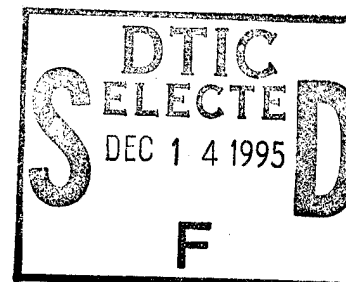


AIR FORCE HEALTH STUDY

An Epidemiologic Investigation of
Health Effects in Air Force Personnel
Following Exposure to Herbicides



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2 May 1995

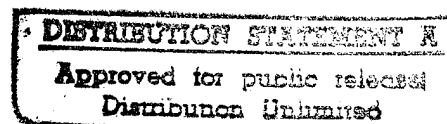
Volume VII

1992 Followup Examination Results

May 1992 to May 1995

Contract Number F41624-91-C-1006
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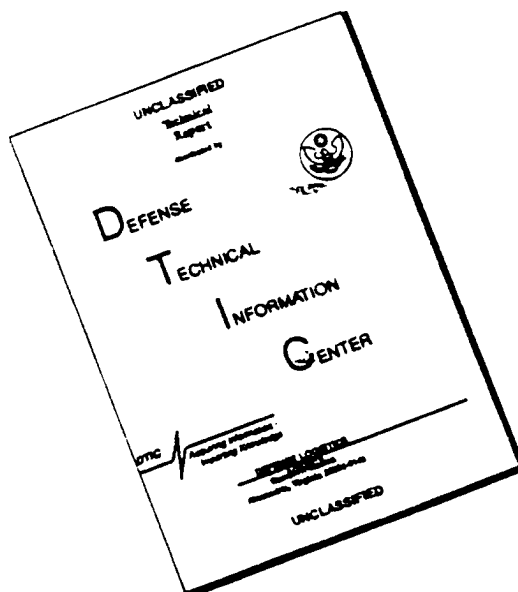
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AIR FORCE HEALTH STUDY

An Epidemiologic Investigation of Health Effects in Air Force Personnel Following Exposure to Herbicides

May 1995

Volume VII

1995 Followup Examination Results

Epidemiologic Research Division
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APPENDIX A-1.

SCRF Policies and Procedures: Dioxin Blood Collection and Dioxin Blood Processing



POLICIES & PROCEDURES

Tripp's Clinic

DEPARTMENT NAME: CLINICAL PATHOLOGY	P. P. NUMBER	ISSUE DATE:
TITLE: AIR FORCE HEALTH STUDY - DIOXIN BLOOD COLLECTION	REVISION DATE: 8/5/87	PAGE 1 OF 4

.0 PURPOSE

To collect blood samples for dioxin testing in accordance with Center for Disease Control standards.

.0 SCOPE

Applies to all Air Force Health Study participants.

.0 MATERIALS

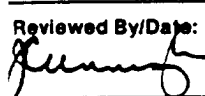
- 3.1 Blood-pack unit without anticoagulant - 600 ml
- 3.2 Alcohol swabs
- 3.3 Sepps
- 3.4 Sterile gauze
- 3.5 Adhesive tape
- 3.6 Balance
- 3.7 Coban
- 3.8 Unit holders

1.0 PROCEDURE

4.1 On the second day of the study, blood is drawn from patient with a 15 gauge needle into a blood pack unit without anti-coagulant.

4.1.1 Blood pack units have been previously tested by the CDC for Dioxin contamination.

A-1-2

Reviewed By/Date:  8/87	Reviewed By/Date:	Reviewed By/Date:	Reviewed By/Date:
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POLICIES & PROCEDURES

Scripps Clinic

P. P. NUMBER

PAGE 2 OF 4

TITLE: CLINICAL PATHOLOGY
AIR FORCE HEALTH STUDY - DIOXIN BLOOD COLLECTION

- 4.2 Patients who have immunology studies have 250 ml of blood drawn. Patients not having immunology studies have 350 ml of blood drawn.
- 4.3 Select site for venipuncture.
 - 4.3.1 On patients who have not yet had their physical exam, the dominant arm is preferred.
- 4.4 Prepare site for venipuncture in accordance with CDC standards.
- 4.5 Perform venipuncture and securely tape needle and tubing to arm.
- 4.6 Blood is collected into unit bag.
 - 4.6.1 Amount of blood collected is determined by weighing sample on a balance.
 - 4.6.2 For 280 ml of blood, set balance at 320 gms
For 350 ml of blood, set balance at 390 gms
 - 4.6.3 When amount needed is obtained clamp tubing with hemostat.
- 4.7 Remove needle from vein
- 4.8 Have patient apply pressure to site for several minutes.
- 4.9 Apply pressure bandage to site using gauge and Coban.
 - 4.9.1 Instruct patient not to remove bandage for at least 30 - 45 minutes.



POLICIES & PROCEDURES

P. P. NUMBER

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TITLE:

CLINICAL PATHOLOGY
AIR FORCE HEALTH STUDY - DIOXIN BLOOD COLLECTION

4.10 Clamp tubing twice with hand sealer and clips.

4.10.1 Cut tubing and discard

4.10.2 Dispose of needle in needle container

4.11 Label unit bag with pre-printed label.

4.11.1 Write time drawn and initials on label

4.11.2 Place label on plastic portion of unit pack

4.12 Place unit bag upright in vertical holder.

4.12.1 Vertical holders are numbered 1-37.

4.12.2 Units are placed in holders according to
order of draw.

4.12.3 Units are to remain upright at room temperature
and allowed to clot for at least 7 hours.

5.0 SHORT DRAWS

5.1 In the event of a short draw, unit pack is to be weighed and the amount of blood noted on the unit label. "Short draw" should also be written on label in large letters.

6.0 MULTIPLE VENIPUNCTURES

6.1 If unable to collect sample with one venipuncture, ask patient if he is willing to be drawn again. If patient is willing start procedure from beginning.



POLICIES & PROCEDURES

Scripps Clinic

P. P. NUMBER

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TITLE: CLINICAL PATHOLOGY
AIR FORCE HEALTH STUDY - DIOXIN BLOOD COLLECTION

6.2 If patient is unwilling to be redrawn, notify the nurse coordinator and Air Force monitor.

6.2.1 Save labels and have test credited.

7.0 MAILING OF SAMPLES

7.1 Frozen samples are mailed twice weekly to Brooks AFB, TX via Airborne Overnight Service.

7.2 Mailing boxes are placed in styrofoam shipping tape.

7.2.1 10 - 15 lbs of dry ice is packed around mailing boxes.

7.3 CDC shipping list is placed on top of styrofoam lid and beneath cardboard box lid.

7.4 Cardboard box is sealed with strapping tape.

7.5 Address label, dry ice label and "this side up" label are placed on box.

7.6 Mailing requisition is filled out and taken with shippers to shipping department.

c:\afhs\dioxcoll.bld



POLICIES & PROCEDURES

Scripps Clinic and Research Foundation — Clinic

DEPARTMENT NAME: SPECIMEN PROCESSING	P.P. NUMBER	ISSUE DATE
TITLE AIR FORCE HEALTH STUDY - DIOXIN BLOOD PROCESSING	REVISION DATE	PAGE OF

- 1.0 PURPOSE: To process blood samples for dioxin testing using Center for Disease Control Standards as a guideline.
- 2.0 SCOPE: Applies to Clinical Pathology Medical Technicians involved in processing dioxin samples.
- 3.0 MATERIALS:
 - 3.1 Transfer pack units - 300ml
 - 3.2 Plasma transfer set
 - 3.3 Plasma extractor
 - 3.4 Vertical unit holders
 - 3.5 Vertical unit holder boxes
 - 3.6 Teflon lined lids
 - 3.7 Teflon stoppers
 - 3.8 Aluminum sealing caps
 - 3.9 Aluminum cap sealer
 - 3.10 Centrifuge bags
 - 3.11 Handsealer/stripper
 - 3.12 Shipping list
 - 3.13 Wheaton bottles
 - 3.13.1 5ml, 10ml, 120ml
 - 3.14 Styrofoam mailing boxes
 - 3.15 Dry ice
- 4.0 PROCEDURE:
 - 4.1 On the specific day the blood is drawn for dioxins, the units will be brought from the blood drawing station to specimen processing and allowed to clot, upright in their unit holders, at room temperature for a total of 7 hours.
 - 4.2 Shipping list:
 - 4.2.1 The shipping list is a modified version of the list provided by the CDC.
 - 4.2.2 Shipping list is prepared as follows: remove top left section of patient's label from unit bag and place sequentially on shipping list.
 - 4.2.3 Specify any deviations from collection, storage and shipment protocols, and date of occurrence.
 - 4.3 Centrifuging of unit bags
 - 4.3.1 Set temperature on floor model blood bank centrifuge between 4-10°C.

A-1-6

APPROVED BY: <i>Richard C. Thompson, M.D.</i> Feb 20 1992	POSITION: <i>Laboratory Director</i>
APPROVED BY:	POSITION:



POLICIES & PROCEDURES

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DEPARTMENT NAME: SPECIMEN PROCESSING	P.P. NUMBER	ISSUE DATE
TITLE AIR FORCE HEALTH STUDY-DIOXIN BLOOD PROCESSING	REVISION DATE	PAGE OF

- 4.3.2 Unit bags are centrifuged in the order they are drawn.
- 4.3.3 The units of blood are place inside plastic centrifuge bags and then into the centrifuge cups.
 - 4.3.3.1 The centrifuge cups are then balanced on the blood bank balance.
 - 4.3.3.2 Place two cups on the balance. If one centrifuge cup and associated unit of blood is heavier than the other, place small rubber stoppers into the centrifuge cups until units are balanced.
- 4.3.4 Centrifuge cups are placed into the centrifuge and spun for 15 minutes at 4500 rpms.
- 4.3.5 Balance next group of unit bags for centrifuging.
- 4.4 Transfer of serum from unit bags to transfer packs.
 - 4.4.1 Label transfer packs with patients aliquot label.
 - 4.4.2 Labeled transfer packs are place in vertical unit holders in the sequence they are to be transferred.
 - 4.4.3 Serum is transferred from the spun unit bag to the transfer pack by plasma extractor.
 - 4.4.3.1 Place the unit bag on the plasma extractor with side not containing manufacturers label toward you.
 - 4.4.3.2 Remove coupler cover of transfer pack unit.
 - 4.4.3.3 Expose outlet port of blood pack unit.
 - 4.4.3.4 Insert coupler into outlet port.
 - 4.4.3.5 Release handle of plasma extractor and express the serum into the transfer pack. Do not allow red cells to enter the transfer pack. It is important to transfer the predominant amount of serum while preventing red cell contamination.
 - 4.4.3.6 When the desired amount of serum is transferred, release the plasma extractor and clamp the tubing between the blood bag and the transfer pack using a hemostat clamp.

A-1-7

APPROVED BY:

RCM

POSITION:

APPROVED BY:

POSITION:



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DEPARTMENT NAME: SPECIMEN PROCESSING	P.P. NUMBER	ISSUE DATE
TITLE AIR FORCE HEALTH STUDY - DIOXIN BLOOD PROCESSING	REVISION DATE	PAGE OF

- 4.4.3.7 Seal the transfer tubing in 2 spots 1 inch apart using the Fenwal Hematron electronic sealer and severe tubing between seals.
- 4.4.4 Transfer packs containing serum and any unit bags that need to be respun are placed in unsequential vertical unit holders and placed in vertical holder boxes.
- 4.4.5 Spinning of transfer packs.
 - 4.4.5.1 Six units of serum in transfer packs will be spun at one time.
 - 4.4.5.2 Transfer packs are to be spun a 4-10°C for 15 minutes at 4500 rpm in the floor model blood bank centrifuge.
- 4.5 Transfer of serum from transfer packs to Wheaton bottles.
 - 4.5.1 Wheaton bottles are labeled with patient aliquot labels.
 - 4 oz Wheaton bottle S1 Serum dioxin
 - 5 ml Wheaton bottle S3 Lipid profile
 - 10 ml Wheaton bottle S4 Serum reserve
 - 4 oz Wheaton bottle S2 serum dioxin
 - 4.5.1.1 Insert the sharp end into one of the outlet ports in top of the bag.
 - 4.5.1.2 Close tubing with thumb roller on tubing.
 - 4.5.1.3 Press bag with plasma extractor
 - 4.5.1.4 Hold open end of tubing over prelabeled Wheaton bottles.
 - 4.5.1.5 Open tubing and put 5ml serum in "S3" bottle, 10ml in "S4" and divide the rest into the 4 oz bottles "S1" and "S2".
 - 4.5.1.6 Extract only the serum being careful that cells do not enter the bottle. Recap and tighten.
 - 4.5.1.7 Log in the serum samples and store at -20°C or less until shipment.
- 5.0 SHORT DRAWS:
 - 5.1 In the event of a short draw, the participant involved maybe drawn again thus having 2 smaller units. The units from these should be treated as all the others with regard to processing. Also, when

A-1-8

APPROVED BY: <i>RLH</i>	POSITION:
APPROVED BY:	POSITION:



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DEPARTMENT NAME: SPECIMEN PROCESSING	P.P. NUMBER	ISSUE DATE
TITLE AIR FORCE HEALTH STUDY - DIOXIN BLOOD PROCESSING	REVISION DATE	PAGE OF

aliquoting serum into the Wheaton bottles they may be pooled from both units.

6.0 MAILING OF SAMPLES:

- 6.1 Frozen samples are mailed twice weekly to Brookes AFB, TX via Airborne overnight mail.
- 6.2 Specimens are placed in styrofoam shipping boxes.
 - 6.2.1 10-15lbs of dry ice is packed around the specimens.
- 6.3 A CDC shipping list is placed on top of the styrofoam lid and beneath the cardboard box lid.
- 6.4 Cardboard box is sealed with strapping tape.
- 6.5 Address label, dry ice label and "This side up" label are placed on box.
- 6.6 Mailing requisition is filled out and taken with shipper to shipping department.

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A-1-9

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POSITION:

APPENDIX A-2.

Reanalysis of Malignant Systemic Cancer and Serum Insulin Inclusion of 174 Additional Dioxin Assays

Table A-2-1.
Comparison of Analyses for Malignant Systemic Neoplasms

Model	Analysis	Cohort	Chapter 10 (Table 10-16)	Analysis with Additional Data (Table A-2-3)
			Relative Risk (p-Value)	Relative Risk (p-Value)
2	Unadjusted	RH: Current Dioxin > 10 ppt	0.63 (0.004)	0.62 (0.004)
	Adjusted	RH: Current Dioxin > 10 ppt	0.72 (0.073)	0.76 (0.139)
3	Unadjusted	Background RH (vs. Comparisons)	1.03 (0.914)	1.06 (0.832)
		Low RH (vs. Comparisons)	1.87 (0.024)	1.96 (0.013)
		High RH (vs. Comparisons)	0.67 (0.309)	0.68 (0.327)
		Low + High RH (vs. Comparisons)	1.26 (0.356)	1.30 (0.285)
	Adjusted	Background RH (vs. Comparisons)	0.94 (0.834)	0.96 (0.891)
		Low RH (vs. Comparisons)	1.72 (0.060)	1.78 (0.041)
		High RH (vs. Comparisons)	0.90 (0.801)	0.90 (0.783)
		Low + High RH (vs. Comparisons)	1.37 (0.220)	1.39 (0.183)
4	Unadjusted	All Ranch Hands w/ Current Dioxin	0.94 (0.585)	0.95 (0.599)
	Adjusted	All Ranch Hands w/ Current Dioxin	1.06 (0.537)	1.06 (0.620)
5	Unadjusted	All Ranch Hands w/ Current Dioxin	0.99 (0.872)	0.99 (0.899)
	Adjusted	All Ranch Hands w/ Current Dioxin	1.10 (0.359)	1.09 (0.411)
6	Unadjusted	All Ranch Hands w/ Current Dioxin	0.95 (0.585)	0.95 (0.604)
	Adjusted	All Ranch Hands w/ Current Dioxin	1.08 (0.506)	1.06 (0.606)

Table A-2-2.
Comparison of Analyses for Serum Insulin (Continuous, Nondiabetics)

Model	Analysis	Cohort		Chapter 18 (Table 18-40)	Analysis with Additional Data (Table A-2-5)
				Difference of Means or Slope (p-Value)	Difference of Means or Slope (p-Value)
2	Unadjusted	RH: Curr. Dioxin > 10 ppt	(Slope)	0.0639 (0.048)	0.0612 (0.058)
	Adjusted	RH: Curr. Dioxin > 10 ppt	(Slope)	0.0729 (0.035)	0.0726 (0.036)
3	Unadjusted	Background RH (vs. Comparisons)		-4.58 (0.170)	-3.86 (0.228)
		Low RH (vs. Comparisons)		-0.12 (0.977)	0.49 (0.905)
		High RH (vs. Comparisons)		7.48 (0.083)	6.70 (0.108)
		Low + High RH (vs. Comparisons)		3.61 (0.266)	3.61 (0.253)
	Adjusted	Background RH (vs. Comparisons)		-2.56 (0.365)	-2.46 (0.362)
		Low RH (vs. Comparisons)		-1.61 (0.631)	-1.81 (0.585)
		High RH (vs. Comparisons)		5.97 (0.104)	4.89 (0.168)
		Low + High RH (vs. Comparisons)		2.10 (0.437)	1.54 (0.558)
4	Unadjusted	All Ranch Hands w/ Curr. Dioxin (Slope)		0.1259 (<0.001)	0.1205 (<0.001)
	Adjusted	All Ranch Hands w/ Curr. Dioxin (Slope)		0.0529 (0.025)	0.0453 (0.048)
5	Unadjusted	All Ranch Hands w/ Curr. Dioxin (Slope)		0.1263 (<0.001)	0.1200 (<0.001)
	Adjusted	All Ranch Hands w/ Curr. Dioxin (Slope)		0.0646 (0.001)	0.0568 (0.003)
6	Unadjusted	All Ranch Hands w/ Curr. Dioxin (Slope)		0.0960 (<0.001)	0.0930 (<0.001)
	Adjusted	All Ranch Hands w/ Curr. Dioxin (Slope)		0.0351 (0.092)	0.0282 (0.160)

Table A-2-3.
Analysis of Malignant Systemic Neoplasms

a) MODEL 1: RANCH HANDS VS. COMPARISONS — UNADJUSTED					
Occupational Category	Group	n	Percent Yes	Est. Relative Risk (95% C.I.)	p-Value
<i>All</i>	<i>Ranch Hand</i>	<i>943</i>	<i>5.0</i>	<i>1.17 (0.78,1.74)</i>	<i>0.507</i>
	<i>Comparison</i>	<i>1,280</i>	<i>4.3</i>		
Officer	Ranch Hand	361	6.1	0.95 (0.54,1.67)	0.980
	Comparison	502	6.4		
Enlisted Flyer	Ranch Hand	160	8.1	1.54 (0.67,3.54)	0.414
	Comparison	203	5.4		
Enlisted Groundcrew	Ranch Hand	422	2.8	1.37 (0.61,3.09)	0.575
	Comparison	575	2.1		

b) MODEL 1: RANCH HANDS VS. COMPARISONS — ADJUSTED			
Occupational Category	Adj. Relative Risk (95% C.I.)	p-Value	Covariate Remarks^a
<i>All</i>	<i>1.16 (0.77,1.75)</i>	<i>0.479</i>	AGE (p<0.001) PACKYR (p=0.051)
Officer	0.94 (0.53,1.66)	0.820	
Enlisted Flyer	1.51 (0.65,3.52)	0.340	
Enlisted Groundcrew	1.37 (0.60,3.14)	0.454	

^a Covariates and associated p-values correspond to final model based on all participants with available data.

Table A-2-3. (Continued)
Analysis of Malignant Systemic Neoplasms

c) MODEL 2: RANCH HANDS — INITIAL DIOXIN — UNADJUSTED				
Initial Dioxin Category Summary Statistics			Analysis Results for Log ₂ (Initial Dioxin) ^a	
Initial Dioxin	n	Percent Yes	Estimated Relative Risk (95% C.I.) ^b	p-Value
Low	171	7.0	0.62 (0.44,0.88)	0.004
Medium	176	8.0		
High	177	1.7		

d) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED			
Analysis Results for Log ₂ (Initial Dioxin) ^c			
n	Adj. Relative Risk (95% C.I.) ^b	p-Value	Covariate Remarks
524	0.76 (0.52,1.11)**	0.139**	INIT*PACKYR (p=0.012) AGE (p<0.001) DC (p=0.143)

^a Adjusted for percent body fat at the time of duty in SEA and change in percent body fat from the time of duty in SEA to the date of the blood draw for dioxin.

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

^c Adjusted for percent body fat at the time of duty in SEA, change in percent body fat from the time of duty in SEA to the date of the blood draw for dioxin, and covariates specified under "Covariate Remarks" column.

** Log₂ (initial dioxin)-by-covariate interaction (0.01 < p ≤ 0.05); adjusted relative risk, confidence interval, and p-value derived from a model fitted after deletion of this interaction; refer to Appendix Table A-2-4 for further analysis of this interaction.

Note: Low = 39-98 ppt; Medium = >98-232 ppt; High = >232 ppt.
 INIT = Log₂ (initial dioxin).

Table A-2-3. (Continued)
Analysis of Malignant Systemic Neoplasms

e) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — UNADJUSTED				
Dioxin Category	n	Percent Yes	Est. Relative Risk (95% C.I.)^{ab}	p-Value
Comparison	1,199	4.1		
Background RH	398	4.0	1.06 (0.60,1.91)	0.832
Low RH	256	8.2	1.96 (1.15,3.35)	0.013
High RH	268	3.0	0.68 (0.32,1.47)	0.327
Low plus High RH	524	5.5	1.30 (0.81,2.09)	0.285

f) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED				
Dioxin Category	n	Adj. Relative Risk (95% C.I.)^{ac}	p-Value	Covariate Remarks
Comparison	1,197			AGE (p<0.001) PACKYR (p=0.117)
Background RH	397	0.96 (0.53,1.74)	0.891	
Low RH	256	1.78 (1.02,3.09)	0.041	
High RH	268	0.90 (0.41,1.96)	0.783	
Low plus High RH	524	1.39 (0.85,2.28)	0.183	

^a Relative risk and confidence interval relative to Comparisons.

^b Adjusted for percent body fat at the time of duty in SEA and change in percent body fat from the time of duty in SEA to the date of the blood draw for dioxin.

^c Adjusted for percent body fat at the time of duty in SEA, change in percent body fat from the time of duty in SEA to the date of the blood draw for dioxin, and covariates specified under "Covariate Remarks" column.

