5B	9.23E-07	3.90E-07	5.33E-07	84	57.8 %
NP2	1.28E-06	3.64E-07	9.14E-07	85	71.5 %
NP8C	1.30E-06	3.42E-07	9.54E-07	86	73.6 %
W5C	5.84E-07	2.69E-07	3.16E-07	87	54.0 %
S3A	5.31E-07	2.17E-07	3.13E-07	88	59.1 %
E2A4	1.13E-06	2.03E-07	9.31E-07	89	82.1 %
NC2C	7.13E-07	1.94E-07	5.19E-07	90	72.8 %
W3C	5.32E-07	1.89E-07	3.44E-07	91	64.6 %
E2A7	1.21E-06	1.73E-07	1.04E-06	92	85.7 %

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals
 Descending Sort on Incremental Cancer Risk
 Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
W1B	3.85E-07	1.49E-07	2.36E-07	93	61.3 %
W1G	2.83E-07	1.46E-07	1.37E-07	94	48.5 %
W3B	4.79E-07	1.13E-07	3.66E-07	95	76.4 %
E2B	6.69E-07	1.01E-07	5.68E-07	96	84.9 %
W4B	4.20E-07	8.02E-08	3.40E-07	97	80.9 %
NP9A	4.73E-07	7.29E-08	4.00E-07	98	84.6 %
C2D	5.48E-07	6.46E-08	4.84E-07	99	88.2 %
E2A1	8.31E-07	5.52E-08	7.76E-07	100	93.4 %
W1C	2.37E-07	4.86E-08	1.88E-07	101	79.4 %
E2A6	1.05E-06	4.79E-08	1.01E-06	102	95.5 %
S5A	3.13E-07	3.07E-08	2.82E-07	103	90.2 %
E2A5	9.15E-07	3.00E-08	8.85E-07	104	96.7 %
E3C	7.35E-07	2.66E-08	7.08E-07	105	96.4 %
NP8B	8.10E-07	2.63E-08	7.84E-07	106	96.8 %
W6D	3.43E-07	2.47E-08	3.19E-07	107	92.8 %
W7A	2.52E-07	2.46E-08	2.27E-07	108	90.2 %
C2C	7.29E-07	1.95E-08	7.09E-07	109	97.3 %
E3D	7.28E-07	1.62E-08	7.12E-07	110	97.8 %
NC9B	2.12E-08	1.18E-08	9.44E-09	111	44.5 %
NC9D	5.90E-07	7.89E-09	5.82E-07	112	98.7 %
NC9C	4.34E-07	3.92E-09	4.30E-07	113	99.1 %
E3I	9.58E-07	3.18E-09	9.55E-07	114	99.7 %
NP9B	1.13E-06	0.00E+00	1.13E-06	1	100.0 %
E2A3	1.11E-06	0.00E+00	1.11E-06	2	100.0 %
E1C	9.33E-07	0.00E+00	9.33E-07	3	100.0 %
E2A2	9.01E-07	0.00E+00	9.01E-07	4	100.0 %
E1B	8.06E-07	0.00E+00	8.06E-07	5	100.0 %
NP4	7.82E-07	0.00E+00	7.82E-07	6	100.0 %
NP9F	7.68E-07	0.00E+00	7.68E-07	7	100.0 %
E6A	7.67E-07	0.00E+00	7.67E-07	8	100.0 %
E3E	7.67E-07	0.00E+00	7.67E-07	9	100.0 %
NP9C	7.52E-07	0.00E+00	7.52E-07	10	100.0 %
NP8A	7.51E-07	0.00E+00	7.51E-07	11	100.0 %
E1D	7.12E-07	0.00E+00	7.12E-07	12	100.0 %
E1A	7.12E-07	0.00E+00	7.12E-07	13	100.0 %
NC9R	7.06E-07	0.00E+00	7.06E-07	14	100.0 %
NC9G	6.56E-07	0.00E+00	6.56E-07	15	100.0 %
NC9O	6.37E-07	0.00E+00	6.37E-07	16	100.0 %
NC9L	6.20E-07	0.00E+00	6.20E-07	17	100.0 %
E6D	6.13E-07	0.00E+00	6.13E-07	18	100.0 %
NP9E	6.03E-07	0.00E+00	6.03E-07	19	100.0 %
W6C	5.97E-07	0.00E+00	5.97E-07	20	100.0 %
E4B	5.94E-07	0.00E+00	5.94E-07	21	100.0 %
E4C	5.89E-07	0.00E+00	5.89E-07	22	100.0 %
NC9F	5.60E-07	0.00E+00	5.60E-07	23	100.0 %
NP7	5.59E-07	0.00E+00	5.59E-07	24	100.0 %
NC9E	5.45E-07	0.00E+00	5.45E-07	25	100.0 %

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals
 Descending Sort on Incremental Cancer Risk
 Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
NC9H	5.37E-07	0.00E+00	5.37E-07	26	100.0%
E4A	5.35E-07	0.00E+00	5.35E-07	27	100.0%
NC9P	5.16E-07	0.00E+00	5.16E-07	28	100.0%
E5	5.08E-07	0.00E+00	5.08E-07	29	100.0%
W8B	5.03E-07	0.00E+00	5.03E-07	30	100.0%
NC9K	5.01E-07	0.00E+00	5.01E-07	31	100.0%
W6B	4.83E-07	0.00E+00	4.83E-07	32	100.0%
NC9J	4.74E-07	0.00E+00	4.74E-07	33	100.0%
W5A	4.70E-07	0.00E+00	4.70E-07	34	100.0%
S5D	4.65E-07	0.00E+00	4.65E-07	35	100.0%
E6B	4.43E-07	0.00E+00	4.43E-07	36	100.0%
W7B	4.40E-07	0.00E+00	4.40E-07	37	100.0%
W3D	4.23E-07	0.00E+00	4.23E-07	38	100.0%
W1A	4.14E-07	0.00E+00	4.14E-07	39	100.0%
W5B	4.10E-07	0.00E+00	4.10E-07	40	100.0%
W8E	4.03E-07	0.00E+00	4.03E-07	41	100.0%
W8C	3.72E-07	0.00E+00	3.72E-07	42	100.0%
W3A	3.60E-07	0.00E+00	3.60E-07	43	100.0%
NC9Q	3.32E-07	0.00E+00	3.32E-07	44	100.0%
W6E	3.22E-07	0.00E+00	3.22E-07	45	100.0%
NC9I	3.16E-07	0.00E+00	3.16E-07	46	100.0%
NC9M	2.98E-07	0.00E+00	2.98E-07	47	100.0%
NC9S	2.98E-07	0.00E+00	2.98E-07	48	100.0%
W8D	2.94E-07	0.00E+00	2.94E-07	49	100.0%
W8F	2.85E-07	0.00E+00	2.85E-07	50	100.0%
S5C	2.51E-07	0.00E+00	2.51E-07	51	100.0%
NC9A	2.50E-07	0.00E+00	2.50E-07	52	100.0%
W4A	2.33E-07	0.00E+00	2.33E-07	53	100.0%
W8A	1.59E-07	0.00E+00	1.59E-07	54	100.0%
E3F	1.35E-07	0.00E+00	1.35E-07	55	100.0%
W1D	1.30E-07	0.00E+00	1.30E-07	56	100.0%
E3J	7.32E-08	0.00E+00	7.32E-08	57	100.0%
NC6B	8.20E-09	0.00E+00	8.20E-09	58	100.0%
E3H	0.00E+00	0.00E+00	0.00E+00	1	NA
E3K	0.00E+00	0.00E+00	0.00E+00	2	NA
NC8C	0.00E+00	0.00E+00	0.00E+00	3	NA
NC9N	0.00E+00	0.00E+00	0.00E+00	4	NA
NP1	0.00E+00	0.00E+00	0.00E+00	5	NA
S1A	0.00E+00	0.00E+00	0.00E+00	6	NA

Program version: Gray Developmental, Smp. Arith. Mean, Models correction

Database version: Gray-1 parameter revisions, updated, November 30, 1993

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSRI5C1.IDK, HSSRT5C1.IDK

Additive 5th Percentile Total Risk for Carcinogenic Chemicals

Descending Sort on Total Indirect Cancer Risk

Indirect cancer risks were not calculated for 134 sites given BCRL data.

Site Name	Total Indirect Cancer Risk	Rank
SP10	1.94E-05	1
SP11	1.49E-05	2
SP2B	1.28E-05	3
NC6A	1.11E-05	4
SP1A	7.98E-06	5
SP1G	4.18E-06	6
SP7C	3.66E-06	7
SP3E	2.34E-06	8
C1A	1.72E-06	9
NC8A	1.47E-06	10
NC3	1.26E-06	11
NC1B	4.79E-07	12
C1B	4.72E-07	13
W1G	4.50E-07	14
E2B	4.17E-07	15
W3C	3.87E-07	16
NC1A	3.75E-07	17
W1C	3.15E-07	18
NP6	2.81E-07	19
W1D	2.79E-07	20
NP5	2.12E-07	21
E2A1	2.11E-07	22
SP7B	1.34E-07	23
W1F	1.24E-07	24
SP3C	1.08E-07	25
NC4A	6.60E-08	26
SP1C	6.32E-08	27
W4B	5.39E-08	28
C1C	5.23E-08	29
W5A	4.86E-08	30
SP12	4.49E-08	31
W6A	3.06E-08	32
NC2A	2.78E-08	33
NC2C	2.51E-08	34
S3B	2.43E-08	35
SP8A	1.68E-08	36
W2	1.60E-08	37
SP2D	9.19E-09	38
C1D	9.04E-09	39
S2A	1.48E-09	40
E2A4	1.48E-09	41
NC1C	1.43E-09	42
SP2C	1.20E-09	43
SP9A	6.92E-10	44

Program version: Gray Developmental, Smp. Arith. Mean,
Models correction

Database version: Gray-1 parameter revisions, updated, 11/30/93

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source File: HSSRT5C2.IDK

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals
 Descending Sort on Incremental Hazard Index
 Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
SP3A	2.45E+01	2.44E+01	1.00E-01	1	0.41 %
SP1A	1.48E+01	1.46E+01	2.00E-01	2	1.35 %
SP1E	1.14E+01	1.12E+01	2.10E-01	3	1.84 %
SP3B	6.05E+00	5.83E+00	2.17E-01	4	3.59 %
NC8A	5.91E+00	5.74E+00	1.71E-01	5	2.89 %
SP8A	3.81E+00	3.65E+00	1.66E-01	6	4.35 %
NP4	2.30E+00	1.90E+00	3.91E-01	7	17.04 %
SP1G	2.28E+00	1.71E+00	5.65E-01	8	24.81 %
SP4A	1.98E+00	1.61E+00	3.71E-01	9	18.73 %
NC1A	1.65E+00	1.43E+00	2.18E-01	10	13.20 %
NC1B	1.25E+00	1.08E+00	1.68E-01	11	13.46 %
SP3C	1.26E+00	8.74E-01	3.81E-01	12	30.36 %
NP5	1.21E+00	8.48E-01	3.58E-01	13	29.68 %
S2B	1.05E+00	7.78E-01	2.72E-01	14	25.90 %
SP12B	8.23E-01	5.24E-01	2.99E-01	15	36.30 %
NP6	7.84E-01	5.19E-01	2.66E-01	16	33.85 %
S4	6.54E-01	5.08E-01	1.46E-01	17	22.32 %
SP1D	5.80E-01	4.81E-01	9.87E-02	18	17.03 %
E3G	6.36E-01	4.10E-01	2.26E-01	19	35.47 %
W6A	8.68E-01	3.06E-01	5.62E-01	20	64.78 %
SP1F	2.60E-01	2.55E-01	4.30E-03	21	1.66 %
C1B	4.59E-01	2.42E-01	2.17E-01	22	47.23 %
NP9B	7.85E-01	2.37E-01	5.48E-01	23	69.80 %
SP8B	2.90E-01	1.93E-01	9.73E-02	24	33.52 %
E2A6	5.27E-01	1.91E-01	3.36E-01	25	63.72 %
E3B	4.95E-01	1.70E-01	3.24E-01	26	65.59 %
NC5C	3.06E-01	1.58E-01	1.49E-01	27	48.53 %
SP2D	2.78E-01	1.47E-01	1.32E-01	28	47.29 %
E3F	1.44E-01	1.40E-01	3.50E-03	29	2.44 %
NC4B	3.33E-01	1.27E-01	2.05E-01	30	61.74 %
NC2A	3.27E-01	1.22E-01	2.05E-01	31	62.65 %
SP9A	3.71E-01	1.13E-01	2.58E-01	32	69.47 %
E2A7	4.28E-01	1.08E-01	3.20E-01	33	74.71 %
SP3E	2.21E-01	9.92E-02	1.22E-01	34	55.07 %
W6D	2.12E-01	8.76E-02	1.25E-01	35	58.76 %
NC5B	3.28E-01	8.73E-02	2.41E-01	36	73.39 %
C1C	3.00E-01	8.56E-02	2.14E-01	37	71.42 %
W3C	2.36E-01	8.10E-02	1.55E-01	38	65.73 %
SP1C	1.33E-01	7.36E-02	5.97E-02	39	44.79 %
E2A5	4.68E-01	7.30E-02	3.95E-01	40	84.39 %
NC4A	2.48E-01	7.22E-02	1.75E-01	41	70.84 %
NC5A	3.59E-01	6.41E-02	2.95E-01	42	82.14 %
W1E	5.62E-02	5.62E-02	0.00E+00	43	<0.01 %
C1A	2.35E-01	5.07E-02	1.84E-01	44	78.43 %
NC2B	2.21E-01	4.79E-02	1.73E-01	45	78.33 %
SP2A	2.02E-01	4.65E-02	1.56E-01	46	77.01 %
SP9B	3.77E-01	4.01E-02	3.37E-01	47	89.35 %

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals

Descending Sort on Incremental Hazard Index

Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
NC1E	2.44E-01	3.80E-02	2.06E-01	48	84.42 %
E2A4	4.46E-01	3.62E-02	4.10E-01	49	91.89 %
SP2C	9.58E-02	2.97E-02	6.61E-02	50	69.01 %
C4	2.00E-01	2.95E-02	1.70E-01	51	85.21 %
S5E	1.08E-01	2.87E-02	7.97E-02	52	73.50 %
S2A	1.52E-01	2.79E-02	1.24E-01	53	81.58 %
W1F	2.93E-02	2.42E-02	5.16E-03	54	17.59 %
SP3D	1.96E-01	2.42E-02	1.72E-01	55	87.70 %
NC2D	1.95E-01	2.17E-02	1.74E-01	56	88.91 %
NC1C	1.26E-01	2.12E-02	1.05E-01	57	83.25 %
SP5B	2.05E-01	1.83E-02	1.86E-01	58	91.03 %
SP4B	1.48E-01	1.79E-02	1.30E-01	59	87.95 %
SP12	1.64E-01	1.64E-02	1.47E-01	60	89.99 %
W2	1.94E-01	1.61E-02	1.78E-01	61	91.72 %
C2A	1.71E-01	1.55E-02	1.55E-01	62	90.93 %
SP2E	1.81E-01	1.52E-02	1.66E-01	63	91.58 %
SP2B	1.26E-01	1.42E-02	1.12E-01	64	88.75 %
NC6A	1.67E-01	1.37E-02	1.53E-01	65	91.80 %
NC8B	2.90E-01	1.12E-02	2.79E-01	66	96.14 %
E6C	3.40E-01	1.10E-02	3.29E-01	67	96.77 %
SP5A	1.81E-02	1.07E-02	7.33E-03	68	40.59 %
NP8C	2.38E-01	9.74E-03	2.28E-01	69	95.90 %
SP12A	1.08E-01	9.46E-03	9.81E-02	70	91.21 %
S2C	1.05E-01	9.22E-03	9.61E-02	71	91.25 %
NC1D	1.76E-01	8.72E-03	1.67E-01	72	95.04 %
SP6	2.75E-01	7.81E-03	2.67E-01	73	97.16 %
C2B	1.91E-01	7.33E-03	1.83E-01	74	96.16 %
SP1B	2.49E-01	7.10E-03	2.42E-01	75	97.15 %
NC1F	1.30E-01	6.90E-03	1.23E-01	76	94.71 %
W6E	1.44E-02	5.38E-03	9.01E-03	77	62.63 %
NC2C	1.30E-01	4.81E-03	1.25E-01	78	96.30 %
S5C	1.25E-01	4.71E-03	1.20E-01	79	96.22 %
E6A	3.01E-01	4.58E-03	2.96E-01	80	98.48 %
NC5D	1.20E-01	4.01E-03	1.16E-01	81	96.66 %
SP7C	1.10E-01	3.82E-03	1.06E-01	82	96.52 %
NP9F	2.40E-01	3.44E-03	2.36E-01	83	98.57 %
S3B	1.30E-01	3.37E-03	1.27E-01	84	97.42 %
E1C	5.22E-01	3.16E-03	5.19E-01	85	99.40 %
S3A	1.23E-01	3.16E-03	1.20E-01	86	97.43 %
SP7A	3.15E-03	3.15E-03	0.00E+00	87	<0.01 %
S5B	2.34E-01	3.03E-03	2.31E-01	88	98.71 %
C1D	1.60E-01	2.99E-03	1.57E-01	89	98.13 %
NC9B	4.27E-03	2.37E-03	1.90E-03	90	44.55 %
S5A	1.30E-01	1.80E-03	1.28E-01	91	98.62 %
E2C	2.34E-01	1.71E-03	2.32E-01	92	99.27 %
E1B	4.52E-01	1.66E-03	4.51E-01	93	99.63 %
NC9D	2.61E-01	1.59E-03	2.60E-01	94	99.39 %

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals
 Descending Sort on Incremental Hazard Index
 Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
SP7B	1.26E-03	1.26E-03	0.00E+00	95	<0.01 %
NP8A	4.13E-01	1.26E-03	4.12E-01	96	99.70 %
NP3	3.41E-01	1.23E-03	3.39E-01	97	99.64 %
SP8C	6.17E-02	1.21E-03	6.05E-02	98	98.05 %
W3A	2.28E-01	1.14E-03	2.27E-01	99	99.50 %
E4C	2.93E-01	9.46E-04	2.92E-01	100	99.68 %
NC9C	1.89E-01	7.90E-04	1.88E-01	101	99.58 %
W6B	2.39E-01	4.48E-04	2.38E-01	102	99.81 %
C2D	1.93E-01	3.63E-04	1.93E-01	103	99.81 %
W7B	2.09E-01	2.55E-04	2.09E-01	104	99.88 %
NC9Q	1.92E-01	1.87E-04	1.92E-01	105	99.90 %
NP1	2.51E-04	1.70E-04	8.09E-05	106	32.26 %
NC6B	2.06E-03	1.52E-04	1.90E-03	107	92.59 %
NC9H	1.84E-01	1.12E-04	1.84E-01	108	99.94 %
NC9S	1.27E-01	2.99E-06	1.27E-01	109	99.99 %
E2A3	4.86E-01	0.00E+00	4.86E-01	1	100.00 %
NP2	4.08E-01	0.00E+00	4.08E-01	2	100.00 %
E2A2	3.86E-01	0.00E+00	3.86E-01	3	100.00 %
E3I	3.61E-01	0.00E+00	3.61E-01	4	100.00 %
E1D	3.52E-01	0.00E+00	3.52E-01	5	100.00 %
NP9E	3.50E-01	0.00E+00	3.50E-01	6	100.00 %
E3E	3.47E-01	0.00E+00	3.47E-01	7	100.00 %
E1A	3.38E-01	0.00E+00	3.38E-01	8	100.00 %
NP9D	3.34E-01	0.00E+00	3.34E-01	9	100.00 %
NP8B	3.20E-01	0.00E+00	3.20E-01	10	100.00 %
E2A1	3.13E-01	0.00E+00	3.13E-01	11	100.00 %
NC9G	2.90E-01	0.00E+00	2.90E-01	12	100.00 %
E6D	2.76E-01	0.00E+00	2.76E-01	13	100.00 %
C2C	2.72E-01	0.00E+00	2.72E-01	14	100.00 %
E4B	2.67E-01	0.00E+00	2.67E-01	15	100.00 %
E3D	2.61E-01	0.00E+00	2.61E-01	16	100.00 %
E3C	2.59E-01	0.00E+00	2.59E-01	17	100.00 %
SP10	2.57E-01	0.00E+00	2.57E-01	18	100.00 %
NC9F	2.48E-01	0.00E+00	2.48E-01	19	100.00 %
E6B	2.47E-01	0.00E+00	2.47E-01	20	100.00 %
E4A	2.47E-01	0.00E+00	2.47E-01	21	100.00 %
NC9E	2.46E-01	0.00E+00	2.46E-01	22	100.00 %
E5	2.38E-01	0.00E+00	2.38E-01	23	100.00 %
NC9O	2.30E-01	0.00E+00	2.30E-01	24	100.00 %
NC9R	2.18E-01	0.00E+00	2.18E-01	25	100.00 %
NC9J	2.10E-01	0.00E+00	2.10E-01	26	100.00 %
E2B	1.97E-01	0.00E+00	1.97E-01	27	100.00 %
W8E	1.81E-01	0.00E+00	1.81E-01	28	100.00 %
W5C	1.78E-01	0.00E+00	1.78E-01	29	100.00 %
NC1G	1.77E-01	0.00E+00	1.77E-01	30	100.00 %
E3A	1.71E-01	0.00E+00	1.71E-01	31	100.00 %
W8C	1.67E-01	0.00E+00	1.67E-01	32	100.00 %

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals
 Descending Sort on Incremental Hazard Index
 Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
S5D	1.61E-01	0.00E+00	1.61E-01	33	100.00%
NC9L	1.58E-01	0.00E+00	1.58E-01	34	100.00%
W3D	1.54E-01	0.00E+00	1.54E-01	35	100.00%
NC9M	1.47E-01	0.00E+00	1.47E-01	36	100.00%
NC9I	1.40E-01	0.00E+00	1.40E-01	37	100.00%
W8D	1.33E-01	0.00E+00	1.33E-01	38	100.00%
W8B	1.33E-01	0.00E+00	1.33E-01	39	100.00%
NC9K	1.29E-01	0.00E+00	1.29E-01	40	100.00%
W4B	1.28E-01	0.00E+00	1.28E-01	41	100.00%
NC9P	1.26E-01	0.00E+00	1.26E-01	42	100.00%
W8F	1.26E-01	0.00E+00	1.26E-01	43	100.00%
NP9A	1.21E-01	0.00E+00	1.21E-01	44	100.00%
NC9A	1.11E-01	0.00E+00	1.11E-01	45	100.00%
W8A	7.28E-02	0.00E+00	7.28E-02	46	100.00%
W1C	7.08E-02	0.00E+00	7.08E-02	47	100.00%
NC9N	3.90E-03	0.00E+00	3.90E-03	48	100.00%
W4A	3.14E-03	0.00E+00	3.14E-03	49	100.00%
W5D	2.19E-03	0.00E+00	2.19E-03	50	100.00%
E3J	1.87E-03	0.00E+00	1.87E-03	51	100.00%
C3	0.00E+00	0.00E+00	0.00E+00	1	NA
E3H	0.00E+00	0.00E+00	0.00E+00	2	NA
E3K	0.00E+00	0.00E+00	0.00E+00	3	NA
NC3	0.00E+00	0.00E+00	0.00E+00	4	NA
NC8C	0.00E+00	0.00E+00	0.00E+00	5	NA
NP7	0.00E+00	0.00E+00	0.00E+00	6	NA
NP9C	0.00E+00	0.00E+00	0.00E+00	7	NA
S1A	0.00E+00	0.00E+00	0.00E+00	8	NA
SP11	0.00E+00	0.00E+00	0.00E+00	9	NA
W1A	0.00E+00	0.00E+00	0.00E+00	10	NA
W1B	0.00E+00	0.00E+00	0.00E+00	11	NA
W1D	0.00E+00	0.00E+00	0.00E+00	12	NA
W1G	0.00E+00	0.00E+00	0.00E+00	13	NA
W3B	0.00E+00	0.00E+00	0.00E+00	14	NA
W5A	0.00E+00	0.00E+00	0.00E+00	15	NA
W5B	0.00E+00	0.00E+00	0.00E+00	16	NA
W6C	0.00E+00	0.00E+00	0.00E+00	17	NA
W7A	0.00E+00	0.00E+00	0.00E+00	18	NA

Program version: Gray Developmental, Smp. Arith. Mean, Models correction

Database version: Gray-1 parameter revisions, updated, November 30, 1993

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSRI5H0.IDK, HSSRT5H0.IDK

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals

Descending Sort on Incremental Hazard Index

Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
SP10	1.70E+04	1.70E+04	0.00E+00	1	<0.01 %
C1A	1.11E+04	1.11E+04	0.00E+00	2	<0.01 %
SP1E	2.51E+03	2.51E+03	0.00E+00	3	<0.01 %
NC3	1.48E+03	1.48E+03	0.00E+00	4	<0.01 %
SP1A	1.16E+03	1.16E+03	0.00E+00	5	<0.01 %
SP8A	6.63E+02	6.62E+02	2.00E-01	6	0.03 %
SP3A	3.84E+02	3.84E+02	1.00E-01	7	0.03 %
SP2A	3.35E+02	3.35E+02	2.00E-01	8	0.06 %
SP3B	3.20E+02	3.20E+02	2.00E-01	9	0.06 %
SP1F	1.19E+02	1.19E+02	0.00E+00	10	<0.01 %
SP2B	6.48E+01	6.47E+01	1.00E-01	11	0.15 %
NC1B	3.53E+01	3.51E+01	1.60E-01	12	0.45 %
SP4A	3.31E+01	3.28E+01	2.60E-01	13	0.79 %
SP12B	2.12E+01	2.09E+01	3.00E-01	14	1.42 %
SP1D	2.06E+01	2.05E+01	1.00E-01	15	0.49 %
NC8A	1.82E+01	1.80E+01	1.90E-01	16	1.05 %
NC1A	1.78E+01	1.76E+01	2.10E-01	17	1.18 %
C1C	1.22E+01	1.17E+01	5.70E-01	18	4.66 %
S2B	1.12E+01	1.10E+01	2.50E-01	19	2.23 %
SP1G	1.03E+01	9.76E+00	5.61E-01	20	5.44 %
SP3C	9.97E+00	9.63E+00	3.38E-01	21	3.39 %
C1B	8.70E+00	8.50E+00	2.00E-01	22	2.30 %
SP3E	8.51E+00	8.31E+00	1.96E-01	23	2.30 %
SP3D	7.73E+00	7.53E+00	2.00E-01	24	2.59 %
S4	7.48E+00	7.31E+00	1.67E-01	25	2.23 %
NC4B	7.50E+00	7.30E+00	1.98E-01	26	2.64 %
SP5B	6.67E+00	6.49E+00	1.77E-01	27	2.65 %
C4	5.81E+00	5.65E+00	1.57E-01	28	2.70 %
SP12A	5.60E+00	5.52E+00	8.00E-02	29	1.43 %
W2	5.33E+00	5.10E+00	2.36E-01	30	4.42 %
S2A	4.58E+00	4.45E+00	1.31E-01	31	2.86 %
NC1D	3.62E+00	3.46E+00	1.61E-01	32	4.45 %
NC2A	3.62E+00	3.41E+00	2.06E-01	33	5.70 %
SP9A	3.64E+00	3.41E+00	2.37E-01	34	6.50 %
SP2D	3.46E+00	3.35E+00	1.11E-01	35	3.21 %
NC4A	3.60E+00	3.34E+00	2.52E-01	36	7.01 %
NC5C	3.20E+00	3.03E+00	1.67E-01	37	5.22 %
W5D	3.45E+00	2.88E+00	5.66E-01	38	16.43 %
SP2E	3.17E+00	2.87E+00	2.97E-01	39	9.38 %
W1E	2.49E+00	2.49E+00	0.00E+00	40	<0.01 %
SP4B	2.32E+00	2.18E+00	1.33E-01	41	5.74 %
NC1F	2.28E+00	2.13E+00	1.52E-01	42	6.66 %
NC1E	2.37E+00	2.05E+00	3.24E-01	43	13.67 %
SP8B	2.07E+00	2.00E+00	6.80E-02	44	3.28 %
NC6A	1.81E+00	1.65E+00	1.63E-01	45	9.01 %
S5E	1.62E+00	1.54E+00	8.00E-02	46	4.95 %

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals
 Descending Sort on Incremental Hazard Index
 Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
S3B	1.58E+00	1.44E+00	1.39E-01	47	8.79 %
W6A	1.53E+00	1.10E+00	4.22E-01	48	27.65 %
NP4	1.42E+00	1.07E+00	3.50E-01	49	24.70 %
SP11	5.83E-01	4.98E-01	8.46E-02	50	14.52 %
NP5	7.96E-01	4.55E-01	3.41E-01	51	42.83 %
NC5B	5.95E-01	3.67E-01	2.28E-01	52	38.35 %
NP6	6.43E-01	3.62E-01	2.81E-01	53	43.70 %
NC2B	5.36E-01	3.62E-01	1.74E-01	54	32.42 %
SP1C	4.87E-01	3.57E-01	1.30E-01	55	26.74 %
NC2D	5.00E-01	3.24E-01	1.76E-01	56	35.13 %
SP9B	5.66E-01	3.00E-01	2.66E-01	57	47.02 %
C1D	4.30E-01	2.61E-01	1.69E-01	58	39.26 %
E3G	4.81E-01	2.48E-01	2.33E-01	59	48.48 %
E3A	4.41E-01	2.27E-01	2.14E-01	60	48.57 %
W1F	2.66E-01	2.10E-01	5.61E-02	61	21.09 %
S5B	3.88E-01	1.70E-01	2.18E-01	62	56.21 %
SP2C	2.26E-01	1.36E-01	8.93E-02	63	39.58 %
SP7C	2.19E-01	1.26E-01	9.26E-02	64	42.36 %
NC8B	3.59E-01	1.04E-01	2.55E-01	65	70.97 %
SP12	2.32E-01	1.03E-01	1.29E-01	66	55.69 %
NC5A	3.30E-01	1.01E-01	2.30E-01	67	69.54 %
E2A6	4.73E-01	9.90E-02	3.74E-01	68	79.06 %
C2B	2.89E-01	9.78E-02	1.91E-01	69	66.14 %
E2A7	4.76E-01	9.61E-02	3.80E-01	70	79.83 %
W1B	1.93E-01	8.89E-02	1.04E-01	71	54.02 %
E2A4	4.78E-01	8.84E-02	3.90E-01	72	81.51 %
SP6	3.06E-01	8.11E-02	2.24E-01	73	73.47 %
S5A	2.08E-01	7.92E-02	1.28E-01	74	61.87 %
E3B	3.23E-01	7.56E-02	2.47E-01	75	76.59 %
SP1B	2.86E-01	7.39E-02	2.12E-01	76	74.21 %
E3F	7.41E-02	7.00E-02	4.03E-03	77	5.44 %
C3	2.71E-01	6.51E-02	2.06E-01	78	75.96 %
S2C	1.48E-01	5.22E-02	9.58E-02	79	64.73 %
NC5D	1.83E-01	5.20E-02	1.31E-01	80	71.64 %
NC1C	1.97E-01	4.31E-02	1.53E-01	81	78.07 %
W3C	1.91E-01	3.62E-02	1.54E-01	82	81.00 %
E2A5	3.54E-01	3.44E-02	3.19E-01	83	90.27 %
C2A	1.89E-01	3.35E-02	1.55E-01	84	82.24 %
E6C	3.20E-01	3.29E-02	2.87E-01	85	89.73 %
SP7B	1.54E-01	3.18E-02	1.22E-01	86	79.29 %
NP2	3.99E-01	2.62E-02	3.73E-01	87	93.44 %
W6D	1.13E-01	2.47E-02	8.85E-02	88	78.19 %
S3A	1.62E-01	2.03E-02	1.41E-01	89	87.44 %
NP3	3.65E-01	1.96E-02	3.45E-01	90	94.64 %
SP5A	2.05E-01	1.93E-02	1.86E-01	91	90.61 %
SP7A	7.69E-02	1.46E-02	6.23E-02	92	81.01 %

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals
 Descending Sort on Incremental Hazard Index
 Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
W4B	1.65E-01	1.21E-02	1.53E-01	93	92.67 %
SP8C	7.35E-02	1.20E-02	6.15E-02	94	83.70 %
NC1G	1.73E-01	1.17E-02	1.61E-01	95	93.23 %
E2C	1.72E-01	1.10E-02	1.61E-01	96	93.63 %
NP8B	3.20E-01	9.80E-03	3.10E-01	97	96.94 %
W6E	1.19E-01	9.23E-03	1.10E-01	98	92.23 %
E3D	2.71E-01	8.97E-03	2.62E-01	99	96.69 %
W5C	1.48E-01	8.19E-03	1.40E-01	100	94.46 %
NP8C	2.74E-01	7.32E-03	2.67E-01	101	97.33 %
NC2C	1.65E-01	5.72E-03	1.59E-01	102	96.52 %
S5C	1.25E-01	4.71E-03	1.20E-01	103	96.22 %
W1G	6.52E-02	4.44E-03	6.08E-02	104	93.19 %
W3B	1.68E-01	3.44E-03	1.64E-01	105	97.95 %
NC9B	4.27E-03	2.37E-03	1.90E-03	106	44.55 %
W6B	1.95E-01	2.04E-03	1.93E-01	107	98.95 %
NC9D	2.61E-01	1.59E-03	2.60E-01	108	99.39 %
W1C	8.62E-02	1.49E-03	8.47E-02	109	98.27 %
E2B	2.16E-01	1.15E-03	2.15E-01	110	99.47 %
C2D	2.15E-01	1.05E-03	2.14E-01	111	99.51 %
NC9C	1.89E-01	7.90E-04	1.88E-01	112	99.58 %
W7A	1.04E-01	7.50E-04	1.03E-01	113	99.28 %
C2C	2.66E-01	6.00E-04	2.66E-01	114	99.77 %
W7B	1.99E-01	9.71E-05	1.99E-01	115	99.95 %
NP1	9.71E-05	1.62E-05	8.09E-05	116	83.34 %
NP9B	4.69E-01	0.00E+00	4.69E-01	1	100.00 %
E2A3	4.14E-01	0.00E+00	4.14E-01	2	100.00 %
E3I	3.76E-01	0.00E+00	3.76E-01	3	100.00 %
E1C	3.66E-01	0.00E+00	3.66E-01	4	100.00 %
E2A2	3.49E-01	0.00E+00	3.49E-01	5	100.00 %
NP8A	3.38E-01	0.00E+00	3.38E-01	6	100.00 %
NP9D	3.30E-01	0.00E+00	3.30E-01	7	100.00 %
E6A	3.21E-01	0.00E+00	3.21E-01	8	100.00 %
E1B	3.13E-01	0.00E+00	3.13E-01	9	100.00 %
E2A1	2.93E-01	0.00E+00	2.93E-01	10	100.00 %
NC9G	2.90E-01	0.00E+00	2.90E-01	11	100.00 %
E3E	2.80E-01	0.00E+00	2.80E-01	12	100.00 %
NP9C	2.78E-01	0.00E+00	2.78E-01	13	100.00 %
E6D	2.76E-01	0.00E+00	2.76E-01	14	100.00 %
NP9E	2.69E-01	0.00E+00	2.69E-01	15	100.00 %
E3C	2.68E-01	0.00E+00	2.68E-01	16	100.00 %
E1A	2.68E-01	0.00E+00	2.68E-01	17	100.00 %
E1D	2.67E-01	0.00E+00	2.67E-01	18	100.00 %
E4C	2.66E-01	0.00E+00	2.66E-01	19	100.00 %
NC9F	2.48E-01	0.00E+00	2.48E-01	20	100.00 %
NP7	2.47E-01	0.00E+00	2.47E-01	21	100.00 %
NC9E	2.46E-01	0.00E+00	2.46E-01	22	100.00 %

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals
 Descending Sort on Incremental Hazard Index
 Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
W6C	2.34E-01	0.00E+00	2.34E-01	23	100.00%
NP9F	2.32E-01	0.00E+00	2.32E-01	24	100.00%
NC9R	2.31E-01	0.00E+00	2.31E-01	25	100.00%
NC9O	2.28E-01	0.00E+00	2.28E-01	26	100.00%
W8B	2.27E-01	0.00E+00	2.27E-01	27	100.00%
E4B	2.12E-01	0.00E+00	2.12E-01	28	100.00%
S5D	2.11E-01	0.00E+00	2.11E-01	29	100.00%
NC9J	2.10E-01	0.00E+00	2.10E-01	30	100.00%
E4A	1.94E-01	0.00E+00	1.94E-01	31	100.00%
W3D	1.90E-01	0.00E+00	1.90E-01	32	100.00%
W5B	1.89E-01	0.00E+00	1.89E-01	33	100.00%
E5	1.88E-01	0.00E+00	1.88E-01	34	100.00%
NC9H	1.86E-01	0.00E+00	1.86E-01	35	100.00%
W5A	1.85E-01	0.00E+00	1.85E-01	36	100.00%
W8E	1.81E-01	0.00E+00	1.81E-01	37	100.00%
NP9A	1.81E-01	0.00E+00	1.81E-01	38	100.00%
W8C	1.67E-01	0.00E+00	1.67E-01	39	100.00%
W3A	1.61E-01	0.00E+00	1.61E-01	40	100.00%
NC9L	1.58E-01	0.00E+00	1.58E-01	41	100.00%
W1A	1.56E-01	0.00E+00	1.56E-01	42	100.00%
E6B	1.56E-01	0.00E+00	1.56E-01	43	100.00%
NC9Q	1.52E-01	0.00E+00	1.52E-01	44	100.00%
NC9P	1.42E-01	0.00E+00	1.42E-01	45	100.00%
NC9I	1.40E-01	0.00E+00	1.40E-01	46	100.00%
NC9S	1.36E-01	0.00E+00	1.36E-01	47	100.00%
W8D	1.33E-01	0.00E+00	1.33E-01	48	100.00%
NC9M	1.32E-01	0.00E+00	1.32E-01	49	100.00%
NC9K	1.29E-01	0.00E+00	1.29E-01	50	100.00%
W8F	1.26E-01	0.00E+00	1.26E-01	51	100.00%
NC9A	1.11E-01	0.00E+00	1.11E-01	52	100.00%
W4A	1.05E-01	0.00E+00	1.05E-01	53	100.00%
W8A	7.24E-02	0.00E+00	7.24E-02	54	100.00%
W1D	5.75E-02	0.00E+00	5.75E-02	55	100.00%
NC9N	3.90E-03	0.00E+00	3.90E-03	56	100.00%
NC6B	3.32E-03	0.00E+00	3.32E-03	57	100.00%
E3J	2.20E-03	0.00E+00	2.20E-03	58	100.00%
E3H	0.00E+00	0.00E+00	0.00E+00	1	NA
E3K	0.00E+00	0.00E+00	0.00E+00	2	NA
NC8C	0.00E+00	0.00E+00	0.00E+00	3	NA
S1A	0.00E+00	0.00E+00	0.00E+00	4	NA

Program version: Gray Developmental, Smp. Arith. Mean, Models correction

Database version: Gray-1 parameter revisions, updated, November 30, 1993

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSRI5H1.IDK, HSSRT5H1.IDK

Page TABLE B.4.4-20 is missing from the original.

