

TABLE H-1. (Continued)

Summary of Dioxin-by-Covariate Interactions for Psychology Variables

Ranch Hands and Comparisons by Current Dioxin Category

Variable/ (Table Ref.)	Interaction	Stratum	Current Dioxin Category	n	Adj. Mean	Contrast	Difference of Adj. Means (95% C.I.)	p-Value		
Antisocial Score (MCM1) (9-40 [j])	Categorized Current Dioxin-by- Current Alcohol Use	0-1	Background	611	59.5	All		0.076		
			Unknown	271	61.6	U vs. B	2.1 (-0.6,4.9)	0.134		
			Low	155	63.4	L vs. B	3.9 (0.5,7.3)	0.024		
					High	151	62.1	H vs. B	2.7 (-0.8,6.1)	0.135
				>1-4	Background	140	60.5	All		0.820
					Unknown	59	60.3	U vs. B	-0.2 (-6.1,5.7)	0.954
					Low	34	63.9	L vs. B	3.4 (-3.9,10.7)	0.361
					High	23	60.3	H vs. B	0.0 (-8.6,8.6)	0.992
				4	Background	29	59.0	All		0.003
					Unknown	7	75.0	U vs. B	16.0 (0.1,31.9)	0.049
					Low	3	69.6	L vs. B	10.6 (-12.9,34.1)	0.378
					High	7	38.0	H vs. B	-21.0 (-37.0,-5.0)	0.010

Ranch Hands and Comparisons by Current Dioxin Category

Variable/ (Table Ref.)	Interaction	Stratum	Current Dioxin Category	n	Adj. Mean	Contrast	Difference of Adj. Means (95% C.I.) ^k	p-Value ^l	
Passive- Aggressive Score (MCM1) (9-42 [j])	Categorized Current Dioxin-by- Age	Born ≥1942	Background	316	19.5	All		0.004	
			Unknown	111	19.7	U vs. B	0.2 --	0.921	
			Low	80	26.7	L vs. B	7.2 --	<0.001	
			High	111	20.9	H vs. B	1.4 --	0.405	
			Born <1942	Background	459	18.4	All		0.430
				Unknown	224	16.8	U vs. B	-1.6 --	0.150
				Low	110	16.8	L vs. B	-1.6 --	0.279
				High	69	17.8	H vs. B	-0.6 --	0.737

TABLE H-1. (Continued)

Summary of Dioxin-by-Covariate Interactions for Psychology Variables

Ranch Hands - Log₂ (Initial Dioxin)							
Variable/ (Assumption-- Table Ref.)	Interaction	Stratum	Initial Dioxin	n	Adj. Mean	Adj. Slope (Std. Error) ^d	p-Value
Borderline Score (MCMJ) (Maximal-- 9-44 [d])	Initial-by- Education	High School	Low	52	43.5	-0.557 (0.625)	0.373
			Medium	205	37.6		
			High	125	36.2		
	College	Low	127	31.1	1.628 (0.704)	0.021	
		Medium	157	32.4			
		High	53	37.8			

Ranch Hands and Comparisons by Current Dioxin Category

Variable/ (Table Ref.)	Interaction	Stratum	Current Dioxin Category	n	Adj. Mean	Contrast	Difference of Adj. Means (95% C.I.)	p-Value
Borderline Score (MCMJ) (9-44 [j])	Categorized Current Dioxin-by- Education	High School	Background	387	34.3	All		0.578
			Unknown	122	36.3	U vs. B	2.0 (-1.5,5.4)	0.263
			Low	118	33.8	L vs. B	-0.5 (-4.0,3.0)	0.784
			High	127	33.6	H vs. B	-0.8 (-4.1,2.6)	0.656
		College	Background	388	32.1	All		0.022
			Unknown	213	27.9	U vs. B	-4.2 (-7.0,-1.4)	0.004
			Low	72	30.1	L vs. B	-2.0 (-6.2,2.2)	0.352
			High	53	33.1	H vs. B	0.9 (-3.9,5.7)	0.712

TABLE H-1. (Continued)

Summary of Dioxin-by-Covariate Interactions for Psychology Variables

Ranch Hands - Log₂ (Initial Dioxin)

Variable/ (Assumption-- Table Ref.)	Interaction	Stratum	Initial Dioxin	n	Adj. Mean	Adj. Slope (Std. Error) ^d	p-Value
Anxiety Score (MCM1) (Minimal-- 9-46 [c])	Initial-by- Race	Black	Low	12	54.0	-8.641 (4.232)	0.043
			Medium	17	54.6		
			High	3	20.7		
		Non-Black	Low	116	46.0	1.679 (0.798)	0.036
			Medium	237	45.8		
			High	125	49.5		
Anxiety Score (MCM1) (Maximal-- 9-46 [d])	Initial-by- Race	Black	Low	4	60.8	-8.359 (3.460)	0.016
			Medium	27	55.6		
			High	7	37.7		
		Non-Black	Low	177	44.5	1.620 (0.594)	0.007
			Medium	338	45.4		
			High	174	47.6		

TABLE H-1. (Continued)

Summary of Dioxin-by-Covariate Interactions for Psychology Variables

Ranch Hands and Comparisons by Current Dioxin Category

Variable/ (Table Ref.)	Interaction	Stratum	Current Dioxin Category	n	Adj. Mean	Contrast	Difference of Adj. Means (95% C.I.)	p-Value		
Anxiety Score (MCMI) (9-46 [j])	Categorized Current Dioxin-by- Race	Black	Background	47	45.1	All		0.066		
			Unknown	12	60.7	U vs. B	15.6 (2.4,28.9)	0.021		
			Low	12	54.6	L vs. B	9.6 (-3.7,22.8)	0.158		
					High	8	41.7	H vs. B	-3.4 (-19.0,12.3)	0.675
		Non- Black	Background	729	47.2	All		0.071		
			Unknown	326	44.2	U vs. B	-3.0 (-5.8,-0.3)	0.032		
			Low	180	45.3	L vs. B	-2.0 (-5.4,1.5)	0.264		
			High	175	48.7	H vs. B	1.5 (-2.0,5.0)	0.409		
			Somatoform Score (MCMI) (9-47 [j])	Categorized Current Dioxin-by- Current Alcohol Use	0-1 Drk/Day ≤40 Drk-Yr	Background	528	52.8	All	
Unknown	243	51.0				U vs. B	-1.8 (-4.5,0.8)	0.177		
Low	132	51.5				L vs. B	-1.4 (-4.7,2.0)	0.424		
					High	128	54.2	H vs. B	1.4 (-2.0,4.8)	0.422
0-1 Drk/Day >40 Drk-Yr	Background	78			56.0	All		0.113		
	Unknown	26			55.2	U vs. B	-0.8 (-8.5,7.0)	0.845		
	Low	21			47.4	L vs. B	-8.6 (-17.0,-0.3)	0.044		
	High	22			49.0	H vs. B	-7.0 (-15.3,1.2)	0.094		
	Categorized Current Dioxin-by- Lifetime Alcohol History	>1 Drk/Day ≤40 Drk-Yr		Background	59	48.3	All		0.244	
Unknown				34	53.5	U vs. B	5.2 (-2.1,12.5)	0.165		
Low				16	52.0	L vs. B	3.7 (-5.9,13.3)	0.450		
					High	11	58.4	H vs. B	10.1 (-1.1,21.3)	0.077
>1 Drk/Day >40 Drk-Yr		Background		110	49.9	All		0.351		
		Unknown		32	54.6	U vs. B	4.7 (-2.1,11.6)	0.178		
		Low		21	51.8	L vs. B	1.9 (-6.2,10.0)	0.640		
		High		19	56.0	H vs. B	6.2 (-2.3,14.7)	0.154		

TABLE H-1. (Continued)

Summary of Dioxin-by-Covariate Interactions for Psychology Variables

Ranch Hands - Log₂ (Initial Dioxin)									
Variable (Assumption-- Table Ref.)	Interaction	Stratum	Initial Dioxin	n	Adj. Mean	Adj. Slope (Std. Error)	p-Value		
Hypomania Score (MCMI) ^j (Minimal-- 9-48 [c])	Initial-by- Race	Black	Low	12	21.0	1.152 (0.547)	0.036		
			Medium	16	25.8				
			High	3	46.6				
		Non-Black	Low	116	21.7			-0.233 (0.103)	0.025
			Medium	234	22.8				
			High	124	17.2				
Hypomania Score (MCMI) ^j (Maximal-- 9-48 [d])	Initial-by- Race	Black	Low	4	20.7	0.851 (0.460)	0.065		
			Medium	26	20.2				
			High	7	49.6				
		Non-Black	Low	175	19.9			-0.114 (0.077)	0.135
			Medium	336	22.3				
			High	171	18.5				

Ranch Hands and Comparisons by Current Dioxin Category

Variable/ (Table Ref.)	Interaction	Stratum	Current Dioxin Category	n	Adj. Mean	Difference of Adj. Contrast Means (95% C.I.) ^k	p-Value ^l	
Hypomania Score (MCMI) ^j (9-48 [j])	Categorized Current Dioxin-by- Race	Black	Background	47	24.0	All	0.013	
			Unknown	12	42.1	U vs. B	18.1 --	0.063
			Low	11	16.7	L vs. B	-7.4 --	0.354
		Non- Black	High	8	54.3	H vs. B	30.3 --	0.015
			Background	728	21.7	All		0.125
			Unknown	323	21.6	U vs. B	-0.1 --	0.948
			Low	179	23.3	L vs. B	1.6 --	0.446
			High	172	17.5	H vs. B	-4.2 --	0.039

TABLE H-1. (Continued)

Summary of Dioxin-by-Covariate Interactions for Psychology Variables

Ranch Hands - Log₂ (Initial Dioxin)							
Variable/ (Assumption-- Table Ref.)	Interaction	Stratum	Initial Dioxin	n	Adj. Mean	Adj. Slope (Std. Error) ^d	p-Value
Dysthymia Score (MCM1) (Minimal-- 9-49 [c])	Initial-by- Race	Black	Low	12	55.2	-12.079 (4.347)	0.006
			Medium	17	52.1		
			High	3	21.3		
		Non-Black	Low	117	49.8	1.508 (0.802)	0.061
			Medium	239	49.3		
			High	126	52.9		
Dysthymia Score (MCM1) (Maximal-- 9-49 [d])	Initial-by- Race	Black	Low	4	45.0	-8.311 (3.678)	0.024
			Medium	27	55.3		
			High	7	34.9		
		Non-Black	Low	178	48.0	1.553 (0.603)	0.010
			Medium	341	48.3		
			High	175	52.3		

TABLE H-1. (Continued)

Summary of Dioxin-by-Covariate Interactions for Psychology Variables

Ranch Hands and Comparisons by Current Dioxin Category

Variable/ (Table Ref.)	Interaction	Stratum	Current Dioxin Category	n	Adj. Mean	Contrast	Difference of Adj. Means (95% C.I.)	p-Value		
Dysthymia Score (MCM1) (9-49 [j])	Categorized Current Dioxin-by- Race	Black	Background	47	48.1	All		0.097		
			Unknown	12	55.2	U vs. B	7.2 (-6.9,21.3)	0.320		
			Low	11	56.8	L vs. B	8.7 (-5.9,23.3)	0.241		
			High	8	33.4	H vs. B	-14.7 (-31.3,2.0)	0.085		
		Non- Black	Background	729	49.7	All		0.211		
			Unknown	324	47.4	U vs. B	-2.3 (-5.2,0.6)	0.126		
			Low	179	48.4	L vs. B	-1.3 (-4.9,2.4)	0.490		
			High	175	51.5	H vs. B	1.9 (-1.8,5.5)	0.325		
			Alcohol Abuse Score (MCM1) (9-50 [j])	Black	Background	47	30.1	All		0.010
					Unknown	12	44.2	U vs. B	14.1 (3.6,24.5)	0.008
Low	12	36.7			L vs. B	6.6 (-3.8,17.1)	0.215			
High	8	45.9			H vs. B	15.8 (3.4,28.1)	0.012			
Non- Black	Background	729	31.4	All		0.458				
	Unknown	326	30.5	U vs. B	-0.9 (-3.1,1.2)	0.392				
	Low	180	30.5	L vs. B	-1.0 (-3.7,1.7)	0.481				
	High	175	29.4	H vs. B	-2.1 (-4.8,0.7)	0.136				

Dioxin Interval	Dioxin Scale Midpoint	a	b	c	d
0.0-0.5	0.25	0	0	42	8
0.5-1.0	1	0	0	38	8
1.0-1.5	1.25	0	0	879	246
1.5-2.0	1.75	0	23	51	404
2.0-2.5	2.25	218	413	1	150
2.5-3.0	2.75	230	230	0	33
3.0-3.5	3.25	68	65	0	3
3.5-4.0	3.75	3	1	0	0

TABLE H-1. (Continued)

Summary of Dioxin-by-Covariate Interactions for Psychology Variables

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- ^aRelative risk for a twofold increase in dioxin.
^bTest of significance for homogeneity of relative risks (current dioxin continuous, time categorized).
^cTest of significance for relative risk equal to 1 (current dioxin continuous, time categorized).
^dAdjusted slope and standard error based on the dependent variable versus \log_2 dioxin.
^eTest of significance for homogeneity of slopes (current dioxin continuous, time categorized).
^fTest of significance for slope equal to 0 (current dioxin continuous, time categorized).
^gAdjusted means transformed from natural logarithm scale; adjusted slope and standard error based on natural logarithm schizoid score versus \log_2 dioxin.
^hAdjusted means transformed from natural logarithm ($X + 1$) scale; adjusted slope and standard error based on natural logarithm (avoidant score + 1) versus \log_2 dioxin.
ⁱAdjusted means transformed from square scale; adjusted slope and standard error based on square histrionic score versus \log_2 dioxin.
^jAdjusted means transformed from square root scale; adjusted slope and standard error based on square root of the dependent variable versus \log_2 dioxin.
^kDifference of means after transformation to original scale; confidence interval on difference of means not given because analysis was performed on square root scale.
^lP-value is based on difference of means on square root scale.
--: Relative risk, confidence interval, and p-value not given due to the sparse number of abnormalities.
- Note: Initial Dioxin: Minimal--Low: 52-93 ppt; Medium: >93-292 ppt; High: >292 ppt.
Maximal--Low: 25-56.9 ppt; Medium: >56.9-218 ppt; High: >218 ppt.
- Current Dioxin: Minimal--Low: >10-14.65 ppt; Medium: >14.65-45.75 ppt; High: >45.75 ppt.
Maximal--Low: >5-9.01 ppt; Medium: >9.01-33.3 ppt; High: >33.3 ppt.
- All: All categories.
Background (B) (Comparisons): Current Dioxin ≤ 10 ppt.
Unknown (U) (Ranch Hands): Current Dioxin ≤ 10 ppt.
Low (L) (Ranch Hands): 15 ppt < Current Dioxin ≤ 33.3 ppt.
High (H) (Ranch Hands): Current Dioxin >33.3 ppt.
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APPENDIX H-1.

Data Displays for the Psychological Assessment

The following figures graphically display relationships between the dependent variables and measures of dioxin for the psychological assessment. The panels are arranged as follows:

Panel	Group	Assumption	Dioxin Measure
a	Ranch Hand	Minimal	Initial
b	Ranch Hand	Maximal	Initial
c	Comparison	--	Current
d	Ranch Hand	--	Current

Dioxin measures are presented in original units, but spacing of intervals is based on the logarithm (base 2) scale, similar to the statistical analysis. The dependent variable is also presented in original units, but spacing is based on the scale used for analysis, as described in the chapter. For continuous variables, current dioxin values of 0.0 ppt are displayed as 0.3 ppt. For these variables, the reference line indicates the general relationship, unadjusted for any covariates, between the (transform of the) dependent variable and \log_2 dioxin. Additionally, the MCMI avoidant score is displayed on an $X + 1$ scale in order to transform zero values of the score to the natural logarithm scale. For discrete variables, the percent of participants that exhibited an abnormal condition is displayed on the vertical axis for given intervals of dioxin. The intervals of dioxin and the sample sizes (excluding participants with PTSD) for each of these intervals for the questionnaire variables are given below. A list of figures found in this appendix follows the table.

Dioxin Interval	Dioxin Scale Midpoint	Panel			
		a	b	c	d
		Sample Size			
0.0-0.5	0.25	0	0	42	8
>0.5-2.0	1	0	0	28	8
>2.0-8.0	4	0	0	679	246
>8.0-32.0	16	0	23	51	404
>32.0-128.0	64	218	413	1	156
>128.0-512.0	256	230	230	0	33
>512.0-2,048.0	1024	65	65	0	2
>2,048.0	4096	3	3	0	0

Due to the large number of participants with missing data for the SCL-90-R variables, the intervals of dioxin and the sample sizes (excluding participants with PTSD) for each of the dioxin intervals for the SCL-90-R variables are given below.

Dioxin Interval	Dioxin Scale Midpoint	Panel			
		a	b	c	d
		Sample Size			
0.0-0.5	0.25	0	0	39	7
>0.5-2.0	1	0	0	23	8
>2.0-8.0	4	0	0	598	208
>8.0-32.0	16	0	16	46	362
>32.0-128.0	64	196	368	1	142
>128.0-512.0	256	206	206	0	29
>512.0-2,048.0	1024	59	59	0	2
>2,048.0	4096	3	3	0	0

Figure

	Page	
H-1-1	Verified Psychoses versus Dioxin.....	H-1-4
H-1-2	Verified Alcohol Dependence versus Dioxin.....	H-1-5
H-1-3	Verified Anxiety versus Dioxin.....	H-1-6
H-1-4	Verified Other Neuroses versus Dioxin.....	H-1-7
H-1-5	Trouble Falling Asleep versus Dioxin	H-1-8
H-1-6	Waking Up During the Night versus Dioxin.....	H-1-9
H-1-7	Waking Up Too Early and Can't Go Back to Sleep versus Dioxin ...	H-1-10
H-1-8	Waking Up Unrefreshed versus Dioxin	H-1-11
H-1-9	Involuntarily Falling Asleep During the Day versus Dioxin.....	H-1-12
H-1-10	Great or Disabling Fatigue During the Day versus Dioxin	H-1-13
H-1-11	Frightening Dreams versus Dioxin.....	H-1-14
H-1-12	Talking in Sleep versus Dioxin	H-1-15
H-1-13	Sleepwalking versus Dioxin	H-1-16
H-1-14	Abnormal Movement/Activity During the Night versus Dioxin.....	H-1-17
H-1-15	Sleep Problems Requiring Medication versus Dioxin.....	H-1-18
H-1-16	Snore Loudly in All Sleeping Positions versus Dioxin	H-1-19
H-1-17	Insomnia versus Dioxin	H-1-20
H-1-18	Overall Sleep Disorder Index versus Dioxin	H-1-21
H-1-19	Average Sleep Each Night versus Dioxin	H-1-22
H-1-20	SCL-90-R Anxiety versus Dioxin.....	H-1-23

H-1-21	SCL-90-R Depression versus Dioxin.....	H-1-24
H-1-22	SCL-90-R Hostility versus Dioxin.....	H-1-25
H-1-23	SCL-90-R Interpersonal Sensitivity versus Dioxin	H-1-26
H-1-24	SCL-90-R Obsessive-Compulsive Behavior versus Dioxin	H-1-27
H-1-25	SCL-90-R Paranoid Ideation versus Dioxin	H-1-28
H-1-26	SCL-90-R Phobic Anxiety versus Dioxin.....	H-1-29
H-1-27	SCL-90-R Psychoticism versus Dioxin	H-1-30
H-1-28	SCL-90-R Somatization versus Dioxin.....	H-1-31
H-1-29	SCL-90-R Global Severity Index versus Dioxin	H-1-32
H-1-30	SCL-90-R Positive Symptom Total versus Dioxin.....	H-1-33
H-1-31	SCL-90-R Positive Symptom Distress Index versus Dioxin.....	H-1-34
H-1-32	MCMC Schizoid Score versus Dioxin.....	H-1-35
H-1-33	MCMC Avoidant Score versus Dioxin	H-1-36
H-1-34	MCMC Dependent Score versus Dioxin.....	H-1-37
H-1-35	MCMC Histrionic Score versus Dioxin	H-1-38
H-1-36	MCMC Narcissistic Score versus Dioxin	H-1-39
H-1-37	MCMC Antisocial Score versus Dioxin	H-1-40
H-1-38	MCMC Compulsive Score versus Dioxin.....	H-1-41
H-1-39	MCMC Passive-Aggressive Score versus Dioxin.....	H-1-42
H-1-40	MCMC Schizotypal Score versus Dioxin	H-1-43
H-1-41	MCMC Borderline Score versus Dioxin.....	H-1-44
H-1-42	MCMC Paranoid Score versus Dioxin.....	H-1-45
H-1-43	MCMC Anxiety Score versus Dioxin.....	H-1-46
H-1-44	MCMC Somatoform Score versus Dioxin	H-1-47
H-1-45	MCMC Hypomania Score versus Dioxin	H-1-48
H-1-46	MCMC Dysthymia Score versus Dioxin	H-1-49
H-1-47	MCMC Alcohol Abuse Score versus Dioxin.....	H-1-50
H-1-48	MCMC Drug Abuse Score versus Dioxin.....	H-1-51
H-1-49	MCMC Psychotic Thinking Score versus Dioxin	H-1-52
H-1-50	MCMC Psychotic Depression Score versus Dioxin.....	H-1-53
H-1-51	MCMC Psychotic Delusion Score versus Dioxin	H-1-54