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 A-2-3. (Continued)
Analysis of Malignant Systemic Neoplasms

g) MODELS 4, 5, AND 6: RANCH HANDS — CURRENT DIOXIN — UNADJUSTED					
Model ^a	Current Dioxin Category Percent Yes/(n)			Analysis Results for Log ₂ (Current Dioxin + 1)	
	Low	Medium	High	Est. Relative Risk (95% C.I.) ^b	p-Value
4	3.8 (317)	8.0 (299)	2.9 (306)	0.95 (0.77,1.16)	0.599
5	4.5 (314)	5.6 (302)	4.6 (306)	0.99 (0.83,1.18)	0.899
6 ^c	4.5 (313)	5.6 (302)	4.6 (306)	0.95 (0.79,1.15)	0.604

h) MODELS 4, 5, AND 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED				
Model ^a	Analysis Results for Log ₂ (Current Dioxin + 1)			
	n	Adj. Relative Risk (95% C.I.) ^b	p-Value	Covariate Remarks
4	921	1.06 (0.84,1.35)**	0.620**	CURR*DC (p=0.014) AGE (p<0.001) PACKYR (p=0.084)
5	921	1.09 (0.89,1.33)**	0.411**	CURR*PACKYR (p=0.037) CURR*DC (p=0.022) AGE (p<0.001)
6 ^d	920	1.06 (0.85,1.31)**	0.606**	CURR*PACKYR (p=0.036) CURR*DC (p=0.021) AGE (p<0.001)

^a Model 4: Log₂ (lipid-adjusted current dioxin + 1).
Model 5: Log₂ (whole-weight current dioxin + 1).
Model 6: Log₂ (whole-weight current dioxin + 1), adjusted for log₂ total lipids.

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

^c Adjusted for log₂ total lipids.

^d Adjusted for log₂ total lipids in addition to covariates specified under "Covariate Remarks" column.

** Log₂ (current dioxin + 1)-by-covariate interaction (0.01 < p ≤ 0.05); adjusted relative risk, confidence interval, and p-value derived from a model fitted after deletion of this interaction; refer to Appendix Table A-2-4 for further analysis of this interaction.

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.
CURR = Log₂ (current dioxin + 1).

Table A-2-4.
Interaction Table for Malignant Systemic Neoplasms

a) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Lifetime Cigarette Smoking History: Table A-2-3)					
Initial Dioxin Category Summary Statistics				Analysis Results for Log₂ (Initial Dioxin)	
Stratum	Initial Dioxin	n	Percent Yes	Adjusted Relative Risk (95% C.I.)^a	p-Value
0 pack-years	Low	45	8.9	0.29 (0.07,1.20)	0.088
	Medium	39	2.6		
	High	54	0.0		
>0-10 pack-years	Low	50	8.0	0.47 (0.18,1.22)	0.122
	Medium	45	2.2		
	High	69	1.5		
>10 pack-years	Low	76	5.3	1.04 (0.67,1.60)	0.864
	Medium	92	13.0		
	High	54	3.7		

b) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Degreasing Chemical Exposure: Table A-2-3)					
Current Dioxin Category Summary Statistics				Analysis Results for Log₂ (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent Yes	Adjusted Relative Risk (95% C.I.)^b	p-Value
No	Low	165	1.8	1.53 (1.07,2.19)	0.020
	Medium	112	11.6		
	High	65	4.6		
Yes	Low	151	6.0	0.84 (0.62,1.14)	0.270
	Medium	187	5.9		
	High	241	2.5		

Table A-2-4. (Continued)
Interaction Table for Malignant Systemic Neoplasms

c) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Lifetime Cigarette Smoking History: Table A-2-3)					
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.) ^b	p-Value
0 pack-years	Low	89	4.5	0.81 (0.49,1.33)	0.399
	Medium	82	6.1		
	High	79	1.3		
>0-10 pack-years	Low	101	1.0	0.99 (0.61,1.62)	0.980
	Medium	79	6.3		
	High	105	1.0		
>10 pack-years	Low	124	7.3	1.20 (0.93,1.55)	0.171
	Medium	140	5.0		
	High	122	9.8		

d) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Degreasing Chemical Exposure: Table A-2-3)					
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.) ^b	p-Value
No	Low	156	2.6	1.45 (1.05,1.99)	0.023
	Medium	120	7.5		
	High	66	9.1		
Yes	Low	158	6.3	0.92 (0.72,1.18)	0.496
	Medium	181	4.4		
	High	240	3.3		

Table A-2-4. (Continued)
Interaction Table for Malignant Systemic Neoplasms

e) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Lifetime Cigarette Smoking History: Table A-2-3)					
Current Dioxin Category Summary Statistics				Analysis Results for Log₂ (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent Yes	Adjusted Relative Risk (95% C.I.)^b	p-Value
0 pack-years	Low	89	4.5	0.79 (0.48,1.32)	0.371
	Medium	82	6.1		
	High	79	1.3		
>0-10 pack-years	Low	101	1.0	0.98 (0.60,1.60)	0.938
	Medium	79	6.3		
	High	105	1.0		
>10 pack-years	Low	123	7.3	1.17 (0.88,1.54)	0.276
	Medium	140	5.0		
	High	122	9.8		

f) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Degreasing Chemical Exposure: Table A-2-3)					
Current Dioxin Category Summary Statistics				Analysis Results for Log₂ (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent Yes	Adjusted Relative Risk (95% C.I.)^b	p-Value
No	Low	156	2.6	1.41 (1.01,1.96)	0.042
	Medium	120	7.5		
	High	66	9.1		
Yes	Low	157	6.4	0.89 (0.68,1.16)	0.390
	Medium	181	4.4		
	High	240	3.3		

^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 A-2-5.
Analysis of Serum Insulin (mIU/ml) (Nondiabetics)
(Continuous)

a) MODEL 1: RANCH HANDS VS. COMPARISONS — UNADJUSTED					
Occupational Category	Group	n	Mean ^{ab}	Difference of Means (95% C.I.) ^c	p-Value ^d
<i>All</i>	<i>Ranch Hand</i>	808	73.88	-0.29 --	0.923
	<i>Comparison</i>	1,098	74.17		
Officer	Ranch Hand	310	69.90	3.83 --	0.374
	Comparison	444	66.07		
Enlisted Flyer	Ranch Hand	137	75.63	-9.64 --	0.225
	Comparison	166	85.27		
Enlisted Groundcrew	Ranch Hand	361	74.29	-1.70 --	0.703
	Comparison	488	75.99		

b) MODEL 1: RANCH HANDS VS. COMPARISONS — ADJUSTED						
Occupational Category	Group	n	Adj. Mean ^{ab}	Difference of Adj. Means (95% C.I.) ^c	p-Value ^d	Covariate Remarks ^e
<i>All</i>	<i>Ranch Hand</i>	794	58.55**	-0.08 -- **	0.968**	GROUP*BFAT (p=0.017) AGE (p<0.001) FAST (p=0.597) RACE*OCC (p=0.024) RACE*PERS (p=0.029) PERS*FAMDIAB (p=0.037)
	<i>Comparison</i>	1,081	58.64**			
Officer	Ranch Hand	306	64.42**	2.61 -- **	0.463**	
	Comparison	441	61.81**			
Enlisted Flyer	Ranch Hand	134	48.88**	7.34 -- **	0.113**	
	Comparison	163	56.22**			
Enlisted Groundcrew	Ranch Hand	354	60.47**	0.65 -- **	0.839**	
	Comparison	477	59.82**			

^a Transformed from the natural logarithm scale.

^b Adjusted for fasting status.

^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-values based on difference of means on natural logarithm scale.

^e Covariates and associated p-values correspond to final model based on all participants with available data.

** Group-by-covariate interaction (0.01 < p ≤ 0.05); adjusted mean, difference of adjusted means, and p-value derived from a model fitted after deletion of this interaction; refer to Appendix Table A-2-6 for further analysis of this interaction.

Table A-2-5. (Continued)
Analysis of Serum Insulin (mIU/ml) (Nondiabetics)
(Continuous)

c) MODEL 2: RANCH HANDS — INITIAL DIOXIN — UNADJUSTED						
Initial Dioxin Category Summary Statistics				Analysis Results for Log ₂ (Initial Dioxin) ^b		
Initial Dioxin	n	Mean ^a	Adj. Mean ^{ab}	R ²	Slope (Std. Error) ^c	p-Value
Low	143	70.29	72.62	0.119	0.0612 (0.0321)	0.058
Medium	145	73.47	75.33			
High	143	86.39	81.53			

d) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED						
Initial Dioxin Category Summary Statistics			Analysis Results for Log ₂ (Initial Dioxin) ^d			
Initial Dioxin	n	Adj. Mean ^{ad}	R ²	Adj. Slope (Std. Error) ^c	p-Value	Covariate Remarks
Low	143	66.87	0.270	0.0726 (0.0344)	0.036	AGE*BFAT (p=0.010) BFAT*OCC (p=0.038)
Medium	145	72.41				
High	143	81.54				

^a Transformed from natural logarithm scale.

^b Adjusted for percent body fat at the time of duty in SEA and change in percent body fat from the time of duty in SEA to the date of the blood draw for dioxin.

^c Slope and standard error based on natural logarithm of serum insulin versus log₂ (initial dioxin).

^d Adjusted for percent body fat at the time of duty in SEA, change in percent body fat from the time of duty in SEA to the date of the blood draw for dioxin, and covariates specified under "Covariate Remarks" column.

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

Table A-2-5. (Continued)
Analysis of Serum Insulin (mIU/ml) (Nondiabetics)
(Continuous)

e) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — UNADJUSTED					
Dioxin Category	n	Mean^{ab}	Adj. Mean^{ac}	Difference of Adj. Mean vs. Comparisons (95% C.I.)^d	p-Value^e
Comparison	1,031	76.85	66.88		
Background RH	357	66.69	63.02	-3.86 --	0.228
Low RH	210	79.17	67.37	0.49 --	0.905
High RH	221	92.92	73.58	6.70 --	0.108
Low plus High RH	431	86.22	70.49	3.61 --	0.253

f) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED					
Dioxin Category	n	Adj. Mean^{af}	Difference of Adj. Mean vs. Comparisons (95% C.I.)^d	p-Value^e	Covariate Remarks
Comparison	1,014	58.10**			DXCAT*AGE (p=0.037) FAST (p=0.417)
Background RH	354	55.64**	-2.46 -- **	0.362**	RACE*OCC (p=0.007)
Low RH	204	56.29**	-1.81 -- **	0.585**	OCC*PERS (p=0.015)
High RH	216	62.99**	4.89 -- **	0.168**	PERS*FAMDIAB (p=0.045)
Low plus High RH	420	59.64**	1.54 -- **	0.558**	

^a Transformed from natural logarithm scale.

^b Adjusted for fasting status.

^c Adjusted for fasting status, percent body fat at the time of duty in SEA and change in percent body fat from the time of duty in SEA to the date of the blood draw for dioxin.

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

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

^f Adjusted for percent body fat at the time of duty in SEA, change in percent body fat from the time of duty in SEA to the date of the blood draw for dioxin, and covariates specified under "Covariate Remarks" column.

** Categorized dioxin-by-covariate interaction ($0.01 < p \leq 0.05$); adjusted mean, difference of adjusted means, and p-value derived from a model fitted after deletion of this interaction; refer to Appendix Table A-2-6 for further analysis of this interaction.

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.

DXCAT = Categorized Dioxin.

Table A-2-5. (Continued)
Analysis of Serum Insulin (mIU/ml) (Nondiabetics)
(Continuous)

g) MODELS 4, 5, AND 6: RANCH HANDS — CURRENT DIOXIN — UNADJUSTED						
Model ^c	Current Dioxin Category Mean ^{ab} /(n)			Analysis Results for Log ₂ (Current Dioxin + 1)		
	Low	Medium	High	R ²	Slope (Std. Error) ^d	p-Value
4	36.33 (290)	43.66 (246)	52.10 (252)	0.041	0.1205 (0.0213)	<0.001
5	35.89 (290)	44.27 (251)	54.34 (247)	0.054	0.1200 (0.0183)	<0.001
6 ^e	38.00 (289)	44.48 (251)	51.31 (247)	0.081	0.0930 (0.0191)	<0.001

h) MODELS 4, 5, AND 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED							
Model ^c	Current Dioxin Category Adjusted Mean ^a /(n)			Analysis Results for Log ₂ (Current Dioxin + 1)			
	Low	Medium	High	R ²	Adj. Slope (Std. Error) ^d	p-Value	Covariate Remarks
4	34.67 (287)	34.31 (241)	40.12 (246)	0.272	0.0453 (0.0228)	0.048	AGE (p<0.001) PERS (p=0.122) BFAT (p<0.001) FAST (p=0.108) OCC*FAMDIAB (p=0.010)
5	34.41 (288)	35.33 (245)	41.66 (241)	0.277	0.0568 (0.0194)	0.003	AGE (p<0.001) PERS (p=0.120) BFAT (p<0.001) FAST (p=0.120) OCC*FAMDIAB (p=0.010)
6 ^f	36.41 (287)	35.63 (245)	39.18 (241)	0.312	0.0282 (0.0201)	0.160	AGE (p<0.001) PERS (p=0.044) BFAT (p<0.001) FAST (p=0.123) OCC*FAMDIAB (p=0.010)

^a Transformed from natural logarithm scale.

^b Adjusted for fasting status.

^c Model 4: Log₂ (lipid-adjusted current dioxin + 1).

Model 5: Log₂ (whole-weight current dioxin + 1).

Model 6: Log₂ (whole-weight current dioxin + 1), adjusted for log₂ total lipids.

^d Slope and standard error based on natural logarithm of serum insulin versus log₂ (current dioxin + 1).

^e Adjusted for log₂ total lipids.

^f Adjusted for log₂ total lipids in addition to covariates specified under "Covariate Remarks" column.

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 A-2-6.
Interaction Table for Serum Insulin (mIU/ml) (Nondiabetics)
(Continuous)

a) MODEL 1: RANCH HANDS VS. COMPARISONS — ADJUSTED (Group-by-Body Fat: Table A-2-5)						
Stratum	Occupational Category	Group	n	Adjusted Mean^a	Difference of Adjusted Means (95% C.I.)^b	p-Value^c
Obese: >25%	All	Ranch Hand	175	117.03	17.32 --	0.043
		Comparison	243	99.71		
Lean or Normal: ≤25%	All	Ranch Hand	619	55.96	-3.19 --	0.189
		Comparison	838	59.15		
Obese: >25%	Officer	Ranch Hand	59	135.02	29.48 --	0.066
		Comparison	89	105.54		
	Enlisted Flyer	Ranch Hand	28	105.19	16.27 --	0.400
		Comparison	37	88.92		
	Enlisted Groundcrew	Ranch Hand	88	115.32	10.63 --	0.390
		Comparison	117	104.69		
Lean or Normal: ≤25%	Officer	Ranch Hand	247	63.64	0.67 --	0.874
		Comparison	352	62.98		
	Enlisted Flyer	Ranch Hand	106	43.22	-10.82 --	0.033
		Comparison	126	54.03		
	Enlisted Groundcrew	Ranch Hand	266	58.34	-3.24 --	0.400
		Comparison	360	61.58		

Table A-2-6. (Continued)
Interaction Table for Serum Insulin (mIU/ml) (Nondiabetics)
(Continuous)

b) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Age: Table A-2-5)					
Stratum	Dioxin Category	n	Adjusted Mean^a	Difference of Adjusted Mean vs. Comparisons (95% C.I.)^b	p-Value^c
Born ≥1942	Comparison	467	47.57		
	Background RH	133	42.00	-5.57 --	0.099
	Low RH	80	45.54	-2.03 --	0.636
	High RH	136	49.83	2.26 --	0.535
	Low plus High RH	216	48.20	0.63 --	0.834
Born <1942	Comparison	547	64.30		
	Background RH	221	64.36	0.06 --	0.989
	Low RH	124	63.31	-0.99 --	0.837
	High RH	80	71.96	7.66 --	0.227
	Low plus High RH	204	66.57	2.27 --	0.583

^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 ≤ 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 A-2-7.
Analysis of Serum Insulin (mIU/ml) (Nondiabetics)
(Continuous)
Occupation and Body Fat Removed from Final Model

a) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED						
Initial Dioxin Category Summary Statistics			Analysis Results for Log ₂ (Initial Dioxin) ^b			
Initial Dioxin	n	Adj. Mean ^{ab}	R ²	Adj. Slope (Std. Error) ^c	p-Value	Covariate Remarks
Low	143	69.02	0.154	0.0969 (0.0327)	0.003	AGE (p < 0.001)
Medium	145	74.34				
High	143	86.93				

^a Transformed from natural logarithm scale.

^b Adjusted for percent body fat at the time of duty in SEA, change in percent body fat from the time of duty in SEA to the date of the blood draw for dioxin, and covariates specified under "Covariate Remarks" column.

^c Slope and standard error based on natural logarithm of serum insulin versus log₂ (initial dioxin).

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

Table A-2-7. (Continued)
Analysis of Serum Insulin (mIU/ml) (Nondiabetics)
(Continuous)
Occupation and Body Fat Removed from Final Model

b) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED					
Dioxin Category	n	Adj. Mean ^{ab}	Difference of Adj. Mean vs. Comparisons (95% C.I.) ^c	p-Value ^d	Covariate Remarks
Comparison	1,014	66.71**			DXCAT*AGE (p=0.037) RACE (p=0.833) FAST (p=0.869) PERS*FAMDIAB (p=0.107)
Background RH	354	61.62**	-5.09 -- **	0.103**	
Low RH	204	66.98**	0.27 -- **	0.946**	
High RH	216	76.42**	9.71 -- **	0.022**	
Low plus High RH	420	71.68**	4.97 -- **	0.115**	

^a Transformed from natural logarithm scale.

^b Adjusted for percent body fat at the time of duty in SEA, change in percent body fat from the time of duty in SEA to the date of the blood draw for dioxin, and covariates specified under "Covariate Remarks" column.

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

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

** Categorized dioxin-by-covariate interaction ($0.01 < p \leq 0.05$); adjusted mean, difference of adjusted means, confidence interval, and p-value derived from a model fitted after deletion of this interaction; refer to Appendix Table A-2-8 for further analysis of this interaction.

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 A-2-7. (Continued)
Analysis of Serum Insulin (mIU/ml) (Nondiabetics)
(Continuous)
Occupation and Body Fat Removed from Final Model

c) MODELS 4, 5, AND 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED							
Model ^b	Current Dioxin Category Adjusted Mean ^a /(n)			Analysis Results for Log ₂ (Current Dioxin + 1)			
	Low	Medium	High	R ²	Adj. Slope (Std. Error) ^c	p-Value	Covariate Remarks
4	34.57 (287)	41.39 (241)	54.38 (246)	0.095	0.1485 (0.0215)	<0.001	AGE (p<0.001) FAMDIAB (p=0.489) PERS (p=0.389) FAST (p=0.249)
5	34.26 (288)	41.22 (245)	56.41 (241)	0.107	0.1402 (0.0183)	<0.001	AGE (p<0.001) FAMDIAB (p=0.526) PERS (p=0.352) FAST (p=0.256)
6 ^d	36.18 (287)	42.65 (245)	53.62 (241)	0.126	0.1158 (0.0192)	<0.001	AGE (p<0.001) FAMDIAB (p=0.576) PERS (p=0.201) FAST (p=0.263)

^a Transformed from natural logarithm scale.

^b Model 4: Log₂ (lipid-adjusted current dioxin + 1).

Model 5: Log₂ (whole-weight current dioxin + 1).

Model 6: Log₂ (whole-weight current dioxin + 1), adjusted for log₂ total lipids.

^c Slope and standard error based on natural logarithm of serum insulin versus log₂ (current dioxin + 1).

^d Adjusted for log₂ total lipids in addition to covariates specified under "Covariate Remarks" column.

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 A-2-8.
Interaction Table for Serum Insulin (mIU/ml) (Nondiabetics)
(Continuous)
Occupation and Body Fat Removed from Final Model

a) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Age: Table A-2-7)					
Stratum	Dioxin Category	n	Adjusted Mean ^a	Difference of Adjusted Mean vs. Comparisons (95% C.I.) ^b	p-Value ^c
Born ≥ 1942	Comparison	467	57.54		
	Background RH	133	48.26	-9.28 --	0.023
	Low RH	80	57.00	-0.54 --	0.921
	High RH	136	62.35	4.81 --	0.294
	Low plus High RH	216	60.31	2.77 --	0.465
Born < 1942	Comparison	547	70.50		
	Background RH	221	69.28	-1.22 --	0.781
	Low RH	124	71.71	1.21 --	0.826
	High RH	80	85.08	14.58 --	0.045
	Low plus High RH	204	76.68	6.18 --	0.192

^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.

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.

APPENDIX B

1992 Interval Questionnaire

Project No. 4563

AIR FORCE HEALTH STUDY
Third Followup Examinations
1992-1993

Study Subject
Health Interval Questionnaire

O.M.B. NUMBER
07010095
Approval Expires
May 1988

CASE ID #

Project No. 4563

AIR FORCE HEALTH STUDY

**Third Followup Examinations
1992-1993**

Study Subject Health Interval Questionnaire

OTHER MATERIALS REQUIRED FOR THIS INTERVIEW ARE:

- PARTICIPANT INFORMATION SHEET
- CHILDREN'S RECORD FORM
- SUPPLEMENTARY CHILDREN'S RECORD FORM
- PRIVACY ACT STATEMENT
- INTERVAL SUPPLEMENTAL RECORDING BOOK
- RESPONDENT HAND CARDS A-Z, AA -- FF
- AFSC CODES LIST
- SELF-ADMINISTERED FORM 1
- SELF-ADMINISTERED FORM 2
- MEDICAL AUTHORIZATION FORMS
- HEALTH CARE PROVIDER FORMS
- DIETARY SELF-ADMINISTERED FORM
- CALENDAR

May 15, 1992

16:49 pm

Field Version 1.1

AIR FORCE HEALTH STUDY

Third Followup Examinations 1992-1993

Health Interval Questionnaire

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TIME BEGAN : AM/PM

10-13/

**SECTION A: INTRODUCTION AND
BACKGROUND**

FOR THIS SECTION YOU WILL NEED:

- PARTICIPANT INFORMATION SHEET
- HAND CARD A

Before I begin the interview, let me make sure that I have your correct name and rank. Is your name (READ NAME FROM INFORMATION SHEET) and is your rank (READ RANK FROM SHEET)?

IF INCORRECT, RE-ASK, CORRECT ON SHEET AND CONTINUE. IF YOU HAVE THE WRONG PERSON, END INTERVIEW AND TALK TO SUPERVISOR.

This part of the physical examination schedule will be an interview about your health and the health of your family. There will be some questions about your education, non-military employment, military experience, and health habits.

SAY TO PARTICIPANTS WHO PARTICIPATED IN PREVIOUS ROUNDS OF THE SURVEY: According to my records, you participated during the previous rounds of this survey. This time the interview will be comparable to the last one with a few additional questions.

The interview should last about two hours.

At various points during the interview, we will use the term "biological" to describe family relationships. For example, we may ask about your "biological" children. When using this term, we are referring to people who are related to you by blood. We do not mean your step-children or step-parents or people related to you through adoption.

You may refuse to answer any question you choose. However, we and the Air Force ask that you answer as many of the questions as you can, so the results will accurately and fully tell your story. We also need as accurate a picture as possible. So when we ask you about the dates of events in your life, please try to think carefully and remember as much as you possibly can.

HAVE PARTICIPANT FILL OUT PRIVACY ACT STATEMENT.

IF R IS NEW TO THE STUDY: (HE JUST COMPLETED THE BASELINE IN LA JOLLA THIS WEEK), HIS DATE OF LAST INTERVIEW IS DECEMBER 31, 1982. USE DECEMBER 31, 1982 AS THE REFERENCE DATE WHILE ADMINISTERING THE HEALTH INTERVAL QUESTIONNAIRE. IF R IS NEW TO STUDY, SKIP TO QUESTION 4A, ON PAGE A-3.

