

APPENDIX I-2.

Interaction Tables for the Gastrointestinal Assessment

This appendix contains exposure analyses results of interactions between covariates and group or dioxin. Results are presented for separate strata of the covariate and include sample sizes, percent abnormal, relative risks, confidence intervals, and p-values for discrete dependent variables. Sample sizes, adjusted means, differences of adjusted means and confidence intervals or adjusted slopes and standard errors, and p-values are given for continuous dependent variables. Means are transformed back to the original scale, if necessary. Chapter 7, Statistical Methods, provides further details on the analytical approaches used in the interaction analyses. The covariate involved in the interaction and a reference to the analysis table in Chapter 13, Gastrointestinal Assessment, are given in the heading of each subtable. A summary of the interactions described in this appendix follows.

Appendix I-2 Table	Chapter 13 Table	Dependent Variable	Model	Covariate
I-2-1	13-3	Jaundice	1	Race
I-2-2	13-6	Chronic Liver Disease and Cirrhosis	2 3	Race Race
I-2-3	13-9	Other Liver Disorders	2 3 4 5 6	Occupation Degreasing Chemical Exposure Occupation, Degreasing Chemical Exposure Occupation, Degreasing Chemical Exposure Occupation, Degreasing Chemical Exposure
I-2-4	13-12	AST (Continuous)	2 4 5 6	Current Alcohol Use Current Alcohol Use Current Alcohol Use Current Alcohol Use
I-2-5	13-13	AST (Discrete)	1 2 3 4 5 6	Current Alcohol Use Current Alcohol Use Current Alcohol Use Current Alcohol Use Current Alcohol Use Current Alcohol Use
I-2-6	13-15	ALT (Discrete)	1 3	Age, Degreasing Chemical Exposure Degreasing Chemical Exposure, Current Alcohol Use
I-2-7	13-16	GGT (Continuous)	2 3 4 5 6	Degreasing Chemical Exposure Degreasing Chemical Exposure Occupation Occupation Occupation

Appendix I-2 Table	Chapter 13 Table	Dependent Variable	Model	Covariate
I-2-8	13-17	GGT (Discrete)	3 4 5 6	Degreasing Chemical Exposure Degreasing Chemical Exposure Degreasing Chemical Exposure Degreasing Chemical Exposure
I-2-9	13-18	Alkaline Phosphatase (Continuous)	1 2 3 4 5 6	Degreasing Chemical Exposure, Age, Race Degreasing Chemical Exposure Degreasing Chemical Exposure Race Race Race
I-2-10	13-19	Alkaline Phosphatase (Discrete)	2	Degreasing Chemical Exposure
I-2-11	13-20	Total Bilirubin (Continuous)	4	Degreasing Chemical Exposure
I-2-12	13-21	Total Bilirubin (Discrete)	2 4 5 6	Industrial Chemical Exposure Degreasing Chemical Exposure Degreasing Chemical Exposure Degreasing Chemical Exposure
I-2-13	13-22	Direct Bilirubin (Discrete)	4 5 6	Lifetime Alcohol History Lifetime Alcohol History Lifetime Alcohol History
I-2-14	13-23	Lactic Dehydrogenase (LDH) (Continuous)	1 3	Age, Lifetime Alcohol History Age, Race Lifetime Alcohol History
I-2-15	13-24	Lactic Dehydrogenase (LDH) (Discrete)	1 3	Current Alcohol Use Lifetime Alcohol History
I-2-16	13-25	Cholesterol (Continuous)	1 2 3	Current Alcohol Use Degreasing Chemical Exposure Lifetime Alcohol History
I-2-17	13-26	Cholesterol (Discrete)	1 2 3 5	Current Alcohol Use Degreasing Chemical Exposure Lifetime Alcohol History Current Alcohol Use Occupation
I-2-18	13-27	HDL Cholesterol (Continuous)	1 3 4 5 6	Current Alcohol Use, Lifetime Alcohol History Current Alcohol Use, Lifetime Alcohol History Current Alcohol Use, Lifetime Alcohol History Current Alcohol Use, Lifetime Alcohol History Current Alcohol Use, Lifetime Alcohol History, Degreasing Chemical Exposure

Appendix I-2 Table	Chapter 13 Table	Dependent Variable	Model	Covariate
I-2-19	13-28	HDL Cholesterol (Discrete)	3 4 5 6	Lifetime Alcohol History Lifetime Alcohol History Lifetime Alcohol History Lifetime Alcohol History
I-2-20	13-29	Cholesterol-HDL Ratio (Continuous)	2 3 4 5 6	Current Alcohol Use Current Alcohol Use Degreasing Chemical Exposure Age Degreasing Chemical Exposure
I-2-21	13-31	Triglycerides (Continuous)	2 4 6	Occupation Occupation Occupation and Lifetime Alcohol History
I-2-22	13-33	Creatine Kinase (Continuous)	1 3	Race Lifetime Alcohol History
I-2-23	13-34	Creatine Kinase (Discrete)	1 3	Race Race, Lifetime Alcohol History
I-2-24	13-36	Serum Amylase (Discrete)	2 3	Age Race
I-2-25	13-38	Serological Evidence of Prior Hepatitis B Infection	3 4 5 6	Age, Occupation Occupation Occupation Occupation
I-2-26	13-39	Antibodies for Hepatitis C	1	Age, Degreasing Chemical Exposure
I-2-27	13-40	Stool Hemoccult	1	Lifetime Alcohol History
I-2-28	13-41	Prealbumin (Continuous)	1 2 3 4 5 6	Current Alcohol Use Industrial Chemical Exposure Industrial Chemical Exposure Industrial Chemical Exposure, Degreasing Chemical Exposure Occupation, Degreasing Chemical Exposure Industrial Chemical Exposure, Degreasing Chemical Exposure
I-2-29	13-42	Prealbumin (Discrete)	4 5 6	Occupation Occupation Age
I-2-30	13-43	Albumin (Continuous)	1 2 3 4 5 6	Age, Lifetime Alcohol History Industrial Chemical Exposure Industrial Chemical Exposure Current Alcohol Use, Degreasing Chemical Exposure Current Alcohol Use, Degreasing Chemical Exposure Current Alcohol Use, Degreasing Chemical Exposure

Appendix I-2 Table	Chapter 13 Table	Dependent Variable	Model	Covariate
I-2-31	13-44	Albumin (Discrete)	1	Industrial Chemical Exposure
I-2-32	13-45	α -1 Acid Glycoprotein (Continuous)	2	Occupation, Lifetime Alcohol History
			3	Lifetime Alcohol History
			4	Lifetime Alcohol History
I-2-33	13-46	α -1 Acid Glycoprotein (Discrete)	1	Age
			2	Occupation, Degreasing Chemical Exposure
			3	Age
			4	Occupation
			5	Occupation
			6	Occupation
I-2-34	13-47	α -1 Antitrypsin (Continuous)	2	Industrial Chemical Exposure
			3	Degreasing Chemical Exposure
			4	Occupation, Degreasing Chemical Exposure
			5	Occupation, Degreasing Chemical Exposure
			6	Occupation, Degreasing Chemical Exposure
I-2-35	13-49	α -2 Macroglobulin (Continuous)	2	Age
I-2-36	13-51	Apolipoprotein B (Continuous)	2	Age
I-2-36	13-51	Apolipoprotein B (Continuous)	5	Age
I-2-37	13-52	Apolipoprotein B (Discrete)	2	Age
I-2-37	13-52	Apolipoprotein B (Discrete)	5	Age
I-2-38	13-53	C ₃ Complement	5	Occupation
I-2-39	13-54	C ₃ Complement (Discrete)	1	Race
			3	Race, Industrial Chemical Exposure
			4	Current Alcohol Use
I-2-40	13-55	C ₄ Complement (Continuous)	2	Age, Occupation
			5	Occupation
I-2-41	13-57	Haptoglobin (Continuous)	2	Age, Lifetime Alcohol History
I-2-42	13-58	Haptoglobin (Discrete)	2	Occupation, Lifetime Alcohol History
I-2-43	13-59	Transferrin (Continuous)	2	Occupation, Industrial Chemical Exposure
I-2-44	13-60	Transferrin (Discrete)	1	Lifetime Alcohol History
			3	Lifetime Alcohol History

Table I-2-1.
Interaction Table for Jaundice

a) MODEL I: RANCH HANDS VS. COMPARISONS — ADJUSTED (Group-by-Race: Table 13-4)						
Stratum	Occupational Category	Group	n	Percent Yes	Adj. Relative Risk (95% C.I.)	p-Value
<i>Non-Black</i>	<i>All</i>	<i>Ranch Hand</i>	872	1.7	0.55 (0.30,1.00)	0.052
		<i>Comparison</i>	1,174	3.2		
<i>Black</i>	<i>All</i>	<i>Ranch Hand</i>	56	3.6	--	--
		<i>Comparison</i>	74	0.0		
<i>Non-Black</i>	Officer	<i>Ranch Hand</i>	348	2.6	0.61 (0.27,1.36)	0.228
		<i>Comparison</i>	480	4.2		
	Enlisted Flyer	<i>Ranch Hand</i>	150	2.0	1.91 (0.33,11.18)	0.473
		<i>Comparison</i>	181	1.1		
	Enlisted Groundcrew	<i>Ranch Hand</i>	374	0.8	0.27 (0.08,0.88)	0.029
		<i>Comparison</i>	513	2.9		
<i>Black</i>	Officer	<i>Ranch Hand</i>	7	0.0	--	--
		<i>Comparison</i>	6	0.0		
	Enlisted Flyer	<i>Ranch Hand</i>	10	10.0	--	--
		<i>Comparison</i>	15	0.0		
	Enlisted Groundcrew	<i>Ranch Hand</i>	39	2.6	--	--
		<i>Comparison</i>	53	0.0		

--: Adjusted relative risk, confidence interval, and p-value not presented due to the sparse number of abnormalities.

Table I-2-2.
Interaction Table for Chronic Liver Disease and Cirrhosis (Alcohol-Related)

a) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Race: Table 13-6)					
Stratum	Initial Dioxin Category	Summary Statistics		Analysis Results for Log ₂ (Initial Dioxin)	
		Initial Dioxin	n	Percent Yes	Adjusted Relative Risk (95% C.I.) ^a
Non-Black	Low	145		4.1	1.13 (0.82,1.55)
	Medium	146		5.5	
	High	144		6.9	
Black	Low	16		25.0	0.14 (0.02,0.95)
	Medium	9		0.0	
	High	7		0.0	

Stratum	Dioxin Category	n	Percent Yes	Adjusted Relative Risk (95% C.I.) ^b		p-Value
				(95% C.I.) ^b	p-Value	
Non-Black	Comparison	938	5.8			
	Background RH	334	5.7	1.09 (0.60,1.97)		0.787
	Low RH	218	4.6	0.71 (0.34,1.50)		0.369
	High RH	217	6.5	0.98 (0.50,1.90)		0.951
	Low plus High RH	435	5.5	0.85 (0.50,1.44)		0.548
Black	Comparison	49	12.2			
	Background RH	13	0.0	--	--	
	Low RH	21	19.0	1.58 (0.36,6.95)		0.544
	High RH	11	0.0	--	--	
	Low plus High RH	32	12.5	0.76 (0.18,3.29)		0.713

^a Relative risk for a twofold increase in initial dioxin.

^b Relative risk and confidence interval relative to Comparisons.

--: Adjusted relative risk, confidence interval, and p-value not presented due to the sparse number of abnormalities.

Note: Model 2: Low = 39-98 ppt; Medium = >98-232 ppt; High = >232 ppt.

Model 3: RH = Ranch Hand.

Comparison: Current Dioxin ≤ 10 ppt.

Background (Ranch Hand): Current Dioxin ≤ 10 ppt.

Low (Ranch Hand): Current Dioxin > 10 ppt, 10 ppt < Initial Dioxin ≤ 143 ppt.

High (Ranch Hand): Current Dioxin > 143 ppt.

Table I-2-3.
Interaction Table for Other Liver Disorders

a) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED <i>(Initial Dioxin-by-Occupation: Table I-3-9)</i>					
Stratum	Initial Dioxin Category Summary Statistics			Analysis Results for Log_e (Initial Dioxin)	
	Initial Dioxin	n	Percent Yes	Adjusted Relative Risk (95% C.I.)^a	p-Value
Officer	Low	76	31.6	1.56 (0.78,3.10)	0.207
	Medium	34	41.2		
	High	1	100.0		
Enlisted Flyer	Low	36	11.1	1.98 (1.28,3.07)	0.002
	Medium	43	25.6		
	High	31	45.2		
Enlisted Groundcrew	Low	61	29.5	1.05 (0.87,1.26)	0.609
	Medium	96	32.3		
	High	141	33.3		

b) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED <i>(Dioxin Category-by-Degreasng Chemical Exposure: Table I-3-9)</i>					
Stratum	Dioxin Category	n	Percent	Adjusted Relative Risk	
			Yes	(95% C.I.)^b	p-Value
No	Comparison	367	25.6		
	Background RH	180	21.7	0.82 (0.53,1.27)	0.373
	Low RH	94	27.7	1.04 (0.62,1.75)	0.877
	High RH	51	45.1	2.73 (1.47,5.09)	0.002
	Low plus High RH	145	33.8	1.48 (0.97,2.26)	0.070
Yes	Comparison	669	28.6		
	Background RH	185	28.6	1.09 (0.75,1.58)	0.639
	Low RH	159	29.6	1.02 (0.69,1.51)	0.923
	High RH	202	32.2	1.14 (0.80,1.63)	0.456
	Low plus High RH	361	30.9	1.08 (0.81,1.43)	0.605

Table I-2-3. (Continued)
Interaction Table for Other Liver Disorders

c) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Occupation: Table 13-9)					
Stratum	Current Dioxin Category Summary Statistics			Analysis Results for \log_2 (Current Dioxin + 1)	
	Current Dioxin	n	Percent Yes	Adjusted Relative Risk (95% C.I.) ^c	p-Value
Officer	Low	189	25.4	1.29 (0.96,1.75)	0.096
	Medium	138	33.3		
	High	14	28.6		
Enlisted Flyer	Low	30	6.7	2.04 (1.38,3.00)	<0.001
	Medium	56	17.9		
	High	60	35.0		
Enlisted Groundcrew	Low	71	26.8	1.07 (0.93,1.23)	0.324
	Medium	97	32.0		
	High	216	33.3		

d) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Degreasing Chemical Exposure: Table 13-9)					
Stratum	Current Dioxin Category Summary Statistics			Analysis Results for \log_2 (Current Dioxin + 1)	
	Current Dioxin	n	Percent Yes	Adjusted Relative Risk (95% C.I.) ^c	p-Value
No	Low	153	20.3	1.49 (1.22,1.82)	<0.001
	Medium	109	28.4		
	High	63	41.3		
Yes	Low	137	27.7	1.09 (0.95,1.24)	0.226
	Medium	182	30.8		
	High	227	31.3		

e) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Occupation: Table 13-9)					
Stratum	Current Dioxin Category Summary Statistics			Analysis Results for \log_2 (Current Dioxin + 1)	
	Current Dioxin	n	Percent Yes	Adjusted Relative Risk (95% C.I.) ^c	p-Value
Officer	Low	188	24.5	1.28 (1.01,1.62)	0.039
	Medium	133	32.3		
	High	20	45.0		
Enlisted Flyer	Low	32	12.5	1.84 (1.32,2.57)	<0.001
	Medium	55	14.5		
	High	59	35.6		
Enlisted Groundcrew	Low	74	28.4	1.07 (0.94,1.21)	0.301
	Medium	101	32.7		
	High	209	32.5		

Table I-2-3. (Continued)
Interaction Table for Other Liver Disorders

f) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Degreasing Chemical Exposure: Table 13-9)					
Current Dioxin Category Summary Statistics				Analysis Results for \log_2 (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent Yes	Adjusted Relative Risk (95% C.I.) ^c	p-Value
No	Low	147	19.7	1.42 (1.19,1.69)	<0.001
	Medium	114	28.1		
	High	64	42.2		
Yes	Low	147	28.6	1.09 (0.97,1.22)	0.161
	Medium	175	29.7		
	High	224	31.7		

g) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Occupation: Table 13-9)					
Current Dioxin Category Summary Statistics				Analysis Results for \log_2 (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent Yes	Adjusted Relative Risk (95% C.I.) ^c	p-Value
Officer	Low	188	24.5	1.23 (0.97,1.56)	0.094
	Medium	133	32.3		
	High	20	45.0		
Enlisted Flyer	Low	31	12.9	1.77 (1.26,2.48)	0.001
	Medium	55	14.5		
	High	59	35.6		
Enlisted Groundcrew	Low	74	28.4	1.05 (0.93,1.19)	0.458
	Medium	101	32.7		
	High	209	32.5		

Table I-2-3. (Continued)
Interaction Table for Other Liver Disorders

h) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Degreasing Chemical Exposure: Table I-3-9)				
Stratum	Current Dioxin Category Summary Statistics			Analysis Results for $\log_2(\text{Current Dioxin} + 1)$
	Current Dioxin	n	Percent Yes	
No	Low	147	19.7	1.37 (1.15,1.64) 0.001
	Medium	114	28.1	
	High	64	42.2	
Yes	Low	146	28.8	1.05 (0.93,1.19) 0.427
	Medium	175	29.7	
	High	224	31.7	

^a Relative risk for a twofold increase in initial dioxin.

^b Relative risk and confidence interval relative to Comparisons.

^c Relative risk for a twofold increase in current dioxin.

Note: Model 2: Low = 39-98 ppt; Medium = >98-232 ppt; High = >232 ppt.

Model 3: RH = Ranch Hand.

Comparison: Current Dioxin \leq 10 ppt.

Background (Ranch Hand): Current Dioxin \leq 10 ppt.

Low (Ranch Hand): Current Dioxin > 10 ppt, 10 ppt < Initial Dioxin \leq 143 ppt.

High (Ranch Hand): Current Dioxin > 10 ppt, Initial Dioxin > 143 ppt.

Model 4: Low = \leq 8.1 ppt; Medium = >8.1-20.5 ppt; High = >20.5 ppt.

Models 5 and 6: Low = \leq 46 ppq; Medium = >46-128 ppq; High = >128 ppq.

Table I-2-4.
Interaction Table for AST (U/L)
(Continuous)

a) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Current Alcohol Use: Table 13-12)				
Initial Dioxin Category Summary Statistics			Analysis Results for \log_2 (Initial Dioxin)	
Stratum	Initial Dioxin	n	Adjusted Mean ^a	Adjusted Slope (Std. Error) ^b
0-1 Drinks/Day	Low	129	21.64	-0.0025 (0.0151)
	Medium	134	22.60	
	High	139	21.78	
>1-4 Drinks/Day	Low	40	22.76	0.0725 (0.0302)
	Medium	29	25.40	
	High	29	27.79	
>4 Drinks/Day	Low	2	21.10	0.2692 (0.1078)
	Medium	4	32.87	
	High	2	57.11	

b) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Current Alcohol Use: Table 13-12)				
Current Dioxin Category Summary Statistics			Analysis Results for \log_2 (Initial Dioxin)	
Stratum	Current Dioxin	n	Adjusted Mean ^a	Adjusted Slope (Std. Error) ^b
0-1 Drinks/Day	Low	224	21.56	0.0072 (0.0102)
	Medium	217	22.27	
	High	236	21.78	
>1-4 Drinks/Day	Low	56	23.40	0.0332 (0.0216)
	Medium	70	26.31	
	High	45	24.22	
>4 Drinks/Day	Low	7	20.06	0.2009 (0.0642)
	Medium	3	20.51	
	High	6	35.94	

Table I-2-4. (Continued)
Interaction Table for AST (U/L)
(Continuous)

c) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Current Alcohol Use: Table 13-12)					
Stratum	Current Dioxin Category Summary Statistics			Analysis Results for Log₂ (Current Dioxin + 1)	
	Current Dioxin	n	Adjusted Mean^a	Adjusted Slope (Std. Error)^b	p-Value
0-1 Drinks/Day	Low	227	21.36	0.0070 (0.0086)	0.416
	Medium	219	22.12		
	High	231	22.09		
>1-4 Drinks/Day	Low	57	23.29	0.0350 (0.0185)	0.059
	Medium	67	25.14		
	High	47	25.91		
>4 Drinks/Day	Low	6	19.37	0.1344 (0.0467)	0.004
	Medium	4	21.25		
	High	6	36.52		

d) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Current Alcohol Use: Table 13-12)					
Stratum	Current Dioxin Category Summary Statistics			Analysis Results for Log₂ (Current Dioxin + 1)	
	Current Dioxin	n	Adjusted Mean^a	Adjusted Slope (Std. Error)^b	p-Value
0-1 Drinks/Day	Low	226	21.49	0.0045 (0.0093)	0.624
	Medium	219	22.17		
	High	231	21.93		
>1-4 Drinks/Day	Low	57	23.45	0.0313 (0.0189)	0.098
	Medium	67	25.11		
	High	47	25.70		
>4 Drinks/Day	Low	6	19.39	0.1328 (0.0467)	0.005
	Medium	4	21.01		
	High	6	36.09		

^a Transformed from natural logarithm scale.

^b Slope and standard error based on natural logarithm of AST versus log₂ dioxin.

Note: RH = Ranch Hand.

Model 2: Low = 39-98 ppt; Medium = >98-232 ppt; High = >232 ppt.

Model 3: Comparison: Current Dioxin ≤ 10 ppt.

Background (Ranch Hand): Current Dioxin ≤ 10 ppt.

Low (Ranch Hand): Current Dioxin > 10 ppt, 10 ppt < Initial Dioxin ≤ 143 ppt.

High (Ranch Hand): Current Dioxin > 10 ppt, Initial Dioxin > 143 ppt.

Model 4: Low = ≤ 8.1 ppt; Medium = > 8.1-20.5 ppt; High = > 20.5 ppt.

Models 5 and 6: Low = ≤ 46 ppq; Medium = > 46-128 ppq; High = > 128 ppq.