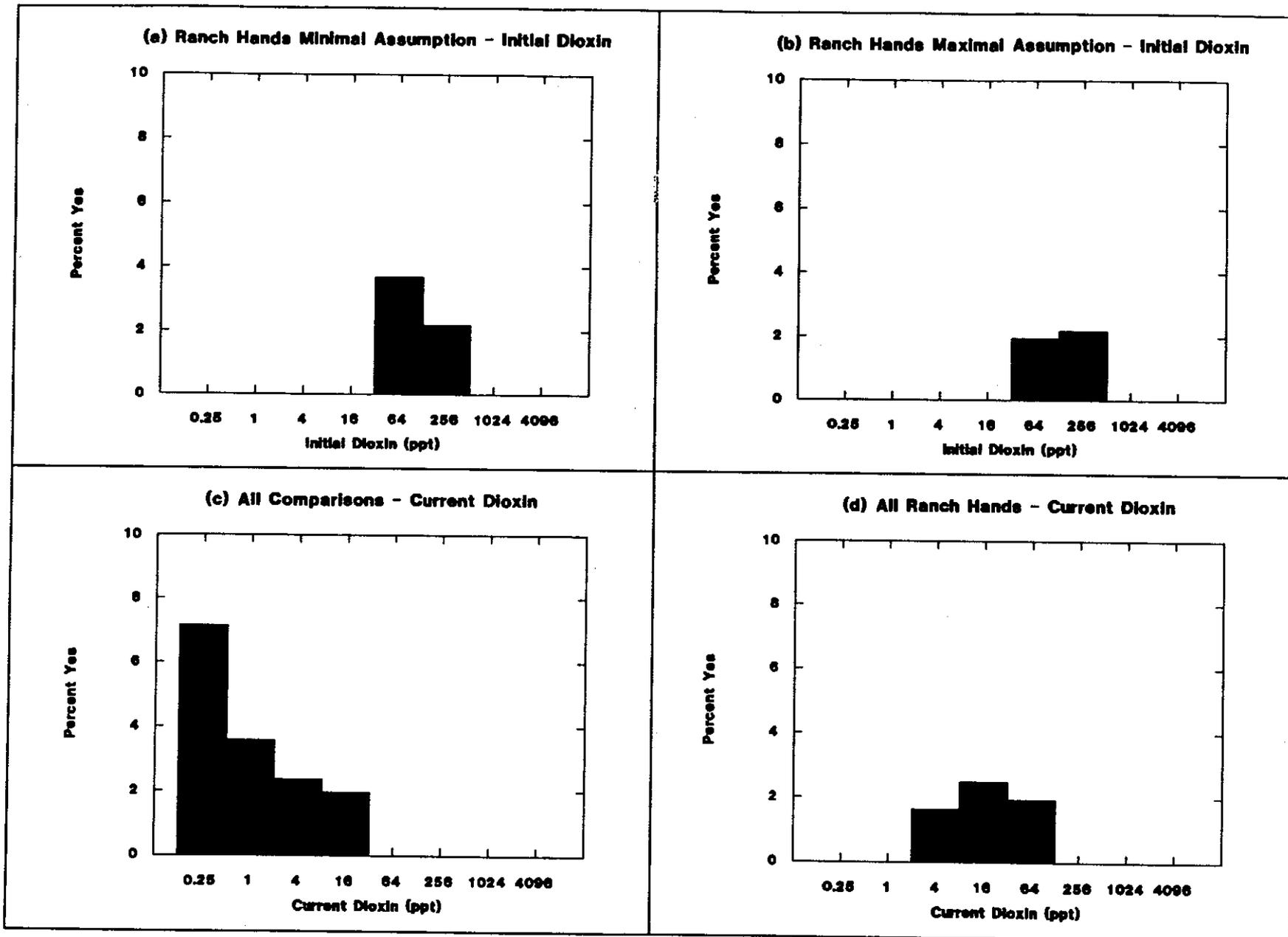


FIGURE H-1-1. Verified Psychoses versus Dioxin

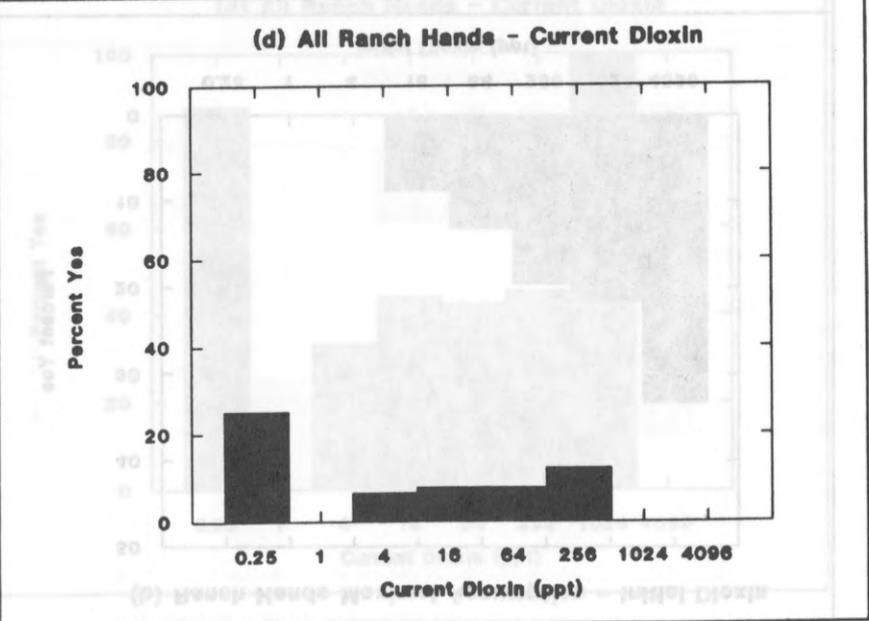
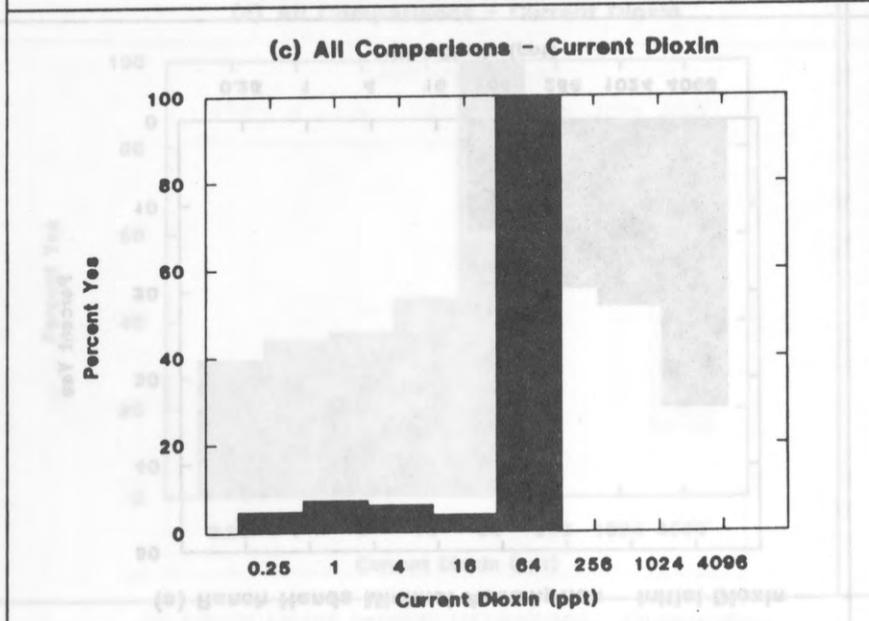
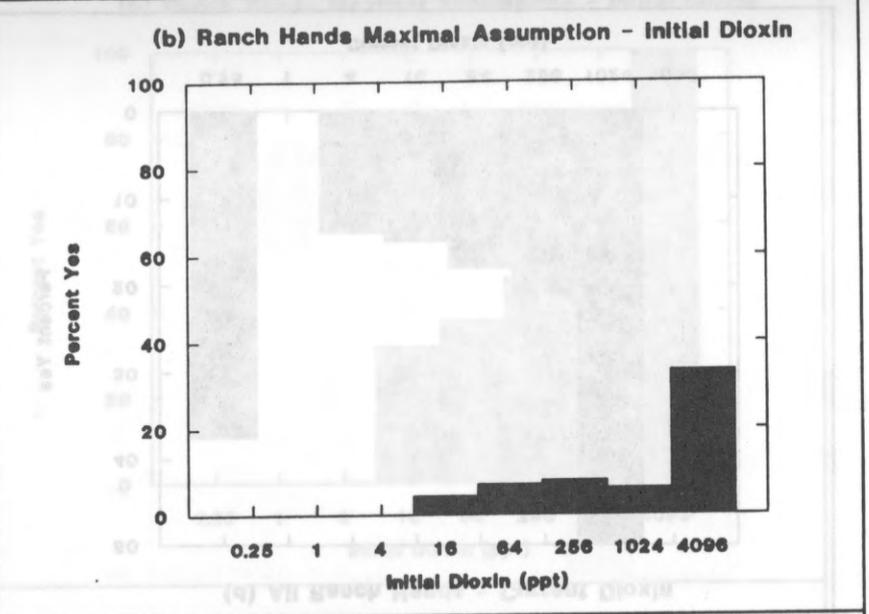
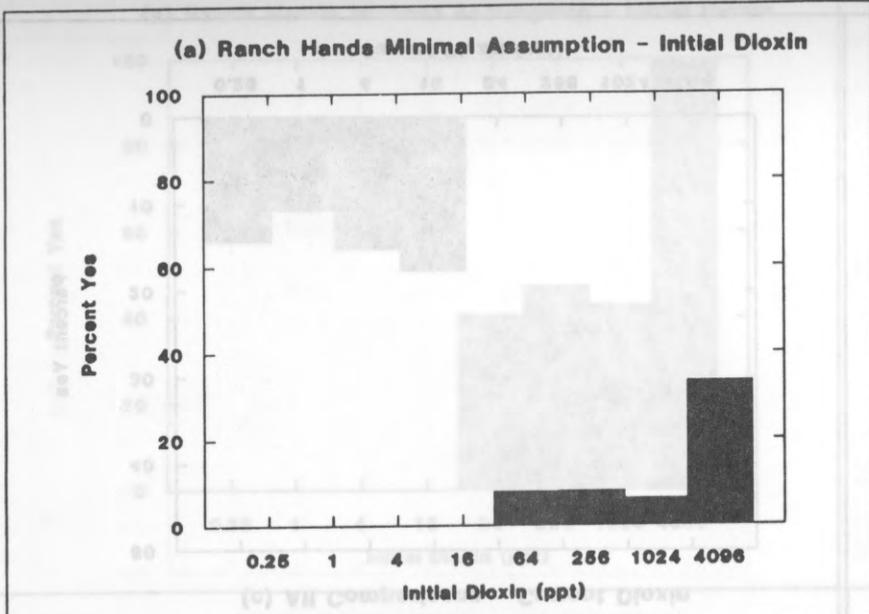


FIGURE H-1-2. Verified Alcohol Dependence versus Dioxin

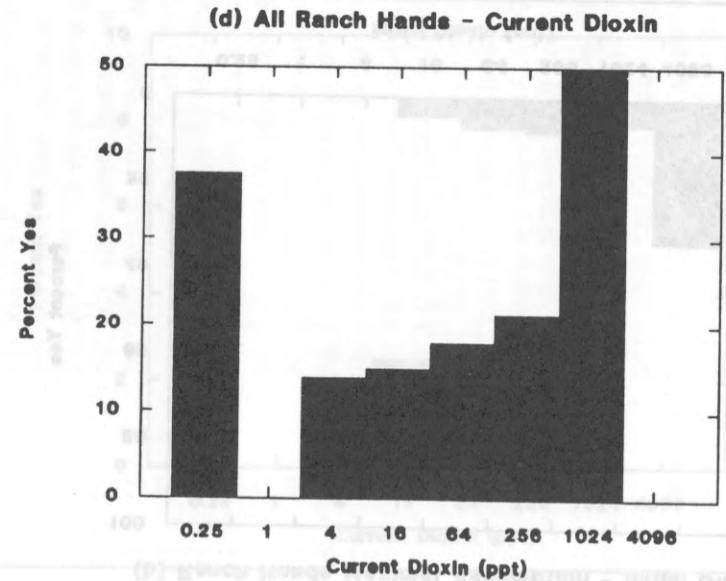
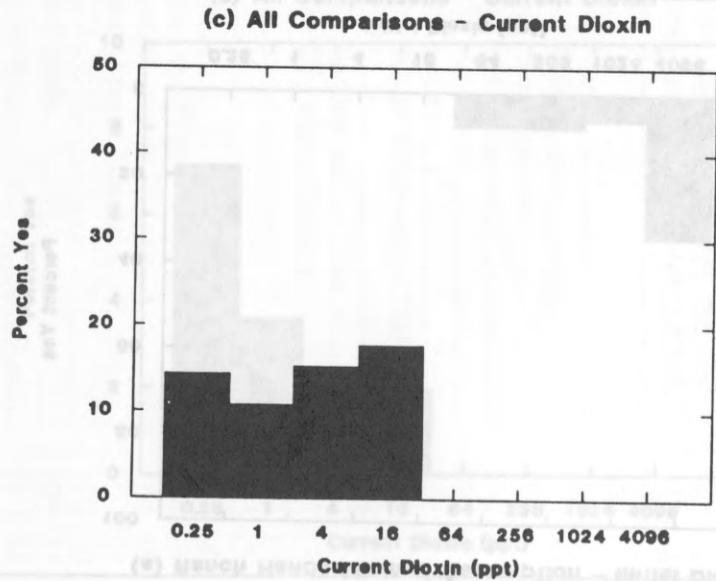
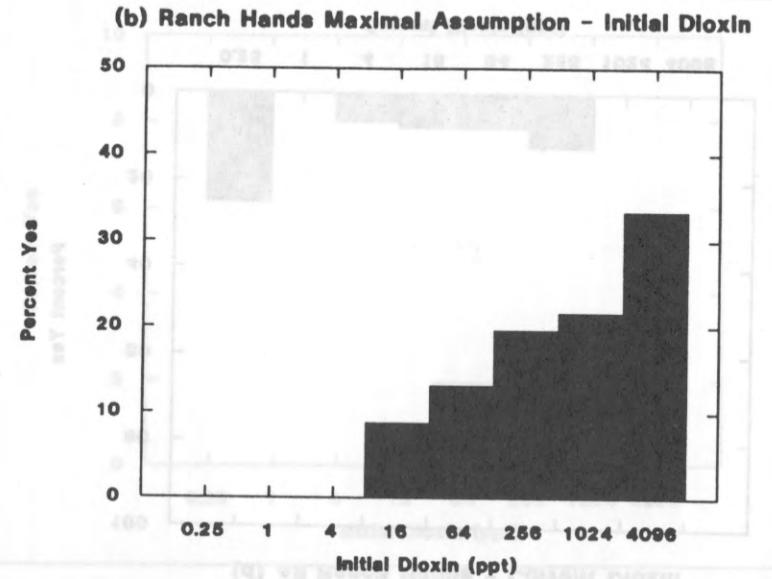
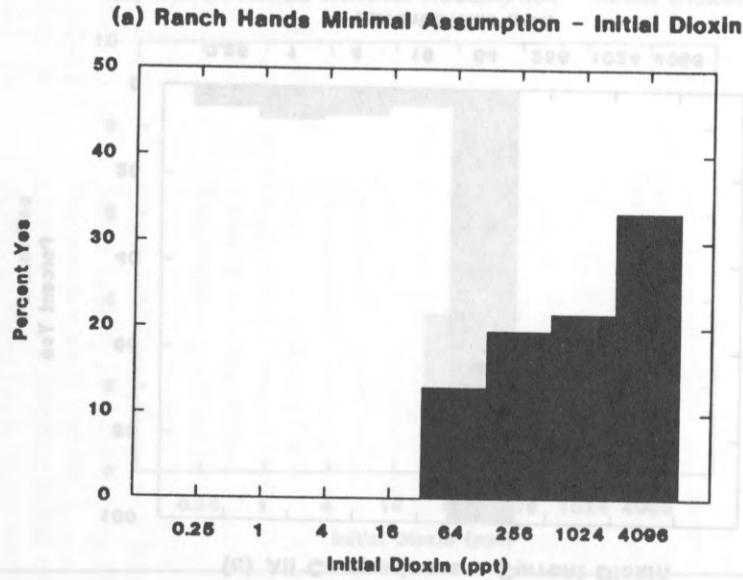
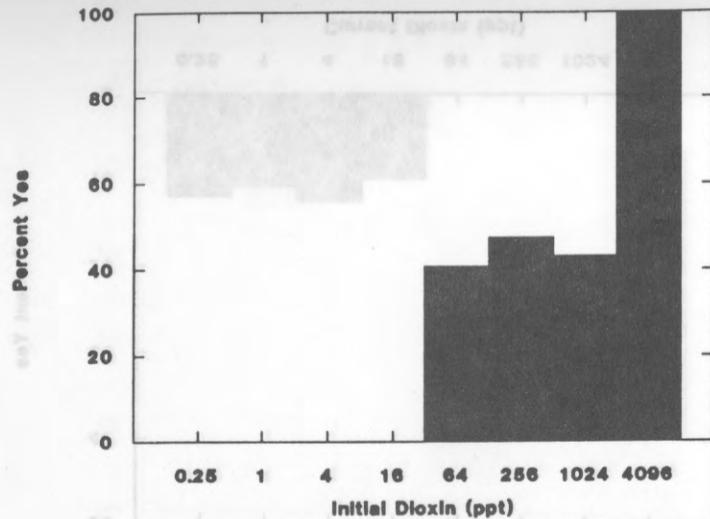
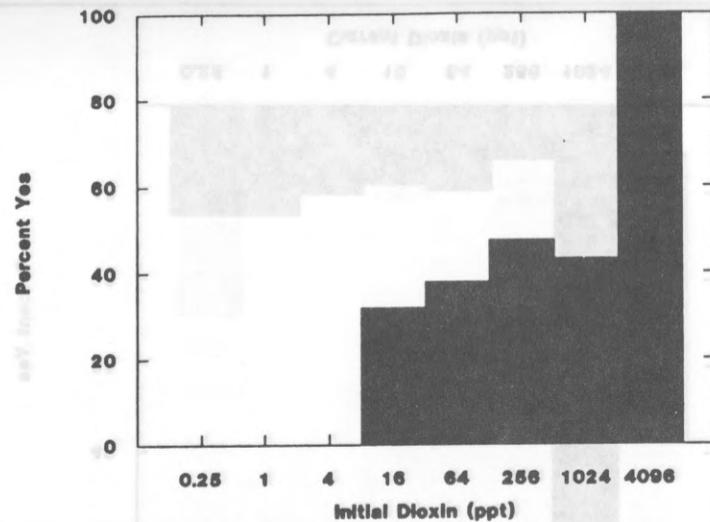


FIGURE H-1-3. Verified Anxiety versus Dioxin

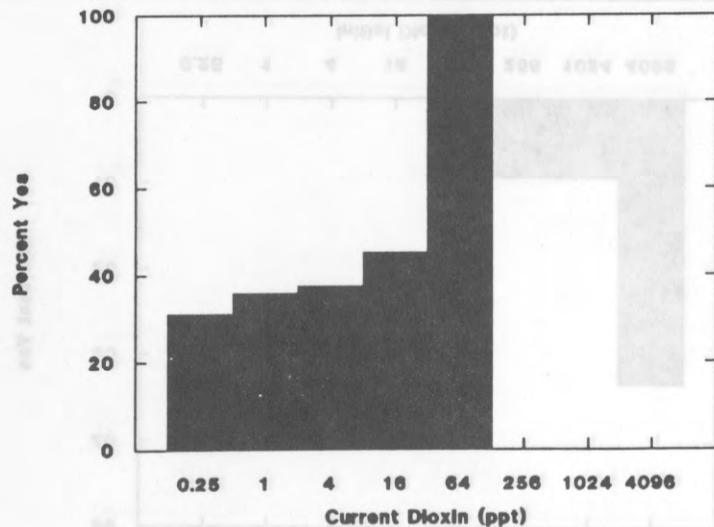
(a) Ranch Hands Minimal Assumption - Initial Dioxin



(b) Ranch Hands Maximal Assumption - Initial Dioxin



(c) All Comparisons - Current Dioxin



(d) All Ranch Hands - Current Dioxin

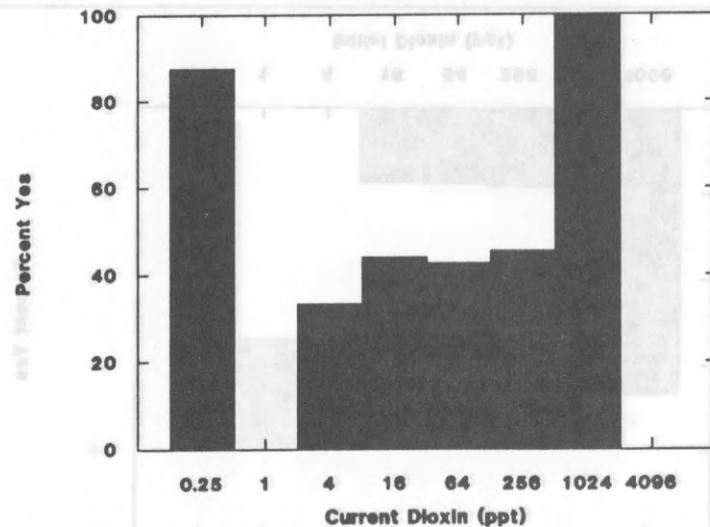
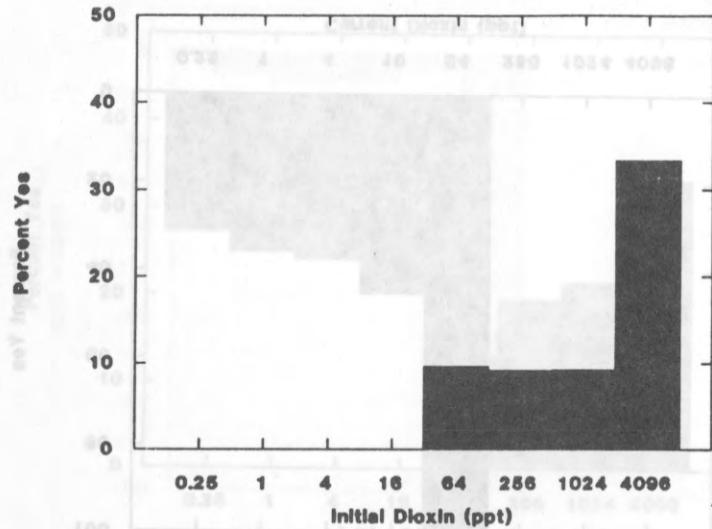
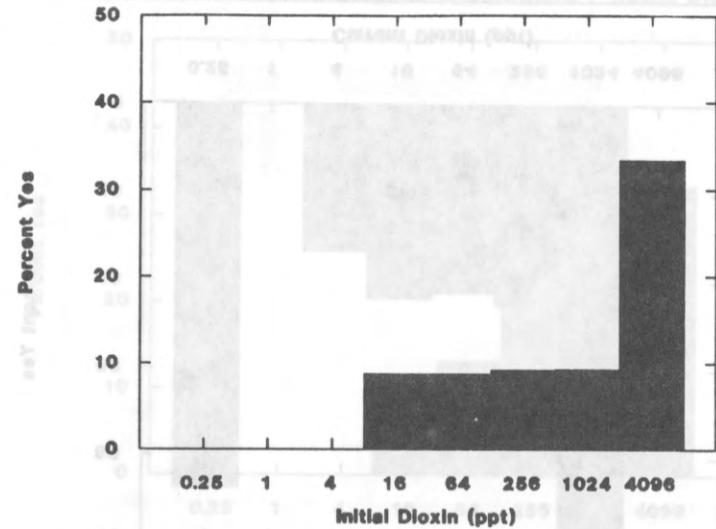


FIGURE H-1-4. Verified Other Neuroses versus Dioxin

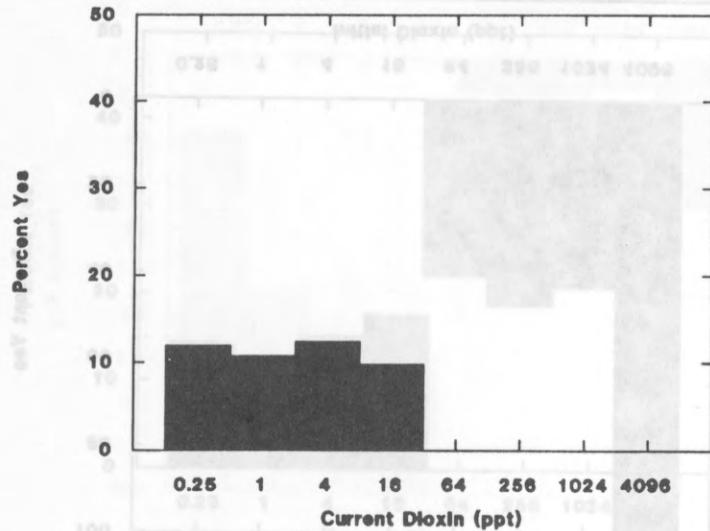
(a) Ranch Hands Minimal Assumption - Initial Dioxin



(b) Ranch Hands Maximal Assumption - Initial Dioxin



(c) All Comparisons - Current Dioxin



(d) All Ranch Hands - Current Dioxin

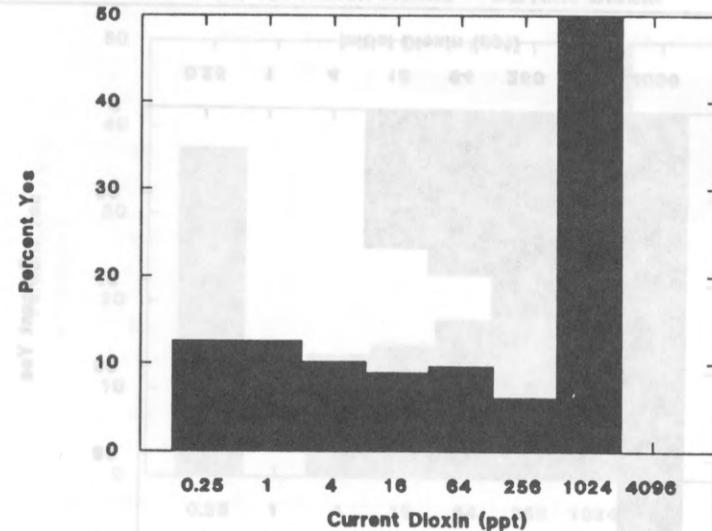
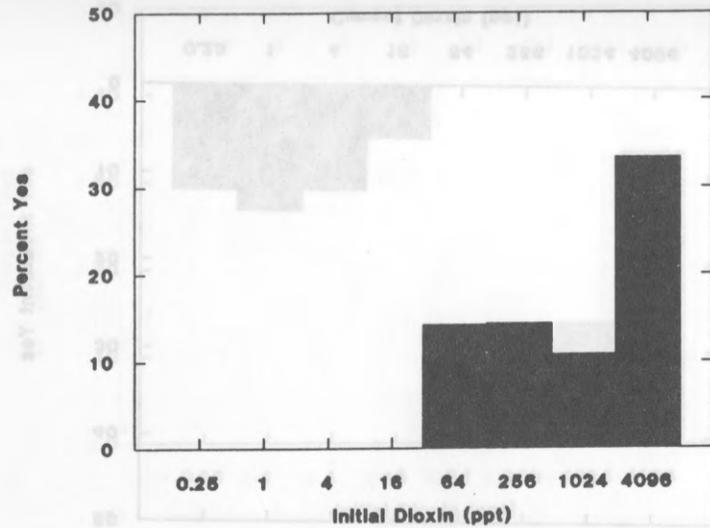
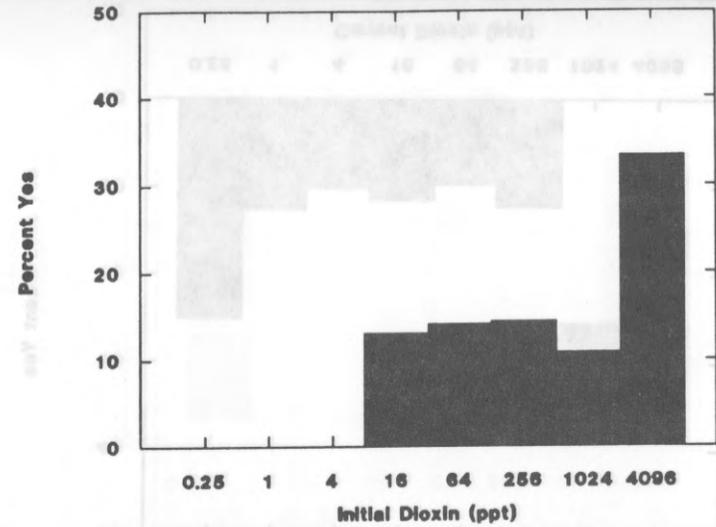