1. First I have a few background questions to ask you. My records indicate that your date of birth is (READ DATE OF BIRTH FROM ITEM 1, INFORMATION SHEET). Is that correct?

YES (CONTINUE) 1 14/

NO (ASK DOB, CORRECT ITEM 1,
INFORMATION SHEET, GO TO Q.2) 2

2. My records indicate that you were previously interviewed in (READ DATE OF LAST INTERVIEW FROM INFORMATION SHEET). Is that correct?

YES (SKIP TO QUESTION 3) 1

NO (ASK Q.2A) 2

- 2A. IF R CANNOT REMEMBER DATE OF LAST INTERVIEW, USE THE FOLLOWING PROBES. Were you here at Scripps five years ago?

YES (ASK Q.2A1) 1

NO (SKIP TO Q.2B) 2

- 2A1. Was it in 1988 or 1987?

YES (RECORD YEAR AND GO TO Q.2C) 1

NO (ASK Q.2B) 2

- 2B. Was it in 1986, 1985, 1982, OR 1981? (RECORD OR CORRECT INFORMATION SHEET)

- 2C. What month did the interview take place? (RECORD OR CORRECT INFORMATION SHEET)

- 2D. IF R CANNOT REMEMBER MONTH, USE THE FOLLOWING PROBE:

Was it in the Spring, Summer, Fall or Winter?

IF SPRING, CONVERT TO MONTH OF MARCH ON INFORMATION SHEET

IF SUMMER, CONVERT TO MONTH OF JUNE ON INFORMATION SHEET

IF FALL, CONVERT TO SEPTEMBER ON INFORMATION SHEET

IF WINTER, CONVERT TO DECEMBER ON INFORMATION SHEET

3. IF R WAS INTERVIEWED IN 88, 87, 86 OR 85, SKIP TO SECTION B: EDUCATION, PAGE B-1.

4A. RESPONDENT	4B. MOTHER	4C. FATHER
SHOW PARTICIPANT HAND CARD A. Please read Card A. To which of the following racial or ethnic groups do you belong? (CODE ALL THAT APPLY) (PROBE: What others?)	CONTINUE WITH HAND CARD A. To which of the following racial or ethnic groups does your biological mother belong? (CODE ALL THAT APPLY) (PROBE: What others?)	CONTINUE WITH HAND CARD A. To which of the following racial or ethnic groups does your biological father belong? (CODE ALL THAT APPLY) (PROBE: What others?)
ENGLISH/WELSH . . . 01 15-16/	ENGLISH/WELSH . . . 01 51-52/	ENGLISH/WELSH . . . 01 16-17/
SCOTTISH 02 17-18/	SCOTTISH 02 53-54	SCOTTISH 02 18-19/
GERMAN 03 19-20/	GERMAN 03 55-56/	GERMAN 03 20-21/
IRISH 04 21-22/	IRISH 04 57-58/	IRISH 04 22-23/
SCANDINAVIAN . . . 05 23-24/	SCANDINAVIAN . . . 05 59-60/	SCANDINAVIAN . . . 05 24-25/
POLISH 06 25-26/	POLISH 06 61-62/	POLISH 06 26-27/
RUSSIAN 07 27-28/	RUSSIAN 07 63-64/	RUSSIAN 07 28-29/
OTHER SLAVIC . . . 08 29-30/	OTHER SLAVIC . . . 08 65-66/	OTHER SLAVIC . . . 08 30-31/
JEWISH 09 31-32/	JEWISH 09 67-68/	JEWISH 09 32-33/
FRENCH 10 33-34/	FRENCH 10 69-70/	FRENCH 10 34-35/
ITALIAN 11 35-36/	ITALIAN 11 71-72/	ITALIAN 11 36-37/
SPANISH 12 37-38/	SPANISH 12 73-74/	SPANISH 12 38-39/
MEXICAN 13 39-40/	MEXICAN 13 75-76/	MEXICAN 13 40-41/
GREEK 14 41-42/	GREEK 14 77-78/	GREEK 14 42-43/
AMERICAN INDIAN 15 43-44/	AMERICAN INDIAN 15 79-80/	AMERICAN INDIAN 15 44-45/
	BEGIN DECK 02	
ASIAN 16 45-46/	ASIAN 16 10-11/	ASIAN 16 46-47/
AFRICAN (OR BLACK AMERICAN) 17 47-48/	AFRICAN (OR BLACK AMERICAN) 17 12-13/	AFRICAN (OR BLACK AMERICAN) 17 48-49/
OTHER (SPECIFY) _____	OTHER (SPECIFY) _____	OTHER (SPECIFY) _____
_____ 18 49-50/	_____ 18 14-15/	_____ 18 50-51/

SECTION B: EDUCATION

FOR THIS SECTION YOU WILL NEED:

- PARTICIPANT INFORMATION SHEET
- HAND CARD B

1A. My records show that when you were last interviewed you had received a (READ LAST DEGREE OBTAINED FROM ITEM 2 OF INFORMATION SHEET). Is that correct?

YES 1

NO (CORRECT INFORMATION SHEET
AND GO TO Q.1B) 2

MISSING (ASK AND RECORD ON INFORMATION SHEET) .. 3

1B. SHOW PARTICIPANT HAND CARD B. Have you received any (additional) regular school certificates, diplomas or degrees since (DATE OF LAST INTERVIEW)?

YES ... (ASK Q.1C AND Q.1D) 1

NO (SKIP TO Q.2, NEXT PAGE) 2

52/

1C. What certificates, diplomas,
and/or degrees did you get?
(CODE ALL THAT APPLY)

1D. INTERVIEWER: FOR
EACH DEGREE CODED
IN Q.1C, ASK Q.1D. In
what year did you receive
(DEGREE IN 1C.)?
RECORD YEAR

HIGH SCHOOL DIPLOMA	01	53-54/	19	YEAR	55-56/
HIGH SCHOOL EQUIVALENCY DIPLOMA ...	02	57-58/	19	YEAR	59-60/
ASSOCIATE OF ARTS (A.A.)	03	61-62/	19	YEAR	63-64/
BACHELOR OF ARTS (B.A.) OR BACHELOR OF SCIENCE (B.S.)	04	65-66/	19	YEAR	67-68/
MASTERS (M.A. OR M.S.)	05	69-70/	19	YEAR	71-72/
DOCTORATE (Ph.D., M.D., Ed.D., Sc.D.)	06	73-74/	19	YEAR	75-76/
OTHERS (SPECIFY)					
	07	77-78/	19	YEAR	79-80/

NO CERTIFICATE, DIPLOMA, OR DEGREE
(VOLUNTEERED) 08

BEGIN DECK 03
10-11/

2. Since (DATE OF LAST INTERVIEW) have you participated in any civilian job training programs (other than the formal schooling that we discussed), that prepared you for a major change in your occupation?

YES (ASK Q.2A) 1

12/

NO (SKIP TO Q.3, PAGE B-5) 2

FIRST PROGRAM: CIVILIAN JOB TRAINING

- 2A. For what kind of work was your first civilian training program preparing you?
PROBE: What would your main duties be if you went into this line of work?

13-15/

- 2B. In what month and year did you start this training?

				--				
MONTH					YEAR			

16-19/

- 2C. In what month and year did you complete this training?

				--				
MONTH					YEAR			

20-23/

CURRENTLY IN TRAINING 1

- 2D. Have you participated in any other civilian job training program that prepared you for a major change in your occupation?

YES (ASK Q.2E, NEXT PAGE) 1

24/

NO (SKIP TO Q.3, PAGE B-5) 2

SECOND PROGRAM: CIVILIAN JOB TRAINING

- 2E. For what kind of work was your second civilian training program preparing you?
PROBE: What would your main duties be if you went into this line of work?

25-27/

- 2F. In what month and year did you start this training?

			-			
MONTH				YEAR		

28-31/

- 2G. In what month and year did you complete this training?

			-			
MONTH				YEAR		

32-35/

CURRENTLY IN TRAINING 1

- 2H. Have you participated in any other civilian job training program that prepared you for a major change in your occupation?

YES (ASK Q.2I, NEXT PAGE) 1

36/

NO (SKIP TO Q.3, PAGE B-5) 2

THIRD PROGRAM: CIVILIAN JOB TRAINING

- 2I. For what kind of work was your third civilian training program preparing you?
PROBE: What would your main duties be if you went into this line of work?

37-39/

- 2J. In what month and year did you start this training?

	--	
MONTH		YEAR

40-43/

- 2K. In what month and year did you complete this training?

	--	
MONTH		YEAR

44-47/

CURRENTLY IN TRAINING 1

- 2L. Have you participated in any other civilian job training program that prepared you for a major change in your occupation?

YES (GO TO NEW QUEX) 1

48/

NO 2

3. Have you served in the military full-time on active duty since (DATE OF LAST INTERVIEW).
IF NEW TO STUDY, USE DECEMBER 31, 1982).

YES 1 49/

NO ... (SKIP TO SECTION C, PAGE C-1) 2

4. Are you currently serving in the military on active duty?

YES 1 50/

NO 2

5. Now let's talk about any military and specialized training programs that prepared you for a major change in your occupation. Since (DATE OF LAST INTERVIEW), (and besides the formal schooling and job training programs you've told me about), have you participated in any military technical or specialized training programs that prepared you for a major change in your career?

YES .. (ASK Q.5A, NEXT PAGE) 1 51/

NO ... (SKIP TO SECTION C, PAGE C-1) 2

FIRST PROGRAM (LEAST RECENT): MILITARY TRAINING PROGRAM

- 5A. For what kind of work was your first military training program preparing you?
PROBE: What would your main duties be if you went into this line of work?

- 5B. What is the AFSC for that job?

52-56/

- 5C. In what month and year did you start this training?

_	-	_
MONTH		YEAR

57-60/

- 5D. In what month and year did you complete this training?

_	-	_
MONTH		YEAR

61-64/

CURRENTLY IN TRAINING 1

- 5E. Have you participated in any other military job training program that prepared you for a major change in your occupation?

YES ... (ASK Q.5F, NEXT PAGE) 1

65/

NO ... (SKIP TO SECTION C, PAGE C-1) 2

SECOND PROGRAM: MILITARY TRAINING PROGRAM

5F. For what kind of work was your second military training program preparing you?
PROBE: What would your main duties be if you went into this line of work?

5G. What is the AFSC for that job?

66-70/

5H. In what month and year did you start this training?

		-		
MONTH			YEAR	

71-74/

5I. In what month and year did you complete this training?

		-		
MONTH			YEAR	

75-78/

CURRENTLY IN TRAINING 1

5J. Have you participated in any other military job training program that prepared you for a major change in your occupation?

YES .. (ASK Q.5K, NEXT PAGE) 1

79/

NO ... (SKIP TO SECTION C, PAGE C-1) 2

THIRD PROGRAM (MOST RECENT): MILITARY TRAINING PROGRAM

5K. For what kind of work was your third military training program preparing you?
PROBE: What would your main duties be if you went into this line of work?

5L. What is the AFSC for that job?

BEGIN DECK 04

10-14/

5M. In what month and year did you start this training?

		-		
MONTH			YEAR	

15-18/

5N. In what month and year did you complete this training?

		-		
MONTH			YEAR	

19-22/

CURRENTLY IN TRAINING 1

5O. Have you participated in any other military job training program that prepared you for a major change in your occupation?

YES .. (GO TO NEW QUEX) 1

23/

NO ... (GO TO SECTION C, NEXT PAGE) 2

24-27/R

SECTION C: EMPLOYMENT (NON-MILITARY)

FOR THIS SECTION YOU WILL NEED:

- INTERVAL SUPPLEMENTAL RECORDING BOOK (I.S.R.B.)
- HAND CARD C
- HAND CARD D
- HAND CARD E

CURRENT OR MOST RECENT JOB

1. Now I have some questions about working. Please tell me about any jobs you've had that lasted for 3 months or longer since (DATE OF LAST INTERVIEW). Include current or newly found jobs. If you had more than one job at the same time, please tell me about each job separately. *Count changes of jobs for the same employer as separate jobs. Do not include jobs in the military.* Let's start with the most recent regular job you've had and work back in time to (DATE OF LAST INTERVIEW).

In what month and year did you start your current job, or if you don't have a current job, your most recent job that lasted 3 months or longer?

-
 MONTH YEAR

28-31/

NO CIVILIAN JOBS:

ONLY MILITARY JOBS: ... (SKIP TO Q.IS.1 IN I.S.R.B. ON PAGE 2) ... 1

32/

- 1A. What (is/was) the name of your employer?

33-57/

- 1B. (Is/Was) this a full-time or part-time job?

FULL-TIME 1

58/

PART-TIME 2

- 1C. What kind of business (is/was) that--what (do/did) they make or do there?
RECORD VERBATIM

59-61/

- 1D. What (do/did) you actually do on the job--what (are/were) some of your main duties?
RECORD VERBATIM

62-64/

CURRENT OR MOST RECENT JOB (Continued)

- 1E. SHOW PARTICIPANT HAND CARD C. Please look at this card and tell me which number best describes the kind of industry you (work/worked) in?

WRITE IN NUMBER:

65-66/

- 1F. In what month and year did this job end or is this your current job?

-
MONTH YEAR

67-70/

CURRENT JOB(SKIP TO Q.2 BELOW) 1

71/

- 1G. What was the main reason you stopped working on your job?
(RECORD VERBATIM)

72-73/

2. SHOW PARTICIPANT HAND CARD D. While working at (EMPLOYER) (do/did) you come in contact with any of the substances on this card? By contact I mean that you inhaled, tasted, had skin contact with these fibers and chemicals or were exposed to ionizing or nuclear radiation. CODE ALL THAT APPLY

Asbestos 01 74-75/
BEGIN DECK 05

Ionizing or nuclear radiation 02 10-11/

Industrial chemicals 03 14-15/

Insecticides or pesticides 04 18-19/

Degreasing chemicals 05 22-23/

Defoliants or herbicides 06 26-27/

NONE OF THE ABOVE
(SKIP TO Q.5, PAGE C-3) 07 30-31/

- 2A. FOR EACH SUBSTANCE CODED IN Q.2, ASK Q.2A.

In general, how many days a month did you come in contact with (SUBSTANCE)?

DAYS Less than once a month . . 95 76-77/

DAYS Less than once a month . . 95 12-13/

DAYS Less than once a month . . 95 16-17/

DAYS Less than once a month . . 95 20-21/

DAYS Less than once a month . . 95 24-25/

DAYS Less than once a month . . 95 28-29/

CURRENT OR MOST RECENT JOB (Continued)

3. While you were on that job, how often (do/did) you wash to remove the (SUBSTANCES) or use protective gear -- would you say all of the time, some of the time, or never?

ALL OF THE TIME	1	32/
SOME OF THE TIME	2	
NEVER	(SKIP TO Q.5)	3

4. SHOW PARTICIPANT HAND CARD E. Which of the following (do/did) you use on that job?
CODE ALL THAT APPLY

Air filter	01	33-34/
Goggles	02	35-36/
Face shield	03	37-38/
Special clothing	04	39-40/
Washing facilities	05	41-42/
Self-contained or supplied air breathing apparatus	06	43-44/
NONE	07	45-46/

5. Did you have another job before the job with (EMPLOYER NAME IN Q.1A) since (DATE OF LAST INTERVIEW) that lasted 3 months or longer?

YES	1	47/
NO	(SKIP TO Q.15.1 IN I.S.R.B. ON PAGE 2)	2

SECOND MOST RECENT JOB

6. In what month and year did you start that job?

				-				
MONTH					YEAR			

48-51/

6A. What was the name of your employer?

52-76/

6B. I have to ask you the same questions for this employer. Was this a full-time or part-time job?

FULL-TIME 1

77/

PART-TIME 2

BEGIN DECK 06

6C. What kind of business was that--what did they make or do there?
RECORD VERBATIM

10-12/

6D. What did you actually do on the job--what were some of your main duties?
RECORD VERBATIM

13-15/

SECOND MOST RECENT JOB (Continued)

- 6E. SHOW PARTICIPANT HAND CARD C. Please look at this card and tell me which number best describes the kind of industry you worked in?

WRITE IN NUMBER:

16-17/

- 6F. In what month and year did this job end?

--
MONTH YEAR

18-21/

CURRENT JOB (SKIP TO Q.7, BELOW) 1

- 6G. What was the main reason you stopped working on your job?
RECORD VERBATIM

22-23/

7. SHOW PARTICIPANT HAND CARD D. While working at (EMPLOYER NAMED IN Q.6A) did you come in contact with any of the substances on this card? By contact I mean that you inhaled, tasted, had skin contact with these fibers and chemicals or were exposed to ionizing or nuclear radiation. CODE ALL THAT APPLY

7A. FOR EACH SUBSTANCE CODED IN Q.7, ASK Q.7A.

In general, how many days a month did you come in contact with (SUBSTANCE)?

Asbestos 01 24-25/

DAYS Less than once a month . . 95 26-27/

Ionizing or nuclear radiation 02 28-29/

DAYS Less than once a month . . 95 30-31/

Industrial chemicals 03 32-33/

DAYS Less than once a month . . 95 34-35/

Insecticides or pesticides 04 36-37/

DAYS Less than once a month . . 95 38-39/

Degreasing chemicals 05 40-41/

DAYS Less than once a month . . 95 42-43/

Defoliants or herbicides 06 44-45/

DAYS Less than once a month . . 95 46-47/

NONE OF THE ABOVE

(SKIP TO Q.10, PAGE C-6) 07 48-49/

SECOND MOST RECENT JOB (Continued)

8. While you were on that job, how often did you wash to remove the (SUBSTANCES) or use protective gear -- would you say all of the time, some of the time, or never?

ALL OF THE TIME 1 50/
 SOME OF THE TIME 2
 NEVER (SKIP TO Q.10) 3

9. SHOW PARTICIPANT HAND CARD E. Which of the following did you use on that job?
 CODE ALL THAT APPLY

Air filter 01 51-52/
 Goggles 02 53-54/
 Face shield 03 55-56/
 Special clothing 04 57-58/
 Washing facilities 05 59-60/
 Self-contained or supplied air breathing apparatus 06 61-62/
 NONE 07 63-64/

10. Did you have another job before the job with (EMPLOYER NAME IN Q.6A) since (DATE OF LAST INTERVIEW)?

YES 1 65/

NO (SKIP TO Q.15.1 IN I.S.R.B. ON PAGE 2) 2

THIRD MOST RECENT JOB

11. In what month and year did you start that job?

____ - ____
MONTH YEAR

66-69/

11A. What was the name of your employer?

BEGIN DECK 07

10-34/

11B. Was this a full-time or part-time job?

FULL-TIME 1

35/

PART-TIME 2

11C. What kind of business was that--what did they make or do there?
RECORD VERBATIM

36-38/

11D. What did you actually do on the job--what were some of your main duties?
RECORD VERBATIM

39-41/

THIRD MOST RECENT JOB (Continued)

- 11E. SHOW PARTICIPANT HAND CARD C. Please look at this card and tell me which number best describes the kind of industry you worked in?

WRITE IN NUMBER: 42-43/

- 11F. In what month and year did this job end?

-
MONTH YEAR

CURRENT JOB (SKIP TO Q.12, BELOW) 1 44-47/

- 11G. What was the main reason you stopped working on your job?
RECORD VERBATIM

48-49/

12. SHOW PARTICIPANT HAND CARD D. While working at (EMPLOYER NAMED IN Q.11A) did you come in contact with any of the substances on this card? By contact I mean that you inhaled, tasted, had skin contact with these fibers and chemicals or were exposed to ionizing or nuclear radiation. CODE ALL THAT APPLY

12A. FOR EACH SUBSTANCE CODED IN Q.12, ASK 12A.

In general, how many days a month did you come in contact with (SUBSTANCE)?

Asbestos 01 50-51/

DAYS Less than once a month . . 95 52-5

Ionizing or nuclear radiation 02 54-55/

DAYS Less than once a month . . 95 56-5

Industrial chemicals 03 58-59/

DAYS Less than once a month . . 95 60-6

Insecticides or pesticides 04 62-63/

DAYS Less than once a month . . 95 64-6

Degreasing chemicals 05 66-67/

DAYS Less than once a month . . 95 68-6

Defoliants or herbicides 06 70-71/

DAYS Less than once a month . . 95 72-7

NONE OF THE ABOVE
(SKIP TO Q.15, PAGE C-9) 07 74-75/

THIRD MOST RECENT JOB (Continued)

13. While you were on that job, how often did you wash to remove the (SUBSTANCES) or use protective gear – would you say all of the time, some of the time, or never?

ALL OF THE TIME 1 76/
 SOME OF THE TIME 2
 NEVER (SKIP TO Q.15, BELOW) 3

14. SHOW PARTICIPANT HAND CARD E. Which of the following did you use on that job?
 CODE ALL THAT APPLY

BEGIN DECK 08

Air filter 01 10-11/
 Goggles 02 12-13/
 Face shield 03 14-15/
 Special clothing 04 16-17/
 Washing facilities 05 18-19/
 Self-contained or supplied air breathing apparatus 06 20-21/
 NONE 07 22-23/

15. Did you have another job before the job with (EMPLOYER NAME IN Q.11A) since (DATE OF LAST INTERVIEW)?

YES 1 24/
 NO (SKIP TO Q.15.1 IN I.S.R.B. ON PAGE 2) 2

FOURTH MOST RECENT JOB

16. In what month and year did you start that job?

<table border="1"><tr><td> </td><td> </td></tr></table>			--	<table border="1"><tr><td> </td><td> </td></tr></table>		
MONTH		YEAR				

25-28/

16A. What was the name of your employer?

29-53/

16B. Was this a full-time or part-time job?

FULL-TIME 1

54/

PART-TIME 2

16C. What kind of business was that--what did they make or do there?
RECORD VERBATIM

55-57/

16D. What did you actually do on the job--what were some of your main duties?
RECORD VERBATIM

58-60/

FOURTH MOST RECENT JOB (Continued)

- 16E. SHOW PARTICIPANT HAND CARD C. Please look at this card and tell me which number best describes the kind of industry you worked in?

WRITE IN NUMBER:

61-62/

- 16F. In what month and year did this job end?

-
MONTH YEAR

63-66/

CURRENT JOB (SKIP TO Q.17, BELOW) 1

- 16G. What was the main reason you stopped working on your job?
RECORD VERBATIM

67-68/

17. SHOW PARTICIPANT HAND CARD D. While working at (EMPLOYER NAMED IN Q.16A) did you come in contact with any of the substances on this card? By contact I mean that you inhaled, tasted, had skin contact with these fibers and chemicals or were exposed to ionizing or nuclear radiation. CODE ALL THAT APPLY

17A. FOR EACH SUBSTANCE CODED IN Q.17, ASK Q.17A.

In general, how many days a month did you come in contact with (SUBSTANCE)?

Asbestos 01 69-70/

DAYS Less than once a month . . 95 71-72/

Ionizing or nuclear radiation 02 73-74/

DAYS Less than once a month . . 95 75-76/

Industrial chemicals 03 77-78/

DAYS Less than once a month . . 95 79-80/

BEGIN DECK 09

Insecticides or pesticides 04 10-11/

DAYS Less than once a month . . 95 12-13/

Degreasing chemicals 05 14-15/

DAYS Less than once a month . . 95 16-17/

Defoliants or herbicides 06 18-19/

DAYS Less than once a month . . 95 20-21/

NONE OF THE ABOVE

(SKIP TO Q.20, PAGE C-12) 07 22-23/

FOURTH MOST RECENT JOB (Continued)

18. While you were on that job, how often did you wash to remove the (SUBSTANCES) or use protective gear – would you say all of the time, some of the time, or never?