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals
 Descending Sort on Incremental Cancer Risk
 Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
SP3A	5.05E-04	5.05E-04	0.00E+00	1	<0.01%
NC8A	1.51E-04	1.50E-04	4.00E-07	2	0.3%
SP3B	1.50E-04	1.49E-04	3.00E-07	3	0.2%
SP1E	1.33E-04	1.33E-04	4.00E-07	4	0.3%
SP1A	9.80E-05	9.76E-05	4.30E-07	5	0.4%
SP8A	9.46E-05	9.42E-05	4.20E-07	6	0.4%
SP4A	4.42E-05	4.40E-05	1.70E-07	7	0.4%
NC1A	3.47E-05	3.43E-05	4.30E-07	8	1.2%
NP5	2.86E-05	2.81E-05	4.70E-07	9	1.6%
SP3C	2.37E-05	2.36E-05	8.00E-08	10	0.3%
S2B	2.18E-05	2.16E-05	1.90E-07	11	0.9%
S4	1.82E-05	1.78E-05	4.10E-07	12	2.3%
NP6	1.76E-05	1.72E-05	4.40E-07	13	2.5%
SP1D	1.30E-05	1.28E-05	1.80E-07	14	1.4%
SP12B	1.24E-05	1.23E-05	7.00E-08	15	0.6%
NC1B	1.10E-05	1.06E-05	4.20E-07	16	3.8%
SP1F	8.01E-06	8.01E-06	0.00E+00	17	<0.01%
SP8B	7.09E-06	7.07E-06	2.10E-08	18	0.3%
E3B	6.03E-06	5.57E-06	4.53E-07	19	7.5%
NC5C	4.87E-06	4.72E-06	1.55E-07	20	3.2%
NC2A	4.61E-06	4.18E-06	4.27E-07	21	9.3%
SP2D	3.57E-06	3.54E-06	3.00E-08	22	0.8%
SP9A	3.73E-06	3.53E-06	2.06E-07	23	5.5%
NC4B	3.66E-06	3.50E-06	1.64E-07	24	4.5%
C1B	3.77E-06	3.45E-06	3.23E-07	25	8.6%
SP3E	2.48E-06	2.45E-06	2.60E-08	26	1.0%
SP1C	2.32E-06	2.31E-06	1.30E-08	27	0.6%
NC5B	2.69E-06	2.26E-06	4.35E-07	28	16.1%
NC4A	2.27E-06	2.23E-06	3.80E-08	29	1.7%
SP1G	2.50E-06	2.16E-06	3.37E-07	30	13.5%
NC5A	2.37E-06	1.93E-06	4.47E-07	31	18.8%
C1A	1.54E-06	1.35E-06	1.97E-07	32	12.8%
NC1E	1.75E-06	1.32E-06	4.27E-07	33	24.5%
W1F	9.23E-07	9.23E-07	0.00E+00	34	<0.01%
SP9B	9.63E-07	8.02E-07	1.61E-07	35	16.7%
SP3D	8.33E-07	7.96E-07	3.71E-08	36	4.5%
S2A	7.67E-07	7.40E-07	2.72E-08	37	3.5%
NC2D	1.09E-06	7.32E-07	3.56E-07	38	32.7%
SP12	6.89E-07	6.57E-07	3.24E-08	39	4.7%
SP2A	7.77E-07	6.52E-07	1.25E-07	40	16.1%
NC2B	1.01E-06	5.95E-07	4.19E-07	41	41.3%
W2	6.31E-07	5.92E-07	3.92E-08	42	6.2%
SP4B	7.04E-07	5.78E-07	1.26E-07	43	17.9%
NC6A	5.92E-07	4.62E-07	1.30E-07	44	21.9%
SP5A	5.82E-07	4.34E-07	1.48E-07	45	25.5%
SP5B	5.31E-07	4.01E-07	1.30E-07	46	24.5%

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals
 Descending Sort on Incremental Cancer Risk
 Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
C2A	4.89E-07	3.51E-07	1.38E-07	47	28.2%
SP2C	3.64E-07	3.50E-07	1.43E-08	48	3.9%
NP8C	7.64E-07	3.32E-07	4.32E-07	49	56.6%
C1C	7.54E-07	3.25E-07	4.29E-07	50	56.9%
NC1C	7.27E-07	3.22E-07	4.05E-07	51	55.7%
C4	4.87E-07	3.08E-07	1.79E-07	52	36.8%
E6C	7.43E-07	2.89E-07	4.54E-07	53	61.1%
NC8B	4.72E-07	2.39E-07	2.33E-07	54	49.4%
C2B	2.51E-07	2.11E-07	4.02E-08	55	16.0%
SP2E	3.59E-07	1.98E-07	1.60E-07	56	44.7%
SP6	3.02E-07	1.80E-07	1.21E-07	57	40.2%
SP2B	1.96E-07	1.71E-07	2.45E-08	58	12.5%
NC1D	4.07E-07	1.62E-07	2.46E-07	59	60.3%
NC1F	3.53E-07	1.61E-07	1.92E-07	60	54.3%
SP12A	1.71E-07	1.49E-07	2.13E-08	61	12.5%
SP7A	1.31E-07	1.31E-07	0.00E+00	62	<0.01%
C1D	2.73E-07	1.25E-07	1.49E-07	63	54.4%
SP7C	2.21E-07	1.18E-07	1.04E-07	64	46.9%
W6A	3.65E-07	1.17E-07	2.47E-07	65	67.8%
NP9F	5.49E-07	1.15E-07	4.35E-07	66	79.2%
NC5D	1.33E-07	1.07E-07	2.61E-08	67	19.7%
S2C	2.58E-07	1.05E-07	1.53E-07	68	59.4%
W1E	9.96E-08	9.96E-08	0.00E+00	69	<0.01%
SP1B	2.35E-07	8.43E-08	1.50E-07	70	64.0%
NC2C	2.82E-07	8.32E-08	1.99E-07	71	70.5%
E2C	2.75E-07	7.15E-08	2.03E-07	72	74.0%
S3A	7.97E-08	5.33E-08	2.64E-08	73	33.1%
NP9B	1.76E-07	5.31E-08	1.23E-07	74	69.8%
NP3	2.80E-07	5.15E-08	2.29E-07	75	81.6%
S5E	6.76E-08	5.09E-08	1.67E-08	76	24.7%
S3B	1.70E-07	4.89E-08	1.21E-07	77	71.3%
W3C	7.88E-08	4.53E-08	3.35E-08	78	42.5%
E3G	1.74E-07	4.36E-08	1.30E-07	79	74.9%
SP7B	3.77E-08	3.77E-08	0.00E+00	80	<0.01%
SP8C	5.06E-08	3.76E-08	1.30E-08	81	25.8%
E2A4	2.18E-07	2.30E-08	1.95E-07	82	89.4%
S5B	6.57E-08	1.57E-08	5.00E-08	83	76.0%
C2D	5.82E-08	1.49E-08	4.33E-08	84	74.3%
E2A7	8.36E-08	1.32E-08	7.04E-08	85	84.2%
S5A	3.11E-08	3.19E-09	2.79E-08	86	89.7%
E2A6	7.57E-08	1.71E-09	7.39E-08	87	97.7%
E2A5	8.86E-08	1.58E-09	8.71E-08	88	98.2%
NC9B	2.40E-09	1.33E-09	1.07E-09	89	44.5%
NC9D	5.87E-08	8.93E-10	5.78E-08	90	98.5%
W3A	5.08E-08	6.42E-10	5.02E-08	91	98.7%
NC9C	4.32E-08	4.44E-10	4.28E-08	92	99.0%
NC6B	1.16E-09	8.56E-11	1.07E-09	93	92.6%

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals
 Descending Sort on Incremental Cancer Risk
 Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
NC9H	1.59E-07	6.30E-11	1.59E-07	94	99.9%
E1C	1.15E-07	3.55E-11	1.15E-07	95	99.9%
E2A3	3.35E-07	0.00E+00	3.35E-07	1	100.0%
W6D	3.20E-07	0.00E+00	3.20E-07	2	100.0%
NC9L	3.16E-07	0.00E+00	3.16E-07	3	100.0%
E2A2	2.76E-07	0.00E+00	2.76E-07	4	100.0%
NC9K	2.53E-07	0.00E+00	2.53E-07	5	100.0%
NC1G	2.49E-07	0.00E+00	2.49E-07	6	100.0%
NC9R	2.48E-07	0.00E+00	2.48E-07	7	100.0%
NC9O	2.38E-07	0.00E+00	2.38E-07	8	100.0%
E1D	2.20E-07	0.00E+00	2.20E-07	9	100.0%
E1A	2.11E-07	0.00E+00	2.11E-07	10	100.0%
E3E	2.11E-07	0.00E+00	2.11E-07	11	100.0%
E4B	2.11E-07	0.00E+00	2.11E-07	12	100.0%
E6B	1.90E-07	0.00E+00	1.90E-07	13	100.0%
NC9P	1.83E-07	0.00E+00	1.83E-07	14	100.0%
E3D	1.83E-07	0.00E+00	1.83E-07	15	100.0%
E2A1	1.77E-07	0.00E+00	1.77E-07	16	100.0%
E3I	1.75E-07	0.00E+00	1.75E-07	17	100.0%
E5	1.73E-07	0.00E+00	1.73E-07	18	100.0%
E4A	1.71E-07	0.00E+00	1.71E-07	19	100.0%
NP8B	1.68E-07	0.00E+00	1.68E-07	20	100.0%
E3C	1.67E-07	0.00E+00	1.67E-07	21	100.0%
E2B	1.38E-07	0.00E+00	1.38E-07	22	100.0%
W6B	1.21E-07	0.00E+00	1.21E-07	23	100.0%
E3F	1.15E-07	0.00E+00	1.15E-07	24	100.0%
E1B	9.96E-08	0.00E+00	9.96E-08	25	100.0%
E3A	9.39E-08	0.00E+00	9.39E-08	26	100.0%
NP8A	9.02E-08	0.00E+00	9.02E-08	27	100.0%
NP2	8.99E-08	0.00E+00	8.99E-08	28	100.0%
NP4	8.59E-08	0.00E+00	8.59E-08	29	100.0%
NP9E	7.76E-08	0.00E+00	7.76E-08	30	100.0%
NP9D	7.36E-08	0.00E+00	7.36E-08	31	100.0%
NC9G	6.51E-08	0.00E+00	6.51E-08	32	100.0%
E6A	6.44E-08	0.00E+00	6.44E-08	33	100.0%
E4C	6.35E-08	0.00E+00	6.35E-08	34	100.0%
E3J	6.23E-08	0.00E+00	6.23E-08	35	100.0%
C2C	6.09E-08	0.00E+00	6.09E-08	36	100.0%
E6D	6.08E-08	0.00E+00	6.08E-08	37	100.0%
SP10	5.77E-08	0.00E+00	5.77E-08	38	100.0%
NC9F	5.55E-08	0.00E+00	5.55E-08	39	100.0%
NC9E	5.40E-08	0.00E+00	5.40E-08	40	100.0%
NC9J	4.70E-08	0.00E+00	4.70E-08	41	100.0%
W7B	4.48E-08	0.00E+00	4.48E-08	42	100.0%
NC9Q	4.13E-08	0.00E+00	4.13E-08	43	100.0%
W5C	3.99E-08	0.00E+00	3.99E-08	44	100.0%
W8E	3.99E-08	0.00E+00	3.99E-08	45	100.0%

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals

Descending Sort on Incremental Cancer Risk

Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
W8C	3.68E-08	0.00E+00	3.68E-08	46	100.0%
S5D	3.41E-08	0.00E+00	3.41E-08	47	100.0%
W3D	3.38E-08	0.00E+00	3.38E-08	48	100.0%
NC9M	3.28E-08	0.00E+00	3.28E-08	49	100.0%
NC9I	3.13E-08	0.00E+00	3.13E-08	50	100.0%
W8D	2.92E-08	0.00E+00	2.92E-08	51	100.0%
W8B	2.90E-08	0.00E+00	2.90E-08	52	100.0%
W4B	2.84E-08	0.00E+00	2.84E-08	53	100.0%
W8F	2.82E-08	0.00E+00	2.82E-08	54	100.0%
NC9S	2.75E-08	0.00E+00	2.75E-08	55	100.0%
NP9A	2.53E-08	0.00E+00	2.53E-08	56	100.0%
S5C	2.49E-08	0.00E+00	2.49E-08	57	100.0%
NC9A	2.48E-08	0.00E+00	2.48E-08	58	100.0%
W8A	1.58E-08	0.00E+00	1.58E-08	59	100.0%
W1C	1.54E-08	0.00E+00	1.54E-08	60	100.0%
C3	0.00E+00	0.00E+00	0.00E+00	1	NA
E3H	0.00E+00	0.00E+00	0.00E+00	2	NA
E3K	0.00E+00	0.00E+00	0.00E+00	3	NA
NC3	0.00E+00	0.00E+00	0.00E+00	4	NA
NC8C	0.00E+00	0.00E+00	0.00E+00	5	NA
NC9N	0.00E+00	0.00E+00	0.00E+00	6	NA
NP1	0.00E+00	0.00E+00	0.00E+00	7	NA
NP7	0.00E+00	0.00E+00	0.00E+00	8	NA
NP9C	0.00E+00	0.00E+00	0.00E+00	9	NA
S1A	0.00E+00	0.00E+00	0.00E+00	10	NA
SP11	0.00E+00	0.00E+00	0.00E+00	11	NA
W1A	0.00E+00	0.00E+00	0.00E+00	12	NA
W1B	0.00E+00	0.00E+00	0.00E+00	13	NA
W1D	0.00E+00	0.00E+00	0.00E+00	14	NA
W1G	0.00E+00	0.00E+00	0.00E+00	15	NA
W3B	0.00E+00	0.00E+00	0.00E+00	16	NA
W4A	0.00E+00	0.00E+00	0.00E+00	17	NA
W5A	0.00E+00	0.00E+00	0.00E+00	18	NA
W5B	0.00E+00	0.00E+00	0.00E+00	19	NA
W5D	0.00E+00	0.00E+00	0.00E+00	20	NA
W6C	0.00E+00	0.00E+00	0.00E+00	21	NA
W6E	0.00E+00	0.00E+00	0.00E+00	22	NA
W7A	0.00E+00	0.00E+00	0.00E+00	23	NA

Program version: Gray Developmental, Smp. Arith. Mean, Models correction

Database version: Gray-1 parameter revisions, updated, November 30, 1993

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSRI5CO.CDK, HSSRT5CO.CDK

Table B.4.4-22 Site Cancer Risk Summary for Commercial Worker, Horizon 1

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals
 Descending Sort on Incremental Cancer Risk
 Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
SP10	9.25E-03	9.25E-03	1.00E-06	1	<0.01%
SP3A	4.87E-03	4.87E-03	0.00E+00	2	<0.01%
SP3B	3.35E-03	3.35E-03	0.00E+00	3	<0.01%
SP1A	2.18E-03	2.18E-03	0.00E+00	4	<0.01%
NC3	1.08E-03	1.08E-03	0.00E+00	5	<0.01%
SP1E	6.30E-04	6.30E-04	5.00E-07	6	0.1%
SP4A	4.38E-04	4.38E-04	1.00E-07	7	<0.01%
NC1B	3.90E-04	3.90E-04	4.00E-07	8	0.1%
SP8A	3.16E-04	3.15E-04	5.00E-07	9	0.2%
SP1D	2.70E-04	2.70E-04	2.00E-07	10	0.1%
SP12B	2.68E-04	2.68E-04	0.00E+00	11	<0.01%
C1A	1.92E-04	1.92E-04	2.00E-07	12	0.1%
NC8A	1.89E-04	1.89E-04	5.00E-07	13	0.3%
S2B	1.47E-04	1.47E-04	2.00E-07	14	0.1%
SP3C	1.30E-04	1.30E-04	1.00E-07	15	0.1%
NC1A	1.10E-04	1.09E-04	5.00E-07	16	0.5%
SP2D	4.35E-05	4.34E-05	3.00E-08	17	0.1%
S4	3.72E-05	3.69E-05	2.90E-07	18	0.8%
SP8B	3.27E-05	3.27E-05	2.00E-08	19	0.1%
SP1F	3.25E-05	3.25E-05	0.00E+00	20	<0.01%
NC2A	2.76E-05	2.73E-05	3.50E-07	21	1.3%
NC4B	2.30E-05	2.28E-05	1.70E-07	22	0.7%
NC1E	1.76E-05	1.72E-05	4.50E-07	23	2.6%
NC5C	1.63E-05	1.62E-05	1.40E-07	24	0.9%
S3B	1.47E-05	1.46E-05	1.30E-07	25	0.9%
NP5	1.49E-05	1.44E-05	4.60E-07	26	3.1%
NC4A	1.45E-05	1.43E-05	1.50E-07	27	1.0%
C1B	1.17E-05	1.15E-05	2.30E-07	28	2.0%
S2A	9.78E-06	9.64E-06	1.41E-07	29	1.4%
SP1G	8.05E-06	7.80E-06	2.45E-07	30	3.0%
SP9A	7.15E-06	6.99E-06	1.64E-07	31	2.3%
NP6	7.09E-06	6.65E-06	4.43E-07	32	6.3%
SP11	6.67E-06	6.59E-06	8.00E-08	33	1.2%
SP3E	6.54E-06	6.49E-06	4.20E-08	34	0.6%
SP1C	5.05E-06	4.90E-06	1.53E-07	35	3.0%
NC2D	4.90E-06	4.65E-06	2.52E-07	36	5.1%
NC5B	4.56E-06	4.13E-06	4.32E-07	37	9.5%
NC2B	3.93E-06	3.61E-06	3.24E-07	38	8.2%
W1F	3.36E-06	3.35E-06	1.20E-08	39	0.4%
C1D	3.43E-06	3.28E-06	1.52E-07	40	4.4%
SP9B	3.25E-06	3.14E-06	1.16E-07	41	3.6%
NC6A	3.20E-06	3.07E-06	1.30E-07	42	4.1%
W5D	3.44E-06	3.05E-06	3.92E-07	43	11.4%
E3B	2.91E-06	2.47E-06	4.37E-07	44	15.0%
SP3D	2.35E-06	2.30E-06	4.30E-08	45	1.8%
W2	2.36E-06	2.21E-06	1.52E-07	46	6.4%

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals
 Descending Sort on Incremental Cancer Risk
 Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
C1C	2.61E-06	2.10E-06	5.08E-07	47	19.4%
SP2A	1.86E-06	1.75E-06	1.17E-07	48	6.3%
SP12	1.77E-06	1.74E-06	2.90E-08	49	1.6%
NC5A	2.17E-06	1.73E-06	4.33E-07	50	20.0%
SP4B	1.83E-06	1.70E-06	1.30E-07	51	7.1%
NC1D	1.77E-06	1.54E-06	2.25E-07	52	12.7%
SP5B	1.43E-06	1.30E-06	1.29E-07	53	9.0%
SP2E	1.50E-06	1.28E-06	2.18E-07	54	14.5%
C2B	1.29E-06	1.25E-06	4.20E-08	55	3.3%
NC8B	1.36E-06	1.17E-06	1.91E-07	56	14.1%
SP2B	1.12E-06	1.10E-06	2.20E-08	57	2.0%
SP7C	1.14E-06	1.05E-06	9.10E-08	58	8.0%
SP2C	9.83E-07	9.63E-07	1.96E-08	59	2.0%
SP6	9.89E-07	8.80E-07	1.10E-07	60	11.1%
SP12A	8.94E-07	8.77E-07	1.74E-08	61	1.9%
C4	1.02E-06	8.55E-07	1.68E-07	62	16.4%
C3	1.01E-06	8.52E-07	1.60E-07	63	15.8%
SP1B	9.82E-07	8.37E-07	1.45E-07	64	14.7%
NC1C	1.16E-06	7.47E-07	4.16E-07	65	35.8%
NC5D	7.48E-07	7.19E-07	2.93E-08	66	3.9%
C2A	6.26E-07	4.94E-07	1.32E-07	67	21.1%
NC1F	6.44E-07	4.41E-07	2.03E-07	68	31.5%
E6C	8.72E-07	4.27E-07	4.45E-07	69	51.0%
SP5A	5.45E-07	4.23E-07	1.22E-07	70	22.4%
SP7B	5.59E-07	4.10E-07	1.49E-07	71	26.7%
SP7A	3.36E-07	3.22E-07	1.40E-08	72	4.2%
W6A	4.37E-07	2.73E-07	1.65E-07	73	37.6%
NC1G	4.55E-07	2.58E-07	1.97E-07	74	43.3%
E3A	3.89E-07	2.51E-07	1.38E-07	75	35.5%
E2C	4.09E-07	2.41E-07	1.68E-07	76	41.1%
S2C	3.38E-07	2.33E-07	1.05E-07	77	30.9%
NP8C	6.46E-07	2.05E-07	4.41E-07	78	68.3%
NP3	3.75E-07	1.87E-07	1.88E-07	79	50.1%
SP8C	1.87E-07	1.73E-07	1.33E-08	80	7.1%
NP9D	2.38E-07	1.65E-07	7.32E-08	81	30.7%
E3G	3.02E-07	1.60E-07	1.42E-07	82	47.1%
NP2	2.97E-07	1.28E-07	1.69E-07	83	56.9%
S5B	2.12E-07	1.12E-07	9.98E-08	84	47.1%
E2A4	2.58E-07	1.04E-07	1.54E-07	85	59.9%
S3A	1.23E-07	9.21E-08	3.10E-08	86	25.2%
NC2C	2.81E-07	7.04E-08	2.10E-07	87	74.9%
W5C	8.53E-08	5.40E-08	3.13E-08	88	36.7%
W1E	5.06E-08	5.06E-08	0.00E+00	89	<0.01%
E2A7	3.36E-07	4.91E-08	2.87E-07	90	85.4%
W1B	6.41E-08	4.07E-08	2.34E-08	91	36.5%
S5E	4.82E-08	3.15E-08	1.67E-08	92	34.6%
W1G	4.29E-08	2.92E-08	1.36E-08	93	31.8%

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals
 Descending Sort on Incremental Cancer Risk
 Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
E2B	1.71E-07	2.92E-08	1.42E-07	94	82.9%
NP9A	6.60E-08	2.64E-08	3.96E-08	95	60.0%
W3C	5.82E-08	2.40E-08	3.42E-08	96	58.7%
C2D	7.10E-08	2.31E-08	4.79E-08	97	67.5%
W3B	5.89E-08	2.27E-08	3.63E-08	98	61.5%
E2A1	2.14E-07	1.97E-08	1.94E-07	99	90.8%
E2A6	2.84E-07	1.46E-08	2.69E-07	100	94.9%
W4B	4.65E-08	1.28E-08	3.37E-08	101	72.5%
W1C	2.84E-08	9.75E-09	1.86E-08	102	65.6%
E3C	1.86E-07	9.55E-09	1.76E-07	103	94.9%
W6D	1.69E-07	4.96E-09	1.64E-07	104	97.1%
W7A	2.74E-08	4.94E-09	2.25E-08	105	82.0%
C2C	1.79E-07	3.91E-09	1.75E-07	106	97.8%
E2A5	2.63E-07	2.46E-09	2.60E-07	107	99.1%
NP8B	1.64E-07	2.18E-09	1.62E-07	108	98.7%
S5A	2.96E-08	1.63E-09	2.79E-08	109	94.5%
E3D	1.96E-07	1.33E-09	1.95E-07	110	99.3%
NC9B	2.40E-09	1.33E-09	1.07E-09	111	44.5%
E3I	2.09E-07	1.14E-09	2.08E-07	112	99.5%
NC9D	5.87E-08	8.93E-10	5.78E-08	113	98.5%
NC9C	4.32E-08	4.44E-10	4.28E-08	114	99.0%
NC9L	3.16E-07	0.00E+00	3.16E-07	1	100.0%
NP9F	3.10E-07	0.00E+00	3.10E-07	2	100.0%
E2A3	2.80E-07	0.00E+00	2.80E-07	3	100.0%
NC9K	2.53E-07	0.00E+00	2.53E-07	4	100.0%
NC9R	2.52E-07	0.00E+00	2.52E-07	5	100.0%
NC9P	2.47E-07	0.00E+00	2.47E-07	6	100.0%
E3E	2.11E-07	0.00E+00	2.11E-07	7	100.0%
E1C	2.05E-07	0.00E+00	2.05E-07	8	100.0%
E2A2	2.05E-07	0.00E+00	2.05E-07	9	100.0%
NP9C	1.97E-07	0.00E+00	1.97E-07	10	100.0%
E1B	1.85E-07	0.00E+00	1.85E-07	11	100.0%
NP9B	1.83E-07	0.00E+00	1.83E-07	12	100.0%
E1D	1.83E-07	0.00E+00	1.83E-07	13	100.0%
NC9O	1.80E-07	0.00E+00	1.80E-07	14	100.0%
E1A	1.77E-07	0.00E+00	1.77E-07	15	100.0%
E4B	1.75E-07	0.00E+00	1.75E-07	16	100.0%
NC9H	1.72E-07	0.00E+00	1.72E-07	17	100.0%
E4A	1.58E-07	0.00E+00	1.58E-07	18	100.0%
E6B	1.39E-07	0.00E+00	1.39E-07	19	100.0%
E3F	1.35E-07	0.00E+00	1.35E-07	20	100.0%
E6A	1.34E-07	0.00E+00	1.34E-07	21	100.0%
E5	1.30E-07	0.00E+00	1.30E-07	22	100.0%
W6C	1.26E-07	0.00E+00	1.26E-07	23	100.0%
W6E	1.23E-07	0.00E+00	1.23E-07	24	100.0%
W5A	1.06E-07	0.00E+00	1.06E-07	25	100.0%
W1A	1.05E-07	0.00E+00	1.05E-07	26	100.0%

Additive 5th Percentile Total and Incremental Risk for Carcinogenic Chemicals

Descending Sort on Incremental Cancer Risk

Rank on Incremental Cancer Risk

Site Name	Total Cancer Risk	Incremental Cancer Risk	Background Cancer Risk	Rank	Background Contribution (%)
W6B	1.01E-07	0.00E+00	1.01E-07	27	100.0%
NP4	7.75E-08	0.00E+00	7.75E-08	28	100.0%
NP8A	7.44E-08	0.00E+00	7.44E-08	29	100.0%
E3J	7.31E-08	0.00E+00	7.31E-08	30	100.0%
NC9G	6.51E-08	0.00E+00	6.51E-08	31	100.0%
E6D	6.08E-08	0.00E+00	6.08E-08	32	100.0%
NP9E	5.97E-08	0.00E+00	5.97E-08	33	100.0%
E4C	5.84E-08	0.00E+00	5.84E-08	34	100.0%
NC9F	5.55E-08	0.00E+00	5.55E-08	35	100.0%
NP7	5.54E-08	0.00E+00	5.54E-08	36	100.0%
NC9E	5.40E-08	0.00E+00	5.40E-08	37	100.0%
W8B	4.99E-08	0.00E+00	4.99E-08	38	100.0%
NC9J	4.70E-08	0.00E+00	4.70E-08	39	100.0%
S5D	4.61E-08	0.00E+00	4.61E-08	40	100.0%
W7B	4.36E-08	0.00E+00	4.36E-08	41	100.0%
W3D	4.19E-08	0.00E+00	4.19E-08	42	100.0%
W5B	4.06E-08	0.00E+00	4.06E-08	43	100.0%
W8E	3.99E-08	0.00E+00	3.99E-08	44	100.0%
W8C	3.68E-08	0.00E+00	3.68E-08	45	100.0%
W3A	3.57E-08	0.00E+00	3.57E-08	46	100.0%
NC9Q	3.30E-08	0.00E+00	3.30E-08	47	100.0%
NC9I	3.13E-08	0.00E+00	3.13E-08	48	100.0%
NC9S	2.96E-08	0.00E+00	2.96E-08	49	100.0%
NC9M	2.96E-08	0.00E+00	2.96E-08	50	100.0%
W8D	2.92E-08	0.00E+00	2.92E-08	51	100.0%
W8F	2.82E-08	0.00E+00	2.82E-08	52	100.0%
S5C	2.49E-08	0.00E+00	2.49E-08	53	100.0%
NC9A	2.48E-08	0.00E+00	2.48E-08	54	100.0%
W4A	2.31E-08	0.00E+00	2.31E-08	55	100.0%
W8A	1.57E-08	0.00E+00	1.57E-08	56	100.0%
W1D	1.29E-08	0.00E+00	1.29E-08	57	100.0%
NC6B	9.29E-10	0.00E+00	9.29E-10	58	100.0%
E3H	0.00E+00	0.00E+00	0.00E+00	1	NA
E3K	0.00E+00	0.00E+00	0.00E+00	2	NA
NC8C	0.00E+00	0.00E+00	0.00E+00	3	NA
NC9N	0.00E+00	0.00E+00	0.00E+00	4	NA
NP1	0.00E+00	0.00E+00	0.00E+00	5	NA
S1A	0.00E+00	0.00E+00	0.00E+00	6	NA

Program version: Gray Developmental, Smp. Arith. Mean, Models correction

Database version: Gray-1 parameter revisions, updated, November 30, 1993

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSRI5C1.CDK, HSSRT5C1.CDK

Additive 5th Percentile Total Risk for Carcinogenic Chemicals

Descending Sort on Total Indirect Cancer Risk

Indirect cancer risks were not calculated for 134 sites given BCRL data.