FIGURE H-1-5. Trouble Falling Asleep versus Dioxin

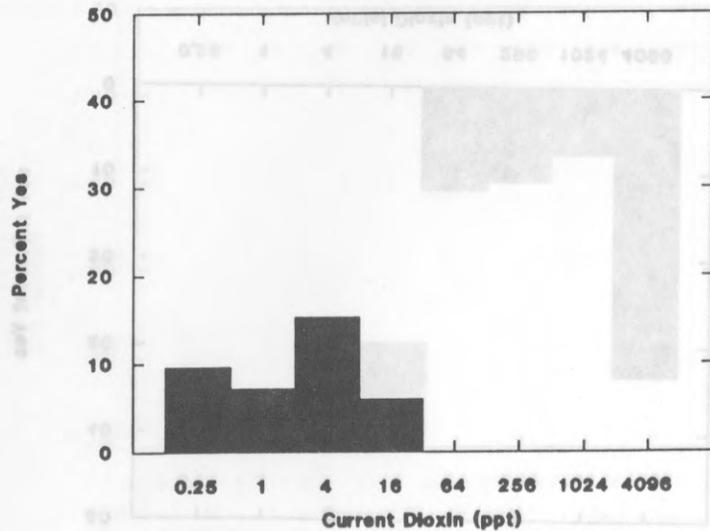
(a) Ranch Hands Minimal Assumption - Initial Dioxin



(b) Ranch Hands Maximal Assumption - Initial Dioxin



(c) All Comparisons - Current Dioxin



(d) All Ranch Hands - Current Dioxin

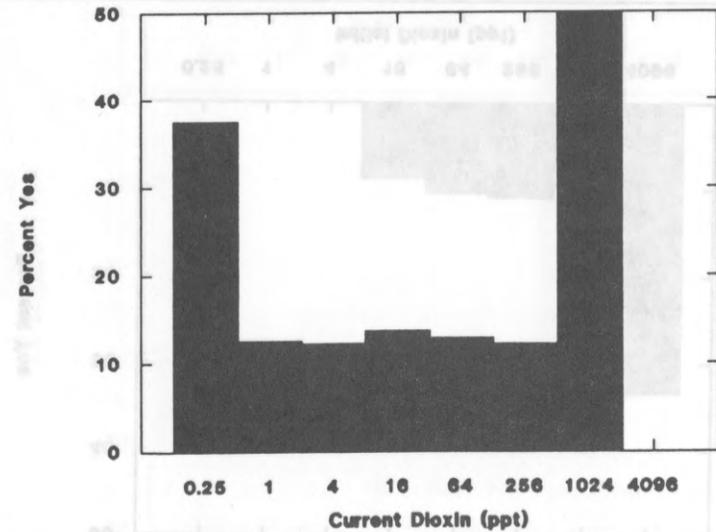
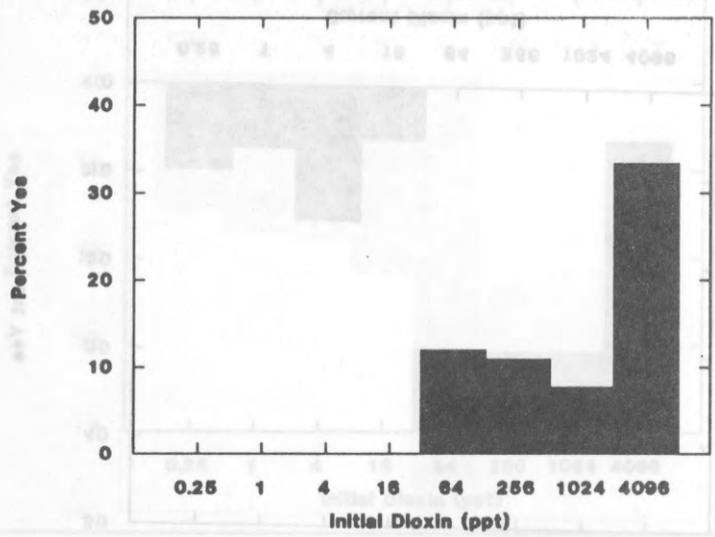
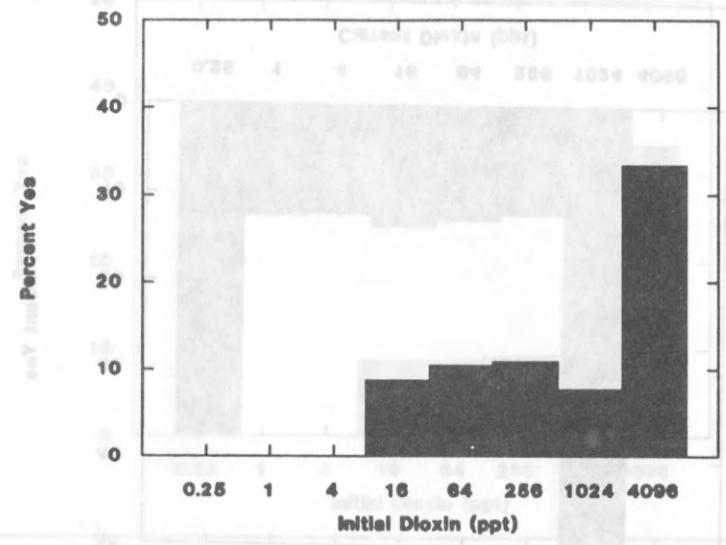


FIGURE H-1-6. Waking Up During the Night versus Dioxin

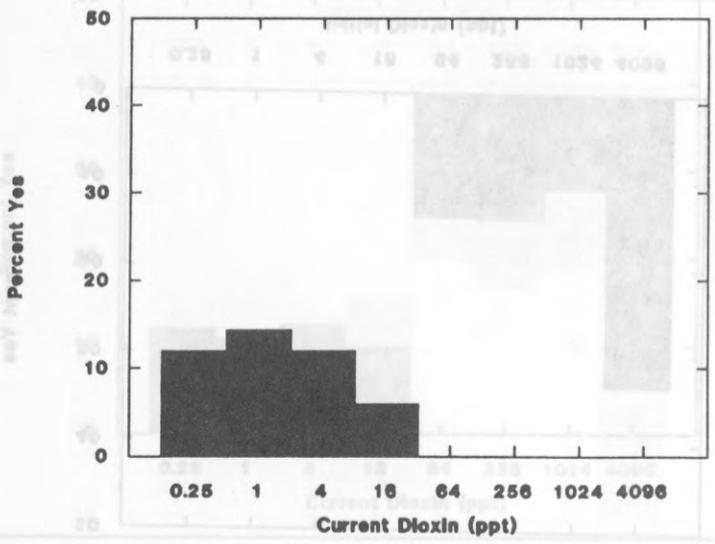
(a) Ranch Hands Minimal Assumption - Initial Dioxin



(b) Ranch Hands Maximal Assumption - Initial Dioxin



(c) All Comparisons - Current Dioxin



(d) All Ranch Hands - Current Dioxin

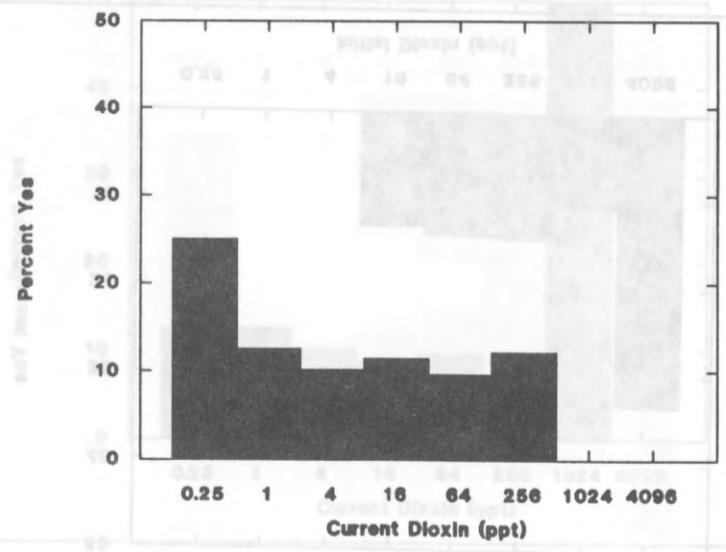
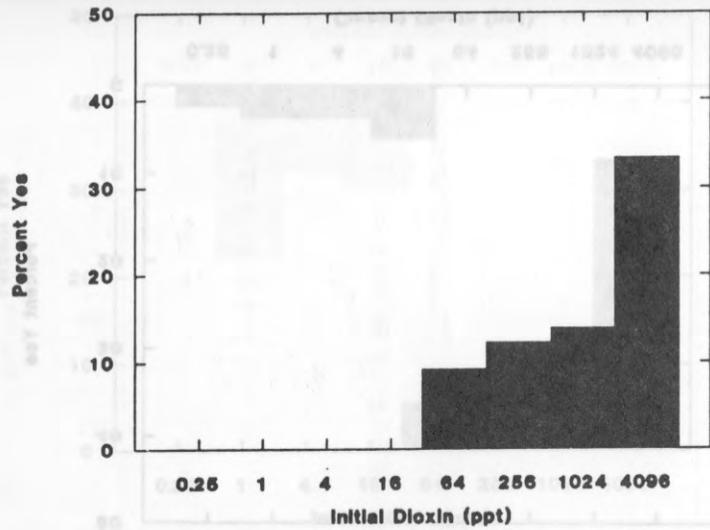
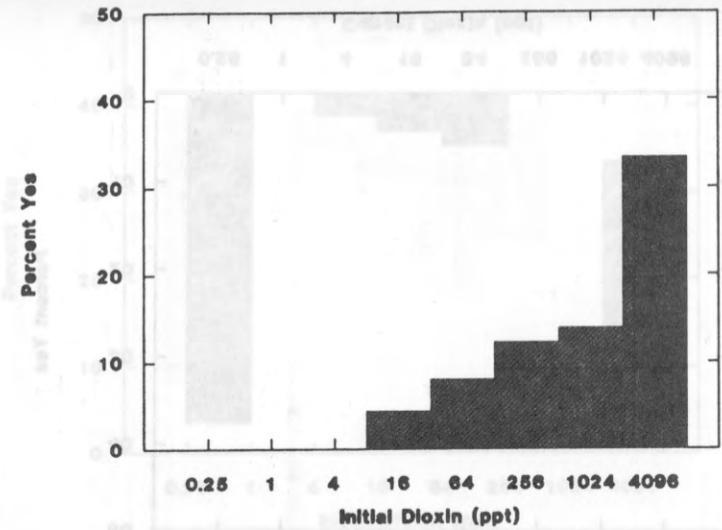


FIGURE H-1-7. Waking Up Too Early and Can't Go Back to Sleep versus Dioxin

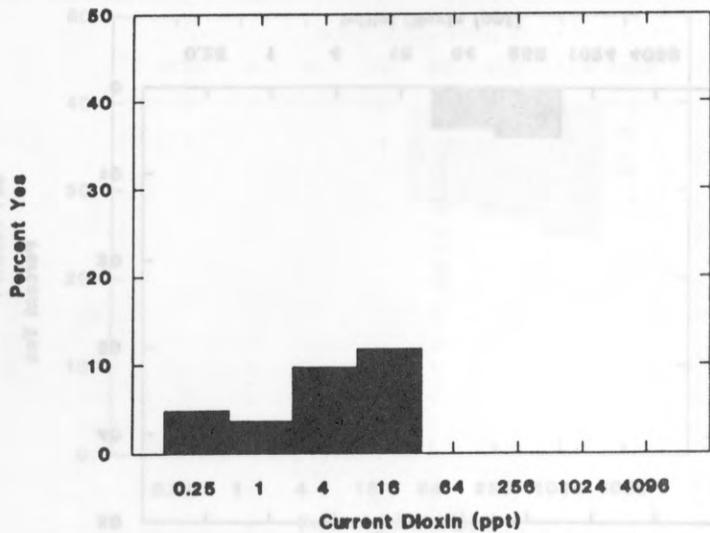
(a) Ranch Hands Minimal Assumption - Initial Dioxin



(b) Ranch Hands Maximal Assumption - Initial Dioxin



(c) All Comparisons - Current Dioxin



(d) All Ranch Hands - Current Dioxin

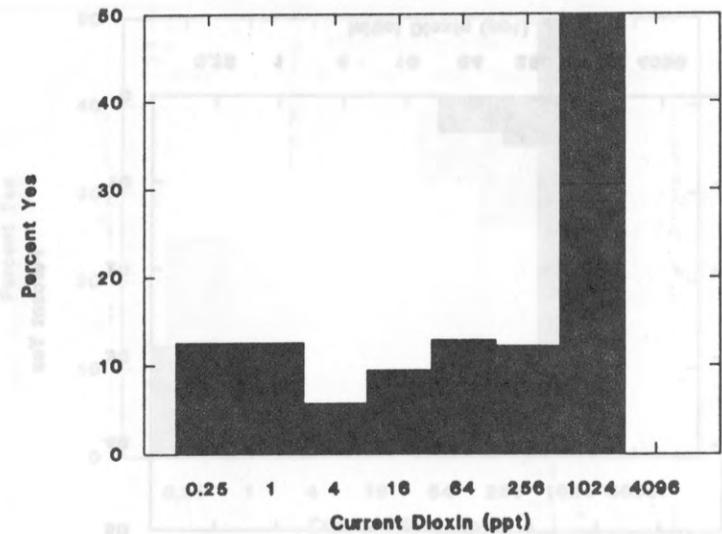
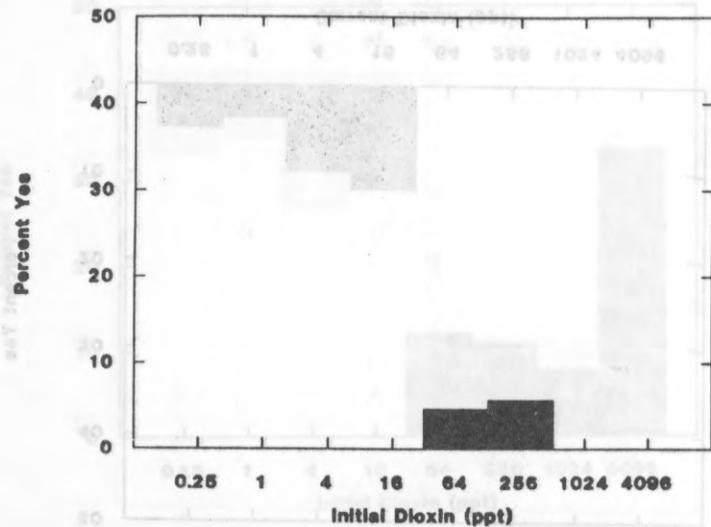
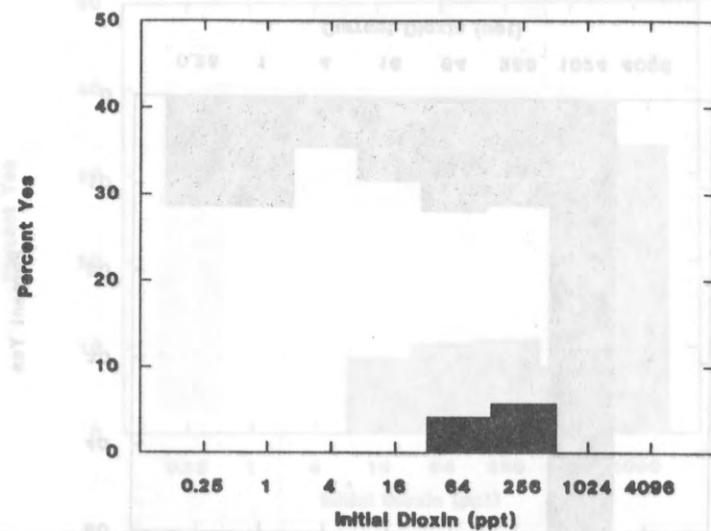


FIGURE H-1-8. Waking Up Unrefreshed versus Dioxin

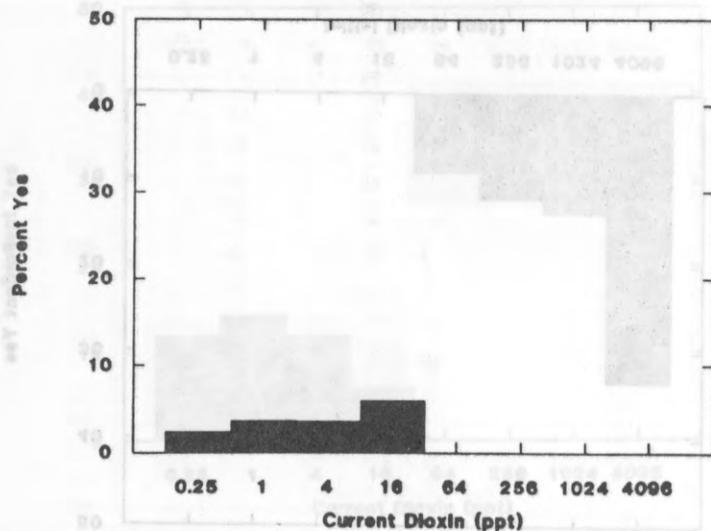
(a) Ranch Hands Minimal Assumption - Initial Dioxin



(b) Ranch Hands Maximal Assumption - Initial Dioxin



(c) All Comparisons - Current Dioxin



(d) All Ranch Hands - Current Dioxin

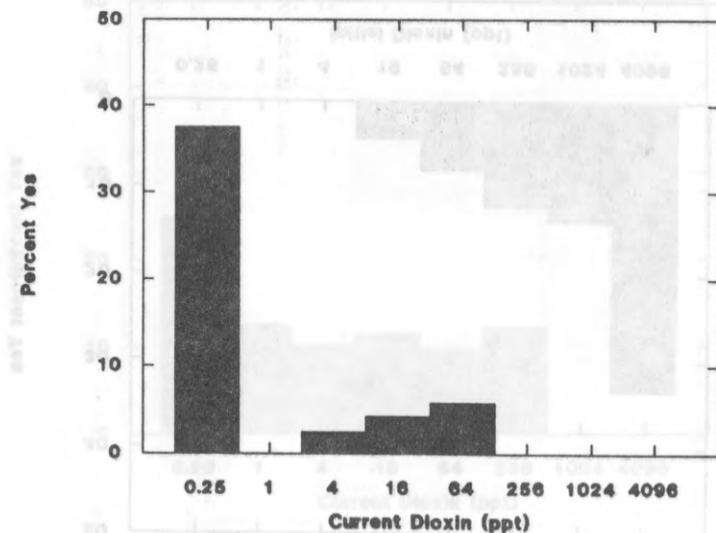
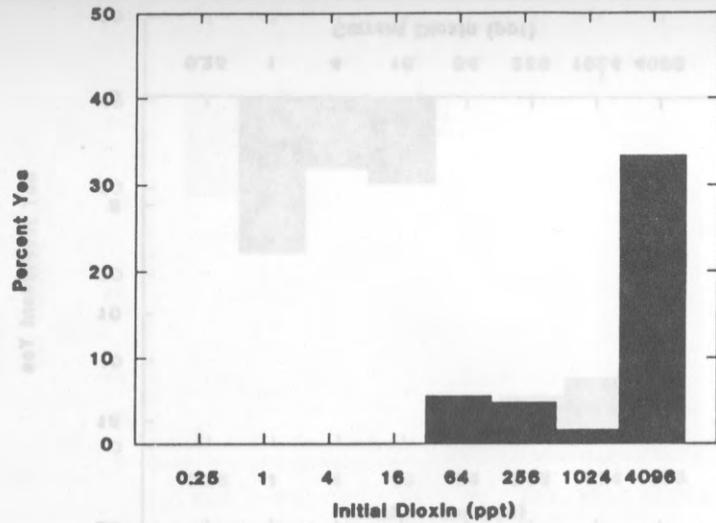
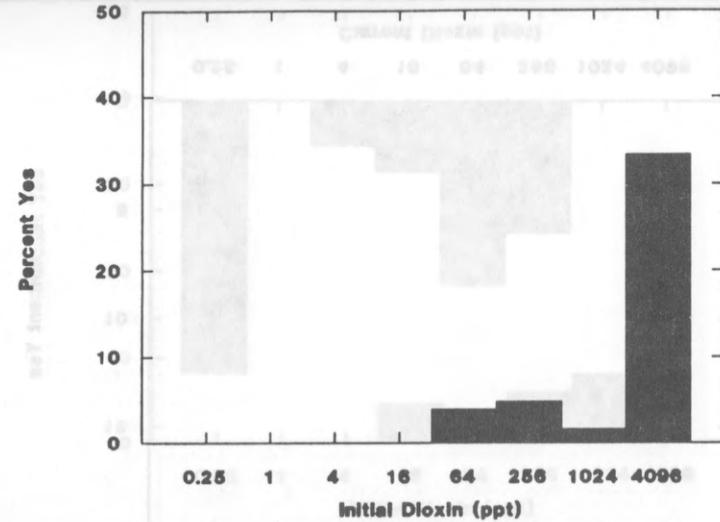


FIGURE H-1-9. Involuntarily Falling Asleep During the Day versus Dioxin

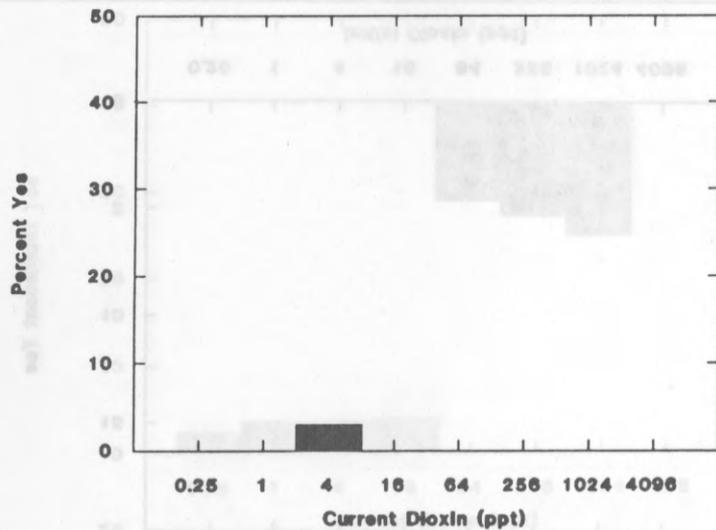
(a) Ranch Hands Minimal Assumption - Initial Dioxin