ALL OF THE TIME	1	24/
SOME OF THE TIME	2	
NEVER	(SKIP TO Q.20, BELOW)	3

19. SHOW PARTICIPANT HAND CARD E. Which of the following did you use on that job?
CODE ALL THAT APPLY

Air filter	01	25-26/
Goggles	02	27-28/
Face shield	03	29-30/
Special clothing	04	31-32/
Washing facilities	05	33-34/
Self-contained or supplied air breathing apparatus	06	35-36/
NONE	07	37-38/

20. Did you have another job before the job with (EMPLOYER NAME IN Q.16A) since (DATE OF LAST INTERVIEW)?

YES	(USE NEW QUEX)	1	39/
NO	(SKIP TO Q.IS.1 IN I.S.R.B. ON PAGE 2)	2	

21. During the past six months, did *illness or injury* keep you from working, not counting work around the house?

- YES 1 40/
NO (SKIP TO SECTION D) 2
RETIRED (SKIP TO SECTION D) 3
UNEMPLOYED (SKIP TO SECTION D) 4

22. Altogether, how many days did illness or injury keep you from working during the past six months?
REFERS TO "WORKING DAYS" ONLY

ENTER NUMBER OF DAYS:

41-43/

23. What illnesses or injuries caused you to miss work? (PROBE: What others?)

44/

SECTION D: MILITARY EXPERIENCE

FOR THIS SECTION YOU WILL NEED:

- PARTICIPANT INFORMATION SHEET
- HAND CARD D
- HAND CARD E
- HAND CARD F

1. WAS R INTERVIEWED IN 1985, 1986 OR 1987, 1988? SEE INFORMATION SHEET.

YES (SKIP TO Q.3) 1

NO (GO TO Q.2) 2
2. SHOW PARTICIPANT HAND CARD F. Which of the following statements best describes your assignment during the Vietnam War? Were you ... (READ CHOICES)? CODE ONE.

A crew member in Vietnam who was on flying status 1 45/

Not a crew member, but flew one or more missions in Vietnam 2

A crew member, but did not log flying time in Vietnam 3

Not a crew member 4
3. INTERVIEWER: HAS R SERVED IN MILITARY ON ACTIVE DUTY SINCE DATE OF LAST INTERVIEW? INTERVIEWER CHECK: GO TO SECTION B, PAGE B-5. IS QUESTION 3 CODED "YES"?

YES (GO TO Q.3A) 1 46/

NO (SKIP TO SECTION E, PAGE E-1) 2
- 3A. I am going to ask you about some of your experience in the military since (READ DATE OF LAST INTERVIEW).
- 3B. According to your records, your last branch of service was (BRANCH FROM ITEM 3)? Is that correct?

YES 1

NO (CORRECT INFORMATION SHEET) 2

MISSING. (ASK LAST BRANCH OF SERVICE, RECORD AT ITEM 3 ON INFORMATION SHEET) 3

4. Since (DATE OF LAST INTERVIEW) have you retired, been discharged or separated from the (BRANCH OF SERVICE FROM ITEM 3 ON SHEET)?

(IF BRANCH MISSING, ASK AND ADD TO INFO SHEET.)

YES (ASK Q.4A THROUGH Q.4C) 1 47/
NO (SKIP TO Q.5, PAGE) 2

- 4A. Were you retired, discharged or separated?

RETIRED 1 48/
DISCHARGED/SEPARATED 2

- 4B. In what month and year were you (retired/discharged/separated) from the (READ BRANCH OF SERVICE FROM ITEM 3)?

 | | - | |
 MONTH YEAR 49-52/

- 4C. Following your (retirement/separation/discharge) in (DATE IN Q.4B.), did you re-enter the armed forces?

YES 1 53/
NO 2

5. I would like to ask you the names of all the countries, including the United States, you have been stationed in since (DATE OF LAST INTERVIEW). I will also ask you some questions about your military assignments while in these countries.

When last interviewed you were stationed in (COUNTRY FROM INFORMATION SHEET ITEM 3), and your assignment began in (DATE OF ASSIGNMENT FROM INFORMATION SHEET ITEM 3). Is that correct?

YES (ASK Q.5B THROUGH Q.5K) 1 54/
NO (CORRECT INFORMATION SHEET,
THEN ASK Q.5B THROUGH Q.5K) 2
MISSING . (ASK COUNTRY AND DATE OF ASSIGNMENT,
ADD TO INFO SHEET AND ASK Q.5B THROUGH Q.5K) 3
NO ACTIVE DUTY AT LAST
INTERVIEW. . . (ASK Q.5A THROUGH Q.5K) 4

BEGIN DECK 10

FIRST COUNTRY	SECOND COUNTRY	THIRD COUNTRY
5A. Since (READ DATE OF LAST INTERVIEW), in what country were you next stationed while on active duty? Please include temporary duties of greater than 90 days. _____ 1ST COUNTRY 55-56/	5L. Since (READ DATE OF LAST INTERVIEW), in what other country were you next stationed while on active duty? Please include temporary duties of greater than 90 days. _____ 1ST COUNTRY 10-11/	5W. Since (READ DATE OF LAST INTERVIEW), in what other country were you next stationed while on active duty? Please include temporary duties of greater than 90 days. _____ 1ST COUNTRY 35-36/
5B. In what month and year did you begin and end active duty in (COUNTRY)? BEGIN ____ - ____ MONTH YEAR 57-60/ END ____ - ____ MONTH YEAR 61-64/ CURRENT (NO END DATE) 1	5M. In what month and year did you begin and end active duty in (COUNTRY)? BEGIN ____ - ____ MONTH YEAR 12-15/ END ____ - ____ MONTH YEAR 16-19/ CURRENT (NO END DATE) 1	5X. In what month and year did you begin and end active duty in (COUNTRY)? BEGIN ____ - ____ MONTH YEAR 37-40/ END ____ - ____ MONTH YEAR 41-44/ CURRENT (NO END DATE) 1
5C. What specific job assignments (do/did) you have in (COUNTRY) since (DATE OF LAST INTERVIEW)? Can you give me the Air Force Speciality Code? (PROBE: What others?) 1. _____ 65-69/ 2. _____ 70-74/ 3. _____ 75-79/ (GO TO Q5.D ON PAGE D-4)	5N. What specific job assignments (do/did) you have in (COUNTRY) since (DATE OF LAST INTERVIEW)? Can you give me the Air Force Speciality Code? (PROBE: What others?) 1. _____ 20-24/ 2. _____ 25-29/ 3. _____ 30-34/ (GO TO Q5.O ON PAGE D-4)	5Y. What specific job assignments (do/did) you have in (COUNTRY) since (DATE OF LAST INTERVIEW)? Can you give me the Air Force Speciality Code? (PROBE: What others?) 1. _____ 45-49/ 2. _____ 50-54/ 3. _____ 55-59/ (GO TO Q.5Z ON PAGE D-4)

BEGIN DECK 11

FIRST COUNTRY	SECOND COUNTRY	THIRD COUNTRY
5D. (Do/Did) your duties in (COUNTRY) since (DATE OF LAST INTERVIEW) include flying? 60/ YES 1 NO . (SKIP TO Q.5G ON PAGE D-5) . . 2	5O. (Do/Did) your duties in (COUNTRY) since (DATE OF LAST INTERVIEW) include flying? 10/ YES 1 NO . (SKIP TO Q.5R ON PAGE D-5) . . 2	5Z. (Do/Did) your duties in (COUNTRY) since (DATE OF LAST INTERVIEW) include flying? 30/ YES 1 NO . (SKIP TO Q.5CC ON PAGE D-5) . . 2
5E. How many flight hours did you log while in (COUNTRY) since (DATE OF LAST INTERVIEW)? 61-64/ Hours	5P. How many flight hours did you log while in (COUNTRY) since (DATE OF LAST INTERVIEW)? 11-14/ Hours	5AA. How many flight hours did you log while in (COUNTRY) since (DATE OF LAST INTERVIEW)? 31-34/ Hours
5F. What specific letter and numerical designation(s) did each aircraft have since (DATE OF LAST INTERVIEW)? 1. 65-69/ 2. 70-74/ 3. 75-79/ (GO TO Q.5G ON PAGE D-5)	5Q. What specific letter and numerical designation(s) did each aircraft have since (DATE OF LAST INTERVIEW)? 1. 15-19/ 2. 20-24/ 3. 25-29/ (GO TO Q.5R ON PAGE D-5)	5BB. What specific letter and numerical designation(s) did each aircraft have since (DATE OF LAST INTERVIEW)? 1. 35-39/ 2. 40-44/ 3. 45-49/ (GO TO Q.5CC ON PAGE D-5)

BEGIN DECK 12

FIRST COUNTRY	SECOND COUNTRY	THIRD COUNTRY
5G. SHOW PARTICIPANT HAND CARD D. In your job assignments while stationed in (COUNTRY), (do/did) you come in contact with any of the substances on this card? By contact I mean that you inhaled, tasted, had skin contact with these fibers and chemicals, or were exposed to ionizing or nuclear radiation. CODE ALL THAT APPLY. Asbestos 01 50-51/ Ionizing or nuclear radiation . . . 02 52-53/ Industrial chemicals . 03 54-55/ Insecticides or pesticides 04 56-57/ Degreasing chemicals 05 58-59/ Defoliants or herbicides 06 60-61/ NONE OF THE ABOVE (SKIP TO SECOND COUNTRY Q.5K ON PAGE D-7) 07 62-63/	5R. SHOW PARTICIPANT HAND CARD D. In your job assignments while stationed in (COUNTRY), (do/did) you come in contact with any of the substances on this card? By contact I mean that you inhaled, tasted, had skin contact with these fibers and chemicals, or were exposed to ionizing or nuclear radiation. CODE ALL THAT APPLY. Asbestos 01 64-65/ Ionizing or nuclear radiation . . . 02 66-67/ Industrial chemicals . 03 68-69/ Insecticides or pesticides 04 70-71/ Degreasing chemicals 05 72-73/ Defoliants or herbicides 06 74-75/ NONE OF THE ABOVE (SKIP TO THIRD COUNTRY Q.5V ON PAGE D-7) 07 76-77/	5CC. SHOW PARTICIPANT HAND CARD D. In your job assignments while stationed in (COUNTRY), (do/did) you come in contact with any of the substances on this card? By contact I mean that you inhaled, tasted, had skin contact with these fibers and chemicals, or were exposed to ionizing or nuclear radiation. CODE ALL THAT APPLY. Asbestos 01 10-11/ Ionizing or nuclear radiation . . . 02 12-13/ Industrial chemicals . 03 14-15/ Insecticides or pesticides 04 16-17/ Degreasing chemicals 05 18-19/ Defoliants or herbicides 06 20-21/ NONE OF THE ABOVE (SKIP TO FOURTH COUNTRY Q.5GG ON PAGE D-7) 07 22-23/

FIRST COUNTRY	SECOND COUNTRY	THIRD COUNTRY
5H. FOR ANY SUBSTANCE CODED IN PREVIOUS QUESTION, ASK: In general, how many days a month (do/did) you come in contact with (SUBSTANCE)? Asbestos 24-25/ less than once a month 95 Ionizing or nuclear radiation 26-27/ less than once a month 95 Industrial chemicals 28-29/ less than once a month 95 Insecticides or pesticides 30-31/ less than once a month 95 Degreasing chemicals 32-33/ less than once a month 95 Defoliants or herbicides 34-35/ less than once a month 95	5S. FOR ANY SUBSTANCE CODED IN PREVIOUS QUESTION, ASK: In general, how many days a month (do/did) you come in contact with (SUBSTANCE)? Asbestos 37-38/ less than once a month 95 Ionizing or nuclear radiation 39-40/ less than once a month 95 Industrial chemicals 41-42/ less than once a month 95 Insecticides or pesticides 43-44/ less than once a month 95 Degreasing chemicals 45-46/ less than once a month 95 Defoliants or herbicides 47-48/ less than once a month 95	5DD. FOR ANY SUBSTANCE CODED IN PREVIOUS QUESTION, ASK: In general, how many days a month (do/did) you come in contact with (SUBSTANCE)? Asbestos 50-51/ less than once a month 95 Ionizing or nuclear radiation 52-53/ less than once a month 95 Industrial chemicals 54-55/ less than once a month 95 Insecticides or pesticides 56-57/ less than once a month 95 Degreasing chemicals 58-59/ less than once a month 95 Defoliants or herbicides 60-61/ less than once a month 95
5I. When you washed to remove the (SUBSTANCES) or used protective clothing or gear when stationed in (COUNTRY) was it all the time, some of the time, or never? 36/ ALL THE TIME 1 SOME OF THE TIME ... 2 NEVER. (SKIP TO Q.5K PAGE D-7) 3	5T. When you washed to remove the (SUBSTANCES) or used protective clothing or gear when stationed in (COUNTRY) was it all the time, some of the time, or never? 49/ ALL THE TIME 1 SOME OF THE TIME 2 NEVER. (SKIP TO Q.5V PAGE D-7) 3	5EE. When you washed to remove the (SUBSTANCES) or used protective clothing or gear when stationed in (COUNTRY) was it all the time, some of the time, or never? 62/ ALL THE TIME 1 SOME OF THE TIME 2 NEVER. (SKIP TO Q.5GG PAGE D-7) 3

BEGIN DECK 13

FIRST COUNTRY	SECOND COUNTRY	THIRD COUNTRY
5J. SHOW PARTICIPANT HAND CARD E. Which of the following did you use on that job? CODE ALL THAT APPLY. Air filter 01 63-64/ Goggles 02 65-66/ Face Shield . 03 67-68/ Special clothing 04 69-70/ Washing facilities 05 71-72/ Self contained or supplied air breathing apparatus . . 06 73-74/ NONE 07 75-76/	5U. SHOW PARTICIPANT HAND CARD E. Which of the following did you use on that job? CODE ALL THAT APPLY. Air filter 01 10-11/ Goggles 02 12-13/ Face Shield . . 03 14-15/ Special clothing 04 16-17/ Washing facilities 05 18-19/ Self contained or supplied air breathing apparatus . . 06 20-21/ NONE 07 22-23/	5FF. SHOW PARTICIPANT HAND CARD E. Which of the following did you use on that job? CODE ALL THAT APPLY. Air filter 01 25-26/ Goggles 02 27-28/ Face Shield . . 03 29-30/ Special clothing . 04 31-32/ Washing facilities 05 33-34/ Self contained or supplied air breathing apparatus 06 35-36/ NONE 07 37-38/
SECOND COUNTRY	THIRD COUNTRY	FOURTH COUNTRY
5K. Are there any other countries that you have been stationed in since (DATE OF LAST INTERVIEW)? YES. . . (GO BACK TO Q.5L: SECOND COUNTRY ON PAGE D-3) . 1 77/ NO. . . (SKIP TO SECTION E, PAGE E-1) . . 2	5V. Are there any other countries that you have been stationed in since (DATE OF LAST INTERVIEW)? YES. . . (GO BACK TO Q.5W: THIRD COUNTRY ON PAGE D-3) 1 24/ NO. . . (SKIP TO SECTION E, PAGE E-1) . . 2	5GG. Are there any other countries that you have been stationed in since (DATE OF LAST INTERVIEW)? YES. . . (USE NEW QUEX) 1 39/ NO. . . (SKIP TO SECTION E, PAGE E-1) . . 2

SECTION E: MARITAL AND FERTILITY HISTORY**FOR THIS SECTION YOU WILL NEED:**

- HAND CARD G
- HAND CARD H
- CHILDREN'S RECORD FORM
- SUPPLEMENTARY CHILDREN'S RECORD FORM
- SELF-ADMINISTERED FORM 1

1. Now I would like to ask you about your personal relationships.

When we talked with you during the last interview (DATE OF LAST INTERVIEW), you said you were (MARITAL STATUS FROM ITEM 4 INFORMATION SHEET). Is that correct?

YES (GO TO Q.1A) 1 40/

NO (REASK MARITAL STATUS AT TIME OF LAST INTERVIEW,
UPDATE ITEM 4, GO TO Q.1A) 2

MISSING (ASK MARITAL STATUS AT TIME OF LAST INTERVIEW,
RECORD AT ITEM 4, GO TO Q.1A) 3

1A. AT TIME OF LAST INTERVIEW, WAS STATUS "MARRIED" OR LIVING WITH SPOUSE?

YES (SKIP TO Q.1F) 1 41/

NO (GO TO Q.1B) 2

1B. IF NOT LIVING WITH PARTNER AT TIME OF LAST INTERVIEW, SKIP TO 1C, OTHERWISE ASK: When we talked with you during the last interview, you said you were living with a partner. Is that correct?

YES (GO TO Q.1C) 1

NO (UPDATE ITEM 5, GO TO Q.1C) 2

1C. WAS RESPONDENT "LIVING WITH PARTNER" AT TIME OF LAST INTERVIEW?

YES (ASK Q.1D) 1 42/

NO (SKIP TO Q.3, PAGE E-5) 2

1D. What is the name of the person you were living with at the time of the last interview? RECORD BELOW

LAST NAME

FIRST NAME

1E. In what month and year did you start living with (READ NAME FROM Q.1D)?
(RECORD MONTH AND YEAR)

ENTER MONTH AND YEAR

--
MONTH YEAR

43-46/

SKIP TO QUESTION 2, PAGE E-3

1F. According to our records, you were married to (NAME OF SPOUSE FROM ITEM 6 ON INFORMATION SHEET). Is that correct?

YES 1 47/

NO (REASK NAME OF SPOUSE, UPDATE ITEM 6) ... 2

MISSING . . (ASK NAME OF SPOUSE, RECORD AT ITEM 6) .. 3

1G. In what month and year did you get married to (READ NAME OF SPOUSE)?

ENTER MONTH AND YEAR

		-		
MONTH			YEAR	

48-51/

2. Have you stopped living with (NAME OF SPOUSE OR PARTNER)?

YES (ASK Q.2A) 1
NO ... (SKIP TO Q.2C, PAGE E-4). ... 2

52/

2A. SHOW PARTICIPANT HAND CARD G. How did this (marriage/relationship) end? Choose one of the responses on the card.

SEPARATION 1

53/

DIVORCE 2

DEATH OF SPOUSE OR PARTNER 3

2B. In what month and year did (READ RESPONSE FROM Q.2A) occur?

ENTER MONTH AND YEAR

MONTH		YEAR	

54-57/

- 2C. During this (marriage/relationship), how many times were you living apart from (NAME OF SPOUSE OR PARTNER) for 3 months or more since (DATE OF LAST INTERVIEW)? Each separation must have lasted at least 3 months or more. DO NOT INCLUDE A CURRENT MARITAL SEPARATION.

ENTER NUMBER OF TIMES:

58-59/

OR

NONE ... (SKIP TO Q.2N, PAGE E-5) 00

- 2D. For how many months did you live apart the (first/next) time? Each separation must have lasted at least 3 months or more. DO NOT INCLUDE A CURRENT MARITAL SEPARATION.

FIRST/ONLY TIME:

60-61/

SECOND TIME:

62-63/

THIRD TIME:

64-65/

FOURTH TIME:

66-67/

- 2E. During this (marriage/relationship), [since the (DATE OF LAST INTERVIEW)], did you ever have a problem conceiving a child because of prolonged separation?

YES 1

68/

NO 2

SKIP TO Q.2N, PAGE E-5

BEGIN DECK 14
10-34/R

2F. QUESTION DELETED.

35-61/R

2G. QUESTION DELETED.

62-74/R

2H. QUESTION DELETED.

2I. QUESTION DELETED.

BEGIN DECK 15
10-44/R

2J. QUESTION DELETED.

45-46/R

2K. QUESTION DELETED.

47-71/R

2L. QUESTION DELETED.

BEGIN DECK 16
10-36/R
37-49/R

2M. QUESTION DELETED.

50-74/R

2N. HAS R STOPPED LIVING WITH SPOUSE OR PARTNER? IS "YES" CODED AT Q.2 ON PAGE E-3?

YES 1 75/

NO (SKIP TO Q.10, PAGE E-18) 2

3. Since (DATE OF LAST INTERVIEW), have you done one of the following: (1) reconciled or married (again);
or (2) lived with a partner for 3 months or more?

YES (ASK Q.3A) 1 76/

DID NEITHER ... (SKIP TO Q.10, PAGE E-18) 2

3A. How many times have you been married or lived with a partner, for at least 3 months since (DATE OF LAST INTERVIEW)?

RECORD NUMBER OF TIMES:

77/

FIRST RELATIONSHIP

4. Thinking of (that/the first) relationship since (DATE OF LAST INTERVIEW), did you marry this person?

YES 1 78/

NO 2

RECONCILED 3

4A. What is the current full name of (this partner/your wife)?

ID #

79-80/

(LAST)

(FIRST)

(MIDDLE)

4A-1. RECORD FULL NAME OF (SPOUSE/PARTNER) AT ITEM 7 ON INFORMATION SHEET.
RECORD ID# ABOVE.

BEGIN DECK 17

What was her full maiden name?

10-29/

4A-2. What was her birthdate? RECORD DATE:

MO

DA

YR

30-35/

4B. In what month and year did you (reconcile/get married to/start living with) (NAME FROM Q.4A)?

ENTER MONTH AND YEAR

 --
MONTH YEAR

36-39/

4C. Have you stopped living with (NAME FROM Q.4A, PAGE E-6)?

YES 1 40/

NO (SKIP TO Q.4F) 2

4D. SHOW PARTICIPANT HAND CARD G. How did this (marriage/relationship) end? Choose one of the responses on Card G.

SEPARATION 1 41/

DIVORCE 2

DEATH OF SPOUSE OR PARTNER 3

4E. In what month and year did (RESPONSE FROM Q.4D) occur?

ENTER MONTH AND YEAR -
 MONTH YEAR 42-45/

4F. During this (marriage/relationship), how many times were you living apart from (NAME FROM Q.4A) for 3 months or more since (DATE OF LAST INTERVIEW)?

ENTER NUMBER OF TIMES: 46-47/

OR

NONE . (SKIP TO Q.5, PAGE E-9) 00

4G. For how many months did you live apart the (this/first/next) time?

FIRST/ONLY TIME: 48-49/

SECOND TIME: 50-51/

THIRD TIME: 52-53/

FOURTH TIME: 54-55/

4H. During this (marriage/relationship), [since the (DATE OF LAST INTERVIEW)], did you ever have a problem conceiving a child because of prolonged separation?

Yes 1 56/

No 2

SKIP TO Q.5, PAGE E-9.

4I. QUESTION DELETED. 57-80/R

4J. QUESTION DELETED. BEGIN DECK 18
10-31/R
32-36/R

4K. QUESTION DELETED. 37-49/R

4L. QUESTION DELETED. 50-80/R

4M. QUESTION DELETED. BEGIN DECK 19
10-11/R

4N. QUESTION DELETED. 12-36/R
37-63/R

40. QUESTION DELETED.

64-76/R
77/R

4P. QUESTION DELETED.

BEGIN DECK 20
10-34/R

5. IS THERE A SECOND RELATIONSHIP SINCE THE DATE OF LAST INTERVIEW? IS NUMBER OF
TIMES RECORDED IN Q.3A, PAGE E-5, EQUAL TO 2 OR MORE?