Table I-2-5.
Interaction Table for AST
(Discrete)

a) MODEL 1: RANCH HANDS VS. COMPARISONS — ADJUSTED (Group-by-Current Alcohol Use: Table 13-13)						
Stratum	Occupational Category	Group	n	Percent High	Adj. Relative Risk (95% C.I.)	p-Value
0-1 Drinks/Day	All	<i>Ranch Hand</i>	719	1.1	<i>0.46 (0.20,1.03)</i>	<i>0.059</i>
		<i>Comparison</i>	980	2.4		
>1-4 Drinks/Day	All	<i>Ranch Hand</i>	181	7.7	<i>1.41 (0.63,3.15)</i>	<i>0.398</i>
		<i>Comparison</i>	213	5.6		
>4 Drinks/Day	All	<i>Ranch Hand</i>	17	17.7	<i>0.97 (0.21,4.43)</i>	<i>0.971</i>
		<i>Comparison</i>	39	18.0		
0-1 Drinks/Day	Officer	<i>Ranch Hand</i>	251	1.2	<i>0.48 (0.17,1.35)</i>	<i>0.166</i>
		<i>Comparison</i>	366	3.0		
	Enlisted Flyer	<i>Ranch Hand</i>	126	0.0	<i>0.22 (0.04,1.24)</i>	<i>0.085</i>
		<i>Comparison</i>	149	3.4		
	Enlisted Groundcrew	<i>Ranch Hand</i>	342	1.5	<i>0.55 (0.21,1.47)</i>	<i>0.234</i>
		<i>Comparison</i>	465	1.5		
>1-4 Drinks/Day	Officer	<i>Ranch Hand</i>	99	10.1	<i>1.45 (0.58,3.63)</i>	<i>0.422</i>
		<i>Comparison</i>	109	3.7		
	Enlisted Flyer	<i>Ranch Hand</i>	25	4.0	<i>0.65 (0.11,3.76)</i>	<i>0.628</i>
		<i>Comparison</i>	35	2.9		
	Enlisted Groundcrew	<i>Ranch Hand</i>	57	5.3	<i>1.65 (0.56,4.92)</i>	<i>0.366</i>
		<i>Comparison</i>	69	10.1		
>4 Drinks/Day	Officer	<i>Ranch Hand</i>	7	0.0	<i>1.02 (0.19,5.36)</i>	<i>0.982</i>
		<i>Comparison</i>	12	33.3		
	Enlisted Flyer	<i>Ranch Hand</i>	5	20.0	<i>0.45 (0.06,3.63)</i>	<i>0.456</i>
		<i>Comparison</i>	11	9.1		
	Enlisted Groundcrew	<i>Ranch Hand</i>	5	40.0	<i>1.16 (0.21,6.31)</i>	<i>0.865</i>
		<i>Comparison</i>	16	12.5		

Table I-2-5. (Continued)
Interaction Table for AST
(Discrete)

b) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Current Alcohol Use: Table I-3-13)					
Initial Dioxin Category Summary Statistics				Analysis Results for Log ₂ (Initial Dioxin)	
Stratum	Initial Dioxin	n	Percent High	Adjusted Relative Risk (95% C.I.) ^a	p-Value
0-1 Drinks/Day	Low	129	0.8	0.40 (0.10,1.51)	0.174
	Medium	132	1.5		
	High	136	0.0		
> 1 Drinks/Day	Low	41	7.3	1.06 (0.65,1.73)	0.829
	Medium	33	9.1		
	High	31	16.1		

c) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Current Alcohol Use: Table I-3-13)					
Stratum	Dioxin Category	n	Percent High	Adjusted Relative Risk (95% C.I.) ^b	p-Value
0-1 Drinks/Day	Comparison	814	2.1		
	Background RH	280	1.4	0.84 (0.28,2.56)	0.759
	Low RH	192	1.6	0.69 (0.19,2.43)	0.560
	High RH	205	0.0	--	--
	Low plus High RH	397	0.8	0.30 (0.08,1.04)	0.058
> 1 Drinks/Day	Comparison	211	6.6		
	Background RH	82	4.9	0.86 (0.27,2.75)	0.801
	Low RH	59	10.2	1.77 (0.63,4.95)	0.276
	High RH	46	10.9	1.24 (0.39,3.92)	0.708
	Low plus High RH	105	10.5	1.52 (0.65,3.56)	0.339

d) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Current Alcohol Use: Table I-3-13)					
Current Dioxin Category Summary Statistics				Analysis Results for Log ₂ (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent High	Adjusted Relative Risk (95% C.I.) ^c	p-Value
0-1 Drinks/Day	Low	224	0.9	0.83 (0.47,1.45)	0.513
	Medium	217	2.3		
	High	236	0.0		
> 1 Drinks/Day	Low	63	3.2	1.43 (0.91,2.24)	0.121
	Medium	73	11.0		
	High	51	9.8		

Table I-2-5. (Continued)
Interaction Table for AST
(Discrete)

e) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Current Alcohol Use: Table 13-13)				
Current Dioxin Category Summary Statistics			Analysis Results for \log_2 (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent High	Adjusted Relative Risk (95% C.I.) ^a
0-1 Drinks/Day	Low	227	0.9	0.94 (0.60,1.47) 0.781
	Medium	219	1.4	
	High	231	0.9	
>1 Drinks/Day	Low	63	3.2	1.42 (0.93,2.14) 0.101
	Medium	71	9.9	
	High	53	11.3	

f) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Current Alcohol Use: Table 13-13)				
Current Dioxin Category Summary Statistics			Analysis Results for \log_2 (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent High	Adjusted Relative Risk (95% C.I.) ^a
0-1 Drinks/Day	Low	226	0.9	0.87 (0.55,1.38) 0.562
	Medium	219	1.4	
	High	231	0.9	
>1 Drinks/Day	Low	63	3.2	1.32 (0.86, 2.04) 0.206
	Medium	71	9.9	
	High	53	11.3	

^a Relative risk for a twofold increase in initial dioxin.

^b Relative risk and confidence interval relative to Comparisons.

^c Relative risk for a twofold increase in current dioxin.

--: Adjusted relative risk, confidence interval, and p-value not presented due to the sparse number of abnormalities.

Note: Model 2: Low = 39-98 ppt; Medium = >98-232 ppt; High = >232 ppt.

Model 3: RH = Ranch Hand.

Comparison: Current Dioxin \leq 10 ppt.

Background (Ranch Hand): Current Dioxin \leq 10 ppt.

Low (Ranch Hand): Current Dioxin > 10 ppt, 10 ppt < Initial Dioxin \leq 143 ppt.

High (Ranch Hand): Current Dioxin > 10 ppt, Initial Dioxin > 143 ppt.

Model 4: Low = \leq 8.1 ppt; Medium = >8.1-20.5 ppt; High = >20.5 ppt.

Models 5 and 6: Low = \leq 46 ppq; Medium = >46-128 ppq; High = >128 ppq.

Table I-2-6.
Interaction Table for ALT
(Discrete)

a) MODEL I: RANCH HANDS VS. COMPARISONS — ADJUSTED (Group-by-Age: Table I-3-15)						
Stratum	Occupational Category	Group	n	Percent High	Adj. Relative Risk (95% C.I.)	p-Value
<i>Born ≥ 1942</i>	<i>All</i>	<i>Ranch Hand</i>	386	5.2	<i>0.50 (0.29,0.85)</i>	<i>0.011</i>
		<i>Comparison</i>	542	10.0		
<i>Born < 1942</i>	<i>All</i>	<i>Ranch Hand</i>	543	5.7	<i>1.16 (0.70,1.91)</i>	<i>0.561</i>
		<i>Comparison</i>	693	5.1		
<i>Born ≥ 1942</i>	Officer	<i>Ranch Hand</i>	78	5.1	<i>0.53 (0.23,1.23)</i>	<i>0.141</i>
		<i>Comparison</i>	121	5.8		
	Enlisted Flyer	<i>Ranch Hand</i>	38	2.6	<i>0.38 (0.12,1.15)</i>	
		<i>Comparison</i>	57	10.5		
<i>Born < 1942</i>	Enlisted Groundcrew	<i>Ranch Hand</i>	270	5.6	<i>0.51 (0.28,0.91)</i>	<i>0.022</i>
		<i>Comparison</i>	364	11.3		
	Officer	<i>Ranch Hand</i>	283	6.0	<i>1.26 (0.68,2.34)</i>	
		<i>Comparison</i>	367	6.0		
<i>Born < 1942</i>	Enlisted Flyer	<i>Ranch Hand</i>	121	5.0	<i>0.90 (0.34,2.40)</i>	<i>0.830</i>
		<i>Comparison</i>	139	5.0		
	Enlisted Groundcrew	<i>Ranch Hand</i>	139	5.8	<i>1.20 (0.56,2.57)</i>	
		<i>Comparison</i>	187	3.2		

Table I-2-6. (Continued)
Interaction Table for ALT
(Discrete)

b) MODEL 1: RANCH HANDS VS. COMPARISONS — ADJUSTED (Group-by-Degreasing Chemical Exposure: Table 13-15)						
Stratum	Occupational Category	Group	n	Percent High	Adj. Relative Risk (95% C.I.)	p-Value
No	<i>All</i>	<i>Ranch Hand Comparison</i>	342	2.9	0.39 (0.19,0.81)	0.012
		<i>Ranch Hand Comparison</i>	461	7.4		
Yes	<i>All</i>	<i>Ranch Hand Comparison</i>	587	7.0	1.00 (0.66,1.52)	0.993
		<i>Ranch Hand Comparison</i>	774	7.1		
No	Officer	Ranch Hand Comparison	233	3.9	0.53 (0.24,1.14)	0.103
		Ranch Hand Comparison	276	6.9		
	Enlisted Flyer	Ranch Hand Comparison	27	0.0	0.22 (0.06,0.75)	0.015
		Ranch Hand Comparison	58	6.9		
	Enlisted Groundcrew	Ranch Hand Comparison	82	1.2	0.20 (0.08,0.53)	0.001
		Ranch Hand Comparison	127	8.7		
Yes	Officer	Ranch Hand Comparison	128	9.4	2.04 (0.99,4.21)	0.054
		Ranch Hand Comparison	212	4.7		
	Enlisted Flyer	Ranch Hand Comparison	132	5.3	0.84 (0.32,2.20)	0.720
		Ranch Hand Comparison	138	6.5		
	Enlisted Groundcrew	Ranch Hand Comparison	327	6.7	0.78 (0.46,1.34)	0.374
		Ranch Hand Comparison	424	8.5		

c) MODEL 3: RANCH HANDS AND COMPARISONS — ADJUSTED (Dioxin Category-by-Degreasing Chemical Exposure: Table 13-15)					
Stratum	Dioxin Category	n	Percent High	Adjusted Relative Risk (95% C.I.) ^a	p-Value
No	Comparison	366	6.6		
	Background RH	177	0.6	0.09 (0.01,0.70)	0.021
	Low RH	94	4.3	0.67 (0.22,2.02)	0.478
	High RH	51	2.0	0.23 (0.03,1.76)	0.157
	Low plus High RH	145	3.4	0.48 (0.18,1.31)	0.154
Yes	Comparison	661	7.3		
	Background RH	190	7.4	1.26 (0.64,2.49)	0.498
	Low RH	160	5.0	0.72 (0.33,1.58)	0.419
	High RH	203	8.9	1.05 (0.57,1.93)	0.872
	Low plus High RH	363	7.2	0.92 (0.56,1.53)	0.748

Table I-2-6. (Continued)
Interaction Table for ALT
(Discrete)

d) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Current Alcohol Use: Table I-3-15)					
Stratum	Dioxin Category	n	Percent High	Adjusted Relative Risk (95% C.I.)^a	p-Value
0-1 Drinks/Day	Comparison	816	6.4		
	Background RH	284	3.2	0.62 (0.30,1.29)	0.204
	Low RH	194	2.6	0.40 (0.16,1.04)	0.059
	High RH	208	6.3	0.73 (0.38,1.40)	0.344
	Low plus High RH	402	4.5	0.59 (0.34,1.04)	0.069
>1-4 Drinks/Day	Comparison	176	8.5		
	Background RH	74	8.1	1.24 (0.45,3.41)	0.676
	Low RH	57	10.5	1.50 (0.54,4.15)	0.431
	High RH	41	12.2	1.23 (0.41,3.68)	0.710
	Low plus High RH	98	11.2	1.37 (0.59,3.15)	0.461
>4 Drinks/Day	Comparison	35	14.3		
	Background RH	9	0.0	--	--
	Low RH	3	33.3	2.64 (0.17,41.07)	0.488
	High RH	5	20.0	1.13 (0.08,15.40)	0.928
	Low plus High RH	8	25.0	1.62 (0.21,12.83)	0.647

^a Relative risk and confidence interval relative to Comparisons.

--: Adjusted relative risk, confidence interval, and p-value not presented due to the sparse number of abnormalities.

Note: Model 3: RH = Ranch Hand.

Comparison: Current Dioxin \leq 10 ppt.

Background (Ranch Hand): Current Dioxin \leq 10 ppt.

Low (Ranch Hand): Current Dioxin $>$ 10 ppt, 10 ppt $<$ Initial Dioxin \leq 143 ppt.

High (Ranch Hand): Current Dioxin $>$ 10 ppt, Initial Dioxin $>$ 143 ppt.

Table I-2-7.
Interaction Table for GGT (U/L)
(Continuous)

a) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Degreasing Chemical Exposure: Table 13-16)			
Initial Dioxin Category Summary Statistics			Analysis Results for \log_2 (Initial Dioxin)
Stratum	Initial Dioxin	n	Adjusted Mean ^a
No	Low	66	30.74
	Medium	46	34.53
	High	31	50.04
Yes	Low	104	35.37
	Medium	119	39.57
	High	136	36.22

b) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Degreasing Chemical Exposure: Table 13-16)					
Stratum	Dioxin Category	n	Adjusted Mean ^a	Difference of Adjusted Mean vs. Comparison (95% C.I.) ^c	p-Value ^d
No	Comparison	366	33.93		
	Background RH	176	31.31	-2.62 --	0.146
	Low RH	93	35.02	1.08 --	0.653
	High RH	50	45.59	11.65 --	0.001
	Low plus High RH	143	38.40	4.47 --	0.038
Yes	Comparison	659	34.81		
	Background RH	186	33.99	-0.82 --	0.634
	Low RH	158	38.45	3.64 --	0.062
	High RH	201	36.27	1.46 --	0.398
	Low plus High RH	359	37.21	2.40 --	0.091

Table I-2-7. (Continued)
Interaction Table for GGT (U/L)
(Continuous)

c) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Occupation: Table 13-16)				
Initial Dioxin Category Summary Statistics				Analysis Results for \log_2 (Initial Dioxin)
Stratum	Initial Dioxin	n	Adjusted Mean ^a	Adjusted Slope (Std. Error) ^b
Officer	Low	189	29.24	0.1364 (0.0403)
	Medium	140	34.70	
	High	14	44.23	
Enlisted Flyer	Low	30	27.57	0.1157 (0.0403)
	Medium	57	30.15	
	High	61	37.20	
Enlisted Groundcrew	Low	70	30.69	0.0327 (0.0193)
	Medium	98	33.46	
	High	216	34.57	

d) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Occupation: Table 13-16)				
Current Dioxin Category Summary Statistics				Analysis Results for \log_2 (Current Dioxin + 1)
Stratum	Current Dioxin	n	Adjusted Mean ^a	Adjusted Slope (Std. Error) ^b
Officer	Low	188	28.90	0.1195 (0.0291)
	Medium	136	33.97	
	High	19	54.57	
Enlisted Flyer	Low	32	27.97	0.1111 (0.0336)
	Medium	56	30.17	
	High	60	37.18	
Enlisted Groundcrew	Low	72	30.25	0.0341 (0.0169)
	Medium	103	33.21	
	High	209	34.88	

Table I-2-7. (Continued)
Interaction Table for GGT (U/L)
(Continuous)

e) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Occupation: Table I-3-16)				Analysis Results for \log_2 (Current Dioxin + 1)	
Stratum	Current Dioxin Category	Summary Statistics		Adjusted Slope (Std. Error) ^b	p-Value
Officer	Low	188	32.13	0.0860 (0.0297)	0.004
	Medium	136	35.79		
	High	19	51.46		
Enlisted Flyer	Low	31	30.11	0.1026 (0.0365)	0.005
	Medium	56	32.17		
	High	60	38.35		
Enlisted Groundcrew	Low	72	32.78	0.0202 (0.0173)	0.242
	Medium	103	35.17		
	High	209	35.78		

^a Transformed from natural logarithm scale.

^b Slope and standard error based on natural logarithm of GGT versus \log_2 dioxin.

^c Difference of means after transformation to original scale; confidence interval on difference of means not presented because analysis was performed on natural logarithm scale.

^d P-value is based on difference of means on natural logarithm scale.

Note: Model 2: Low = 39-98 ppt; Medium = >98-232 ppt; High = >232 ppt.

Model 3: RH = Ranch Hand.

Comparison: Current Dioxin \leq 10 ppt.

Background (Ranch Hand): Current Dioxin \leq 10 ppt.

Low (Ranch Hand): Current Dioxin >10 ppt, 10 ppt < Initial Dioxin \leq 143 ppt.

High (Ranch Hand): Current Dioxin >10 ppt, Initial Dioxin >143 ppt.

Model 4: Low = \leq 8.1 ppt; Medium = >8.1-20.5 ppt; High = >20.5 ppt.

Models 5 and 6: Low = \leq 46 ppq; Medium = >46-128 ppq; High = >128 ppq.

Table I-2-8.
Interaction Table for GGT
(Discrete)

a) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Degreasing Chemical Exposure: Table 13-17)					
Stratum	Dioxin Category	n	Percent High	Adjusted Relative Risk (95% C.I.) ^a	p-Value
No	Comparison	366	17.8		
	Background RH	176	12.5	0.75 (0.44,1.28)	0.292
	Low RH	93	23.7	1.47 (0.83,2.59)	0.185
	High RH	50	38.0	2.97 (1.53,5.75)	0.001
	Low plus High RH	143	28.7	1.92 (1.20,3.07)	0.007
Yes	Comparison	659	18.4		
	Background RH	186	20.4	1.24 (0.81,1.91)	0.327
	Low RH	158	20.3	1.16 (0.73,1.83)	0.534
	High RH	201	19.4	1.01 (0.67,1.54)	0.959
	Low plus High RH	359	19.8	1.07 (0.76,1.51)	0.690

b) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Degreasing Chemical Exposure: Table 13-17)					
Current Dioxin Category Summary Statistics			Analysis Results for Log ₂ (Current Dioxin + 1)		
Stratum	Current Dioxin	n	Percent High	Adjusted Relative Risk (95% C.I.) ^b	p-Value
No	Low	149	13.4		
	Medium	109	20.2		
	High	61	34.4		
Yes	Low	138	18.1	1.43 (1.17,1.76)	0.001
	Medium	181	19.9		
	High	226	21.2	1.00 (0.86,1.17)	0.965

c) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Degreasing Chemical Exposure: Table 13-17)					
Current Dioxin Category Summary Statistics			Analysis Results for Log ₂ (Current Dioxin + 1)		
Stratum	Current Dioxin	n	Percent High	Adjusted Relative Risk (95% C.I.) ^b	p-Value
No	Low	143	12.6		
	Medium	115	19.1		
	High	61	37.7	1.36 (1.14,1.63)	0.001
Yes	Low	147	18.4		
	Medium	175	19.4	1.04 (0.91,1.18)	0.560
	High	223	21.5		

Table I-2-8. (Continued)
Interaction Table for GGT
(Discrete)

d) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Degreasing Chemical Exposure: Table 13-17)			
Stratum	Current Dioxin Category Summary Statistics		Analysis Results for Log ₂ (Current Dioxin + 1)
	Current Dioxin	n	
No	Low	143	12.6
	Medium	115	19.1
	High	61	37.7
Yes	Low	146	18.5
	Medium	175	19.4
	High	223	21.5

^a Relative risk and confidence interval relative to Comparisons.

^b Relative risk for a twofold increase in current dioxin.

Note: Model 3: RH = Ranch Hand.

Comparison: Current Dioxin \leq 10 ppt.

Background (Ranch Hand): Current Dioxin \leq 10 ppt.

Low (Ranch Hand): Current Dioxin $>$ 10 ppt, 10 ppt $<$ Initial Dioxin \leq 143 ppt.

High (Ranch Hand): Current Dioxin $>$ 10 ppt, Initial Dioxin $>$ 143 ppt.

Model 4: Low = \leq 8.1 ppt; Medium = $>$ 8.1-20.5 ppt; High = $>$ 20.5 ppt.

Models 5 and 6: Low = \leq 46 ppq; Medium = $>$ 46-128 ppq; High = $>$ 128 ppq.

Table I-2-9.
Interaction Table for Alkaline Phosphatase (U/L)
(Continuous)

a) MODEL I: RANCH HANDS VS. COMPARISONS — ADJUSTED (Group-by-Degreasing Chemical Exposure: Table 13-18)						
Stratum	Occupational Category	Group	n	Adjusted Mean ^a	Difference of Adjusted Means (95% C.I.) ^b	p-Value ^c
No	<i>All</i>	<i>Ranch Hand</i>	340	69.55	-0.58 --	0.651
		<i>Comparison</i>	460	70.12		
Yes	<i>All</i>	<i>Ranch Hand</i>	580	71.74	3.84 --	< 0.001
		<i>Comparison</i>	772	67.90		
No	Officer	<i>Ranch Hand</i>	231	65.50	-1.32 --	0.380
		<i>Comparison</i>	276	66.82		
	Enlisted Flyer	<i>Ranch Hand</i>	27	71.93	-0.54 --	0.900
		<i>Comparison</i>	58	72.46		
	Enlisted Groundcrew	<i>Ranch Hand</i>	82	74.46	2.15 --	0.418
		<i>Comparison</i>	126	72.31		
Yes	Officer	<i>Ranch Hand</i>	126	71.48	6.45 --	0.001
		<i>Comparison</i>	211	65.03		
	Enlisted Flyer	<i>Ranch Hand</i>	130	69.96	-0.26 --	0.904
		<i>Comparison</i>	137	70.22		
	Enlisted Groundcrew	<i>Ranch Hand</i>	324	73.90	4.46 --	0.001
		<i>Comparison</i>	424	69.43		

Table I-2-9. (Continued)
Interaction Table for Alkaline Phosphatase (U/L)
(Continuous)

b) MODEL 1: RANCH HANDS VS. COMPARISONS — ADJUSTED (Group-by-Age: Table 13-18)						
Stratum	Occupational Category	Group	n	Adjusted Mean^a	Difference of Adjusted Means (95% C.I.)^b	p-Value^c
<i>Born ≥ 1942 All</i>		<i>Ranch Hand</i>	384	71.31	4.13 --	<0.001
		<i>Comparison</i>	541	67.18		
<i>Born < 1942 All</i>		<i>Ranch Hand</i>	536	70.93	0.76 --	0.465
		<i>Comparison</i>	691	70.17		
<i>Born ≥ 1942</i>	Officer	Ranch Hand	77	67.12	4.07 --	0.093
		Comparison	121	63.04		
	Enlisted Flyer	Ranch Hand	38	76.53	3.78 --	0.346
		Comparison	56	72.75		
	Enlisted Groundcrew	Ranch Hand	269	72.91	4.23 --	0.004
		Comparison	364	68.69		
<i>Born < 1942</i>	Officer	Ranch Hand	280	68.61	0.60 --	0.664
		Comparison	366	68.00		
	Enlisted Flyer	Ranch Hand	119	69.30	-1.65 --	0.461
		Comparison	139	70.95		
	Enlisted Groundcrew	Ranch Hand	137	74.31	3.26 --	0.119
		Comparison	186	71.06		