(b) Ranch Hands Maximal Assumption - Initial Dioxin



(c) All Comparisons - Current Dioxin



(d) All Ranch Hands - Current Dioxin

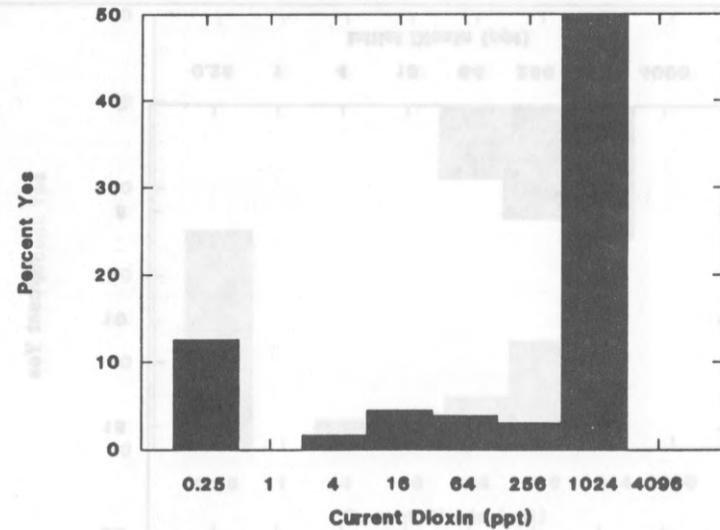


FIGURE H-1-10. Great or Disabling Fatigue During the Day versus Dioxin

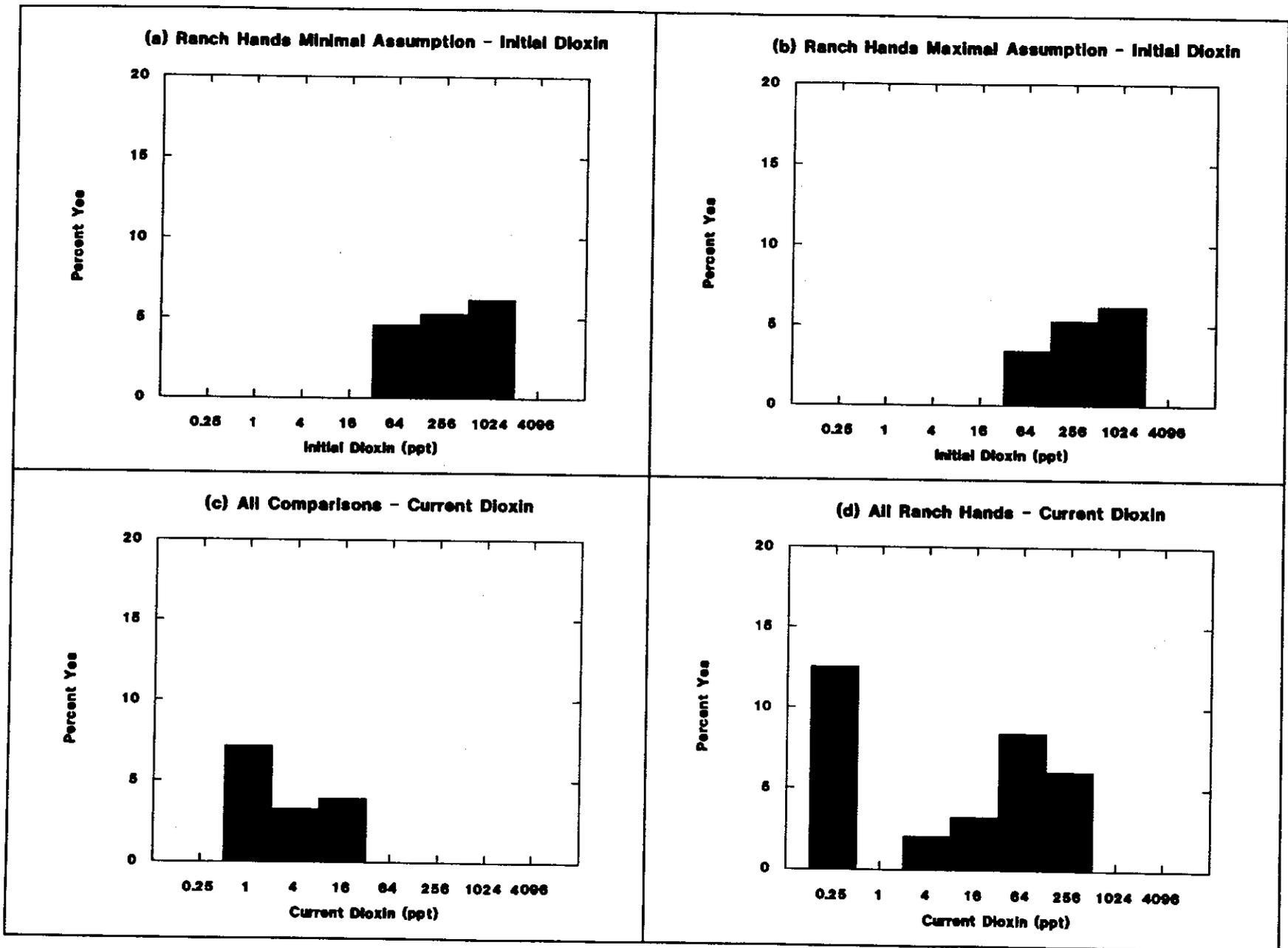


FIGURE H-1-11. Frightening Dreams versus Dioxin

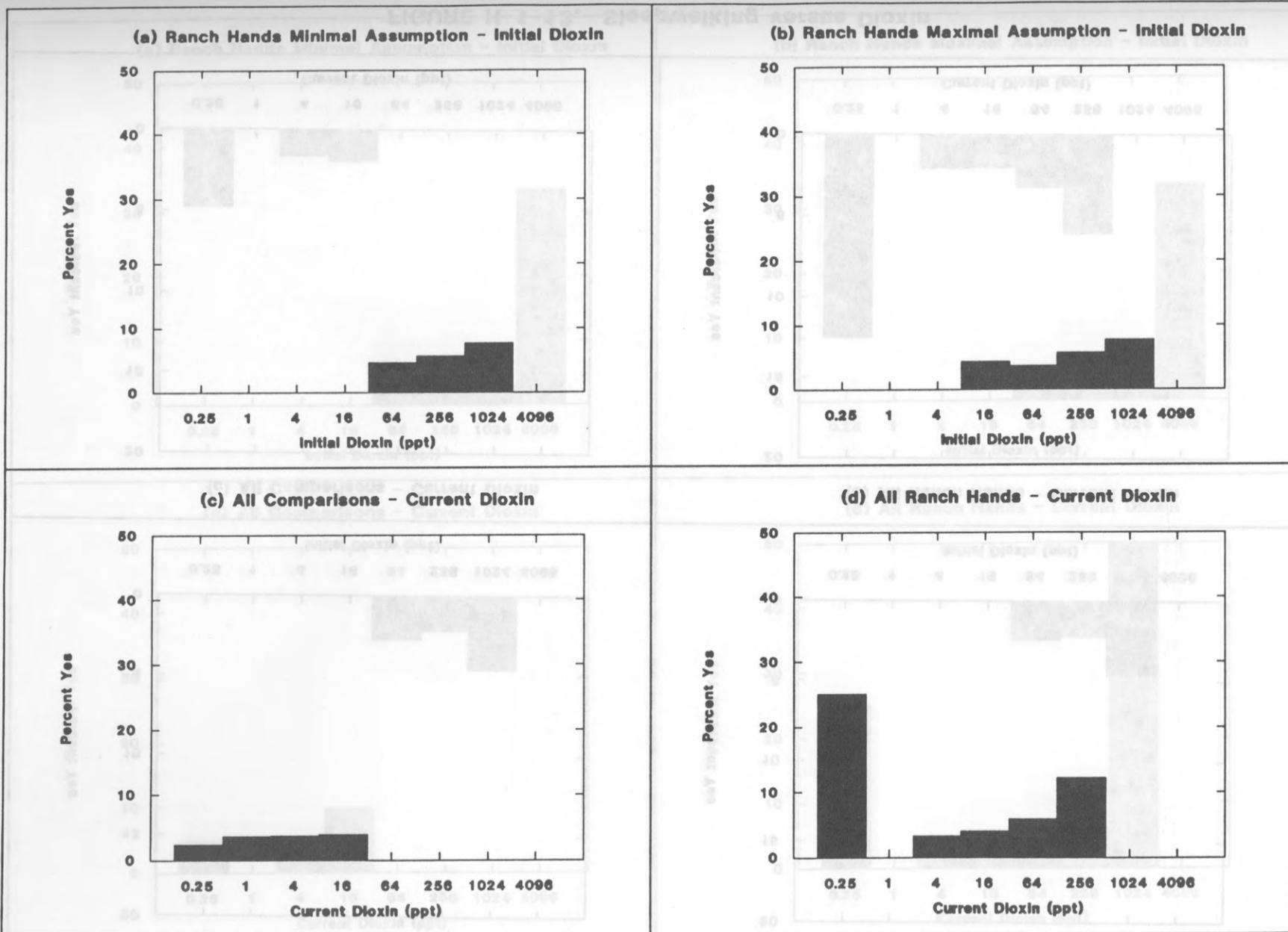
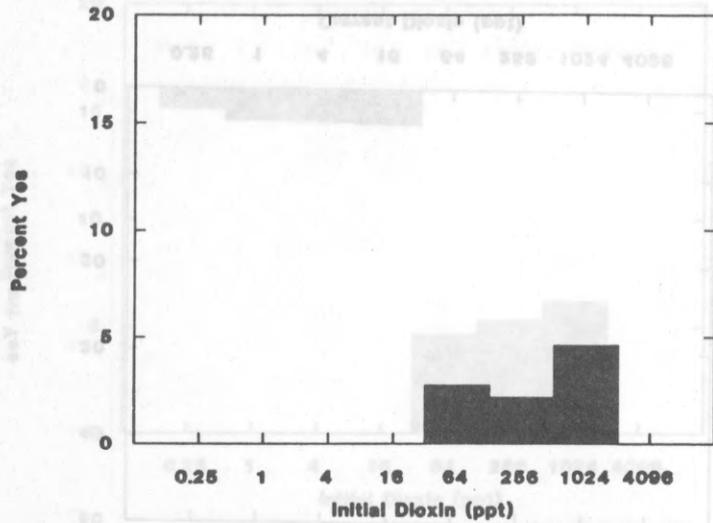
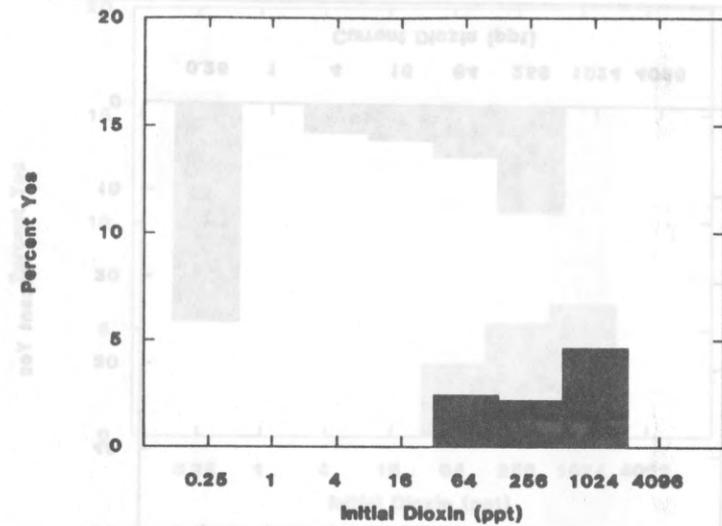


FIGURE H-1-12. Talking in Sleep versus Dioxin

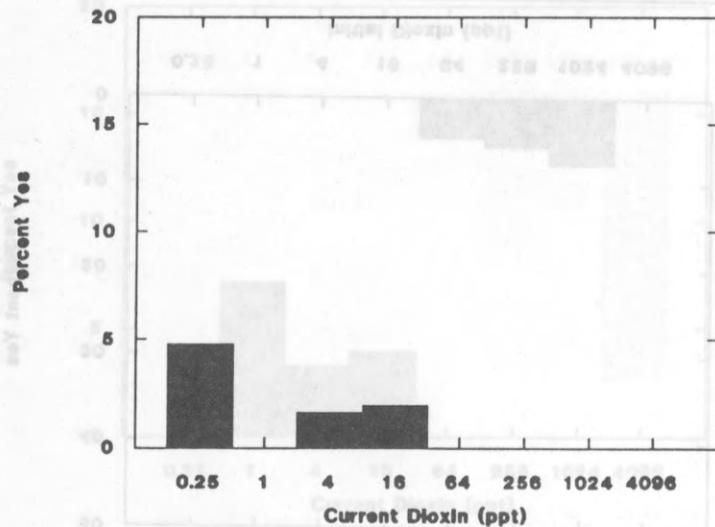
(a) Ranch Hands Minimal Assumption - Initial Dioxin



(b) Ranch Hands Maximal Assumption - Initial Dioxin



(c) All Comparisons - Current Dioxin



(d) All Ranch Hands - Current Dioxin

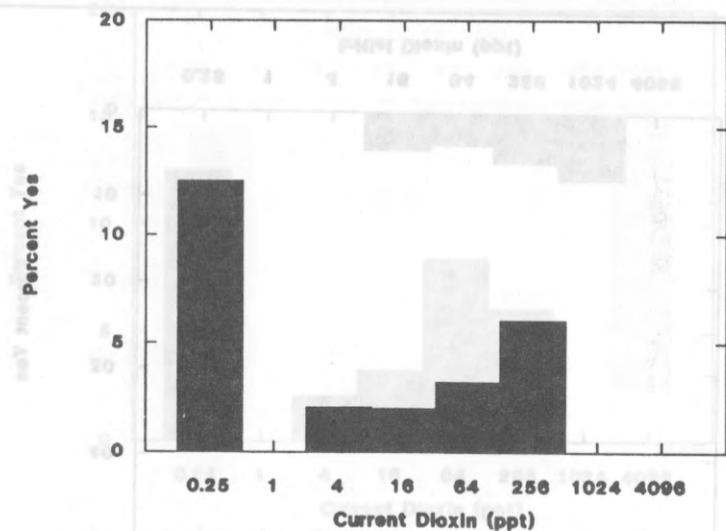


FIGURE H-1-13. Sleepwalking versus Dioxin

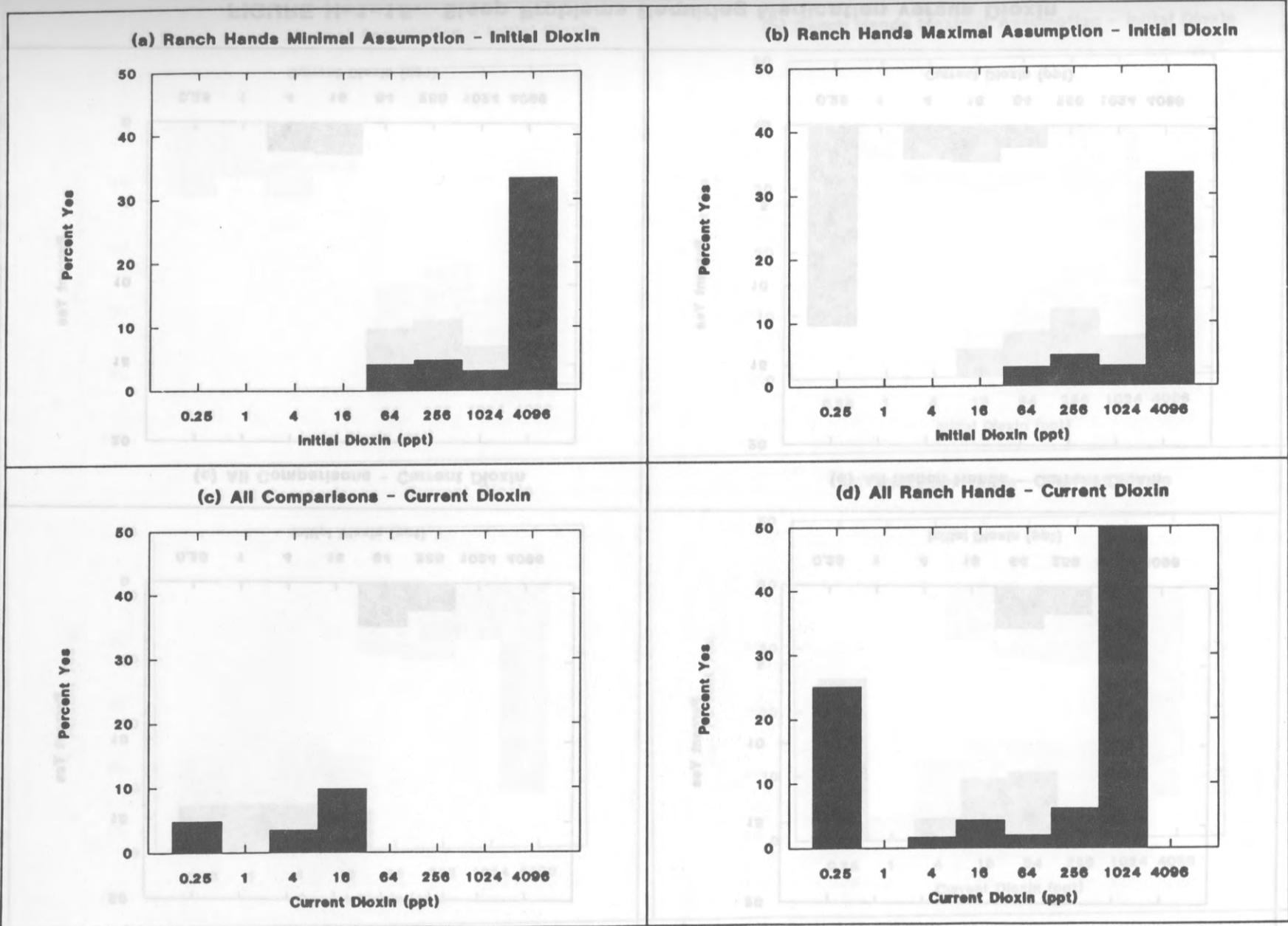
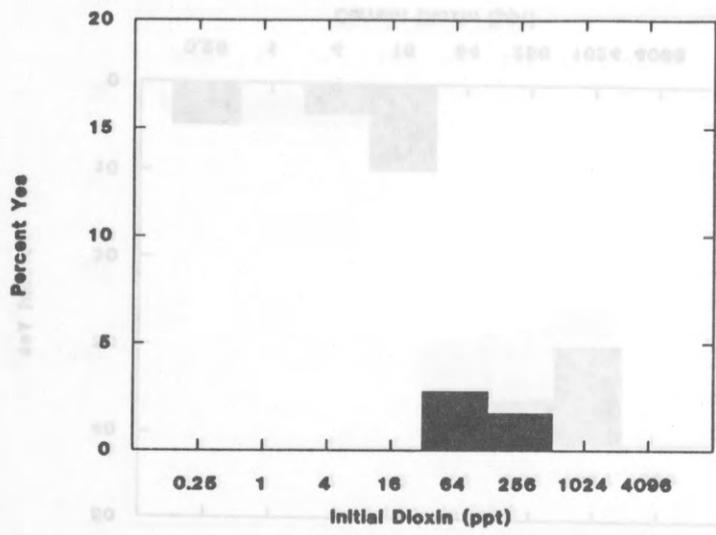
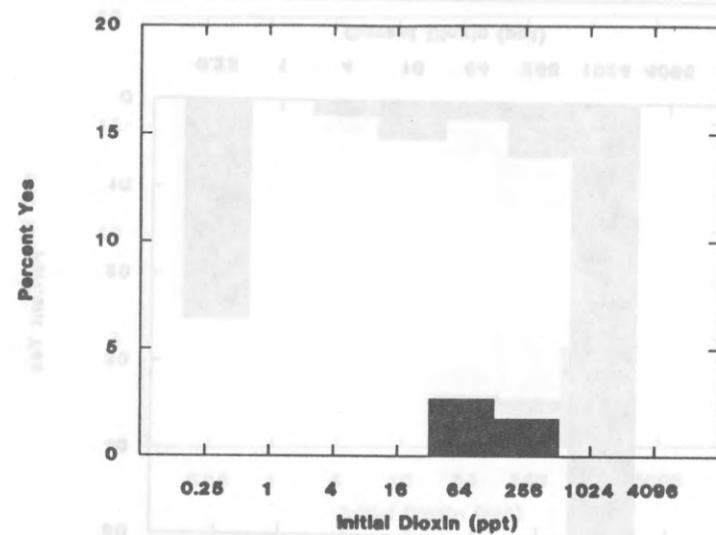


FIGURE H-1-14. Abnormal Movement/Activity During the Night versus Dioxin

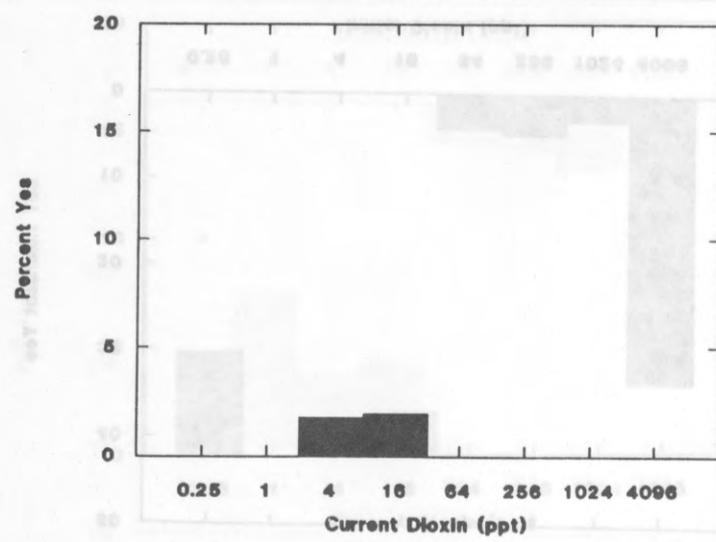
(a) Ranch Hands Minimal Assumption - Initial Dioxin



(b) Ranch Hands Maximal Assumption - Initial Dioxin



(c) All Comparisons - Current Dioxin



(d) All Ranch Hands - Current Dioxin

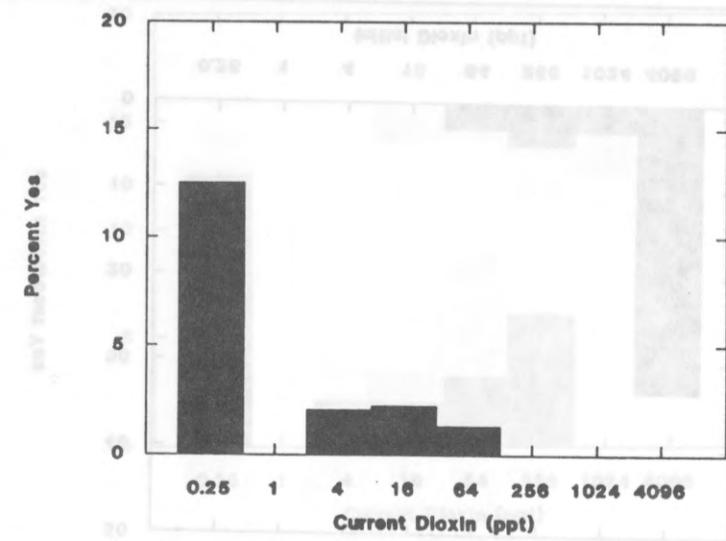


FIGURE H-1-15. Sleep Problems Requiring Medication versus Dioxin

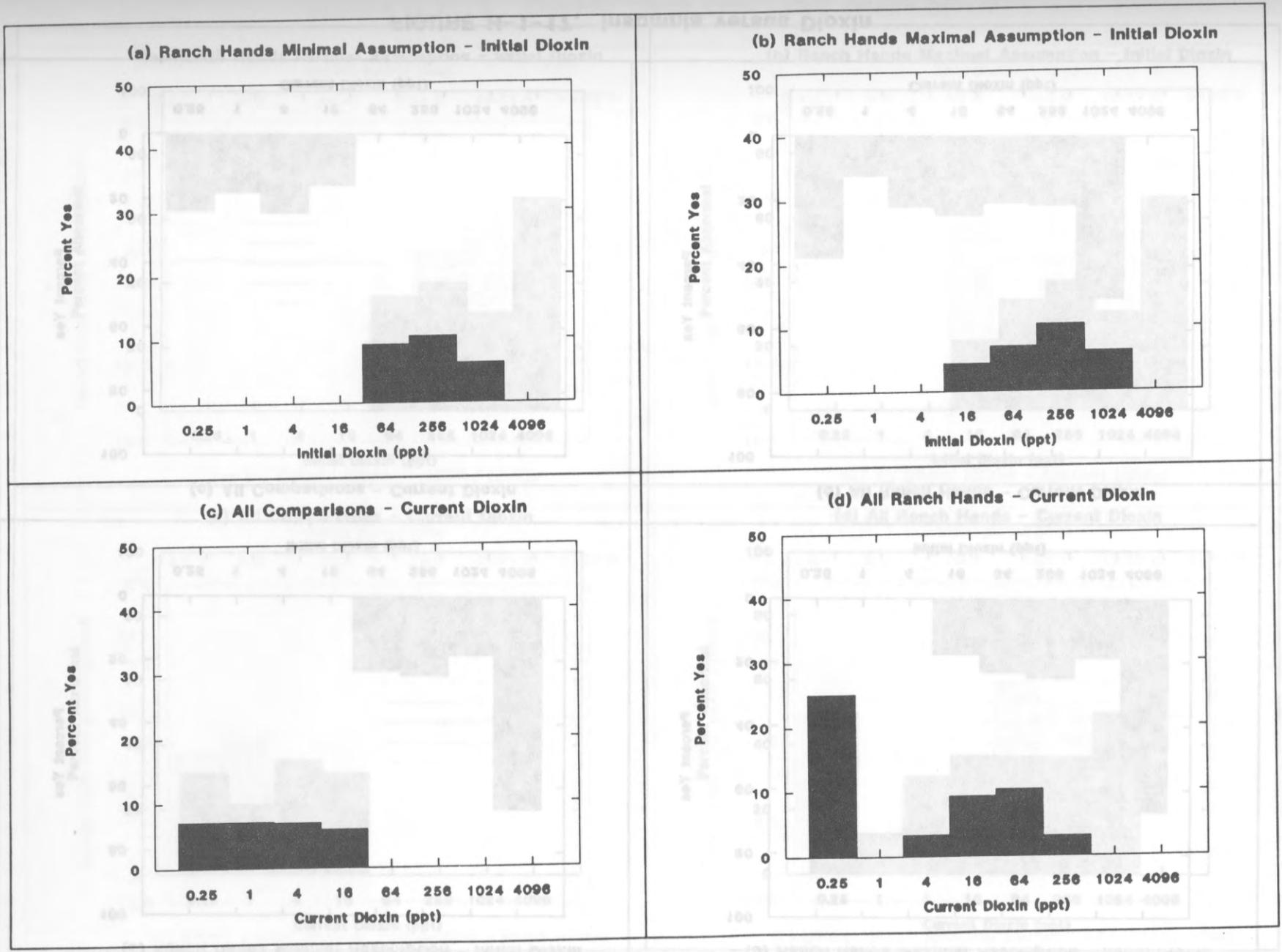
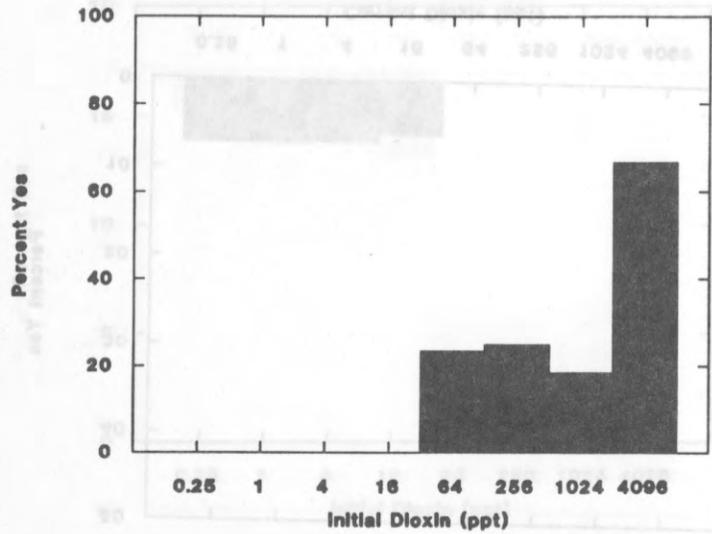
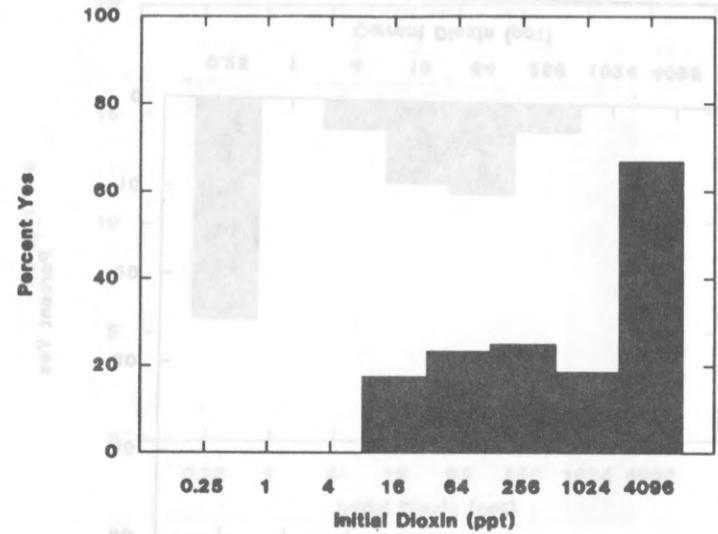