YES (GO TO Q.6, NEXT PAGE) 1 35/

NO (SKIP TO Q.10, PAGE E-18) 2

SECOND RELATIONSHIP (SECOND MOST RECENT)

6. Thinking of the next relationship since (DATE OF LAST INTERVIEW), did you marry this person?

YES 1 36/

NO 2

6A. What is the current full name of this person?

ID #
37-38/_____
(LAST)_____
(FIRST) (MIDDLE)

6A-1. RECORD FULL NAME OF (SPOUSE/PARTNER) AT ITEM 7 ON INFORMATION SHEET. RECORD ID# ABOVE.

What was her full maiden name?

_____ 39-58/

6A-2. What was her birthdate? RECORD DATE:

59-64/

MO

DA

YR

6B. In what month and year did you (reconcile/get married to/start living with) (NAME FROM Q.6A)?

ENTER MONTH AND YEAR

		--		
MONTH			YEAR	

65-68/

6C. Have you stopped living with (NAME FROM Q.6A)?

YES 1 69/

NO (SKIP TO Q.6F) 2

6D. SHOW PARTICIPANT HAND CARD G. How did this (marriage/relationship) end? Choose one of the responses on Card G.

SEPARATION 1 70/

DIVORCE 2

DEATH OF SPOUSE OR PARTNER 3

6E. In what month and year did (RESPONSE FROM Q.6D) occur?

ENTER MONTH AND YEAR --
 MONTH YEAR

71-74/

6F. During this (marriage/relationship), how many times were you living apart from (NAME FROM Q.6A) for 3 months or more since (DATE OF LAST INTERVIEW)?

ENTER NUMBER OF TIMES:

75-76/

OR

NONE . (SKIP TO Q.7, PAGE E-13) 00

6G. For how many months did you live apart the (this/first/next) time?

FIRST/ONLY TIME:

77-78/

SECOND TIME:

79-80/

BEGIN DECK 21

THIRD TIME:

10-11/

FOURTH TIME:

12-13/

6H. During this (marriage/relationship), [since the (DATE OF LAST INTERVIEW)], did you ever have a problem conceiving a child because of prolonged separation?

YES 1

14/

NO 2

SKIP TO Q.7, PAGE E-13

6I. QUESTION DELETED.

15-39/R

6J. QUESTION DELETED.

40-66/R

6K. QUESTION DELETED.

67-79/R

6L. QUESTION DELETED.

BEGIN DECK 22

10-29/R

30-44/R

6M. QUESTION DELETED.

45-46/R

6N. QUESTION DELETED.

47-71/R

BEGIN DECK 23

10-29/R

30-36/R

60. QUESTION DELETED.

37-49/R

6P. QUESTION DELETED.

50/R
51-75/R

7. IS THERE A THIRD RELATIONSHIP SINCE THE DATE OF LAST INTERVIEW?

IS NUMBER OF TIMES RECORDED IN Q.3A, PAGE E-5 EQUAL TO 3 OR MORE?

YES (GO TO Q.8, NEXT PAGE) 1

76/

NO (SKIP TO Q.10, PAGE E-18) 2

THIRD RELATIONSHIP

8. Thinking of the next relationship since (DATE OF LAST INTERVIEW), did you marry this person?

YES 1 77/

NO 2

8A. What is the current full name of this person?

ID #
78-79/

(LAST)

(FIRST) (MIDDLE)

8A-1. RECORD FULL NAME OF (SPOUSE/PARTNER) AT ITEM 7 ON INFORMATION SHEET.
RECORD ID# ABOVE.

BEGIN DECK 24

What was her full maiden name?

_____ 10-29/

What was her birthdate? RECORD DATE: 30-35/
MO DA YR

8B. In what month and year did you (reconcile/get married to/start living with) (NAME FROM Q.8A)?

ENTER MONTH AND YEAR --
MONTH YEAR 36-39/

8C. Have you stopped living with (NAME FROM Q.8A)?

YES 1 40/

NO (SKIP TO Q.8F) 2

8D. SHOW PARTICIPANT HAND CARD G. How did this (marriage/relationship) end?
Choose one of the responses on Card G.

SEPARATION 1 41/

DIVORCE 2

DEATH OF SPOUSE OR PARTNER 3

8E. In what month and year did this occur?

ENTER MONTH AND YEAR

-
MONTH YEAR

42-45/

8F. During this (marriage/relationship), how many times were you living apart from (NAME FROM Q.8A) for 3 months or more since (DATE OF LAST INTERVIEW)?

ENTER NUMBER OF TIMES:

46-47/

OR

NONE . (GO TO Q.9, PAGE E-17) 00

8G. For how many months did you live apart the (this/first/next) time?

FIRST/ONLY TIME:

48-49/

SECOND TIME:

50-51/

THIRD TIME:

52-53/

FOURTH TIME:

54-55/

8H. During this (marriage/relationship), [since the (DATE OF LAST INTERVIEW)], did you ever have a problem conceiving a child because of prolonged separation?

YES 1

56/

NO 2

SKIP TO Q.9, PAGE E-17

8I. QUESTION DELETED.

57-80/R

8J. QUESTION DELETED.

BEGIN DECK 25
10-36/R

8K. QUESTION DELETED.

37-49/R

8L. QUESTION DELETED.

50-74/R

8M. QUESTION DELETED.

75-76/R

8N. QUESTION DELETED.

BEGIN DECK 26
10-34/R
35-61/R

80. QUESTION DELETED.

62-74/R
75/R

8P. QUESTION DELETED.

BEGIN DECK 27
10-34/R

9. IS THERE A FOURTH RELATIONSHIP SINCE THE DATE OF LAST INTERVIEW?

IS NUMBER OF TIMES RECORDED IN Q.3A, EQUAL TO 4 OR MORE?

YES (GO TO NEW QUESTIONNAIRE) 1

35/

NO 2

10. NOW YOU WILL VERIFY BIOLOGICAL CHILDREN USING CHILDREN'S RECORD FORM: THIS FORM INCLUDES R'S BIOLOGICAL CHILDREN AS OF DATE OF LAST INTERVIEW.

ARE CHILDREN LISTED ON CHILDREN'S RECORD FORM?

YES (ASK Q.10A) 1 36/

NO (ASK Q.10B) 2

- 10A. I'd like to read information about your (child/children) from our last interview to check our records. As of (DATE OF LAST INTERVIEW), our records show that you have had (NUMBER OF CHILDREN).

NEXT, READ EACH CHILD'S FULL NAME, SEX, AND BIRTHDATE AND MOTHER'S NAME.
Is that correct?

YES, CHILDREN ARE CORRECT.
IF INFORMATION IS CORRECT (GO TO Q.11) 1 37/

NO. . . . (IF INFORMATION IS INCOMPLETE,
MAKE CORRECTIONS FOR EACH CHILD
ON CHILDREN'S RECORD FORM.
CORRECT FULL NAME, SEX, DOB,
MOTHER'S MAIDEN NAME. THEN GO TO Q.11) 2

- 10B. Our records show that you had not had any children of your own as of (DATE OF LAST INTERVIEW).
Is that correct?

YES, IF INFORMATION IS CORRECT (GO TO Q.12) ... 1 38/

NO/MISSING . . (IF CHILDREN MISSING, ADD TO CHILDREN'S
RECORD FORM. RECORD BEGINNING
AT LINE 01 ON CHILDREN'S
RECORD FORM. THEN GO TO Q.11) 2

11. NOW YOU WILL UPDATE EACH CHILD'S AGE. ASK THIS QUESTION FOR EACH CHILD LISTED ON CHILDREN'S RECORD FORM FOR WHOM THERE IS NO DEATH DATE: What is (READ NAME OF 1ST CHILD/NAME OF 2ND CHILD, SO FORTH)'s current age? UPDATE AGE ON CHILDREN'S RECORD FORM.

NOW YOU WILL ASK IF ANY OF THE CHILDREN HAVE DIED: Have any of your children died since (DATE OF LAST INTERVIEW)? FOR EACH CHILD THAT DIED, RECORD CHILD ID# IN QUESTIONNAIRE AND ASK QUESTIONS 11A THROUGH 11C. IF NO CHILDREN HAVE DIED, SKIP TO Q.12.

- 11A. FOR EACH DECEASED CHILD ASK: When did (NAME OF CHILD) die? RECORD DAY, MONTH, AND YEAR ON CHILDREN'S RECORD FORM.

- 11B. What was the cause of death? RECORD BELOW.

BEGIN DECK 28

- 11C. Where is (CHILD)'s death registered? In what city and state? RECORD BELOW.

CHILD ID: 39-40/	CHILD ID: 60-61/	CHILD ID: 10-11/
CAUSE: _____ 41/	CAUSE: _____ 62/	CAUSE: _____ 12/
REGISTRATION: _____ CITY 42-57/	REGISTRATION: _____ CITY 63-78/	REGISTRATION: _____ CITY 13-28/
STATE 58-59/	STATE 79-80/	STATE 29-30/

12. HAS R BEEN MARRIED OR HAD A PARTNER FOR 3 MONTHS OR MORE SINCE (DATE OF LAST INTERVIEW)? VERIFY WITH R.

YES (ASK Q.12A) 1 31/

NO (SKIP TO SECTION F, PAGE F-1) 2

12A. Has/Have (your wife/any of your partners) become pregnant by you since (DATE OF LAST INTERVIEW)? This includes pregnancies that began before (DATE OF LAST INTERVIEW) and ended after (DATE OF LAST INTERVIEW).

YES (ASK Q.12B) 1 32/

NO (SKIP TO Q.25, PAGE E-35) 2

12B. How many pregnancies (has your wife/have your partners) had with you since (DATE OF LAST INTERVIEW)?

ENTER NUMBER OF PREGNANCIES:

33-34/

FIRST PREGNANCY

13. When did the first pregnancy begin? What month and year?

ENTER MONTH AND YEAR

--
MONTH YEAR

35-38/

13A. HAS R HAD MORE THAN ONE RELATIONSHIP SINCE DATE OF LAST INTERVIEW? IS "YES"
CODED AT Q.3, PAGE E-5?)

YES (ASK Q.13B) 1

39/

NO (SKIP TO Q.13C) 2

13B. Which (spouse/partner) had this pregnancy?

RECORD NAME:

(LAST)

(MAIDEN)

40-64/

(FIRST)

(MIDDLE)

RECORD ID # FROM INFORMATION SHEET.

65-66/

13C. How many months did it take (NAME OF SPOUSE/PARTNER) to become pregnant (this time)?

RECORD MONTHS AND/OR 67-68/
AND/OR YEARS MOS YRS

WASN'T TRYING 00 69-70/
OR
DON'T KNOW 98

13D. Were either you or (NAME OF SPOUSE/PARTNER) using birth control at the time she became pregnant?

YES (ASK Q.13E) 1 71/
NO (SKIP TO Q.14) 2

13E. SHOW PARTICIPANT HAND CARD H. Please look at this card and tell me all the numbers of the types of birth control you and (NAME FROM Q.13B) were using when she became pregnant. CODE ALL THAT APPLY.

1. PILL	01	72-73/
2. DOUCHE	02	74-75/
3. FOAM	03	76-77/
4. JELLY, CREAM, SUPPOSITORY	04	78-79/
		BEGIN DECK 29
5. IUD	05	10-11/
6. CONDOM, RUBBER	06	12-13/
7. DIAPHRAGM	07	14-15/
8. DIAPHRAGM AND JELLY	08	16-17/
9. SPONGE	09	18-19/
10. RHYTHM - CALENDAR	10	20-21/
11. RHYTHM - TEMPERATURE	11	22-23/
12. WITHDRAWAL	12	24-25/
13. OTHER (SPECIFY) _____		
	13	26-27/
DON'T KNOW	98	28-29/

14. Did that pregnancy result in a live birth; or in a miscarriage, stillbirth, or abortion, [or is (NAME) still pregnant]?

LIVE BIRTH 1 30/

MISCARRIAGE.....(SKIP TO Q.16) 2
STILLBIRTH.....(SKIP TO Q.16) 3

ABORTION.....(SKIP TO Q.16) 4
STILL PREGNANT (SKIP TO Q.25, PAGE E-35) 5

- 14A. What is the first and last name of the child as it appears on the birth certificate?
RECORD ON SUPPLEMENTARY CHILDREN'S RECORD FORM.

RECORD ID FROM SUPPLEMENTARY CHILDREN'S RECORD FORM

31-32/

- 14B. When was (CHILD) born? ENTER BIRTHDATE ON SUPPLEMENTARY CHILDREN'S RECORD FORM.

- 14C. Was (CHILD) male or female? RECORD ON SUPPLEMENTARY CHILDREN'S RECORD FORM.

- 14D. How much did (CHILD) weigh at birth?

ENTER POUNDS:

33-34/

AND

OUNCES:

35-36/

OR
DON'T KNOW 98

- 14E. Was (CHILD) a twin?

YES 1

37/

NO 2

- 14F. Was (CHILD) premature, full term, or overdue?

PREMATURE 1

38/

FULL TERM 2

OVERDUE 3

DON'T KNOW 8

- 14G. How old was (NAME OF MOTHER) when (CHILD) was born?

RECORD AGE:

39-40/

DON'T KNOW 98

- 14H. What is the name and address of the hospital where this child was born? RECORD BELOW

41/

NAME OF HOSPITAL

STREET ADDRESS

(CITY) _____ (STATE)

RECORD NAME AND ADDRESS ON MEDICAL CONSENT FORM

- 14I. What is the name and address of the doctor or medical facility who has (CHILD)'s current medical records? RECORD BELOW.

42/

DOCTOR'S NAME OR FACILITY NAME

STREET ADDRESS

(CITY) _____ (STATE)

RECORD NAME AND ADDRESS ON MEDICAL CONSENT FORM

- 14J. Is this child still living? IF NO, SKIP TO Q.14K. IF YES, ASK: What is child's current age?
RECORD AGE ON SUPPLEMENT CHILDREN'S FORM. SKIP TO Q.15.

- 14K. When did (CHILD) die?

RECORD DAY, MONTH, AND YEAR ON SUPPLEMENTARY CHILDREN'S RECORD FORM.

- 14L. What was the cause of death? RECORD BELOW.

43/

- 14M. Where is (CHILD'S) death registered? In what city and state?

(CITY) _____ (STATE)

44-59/
60-61/

15. IS THERE A SECOND PREGNANCY SINCE THE DATE OF LAST INTERVIEW? IS NUMBER OF PREGNANCIES IN Q.12B ON PAGE E-20 EQUAL TO 2 OR MORE?

YES (SKIP TO Q.17) 1 62/

NO (SKIP TO Q.25, PAGE E-35) 2

16. When did that pregnancy end?

RECORD DATE: 63-68/
MO DA YR

16A. How many weeks had (NAME FROM Q.13B) been pregnant when that happened?

ENTER NUMBER OF WEEKS: 69-70/
DON'T KNOW 98

16B. IF CODE "2" OR "3" IN Q.14, MISCARRIAGE OR STILLBIRTH, ASK Q.16B-C. OTHERS GO TO Q.16D. Did a doctor tell you why this (miscarriage/stillbirth) might have occurred?

YES (ASK Q.16C) 1 71/

NO (SKIP TO Q.16D) 2

16C. What did the doctor say caused the (miscarriage/stillbirth)? RECORD VERBATIM.

72/

16D. IS THERE A SECOND PREGNANCY SINCE DATE OF LAST INTERVIEW? IS NUMBER OF PREGNANCIES IN Q.12B ON PAGE E-20 EQUAL TO 2 OR MORE?

YES (GO TO Q.17) 1 73/

NO (SKIP TO Q.25, PAGE E-35) . 2

SECOND PREGNANCY

17. When did the next pregnancy begin? What month and year?

ENTER MONTH AND YEAR -
MONTH YEAR

74-77/

17A. HAS R HAD MORE THAN ONE RELATIONSHIP SINCE DATE OF LAST INTERVIEW?
(SEE ITEM 7, INFORMATION SHEET.)

YES (ASK Q.17B) 1

78/

NO (SKIP TO Q.17C) 2

BEGIN DECK 30

17B. Which (spouse/partner) had this pregnancy?

RECORD NAME: _____
(LAST)

10-34/

(FIRST)_____
(MIDDLE)

RECORD ID # FROM INFORMATION SHEET.

35-36/

17C. How many months did it take (NAME OF SPOUSE/PARTNER) to become pregnant (this time)?

RECORD MONTHS AND/OR
AND/OR YEARS MOS YRS

37-38/

WASN'T TRYING 00

39-40/

OR

DON'T KNOW 98

17D. Were either you or (NAME OF SPOUSE/PARTNER) using birth control at the time she became pregnant?

YES (ASK Q.17E) 1

41/

NO (SKIP TO Q.18, PAGE E-27) 2

17E. SHOW PARTICIPANT HAND CARD H. Please look at card H again and tell me all the numbers of the types of birth control you and (NAME FROM Q.17B) were using when she became pregnant. CODE ALL THAT APPLY.

1. PILL	01	42-43/
2. DOUCHE	02	44-45/
3. FOAM	03	46-47/
4. JELLY, CREAM, SUPPOSITORY	04	48-49/
5. IUD	05	50-51/
6. CONDOM, RUBBER	06	52-53/
7. DIAPHRAGM	07	54-55/
8. DIAPHRAGM AND JELLY	08	56-57/
9. SPONGE	09	58-59/
10. RHYTHM - CALENDAR	10	60-61/
11. RHYTHM - TEMPERATURE	11	62-63/
12. WITHDRAWAL	12	64-65/
13. OTHER (SPECIFY)		
.....	13	66-67/
DON'T KNOW	98	68-69/

18. Did that pregnancy result in a live birth; or in a miscarriage, stillbirth, or abortion, [or is (NAME) still pregnant]?

LIVE BIRTH 1 70/

MISCARRIAGE.....(SKIP TO Q.20)	2
STILLBIRTH.....(SKIP TO Q.20)	3

ABORTION.....(SKIP TO Q.20) 4
STILL PREGNANT(SKIP TO Q.25, PAGE 35) 5

18A. What is the first and last name of the child as it appears on the birth certificate?
RECORD ON SUPPLEMENTARY CHILDREN'S RECORD FORM.

RECORD ID FROM SUPPLEMENTARY CHILDREN'S RECORD FORM ☐☐ 71-72/

18B. When was (CHILD) born? ENTER BIRTHDATE ON SUPPLEMENTARY CHILDREN'S RECORD FORM.

18C. Was (CHILD) male or female? RECORD ON SUPPLEMENTARY CHILDREN'S RECORD FORM.

18D. How much did (CHILD) weigh at birth?

ENTER POUNDS: 73-74/
 AND
 OUNCES: 75-76/
 OR
 DON'T KNOW 98

18E. Was (CHILD) a twin?

YES 1 77/
 NO 2

18F. Was (CHILD) premature, full term, or overdue?

PREMATURE 1 78/
 FULL TERM 2
 OVERDUE 3
 DON'T KNOW 8

18G. How old was (NAME OF MOTHER) when (CHILD) was born?

RECORD AGE: 79-80/
 Don't know 98

18H. What is the name and address of the hospital where this child was born? RECORD BELOW

NAME OF HOSPITAL_____
STREET ADDRESS_____
(CITY)_____
(STATE)

RECORD NAME AND ADDRESS ON MEDICAL CONSENT FORM

18I. What is the name and address of the doctor or medical facility who has (CHILD)'s current medical records?
RECORD BELOW.

DOCTOR'S-NAME OR FACILITY NAME

STREET ADDRESS

(CITY) (STATE)

RECORD NAME AND ADDRESS ON MEDICAL CONSENT FORM.

18J. Is this child still living? IF NO, SKIP TO Q.18K. IF YES, ASK: What is child's current age? RECORD
AGE ON SUPPLEMENT CHILDREN'S FORM. SKIP TO Q.19.

18K. When did (CHILD) die? RECORD DAY, MONTH, AND YEAR ON SUPPLEMENTARY CHILDREN'S
RECORD FORM.

18L. What was the cause of death? RECORD BELOW.

BEGIN DECK 31

10/

18M. Where is (CHILD'S) death registered? In what city and state?

(CITY) (STATE)

11-26/

27-28/

19. IS THERE A THIRD PREGNANCY SINCE THE DATE OF LAST INTERVIEW? IS NUMBER OF
PREGNANCIES IN Q.12B ON PAGE E-20 EQUAL TO 3 OR MORE?

YES (SKIP TO Q.21) 1

29/

NO (SKIP TO Q.25, PAGE E-35) 2

20. When did that pregnancy end?

RECORD DATE: 30-35/
MO DA YR

20A. How many weeks had (NAME FROM Q.17B, PAGE E-26) been pregnant when that happened?

ENTER NUMBER OF WEEKS: 36-37/
DON'T KNOW 98

20B. IF CODE "2" OR "3" IN Q.18, MISCARRIAGE OR STILLBIRTH, ASK Q.20B-C; OTHERS GO TO Q.20D.
Did a doctor tell why this (miscarriage/stillbirth) might have occurred?

YES (ASK Q.20C) 1

38/

NO (SKIP TO Q.20D) 2

20C. What did the doctor say caused the (miscarriage/stillbirth)? RECORD VERBATIM.

39/

20D. IS THERE A THIRD PREGNANCY SINCE DATE OF LAST INTERVIEW? IS NUMBER OF
PREGNANCIES IN Q.12B ON PAGE E-20 EQUAL TO 2 OR MORE?

YES (GO TO Q.21) 1

40/

NO (SKIP TO Q.25, PAGE E-35) . 2

THIRD PREGNANCY

21. When did the next pregnancy begin? What month and year?

ENTER MONTH AND YEAR

-
MONTH YEAR

41-44/

21A. HAS R HAD MORE THAN ONE RELATIONSHIP SINCE DATE OF LAST INTERVIEW? (SEE ITEM 7, INFORMATION SHEET.)

YES (ASK Q.21B) 1

45/

NO (SKIP TO Q.21C) 2

21B. Which (spouse/partner) had this pregnancy?

RECORD NAME:

(LAST)

(MAIDEN)

46-70/

(FIRST)

(MIDDLE)

RECORD ID # FROM INFORMATION SHEET.

71-72/

21C. How many months did it take (NAME OF SPOUSE/PARTNER) to become pregnant (this time)?

RECORD MONTHS

AND/OR

AND/OR YEARS

MOS

YRS

73-74/

WASN'T TRYING 00

75-76/

OR

DON'T KNOW 98

21D. Were either you or (NAME OF SPOUSE/PARTNER) using birth control at the time she became pregnant?

YES (ASK Q.21E) 1

77/

NO (SKIP TO Q.22) 2

21E. SHOW PARTICIPANT HAND CARD H. Please look at card H again and tell me all the numbers of the types of birth control you and (NAME FROM Q.21B) were using when she became pregnant. CODE ALL THAT APPLY.

	BEGIN DECK 32	
1. PILL	01	10-11/
2. DOUCHE	02	12-13/
3. FOAM	03	14-15/
4. JELLY, CREAM, SUPPOSITORY	04	16-17/
5. IUD	05	18-19/
6. CONDOM, RUBBER	06	20-21/
7. DIAPHRAGM	07	22-23/
8. DIAPHRAGM AND JELLY	08	24-25/
9. SPONGE	09	26-27/
10. RHYTHM - CALENDAR	10	28-29/
11. RHYTHM - TEMPERATURE	11	30-31/
12. WITHDRAWAL	12	32-33/
13. OTHER (SPECIFY)		
	13	34-35/
DON'T KNOW	98	36-37/

22. Did that pregnancy result in a live birth; or in a miscarriage, stillbirth, or abortion, [or is (NAME) still pregnant]?

