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TABLE A-1

**Summary of Dioxin-by-Covariate Interactions for
Miscarriage and Total Adverse Outcome**

a) Table Reference: 3-21[c]

Interaction: Miscarriage (DIOXIN by M-AGE)

M-AGE	Initial Dioxin	n	Rate/ (count)	Adj. Relative Risk (95% C.I.)	p-Value
≤ 27	Low	66	151.5(10)	1.20(0.91,1.59)	0.198
	Medium	148	141.9(21)		
	High	115	191.3(22)		
> 27	Low	59	169.5(10)	1.03(0.71,1.51)	0.867
	Medium	123	170.7(21)		
	High	58	103.4(6)		

b) Table Reference: 3-22[c]

Interaction: Miscarriage (DIOXIN by TIME by OCC)

OCC	Time Since SEA (years)	Dioxin	n	Current Rate(count)	Adj. Relative Risk (95% C.I.)	p-Value
						0.022
Officers	≤18.6	Low	25	120.0(3)	4.55(0.40,52.3)	0.224
		Medium	7	142.9(1)		
		High	0	--		
	>18.6	Low	28	25.0(7)	0.06(0.002,1.43)	0.075
		Medium	19	52.6(1)		
		High	0	--		
						0.218
Enlisted Flyers	≤18.6	Low	3	0.0(0)	0.29(0.02,4.43)	0.376
		Medium	27	111.1(3)		
		High	1	0.0(0)		
	>18.6	Low	2	0.0(0)	1.41(0.57,3.49)	0.451
		Medium	36	416.7(15)		
		High	5	200.0(1)		

Table A-1 (Continued)

OCC	Time Since SEA (years)	Dioxin	n	Current Rate(count)	Adj. Relative Risk (95% C.I.)	p-Value
						0.069
Enlisted Ground	≤18.6	Low	38	105.3(4)	1.46(1.04,2.05)	0.030
		Medium	108	166.7(18)		
		High	84	166.7(14)		
	>18.6	Low	27	185.2(5)	0.94(0.65,1.34)	0.712
		Medium	73	109.6(8)		
		High	87	114.9(10)		

c) Table Reference: 3-22[d]
Interaction: Miscarriage (DIOXIN by TIME by OCC)

OCC	Time Since SEA (years)	Dioxin	n	Current Rate(count)	Adj. Relative Risk (95% C.I.)	p-Value
						0.183
Officers	≤18.6	Low	50	40.0(2)	2.80(0.78,10.1)	0.116
		Medium	40	125.0(5)		
		High	0	--		
	>18.6	Low	25	120.0(3)	0.86(0.26,2.79)	0.797
		Medium	49	163.3(8)		
		High	0	--		
						0.021
Enlisted Flyers	≤18.6	Low	10	100.0(1)	0.43(0.11,1.67)	0.223
		Medium	26	153.8(4)		
		High	8	0.0(0)		
	>18.6	Low	8	0.0(0)	2.58(1.01,6.57)	0.043
		Medium	27	333.3(9)		
		High	16	437.5(7)		
						0.639
Enlisted Ground	≤18.6	Low	40	200.0(8)	1.00(0.75,1.33)	0.992
		Medium	122	147.5(18)		
		High	116	172.4(20)		
	>18.6	Low	32	62.5(2)	0.91(0.68,1.21)	0.514
		Medium	88	147.7(13)		
		High	110	118.2(13)		

Table A-1 (Continued)

d) Table Reference: 3-23[b]

Interaction: Miscarriage (Categorized DIOXIN by M-AGE)

M-AGE	Exposure Category	n	Rate/ (count)	Category Contrast	Adj. Relative Risk (95% C.I.)	p-Value
≤ 27	Background	500	126.0(63)	All		0.273
	Unknown	147	170.1(25)	U vs B	1.36(0.82,2.26)	0.238
	Low	92	141.3(13)	L vs B	1.08(0.57,2.07)	0.810
	High	171	175.4(30)	H vs B	1.57(0.97,2.54)	0.064
> 27	Background	544	147.1(80)	All		0.586
	Unknown	166	108.4(18)	U vs. B	0.70(0.41,1.21)	0.204
	Low	97	154.6(15)	L vs. B	1.06(0.58,1.93)	0.852
	High	79	126.6(10)	H vs. B	0.87(0.43,1.76)	0.697

e) Table Reference: 3-24[c]

Interaction: Miscarriage (DIOXIN by M-AGE)

M-AGE	Initial Dioxin	n	Rate/ (count)	Adj. Relative Risk (95% C.I.)	p-Value
≤ 27	Low	38	131.6(5)	1.25(0.92,1.69)	0.146
	Medium	119	100.8(12)		
	High	101	188.1(19)		
> 27	Low	55	181.8(10)	0.91(0.66,1.26)	0.569
	Medium	107	149.5(16)		
	High	48	104.2(5)		

Table A-1 (Continued)

f) Table Reference: 3-25[c]

Interaction: Miscarriage (DIOXIN by TIME by OCC)

OCC	Time Since SEA (years)	Dioxin	n	Current Rate(count)	Adj. Relative Risk (95% C.I.)	p-Value
						0.031
Officers	≤18.6	Low	24	125.0(3)	4.49(0.38,52.3)	0.231
		Medium	7	142.9(1)		
		High	0	--		
	>18.6	Low	25	240.0(6)	0.05(0.001,2.03)	0.107
		Medium	16	62.5(1)		
		High	0	--		
						0.139
Enlisted Flyers	≤18.6	Low	3	0.0(0)	0.32(0.02,4.80)	0.410
		Medium	25	120.0(3)		
		High	1	0.0(0)		
	>18.6	Low	2	0.0(0)	2.13(0.74,6.09)	0.153
		Medium	24	291.7(7)		
		High	5	200.0(1)		
						0.108
Enlisted Ground	≤18.6	Low	24	83.3(2)	1.34(0.92,1.95)	0.132
		Medium	92	141.3(13)		
		High	72	152.8(11)		
	>18.6	Low	14	214.3(3)	0.85(0.56,1.28)	0.434
		Medium	63	127.0(8)		
		High	72	111.1(8)		

Table A-1 (Continued)

g) Table Reference: 3-25[d]

Interaction: Miscarriage (DIOXIN by TIME by OCC)

OCC	Time Since SEA (years)	Dioxin	n	Current Rate(count)	Adj. Relative Risk (95% C.I.)	p-Value
						0.103
Officers	≤18.6	Low	43	46.5(2)	3.07(0.86,10.9)	0.083
		Medium	39	128.2(5)		
		High	0	--		
	>18.6	Low	25	120.0(3)	0.76(0.25,2.30)	0.621
		Medium	43	162.8(7)		
		High	0	--		
						0.064
Enlisted Flyers	≤18.6	Low	5	200.0(1)	0.59(0.18,1.93)	0.383
		Medium	25	160.0(4)		
		High	7	0.0(0)		
	>18.6	Low	7	0.0(0)	2.06(0.98,4.33)	0.054
		Medium	18	111.1(2)		
		High	13	461.5(6)		
						0.636
Enlisted Ground	≤18.6	Low	21	285.7(6)	1.05(0.83,1.33)	0.692
		Medium	93	118.3(11)		
		High	103	165.0(17)		
	>18.6	Low	24	83.3(2)	0.96(0.74,1.25)	0.779
		Medium	66	166.7(11)		
		High	92	119.6(11)		

Table A-1 (Continued)

h) Table Reference: 3-27[c]

Interaction: Total Adverse Outcome (DIOXIN by M-AGE)

M-AGE	Initial Dioxin	n	Rate/ (count)	Adj. Relative Risk (95% C.I.)	p-Value
≤ 27	Low	62	161.3(10)	1.26(0.95,1.67)	0.106
	Medium	146	164.4(24)		
	High	111	198.2(22)		
> 27	Low	57	175.4(10)	1.03(0.72,1.49)	0.855
	Medium	121	206.6(25)		
	High	58	103.4(6)		

i) Table Reference: 3-27[d]

Interaction: Total Adverse Outcome (DIOXIN by RACE, DIOXIN by-OCC)

RACE/OCC	Initial Dioxin	n	Rate/ (count)	Adj. Relative Risk (95% C.I.)	p-Value
Black Officers	Low	0	--	No analysis, only 3 observations	
	Medium	3	0.0(0)		
	High	0	--		
Black Enlisted Flyers	Low	0	--	No analysis, only 4 observations	
	Medium	2	0.0(0)		
	High	2	500.0(1)		
Black Enlisted Ground	Low	7	0.0(0)	1.58(0.92,2.70)	0.088
	Medium	40	225.0(9)		
	High	11	363.6(4)		
Nonblack Officers	Low	71	70.4(5)	2.12(1.12,4.00)	0.017
	Medium	79	227.8(18)		
	High	0	--		
Nonblack Enlisted Flyers	Low	16	187.5(3)	1.43(0.90,2.27)	0.121
	Medium	47	255.3(12)		
	High	24	291.7(7)		
Nonblack Enlisted Ground	Low	67	238.8(16)	0.88(0.73,1.05)	0.157
	Medium	164	152.4(25)		
	High	209	124.4(26)		

Table A-1 (Continued)

j) Table Reference: 3-28[c]

Interaction: Total Adverse Outcome (DIOXIN by TIME by OCC)

OCC	Time Since SEA (years)	Dioxin	n	Current Rate(count)	Adj. Relative Risk (95% C.I.)	p-Value
						0.078
Officers	≤18.6	Low	22	136.4(3)	3.61(0.30,44.1)	0.314
		Medium	7	142.9(1)		
		High	0	--		
	>18.6	Low	28	357.1(10)	0.19(0.02,1.71)	0.131
		Medium	19	157.9(3)		
		High	0	--		
						0.197
Enlisted Flyers	≤18.6	Low	3	0.0(0)	0.45(0.04,5.46)	0.533
		Medium	27	111.1(3)		
		High	1	0.0(0)		
	>18.6	Low	2	0.0(0)	2.25(0.68,7.40)	0.174
		Medium	35	457.1(16)		
		High	4	250.0(1)		
						0.063
Enlisted Ground	≤18.6	Low	37	108.1(4)	1.45(1.04,2.05)	0.029
		Medium	107	177.6(19)		
		High	82	170.7(14)		
	>18.6	Low	25	200.0(5)	0.92(0.64,1.33)	0.669
		Medium	70	114.3(8)		
		High	87	114.9(10)		

Table A-1 (Continued)

k) Table Reference: 3-28[d]

Interaction: Total Adverse Outcome (DIOXIN by TIME by OCC)