FIGURE H-1-16. Snore Loudly in All Sleeping Positions versus Dioxin

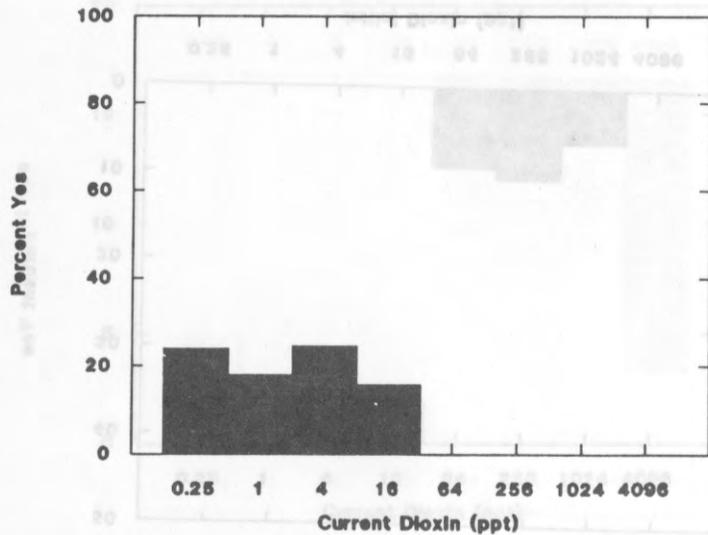
(a) Ranch Hands Minimal Assumption - Initial Dioxin



(b) Ranch Hands Maximal Assumption - Initial Dioxin



(c) All Comparisons - Current Dioxin



(d) All Ranch Hands - Current Dioxin

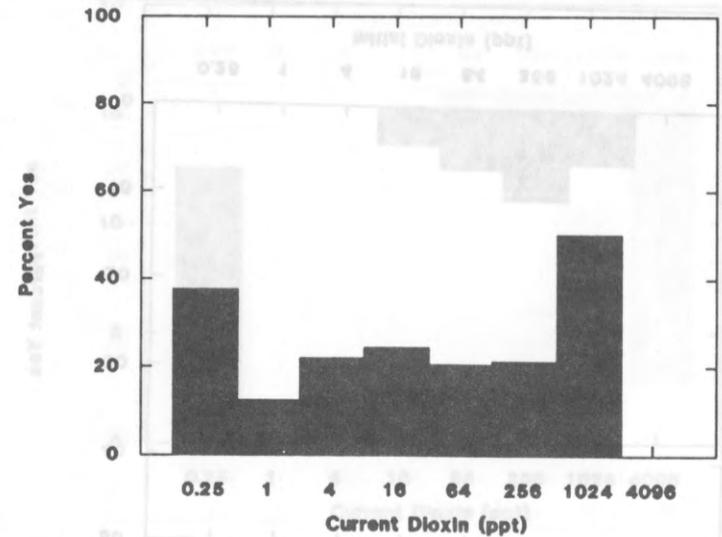


FIGURE H-1-17. Insomnia versus Dioxin

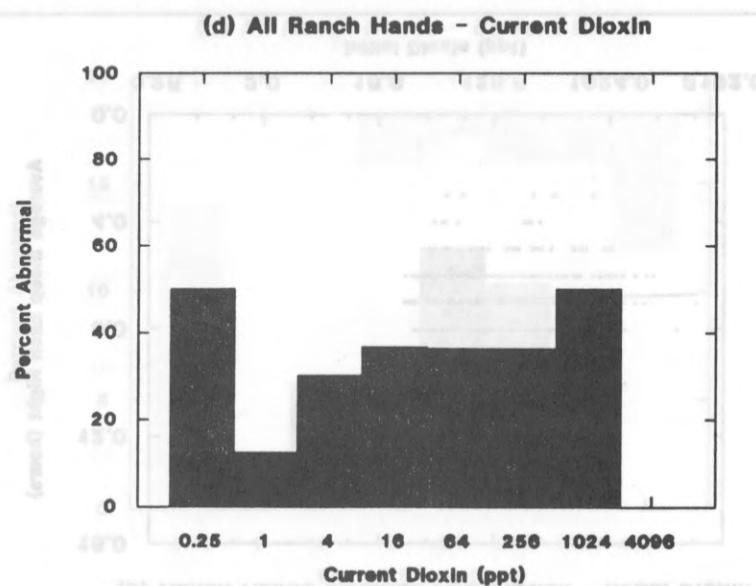
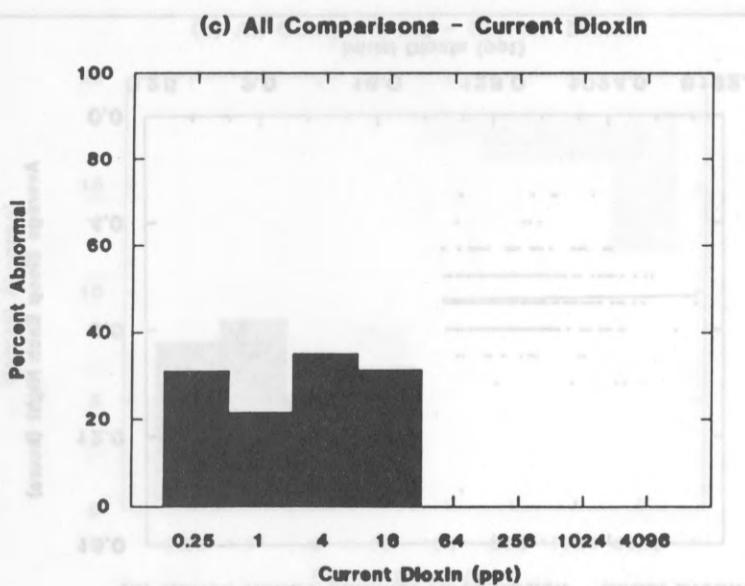
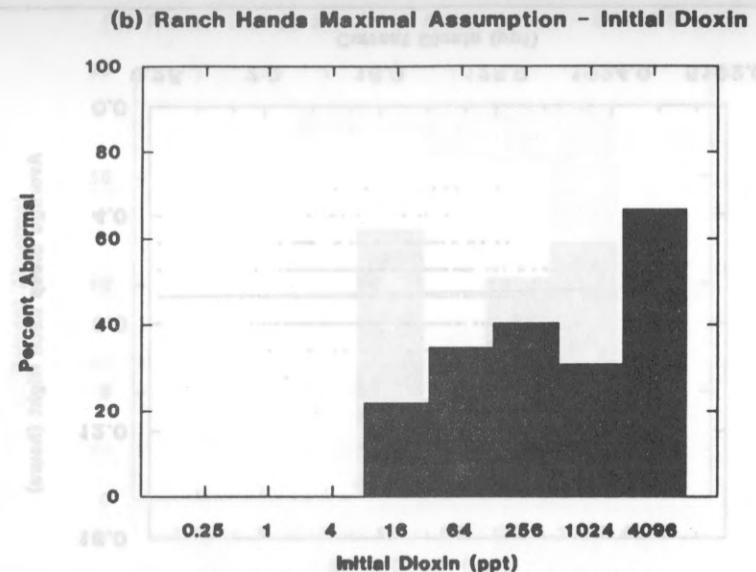
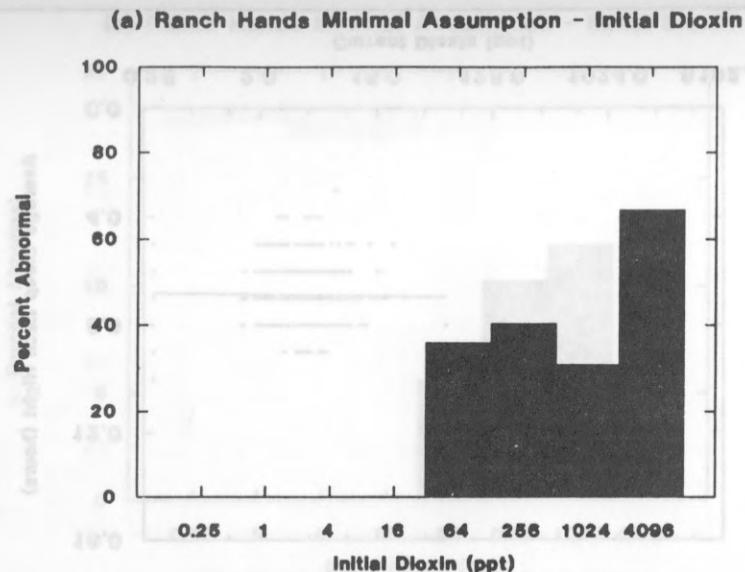
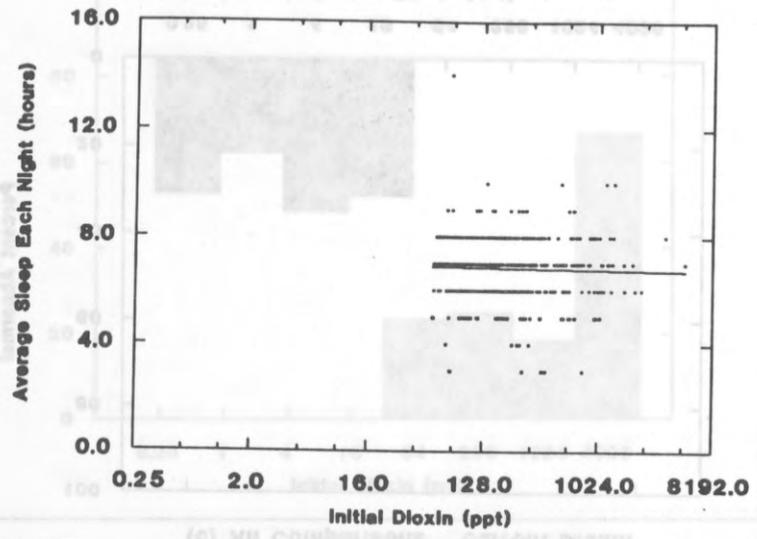
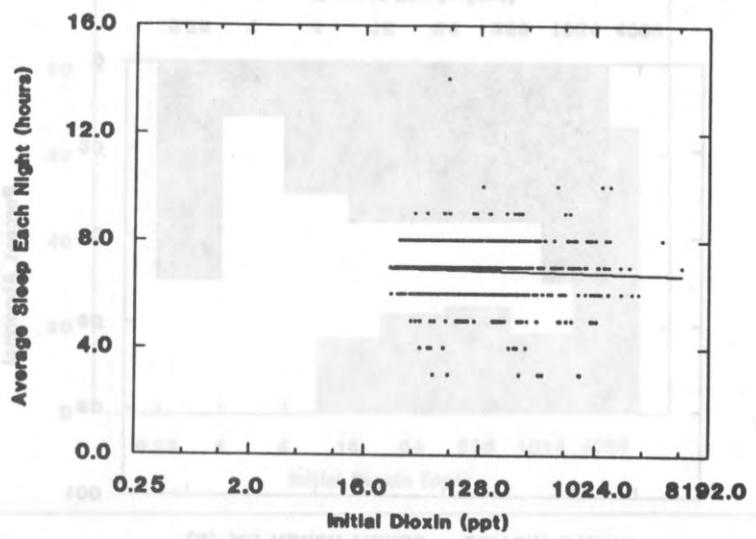


FIGURE H-1-18. Overall Sleep Disorder Index versus Dioxin

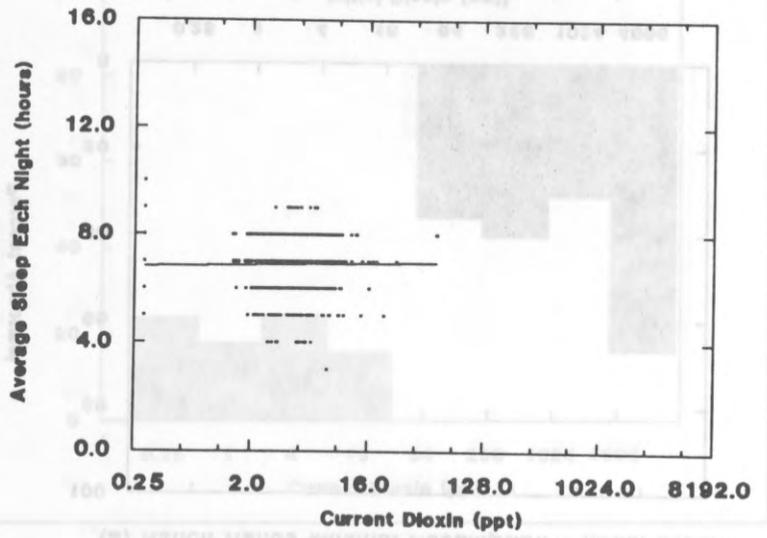
(a) Ranch Hands Minimal Assumption - Initial Dioxin



(b) Ranch Hands Maximal Assumption - Initial Dioxin



(c) All Comparisons - Current Dioxin



(d) All Ranch Hands - Current Dioxin

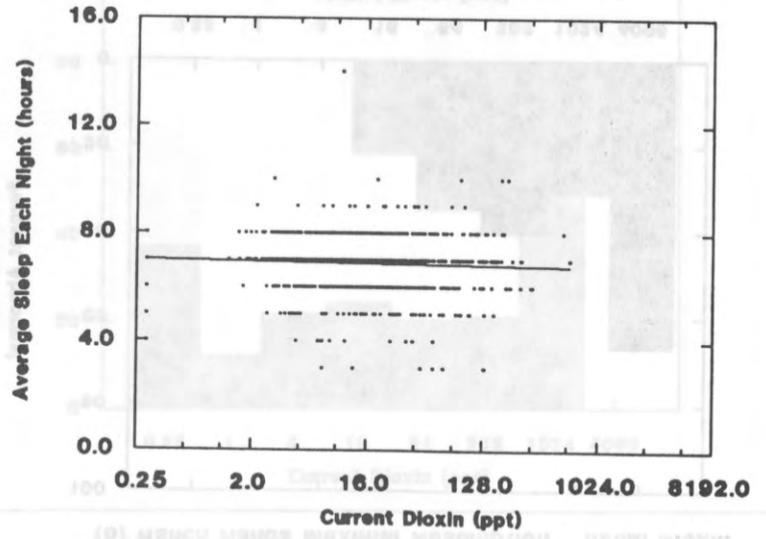


FIGURE H-1-19. Average Sleep Each Night versus Dioxin

H-1-22

H-1-23

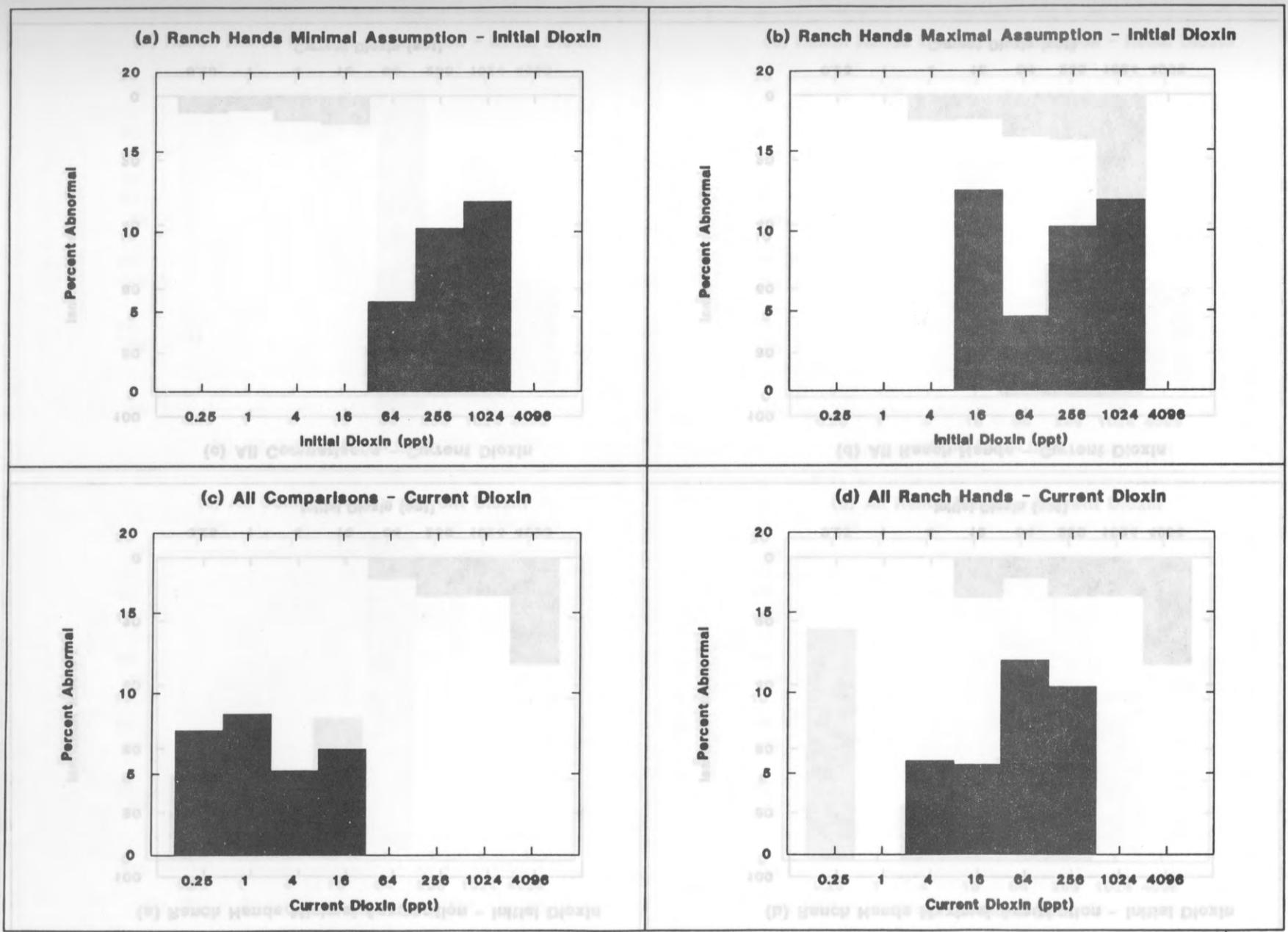
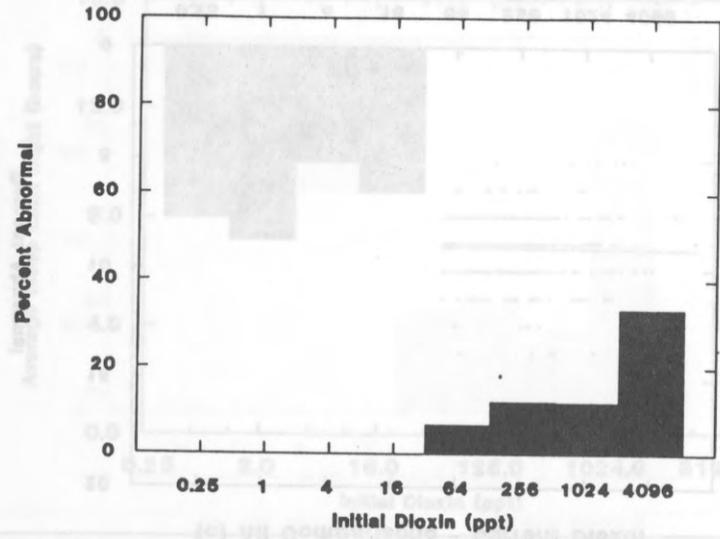
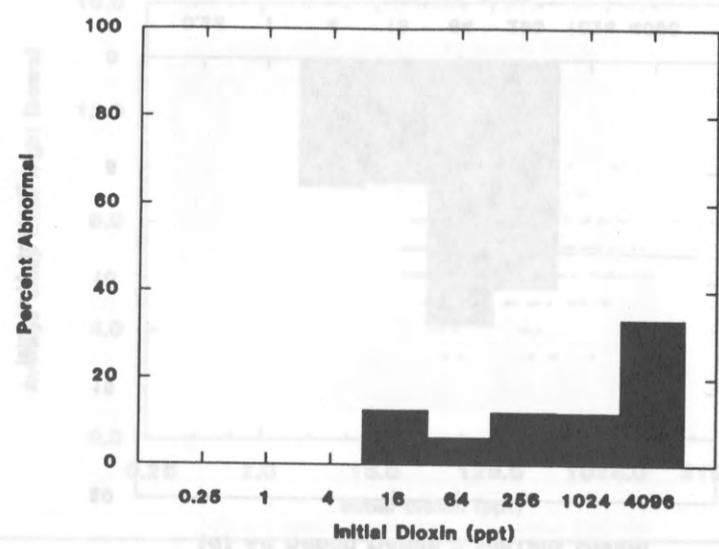


FIGURE H-1-20. SCL-90-R Anxiety versus Dioxin

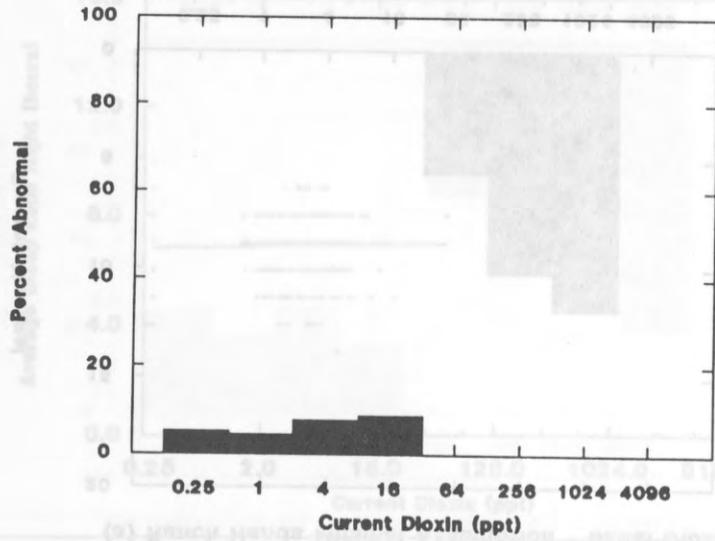
(a) Ranch Hands Minimal Assumption - Initial Dioxin