Site Name	Total Indirect Cancer Risk	Rank
SP10	6.66E-06	1
SP11	5.20E-06	2
NC6A	4.15E-06	3
SP2B	2.90E-06	4
SP1A	2.70E-06	5
SP7C	1.25E-06	6
SP1G	1.22E-06	7
SP3E	7.10E-07	8
C1A	6.67E-07	9
NC8A	4.14E-07	10
NC3	4.13E-07	11
NC1B	1.90E-07	12
C1B	1.43E-07	13
E2B	1.42E-07	14
W1G	1.37E-07	15
W1C	1.27E-07	16
W3C	1.20E-07	17
NC1A	1.15E-07	18
NP6	1.12E-07	19
W1D	8.47E-08	20
NP5	7.79E-08	21
E2A1	7.30E-08	22
SP7B	5.39E-08	23
SP3C	4.33E-08	24
W1F	3.80E-08	25
SP1C	2.54E-08	26
NC4A	2.28E-08	27
SP12	1.81E-08	28
W5A	1.45E-08	29
W4B	1.40E-08	30
NC2A	1.10E-08	31
NC2C	1.01E-08	32
C1C	9.52E-09	33
W6A	7.77E-09	34
S3B	6.09E-09	35
SP8A	5.71E-09	36
W2	5.47E-09	37
C1D	3.53E-09	38
SP2D	2.64E-09	39
E2A4	4.87E-10	40
NC1C	3.80E-10	41
S2A	3.80E-10	42
SP2C	3.80E-10	43
SP9A	3.25E-10	44

Program version: Gray Developmental, Smp. Arith. Mean,
Models correction

Database version: Gray-1 parameter revisions, updated, 11/30/93

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source File: HSSRT5C2.CDK

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals

Descending Sort on Incremental Hazard Index

Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
SP3A	1.20E+01	1.20E+01 ✓	1.00E-02	1	0.08 %
SP1E	4.50E+00	4.47E+00	3.00E-02	2	0.67 %
SP3B	3.07E+00	3.05E+00	2.60E-02	3	0.85 %
NC8A	2.46E+00	2.43E+00	2.60E-02	4	1.06 %
SP1A	1.97E+00	1.94E+00	3.00E-02	5	1.52 %
SP8A	1.59E+00	1.56E+00	2.40E-02	6	1.51 %
SP4A	9.21E-01	8.80E-01	4.14E-02	7	4.49 %
NC1A	7.54E-01	7.24E-01	2.99E-02	8	3.97 %
NP5	6.10E-01	5.64E-01	4.59E-02	9	7.53 %
SP3C	5.29E-01	4.88E-01	4.05E-02	10	7.66 %
S2B	4.59E-01	4.26E-01	3.26E-02	11	7.10 %
NC1B	3.80E-01	3.55E-01	2.45E-02	12	6.46 %
NP6	3.81E-01	3.44E-01	3.69E-02	13	9.69 %
SP12B	3.17E-01	2.84E-01	3.28E-02	14	10.35 %
SP1D	2.86E-01	2.72E-01	1.47E-02	15	5.13 %
S4	2.66E-01	2.42E-01	2.36E-02	16	8.88 %
SP1G	2.50E-01	1.87E-01	6.23E-02	17	24.97 %
E2A6	1.58E-01	1.21E-01	3.72E-02	18	23.53 %
E3B	1.55E-01	1.14E-01	4.11E-02	19	26.50 %
SP1F	1.11E-01	1.08E-01	2.70E-03	20	2.44 %
SP8B	1.04E-01	9.20E-02	1.21E-02	21	11.63 %
SP2D	9.31E-02	8.08E-02	1.23E-02	22	13.25 %
NC5C	1.02E-01	8.07E-02	2.11E-02	23	20.74 %
NP4	1.18E-01	7.79E-02	4.04E-02	24	34.16 %
C1B	1.04E-01	7.68E-02	2.70E-02	25	26.05 %
E2A7	1.04E-01	6.81E-02	3.57E-02	26	34.39 %
W6A	1.21E-01	6.01E-02	6.05E-02	27	50.15 %
NC2A	8.85E-02	5.96E-02	2.90E-02	28	32.71 %
NC4B	8.28E-02	5.93E-02	2.35E-02	29	28.43 %
W6D	7.76E-02	5.54E-02	2.23E-02	30	28.66 %
SP9A	8.17E-02	5.02E-02	3.16E-02	31	38.62 %
W3C	7.03E-02	5.00E-02	2.03E-02	32	28.92 %
E2A5	8.88E-02	4.61E-02	4.27E-02	33	48.06 %
NC5B	7.89E-02	4.60E-02	3.29E-02	34	41.75 %
NC5A	7.59E-02	3.75E-02	3.85E-02	35	50.66 %
NC4A	5.39E-02	3.52E-02	1.88E-02	36	34.82 %
SP3E	4.79E-02	3.39E-02	1.40E-02	37	29.28 %
SP1C	3.81E-02	3.25E-02	5.61E-03	38	14.71 %
NC1E	5.30E-02	2.39E-02	2.91E-02	39	54.94 %
NC2B	5.03E-02	2.24E-02	2.79E-02	40	55.44 %
E2A4	6.82E-02	2.24E-02	4.59E-02	41	67.23 %
C1C	5.13E-02	2.23E-02	2.90E-02	42	56.52 %
NP9B	7.32E-02	2.21E-02	5.11E-02	43	69.81 %
C1A	4.40E-02	2.09E-02	2.31E-02	44	52.51 %
E3G	3.97E-02	1.72E-02	2.24E-02	45	56.58 %
SP9B	5.39E-02	1.58E-02	3.81E-02	46	70.75 %

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals

Descending Sort on Incremental Hazard Index

Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
S2A	2.76E-02	1.46E-02	1.29E-02	47	46.88 %
SP2A	3.18E-02	1.43E-02	1.76E-02	48	55.19 %
W1F	1.52E-02	1.19E-02	3.26E-03	49	21.52 %
NC2D	3.79E-02	1.13E-02	2.66E-02	50	70.18 %
SP3D	3.04E-02	1.07E-02	1.97E-02	51	64.73 %
SP2C	1.79E-02	1.00E-02	7.90E-03	52	44.06 %
C4	3.02E-02	9.63E-03	2.06E-02	53	68.16 %
SP4B	2.35E-02	8.19E-03	1.53E-02	54	65.15 %
NC1C	2.67E-02	8.02E-03	1.86E-02	55	69.93 %
C2A	2.99E-02	7.93E-03	2.20E-02	56	73.51 %
SP12	2.33E-02	7.85E-03	1.55E-02	57	66.33 %
W2	2.62E-02	7.83E-03	1.84E-02	58	70.11 %
SP5B	2.84E-02	7.06E-03	2.13E-02	59	75.13 %
NC6A	2.53E-02	6.37E-03	1.90E-02	60	74.84 %
NP8C	3.70E-02	6.30E-03	3.07E-02	61	82.96 %
E6C	4.79E-02	6.22E-03	4.17E-02	62	87.03 %
E3F	8.03E-03	5.74E-03	2.29E-03	63	28.52 %
SP2E	2.44E-02	5.22E-03	1.92E-02	64	78.64 %
SP5A	9.97E-03	5.16E-03	4.81E-03	65	48.23 %
SP2B	1.68E-02	4.86E-03	1.20E-02	66	71.15 %
NC8B	3.64E-02	4.83E-03	3.15E-02	67	86.71 %
SP1B	3.34E-02	3.81E-03	2.96E-02	68	88.62 %
C2B	2.36E-02	3.61E-03	2.00E-02	69	84.70 %
NC1D	2.66E-02	3.44E-03	2.32E-02	70	87.07 %
SP12A	1.41E-02	3.44E-03	1.07E-02	71	75.69 %
W6E	9.11E-03	3.40E-03	5.71E-03	72	62.69 %
SP6	3.44E-02	3.31E-03	3.11E-02	73	90.37 %
S2C	1.58E-02	3.06E-03	1.28E-02	74	80.70 %
S5C	1.90E-02	2.98E-03	1.60E-02	75	84.33 %
E6A	3.54E-02	2.90E-03	3.25E-02	76	91.81 %
NC1F	1.92E-02	2.70E-03	1.65E-02	77	85.96 %
W1E	2.44E-03	2.44E-03	0.00E+00	78	<0.01 %
NP9F	3.09E-02	2.29E-03	2.86E-02	79	92.61 %
NC2C	1.84E-02	2.04E-03	1.64E-02	80	88.90 %
NC5D	1.51E-02	2.01E-03	1.30E-02	81	86.64 %
E1C	5.62E-02	1.99E-03	5.42E-02	82	96.45 %
SP7C	1.50E-02	1.81E-03	1.32E-02	83	87.96 %
SP7A	1.47E-03	1.47E-03	0.00E+00	84	<0.01 %
NC9B	2.64E-03	1.46E-03	1.17E-03	85	44.54 %
C1D	1.92E-02	1.40E-03	1.78E-02	86	92.72 %
S5E	1.14E-02	1.25E-03	1.02E-02	87	89.06 %
S3A	1.33E-02	1.16E-03	1.21E-02	88	91.29 %
E1B	4.89E-02	1.05E-03	4.79E-02	89	97.86 %
NC9D	2.86E-02	9.81E-04	2.76E-02	90	96.57 %
E2C	2.71E-02	8.01E-04	2.63E-02	91	97.04 %
NP8A	4.41E-02	7.93E-04	4.33E-02	92	98.20 %
W3A	2.59E-02	7.05E-04	2.52E-02	93	97.28 %

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals

Descending Sort on Incremental Hazard Index

Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
S5B	2.71E-02	6.34E-04	2.64E-02	94	97.66 %
S3B	1.49E-02	6.21E-04	1.43E-02	95	95.83 %
SP7B	6.01E-04	6.01E-04	0.00E+00	96	<0.01 %
E4C	3.29E-02	5.98E-04	3.23E-02	97	98.19 %
NP3	4.05E-02	5.77E-04	3.99E-02	98	98.57 %
NC9C	1.91E-02	4.87E-04	1.86E-02	99	97.44 %
SP8C	7.39E-03	4.87E-04	6.90E-03	100	93.42 %
W6B	2.86E-02	2.83E-04	2.83E-02	101	99.01 %
W7B	2.45E-02	2.34E-04	2.43E-02	102	99.05 %
C2D	1.82E-02	1.68E-04	1.80E-02	103	99.07 %
NP1	2.30E-04	1.56E-04	7.42E-05	104	32.29 %
NC9Q	2.34E-02	1.33E-04	2.33E-02	105	99.43 %
NC6B	1.27E-03	9.39E-05	1.17E-03	106	92.59 %
S5A	1.41E-02	7.82E-05	1.40E-02	107	99.45 %
NC9H	2.31E-02	6.91E-05	2.30E-02	108	99.70 %
NC9S	1.51E-02	2.74E-06	1.51E-02	109	99.98 %
E2A3	4.93E-02	0.00E+00	4.93E-02	1	100.00 %
E2A2	4.26E-02	0.00E+00	4.26E-02	2	100.00 %
NP2	4.17E-02	0.00E+00	4.17E-02	3	100.00 %
E1D	3.92E-02	0.00E+00	3.92E-02	4	100.00 %
E3I	3.80E-02	0.00E+00	3.80E-02	5	100.00 %
E3E	3.69E-02	0.00E+00	3.69E-02	6	100.00 %
E1A	3.64E-02	0.00E+00	3.64E-02	7	100.00 %
NP8B	3.46E-02	0.00E+00	3.46E-02	8	100.00 %
NP9E	3.43E-02	0.00E+00	3.43E-02	9	100.00 %
NP9D	3.38E-02	0.00E+00	3.38E-02	10	100.00 %
E2A1	3.37E-02	0.00E+00	3.37E-02	11	100.00 %
E4B	3.00E-02	0.00E+00	3.00E-02	12	100.00 %
E3D	2.96E-02	0.00E+00	2.96E-02	13	100.00 %
E3C	2.91E-02	0.00E+00	2.91E-02	14	100.00 %
E6D	2.87E-02	0.00E+00	2.87E-02	15	100.00 %
E4A	2.83E-02	0.00E+00	2.83E-02	16	100.00 %
NC9G	2.71E-02	0.00E+00	2.71E-02	17	100.00 %
E6B	2.69E-02	0.00E+00	2.69E-02	18	100.00 %
NC9R	2.60E-02	0.00E+00	2.60E-02	19	100.00 %
NC9E	2.60E-02	0.00E+00	2.60E-02	20	100.00 %
C2C	2.54E-02	0.00E+00	2.54E-02	21	100.00 %
NC9O	2.47E-02	0.00E+00	2.47E-02	22	100.00 %
E5	2.43E-02	0.00E+00	2.43E-02	23	100.00 %
SP10	2.40E-02	0.00E+00	2.40E-02	24	100.00 %
NC9F	2.31E-02	0.00E+00	2.31E-02	25	100.00 %
E2B	2.23E-02	0.00E+00	2.23E-02	26	100.00 %
NC1G	2.18E-02	0.00E+00	2.18E-02	27	100.00 %
S5D	1.96E-02	0.00E+00	1.96E-02	28	100.00 %
NC9J	1.96E-02	0.00E+00	1.96E-02	29	100.00 %
NC9L	1.96E-02	0.00E+00	1.96E-02	30	100.00 %

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals
 Descending Sort on Incremental Hazard Index
 Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
W8E	1.86E-02	0.00E+00	1.86E-02	31	100.00%
E3A	1.77E-02	0.00E+00	1.77E-02	32	100.00%
NC9P	1.74E-02	0.00E+00	1.74E-02	33	100.00%
W8C	1.73E-02	0.00E+00	1.73E-02	34	100.00%
W5C	1.66E-02	0.00E+00	1.66E-02	35	100.00%
W3D	1.65E-02	0.00E+00	1.65E-02	36	100.00%
NP9A	1.60E-02	0.00E+00	1.60E-02	37	100.00%
NC9K	1.59E-02	0.00E+00	1.59E-02	38	100.00%
W8B	1.50E-02	0.00E+00	1.50E-02	39	100.00%
W8D	1.40E-02	0.00E+00	1.40E-02	40	100.00%
NC9M	1.37E-02	0.00E+00	1.37E-02	41	100.00%
NC9I	1.30E-02	0.00E+00	1.30E-02	42	100.00%
W4B	1.29E-02	0.00E+00	1.29E-02	43	100.00%
W8F	1.18E-02	0.00E+00	1.18E-02	44	100.00%
NC9A	1.03E-02	0.00E+00	1.03E-02	45	100.00%
W8A	8.06E-03	0.00E+00	8.06E-03	46	100.00%
W1C	7.66E-03	0.00E+00	7.66E-03	47	100.00%
NC9N	2.47E-03	0.00E+00	2.47E-03	48	100.00%
W4A	1.98E-03	0.00E+00	1.98E-03	49	100.00%
W5D	1.38E-03	0.00E+00	1.38E-03	50	100.00%
E3J	1.24E-03	0.00E+00	1.24E-03	51	100.00%
C3	0.00E+00	0.00E+00	0.00E+00	1	NA
E3H	0.00E+00	0.00E+00	0.00E+00	2	NA
E3K	0.00E+00	0.00E+00	0.00E+00	3	NA
NC3	0.00E+00	0.00E+00	0.00E+00	4	NA
NC8C	0.00E+00	0.00E+00	0.00E+00	5	NA
NP7	0.00E+00	0.00E+00	0.00E+00	6	NA
NP9C	0.00E+00	0.00E+00	0.00E+00	7	NA
S1A	0.00E+00	0.00E+00	0.00E+00	8	NA
SP11	0.00E+00	0.00E+00	0.00E+00	9	NA
W1A	0.00E+00	0.00E+00	0.00E+00	10	NA
W1B	0.00E+00	0.00E+00	0.00E+00	11	NA
W1D	0.00E+00	0.00E+00	0.00E+00	12	NA
W1G	0.00E+00	0.00E+00	0.00E+00	13	NA
W3B	0.00E+00	0.00E+00	0.00E+00	14	NA
W5A	0.00E+00	0.00E+00	0.00E+00	15	NA
W5B	0.00E+00	0.00E+00	0.00E+00	16	NA
W6C	0.00E+00	0.00E+00	0.00E+00	17	NA
W7A	0.00E+00	0.00E+00	0.00E+00	18	NA

Program version: Gray Developmental, Smp. Arith. Mean, Models correction

Database version: Gray-1 parameter revisions, updated, November 30, 1993

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSRI5H0.CDK, HSSRT5H0.CDK

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals

Descending Sort on Incremental Hazard Index

Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
SP10	1.07E+04	1.07E+04	0.00E+00	1	<0.01 %
C1A	4.32E+03	4.32E+03	0.00E+00	2	<0.01 %
SP1E	9.46E+02	9.46E+02	0.00E+00	3	<0.01 %
SP1A	6.01E+02	6.01E+02	0.00E+00	4	<0.01 %
NC3	5.54E+02	5.54E+02	0.00E+00	5	<0.01 %
SP8A	2.57E+02	2.57E+02	0.00E+00	6	<0.01 %
SP3A	1.59E+02	1.59E+02	0.00E+00	7	<0.01 %
SP3B	1.30E+02	1.30E+02	0.00E+00	8	<0.01 %
SP2A	1.21E+02	1.21E+02	0.00E+00	9	<0.01 %
SP1F	4.60E+01	4.60E+01	1.00E-02	10	0.02 %
SP2B	2.28E+01	2.28E+01	1.00E-02	11	0.04 %
NC1B	1.44E+01	1.44E+01	3.00E-02	12	0.21 %
SP4A	1.35E+01	1.35E+01	3.00E-02	13	0.22 %
SP12B	8.65E+00	8.62E+00	3.30E-02	14	0.38 %
SP1D	8.44E+00	8.43E+00	1.50E-02	15	0.18 %
NC1A	7.39E+00	7.36E+00	2.90E-02	16	0.39 %
NC8A	7.29E+00	7.27E+00	2.50E-02	17	0.34 %
S2B	4.53E+00	4.50E+00	2.90E-02	18	0.64 %
C1C	4.42E+00	4.35E+00	6.60E-02	19	1.49 %
SP1G	4.33E+00	4.27E+00	5.90E-02	20	1.36 %
SP3C	4.01E+00	3.97E+00	3.70E-02	21	0.92 %
SP3E	3.84E+00	3.82E+00	2.30E-02	22	0.60 %
SP3D	2.85E+00	2.83E+00	2.10E-02	23	0.74 %
NC4B	2.84E+00	2.82E+00	2.30E-02	24	0.81 %
S4	2.80E+00	2.78E+00	2.20E-02	25	0.79 %
C1B	2.72E+00	2.70E+00	2.30E-02	26	0.85 %
SP5B	2.31E+00	2.29E+00	2.00E-02	27	0.87 %
C4	2.12E+00	2.10E+00	1.90E-02	28	0.90 %
SP12A	2.05E+00	2.04E+00	9.00E-03	29	0.44 %
W2	1.88E+00	1.85E+00	2.90E-02	30	1.55 %
W1E	1.58E+00	1.58E+00	0.00E+00	31	<0.01 %
S2A	1.56E+00	1.55E+00	1.60E-02	32	1.02 %
NC4A	1.53E+00	1.50E+00	2.60E-02	33	1.70 %
SP2D	1.39E+00	1.38E+00	1.10E-02	34	0.79 %
NC1D	1.38E+00	1.36E+00	2.20E-02	35	1.60 %
NC2A	1.36E+00	1.34E+00	2.70E-02	36	1.98 %
NC1F	1.33E+00	1.31E+00	1.90E-02	37	1.43 %
SP9A	1.31E+00	1.29E+00	2.60E-02	38	1.98 %
NC5C	1.20E+00	1.18E+00	2.20E-02	39	1.83 %
SP2E	1.06E+00	1.03E+00	3.20E-02	40	3.02 %
NC6A	1.01E+00	9.88E-01	1.91E-02	41	1.90 %
S5E	9.92E-01	9.82E-01	1.02E-02	42	1.03 %
NC1E	8.98E-01	8.56E-01	4.27E-02	43	4.75 %
SP8B	8.35E-01	8.27E-01	8.20E-03	44	0.98 %
SP4B	7.62E-01	7.46E-01	1.55E-02	45	2.03 %
W6A	7.36E-01	6.90E-01	4.60E-02	46	6.25 %

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals

Descending Sort on Incremental Hazard Index

Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
S3B	6.55E-01	6.39E-01	1.60E-02	47	2.44 %
W5D	5.76E-01	5.13E-01	6.29E-02	48	10.93 %
NP5	3.36E-01	2.93E-01	4.28E-02	49	12.75 %
SP11	2.13E-01	2.04E-01	8.90E-03	50	4.18 %
NC5B	1.92E-01	1.61E-01	3.12E-02	51	16.24 %
NC2B	1.80E-01	1.54E-01	2.63E-02	52	14.60 %
NP6	1.88E-01	1.52E-01	3.64E-02	53	19.35 %
SP1C	1.65E-01	1.50E-01	1.50E-02	54	9.12 %
NC2D	1.56E-01	1.34E-01	2.28E-02	55	14.59 %
SP9B	1.56E-01	1.27E-01	2.92E-02	56	18.74 %
C1D	1.27E-01	1.08E-01	1.93E-02	57	15.15 %
S5B	1.27E-01	1.03E-01	2.38E-02	58	18.77 %
W1F	9.32E-02	8.65E-02	6.69E-03	59	7.18 %
E2A6	1.07E-01	6.26E-02	4.39E-02	60	41.26 %
E2A7	1.05E-01	6.03E-02	4.49E-02	61	42.67 %
SP2C	6.96E-02	6.00E-02	9.65E-03	62	13.86 %
W1B	6.58E-02	5.60E-02	9.75E-03	63	14.83 %
SP7C	6.63E-02	5.52E-02	1.11E-02	64	16.79 %
E2A4	9.71E-02	5.37E-02	4.34E-02	65	44.72 %
S5A	6.47E-02	5.06E-02	1.40E-02	66	21.71 %
E3B	8.29E-02	5.05E-02	3.23E-02	67	39.02 %
NC5A	8.08E-02	4.98E-02	3.10E-02	68	38.40 %
NP4	7.85E-02	4.37E-02	3.49E-02	69	44.42 %
NC8B	7.10E-02	4.28E-02	2.83E-02	70	39.81 %
SP12	5.53E-02	4.23E-02	1.30E-02	71	23.45 %
C2B	6.02E-02	4.00E-02	2.02E-02	72	33.51 %
SP1B	5.96E-02	3.42E-02	2.54E-02	73	42.62 %
SP6	5.81E-02	3.34E-02	2.47E-02	74	42.50 %
E3G	5.48E-02	3.15E-02	2.33E-02	75	42.57 %
C3	4.96E-02	2.68E-02	2.29E-02	76	46.03 %
S2C	3.44E-02	2.29E-02	1.16E-02	77	33.54 %
W3C	4.03E-02	2.24E-02	1.79E-02	78	44.40 %
NC5D	3.53E-02	2.13E-02	1.39E-02	79	39.46 %
E2A5	5.93E-02	2.04E-02	3.89E-02	80	65.61 %
NC1C	4.33E-02	2.02E-02	2.31E-02	81	53.36 %
E3A	4.03E-02	1.75E-02	2.28E-02	82	56.66 %
NP2	5.54E-02	1.66E-02	3.88E-02	83	70.03 %
W6D	3.14E-02	1.54E-02	1.60E-02	84	50.88 %
C2A	3.69E-02	1.50E-02	2.19E-02	85	59.36 %
E6C	5.21E-02	1.49E-02	3.72E-02	86	71.46 %
SP7B	2.72E-02	1.29E-02	1.43E-02	87	52.52 %
NP3	4.78E-02	1.01E-02	3.77E-02	88	78.78 %
S3A	2.30E-02	8.41E-03	1.46E-02	89	63.48 %
SP5A	2.77E-02	8.01E-03	1.97E-02	90	71.05 %
W4B	2.33E-02	7.53E-03	1.57E-02	91	67.64 %
NP8B	3.90E-02	6.48E-03	3.25E-02	92	83.39 %
SP7A	1.19E-02	6.05E-03	5.81E-03	93	49.00 %

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals
 Descending Sort on Incremental Hazard Index
 Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
W6E	2.27E-02	5.84E-03	1.69E-02	94	74.27 %
NC1G	2.46E-02	4.85E-03	1.97E-02	95	80.24 %
E3D	3.38E-02	4.65E-03	2.92E-02	96	86.24 %
E2C	2.35E-02	4.53E-03	1.89E-02	97	80.69 %
SP8C	1.12E-02	4.43E-03	6.79E-03	98	60.51 %
NP8C	3.83E-02	4.00E-03	3.43E-02	99	89.55 %
W5C	1.62E-02	3.14E-03	1.30E-02	100	80.59 %
S5C	1.90E-02	2.98E-03	1.60E-02	101	84.33 %
E3F	5.55E-03	2.87E-03	2.69E-03	102	48.40 %
NC2C	2.17E-02	2.05E-03	1.97E-02	103	90.57 %
W1G	7.43E-03	1.70E-03	5.73E-03	104	77.10 %
NC9B	2.64E-03	1.46E-03	1.17E-03	105	44.54 %
W3B	1.80E-02	1.32E-03	1.67E-02	106	92.67 %
W6B	2.25E-02	1.25E-03	2.12E-02	107	94.45 %
NC9D	2.86E-02	9.81E-04	2.76E-02	108	96.57 %
W1C	9.31E-03	5.67E-04	8.74E-03	109	93.91 %
NC9C	1.91E-02	4.87E-04	1.86E-02	110	97.44 %
C2D	2.04E-02	4.34E-04	2.00E-02	111	97.87 %
E2B	2.39E-02	4.18E-04	2.35E-02	112	98.25 %
W7A	1.15E-02	2.87E-04	1.12E-02	113	97.51 %
C2C	2.71E-02	2.28E-04	2.68E-02	114	99.16 %
W7B	2.14E-02	8.89E-05	2.13E-02	115	99.58 %
NP1	8.89E-05	1.48E-05	7.41E-05	116	83.34 %
NP9B	4.51E-02	0.00E+00	4.51E-02	1	100.00 %
E2A3	4.30E-02	0.00E+00	4.30E-02	2	100.00 %
E3I	4.01E-02	0.00E+00	4.01E-02	3	100.00 %
E1C	4.00E-02	0.00E+00	4.00E-02	4	100.00 %
E2A2	3.67E-02	0.00E+00	3.67E-02	5	100.00 %
E6A	3.53E-02	0.00E+00	3.53E-02	6	100.00 %
E1B	3.51E-02	0.00E+00	3.51E-02	7	100.00 %
NP8A	3.46E-02	0.00E+00	3.46E-02	8	100.00 %
NP9D	3.24E-02	0.00E+00	3.24E-02	9	100.00 %
E2A1	3.17E-02	0.00E+00	3.17E-02	10	100.00 %
E3E	3.03E-02	0.00E+00	3.03E-02	11	100.00 %
E1D	2.97E-02	0.00E+00	2.97E-02	12	100.00 %
E3C	2.95E-02	0.00E+00	2.95E-02	13	100.00 %
NP9C	2.91E-02	0.00E+00	2.91E-02	14	100.00 %
E6D	2.87E-02	0.00E+00	2.87E-02	15	100.00 %
E1A	2.86E-02	0.00E+00	2.86E-02	16	100.00 %
E4C	2.85E-02	0.00E+00	2.85E-02	17	100.00 %
NC9R	2.82E-02	0.00E+00	2.82E-02	18	100.00 %
NC9G	2.71E-02	0.00E+00	2.71E-02	19	100.00 %
NP9E	2.64E-02	0.00E+00	2.64E-02	20	100.00 %
NP9F	2.62E-02	0.00E+00	2.62E-02	21	100.00 %
NC9E	2.60E-02	0.00E+00	2.60E-02	22	100.00 %
W8B	2.42E-02	0.00E+00	2.42E-02	23	100.00 %
E4B	2.38E-02	0.00E+00	2.38E-02	24	100.00 %

Additive 5th Percentile Total and Incremental Hazard Index Noncarcinogenic Chemicals
 Descending Sort on Incremental Hazard Index
 Rank on Incremental Hazard Index

Site Name	Total Hazard Index	Incremental Hazard Index	Background Hazard Index	Rank	Background Contribution (%)
NC9O	2.36E-02	0.00E+00	2.36E-02	25	100.00%
NC9F	2.31E-02	0.00E+00	2.31E-02	26	100.00%
NP7	2.31E-02	0.00E+00	2.31E-02	27	100.00%
W6C	2.31E-02	0.00E+00	2.31E-02	28	100.00%
NC9H	2.30E-02	0.00E+00	2.30E-02	29	100.00%
E4A	2.30E-02	0.00E+00	2.30E-02	30	100.00%
S5D	2.27E-02	0.00E+00	2.27E-02	31	100.00%
W5B	2.18E-02	0.00E+00	2.18E-02	32	100.00%
W5A	2.10E-02	0.00E+00	2.10E-02	33	100.00%
NC9J	1.96E-02	0.00E+00	1.96E-02	34	100.00%
NC9L	1.96E-02	0.00E+00	1.96E-02	35	100.00%
W3D	1.91E-02	0.00E+00	1.91E-02	36	100.00%
E5	1.91E-02	0.00E+00	1.91E-02	37	100.00%
NP9A	1.91E-02	0.00E+00	1.91E-02	38	100.00%
NC9P	1.89E-02	0.00E+00	1.89E-02	39	100.00%
W8E	1.86E-02	0.00E+00	1.86E-02	40	100.00%
E6B	1.82E-02	0.00E+00	1.82E-02	41	100.00%
NC9Q	1.75E-02	0.00E+00	1.75E-02	42	100.00%
W3A	1.74E-02	0.00E+00	1.74E-02	43	100.00%
W8C	1.73E-02	0.00E+00	1.73E-02	44	100.00%
W1A	1.69E-02	0.00E+00	1.69E-02	45	100.00%
NC9K	1.59E-02	0.00E+00	1.59E-02	46	100.00%
NC9S	1.55E-02	0.00E+00	1.55E-02	47	100.00%
W8D	1.40E-02	0.00E+00	1.40E-02	48	100.00%
NC9I	1.30E-02	0.00E+00	1.30E-02	49	100.00%
NC9M	1.23E-02	0.00E+00	1.23E-02	50	100.00%
W8F	1.18E-02	0.00E+00	1.18E-02	51	100.00%
W4A	1.10E-02	0.00E+00	1.10E-02	52	100.00%
NC9A	1.03E-02	0.00E+00	1.03E-02	53	100.00%
W8A	7.94E-03	0.00E+00	7.94E-03	54	100.00%
W1D	5.37E-03	0.00E+00	5.37E-03	55	100.00%
NC9N	2.47E-03	0.00E+00	2.47E-03	56	100.00%
NC6B	2.07E-03	0.00E+00	2.07E-03	57	100.00%
E3J	1.46E-03	0.00E+00	1.46E-03	58	100.00%
E3H	0.00E+00	0.00E+00	0.00E+00	1	NA
E3K	0.00E+00	0.00E+00	0.00E+00	2	NA
NC8C	0.00E+00	0.00E+00	0.00E+00	3	NA
S1A	0.00E+00	0.00E+00	0.00E+00	4	NA

Program version: Gray Developmental, Smp. Arith. Mean, Models correction

Database version: Gray-1 parameter revisions, updated, November 30, 1993

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source Files: HSSRI5H1.CDK, HSSRT5H1.CDK

Additive 5th Percentile Total Hazard Index Noncarcinogenic Chemicals

Descending Sort on Total Indirect Hazard Index

Indirect hazard indices were not calculated for 134 sites given BCRL data.

Site Name	Total Indirect Hazard Index	Rank
SP10	1.42E+01	1
C1A	1.19E+01	2
SP1A	1.02E+01	3
NC3	9.75E+00	4
SP2B	1.83E+00	5
SP3E	6.83E-01	6
C1B	6.13E-01	7
C1C	3.93E-01	8
SP12	2.84E-01	9
NC1A	2.80E-01	10
SP11	2.46E-01	11
NC6A	2.45E-01	12
W5D	1.80E-01	13
SP1G	3.06E-02	14
W5A	2.46E-02	15
W4B	2.07E-02	16
W3C	1.99E-02	17
NC8A	1.63E-02	18
NC1B	1.53E-02	19
W2	1.21E-02	20
W6A	1.07E-02	21
W1C	5.30E-03	22
E3D	4.07E-03	23
W1G	3.72E-03	24
SP7C	3.48E-03	25
SP7B	2.82E-03	26
SP3C	2.21E-03	27
W1D	1.91E-03	28
E2B	1.75E-03	29
SP1C	1.33E-03	30
NC4A	1.20E-03	31
SP5B	1.13E-03	32
W1F	8.67E-04	33
NC2A	5.17E-04	34
NC2C	4.71E-04	35
E2A4	3.32E-04	36
S3B	3.16E-04	37
SP8A	2.60E-04	38
C1D	2.10E-04	39
SP2D	1.49E-04	40
NC1C	1.28E-05	41
S2A	1.27E-05	42
SP2C	9.96E-06	43
SP9A	7.12E-06	44

Program version: Gray Developmental, Smp. Arith. Mean,
Models correction.