OCC	Time Since SEA (years)	Dioxin	n	Current Rate(count)	Adj. Relative Risk (95% C.I.)	p-Value
						0.290
Officers	≤18.6	Low	45	44.4(2)	2.95(0.85,10.3)	0.089
		Medium	37	135.1(5)		
		High	0	--		
	>18.6	Low	22	136.4(3)	1.26(0.48,3.32)	0.636
		Medium	49	265.3(13)		
		High	0	--		
						0.004
Enlisted Flyers	≤18.6	Low	8	250.0(2)	0.35(0.09,1.30)	0.116
		Medium	26	153.8(4)		
		High	8	0.0(0)		
	>18.6	Low	8	0.0(0)	2.81(1.15,6.91)	0.022
		Medium	27	370.4(10)		
		High	14	500.0(7)		
						0.467
Enlisted Ground	≤18.6	Low	40	275.0(11)	1.01(0.79,1.28)	0.964
		Medium	120	150.0(18)		
		High	114	184.2(21)		
	>18.6	Low	31	129.0(4)	0.88(0.68,1.14)	0.344
		Medium	85	152.9(13)		
		High	108	120.4(13)		

Table A-1 (Continued)

1) Table Reference: 3-29[b]

Interaction: Total Adverse Outcome (Categorized DIOXIN by M-AGE)

M-AGE	Exposure Category	n	Rate/ (count)	Category Contrast	Adj. Relative Risk (95% C.I.)	p-Value
≤ 27	Background	488	141.4(69)	All		0.184
	Unknown	142	211.3(30)	U vs B	1.67(1.02,2.72)	0.039
	Low	91	164.8(15)	L vs B	1.05(0.56,1.96)	0.882
	High	166	180.7(30)	H vs B	1.36(0.84,2.21)	0.211
> 27	Background	517	179.9(93)	All		0.417
	Unknown	153	124.2(19)	U vs B	0.66(0.38,1.12)	0.124
	Low	96	166.7(16)	L vs B	0.85(0.47,1.53)	0.580
	High	78	141.0(11)	H vs B	0.78(0.39,1.57)	0.486

m) Table Reference: 3-30[c]

Interaction: Total Adverse Outcome (DIOXIN by M-AGE)

M-AGE	Initial Dioxin	n	Rate/ (count)	Adj. Relative Risk (95% C.I.)	p-Value
≤ 27	Low	35	142.9(5)	1.16(0.86,1.56)	0.330
	Medium	119	126.1(15)		
	High	98	193.9(19)		
> 27	Low	54	185.2(10)	0.88(0.64,1.20)	0.404
	Medium	105	190.5(20)		
	High	48	104.2(5)		

Table A-1 (Continued)

n) Table Reference: 3-30[d]

Interaction: Total Adverse Outcome (DIOXIN by OCC)

OCC	Initial Dioxin	n	Rate/ (count)	Adj. Relative Risk (95% C.I.)	p-Value
Officers	Low	65	76.9(5)	0.41(0.003,49.6)	0.713
	Medium	76	223.7(17)		
	High	0	--		
Enlisted Flyers	Low	12	166.7(2)	1.83(0.03,106)	0.767
	Medium	38	131.6(5)		
	High	23	304.3(7)		
Enlisted Ground	Low	47	276.6(13)	5.35(1.28,22.3)	0.021
	Medium	155	162.3(25)		
	High	191	130.9(25)		

o) Table Reference: 3-30[d]

Interaction: Total Adverse Outcome (DIOXIN by C-TIME)

C-TIME	Initial Dioxin	n	Rate/ (count)	Adj. Relative Risk (95% C.I.)	p-Value
≤ 4	Low	58	137.9(8)	26.2(2.26,303)	0.009
	Medium	119	151.3(18)		
	High	98	132.7(13)		
> 4	Low	66	181.8(12)	2.46(0.38,15.9)	0.343
	Medium	150	193.3(29)		
	High	116	163.8(19)		

p) Table Reference: 3-30[d]

Interaction: Total Adverse Outcome (DIOXIN by M-AGE)

M-AGE	Initial Dioxin	n	Rate/ (count)	Adj. Relative Risk (95% C.I.)	p-Value
≤ 27	Low	54	203.7(11)	2.41(0.72,8.00)	0.150
	Medium	122	163.9(20)		
	High	143	160.8(23)		
> 27	Low	70	128.6(9)	1.67(0.64,4.32)	0.289
	Medium	147	183.7(27)		
	High	71	126.8(9)		

Table A-1 (Continued)

q) Table Reference: 3-31[d]

Interaction: Total Adverse Outcome (DIOXIN by TIME by OCC)

OCC	Time Since SEA (years)	Dioxin	n	Current Rate(count)	Adj. Relative Risk (95% C.I.)	p-Value
						0.463
Officers	≤18.6	Low	39	51.3(2)	2.65(0.73,9.54)	0.137
		Medium	37	135.1(5)		
		High	0	--		
	>18.6	Low	22	136.4(3)	1.43(0.51,3.98)	0.488
		Medium	43	279.1(12)		
		High	0	--		
						0.006
Enlisted Flyers	≤18.6	Low	4	250.0(1)	0.32(0.07,1.55)	0.157
		Medium	25	160.0(4)		
		High	7	0.0(0)		
	>18.6	Low	7	0.0(0)	3.58(1.15,11.1)	0.025
		Medium	18	166.7(3)		
		High	12	500.0(6)		
						0.851
Enlisted Ground	≤18.6	Low	21	428.6(9)	0.89(0.68,1.17)	0.411
		Medium	92	119.6(11)		
		High	101	178.2(18)		
	>18.6	Low	24	125.0(3)	0.86(0.65,1.14)	0.289
		Medium	64	171.9(11)		
		High	91	120.9(11)		

Table A-1 (Continued)

r) Table Reference: 3-32[b]

Interaction: Total Adverse Outcome (Categorized DIOXIN by M-AGE)

M-AGE	Exposure Category	n	Rate/ (count)	Category Contrast	Adj. Relative Risk (95% C.I.)	p-Value
≤ 27	Background	406	155.2(63)	All		0.166
	Unknown	107	215.0(23)	U vs B	1.61(0.93,2.81)	0.089
	Low	73	109.6(8)	L vs B	0.64(0.29,1.40)	0.258
	High	144	173.6(25)	H vs B	1.13(0.67,1.91)	0.635
> 27	Background	427	180.3(77)	All		0.350
	Unknown	125	128.0(16)	U vs B	0.64(0.36,1.16)	0.142
	Low	82	134.1(11)	L vs B	0.66(0.33,1.32)	0.238
	High	67	149.3(10)	H vs B	0.93(0.44,1.98)	0.848

s) Table Reference: 3-38[b]

Interaction: Total Conceptions (Categorized DIOXIN by SMOKE)

SMOKE	Exposure Category	n	Rate/ (count)	Category Contrast	Adj. Relative Risk (95% C.I.)	p-Value
No	Background	313	2.150	All		0.671
	Unknown	91	2.130	U vs B	3.02(-26.21,32.26)	0.840
	Low	55	2.273	L vs B	7.10(-25.12,39.32)	0.667
	High	73	2.459	H vs B	19.93(-9.51,49.37)	0.188
Yes	Background	94	2.021	All		0.035
	Unknown	36	1.528	U vs B	67.39(15.94,118.8)	0.012
	Low	20	1.600	L vs B	-55.07(-113.8,3.70)	0.071
	High	14	1.786	H vs B	-23.14(-92.72,46.44)	0.517

Table B-1

**Summary of Dioxin-by-Covariate Interactions for
Birth Weight**

a) Table Reference: 4-13[c]

Interaction: Birth Weight (DIOXIN by RACE, DIOXIN by SMOKE)

RACE/SMOKE	Adj. Mean/(n) Initial Dioxin			Adj. Slope (Std. Error)	p-Value
	Low	Medium	High		
Black No	3513.9 (20)	2890.3 (8)	2828.4 (6)	-266.3(109.0)	0.020
Black Yes	-- (0)	3375.7 (6)	2722.0 (1)	-362.4(374.1)	0.377
Nonblack No	3385.2 (61)	3404.8 (157)	3352.2 (120)	-7.306(30.8)	0.813
Nonblack Yes	3052.5 (18)	3106.0 (45)	2619.3 (14)	-117.5(61.5)	0.060

b) Table Reference: 4-13[d]

Interaction: Birth Weight (DIOXIN by RACE, DIOXIN by SMOKE)

RACE/SMOKE	Adj. Mean/(n) Initial Dioxin			Adj. Slope (Std. Error)	p-Value
	Low	Medium	High		
Black No	3300.0 (7)	3141.0 (30)	2534.8 (6)	-254.1(85.7)	0.005
Black Yes	-- (0)	3375.7 (6)	2722.0 (1)	-362.4(374.1)	0.377
Nonblack No	3211.5 (98)	3457.9 (173)	3321.1 (177)	21.2(22.8)	0.352
Nonblack Yes	3073.6 (31)	3114.1 (61)	2881.3 (22)	-52.4(45.9)	0.256

Table B-1 (Continued)

c) Table Reference: 4-14[c]

Interaction: Birth Weight (DIOXIN by TIME by RACE)

RACE	Time Since SEA (years)	Adj. Mean/(n) Initial Dioxin			Adj. Slope (Std. Error)	p-Value
		Low	Medium	High		
Black	≤18.6	3241.4 (14)	2844.8 (11)	-- (0)	-346.9(207.0)	0.108
	>18.6	3426.2 (6)	3460.3 (3)	2575.4 (7)	-351.6(167.5)	0.056
Nonblack	≤18.6	3375.8 (41)	3393.9 (107)	3218.3 (68)	-55.74(40.72)	0.172
	>18.6	3242.4 (34)	3262.1 (93)	3413.6 (73)	35.15(43.63)	0.421

d) Table Reference: 4-14[d]

Interaction: Birth Weight (DIOXIN by TIME by RACE)

RACE	Time Since SEA (years)	Adj. Mean/(n) Initial Dioxin			Adj. Slope (Std. Error)	p-Value
		Low	Medium	High		
Black	≤18.6	3552.3 (7)	*3284.5 (23)	*2537.0 (2)	*-396.4(161.7)	0.021
	>18.6	-- (0)	3638.4 (11)	*2777.9 (7)	*-354.6(147.4)	0.031
Nonblack	≤18.6	3136.5 (70)	3223.5 (133)	3113.5 (98)	-8.74(30.4)	0.774
	>18.6	3225.5 (54)	3275.7 (113)	3117.1 (94)	16.02(29.82)	0.592

* Unadjusted means are presented since adjusted means were non-estimable

Table B-1 (Continued)

e) Table Reference: 4-15[b]

Interaction: Birth Weight (Categorized DIOXIN by RACE)

RACE	Exposure Category	n	Mean	Category Contrast	Diff. of Adj. Means (95% C.I.)	p-Value
Nonblack	Background	783	3322.3	All		0.006
	Unknown	228	3249.3	U vs B	-73.0(-153.1,7.1)	0.078
	Low	144	3370.8	L vs B	48.5(-48.0,145.0)	0.330
	High	192	3194.9	H vs B	-127.5(-213.1,-41.7)	0.005
Black	Background	54	3482.8	All		0.011
	Unknown	16	3672.7	U vs B	189.9(-118.0,497.8)	0.239
	Low	12	3200.4	L vs B	-282.4(-627.7,62.9)	0.181
	High	9	2912.4	H vs B	-570.4(-959.9,-180.9)	0.006

f) Table Reference: 4-16[c]