Table I-2-9. (Continued)
Interaction Table for Alkaline Phosphatase (U/L)
(Continuous)

c) MODEL 1: RANCH HANDS VS. COMPARISONS — ADJUSTED (Group-by-Race: Table 13-18)						
Stratum	Occupational Category	Group	n	Adjusted Mean ^a	Difference of Adjusted Means (95% C.I.) ^b	p-Value ^c
<i>Black</i>	<i>All</i>	<i>Ranch Hand</i>	51	67.52	-4.20 --	0.201
		<i>Comparison</i>	70	71.72		
<i>Non-Black</i>	<i>All</i>	<i>Ranch Hand</i>	869	71.11	2.57 --	0.001
		<i>Comparison</i>	1,162	68.55		
Black	Officer	Ranch Hand	7	54.28	-13.32 --	0.121
		Comparison	6	67.59		
	Enlisted Flyer	Ranch Hand	9	60.61	-15.93 --	0.030
		Comparison	15	76.54		
	Enlisted Groundcrew	Ranch Hand	35	74.40	1.47 --	0.724
		Comparison	49	72.92		
Non-Black	Officer	Ranch Hand	350	67.70	1.75 --	0.146
		Comparison	481	65.95		
	Enlisted Flyer	Ranch Hand	148	71.06	0.55 --	0.784
		Comparison	180	70.51		
	Enlisted Groundcrew	Ranch Hand	371	74.09	4.17 --	0.001
		Comparison	501	69.92		

d) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Degreasing Chemical Exposure: Table 13-18)						
Stratum	Initial Dioxin	Initial Dioxin Category Summary Statistics		Analysis Results for Log ₂ (Initial Dioxin)		
		n	Adjusted Mean ^a	Adjusted Slope (Std. Error) ^d	p-Value	
No	Low	67	67.46	0.0245 (0.0172)	0.155	
	Medium	46	69.57			
	High	32	72.42			
Yes	Low	106	72.67	-0.0172 (0.0103)	0.096	
	Medium	124	73.14			
	High	140	69.69			

Table I-2-9. (Continued)
Interaction Table for Alkaline Phosphatase (U/L)
(Continuous)

e) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED
(Dioxin Category-by-Degreasing Chemical Exposure: Table 13-18)

Stratum	Dioxin Category	n	Adjusted Mean ^a	Difference of Adjusted Mean vs. Comparisons (95% C.I.) ^b		p-Value ^c
No	Comparison	366	68.59			
	Background RH	176	67.70	-0.89 --		0.575
	Low RH	94	67.74	-0.85 --		0.668
	High RH	51	69.49	0.90 --		0.735
	Low plus High RH	145	68.35	-0.24 --		0.885
Yes	Comparison	661	66.87			
	Background RH	190	71.43	4.56 --		0.002
	Low RH	160	72.77	5.90 --		<0.001
	High RH	203	68.94	2.08 --		0.136
	Low plus High RH	363	70.60	3.74 --		0.001

f) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED
(Current Dioxin-by-Race: Table 13-18)

Stratum	Current Dioxin Category Summary Statistics			Analysis Results for Log ₂ (Current Dioxin + 1)	
	Current Dioxin	n	Adjusted Mean ^a	Adjusted Slope (Std. Error) ^d	p-Value
Black	Low	12	58.14	0.0516 (0.0307)	0.093
	Medium	20	64.94		
	High	15	70.81		
Non-Black	Low	275	71.34	-0.0128 (0.0068)	0.061
	Medium	271	71.72		
	High	274	68.70		

Table I-2-9. (Continued)
Interaction Table for Alkaline Phosphatase (U/L)
(Continuous)

g) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Race: Table 13-18)					
Current Dioxin Category Summary Statistics			Analysis Results for \log_2 (Current Dioxin + 1)		
Stratum	Current Dioxin	n	Adjusted Mean ^a	Adjusted Slope (Std. Error) ^c	p-Value
Black	Low	12	58.80	0.0553 (0.0276)	0.045
	Medium	22	62.68		
	High	13	75.86		
Non-Black	Low	278	71.59	-0.0104 (0.0057)	0.071
	Medium	269	70.91		
	High	273	69.22		

h) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Race: Table 13-18)					
Current Dioxin Category Summary Statistics			Analysis Results for \log_2 (Current Dioxin + 1)		
Stratum	Current Dioxin	n	Adjusted Mean ^a	Adjusted Slope (Std. Error) ^c	p-Value
Black	Low	12	59.26	0.0522 (0.0275)	0.058
	Medium	22	63.07		
	High	13	75.80		
Non-Black	Low	277	72.16	-0.0146 (0.0062)	0.019
	Medium	269	71.00		
	High	273	68.55		

^a Transformed from natural logarithm scale.

^b Difference of means after transformation to original scale; confidence interval on difference of means not presented because analysis was performed on natural logarithm scale.

^c P-value is based on difference of means on natural logarithm scale.

^d Slope and standard error based on natural logarithm of alkaline phosphatase versus \log_2 dioxin.

Note: RH = Ranch Hand.

Model 2: Low = 39-98 ppt; Medium = >98-232 ppt; High = >232 ppt.

Model 3: Comparison: Current Dioxin \leq 10 ppt.

Background (Ranch Hand): Current Dioxin \leq 10 ppt.

Low (Ranch Hand): Current Dioxin > 10 ppt, 10 ppt < Initial Dioxin \leq 143 ppt.

High (Ranch Hand): Current Dioxin > 10 ppt, Initial Dioxin > 143 ppt.

Model 4: Low = \leq 8.1 ppt; Medium = >8.1-20.5 ppt; High = >20.5 ppt.

Models 5 and 6: Low = \leq 46 ppq; Medium = >46-128 ppq; High = >128 ppq.

Table I-2-10.
Interaction Table for Alkaline Phosphatase
(Discrete)

a) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Industrial Chemical Exposure: Table I-3-19)					
Stratum	Initial Dioxin Category Summary Statistics			Analysis Results for Log ₂ (Initial Dioxin)	
	Initial Dioxin	n	Percent High	Adjusted Relative Risk (95% C.I.) ^a	p-Value
No	Low	72	4.2	0.31 (0.08,1.13)	0.076
	Medium	60	1.7		
	High	51	0.0		
Yes	Low	98	3.1	1.06 (0.74,1.50)	0.765
	Medium	105	8.6		
	High	118	7.6		

^a Relative risk for a twofold increase in initial dioxin.

Table I-2-11.
Interaction Table for Total Bilirubin (mg/dl)
(Continuous)

a) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Degreasing Chemical Exposure: Table 13-20)					
Current Dioxin Category Summary Statistics			Analysis Results for Log ₂ (Current Dioxin + 1)		
Stratum	Current Dioxin	n	Adjusted Mean ^a	Adjusted Slope (Std. Error) ^b	p-Value
No	Low	149	0.59	0.0314 (0.0179)	0.079
	Medium	112	0.62		
	High	62	0.61		
Yes	Low	141	0.63	-0.0090 (0.0122)	0.464
	Medium	186	0.63		
	High	234	0.60		

^a Transformed from natural logarithm scale.

^b Slope and standard error based on natural logarithm of total bilirubin versus log₂ dioxin.

Note: Low = ≤8.1 ppt; Medium = >8.1-20.5 ppt; High = >20.5 ppt.

Table I-2-12.
Interaction Table for Total Bilirubin
(Discrete)

a) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Industrial Chemical Exposure: Table I-2-21)					
Stratum	Initial Dioxin Category	Summary Statistics		Analysis Results for \log_2 (Initial Dioxin)	
		Initial Dioxin	n	Percent High	Adjusted Relative Risk (95% C.I.) ^a
No	Low	72	2.8	1.66 (0.90,3.07)	0.104
	Medium	60	0.0		
	High	50	6.0		
Yes	Low	98	10.2	0.73 (0.50,1.07)	0.109
	Medium	105	3.8		
	High	117	4.3		

b) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Degreasing Chemical Exposure: Table I-2-21)					
Stratum	Current Dioxin Category	Summary Statistics		Analysis Results for \log_2 (Current Dioxin + 1)	
		Current Dioxin	n	Percent High	Adjusted Relative Risk (95% C.I.) ^b
No	Low	149	4.7	1.26 (0.92,1.72)	0.155
	Medium	111	5.4		
	High	62	8.1		
Yes	Low	140	6.4	0.76 (0.57,1.01)	0.057
	Medium	184	5.4		
	High	229	3.1		

c) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Degreasing Chemical Exposure: Table I-2-21)					
Stratum	Current Dioxin Category	Summary Statistics		Analysis Results for \log_2 (Current Dioxin + 1)	
		Current Dioxin	n	Percent High	Adjusted Relative Risk (95% C.I.) ^b
No	Low	143	4.2	1.26 (0.95,1.67)	0.103
	Medium	117	4.3		
	High	62	11.3		
Yes	Low	149	6.7	0.83 (0.67,1.04)	0.103
	Medium	178	5.1		
	High	226	3.1		

Table I-2-12. (Continued)
Interaction Table for Total Bilirubin
(Discrete)

d) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Degreasing Chemical Exposure: Table 13-21)					
Stratum	Current Dioxin Category	Summary Statistics		Analysis Results for Log₂ (Current Dioxin + 1)	
		Current Dioxin	n	Percent High	
No	Low	143	4.2	1.17 (0.88,1.55)	0.287
	Medium	117	4.3		
	High	62	11.3		
Yes	Low	148	6.8	0.77 (0.61,0.99)	0.038
	Medium	178	5.1		
	High	226	3.1		

^a Relative risk for a twofold increase in initial dioxin.

^b Relative risk for a twofold increase in current dioxin.

Note: Model 2: Low = 39-98 ppt; Medium = >98-232 ppt; High = >232 ppt.
 Model 4: Low = ≤8.1 ppt; Medium = >8.1-20.5 ppt; High = >20.5 ppt.
 Models 5 and 6: Low = ≤46 ppq; Medium = >46-128 ppq; High = >128 ppq.

Table I-2-13.
Interaction Table for Direct Bilirubin

a) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Lifetime Alcohol History: Table 13-22)					
Current Dioxin Category Summary Statistics				Analysis Results for Log ₂ (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent High	Adjusted Relative Risk (95% C.I.) ^a	p-Value
0-40 Drink-years	Low	221	0.9	1.43 (0.72,2.84)	0.307
	Medium	213	1.4		
	High	216	0.5		
> 40 Drink-years	Low	66	1.5	0.89 (0.40,1.98)	0.778
	Medium	77	3.9		
	High	71	1.4		

b) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Lifetime Alcohol History: Table 13-22)					
Current Dioxin Category Summary Statistics				Analysis Results for Log ₂ (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent High	Adjusted Relative Risk (95% C.I.) ^a	p-Value
0-40 Drink-years	Low	224	0.0	1.77 (0.97,3.21)	0.061
	Medium	215	2.3		
	High	211	0.5		
> 40 Drink-years	Low	66	1.5	1.04 (0.55,1.99)	0.901
	Medium	75	2.7		
	High	73	2.7		

c) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Lifetime Alcohol History: Table 13-22)					
Current Dioxin Category Summary Statistics				Analysis Results for Log ₂ (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent High	Adjusted Relative Risk (95% C.I.) ^a	p-Value
0-40 Drink-years	Low	223	0.0	1.05 (0.54,2.07)	0.878
	Medium	215	2.3		
	High	211	0.5		
> 40 Drink-years	Low	66	1.5	0.78 (0.46,1.32)	0.362
	Medium	75	2.7		
	High	73	2.7		

^a Relative risk for a twofold increase in current dioxin.

Note: Model 4: Low = ≤8.1 ppt; Medium = >8.1-20.5 ppt; High = >20.5 ppt.

Models 5 and 6: Low = ≤46 ppq; Medium = >46-128 ppq; High = >128 ppq.

Table I-2-14.
Interaction Table for LDH (U/L)
(Continuous)

a) MODEL 1: RANCH HANDS VS. COMPARISONS — ADJUSTED (Group-by-Age: Table I3-23)						
Stratum	Occupational Category	Group	n	Adjusted Mean ^a	Difference of Adjusted Means (95% C.I.) ^b	p-Value ^c
<i>Born ≥ 1942 All</i>	<i>Ranch Hand Comparison</i>	<i>Ranch Hand</i>	382	144.37	2.80--	0.096
		<i>Comparison</i>	540	141.57		
<i>Born < 1942 All</i>	<i>Ranch Hand Comparison</i>	<i>Ranch Hand</i>	534	146.17	-1.51--	0.308
		<i>Comparison</i>	691	147.69		
<i>Born ≥ 1942</i>	Officer	Ranch Hand	77	142.11	4.90 --	0.170
		Comparison	121	137.21		
	Enlisted Flyer	Ranch Hand	37	139.55	-5.60 --	0.290
		Comparison	56	145.15		
	Enlisted Groundcrew	Ranch Hand	268	147.03	3.30 --	0.109
		Comparison	363	143.73		
<i>Born < 1942</i>	Officer	Ranch Hand	279	145.09	-2.27 --	0.267
		Comparison	366	147.36		
	Enlisted Flyer	Ranch Hand	119	144.44	-3.59 --	0.262
		Comparison	139	148.03		
	Enlisted Groundcrew	Ranch Hand	136	148.57	1.72 --	0.557
		Comparison	186	146.85		

Table I-2-14. (Continued)
Interaction Table for LDH (U/L)
(Continuous)

b) MODEL 1: RANCH HANDS VS. COMPARISONS — ADJUSTED (Group-by-Lifetime Alcohol History: Table 13-23)						
Stratum	Occupational Category	Group	n	Adjusted Mean ^a	Difference of Adjusted Means (95% C.I.) ^b	p-Value ^c
<i>0 Drink-years</i>	<i>All</i>	<i>Ranch Hand</i>	63	143.20	-2.57--	0.560
		<i>Comparison</i>	69	145.77		
<i>>0-40 Drink-years</i>	<i>All</i>	<i>Ranch Hand</i>	624	145.69	-0.82--	0.545
		<i>Comparison</i>	840	146.51		
<i>>40 Drink-years</i>	<i>All</i>	<i>Ranch Hand</i>	229	144.91	3.77--	0.082
		<i>Comparison</i>	322	141.13		
<i>0 Drink-years</i>	Officer	<i>Ranch Hand</i>	14	137.35	-2.68 --	0.745
		<i>Comparison</i>	23	140.03		
	Enlisted Flyer	<i>Ranch Hand</i>	14	138.02	-8.28 --	0.409
		<i>Comparison</i>	11	146.29		
	Enlisted Groundcrew	<i>Ranch Hand</i>	35	149.20	-1.20 --	0.848
		<i>Comparison</i>	35	150.41		
<i>>0-40 Drink-years</i>	Officer	<i>Ranch Hand</i>	247	143.36	-1.33 --	0.529
		<i>Comparison</i>	337	144.69		
	Enlisted Flyer	<i>Ranch Hand</i>	95	142.77	-5.70 --	0.105
		<i>Comparison</i>	119	148.46		
	Enlisted Groundcrew	<i>Ranch Hand</i>	282	149.19	1.27 --	0.534
		<i>Comparison</i>	384	147.93		
<i>>40 Drink-years</i>	Officer	<i>Ranch Hand</i>	95	141.92	1.47 --	0.662
		<i>Comparison</i>	127	140.45		
	Enlisted Flyer	<i>Ranch Hand</i>	47	143.15	0.44 --	0.928
		<i>Comparison</i>	65	142.72		
	Enlisted Groundcrew	<i>Ranch Hand</i>	87	149.15	7.92 --	0.025
		<i>Comparison</i>	130	141.24		

Table I-2-14. (Continued)
Interaction Table for LDH (U/L)
(Continuous)

c) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED
(Dioxin Category-by-Age: Table 13-23)

Stratum	Dioxin Category	n	Adjusted Mean ^a	Difference of Adjusted Mean vs. Comparisons (95% C.I.) ^b	p-Value ^c
Born ≥ 1942	Comparison	438	143.63		
	Background RH	125	146.47	2.84 --	0.283
	Low RH	82	147.55	3.91 --	0.206
	High RH	149	144.22	0.59 --	0.810
	Low plus High RH	231	145.39	1.76 --	0.399
Born < 1942	Comparison	586	150.04		
	Background RH	237	148.95	-1.09 --	0.595
	Low RH	169	147.97	-2.07 --	0.368
	High RH	102	147.21	-2.83 --	0.326
	Low plus High RH	271	147.68	-2.36 --	0.227

d) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED
(Dioxin Category-by-Race: Table 13-23)

Stratum	Dioxin Category	n	Adjusted Mean ^a	Difference of Adjusted Mean vs. Comparisons (95% C.I.) ^b	p-Value ^c
Black	Comparison	52	155.49		
	Background RH	15	136.20	-19.29 --	0.010
	Low RH	20	149.14	-6.35 --	0.367
	High RH	12	144.28	-11.21 --	0.184
	Low plus High RH	32	147.30	-8.19 --	0.170
Non-Black	Comparison	972	144.84		
	Background RH	347	146.19	1.35 --	0.411
	Low RH	231	145.12	0.28 --	0.880
	High RH	239	144.41	-0.43 --	0.823
	Low plus High RH	470	144.76	-0.08 --	0.956

Table I-2-14. (Continued)
Interaction Table for LDH (U/L)
(Continuous)

e) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Lifetime Alcohol History: Table 13-23)					
Stratum	Dioxin Category	n	Adjusted Mean^a	Difference of Adjusted Mean vs. Comparisons (95% C.I.)^b	p-Value^c
0 Drink-years	Comparison	53	146.03		
	Background RH	20	135.68	-10.35 --	0.111
	Low RH	15	152.26	6.23 --	0.415
	High RH	24	143.44	-2.59 --	0.678
	Low plus High RH	39	146.77	0.74 --	0.891
>0-40 Drink-years	Comparison	696	149.05		
	Background RH	258	148.78	-0.27 --	0.891
	Low RH	169	147.45	-1.59 --	0.477
	High RH	164	146.58	-2.46 --	0.288
	Low plus High RH	333	147.02	-2.02 --	0.250
>40 Drink-years	Comparison	275	143.89		
	Background RH	84	148.61	4.71 --	0.143
	Low RH	67	146.18	2.29 --	0.511
	High RH	63	147.50	3.61 --	0.316
	Low plus High RH	130	146.82	2.93 --	0.282

^a Transformed from natural logarithm scale.

^b Difference of means after transformation to original scale; confidence interval on difference of means not presented because analysis was performed on natural logarithm scale.

^c P-value is based on difference of means on natural logarithm scale.

Note: RH = Ranch Hand.

Comparison: Current Dioxin \leq 10 ppt.

Background (Ranch Hand): Current Dioxin \leq 10 ppt.

Low (Ranch Hand): Current Dioxin $>$ 10 ppt, 10 ppt $<$ Initial Dioxin \leq 143 ppt.

High (Ranch Hand): Current Dioxin $>$ 10 ppt, Initial Dioxin $>$ 143 ppt.

Table I-2-15.
Interaction Table for LDH
(Discrete)

a) MODEL 1: RANCH HANDS VS. COMPARISONS — ADJUSTED (Group-by-Current Alcohol Use: Table 13-24)						
Stratum	Occupational Category	Group	n	Percent High	Adj. Relative Risk (95% C.I.)	p-Value
0-1 Drinks/Day	<i>All</i>	<i>Ranch Hand</i>	718	12.7	0.90 (0.67,1.19)	0.457
		<i>Comparison</i>	980	14.2		
>1-4 Drinks/Day	<i>All</i>	<i>Ranch Hand</i>	181	18.2	1.69 (0.96,2.98)	0.069
		<i>Comparison</i>	212	11.8		
>4 Drinks/Day	<i>All</i>	<i>Ranch Hand</i>	17	47.1	2.64 (0.74,9.45)	0.136
		<i>Comparison</i>	39	20.5		
0-1 Drinks/Day	Officer	<i>Ranch Hand</i>	250	11.2	0.82 (0.52,1.29)	0.384
		<i>Comparison</i>	366	12.6		
	Enlisted Flyer	<i>Ranch Hand</i>	126	12.7	0.81 (0.43,1.52)	0.520
		<i>Comparison</i>	149	16.1		
	Enlisted Groundcrew	<i>Ranch Hand</i>	342	13.7	0.98 (0.67,1.44)	0.936
		<i>Comparison</i>	465	14.8		
>1-4 Drinks/Day	Officer	<i>Ranch Hand</i>	99	16.2	1.59 (0.85,2.98)	0.150
		<i>Comparison</i>	109	13.8		
	Enlisted Flyer	<i>Ranch Hand</i>	25	20.0	1.58 (0.71,3.52)	0.262
		<i>Comparison</i>	35	11.4		
	Enlisted Groundcrew	<i>Ranch Hand</i>	57	21.1	1.91 (0.99,3.70)	0.054
		<i>Comparison</i>	68	8.8		
>4 Drinks/Day	Officer	<i>Ranch Hand</i>	7	28.6	2.46 (0.65,9.28)	0.183
		<i>Comparison</i>	12	16.7		
	Enlisted Flyer	<i>Ranch Hand</i>	5	40.0	2.45 (0.63,9.58)	0.197
		<i>Comparison</i>	11	18.2		
	Enlisted Groundcrew	<i>Ranch Hand</i>	5	80.0	2.97 (0.79,11.10)	0.106
		<i>Comparison</i>	16	25.0		

Table I-2-15. (Continued)
Interaction Table for LDH
(Discrete)

b) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Lifetime Alcohol History; Table 13-24)					
Stratum	Dioxin Category	n	Percent High	Adjusted Relative Risk (95% C.I.)^a	p-Value
0-40 Drink-years	Comparison	749	15.5		
	Background RH	278	12.2	0.91 (0.59,1.39)	0.658
	Low RH	184	12.5	0.73 (0.45,1.19)	0.210
	High RH	188	14.9	0.88 (0.55,1.40)	0.577
	Low plus High RH	372	13.7	0.80 (0.55,1.15)	0.232
>40 Drink-years	Comparison	275	10.2		
	Background RH	84	16.7	2.15 (1.05,4.40)	0.036
	Low RH	67	11.9	1.27 (0.54,3.00)	0.578
	High RH	63	19.0	1.83 (0.84,3.97)	0.126
	Low plus High RH	130	15.4	1.55 (0.82,2.93)	0.180

^a Relative risk and confidence interval relative to Comparisons.

Note: RH = Ranch Hand.

Comparison: Current Dioxin \leq 10 ppt.

Background (Ranch Hand): Current Dioxin \leq 10 ppt.

Low (Ranch Hand): Current Dioxin $>$ 10 ppt, 10 ppt $<$ Initial Dioxin \leq 143 ppt.

High (Ranch Hand): Current Dioxin $>$ 10 ppt, Initial Dioxin $>$ 143 ppt.