LIVE BIRTH 1 38/

MISCARRIAGE.....(SKIP TO Q.24) 2
STILLBIRTH.....(SKIP TO Q.24) 3

ABORTION.....(SKIP TO Q.24) 4
STILL PREGNANT(SKIP TO Q.25, PAGE E-35) 5

22A. What is the first and last name of the child as it appears on the birth certificate?
RECORD ON SUPPLEMENTARY CHILDREN'S RECORD FORM.

RECORD ID FROM SUPPLEMENTARY CHILDREN'S RECORD FORM:

39-40/

22B. When was (CHILD) born? ENTER BIRTHDATE ON SUPPLEMENTARY CHILDREN'S RECORD FORM.

22C. Was (CHILD) male or female? RECORD ON SUPPLEMENTARY CHILDREN'S RECORD FORM.

22D. How much did (CHILD) weigh at birth?

ENTER POUNDS: 41-42/
AND
OUNCES: 43-44/
OR
DON'T KNOW 98

22E. Was (CHILD) a twin?

YES 1 45/
NO 2

22F. Was (CHILD) premature, full term, or overdue?

PREMATURE 1 46/
FULL TERM 2
OVERDUE 3
DON'T KNOW 8

22G. How old was (NAME OF MOTHER) when (CHILD) was born?

RECORD AGE: 47-48/
DON'T KNOW 98

22H. What is the name and address of the hospital where this child was born? RECORD BELOW

NAME OF HOSPITAL

STREET ADDRESS

(CITY)

(STATE)

RECORD NAME AND ADDRESS ON MEDICAL CONSENT FORM

22I. What is the name and address of the doctor or medical facility who has (CHILD)'s current medical records? RECORD BELOW.

DOCTOR'S NAME OR FACILITY NAME

STREET ADDRESS

(CITY) (STATE)

RECORD NAME AND ADDRESS ON MEDICAL CONSENT FORM

22J. Is this child still living? IF NO, SKIP TO Q.22K. IF YES, ASK: What is child's current age? RECORD AGE ON SUPPLEMENT CHILDREN'S FORM. SKIP TO Q.23.

22K. When did (CHILD) die? RECORD DAY, MONTH, AND YEAR ON SUPPLEMENTARY CHILDREN'S RECORD FORM.

22L. What was the cause of death? RECORD BELOW.

49/

22M. Where is (CHILD'S) death registered? In what city and state?

(CITY) (STATE)

23. IS THERE A FOURTH PREGNANCY SINCE THE DATE OF LAST INTERVIEW? IS NUMBER OF PREGNANCIES IN Q.12B EQUAL TO 4 OR MORE?

YES (GO TO NEW QUESTIONNAIRE) 1

68/

NO (SKIP TO Q.25, PAGE E-35) 2

24. When did that pregnancy end?

RECORD DATE: ____
MO DA YR

69-74/

24A. How many weeks had (NAME FRgnant when that happened?

ENTER NUMBER OF WEEKS:

75-76/

DON'T KNOW 98

24B. IF CODE "2" OR "3" IN Q.22, MISCARRIAGE OR STILLBIRTH, ASK Q.24B AND Q.24C. OTHERS GO TO Q.24D. Did a doctor tell why this (miscarriage/stillbirth) might have occurred?

YES (ASK Q.24C) 1

77/

NO (SKIP TO Q.24D) 2

24C. What did the doctor say caused the (miscarriage/stillbirth)? RECORD VERBATIM.

78/

- 24D. IS THERE A FOURTH PREGNANCY SINCE DATE OF LAST INTERVIEW? IS NUMBER OF PREGNANCIES IN Q.12B ON PAGE E-20 EQUAL TO 4 OR MORE?

YES (GO TO NEW QUESTIONNAIRE) 1

79/

NO (GO TO Q.25) 2

25. Since (DATE OF LAST INTERVIEW) have you ever tried for a period of one year or more, to conceive a child and were not able to do so?

YES **1**

BEGIN DECK 33

10/

NO (SKIP TO SECTION F, PAGE F-1) 2

26. For how many periods of one year or more did this happen? (PROBE: Was it one period, two periods. . ?)

ONE 1

11/

TWO 2

THREE 3

FOUR 4

27. Since (DATE OF LAST INTERVIEW), in what month and year did the first period begin?
And in what month and year did it end?

BEGIN 12-15/ END

16-19/

[] [] -- [] [] [] [] -- [] [] OR HAS NOT
 MONTH YEAR MONTH YEAR ENDED..... 0000

- 28. During this first period, what was your wife or partner's first name? RECORD BELOW.**

11

20-33/

ID#

34-35/

29. How old was (NAME OF WIFE/PARTNER) in (BEGINNING DATE OF PERIOD)?

RECORD AGE:

36-37/

30. During this first period, did either of you see a doctor to discuss any difficulties in conceiving children?

YES 1 38/

NO 2

31. ON BLUE SELF ADMINISTERED FORM 1, CODE "PERIOD 1." GIVE BLUE FORM TO R, AND READ THESE INSTRUCTIONS.

There are many reasons that some couples find it difficult or impossible to conceive a child. Please read this form and circle the number on Side A for each reason which applied to you for this period. Side B provides reasons appropriate for your spouse. Circle as many responses as appropriate for you and your spouse.

Now please fill out Side A for yourself and Side B for your spouse on this form.

32. IS THERE A SECOND PERIOD OF INFERTILITY SINCE DATE OF LAST INTERVIEW? IS Q.26 ON PAGE E-35 CODED "TWO" OR MORE?

YES (GO TO Q.33) 1 39/

NO (INSTRUCT R TO PUT SELF-ADMINISTERED FORM 1 IN ENVELOPE AND SKIP TO SECTION F, PAGE F-1) 2

33. Since (DATE OF LAST INTERVIEW), in what month and year did the second period begin? And in what month and year did it end?

BEGIN 40-43/ END 44-47/

OR HAS NOT

____ - ____ - ____ - ____ ENDED. 0000

MONTH YEAR MONTH YEAR

34. During this second period, what was your wife or partner's first name? RECORD BELOW.

☐ ☐

48-61/

ID# 62-63/

35. How old was (NAME OF WIFE/PARTNER) in (BEGINNING DATE OF PERIOD)?

RECORD AGE:

☐ ☐

64-65/

36. During this second period, did either of you see a doctor to discuss any difficulties in conceiving children?

YES 1 66/

NO 2

37. CODE "PERIOD 2" AND ASK PARTICIPANT TO READ SELF-ADMINISTERED FORM 1. READ INSTRUCTIONS BELOW.

There are many reasons that some couples find it difficult or impossible to conceive a child. Please read this form and circle the number on Side A for each reason which applied to you for this period. Side B provides reasons appropriate for your spouse. Circle as many responses as appropriate for you and your spouse.

Now please fill out Side A for yourself and Side B for your spouse on this form.

38. IS THERE A THIRD PERIOD OF INFERTILITY SINCE DATE OF LAST INTERVIEW? (IS Q.26 CODED "THREE" OR MORE?)

YES (GO TO Q.39) 1 67/

NO (INSTRUCT R TO PUT SELF-
ADMINISTERED FORM 1
IN ENVELOPE AND SKIP
TO SECTION F, PAGE F-1) 2

39. Since (DATE OF LAST INTERVIEW), in what month and year did the third period begin?
And in what month and year did it end?

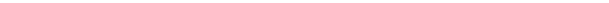
BEGIN 68-71/ END 72-75/

OR HAS NOT
ENDED..... 0000

MONTH YEAR MONTH YEAR

BEGIN DECK 34

40. During this second period, what was your wife or partner's first name? RECORD BELOW.



 10-23/
 ID# 24-25/

41. How old was (NAME) in (BEGINNING DATE OF PERIOD)?

RECORD AGE: 26-27/

42. During this third period, did either of you see a doctor to discuss any difficulties in conceiving children?

YES 1 28/

NO 2

B-73

43. CODE "PERIOD 3" AND ASK PARTICIPANT TO READ SELF ADMINISTERED FORM 1.
READ INSTRUCTIONS BELOW.

There are many reasons that some couples find it difficult or impossible to conceive a child. Please read this form and circle the number on Side A for each reason which applied to you for this period. Side B provides reasons appropriate for your spouse. Circle as many responses as appropriate for you and your spouse.

Now please fill out Side A for yourself and Side B for your spouse on this form.

44. IS THERE A FOURTH PERIOD OF INFERTILITY SINCE DATE OF LAST INTERVIEW? (IS Q.26 CODED "FOUR" OR MORE?)

YES (GO TO NEW QUESTIONNAIRE) 1

NO (INSTRUCT R TO PUT SELF-
ADMINISTERED FORM 1
IN ENVELOPE AND SKIP
TO SECTION F, PAGE F-1) 2

SECTION F: CHILD AND FAMILY HEALTH

FOR THIS SECTION YOU WILL NEED:

- HAND CARD I
- INTERVAL SUPPLEMENTAL RECORDING BOOK (I.S.R.B.)

1. Now I would like to ask you some questions about birth defects in your family. By birth defects I mean a physical abnormality present (though not necessarily noticed) at the time of birth. Birth defects range in severity from unusual birthmarks to a missing or mishapen limb. Birth defects can affect any part of the body, including bones, body organs such as kidneys or the heart, reproductive and respiratory systems, blood, and the skin.

INTERVIEWER: HAS RESPONDENT HAD ANY BIOLOGICAL CHILDREN?

YES 1 29/

NO... (SKIP TO INSTRUCTION 12
BOX ABOVE Q.22, PAGE F-14) 2

1A. ARE CHILDREN RECORDED ON CHILDREN'S RECORD FORM?

YES (ASK Q.1B) 1 30/

NO (SKIP TO Q.2B) 2

1B. FOR EACH CHILD LISTED ON CHILDREN'S RECORD FORM ASK: Our records indicate that (READ CHILD'S NAME)(had/did not have) a birth defect at the time you were last interviewed. Is this information correct?

YES, IF INFORMATION IS CORRECT... (GO TO Q.2, PAGE F-2) ... 1 31/

NO, IF INFORMATION IS INCORRECT, UPDATE
CHILDREN'S RECORD FORM, THEN GO TO Q.2, PAGE F-2 2

MISSING 8

2. CHILDREN'S RECORD FORM HAS INFORMATION FOR CHILDREN PREVIOUSLY REPORTED. THESE ARE CHILDREN BORN TO PARTICIPANT AS OF DATE OF LAST INTERVIEW.

FOR EACH CHILD ON RECORD FORM (EXCEPT CHILDREN WHO DIED BEFORE DATE OF LAST INTERVIEW), ASK:

- 2A-1. Has any new defect, impairment or cancer been identified in (READ CHILD'S NAME) since our last interview, that is, since (READ DATE OF LAST INTERVIEW)? RECORD ON CHILDREN'S RECORD FORM.
- 2A-2. IF DEFECTS, IMPAIRMENTS, OR CANCER EXISTS PREVIOUSLY ASK: Has any change occurred in the condition for previously existing defects, impairments, or cancer for (CHILD) since (DATE OF LAST INTERVIEW)? RECORD ON CHILDREN'S RECORD FORM.

IF NO NEW DEFECT, IMPAIRMENT, OR CANCER, AND NO CHANGE IN CONDITION FOR CHILD, REASK Q.2 AND Q.2A FOR EACH CHILD.

- 2B. SUPPLEMENTARY CHILDREN'S RECORD FORM HAS INFORMATION FOR CHILDREN BORN TO PARTICIPANT SINCE THE DATE OF LAST INTERVIEW.

FOR EACH CHILD ON SUPPLEMENTARY CR FORM, ASK:

Has a defect, impairment or cancer been identified in (READ CHILD'S NAME)?

RECORD ON SUPPLEMENTARY CHILDREN'S RECORD FORM.

3. ASK QUESTIONS 4-20 FOR EACH CHILD WITH CANCER, DEFECT, OR IMPAIRMENT OR ANY CHANGE IN PREVIOUS CONDITION(S), INCLUDING ALL WHO MAY HAVE DIED AFTER DATE OF LAST INTERVIEW.

IF NONE OF THE CHILDREN HAVE CANCER, A BIRTH DEFECT, OR IMPAIRMENT, SKIP TO INSTRUCTION BOX ABOVE Q.22.

B-77

May 15, 1992

16:03 pm

Field Version 1.1

	1ST CHILD	2ND CHILD																																
CHILD'S NAME:																																		
CHILD'S ID#	32-33/	49-50/																																
MOTHER'S ID#	34-35/	51-52/																																
4. Was (READ CHILD'S NAME) (ever/since/last interview) diagnosed as having cancer?	YES 1 36/ NO (GO TO Q.5) 2	YES 1 53/ NO (GO TO Q.5) 2																																
5. Was (CHILD) (ever/since last interview) diagnosed as having a ... (READ EACH CATEGORY).	<table border="0"> <tr> <td></td> <td>YES</td> <td>NO</td> <td></td> </tr> <tr> <td>Learning Disability</td> <td>1</td> <td>2</td> <td>37/</td> </tr> <tr> <td>Physical or Motor Impairment</td> <td>1</td> <td>2</td> <td>38/</td> </tr> <tr> <td>Mental Impairment</td> <td>1</td> <td>2</td> <td>39/</td> </tr> </table>		YES	NO		Learning Disability	1	2	37/	Physical or Motor Impairment	1	2	38/	Mental Impairment	1	2	39/	<table border="0"> <tr> <td></td> <td>YES</td> <td>NO</td> <td></td> </tr> <tr> <td>Learning Disability</td> <td>1</td> <td>2</td> <td>54/</td> </tr> <tr> <td>Physical or Motor Impairment</td> <td>1</td> <td>2</td> <td>55/</td> </tr> <tr> <td>Mental Impairment</td> <td>1</td> <td>2</td> <td>56/</td> </tr> </table>		YES	NO		Learning Disability	1	2	54/	Physical or Motor Impairment	1	2	55/	Mental Impairment	1	2	56/
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Learning Disability	1	2	54/																															
Physical or Motor Impairment	1	2	55/																															
Mental Impairment	1	2	56/																															
6. INTERVIEWER: HAS ANY CANCER, DEFECT OR IMPAIRMENT BEEN IDENTIFIED IN CHILD? CHECK CHILDREN'S RECORD FORM OR SUPPLEMENTAL FORM. IF YES, ASK Q.7. IF NO, ASK Q.6A.	40-44/R YES (GO TO Q.7) 1 45/ NO (ASK Q.6A) 2	57-61/R YES (GO TO Q.7) 1 62/ NO (ASK Q.6A) 2																																
6A. INTERVIEWER: IS THERE ANOTHER CHILD?	YES (Q.4 AND 5 FOR NEXT CHILD) 1 46/ NO (SKIP TO BOX ABOVE Q.22) 2	YES (Q.4 AND 5 FOR NEXT CHILD) 1 63/ NO (SKIP TO BOX ABOVE Q.22) 2																																
7. What kind of birth defect or impairment (does/did) (CHILD) have? Any others?	_____ _____ 47/	_____ _____ 64/																																
8. Did you or someone else discuss (CHILD'S) birth defect or impairment with a doctor?	YES (GO TO Q.9) 1 48/ NO (SKIP TO Q.11) 2	YES (GO TO Q.9) 1 65/ NO (SKIP TO Q.11) 2																																

3RD CHILD	4TH CHILD	5TH CHILD	6TH CHILD
66-67/	14-15/	31-32/	48-49/
68-69/	16-17/	33-34/	50-51/
YES 1 70/ NO.....(GO TO Q.5) . 2	YES 1 18/ NO.....(GO TO Q.5) . 2	YES 1 35/ NO.....(GO TO Q.5) .. 2	YES 1 52/ NO.....(GO TO Q.5) . 2
YES NO Learning Disability ...1 2 71/ Physical or Motor Impairment ..1 2 72/ Mental Impairment. . 1 2 73/	YES NO Learning Disability ...1 2 19/ Physical or Motor Impairment ..1 2 20/ Mental Impairment. . 1 2 21/	YES NO Learning Disability ...1 2 36/ Physical or Motor Impairment ..1 2 37/ Mental Impairment. . 1 2 38/	YES NO Learning Disability ...1 2 53/ Physical or Motor Impairment ..1 2 54/ Mental Impairment. . 1 2 55/
BEGIN DECK 35 YES . (GO TO Q.7) ... 1 10/ NO .. (ASK Q.6A) 2	YES . (GO TO Q.7) ... 1 27/ NO .. (ASK Q.6A) 2	YES .. (GO TO Q.7) .. 1 44/ NO ... (ASK Q.6A) ... 2	YES . (GO TO Q.7) ... 1 61/ NO .. (ASK Q.6A) 2
YES . (Q.4 AND 5 FOR NEXT CHILD) .. 1 11/ NO .. (SKIP TO ~~DECK~~ ~~ABOVE~~ Q.22) .. 2	YES . (Q.4 AND 5 FOR NEXT CHILD) .. 1 28/ NO .. (SKIP TO ~~DECK~~ ~~ABOVE~~ Q.22) .. 2	YES .. (Q.4 AND 5 FOR NEXT CHILD) . 1 45/ NO ... (SKIP TO ~~DECK~~ ~~ABOVE~~ Q.22) . 2	YES . (Q.4 AND 5 FOR NEXT CHILD) .. 1 62/ NO .. (SKIP TO ~~DECK~~ ~~ABOVE~~ Q.22) .. 2
12/	29/	46/	63/
YES . (GO TO Q.9) ... 1 13/ NO .. (SKIP TO Q.11) . 2	YES .. (GO TO Q.9) . 1 30/ NO ... (SKIP TO Q.11) 2	YES .. (GO TO Q.9) .. 1 47/ NO ... (SKIP TO Q.11) 2	YES . (GO TO Q.9) ... 1 64/ NO .. (SKIP TO Q.11) . 2

	1ST CHILD	2ND CHILD
CHILD'S NAME:		
CHILD'S ID#		
MOTHER'S ID#		
9. COMPLETE HEALTH CARE PROVIDER FORM FOR EACH CANCER, DISABILITY AND DEFECT. IF NECESSARY, COMPLETE A MEDICAL AUTHORIZATION FORM	COMPLETE HEALTH CARE PROVIDER FORM FOR EACH CANCER, DISABILITY AND DEFECT. IF NECESSARY, COMPLETE A MEDICAL AUTHORIZATION FORM	COMPLETE HEALTH CARE PROVIDER FORM FOR EACH CANCER, DISABILITY AND DEFECT. IF NECESSARY, COMPLETE A MEDICAL AUTHORIZATION FORM
10. Did the doctor say that (CHILD) need (s/ed) any testing, medication, treatment, surgery, or special equipment because of the birth defect or impairment? By special equipment I mean a wheelchair, walker, artificial limb, body brace(s), or crutches.	66/ YES 1 NO 2 DON'T KNOW 8	72/ YES 1 NO 2 DON'T KNOW 8
11. Did (CHILD) ever receive any testing, medication, treatment, surgery or special equipment because of the birth defect or impairment?	67/ YES 1 NO 2 DON'T KNOW 8	73/ YES 1 NO 2 DON'T KNOW 8
12. At any time, did (CHILD'S) birth defect or impairment interfere in any way with (CHILD'S) physical or social development? For example, getting a job or making friends?	68/ YES... (GO TO Q.13) 1 NO... (ASK Q.12A) 2 DON'T KNOW 8	74/ YES... (GO TO Q.13) 1 NO... (ASK Q.12A) 2 DON'T KNOW 8
12A. INTERVIEWER: WAS THERE A "YES" CODED AT Q.10 OR Q.11?	69/ YES... (SKIP TO Q.13) 1 NO... (ASK Q.12B) 2	75/ YES... (SKIP TO Q.13) 1 NO... (ASK Q.12B) 2
12B. INTERVIEWER: IS THERE ANOTHER CHILD?	70/ YES... (GO BACK TO Q.4 FOR NEXT CHILD) 1 NO... (SKIP TO ~~BOX~~ ABOVE Q.22) 2	76/ YES... (GO BACK TO Q.4 FOR NEXT CHILD) 1 NO... (SKIP TO ~~BOX~~ ABOVE Q.22) 2

3RD CHILD	4TH CHILD	5TH CHILD	6TH CHILD
☐ ☐	☐ ☐	☐ ☐	☐ ☐
☐ ☐	☐ ☐	☐ ☐	☐ ☐
COMPLETE HEALTH CARE PROVIDER FORM FOR EACH CANCER, DISABILITY AND DEFECT. IF NECESSARY, COMPLETE A MEDICAL AUTHORIZATION FORM	COMPLETE HEALTH CARE PROVIDER FORM FOR EACH CANCER, DISABILITY AND DEFECT. IF NECESSARY, COMPLETE A MEDICAL AUTHORIZATION FORM	COMPLETE HEALTH CARE PROVIDER FORM FOR EACH CANCER, DISABILITY AND DEFECT. IF NECESSARY, COMPLETE A MEDICAL AUTHORIZATION FORM	COMPLETE HEALTH CARE PROVIDER FORM FOR EACH CANCER, DISABILITY AND DEFECT. IF NECESSARY, COMPLETE A MEDICAL AUTHORIZATION FORM
78/ YES 1 NO 2 DON'T KNOW 8	14/ YES 1 NO 2 DON'T KNOW 8	20/ YES 1 NO 2 DON'T KNOW 8	26/ YES 1 NO 2 DON'T KNOW 8
79/ YES 1 NO 2 DON'T KNOW 8	15/ YES 1 NO 2 DON'T KNOW 8	21/ YES 1 NO 2 DON'T KNOW 8	27/ YES 1 NO 2 DON'T KNOW 8
BEGIN DECK 36 10/ YES... (GO TO Q.13) 1 NO... (ASK Q.12A) .. 2 DON'T KNOW 8	16/ YES... (GO TO Q.13) . 1 NO... (ASK Q.12A) .. 2 DON'T KNOW 8	22/ YES... (GO TO Q.13) . 1 NO... (ASK Q.12A) .. 2 DON'T KNOW 8	28/ YES... (GO TO Q.13) . 1 NO... (ASK Q.12A) .. 2 DON'T KNOW 8
11/ YES... (SKIP TO Q.13)1 NO... (ASK Q.12B) . 2	17/ YES... (SKIP TO Q.13)1 NO... (ASK Q.12B) .. 2	23/ YES... (SKIP TO Q.13)1 NO... (ASK Q.12B) .. 2	29/ YES... (SKIP TO Q.13) 1 NO... (ASK Q.12B) .. 2
12/ YES... (GO BACK TO Q.4 FOR NEXT CHILD) 1 NO... (SKIP TO ~~BOX~~ ABOVE Q.22) 2	18/ YES... (GO BACK TO Q.4 FOR NEXT CHILD) 1 NO... (SKIP TO ~~BOX~~ ABOVE Q.22) . 2	24/ YES... (GO BACK TO Q.4 FOR NEXT CHILD) 1 NO... (SKIP TO ~~BOX~~ ABOVE Q.22) . 2	30/ YES... (GO BACK TO Q.4 FOR NEXT CHILD) 1 NO... (SKIP TO ~~BOX~~ ABOVE Q.22) . 2