Database version: Gray-1 parameter revisions, updated, 11/30/93

Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean

Random Seed: 0, Unc. Sample Size: 100

HHRC Code Source File: HSSRT5H2.CDK

SECTION B.4.5

SUMMARY OF CONFIDENCE LIMITS FOR SITE-SPECIFIC C_{rep} MEAN ESTIMATES

Table B.4.5-1 Confidence Limits for Site-Specific (Crep Mean) 5th Percentile Cancer Risks, Biological Worker, Horizon 1

Descending sort on Ratio of UCL over LCL

Sites with zero-valued LCLs and UCLs are not listed (total = 23)

Site	Total Cancer Risk Crep Mean	Total Cancer Risk Lower 95th Confidence Limit (LCL)	Total Cancer Risk Upper 95th Confidence Limit (UCL)	Ratio of UCL over LCL
W1E	1.12E-06	1.24E-08	2.62E-06	210.6
SP1D	8.52E-05	1.21E-06	1.69E-04	139.9
NC8A	1.83E-04	4.57E-06	4.18E-04	91.6
W5D	3.05E-05	2.25E-06	7.94E-05	35.2
NP6	4.20E-05	3.49E-06	1.17E-04	33.4
SP3C	5.36E-05	5.63E-06	1.39E-04	24.7
SP3A	1.58E-03	1.46E-04	3.59E-03	24.6
NP5	9.26E-05	1.34E-05	2.40E-04	17.9
S4	3.79E-05	5.59E-06	9.42E-05	16.9
SP2D	1.39E-05	2.25E-06	3.12E-05	13.9
SP12B	8.31E-05	1.12E-05	1.55E-04	13.8
NC4B	1.65E-05	3.35E-06	4.13E-05	12.3
NP9F	3.80E-06	3.14E-07	3.78E-06	12.1
C1A	1.41E-04	3.22E-05	3.11E-04	9.7
W1F	3.47E-06	9.18E-07	8.13E-06	8.9
SP8A	2.59E-04	6.58E-05	5.58E-04	8.5
NC1B	1.79E-04	4.65E-05	3.89E-04	8.4
E3B	2.00E-05	4.99E-06	3.97E-05	8.0
SP3B	9.98E-04	2.77E-04	1.99E-03	7.2
SP9A	1.19E-05	3.68E-06	2.56E-05	7.0
SP1G	1.65E-05	4.88E-06	3.33E-05	6.8
C1C	1.38E-05	3.98E-06	2.70E-05	6.8
SP3E	9.19E-06	2.71E-06	1.83E-05	6.7
S5A	1.25E-06	1.24E-08	8.32E-08	6.7
SP10	1.01E-02	3.32E-03	1.83E-02	5.5
SP1A	1.21E-03	4.11E-04	2.13E-03	5.2
SP4A	1.69E-04	5.73E-05	2.89E-04	5.0
SP8B	3.35E-05	1.19E-05	5.81E-05	4.9
SP1C	7.16E-06	2.75E-06	1.34E-05	4.9
NC1A	1.66E-04	6.47E-05	3.13E-04	4.8
NC3	4.91E-04	1.86E-04	8.51E-04	4.6
C1B	1.47E-05	6.08E-06	2.67E-05	4.4
S2B	6.40E-05	2.65E-05	1.07E-04	4.0
SP5A	2.97E-06	1.34E-06	5.00E-06	3.7
NC9L	3.21E-06	7.63E-07	2.76E-06	3.6
SP11	3.31E-06	1.55E-06	5.51E-06	3.6
NC1E	5.59E-05	2.64E-05	9.37E-05	3.5
W1B	1.09E-06	4.84E-07	1.71E-06	3.5
SP9B	6.21E-06	2.97E-06	1.04E-05	3.5
S2A	6.11E-06	2.76E-06	9.66E-06	3.5
W7A	9.94E-07	4.44E-07	1.54E-06	3.5
W6E	1.58E-06	7.32E-07	2.42E-06	3.3
W2	4.82E-06	2.47E-06	8.14E-06	3.3

Table B.4.5-1 Confidence Limits for Site-Specific (Crep Mean) 5th Percentile Cancer Risks, Biological Worker, Horizon 1

Descending sort on Ratio of UCL over LCL

Sites with zero-valued LCLs and UCLs are not listed (total = 23)

Site	Total Cancer Risk Crep Mean	Total Cancer Risk Lower 95th Confidence Limit (LCL)	Total Cancer Risk Upper 95th Confidence Limit (UCL)	Ratio of UCL over LCL
NC5C	1.54E-05	7.68E-06	2.52E-05	3.3
S5E	1.42E-06	6.85E-07	2.17E-06	3.2
NC2D	5.57E-06	3.05E-06	9.53E-06	3.1
SP12	3.04E-06	1.63E-06	5.04E-06	3.1
W5C	1.57E-06	8.53E-07	2.44E-06	2.9
W6C	2.71E-06	1.47E-06	3.95E-06	2.7
W6D	1.67E-06	9.67E-07	2.48E-06	2.6
E6C	5.64E-06	3.26E-06	8.36E-06	2.6
W3B	1.66E-06	9.34E-07	2.38E-06	2.6
NP9C	3.49E-06	1.97E-06	5.02E-06	2.5
NP7	2.40E-06	1.36E-06	3.45E-06	2.5
SP3D	4.32E-06	2.59E-06	6.44E-06	2.5
W6A	5.15E-06	3.08E-06	7.63E-06	2.5
SP2A	6.24E-06	3.88E-06	9.39E-06	2.4
NC4A	1.10E-05	6.67E-06	1.61E-05	2.4
SP4B	3.76E-06	2.32E-06	5.51E-06	2.4
NC5B	1.05E-05	6.40E-06	1.52E-05	2.4
SP2E	4.94E-06	3.03E-06	7.09E-06	2.3
W8A	6.82E-07	4.14E-07	9.67E-07	2.3
S3B	1.24E-05	7.77E-06	1.79E-05	2.3
NC9O	2.99E-06	5.64E-07	1.30E-06	2.3
W3C	2.04E-06	1.39E-06	3.17E-06	2.3
SP7A	1.14E-06	7.09E-07	1.61E-06	2.3
W1G	7.03E-07	4.31E-07	9.75E-07	2.3
S2C	1.76E-06	1.15E-06	2.59E-06	2.3
NC1F	4.02E-06	2.53E-06	5.70E-06	2.3
SP1E	3.75E-03	2.31E-03	5.16E-03	2.2
W1D	5.58E-07	3.46E-07	7.71E-07	2.2
NC6A	4.95E-06	3.16E-06	7.02E-06	2.2
W3A	1.54E-06	9.60E-07	2.13E-06	2.2
NC9M	1.28E-06	8.02E-07	1.76E-06	2.2
SP2C	2.08E-06	1.34E-06	2.93E-06	2.2
NC1D	3.65E-06	2.36E-06	5.14E-06	2.2
W1A	1.91E-06	1.21E-06	2.62E-06	2.2
NC2B	4.92E-06	3.29E-06	7.10E-06	2.2
W8B	2.16E-06	1.39E-06	2.99E-06	2.2
NP9B	5.02E-06	3.22E-06	6.82E-06	2.1
W1C	8.45E-07	5.52E-07	1.10E-06	2.0
SP8C	9.35E-07	6.21E-07	1.23E-06	2.0
SP12A	1.31E-06	9.08E-07	1.80E-06	2.0
SP7B	2.10E-06	1.51E-06	2.96E-06	2.0
NC8B	4.11E-06	2.95E-06	5.75E-06	2.0
S5D	2.00E-06	1.40E-06	2.68E-06	1.9

Table B.4.5-1 Confidence Limits for Site-Specific (Crep Mean) 5th Percentile Cancer Risks, Biological Worker, Horizon 1

Descending sort on Ratio of UCL over LCL

Sites with zero-valued LCLs and UCLs are not listed (total = 23)

Site	Total Cancer Risk Crep Mean	Total Cancer Risk Lower 95th Confidence Limit (LCL)	Total Cancer Risk Upper 95th Confidence Limit (UCL)	Ratio of UCL over LCL
C4	3.43E-06	2.56E-06	4.89E-06	1.9
C2A	2.77E-06	2.00E-06	3.82E-06	1.9
NP9A	1.73E-06	1.20E-06	2.26E-06	1.9
W5A	2.15E-06	1.49E-06	2.78E-06	1.9
SP5B	3.67E-06	2.67E-06	4.92E-06	1.8
W4A	9.99E-07	7.14E-07	1.29E-06	1.8
NC5A	1.15E-05	8.48E-06	1.51E-05	1.8
NC5D	1.61E-06	1.15E-06	2.04E-06	1.8
NP8C	5.77E-06	4.22E-06	7.48E-06	1.8
NC2A	2.57E-05	1.92E-05	3.35E-05	1.7
E2A5	4.20E-06	3.11E-06	5.37E-06	1.7
E3A	3.30E-06	2.49E-06	4.30E-06	1.7
C3	2.89E-06	2.19E-06	3.75E-06	1.7
NC6B	3.47E-08	2.57E-08	4.37E-08	1.7
C1D	4.02E-06	3.08E-06	5.23E-06	1.7
E2A2	4.12E-06	3.06E-06	5.18E-06	1.7
C2B	2.57E-06	1.97E-06	3.31E-06	1.7
NC9Q	1.43E-06	1.07E-06	1.79E-06	1.7
SP7C	2.14E-06	1.68E-06	2.80E-06	1.7
W5B	1.76E-06	1.32E-06	2.19E-06	1.7
E2A6	4.73E-06	3.59E-06	5.87E-06	1.6
E6B	2.11E-06	1.64E-06	2.68E-06	1.6
E1C	4.25E-06	3.28E-06	5.31E-06	1.6
SP2B	1.84E-06	1.43E-06	2.31E-06	1.6
NC1C	6.12E-06	4.74E-06	7.60E-06	1.6
E1D	3.30E-06	2.57E-06	4.13E-06	1.6
SP6	3.04E-06	2.41E-06	3.83E-06	1.6
W4B	1.53E-06	1.23E-06	1.95E-06	1.6
E3J	4.56E-07	3.51E-07	5.46E-07	1.6
NP8A	3.22E-06	2.54E-06	3.91E-06	1.5
E2C	2.73E-06	2.19E-06	3.35E-06	1.5
E5	2.35E-06	1.89E-06	2.87E-06	1.5
NC9H	2.56E-06	2.03E-06	3.08E-06	1.5
SP1B	3.22E-06	2.59E-06	3.90E-06	1.5
NP9E	2.59E-06	2.07E-06	3.11E-06	1.5
E6A	3.42E-06	2.80E-06	4.21E-06	1.5
E2A7	5.13E-06	4.25E-06	6.31E-06	1.5
E2A3	5.12E-06	4.17E-06	6.07E-06	1.5
E1B	3.68E-06	3.08E-06	4.33E-06	1.4
S3A	1.47E-06	1.23E-06	1.72E-06	1.4
S5B	2.62E-06	2.22E-06	3.09E-06	1.4
E2A4	4.36E-06	3.68E-06	5.10E-06	1.4
NC1G	2.93E-06	2.51E-06	3.43E-06	1.4

Table B.4.5-1 Confidence Limits for Site-Specific (Crep Mean) 5th Percentile Cancer Risks, Biological Worker, Horizon 1

Descending sort on Ratio of UCL over LCL

Sites with zero-valued LCLs and UCLs are not listed (total = 23)

Site	Total Cancer Risk Crep Mean	Total Cancer Risk Lower 95th Confidence Limit (LCL)	Total Cancer Risk Upper 95th Confidence Limit (UCL)	Ratio of UCL over LCL
E4B	2.80E-06	2.39E-06	3.25E-06	1.4
W6B	2.19E-06	1.88E-06	2.54E-06	1.4
NC9P	2.64E-06	2.26E-06	3.05E-06	1.4
NP8B	3.57E-06	3.04E-06	4.09E-06	1.3
E4A	2.53E-06	2.16E-06	2.91E-06	1.3
E3F	8.40E-07	7.26E-07	9.68E-07	1.3
E1A	3.29E-06	2.86E-06	3.76E-06	1.3
E3I	4.35E-06	3.77E-06	4.94E-06	1.3
NC2C	2.69E-06	2.34E-06	3.05E-06	1.3
E2A1	3.60E-06	3.16E-06	4.03E-06	1.3
C2C	3.28E-06	2.96E-06	3.72E-06	1.3
NP2	4.17E-06	3.71E-06	4.64E-06	1.3
NC9S	1.28E-06	1.14E-06	1.42E-06	1.2
NP4	3.36E-06	2.99E-06	3.72E-06	1.2
C2D	2.12E-06	1.92E-06	2.37E-06	1.2
W3D	1.82E-06	1.64E-06	1.99E-06	1.2
E2B	2.67E-06	2.42E-06	2.92E-06	1.2
E3E	3.58E-06	3.25E-06	3.90E-06	1.2
NP3	4.32E-06	3.93E-06	4.71E-06	1.2
E3C	3.28E-06	3.02E-06	3.57E-06	1.2
E4C	2.53E-06	2.32E-06	2.74E-06	1.2
E3G	3.07E-06	2.87E-06	3.28E-06	1.1
E3D	3.34E-06	3.13E-06	3.56E-06	1.1
NC9R	3.42E-06	3.29E-06	3.56E-06	1.1
W7B	1.89E-06	1.84E-06	1.94E-06	1.1
NP9D	3.26E-06	3.15E-06	3.19E-06	1.0

Program version: Gray Developmental, Smp. Arith. Mean, Models correction

Database version: Gray-1 parameter revisions, updated, November 30, 1993

Cases: Crep95LCL, Crep Statistic: 95 % Lower Confidence Limit and

Crep95UCL, Crep Statistic: 95 % Upper Confidence Limit

Random Seed: 0, Unc. Sample Size: 100

HHRC Source Files: HSSRT5C1.BDK for the following cases: Crep, mean; Crep95UCL; Crep 95LCL

Table B.4.5-2 Confidence Limits for Site-Specific (Crep Mean) 5th Percentile Hazard Indices, Biological Worker, Horizon 1

Descending sort on Ratio of UCL over LCL

Sites with non-zero LCLs and UCLs are not listed (total = 24)

Site	Total cancer Risk Crep Mean	Total Hazard Index Lower 95th Confidence Limit (LCL)	Total Hazard Index Upper 95th Confidence Limit (UCL)	Ratio of UCL over LCL
W1E	5.35E-02	5.92E-04	1.25E-01	2.1E+02
W5D	5.53E+00	1.79E-01	1.47E+01	8.2E+01
SP3A	1.83E+01	1.59E+00	4.03E+01	2.5E+01
SP1D	9.99E-01	1.02E-01	1.90E+00	1.9E+01
NC8A	2.16E+00	3.68E-01	4.61E+00	1.3E+01
NP9F	4.38E-01	2.75E-03	3.31E-02	1.2E+01
SP2B	2.83E+00	4.72E-01	5.35E+00	1.1E+01
SP1G	2.20E+00	4.69E-01	4.73E+00	1.0E+01
C1A	3.72E+00	8.61E-01	8.22E+00	9.5E+00
SP8A	4.02E+00	8.70E-01	8.05E+00	9.3E+00
NP1	2.09E-04	4.36E-05	3.75E-04	8.6E+00
SP1A	3.25E+01	6.60E+00	5.58E+01	8.5E+00
NC1B	2.41E+00	7.48E-01	5.04E+00	6.7E+00
S5A	2.44E-01	2.56E-04	1.72E-03	6.7E+00
SP3B	1.13E+01	3.32E+00	2.19E+01	6.6E+00
E3F	6.07E-02	2.03E-02	1.17E-01	5.8E+00
SP10	1.83E+02	6.09E+01	3.36E+02	5.5E+00
NC3	1.12E+01	3.82E+00	2.10E+01	5.5E+00
SP3C	1.18E+00	4.39E-01	2.33E+00	5.3E+00
C1C	1.63E+00	6.48E-01	2.89E+00	4.5E+00
NP5	1.41E+00	6.61E-01	2.74E+00	4.1E+00
SP8B	3.86E-01	1.60E-01	6.36E-01	4.0E+00
SP4A	2.08E+00	8.65E-01	3.42E+00	4.0E+00
NC1A	2.35E+00	1.06E+00	4.15E+00	3.9E+00
W6D	2.18E-01	1.04E-01	4.01E-01	3.9E+00
SP5A	3.56E-01	1.49E-01	5.66E-01	3.8E+00
S4	6.30E-01	3.10E-01	1.16E+00	3.7E+00
SP12B	1.44E+00	6.08E-01	2.26E+00	3.7E+00
W1B	2.00E-01	8.61E-02	3.15E-01	3.7E+00
NC9L	2.97E-01	6.68E-03	2.42E-02	3.6E+00
W7A	1.96E-01	8.64E-02	3.05E-01	3.5E+00
NP6	9.44E-01	5.36E-01	1.67E+00	3.1E+00
SP2D	3.43E-01	1.83E-01	5.61E-01	3.1E+00
W6E	2.27E-01	1.16E-01	3.38E-01	2.9E+00
NP4	1.47E+00	7.59E-01	2.19E+00	2.9E+00
NP9C	5.25E-01	2.73E-01	7.76E-01	2.8E+00
W6C	4.41E-01	2.30E-01	6.52E-01	2.8E+00
SP3E	9.91E-01	5.90E-01	1.65E+00	2.8E+00
E3B	6.04E-01	3.56E-01	9.66E-01	2.7E+00
W1F	1.29E-01	7.49E-02	1.99E-01	2.7E+00
SP1E	4.21E+01	2.35E+01	6.21E+01	2.6E+00
NC1E	1.09E+00	6.36E-01	1.67E+00	2.6E+00
S5E	1.66E-01	9.25E-02	2.39E-01	2.6E+00

**Table B.4.5-2 Confidence Limits for Site-Specific (Crep Mean) 5th Percentile Hazard Indices,
Biological Worker, Horizon 1**

Descending sort on Ratio of UCL over LCL

Sites with non-zero LCLs and UCLs are not listed (total = 24)

Site	Total cancer Risk Crep Mean	Total Hazard Index Lower 95th Confidence Limit (LCL)	Total Hazard Index Upper 95th Confidence Limit (UCL)	Ratio of UCL over LCL
NP7	4.67E-01	2.64E-01	6.70E-01	2.5E+00
NC9J	3.96E-01	4.36E-05	1.10E-04	2.5E+00
SP7A	1.21E-01	6.98E-02	1.73E-01	2.5E+00
SP11	1.81E-01	1.08E-01	2.66E-01	2.5E+00
W3B	3.12E-01	1.81E-01	4.42E-01	2.4E+00
W6A	8.59E-01	5.21E-01	1.26E+00	2.4E+00
W1G	1.16E-01	6.82E-02	1.64E-01	2.4E+00
W5C	2.66E-01	1.57E-01	3.77E-01	2.4E+00
S2B	1.06E+00	6.46E-01	1.53E+00	2.4E+00
SP2E	6.88E-01	4.18E-01	9.80E-01	2.3E+00
W2	6.14E-01	4.02E-01	9.30E-01	2.3E+00
W8A	1.37E-01	8.40E-02	1.94E-01	2.3E+00
NC9O	4.31E-01	4.94E-03	1.13E-02	2.3E+00
W1D	1.09E-01	6.72E-02	1.50E-01	2.2E+00
W1A	2.95E-01	1.82E-01	4.07E-01	2.2E+00
W3A	3.04E-01	1.89E-01	4.19E-01	2.2E+00
NC9M	2.49E-01	1.56E-01	3.42E-01	2.2E+00
W8B	4.29E-01	2.77E-01	5.93E-01	2.1E+00
SP9B	5.53E-01	3.79E-01	8.01E-01	2.1E+00
NP9B	8.85E-01	5.69E-01	1.20E+00	2.1E+00
E2A6	9.11E-01	6.19E-01	1.26E+00	2.0E+00
SP8C	1.20E-01	8.02E-02	1.61E-01	2.0E+00
W1C	1.61E-01	1.05E-01	2.10E-01	2.0E+00
SP9A	5.48E-01	3.83E-01	7.68E-01	2.0E+00
S5D	3.99E-01	2.74E-01	5.45E-01	2.0E+00
NC4B	5.09E-01	3.77E-01	7.37E-01	2.0E+00
C1B	1.39E+00	9.91E-01	1.92E+00	1.9E+00
E6C	5.49E-01	3.77E-01	7.28E-01	1.9E+00
W5A	3.50E-01	2.39E-01	4.60E-01	1.9E+00
SP12A	2.36E-01	1.66E-01	3.18E-01	1.9E+00
NP9A	3.42E-01	2.36E-01	4.49E-01	1.9E+00
NC6B	6.72E-03	4.72E-03	8.71E-03	1.8E+00
W4A	1.99E-01	1.42E-01	2.56E-01	1.8E+00
E2A5	6.48E-01	4.90E-01	8.72E-01	1.8E+00
NC1F	3.56E-01	2.64E-01	4.64E-01	1.8E+00
W3C	3.40E-01	2.64E-01	4.64E-01	1.8E+00
E3A	5.64E-01	4.24E-01	7.42E-01	1.7E+00
SP2A	4.22E+00	3.09E+00	5.39E+00	1.7E+00
NC9Q	2.87E-01	2.10E-01	3.65E-01	1.7E+00
W5B	3.58E-01	2.65E-01	4.51E-01	1.7E+00
E6B	2.94E-01	2.19E-01	3.73E-01	1.7E+00
SP3D	4.39E-01	3.37E-01	5.72E-01	1.7E+00
SP5B	6.59E-01	4.89E-01	8.22E-01	1.7E+00

Table B.4.5-2 Confidence Limits for Site-Specific (Crep Mean) 5th Percentile Hazard Indices, Biological Worker, Horizon 1

Descending sort on Ratio of UCL over LCL

Sites with non-zero LCLs and UCLs are not listed (total = 24)

Site	Total cancer Risk Crep Mean	Total Hazard Index Lower 95th Confidence Limit (LCL)	Total Hazard Index Upper 95th Confidence Limit (UCL)	Ratio of UCL over LCL
E3G	6.03E-01	4.67E-01	7.80E-01	1.7E+00
NC5C	4.45E-01	3.44E-01	5.68E-01	1.7E+00
E1C	6.91E-01	5.29E-01	8.64E-01	1.6E+00
E2A7	9.03E-01	7.03E-01	1.14E+00	1.6E+00
E2A2	6.59E-01	5.05E-01	8.14E-01	1.6E+00
S3B	3.67E-01	2.88E-01	4.61E-01	1.6E+00
W4B	2.90E-01	2.33E-01	3.68E-01	1.6E+00
NP8A	6.38E-01	4.96E-01	7.81E-01	1.6E+00
NC4A	5.68E-01	4.59E-01	7.22E-01	1.6E+00
SP1C	2.97E-01	2.39E-01	3.74E-01	1.6E+00
E3J	3.99E-03	3.07E-03	4.78E-03	1.6E+00
C3	3.91E-01	3.13E-01	4.80E-01	1.5E+00
NP9E	5.08E-01	4.05E-01	6.11E-01	1.5E+00
NC2D	3.54E-01	2.87E-01	4.33E-01	1.5E+00
S2C	1.91E-01	1.56E-01	2.33E-01	1.5E+00
E5	3.55E-01	2.87E-01	4.28E-01	1.5E+00
E6A	6.07E-01	4.98E-01	7.36E-01	1.5E+00
E1D	5.05E-01	4.10E-01	6.04E-01	1.5E+00
SP2C	1.93E-01	1.58E-01	2.31E-01	1.5E+00
NP8C	5.11E-01	4.21E-01	6.12E-01	1.5E+00
E2A3	7.81E-01	6.38E-01	9.24E-01	1.4E+00
NC1D	3.44E-01	2.88E-01	4.14E-01	1.4E+00
E2A4	9.01E-01	7.40E-01	1.06E+00	1.4E+00
S5B	4.21E-01	3.52E-01	5.02E-01	1.4E+00
SP7B	2.32E-01	1.93E-01	2.75E-01	1.4E+00
NC5A	4.99E-01	4.15E-01	5.86E-01	1.4E+00
E1B	5.92E-01	4.93E-01	6.95E-01	1.4E+00
S2A	5.79E-01	4.82E-01	6.78E-01	1.4E+00
E2C	3.07E-01	2.55E-01	3.59E-01	1.4E+00
C2A	3.10E-01	2.59E-01	3.63E-01	1.4E+00
NC9P	2.68E-01	2.27E-01	3.16E-01	1.4E+00
W6B	3.66E-01	3.09E-01	4.27E-01	1.4E+00
SP12	2.58E-01	2.19E-01	3.02E-01	1.4E+00
NC5B	5.03E-01	4.29E-01	5.86E-01	1.4E+00
NC2B	3.60E-01	3.09E-01	4.21E-01	1.4E+00
NC9H	3.52E-01	2.98E-01	4.04E-01	1.4E+00
SP1B	4.08E-01	3.47E-01	4.70E-01	1.4E+00
S3A	2.70E-01	2.30E-01	3.12E-01	1.4E+00
NC1C	3.12E-01	2.67E-01	3.58E-01	1.3E+00
NC6A	3.58E-01	3.08E-01	4.14E-01	1.3E+00
E4B	4.01E-01	3.44E-01	4.58E-01	1.3E+00
NP8B	5.87E-01	5.02E-01	6.67E-01	1.3E+00
E1A	5.06E-01	4.39E-01	5.78E-01	1.3E+00

Table B.4.5-2 Confidence Limits for Site-Specific (Crep Mean) 5th Percentile Hazard Indices, Biological Worker, Horizon 1

Descending sort on Ratio of UCL over LCL

Sites with non-zero LCLs and UCLs are not listed (total = 24)

Site	Total cancer Risk Crep Mean	Total Hazard Index Lower 95th Confidence Limit (LCL)	Total Hazard Index Upper 95th Confidence Limit (UCL)	Ratio of UCL over LCL
E4A	3.67E-01	3.18E-01	4.17E-01	1.3E+00
NC2A	5.93E-01	5.18E-01	6.78E-01	1.3E+00
SP4B	4.36E-01	3.80E-01	4.94E-01	1.3E+00
SP7C	1.90E-01	1.67E-01	2.16E-01	1.3E+00
E2A1	5.54E-01	4.85E-01	6.20E-01	1.3E+00
E3I	7.10E-01	6.26E-01	7.94E-01	1.3E+00
SP6	4.33E-01	3.86E-01	4.89E-01	1.3E+00
NC9S	2.57E-01	2.27E-01	2.87E-01	1.3E+00
C2B	3.70E-01	3.31E-01	4.15E-01	1.3E+00
NC8B	4.93E-01	4.41E-01	5.51E-01	1.2E+00
NC5D	2.52E-01	2.25E-01	2.80E-01	1.2E+00
NC2C	3.04E-01	2.72E-01	3.36E-01	1.2E+00
W3D	3.59E-01	3.22E-01	3.95E-01	1.2E+00
E3E	5.29E-01	4.76E-01	5.82E-01	1.2E+00
C4	4.00E-01	3.63E-01	4.44E-01	1.2E+00
E4C	5.04E-01	4.56E-01	5.54E-01	1.2E+00
E2B	4.07E-01	3.69E-01	4.47E-01	1.2E+00
NC1G	3.08E-01	2.80E-01	3.37E-01	1.2E+00
C2D	4.04E-01	3.72E-01	4.46E-01	1.2E+00
E3C	5.07E-01	4.64E-01	5.55E-01	1.2E+00
C1D	3.40E-01	3.13E-01	3.70E-01	1.2E+00
NP2	7.06E-01	6.49E-01	7.63E-01	1.2E+00
NP3	6.55E-01	6.07E-01	7.04E-01	1.2E+00
E3D	4.96E-01	4.60E-01	5.33E-01	1.2E+00
C2C	5.02E-01	4.67E-01	5.36E-01	1.1E+00
NC9R	4.37E-01	4.13E-01	4.60E-01	1.1E+00
W7B	3.77E-01	3.59E-01	3.96E-01	1.1E+00
NP9D	6.22E-01	6.14E-01	6.31E-01	1.0E+00

Program version: Gray Developmental, Smp. Arith. Mean, Models correction

Database version: Gray-1 parameter revisions, updated, November 30, 1993.

Case: Crep95LCL, Crep Statistic: 95 % Lower Confidence Limit and

Crep95UCL, Crep Statistic: 95 % Upper Confidence Limit

HHRC Source Codes: HSSRT5HI.BDK for the following cases: Crep, Crep95UCL, and Crep 95LCL

Random Seed: 0, Unc. Sample Size: 100

Table B.4.5-3 Confidence Limits for Site-Specific Mean Crep Estimates (5th Percentile): Aldrin, Horizon 1

Descending Sort on Ratio of UCL over LCL

Sites with no available data or zero-valued LCLs and UCLs are not listed (total = 108).

	Aldrin Crep Mean	Crep Lower 95th Confidence Limit (LCL)	Crep Upper 95th Confidence Limit (UCL)	Ratio of UCL Over LCL
SP1D	5.01E+01	1.25E-01	1.00E+02	800.0
SP12B	5.01E+01	1.25E-01	1.00E+02	800.0
NC5D	1.17E-01	9.10E-04	2.33E-01	255.9
SP3C	2.27E+01	3.35E-01	6.65E+01	198.5
NC4B	3.23E+00	5.40E-02	8.91E+00	165.1
S4	3.59E+00	6.76E-02	1.04E+01	154.2
NC8A	1.80E+01	4.36E-01	4.95E+01	113.7
C1C	1.35E-01	4.28E-03	3.91E-01	91.4
SP9A	3.42E-01	1.50E-02	8.95E-01	59.5
NC8B	1.60E-01	7.89E-03	3.60E-01	45.6
SP2D	8.12E+00	4.62E-01	1.98E+01	42.8
SP1E	1.55E+00	9.44E-02	3.79E+00	40.2
C1B	1.30E+00	1.17E-01	3.50E+00	29.9
SP2C	4.51E-02	4.15E-03	1.16E-01	27.8
SP3E	6.95E-01	6.61E-02	1.83E+00	27.7
NC2B	5.90E-01	6.26E-02	1.39E+00	22.1
SP3A	8.89E+02	8.94E+01	1.96E+03	22.0
E2A4	1.62E-02	1.97E-03	4.23E-02	21.5
SP1G	1.05E+00	1.52E-01	2.49E+00	16.4
NC6A	3.71E-01	6.60E-02	7.48E-01	11.3
C4	2.37E-02	5.19E-03	5.70E-02	11.0
NC5B	3.08E-01	5.90E-02	6.36E-01	10.8
SP1C	4.08E-01	7.89E-02	8.48E-01	10.8
SP11	1.21E+00	2.44E-01	2.40E+00	9.8
SP4B	1.59E-01	3.50E-02	3.20E-01	9.2
S2A	1.72E+00	3.68E-01	3.33E+00	9.1
SP4A	7.69E+01	1.62E+01	1.45E+02	8.9
NC1B	6.53E+01	1.71E+01	1.48E+02	8.7
NC5A	2.37E-02	5.38E-03	4.53E-02	8.4
NC1E	1.12E+00	3.24E-01	2.13E+00	6.6
SP3B	6.25E+02	1.85E+02	1.21E+03	6.5
SP8B	2.90E+00	8.30E-01	5.18E+00	6.2
NC5C	1.84E+00	5.86E-01	3.40E+00	5.8
C1A	3.10E+01	9.92E+00	5.69E+01	5.7
SP3D	1.73E-01	5.35E-02	3.06E-01	5.7
SP10	1.70E+03	5.31E+02	2.92E+03	5.5
NC2D	6.96E-01	2.72E-01	1.48E+00	5.4
W1F	3.56E-01	1.50E-01	7.67E-01	5.1
S2B	2.51E+01	9.14E+00	4.39E+01	4.8
NC3	1.79E+02	6.69E+01	3.08E+02	4.6
W5D	3.25E-01	1.50E-01	6.75E-01	4.5
SP8A	3.65E+01	1.43E+01	6.41E+01	4.5
S2C	5.90E-03	2.29E-03	1.01E-02	4.4
SP9B	2.74E-01	1.21E-01	5.17E-01	4.3

Table B.4.5-3 Confidence Limits for Site-Specific Mean Crep Estimates (5th Percentile): Aldrin, Horizon 1

Descending Sort on Ratio of UCL over LCL

Sites with no available data or zero-valued LCLs and UCLs are not listed (total = 108).

	Aldrin Crep Mean	Crep Lower 95th Confidence Limit (LCL)	Crep Upper 95th Confidence Limit (UCL)	Ratio of UCL Over LCL
NC4A	2.21E+00	9.49E-01	3.67E+00	3.9
C2A	9.40E-03	4.63E-03	1.57E-02	3.4
SP1A	3.51E+02	1.65E+02	5.44E+02	3.3
NC2A	3.20E+00	1.69E+00	5.15E+00	3.1
E6C	5.79E-02	3.01E-02	8.60E-02	2.9
SP12A	1.33E-01	7.76E-02	2.19E-01	2.8
S3B	1.90E+00	1.06E+00	2.94E+00	2.8
NC1C	3.99E-03	2.17E-03	6.05E-03	2.8
W2	2.46E-01	1.50E-01	4.16E-01	2.8
NC2C	9.28E-04	5.32E-04	1.40E-03	2.6
C2B	1.89E-01	1.11E-01	2.71E-01	2.4
NC1A	9.16E+00	5.55E+00	1.33E+01	2.4
SP2A	3.47E-02	2.16E-02	5.07E-02	2.4
NC1F	6.49E-03	4.10E-03	9.27E-03	2.3
NC1D	2.28E-01	1.41E-01	3.13E-01	2.2
NP6	1.22E-01	8.35E-02	1.77E-01	2.1
SP5B	1.15E-01	7.78E-02	1.65E-01	2.1
S5B	1.01E-03	7.01E-04	1.39E-03	2.0
NP5	7.78E-02	5.73E-02	9.83E-02	1.7
C3	1.63E-01	1.30E-01	2.22E-01	1.7
C1D	5.14E-01	4.10E-01	6.94E-01	1.7
SP1B	1.13E-01	8.62E-02	1.39E-01	1.6
SP7B	7.19E-02	5.53E-02	8.90E-02	1.6
S3A	6.44E-03	5.07E-03	7.87E-03	1.6
SP12	1.46E-01	1.31E-01	1.72E-01	1.3
SP2E	1.29E-01	1.13E-01	1.45E-01	1.3
SP7C	1.35E-01	1.21E-01	1.52E-01	1.3
SP2B	1.38E-01	1.24E-01	1.54E-01	1.2
SP6	1.33E-01	1.24E-01	1.42E-01	1.1

Program version: Gray Developmental, Smp. Arith. Mean, Models correction

Database version: Gray-1 parameter revisions, updated, November 30, 1993

Case: Crep95LCL, Crep Statistic: 95 % Lower Confidence Limit and

Crep95UCL, Crep Statistic: 95 % Upper Confidence Limit

Random Seed: 0, Unc. Sample Size: 100

HHRC Source Files: HSSR_0@1.@DR for the following cases: Crep, Crep95UCL, and Crep95LCL

Table B.4.5-4 Summary of Confidence Limits for Site-Specific Mean Crep Estimates (5th Percentile): Dieldrin, Horizon 1

Descending Sort on Ratio of UCL over LCL

Sites with no available data or with zero-valued LCLs and UCLs are not listed (total = 98).

Site	Dieldrin Mean Crep	Creep Lower 95th Confidence Limit (LCL)	Creep Lower 95th Confidence Limit (UCL)	Ratio of UCL over LCL
NC8A	6.20E+01	2.78E-01	1.39E+02	499.5
NC4B	3.60E+00	8.44E-02	1.05E+01	124.2
SP1D	5.56E+00	1.25E-01	1.10E+01	88.0
NC5D	7.31E-02	1.46E-03	1.27E-01	86.4
S2C	8.71E-02	4.60E-03	2.21E-01	47.9
SP3A	1.17E+02	8.34E+00	3.09E+02	37.0
C2D	1.57E-02	9.05E-04	3.04E-02	33.6
E6C	3.26E-02	3.26E-03	7.55E-02	23.1
SP3E	1.80E+00	1.83E-01	3.97E+00	21.7
C4	2.86E-01	3.66E-02	7.63E-01	20.8
S4	1.22E+01	1.63E+00	3.03E+01	18.6
SP3B	4.90E+01	6.47E+00	1.18E+02	18.2
W1F	1.01E+00	1.50E-01	2.63E+00	17.6
SP9A	3.39E+00	4.92E-01	8.37E+00	17.0
NP6	7.97E-02	1.24E-02	1.93E-01	15.5
SP3C	7.61E+00	1.21E+00	1.70E+01	14.1
NC8B	2.10E-01	3.82E-02	5.04E-01	13.2
W6A	1.98E-02	3.66E-03	4.80E-02	13.1
SP1C	1.81E+00	3.51E-01	3.87E+00	11.0
NC1B	3.00E+01	5.99E+00	6.47E+01	10.8
SP9B	9.77E-01	1.84E-01	1.97E+00	10.7
SP7B	1.12E-02	2.16E-03	2.28E-02	10.6
SP8A	8.19E+01	1.78E+01	1.85E+02	10.4
SP1E	2.10E+00	4.62E-01	4.77E+00	10.3
SP12	6.60E-01	1.46E-01	1.41E+00	9.7
NC1D	2.14E-01	4.48E-02	4.29E-01	9.6
C2A	3.03E-01	6.77E-02	6.47E-01	9.6
SP7C	8.13E-02	1.80E-02	1.72E-01	9.6
W5D	5.75E-01	1.50E-01	1.43E+00	9.5
W2	6.00E-01	1.33E-01	1.21E+00	9.1
C2B	1.72E-01	3.91E-02	3.56E-01	9.1
SP6	1.25E-01	2.90E-02	2.55E-01	8.8
NC2D	6.88E-01	2.33E-01	1.53E+00	6.6
C1B	2.75E+00	8.31E-01	5.44E+00	6.5
SP12A	1.18E-01	3.36E-02	2.14E-01	6.4
SP4B	5.79E-01	1.86E-01	1.07E+00	5.7
SP1B	1.60E-01	5.19E-02	2.95E-01	5.7
SP5B	3.65E-01	1.20E-01	6.82E-01	5.7
C1A	1.75E+01	6.11E+00	3.34E+01	5.5
NC2C	4.37E-02	1.52E-02	7.93E-02	5.2
S2A	4.12E-01	1.40E-01	7.27E-01	5.2
SP5A	2.88E-01	1.25E-01	6.13E-01	4.9
SP8B	1.19E+01	4.27E+00	2.06E+01	4.8
NC3	9.75E+01	3.69E+01	1.71E+02	4.6
C1D	4.02E-01	1.56E-01	7.14E-01	4.6
NC6A	6.09E-01	2.31E-01	1.04E+00	4.5
NC5A	4.22E-01	1.73E-01	7.71E-01	4.5

Table B.4.5-4 Summary of Confidence Limits for Site-Specific Mean Crep Estimates (5th Percentile): Dieldrin, Horizon 1

Descending Sort on Ratio of UCL over LCL

Sites with no available data or with zero-valued LCLs and UCLs are not listed (total = 98).