Table I-2-16.
Interaction Table for Cholesterol (mg/dl)
(Continuous)

a) MODEL 1: RANCH HANDS VS. COMPARISONS — ADJUSTED (Group-by-Current Alcohol Use: Table 13-25)						
Stratum	Occupational Category	Group	n	Adjusted Mean ^a	Difference of Adjusted Means (95% C.I.) ^b	p-Value ^c
0-1 Drinks/Day	All	<i>Ranch Hand</i>	719	213.51	-0.70 --	0.708
		<i>Comparison</i>	980	214.21		
>1-4 Drinks/Day	All	<i>Ranch Hand</i>	181	224.29	2.68 --	0.506
		<i>Comparison</i>	213	221.61		
>4 Drinks/Day	All	<i>Ranch Hand</i>	17	240.42	23.12 --	0.052
		<i>Comparison</i>	39	217.31		
0-1 Drinks/Day	Officer	<i>Ranch Hand</i>	251	210.99	1.96 --	0.527
		<i>Comparison</i>	366	209.04		
	Enlisted Flyer	<i>Ranch Hand</i>	126	213.59	-5.47 --	0.244
		<i>Comparison</i>	149	219.06		
	Enlisted Groundcrew	<i>Ranch Hand</i>	342	213.90	-1.07 --	0.695
		<i>Comparison</i>	465	214.97		
>1-4 Drinks/Day	Officer	<i>Ranch Hand</i>	99	219.80	0.84 --	0.878
		<i>Comparison</i>	109	218.96		
	Enlisted Flyer	<i>Ranch Hand</i>	25	236.81	7.84 --	0.473
		<i>Comparison</i>	35	228.96		
	Enlisted Groundcrew	<i>Ranch Hand</i>	57	221.59	3.75 --	0.595
		<i>Comparison</i>	69	217.84		
>4 Drinks/Day	Officer	<i>Ranch Hand</i>	7	239.64	25.35 --	0.190
		<i>Comparison</i>	12	214.30		
	Enlisted Flyer	<i>Ranch Hand</i>	5	229.77	1.08 --	0.961
		<i>Comparison</i>	11	228.68		
	Enlisted Groundcrew	<i>Ranch Hand</i>	5	250.76	38.91 --	0.066
		<i>Comparison</i>	16	211.85		

Table I-2-16. (Continued)
Interaction Table for Cholesterol (mg/dl)
(Continuous)

b) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Degreasing Chemical Exposure: Table 13-25)					
Stratum	Initial Dioxin	Initial Dioxin Category Summary Statistics		Analysis Results for \log_2 (Initial Dioxin)	
		n	Adjusted Mean ^a	Adjusted Slope (Std. Error) ^d	p-Value
No	Low	67	206.53	0.0333 (0.0116)	0.004
	Medium	46	213.93		
	High	32	225.18		
	Yes	104	220.80	0.0027 (0.0074)	0.715
	Medium	121	214.07		
	High	138	219.23		

c) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Lifetime Alcohol History: Table 13-25)						
Stratum	Dioxin Category	n	Adjusted Mean ^a	Difference of Adjusted Mean vs. Comparisons (95% C.I.) ^b		p-Value ^c
0 Drink-years	Comparison	53	214.54			
	Background RH	20	198.73	-15.81 --		0.013
	Low RH	15	210.64	-3.91 --		0.722
	High RH	24	235.06	20.51 --		0.041
	Low plus High RH	39	225.35	10.80 --		0.197
>0-40 Drink-years	Comparison	696	218.70			
	Background RH	258	224.74	6.04 --		0.039
	Low RH	169	219.73	1.03 --		0.756
	High RH	164	220.28	1.58 --		0.650
>40 Drink-years	Comparison	276	221.14			
	Background RH	84	211.00	-10.14--		0.036
	Low RH	67	217.68	-3.46--		0.515
	High RH	63	219.92	-1.22--		0.827
	Low plus High RH	130	218.76	-2.38		0.567

^a Transformed from natural logarithm scale.

^b Difference of means after transformation to original scale; confidence interval on difference of means not presented because analysis was performed on natural logarithm scale.

^c P-value is based on difference of means on natural logarithm scale.

^d Slope and standard error based on natural logarithm of cholesterol versus \log_2 dioxin.

Note: Model 2: Low = 39-98 ppt; Medium = >98-232 ppt; High = >232 ppt.

Model 3: RH = Ranch Hand.

Comparison: Current Dioxin \leq 10 ppt.

Background (Ranch Hand): Current Dioxin \leq 10 ppt.

Low (Ranch Hand): Current Dioxin > 10 ppt, 10 ppt < Initial Dioxin \leq 143 ppt.

High (Ranch Hand): Current Dioxin > 10 ppt, Initial Dioxin > 143 ppt.

Table I-2-17.
Interaction Table for Cholesterol
(Discrete)

a) MODEL 1: RANCH HANDS VS. COMPARISONS — ADJUSTED (Group-by-Current Alcohol Use: Table I-3-26)							
Stratum	Occupational Category	Group	n	Percent High	Adj. Relative Risk (95% C.I.)	p-Value	
<i>0-1 Drinks/Day</i>	<i>All</i>	<i>Ranch Hand</i>	729	12.4	<i>0.96 (0.72,1.28)</i>	<i>0.776</i>	
		<i>Comparison</i>	983	12.7			
<i>>1-4 Drinks/Day</i>	<i>All</i>	<i>Ranch Hand</i>	182	24.2	<i>1.42 (0.87,2.31)</i>	<i>0.161</i>	
		<i>Comparison</i>	213	18.8			
<i>>4 Drinks/Day</i>	<i>All</i>	<i>Ranch Hand</i>	18	38.9	<i>8.62 (1.87,39.77)</i>	<i>0.006</i>	
		<i>Comparison</i>	39	7.7			
<i>0-1 Drinks/Day</i>	Officer	Ranch Hand	254	7.9	<i>0.90 (0.56,1.46)</i>	<i>0.675</i>	
		Comparison	367	8.5			
	Enlisted Flyer	Ranch Hand	129	14.7	<i>1.31 (0.73,2.36)</i>	<i>0.363</i>	
		Comparison	150	14.0			
	Enlisted Groundcrew	Ranch Hand	346	14.7	<i>0.88 (0.61,1.28)</i>	<i>0.510</i>	
		Comparison	466	15.7			
	<i>>1-4 Drinks/Day</i>	Officer	Ranch Hand	100	21.0	<i>1.34 (0.76,2.36)</i>	<i>0.307</i>
			Comparison	109	20.2		
		Enlisted Flyer	Ranch Hand	25	48.0	<i>1.95 (0.95,4.02)</i>	<i>0.068</i>
			Comparison	35	17.1		
	<i>>4 Drinks/Day</i>	Enlisted Groundcrew	Ranch Hand	57	19.3	<i>1.31 (0.73,2.35)</i>	<i>0.361</i>
			Comparison	69	17.4		
		Officer	Ranch Hand	7	42.9	<i>7.76 (1.61,37.52)</i>	<i>0.011</i>
			Comparison	12	0.0		
	<i>Enlisted Flyer</i>	Ranch Hand	5	20.0	<i>11.30 (2.30,55.64)</i>	<i>0.003</i>	
			Comparison	11	9.1		
	<i>Enlisted Groundcrew</i>	Ranch Hand	6	50.0	<i>7.59 (1.59,36.16)</i>	<i>0.011</i>	
			Comparison	16	12.5		

Table I-2-17. (Continued)
Interaction Table for Cholesterol
(Discrete)

b) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Degreasing Chemical Exposure: Table 13-26)					
Stratum	Initial Dioxin Category Summary Statistics			Analysis Results for Log₂ (Initial Dioxin)	
	Initial Dioxin	n	Percent High	Adjusted Relative Risk (95% C.I.)^a	p-Value
No	Low	66	10.6	1.45 (1.03,2.03)	0.033
	Medium	46	15.2		
	High	31	22.6		
Yes	Low	104	19.2	0.95 (0.75,1.20)	0.651
	Medium	119	14.3		
	High	136	14.7		

c) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Lifetime Alcohol History: Table 13-26)					
Stratum	Initial Dioxin Category Summary Statistics			Analysis Results for Log₂ (Initial Dioxin)	
	Initial Dioxin	n	Percent High	Adjusted Relative Risk (95% C.I.)^a	p-Value
0 Drink-years	Low	10	10.0	1.52 (0.74,3.10)	0.254
	Medium	12	8.3		
	High	17	17.6		
>0-40 Drink-years	Low	119	16.8	0.99 (0.77,1.27)	0.947
	Medium	107	15.0		
	High	107	15.0		
>40 Drink-years	Low	41	14.6	1.17 (0.82,1.67)	0.376
	Medium	46	15.2		
	High	43	18.6		

Table I-2-17. (Continued)
Interaction Table for Cholesterol
(Discrete)

d) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Current Alcohol Use: Table 13-26)					
Stratum	Dioxin Category	n	Percent High	Adjusted Relative Risk (95% C.I.)^b	p-Value
0-1 Drinks/Day	Comparison	816	12.0		
	Background RH	284	10.9	1.02 (0.66,1.59)	0.923
	Low RH	194	10.3	0.81 (0.48,1.35)	0.420
	High RH	208	14.9	1.11 (0.71,1.74)	0.648
	Low plus High RH	402	12.7	0.97 (0.67,1.40)	0.872
>1-4 Drinks/Day	Comparison	176	17.0		
	Background RH	74	18.9	1.31 (0.64,2.68)	0.463
	Low RH	57	31.6	2.58 (1.29,5.19)	0.008
	High RH	41	24.4	1.30 (0.56,2.98)	0.541
	Low plus High RH	98	28.6	1.94 (1.06,3.52)	0.030
>4 Drinks/Day	Comparison	35	8.6		
	Background RH	9	55.6	16.42 (2.74,98.48)	0.002
	Low RH	3	0.0	--	--
	High RH	5	40.0	4.78 (0.54,41.95)	0.158
	Low plus High RH	8	25.0	3.10 (0.40,24.02)	0.278

Table I-2-17. (Continued)
Interaction Table for Cholesterol
(Discrete)

e) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Occupation: Table I-2-26)					
Stratum	Current Dioxin Category	Summary Statistics		Analysis Results for \log_2 (Current Dioxin + 1)	
		n	Percent High	Adjusted Relative Risk (95% C.I.) ^c	p-Value
Officer	Low	186	7.0	1.88 (1.28,2.76)	0.001
	Medium	134	16.4		
	High	19	36.8		
Enlisted Flyer	Low	32	21.9	1.03 (0.77,1.39)	0.835
	Medium	55	16.4		
	High	59	16.9		
Enlisted Groundcrew	Low	72	18.1	1.11 (0.94,1.31)	0.228
	Medium	101	10.9		
	High	206	17.0		

^a Relative risk for a twofold increase in initial dioxin.

^b Relative risk and confidence interval relative to Comparisons.

^c Relative risk for a twofold increase in current dioxin.

--: Adjusted relative risk, confidence interval, and p-value not presented due to the sparse number of abnormalities.

Note: Model 2: Low = 39-98 ppt; Medium = >98-232 ppt; High = >232 ppt.

Model 3: RH = Ranch Hand.

Comparison: Current Dioxin \leq 10 ppt.

Background (Ranch Hand): Current Dioxin \leq 10 ppt.

Low (Ranch Hand): Current Dioxin > 10 ppt, 10 ppt < Initial Dioxin \leq 143 ppt.

High (Ranch Hand): Current Dioxin > 10 ppt, Initial Dioxin > 143 ppt.

Models 5: Low = \leq 46 ppq; Medium = > 46-128 ppq; High = > 128 ppq.

Table I-2-18.
Interaction Table for HDL Cholesterol (mg/dl)
(Continuous)

a) MODEL 1: RANCH HANDS VS. COMPARISONS — ADJUSTED (Group-by-Current Alcohol Use: Table 13-27)						
Stratum	Occupational Category	Group	n	Adjusted Mean ^a	Difference of Adjusted Means (95% C.I.) ^b	p-Value ^c
<i>0-1 Drinks/Day</i>	<i>All</i>	<i>Ranch Hand</i>	710	41.33	-0.36 --	0.473
		<i>Comparison</i>	970	41.69		
<i>>1-4 Drinks/Day</i>	<i>All</i>	<i>Ranch Hand</i>	176	46.67	0.06 --	0.962
		<i>Comparison</i>	212	46.62		
<i>>4 Drinks/Day</i>	<i>All</i>	<i>Ranch Hand</i>	17	47.80	2.95 --	0.374
		<i>Comparison</i>	39	44.85		
<i>0-1 Drinks/Day</i>	Officer	<i>Ranch Hand</i>	246	43.30	0.16 --	0.859
		<i>Comparison</i>	364	43.15		
		<i>Enlisted Flyer</i>	123	41.34	0.60 --	0.627
	Enlisted Groundcrew	<i>Ranch Hand</i>	146	40.74		
		<i>Comparison</i>	341	40.00	-1.05 --	0.139
		<i>Enlisted Groundcrew</i>	460	41.05		
<i>>1-4 Drinks/Day</i>	Officer	<i>Ranch Hand</i>	96	47.16	-2.45 --	0.141
		<i>Comparison</i>	108	49.61		
		<i>Enlisted Flyer</i>	24	47.50	3.91 --	0.188
	Enlisted Groundcrew	<i>Ranch Hand</i>	35	43.59		
		<i>Comparison</i>	56	47.46	2.17 --	0.292
		<i>Enlisted Groundcrew</i>	69	45.29		
<i>>4 Drinks/Day</i>	Officer	<i>Ranch Hand</i>	7	52.70	7.84 --	0.168
		<i>Comparison</i>	12	44.86		
		<i>Enlisted Flyer</i>	5	43.99	-2.13 --	0.734
	Enlisted Groundcrew	<i>Ranch Hand</i>	11	46.12		
		<i>Comparison</i>	5	47.40	2.50 --	0.672
		<i>Enlisted Groundcrew</i>	16	44.90		

Table I-2-18. (Continued)
Interaction Table for HDL Cholesterol (mg/dl)
(Continuous)

b) MODEL 1: RANCH HANDS VS. COMPARISONS — ADJUSTED (Group-by-Lifetime Alcohol History: Table 13-27)						
Stratum	Occupational Category	Group	n	Adjusted Mean ^a	Difference of Adjusted Means (95% C.I.) ^b	p-Value ^c
0 Drink-years	All	Ranch Hand Comparison	62	40.23	1.19 --	0.484
			69	39.04		
>0-40 Drink-years	All	Ranch Hand Comparison	618	42.63	-0.31 --	0.576
			832	42.94		
>40 Drink-years	All	Ranch Hand Comparison	223	43.16	0.08 --	0.933
			320	43.08		
0 Drink-years	Officer	Ranch Hand Comparison	14	40.64	1.84 --	0.576
			23	38.79		
	Enlisted Flyer	Ranch Hand Comparison	13	41.13	3.45 --	0.381
			11	37.67		
	Enlisted Groundcrew	Ranch Hand Comparison	35	39.31	-0.33 --	0.886
			35	39.64		
>0-40 Drink-years	Officer	Ranch Hand Comparison	244	44.53	-0.16 --	0.862
			335	44.69		
	Enlisted Flyer	Ranch Hand Comparison	93	43.01	1.45 --	0.314
			117	41.56		
	Enlisted Groundcrew	Ranch Hand Comparison	281	41.25	-0.98 --	0.220
			380	42.23		
>40 Drink-years	Officer	Ranch Hand Comparison	91	44.48	-0.82 --	0.586
			126	45.30		
	Enlisted Flyer	Ranch Hand Comparison	46	42.01	-0.04 --	0.986
			64	42.04		
	Enlisted Groundcrew	Ranch Hand Comparison	86	42.93	1.00 --	0.488
			130	41.93		

Table I-2-18. (Continued)
Interaction Table for HDL Cholesterol (mg/dl)
(Continuous)

c) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Current Alcohol Use: Table 13-27)					
Stratum	Dioxin Category	n	Adjusted Mean^a	Difference of Adjusted Mean vs. Comparisons (95% C.I.)^b	p-Value^c
0-1 Drinks/Day	Comparison	806	41.72		
	Background RH	277	42.24	0.52 --	0.463
	Low RH	190	41.19	-0.54 --	0.499
	High RH	202	40.41	-1.31 --	0.096
	Low plus High RH	392	40.78	-0.94 --	0.125
>1-4 Drinks/Day	Comparison	175	46.23		
	Background RH	73	45.64	-0.60 --	0.697
	Low RH	54	46.74	0.51 --	0.768
	High RH	39	48.20	1.97 --	0.330
	Low plus High RH	93	47.35	1.11 --	0.435
>4 Drinks/Day	Comparison	35	47.02		
	Background RH	8	50.16	3.14 --	0.489
	Low RH	3	64.81	17.79 --	0.025
	High RH	5	44.78	-2.24 --	0.673
	Low plus High RH	8	51.44	4.42 --	0.344

Table I-2-18. (Continued)
Interaction Table for HDL Cholesterol (mg/dl)
(Continuous)

d) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Lifetime Alcohol History: Table 13-27)					
Stratum	Dioxin Category	n	Adjusted Mean^a	Difference of Adjusted Mean vs. Comparisons (95% C.I.)^b	p-Value^c
0 Drink-years	Comparison	53	40.20		
	Background RH	20	38.67	-1.53 --	0.534
	Low RH	15	39.01	-1.19 --	0.664
	High RH	23	42.07	1.87 --	0.442
	Low plus High RH	38	40.83	0.63 --	0.756
>0-40 Drink-years	Comparison	690	42.52		
	Background RH	255	43.52	1.00 --	0.190
	Low RH	168	42.48	-0.04 --	0.963
	High RH	162	40.89	-1.63 --	0.067
	Low plus High RH	330	41.69	-0.83 --	0.223
>40 Drink-years	Comparison	273	43.21		
	Background RH	83	42.66	-0.55 --	0.667
	Low RH	64	43.83	0.61 --	0.670
	High RH	61	43.73	0.51 --	0.728
	Low plus High RH	125	43.78	0.56 --	0.614

Table I-2-18. (Continued)
Interaction Table for HDL Cholesterol (mg/dl)
(Continuous)

e) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Current Alcohol Use: Table 13-27)					
Current Dioxin Category Summary Statistics			Analysis Results for \log_2 (Current Dioxin + 1)		
Stratum	Current Dioxin	n	Adjusted Mean ^a	Adjusted Slope (Std. Error) ^d	p-Value
0-1 Drinks/Day	Low	222	42.86	-0.0180 (0.0075)	0.017
	Medium	215	41.07		
	High	232	39.54		
>1-4 Drinks/Day	Low	56	49.85	-0.0351 (0.0172)	0.042
	Medium	67	47.48		
	High	43	45.21		
>4 Drinks/Day	Low	7	50.99	-0.0173 (0.0576)	0.764
	Medium	3	61.68		
	High	6	47.05		

f) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Lifetime Alcohol History: Table 13-27)					
Current Dioxin Category Summary Statistics			Analysis Results for \log_2 (Current Dioxin + 1)		
Stratum	Current Dioxin	n	Adjusted Mean ^a	Adjusted Slope (Std. Error) ^d	p-Value
0 Drink-years	Low	17	39.81	0.0010 (0.0205)	0.962
	Medium	18	40.37		
	High	23	41.62		
>0-40 Drink-years	Low	202	45.13	-0.0304 (0.0081)	<0.001
	Medium	194	42.91		
	High	189	40.23		
>40 Drink-years	Low	66	43.06	-0.0079 (0.0124)	0.524
	Medium	73	42.22		
	High	69	41.38		

Table I-2-18. (Continued)
Interaction Table for HDL Cholesterol (mg/dl)
(Continuous)

g) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Current Alcohol Use: Table 13-27)					
Stratum	Current Dioxin Category Summary Statistics			Analysis Results for Log ₂ (Current Dioxin + 1)	
	Current Dioxin	n	Adjusted Mean ^a	Adjusted Slope (Std. Error) ^b	p-Value
0-1 Drinks/Day	Low	227	43.21	-0.0187 (0.0064)	0.004
	Medium	217	40.86		
	High	225	39.29		
>1-4 Drinks/Day	Low	57	50.81	-0.0361 (0.0146)	0.014
	Medium	66	47.53		
	High	43	44.36		
>4 Drinks/Day	Low	6	52.45	-0.0086 (0.0413)	0.834
	Medium	4	55.20		
	High	6	47.27		

h) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Lifetime Alcohol History: Table 13-27)					
Stratum	Current Dioxin Category Summary Statistics			Analysis Results for Log ₂ (Current Dioxin + 1)	
	Current Dioxin	n	Adjusted Mean ^a	Adjusted Slope (Std. Error) ^b	p-Value
0 Drink-years	Low	18	40.94	-0.0029 (0.0171)	0.867
	Medium	14	38.81		
	High	26	41.56		
>0-40 Drink-years	Low	206	45.50	-0.0313 (0.0070)	<0.001
	Medium	199	42.51		
	High	180	40.12		
>40 Drink-years	Low	66	43.81	-0.0091 (0.0103)	0.378
	Medium	74	42.59		
	High	68	40.20		

Table I-2-18. (Continued)
Interaction Table for HDL Cholesterol (mg/dl)
(Continuous)

I) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Current Alcohol Use: Table 13-27)					
Current Dioxin Category Summary Statistics				Analysis Results for \log_2 (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Adjusted Mean ^a	Adjusted Slope (Std. Error) ^d	p-Value
0-1 Drinks/Day	Low	226	42.20	-0.0101 (0.0067)	0.133
	Medium	217	40.38		
	High	225	39.70		
>1-4 Drinks/Day	Low	57	49.75	-0.0260 (0.0147)	0.077
	Medium	66	47.54		
	High	43	45.04		
>4 Drinks/Day	Low	6	53.77	-0.0111 (0.0409)	0.786
	Medium	4	57.70		
	High	6	47.84		

J) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Lifetime Alcohol History: Table 13-27)					
Current Dioxin Category Summary Statistics				Analysis Results for \log_2 (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Adjusted Mean ^a	Adjusted Slope (Std. Error) ^d	p-Value
0 Drink-years	Low	18	39.64	0.0063 (0.0171)	0.713
	Medium	14	38.21		
	High	26	42.10		
>0-40 Drink-years	Low	205	44.55	-0.0228 (0.0073)	0.002
	Medium	199	42.26		
	High	180	40.67		
>40 Drink-years	Low	66	42.77	-0.0006 (0.0103)	0.952
	Medium	74	42.13		
	High	68	40.72		

Table I-2-18. (Continued)
Interaction Table for HDL Cholesterol (mg/dl)
(Continuous)

k) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Degreasing Chemical Exposure: Table 13-27)					
Stratum	Current Dioxin Category	Summary Statistics		Analysis Results for \log_2 (Current Dioxin + 1)	
		Current Dioxin	n	Adjusted Mean ^a	Adjusted Slope (Std. Error) ^d
No	Low	143	44.80	-0.0315 (0.0096)	0.001
	Medium	114	41.54		
	High	57	39.13		
Yes	Low	146	42.74	-0.0053 (0.0070)	0.446
	Medium	173	42.22		
	High	217	41.17		

^a Transformed from natural logarithm scale.

^b Difference of means after transformation to original scale; confidence interval on difference of means not presented because analysis was performed on natural logarithm scale.

^c P-value is based on difference of means on natural logarithm scale.

^d Slope and standard error based on natural logarithm of HDL cholesterol versus \log_2 dioxin.

Note: RH = Ranch Hand.

Model 3: Comparison: Current Dioxin \leq 10 ppt.

Background (Ranch Hand): Current Dioxin \leq 10 ppt.

Low (Ranch Hand): Current Dioxin $>$ 10 ppt, 10 ppt $<$ Initial Dioxin \leq 143 ppt.

High (Ranch Hand): Current Dioxin $>$ 10 ppt, Initial Dioxin $>$ 143 ppt.

Model 4: Low = \leq 8.1 ppt; Medium = $>$ 8.1-20.5 ppt; High = $>$ 20.5 ppt.

Models 5 and 6: Low = \leq 46 ppq; Medium = $>$ 46-128 ppq; High = $>$ 128 ppq.