Interaction: Birth Weight (DIOXIN by SMOKE)

SMOKE	Adj. Mean/(n) Initial Dioxin			Adj. Slope (Std. Error)	p-Value
	Low	Medium	High		
No	3261.0 (59)	3218.3 (143)	3160.6 (112)	-17.2(33.0)	0.603
Yes	3098.6 (15)	3167.6 (47)	2672.1 (14)	-127.6(64.5)	0.052

g) Table Reference: 4-19[d]

Interaction: Low Birth Weight (DIOXIN by DRINK, DIOXIN by RACE)

DRINK/RACE		Initial Dioxin	n	Rate (count)	Adj. Relative Risk (95% C.I.)	p-Value
No Nonblack	Low		118	110.2(13)	0.83(0.64,1.09)	0.173
	Medium		214	65.4(14)		
	High		195	76.9(15)		
No BLack	Low		7	0.0(0)	1.94(0.90,4.16)	0.084
	Medium		34	117.6(4)		
	High		7	285.7(2)		

Table B-1 (Continued)

DRINK/RACE	Initial Dioxin	n	Rate (count)	Adj. Relative Risk (95% C.I.)	p-Value
Yes Nonblack	Low	11	0.0(0)	8.51(0.65,111)	0.017
	Medium	20	100.0(2)		
	High	4	250.0(1)		
Yes Black	Low	0	--	No adjusted analysis, no defects	
	Medium	2	0.0(0)		
	High	0	--		

h) Table Reference 4-20[d]

Interaction: Low Birth Weight (DIOXIN by TIME by C-TIME)

C-TIME	Time Since SEA (years)	Current Dioxin	n	Abnormal Rate/ (count)	Adj. Relative Risk (95% C.I.)	p-Value
						0.364
≤ 2	≤18.6	Low	28	71.4(2)	0.69(0.31,1.56)	0.372
		Medium	42	71.4(3)		
		High	27	74.1(2)		
	>18.6	Low	17	235.3(4)	0.40(0.15,1.04)	0.060
		Medium	35	57.1(2)		
		High	21	47.6(1)		
						0.636
(2,6.5]	≤18.6	Low	19	52.6(1)	1.10(0.64,1.87)	0.738
		Medium	57	87.7(5)		
		High	43	93.0(4)		
	>18.6	Low	15	66.7(1)	0.92(0.55,1.56)	0.762
		Medium	47	85.1(4)		
		High	40	100.0(4)		
						0.017
> 6.5	≤18.6	Low	30	100.0(3)	0.72(0.37,1.40)	0.329
		Medium	57	87.7(5)		
		High	30	66.7(2)		
	>18.6	Low	22	45.5(1)	1.84(1.06,3.19)	0.030
		Medium	42	0.0(0)		
		High	40	175.0(7)		

Table B-1 (Continued)

i) Table Reference: 4-21[b]

Interaction: Low Birth Weight (Categorized DIOXIN by OCC)

OCC	Exposure Category	n	Rate(count)	Category Contrast	Adj. Relative Risk (95% C.I.)	p-Value
Officers	Background	254	35.4(9)	All		0.176
	Unknown	112	71.4(8)	U vs B	1.88(0.69,5.09)	0.215
	Low	22	0.0(0)	L vs B	--	--
	High	0	--	H vs B	--	--
Enlisted Flyers	Background	83	36.1(3)	All		0.002
	Unknown	23	43.5(1)	U vs B	1.18(0.11,12.2)	0.890
	Low	30	233.3(7)	L vs B	9.89(2.17,45.0)	0.003
	High	14	285.7(4)	H vs B	13.8(2.40,79.7)	0.003
Enlisted Ground	Background	500	40.0(20)	All		0.002
	Unknown	109	110.1(12)	U vs B	3.14(1.47,6.70)	0.003
	Low	104	28.8(3)	L vs B	0.64(0.18,2.20)	0.472
	High	187	85.6(16)	H vs B	2.58(1.29,5.16)	0.007

j) Table Reference: 4-22[c]

Interaction: Low Birth Weight (DIOXIN by SMOKE, DIOXIN by C-TIME)

SMOKE/C-TIME	Initial Dioxin	n	Rate (count)	Adj. Relative Risk (95% C.I.)	p-Value
No ≤ 2	Low	16	125.0(2)	0.34(0.09,1.32)	0.082
	Medium	37	108.1(4)		
	High	25	0.0(0)		
No (2,6.5]	Low	22	45.5(1)	1.22(0.57,2.59)	0.605
	Medium	52	76.9(4)		
	High	46	65.2(3)		
No > 6.5	Low	21	95.2(2)	1.32(0.70,2.51)	0.390
	Medium	54	37.0(2)		
	High	41	122.0(5)		

Table B-1 (Continued)

SMOKE/C-TIME	Initial Dioxin	n	Rate (count)	Adj. Relative Risk (95% C.I.)	p-Value
Yes ≤ 2	Low	6	0.0(0)	No adj. analysis, only two abnormals	
	Medium	16	125.0(2)		
	High	4	0.0(0)		
Yes (2,6.5]	Low	9	0.0(0)	1.71(0.69,4.23) 0.203	
	Medium	15	200.0(3)		
	High	8	375.0(3)		
Yes > 6.5	Low	0	--	No adj. analysis, only one abnormal	
	Medium	16	0.0(0)		
	High	2	500.0(1)		

k) Table Reference: 4-22 [d]

Interaction: Low Birth Weight (DIOXIN by SMOKE, DIOXIN by C-TIME)

SMOKE/C-TIME	Initial Dioxin	n	Rate (count)	Adj. Relative Risk (95% C.I.)	p-Value
No ≤ 2	Low	25	120.0(3)	0.32(0.12,0.82)	0.006
	Medium	40	125.0(5)		
	High	41	24.4(1)		
No (2,6.5]	Low	24	83.3(2)	0.98(0.57,1.70)	0.941
	Medium	57	70.2(4)		
	High	66	60.6(4)		
No > 6.5	Low	31	96.8(3)	1.13(0.70,1.83)	0.603
	Medium	66	30.3(2)		
	High	57	122.8(7)		
Yes ≤ 2	Low	11	90.9(1)	0.97(0.27,3.51)	0.965
	Medium	22	136.4(3)		
	High	7	0.0(0)		
Yes (2,6.5]	Low	5	0.0(0)	1.78(0.74,4.26)	0.158
	Medium	23	87.0(2)		
	High	10	400.0(4)		
Yes > 6.5	Low	7	142.9(1)	1.50(0.54,4.16)	0.413
	Medium	14	71.4(1)		
	High	5	200.0(1)		

Table B-1 (Continued)

1) Table Reference: 4-24[b]

Interaction: Low Birth Weight (Categorized DIOXIN by OCC,
Categorized DIOXIN by RACE)

OCC/RACE	Exposure Category	n	Abnormal rate(count)	Category Contrast	Adj. Relative Risk (95% C.I.)	p-Value
Officers Nonblack	Background	223	40.4(9)	All		0.164
	Unknown	101	79.2(8)	U vs. B	1.98(0.73,5.37)	0.180
	Low	17	0.0(0)	L vs. B	--	--
	High	0	--			
Officers Black	Background	4	0.0(0)	All	No adj. analysis, no abnormals	
	Unknown	0	--	U vs. B		
	Low	2	0.0(0)	L vs. B		
	High	0	--	H vs. B		
Enlisted Flyers Nonblack	Low	65	30.8(2)	All		0.012
	Unknown	19	52.6(1)	U vs. B	1.75(0.15,20.9)	0.656
	Low	27	222.2(6)	L vs. B	9.72(1.66,56.9)	0.011
	High	11	272.7(3)	H vs. B	12.7(1.89,95.1)	0.012
Enlisted Flyers Black	Low	0	--	All	No adj. analysis, only 2 values	
	Unknown	0	--	U vs. B		
	Low	0	--	L vs. B		
	High	2	500.0(1)	H vs. B		
Enlisted Ground Nonblack	Background	383	47.0(18)	All		0.006
	Unknown	70	114.3(8)	U vs. B	2.55(1.05,6.21)	0.038
	Low	83	12.0(1)	L vs. B	0.22(0.03,1.71)	0.147
	High	163	85.9(14)	H vs. B	2.18(1.04,4.56)	0.039
Enlisted Ground Black	Background	38	0.0(0)	All	No adj. analysis, only 4 abnormals	
	Unknown	7	142.9(1)	U vs. B		
	Low	8	250.0(2)	L vs. B		
	High		250.0(1)	H vs. B		

Table C-1

Counts and Rates (per 1000) of Children by Category
of Anomaly Included in the Baseline Definition but not
Included in the CDC Definition of Birth Defect

Category (ICD Code)	Time of Conception Relative to the Father's Duty in SEA			
	Pre-SEA		Post-SEA	
	Comparisons (n=2340)	RH (n=1805)	Comparisons (n=1602)	RH (n=1045)
All Baseline Categories	149(63.7)	115(63.7)	183(114.2)	127(121.6)
Benign neoplasm of skin(216)	54(23.1)	44(24.4)	60(37.5)	44(42.1)
Hemangioma and Lymphangioma any site(228)	27(11.5)	13(7.2)	36(22.5)	20(19.2)
Neoplasms of unspecified nature of bone, skin etc(239.2)	0(0.0)	0(0.0)	0(0.0)	0(0.0)
Chorioretinitis(363.2)	0(0.0)	0(0.0)	0(0.0)	0(0.0)
Wolff-Parkinson-White syndrome(426.7)	1(0.4)	2(1.1)	1(0.6)	2(1.9)
Major anomalies of jaw size(524.0)	3(1.3)	1(0.6)	3(1.9)	2(1.9)
Inguinal hernia (550, 5501 (5509)	46(19.7)	32(17.7)	41(25.6)	22(21.1)
Umbilical hernia(553.1)	14(6.0)	20(11.1)	32(20.0)	28(26.8)
Epigastric hernia(553.29)	1(0.4)	0(0.0)	0(0.0)	0(0.0)
Amniotic bands(658.8)	0(0.0)	0(0.0)	0(0.0)	0(0.0)
Pilonidal sinus or dimple(685.1)	2(0.9)	1(0.6)	2(1.2)	3(2.9)
Hydrocele(778.6)	19(8.1)	21(11.6)	32(20.0)	28(26.8)

Table D-1

**Listings of Post-SEA Children with Birth Defects by Selected
Clinical Area (Each Anomaly is Listed Although
Some Children had Multiple Anomalies)**

a) Nervous System Anomalies (740-742)