Site	Dieldrin Mean Crep	Crep Lower 95th Confidence Limit (LCL)	Crep Lower 95th Confidence Limit (UCL)	Ratio of UCL over LCL
SP1G	1.35E+00	5.30E-01	2.31E+00	4.4
NC1E	3.14E+00	1.27E+00	5.47E+00	4.3
NP8C	5.18E-02	2.03E-02	8.42E-02	4.2
SP2A	7.36E-01	3.24E-01	1.27E+00	3.9
NC1A	3.07E+01	1.31E+01	5.12E+01	3.9
NC2B	2.13E-01	9.25E-02	3.60E-01	3.9
SP2B	1.14E-01	4.98E-02	1.91E-01	3.8
NC5B	1.26E+00	5.52E-01	2.11E+00	3.8
S2B	1.07E+01	4.57E+00	1.73E+01	3.8
NC5C	4.38E+00	2.02E+00	7.40E+00	3.7
SP1A	1.43E+02	6.69E+01	2.40E+02	3.6
SP3D	7.65E-01	3.49E-01	1.23E+00	3.5
C1C	1.74E-01	8.81E-02	2.90E-01	3.3
SP2C	3.60E-01	1.78E-01	5.54E-01	3.1
SP2D	5.66E-01	2.90E-01	8.71E-01	3.0
NC1F	2.15E-01	1.11E-01	3.27E-01	2.9
NC4A	1.75E+00	9.29E-01	2.72E+00	2.9
SP10	1.87E+01	9.94E+00	2.84E+01	2.9
S5B	2.83E-03	1.67E-03	4.39E-03	2.6
SP4A	2.43E+01	1.34E+01	3.40E+01	2.5
SP2E	2.32E-01	1.39E-01	3.48E-01	2.5
S3B	3.10E+00	1.86E+00	4.56E+00	2.5
S3A	3.96E-02	2.50E-02	5.73E-02	2.3
NC1C	3.01E-01	1.98E-01	4.17E-01	2.1
SP7A	2.19E-01	1.50E-01	3.09E-01	2.1
NC1G	1.75E-01	1.33E-01	2.44E-01	1.8
SP8C	1.06E-01	7.26E-02	1.30E-01	1.8
E3A	9.18E-02	6.59E-02	1.18E-01	1.8
NP5	8.44E-02	6.24E-02	1.06E-01	1.7
NC2A	7.10E+00	5.45E+00	9.03E+00	1.7
NP3	1.26E-01	9.76E-02	1.56E-01	1.6
E3G	1.06E-01	8.39E-02	1.28E-01	1.5
E2C	1.64E-01	1.29E-01	1.96E-01	1.5
E2A4	3.29E-03	2.64E-03	3.97E-03	1.5
SP12B	4.30E+00	3.60E+00	5.00E+00	1.4
SP11	1.69E-01	1.50E-01	2.07E-01	1.4

Program version: Gray Developmental, Smp. Arith. Mean, Models correction

Database version: Gray-1 parameter revisions, updated, July 31, 1993

Case: Crep95LCL, Crep Statistic: 95 % Lower Confidence Limit and

Crep95UCL, Crep Statistic: 95 % Upper Confidence Limit

Random Seed: 0, Unc. Sample Size: 100

HHRC Source Files: HSSR13@1.@DR for the following cases: Crep, Crep95UCL, and Crep95LCL

Table B.4.5-5 Summary of Confidence Limits for Site-Specific Mean Crep Estimates (5th Percentile): DBCP, Horizon 1

Descending Sort on Ratio of UCL over LCL

Sites with no available data or zero-valued LCLs and UCLs are not listed (total = 161).

	DBCP Crep Mean	Crep Lower 95th Confidence Limit (LCL)	Crep Upper 95th Confidence Limit (UCL)	Ratio of UCL over LCL
C1A	1.01E+01	1.33E-01	2.90E+01	2.2E+02
W1E	2.26E-01	2.50E-03	5.27E-01	2.1E+02
NC3	2.61E-01	3.72E-03	6.21E-01	1.7E+02
SP1A	5.93E+01	1.21E+00	1.30E+02	1.1E+02
C1C	3.53E-02	3.74E-03	9.48E-02	2.5E+01
NC1D	2.39E-02	3.57E-03	4.48E-02	1.3E+01
S5A	7.25E-03	2.50E-03	1.68E-02	6.7E+00
SP10	1.54E+03	5.11E+02	2.85E+03	5.6E+00
SP3B	4.32E-01	1.73E-01	8.03E-01	4.6E+00
S5E	1.41E-01	5.09E-02	2.33E-01	4.6E+00
S3B	2.15E-02	8.23E-03	3.55E-02	4.3E+00
C1B	1.02E-02	4.84E-03	1.66E-02	3.4E+00
W6A	9.12E-02	4.50E-02	1.46E-01	3.2E+00
NC1F	1.83E-01	9.84E-02	2.75E-01	2.8E+00
SP2A	4.21E-01	2.54E-01	6.65E-01	2.6E+00
SP3E	3.13E-01	1.96E-01	4.64E-01	2.4E+00
NC6A	1.23E-01	7.99E-02	1.70E-01	2.1E+00
NC1B	1.20E-03	8.07E-04	1.70E-03	2.1E+00
SP1G	2.81E-01	2.00E-01	3.64E-01	1.8E+00
NC1A	7.43E-02	5.70E-02	9.09E-02	1.6E+00
NC4A	7.19E-02	5.59E-02	8.80E-02	1.6E+00

Program version: Gray Developmental, Smp. Arith. Mean, Models correction

Database version: Gray-1 parameter revisions, updated, November 30, 1993

Case: Crep95LCL, Crep Statistic: 95 % Lower Confidence Limit and

Crep95UCL, Crep Statistic: 95 % Upper Confidence Limit

Random Seed: 0, Unc. Sample Size: 100

HHRC Source Files: HSSR_9@1 for the following cases: Crep, Crep95UCL, and Crep95LCL

Table B.4.5-6 Summary of Confidence Limits for Site-Specific Mean Crep Estimates (5th Percentile): Arsenic, Horizon 1

Descending sort on Ratio of UCL over LCL

Sites with no available data or with zero-valued LCLs and UCLs are not listed (total = 76).

Site	Arsenic Mean Crep	Creep Lower 95th Confidence Limit (LCL)	Creep Upper 95th Confidence Limit (UCL)	Ratio of UCL over LCL
NP6	1.62E+02	3.95E+00	4.71E+02	119.2
NP5	3.71E+02	4.24E+01	9.83E+02	23.2
S4	6.57E+00	8.26E-01	1.67E+01	20.2
NP9F	6.76E+00	1.31E+00	1.58E+01	12.0
E3B	7.40E+01	1.39E+01	1.52E+02	11.0
C1C	2.84E+01	6.58E+00	5.77E+01	8.8
NC1A	2.95E+02	8.80E+01	6.53E+02	7.4
SP1A	1.22E+02	3.85E+01	2.51E+02	6.5
SP8A	1.73E+01	5.70E+00	3.36E+01	5.9
SP1D	4.15E+00	1.25E+00	7.04E+00	5.6
E2A6	4.89E+00	1.88E+00	7.72E+00	4.1
NC9L	7.34E+00	3.18E+00	1.15E+01	3.6
NC1E	1.82E+02	8.66E+01	3.04E+02	3.5
E6C	1.19E+01	5.69E+00	1.94E+01	3.4
SP3B	2.19E+00	1.07E+00	3.58E+00	3.4
SP7B	3.21E+00	1.75E+00	5.74E+00	3.3
W6D	3.81E+00	1.88E+00	6.10E+00	3.3
W6E	2.63E+00	1.25E+00	4.00E+00	3.2
W2	2.66E+00	1.50E+00	4.72E+00	3.1
NC8A	1.03E+01	5.23E+00	1.61E+01	3.1
W5D	7.00E+00	3.63E+00	1.09E+01	3.0
E2A5	4.98E+00	2.50E+00	7.45E+00	3.0
NC1F	4.43E+00	2.43E+00	6.67E+00	2.7
NC2D	5.58E+00	3.01E+00	8.19E+00	2.7
SP10	7.49E+01	4.25E+01	1.15E+02	2.7
SP6	1.58E+00	8.93E-01	2.41E+00	2.7
NC1B	4.81E+01	2.77E+01	7.41E+01	2.7
E2A7	5.31E+00	3.22E+00	8.53E+00	2.6
S2C	2.18E+00	1.27E+00	3.34E+00	2.6
C3	3.00E+00	1.83E+00	4.42E+00	2.4
SP5A	2.12E+00	1.25E+00	2.99E+00	2.4
NC1D	5.00E+00	3.00E+00	7.08E+00	2.4
NC9O	3.37E+00	2.35E+00	5.40E+00	2.3
W6A	1.88E+00	1.18E+00	2.69E+00	2.3
NP9B	2.04E+00	1.25E+00	2.84E+00	2.3
NC5B	1.87E+01	1.18E+01	2.66E+01	2.3
E2A2	3.33E+00	2.08E+00	4.58E+00	2.2
SP1E	1.54E+04	9.58E+03	2.10E+04	2.2
NC8B	3.52E+00	2.41E+00	5.26E+00	2.2
E1D	3.23E+00	2.15E+00	4.66E+00	2.2
SP9B	1.50E+00	9.76E-01	2.08E+00	2.1
W6C	1.93E+00	1.25E+00	2.60E+00	2.1
SP1G	3.18E+00	2.19E+00	4.49E+00	2.1
NP8C	1.33E+01	8.90E+00	1.83E+01	2.1

Table B.4.5-6 Summary of Confidence Limits for Site-Specific Mean Crep Estimates (5th Percentile): Arsenic, Horizon 1

Descending sort on Ratio of UCL over LCL

Sites with no available data or with zero-valued LCLs and UCLs are not listed (total = 76).

Site	Arsenic Mean Crep	Creep Lower 95th Confidence Limit (LCL)	Creep Upper 95th Confidence Limit (UCL)	Ratio of UCL over LCL
SP1C	3.25E+00	2.39E+00	4.78E+00	2.0
E6A	1.66E+00	1.25E+00	2.49E+00	2.0
W1A	1.83E+00	1.25E+00	2.42E+00	1.9
NC9H	3.42E+00	2.35E+00	4.49E+00	1.9
E2C	3.47E+00	2.58E+00	4.73E+00	1.8
NP9C	3.54E+00	2.50E+00	4.57E+00	1.8
W5A	1.73E+00	1.25E+00	2.20E+00	1.8
C2C	3.01E+00	2.39E+00	4.13E+00	1.7
SP2E	3.99E+00	2.92E+00	4.99E+00	1.7
SP4A	1.84E+00	1.40E+00	2.39E+00	1.7
NC5A	3.42E+01	2.59E+01	4.43E+01	1.7
NP2	2.26E+00	1.67E+00	2.85E+00	1.7
E2A4	1.79E+00	1.39E+00	2.30E+00	1.7
NC2B	7.53E+00	5.83E+00	9.61E+00	1.6
NC1C	1.66E+01	1.26E+01	2.08E+01	1.6
E1C	3.25E+00	2.54E+00	4.14E+00	1.6
E5	2.30E+00	1.80E+00	2.93E+00	1.6
SP11	1.60E+00	1.25E+00	2.03E+00	1.6
NC3	6.15E+00	4.80E+00	7.68E+00	1.6
S2A	2.94E+00	2.34E+00	3.65E+00	1.6
E3J	1.90E+00	1.46E+00	2.27E+00	1.6
E3I	3.28E+00	2.61E+00	4.01E+00	1.5
SP9A	2.92E+00	2.34E+00	3.55E+00	1.5
E2A3	4.92E+00	3.92E+00	5.92E+00	1.5
E6B	2.74E+00	2.35E+00	3.53E+00	1.5
NC1G	4.22E+00	3.40E+00	5.05E+00	1.5
E4B	3.34E+00	2.77E+00	4.08E+00	1.5
NP8B	2.44E+00	1.98E+00	2.91E+00	1.5
NC5C	2.68E+00	2.22E+00	3.18E+00	1.4
E4A	3.03E+00	2.52E+00	3.58E+00	1.4
S2B	2.35E+00	1.95E+00	2.77E+00	1.4
E1B	3.02E+00	2.54E+00	3.59E+00	1.4
S3B	2.63E+00	2.24E+00	3.02E+00	1.3
W6B	1.53E+00	1.33E+00	1.78E+00	1.3
NC2A	8.15E+00	7.03E+00	9.37E+00	1.3
E3F	3.50E+00	3.03E+00	4.03E+00	1.3
SP4B	2.64E+00	2.27E+00	3.03E+00	1.3
E3A	2.38E+00	2.08E+00	2.75E+00	1.3
NC9P	5.66E+00	4.88E+00	6.45E+00	1.3
C1B	4.86E+00	4.20E+00	5.54E+00	1.3
E1A	3.08E+00	2.72E+00	3.56E+00	1.3
SP3C	1.56E+00	1.35E+00	1.77E+00	1.3
C2A	2.59E+00	2.25E+00	2.94E+00	1.3
C1D	3.00E+00	2.64E+00	3.43E+00	1.3

Table B.4.5-6 Summary of Confidence Limits for Site-Specific Mean Crep Estimates (5th Percentile): Arsenic, Horizon 1

Descending sort on Ratio of UCL over LCL

Sites with no available data or with zero-valued LCLs and UCLs are not listed (total = 76).

Site	Arsenic Mean Crep	Crep Lower 95th Confidence Limit (LCL)	Crep Upper 95th Confidence Limit (UCL)	Ratio of UCL over LCL
NP3	2.91E+00	2.56E+00	3.29E+00	1.3
E3G	2.35E+00	2.08E+00	2.65E+00	1.3
NC2C	4.59E+00	4.04E+00	5.13E+00	1.3
E2A1	3.39E+00	3.01E+00	3.81E+00	1.3
SP5B	2.34E+00	2.09E+00	2.60E+00	1.2
SP1B	2.57E+00	2.31E+00	2.84E+00	1.2
E2B	2.46E+00	2.23E+00	2.70E+00	1.2
NC6A	2.47E+00	2.24E+00	2.71E+00	1.2
C1A	3.72E+00	3.40E+00	4.08E+00	1.2
S5B	1.36E+00	1.25E+00	1.47E+00	1.2
SP2A	2.29E+00	2.12E+00	2.44E+00	1.2
E3E	3.88E+00	3.60E+00	4.13E+00	1.1
SP7C	1.84E+00	1.72E+00	1.96E+00	1.1
E3C	3.06E+00	2.86E+00	3.26E+00	1.1
NC4A	2.62E+00	2.47E+00	2.78E+00	1.1
C4	3.47E+00	3.27E+00	3.68E+00	1.1
NC4B	3.35E+00	3.19E+00	3.52E+00	1.1
E3D	3.58E+00	3.45E+00	3.72E+00	1.1
NC9R	5.26E+00	5.24E+00	5.28E+00	1.0

Program version: Gray Developmental, Smp. Arith. Mean, Models correction

Database version: Gray-1 parameter revisions, updated, November 30, 1993

Case: Crep95LCL, Crep Statistic: 95 % Lower Confidence Limit and

Crep95UCL, Crep Statistic: 95 % Upper Confidence Limit

Random Seed: 0, Unc. Sample Size: 100

HHRC Source Files: HSSR23@1.@DR for the following cases: Crep, Crep95UCL, and Crep95LCL

SECTION B.4.6

ADDITIVITY SUMMARIES FOR SELECTED SITES

Table B.4.6-1 Additivity Summary for Biological Worker, Horizon 1, 5th Percentile Cancer Risks

Detailed Analysis of Selected Sites (Top 20, Ranked on Total CR)

Additive Total and Incremental Cancer Risks for Carcinogenic Chemicals using Crep.

Cancer risks are specified as 0.00E+00 for sites for which Crep was unavailable.

Supporting data for text Figure 3.2-11.

Detailed information regarding the contribution of individual chemicals to total risks

at all sites is provided in the additivity reports, which can be accessed through the

Additivity module in the HHRC code and HHRC Source file: HSSRT5C1.BDK.

<u>Site</u>	<u>Total CR</u>	<u>Aldrin</u>	<u>Dieldrin</u>	<u>Chlordane</u>	<u>DBCP</u>	<u>Arsenic - Incremental</u>	<u>DDT/ DDE</u>	<u>Background</u>	<u>Other</u>
SP10	1.01E-02	2.37E-03	4.51E-05	0.00E+00	7.64E-03	1.56E-05	1.29E-06	0.00E+00	0.00E+00
SP1E	3.75E-03	2.16E-06	5.07E-06	2.86E-05	0.00E+00	3.70E-03	2.47E-06	5.00E-06	7.70E-06
SP3A	1.58E-03	1.24E-03	2.84E-04	5.19E-05	0.00E+00	0.00E+00	1.04E-08	1.00E-06	8.96E-08
SP1A	1.21E-03	4.91E-04	3.47E-04	8.21E-06	2.94E-04	2.68E-05	3.12E-07	4.00E-06	3.67E-05
SP3B	9.98E-04	8.73E-04	1.18E-04	1.70E-06	2.15E-06	0.00E+00	5.03E-08	2.30E-06	6.00E-07
NC3	4.91E-04	2.49E-04	2.36E-04	0.00E+00	1.29E-06	0.00E+00	0.00E+00	3.80E-06	8.10E-07
SP8A	2.59E-04	5.11E-05	1.98E-04	3.92E-06	0.00E+00	1.76E-06	3.54E-07	3.90E-06	1.66E-07
NC8A	1.83E-04	2.52E-05	1.50E-04	3.43E-06	0.00E+00	6.33E-08	1.09E-07	4.10E-06	0.00E+00
NC1B	1.79E-04	9.13E-05	7.27E-05	2.07E-06	5.94E-09	9.14E-06	6.61E-08	3.80E-06	1.18E-07
SP4A	1.69E-04	1.07E-04	5.87E-05	1.83E-07	0.00E+00	0.00E+00	3.90E-08	2.90E-06	2.78E-07
NC1A	1.66E-04	1.28E-05	7.41E-05	6.17E-06	3.69E-07	6.85E-05	8.07E-08	4.40E-06	0.00E+00
C1A	1.41E-04	4.33E-05	4.23E-05	0.00E+00	5.00E-05	0.00E+00	3.28E-10	2.50E-06	2.40E-06
NP5	9.26E-05	1.33E-07	2.27E-07	0.00E+00	0.00E+00	8.67E-05	1.04E-08	5.56E-06	0.00E+00
SP1D	8.52E-05	6.99E-05	1.34E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-06	2.00E-08
SP12B	8.31E-05	6.99E-05	1.04E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.81E-06	0.00E+00
S2B	6.40E-05	3.52E-05	2.60E-05	4.10E-08	0.00E+00	0.00E+00	3.53E-08	2.81E-06	0.00E+00
NC1E	5.59E-05	1.56E-06	7.61E-06	1.18E-07	0.00E+00	4.13E-05	0.00E+00	5.36E-06	0.00E+00
SP3C	5.36E-05	3.16E-05	1.84E-05	0.00E+00	0.00E+00	0.00E+00	2.67E-08	3.55E-06	4.33E-08
SP1F	4.92E-05	8.38E-07	4.83E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.20E-08
NP6	4.20E-05	1.91E-07	1.97E-07	0.00E+00	0.00E+00	3.66E-05	3.32E-08	4.97E-06	0.00E+00
TOTALS:	1.97E-02	5.77E-03	1.76E-03	1.06E-04	7.99E-03	3.99E-03	4.89E-06	6.46E-05	4.89E-05
Percentage:		29.2%	8.9%	0.5%	40.5%	20.2%	0.02%	0.3%	0.25%

Table B.4.6-2 Additivity Summary for Biological Worker, Horizon 1, 5th Percentile Hazard Indices

Detailed Analysis of Selected Sites (Top 20, ranked on Total HI)

Additive Total Hazard Index for Non-carcinogenic Chemicals using Crep.

Hazard Indices specified as 0.00E+00 for sites for which Crep was unavailable.

Supporting data for text Figure 3.2-12.

Detailed information regarding the contribution of individual chemicals to total HIs is provided

in the site-specific additivity reports, which can be accessed using the HHRC code and HHRC Source file: HSSRT5HI.BDK.

Site	Total HI	Aldrin	Chlordane	DBCP	Dicyclo- pentadiene	Dieldrin	Isodrin	Arsenic (Incremental)	Background	Other
SP10	1.83E+02	2.39E+01	0.00E+00	1.58E+02	9.31E-04	3.24E-01	5.92E-01	1.36E-01	3.00E-01	4.71E-02
SP1E	4.21E+01	2.18E-02	1.93E+00	0.00E+00	2.71E-01	3.64E-02	6.14E-03	3.24E+01	6.30E-01	6.81E+00
SP1A	3.25E+01	4.96E+00	5.55E-01	1.49E+01	4.35E+00	2.49E+00	1.21E-01	2.34E-01	3.70E-01	4.51E+00
SP3A	1.83E+01	1.25E+01	3.50E+00	0.00E+00	0.00E+00	2.94E+00	2.48E-02	2.42E-01	2.20E-01	0.00E+00
SP3B	1.13E+01	8.80E+00	1.15E-01	1.36E-01	2.45E-01	8.50E-01	6.61E-01	0.00E+00	3.60E-01	1.63E-01
NC3	1.12E+01	2.51E+00	0.00E+00	2.67E-02	8.21E-02	1.69E+00	2.89E+00	0.00E+00	4.80E-01	3.54E+00
W5D	5.53E+00	4.57E-03	0.00E+00	0.00E+00	0.00E+00	9.98E-03	5.41E-02	0.00E+00	1.07E+00	4.40E+00
SP2A	4.22E+00	6.98E-04	2.03E-02	9.61E-02	3.71E+00	1.29E-02	9.76E-05	0.00E+00	2.54E-01	1.30E-01
SP8A	4.02E+00	5.15E-01	2.65E-01	0.00E+00	0.00E+00	1.42E+00	2.80E-01	1.54E-02	3.28E-01	1.19E+00
C1A	3.72E+00	4.37E-01	0.00E+00	1.03E+00	3.86E-03	3.04E-01	5.93E-01	0.00E+00	3.23E-01	1.03E+00
SP2B	2.83E+00	2.75E-03	1.24E-02	0.00E+00	2.52E+00	2.05E-03	0.00E+00	0.00E+00	1.92E-01	1.04E-01
NC1B	2.41E+00	9.21E-01	1.40E-01	5.25E-04	1.11E-01	5.22E-01	2.72E-01	8.00E-02	3.03E-01	6.35E-02
NC1A	2.35E+00	1.29E-01	4.16E-01	7.63E-03	3.91E-05	5.32E-01	4.22E-02	5.99E-01	4.07E-01	2.18E-01
NC8A	2.16E+00	2.54E-01	2.31E-01	0.00E+00	0.00E+00	1.08E+00	1.37E-02	5.54E-04	3.68E-01	2.16E-01
SP4A	2.08E+00	1.08E+00	1.24E-02	0.00E+00	0.00E+00	4.21E-01	2.76E-02	0.00E+00	4.95E-01	3.90E-02
SP1G	2.20E+00	1.76E-02	7.52E-03	1.68E-01	0.00E+00	2.36E-02	5.90E-04	0.00E+00	1.06E+00	9.26E-01
C1B	1.39E+00	7.26E-02	8.94E-02	5.99E-02	6.16E-01	5.07E-02	1.54E-02	0.00E+00	3.79E-01	1.08E-01
SP12B	1.44E+00	7.05E-01	0.00E+00	0.00E+00	0.00E+00	7.46E-02	8.20E-02	0.00E+00	5.65E-01	9.10E-03
NP4	1.47E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.61E-01	8.12E-01
SP1D	9.99E-01	7.05E-01	0.00E+00	0.00E+00	0.00E+00	9.65E-02	1.09E-02	0.00E+00	1.87E-01	0.00E+00
TOTALS:	3.36E+02	5.75E+01	7.29E+00	1.74E+02	1.19E+01	1.29E+01	5.69E+00	3.37E+01	8.95E+00	2.43E+01
Percentage:		17.1%	2.2%	52.0%	3.5%	3.8%	1.7%	10.0%	2.7%	7.2%

Table B.4.6-3 Additivity Summary for Industrial Worker, Horizon 2, 5th Percentile Indirect Cancer Risks

Detailed Analysis of Selected Sites (Top 20, ranked on Total CR)

Additive Total Indirect Cancer Risk for Carcinogenic Chemicals Using Crep.

Cancer risks are specified as 0.00E+00 for sites for which Crep was unavailable.

Supporting data for text Figure 3.2-13.

Detailed information regarding the contribution of individual chemicals to total cancer risks is provided

in the site-specific additivity reports, which can be accessed using the HHRC code and HHRC Source file: HSSRT5C2.IDK.

Site Location	Total CR	Aldrin	Benzene	Chloroform	Dieldrin	Methylene Chloride	Carbon Tetrachloride	Other
SP10	1.94E-05	4.12E-08	6.58E-07	1.30E-05	1.43E-09	9.21E-08	4.85E-06	7.27E-07
SP11	1.49E-05	0.00E+00	0.00E+00	1.49E-05	0.00E+00	0.00E+00	0.00E+00	3.01E-08
SP2B	1.28E-05	0.00E+00	1.28E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.01E-08
NC6A	1.11E-05	4.01E-08	0.00E+00	1.10E-05	1.43E-09	0.00E+00	0.00E+00	3.81E-08
SP1A	7.98E-06	4.30E-08	9.67E-07	6.05E-06	1.47E-09	7.33E-07	0.00E+00	1.81E-07
SP1G	4.18E-06	0.00E+00	2.47E-06	1.71E-06	0.00E+00	0.00E+00	0.00E+00	3.01E-09
SP7C	3.65E-06	0.00E+00	3.46E-06	0.00E+00	0.00E+00	1.94E-07	0.00E+00	0.00E+00
SP3E	2.33E-06	0.00E+00	0.00E+00	2.33E-06	1.46E-09	0.00E+00	0.00E+00	0.00E+00
C1A	1.72E-06	4.01E-08	2.81E-07	1.21E-06	1.51E-09	3.03E-08	0.00E+00	1.51E-07
NC8A	1.47E-06	0.00E+00	0.00E+00	1.37E-06	0.00E+00	1.01E-07	0.00E+00	1.00E-09
NC3	1.26E-06	4.03E-08	0.00E+00	7.33E-07	1.49E-09	4.40E-07	0.00E+00	4.81E-08
NC1B	4.79E-07	0.00E+00	1.05E-07	3.73E-07	0.00E+00	0.00E+00	0.00E+00	6.00E-10
C1B	4.72E-07	0.00E+00	1.66E-07	2.79E-07	6.45E-10	1.47E-08	0.00E+00	1.11E-08
W1G	4.50E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.50E-07	0.00E+00	0.00E+00
E2B	4.17E-07	2.68E-08	2.75E-07	0.00E+00	1.27E-09	8.13E-08	0.00E+00	3.21E-08
W3C	3.87E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.32E-07	0.00E+00	5.51E-08
NC1A	3.75E-07	4.01E-08	2.79E-07	0.00E+00	1.52E-09	5.09E-08	0.00E+00	3.63E-09
W1C	3.15E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.15E-07	0.00E+00	4.00E-10
NP6	2.81E-07	0.00E+00	2.81E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E-10
W1D	2.79E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.79E-07	0.00E+00	1.00E-10
TOTALS:	8.43E-05	2.72E-07	2.17E-05	5.30E-05	1.22E-08	3.11E-06	4.85E-06	1.31E-06
Percentage:		0.32%	25.81%	62.85%	0.01%	3.70%	5.76%	1.56%

Table B.4.6-4 Additivity Summary for Industrial Worker, Horizon 2, 5th Percentile Hazard Index

Detailed Analysis of Selected Sites (Top 20, ranked on Total HI)

Additive Total Hazard Index for Non-Carcinogenic Chemicals Using Crep.

Cancer risks are specified as 0.00E+00 for sites for which Crep was unavailable.

Supporting data for text Figure 3.2-14.

Detailed information regarding the contribution of individual chemicals to total HIs is provided

in the site-specific additivity reports, which can be accessed using the HHRC code and HHRC Source file: HSSRT5H2.IDK.

Site Location	Total HI	Aldrin	Chloroform	DBCP	Dicyclo-pentadiene	Hexachloro-cyclopentadiene	PCE	Carbon Tetrachloride	Other
SP10	4.10E+01	2.18E-03	5.15E-01	3.32E+01	0.00E+00	1.77E+00	2.05E-01	5.18E+00	1.28E-01
C1A	3.50E+01	9.19E-04	6.93E-02	1.43E+01	2.06E+01	0.00E+00	2.41E-02	0.00E+00	5.68E-03
SP1A	2.90E+01	1.19E-03	2.64E-01	1.72E+01	9.52E+00	1.79E+00	4.37E-02	0.00E+00	1.81E-01
NC3	2.80E+01	1.10E-03	2.69E-02	1.11E+00	2.67E+01	0.00E+00	9.36E-02	0.00E+00	6.84E-02
SP2B	4.20E+00	0.00E+00	0.00E+00	0.00E+00	4.19E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-02
C1B	1.94E+00	0.00E+00	2.03E-02	1.92E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
SP3E	1.71E+00	0.00E+00	9.27E-02	0.00E+00	1.62E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
C1C	1.31E+00	9.09E-04	0.00E+00	0.00E+00	0.00E+00	1.30E+00	0.00E+00	0.00E+00	9.09E-03
NC1A	8.78E-01	8.75E-04	0.00E+00	0.00E+00	0.00E+00	8.36E-01	9.40E-03	0.00E+00	3.17E-02
SP12	6.95E-01	0.00E+00	0.00E+00	0.00E+00	6.05E-01	0.00E+00	8.95E-02	0.00E+00	5.00E-04
SP11	6.03E-01	0.00E+00	6.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NC6A	5.45E-01	8.67E-04	5.44E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-04
W5D	4.30E-01	0.00E+00	0.00E+00	0.00E+00	4.30E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
SP1G	8.22E-02	0.00E+00	5.38E-02	0.00E+00	0.00E+00	0.00E+00	2.83E-02	0.00E+00	1.00E-04
W5A	6.03E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.03E-02	0.00E+00	0.00E+00
W3C	5.12E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.50E-02	0.00E+00	6.20E-03
W4B	4.90E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.90E-02	0.00E+00	0.00E+00
NC8A	4.62E-02	0.00E+00	4.29E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.30E-03
W6A	3.23E-02	5.59E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.23E-02	0.00E+00	0.00E+00
W2	2.87E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.87E-02	0.00E+00	0.00E+00
TOTALS:	1.46E+02	8.10E-03	2.23E+00	6.77E+01	6.37E+01	5.70E+00	7.09E-01	5.18E+00	4.44E-01
Percentage:		0.01%	1.5%	46.4%	43.6%	3.9%	0.5%	3.5%	0.3%

SECTION B.4.7

SAMPLE-SPECIFIC RISK SUMMARIES FOR SURFICIAL AND SUBSURFACE SOIL BORINGS

Table B.4.7-1 Cancer Risk Summary for Biological Worker, Surficial Soils

Boring Report for Surficial Soils						
Boring Summary for Biological Worker						
Additive Total and Incremental Risk for Carcinogenic Chemicals						
For incremental CRs, there are 496 non-zero observations and 45 zero-risk (i.e., BCRL or < background) observations.						
Only borings with incremental cancer risks exceeding 10 ⁻⁶ are listed here.						
Site	Boring ID	Loc X	Loc Y	Total CR	Inc CR	Inc Rank
SS	SS26049	2182106	188895	2.24E-03	2.24E-03	1
SS	SS260035	2181421	188072	2.82E-04	2.81E-04	2
SS	SS360001	2186679	181106	2.42E-04	2.41E-04	3
SS	SS260040	2181956	188728	1.04E-04	1.04E-04	4
SS	SS360001	2184744	183967	8.13E-05	7.89E-05	5
SS	SS260000	2182562	187859	5.93E-05	5.82E-05	6
SS	SS360015	2185311	182658	4.80E-05	4.56E-05	7
SS	SS360005	2185610	183839	4.38E-05	4.14E-05	8
SS	SS350020	2182413	185155	4.14E-05	3.90E-05	9
SS	SS36162	2187305	180877	3.47E-05	3.47E-05	10
SS	SS360002	2184619	183341	3.56E-05	3.32E-05	11
SS	SS360020	2185515	181171	3.35E-05	3.12E-05	12
SS	SS360016	2187678	180902	3.06E-05	3.06E-05	13
SS	SS360001	2185840	181389	3.00E-05	2.88E-05	14
SS	SS260011	2182071	189234	2.84E-05	2.84E-05	15
SS	SS360001	2186636	183763	2.57E-05	2.33E-05	16
SS	SS360024	2185634	182240	2.54E-05	2.30E-05	17
SS	SS360001	2186451	182133	2.53E-05	2.29E-05	18
SS	SS360017	2186154	183093	2.28E-05	2.04E-05	19
SS	SS260000	2181480	190403	1.98E-05	1.98E-05	20
SS	SS260033	2182113	188980	1.85E-05	1.85E-05	21
SS	SS260036	2182125	187925	1.93E-05	1.85E-05	22
SS	SS360023	2185647	183028	2.03E-05	1.79E-05	23
SS	SS360018	2186131	182504	1.90E-05	1.66E-05	24
SS	SS26059	2181493	185934	1.59E-05	1.59E-05	25
SS	SS260020	2180665	186086	1.38E-05	1.38E-05	26
SS	SS260010	2182951	188792	1.29E-05	1.29E-05	27
SS	SS360001	2184030	180979	1.33E-05	1.24E-05	28
SS	SS260041	2182067	188377	1.13E-05	1.06E-05	29
SS	SS26054	2182378	187052	1.04E-05	1.04E-05	30
SS	SS360019	2186139	181205	1.03E-05	9.41E-06	31
SS	SS360001	2186343	183497	1.18E-05	9.35E-06	32
SS	SS360001	2184891	180789	1.07E-05	9.27E-06	33
SS	SS260038	2181831	186382	1.15E-05	9.06E-06	34
SS	SS360026	2184928	183902	1.13E-05	8.93E-06	35
SS	SS260034	2180547	187683	1.05E-05	8.09E-06	36
SS	SS25073	2183739	187880	7.51E-06	7.51E-06	37
SS	SS260003	2180852	190519	7.83E-06	6.92E-06	38
SS	SS260025	2182392	187599	6.91E-06	6.27E-06	39
SS	SS360007	2184940	185380	4.54E-06	4.54E-06	40
SS	SS260004	2181118	190420	4.45E-06	4.45E-06	41
SS	SS350011	2182121	185744	4.01E-06	4.01E-06	42
SS	SS350005	2180651	185393	3.79E-06	3.79E-06	43