(b) Ranch Hands Maximal Assumption - Initial Dioxin



(c) All Comparisons - Current Dioxin



(d) All Ranch Hands - Current Dioxin

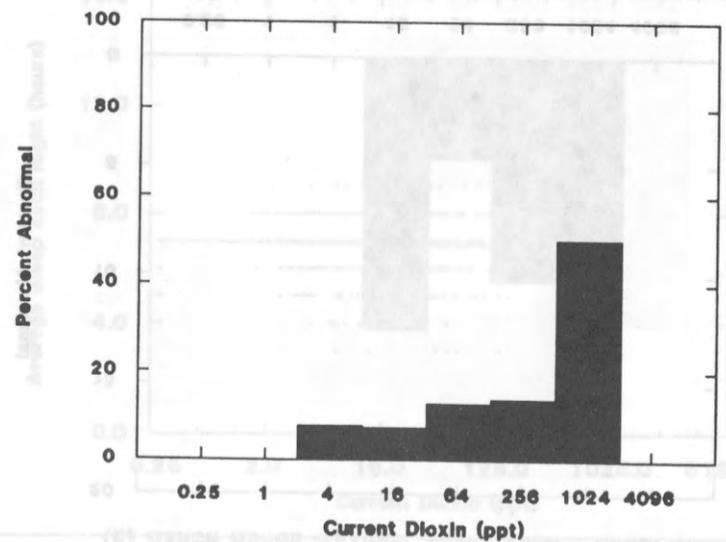


FIGURE H-1-21. SCL-90-R Depression versus Dioxin

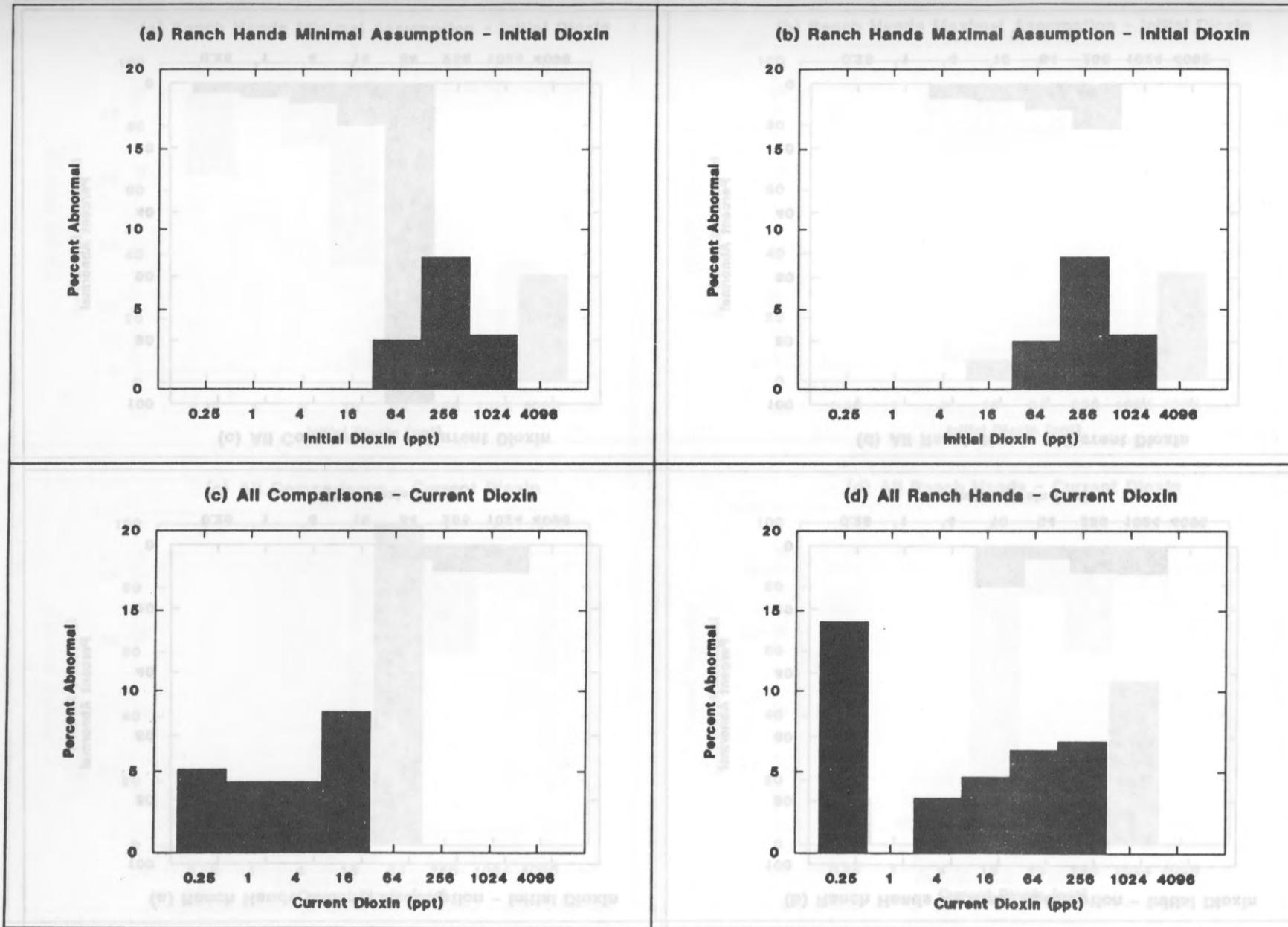
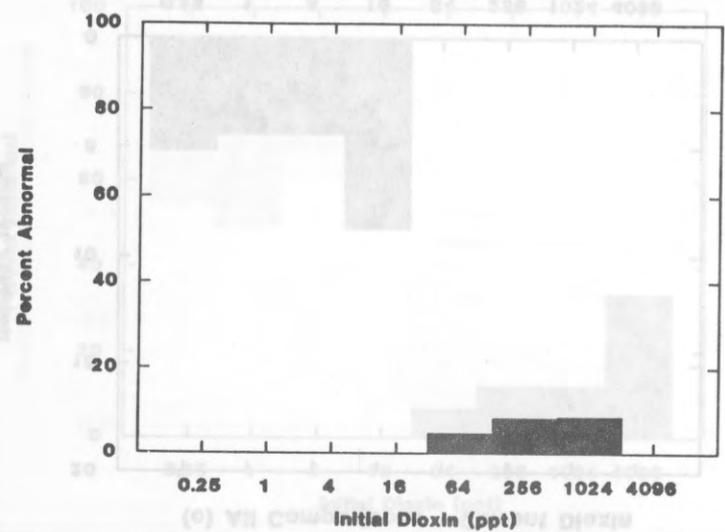


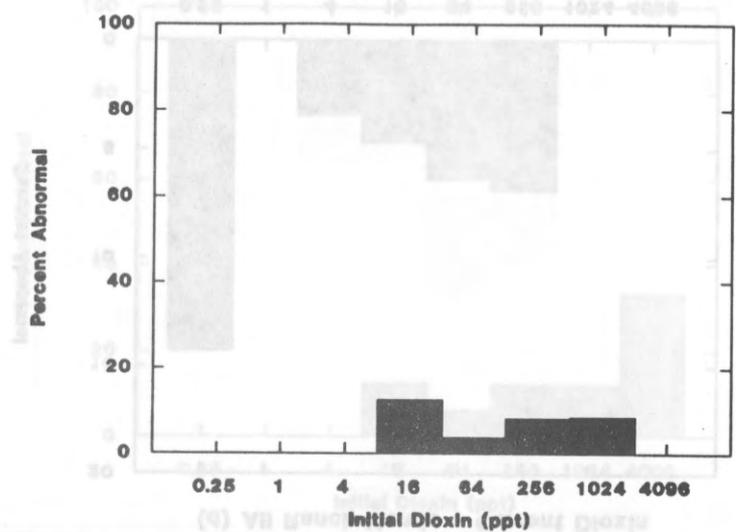
FIGURE H-1-22. SCL-90-R Hostility versus Dioxin

H-1-26

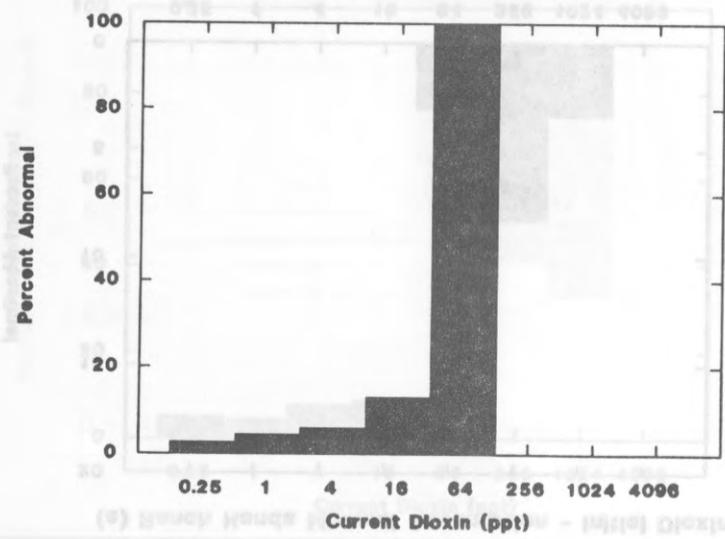
(a) Ranch Hands Minimal Assumption - Initial Dioxin



(b) Ranch Hands Maximal Assumption - Initial Dioxin



(c) All Comparisons - Current Dioxin



(d) All Ranch Hands - Current Dioxin

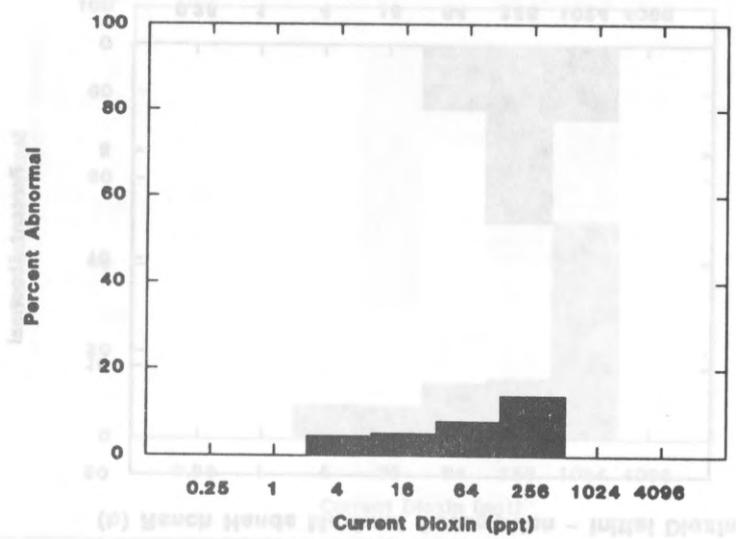


FIGURE H-1-23. SCL-90-R Interpersonal Sensitivity versus Dioxin

H-1-27

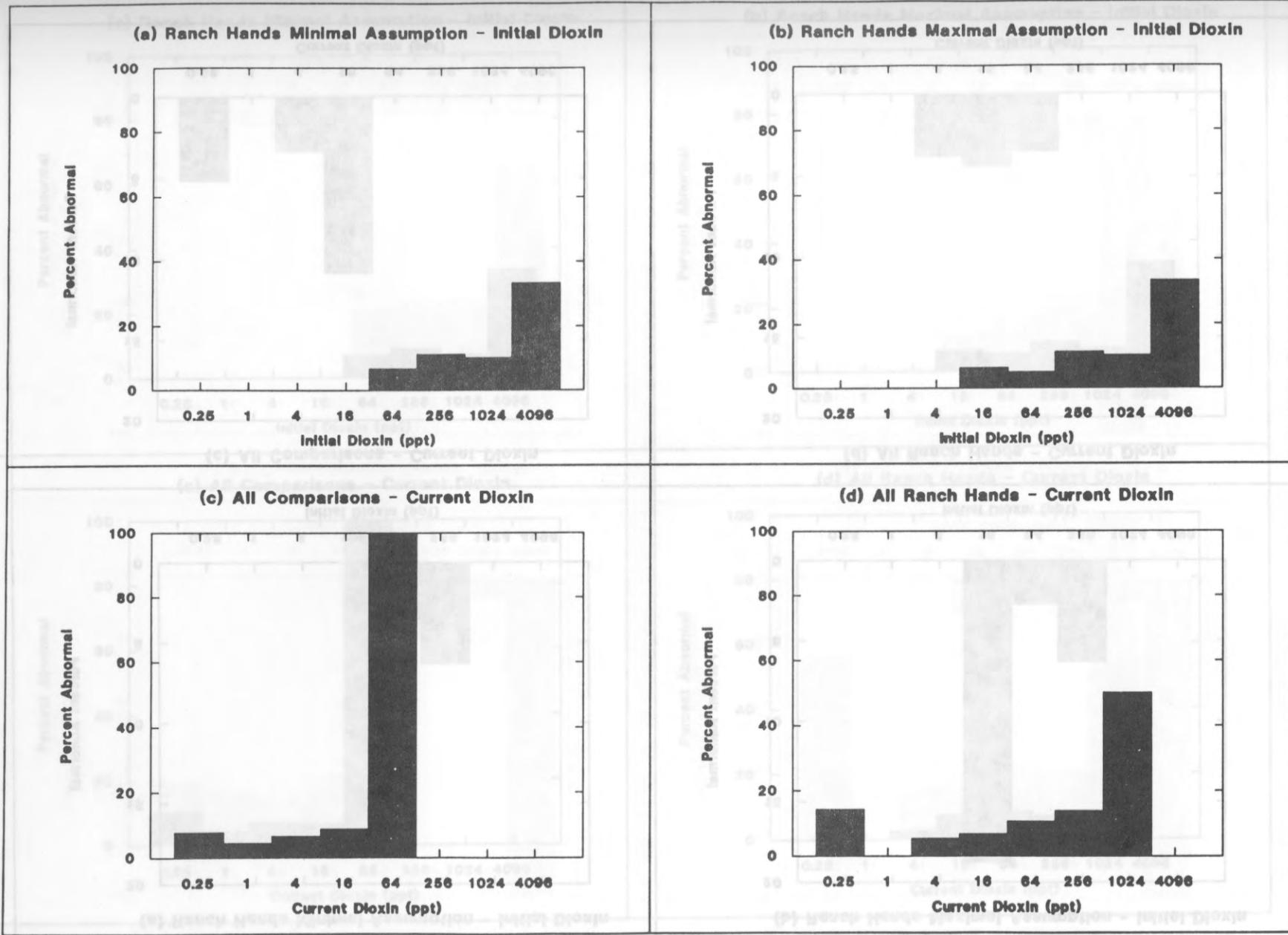
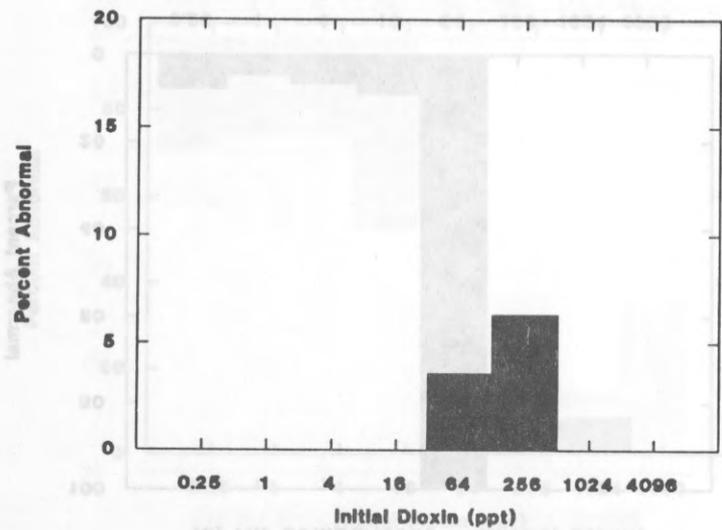


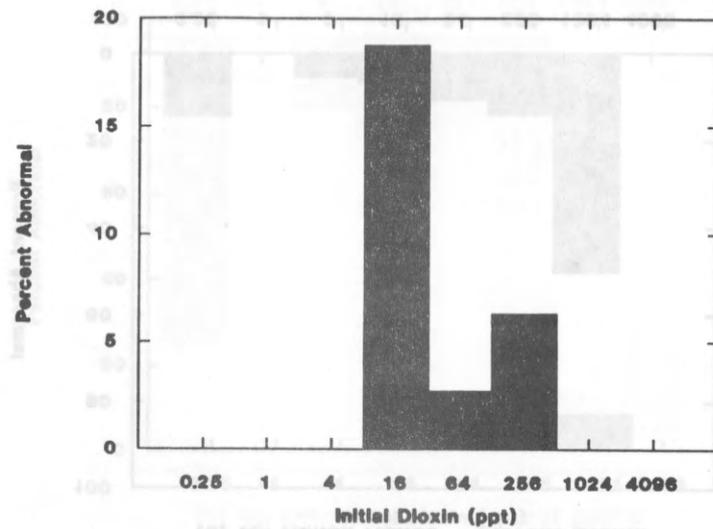
FIGURE H-1-24. SCL-90-R Obsessive-Compulsive Behavior versus Dioxin

H-1-28

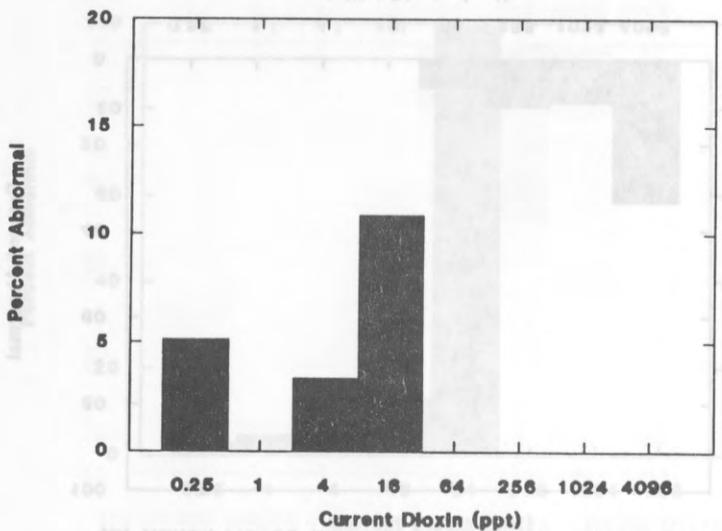
(a) Ranch Hands Minimal Assumption - Initial Dioxin



(b) Ranch Hands Maximal Assumption - Initial Dioxin



(c) All Comparisons - Current Dioxin



(d) All Ranch Hands - Current Dioxin

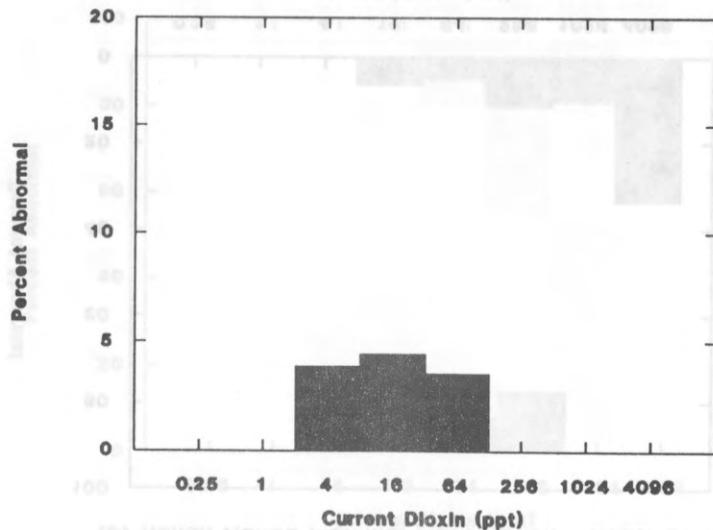


FIGURE H-1-25. SCL-90-R Paranoid Ideation versus Dioxin

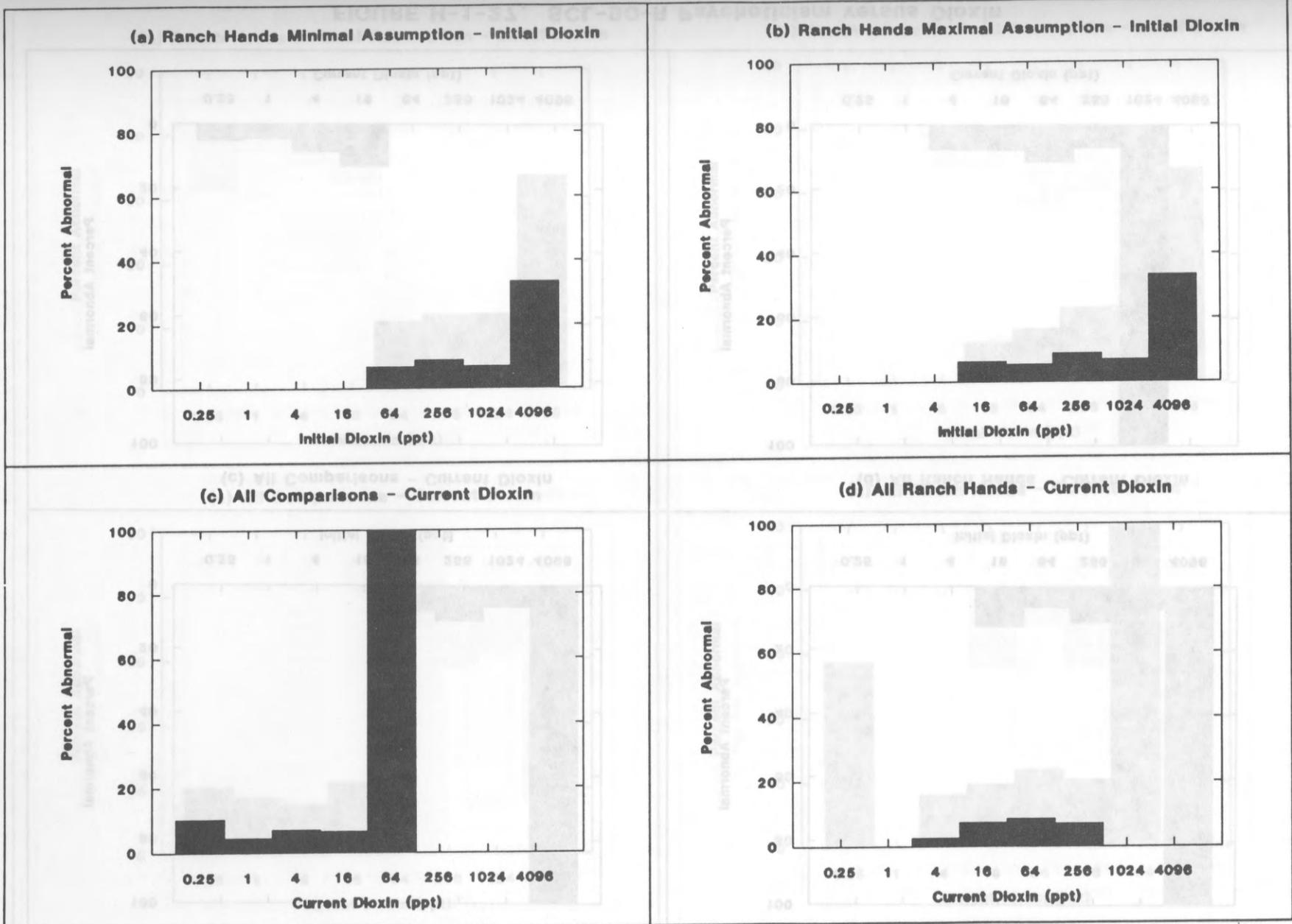
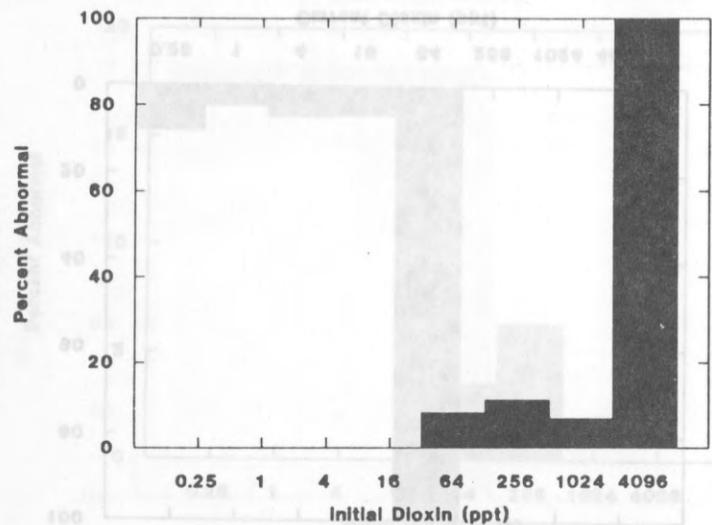
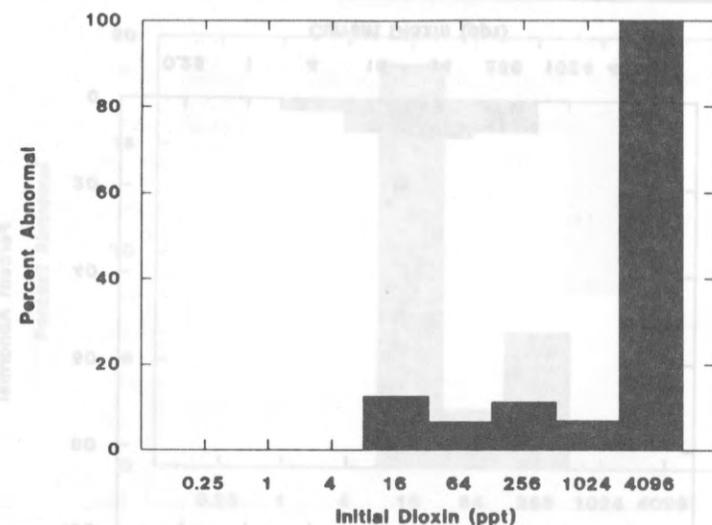


FIGURE H-1-26. SCL-90-R Phobic Anxiety versus Dioxin

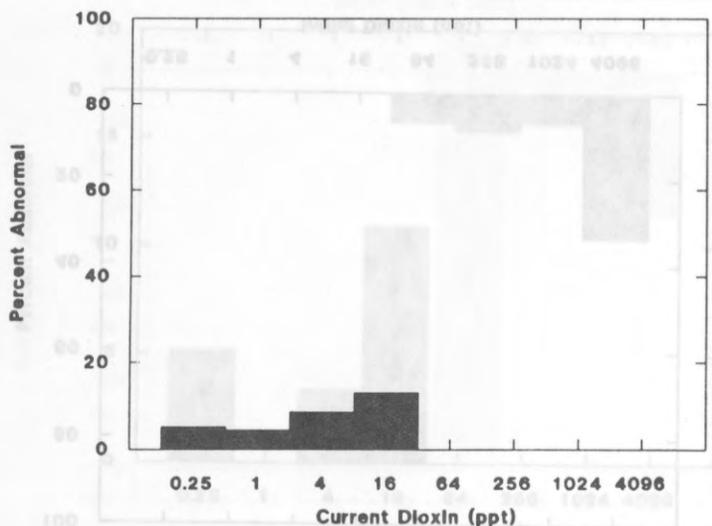
(a) Ranch Hands Minimal Assumption - Initial Dioxin