Child	ICD Code	ICD Description	Father's Dioxin Level		
			Model 3	Model 2 D>10	D>5
1	74191	spina bifida, cervical region		Low	Med
	7420	encephalocele			
2	7423	congenital hydrocephalus	Bkgd		
	7424	other specified congenital anomalies of brain			
3	7424	other specified congenital anomalies of brain	Bkgd		
4	7421	microcephalus	Bkgd		
	7424	other specified congenital anomalies of brain			
5	7400	anencephalus	Low	Med	Med
6	7421	microcephalus	High	High	High
7	74193	spina bifida, lumbar region	High	Med	High
8	74193	spina bifida, lumbar region	High	High	High

b) Eye Anomalies (743)

Child	ICD Code	ICD Description	Father's Dioxin Level		
			Model 3	Model 2 D>10	D>5
1	74365	specified congenital anomalies of lacrimal passages		Low	Med
2	74346	other specified congenital anomalies of iris & ciliary body	Bkgd		
3	7438	other specified anomalies of eye, congenital	Bkgd		
4	74361	congenital ptosis of eyelid	Bkgd		
5	74357	specified congenital anomalies of optic disc	Bkgd		
6	74363	other specified congenital anomalies of eyelid	Bkgd		
7	74365	specified congenital anomalies of lacrimal passages	Bkgd		
8	74361	congenital ptosis of eyelid	Bkgd		
9	74361	congenital ptosis of eyelid	Unk		

Table D-1 (Continued)

Child	ICD Code	ICD Description	Father's Dioxin Level		
			Model 3	Model 2 D>10	D>5
10	74346	other specified congenital anomalies of iris & ciliary body			
11	74330	congenital cataract, unspecified	Unk		Med
12	74365	specified congenital anomalies of lacrimal passages	Unk		
13	74361	congenital ptosis of eyelid	Unk		Low
	74365	specified congenital anomalies of lacrimal passages	Low	Med	Med
14	74363	other specified congenital anomalies of eyelid			
15	74352	fundus coloboma	High	High	High
16	74361	congenital ptosis of eyelid	High	Med	High
			High	High	High

c) Ear, Face and Neck Anomalies (744)

Child	ICD Code	ICD Description	Father's Dioxin Level		
			Model 3	Model 2 D>10	D>5
1	7441	accessory auricle		Low	Med
2	7441	accessory auricle			
3	74442	branchial cleft cyst	Bkgd		
4	74441	branchial cleft sinus or fistula	Bkgd		
5	74409	other congenital anomalies of ear causing hearing impairment	Bkgd		
6	7443	unspecified congenital anomaly of ear	Bkgd		
7	7441	accessory auricle	Bkgd		
8	7443	unspecified congenital anomaly of ear	Bkgd		
9	7441	accessory auricle	Bkgd		
10	7443	unspecified congenital anomaly of ear	Bkgd		
11	7441	accessory auricle	Bkgd		
12	7441	accessory auricle	Bkgd		
13	74429	other congenital anomalies of ear	Unk		Med
	7449	unspecified congenital anomalies of face and neck			
14	7441	accessory auricle	Unk		Low
	74446	preauricular sinus or fistula			
15	7443	unspecified congenital anomaly of ear	Unk		Low

Table D-1 (Continued)

Child	ICD Code	ICD Description	Father's Dioxin Level		
			Model 3	Model 2 D>10	D>5
16	7441	accessory auricle	Unk		
17	7445	webbing of neck	Unk		Low
18	74429	other congenital anomalies	Low	Med	Med
19	7443	unspecified congenital anomaly of ear	Low	Med	Med
20	74446	preauricular sinus or fistula	High	High	High
21	74429	other congenital anomalies of ear	High	Med	High
22	7441	accessory auricle	High	High	High
23	7441	accessory auricle	High	High	High

d) Circulatory System and Heart Anomalies (745-747)

Child	ICD Code	ICD Description	Father's Dioxin Level		
			Model 3	Model 2 D>10	D>5
1	74510	complete transposition of great vessels		Low	Med
2	7454	ventricular septal defect		Low	Med
	7475	absence or hypoplasia of umbilical artery			
3	7475	absence or hypoplasia of umbilical artery		Low	Med
4	7455	ostium secundum type atrial septal defect	Bkgd		
	74689	other specified congenital anomalies of heart			
5	7470	patent ductus arteriosus	Bkgd		
6	74560	endocardial cushion defect, unspecified type	Bkgd		
	7469	unspecified congenital anomaly of heart			
	7473	congenital anomalies of pulmonary artery			
7	7475	absence or hypoplasia of umbilical artery	Bkgd		
8	7454	ventricular septal defect	Bkgd		
9	7467	hypoplastic left heart syndrome	Bkgd		
10	7454	ventricular septal defect	Bkgd		
11	7454	ventricular septal defect	Bkgd		
12	7463	congenital stenosis of aortic valve	Bkgd		
	7464	congenital insufficiency of aortic valve			
13	7454	ventricular septal defect	Bkgd		
	74689	other specified congenital anomalies of heart			
14	74689	other specified congenital anomalies of heart	Bkgd		
15	7475	absence or hypoplasia of umbilical artery	Bkgd		
16	7463	congenital stenosis of aortic valve	Bkgd		
17	7463	congenital stenosis of aortic valve	Bkgd		
	7464	congenital insufficiency of aortic valve			

Table D-1 (Continued)

Child	ICD Code	ICD Description	Father's Dioxin Level		
			Model 3	Model 2 D>10	D>5
18	74511	double outlet right ventricle	Bkgd		
	74569	other endocardial cushion defects			
	7470	patent ductus arteriosus			
	7473	congenital anomalies of pulmonary artery			
19	7454	ventricular septal defect	Bkgd		
20	7470	patent ductus arteriosus	Unk		
21	7455	ostium secundum type atrial septal defect	Unk		
22	74569	other endocardial cushion defects	Unk		Low
	7470	patent ductus arteriosus			
23	7455	ostium secundum type atrial septal defect	Unk		
24	7475	absence or hypoplasia of umbilical artery	Low	Med	Med
25	7470	patent ductus arteriosus	Low	Med	Med
26	74511	double outlet right ventricle	Low	Med	Med
	7455	ostium secundum type atrial septal defect			
	74742	partial anomalous pulmonary venous connection			
27	74511	double outlet right ventricle	Low	Med	Med
	7454	ventricular septal defect			
28	7454	ventricular septal defect	Low	Med	Med
29	7455	ostium secundum type atrial septal defect	Low	Med	Med
30	7454	ventricular septal defect	Low	Med	Med
31	7454	ventricular septal defect	Low	Med	Med
32	74602	stenosis of pulmonary valve, congenital	High	Med	High
	7473	congenital anomalies of pulmonary artery			
33	74602	stenosis of pulmonary valve, congenital	High	High	High

e) Respiratory System Anomalies (748)

Child	ICD Code	ICD Description	Father's Dioxin Level		
			Model 3	Model 2 D>10	D>5
1	74860	congenital anomaly of lung, unspecified	Bkgd		
2	7480	choanal atresia	Bkgd		
3	7485	congenital agenesis, hypoplasia, and dysplasia of lung	Unk		
4	7485	congenital agenesis, hypoplasia, and dysplasia of lung	Unk		Low
5	7485	congenital agenesis, hypoplasia, and dysplasia of lung	Low	Med	Med
6	7480	choanal atresia	High	High	High

Table D-1 (Continued)

f) Digestive System Anomalies (749-751)

Child	ICD Code	ICD Description	Father's Dioxin Level		
			Model 3	Model 2 D>10	D>5
1	7500	tongue tie		Low	Med
2	7503	congenital tracheoesophageal fistula, esophageal atresia, stenosis		Low	Med
3	7500	tongue tie	Bkgd		
4	7500	tongue tie	Bkgd		
5	74921	cleft palate with cleft lip, unilateral, complete	Bkgd		
6	75015	macroglossia	Bkgd		
	75019	other congenital anomalies of tongue			
7	74900	cleft palate, unspecified	Bkgd		
	7515	other congenital anomalies of intestine			
8	7500	tongue tie	Bkgd		
9	7505	congenital hypertrophic pyloric stenosis	Bkgd		
10	7505	congenital hypertrophic pyloric stenosis	Bkgd		
11	7500	tongue tie	Bkgd		
12	74900	cleft palate, unspecified	Bkgd		
13	7500	tongue tie	Bkgd		
14	7500	tongue tie	Bkgd		
15	7505	congenital hypertrophic pyloric stenosis	Bkgd		
16	7500	tongue tie	Bkgd		
17	7505	congenital hypertrophic pyloric stenosis	Bkgd		
18	7505	congenital hypertrophic pyloric stenosis	Bkgd		
19	7510	Meckel's diverticulum	Bkgd		
20	7505	congenital hypertrophic pyloric stenosis	Bkgd		
21	74900	cleft palate, unspecified	Bkgd		
22	74902	cleft palate, unilateral, incomplete	Bkgd		
23	75026	other specified congenital anomalies of mouth	Bkgd		
24	7511	congenital atresia and stenosis of small intestine	Bkgd		
25	7515	other congenital anomalies of intestine	Bkgd		
26	74910	cleft lip, unspecified	Bkgd		
27	7500	tongue tie	Unk		Med
28	7505	congenital hypertrophic pyloric stenosis	Unk		
29	75026	other specified congenital anomalies of mouth	Unk		Med
30	75026	other specified congenital anomalies of mouth	Unk		Low
31	7500	tongue tie	Unk		
32	74910	cleft lip, unspecified	Unk		Med
	75019	other congenital anomalies of tongue			
33	7500	tongue tie	Low	Med	Med

Table D-1 (Continued)

Child	ICD Code	ICD Description	Father's Dioxin Level		
			Model 3	Model 2 D>10	D>5
34	74910	cleft lip, unspecified	Low	Med	Med
35	7500	tongue tie	Low	Med	Med
36	7517	congenital anomalies of pancreas	Low	Med	Med
37	7500	tongue tie	Low	Med	Med
38	7505	congenital hypertrophic pyloric stenosis	Low	Med	Med
39	7500	tongue tie	High	High	High
40	7500	tongue tie	High	High	High
41	7512	congenital atresia, stenosis, large intestine, rectum, anal canal	High	High	High
42	7500	tongue tie	High	High	High

g) Genital Anomalies (752)

Child	ICD Code	ICD Description	Father's Dioxin Level		
			Model 3	Model 2 D>10	D>5
1	7526	hypospadias and epispadias		Med	Med
2	75249	other congenital anomalies of external female genital		Low	Med
3	7526	hypospadias and epispadias	Bkgd		
4	75249	other congenital anomalies of external female genitalia	Bkgd		
5	7526	hypospadias and epispadias	Bkgd		
6	75249	other congenital anomalies of external female genitalia	Bkgd		
7	7525	undescended testicle	Bkgd		
8	7525	undescended testicle	Bkgd		
9	7525	undescended testicle	Bkgd		
10	7525	undescended testicle	Bkgd		
11	75249	other congenital anomalies of external female genitalia	Bkgd		
12	7525	undescended testicle	Bkgd		
13	7525	undescended testicle	Bkgd		
	7526	hypospadias and epispadias			
14	7525	undescended testicle	Bkgd		
15	7525	undescended testicle	Bkgd		
16	7526	hypospadias and epispadias	Bkgd		
17	7526	hypospadias and epispadias	Bkgd		
18	75249	other congenital anomalies of external female genitalia	Bkgd		
19	7526	hypospadias and epispadias	Bkgd		
20	75242	imperforate hymen	Bkgd		