Table B.4.7-1 Cancer Risk Summary for Biological Worker, Surficial Soils

Boring Report for Surficial Soils						
Boring Summary for Biological Worker						
Additive Total and Incremental Risk for Carcinogenic Chemicals						
For incremental CRs, there are 496 non-zero observations and 45 zero-risk (i.e., BCRL or < background) observations.						
Only borings with incremental cancer risks exceeding 10 ⁻⁶ are listed here.						
Site	Boring ID	Loc X	Loc Y	Total CR	Inc CR	Inc Rank
SS	SS250009	2184425	187229	4.44E-06	3.74E-06	44
SS	SS260021	2180605	186976	4.47E-06	3.74E-06	45
SS	SS260013	2180022	188062	3.67E-06	3.67E-06	46
SS	SS310001	2193322	184013	4.41E-06	3.65E-06	47
SS	SS260037	2181156	186734	5.62E-06	3.60E-06	48
SS	SS230016	2182293	191314	4.03E-06	3.34E-06	49
SS	SS25079	2184900	187041	3.27E-06	3.27E-06	50
SS	SS350021	2182643	185345	5.58E-06	3.18E-06	51
SS	SS36149	2183939	183254	3.14E-06	3.14E-06	52
SS	SS360003	2183933	181229	3.07E-06	3.07E-06	53
SS	SS01223	2185895	178754	3.03E-06	3.03E-06	54
SS	SS25068	2183964	189036	2.90E-06	2.90E-06	55
SS	SS010002	2188001	180296	3.07E-06	2.59E-06	56
SS	SS01221	2186771	180516	2.55E-06	2.55E-06	57
SS	SS040009	2172555	176362	4.92E-06	2.52E-06	59
SS	SS260009	2182587	189663	2.52E-06	2.52E-06	58
SS	SS250010	2184800	186207	2.46E-06	2.46E-06	60
SS	SS260008	2181588	190004	2.43E-06	2.43E-06	61
SS	SS26053	2180097	187369	2.43E-06	2.43E-06	62
SS	SS36153	2187523	182641	2.34E-06	2.34E-06	63
SS	HA1226W	2183300	199150	4.42E-06	2.33E-06	64
SS	SS23043	2180710	191343	2.30E-06	2.30E-06	65
SS	SS06242	2193924	177737	2.27E-06	2.27E-06	66
SS	SS260017	2179485	189059	2.20E-06	2.20E-06	67
SS	SS360001	2188208	180920	2.11E-06	2.11E-06	68
SS	SS260005	2181566	190509	3.37E-06	2.00E-06	69
SS	SS25061	2185016	190990	1.80E-06	1.80E-06	70
SS	SS25082	2183762	186101	1.71E-06	1.71E-06	71
SS	SS26047	2183097	189449	1.71E-06	1.71E-06	72
SS	SS250013	2185421	187950	2.44E-06	1.61E-06	73
SS	SS25065	2185508	189414	1.59E-06	1.59E-06	74
SS	SS360021	2184110	181942	2.28E-06	1.53E-06	75
SS	SS360014	2188077	182181	2.26E-06	1.52E-06	76
SS	SS260031	2180235	186962	2.91E-06	1.48E-06	77
SS	SS360001	2184008	182006	2.27E-06	1.47E-06	78
SS	SS360022	2183858	183254	2.49E-06	1.47E-06	79
SS	SS35130	2183356	183084	1.40E-06	1.40E-06	80
SS	SS250014	2185453	186871	2.14E-06	1.39E-06	81
SS	SS26044	2182782	190954	1.29E-06	1.29E-06	82
SS	SS260000	2182456	186323	2.24E-06	1.27E-06	83
SS	SS35137	2183330	180839	1.26E-06	1.26E-06	84
SS	SS260024	2182877	186791	1.21E-06	1.21E-06	85
SS	SS36144	2186574	184514	1.19E-06	1.19E-06	86

Table B.4.7-1 Cancer Risk Summary for Biological Worker, Surficial Soils

Boring Report for Surficial Soils						
Boring Summary for Biological Worker						
Additive Total and Incremental Risk for Carcinogenic Chemicals						
For incremental CRs, there are 496 non-zero observations and 45 zero-risk (i.e., BCRL or < background) observations.						
Only borings with incremental cancer risks exceeding 10 ⁻⁶ are listed here.						
Site	Boring ID	Loc X	Loc Y	Total CR	Inc CR	Inc Rank
SS	SS250000	2185355	187381	1.17E-06	1.17E-06	87
SS	SS360009	2186261	184937	1.16E-06	1.16E-06	88
SS	SS36157	2188559	181895	1.13E-06	1.13E-06	89
SS	SS350004	2180257	184082	1.77E-06	1.11E-06	90
SS	SS230014	2181548	191425	1.90E-06	1.10E-06	92
SS	SS25081	2187725	186405	1.10E-06	1.10E-06	91
SS	SS360001	2186044	185635	2.08E-06	1.10E-06	93
SS	SS230010	2180625	191760	1.06E-06	1.06E-06	94
SS	SS25074	2187511	187656	1.05E-06	1.05E-06	95
SS	SS360010	2187064	184623	1.03E-06	1.03E-06	96
Program version: Gray Developmental, Smp. Arith. Mean, Models correction						
Database version: Gray-1 parameter revisions, updated, November 30, 1993						
HHRC Source Code File = HBSRTSC0.BDK and HBSRI5C0.BDK						
Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean						
Random Seed: 0, Unc. Sample Size: 100						

Table B.4.7-2 Cancer Risk Summary for Biological Worker, Horizon 0 Soil Borings

Boring Report for Horizon 0 (Non-Surface Borings, 0-1 ft)						
Boring Summary for Biological Worker						
Additive Total and Incremental Risk for Carcinogenic Chemicals						
For incremental CRs, there are 1,419 non-zero observations and 2,044 zero-risk (i.e., BCRL or < background) observations.						
Only borings with incremental cancer risks exceeding 10 ⁻⁴ are listed here.						
Site	Boring ID	Loc X	Loc Y	Total CR	Inc CR	Inc Rank
SP1A	0113G401	2184718	179439	5.49E-02	5.49E-02	1
SP3A	NRS02114	2181830	179700	2.56E-02	2.56E-02	2
SP1A	2.4E+09	2184479	179326	1.94E-02	1.94E-02	3
NC1A	BR360010	2184879	181703	1.68E-02	1.68E-02	4
SP3B	RS02113@	2182256	179847	1.13E-02	1.13E-02	5
SP1E	2.4E+09	2184363	180516	9.61E-03	9.60E-03	6
SP1A	BR010028	2184830	180161	9.26E-03	9.25E-03	7
SP1A	0113O301	2184227	180370	7.31E-03	7.31E-03	8
SP8A	0214A011	2180919	179035	7.25E-03	7.25E-03	9
SP3B	BR020007	2182304	179841	5.55E-03	5.55E-03	10
NC8A	BR360082	2184848	181967	5.47E-03	5.47E-03	11
SP1A	010R0036	2184330	179693	4.96E-03	4.96E-03	12
SP1A	0113C103	2184461	179365	3.03E-03	3.03E-03	13
NC8A	BR360094	2184702	182068	2.89E-03	2.88E-03	14
SP3A	2.02E+08	2182221	179682	2.82E-03	2.82E-03	15
SP1A	0113K102	2184779	180098	2.57E-03	2.57E-03	16
NP5	4.23E+09	2187137	188262	2.40E-03	2.40E-03	17
SP1A	0113B201	2184373	179263	2.37E-03	2.36E-03	18
NC1A	BR360095	2184851	182027	2.28E-03	2.27E-03	19
NC4B	4722A	2181799	189024	2.07E-03	2.07E-03	20
NC1A	3346A	2184618	183042	2.01E-03	2.01E-03	21
SP4A	2E+09	2182768	178698	1.78E-03	1.77E-03	22
SP4A	2E+09	2183123	178691	1.76E-03	1.76E-03	23
SP3C	2.02E+08	2182828	179696	1.74E-03	1.74E-03	24
SP8A	BR020020	2181074	178990	1.52E-03	1.52E-03	25
SP3B	BR020006	2182291	179841	1.44E-03	1.44E-03	26
NC2A	RTPX32@	2181369	186118	1.42E-03	1.42E-03	27
SP8A	BR020018	2180908	178997	1.42E-03	1.42E-03	28
NC1A	3204@	2184701	181622	1.40E-03	1.40E-03	29
NC2A	RTPX21@	2181429	186092	1.36E-03	1.36E-03	30
NC1A	BR360090	2184618	183042	1.32E-03	1.31E-03	31
NC1A	BR360011	2184869	181668	1.30E-03	1.29E-03	32
NP6	4.23E+09	2187282	187846	1.16E-03	1.15E-03	33
SP1A	0100013A	2184831	180151	1.14E-03	1.14E-03	34
SP1A	0113C102	2184472	179436	1.11E-03	1.11E-03	35
SP3A	2E+09	2181845	179830	1.02E-03	1.02E-03	36
E3B	BR060018	2193286	178864	9.91E-04	9.84E-04	37
NC1A	3343A	2184742	181872	9.16E-04	9.12E-04	38
NC1A	BR360091	2184601	183004	9.03E-04	8.99E-04	39
NC1A	BR360083	2184785	181835	9.01E-04	8.97E-04	40
S4	0100U170	2186258	177937	8.80E-04	8.80E-04	41
NC1A	BR360096	2184742	181872	8.43E-04	8.39E-04	42

Table B.4.7-2 Cancer Risk Summary for Biological Worker, Horizon 0 Soil Borings

Boring Report for Horizon 0 (Non-Surface Borings, 0-1 ft)						
Boring Summary for Biological Worker						
Additive Total and Incremental Risk for Carcinogenic Chemicals						
For incremental CRs, there are 1,419 non-zero observations and 2,044 zero-risk (i.e., BCRL or < background) observations.						
Only borings with incremental cancer risks exceeding 10 ⁻⁴ are listed here.						
Site	Boring ID	Loc X	Loc Y	Total CR	Inc CR	Inc Rank
S2B	7.02E+08	2178876	179558	8.27E-04	8.25E-04	43
C1B	3437@	2186587	181429	8.21E-04	8.21E-04	44
SP8A	BR020017	2180928	179079	7.99E-04	7.92E-04	45
SP1A	0113B401	2184195	179344	7.52E-04	7.52E-04	46
SP1A	0113B402	2184198	179315	7.46E-04	7.46E-04	47
NC2A	RTPX22@	2181482	186124	7.05E-04	7.05E-04	48
NC1A	3344A	2184557	181919	6.91E-04	6.89E-04	49
SP1A	BR010030	2184807	180152	6.49E-04	6.47E-04	50
S2B	2E+09	2180185	178873	6.49E-04	6.46E-04	51
SP1E	2.4E+09	2184464	180384	6.33E-04	6.28E-04	52
NC1B	3421@	2184499	181159	5.78E-04	5.77E-04	53
NC1A	3503@	2184859	181751	5.66E-04	5.63E-04	54
SP1A	BR010023	2184309	179750	5.60E-04	5.57E-04	55
SP8A	0214A002	2181055	178924	5.25E-04	5.21E-04	56
S2B	7.02E+08	2180043	178929	5.24E-04	5.21E-04	57
NC1A	BR360027	2184968	181426	5.04E-04	5.02E-04	58
SP1A	2.4E+09	2184479	179608	4.95E-04	4.87E-04	59
SP1A	0113J501	2184744	180294	4.90E-04	4.86E-04	60
E3B	BR060001	2193285	178852	4.82E-04	4.78E-04	61
NC1A	BR360028	2184919	181430	4.80E-04	4.78E-04	62
NC1B	3203@	2184732	181327	4.79E-04	4.74E-04	63
NC1A	3224@	2184703	182975	4.71E-04	4.68E-04	64
SP1G	2.4E+09	2185246	179469	4.64E-04	4.56E-04	65
SP4A	7.02E+08	2180270	178913	4.58E-04	4.54E-04	66
NC1B	3492@	2184570	181489	4.55E-04	4.52E-04	67
NC2A	RTPX23@	2181476	186169	4.51E-04	4.51E-04	68
S2B	2E+09	2178826	179667	4.44E-04	4.44E-04	69
NC1A	3348A	2185104	183295	4.36E-04	4.31E-04	70
NC2A	RTPX28@	2181471	186126	4.16E-04	4.16E-04	71
SP1A	2.4E+09	2184563	179337	4.12E-04	4.08E-04	72
NC2A	RTPX29@	2181462	186087	3.79E-04	3.79E-04	73
SP1A	0113K401	2184654	180091	3.53E-04	3.52E-04	74
SP1E	BR010025	2184555	180488	3.37E-04	3.34E-04	75
SP4A	7.02E+08	2181607	178659	3.35E-04	3.33E-04	76
NC2A	RTP562	2181151	186632	3.29E-04	3.29E-04	77
SP4A	BR020015	2183241	178697	3.17E-04	3.16E-04	78
NC1A	3528@	2185171	183355	3.19E-04	3.15E-04	79
SP3E	2.02E+08	2182290	179855	3.14E-04	3.14E-04	80
S2B	2E+09	2179410	178897	3.14E-04	3.09E-04	81
SP4A	2E+09	2182395	178684	3.01E-04	2.99E-04	82
NC1A	3733A	2184943	181446	3.00E-04	2.98E-04	83
SP3A	2E+09	2181991	179689	2.93E-04	2.93E-04	84

Table B.4.7-2 Cancer Risk Summary for Biological Worker, Horizon 0 Soil Borings

Boring Report for Horizon 0 (Non-Surface Borings, 0-1 ft)						
Boring Summary for Biological Worker						
Additive Total and Incremental Risk for Carcinogenic Chemicals						
For incremental CRs, there are 1,419 non-zero observations and 2,044 zero-risk (i.e., BCRL or < background) observations.						
Only borings with incremental cancer risks exceeding 10 ⁻⁴ are listed here.						
Site	Boring ID	Loc X	Loc Y	Total CR	Inc CR	Inc Rank
NC1A	BR360092	2184446	183074	2.95E-04	2.89E-04	85
SP3B	2.02E+08	2182256	179847	2.84E-04	2.84E-04	86
SP1A	2.4E+09	2184720	180227	2.85E-04	2.83E-04	87
NC1A	3205@	2185150	181613	2.80E-04	2.76E-04	88
SP1A	2.4E+09	2184831	180151	2.52E-04	2.52E-04	89
NC2A	RTP329T6	2181363	186245	2.45E-04	2.45E-04	90
NC2A	RTPX31@	2181342	186155	2.33E-04	2.33E-04	91
NC1B	3049	2184688	181276	2.30E-04	2.27E-04	92
NC2A	RTP327T3	2181280	186242	2.21E-04	2.21E-04	93
SP1A	0113G701	2184625	179437	2.21E-04	2.20E-04	94
SP3B	2.02E+08	2182502	179714	2.20E-04	2.15E-04	95
NC2A	RTP321@	2181278	186255	2.14E-04	2.14E-04	96
NC1B	BR360049	2184718	181481	2.16E-04	2.14E-04	97
C1B	3433@	2186949	181769	2.10E-04	2.10E-04	98
NC2A	RTP322@	2181324	186204	2.03E-04	2.03E-04	99
SP1A	NRS01115	2184197	179276	2.03E-04	2.03E-04	100
SP1G	0113G901	2184790	179192	1.95E-04	1.95E-04	101
SP3B	2.02E+08	2182414	179814	1.97E-04	1.92E-04	102
SP4A	2E+09	2181448	178643	1.90E-04	1.88E-04	103
SP1A	0113K101	2184769	180092	1.88E-04	1.87E-04	104
NC1A	3239A	2185150	183122	1.91E-04	1.86E-04	105
SP1A	0113B101	2184239	179383	1.84E-04	1.82E-04	106
NC2A	TP327T10	2181280	186242	1.78E-04	1.78E-04	107
SP1A	#####	2184725	179459	1.80E-04	1.77E-04	108
NC1A	BR360084	2185063	181698	1.75E-04	1.71E-04	109
SP1A	BR010024	2184319	179701	1.74E-04	1.70E-04	110
SP1D	01PWR003	2185214	179205	1.68E-04	1.66E-04	111
SP1A	2.4E+09	2184328	179727	1.68E-04	1.66E-04	112
NC1A	3219@	2184851	182363	1.66E-04	1.64E-04	113
SP1A	2.4E+09	2184903	180047	1.65E-04	1.63E-04	114
NC1A	3734A	2184872	181826	1.62E-04	1.60E-04	115
NC1A	BR360097	2184654	181831	1.60E-04	1.56E-04	116
NC2A	RTP562P@	2181151	186632	1.54E-04	1.54E-04	117
NC5C	CSO01001	2179509	181213	1.55E-04	1.52E-04	118
NC1A	3510@	2185381	182262	1.54E-04	1.50E-04	119
NC2A	RTP555PA	2181030	186807	1.49E-04	1.49E-04	120
NC2A	RTP564P	2181127	186607	1.47E-04	1.47E-04	121
NC2A	RTP327T7	2181280	186242	1.45E-04	1.45E-04	122
SP3A	BR020002	2181832	179700	1.47E-04	1.45E-04	123
SP1A	0113G801	2184611	179330	1.45E-04	1.45E-04	124
SP12B	01PWR001	2185328	179146	1.42E-04	1.40E-04	125
SP3C	2.02E+08	2182705	179678	1.39E-04	1.39E-04	126

Table B.4.7-2 Cancer Risk Summary for Biological Worker, Horizon 0 Soil Borings

Boring Report for Horizon 0 (Non-Surface Borings, 0-1 ft)						
Boring Summary for Biological Worker						
Additive Total and Incremental Risk for Carcinogenic Chemicals						
For incremental CRs, there are 1,419 non-zero observations and 2,044 zero-risk (i.e., BCRL or < background) observations.						
Only borings with incremental cancer risks exceeding 10 ⁻⁴ are listed here.						
Site	Boring ID	Loc X	Loc Y	Total CR	Inc CR	Inc Rank
NC5C	4129@	2181232	184913	1.38E-04	1.38E-04	127
SP3E	0113G602	2182541	179523	1.35E-04	1.35E-04	128
NC1B	3422@	2184933	181128	1.36E-04	1.33E-04	129
SP3B	2.02E+08	2182372	179724	1.36E-04	1.33E-04	130
NC5C	4091	2179442	181704	1.35E-04	1.32E-04	131
NC2A	RTP328T6	2181328	186244	1.31E-04	1.31E-04	132
NC1A	3225A	2184931	182823	1.33E-04	1.29E-04	133
NC2A	RTP327T2	2181280	186242	1.29E-04	1.29E-04	134
NC1A	3511@	2184931	182150	1.28E-04	1.25E-04	135
NC1A	3735A	2185127	182597	1.23E-04	1.21E-04	136
SP1A	BR010029	2184828	180153	1.17E-04	1.17E-04	137
SP1E	NRS01M1E	2184528	180476	1.21E-04	1.16E-04	138
SP1A	010R0048	2184144	179074	1.18E-04	1.16E-04	139
NC4A	4739@	2181541	189289	1.15E-04	1.15E-04	140
SP1A	0113L101	2184756	179919	1.17E-04	1.14E-04	141
NC1A	3350A	2185806	183636	1.18E-04	1.12E-04	142
NC2A	4583@	2181345	186075	1.17E-04	1.12E-04	143
S2B	2E+09	2179305	180304	1.09E-04	1.09E-04	144
C1B	3431@	2186709	181808	1.09E-04	1.09E-04	145
NC1A	BR360025	2184943	181446	1.10E-04	1.08E-04	146
SP1A	2.4E+09	2184415	180224	1.08E-04	1.07E-04	147
SP9A	1BORE004	2186444	179602	1.13E-04	1.07E-04	148
SP1A	0113C101	2184420	179401	1.04E-04	1.04E-04	149
NC2A	RTP328T2	2181328	186244	1.04E-04	1.04E-04	150
SP4A	02PWR001	2182840	178698	1.07E-04	1.04E-04	151
NC1A	3342@	2184601	181742	1.06E-04	1.03E-04	152
SP2D	2.01E+08	2185498	178363	1.03E-04	1.03E-04	153
NC2A	RTP329T1	2181363	186245	1.01E-04	1.01E-04	154
SP8B	NRS02118	2181558	179462	1.00E-04	1.00E-04	155
Program version: Gray Developmental, Smp. Arith. Mean, Models correction						
Database version: Gray-1 parameter revisions, updated, November 30, 1993						
HHRC Source Code File = HBSRT5C0.BDK and HBSR15C0.BDK						
Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean						
Variable Percentile: 5.00						
Random Seed: 0, Unc. Sample Size: 100						

Table B.4.7-3 Cancer Risk Summary for Biological Worker, Horizon 1 Soil Borings

Boring Report for Horizon 1						
Boring Summary for Biological Worker						
Additive Total and Incremental Risk for Carcinogenic Chemicals						
For incremental CRs, there are 1,811 non-zero observations and 1,652 zero-risk (i.e., BCRL or < background) observations.						
Only borings with incremental cancer risks exceeding 10 ⁻⁴ are listed here.						
Site	Boring ID	Loc X	Loc Y	Total CR	Inc CR	Inc Rank
SP10	1001MKE021	2184409	179602	1.58E-01	1.58E-01	1
SP10	1001000W25	2184435	179666	6.39E-02	6.39E-02	2
SP10	1001CS0202	2184405	179497	5.77E-02	5.77E-02	3
SP10	1001CS0205	2184404	179501	5.67E-02	5.67E-02	4
SP1A	01-@@-02	2184411	179607	5.59E-02	5.59E-02	5
SP1A	020113G401	2184718	179439	5.49E-02	5.49E-02	6
SP10	1001CS0206	2184405	179513	4.83E-02	4.83E-02	7
SP1A	01-@@-03	2184433	179791	3.75E-02	3.75E-02	8
SP10	1001MKE023	2184411	179608	3.45E-02	3.45E-02	9
SP1A	BR010028	2184830	180161	2.82E-02	2.82E-02	10
SP10	1001CS0207	2184405	179498	2.81E-02	2.80E-02	11
SP1E	2401000004	2184635	180446	2.69E-02	2.69E-02	12
SP1E	2401000001	2184363	180516	2.65E-02	2.65E-02	13
SP1E	COEM-10013	2184382	180486	2.64E-02	2.64E-02	14
SP3A	NRS02114	2181830	179700	2.56E-02	2.56E-02	15
SP3B	202062015	2182285	179807	2.47E-02	2.47E-02	16
SP1E	COEM-10015	2184605	180487	2.21E-02	2.21E-02	17
SP1E	NRS01M1E	2184528	180476	2.16E-02	2.16E-02	18
SP1A	01-@@-04	2184419	179811	2.11E-02	2.11E-02	19
SP1A	2401000035	2184479	179326	1.94E-02	1.94E-02	20
SP1A	2401000049	2184827	180151	1.92E-02	1.92E-02	21
SP1A	01-@@-06	2184336	179843	1.74E-02	1.74E-02	22
NC3	BR260006	2181573	188552	1.74E-02	1.74E-02	23
NC1A	BR360010	2184879	181703	1.68E-02	1.68E-02	24
SP1E	NRS01M1M	2184494	180434	1.42E-02	1.42E-02	25
SP1E	NRS01M1W	2184408	180433	1.22E-02	1.22E-02	26
NC1B	3421@	2184499	181159	1.19E-02	1.19E-02	27
SP1E	020113J802	2184591	180485	1.18E-02	1.18E-02	28
SP1A	2401000034	2184563	179337	1.15E-02	1.15E-02	29
SP1E	BR010026	2184640	180483	1.15E-02	1.15E-02	30
SP3B	NRS02113@	2182256	179847	1.13E-02	1.13E-02	31
NC3	4626@	2181018	189002	1.05E-02	1.05E-02	32
NC1A	BR360097	2184654	181831	8.17E-03	8.17E-03	33
NC1A	BR360095	2184851	182027	7.77E-03	7.76E-03	34
SP1E	COEM-10014	2184507	180489	7.44E-03	7.44E-03	35
SP1A	020113O301	2184227	180370	7.31E-03	7.31E-03	36
SP8A	020214A011	2180919	179035	7.25E-03	7.25E-03	37
SP3B	BR020007	2182304	179841	5.97E-03	5.96E-03	38
NC8A	BR360082	2184848	181967	5.47E-03	5.47E-03	39
SP1A	02010R0036	2184330	179693	4.96E-03	4.96E-03	40
SP1A	020113S104	2184408	179024	4.91E-03	4.91E-03	41
SP1E	M1BORE006	2184412	180480	4.59E-03	4.59E-03	42

Table B.4.7-3 Cancer Risk Summary for Biological Worker, Horizon 1 Soil Borings

Boring Report for Horizon 1						
Boring Summary for Biological Worker						
Additive Total and Incremental Risk for Carcinogenic Chemicals						
For incremental CRs, there are 1,811 non-zero observations and 1,652 zero-risk (i.e., BCRL or < background) observations.						
Only borings with incremental cancer risks exceeding 10 ⁻⁴ are listed here.						
Site	Boring ID	Loc X	Loc Y	Total CR	Inc CR	Inc Rank
SP1E	M1BORE007	2184509	180423	4.59E-03	4.58E-03	43
SP1A	2401000010	2184910	180206	4.51E-03	4.50E-03	44
NC3	4620@	2180982	189756	3.78E-03	3.78E-03	45
C1A	3458@	2186745	181653	3.55E-03	3.55E-03	46
NC3	002606DJ37	2180961	189720	3.17E-03	3.17E-03	47
SP1A	020113C103	2184461	179365	3.03E-03	3.03E-03	48
NC8A	BR360094	2184702	182068	2.89E-03	2.88E-03	49
SP3A	202062016	2182221	179682	2.82E-03	2.82E-03	50
SP10	1001MKE042	2184419	179812	2.81E-03	2.80E-03	51
NC3	3126060001	2181444	188894	2.70E-03	2.69E-03	52
SP1A	020113K102	2184779	180098	2.58E-03	2.58E-03	53
SP10	1001MKE061	2184336	179843	2.49E-03	2.49E-03	54
NP5	4225000026	2187137	188262	2.40E-03	2.40E-03	55
NC1A	BR360020	2184541	181821	2.40E-03	2.40E-03	56
SP1A	020113B201	2184373	179263	2.37E-03	2.36E-03	57
C1A	3457@	2186615	181615	2.10E-03	2.10E-03	58
NC4B	4722A	2181799	189024	2.07E-03	2.07E-03	59
SP10	1001MKE022	2184410	179605	2.03E-03	2.03E-03	60
NC1A	3346A	2184618	183042	2.01E-03	2.01E-03	61
SP4A	2002010040	2182768	178698	1.78E-03	1.77E-03	62
SP4A	2002010041	2183123	178691	1.76E-03	1.76E-03	63
SP3C	202080012	2182828	179696	1.74E-03	1.74E-03	64
NC3	3126060002	2181421	188810	1.74E-03	1.73E-03	65
SP10	1001MKE062	2184335	179846	1.66E-03	1.66E-03	66
NC1A	BR360091	2184601	183004	1.55E-03	1.54E-03	67
SP8A	BR020020	2181074	178990	1.53E-03	1.53E-03	68
SP3B	BR020006	2182291	179841	1.45E-03	1.44E-03	69
NC2A	RTPX32@	2181369	186118	1.42E-03	1.42E-03	70
SP8A	BR020018	2180908	178997	1.42E-03	1.42E-03	71
NC1A	BR360090	2184618	183042	1.42E-03	1.41E-03	72
NC1A	3204@	2184701	181622	1.40E-03	1.40E-03	73
NC2A	RTPX21@	2181429	186092	1.36E-03	1.36E-03	74
NC3	002606DJ39	2180962	189675	1.33E-03	1.33E-03	75
C1A	3446@	2186729	181762	1.32E-03	1.32E-03	76
NC1A	BR360011	2184869	181668	1.30E-03	1.29E-03	77
SP1A	2401000P33	2183713	179328	1.27E-03	1.26E-03	78
NP6	4225000042	2187282	187846	1.16E-03	1.15E-03	79
SP1A	240100013A	2184831	180151	1.14E-03	1.14E-03	80
SP1A	020113C102	2184472	179436	1.11E-03	1.11E-03	81
NC3	002606DJ38	2180961	189710	1.09E-03	1.09E-03	82
C1C	36TRENCH16	2186050	183068	1.09E-03	1.08E-03	83
SP3A	2002010031	2181845	179830	1.02E-03	1.02E-03	84

Table B.4.7-3 Cancer Risk Summary for Biological Worker, Horizon 1 Soil Borings

Boring Report for Horizon 1						
Boring Summary for Biological Worker						
Additive Total and Incremental Risk for Carcinogenic Chemicals						
For incremental CRs, there are 1,811 non-zero observations and 1,652 zero-risk (i.e., BCRL or < background) observations.						
Only borings with incremental cancer risks exceeding 10 ⁻⁴ are listed here.						
Site	Boring ID	Loc X	Loc Y	Total CR	Inc CR	Inc Rank
E3B	BR060018	2193286	178864	9.91E-04	9.84E-04	85
NC1B	3422@	2184933	181128	9.71E-04	9.69E-04	86
NC1A	3343A	2184742	181872	9.16E-04	9.12E-04	87
SP10	1001MKE031	2184434	179786	9.15E-04	9.11E-04	88
NC1A	BR360083	2184785	181835	9.01E-04	8.97E-04	89
S4	200100U170	2186258	177937	8.80E-04	8.80E-04	90
NC1A	BR360096	2184742	181872	8.43E-04	8.39E-04	91
S2B	702010012	2178876	179558	8.27E-04	8.25E-04	92
C1B	3437@	2186587	181429	8.21E-04	8.21E-04	93
SP10	1001CS0201	2184405	179495	7.95E-04	7.92E-04	94
SP8A	BR020017	2180928	179079	7.99E-04	7.92E-04	95
SP1E	2401000005	2184464	180384	7.78E-04	7.72E-04	96
SP1A	BR010030	2184807	180152	7.70E-04	7.68E-04	97
SP1A	020113B401	2184195	179344	7.53E-04	7.52E-04	98
SP1A	020113B402	2184198	179315	7.49E-04	7.46E-04	99
NC2A	RTPX22@	2181482	186124	7.05E-04	7.05E-04	100
C1C	3584GRAB	2187000	184224	6.99E-04	6.91E-04	101
NC1A	3344A	2184557	181919	6.91E-04	6.89E-04	102
SP1A	BR010029	2184828	180153	6.79E-04	6.77E-04	103
S2B	2002010026	2180185	178873	6.49E-04	6.46E-04	104
C1A	3445@	2186626	181744	5.97E-04	5.97E-04	105
NC1A	3503@	2184859	181751	6.00E-04	5.95E-04	106
SP1A	020113G801	2184611	179330	5.66E-04	5.66E-04	107
SP1A	BR010023	2184309	179750	5.60E-04	5.57E-04	108
C1C	36TRENCH15	2186120	183039	5.31E-04	5.26E-04	109
SP8A	020214A002	2181055	178924	5.27E-04	5.23E-04	110
S2B	702010010	2180043	178929	5.25E-04	5.21E-04	111
NC1A	BR360027	2184968	181426	5.04E-04	5.02E-04	112
NC1B	3492@	2184570	181489	5.00E-04	4.97E-04	113
SP10	1001MKE063	2184334	179849	4.96E-04	4.92E-04	114
SP1A	2401000044	2184479	179608	4.95E-04	4.87E-04	115
SP1A	020113J501	2184744	180294	4.90E-04	4.86E-04	116
E3B	BR060001	2193285	178852	4.82E-04	4.78E-04	117
NC1A	BR360028	2184919	181430	4.80E-04	4.78E-04	118
NC1B	3203@	2184732	181327	4.79E-04	4.74E-04	119
SP4A	BR020015	2183241	178697	4.74E-04	4.72E-04	120
NC1A	3224@	2184703	182975	4.71E-04	4.68E-04	121
SP1G	2401000037	2185246	179469	4.64E-04	4.56E-04	122
SP4A	702010009	2180270	178913	4.58E-04	4.54E-04	123
NC2A	RTPX23@	2181476	186169	4.51E-04	4.51E-04	124
S2B	2002010022	2178826	179667	4.45E-04	4.44E-04	125
NC1A	3348A	2185104	183295	4.36E-04	4.31E-04	126

Table B.4.7-3 Cancer Risk Summary for Biological Worker, Horizon 1 Soil Borings

Boring Report for Horizon 1						
Boring Summary for Biological Worker						
Additive Total and Incremental Risk for Carcinogenic Chemicals						
<i>For incremental CRs, there are 1,811 non-zero observations and 1,652 zero-risk (i.e., BCRL or < background) observations.</i>						
<i>Only borings with incremental cancer risks exceeding 10⁻⁴ are listed here.</i>						
<u>Site</u>	<u>Boring ID</u>	<u>Loc X</u>	<u>Loc Y</u>	<u>Total CR</u>	<u>Inc CR</u>	<u>Inc Rank</u>
SP10	1001CS0204	2184404	179499	4.31E-04	4.28E-04	127
NC3	B02606DJ14	2180958	189763	4.24E-04	4.19E-04	128
SP10	1001MKE043	2184416	179813	4.21E-04	4.19E-04	129
NC2A	RTPX28@	2181471	186126	4.16E-04	4.16E-04	130
SP10	1001000W27	2184405	179371	4.15E-04	4.10E-04	131
NC1E	3196@	2185774	183269	3.99E-04	3.91E-04	132
NC2A	RTPX29@	2181462	186087	3.79E-04	3.79E-04	133
SP8A	BR020019	2181022	179039	3.80E-04	3.76E-04	134
SP10	1001MKE044	2184414	179813	3.71E-04	3.69E-04	135
SP1A	020113K401	2184654	180091	3.53E-04	3.52E-04	136
NC1B	3413@	2184474	181723	3.41E-04	3.37E-04	137
SP1E	BR010025	2184555	180488	3.39E-04	3.34E-04	138
SP4A	702010008	2181607	178659	3.35E-04	3.33E-04	139
NC2A	RTP562	2181151	186632	3.29E-04	3.29E-04	140
NC1A	3528@	2185171	183355	3.19E-04	3.15E-04	141
SP3E	202062013	2182290	179855	3.14E-04	3.14E-04	142
NC1B	3731@	2184889	181298	3.15E-04	3.12E-04	143
S2B	2002010023	2179410	178897	3.14E-04	3.09E-04	144
SP4A	2002010039	2182395	178684	3.01E-04	2.99E-04	145
NC1A	3733A	2184943	181446	3.00E-04	2.98E-04	146
NC1A	BR360092	2184446	183074	2.99E-04	2.94E-04	147
SP3A	2002010032	2181991	179689	2.93E-04	2.93E-04	148
SP1A	2401000007	2184720	180227	2.92E-04	2.90E-04	149
SP10	1001CS0203	2184405	179498	2.87E-04	2.85E-04	150
SP3B	202060002	2182256	179847	2.84E-04	2.84E-04	151
NC1A	3205@	2185150	181613	2.80E-04	2.76E-04	152
SP10	1001000W21	2184337	179839	2.77E-04	2.70E-04	153
NC1E	3566@	2185748	183329	2.75E-04	2.68E-04	154
NC1B	BR360049	2184718	181481	2.64E-04	2.62E-04	155
SP10	1001MKE033	2184434	179792	2.54E-04	2.52E-04	156
SP1A	2401000013	2184831	180151	2.53E-04	2.52E-04	157
NC2A	RTP329T6	2181363	186245	2.45E-04	2.45E-04	158
W5D	2204050031	2171075	178578	2.44E-04	2.36E-04	159
NC2A	RTPX31@	2181342	186155	2.33E-04	2.33E-04	160
S2B	2002010025	2180191	178918	2.30E-04	2.27E-04	161
NC1B	3049	2184688	181276	2.30E-04	2.27E-04	162
NC1E	3564@	2185733	183228	2.31E-04	2.23E-04	163
NC1B	3730@	2184733	181457	2.25E-04	2.22E-04	164
NC2A	RTP327T3	2181280	186242	2.21E-04	2.21E-04	165
SP1A	020113G701	2184625	179437	2.21E-04	2.20E-04	166
SP3B	202060009	2182502	179714	2.20E-04	2.15E-04	167
NC2A	RTP321@	2181278	186255	2.14E-04	2.14E-04	168