Table I-2-19.
Interaction Table for HDL Cholesterol
(Discrete)

a) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Lifetime Alcohol History: Table 13-28)					
Stratum	Dioxin Category	n	Percent Low	Adjusted Relative Risk (95% C.I.) ^a	p-Value
0 Drink-years	Comparison	53	20.8		
	Background RH	20	15.0	0.87 (0.21,3.57)	0.849
	Low RH	15	13.3	0.65 (0.12,3.35)	0.603
	High RH	23	13.0	0.55 (0.14,2.24)	0.405
>0-40 Drink-years	Comparison	690	8.8		
	Background RH	255	9.0	1.18 (0.71,1.97)	0.514
	Low RH	168	10.1	1.09 (0.62,1.95)	0.758
	High RH	162	14.2	1.53 (0.91,2.58)	0.111
>40 Drink-years	Comparison	273	5.1		
	Background RH	83	12.0	3.05 (1.28,7.28)	0.012
	Low RH	64	4.7	0.96 (0.26,3.55)	0.956
	High RH	61	8.2	1.51 (0.51,4.48)	0.460
	Low plus High RH	125	6.4	1.24 (0.50,3.08)	0.645

b) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Lifetime Alcohol History: Table 13-28)					
Stratum	Current Dioxin Category Summary Statistics			Analysis Results for Log ₂ (Current Dioxin + 1)	
	Current Dioxin	n	Percent Low	Adjusted Relative Risk (95% C.I.) ^b	p-Value
0 Drink-years	Low	17	11.8	1.06 (0.66,1.69)	0.808
	Medium	18	16.7		
	High	23	13.0		
>0-40 Drink-years	Low	202	8.9	1.13 (0.95,1.35)	0.159
	Medium	194	9.3		
	High	189	14.3		
>40 Drink-years	Low	66	10.6	0.76 (0.54,1.08)	0.131
	Medium	73	8.2		
	High	69	7.2		

Table I-2-19. (Continued)
Interaction Table for HDL Cholesterol
(Discrete)

c) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Lifetime Alcohol History: Table 13-28)				
Stratum	Current Dioxin Category Summary Statistics			Analysis Results for \log_2 (Current Dioxin + 1)
	Current Dioxin	n	Percent Low	
0 Drink-years	Low	18	16.7	1.07 (0.71,1.62) 0.740
	Medium	14	14.3	
	High	26	11.5	
>0-40 Drink-years	Low	206	8.7	1.25 (1.06,1.47) 0.008
	Medium	199	9.0	
	High	180	15.0	
>40 Drink-years	Low	66	10.6	0.84 (0.64,1.11) 0.225
	Medium	74	6.8	
	High	68	8.8	

d) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Lifetime Alcohol History: Table 13-28)				
Stratum	Current Dioxin Category Summary Statistics			Analysis Results for \log_2 (Current Dioxin + 1)
	Current Dioxin	n	Percent Low	
0 Drink-years	Low	18	16.7	0.98 (0.65,1.47) 0.911
	Medium	14	14.3	
	High	26	11.5	
>0-40 Drink-years	Low	205	8.8	1.10 (0.93,1.31) 0.275
	Medium	199	9.0	
	High	180	15.0	
>40 Drink-years	Low	66	10.6	0.77 (0.59,1.01) 0.062
	Medium	74	6.8	
	High	68	8.8	

^a Relative risk and confidence interval relative to Comparisons.

^b Relative risk for a twofold increase in current dioxin.

Note: Model 3: RH = Ranch Hand.

Comparison: Current Dioxin \leq 10 ppt.

Background (Ranch Hand): Current Dioxin \leq 10 ppt.

Low (Ranch Hand): Current Dioxin > 10 ppt, 10 ppt < Initial Dioxin \leq 143 ppt.

High (Ranch Hand): Current Dioxin > 143 ppt, Initial Dioxin > 143 ppt.

Model 4: Low = \leq 8.1 ppt; Medium = > 8.1-20.5 ppt; High = > 20.5 ppt.

Models 5 and 6: Low = \leq 46 ppq; Medium = > 46-128 ppq; High = > 128 ppq.

Table I-2-20.
Interaction Table for Cholesterol-HDL Ratio
(Continuous)

a) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Current Alcohol Use: Table 13-29)					
Stratum	Initial Dioxin Category	Summary Statistics		Analysis Results for Log _e (Initial Dioxin)	
		Initial Dioxin	n	Adjusted Mean ^a	Adjusted Slope (Std. Error) ^b
0-1 Drinks/Day	Low	128	5.25		
	Medium	130	5.22		
	High	134	5.23	0.0049 (0.0117)	0.672
>1-4 Drinks/Day	Low	39	4.68		
	Medium	27	4.98	0.0477 (0.0257)	0.064
	High	27	4.91		
>4 Drinks/Day	Low	2	--		
	Medium	4	--	0.1874 (0.1051)	0.075
	High	2	--		

b) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Current Alcohol Use: Table 13-29)					
Stratum	Dioxin Category	n	Adjusted Mean ^a	Difference of Adjusted Means vs. Comparisons (95% C.I.) ^c	
					p-Value ^d
0-1 Drinks/Day	Comparison	808	5.15		
	Background RH	281	5.09	-0.06 --	0.511
	Low RH	192	5.17	0.02 --	0.860
	High RH	205	5.36	0.20 --	0.078
	Low plus High RH	397	5.27	0.11 --	0.198
>1-4 Drinks/Day	Comparison	175	4.78		
	Background RH	73	4.89	0.12 --	0.524
	Low RH	55	4.85	0.08 --	0.710
	High RH	39	4.60	-0.17 --	0.443
	Low plus High RH	94	4.75	-0.03 --	0.857
>4 Drinks/Day	Comparison	35	4.72		
	Background RH	9	4.98	0.26 --	0.597
	Low RH	3	3.39	-1.33 --	0.042
	High RH	5	5.07	0.34 --	0.591
	Low plus High RH	8	4.36	-0.37 --	0.449

Table I-2-20. (Continued)
Interaction Table for Cholesterol-HDL Ratio
(Continuous)

c) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Degreasing Chemical Exposure: Table 13-29)					
Current Dioxin Category Summary Statistics				Analysis Results for \log_2 (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Adjusted Mean ^a	Adjusted Slope (Std. Error) ^b	p-Value
No	Low	148	4.60	0.0498 (0.0121)	<0.001
	Medium	109	5.00		
	High	60	5.51		
Yes	Low	139	5.08	0.0178 (0.0084)	0.033
	Medium	181	5.04		
	High	225	5.34		

d) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Age: Table 13-29)					
Current Dioxin Category Summary Statistics				Analysis Results for \log_2 (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Adjusted Mean ^a	Adjusted Slope (Std. Error) ^b	p-Value
Born ≥ 1942	Low	101	4.60	0.0335 (0.0082)	<0.001
	Medium	94	5.21		
	High	160	5.27		
Born < 1942	Low	191	4.68	0.0464 (0.0083)	<0.001
	Medium	198	5.00		
	High	118	5.70		

Table I-2-20. (Continued)
Interaction Table for Cholesterol-HDL Ratio
(Continuous)

e) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Degreasing Chemical Exposure: Table I-3-29)					
Stratum	Current Dioxin Category Summary Statistics			Analysis Results for Log ₂ (Current Dioxin + 1)	
	Current Dioxin	n	Adjusted Mean ^a	Adjusted Slope (Std. Error) ^b	p-Value
No	Low	143	4.96	0.0300 (0.0091)	0.001
	Medium	116	5.32		
	High	58	5.64		
Yes	Low	148	5.36	-0.0015 (0.0068)	0.825
	Medium	176	5.32		
	High	220	5.31		

^a Transformed from natural logarithm scale.

^b Slope and standard error based on natural logarithm of cholesterol-HDL ratio versus log₂ dioxin.

^c Difference of means after transformation to original scale; confidence interval on difference of means not presented because analysis was performed on natural logarithm scale.

^d P-value is based on difference of means on natural logarithm scale.

--: Adjusted mean not presented due to sparse cell sizes.

Note: Model 2: Low = 39-98 ppt; Medium = >98-232 ppt; High = >232 ppt.

Model 3: RH = Ranch Hand.

Comparison: Current Dioxin ≤ 10 ppt.

Background (Ranch Hand): Current Dioxin ≤ 10 ppt.

Low (Ranch Hand): Current Dioxin > 10 ppt, 10 ppt < Initial Dioxin ≤ 143 ppt.

High (Ranch Hand): Current Dioxin > 10 ppt, Initial Dioxin > 143 ppt.

Model 4: Low = ≤8.1 ppt; Medium = >8.1-20.5 ppt; High = >20.5 ppt.

Models 5 and 6: Low = ≤46 ppq; Medium = >46-128 ppq; High = >128 ppq.

Table I-2-21.
Interaction Table for Triglycerides (mg/dl)
(Continuous)

a) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Occupation: Table I-3-31)					
Initial Dioxin Category Summary Statistics			Analysis Results for \log_2 (Initial Dioxin)		
Stratum	Initial Dioxin	n	Adjusted Mean ^a	Adjusted Slope (Std. Error) ^b	p-Value
Officer	Low	77	127.30	0.2639 (0.0934)	0.005
	Medium	33	159.67		
	High	1	220.73		
Enlisted Flyer	Low	36	125.79	0.0716 (0.0503)	0.155
	Medium	43	129.71		
	High	31	144.96		
Enlisted Groundcrew	Low	60	131.79	0.0178 (0.0245)	0.469
	Medium	94	143.46		
	High	140	138.41		

b) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Occupation: Table I-3-31)					
Current Dioxin Category Summary Statistics			Analysis Results for \log_2 (Current Dioxin + 1)		
Stratum	Current Dioxin	n	Adjusted Mean ^a	Adjusted Slope (Std. Error) ^b	p-Value
Officer	Low	189	116.71	0.1509 (0.0374)	<0.001
	Medium	140	135.54		
	High	14	198.36		
Enlisted Flyer	Low	31	122.25	0.1003 (0.0373)	0.007
	Medium	57	115.07		
	High	62	148.05		
Enlisted Groundcrew	Low	70	116.53	0.0485 (0.0180)	0.007
	Medium	101	127.70		
	High	220	145.53		

Table I-2-21. (Continued)
Interaction Table for Triglycerides (mg/dl)
(Continuous)

c) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Occupation and Lifetime Alcohol History: Table I-3-31)					
Current Dioxin Category Summary Statistics			Analysis Results for Log ₂ (Current Dioxin + 1)		
Stratum	Current Dioxin	n	Adjusted Mean ^a	Adjusted Slope (Std. Error) ^b	p-Value
Officer, 0 Drink-years	Low	7	120.13	0.1498 (0.1483)	0.313
	Medium	5	95.93		
	High	2	278.09		
Officer, >0-40 Drink-years	Low	136	107.28	0.2312 (0.0345)	<0.001
	Medium	89	143.76		
	High	10	312.21		
Officer, >40 Drink-years	Low	43	108.39	0.1146 (0.0441)	0.009
	Medium	40	138.60		
	High	7	271.87		
Enlisted Flyer, 0 Drink-years	Low	1	59.78	0.2827 (0.0928)	0.002
	Medium	5	125.92		
	High	7	190.26		
Enlisted Flyer, >0-40 Drink-years	Low	25	125.02	0.0907 (0.0409)	0.027
	Medium	36	121.21		
	High	28	149.58		
Enlisted Flyer, >40 Drink-years	Low	6	72.68	0.2119 (0.0619)	<0.001
	Medium	14	103.47		
	High	24	153.79		
Enlisted Groundcrew, 0 Drink-years	Low	10	111.25	0.1043 (0.0449)	0.020
	Medium	4	112.46		
	High	18	173.64		
Enlisted Groundcrew, >0-40 Drink-years	Low	45	111.04	0.0695 (0.0199)	<0.001
	Medium	76	124.69		
	High	146	147.41		
Enlisted Groundcrew, >40 Drink-years	Low	17	121.11	0.0626 (0.0307)	0.042
	Medium	21	131.54		
	High	42	160.74		

Table I-2-21. (Continued)
Interaction Table for Triglycerides (mg/dl)
(Continuous)

d) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Occupation and Lifetime Alcohol History: Table 13-31)					
Stratum	Current Dioxin Category	Summary Statistics		Analysis Results for Log ₂ (Current Dioxin + 1)	
		Current Dioxin	n	Adjusted Mean ^a	Adjusted Slope (Std. Error) ^b
Officer, 0 Drink-years	Low	7	149.68	-0.0084 (0.1179)	0.943
	Medium	5	94.27		
	High	2	198.65		
Officer, >0-40 Drink-years	Low	136	129.28	0.1020 (0.0291)	<0.001
	Medium	89	142.78		
	High	10	183.89		
Officer, >40 Drink-years	Low	43	133.14	0.0268 (0.0361)	0.458
	Medium	40	145.99		
	High	7	197.95		
Enlisted Flyer, 0 Drink-years	Low	1	123.22	0.0898 (0.0770)	0.244
	Medium	5	146.97		
	High	7	157.83		
Enlisted Flyer, >0-40 Drink-years	Low	24	137.44	0.0327 (0.0387)	0.398
	Medium	36	133.89		
	High	28	132.09		
Enlisted Flyer, >40 Drink-years	Low	6	93.55	0.0980 (0.0512)	0.056
	Medium	14	116.53		
	High	24	139.40		
Enlisted Groundcrew, 0 Drink-years	Low	10	144.75	0.0375 (0.0371)	0.312
	Medium	4	149.23		
	High	18	161.05		
Enlisted Groundcrew, >0-40 Drink-years	Low	45	125.74	0.0104 (0.0164)	0.527
	Medium	76	133.42		
	High	146	136.93		
Enlisted Groundcrew, >40 Drink-years	Low	17	134.80	0.0075 (0.0255)	0.769
	Medium	21	140.83		
	High	42	145.14		

^a Transformed from natural logarithm scale.

^b Slope and standard error based on natural logarithm of triglycerides versus log₂ dioxin.

Note: RH = Ranch Hand.

Model 2: Low = 39-98 ppt; Medium = >98-232 ppt; High = >232 ppt.

Models 5 and 6: Low = ≤46 ppq; Medium = >46-128 ppq; High = >128 ppq.

Table I-2-22.
Interaction Table for Creatine Kinase (U/L)
(Continuous)

a) MODEL 1: RANCH HANDS VS. COMPARISONS — ADJUSTED (Group-by-Race: Table 13-33)						
Stratum	Occupational Category	Group	n	Adjusted Mean ^a	Difference of Adjusted Means (95% C.I.) ^b	p-Value ^c
Black	<i>All</i>	<i>Ranch Hand</i>	51	191.16	-72.90--	0.001
		<i>Comparison</i>	70	264.06		
Non-Black	<i>All</i>	<i>Ranch Hand</i>	866	125.33	1.44--	0.621
		<i>Comparison</i>	1,162	123.89		
Black	Officer	Ranch Hand	7	178.12	-70.20--	0.253
		Comparison	6	248.33		
	Enlisted Flyer	Ranch Hand	9	129.17	-120.56--	0.003
		Comparison	15	249.73		
	Enlisted Groundcrew	Ranch Hand	35	213.91	-55.98--	0.048
		Comparison	49	269.90		
Non-Black	Officer	Ranch Hand	350	129.22	4.20--	0.367
		Comparison	481	125.02		
	Enlisted Flyer	Ranch Hand	147	119.72	-2.44--	0.728
		Comparison	180	122.17		
	Enlisted Groundcrew	Ranch Hand	369	123.53	0.59--	0.894
		Comparison	501	122.94		

Table I-2-22. (Continued)
Interaction Table for Creatine Kinase (U/L)
(Continuous)

**b) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED
(Dioxin Category-by-Race and Lifetime Alcohol History: Table 13-33)**

Stratum	Dioxin Category	n	Adjusted Mean ^a	Difference of Adjusted Mean vs. Comparisons (95% C.I.) ^b		p-Value ^c
Black, 0 Drink-years	Comparison	5	263.75			
	Background RH	2	262.51	-1.24	--	0.991
	Low RH	1	73.78	-189.97	--	0.026
	High RH	2	134.97	-128.78	--	0.121
	Low plus High RH	3	110.36	-153.39	--	0.021
Black, > 0-40 Drink-years	Comparison	38	286.59			
	Background RH	11	185.37	-101.22	--	0.013
	Low RH	11	185.66	-100.93	--	0.013
	High RH	6	177.91	-108.68	--	0.034
	Low plus High RH	17	182.88	-103.71	--	0.003
Black, > 40 Drink-years	Comparison	9	225.35			
	Background RH	2	112.14	-113.21	--	0.081
	Low RH	8	275.59	50.24	--	0.419
	High RH	4	334.50	109.15	--	0.199
	Low plus High RH	12	293.97	68.62	--	0.240
Non-Black, 0 Drink-years	Comparison	48	121.79			
	Background RH	18	104.67	-17.12	--	0.291
	Low RH	14	126.43	4.64	--	0.810
	High RH	22	154.21	32.42	--	0.083
	Low plus High RH	36	142.74	20.95	--	0.171
Non-Black, > 0-40 Drink-years	Comparison	658	123.94			
	Background RH	247	125.36	1.42	--	0.773
	Low RH	158	125.99	2.05	--	0.719
	High RH	158	124.17	0.23	--	0.969
	Low plus High RH	316	125.08	1.14	--	0.801
Non-Black, > 40 Drink-years	Comparison	267	116.06			
	Background RH	82	122.35	6.29	--	0.423
	Low RH	59	109.81	-6.25	--	0.455
	High RH	59	118.77	2.71	--	0.761
	Low plus High RH	118	114.20	-1.86	--	0.779

^a Transformed from natural logarithm scale.

^b Difference of means after transformation to original scale; confidence interval on difference of means not presented because analysis was performed on natural logarithm scale.

^c P-value is based on difference of means on natural logarithm scale.

Note: Model 3: RH = Ranch Hand.

Comparison: Current Dioxin ≤ 10 ppt.

Background (Ranch Hand): Current Dioxin ≤ 10 ppt.

Low (Ranch Hand): Current Dioxin > 10 ppt, 10 ppt < Initial Dioxin ≤ 143 ppt.

High (Ranch Hand): Current Dioxin > 10 ppt, Initial Dioxin > 143 ppt.

Table I-2-23.
Interaction Table for Creatine Kinase
(Discrete)

a) MODEL 1: RANCH HANDS VS. COMPARISONS — ADJUSTED (Group-by-Race: Table 13-34)						
Stratum	Occupational Category	Group	n	Percent High	Adj. Relative Risk (95% C.I.)	p-Value
<i>Non-Black</i>	<i>All</i>	<i>Ranch Hand</i>	876	12.6	<i>1.17 (0.89,1.54)</i>	<i>0.258</i>
		<i>Comparison</i>	1,165	10.9		
<i>Black</i>	<i>All</i>	<i>Ranch Hand</i>	53	39.6	<i>0.38 (0.18,0.80)</i>	<i>0.011</i>
		<i>Comparison</i>	70	61.4		
<i>Non-Black</i>	Officer	<i>Ranch Hand</i>	354	13.6	<i>1.30 (0.85,1.97)</i>	<i>0.222</i>
		<i>Comparison</i>	482	10.8		
	Enlisted Flyer	<i>Ranch Hand</i>	149	10.7	<i>0.88 (0.45,1.73)</i>	<i>0.715</i>
		<i>Comparison</i>	181	9.9		
	Enlisted Groundcrew	<i>Ranch Hand</i>	373	12.3	<i>1.18 (0.79,1.75)</i>	<i>0.417</i>
		<i>Comparison</i>	502	11.4		
<i>Black</i>	Officer	<i>Ranch Hand</i>	7	28.6	<i>0.43 (0.17,1.04)</i>	<i>0.062</i>
		<i>Comparison</i>	6	50.0		
	Enlisted Flyer	<i>Ranch Hand</i>	10	20.0	<i>0.29 (0.11,0.76)</i>	<i>0.012</i>
		<i>Comparison</i>	15	73.3		
	Enlisted Groundcrew	<i>Ranch Hand</i>	36	47.2	<i>0.39 (0.18,0.84)</i>	<i>0.017</i>
		<i>Comparison</i>	49	59.2		

b) MODEL 3: RANCH HANDS AND COMPARISONS — ADJUSTED (Dioxin Category-by-Race: Table 13-34)						
Stratum	Dioxin Category	n	Percent High	Adjusted Relative Risk (95% C.I.) ^a		p-Value
<i>Non-Black</i>	Comparison	973	10.6			
	Background RH	347	12.1	<i>1.26 (0.84,1.88)</i>		<i>0.268</i>
	Low RH	231	9.5	<i>0.84 (0.51,1.38)</i>		<i>0.497</i>
	High RH	239	15.1	<i>1.42 (0.92,2.20)</i>		<i>0.117</i>
	Low plus High RH	470	12.3	<i>1.12 (0.78,1.59)</i>		<i>0.539</i>
<i>Black</i>	Comparison	52	67.3			
	Background RH	15	26.7	<i>0.17 (0.05,0.67)</i>		<i>0.011</i>
	Low RH	20	55.0	<i>0.63 (0.21,1.93)</i>		<i>0.420</i>
	High RH	12	33.3	<i>0.20 (0.04,0.87)</i>		<i>0.032</i>
	Low plus High RH	32	46.9	<i>0.42 (0.16,1.10)</i>		<i>0.077</i>

Table I-2-23. (Continued)
Interaction Table for Creatine Kinase
(Discrete)

c) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Lifetime Alcohol History: Table I-3-34)					
Stratum	Dioxin Category	n	Percent High	Adjusted Relative Risk (95% C.I.)^a	p-Value
0 Drink-years	Comparison	53	15.1		
	Background RH	20	10.0	0.72 (0.13,4.09)	0.712
	Low RH	15	13.3	1.27 (0.22,7.31)	0.789
	High RH	24	25.0	2.91 (0.75,11.32)	0.123
	Low plus High RH	39	20.5	2.13 (0.65,6.99)	0.214
> 0-40 Drink-years	Comparison	696	13.9		
	Background RH	258	13.6	1.08 (0.69,1.68)	0.741
	Low RH	169	10.7	0.65 (0.37,1.14)	0.136
	High RH	164	14.6	1.14 (0.67,1.93)	0.631
	Low plus High RH	333	12.6	0.86 (0.57,1.30)	0.482
> 40 Drink-years	Comparison	276	12.0		
	Background RH	84	10.7	1.17 (0.51,2.69)	0.717
	Low RH	67	19.4	1.42 (0.63,3.22)	0.397
	High RH	63	15.9	0.90 (0.37,2.19)	0.814
	Low plus High RH	130	17.7	1.15 (0.60,2.21)	0.678

^a Relative risk and confidence interval relative to Comparisons.

Note: Model 2: Low = 39-98 ppt; Medium = >98-232 ppt; High = >232 ppt.

Model 3: RH = Ranch Hand.

Comparison: Current Dioxin ≤ 10 ppt.

Background (Ranch Hand): Current Dioxin ≤ 10 ppt.

Low (Ranch Hand): Current Dioxin > 10 ppt, 10 ppt < Initial Dioxin ≤ 143 ppt.

High (Ranch Hand): Current Dioxin > 10 ppt, Initial Dioxin > 143 ppt.

Table I-2-24.
Interaction Table for Serum Amylase
(Discrete)

a) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Age: Table 13-36)					
Stratum	Initial Dioxin Category Summary Statistics			Analysis Results for Log _e (Initial Dioxin)	
	Initial Dioxin	n	Percent High	Adjusted Relative Risk (95% C.I.) ^a	p-Value
Born ≥ 1942	Low	53	7.5	1.24 (0.65,2.37)	0.510
	Medium	69	0.0		
	High	111	3.6		
Born < 1942	Low	118	8.5	0.76 (0.47,1.23)	0.265
	Medium	98	7.1		
	High	59	8.5		

b) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Race: Table 13-36)					
Stratum	Dioxin Category	n	Percent High	Adjusted Relative Risk (95% C.I.) ^b	p-Value
Non-Black	Comparison	990	7.2		
	Background RH	354	6.2	0.70 (0.42,1.16)	0.161
	Low RH	236	6.4	0.94 (0.52,1.68)	0.827
	High RH	246	2.4	0.44 (0.18,1.05)	0.063
	Low plus High RH	482	4.4	0.71 (0.42,1.18)	0.186
Black	Comparison	53	20.8		
	Background RH	15	20.0	0.81 (0.19,3.49)	0.781
	Low RH	21	14.3	0.52 (0.12,2.14)	0.361
	High RH	12	50.0	3.82 (0.98,14.95)	0.054
	Low plus High RH	33	27.3	1.25 (0.44,3.56)	0.671

^a Relative risk for a twofold increase in initial dioxin.