Table D-1 (Continued)

Child	ICD Code	ICD Description	Father's Dioxin Level		
			Model 3	Model 2 D>10	D>5
21	75249	other congenital anomalies of external female genitalia	Unk		Low
22	7526	hypospadias and epispadias	Low	Med	Med
23	7525	undescended testicle	Low	Med	Med
24	7526	hypospadias and epispadias	Low	Med	Med
25	7525	undescended testicle	Low	Med	Med
26	7525	undescended testicle	Low	Med	Med
27	7525	undescended testicle	Low	Med	Med
28	7528	other specified congenital anomalies of genital organs	Low	Med	Med
29	7526	hypospadias and epispadias	Low	Med	Med
30	75249	other congenital anomalies of external female genitalia	Low	Med	Med
31	7525	undescended testicle	High	High	High
32	7525	undescended testicle	High	Med	High
33	7525	undescended testicle	High	High	High

h) Urinary System Anomalies (753)

Child	ICD Code	ICD Description	Father's Dioxin Level		
			Model 3	Model 2 D>10	D>5
1	7536	congenital atresia and stenosis of urethra and bladder neck		Low	Med
2	7532	congenital obstructive defects of renal pelvis and ureter		Low	Med
	7534	other specified congenital anomalies of ureter			
3	7536	congenital atresia and stenosis of urethra and bladder neck	Bkgd		
4	7534	other specified congenital anomalies of ureter	Bkgd		
5	7536	congenital atresia and stenosis of urethra and bladder neck	Bkgd		
6	7531	congenital cystic kidney disease	Bkgd		
7	7533	other specified congenital anomalies of kidney	Bkgd		
8	7533	other specified congenital anomalies of kidney	Bkgd		
9	7536	congenital atresia and stenosis of urethra and bladder neck	Bkgd		

Table D-1 (Continued)

Child	ICD Code	ICD Description	Father's Dioxin Level		
			Model 3	Model 2 D>10	D>5
10	7536	congenital atresia and stenosis of urethra and bladder neck	Bkgd		
11	7532	congenital obstructive defects of renal pelvis and ureter	Bkgd		
12	7536	congenital atresia and stenosis of urethra and bladder neck	Bkgd		
13	7536	congenital atresia and stenosis of urethra and bladder neck	Bkgd		
14	7536	congenital atresia and stenosis of urethra and bladder neck	Bkgd		
15	7536	congenital atresia and stenosis of urethra and bladder neck	Unk		Low
16	7533	other specified congenital anomalies of kidney	Unk		Low
17	7534	other specified congenital anomalies of ureter	Unk		
18	7532	congenital obstructive defects of renal pelvis and ureter	Unk		
19	7532	congenital obstructive defects of renal pelvis and ureter	Low	Med	Med
20	7534	other specified congenital anomalies of ureter	Low	Med	Med
21	7536	congenital atresia and stenosis of urethra and bladder neck	Low	Med	Med
22	7536	congenital atresia and stenosis of urethra and bladder neck	Low	Med	Med
23	7532	congenital obstructive defects of renal pelvis and ureter	Low	Med	Med
24	7536	congenital atresia and stenosis of urethra and bladder neck	Low	Med	Med
25	7534	other specified congenital anomalies of ureter	High	High	High
26	7536	congenital atresia and stenosis of urethra and bladder neck	High	Med	High
27	7536	congenital atresia and stenosis of urethra and bladder neck	High	High	High
28	7532	congenital obstructive defects of renal pelvis and ureter	High	High	High
29	75314	polycystic kidney, autosomal recessive	High	High	High

Table D-1 (Continued)

i) Musculoskeletal deformities (754-756)

Child	ICD Code	ICD Description	Father's Dioxin Level		
			Model 3	Model 2 C>10	C>5
1	75461	congenital pes planus		Low	Med
	75563	other congenital deformity of hip (joint)			
	75564	congenital deformity of knee (joint)			
2	75453	congenital metatarsus varus		Low	Med
3	75563	other congenital deformity of hip (joint)		Low	Med
4	75564	congenital deformity of knee (joint)		Med	Med
5	75461	congenital pes planus		Low	Med
6	75563	other congenital deformity of hip (joint)		Low	Med
	75569	other congenital anomalies of lower limb, including pelvis			
7	75453	congenital metatarsus varus		Low	Med
8	75450	congenital talipes varus		Low	Med
9	75461	congenital pes planus		Low	Med
10	7542	congenital musculoskeletal deformities of spine		Low	Med
	75460	congenital talipes valgus			
	75461	congenital pes planus			
11	75453	congenital metatarsus varus		Low	Med
12	75462	talipes calcaneovalgus		Low	Med
13	75460	congenital talipes valgus		Low	Med
14	75530	unspecified reduction deformity of lower limb, congenital		Low	Med
15	75564	congenital deformity of knee (joint)		Low	Med
16	75563	other congenital deformity of hip (joint)		Low	Med
17	75461	congenital pes planus	Bkgd		
	75462	talipes calcaneovalgus			
	75564	congenital deformity of knee (joint)			
18	75453	congenital metatarsus varus	Bkgd		
	75462	talipes calcaneovalgus			
	75564	congenital deformity of knee (joint)			
19	75451	congenital talipes equinovarus	Bkgd		
	75460	congenital talipes valgus			
	75461	congenital pes planus			
	75569	other congenital anomalies of lower limb, including pelvis			
20	7541	congenital anomalies of sternocleidomastoid muscle	Bkgd		
21	75460	congenital talipes valgus	Bkgd		
22	75471	talipes cavus	Bkgd		
23	75559	other congenital anomalies of upper limb, including shoulder	Bkgd		
	75566	other congenital anomalies of toes			

Table D-1 (Continued)

Child	ICD Code	ICD Description	Father's Dioxin Level		
			Model 3	Model 2 C>10	C>5
24	75453	congenital metatarsus varus	Bkgd		
25	75453	congenital metatarsus varus	Bkgd		
26	75444	congenital bowing of unspecified long bones of leg	Bkgd		
	75453	congenital metatarsus varus			
	75460	congenital talipes valgus			
27	75461	congenital pes planus	Bkgd		
28	75461	congenital pes planus	Bkgd		
29	75461	congenital pes planus	Bkgd		
30	75569	other congenital anomalies of lower limb, including pelvis	Bkgd		
31	75450	congenital talipes varus	Bkgd		
32	75569	other congenital anomalies of lower limb, including pelvis	Bkgd		
33	75569	other congenital anomalies of lower limb, including pelvis	Bkgd		
34	75460	congenital talipes valgus	Bkgd		
35	75453	congenital metatarsus varus	Bkgd		
	75462	talipes calcaneovalgus			
36	75453	congenital metatarsus varus	Bkgd		
37	75461	congenital pes planus	Bkgd		
38	75460	congenital talipes valgus	Bkgd		
39	75431	congenital dislocation of hip, bilateral	Bkgd		
40	75461	congenital pes planus	Bkgd		
	75569	other congenital anomalies of lower limb, including pelvis			
41	75461	congenital pes planus	Bkgd		
	75563	other congenital deformity of hip (joint)			
42	7560	congenital anomalies of skull and face bone	Bkgd		
	7564	chondrodystrophy			
43	75450	congenital talipes varus	Bkgd		
44	75689	other specified congenital anomalies of musculoskeletal system	Bkgd		
45	75461	congenital pes planus	Bkgd		
	75563	other congenital deformity of hip (joint)			
	75569	other congenital anomalies of lower limb, including pelvis			
46	75481	pectus excavatum	Bkgd		
	7563	other congenital anomalies of ribs and sternum			
47	75453	congenital metatarsus varus	Bkgd		
48	75431	congenital dislocation of hip, bilateral	Bkgd		
	75559	other congenital anomalies of upper limb, including shoulder			

Table D-1 (Continued)

Child	ICD Code	ICD Description	Father's Dioxin Level		
			Model 3	Model 2 C>10	C>5
49	7542	congenital musculoskeletal deformities of spine	Bkgd		
	75460	congenital talipes valgus			
	75567	congenital anomalies of foot, not elsewhere classified			
	7563	other congenital anomalies of ribs and sternum			
50	75563	other congenital deformity of hip (joint)	Bkgd		
	75569	other congenital anomalies of lower limb, including pelvis			
51	75461	congenital pes planus	Bkgd		
	75563	other congenital deformity of hip (joint)			
52	75564	congenital deformity of knee (joint)	Bkgd		
53	75432	congenital subluxation of hip, unilateral	Bkgd		
54	75563	other congenital deformity of hip (joint)	Bkgd		
55	75567	congenital anomalies of foot, not elsewhere classified	Bkgd		
56	75450	congenital talipes varus	Bkgd		
57	75450	congenital talipes varus	Bkgd		
	75461	congenital pes planus			
58	75450	congenital talipes varus	Bkgd		
	75461	congenital pes planus			
59	75681	congenital absence of muscle and tendon	Bkgd		
60	75461	congenital pes planus	Bkgd		
	75469	other congenital valgus deformities of feet			
61	75460	congenital talipes valgus	Bkgd		
62	75460	congenital talipes valgus	Bkgd		
63	75460	congenital talipes valgus	Bkgd		
	75563	other congenital deformity of hip (joint)			
	75566	other congenital anomalies of toes			
64	75521	transverse deficiency of upper limb	Bkgd		
	75528	longitudinal deficiency, carpals, metacarpals, complete/partial			
65	75470	talipes, unspecified	Bkgd		
66	75453	congenital metatarsus varus	Bkgd		
	75569	other congenital anomalies of lower limb, including pelvis			
67	7560	congenital anomalies of skull and face bones	Bkgd		
68	75430	congenital dislocation of hip, unilateral	Bkgd		
	75462	talipes calcaneovalgus			
	75563	other congenital deformity of hip (joint)			
69	75432	congenital subluxation of hip, unilateral	Bkgd		
70	75479	other congenital deformities of feet	Bkgd		

Table D-1 (Continued)