Table B.4.7-3 Cancer Risk Summary for Biological Worker, Horizon 1 Soil Borings

Boring Report for Horizon 1						
Boring Summary for Biological Worker						
Additive Total and Incremental Risk for Carcinogenic Chemicals						
<i>For incremental CRs, there are 1,811 non-zero observations and 1,652 zero-risk (i.e., BCRL or < background) observations.</i>						
<i>Only borings with incremental cancer risks exceeding 10⁻⁴ are listed here.</i>						
<u>Site</u>	<u>Boring ID</u>	<u>Loc X</u>	<u>Loc Y</u>	<u>Total CR</u>	<u>Inc CR</u>	<u>Inc Rank</u>
C1B	3433@	2186949	181769	2.10E-04	2.10E-04	169
SP1A	020113N301	2184851	180039	2.11E-04	2.08E-04	170
SP1A	2401000028	2184328	179727	2.06E-04	2.04E-04	171
S3B	2012010016	2186853	174876	2.04E-04	2.04E-04	172
NC2A	RTP322@	2181324	186204	2.03E-04	2.03E-04	173
SP1A	NRS01115	2184197	179276	2.03E-04	2.03E-04	174
SP1G	020113G901	2184790	179192	1.96E-04	1.95E-04	175
SP1A	#####	2184725	179459	1.96E-04	1.92E-04	176
SP3B	202060011	2182414	179814	1.97E-04	1.92E-04	177
SP1A	020113K101	2184769	180092	1.90E-04	1.88E-04	178
SP4A	2002010036	2181448	178643	1.90E-04	1.88E-04	179
SP1A	01CSO03306	2184895	180273	1.93E-04	1.88E-04	180
NC1B	COELSB0018	2184945	181230	1.92E-04	1.88E-04	181
C1C	3086@	2186799	184285	1.93E-04	1.87E-04	182
NC1A	3239A	2185150	183122	1.91E-04	1.86E-04	183
SP1A	020113B101	2184239	179383	1.84E-04	1.82E-04	184
NC2A	RTP327T10	2181280	186242	1.78E-04	1.78E-04	185
C1A	3176@	2186580	181641	1.77E-04	1.76E-04	186
NC1B	3168@	2184466	181085	1.79E-04	1.72E-04	187
NC1A	BR360084	2185063	181698	1.75E-04	1.71E-04	188
SP1A	BR010024	2184319	179701	1.74E-04	1.70E-04	189
SP1D	1001PWR003	2185214	179205	1.68E-04	1.66E-04	190
SP8A	BR020021	2181004	178929	1.68E-04	1.64E-04	191
NC1A	3219@	2184851	182363	1.66E-04	1.64E-04	192
SP1A	2401000015	2184903	180047	1.65E-04	1.63E-04	193
NC1A	3734A	2184872	181826	1.62E-04	1.60E-04	194
NC2A	RTP562P@	2181151	186632	1.54E-04	1.54E-04	195
NC5C	35CSO01001	2179509	181213	1.55E-04	1.52E-04	196
NC1A	3510@	2185381	182262	1.54E-04	1.50E-04	197
NC2A	RTP555PA	2181030	186807	1.49E-04	1.49E-04	198
NC2A	RTP564P	2181127	186607	1.47E-04	1.47E-04	199
SP3A	BR020002	2181832	179700	1.48E-04	1.45E-04	200
NC2A	RTP327T7	2181280	186242	1.45E-04	1.45E-04	201
NC3	002606DJ28	2181415	188818	1.47E-04	1.41E-04	202
SP12B	1001PWR001	2185328	179146	1.42E-04	1.40E-04	203
SP3C	202082021	2182705	179678	1.39E-04	1.39E-04	204
NC5C	4129@	2181232	184913	1.40E-04	1.38E-04	205
SP3E	020113G602	2182541	179523	1.37E-04	1.35E-04	206
SP3B	202060008	2182372	179724	1.36E-04	1.33E-04	207
NC5C	4091	2179442	181704	1.35E-04	1.32E-04	208
S3B	2012010017	2186704	174865	1.31E-04	1.31E-04	209
NC2A	RTP328T6	2181328	186244	1.31E-04	1.31E-04	210

Table B.4.7-3 Cancer Risk Summary for Biological Worker, Horizon 1 Soil Borings

Boring Report for Horizon 1						
Boring Summary for Biological Worker						
Additive Total and Incremental Risk for Carcinogenic Chemicals						
<i>For incremental CRs, there are 1,811 non-zero observations and 1,652 zero-risk (i.e., BCRL or < background) observations.</i>						
<i>Only borings with incremental cancer risks exceeding 10⁻⁴ are listed here.</i>						
Site	Boring ID	Loc X	Loc Y	Total CR	Inc CR	Inc Rank
NC1A	3225A	2184931	182823	1.33E-04	1.29E-04	211
S3B	BR120007	2186918	174915	1.32E-04	1.29E-04	212
NC2A	RTP327T2	2181280	186242	1.29E-04	1.29E-04	213
NC1B	3732@	2184405	181015	1.32E-04	1.28E-04	214
SP1A	2401000030	2184383	179751	1.33E-04	1.25E-04	215
NC1A	3511@	2184931	182150	1.30E-04	1.25E-04	216
NC1A	3735A	2185127	182597	1.23E-04	1.21E-04	217
NC1B	3166@	2184338	181149	1.22E-04	1.17E-04	218
NC1E	3565@	2185667	183298	1.24E-04	1.17E-04	219
SP1A	2401000025	2184490	180030	1.25E-04	1.17E-04	220
SP1A	02010R0048	2184144	179074	1.18E-04	1.16E-04	221
NC4A	4739@	2181541	189289	1.18E-04	1.15E-04	222
SP1A	020113L101	2184756	179919	1.17E-04	1.14E-04	223
NC3	4644@	2181382	188842	1.16E-04	1.14E-04	224
NC1A	3350A	2185806	183636	1.18E-04	1.12E-04	225
NC2A	4583@	2181345	186075	1.17E-04	1.12E-04	226
S2B	2002010020	2179305	180304	1.09E-04	1.09E-04	227
C1B	3431@	2186709	181808	1.09E-04	1.09E-04	228
NC1A	BR360025	2184943	181446	1.10E-04	1.08E-04	229
SP1A	2401000027	2184415	180224	1.08E-04	1.07E-04	230
SP9A	01BORE004	2186444	179602	1.13E-04	1.07E-04	231
SP1A	020113C101	2184420	179401	1.04E-04	1.04E-04	232
SP4A	1002PWR001	2182840	178698	1.07E-04	1.04E-04	233
NC2A	RTP328T2	2181328	186244	1.04E-04	1.04E-04	234
NC1A	3342@	2184601	181742	1.06E-04	1.03E-04	235
SP2D	201082024	2185498	178363	1.03E-04	1.03E-04	236
S3B	271A0	2186637	174826	1.02E-04	1.02E-04	237
NC1A	3210A	2185148	182223	1.03E-04	1.01E-04	238
Program version: Gray Developmental, Smp. Arith. Mean, Models correction						
Database version: Gray-1 parameter revisions, updated, July 31, 1993						
HHRC Source Code Files = HBSRI5C1.BDK and HBSRT5C1.BDK						
Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean						
Variable Percentile: 5.00, 1.0e-006 Cancer Risk Level						
Random Seed: 0, Unc. Sample Size: 100, Print Date: August 05, 1993. 12:49:16						

Table B.4.7-4 Hazard Index Summary for Biological Worker, Surficial Soils

Boring Report for Surficial Soils						
Boring Summary for Biological Worker						
Additive Total and Incremental Hazard Index for Non-Carcinogenic Chemicals						
<i>For incremental HIs, there are 493 non-zero observations and 45 zero-risk (i.e., BCRL or < background) observations.</i>						
<i>Only borings with incremental hazard indices exceeding 1.0 are listed here.</i>						
Site	Boring ID	Loc X	Loc Y	Total HI	Inc HI	Inc Rank
SS	SS26049	2182106	188895	1.61E+01	1.61E+01	1
SS	SS260035	2181421	188072	2.33E+00	2.32E+00	2
SS	SS360001	2186679	181106	1.89E+00	1.88E+00	3
Program version: Gray Developmental, Smp. Arith. Mean, Models correction						
Database version: Gray-1 parameter revisions, updated, November 30, 1993						
HHRC Source Code File = HBSRTSH0.BDK and HBSRI5H0.BDK						
Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean						
Variable Percentile: 5.00						
Random Seed: 0, Unc. Sample Size: 100						

Table B.4.7-5 Hazard Index Summary for Biological Worker, Horizon 0 Soil Borings

Boring Report for Horizon 0 (Non-Surface Borings, 0-1 ft)						
Boring Summary for Biological Worker						
Additive Total and Incremental Hazard Index for Non-Carcinogenic Chemicals						
For incremental HIs, there are 1,559 non-zero observations and 1,904 zero-risk (i.e., BCRL or < background) observations.						
Only borings with incremental hazard indices exceeding 1.0 are listed here.						
Site	Boring ID	Loc X	Loc Y	Total HI	Inc HI	Inc Rank
SP1A	020113G401	2184718	179439	1.13E+03	1.13E+03	1
SP3A	NRS02114	2181830	179700	2.40E+02	2.40E+02	2
SP1A	2401000035	2184479	179326	1.97E+02	1.97E+02	3
NC1A	BR360010	2184879	181703	1.60E+02	1.60E+02	4
SP3B	NRS02113@	2182256	179847	1.01E+02	1.01E+02	5
SP1G	2401000037	2185246	179469	9.00E+01	8.89E+01	6
SP1E	2401000001	2184363	180516	8.47E+01	8.41E+01	7
SP1A	BR010028	2184830	180161	7.42E+01	7.32E+01	8
SP8A	020214A011	2180919	179035	6.45E+01	6.44E+01	9
SP3B	BR020007	2182304	179841	6.08E+01	6.04E+01	10
SP1A	020113O301	2184227	180370	5.32E+01	5.28E+01	11
NC8A	BR360082	2184848	181967	5.24E+01	5.21E+01	12
SP1A	02010R0036	2184330	179693	4.51E+01	4.47E+01	13
SP1A	020113C103	2184461	179365	3.07E+01	3.07E+01	14
NC8A	BR360094	2184702	182068	3.10E+01	3.06E+01	15
SP3A	202062016	2182221	179682	2.85E+01	2.85E+01	16
NC1A	BR360095	2184851	182027	2.82E+01	2.76E+01	17
NC1A	3346A	2184618	183042	2.34E+01	2.29E+01	18
SP1A	020113B201	2184373	179263	2.16E+01	2.15E+01	19
NP5	4225000026	2187137	188262	2.15E+01	2.10E+01	20
SP1A	2401000034	2184563	179337	2.11E+01	2.05E+01	21
NC1B	3492@	2184570	181489	2.01E+01	2.01E+01	22
SP1A	020113K102	2184779	180098	1.93E+01	1.90E+01	23
NC1A	BR360090	2184618	183042	1.94E+01	1.85E+01	24
SP4A	2002010040	2182768	178698	1.86E+01	1.77E+01	25
NC4B	4722A	2181799	189024	1.75E+01	1.75E+01	26
SP1G	BR010032	2185219	179458	1.86E+01	1.75E+01	27
SP4A	2002010041	2183123	178691	1.80E+01	1.75E+01	28
SP8A	020214A002	2181055	178924	1.75E+01	1.73E+01	29
SP3B	BR020006	2182291	179841	1.73E+01	1.69E+01	30
SP3C	202080012	2182828	179696	1.66E+01	1.62E+01	31
NC1A	3204@	2184701	181622	1.54E+01	1.50E+01	32
E3B	BR060018	2193286	178864	1.48E+01	1.37E+01	33
SP8A	BR020020	2181074	178990	1.37E+01	1.34E+01	34
SP8A	BR020018	2180908	178997	1.37E+01	1.33E+01	35
NC2A	RTPX21@	2181429	186092	1.23E+01	1.23E+01	36
NC1A	BR360011	2184869	181668	1.21E+01	1.21E+01	37
NC2A	RTPX32@	2181369	186118	1.11E+01	1.11E+01	38
NC1A	BR360091	2184601	183004	1.08E+01	1.04E+01	39
SP3A	2002010031	2181845	179830	1.02E+01	1.02E+01	40
NP6	4225000042	2187282	187846	1.07E+01	1.01E+01	41
W6A	3804060038	2172519	176715	1.08E+01	9.79E+00	42

Table B.4.7-5 Hazard Index Summary for Biological Worker, Horizon 0 Soil Borings

Boring Report for Horizon 0 (Non-Surface Borings, 0-1 ft)						
Boring Summary for Biological Worker						
Additive Total and Incremental Hazard Index for Non-Carcinogenic Chemicals						
For incremental HIs, there are 1,559 non-zero observations and 1,904 zero-risk (i.e., BCRL or < background) observations.						
Only borings with incremental hazard indices exceeding 1.0 are listed here.						
Site	Boring ID	Loc X	Loc Y	Total HI	Inc HI	Inc Rank
SP1E	2401000005	2184464	180384	1.02E+01	9.63E+00	43
NC1A	3343A	2184742	181872	9.61E+00	9.33E+00	44
NC1A	3348A	2185104	183295	9.77E+00	9.28E+00	45
SP1A	240100013A	2184831	180151	9.25E+00	8.80E+00	46
SP1A	02010R0038	2185230	180238	9.86E+00	8.78E+00	47
NC1A	BR360083	2184785	181835	8.84E+00	8.60E+00	48
SP1A	020113C102	2184472	179436	8.40E+00	8.38E+00	49
NC1A	BR360096	2184742	181872	8.26E+00	8.01E+00	50
NC1B	3203@	2184732	181327	8.45E+00	7.97E+00	51
SP8A	BR020017	2180928	179079	8.80E+00	7.73E+00	52
S2B	702010012	2178876	179558	8.10E+00	7.68E+00	53
SP1A	020113B402	2184198	179315	7.38E+00	7.38E+00	54
NC1A	3344A	2184557	181919	7.10E+00	7.08E+00	55
S4	200100U170	2186258	177937	7.02E+00	7.02E+00	56
SP1A	020113B401	2184195	179344	7.03E+00	7.02E+00	57
C1B	3437@	2186587	181429	6.98E+00	6.98E+00	58
SP1G	2401000036	2185213	179469	7.88E+00	6.80E+00	59
SP1A	2401000007	2184720	180227	6.02E+00	6.00E+00	60
SP3C	202080003	2182809	179750	7.02E+00	5.96E+00	61
SP3B	202060008	2182372	179724	6.25E+00	5.87E+00	62
NC1B	3421@	2184499	181159	5.79E+00	5.77E+00	63
S2B	2002010026	2180185	178873	6.19E+00	5.65E+00	64
NC2A	RTPX22@	2181482	186124	5.65E+00	5.65E+00	65
NC1A	3224@	2184703	182975	5.81E+00	5.50E+00	66
SP1A	BR010030	2184807	180152	5.81E+00	5.50E+00	67
NC1A	3503@	2184859	181751	5.46E+00	5.44E+00	68
SP1A	BR010023	2184309	179750	5.25E+00	4.92E+00	69
SP1A	2401000044	2184479	179608	5.96E+00	4.88E+00	70
S2B	702010010	2180043	178929	5.04E+00	4.59E+00	71
W6A	BR040017	2172507	176692	5.49E+00	4.45E+00	72
S2B	2002010022	2178826	179667	4.43E+00	4.43E+00	73
NC1A	BR360027	2184968	181426	4.41E+00	4.39E+00	74
E3B	BR060001	2193285	178852	4.55E+00	4.25E+00	75
NC1A	BR360028	2184919	181430	4.21E+00	4.18E+00	76
SP1A	020113K401	2184654	180091	4.12E+00	4.10E+00	77
C1C	3639@	2185689	184219	5.11E+00	4.03E+00	78
SP1A	020113J501	2184744	180294	4.37E+00	3.87E+00	79
NC1A	3528@	2185171	183355	4.18E+00	3.75E+00	80
SP4A	702010009	2180270	178913	4.27E+00	3.71E+00	81
NC2A	RTPX23@	2181476	186169	3.59E+00	3.59E+00	82
SP1E	BR010025	2184555	180488	3.78E+00	3.55E+00	83
NC1A	3733A	2184943	181446	3.46E+00	3.44E+00	84

Table B.4.7-5 Hazard Index Summary for Biological Worker, Horizon 0 Soil Borings

Boring Report for Horizon 0 (Non-Surface Borings, 0-1 ft)						
Boring Summary for Biological Worker						
Additive Total and Incremental Hazard Index for Non-Carcinogenic Chemicals						
For incremental HIs, there are 1,559 non-zero observations and 1,904 zero-risk (i.e., BCRL or < background) observations.						
Only borings with incremental hazard indices exceeding 1.0 are listed here.						
Site	Boring ID	Loc X	Loc Y	Total HI	Inc HI	Inc Rank
NC1A	BR360092	2184446	183074	3.98E+00	3.35E+00	85
NC2A	RTPX28@	2181471	186126	3.31E+00	3.31E+00	86
NC2A	RTPX29@	2181462	186087	3.11E+00	3.11E+00	87
SP4A	2002010039	2182395	178684	3.28E+00	2.90E+00	88
NC1A	3205@	2185150	181613	3.21E+00	2.88E+00	89
SP1A	2401000027	2184415	180224	2.84E+00	2.84E+00	90
SP4A	702010008	2181607	178659	3.26E+00	2.82E+00	91
C1C	BS01S005P	2186458	183651	2.83E+00	2.81E+00	92
S2B	2002010023	2179410	178897	3.82E+00	2.77E+00	93
SP1E	2401000004	2184635	180446	3.16E+00	2.66E+00	94
W6A	BR040018	2172634	176679	3.71E+00	2.66E+00	95
NC2A	RTP562	2181151	186632	2.60E+00	2.60E+00	96
SP3A	2002010032	2181991	179689	2.56E+00	2.56E+00	97
C1B	3337@	2186829	182476	3.07E+00	2.54E+00	98
SP3E	202062013	2182290	179855	2.51E+00	2.51E+00	99
W6A	3804060025	2172566	176678	3.49E+00	2.44E+00	100
NC1B	3049	2184688	181276	2.67E+00	2.36E+00	101
SP4A	BR020015	2183241	178697	2.73E+00	2.36E+00	102
C1B	3433@	2186949	181769	2.35E+00	2.35E+00	103
NP4	4525000051	2186697	189681	2.32E+00	2.32E+00	104
SP3B	202060002	2182256	179847	2.17E+00	2.16E+00	105
W3C	1504030012	2171832	175915	2.36E+00	2.12E+00	106
SP9B	2401000040	2185878	179467	3.17E+00	2.12E+00	107
SP1A	2401000013	2184831	180151	2.03E+00	2.03E+00	108
W6A	3804060039	2172559	176678	3.02E+00	1.96E+00	109
NC1A	BR360097	2184654	181831	2.23E+00	1.94E+00	110
NC1A	3243@	2184850	183422	2.95E+00	1.89E+00	111
NC2A	RTP329T6	2181363	186245	1.88E+00	1.88E+00	112
SP1A	NRS01115	2184197	179276	1.88E+00	1.88E+00	113
NC1B	BR360049	2184718	181481	1.89E+00	1.87E+00	114
W6A	3804060024	2172522	176706	2.92E+00	1.87E+00	115
SP1A	020113L101	2184756	179919	2.17E+00	1.86E+00	116
SP3B	202060009	2182502	179714	2.41E+00	1.82E+00	117
NC1A	3239A	2185150	183122	2.37E+00	1.76E+00	118
SP1A	020113G601	2184667	179438	2.02E+00	1.76E+00	119
SP4A	2002010042	2181721	178532	2.78E+00	1.73E+00	120
NC1B	3172@	2184897	180977	2.06E+00	1.73E+00	121
NC2A	RTPX31@	2181342	186155	1.73E+00	1.73E+00	122
SP1G	020113G901	2184790	179192	1.72E+00	1.72E+00	123
NC1A	BR360084	2185063	181698	1.96E+00	1.70E+00	124
NC2A	RTP321@	2181278	186255	1.68E+00	1.68E+00	125
NC2A	RTP327T3	2181280	186242	1.67E+00	1.67E+00	126

Table B.4.7-5 Hazard Index Summary for Biological Worker, Horizon 0 Soil Borings

Boring Report for Horizon 0 (Non-Surface Borings, 0-1 ft)						
Boring Summary for Biological Worker						
Additive Total and Incremental Hazard Index for Non-Carcinogenic Chemicals						
For incremental HIs, there are 1,559 non-zero observations and 1,904 zero-risk (i.e., BCRL or < background) observations.						
Only borings with incremental hazard indices exceeding 1.0 are listed here.						
Site	Boring ID	Loc X	Loc Y	Total HI	Inc HI	Inc Rank
SP1D	1001PWR003	2185214	179205	1.88E+00	1.62E+00	127
SP1A	020113G701	2184625	179437	1.64E+00	1.61E+00	128
E2A6	1532060002	2195670	183177	2.20E+00	1.60E+00	129
SP1A	020113B101	2184239	179383	1.63E+00	1.60E+00	130
NC1A	3510@	2185381	182262	1.94E+00	1.59E+00	131
NC2A	RTP322@	2181324	186204	1.57E+00	1.57E+00	132
SP4A	2002010036	2181448	178643	1.91E+00	1.56E+00	133
SP3B	202060011	2182414	179814	2.08E+00	1.53E+00	134
NC1A	3350A	2185806	183636	2.29E+00	1.51E+00	135
SP4A	1002PWR001	2182840	178698	2.20E+00	1.50E+00	136
SP1A	BR010024	2184319	179701	1.73E+00	1.49E+00	137
NC1A	3734A	2184872	181826	1.50E+00	1.48E+00	138
NC1A	3225A	2184931	182823	1.86E+00	1.47E+00	139
SP1A	020113K101	2184769	180092	1.68E+00	1.47E+00	140
NC1A	3219@	2184851	182363	1.48E+00	1.46E+00	141
SP1A	2401000028	2184328	179727	1.47E+00	1.45E+00	142
NC1B	3422@	2184933	181128	1.44E+00	1.42E+00	143
SP1A	2401000015	2184903	180047	1.43E+00	1.41E+00	144
SP12B	1001PWR001	2185328	179146	1.88E+00	1.41E+00	145
SP1E	NRS01M1E	2184528	180476	1.79E+00	1.38E+00	146
NC5C	35CSO01001	2179509	181213	1.86E+00	1.37E+00	147
W6A	3804060010	2172521	176778	2.41E+00	1.36E+00	148
SP1A	2401000008	2184394	180030	1.72E+00	1.33E+00	149
E3G	2231070036	2191632	183795	1.74E+00	1.32E+00	150
NC2A	RTP327T10	2181280	186242	1.31E+00	1.31E+00	151
SP1A	2.01E+106	2184725	179459	1.50E+00	1.30E+00	152
SP1A	020113G801	2184611	179330	1.28E+00	1.28E+00	153
C1C	3059@	2186494	182870	1.72E+00	1.27E+00	154
NC1A	3735A	2185127	182597		1.25E+00	155
NC1B	3165@	2184931	181246	1.75E+00	1.24E+00	156
NC2A	RTP562P@	2181151	186632	1.21E+00	1.21E+00	157
SP1A	020113J801	2184614	180306	1.53E+00	1.20E+00	158
C1B	3089@	2186502	182524	1.46E+00	1.17E+00	159
NC1A	3208@	2184701	182069	1.51E+00	1.15E+00	160
NC2A	RTP555PA	2181030	186807	1.15E+00	1.15E+00	161
SP1E	M1BORE001	2184413	180393	1.17E+00	1.15E+00	162
NC2A	RTP564P	2181127	186607	1.14E+00	1.14E+00	163
SP3E	020113G602	2182541	179523	1.13E+00	1.12E+00	164
NC5C	4129@	2181232	184913	1.14E+00	1.12E+00	165
SP3A	BR020002	2181832	179700	1.37E+00	1.11E+00	166
C1B	3431@	2186709	181808	1.10E+00	1.10E+00	167
NC2A	RTP327T7	2181280	186242	1.10E+00	1.10E+00	168

Table B.4.7-5 Hazard Index Summary for Biological Worker, Horizon 0 Soil Borings

Boring Report for Horizon 0 (Non-Surface Borings, 0-1 ft)						
Boring Summary for Biological Worker						
Additive Total and Incremental Hazard Index for Non-Carcinogenic Chemicals						
For incremental HIs, there are 1,559 non-zero observations and 1,904 zero-risk (i.e., BCRL or < background) observations.						
Only borings with incremental hazard indices exceeding 1.0 are listed here.						
Site	Boring ID	Loc X	Loc Y	Total HI	Inc HI	Inc Rank
NC1A	3511@	2184931	182150	1.10E+00	1.08E+00	169
SP3C	202082021	2182705	179678	1.06E+00	1.06E+00	170
SP2D	201082024	2185498	178363	1.05E+00	1.05E+00	171
NC4A	4739@	2181541	189289	1.04E+00	1.04E+00	172
SP1A	020113G101	2184743	179340	1.04E+00	1.01E+00	173
NC2A	4583@	2181345	186075	1.52E+00	1.01E+00	174
NC1A	3342@	2184601	181742	1.03E+00	1.01E+00	175
Program version: Gray Developmental, Smp. Arith. Mean, Models correction						
Database version: Gray-1 parameter revisions, updated, November 30, 1993						
HHRC Source Code File = HBSRTSH0.BDK and HBSRISH0.BDK						
Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean						
Variable Percentile: 5.00						

Table B.4.7-6 Hazard Index Summary for Biological Worker, Horizon 1 Soil Borings

Boring Report for Horizon 1						
Boring Summary for Biological Worker						
Additive Total and Incremental Hazard Index for Non-Carcinogenic Chemicals						
For incremental HIs, there are 2,008 non-zero observations and 1,455 zero-risk (i.e., BCRL or < background) observations.						
Only borings with incremental hazard indices exceeding 1.0 are listed here.						
Site	Boring ID	Loc X	Loc Y	Total HI	Inc HI	Inc Rank
SP10	1001MKE021	2184409	179602	3.25E+03	3.25E+03	1
SP10	1001000W25	2184435	179666	1.18E+03	1.18E+03	2
SP1A	020113G401	2184718	179439	1.13E+03	1.13E+03	3
SP10	1001CS0205	2184404	179501	1.10E+03	1.10E+03	4
SP1A	01-@@-02	2184411	179607	9.42E+02	9.42E+02	5
SP10	1001CS0202	2184405	179497	8.97E+02	8.97E+02	6
SP10	1001MKE023	2184411	179608	7.10E+02	7.10E+02	7
SP10	1001CS0206	2184405	179513	7.04E+02	7.04E+02	8
SP1A	01-@@-03	2184433	179791	3.90E+02	3.90E+02	9
SP1E	COEM-10015	2184605	180487	3.57E+02	3.57E+02	10
SP1E	2401000001	2184363	180516	2.96E+02	2.96E+02	11
SP10	1001CS0207	2184405	179498	2.92E+02	2.92E+02	12
NC3	002606DJ39	2180962	189675	2.87E+02	2.87E+02	13
SP1A	BR010028	2184830	180161	2.86E+02	2.85E+02	14
SP1E	NRS01M1E	2184528	180476	2.84E+02	2.83E+02	15
SP3B	202062015	2182285	179807	2.64E+02	2.64E+02	16
SP1E	2401000004	2184635	180446	2.55E+02	2.54E+02	17
SP1A	2401000049	2184827	180151	2.51E+02	2.50E+02	18
SP3A	NRS02114	2181830	179700	2.40E+02	2.40E+02	19
SP1E	COEM-10013	2184382	180486	2.37E+02	2.37E+02	20
SP1A	01-@@-04	2184419	179811	2.19E+02	2.19E+02	21
SP1A	01-@@-06	2184336	179843	2.11E+02	2.11E+02	22
SP1A	2401000035	2184479	179326	1.97E+02	1.97E+02	23
NC3	BR260006	2181573	188552	1.70E+02	1.70E+02	24
NC1A	BR360010	2184879	181703	1.60E+02	1.60E+02	25
SP1A	2401000034	2184563	179337	1.40E+02	1.39E+02	26
SP1E	NRS01M1M	2184494	180434	1.36E+02	1.35E+02	27
C1C	3584GRAB	2187000	184224	1.35E+02	1.34E+02	28
NC1A	BR360095	2184851	182027	1.24E+02	1.24E+02	29
SP1E	020113J802	2184591	180485	1.18E+02	1.17E+02	30
SP1E	NRS01M1W	2184408	180433	1.16E+02	1.16E+02	31
NC1B	3421@	2184499	181159	1.11E+02	1.11E+02	32
SP1E	BR010026	2184640	180483	1.08E+02	1.08E+02	33
SP3B	NRS02113@	2182256	179847	1.01E+02	1.01E+02	34
NC3	4620@	2180982	189756	1.01E+02	1.00E+02	35
NC3	4626@	2181018	189002	9.91E+01	9.87E+01	36
NC1A	BR360097	2184654	181831	9.13E+01	9.06E+01	37
SP1G	2401000037	2185246	179469	9.00E+01	8.89E+01	38
NC3	002606DJ38	2180961	189710	8.93E+01	8.88E+01	39
C1A	3458@	2186745	181653	7.25E+01	7.25E+01	40
SP1E	COEM-10014	2184507	180489	6.98E+01	6.98E+01	41
NC3	B02606DJ14	2180958	189763	6.95E+01	6.89E+01	42

Table B.4.7-6 Hazard Index Summary for Biological Worker, Horizon 1 Soil Borings

Boring Report for Horizon 1						
Boring Summary for Biological Worker						
Additive Total and Incremental Hazard Index for Non-Carcinogenic Chemicals						
For incremental HIs, there are 2,008 non-zero observations and 1,455 zero-risk (i.e., BCRL or < background) observations.						
Only borings with incremental hazard indices exceeding 1.0 are listed here.						
Site	Boring ID	Loc X	Loc Y	Total HI	Inc HI	Inc Rank
SP3B	BR020007	2182304	179841	6.54E+01	6.51E+01	43
SP8A	020214A011	2180919	179035	6.45E+01	6.44E+01	44
NC3	002606DJ37	2180961	189720	6.13E+01	6.08E+01	45
SP10	1001MKE042	2184419	179812	5.70E+01	5.70E+01	46
SP1E	M1BORE006	2184412	180480	5.38E+01	5.38E+01	47
SP1A	020113O301	2184227	180370	5.33E+01	5.29E+01	48
NC8A	BR360082	2184848	181967	5.24E+01	5.21E+01	49
SP1A	020113S104	2184408	179024	5.12E+01	5.12E+01	50
C1A	3445@	2186626	181744	4.99E+01	4.99E+01	51
SP10	1001MKE061	2184336	179843	4.88E+01	4.82E+01	52
NC1A	BR360020	2184541	181821	4.71E+01	4.71E+01	53
SP1A	2401000P33	2183713	179328	4.80E+01	4.70E+01	54
W5D	2204050031	2171075	178578	4.75E+01	4.65E+01	55
SP1A	02010R0036	2184330	179693	4.52E+01	4.47E+01	56
SP1E	M1BORE007	2184509	180423	4.47E+01	4.46E+01	57
SP10	1001MKE022	2184410	179605	4.01E+01	3.98E+01	58
C1C	3086@	2186799	184285	4.05E+01	3.95E+01	59
C1A	3457@	2186615	181615	3.89E+01	3.89E+01	60
SP1A	2401000010	2184910	180206	3.59E+01	3.54E+01	61
NC3	3126060001	2181444	188894	3.21E+01	3.14E+01	62
SP1A	020113C103	2184461	179365	3.09E+01	3.07E+01	63
NC8A	BR360094	2184702	182068	3.12E+01	3.06E+01	64
SP10	1001MKE062	2184335	179846	3.05E+01	3.02E+01	65
SP3A	202062016	2182221	179682	2.85E+01	2.85E+01	66
C1A	3446@	2186729	181762	2.52E+01	2.52E+01	67
NC1A	3346A	2184618	183042	2.34E+01	2.29E+01	68
SP1A	020113B201	2184373	179263	2.17E+01	2.15E+01	69
NP5	4225000026	2187137	188262	2.15E+01	2.10E+01	70
NC1B	3422@	2184933	181128	2.07E+01	2.07E+01	71
NC1B	3492@	2184570	181489	2.04E+01	2.04E+01	72
NC3	3126060002	2181421	188810	1.99E+01	1.94E+01	73
NC1A	BR360090	2184618	183042	2.03E+01	1.94E+01	74
SP1A	020113K102	2184779	180098	1.94E+01	1.91E+01	75
SP4A	2002010040	2182768	178698	1.86E+01	1.77E+01	76
NC4B	4722A	2181799	189024	1.75E+01	1.75E+01	77
SP1G	BR010032	2185219	179458	1.86E+01	1.75E+01	78
SP4A	2002010041	2183123	178691	1.80E+01	1.75E+01	79
SP8A	020214A002	2181055	178924	1.76E+01	1.73E+01	80
NC1A	BR360091	2184601	183004	1.83E+01	1.73E+01	81
SP3B	BR020006	2182291	179841	1.73E+01	1.69E+01	82
SP3C	202080012	2182828	179696	1.66E+01	1.62E+01	83
NC1A	3204@	2184701	181622	1.54E+01	1.50E+01	84