^b Relative risk and confidence interval relative to Comparisons.

Note: Model 2: Low = 39-98 ppt; Medium = >98-232 ppt; High = >232 ppt.

Model 3: RH = Ranch Hand.

Comparison: Current Dioxin ≤ 10 ppt.

Background (Ranch Hand): Current Dioxin ≤ 10 ppt.

Low (Ranch Hand): Current Dioxin > 10 ppt, 10 ppt < Initial Dioxin ≤ 143 ppt.

High (Ranch Hand): Current Dioxin > 10 ppt, Initial Dioxin > 143 ppt.

Table I-2-25.
Interaction Table for Serological Evidence of Prior Hepatitis B Infection

a) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Age: Table 13-38)					
Stratum	Dioxin Category	n	Percent Yes	Adjusted Relative Risk (95% C.I.)^b	p-Value
Born ≥ 1942	Comparison	448	13.4		
	Background RH	126	12.7	1.26 (0.68,2.33)	0.455
	Low RH	84	9.5	0.64 (0.29,1.41)	0.264
	High RH	150	10.7	0.65 (0.36,1.18)	0.159
	Low plus High RH	234	10.3	0.65 (0.39,1.07)	0.092
Born < 1942	Comparison	597	16.2		
	Background RH	241	7.9	0.56 (0.33,0.96)	0.034
	Low RH	170	10.0	0.55 (0.32,0.97)	0.038
	High RH	103	16.5	0.65 (0.36,1.17)	0.148
	Low plus High RH	273	12.5	0.59 (0.39,0.92)	0.019

b) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Occupation: Table 13-38)					
Stratum	Dioxin Category	n	Percent Yes	Adjusted Relative Risk (95% C.I.)^a	p-Value
Officer	Comparison	402	9.7		
	Background RH	233	6.4	0.67 (0.36,1.25)	0.205
	Low RH	102	2.9	0.25 (0.08,0.84)	0.024
	High RH	9	0.0	--	--
	Low plus High	111	2.7	0.23 (0.07,0.76)	0.016
Enlisted Flyer	Comparison	172	19.8		
	Background RH	38	5.3	0.26 (0.06,1.15)	0.076
	Low RH	55	10.9	0.49 (0.19,1.26)	0.139
	High RH	53	24.5	1.19 (0.57,2.51)	0.639
	Low plus High RH	108	17.6	0.82 (0.44,1.54)	0.536
Enlisted Groundcrew	Comparison	471	17.8		
	Background RH	96	18.8	1.08 (0.61,1.93)	0.783
	Low RH	97	16.5	0.87 (0.48,1.57)	0.635
	High RH	191	10.5	0.54 (0.32,0.92)	0.023
	Low plus High RH	288	12.5	0.65 (0.42,1.00)	0.050

Table I-2-25. (Continued)
Interaction Table for Serological Evidence of Prior Hepatitis B Infection

c) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Occupation: Table 13-38)				
Current Dioxin Category Summary Statistics			Analysis Results for \log_2 (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent High	Adjusted Relative Risk (95% C.I.) ^b
Officer	Low	191	6.3	0.72 (0.41,1.23)
	Medium	139	4.3	
	High	14	0.0	
Enlisted Flyer	Low	30	3.3	1.73 (1.14,2.64)
	Medium	56	10.7	
	High	60	23.3	
Enlisted Groundcrew	Low	71	18.3	0.87 (0.72,1.06)
	Medium	97	16.5	
	High	216	11.6	

d) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Occupation: Table 13-38)				
Current Dioxin Category Summary Statistics			Analysis Results for \log_2 (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent High	Adjusted Relative Risk (95% C.I.) ^b
Officer	Low	190	6.8	0.85 (0.58,1.24)
	Medium	134	3.7	
	High	20	0.0	
Enlisted Flyer	Low	32	3.1	1.56 (1.09,2.24)
	Medium	55	10.9	
	High	59	23.7	
Enlisted Groundcrew	Low	74	18.9	0.89 (0.75,1.04)
	Medium	101	13.9	
	High	209	12.4	

Table I-2-25. (Continued)
Interaction Table for Serological Evidence of Prior Hepatitis B Infection

e) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Occupation: Table 13-38)					
Stratum	Current Dioxin Category Summary Statistics			Analysis Results for Log ₂ (Current Dioxin + 1)	
	Current Dioxin	n	Percent High	Adjusted Relative Risk (95% C.I.) ^b	p-Value
Officer	Low	190	6.8	0.85 (0.58,1.25)	0.404
	Medium	134	3.7		
	High	20	0.0		
Enlisted Flyer	Low	31	3.2	1.55 (1.07,2.25)	0.021
	Medium	55	10.9		
	High	59	23.7		
Enlisted	Low	74	18.9	0.89 (0.75,1.05)	0.160
Groundcrew	Medium	101	13.9		
	High	209	12.4		

^a Relative risk and confidence interval relative to Comparisons.

^b Relative risk for a twofold increase in current dioxin.

--: Adjusted relative risk, confidence interval, and p-value not presented due to the sparse number of abnormalities.

Note: Model 3: RH = Ranch Hand.

Comparison: Current Dioxin \leq 10 ppt.

Background (Ranch Hand): Current Dioxin \leq 10 ppt.

Low (Ranch Hand): Current Dioxin $>$ 10 ppt, 10 ppt $<$ Initial Dioxin \leq 143 ppt.

High (Ranch Hand): Current Dioxin $>$ 10 ppt, Initial Dioxin $>$ 143 ppt.

Model 4: Low = \leq 8.1 ppt; Medium = $>$ 8.1-20.5 ppt; High = $>$ 20.5 ppt.

Models 5 and 6: Low = \leq 46 ppq; Medium = $>$ 46-128 ppq; High = $>$ 128 ppq.

Table I-2-26.
Interaction Table for Antibodies for Hepatitis C

a) MODEL I: RANCH HANDS AND BY DIOXIN CATEGORY — ADJUSTED (Group-by-Age: Table 13-39)						
Stratum	Occupational Category	Group	n	Percent Yes	Adj. Relative Risk (95% C.I.)	p-Value
<i>Born ≥ 1942</i>	<i>All</i>	<i>Ranch Hand Comparison</i>	396	1.8	<i>1.09 (0.40,2.96)</i>	0.865
		<i>Ranch Hand Comparison</i>	559	1.6		
<i>Born < 1942</i>	<i>All</i>	<i>Ranch Hand Comparison</i>	556	0.2	<i>0.09 (0.01,0.70)</i>	0.021
		<i>Ranch Hand Comparison</i>	721	1.9		
<i>Born ≥ 1942</i>	Officer	Ranch Hand Comparison	79	2.5	--	--
		Ranch Hand Comparison	121	0.0		
	Enlisted Flyer	Ranch Hand Comparison	38	0.0	--	--
		Ranch Hand Comparison	58	0.0		
	Enlisted Groundcrew	Ranch Hand Comparison	279	1.8	0.93 (0.30,2.87)	0.902
		Ranch Hand Comparison	380	2.4		
<i>Born < 1942</i>	Officer	Ranch Hand Comparison	288	0.4	0.18 (0.02,1.51)	0.114
		Ranch Hand Comparison	381	1.8		
	Enlisted Flyer	Ranch Hand Comparison	124	0.0	--	--
		Ranch Hand Comparison	144	2.8		
	Enlisted Groundcrew	Ranch Hand Comparison	144	0.0	--	--
		Ranch Hand Comparison	196	1.5		

Table I-2-26. (Continued)
Interaction Table for Antibodies for Hepatitis C

b) MODEL I: RANCH HANDS VS. COMPARISONS — ADJUSTED (Group-by-Degreasing Chemical Exposure: Table I-3-39)						
Stratum	Occupational Category	Group	n	Percent Yes	Adj. Relative Risk (95% C.I.)	p-Value
No	<i>All</i>	<i>Ranch Hand</i>	352	1.1	<i>1.12 (0.30,4.20)</i>	<i>0.871</i>
		<i>Comparison</i>	473	1.1		
Yes	<i>All</i>	<i>Ranch Hand</i>	600	0.7	<i>0.29 (0.10,0.86)</i>	<i>0.025</i>
		<i>Comparison</i>	807	2.2		
No	Officer	Ranch Hand	239	1.3	1.02 (0.22,4.76)	0.978
		Comparison	285	1.8		
	Enlisted Flyer	Ranch Hand	27	0.0	--	--
		Comparison	58	0.0		
	Enlisted Groundcrew	Ranch Hand	86	1.2	--	--
		Comparison	130	0.0		
	Officer	Ranch Hand	128	0.0	--	--
		Comparison	217	0.9		
	Enlisted Flyer	Ranch Hand	135	0.0	--	--
		Comparison	144	2.8		
Yes	Enlisted Groundcrew	Ranch Hand	337	1.2	0.41 (0.13,1.33)	0.139
		Comparison	446	2.7		

--: Adjusted relative risk, confidence interval, and p-value not presented due to the sparse number of abnormalities.

Table I-2-27.
Interaction Table for Stool Hemoccult

a) MODEL 1: RANCH HANDS VS. COMPARISONS — ADJUSTED (Group-by-Lifetime Alcohol History: Table 13-40)						
Stratum	Occupational Category	Group	n	Percent Yes	Adj. Relative Risk (95% C.I.)	p-Value
0 Drink-years	<i>All</i>	<i>Ranch Hand</i>	57	1.8	<i>0.64 (0.06,7.26)</i>	<i>0.718</i>
		<i>Comparison</i>	67	3.0		
>0-40 Drink-years	<i>All</i>	<i>Ranch Hand</i>	606	1.7	<i>0.82 (0.38,1.80)</i>	<i>0.625</i>
		<i>Comparison</i>	806	2.1		
>40 Drink-years	<i>All</i>	<i>Ranch Hand</i>	213	5.2	<i>4.40 (1.39,13.94)</i>	<i>0.012</i>
		<i>Comparison</i>	308	1.3		
0 Drink-years	Officer	<i>Ranch Hand</i>	13	0.0	--	--
		<i>Comparison</i>	22	0.0	--	--
	Enlisted Flyer	<i>Ranch Hand</i>	13	0.0	--	--
		<i>Comparison</i>	11	0.0	--	--
	Enlisted Groundcrew	<i>Ranch Hand</i>	31	3.2	<i>0.74 (0.06,8.75)</i>	<i>0.811</i>
		<i>Comparison</i>	34	5.9		
	Officer	<i>Ranch Hand</i>	245	2.0	<i>0.84 (0.27,2.65)</i>	<i>0.770</i>
		<i>Comparison</i>	324	1.5		
	Enlisted Flyer	<i>Ranch Hand</i>	91	0.0	--	--
		<i>Comparison</i>	117	1.7	--	--
>0-40 Drink-years	Enlisted Groundcrew	<i>Ranch Hand</i>	270	1.9	<i>0.94 (0.36,2.40)</i>	<i>0.890</i>
		<i>Comparison</i>	365	2.7		
	Officer	<i>Ranch Hand</i>	90	4.4	<i>4.75 (1.21,18.73)</i>	<i>0.026</i>
		<i>Comparison</i>	124	2.4		
	Enlisted Flyer	<i>Ranch Hand</i>	42	0.0	--	--
		<i>Comparison</i>	63	0.0	--	--
	Enlisted Groundcrew	<i>Ranch Hand</i>	81	8.6	<i>5.27 (1.37,20.27)</i>	<i>0.015</i>
		<i>Comparison</i>	121	0.8		

--: Adjusted relative risk, confidence interval, and p-value not presented due to the sparse number of abnormalities.

Table I-2-28.
Interaction Table for Prealbumin (mg/dl)
(Continuous)

a) MODEL 1: RANCH HANDS VS. COMPARISONS — ADJUSTED (Group-by-Current Alcohol Use: Table I-3-41)						
Stratum	Occupational Category	Group	n	Adjusted Mean	Difference of Adjusted Means (95% C.I.)	p-Value
<i>0-1 Drinks/Day</i>	<i>All</i>	<i>Ranch Hand</i>	719	27.49	<i>-0.11 (-0.53,0.31)</i>	<i>0.622</i>
		<i>Comparison</i>	980	27.60		
<i>> 1-4 Drinks/Day</i>	<i>All</i>	<i>Ranch Hand</i>	181	28.89	<i>0.37 (-0.50,1.23)</i>	<i>0.407</i>
		<i>Comparison</i>	213	28.53		
<i>> 4 Drinks/Day</i>	<i>All</i>	<i>Ranch Hand</i>	17	28.97	<i>1.42 (-1.06,3.90)</i>	<i>0.262</i>
		<i>Comparison</i>	39	27.55		
<i>0-1 Drinks/Day</i>	Officer	Ranch Hand	251	28.00	<i>-0.01 (-0.71,0.69)</i>	<i>0.984</i>
		Comparison	366	28.01		
	Enlisted Flyer	Ranch Hand	126	27.42	<i>-0.16 (-1.20,0.87)</i>	<i>0.755</i>
		Comparison	149	27.59		
	Enlisted Groundcrew	Ranch Hand	342	26.99	<i>-0.15 (-0.76,0.46)</i>	<i>0.632</i>
		Comparison	465	27.13		
	<i>> 1-4 Drinks/Day</i>	Officer	99	28.84	<i>0.21 (-0.97,1.40)</i>	<i>0.726</i>
		Comparison	109	28.63		
		Enlisted Flyer	25	30.27	<i>1.37 (-0.87,3.61)</i>	<i>0.230</i>
	Enlisted Groundcrew	Ranch Hand	57	28.59		
		Comparison	69	28.34		
<i>> 4 Drinks/Day</i>	Officer	Ranch Hand	7	30.13	<i>1.44 (-2.63,5.50)</i>	<i>0.489</i>
		Comparison	12	28.70		
	Enlisted Flyer	Ranch Hand	5	27.72	<i>-0.11 (-4.27,4.50)</i>	<i>0.963</i>
		Comparison	11	27.83		
	Enlisted Groundcrew	Ranch Hand	5	28.73	<i>2.36 (-2.02,6.74)</i>	<i>0.291</i>
		Comparison	16	26.37		

Table I-2-28. (Continued)
Interaction Table for Prealbumin (mg/dl)
(Continuous)

b) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Dioxin-by-Industrial Chemical Exposure: Table I-3-41)					
Initial Dioxin Category Summary Statistics				Analysis Results for Log ₂ (Initial Dioxin)	
Stratum	Initial Dioxin	n	Adjusted Mean	Adjusted Slope (Std. Error)	p-Value
No	Low	73	27.17	0.4196 (0.2579)	0.104
	Medium	60	27.65		
	High	51	28.37		
Yes	Low	98	28.29	-0.3465 (0.1822)	0.058
	Medium	107	27.30		
	High	119	27.40		

c) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Industrial Chemical Exposure: Table I-3-41)					
Stratum	Dioxin Category	n	Adjusted Mean	Difference of Adjusted Mean vs. Comparisons (95% C.L.)	p-Value
No	Comparison	416	27.75		
	Background RH	186	27.82	0.07 (-0.69,0.83)	0.855
	Low RH	104	27.03	-0.72 (-1.66,0.22)	0.134
	High RH	78	28.83	1.08 (-0.01,2.16)	0.052
	Low plus High RH	182	27.80	0.05 (-0.72,0.83)	0.896
Yes	Comparison	609	27.73		
	Background RH	176	27.30	-0.43 (-1.18,0.32)	0.260
	Low RH	147	28.36	0.63 (-0.16,1.42)	0.118
	High RH	173	27.51	-0.23 (-0.97,0.52)	0.555
	Low plus High RH	320	27.90	0.17 (-0.01,1.20)	0.052

Table I-2-28. (Continued)
Interaction Table for Prealbumin (mg/dl)
(Continuous)

d) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Industrial Chemical Exposure: Table 13-41)					
Current Dioxin Category Summary Statistics				Analysis Results for \log_2 (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Adjusted Mean	Adjusted Slope (Std. Error)	p-Value
No	Low	155	28.12	0.1388 (0.1772)	0.434
	Medium	122	27.17		
	High	91	28.30		
Yes	Low	132	28.06	-0.1199 (0.1331)	0.368
	Medium	168	28.05		
	High	196	27.31		

e) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Degreasing Chemical Exposure: Table 13-41)					
Current Dioxin Category Summary Statistics				Analysis Results for \log_2 (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Adjusted Mean	Adjusted Slope (Std. Error)	p-Value
No	Low	149	28.66	-0.4043 (0.1893)	0.033
	Medium	109	27.54		
	High	61	27.48		
Yes	Low	138	27.51	0.1527 (0.1310)	0.244
	Medium	181	27.68		
	High	226	27.51		

f) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Occupation: Table 13-41)					
Current Dioxin Category Summary Statistics				Analysis Results for \log_2 (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Adjusted Mean	Adjusted Slope (Std. Error)	p-Value
Officer	Low	186	27.87	0.4431 (0.2176)	0.042
	Medium	134	28.23		
	High	19	27.11		
Enlisted Flyer	Low	32	27.15	0.4033 (0.2504)	0.108
	Medium	55	28.21		
	High	59	28.24		
Enlisted Groundcrew	Low	72	27.95	-0.0019 (0.1258)	0.988
	Medium	101	27.11		
	High	206	27.64		

Table I-2-28. (Continued)
Interaction Table for Prealbumin (mg/dl)
(Continuous)

g) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Degreasing Chemical Exposure: Table I-3-41)			
Current Dioxin Category Summary Statistics		Analysis Results for Log ₂ (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Adjusted Mean
No	Low	143	28.41
	Medium	115	27.94
	High	61	27.37
Yes	Low	147	27.18
	Medium	175	27.72
	High	223	27.88

h) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Industrial Chemical Exposure: Table I-3-41)			
Current Dioxin Category Summary Statistics		Analysis Results for Log ₂ (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Adjusted Mean
No	Low	149	28.21
	Medium	127	27.45
	High	92	27.98
Yes	Low	140	28.21
	Medium	163	28.23
	High	192	27.07

i) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Degreasing Chemical Exposure: Table I-3-41)			
Current Dioxin Category Summary Statistics		Analysis Results for Log ₂ (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Adjusted Mean
No	Low	143	28.90
	Medium	115	28.01
	High	61	26.84
Yes	Low	146	27.53
	Medium	175	27.73
	High	223	27.33

Note: Model 2: Low = 39-98 ppt; Medium = >98-232 ppt; High = >232 ppt.

Model 3: RH = Ranch Hand.

Comparison: Current Dioxin \leq 10 ppt.

Background (Ranch Hand): Current Dioxin \leq 10 ppt.

Low (Ranch Hand): Current Dioxin > 10 ppt, 10 ppt < Initial Dioxin \leq 143 ppt.

High (Ranch Hand): Current Dioxin > 10 ppt, Initial Dioxin > 143 ppt.

Model 4: Low = \leq 8.1 ppt; Medium = > 8.1-20.5 ppt; High = > 20.5 ppt.

Models 5 and 6: Low = \leq 46 ppq; Medium = > 46-128 ppq; High = > 128 ppq.

Table I-2-29.
Interaction Table for Prealbumin
(Discrete)

a) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Occupation: Table 13-42)				
Stratum	Current Dioxin Category Summary Statistics			Analysis Results for \log_2 (Current Dioxin + 1)
	Current Dioxin	n	Percent Low	
Officer	Low	189	1.6	0.32 (0.14,0.74) 0.008
	Medium	140	0.7	
	High	14	0.0	
Enlisted Flyer	Low	31	3.2	0.29 (0.09,0.91) 0.033
	Medium	57	1.8	
	High	62	0.0	
Enlisted Groundcrew	Low	70	0.0	1.53 (0.86,2.72) 0.152
	Medium	101	1.0	
	High	220	1.8	

b) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Occupation: Table 13-42)				
Stratum	Current Dioxin Category Summary Statistics			Analysis Results for \log_2 (Current Dioxin + 1)
	Current Dioxin	n	Percent Low	
Officer	Low	188	1.6	0.51 (0.32,0.80) 0.003
	Medium	136	0.7	
	High	19	0.0	
Enlisted Flyer	Low	33	3.0	0.38 (0.18,0.83) 0.015
	Medium	56	1.8	
	High	61	0.0	
Enlisted Groundcrew	Low	73	0.0	1.47 (0.86,2.51) 0.162
	Medium	105	1.0	
	High	213	1.9	

Table I-2-29. (Continued)
Interaction Table for Prealbumin
(Discrete)

c) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Age: Table I-3-42)					
Stratum	Current Dioxin Category	Summary Statistics		Analysis Results for \log_2 (Current Dioxin + 1)	
		Current Dioxin	n	Percent Low	Adjusted Relative Risk (95% C.I.) ^a
Born ≥ 1942	Low	101	0.0	2.05 (0.96,4.37)	0.062
	Medium	96	1.0		
	High	166	1.2		
Born < 1942	Low	192	1.6	0.69 (0.45,1.07)	0.099
	Medium	201	1.0		
	High	127	1.6		

^a Relative risk for a twofold increase in current dioxin.

Note: Model 4: Low = ≤8.1 ppt; Medium = >8.1-20.5 ppt; High = >20.5 ppt.
 Models 5 and 6: Low = ≤46 ppq; Medium = >46-128 ppq; High = >128 ppq.

