

Table VI-1

Dose-Response Data From Environ (2003, Ex. 33-12): Observed and Expected Lung Cancer Deaths for Gibb Cohort Grouped by Ten Cumulative Cr(VI) Exposure Categories

	Cumulative Cr(VI) Exposure ( $\mu\text{g}/\text{m}^3$ -years)	Mean Cr(VI) Exposure ( $\mu\text{g}/\text{m}^3$ -yr)	Person-Years	Observed Lung Cancers	Expected Lung Cancers	
					Maryland Rates	Baltimore Rates
Alternative 1: Roughly Equal Observed Cases per Group	0 - 0.151	0.0246	17982	12	10.3	13.37
	0.151 - 0.686	0.395	9314	12	13.0	16.80
	0.686 - 2.08	1.25	8694	12	10.3	13.55
	2.08 - 4.00	2.96	5963	12	7.38	9.42
	4.00 - 8.32	5.89	5102	12	5.63	7.32
	8.32 - 18.2	12.4	5829	13	7.09	9.21
	18.2 - 52	31.1	6679	13	6.83	9.05
	52 - 182	105	6194	12	5.77	7.73
	182 - 572	314	4118	12	5.79	7.66
	>572	979	945	12	2.07	2.62
Alternative 2: Roughly Equal Number of Person-Years per Group	0 - 0.052	0.00052	14282	4	5.08	6.63
	0.052 - 0.273	0.147	6361	11	9.05	11.58
	0.273 - 0.65	0.455	6278	7	8.71	11.33
	0.65 - 1.43	0.996	6194	11	7.30	9.58
	1.43 - 3.12	2.19	6395	12	8.17	10.52
	3.12 - 6.89	4.59	6207	11	6.90	8.95
	6.89 - 16.1	10.7	6296	17	7.77	10.05
	16.1 - 41.6	25.9	6230	12	6.50	8.57
	41.6 - 143	81.5	6287	10	5.56	7.52
	>143	384	6289	27	9.17	11.99
<b>TOTAL</b>			<b>70819.38</b>	<b>122</b>	<b>74.2</b>	<b>96.7</b>

The lower bounds of the ranges are inclusive; the upper bounds are exclusive.

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The 2003 Environ analysis also derived expected cases using lung cancer rates from alternative reference

populations. In addition to the State of Maryland lung cancer rates that were used by Gibb *et al.*, Environ used age- and race-specific rates from the city of

Baltimore, where the plant was located. Baltimore may represent a more appropriate reference population because most of the cohort members