Child	ICD Code	ICD Description	Father's Dioxin Level		
			Model 3	Model 2 C>10	C>5
71	75451	congenital talipes equinovarus	Bkgd		
	75530	unspecified reduction deformity of lower limb, congenital			
	75563	other congenital deformity of hip (joint)			
72	75432	congenital subluxation of hip, unilateral	Bkgd		
73	75453	congenital metatarsus varus	Bkgd		
74	75461	congenital pes planus	Bkgd		
75	75432	congenital subluxation of hip, unilateral	Bkgd		
76	75460	congenital talipes valgus	Bkgd		
	75461	congenital pes planus			
77	75450	congenital talipes varus	Bkgd		
78	75453	congenital metatarsus varus	Bkgd		
79	75460	congenital talipes valgus	Bkgd		
80	75461	congenital pes planus	Bkgd		
81	75440	genu recurvatum	Bkgd		
82	7563	other congenital anomalies of ribs and sternum	Bkgd		
83	75461	congenital pes planus	Bkgd		
84	75610	congenital anomaly of spine, unspecified	Bkgd		
85	75513	syndactyly of toes without fusion of bone	Bkgd		
86	75521	transverse deficiency of upper limb	Bkgd		
87	75453	congenital metatarsus varus	Bkgd		
	75471	talipes cavus			
88	75453	congenital metatarsus varus	Bkgd		
89	75450	congenital talipes varus	Bkgd		
90	75444	congenital bowing of unspecified long bones of leg	Bkgd		
91	75460	congenital talipes valgus	Bkgd		
92	75450	congenital talipes varus	Bkgd		
93	75453	congenital metatarsus varus	Bkgd		
94	75453	congenital metatarsus varus	Bkgd		
95	75453	congenital metatarsus varus	Bkgd		
	75563	other congenital deformity of hip (joint)			
96	75453	congenital metatarsus varus	Bkgd		
	75461	congenital pes planus			
97	75430	congenital dislocation of hip, unilateral	Bkgd		
98	75453	congenital metatarsus varus	Bkgd		
99	75450	congenital talipes varus	Bkgd		
100	75450	congenital talipes varus	Bkgd		
101	75453	congenital metatarsus varus	Bkgd		
	75569	other congenital anomalies of lower limb, including pelvis			
102	75563	other congenital deformity of hip (joint)	Bkgd		

Table D-1 (Continued)

Child	ICD Code	ICD Description	Father's Dioxin Level		
			Model 3	Model 2 C>10	C>5
103	75450	congenital talipes varus	Bkgd		
	75461	congenital pes planus			
104	75563	other congenital deformity of hip (joint)	Bkgd		
105	75432	congenital subluxation of hip, unilateral	Bkgd		
	75563	other congenital deformity of hip (joint)			
106	75453	congenital metatarsus varus	Bkgd		
107	75451	congenital talipes equinovarus	Bkgd		
	75569	other congenital anomalies of lower limb, including pelvis			
108	7541	congenital anomalies of sternocleidomastoid muscle	Bkgd		
109	75450	congenital talipes varus	Bkgd		
110	75451	congenital talipes equinovarus	Bkgd		
111	75461	congenital pes planus	Bkgd		
	75564	congenital deformity of knee (joint)			
	75569	other congenital anomalies of lower limb, including pelvis			
112	75451	congenital talipes equinovarus	Bkgd		
113	75452	congenital metatarsus primus varus	Bkgd		
114	75566	other congenital anomalies of toes	Bkgd		
115	75563	other congenital deformity of hip (joint)	Bkgd		
116	75450	congenital talipes varus	Bkgd		
117	75563	other congenital deformity of hip (joint)	Bkgd		
118	75461	congenital pes planus	Bkgd		
119	7542	congenital musculoskeletal deformities of spine	Bkgd		
	75450	congenital talipes varus			
	7560	congenital anomalies of skull and face bones			
120	75563	other congenital deformity of hip (joint)	Bkgd		
121	7541	congenital anomalies of sternocleidomastoid muscle	Bkgd		
122	75453	congenital metatarsus varus	Bkgd		
123	75461	congenital pes planus	Bkgd		
124	75460	congenital talipes valgus	Bkgd		
125	75461	congenital pes planus	Bkgd		
126	75461	congenital pes planus	Bkgd		
127	75442	congenital bowing of femur	Bkgd		
	75563	other congenital deformity of hip (joint)			
	75564	congenital deformity of knee (joint)			
128	75481	pectus excavatum	Bkgd		
129	75460	congenital talipes valgus	Bkgd		
130	75563	other congenital deformity of hip (joint)	Bkgd		
131	75481	pectus excavatum	Bkgd		

Table D-1 (Continued)

Child	ICD Code	ICD Description	Father's Dioxin Level		
			Model 3	Model 2 C>10	C>5
132	75450	congenital talipes varus	Bkgd		
	75569	other congenital anomalies of lower limb, including pelvis			
133	75560	unspecified congenital anomaly of lower limb			
134	75453	congenital metatarsus varus	Bkgd		
	75569	other congenital anomalies of lower limb, including pelvis	Bkgd		
135	75462	talipes calcaneovalgus	Bkgd		
136	75513	syndactyly of toes without fusion of bone	Bkgd		
	7560	congenital anomalies of skull and face bones			
137	75453	congenital metatarsus varus	Bkgd		
	75569	other congenital anomalies of lower limb, including pelvis			
138	75453	congenital metatarsus varus	Bkgd		
	75513	syndactyly of toes without fusion of bone			
139	75453	congenital metatarsus varus	Bkgd		
140	75460	congenital talipes valgus	Bkgd		
141	75659	other congenital osteodystrophies	Bkgd		
142	75453	congenital metatarsus varus	Bkgd		
143	75461	congenital pes planus	Bkgd		
	75564	congenital deformity of knee (joint)			
144	75563	other congenital deformity of hip (joint)	Bkgd		
145	75566	other congenital anomalies of toes	Bkgd		
146	75481	pectus excavatum	Bkgd		
147	7540	congenital musculoskeletal deformities of skull, face, & jaw	Bkgd		
148	7540	congenital musculoskeletal deformities of skull, face, & jaw			
149	7540	congenital musculoskeletal deformities of skull, face, & jaw			
150	75453	congenital metatarsus varus	Unk		Low
151	75453	congenital metatarsus varus	Unk		Low
152	75450	congenital talipes varus	Unk		Med
153	75442	congenital bowing of femur	Unk		
	75569	other congenital anomalies of lower limb, including pelvis			
154	75453	congenital metatarsus varus	Unk		Med
155	75450	congenital talipes varus	Unk		Low
156	7563	other congenital anomalies of ribs and sternum	Unk		
157	75450	congenital talipes varus	Unk		Low

Table D-1 (Continued)

Child	ICD Code	ICD Description	Father's Dioxin Level		
			Model 3	Model 2 C>10	C>5
158	75453	congenital metatarsus varus	Unk		Low
	75569	other congenital anomalies of lower limb, including pelvis			
159	7542	congenital musculoskeletal deformities of spine	Unk		Low
160	75569	other congenital anomalies of lower limb, including pelvis	Unk		Low
161	75450	congenital talipes varus	Unk		Low
162	75453	congenital metatarsus varus	Unk		Low
	75569	other congenital anomalies of lower limb, including pelvis			
163	75450	congenital talipes varus	Unk		Low
164	75432	congenital subluxation of hip, unilateral	Unk		Low
165	75569	other congenital anomalies of lower limb, including pelvis	Unk		
166	75453	congenital metatarsus varus	Unk		
167	75563	other congenital deformity of hip (joint)	Unk		Low
168	75689	other specified congenital anomalies of musculoskeletal system	Unk		Low
169	75451	congenital talipes equinovarus	Unk		Low
	75453	congenital metatarsus varus			
170	75450	congenital talipes varus	Unk		Med
171	75461	congenital pes planus	Unk		Low
172	75453	congenital metatarsus varus	Unk		Med
173	75489	other specified nonteratogenic anomalies	Unk		
	75566	other congenital anomalies of toes			
174	75563	other congenital deformity of hip (joint)	Unk		
	75564	congenital deformity of knee (joint)			
175	75482	pectus carinatum	Unk		Low
176	75432	congenital subluxation of hip, unilateral	Unk		
177	75452	congenital metatarsus primus varus	Unk		
	75459	other congenital varus deformities of feet			
	75513	syndactyly of toes without fusion of bone			
	75563	other congenital deformity of hip (joint)			
178	75453	congenital metatarsus varus	Unk		Low
	75569	other congenital anomalies of lower limb, including pelvis			
179	75453	congenital metatarsus varus	Unk		
180	75569	other congenital anomalies of lower limb, including pelvis	Unk		
181	7542	congenital musculoskeletal deformities of spine	Unk		Low
	75563	other congenital deformity of hip (joint)			
182	75461	congenital pes planus	Unk		

Table D-1 (Continued)

Child	ICD Code	ICD Description	Father's Dioxin Level		
			Model 3	Model 2 C>10	C>5
183	75617	spina bifida occulta	Low	Med	Med
184	75569	other congenital anomalies of lower limb, including pelvis	Low	Med	Med
185	75513	syndactyly of toes without fusion of bone	Low	Med	Med
186	75453	congenital metatarsus varus	Low	Med	Med
187	75433	congenital subluxation of hip, bilateral	Low	Med	Med
188	7542	congenital musculoskeletal deformities of spine	Low	Med	Med
	75513	syndactyly of toes without fusion of bone	Low	Med	Med
	75617	spina bifida occulta	Low	Med	Med
189	75461	congenital pes planus	Low	Med	Med
	75564	congenital deformity of knee (joint)	Low	Med	Med
190	75450	congenital talipes varus	Low	Med	Med
	75569	other congenital anomalies of lower limb, including pelvis	Low	Med	Med
191	75617	spina bifida occulta	Low	Med	Med
192	75453	congenital metatarsus varus	Low	Med	Med
193	75453	congenital metatarsus varus	Low	Med	Med
194	75433	congenital subluxation of hip, bilateral	Low	Med	Med
195	7560	congenital anomalies of skull and face bones	Low	Med	Med
196	7542	congenital musculoskeletal deformities of spine	Low	Med	Med
	75450	congenital talipes varus	Low	Med	Med
197	75489	other specified nonteratogenic anomalies	Low	Med	Med
198	75453	congenital metatarsus varus	Low	Med	Med
199	75460	congenital talipes valgus	Low	Med	Med
200	75453	congenital metatarsus varus	Low	Med	Med
	75461	congenital pes planus	Low	Med	Med
201	75460	congenital talipes valgus	Low	Med	Med
202	75563	other congenital deformity of hip (joint)	Low	Med	Med
203	75453	congenital metatarsus varus	Low	Med	Med
	75569	other congenital anomalies of lower limb, including pelvis	Low	Med	Med
204	75563	other congenital deformity of hip (joint)	Low	Med	Med
205	7564	chondrodystrophy	Low	Med	Med
206	75453	congenital metatarsus varus	Low	Med	Med
207	75450	congenital talipes varus	Low	Med	Med
208	75461	congenital pes planus	High	High	High
	75481	pectus excavatum	High	High	High
	75567	congenital anomalies of foot, not elsewhere classified	High	High	High
209	75450	congenital talipes varus	High	High	High
210	75450	congenital talipes varus	High	High	High
211	75432	congenital subluxation of hip, unilateral	High	High	High