(b) Ranch Hands Maximal Assumption - Initial Dioxin



(c) All Comparisons - Current Dioxin



(d) All Ranch Hands - Current Dioxin

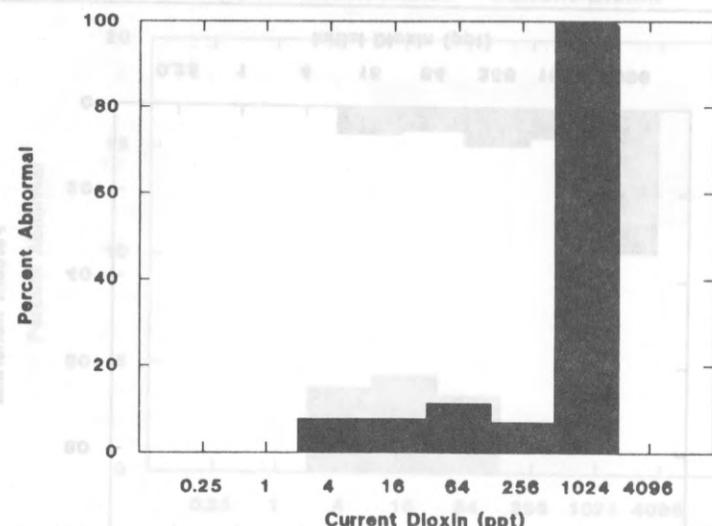
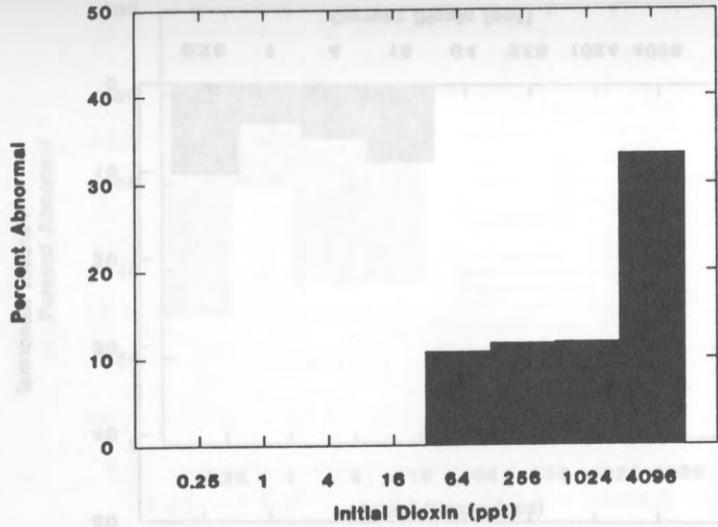
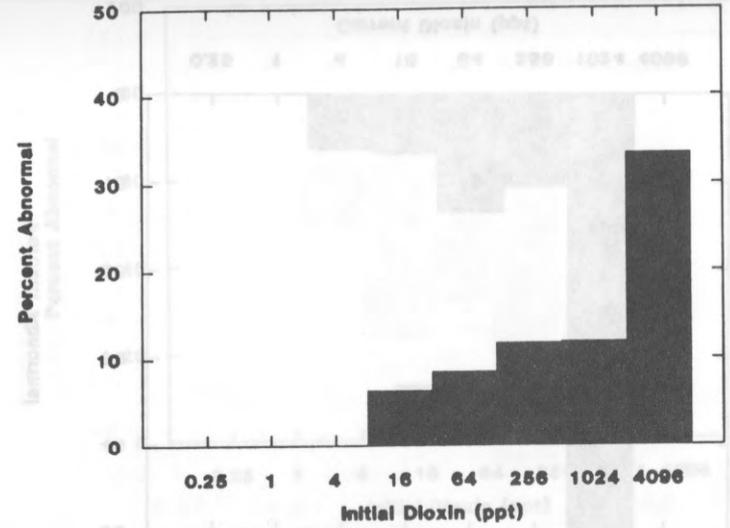


FIGURE H-1-27. SCL-90-R Psychoticism versus Dioxin

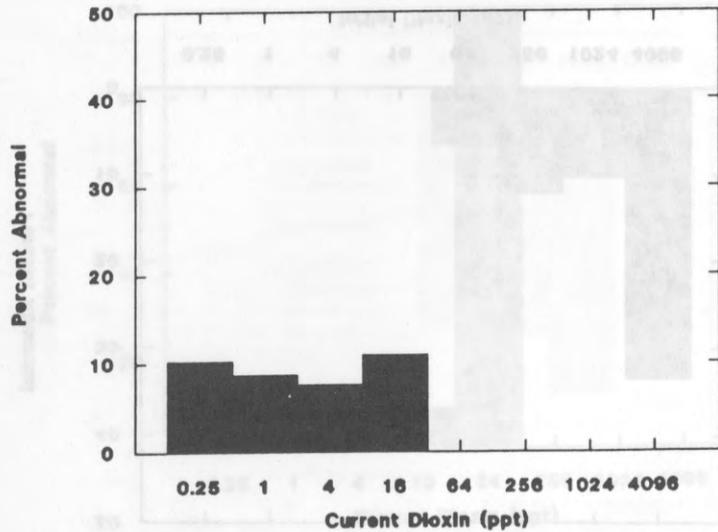
(a) Ranch Hands Minimal Assumption - Initial Dioxin



(b) Ranch Hands Maximal Assumption - Initial Dioxin



(c) All Comparisons - Current Dioxin



(d) All Ranch Hands - Current Dioxin

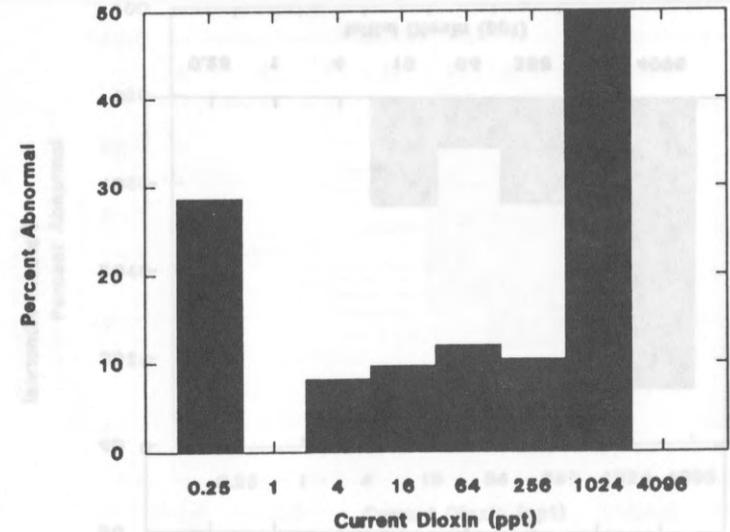


FIGURE H-1-28. SCL-90-R Somatization versus Dioxin

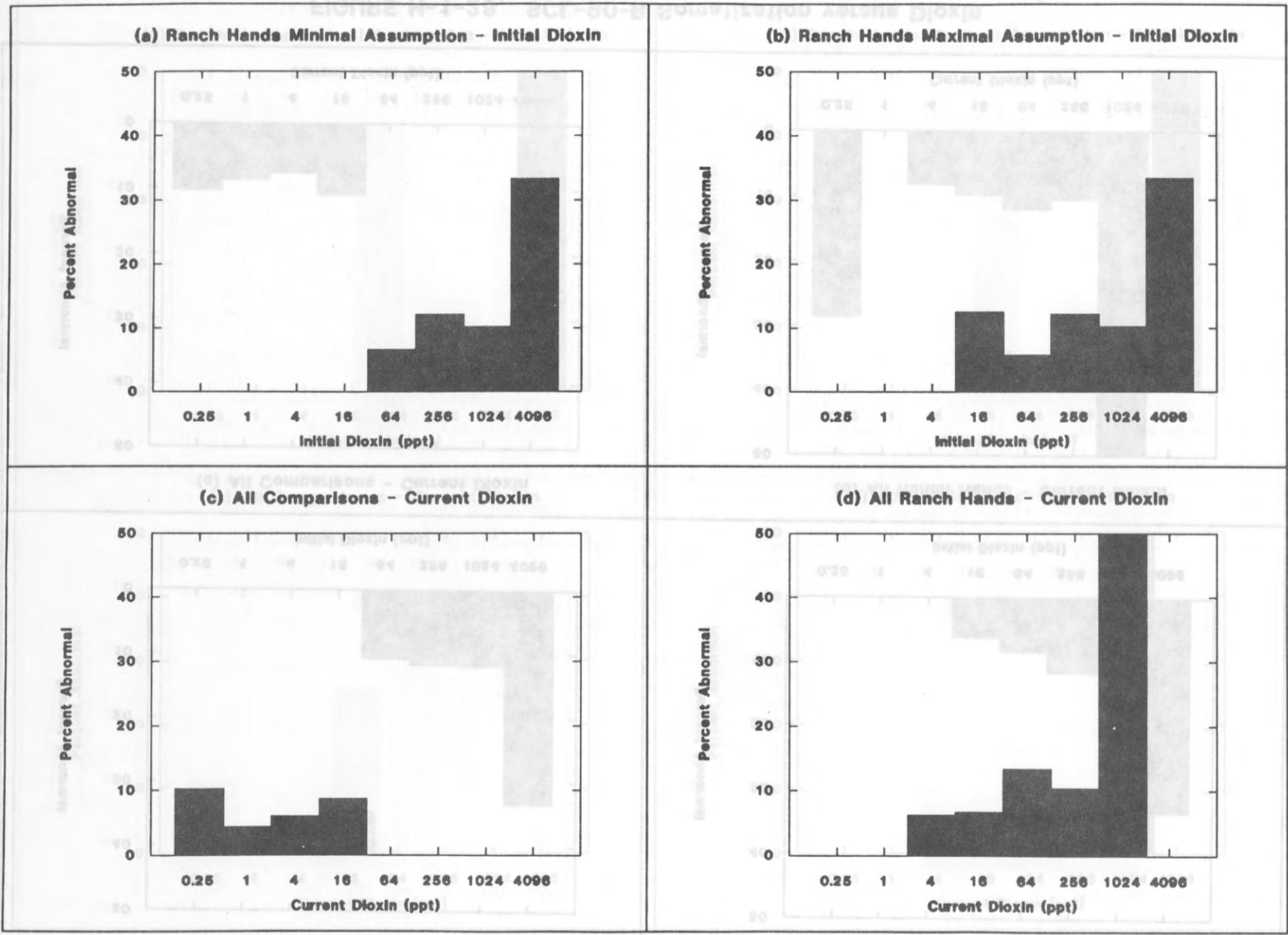
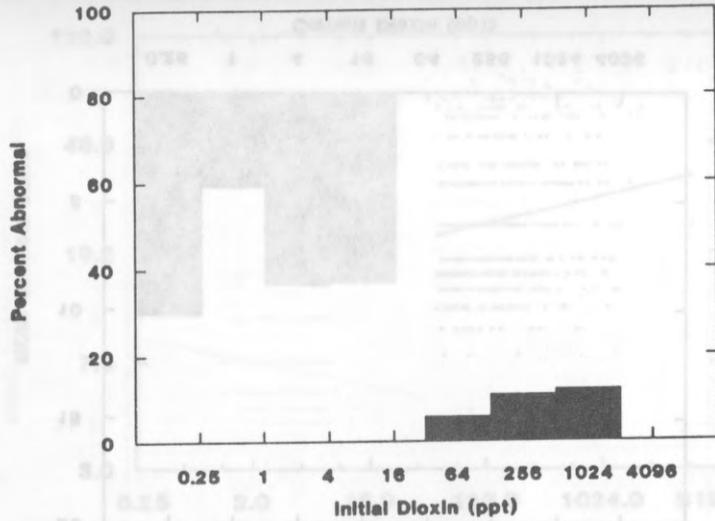
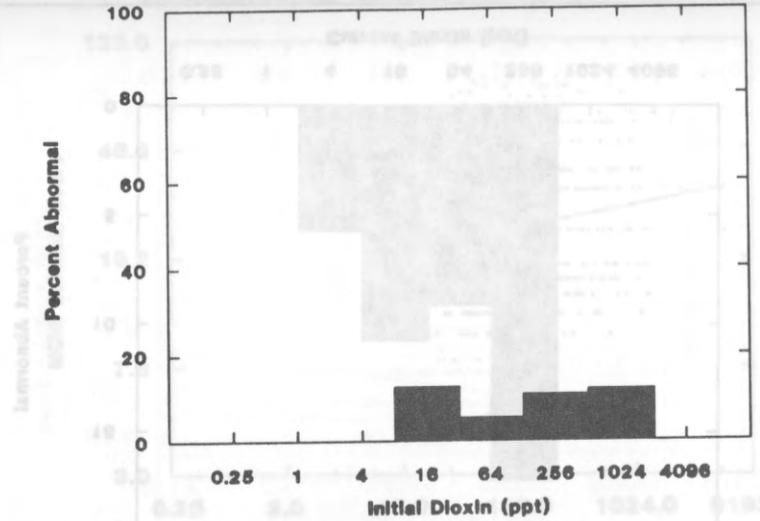


FIGURE H-1-29. SCL-90-R Global Severity Index versus Dioxin

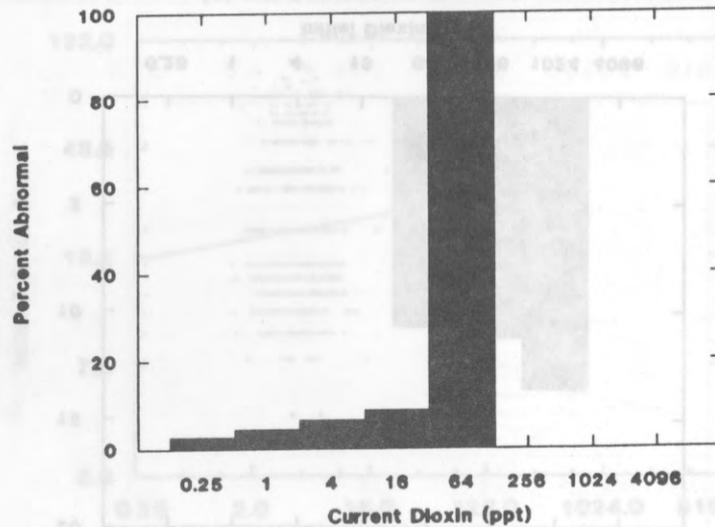
(a) Ranch Hands Minimal Assumption - Initial Dioxin



(b) Ranch Hands Maximal Assumption - Initial Dioxin



(c) All Comparisons - Current Dioxin



(d) All Ranch Hands - Current Dioxin

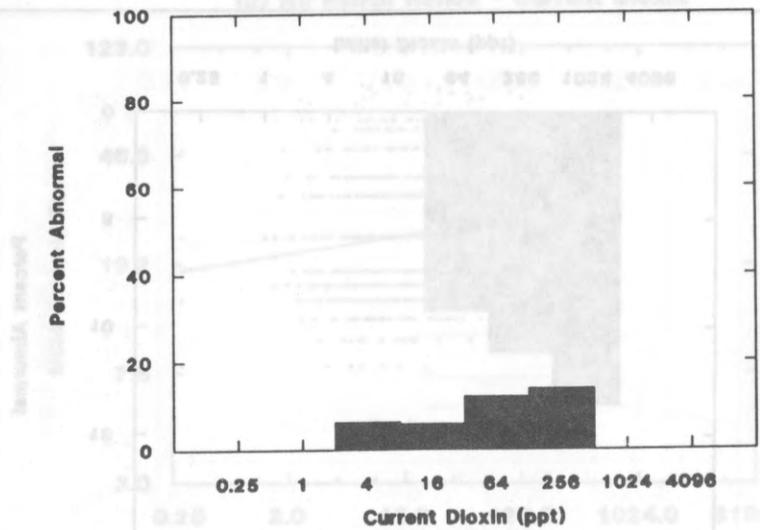
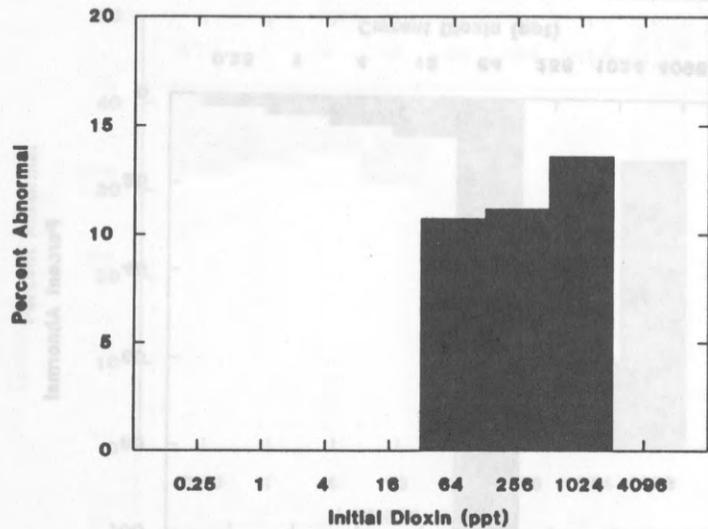
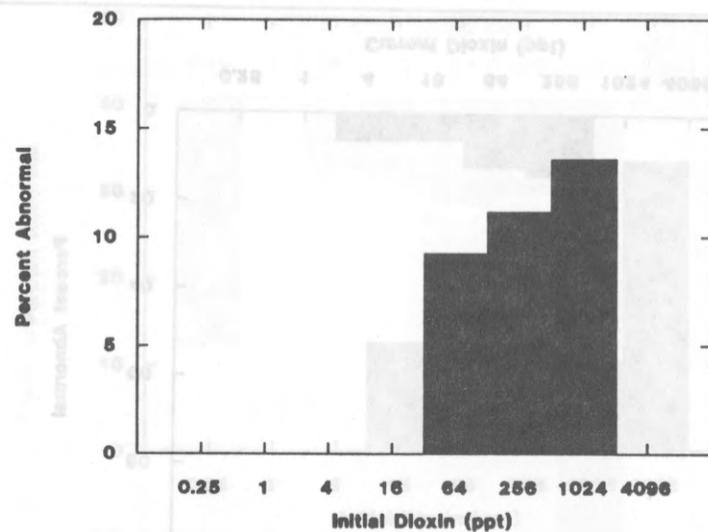


FIGURE H-1-30. SCL-90-R Positive Symptom Total versus Dioxin

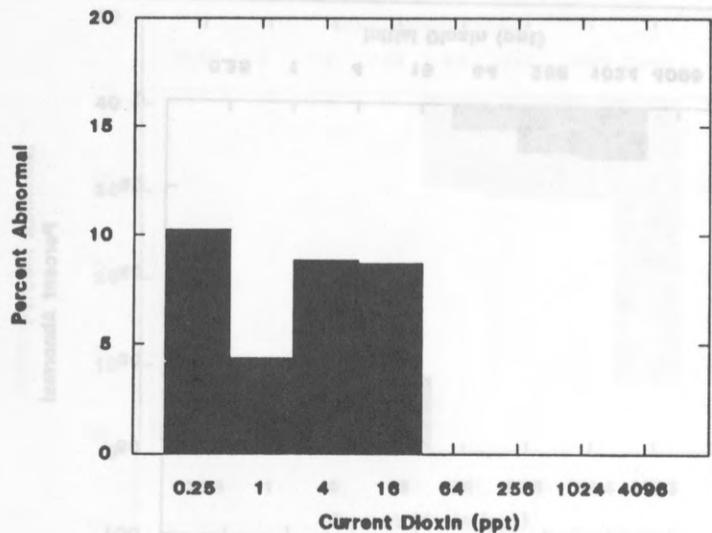
(a) Ranch Hands Minimal Assumption - Initial Dioxin