Table B.4.7-6 Hazard Index Summary for Biological Worker, Horizon 1 Soil Borings

Boring Report for Horizon 1						
Boring Summary for Biological Worker						
Additive Total and Incremental Hazard Index for Non-Carcinogenic Chemicals						
For incremental HIs, there are 2,008 non-zero observations and 1,455 zero-risk (i.e., BCRL or < background) observations.						
Only borings with incremental hazard indices exceeding 1.0 are listed here.						
Site	Boring ID	Loc X	Loc Y	Total HI	Inc HI	Inc Rank
SP8A	BR020020	2181074	178990	1.59E+01	1.49E+01	85
SP10	1001MKE031	2184434	179786	1.45E+01	1.42E+01	86
E3B	BR060018	2193286	178864	1.48E+01	1.37E+01	87
SP10	1001CS0201	2184405	179495	1.39E+01	1.36E+01	88
SP8A	BR020018	2180908	178997	1.38E+01	1.33E+01	89
W6A	3804060024	2172522	176706	1.36E+01	1.26E+01	90
NC2A	RTPX21@	2181429	186092	1.23E+01	1.23E+01	91
NC1A	BR360011	2184869	181668	1.21E+01	1.21E+01	92
C1C	36TRENCH16	2186050	183068	1.18E+01	1.14E+01	93
NC2A	RTPX32@	2181369	186118	1.11E+01	1.11E+01	94
SP1E	2401000005	2184464	180384	1.16E+01	1.10E+01	95
NC3	002606DJ36	2180959	189744	1.06E+01	1.03E+01	96
SP3A	2002010031	2181845	179830	1.02E+01	1.02E+01	97
NP6	4225000042	2187282	187846	1.07E+01	1.01E+01	98
SP3E	02020800P8	2182295	179930	1.11E+01	1.00E+01	99
W6A	3804060038	2172519	176715	1.08E+01	9.79E+00	100
NC1A	3343A	2184742	181872	9.61E+00	9.33E+00	101
NC1A	3348A	2185104	183295	9.77E+00	9.28E+00	102
SP1E	M1BORE003	2184415	180552	9.94E+00	8.89E+00	103
SP1A	240100013A	2184831	180151	9.25E+00	8.80E+00	104
SP1A	02010R0038	2185230	180238	9.86E+00	8.78E+00	105
NC1A	BR360083	2184785	181835	8.84E+00	8.60E+00	106
SP1A	020113C102	2184472	179436	8.40E+00	8.38E+00	107
SP10	1001MKE063	2184334	179849	8.48E+00	8.17E+00	108
NC1A	BR360096	2184742	181872	8.26E+00	8.01E+00	109
NC1B	3203@	2184732	181327	8.45E+00	7.97E+00	110
SP10	1001MKE043	2184416	179813	7.93E+00	7.90E+00	111
SP8A	BR020017	2180928	179079	8.80E+00	7.73E+00	112
NC3	002606DJ11	2180710	190049	8.47E+00	7.70E+00	113
S2B	702010012	2178876	179558	8.10E+00	7.68E+00	114
NC1A	3503@	2184859	181751	7.90E+00	7.43E+00	115
SP1A	020113B402	2184198	179315	7.98E+00	7.38E+00	116
SP1A	BR010030	2184807	180152	7.44E+00	7.13E+00	117
NC1A	3344A	2184557	181919	7.10E+00	7.08E+00	118
S4	200100U170	2186258	177937	7.02E+00	7.02E+00	119
SP1A	020113B401	2184195	179344	7.04E+00	7.02E+00	120
C1B	3437@	2186587	181429	6.98E+00	6.98E+00	121
SP10	1001MKE044	2184414	179813	6.90E+00	6.87E+00	122
SP1G	2401000036	2185213	179469	7.88E+00	6.80E+00	123
SP1E	BR010005	2184495	180466	6.27E+00	6.27E+00	124
SP1A	2401000007	2184720	180227	6.10E+00	6.08E+00	125
SP3C	202080003	2182809	179750	7.02E+00	5.96E+00	126

Table B.4.7-6 Hazard Index Summary for Biological Worker, Horizon 1 Soil Borings

Boring Report for Horizon 1						
Boring Summary for Biological Worker						
Additive Total and Incremental Hazard Index for Non-Carcinogenic Chemicals						
For incremental HIs, there are 2,008 non-zero observations and 1,455 zero-risk (i.e., BCRL or < background) observations.						
Only borings with incremental hazard indices exceeding 1.0 are listed here.						
Site	Boring ID	Loc X	Loc Y	Total HI	Inc HI	Inc Rank
C1C	36TRENCH14	2186364	182905	7.00E+00	5.93E+00	127
SP10	1001CS0204	2184404	179499	6.15E+00	5.91E+00	128
SP3B	202060008	2182372	179724	6.25E+00	5.87E+00	129
S2B	2002010026	2180185	178873	6.31E+00	5.65E+00	130
NC2A	RTPX22@	2181482	186124	5.65E+00	5.65E+00	131
NC1E	3196@	2185774	183269	6.72E+00	5.64E+00	132
NC1A	3224@	2184703	182975	5.81E+00	5.50E+00	133
SP1A	BR010029	2184828	180153	5.77E+00	5.38E+00	134
SP8A	BR020019	2181022	179039	5.54E+00	5.18E+00	135
NC3	002606DJ27	2180005	189540	5.47E+00	5.10E+00	136
C1C	3581GRAB	2186115	184197	6.15E+00	5.09E+00	137
SP1A	020113G801	2184611	179330	4.97E+00	4.96E+00	138
W5D	220405030@	2171159	178827	6.01E+00	4.93E+00	139
SP1A	BR010023	2184309	179750	5.25E+00	4.92E+00	140
SP1A	2401000044	2184479	179608	5.96E+00	4.88E+00	141
SP10	1001CS0203	2184405	179498	4.92E+00	4.88E+00	142
C1C	36TRENCH15	2186120	183039	5.25E+00	4.79E+00	143
C1C	36TRENCH13	2186252	182793	5.07E+00	4.74E+00	144
S2B	702010010	2180043	178929	5.15E+00	4.59E+00	145
W6A	BR040017	2172507	176692	5.49E+00	4.45E+00	146
S2B	2002010022	2178826	179667	4.71E+00	4.43E+00	147
NC1A	BR360027	2184968	181426	4.41E+00	4.39E+00	148
SP10	1001000W21	2184337	179839	5.40E+00	4.33E+00	149
E3B	BR060001	2193285	178852	4.60E+00	4.25E+00	150
NC1A	BR360028	2184919	181430	4.21E+00	4.18E+00	151
SP1A	020113K401	2184654	180091	4.12E+00	4.10E+00	152
SP10	1001000W27	2184405	179371	4.52E+00	4.07E+00	153
C1C	3639@	2185689	184219	5.11E+00	4.03E+00	154
SP4A	BR020015	2183241	178697	4.44E+00	3.94E+00	155
NC1B	3731@	2184889	181298	4.20E+00	3.94E+00	156
NC3	002606DJ28	2181415	188818	4.52E+00	3.88E+00	157
SP3C	02020800P7	2182690	179937	4.92E+00	3.87E+00	158
SP1A	020113J501	2184744	180294	4.37E+00	3.87E+00	159
SP3C	202080004	2182721	179712	4.85E+00	3.79E+00	160
NC1A	3528@	2185171	183355	4.18E+00	3.75E+00	161
SP1A	020113N301	2184851	180039	3.98E+00	3.71E+00	162
SP4A	702010009	2180270	178913	4.27E+00	3.71E+00	163
NC2A	RTPX23@	2181476	186169	3.59E+00	3.59E+00	164
SP10	1001MKE033	2184434	179792	3.86E+00	3.57E+00	165
SP1E	BR010025	2184555	180488	4.05E+00	3.55E+00	166
NC1A	3733A	2184943	181446	3.46E+00	3.44E+00	167
NC1A	BR360092	2184446	183074	4.01E+00	3.38E+00	168

Table B.4.7-6 Hazard Index Summary for Biological Worker, Horizon 1 Soil Borings

Boring Report for Horizon 1						
Boring Summary for Biological Worker						
Additive Total and Incremental Hazard Index for Non-Carcinogenic Chemicals						
For incremental HIs, there are 2,008 non-zero observations and 1,455 zero-risk (i.e., BCRL or < background) observations.						
Only borings with incremental hazard indices exceeding 1.0 are listed here.						
Site	Boring ID	Loc X	Loc Y	Total HI	Inc HI	Inc Rank
NC2A	RTPX28@	2181471	186126	3.31E+00	3.31E+00	169
SP1A	2401000025	2184490	180030	4.30E+00	3.22E+00	170
W2	2204020018	2170523	176040	4.26E+00	3.19E+00	171
NC1B	3730@	2184733	181457	3.19E+00	3.16E+00	172
C1B	3659@	2186248	182479	3.74E+00	3.15E+00	173
NC2A	RTPX29@	2181462	186087	3.11E+00	3.11E+00	174
SP4A	2002010039	2182395	178684	3.28E+00	2.90E+00	175
NC1A	3205@	2185150	181613	3.22E+00	2.88E+00	176
SP1A	2401000027	2184415	180224	2.84E+00	2.84E+00	177
SP4A	702010008	2181607	178659	3.26E+00	2.82E+00	178
C1C	BS01S005P	2186458	183651	2.83E+00	2.81E+00	179
S2B	2002010023	2179410	178897	3.82E+00	2.77E+00	180
NC1B	3413@	2184474	181723	3.01E+00	2.72E+00	181
NC1E	3566@	2185748	183329	3.59E+00	2.67E+00	182
W6A	BR040018	2172634	176679	3.72E+00	2.66E+00	183
NC2A	RTP562	2181151	186632	2.60E+00	2.60E+00	184
SP3A	2002010032	2181991	179689	2.56E+00	2.56E+00	185
SP1A	2401000030	2184383	179751	3.63E+00	2.56E+00	186
C1B	3337@	2186829	182476	3.14E+00	2.54E+00	187
NC1E	3564@	2185733	183228	3.59E+00	2.51E+00	188
SP3E	202062013	2182290	179855	2.51E+00	2.51E+00	189
W6A	3804060025	2172566	176678	3.49E+00	2.44E+00	190
NC1B	3049	2184688	181276	2.67E+00	2.36E+00	191
C1B	3433@	2186949	181769	2.35E+00	2.35E+00	192
NP4	4525000051	2186697	189681	2.32E+00	2.32E+00	193
NC1B	BR360049	2184718	181481	2.31E+00	2.29E+00	194
SP1A	2401000013	2184831	180151	2.53E+00	2.19E+00	195
C1A	3176@	2186580	181641	2.45E+00	2.16E+00	196
SP3B	202060002	2182256	179847	2.17E+00	2.16E+00	197
W3C	1504030012	2171832	175915	2.37E+00	2.12E+00	198
SP9B	2401000040	2185878	179467	3.17E+00	2.12E+00	199
NC4A	4548A	2181020	190385	3.11E+00	2.07E+00	200
SP1A	01CSO03306	2184895	180273	2.42E+00	1.98E+00	201
W6A	3804060039	2172559	176678	3.02E+00	1.96E+00	202
S2B	2002010025	2180191	178918	2.37E+00	1.93E+00	203
NC1B	COELSB0018	2184945	181230	2.28E+00	1.93E+00	204
SP1A	2401000012	2183937	180097	2.99E+00	1.92E+00	205
NC1A	3243@	2184850	183422	2.96E+00	1.89E+00	206
NC2A	RTP329T6	2181363	186245	1.88E+00	1.88E+00	207
SP1A	NRS01115	2184197	179276	1.88E+00	1.88E+00	208
SP1A	020113L101	2184756	179919	2.17E+00	1.86E+00	209
SP3B	202060009	2182502	179714	2.41E+00	1.82E+00	210

Table B.4.7-6 Hazard Index Summary for Biological Worker, Horizon 1 Soil Borings

Boring Report for Horizon 1						
Boring Summary for Biological Worker						
Additive Total and Incremental Hazard Index for Non-Carcinogenic Chemicals						
For incremental HIs, there are 2,008 non-zero observations and 1,455 zero-risk (i.e., BCRL or < background) observations.						
Only borings with incremental hazard indices exceeding 1.0 are listed here.						
Site	Boring ID	Loc X	Loc Y	Total HI	Inc HI	Inc Rank
SP1A	2401000028	2184328	179727	1.81E+00	1.79E+00	211
SP1G	020113G901	2184790	179192	1.93E+00	1.77E+00	212
NC1A	3239A	2185150	183122	2.37E+00	1.76E+00	213
SP1A	020113G601	2184667	179438	2.02E+00	1.76E+00	214
NC1B	3172@	2184897	180977	2.06E+00	1.73E+00	215
SP4A	2002010042	2181721	178532	2.78E+00	1.73E+00	216
NC2A	RTPX31@	2181342	186155	1.73E+00	1.73E+00	217
NC1B	3168@	2184466	181085	2.60E+00	1.70E+00	218
S3B	2012010016	2186853	174876	1.70E+00	1.70E+00	219
NC1A	BR360084	2185063	181698	1.96E+00	1.70E+00	220
NC2A	RTP321@	2181278	186255	1.68E+00	1.68E+00	221
NC2A	RTP327T3	2181280	186242	1.67E+00	1.67E+00	222
SP8A	BR020021	2181004	178929	2.04E+00	1.66E+00	223
SP1A	020113K101	2184769	180092	1.84E+00	1.62E+00	224
SP1D	1001PWR003	2185214	179205	1.88E+00	1.62E+00	225
SP1A	020113G701	2184625	179437	1.64E+00	1.61E+00	226
SP1A	020113B101	2184239	179383	1.63E+00	1.60E+00	227
E2A6	1532060002	2195670	183177	2.20E+00	1.60E+00	228
NC1A	3510@	2185381	182262	1.98E+00	1.59E+00	229
SP1A	2.01E+106	2184725	179459	1.91E+00	1.57E+00	230
NC2A	RTP322@	2181324	186204	1.57E+00	1.57E+00	231
SP4A	2002010036	2181448	178643	1.92E+00	1.56E+00	232
SP3B	202060011	2182414	179814	2.08E+00	1.53E+00	233
NC1A	3350A	2185806	183636	2.29E+00	1.51E+00	234
SP4A	1002PWR001	2182840	178698	2.20E+00	1.50E+00	235
SP1A	BR010024	2184319	179701	1.73E+00	1.49E+00	236
NC1A	3734A	2184872	181826	1.50E+00	1.48E+00	237
NC1A	3225A	2184931	182823	1.86E+00	1.47E+00	238
NC1A	3219@	2184851	182363	1.48E+00	1.46E+00	239
C1C	36TRENCH09	2186232	183012	2.26E+00	1.42E+00	240
SP1A	2401000015	2184903	180047	1.43E+00	1.41E+00	241
SP12B	1001PWR001	2185328	179146	1.88E+00	1.41E+00	242
NC5C	35CS001001	2179509	181213	1.86E+00	1.37E+00	243
C1A	3444@	2186393	181781	1.36E+00	1.36E+00	244
W6A	3804060010	2172521	176778	2.41E+00	1.36E+00	245
S3B	BR120007	2186918	174915	1.63E+00	1.34E+00	246
SP1A	2401000008	2184394	180030	1.72E+00	1.33E+00	247
E3G	2231070036	2191632	183795	1.77E+00	1.32E+00	248
SP1E	M1BORE008	2184641	180427	2.01E+00	1.31E+00	249
NC2A	RTP327T10	2181280	186242	1.31E+00	1.31E+00	250
NC1B	3166@	2184338	181149	1.72E+00	1.28E+00	251
NC3	002606DJ29	2181446	188873	1.74E+00	1.27E+00	252

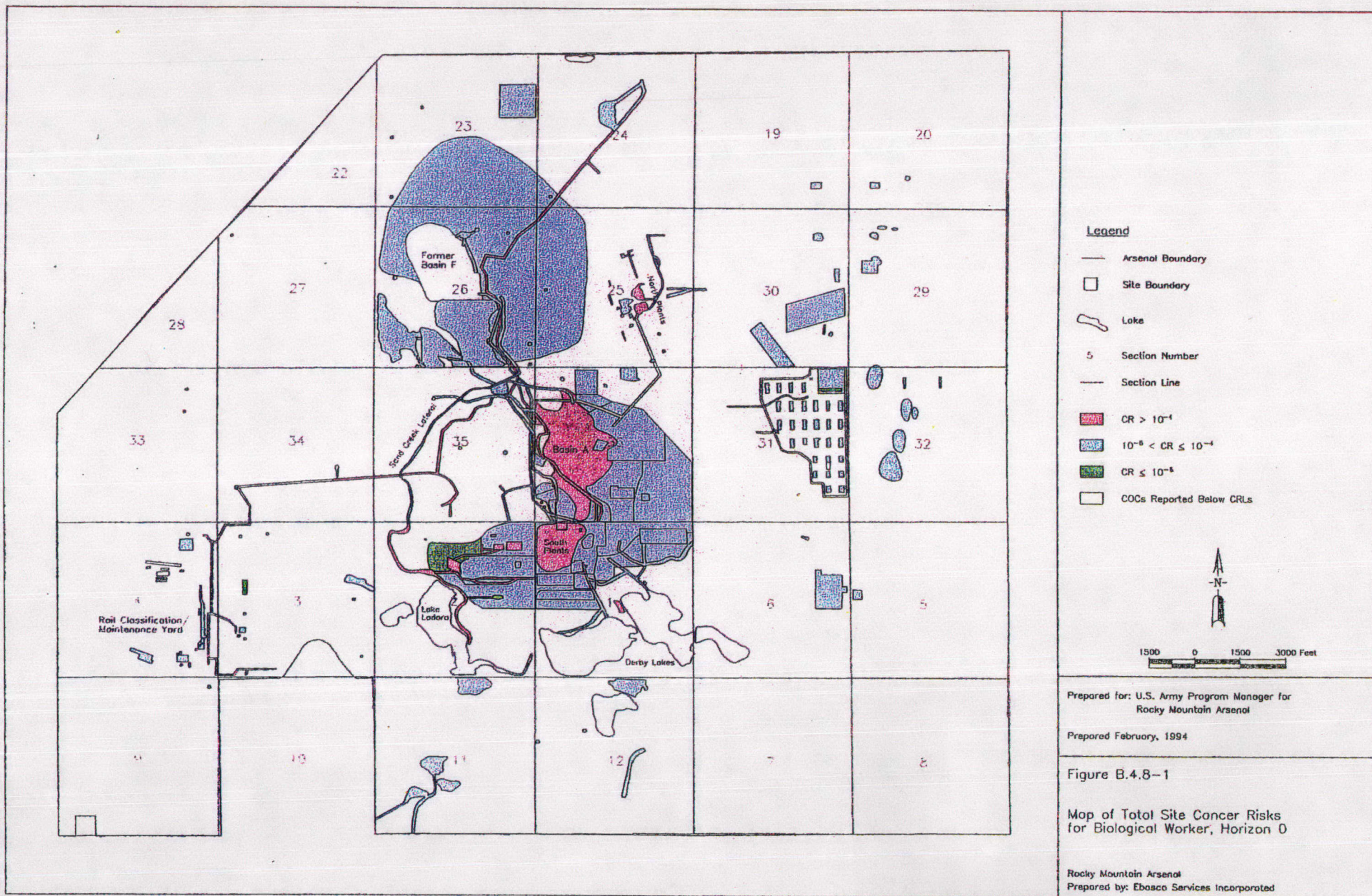
Table B.4.7-6 Hazard Index Summary for Biological Worker, Horizon 1 Soil Borings

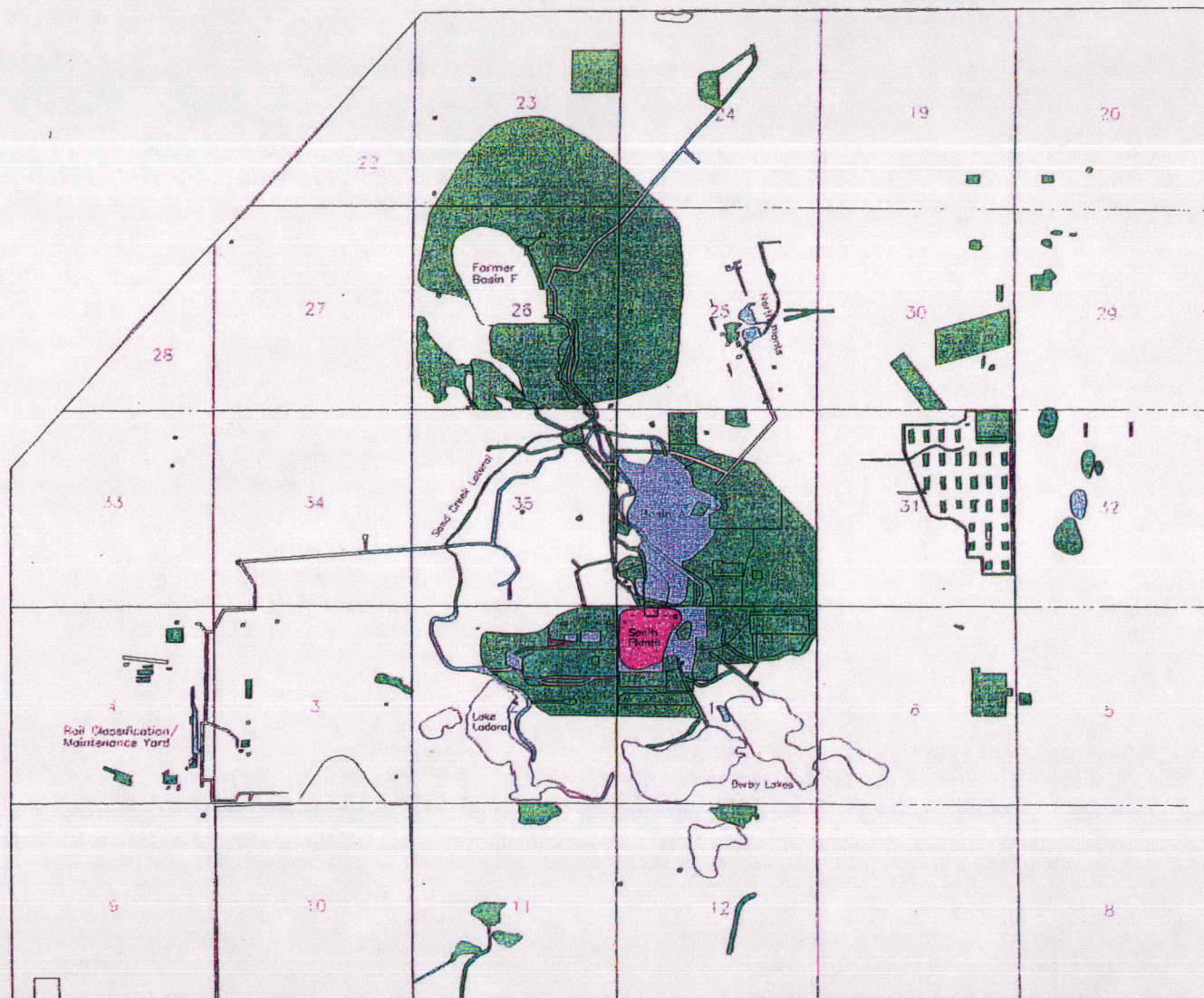
Boring Report for Horizon 1						
Boring Summary for Biological Worker						
Additive Total and Incremental Hazard Index for Non-Carcinogenic Chemicals						
For incremental HIs, there are 2,008 non-zero observations and 1,455 zero-risk (i.e., BCRL or < background) observations.						
Only borings with incremental hazard indices exceeding 1.0 are listed here.						
Site	Boring ID	Loc X	Loc Y	Total HI	Inc HI	Inc Rank
C1C	3059@	2186494	182870	1.72E+00	1.27E+00	253
NC1A	3735A	2185127	182597	1.28E+00	1.25E+00	254
NC1B	3165@	2184931	181246	1.85E+00	1.25E+00	255
NC2A	RTP562P@	2181151	186632	1.21E+00	1.21E+00	256
SP1A	020113J801	2184614	180306	1.59E+00	1.21E+00	257
NC1B	3732@	2184405	181015	1.62E+00	1.21E+00	258
SP1A	020113W101	2184208	180092	1.21E+00	1.21E+00	259
E3A	2205020009	2194388	178208	1.21E+00	1.21E+00	260
C1B	3089@	2186502	182524	1.55E+00	1.17E+00	261
SP1E	M1BORE001	2184413	180393	1.91E+00	1.16E+00	262
NC1A	3208@	2184701	182069	1.51E+00	1.15E+00	263
NC2A	RTP555PA	2181030	186807	1.15E+00	1.15E+00	264
NC2A	RTP564P	2181127	186607	1.14E+00	1.14E+00	265
SP3E	020113G602	2182541	179523	1.43E+00	1.13E+00	266
NC5C	4129@	2181232	184913	1.56E+00	1.12E+00	267
C1C	3604SHTR	2187056	184004	2.17E+00	1.11E+00	268
SP3A	BR020002	2181832	179700	1.62E+00	1.11E+00	269
E2A7	1532060005	2195386	182624	1.98E+00	1.11E+00	270
NC3	4644@	2181382	188842	1.46E+00	1.10E+00	271
C1B	3431@	2186709	181808	1.10E+00	1.10E+00	272
NC2A	RTP327T7	2181280	186242	1.10E+00	1.10E+00	273
NC1E	3565@	2185667	183298	2.09E+00	1.09E+00	274
NC1A	3511@	2184931	182150	1.50E+00	1.08E+00	275
E2A7	1532060007	2195384	182462	1.79E+00	1.07E+00	276
SP3C	202082021	2182705	179678	1.06E+00	1.06E+00	277
SP2D	201082024	2185498	178363	1.05E+00	1.05E+00	278
SP3C	202080008	2182795	179930	2.11E+00	1.05E+00	279
NC4A	4739@	2181541	189289	1.66E+00	1.04E+00	280
SP2E	01CSO03311	2183992	178348	2.08E+00	1.04E+00	281
NC1B	3171@	2184669	181021	1.06E+00	1.04E+00	282
SP1A	020113G101	2184743	179340	1.21E+00	1.01E+00	283
NC2A	4583@	2181345	186075	1.52E+00	1.01E+00	284
NC1A	3342@	2184601	181742	1.03E+00	1.01E+00	285
Program version: Gray Developmental, Smp. Arith. Mean, Models correction						
Database version: Gray-1 parameter revisions, updated, November 30, 1993						
HHRC Source Code Files = HBSRISH1.BDK and HBSRTSH1.BDK						
Case: Crep Mean, Crep Statistic: Sample Arithmetic Mean						
Variable Percentile: 5.00						
Random Seed: 0, Unc. Sample Size: 100						

Page TABLE B.4.7-6 PAGE 8 OF 8 is missing from the original.

SECTION B.4.8

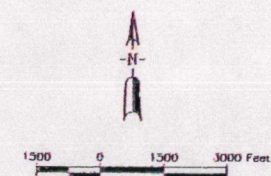
SUPPLEMENTARY MAPS AND FIGURES





Legend

- Arsenal Boundary
- Site Boundary
- Lake
- 6 Section Number
- Section Line
- HI > 10
- 1 < HI ≤ 10
- HI ≤ 1
- CDCs Reported Below CRLs



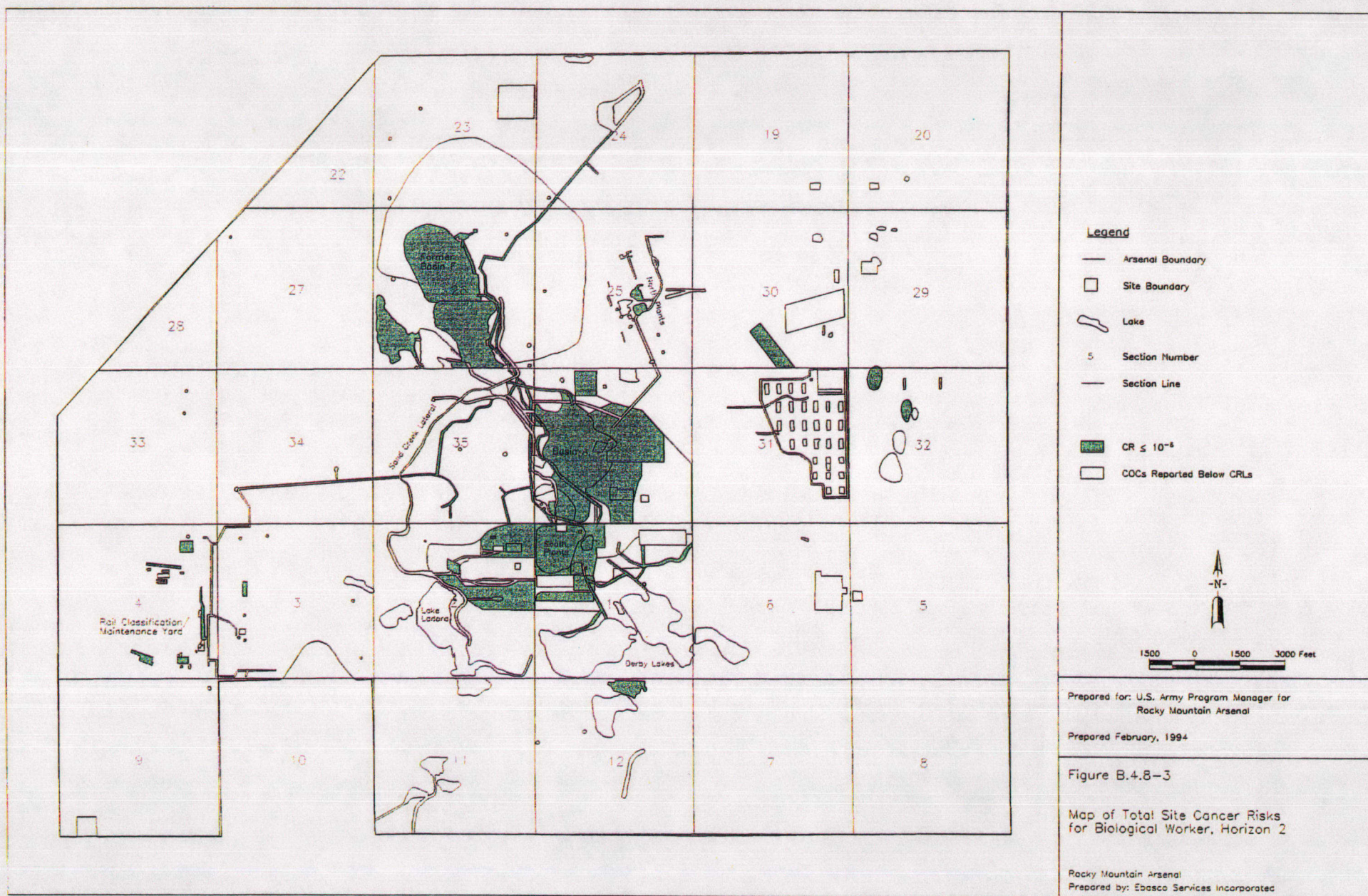
Prepared for: U.S. Army Program Manager for
Rocky Mountain Arsenal

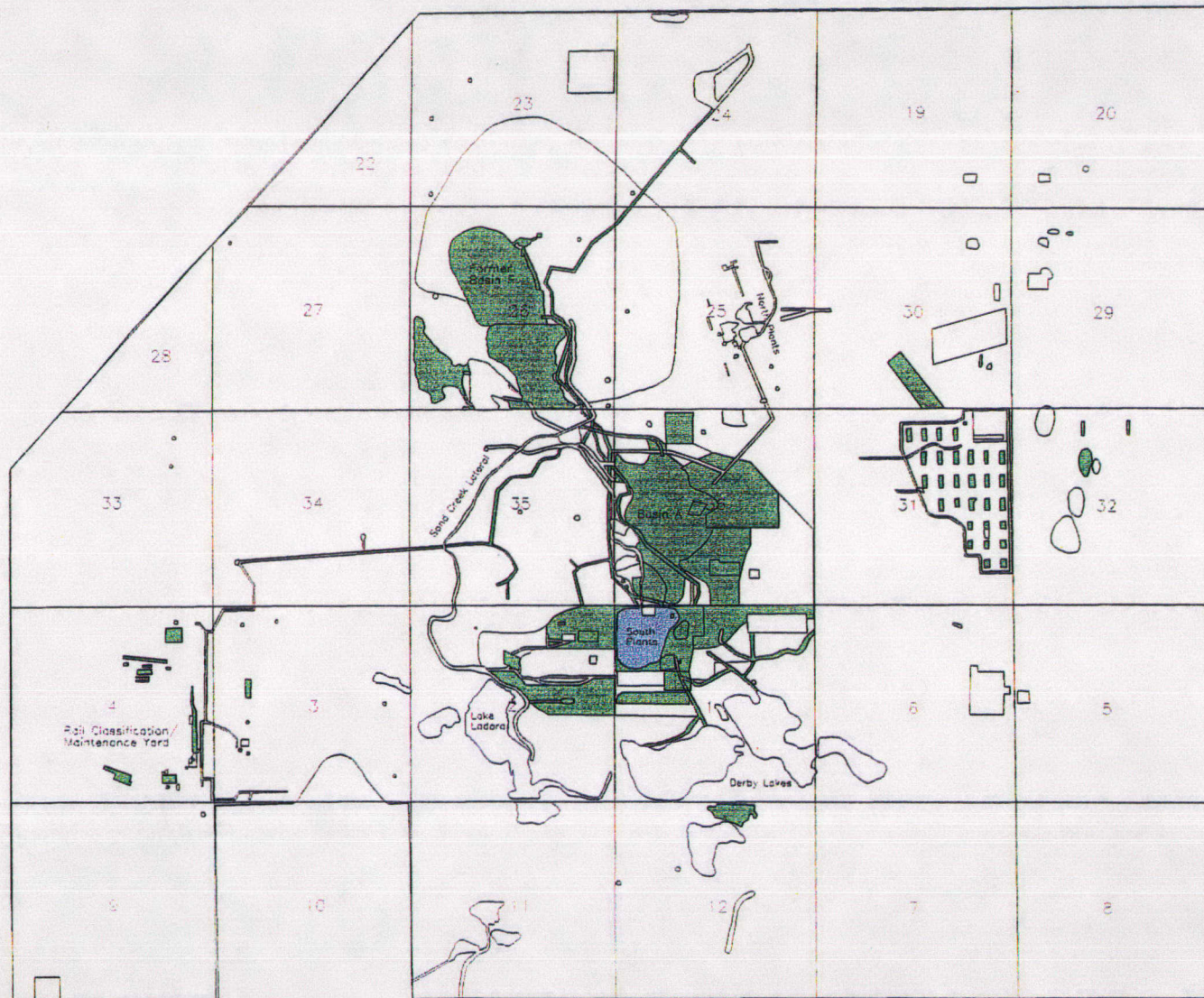
Prepared February, 1994

Figure B.4.8-2

Map of Total Site Hazard Indices
for Biological Worker, Horizon 0

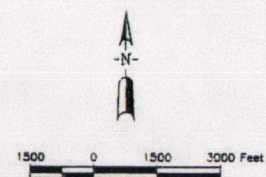
Rocky Mountain Arsenal
Prepared by: Eonco Services Incorporated





Legend

- Arsenal Boundary
- Site Boundary
- Lake
- 5 Section Number
- Section Line
- 1 < HI ≤ 10
- HI ≤ 1
- COCs Reported Below CRLs



Prepared for: U.S. Army Program Manager for
Rocky Mountain Arsenal

Prepared February, 1994

Figure B.4.8-4

Map of Total Site Hazard Indices
for Biological Worker, Horizon 2

Rocky Mountain Arsenal
Prepared by: Ebasco Services Incorporated