Table D-1 (Continued)

Child	ICD Code	ICD Description	Father's Dioxin Level		
			Model 3	Model 2 C>10	C>5
212	75453	congenital metatarsus varus	High	High	High
213	75469	other congenital valgus deformities of feet	High	High	High
214	7542	congenital musculoskeletal deformities of spine	High	High	High
	75617	spina bifida occulta			
215	75461	congenital pes planus	High	Med	High
216	75450	congenital talipes varus	High	Med	High
	75461	congenital pes planus			
	75566	other congenital anomalies of toes			
217	75460	congenital talipes valgus	High	High	High
218	75460	congenital talipes valgus	High	High	High
219	75501	polydactyly of fingers	High	Med	High
	75502	polydactyly of toes			
	75530	unspecified reduction deformity of lower limb, congenital			
	75563	other congenital deformity of hip (joint)			
	75564	congenital deformity of knee (joint)			
220	75453	congenital metatarsus varus	High	High	High
221	75453	congenital metatarsus varus	High	High	High
222	75461	congenital pes planus	High	High	High
	75610	congenital anomaly of spine, unspecified			
	75617	spina bifida occulta			
223	75450	congenital talipes varus	High	High	High
224	75569	other congenital anomalies of lower limb, including pelvis	High	Med	High
225	75450	congenital talipes varus	High	Med	High
	75461	congenital pes planus			
226	75451	congenital talipes equinovarus	High	High	High
227	75563	other congenital deformity of hip (joint)	High	High	High
228	75612	spondylolisthesis, congenital	High	High	High
	75617	spina bifida occulta			
229	75450	congenital talipes varus	High	High	High
230	75461	congenital pes planus	High	High	High
231	75461	congenital pes planus	High	High	High

Table D-1 (Continued)

j) Anomalies of the Skin (757)

Child	ICD Code	ICD Description	Father's Dioxin Level		
			Model 3	Model 2 D>10	D>5
1	75732	vascular hamartomas		Low	Med
	75739	other specified congenital anomalies of skin			
2	75733	congenital pigmentary anomalies of skin		Med	Med
3	75732	vascular hamartomas	Bkgd		
4	75732	vascular hamartomas	Bkgd		
5	75732	vascular hamartomas	Bkgd		
6	75732	vascular hamartomas	Bkgd		
7	7572	dermatoglyphic anomalies	Bkgd		
8	75739	other specified congenital anomalies of skin	Bkgd		
9	75739	other specified congenital anomalies of skin	Bkgd		
10	75732	vascular hamartomas	Bkgd		
11	7572	dermatoglyphic anomalies	Bkgd		
12	7571	ichthyosis congenita	Bkgd		
13	75732	vascular hamartomas	Bkgd		
14	75732	vascular hamartomas	Bkgd		
15	7578	other specified congenital anomalies of the integument	Bkgd		
16	7572	dermatoglyphic anomalies	Bkgd		
17	75732	vascular hamartomas	Bkgd		
	75739	other specified congenital anomalies of skin			
18	75732	vascular hamartomas	Bkgd		
19	7572	dermatoglyphic anomalies	Bkgd		
20	75739	other specified congenital anomalies of skin	Bkgd		
21	75732	vascular hamartomas	Bkgd		
22	7576	specified congenital anomalies of breast	Bkgd		
23	7572	dermatoglyphic anomalies	Bkgd		
24	75732	vascular hamartomas	Unk		Low
25	75733	congenital pigmentary anomalies of skin	Unk		
	7574	specified congenital anomalies of hair			
26	75739	other specified congenital anomalies of skin	Unk		Low
27	75739	other specified congenital anomalies of skin	Unk		
	7575	specified congenital anomalies of nails			

Table D-1 (Continued)

Child	ICD Code	ICD Description	Father's Dioxin Level		
			Model 3	Model 2 D>10	D>5
28	75739	other specified congenital anomalies of skin	Unk		
29	75739	other specified congenital anomalies of skin	Low	Med	Med
30	75732	vascular hamartomas	Low	Med	Med
31	75732	vascular hamartomas	Low	Med	Med
32	7572	dermatoglyphic anomalies	Low	Med	Med
33	75732	vascular hamartomas	Low	Med	Med
34	75739	other specified congenital anomalies of skin	Low	Med	Med
35	75739	other specified congenital anomalies of skin	High	High	High
36	75732	vascular hamartomas	High	High	High

k) Chromosomal Anomalies (758)

Child	ICD Code	ICD Description	Father's Dioxin Level		
			Model 3	Model 2 D>10	D>5
1	7580	Down's syndrome	Bkgd		
2	7580	Down's syndrome	Bkgd		
3	7580	Down's syndrome	Bkgd		
4	7580	Down's syndrome	Unk		
5	7580	Down's syndrome	Unk		Low
6	7580	Down's syndrome	Unk		
7	7580	Down's syndrome	High	High	High

l) Other and Unspecified Anomalies (759)

Child	ICD Code	ICD Description	Father's Dioxin Level		
			Model 3	Model 2 D>10	D>5
1	75989	other specified congenital anomalies		Low	Med
2	75989	other specified congenital anomalies	Bkgd		
3	7596	other congenital hamartoses, not elsewhere classified	Bkgd		
4	7598	other specified congenital anomalies	Unk		Low
5	7591	anomalies of adrenal gland, congenital	Low	Med	Med
6	7596	other congenital hamartoses, not elsewhere classified	Low	Med	Med

Table D-2

**Summary of Dioxin-by-Covariate Interactions for
Post-SEA Birth Defects**

a) Table Reference: 6-1[d]

Interaction: Total Congenital Anomalies (DIOXIN by RACE)

RACE	Initial Dioxin	n	Rate	Adj. Relative Risk (95% C.I.)	p-Value
Nonblack	Low	130	200.0(26)	0.96(0.82,1.12)	0.602
	Medium	235	225.3(60)		
	High	200	230.0(46)		
Black	Low	7	571.4(4)	0.35(0.11,1.15)	0.077
	Medium	36	138.9(5)		
	High	8	0.0(0)		

b) Table Reference: 6-2[c]

Interaction: Total Congenital Anomalies (DIOXIN by TIME by DRINK)

DRINK	Time Since SEA (years)	Rate (count/n) Current Dioxin			Adj. Relative Risk (95% C.I.)	p-Value
		Low	Medium	High		
						0.857
No	≤18.6	156.9 (8/51)	261.3 (29/111)	250.0 (17/68)	0.84(0.61,1.16)	0.289
	>18.6	263.2 (10/38)	271.7 (25/92)	220.8 (17/77)	0.81(0.61,1.08)	0.155
Yes	≤18.6	500.0 (2/4)	0.0 (0/7)	0.0 (0/1)	No analysis, only 4 defects total	
	>18.6	500.0 (1/2)	200.0 (1/5)	0.0 (0/3)		

Table D-2 (Continued)

c) Table Reference: 6-2[d]

Interaction: Total Congenital Anomalies (DIOXIN by TIME by F-AGE)

F-AGE	Time Since SEA (years)	Rate (count/n) Current Dioxin			Adj. Relative Risk (95% C.I.)	p-Value
		Low	Medium	High		
						0.720
≤30	≤18.6	172.4 (5/29)	246.4 (17/69)	257.1 (18/70)	1.15(0.88,1.51)	0.294
	>18.6	62.5 (1/16)	204.5 (9/44)	203.7 (11/54)	1.25(0.89,1.76)	0.202
						0.046
>30	≤18.6	306.1 (15/49)	252.9 (22/87)	96.8 (3/31)	0.62(0.42,0.91)	0.014
	>18.6	131.6 (5/38)	333.3 (27/81)	166.7 (8/48)	0.96(0.74,1.23)	0.739

d) Table Reference: 6-3[b]

Interaction: Total Congenital Anomalies (Categorized DIOXIN by OCC)

OCC	Exposure Category	n	Rate	Category Contrast	Adj. Relative Risk (95% C.I.)	p-Value
Officers	Background	257	217.9(56)	All		0.039
	Unknown	113	150.4(17)	U vs B	0.64(0.35,1.15)	0.136
	Low	22	45.5(1)	L vs B	0.17(0.02,1.31)	0.087
	High	0	--	H vs B	--	--
Enlisted Flyers	Background	83	228.9(19)	All		0.002
	Unknown	23	391.3(9)	U vs B	2.17(0.80,5.83)	0.124
	Low	30	433.3(13)	L vs B	2.58(1.05,6.29)	0.037
	High	15	0.0(0)	H vs B	--	--
Enlisted Ground	Background	503	212.7(107)	All		0.150
	Unknown	110	218.2(24)	U vs B	1.03(0.63,1.70)	0.900
	Low	104	317.3(33)	L vs B	1.72(1.08,2.74)	0.022
	High	188	212.8(40)	H vs B	1.00(0.66,1.51)	0.999

Table D-2 (Continued)

e) Table Reference: 6-6[b]

Interaction: Total Congenital Anomalies (Categorized DIOXIN by OCC)

OCC	Exposure Category	n	Rate	Category Contrast	Adj. Relative Risk (95% C.I.)	p-Value
Officers	Background	228	210.5(48)	All		0.074
	Unknown	102	137.3(14)	U vs B	0.58(0.30,1.12)	0.103
	Low	19	52.6(1)	L vs B	0.23(0.03,1.78)	0.159
	High	0	-	H vs B	--	--
Enlisted Flyers	Background	65	230.8(15)	All		0.014
	Unknown	19	368.4(7)	U vs B	1.94(0.64,5.89)	0.234
	Low	27	407.4(11)	L vs B	2.29(0.87,6.05)	0.091
	High	13	0.0(0)	H vs B	--	--
Enlisted Ground	Background	422	222.7(94)	All		0.094
	Unknown	78	192.3(15)	U vs B	0.83(0.45,1.53)	0.549
	Low	91	329.7(30)	L vs B	1.72(1.05,2.82)	0.032
	High	167	203.6(34)	H vs B	0.86(0.56,1.35)	0.522

f) Table Reference: 6-47[c]

Interaction: Genital (DIOXIN by TIME by F-AGE)

F-AGE	Time Since SEA (years)	Rate (count/n) Current Dioxin			Adj. Relative Risk (95% C.I.)	p-Value
		Low	Medium	High		
≤30	≤18.6	0.0 (0/16)	35.1 (2/57)	21.7 (1/46)	0.96(0.31,2.90)	0.934
	>18.6	0.0 (0/7)	26.3 (1/38)	0.0 (0/34)	No adjusted analysis, only 1 defect total	
>30	≤18.6	37.0 (1/27)	80.0 (4/50)	0.0 (0/16)	0.54(0.15,1.98)	0.349
	>18.6	0.0 (0/21)	0.0 (0/46)	30.3 (1/33)	No adjusted analysis, only 1 defect total	