(b) Ranch Hands Maximal Assumption - Initial Dioxin



(c) All Comparisons - Current Dioxin



(d) All Ranch Hands - Current Dioxin

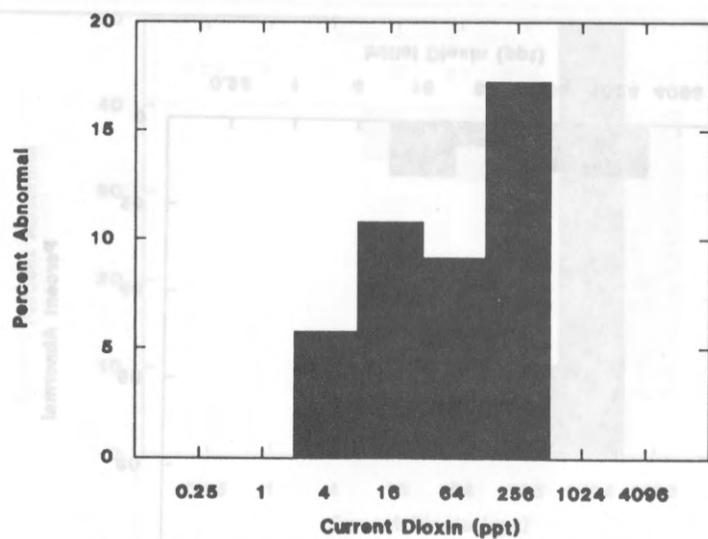


FIGURE H-1-31. SCL-90-R Positive Symptom Distress Index versus Dioxin

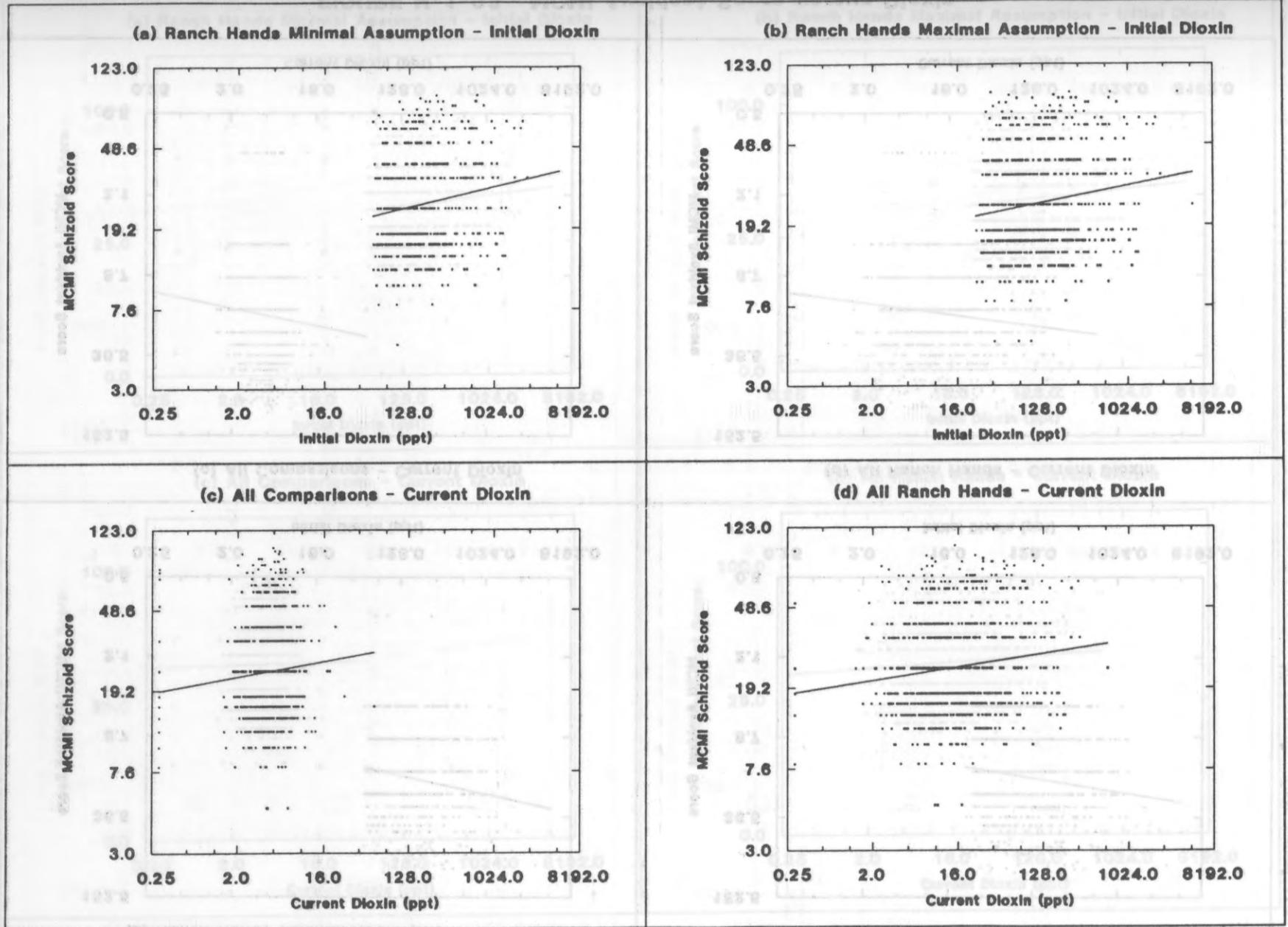


FIGURE H-1-32. MCM Schizoid Score versus Dioxin

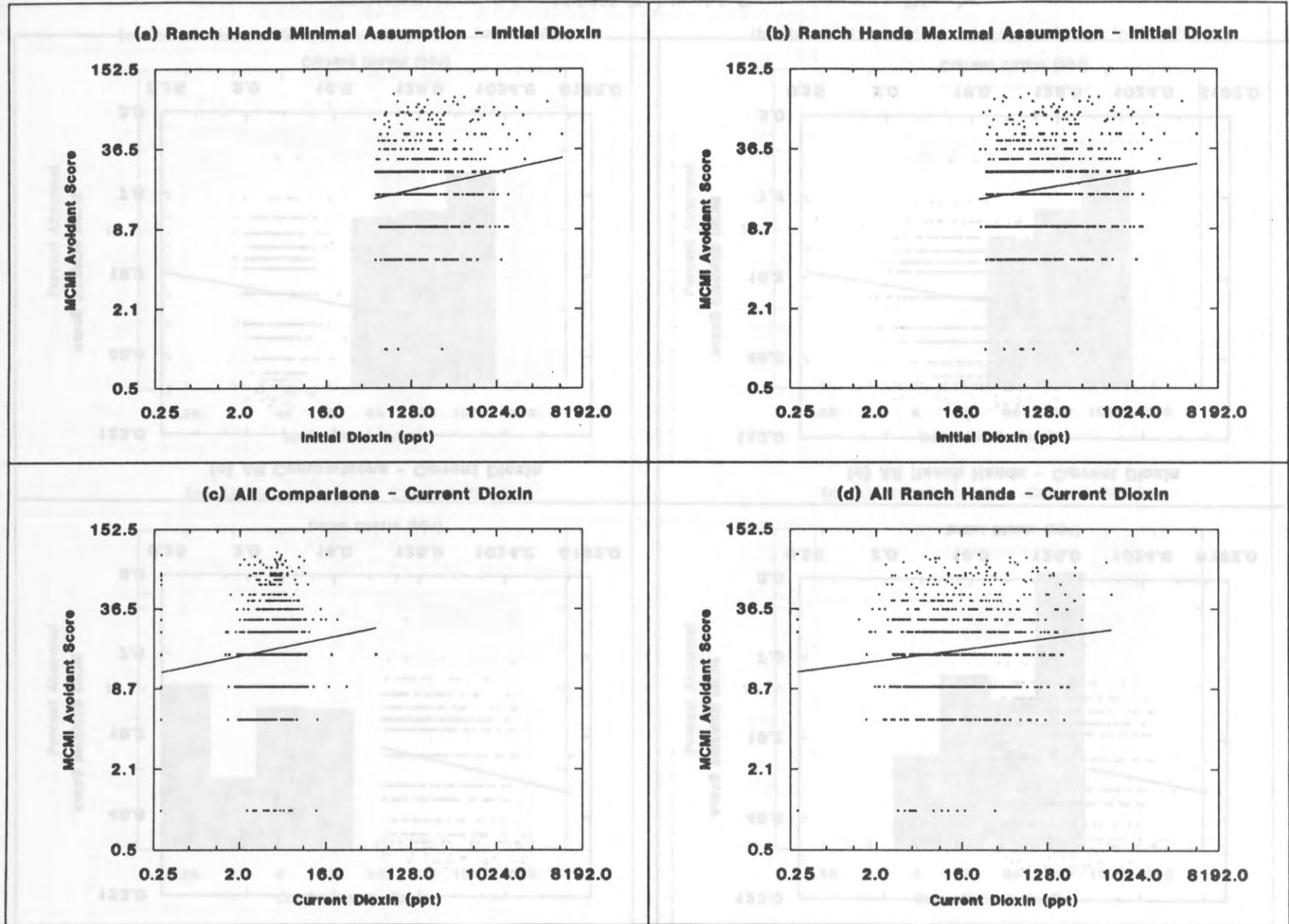


FIGURE H-1-33. MCMC Avoidant Score versus Dioxin

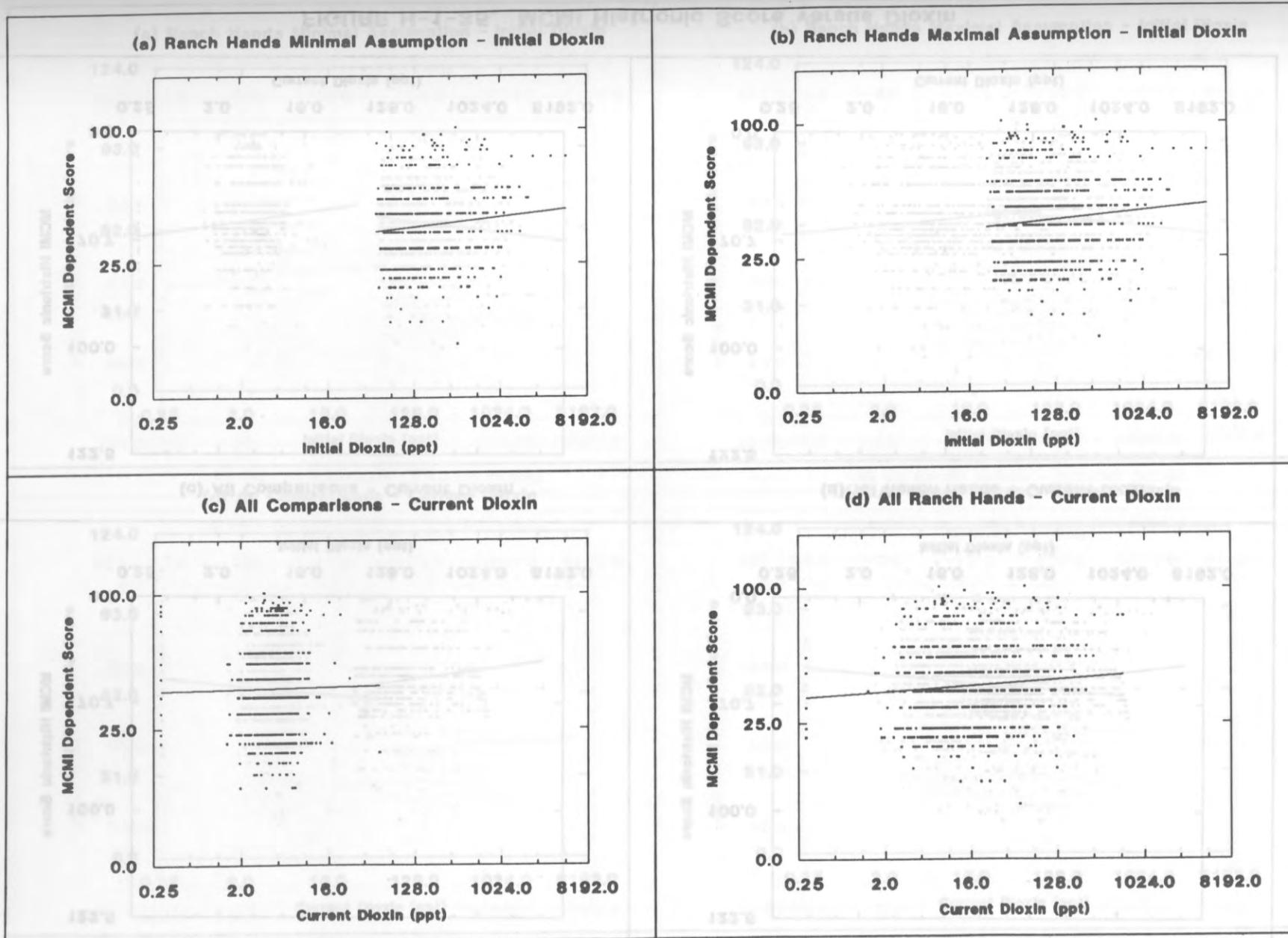


FIGURE H-1-34. MCMi Dependent Score versus Dioxin

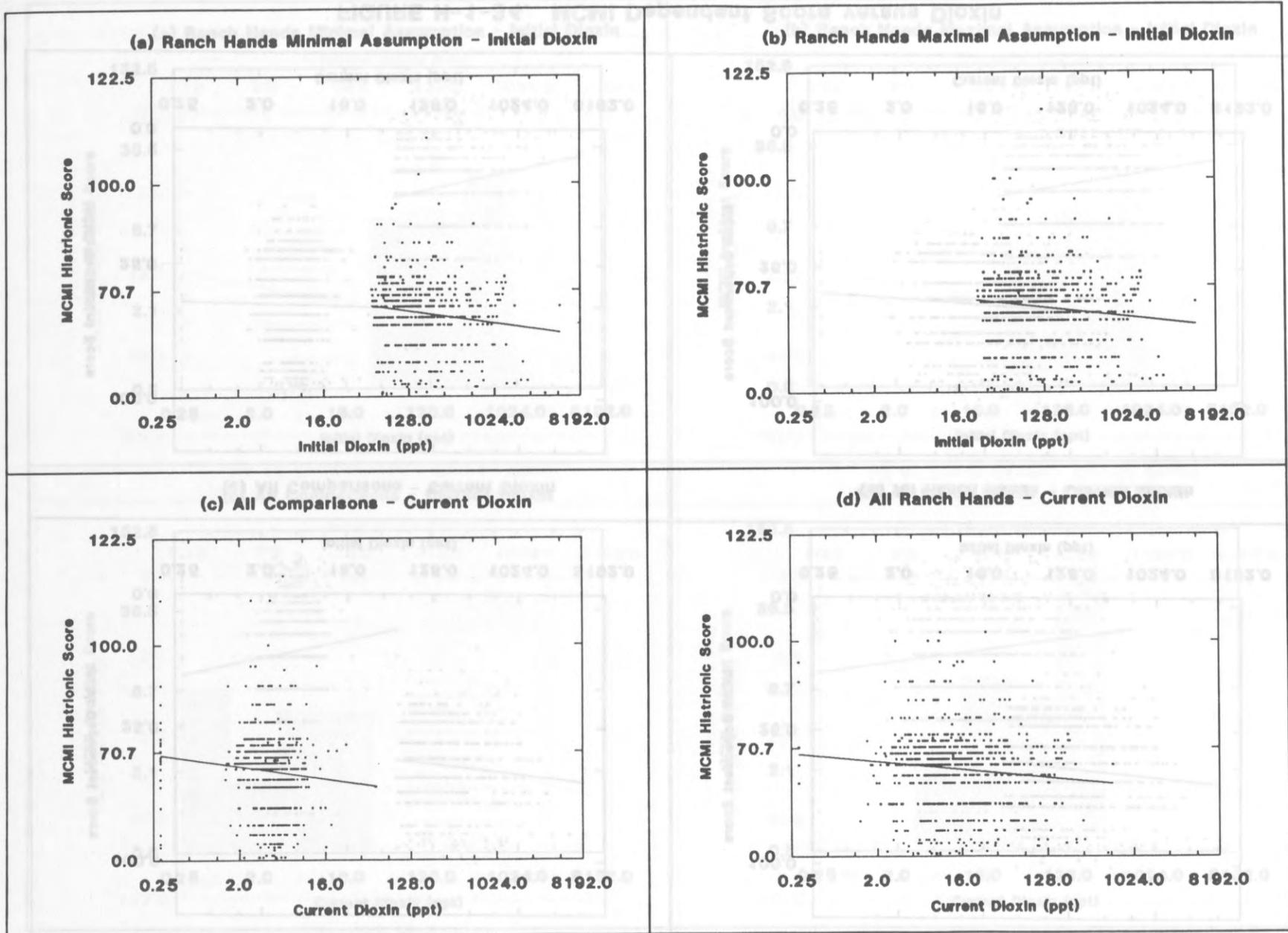


FIGURE H-1-35. MCMC Histrionic Score versus Dioxin

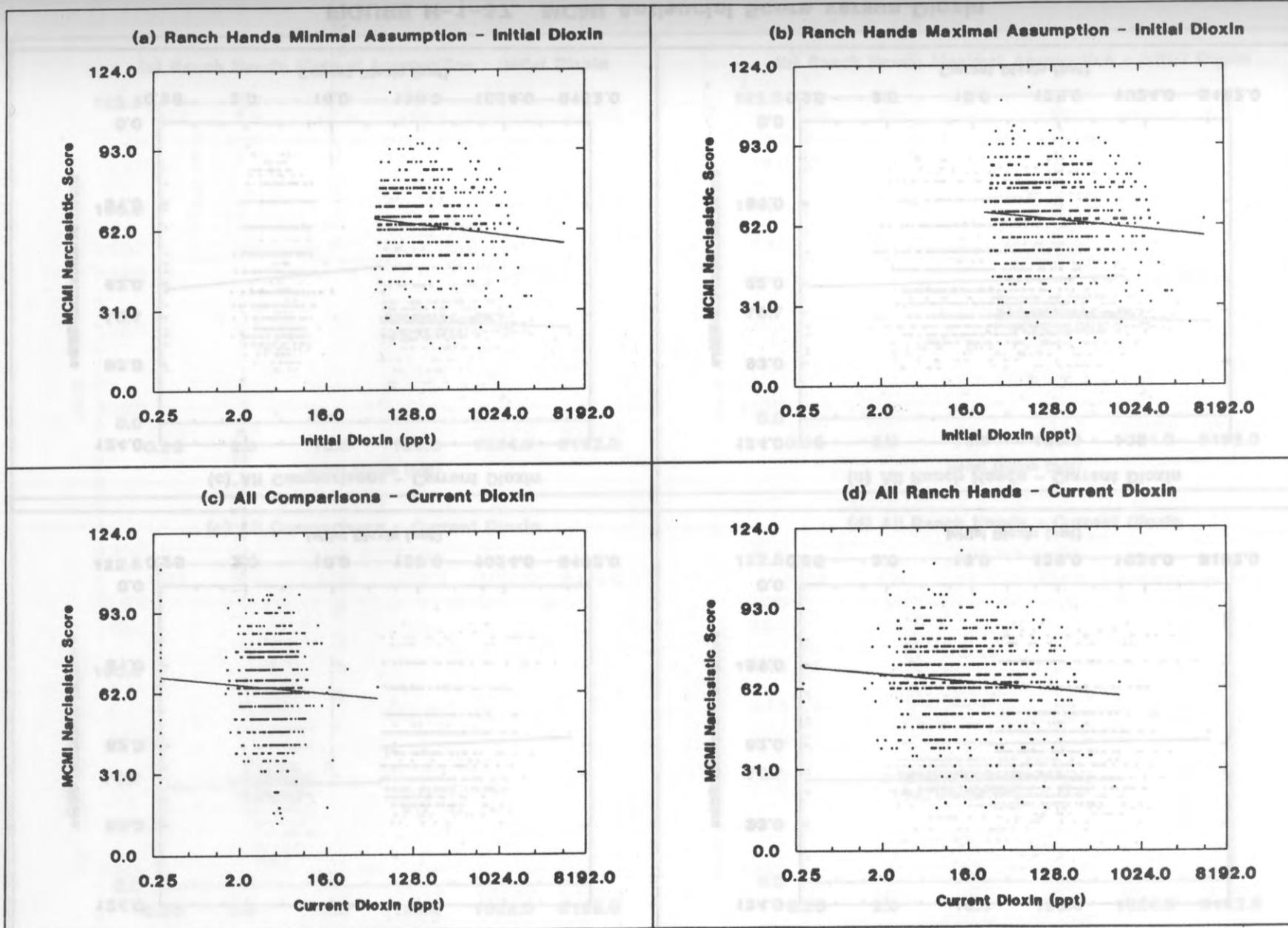


FIGURE H-1-36. MCM Narcissistic Score versus Dioxin

FIGURE H-1-38. MCM Cumulative Score versus Dioxin

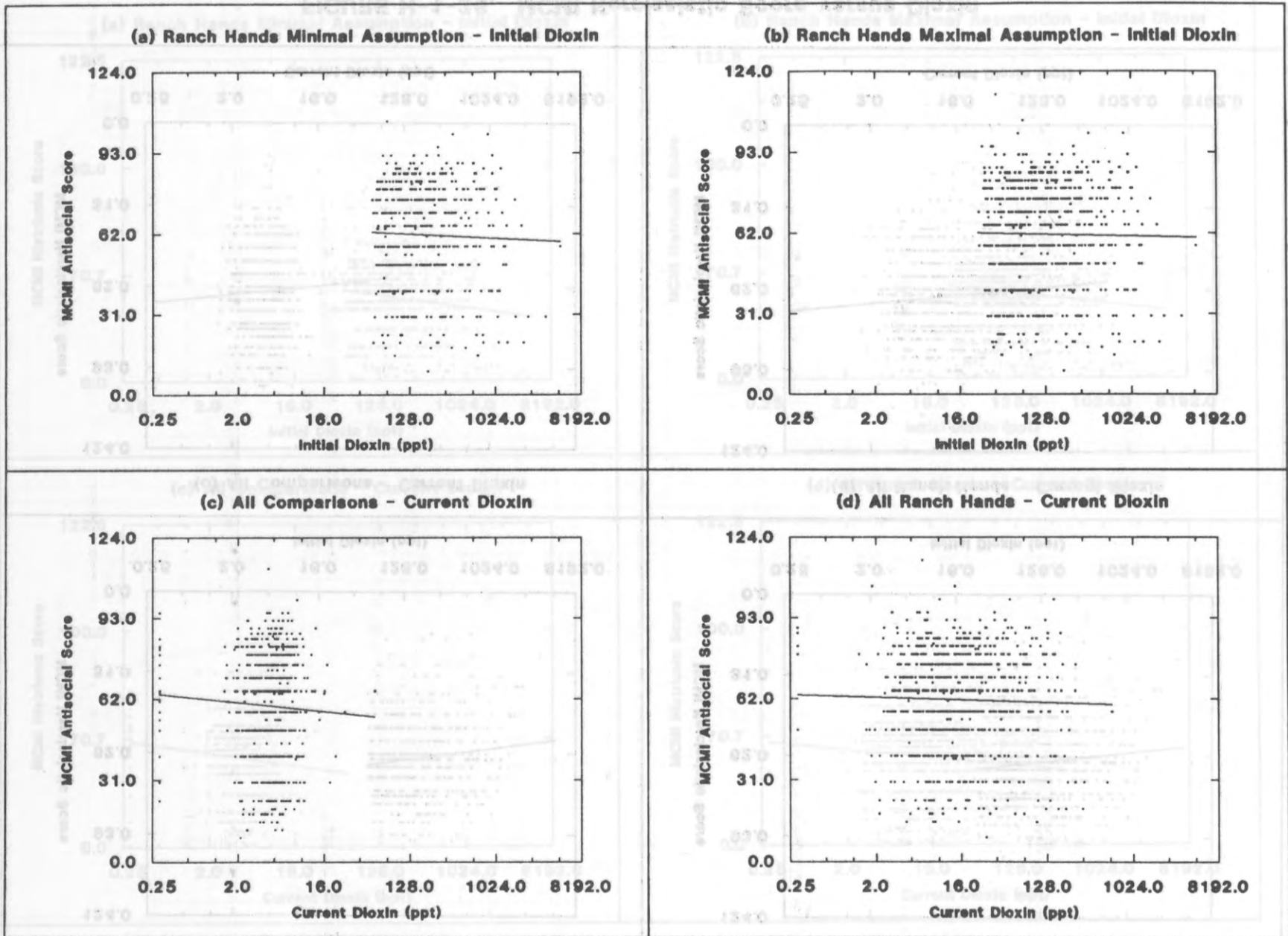


FIGURE H-1-37. MCMC Antisocial Score versus Dioxin

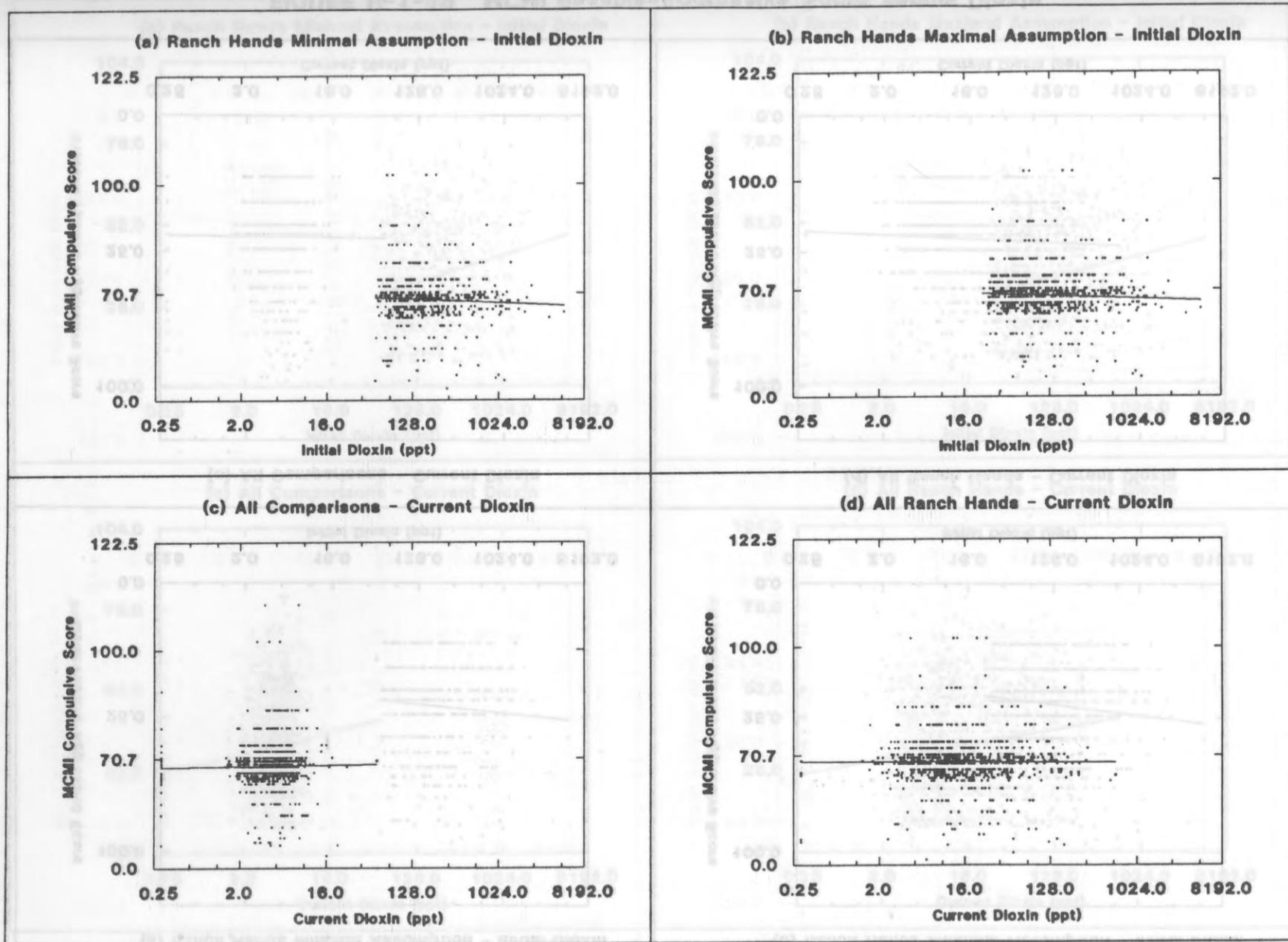


FIGURE H-1-38. MCMC Compulsive Score versus Dioxin

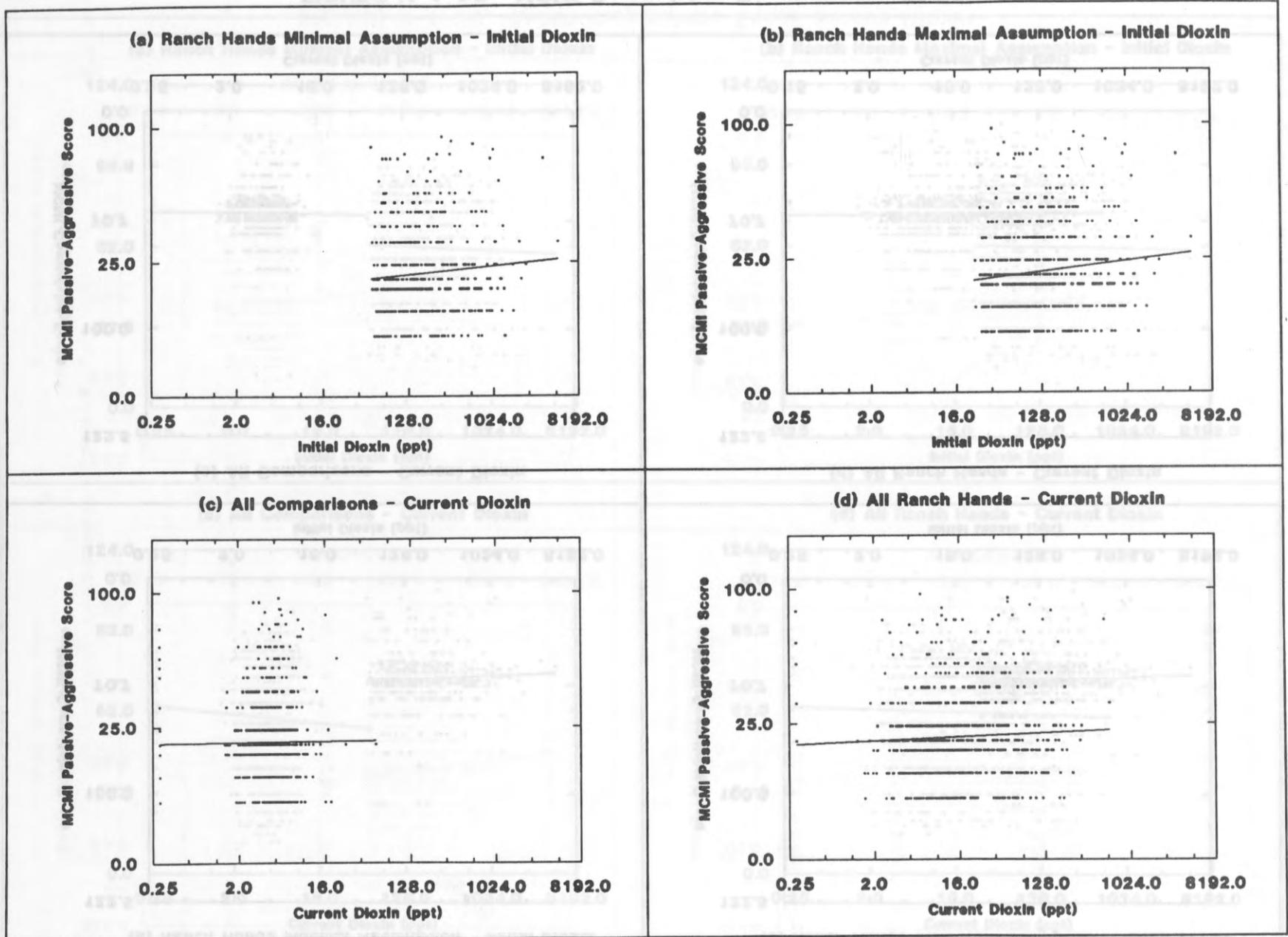


FIGURE H-1-39. MCMC Passive-Aggressive Score versus Dioxin