	1ST CHILD	2ND CHILD
CHILD'S NAME:		
CHILD'S ID#		
MOTHER'S ID#		
13. Did (CHILD'S) doctor say that any of the birth defect(s) or impairments (was/were) life-threatening if left untreated? By untreated I mean if (CHILD) did not receive surgery, medication, a special diet, or some other medical intervention.	31/ YES..... (ASK Q.13A) 1 NO..... (ASK Q.13A) 2 DON'T KNOW..... (ASK Q.13A) 8	37/ YES..... (ASK Q.13A) 1 NO..... (ASK Q.13A) 2 DON'T KNOW..... (ASK Q.13A) 8
13A. INTERVIEWER: IS CHILD UNDER TWO YEARS OLD OR DID CHILD DIE BEFORE HE OR SHE WAS TWO YEARS OLD?	32/ YES..... SKIP TO Q.21, PAGE F-12 1 NO 2	38/ YES..... SKIP TO Q.21, PAGE F-12 1 NO 2
14. Did (CHILD) ever need help with eating, dressing, bathing, or using the toilet because of a birth defect or impairment? Help includes someone actually helping rather than just standing by to assist if needed.	33/ YES 1 NO 2	39/ YES 1 NO 2
15. Because of a birth defect or impairment, did (CHILD) ever use or need any mechanical or need any mechanical or special aids such as a wheelchair, walker, body braces, artificial limbs, or crutches to carry out everyday activities?	34/ YES 1 NO 2	40/ YES 1 NO 2
16. Was (CHILD) ever unable to take part at all in ordinary play with other children because of a birth defect or impairment?	35/ YES..... (SKIP TO Q.17) 1 NO..... (ASK Q.16A) 2	41/ YES..... (SKIP TO Q.17) 1 NO..... (ASK Q.16A) 2
16A. Was (CHILD) ever limited in the kind or amount of play he/she could do because of his/her birth defect or impairment?	36/ YES 1 NO 2	42/ YES 1 NO 2

3RD CHILD	4TH CHILD	5TH CHILD	6TH CHILD
☐ ☐	☐ ☐	☐ ☐	☐ ☐
☐ ☐	☐ ☐	☐ ☐	☐ ☐
43/ YES... (ASK Q.13A) . 1 NO... (ASK Q.13A) . 2 DON'T KNOW.. (ASK Q.13A) . 8	49/ YES... (ASK Q.13A) . 1 NO... (ASK Q.13A) . 2 DON'T KNOW.. (ASK Q.13A) . 8	55/ YES... (ASK Q.13A) . 1 NO... (ASK Q.13A) . 2 DON'T KNOW.. (ASK Q.13A) . 8	61/ YES... (ASK Q.13A) . 1 NO... (ASK Q.13A) . 2 DON'T KNOW.. (ASK Q.13A) . 8
44/ YES. SKIP TO Q.21, PAGE F-12 . 1 NO . 2	50/ YES. SKIP TO Q.21, PAGE F-12 . 1 NO . 2	56/ YES. SKIP TO Q.21, PAGE F-12 . 1 NO . 2	62/ YES. SKIP TO Q.21, PAGE F-12 . 1 NO . 2
45/ YES . 1 NO . 2	51/ YES . 1 NO . 2	57/ YES . 1 NO . 2	63/ YES . 1 NO . 2
46/ YES . 1 NO . 2	52/ YES . 1 NO . 2	58/ YES . 1 NO . 2	64/ YES . 1 NO . 2
47/ YES... (SKIP TO Q.17) 1 NO... (ASK Q.16A) . 2	53/ YES... (SKIP TO Q.17) 1 NO... (ASK Q.16A) . 2	59/ YES... (SKIP TO Q.17) 1 NO... (ASK Q.16A) . 2	65/ YES... (SKIP TO Q.17) . 1 NO... (ASK Q.16A) . 2
48/ YES . 1 NO . 2	54/ YES . 1 NO . 2	60/ YES . 1 NO . 2	66/ YES . 1 NO . 2

	1ST CHILD	2ND CHILD
CHILD'S NAME:		
CHILD'S ID#		
MOTHER'S ID#		
17. Did (CHILD'S) birth defect or impairment ever keep (him/her) from going to school?	67/ YES. (SKIP TO Q.18) 1 NO. (ASK Q.17A) 2	75/ YES. (SKIP TO Q.18) 1 NO. (ASK Q.17A) 2
17A. Did (CHILD) ever have to go to a certain type of school, or be in a special class because of (his/her) birth defect or impairment?	68/ YES. (SKIP TO Q.18) 1 NO. (ASK Q.17B) 2	76/ YES. (SKIP TO Q.18) 1 NO. (ASK Q.17B) 2
17B. Was (CHILD) ever limited in school attendance or in being able to learn because of (his/her) birth defect or impairment?	69/ YES 1 NO 2	77/ YES 1 NO 2
18. Because of (his/her) birth defect or impairment did (CHILD) ever need a lot more help than other children (his/her) age in going outside, getting to school, going to the store, and other everyday activities like that?	70/ YES 1 NO 2	78/ YES 1 NO 2
19. Because of a birth defect or impairment, did (CHILD) ever need the help of another person for everyday activities such as taking care of the house or yard, doing the laundry, or preparing meals?	71/ YES 1 NO 2	79/ YES 1 NO 2 BEGIN DECK 37
20. Will/Would (CHILD'S) impairment (keep/have kept) (him/her) from working on a job for pay?	72/ YES. (SKIP TO Q.21) 1 NO. (ASK Q.20A) 2	10/ YES. (SKIP TO Q.21) 1 NO. (ASK Q.20A) 2
20A. Will/Would (CHILD) (be/have been) limited in the kind of work (he/she) could (do/have done) because of (his/her) birth defect?	73/ YES. (SKIP TO Q.21) 1 NO. (ASK Q.20B) 2	11/ YES. (SKIP TO Q.21) 1 NO. (ASK Q.20B) 2
20B. Will/Would (CHILD) (be/have been) limited in the amount of work (he/she) could (do/have done) because of (his/her) birth defect?	74/ YES 1 NO 2	12/ YES 1 NO 2

3RD CHILD	4TH CHILD	5TH CHILD	6TH CHILD
☐ ☐	☐ ☐	☐ ☐	☐ ☐
☐ ☐	☐ ☐	☐ ☐	☐ ☐
13/ YES... (SKIP TO Q.18) 1 NO... (ASK Q.17A) .. 2 14/ YES... (SKIP TO Q.18) 1 NO... (ASK Q.17B) .. 2 15/ YES 1 NO 2	21/ YES... (SKIP TO Q.18) 1 NO... (ASK Q.17A) .. 2 22/ YES... (SKIP TO Q.18) 1 NO... (ASK Q.17B) .. 2 23/ YES 1 NO 2	29/ YES... (SKIP TO Q.18) 1 NO... (ASK Q.17A) .. 2 30/ YES... (SKIP TO Q.18) 1 NO... (ASK Q.17B) .. 2 31/ YES 1 NO 2	37/ YES... (SKIP TO Q.18) . 1 NO... (ASK Q.17A) ... 2 38/ YES... (SKIP TO Q.18) . 1 NO... (ASK Q.17B) ... 2 39/ YES 1 NO 2
16/ YES 1 NO 2	24/ YES 1 NO 2	32/ YES 1 NO 2	40/ YES 1 NO 2
17/ YES 1 NO 2	25/ YES 1 NO 2	33/ YES 1 NO 2	41/ YES 1 NO 2
18/ YES... (SKIP TO Q.21) 1 NO... (ASK Q.20A) . 2 19/ YES... (SKIP TO Q.21) 1 NO... (ASK Q.20B) .. 2 20/ YES 1 NO 2	26/ YES... (SKIP TO Q.21) 1 NO... (ASK Q.20A) . 2 27/ YES... (SKIP TO Q.21) 1 NO... (ASK Q.20B) .. 2 28/ YES 1 NO 2	34/ YES... (SKIP TO Q.21) 1 NO... (ASK Q.20A) . 2 35/ YES... (SKIP TO Q.21) 1 NO... (ASK Q.20B) .. 2 36/ YES 1 NO 2	42/ YES... (SKIP TO Q.21) 1 NO... (ASK Q.20A) .. 2 43/ YES... (SKIP TO Q.21) 1 NO... (ASK Q.20B) .. 2 44/ YES 1 NO 2

	1ST CHILD	2ND CHILD
CHILD'S NAME:		
CHILD'S ID#		
MOTHER'S ID#		
21. INTERVIEWER: DOES RESPONDENT HAVE ANOTHER CHILD WITH CONDITIONS?	45/ YES. . (GO BACK TO Q.4 FOR NEXT CHILD) 1 NO. (SKIP TO ~~BOX~~ ~~ABOVE~~ Q.22) ... 2	46/ YES. . (GO BACK TO Q.4 FOR NEXT CHILD) 1 NO. (SKIP TO BOX ABOVE Q.22) ... 2

22. Did you ever have a birth defect?

YES (ASK Q.22A) 1 47/

NO 2

22A. What kind of birth defect was it? Any others?

48/

23. Do you have any biological brothers or sisters? Include any brothers or sisters who may have died before age of 1.

YES (ASK Q.24, PAGE F-14) 1 49/

NO (SKIP TO Q.25, PAGE F-14) 2

DON'T KNOW ... (SKIP TO Q.25, PAGE F-14) 8

3RD CHILD	4TH CHILD	5TH CHILD	6TH CHILD
☐ ☐	☐ ☐	☐ ☐	☐ ☐
☐ ☐	☐ ☐	☐ ☐	☐ ☐
50/ YES. . (GO BACK TO Q.4 FOR NEXT CHILD) 1 NO. . . (SKIP TO ~~BOX~~ ~~ABOVE~~ Q.22) 2	51/ YES. . (GO BACK TO Q.4 FOR NEXT CHILD) 1 NO. (SKIP TO ~~BOX~~ ~~ABOVE~~ Q.22) . . . 2	52/ YES. . (GO BACK TO Q.4 FOR NEXT CHILD) 1 NO. . . (SKIP TO ~~BOX~~ ~~ABOVE~~ Q.22) . . . 2	53/ YES. . (NEW QUEX) . . 1 NO. . . (SKIP TO ~~BOX~~ ~~ABOVE~~ Q.22) . . 2

24. Did any of your biological brothers or sisters ever have a birth defect?

YES (ASK Q.24A) 1
 NO (SKIP TO Q.25) 2
 DON'T KNOW ... (SKIP TO Q.25) 8

54/

24A. Who had a defect, your brothers, sisters, or both?

BROTHERS 1
 SISTERS 2
 BOTH 3

55/

FOR EACH SIBLING WITH A BIRTH DEFECT, ASK: What kind of birth defect did your (brother/sister) have? RECORD DEFECT. Was this sibling a half (brother/sister) or a full (brother/sister)? RECORD BELOW.

SIBLING 1	56/	SIBLING 2	58/
DEFECT: _____		DEFECT: _____	
_____	57/	_____	59/
HALF (BROTHER/SISTER) 1		HALF (BROTHER/SISTER) 1	
FULL (BROTHER/SISTER) 2		FULL (BROTHER/SISTER) 2	
SIBLING 3	60/	SIBLING 4	62/
DEFECT: _____		DEFECT: _____	
_____	61/	_____	63/
HALF (BROTHER/SISTER) 1		HALF (BROTHER/SISTER) 1	
FULL (BROTHER/SISTER) 2		FULL (BROTHER/SISTER) 2	

25. Now I would like to ask you some questions about your biological parents. Did either your biological mother or biological father ever have a birth defect?

YES (GO TO Q.26) 1
 NO (SKIP TO Q.28, PAGE F-15) 2
 DON'T KNOW ... (SKIP TO Q.28, PAGE F-15) 8

64/

26. Which parent had a birth defect?

MOTHER ONLY 1
 FATHER ONLY 2
 BOTH PARENTS 3

65/

27. What kind of birth defect did your (PARENT) have?

Mother: _____ 66/ Father: _____

67/

I.S.R.B. ON PAGE 5.

28. Now there are some questions about death in your family. Has anyone near to you died in the last 12 months?

YES 1 68/

NO (SKIP TO SECTION G) 2

28A. SHOW PARTICIPANT HAND CARD I. What was the person's relationship to you? Please choose as many as apply from the card. CODE ALL THAT APPLY.

A. CHILD 01 69-70/

B. PARENT 02 71-72/

C. SPOUSE/PARTNER 03 73-74/

D. BROTHER OR SISTER 04 75-76/

E. OTHER NEAR RELATIVE OF YOU OR YOUR SPOUSE/PARTNER 05 77-78/

F. FRIEND 06 79-80/

G. OTHER (SPECIFY) _____ BEGIN DECK 38

_____ 07 10-11/

28B. What (was the date/were the dates) of the death(s)? What month and year?
(ENTER DATES OF DEATH IN SAME ORDER AS CIRCLED CODES.)

ENTER MONTH AND YEAR [] [] - [] [] 12-15/

ENTER MONTH AND YEAR [] [] - [] [] 16-19/

ENTER MONTH AND YEAR [] [] - [] [] 20-23/

SECTION G: HEALTH**FOR THIS SECTION YOU WILL NEED:**

- HAND CARDS J - L
- HAND CARD N - Q
- SELF ADMINISTERED FORM 2
- INTERVAL SUPPLEMENTAL RECORDING BOOK(I.S.R.B.)

1. Now let's talk about health. Compared to other people your age, would you say that your health is . . .
(READ CHOICES)?

Excellent	1	24/
Good	2	
Fair	3	
Poor	4	

2. Since (DATE OF LAST INTERVIEW) have you had acne on your face, chest or back?

YES	1	25/
NO (SKIP TO Q.9, PAGE G-5)	2	

3. During what year, between (DATE OF LAST INTERVIEW) and now, did you last have acne on your face, chest or back?

RECORD YEAR: 19			26-27/

4. Think about the [first/next] time you had acne on your face, chest or back between (DATE OF LAST INTERVIEW) and now. When did it start and until when did it last? (PROBE FOR ALL PERIODS OF TIME.)

FIRST

SECOND

THIRD

- 28-31/
 MONTH YEAR

- 36-39/
 MONTH YEAR

- 44-47/
 MONTH YEAR

TO

TO

TO

- 32-35/
 MONTH YEAR

- 40-43/
 MONTH YEAR

- 48-51/
 MONTH YEAR

- 4A. ASK Q.4A FOR EACH TIME IN Q.4. SHOW RESPONDENT HAND CARD J. Where was the acne located [the (first/next) time]?
CIRCLE "YES" OR "NO."

FIRST TIME
YES NO

SECOND TIME
YES NO

THIRD TIME
YES NO

TEMPLES	1 . 2	52/	1 . . 2	61/	1 . . 2	70/
EYES OR EYELIDS	1 . 2	53/	1 . . 2	62/	1 . . 2	71/
EARS	1 . 2	54/	1 . . 2	63/	1 . . 2	72/
CHEEKS	1 . 2	55/	1 . . 2	64/	1 . 2	73/
NOSE	1 . . 2	56/	1 . . 2	65/	1 . 2	74/
FOREHEAD	1 . . 2	57/	1 . . 2	66/	1 . 2	75/
JAW, CHIN						
OTHER	1 . . 2	58/	1 . . 2	67/	1 . 2	76/
CHEST	1 . . 2	59/	1 . . 2	68/	1 . 2	77/
BACK	1 . . 2	60/	1 . . 2	69/	1 . 2	78/

5. IF TEMPLES, EYES, EYELIDS, OR EARS NOT CIRCLED IN Q.4A, SKIP TO Q.9, PAGE G-5.
OTHERWISE ASK: Between (DATE OF LAST INTERVIEW) and now, did you ever consult a doctor or medical facility about the acne on your (temples/eyes or eyelids/ears)?

YES 1 79/

NO (SKIP TO Q.9, PAGE G-5) 2

6. What month and year did you first consult a doctor about the acne on your (temples/eyes or eyelids/ears)?

 | | | - | | |
 MONTH YEAR

BEGIN DECK 39
10-13/

- 6A. What is the full name of the doctor who made the diagnosis or the name of the medical facility where the diagnosis was made?

COMPLETE MEDICAL AUTHORIZATION FORM, IF NECESSARY.

PHYSICIAN'S LAST NAME

FIRST NAME

OR

FACILITY NAME

INSTRUCTIONS FOR MEDICAL AUTHORIZATION FORMS:

YOU MUST COMPLETE AN AUTHORIZATION FORM FOR EACH PHYSICIAN OR FACILITY NAMED BY THE PARTICIPANT.

IF THE PARTICIPANT SEES THE SAME PROVIDER (PHYSICIAN OR FACILITY) FOR SEVERAL CONDITIONS, YOU COMPLETE ONE AUTHORIZATION FORM FOR THE SAME PROVIDER FORM.

LIST EACH INDIVIDUAL CONDITION ON THE SAME PROVIDER FORM.

- 6B. What is the address of that (doctor/medical facility)?

STREET ADDRESS

14/

CITY

(STATE)

7. What month and year did you last consult a doctor about the acne on your (temples/eyes or eyelids/ears)?

____ - ____
MONTH YEAR

15-18/

- 8A. What was the name of the doctor or medical facility you consulted at that time?
IF THE NAME OF THE PROVIDER IS THE SAME AS IN Q.6A,
WRITE: "SAME PROVIDER AS IN Q.6A."

PHYSICIANS LAST NAME

FIRST NAME

OR

FACILITY NAME

- 8B. What is the address of that (doctor/medical facility)?

STREET ADDRESS

CITY

(STATE)

9. WAS R INTERVIEWED IN 1985/1986 OR 1987/1988? SEE INFORMATION SHEET.

YES (SKIP TO Q.11, PAGE G-6) 1

NO 2

10. SHOW RESPONDENT HAND CARD K. What is your blood type?

A 1

19/

B 2

O 3

AB 4

DON'T KNOW 8

- 10A. Is that positive or negative?

POSITIVE 1

20/

NEGATIVE 2

11. ASK ALL RESPONDENTS. SHOW RESPONDENT HAND CARD L. During the last year, how often, on average, would you say you use aspirin?

More than 4 aspirin a day	1	21/
4 aspirin a day (2 doses a day)	2	
2 aspirin a day (1 dose a day)	3	
6-8 aspirin a week (1 dose, 3-4 days/week)	4	
4 aspirin a week or less	5	
NONE	6	

12. In the summer, once you have already been in the sun several times, what reaction will your skin have the next time you go out in the sun for two or more hours on a bright day? Would you say you get . . .

A painful burn?	1	22/
A burn?	2	
Some redness only?	3	
Or no reaction?	4	

13. SHOW RESPONDENT HAND CARD N. After repeated sun exposures, for example, a two week vacation outdoors, will your skin become . . .

Only freckled or no suntan at all?	1	23/
Only mildly tanned due to a tendency to peel?	2	
Moderately tanned?	3	
Very brown and deeply tanned?	4	

WAS R INTERVIEWED IN 1985/1986 OR 1987/1988? SEE INFORMATION SHEET.

YES (SKIP TO Q.15, BELOW) 1

NO 2

14. **HAND R SELF-ADMINISTERED FORM 2.** We would like you to tell us all the places you've lived since you were born. Please list all the places you've lived for more than 12 months starting with the first place since birth. Please take your time. It will probably take you 10 minutes or so to fill out this form. Please begin.

15. Since (DATE OF LAST INTERVIEW)/(During any period in your life), did a doctor (ever) tell you that you had a peptic or stomach ulcer?

Yes (GO TO Q.16) 1 24/

No (SKIP TO Q.30, PAGE G-11) 2

16. During what month and year did a doctor first tell you that you had a peptic or stomach ulcer?

-
 MONTH YEAR

25-28/

17. What is the full name of the doctor who made the diagnosis or the name of the medical facility where the diagnosis was made? COMPLETE MEDICAL AUTHORIZATION FORM.

PHYSICIAN'S LAST NAME

FIRST NAME

OR

FACILITY NAME

A. What is the address of that (doctor/medical facility)?

STREET ADDRESS

CITY

(STATE)

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18. Do you have a peptic or stomach ulcer now?

YES 1

29/

NO 2

19. What month and year did you last consult a doctor for your peptic or stomach ulcer?

____ - ____
MONTH YEAR

30-33/

A. Was this the same doctor that had originally diagnosed the stomach ulcer for the first time?

YES (SKIP TO Q.20, BELOW) 1

NO 2

B. What is the full name of the doctor or the name of the medical facility you last consulted for your peptic or stomach ulcer? COMPLETE MEDICAL AUTHORIZATION FORM.

PHYSICIANS LAST NAME

FIRST NAME

OR

FACILITY NAME

C. What is the address of that doctor/medical facility)?

STREET ADDRESS

CITY

(STATE)

20. Since (DATE OF LAST INTERVIEW) have you/(Have you ever during any period in your life) had a bleeding ulcer?

YES 1

34/

NO 2

.. SKIP TO Q-27, PAGE G-11)..

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May 15, 1992

16:10 pm

Field Version 1.1

21. During what month and year did a doctor first tell you that you had a bleeding ulcer?

-
 MONTH YEAR

35-38/

22. What is the full name of the doctor who made the diagnosis or the medical facility where the diagnosis was made?

IF NAME OF THE PROVIDER IS THE SAME AS IN Q.17,
WRITE: "SAME PROVIDER AS IN Q.17."

PHYSICIAN'S LAST NAME

FIRST NAME

OR

FACILITY NAME

23. What is the address of that (doctor/medical facility)?

STREET ADDRESS

CITY

(STATE)

24. What month and year did you last consult a doctor for your bleeding ulcer?

-
 MONTH YEAR

39-42/

- A. Was this the same doctor that had originally diagnosed the stomach ulcer for the first time?

YES (SKIP TO Q.25, NEXT PAGE) 1

NO 2

- B. What is the full name of the doctor or the name of the medical facility you last consulted for you bleeding ulcer?

COMPLETE MEDICAL AUTHORIZATION FORM.

PHYSICIAN'S LAST NAME

FIRST NAME

OR

FACILITY NAME

- C. What is the address of that doctor/medical facility)?

STREET ADDRESS

CITY (STATE)

25. What is the treatment you are currently taking for the bleeding ulcer?

26. During what month(s) and year(s) did you have a bleeding ulcer? Any other times?

FROM

____ - ____ 43-46/
MONTH YEAR

TO

____ - ____ 47-50/
MONTH YEAR

FROM

____ - ____ 51-54/
MONTH YEAR

TO

____ - ____ 55-58/
MONTH YEAR

FROM

____ - ____ 59-62/
MONTH YEAR

TO

____ - ____ 63-66/
MONTH YEAR

B-100

27. FOR PARTICIPANTS INTERVIEWED IN 1985/1986 OR 1987/1988 READ "SINCE DATE OF LAST INTERVIEW. Since (DATE OF LAST INTERVIEW) have you been/(Were you ever during any period in your life) hospitalized for your peptic or stomach ulcer?

YES 1 67/

NO 2

28. Since (DATE OF LAST INTERVIEW) did you have/(Have you ever during any period in your life had) surgery for your peptic or stomach ulcer?