Table D-2 (Continued)

g) Table Reference: 6-55[c]

Interaction: Musculoskeletal (DIOXIN by RACE)

RACE	Initial Dioxin	n	Rate	Adj. Relative Risk (95% C.I.)	p-Value
Nonblack	Low	79	101.3(8)	0.76(0.58,0.99)	0.039
	Medium	203	177.3(36)		
	High	134	97.0(13)		
Black	Low	20	100.0(2)	No adjusted analysis, only 2 defects total	
	Medium	15	0.0(0)		
	High	7	0.0(0)		

h) Table Reference: 6-55[d]

Interaction: Musculoskeletal (DIOXIN by RACE)

RACE	Initial Dioxin	n	Rate	Adj. Relative Risk (95% C.I.)	p-Value
Nonblack	Low	130	123.1(16)	0.85(0.70,1.04)	0.107
	Medium	235	136.2(32)		
	High	200	135.0(27)		
Black	Low	7	428.6(3)	0.03(0.001,0.68)	0.024
	Medium	36	55.6(2)		
	High	8	0.0(0)		

i) Table Reference: 6-56[d]

Interaction: Genital (DIOXIN by TIME by F-AGE)

F-AGE	Time Since SEA (years)	Rate (count/n)			Adj. Relative Risk (95% C.I.)	p-Value
		Low	Medium	High		
						0.657
≤30	≤18.6	137.9 (4/29)	115.9 (8/69)	171.4 (12/70)	1.14(0.82,1.57)	0.442
	>18.6	62.5 (1/16)	113.6 (5/44)	92.6 (5/54)	1.00(0.65,1.56)	0.986

Table D-2 (Continued)

F-AGE	Time Since SEA (years)	Rate (count/n)			Adj. Relative Risk (95% C.I.)	p-Value
		Low	Medium	High		
						0.330
>30	≤18.6	183.7 (9/49)	126.4 (11/87)	64.5 (2/31)	0.56(0.34,0.92)	0.021
	>18.6	105.3 (4/38)	209.9 (17/81)	41.7 (2/48)	0.74(0.53,1.04)	0.080

j) Table Reference: 6-57[b]

Interaction: Musculoskeletal (Categorized DIOXIN by OCC)

OCC	Exposure Category	n	Rate	Category Contrast	Adj. Relative Risk (95% C.I.)	p-Value
Officers	Background	257	155.6(40)	All		0.001
	Unknown	113	53.1(6)	U vs B	0.30(0.12,0.74)	0.009
	Low	22	0.0(0)	L vs B	--	--
	High	0	--	H vs B	--	--
Enlisted Flyers	Background	83	156.6(13)	All		0.021
	Unknown	23	304.3(7)	U vs B	2.36(0.80,6.91)	0.116
	Low	30	266.7(8)	L vs B	1.96(0.71,5.38)	0.190
	High	15	0.0(0)	H vs B	--	--
Enlisted Ground	Background	503	131.2(66)	All		0.726
	Unknown	110	154.5(17)	U vs B	1.21(0.68,2.16)	0.518
	Low	104	144.2(15)	L vs B	1.12(0.61,2.05)	0.723
	High	188	111.7(21)	H vs B	0.83(0.49,1.40)	0.491

k) Table Reference: 6-58[c]

Interaction: Musculoskeletal (DIOXIN by RACE)

RACE	Initial Dioxin	n	Rate	Adj. Relative Risk (95% C.I.)	p-Value
Nonblack	Low	64	109.4(7)	0.85(0.65,1.10)	0.211
	Medium	178	168.5(30)		
	High	122	98.4(12)		
Black	Low	10	200.0(2)	No adjusted analysis, only 2 defects total	
	Medium	12	0.0(0)		
	High	4	0.0(0)		

Table D-2 (Continued)

1) Table Reference: 6-58[d]

Interaction: Musculoskeletal (DIOXIN by RACE)

RACE	Initial Dioxin	n	Rate	Adj. Relative Risk (95% C.I.)	p-Value
Nonblack	Low	104	86.5(9)	0.88(0.71,1.10)	0.264
	Medium	201	129.4(26)		
	High	182	137.4(25)		
Black	Low	0	--	No adjusted analysis, only 2 defects total	
	Medium	22	90.9(2)		
	High	4	0.0(0)		

m) Table Reference: 6-60[b]

Interaction: Musculoskeletal (Categorized DIOXIN by OCC)

OCC	Exposure Category	n	Rate	Category Contrast	Adj. Relative Risk (95% C.I.)	p-Value
Officers	Background	228	153.5(35)	All		0.002
	Unknown	102	49.0(5)	U vs B	0.28(0.10,0.74)	0.010
	Low	19	0.0(0)	L vs B	--	--
	High	0	--	H vs B	--	--
Enlisted Flyers	Background	65	153.8(10)	All		0.089
	Unknown	19	263.2(5)	U vs B	1.96(0.57,6.76)	0.280
	Low	27	259.3(7)	L vs B	1.92(0.64,5.81)	0.242
	High	13	0.0(0)	H vs B	--	--
Enlisted Ground	Background	422	139.8(59)	All		0.778
	Unknown	78	128.2(10)	U vs B	0.90(0.44,1.86)	0.784
	Low	91	142.9(13)	L vs B	1.02(0.53,1.96)	0.943
	High	167	113.8(19)	H vs B	0.76(0.44,1.32)	0.327

Table D-2 (Continued)

n) Table Reference: 6-61[d]

Interaction: Skin (DIOXIN by RACE)

RACE	Initial Dioxin	n	Rate	Adj. Relative Risk (95% C.I.)	p-Value
Nonblack	Low	130	0.0(0)	1.20(0.77,1.87)	0.425
	Medium	235	29.8(7)		
	High	200	222.2(2)		
Black	Low	7	142.9(1)	No adjusted analysis, only 1 defect total	
	Medium	36	0.0(0)		
	High	8	0.0(0)		

o) Table Reference: 6-63[b]

Interaction: Skin (Categorized DIOXIN by RACE)

RACE	Exposure Category	n	Rate	Category Contrast	Adj. Relative Risk (95% C.I.)	p-Value
Nonblack	Background	788	22.8(18)	All		0.115
	Unknown	230	8.7(2)	U vs B	0.38(0.09,1.63)	0.190
	Low	144	41.7(6)	L vs B	1.86(0.72,4.77)	0.197
	High	193	10.4(2)	H vs B	0.45(0.10,1.95)	0.285
Black	Background	55	0.0(0)	All	No adjusted analysis, only 2 defects total	
	Unknown	16	125.0(2)	U vs B		
	Low	12	0.0(0)	L vs B		
	High	10	0.0(0)	H vs B		

TABLE E-1

**Summary of Dioxin-by-Covariate Interactions for
Birth Defects Severity (Major, Not Major)**

a) Table Reference: 7-10[c]

Interactions: Severity (DIOXIN by TIME by OCC)

OCC	Time Since SEA (years)	Dioxin	n	Current Rate(count)	Adj. Relative Risk (95% C.I.)	p-Value
						0.301
Officers	≤18.6	Low	19	105.3(2)	0.18(00.0,53.5)	0.543
		Medium	6	0.0(0)		
		High	0	--		
	>18.6	Low	18	0.0(0)	9.17(0.02,4333)	0.481
		Medium	16	62.5(1)		
		High	0	--		
						0.860
Enlisted Flyers	≤18.6	Low	3	0.0(0)	0.63(0.08,5.09)	0.656
		Medium	24	125.0(3)		
		High	1	0.0(0)		
	>18.6	Low	2	500.0(1)	0.49(0.08,2.94)	0.437
		Medium	19	157.9(3)		
		High	3	0.0(0)		
						0.232
Enlisted Ground	≤18.6	Low	33	0.0(0)	1.22(0.68,2.17)	0.499
		Medium	88	90.9(8)		
		High	68	44.1(3)		
	>18.6	Low	20	100.0(2)	0.78(0.50,1.22)	0.281
		Medium	62	112.9(7)		
		High	77	90.9(7)		

Table E-1 (Continued)

b) Table Reference: 7-12[b]

Interaction: Severity (Categorized DIOXIN by SMOKE,
Categorized DIOXIN by OCC)

SMOKE/OCC	Initial Dioxin	N	Rate/ (count)	Category Contrast	Adj. Relative Risk (95% C.I.)	p-Value
No Officers	Background	210	57.1(12)	All		0.714
	Unknown	84	83.3(7)	U vs B	1.50(0.57,3.97)	0.412
	Low	18	55.6(1)	L vs B	0.97(0.12,7.98)	0.978
	High	0	--	H vs B	--	--
No Enlisted Flyers	Background	57	52.6(3)	All		0.034
	Unknown	15	266.7(4)	U vs B	6.55(1.26,34.1)	0.023
	Low	26	153.8(4)	L vs B	3.27(0.66,16.1)	0.142
	High	14	0.0(0)	H vs B	--	--
No Enlisted Ground	Background	400	75.0(30)	All		0.722
	Unknown	90	44.4(4)	U vs B	0.57(0.20,1.67)	0.308
	Low	74	67.6(5)	L vs B	0.89(0.34,2.39)	0.823
	High	165	60.6(10)	H vs B	0.80(0.38,1.67)	0.545
Yes Officers	Background	47	21.3(1)	All		--
	Unknown	29	34.5(1)	U vs B	1.64(0.09,28.6)	0.729
	Low	4	0.0(0)	L vs B	--	--
	High	0	--	H vs B	--	--
Yes Enlisted Flyers	Background	26	38.5(1)	All		--
	Unknown	8	125.0(1)	U vs B	8.72(0.22,354)	0.234
	Low	4	500.0(2)	L vs B	--	--
	High	1	0.0(0)	H vs B	--	--
Yes Enlisted Ground	Background	103	48.5(5)	All		0.009
	Unknown	20	0.0(0)	U vs B	--	--
	Low	30	233.3(7)	L vs B	5.97(1.72,20.7)	0.005
	High	23	87.0(2)	H vs B	1.87(0.33,10.4)	0.473

Table E-1 (Continued)

c) Table Reference: 7-18[b]

Interaction: Severity (Categorized DIOXIN by SMOKE)

SMOKE	Initial Dioxin	n	Rate/ (count)	Category Contrast	Adj. Relative Risk (95% C.I.)	p-Value
No	Background	564	67.4(38)	All		0.229
	Unknown	152	98.7(15)	U vs B	1.50(0.80,2.81)	0.204
	Low	103	87.4(9)	L vs B	1.31(0.61,2.80)	0.487
	High	158	44.3(7)	H vs B	0.61(0.27,1.40)	0.246
Yes	Background	151	39.7(6)	All		0.014
	Unknown	47	21.3(1)	U vs B	0.49(0.06,4.25)	0.513
	Low	34	235.3(8)	L vs B	5.65(1.73,18.5)	0.004
	High	22	90.9(2)	H vs B	2.42(0.44,13.2)	0.308