Table I-2-30.
Interaction Table for Albumin (mg/dl)
(Continuous)

a) MODEL 1: RANCH HANDS VS. COMPARISONS — ADJUSTED (Group-by-Age: Table I-3-43)						
Stratum	Occupational Category	Group	n	Adjusted Mean	Difference of Adjusted Means (95% C.I.)	p-Value
<i>Born ≥ 1942</i>	<i>All</i>	<i>Ranch Hand</i>	382	3,949.54	<i>-30.94 (-70.93,9.05)</i>	<i>0.130</i>
		<i>Comparison</i>	541	3,980.49		
<i>Born < 1942</i>	<i>All</i>	<i>Ranch Hand</i>	535	3,884.62	<i>2.17 (-32.28,36.62)</i>	<i>0.902</i>
		<i>Comparison</i>	691	3,882.45		
<i>Born ≥ 1942</i>	Officer	<i>Ranch Hand</i>	77	3,965.68	<i>-42.82 (-130.08,44.44)</i>	<i>0.336</i>
		<i>Comparison</i>	121	4,008.51		
	Enlisted Flyer	<i>Ranch Hand</i>	37	3,967.36	<i>61.91 (-64.96,188.78)</i>	<i>0.339</i>
		<i>Comparison</i>	56	3,905.45		
	Enlisted Groundcrew	<i>Ranch Hand</i>	268	3,941.80	<i>-40.15 (-88.31,8.02)</i>	<i>0.102</i>
		<i>Comparison</i>	364	3,981.94		
<i>Born < 1942</i>	Officer	<i>Ranch Hand</i>	280	3,873.77	<i>-16.62 (-64.16,30.92)</i>	<i>0.493</i>
		<i>Comparison</i>	366	3,890.40		
	Enlisted Flyer	<i>Ranch Hand</i>	119	3,882.72	<i>-26.15 (-100.92,48.62)</i>	<i>0.493</i>
		<i>Comparison</i>	139	3,908.86		
	Enlisted Groundcrew	<i>Ranch Hand</i>	136	3,910.51	<i>61.64 (-5.91,129.18)</i>	<i>0.074</i>
		<i>Comparison</i>	186	3,848.88		

Table I-2-30. (Continued)
Interaction Table for Albumin (mg/dl)
(Continuous)

b) MODEL 1: RANCH HANDS VS. COMPARISONS — ADJUSTED (Group-by-Lifetime Alcohol History: Table 13-43)						
Stratum	Occupational Category	Group	n	Adjusted Mean	Difference of Adjusted Means (95% C.I.)	p-Value
<i>0 Drink-years</i>	All	Ranch Hand Comparison	63 69	3,915.09 3,835.91	79.18 (-24.30,182.67)	0.134
>0-40 Drink-years	All	Ranch Hand Comparison	625 840	3,916.10 3,923.75	-7.65 (39.04,23.73)	0.633
>40 Drink-years	All	Ranch Hand Comparison	229 323	3,896.63 3,940.59	-43.95 (-95.31,7.40)	0.094
0 Drink-years	Officer	Ranch Hand Comparison	14 23	3,919.68 3,894.62	25.06 (-176.74,226.86)	0.808
	Enlisted Flyer	Ranch Hand Comparison	14 11	4,040.51 3,854.07	186.44 (-52.83,425.71)	0.127
	Enlisted Groundcrew	Ranch Hand Comparison	35 35	3,863.85 3,793.50	70.34 (-71.79,212.48)	0.332
	Officer	Ranch Hand Comparison	248 337	3,922.00 3,934.92	-12.93 (-62.71,36.86)	0.611
	Enlisted Flyer	Ranch Hand Comparison	95 119	3,918.83 3,894.49	24.34 (-57.46,106.15)	0.560
	Enlisted Groundcrew	Ranch Hand Comparison	282 384	3,912.16 3,923.80	-11.64 (-58.24,34.96)	0.624
	Officer	Ranch Hand Comparison	95 127	3,912.52 3,971.31	-58.79 (-139.44,21.86)	0.153
	Enlisted Flyer	Ranch Hand Comparison	47 65	3,874.16 3,975.98	-101.81 (-215.62,12.00)	0.080
	Enlisted Groundcrew	Ranch Hand Comparison	87 131	3,895.34 3,898.92	-3.57 (-85.77,78.62)	0.932

Table I-2-30. (Continued)
Interaction Table for Albumin (mg/dl)
(Continuous)

c) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Dioxin Category-by-Industrial Chemical Exposure: Table 13-43)					
Initial Dioxin Category Summary Statistics			Analysis Results for Log ₂ (Initial Dioxin)		
Stratum	Initial Dioxin	n	Adjusted Mean	Adjusted Slope (Std. Error)	p-Value
No	Low	75	3,805.39	44.1831 (17.9207)	0.014
	Medium	61	3,892.78		
	High	51	3,925.13		
Yes	Low	98	3,931.37	-9.3879 (12.7375)	0.461
	Medium	109	3,828.44		
	High	121	3,903.15		

d) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Industrial Chemical Exposure: Table 13-43)					
Stratum	Dioxin Category	n	Adjusted Mean	Difference of Adjusted Means vs. Comparisons (95% C.I.)	p-Value
No	Comparison	416	3,936.01		
	Background RH	188	3,928.25	-7.76 (-59.63,44.11)	0.769
	Low RH	105	3,870.60	-65.41 (-128.95,-1.88)	0.044
	High RH	79	4,020.49	84.48 (8.96,160.00)	0.028
	Low plus High RH	184	3,934.95	-1.06 (-62.27,60.16)	0.973
Yes	Comparison	611	3,933.77		
	Background RH	179	3,900.94	-32.83 (-83.49,17.82)	0.204
	Low RH	149	3,954.56	20.79 (-32.56,74.13)	0.445
	High RH	175	3,934.26	0.49 (-50.40,51.38)	0.985
	Low plus High RH	324	3,943.59	9.82 (-41.47,61.12)	0.707

Table I-2-30. (Continued)
Interaction Table for Albumin (mg/dl)
(Continuous)

e) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Current Alcohol Use: Table 13-43)				
Stratum	Current Dioxin Category Summary Statistics			Analysis Results for \log_2 (Current Dioxin + 1)
	Current Dioxin	n	Adjusted Mean	
0-1 Drinks/Day	Low	226	3,907.09	5.3704 (8.7818)
	Medium	220	3,872.26	
	High	240	3,927.07	
>1-4 Drinks/Day	Low	56	4,034.64	-34.1173 (19.8300)
	Medium	71	3,924.96	
	High	45	3,930.55	
>4 Drinks/Day	Low	7	3,961.80	-178.8045 (64.9326)
	Medium	4	3,893.56	
	High	6	3,629.82	

f) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Degreasing Chemical Exposure: Table 13-43)				
Stratum	Current Dioxin Category Summary Statistics			Analysis Results for \log_2 (Current Dioxin + 1)
	Current Dioxin	n	Adjusted Mean	
No	Low	149	3,976.82	-31.4753 (13.4453)
	Medium	111	3,864.52	
	High	62	3,910.16	
Yes	Low	140	3,876.02	8.4494 (9.2200)
	Medium	184	3,879.76	
	High	229	3,911.54	

Table I-2-30. (Continued)
Interaction Table for Albumin (mg/dl)
(Continuous)

g) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Current Alcohol Use: Table 13-43)					
Current Dioxin Category Summary Statistics				Analysis Results for \log_2 (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Adjusted Mean	Adjusted Slope (Std. Error)	p-Value
0-1 Drinks/Day	Low	229	3,897.64	8.0534 (7.4504)	0.280
	Medium	222	3,887.12		
	High	235	3,926.45		
> 1-4 Drinks/Day	Low	57	4,045.51	-24.0586 (16.8150)	0.153
	Medium	68	3,920.09		
	High	47	3,930.73		
> 4 Drinks/Day	Low	6	4,074.80	-126.8478 (47.0410)	0.007
	Medium	5	3,847.74		
	High	6	3,598.09		

b) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Degreasing Chemical Exposure: Table 13-43)					
Current Dioxin Category Summary Statistics				Analysis Results for \log_2 (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Adjusted Mean	Adjusted Slope (Std. Error)	p-Value
No	Low	143	3,968.69	-23.0042 (11.1454)	0.039
	Medium	117	3,900.71		
	High	62	3,877.96		
Yes	Low	149	3,879.33	11.3152 (7.9399)	0.155
	Medium	178	3,870.37		
	High	226	3,913.99		

Table I-2-30. (Continued)
Interaction Table for Albumin (mg/dl)
(Continuous)

i) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Current Alcohol Use: Table 13-43)					
Current Dioxin Category Summary Statistics			Analysis Results for \log_2 (Current Dioxin + 1)		
Stratum	Current Dioxin	n	Adjusted Mean	Adjusted Slope (Std. Error)	p-Value
0-1 Drinks/Day	Low	228	3,911.06	3.2706 (7.9638)	0.681
	Medium	222	3,893.22		
	High	235	3,919.26		
>1-4 Drinks/Day	Low	57	4,057.55	-29.6257 (17.0541)	0.083
	Medium	68	3,920.16		
	High	47	3,921.35		
>4 Drinks/Day	Low	6	4,064.51	-126.4062 (46.9979)	0.007
	Medium	5	3,831.75		
	High	6	3,590.84		

j) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Degreasing Chemical Exposure: Table 13-43)					
Current Dioxin Category Summary Statistics			Analysis Results for \log_2 (Current Dioxin + 1)		
Stratum	Current Dioxin	n	Adjusted Mean	Adjusted Slope (Std. Error)	p-Value
No	Low	143	3,984.02	-28.0614 (11.4260)	0.014
	Medium	117	3,905.30		
	High	62	3,869.66		
Yes	Low	148	3,890.13	6.4226 (8.4481)	0.447
	Medium	178	3,873.86		
	High	226	3,904.50		

Note: Model 2: Low = 39-98 ppt; Medium = >98-232 ppt; High = >232 ppt.

Model 3: RH = Ranch Hand.

Comparison: Current Dioxin \leq 10 ppt.

Background (Ranch Hand): Current Dioxin \leq 10 ppt.

Low (Ranch Hand): Current Dioxin > 10 ppt, 10 ppt < Initial Dioxin \leq 143 ppt.

High (Ranch Hand): Current Dioxin > 143 ppt.

Model 4: Low = \leq 8.1 ppt; Medium = > 8.1-20.5 ppt; High = > 20.5 ppt.

Models 5 and 6: Low = \leq 46 ppq; Medium = > 46-128 ppq; High = > 128 ppq.

Table I-2-31.
Interaction Table for Albumin
(Discrete)

a) MODEL 1: RANCH HANDS VS. COMPARISONS — ADJUSTED (Group-by-Industrial Chemical Exposure: Table 13-44)						
Stratum	Occupational Category	Group	n	Percent Low	Adj. Relative Risk (95% C.I.)	p-Value
No	<i>All</i>	<i>Ranch Hand</i>	396	3.3	2.39 (0.93,6.11)	0.069
		<i>Comparison</i>	512	1.4		
Yes	<i>All</i>	<i>Reach Hand</i>	543	1.8	0.64 (0.30,1.37)	0.249
		<i>Comparison</i>	741	2.8		
No	Officer	<i>Ranch Hand</i>	226	3.1	2.48 (0.80,7.70)	0.117
		<i>Comparison</i>	305	1.6		
	Enlisted Flyer	<i>Ranch Hand</i>	46	4.4	1.24 (0.24,6.45)	0.798
		<i>Comparison</i>	62	0.0		
	Enlisted Groundcrew	<i>Ranch Hand</i>	124	3.2	3.02 (0.86,10.56)	0.084
		<i>Comparison</i>	145	1.4		
Yes	Officer	<i>Ranch Hand</i>	135	0.7	0.66 (0.17,2.55)	0.543
		<i>Comparison</i>	190	1.1		
	Enlisted Flyer	<i>Ranch Hand</i>	116	0.9	0.33 (0.08,1.40)	0.132
		<i>Comparison</i>	134	5.2		
	Enlisted Groundcrew	<i>Ranch Hand</i>	292	2.7	0.80 (0.33,1.94)	0.622
		<i>Comparison</i>	417	2.9		

Table I-2-32.
Interaction Table for α -1 Acid Glycoprotein (mg/dl)
(Continuous)

a) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Occupation: Table I-3-45)					
Stratum	Initial Dioxin	Initial Dioxin Category Summary Statistics		Analysis Results for \log_2 (Initial Dioxin) Adjusted Slope (Std. Error) ^b	p-Value
		n	Adjusted Mean ^a		
Officer	Low	76	51.23	0.0667 (0.0340)	0.050
	Medium	33	53.86		
	High	1	55.67		
Enlisted Flyer	Low	36	53.34	0.0103 (0.0185)	0.580
	Medium	43	54.36		
	High	29	55.48		
Enlisted Groundcrew	Low	58	58.33	-0.0244 (0.0090)	0.007
	Medium	89	57.62		
	High	137	55.22		

b) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Lifetime Alcohol History: Table I-3-45)					
Stratum	Initial Dioxin	Initial Dioxin Category Summary Statistics		Analysis Results for \log_2 (Initial Dioxin) Adjusted Slope (Std. Error) ^b	
		n	Adjusted Mean ^a		
0 Drink-years	Low	10	54.67	-0.0223 (0.0238)	0.348
	Medium	12	57.26		
	High	17	54.02		
>0-40 Drink-years	Low	119	53.16	-0.0086 (0.0096)	0.369
	Medium	107	55.20		
	High	107	52.81		
>40 Drink-years	Low	41	57.64	-0.0239 (0.0143)	0.096
	Medium	46	54.28		
	High	43	54.39		

Table I-2-32. (Continued)
Interaction Table for α -1 Acid Glycoprotein (mg/dl)
(Continuous)

c) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Lifetime Alcohol History: Table 13-45)					
Stratum	Dioxin Category	n	Adjusted Mean^a	Difference of Adjusted Mean vs. Comparisons (95% C.I.)^c	p-Value^d
0 Drink-years	Comparison	53	51.42		
	Background RH	20	50.80	-0.62 --	0.831
	Low RH	15	58.51	7.09 --	0.042
	High RH	24	54.88	3.46 --	0.222
	Low plus High RH	39	56.25	4.83 --	0.050
>0-40 Drink-years	Comparison	696	54.29		
	Background RH	258	53.82	-0.46 --	0.594
	Low RH	169	54.27	-0.02 --	0.987
	High RH	164	54.78	0.49 --	0.644
	Low plus High RH	333	54.52	0.23 --	0.772
>40 Drink-years	Comparison	276	54.93		
	Background RH	84	54.89	-0.05 --	0.975
	Low RH	67	56.75	1.82 --	0.272
	High RH	63	53.61	-1.32 --	0.426
	Low plus High RH	130	55.21	0.28 --	0.829

Table I-2-32. (Continued)
Interaction Table for α -1 Acid Glycoprotein (mg/dl)
(Continuous)

d) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Lifetime Alcohol History: Table I-3-45)				Analysis Results for \log_2 (Current Dioxin + 1)	
Stratum	Current Dioxin Category	Summary Statistics		Adjusted Slope (Std. Error) ^b	p-Value
0 Drink-years	Low	17	51.20	0.0056 (0.0167)	0.736
	Medium	18	55.85		
	High	24	54.39		
>0-40 Drink-years	Low	204	54.36	-0.0112 (0.0068)	0.102
	Medium	195	53.63		
	High	192	53.31		
>40 Drink-years	Low	66	54.69	-0.0105 (0.0100)	0.297
	Medium	77	55.37		
	High	71	52.50		

^a Transformed from natural logarithm scale.

^b Slope and standard error based on natural logarithm of α -1 acid glycoprotein versus \log_2 dioxin.

^c Difference of means after transformation to original scale; confidence interval on difference of means not presented because analysis was performed on natural logarithm scale.

^d P-value is based on difference of means on natural logarithm scale.

Note: Model 2: Low = 39-98 ppt; Medium = >98-232 ppt; High = >232 ppt.

Model 3: RH = Ranch Hand.

Comparison: Current Dioxin \leq 10 ppt.

Background (Ranch Hand): Current Dioxin \leq 10 ppt.

Low (Ranch Hand): Current Dioxin > 10 ppt, 10 ppt < Initial Dioxin \leq 143 ppt.

High (Ranch Hand): Current Dioxin > 10 ppt, Initial Dioxin > 143 ppt.

Model 4: Low = \leq 8.1 ppt; Medium = > 8.1-20.5 ppt; High = > 20.5 ppt.

Table I-2-33.
**Interaction Table for α -1 Acid Glycoprotein
(Discrete)**

a) MODEL 1: RANCH HANDS VS. COMPARISONS — ADJUSTED (Group-by-Age: Table 13-46)						
Stratum	Occupational Category	Group	n	Percent High	Adj. Relative Risk (95% C.I.)	p-Value
<i>Born ≥ 1942</i>	<i>All</i>	<i>Ranch Hand</i>	382	2.6	<i>2.00 (0.75,5.32)</i>	<i>0.165</i>
		<i>Comparison</i>	541	1.3		
<i>Born < 1942</i>	<i>All</i>	<i>Ranch Hand</i>	535	2.1	<i>0.51 (0.25,1.04)</i>	<i>0.065</i>
		<i>Comparison</i>	691	3.9		
<i>Born ≥ 1942</i>	Officer	<i>Ranch Hand</i>	77	0.0	<i>1.71 (0.38,7.70)</i>	<i>0.488</i>
		<i>Comparison</i>	121	1.7		
	Enlisted Flyer	<i>Ranch Hand</i>	37	2.7	<i>3.35 (0.73,15.44)</i>	<i>0.121</i>
		<i>Comparison</i>	56	1.8		
	Enlisted Groundcrew	<i>Ranch Hand</i>	268	3.4	<i>1.85 (0.65,5.25)</i>	<i>0.245</i>
		<i>Comparison</i>	364	1.1		
<i>Born < 1942</i>	Officer	<i>Ranch Hand</i>	280	1.8	<i>0.40 (0.14,1.18)</i>	<i>0.097</i>
		<i>Comparison</i>	366	3.0		
	Enlisted Flyer	<i>Ranch Hand</i>	119	4.2	<i>0.79 (0.25,2.51)</i>	<i>0.691</i>
		<i>Comparison</i>	139	4.3		
	Enlisted Groundcrew	<i>Ranch Hand</i>	136	0.7	<i>0.44 (0.14,1.34)</i>	<i>0.148</i>
		<i>Comparison</i>	186	5.4		

Table I-2-33. (Continued)
Interaction Table α -1 Acid for Glycoprotein
(Discrete)

b) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Occupation: Table 13-46)					
Stratum	Initial Dioxin Category Summary Statistics			Analysis Results for Log ₂ (Initial Dioxin)	
	Initial Dioxin	n	Percent High	Adjusted Relative Risk (95% C.I.) ^a	p-Value
Officer	Low	77	0.0	--	--
	Medium	33	0.0		
	High	1	0.0		
Enlisted Flyer	Low	36	0.0	2.75 (1.03,7.31)	0.043
	Medium	43	7.0		
	High	31	6.5		
Enlisted Groundcrew	Low	60	6.7	0.72 (0.36,1.44)	0.351
	Medium	94	1.1		
	High	140	1.4		

c) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Degreasing Chemical Exposure: Table 13-46)					
Stratum	Initial Dioxin Category Summary Statistics			Analysis Results for Log ₂ (Initial Dioxin)	
	Initial Dioxin	n	Percent High	Adjusted Relative Risk (95% C.I.) ^a	p-Value
No	Low	67	4.5	0.58 (0.21,1.58)	0.283
	Medium	46	4.3		
	High	32	0.0		
Yes	Low	106	0.9	1.53 (0.80,2.90)	0.195
	Medium	124	1.6		
	High	140	2.9		

Table I-2-33. (Continued)
Interaction Table for α -1 Acid Glycoprotein
(Discrete)

d) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Age: Table I-3-46)					
Stratum	Dioxin Category	n	Percent High	Adjusted Relative Risk (95% C.I.) ^b	p-Value
Born \geq 1942	Comparison	439	1.1		
	Background RH	125	0.8	0.63 (0.07,5.49)	0.674
	Low RH	82	6.1	5.32 (1.49,18.98)	0.010
	High RH	149	2.0	1.87 (0.43,8.03)	0.401
Born $<$ 1942	Comparison	586	3.8		
	Background RH	237	2.1	0.51 (0.19,1.34)	0.171
	Low RH	169	0.6	0.16 (0.02,1.22)	0.077
	High RH	102	2.9	0.78 (0.23,2.67)	0.687
	Low plus High RH	271	1.5	0.40 (0.13,1.17)	0.093

e) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Occupation: Table I-3-46)			
Current Dioxin Category Summary Statistics			Analysis Results for Log ₂ (Current Dioxin + 1)
Stratum	Current Dioxin	n	Percent High
Officer	Low	187	2.7
	Medium	138	0.0
	High	14	0.0
Enlisted Flyer	Low	30	0.0
	Medium	56	0.0
	High	60	8.3
Enlisted Groundcrew	Low	70	0.0
	Medium	96	6.3
	High	213	0.9

Table I-2-33. (Continued)
Interaction Table for α -1 Acid Glycoprotein
(Discrete)

f) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Occupation: Table 13-46)				
Stratum	Current Dioxin Category Summary Statistics			Analysis Results for \log_2 (Current Dioxin + 1)
	Current Dioxin	n	Percent High	
Officer	Low	186	2.7	0.62 (0.39,0.98) 0.043
	Medium	134	0.0	
	High	19	0.0	
Enlisted Flyer	Low	32	0.0	2.10 (1.01,4.34) 0.046
	Medium	55	0.0	
	High	59	8.5	
Enlisted Groundcrew	Low	72	0.0	0.96 (0.66,1.40) 0.834
	Medium	101	5.9	
	High	206	1.0	

g) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Occupation: Table 13-46)				
Stratum	Current Dioxin Category Summary Statistics			Analysis Results for \log_2 (Current Dioxin + 1)
	Current Dioxin	n	Percent High	
Officer	Low	186	2.7	0.63 (0.39,1.01) 0.053
	Medium	134	0.0	
	High	19	0.0	
Enlisted Flyer	Low	31	0.0	2.31 (1.06,5.03) 0.036
	Medium	55	0.0	
	High	59	8.5	
Enlisted GroundCrew	Low	72	0.0	1.00 (0.68,1.46) 0.980
	Medium	101	5.9	
	High	206	1.0	

^a Relative risk for a twofold increase in initial dioxin.

^b Relative risk and confidence interval relative to Comparisons.

^c Relative risk for a twofold increase in current dioxin.

Note: Model 2: Low = 39-98 ppt; Medium = >98-232 ppt; High = >232 ppt.

Model 3: RH = Ranch Hand.

Comparison: Current Dioxin \leq 10 ppt.

Background (Ranch Hand): Current Dioxin \leq 10 ppt.

Low (Ranch Hand): Current Dioxin > 10 ppt, 10 ppt < Initial Dioxin \leq 143 ppt.

High (Ranch Hand): Current Dioxin > 10 ppt, Initial Dioxin > 143 ppt.

Model 4: Low = \leq 8.1 ppt; Medium = > 8.1-20.5 ppt; High = > 20.5 ppt.

Models 5 and 6: Low = \leq 46 ppq; Medium = > 46-128 ppq; High = > 128 ppq.

Table I-2-34.
Interaction Table for α -1 Antitrypsin (mg/dl)
(Continuous)

a) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Industrial Chemical Exposure: Table I-3-47)					
Initial Dioxin Category Summary Statistics			Analysis Results for Log ₂ (Initial Dioxin)		
Stratum	Initial Dioxin	n	Adjusted Mean	Adjusted Slope (Std. Error)	p-Value
No	Low	72	142.91	-2.4852 (1.6706)	0.138
	Medium	60	152.17		
	High	50	135.71		
Yes	Low	98	141.76	1.1608 (1.1484)	0.313
	Medium	105	140.52		
	High	117	145.05		

b) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Degreasing Chemical Exposure: Table I-3-47)					
Initial Dioxin Category Summary Statistics			Analysis Results for Log ₂ (Initial Dioxin)		
Stratum	Initial Dioxin	n	Adjusted Mean	Adjusted Slope (Std. Error)	p-Value
No	Low	66	138.92	2.6547 (1.8262)	0.147
	Medium	46	146.87		
	High	31	145.13		
Yes	Low	104	145.01	-0.6819 (1.1146)	0.541
	Medium	119	145.44		
	High	136	143.70		

Table I-2-34. (Continued)
Interaction Table for α -1 Antitrypsin (mg/dl)
(Continuous)

c) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Occupation: Table 13-47)					
Stratum	Current Dioxin Category Summary Statistics			Analysis Results for \log_2 (Current Dioxin + 1)	
	Current Dioxin	n	Adjusted Mean	Adjusted Slope (Std. Error)	p-Value
Officer	Low	187	143.77	-5.0191 (1.7880)	0.005
	Medium	138	136.71		
	High	14	135.83		
Enlisted	Low	30	153.17	-2.2770 (1.7871)	0.203
	Medium	56	146.15		
	High	60	145.68		
Flyer	Low	70	153.49	-1.2898 (0.8576)	0.133
	Medium	96	152.16		
	High	213	146.99		

d) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Degreasing Chemical Exposure: Table 13-47)					
Stratum	Current Dioxin Category Summary Statistics			Analysis Results for \log_2 (Current Dioxin + 1)	
	Current Dioxin	n	Adjusted Mean	Adjusted Slope (Std. Error)	p-Value
No	Low	149	147.46	-0.3926 (1.1954)	0.743
	Medium	109	142.29		
	High	61	144.93		
Yes	Low	138	153.38	-2.7376 (0.8138)	<0.001
	Medium	181	147.49		
	High	226	143.30		

Table I-2-34. (Continued)
Interaction Table for α -1 Antitrypsin (mg/dl)
(Continuous)

e) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Occupation: Table 13-47)					
Stratum	Current Dioxin Category Summary Statistics		Analysis Results for \log_2 (Current Dioxin + 1)		
	Current Dioxin	n		Adjusted Slope (Std. Error)	p-Value
Officer	Low	186	144.19	-4.0222 (1.3046)	0.002
	Medium	134	135.79		
	High	19	139.87		
Enlisted Flyer	Low	32	155.03	-2.1960 (1.4904)	0.141
	Medium	55	143.09		
	High	59	147.31		
Enlisted Groundcrew	Low	72	153.60	-1.4504 (0.7536)	0.055
	Medium	101	150.51		
	High	206	147.85		

f) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Degreasing Chemical Exposure: Table 13-47)					
Stratum	Current Dioxin Category Summary Statistics		Analysis Results for \log_2 (Current Dioxin + 1)		
	Current Dioxin	n		Adjusted Slope (Std. Error)	p-Value
No	Low	143	147.58	-0.6692 (0.9924)	0.500
	Medium	115	141.21		
	High	61	147.44		
Yes	Low	147	154.14	-2.7814 (0.6980)	<0.001
	Medium	175	145.92		
	High	223	144.79		

Table I-2-34. (Continued)
Interaction Table for α -1 Antitrypsin (mg/dl)
(Continuous)

g) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Occupation: Table 13-47)			
Current Dioxin Category Summary Statistics			Analysis Results for \log_2 (Current Dioxin + 1)
Stratum	Current Dioxin	n	Adjusted Mean
Officer	Low	186	143.62
	Medium	134	135.82
	High	19	141.31
Enlisted Flyer	Low	31	152.53
	Medium	55	142.92
	High	59	147.90
Enlisted Groundcrew	Low	72	153.17
	Medium	101	150.28
	High	206	148.14

b) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Degreasing Chemical Exposure: Table 13-47)			
Current Dioxin Category Summary Statistics			Analysis Results for \log_2 (Current Dioxin + 1)
Stratum	Current Dioxin	n	Adjusted Mean
No	Low	143	146.75
	Medium	115	140.91
	High	61	147.86
Yes	Low	146	153.19
	Medium	175	145.83
	High	223	145.32

Note: Model 2: Low = 39-98 ppt; Medium = >98-232 ppt; High = >232 ppt.

Model 4: Low = ≤ 8.1 ppt; Medium = >8.1-20.5 ppt; High = >20.5 ppt.

Models 5 and 6: Low = ≤ 46 ppq; Medium = >46-128 ppq; High = >128 ppq.

Table I-2-35.
Interaction Table for α -2 Macroglobulin
(Continuous)

a) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Age: Table 13-49)				
Stratum	Initial Dioxin Category	Summary Statistics		Analysis Results for Log ₂ (Initial Dioxin)
		n	Adjusted Mean ^a	
Born \geq 1942	Low	53	120.89	-0.0100 (0.0105) 0.338
	Medium	69	119.49	
	High	109	120.04	
Born < 1942	Low	117	125.27	0.0238 (0.0111) 0.032
	Medium	96	131.31	
	High	58	134.79	

^a Transformed from natural logarithm scale.

^b Slope and standard error based on natural logarithm of α -2 macroglobulin versus log₂ dioxin.

Note: Low = 39-98 ppt; Medium = >98-232 ppt; High = >232 ppt.

Table I-2-36.
Interaction Table for Apolipoprotein B
(Continuous)

a) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Age: Table 13-51)					
Initial Dioxin Category Summary Statistics			Analysis Results for Log ₂ (Initial Dioxin)		
Stratum	Initial Dioxin	n	Adjusted Mean ^a	Adjusted Slope (Std. Error) ^b	p-Value
Born ≥ 1942	Low	54	147.91	-0.0021 (0.0117)	0.856
	Medium	70	144.69		
	High	112	146.11		
Born < 1942	Low	119	147.63	0.0424 (0.0123)	< 0.001
	Medium	100	149.32		
	High	60	162.95		

b) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Age: Table 13-51)					
Current Dioxin Category Summary Statistics			Analysis Results for Log ₂ (Current Dioxin + 1)		
Stratum	Current Dioxin	n	Adjusted Mean ^a	Adjusted Slope (Std. Error) ^b	p-Value
Born ≥ 1942	Low	101	140.17	0.0143 (0.0069)	0.039
	Medium	96	147.14		
	High	166	145.20		
Born < 1942	Low	193	140.62	0.0360 (0.0072)	< 0.001
	Medium	201	147.70		
	High	127	161.35		

^a Transformed from natural logarithm scale.

^b Slope and standard error based on natural logarithm of apolipoprotein B versus log₂ dioxin.

Note: Model 2: Low = 39-98 ppt; Medium = > 98-232 ppt; High = > 232 ppt.

Models 5: Low = ≤46 ppq; Medium = >46-128 ppq; High = > 128 ppq.

Table I-2-37.
Interaction Table for Apolipoprotein B
(Discrete)

a) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Age: Table 13-52)					
Stratum	Initial Dioxin Category	Summary Statistics		Analysis Results for Log ₂ (Initial Dioxin)	
		Initial Dioxin	n	Percent High	Adjusted Relative Risk (95% C.I.) ^a
Born ≥ 1942	Low	54	77.8	0.88 (0.71,1.10)	0.273
	Medium	70	72.9		
	High	112	70.5		
Born < 1942	Low	119	73.1	1.44 (1.05,1.97)	0.023
	Medium	100	77.0		
	High	60	86.7		

b) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Age: Table 13-52)					
Stratum	Current Dioxin Category	Summary Statistics		Analysis Results for Log ₂ (Current Dioxin + 1)	
		Current Dioxin	n	Percent High	Adjusted Relative Risk (95% C.I.) ^b
Born ≥ 1942	Low	101	71.3	1.06 (0.93,1.20)	0.368
	Medium	96	76.0		
	High	166	71.7		
Born < 1942	Low	193	65.8	1.32 (1.15,1.51)	<0.001
	Medium	201	75.1		
	High	127	85.8		

^a Relative risk for a twofold increase in initial dioxin.

^b Relative risk for a twofold increase in current dioxin.

Note: Model 2: Low = 39-98 ppt; Medium = >98-232 ppt; High = >232 ppt.

Model 5: Low = ≤46 ppq; Medium = >46-128 ppq; High = >128 ppq.

Table I-2-38.
Interaction Table for C₃ Complement
(Continuous)

a) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Occupation: Table I-3-53)					
Stratum	Current Dioxin Category Summary Statistics			Analysis Results for Log₂ (Current Dioxin + 1)	
	Current Dioxin	n	Adjusted Mean^a	Adjusted Slope (Std. Error)^b	p-Value
Officer	Low	188	111.68	0.0316 (0.0070)	<0.001
	Medium	136	115.48		
	High	19	130.65		
Enlisted Flyer	Low	33	109.00	0.0398 (0.0081)	<0.001
	Medium	56	112.02		
	High	61	120.58		
Enlisted Groundcrew	Low	73	113.75	0.0181 (0.0041)	<0.001
	Medium	105	119.87		
	High	213	121.57		

^a Transformed from natural logarithm scale.

^b Slope and standard error based on natural logarithm of C₃ complement versus log₂ dioxin.

Note: Low = ≤46 ppq; Medium = >46-128 ppq; High = >128 ppq.

Table I-2-39.
**Interaction Table for C₃ Complement
(Discrete)**

a) MODEL 1: RANCH HANDS VS. COMPARISONS — ADJUSTED (Group-by-Race: Table 13-54)						
Stratum	Occupational Category	Group	n	Percent Low	Adj. Relative Risk (95% C.I.)	p-Value
Non-Black	All	Ranch Hand	866	2.5	1.00 (0.57,1.76)	0.996
		Comparison	1,162	2.6		
Black	All	Ranch Hand	51	3.9	--	--
		Comparison	70	0.0		
Non-Black	Officer	Ranch Hand	350	2.6	0.83 (0.37,1.86)	0.648
		Comparison	481	3.3		
	Enlisted Flyer	Ranch Hand	147	2.7	0.66 (0.19,2.33)	0.519
		Comparison	180	3.9		
	Enlisted Groundcrew	Ranch Hand	369	2.4	1.79 (0.65,4.97)	0.260
		Comparison	501	1.4		
Black	Officer	Ranch Hand	7	14.3	--	--
		Comparison	6	0.0		
	Enlisted Flyer	Ranch Hand	9	0.0	--	--
		Comparison	15	0.0		
	Enlisted Groundcrew	Ranch Hand	35	2.9	--	--
		Comparison	49	0.0		

b) MODEL 3: RANCH HANDS AND COMPARISONS — ADJUSTED (Dioxin Category-by-Race: Table 13-54)						
Stratum	Dioxin Category	n	Percent Low	Adjusted Relative Risk (95% C.I.) ^a	p-Value	
Black	Comparison	52	0.0			
	Background RH	15	13.3	--	--	
	Low RH	21	0.0	--	--	
	High RH	12	0.0	--	--	
	Low plus High RH	33	0.0	--	--	
Non-Black	Comparison	975	2.9			
	Background RH	352	3.4	1.06 (0.52,2.17)	0.870	
	Low RH	233	2.1	0.76 (0.29,2.05)	0.593	
	High RH	242	1.2	0.39 (0.11,1.33)	0.132	
	Low plus High RH	475	1.7	0.56 (0.25,1.28)	0.172	

Table I-2-39. (Continued)
Interaction Table for C₃ Complement
(Discrete)

c) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Industrial Chemical Exposure: Table 13-54)					
Stratum	Dioxin Category	n	Percent Low	Adjusted Relative Risk (95% C.I.) ^a	p-Value
No	Comparison	416	3.1		
	Background RH	188	2.7	0.74 (0.26,2.17)	0.588
	Low RH	105	4.8	1.59 (0.53,4.75)	0.407
	High RH	79	0.0	--	--
	Low plus High RH	184	2.7	0.76 (0.26,2.26)	0.625
Yes	Comparison	611	2.5		
	Background RH	179	5.0	1.93 (0.80,4.64)	0.143
	Low RH	149	0.0	--	--
	High RH	175	1.7	0.75 (0.21,2.73)	0.661
	Low plus High RH	324	0.9	0.40 (0.11,1.41)	0.153

d) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED			
Current Dioxin Category Summary Statistics			Analysis Results for Log ₂ (Current Dioxin + 1)
Stratum	Current Dioxin	n	Percent Low
0-1 Drinks/Day	Low	226	4.0
	Medium	220	3.2
	High	240	0.4
>1 Drinks/Day	Low	63	1.6
	Medium	75	0.0
	High	51	7.8

^a Relative risk and confidence interval relative to Comparisons.

^b Relative risk for a twofold increase in current dioxin.

--: Adjusted relative risk, confidence interval, and p-value not presented due to the sparse number of abnormalities.

Note: Model 3: RH = Ranch Hand.

Comparison: Current Dioxin ≤ 10 ppt.

Background (Ranch Hand): Current Dioxin ≤ 10 ppt.

Low (Ranch Hand): Current Dioxin > 10 ppt, 10 ppt < Initial Dioxin ≤ 143 ppt.

High (Ranch Hand): Current Dioxin > 143 ppt, Initial Dioxin > 143 ppt.

Model 4: Low = ≤ 8.1 ppt; Medium = > 8.1-20.5 ppt; High = > 20.5 ppt.

Table I-2-40.
Interaction Table for C₄ Complement (mg/dl)
(Continuous)

a) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED <i>(Initial Dioxin-by-Age: Table 13-55)</i>					
Initial Dioxin Category Summary Statistics				Analysis Results for Log _e (Initial Dioxin)	
Stratum	Initial Dioxin	n	Adjusted Mean ^a	Adjusted Slope (Std. Error) ^b	p-Value
Born ≥ 1942	Low	53	22.16	0.0113 (0.0125)	0.365
	Medium	69	23.78		
	High	111	23.71		
Born < 1942	Low	118	22.72	-0.0117 (0.0139)	0.401
	Medium	98	23.34		
	High	59	22.83		

b) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED <i>(Initial Dioxin-by-Occupation: Table 13-55)</i>					
Initial Dioxin Category Summary Statistics				Analysis Results for Log _e (Initial Dioxin)	
Stratum	Initial Dioxin	n	Adjusted Mean ^a	Adjusted Slope (Std. Error) ^b	p-Value
Officer	Low	77	21.97	0.1323 (0.0408)	0.001
	Medium	33	24.95		
	High	1	28.36		
Enlisted	Low	36	22.62	-0.0134 (0.0222)	0.547
	Flyer	43	22.62		
	High	30	22.48		
Enlisted	Low	58	22.78	-0.0038 (0.0109)	0.726
	Groundcrew	91	22.88		
	High	139	23.18		

Table I-2-40. (Continued)
Interaction Table for C₄ Complement (mg/dl)
(Continuous)

c) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Occupation: Table 13-55)				Analysis Results for Log ₂ (Current Dioxin + 1)	
Stratum	Current Dioxin Category	Summary Statistics		Adjusted Slope (Std. Error) ^b	p-Value
Officer	Low	186	21.75	0.0369 (0.0116)	0.002
	Medium	134	22.25		
	High	19	27.63		
Enlisted Flyer	Low	32	21.60	0.0212 (0.0135)	0.117
	Medium	55	22.44		
	High	59	23.14		
Enlisted Groundcrew	Low	72	23.21	0.0024 (0.0068)	0.726
	Medium	101	23.14		
	High	206	23.04		

^a Transformed from natural logarithm scale.

^b Slope and standard error based on natural logarithm of C₄ complement versus log₂ dioxin.

Note: Model 2: Low = 39-98 ppt; Medium = >98-232 ppt; High = >232 ppt.

Model 5: Low = ≤46 ppq; Medium = >46-128 ppq; High = >128 ppq.

Table I-2-41.
Interaction Table for Haptoglobin
(Continuous)

a) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Age: Table 13-57)				
Initial Dioxin Category Summary Statistics				Analysis Results for \log_2 (Initial Dioxin)
Stratum	Initial Dioxin	n	Adjusted Mean	Adjusted Slope (Std. Error)
Born ≥ 1942	Low	53	102.35	-4.7528 (2.3951)
	Medium	69	94.03	
	High	109	89.61	
Born < 1942	Low	117	100.89	2.3998 (2.5456)
	Medium	96	111.57	
	High	58	113.28	

b) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Lifetime Alcohol History: Table 13-57)				
Initial Dioxin Category Summary Statistics				Analysis Results for \log_2 (Initial Dioxin)
Stratum	Initial Dioxin	n	Adjusted Mean	Adjusted Slope (Std. Error)
0 Drink-years	Low	10	120.12	-4.0969 (5.0846)
	Medium	12	96.66	
	High	17	101.49	
>0-40 Drink-years	Low	119	96.57	-0.5802 (2.0963)
	Medium	107	103.80	
	High	107	99.30	
>40 Drink-years	Low	41	106.74	-1.8189 (3.0710)
	Medium	46	110.02	
	High	43	112.01	

Note: Low = 39-98 ppt; Medium = >98-232 ppt; High = >232 ppt.

Table I-2-42.
Interaction Table for Haptoglobin
(Discrete)

a) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Occupation: Table 13-58)					
Stratum	Initial Dioxin Category Summary Statistics			Analysis Results for Log ₂ (Initial Dioxin)	
	Initial Dioxin	n	Percent High	Adjusted Relative Risk (95% C.I.) ^a	p-Value
Officer	Low	76	5.3	4.51 (1.45,14.01)	0.009
	Medium	33	18.2		
	High	1	100.0		
Enlisted Flyer	Low	36	13.9	1.07 (0.66,1.74)	0.781
	Medium	43	16.3		
	High	29	20.7		
Enlisted Groundcrew	Low	58	10.3	0.91 (0.70,1.19)	0.500
	Medium	89	13.5		
	High	137	13.9		

b) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Lifetime Alcohol History: Table 13-58)					
Stratum	Initial Dioxin Category Summary Statistics			Analysis Results for Log ₂ (Initial Dioxin)	
	Initial Dioxin	n	Percent High	Adjusted Relative Risk (95% C.I.) ^a	p-Value
0 Drink-years	Low	10	20.0	0.84 (0.46,1.54)	0.577
	Medium	12	16.7		
	High	17	17.6		
>0-40 Drink-years	Low	119	5.9	1.19 (0.90,1.57)	0.229
	Medium	107	12.1		
	High	107	15.0		
>40 Drink-years	Low	41	14.6	0.78 (0.52,1.17)	0.238
	Medium	46	21.7		
	High	43	16.3		

^a Relative risk for a twofold increase in initial dioxin.

Note: Low = 39-98 ppt; Medium = >98-232 ppt; High = >232 ppt.

Table I-2-43.
Interaction Table for Transferrin
(Continuous)

a) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Occupation: Table 13-59)					
Stratum	Initial Dioxin	Initial Dioxin Category Summary Statistics		Analysis Results for Log ₂ (Initial Dioxin)	
		n	Adjusted Mean ^a	Adjusted Slope (Std. Error) ^b	p-Value
Officer	Low	77	299.97	-0.0371 (0.0221)	0.094
	Medium	33	286.49		
	High	1	288.16		
Enlisted Flyer	Low	36	292.54	0.0186 (0.0120)	0.122
	Medium	43	289.48		
	High	30	301.81		
Enlisted Groundcrew	Low	58	292.64	0.0025 (0.0058)	0.664
	Medium	91	301.04		
	High	139	299.65		

b) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Industrial Chemical Exposure: Table 13-59)					
Stratum	Initial Dioxin	Initial Dioxin Category Summary Statistics		Analysis Results for Log ₂ (Initial Dioxin)	
		n	Adjusted Mean ^a	Adjusted Slope (Std. Error) ^b	p-Value
No	Low	73	291.72	0.0148 (0.0086)	0.085
	Medium	60	294.72		
	High	51	302.52		
Yes	Low	98	298.44	-0.0015 (0.0059)	0.799
	Medium	107	294.98		
	High	119	297.91		

^a Transformed from natural logarithm scale.

^b Slope and standard error based on natural logarithm of transferrin versus log₂ dioxin.

Note: Low = 39-98 ppt; Medium = >98-232 ppt; High = >232 ppt.

Table I-2-44.
Interaction Table for Transferrin
(Discrete)

a) MODEL I: RANCH HANDS VS. COMPARISONS — ADJUSTED (Group-by-Lifetime Alcohol History: Table I-3-60)						
Stratum	Occupational Category	Group	n	Percent Low	Adj. Relative Risk (95% C.I.)	p-Value
<i>0 Drink-years</i>	<i>All</i>	<i>Ranch Hand</i>	63	14.3	0.92 (0.35,2.43)	0.867
		<i>Comparison</i>	69	15.9		
<i>>0-40 Drink-years</i>	<i>All</i>	<i>Ranch Hand</i>	625	12.2	0.97 (0.70,1.33)	0.829
		<i>Comparison</i>	840	12.5		
<i>>40 Drink-years</i>	<i>All</i>	<i>Ranch Hand</i>	229	10.9	0.53 (0.32,0.89)	0.016
		<i>Comparison</i>	323	17.3		
<i>0 Drink-years</i>	Officer	<i>Ranch Hand</i>	14	7.1	0.77 (0.27,2.20)	0.630
		<i>Comparison</i>	23	13.0		
	Enlisted Flyer	<i>Ranch Hand</i>	14	21.4	1.38 (0.46,4.16)	0.562
		<i>Comparison</i>	11	9.1		
	Enlisted Groundcrew	<i>Ranch Hand</i>	35	14.3	0.82 (0.30,2.26)	0.698
		<i>Comparison</i>	35	20.0		
	Officer	<i>Ranch Hand</i>	248	13.7	0.85 (0.55,1.33)	0.487
		<i>Comparison</i>	337	14.2		
	Enlisted Flyer	<i>Ranch Hand</i>	95	16.8	1.53 (0.81,2.90)	0.191
		<i>Comparison</i>	119	11.7		
<i>>0-40 Drink-years</i>	Enlisted Groundcrew	<i>Ranch Hand</i>	282	9.2	0.90 (0.57,1.42)	0.661
		<i>Comparison</i>	384	11.2		
	Officer	<i>Ranch Hand</i>	95	8.4	0.45 (0.16,1.29)	0.136
		<i>Comparison</i>	127	18.1		
	Enlisted Flyer	<i>Ranch Hand</i>	47	14.9	0.81 (0.39,1.66)	0.562
		<i>Comparison</i>	65	18.5		
	Enlisted Groundcrew	<i>Ranch Hand</i>	87	11.5	0.48 (0.26,0.88)	0.018
		<i>Comparison</i>	131	16.0		

Table I-2-44. (Continued)
Interaction Table for Transferrin
(Discrete)

b) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Lifetime Alcohol History: Table 13-60)					
Stratum	Dioxin Category	n	Percent Low	Adjusted Relative Risk (95% C.I.)^a	p-Value
0 Drink-years	Comparison	53	18.9		
	Background RH	20	15.0	0.73 (0.17,3.08)	0.664
	Low RH	15	20.0	1.13 (0.26,4.92)	0.868
	High RH	24	12.5	0.68 (0.16,2.86)	0.599
>0-40 Drink-years	Comparison	696	12.6		
	Background RH	258	15.5	1.21 (0.79,1.83)	0.379
	Low RH	169	10.7	0.77 (0.44,1.32)	0.337
	High RH	164	7.9	0.68 (0.37,1.27)	0.224
>40 Drink-years	Comparison	276	18.5		
	Background RH	84	9.5	0.45 (0.20,1.01)	0.053
	Low RH	67	9.0	0.37 (0.15,0.91)	0.031
	High RH	63	11.1	0.52 (0.22,1.24)	0.139
	Low plus High RH	130	10.0	0.44 (0.22,0.85)	0.014

^a Relative risk and confidence interval relative to Comparisons.

Note: Model 3: RH = Ranch Hand.

Comparison: Current Dioxin \leq 10 ppt.

Background (Ranch Hand): Current Dioxin \leq 10 ppt.

Low (Ranch Hand): Current Dioxin > 10 ppt, 10 ppt < Initial Dioxin \leq 143 ppt.

High (Ranch Hand): Current Dioxin > 10 ppt, Initial Dioxin > 143 ppt.