YES 1 68/

NO 2

29. Are you currently taking any prescribed medicines for your peptic or stomach ulcer?

YES 1 69/

NO (SKIP TO Q.30, BELOW) 2

A. What are the names of the medicines you are taking?
(PROBE: WHAT OTHERS?)

1) _____

2) _____

3) _____

30. SHOW RESPONDENT HAND CARD O. Please indicate which of the following members of your biological family have ever had a peptic or stomach ulcer?

1. Mother 01 70-71/

2. Father 02 72-73/

3. Full Brother 03 74-75/

4. Half Brother 04 76-77/

5. Full Sister 05 78-79/

BEGIN DECK 40

6. Half Sister 06 10-11/

7. NONE 07 12-13/

8. DON'T KNOW 98 14-15/

31. Do you have or have you recently had sharp upper stomach pain?

YES 1 16/
NO (SKIP TO Q.34, BELOW) 2

32. Was this pain relieved by food, milk, or antacids?

YES 1 17/
NO 2

33. Has this stomach pain awakened you from sleep?

YES 1 18/
NO 2

34. Have you vomited blood recently?

YES 1 19/
NO 2

35. Have you recently experienced dark tar colored stools or bowel movements?

YES 1 20/
NO 2

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May 15, 1992

19:06 pm

Field Version 1.1

Now I would like to ask you some questions that deal only with the period of time between (DATE OF LAST INTERVIEW) and now. (IF NEW PARTICIPANT OR ONLY THE BASELINE COMPLETED: REFERENCE DATE IS: Between January 1, 1983 and now.)

INTERVIEWER: ASK A THROUGH G FOR EACH CONDITION CODED YES.

		A	B
Since (DATE OF LAST INTERVIEW) has a doctor told you for the first time that you had...?		Between (DATE OF LAST INTERVIEW) and now, in what month and year <u>did a doctor first tell you that you had</u> (CONDITION)?	What is the full name and address of the doctor who first made the diagnosis or the medical facility where the diagnosis was first made? REVIEW MEDICAL AUTHORIZATION FORMS. IF FORM NOT COMPLETED FOR THIS DOCTOR, COMPLETE FORM NOW.
36. Diabetes?	YES 1 (SKIP TO Q.1525 in I.S.R.B. on page 7) NO 2 21/	MONTH YEAR 22-25/	PHYSICIAN'S LAST NAME 26/ FIRST NAME OR FACILITY NAME STREET ADDRESS CITY STATE
37. Thyroid problems? (SPECIFY) _____ _____ _____ 28/	YES 1 NO. (SKIP TO Q.38, PAGE G-16) 2 27/	MONTH YEAR 29-32/	PHYSICIAN'S LAST NAME 33/ FIRST NAME OR FACILITY NAME STREET ADDRESS CITY STATE

C	D	E	F	G
Do you have (CONDITION) now?	Are you currently taking any prescribed medicines for your (CONDITION)?	What are the names of medicines you are taking? Any others?	When did you last consult a doctor for (CONDITION) between (DATE OF LAST INTERVIEW) and now?	What is the full name and address of the doctor or medical facility you last consulted? IF DIFFERENT DOCTOR FROM B, COMPLETE MEDICAL AUTHORIZATION FORM.
YES 1 NO 2 34/	YES 1 NO. (SKIP TO F FOR THIS CONDITION) 2 35/	1) _____ _____ 36-38/ 2) _____ _____ 39-41/ 3) _____ _____ 42-44/	_____ _____ _____ _____ MONTH YEAR 45-48/	_____ PHYSICIAN'S LAST NAME 49/ _____ FIRST NAME OR _____ FACILITY NAME _____ STREET ADDRESS _____ _____ _____ CITY STATE INTERVIEWER: BEFORE ASKING ABOUT THYROID PROBLEMS, SKIP TO Q.IS25 IN I.S.R.B. PAGE 7.
YES 1 NO 2 50/	YES 1 NO. (SKIP TO F FOR THIS CONDITION) 2 51/	1) _____ _____ 52-54/ 2) _____ _____ 55-57/ 3) _____ _____ 58-60/	_____ _____ _____ _____ MONTH YEAR	_____ PHYSICIAN'S LAST NAME 65/ _____ FIRST NAME OR _____ FACILITY NAME _____ STREET ADDRESS _____ _____ _____ CITY STATE

B-105

		A	B
Since (DATE OF LAST INTERVIEW) has a doctor told you for the first time that you had. . . ?		Between (DATE OF LAST INTERVIEW) and now, in what month and year <u>did a doctor first tell</u> you that you had (CONDITION)?	What is the full name and address of the doctor <u>who first made the diagnosis or the medical facility where the diagnosis was first made?</u> REVIEW MEDICAL AUTHORIZATION FORMS. IF FORM NOT COMPLETED FOR THIS DOCTOR, COMPLETE FORM NOW.
38. Anemia?	YES 1 NO. . (SKIP TO Q.39 BELOW) ... 2 66/	_ - - _ MONTH YEAR 67-70/	PHYSICIAN'S LAST NAME 71/ FIRST NAME OR FACILITY NAME STREET ADDRESS CITY STATE
39. A heart condition? (SPECIFY) _____ _____ _____ 73/	YES 1 NO. . (SKIP TO Q.40, PAGE G-18) 2 72/	_ - - _ MONTH YEAR 74-77/	PHYSICIAN'S LAST NAME 78/ FIRST NAME OR FACILITY NAME STREET ADDRESS CITY STATE

1992 Air Force Health Study (#4563)
Health Interval Questionnaire

C	D	E	F	G
Do you have (CONDITION) now?	Are you currently taking any prescribed medicines for your (CONDITION)?	What are the names of medicines you are taking? Any others?	When did you last consult a doctor for (CONDITION) between (DATE OF LAST INTERVIEW) and now?	What is the full name and address of the doctor or medical facility you last consulted? IF DIFFERENT DOCTOR FROM B, COMPLETE MEDICAL AUTHORIZATION FORM.
YES 1 NO 2 10/	YES 1 NO. (SKIP TO F FOR THIS CONDITION) 2 11/	1) _____ 12-14/ 2) _____ 15-17/ 3) _____ 18-20/	MONTH YEAR	PHYSICIAN'S LAST NAME 25/ FIRST NAME OR FACILITY NAME STREET ADDRESS CITY STATE
YES 1 NO 2 26/	YES 1 NO. (SKIP TO F FOR THIS CONDITION) 2 27/	1) _____ 28-30/ 2) _____ 31-33/ 3) _____ 34-36/	MONTH YEAR	PHYSICIAN'S LAST NAME 41/ FIRST NAME OR FACILITY NAME STREET ADDRESS CITY STATE

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May 15, 1992

18:00 pm

Field Version 1.1

		A	B
Since (DATE OF LAST INTERVIEW) has a doctor told you for the first time that you had. . . ?		Between (DATE OF LAST INTERVIEW) and now, in what month and year <u>did a doctor first tell you that you had</u> (CONDITION)?	What is the full name and address of the doctor <u>who first made the diagnosis or the medical facility where the diagnosis was first made?</u> IF AUTHORIZATION FORM NOT COMPLETED FOR THIS DOCTOR, COMPLETE FORM.
40. An enlarged liver?	YES 1 NO. . (SKIP TO Q.41 BELOW) ... 2 42/	MONTH YEAR 43-46/	PHYSICIAN'S LAST NAME 47/ FIRST NAME OR FACILITY NAME STREET ADDRESS CITY STATE
41. Jaundice? (SPECIFY) _____ _____ _____	YES 1 NO. . (SKIP TO Q.42 PAGE G-20) 2 48/	MONTH YEAR 49-52/	PHYSICIAN'S LAST NAME 53/ FIRST NAME OR FACILITY NAME STREET ADDRESS CITY STATE

C	D	E	F	G
Do you have (CONDITION) now?	Are you currently taking any prescribed medicines for your (CONDITION)?	What are the names of medicines you are taking? Any others?	When did you last consult a doctor for (CONDITION) between (DATE OF LAST INTERVIEW) and now?	What is the full name and address of the doctor or medical facility you last consulted? IF DIFFERENT DOCTOR FROM B, COMPLETE MEDICAL AUTHORIZATION FORM.
YES 1 NO 2 54/	YES 1 NO. (SKIP TO F FOR THIS CONDITION) 2 55/	1) _____ 56-58/ 2) _____ 59-61/ 3) _____ 62-64/	MONTH YEAR 65-68/ BEGIN DECK 42	PHYSICIAN'S LAST NAME 69/ FIRST NAME OR FACILITY NAME STREET ADDRESS CITY STATE
YES 1 NO 2 70/	YES 1 NO. (SKIP TO F FOR THIS CONDITION) 2 71/	1) _____ 72-74/ 2) _____ 75-77/ 3) _____ 78-80/	MONTH YEAR 10-13/	PHYSICIAN'S LAST NAME 14/ FIRST NAME OR FACILITY NAME STREET ADDRESS CITY STATE

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May 15, 1992

18:07 pm

Field Version 1.1

		A	B
Since (DATE OF LAST INTERVIEW) has a doctor told you for the first time that you had. ...?		Between (DATE OF LAST INTERVIEW) and now, in what month and year <u>did a doctor first tell you that you had</u> (CONDITION)?	What is the full name and address of the doctor who first made the <u>diagnosis</u> or the <u>medical facility where the diagnosis was first made</u> ? IF AUTHORIZATION FORM NOT COMPLETED FOR THIS DOCTOR, COMPLETE FORM.
42. Hepatitis?	YES 1 NO. . (SKIP TO Q.43 BELOW) ... 2 15/	MONTH YEAR 16-19/	PHYSICIAN'S LAST NAME 20/ FIRST NAME OR FACILITY NAME STREET ADDRESS CITY STATE
43. Cirrhosis of the liver? ("SIR-O-SIS")	YES 1 NO. . (SKIP TO Q.44, PAGE G-22) 2 21/	MONTH YEAR 22-25/	PHYSICIAN'S LAST NAME 26/ FIRST NAME OR FACILITY NAME STREET ADDRESS CITY STATE

B-110

May 15, 1992

18:08 pm

Field Version 1.1

C	D	E	F	G
Do you have (CONDITION) now?	Are you currently taking any prescribed medicines for your (CONDITION)?	What are the names of medicines you are taking? Any others?	When did you last consult a doctor for (CONDITION) between (DATE OF LAST INTERVIEW) and now?	What is the full name and address of the doctor or medical facility you last consulted? IF DIFFERENT DOCTOR FROM B, COMPLETE MEDICAL AUTHORIZATION FORM.
YES 1 NO 2 27/	YES 1 NO. (SKIP TO F FOR THIS CONDITION) 2 28/	1) _____ 29-31/ 2) _____ 32-34/ 3) _____ 35-37/	- MONTH YEAR 38-41/	PHYSICIAN'S LAST NAME 42/ FIRST NAME OR FACILITY NAME STREET ADDRESS CITY _____ STATE _____
YES 1 NO 2 43/	YES 1 NO. (SKIP TO F FOR THIS CONDITION) 2 44/	1) _____ 45-47/ 2) _____ 48-50/ 3) _____ 51-53/	- MONTH YEAR 54-57/	PHYSICIAN'S LAST NAME 58/ FIRST NAME OR FACILITY NAME STREET ADDRESS CITY _____ STATE _____

B-111

May 15, 1992

18:08 pm

Field Version 1.1

		A	B
Since (DATE OF LAST INTERVIEW) has a doctor told you for the first time that you had...?		Between (DATE OF LAST INTERVIEW) and now, in what month and year <u>did a doctor first tell you that you had</u> (CONDITION)?	What is the full name and address of the doctor <u>who first made the diagnosis or the medical facility where the diagnosis was first made?</u> IF AUTHORIZATION FORM NOT COMPLETED FOR THIS DOCTOR, COMPLETE FORM.
44. Intestinal parasites?	YES 1 NO. . (SKIP TO Q.45 BELOW) ... 2 59/	MONTH YEAR 60-63/	PHYSICIAN'S LAST NAME 64/ FIRST NAME OR FACILITY NAME STREET ADDRESS CITY STATE
45. Gall bladder problems?	YES 1 NO. . (SKIP TO Q.46, PAGE G-24) 2 65/	MONTH YEAR 66-69/	PHYSICIAN'S LAST NAME 70/ FIRST NAME OR FACILITY NAME STREET ADDRESS CITY STATE

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May 15, 1992

18:08 pm

Field Version 1.1

C	D	E	F	G
Do you have (CONDITION) now?	Are you currently taking any prescribed medicines for your (CONDITION)?	What are the names of medicines you are taking? Any others?	When did you <u>last consult a doctor</u> for (CONDITION) between (DATE OF LAST INTERVIEW) and now?	What is the full name and address of the doctor or medical facility you <u>last consulted</u> ? IF DIFFERENT DOCTOR FROM B, COMPLETE MEDICAL AUTHORIZATION FORM.
YES 1 NO 2 71/	YES 1 NO. (SKIP TO F FOR THIS CONDITION) 2 72/	1) _____ 73-75/ 2) _____ 76-78/ BEGIN DECK 43 3) _____ 10-12/	MONTH YEAR 13-16/	PHYSICIAN'S LAST NAME 17/ FIRST NAME OR FACILITY NAME STREET ADDRESS CITY STATE
YES 1 NO 2 18/	YES 1 NO. (SKIP TO F FOR THIS CONDITION) 2 19/	1) _____ 20-22/ 2) _____ 23-25/ 3) _____ 26-28/	MONTH YEAR 29-32/	PHYSICIAN'S LAST NAME 33/ FIRST NAME OR FACILITY NAME STREET ADDRESS CITY STATE

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May 15, 1992

18:09 pm

Field Version 1.1

		A	B
Since (DATE OF LAST INTERVIEW) has a doctor told you for the first time that you had. . . ?		Between (DATE OF LAST INTERVIEW) and now, in what month and year <u>did</u> a doctor first tell you that you had (CONDITION)?	What is the full name and address of the doctor who first made the diagnosis or the medical facility where the diagnosis was first made? IF AUTHORIZATION FORM NOT COMPLETED FOR THIS DOCTOR, COMPLETE FORM.
46. Any other liver condition? (SPECIFY) _____ _____ _____ 35/	YES 1 NO. (SKIP TO Q.47 BELOW) ... 2 34/	MONTH YEAR 36-39/	PHYSICIAN'S LAST NAME 40/ FIRST NAME OR FACILITY NAME STREET ADDRESS CITY STATE
47. Pneumonia?	YES 1 NO. (SKIP TO Q.48 PAGE G-26) 2 41/	MONTH YEAR 42-45/	PHYSICIAN'S LAST NAME 46/ FIRST NAME OR FACILITY NAME STREET ADDRESS CITY STATE

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May 15, 1992

16:10 pm

Field Version 1.1

Field Version 1.1

		A	B
Since (DATE OF LAST INTERVIEW) has a doctor told you for the first time that you had. ...?		Between (DATE OF LAST INTERVIEW) and now, in what month and year <u>did a doctor first tell</u> you that you had (CONDITION)?	What is the full name and address of the doctor <u>who first made the diagnosis</u> or the medical facility <u>where the diagnosis was first made</u> ? IF AUTHORIZATION FORM NOT COMPLETED FOR THIS DOCTOR, COMPLETE FORM.
48. A respiratory condition other than pneumonia? (SPECIFY) _____ _____ _____ 11/	YES 1 NO. (SKIP TO Q.49 BELOW) ... 2 10/	MONTH YEAR 12-15/	PHYSICIAN'S LAST NAME 16/ FIRST NAME OR FACILITY NAME STREET ADDRESS CITY STATE
49. Any other major condition? (SPECIFY) _____ _____ _____ 18/	YES 1 NO. (SKIP TO Q.50, PAGE G-28) 2 17/	MONTH YEAR 19-22/	PHYSICIAN'S LAST NAME 23/ FIRST NAME OR FACILITY NAME STREET ADDRESS CITY STATE

B-116

C	D	E	F	G
Do you have (CONDITION) now?	Are you currently taking any prescribed medicines for your (CONDITION)?	What are the names of medicines you are taking? Any others?	When did you last consult a doctor for (CONDITION) between (DATE OF LAST INTERVIEW) and now?	What is the full name and address of the doctor or medical facility you last consulted? IF DIFFERENT DOCTOR FROM B, COMPLETE MEDICAL AUTHORIZATION FORM.
YES 1 NO 2 24/	YES 1 NO. (SKIP TO F FOR THIS CONDITION) 2 25/	1) _____ 26-28/ 2) _____ 29-31/ 3) _____ 32-34/	MONTH YEAR 35-38/	PHYSICIAN'S LAST NAME 39/ FIRST NAME OR FACILITY NAME STREET ADDRESS CITY STATE
YES 1 NO 2 40/	YES 1 NO. (SKIP TO F FOR THIS CONDITION) 2 41/	1) _____ 42-44/ 2) _____ 45-47/ 3) _____ 48-50/	MONTH YEAR 51-54/	PHYSICIAN'S LAST NAME 55/ FIRST NAME OR FACILITY NAME STREET ADDRESS CITY STATE

		A	B
		Between (DATE OF LAST INTERVIEW) and now, in what month and year <u>did a doctor first tell you that you had a condition which needed treatment?</u>	What is the full name and address of the doctor who first made the <u>diagnosis</u> or the medical facility <u>where the diagnosis was first made?</u> IF AUTHORIZATION FORM NOT COMPLETED FOR THIS DOCTOR, COMPLETE FORM.
50. Since (DATE OF LAST INTERVIEW), have you been treated for a mental or emotional disorder whether you were hospitalized or treated as an outpatient. (SPECIFY) _____ _____ _____ 57/	YES 1 (SKIP TO Q. IS 50 in I.S.R.B. Page 12) NO 2 56/	MONTH YEAR 58-61/	PHYSICIAN'S LAST NAME _____ 62/ FIRST NAME _____ OR _____ FACILITY NAME _____ STREET ADDRESS _____ CITY _____ STATE _____

B-118

C	D	E	F	G
Do you have emotional disorder now?	Are you currently taking any prescribed medicines for your (CONDITION)?	What are the names of medicines you are taking? Any others?	When did you last consult a doctor for (CONDITION) between (DATE OF LAST INTERVIEW) and now?	What is the full name and address of the doctor or medical facility you last consulted? IF DIFFERENT DOCTOR FROM B, COMPLETE MEDICAL AUTHORIZATION FORM.
YES 1 NO 2 63/	YES 1 NO. .(SKIP TO F FOR THIS CONDITION) 2 64/	1) _____ _____ 2) _____ _____ 3) _____ _____	MONTH YEAR 65-68/	_____ PHYSICIAN'S LAST NAME _____ FIRST NAME OR _____ FACILITY NAME _____ STREET ADDRESS CITY STATE

BEFORE ASKING Q.51, SKIP TO Q.150 in I.S.R.B. on PAGE 12.

51. At any time since (DATE OF LAST INTERVIEW) has a doctor told you that you had cancer?

YES 1 69/
NO (SKIP TO Q.55, PAGE G-30) 2

52. Did the doctor tell you that this was a skin cancer or a systemic (body) cancer?

SKIN CANCER ONLY 1 70/
SYSTEMIC CANCER ONLY (SKIP TO Q.54, PAGE G-34) ... 2
BOTH SKIN AND SYSTEMIC CANCER 3

SKIN CANCER ONLY

53. SHOW RESPONDENT HAND CARD J. Please look at this chart and tell me where each of your skin cancers (is/was) located.

INDICATE THE ANATOMICAL CODE FOR EACH SITE BEING REPORTED.

SITE NUMBER

1	2	3
71-72/	73-74/	75-76/

SITE CODE

CODES: (01) Scalp or Forehead	(14) Arm or Hand, Not Otherwise Specified
(02) Eye Lid	(15) Genitals
(03) Ear	(16) Leg
(04) Nose	(17) Foot
(05) Head or Neck, Not Otherwise Specified	(18) Leg or Foot, Not Otherwise Specified
(06) Cheek, chin or jaw	(19) Skin, Not Otherwise Specified
(07) Neck or Supraclavicular	(20) Upperlip, Not Otherwise Specified
(08) Vermilion	(21) Lowerlip, Not Otherwise Specified
(09) Trunk, Front	(22) Lip, Not Otherwise Specified
(10) Trunk, Back	
(11) Trunk, Not Otherwise Specified	
(12) Arm	
(13) Hand	

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May 15, 1992

16:10 pm

Field Version 1.1

INTERVIEWER: FOR EACH SITE REPORTED ASK Q.53A THROUGH Q.53E

SKIN CANCER ONLY

SITE 1	SITE 2	SITE 3
53A.1 In what month and year was cancer of the (SITE) <u>first</u> diagnosed? - MONTH YEAR 77-80/ BEGIN DECK 45	53A.1 In what month and year was cancer of the (SITE) <u>first</u> diagnosed? - MONTH YEAR 15-18/	53A.1 In what month and year was cancer of the (SITE) <u>first</u> diagnosed? - MONTH YEAR 24-27/
53A.2 When did you <u>last consult</u> a doctor for cancer of (SITE)? - MONTH YEAR 10-13/	53A.2 When did you <u>last consult</u> a doctor for cancer of (SITE)? - MONTH YEAR 19-22/	53A.2 When did you <u>last consult</u> a doctor for cancer of (SITE)? - MONTH YEAR 28-31/
SHOW PARTICIPANT HAND CARD P	SHOW PARTICIPANT HAND CARD P	SHOW PARTICIPANT HAND CARD P
53B. What kind of skin cancer was this? Basal cell carcinoma 1 14/ Squamous cell carcinoma 2 Melanoma 3 Cancer metastatic to the skin 4 DON'T KNOW 8	53B. What kind of skin cancer was this? Basal cell carcinoma 1 23/ Squamous cell carcinoma 2 Melanoma 3 Cancer metastatic to the skin 4 DON'T KNOW 8	53B. What kind of skin cancer was this? Basal cell carcinoma . 1 32/ Squamous cell carcinoma 2 Melanoma 3 Cancer metastatic to the skin 4 DON'T KNOW 8

SITE 1	SITE 2	SITE 3
53C.1 What is the full name and address of the doctor or the medical facility where the <u>first</u> diagnosis was made? COMPLETE MEDICAL AUTHORIZATION FORM IF NECESSARY. _____ PHYSICIAN'S LAST NAME 33/ _____ FIRST NAME OR _____ FACILITY NAME _____ STREET ADDRESS _____ CITY STATE	53C.1 What is the full name and address of the doctor or the medical facility where the <u>first</u> diagnosis was made? COMPLETE MEDICAL AUTHORIZATION FORM IF NECESSARY. _____ PHYSICIAN'S LAST NAME 34/ _____ FIRST NAME OR _____ FACILITY NAME _____ STREET ADDRESS _____ CITY STATE	53C.1 What is the full name and address of the doctor or the medical facility where the <u>first</u> diagnosis was made? COMPLETE MEDICAL AUTHORIZATION FORM IF NECESSARY. _____ PHYSICIAN'S LAST NAME 35/ _____ FIRST NAME OR _____ FACILITY NAME _____ STREET ADDRESS _____ CITY STATE
53C.2 What is the full name and address of the doctor or medical facility you <u>last</u> consulted? COMPLETE AUTHORIZATION FORM IF NECESSARY. IF SAME AS IN C.1, WRITE "SAME AS IN C.1" _____ PHYSICIAN'S LAST NAME _____ FIRST NAME OR _____ FACILITY NAME _____ STREET ADDRESS _____ CITY STATE	53C.2 What is the full name and address of the doctor or medical facility you <u>last</u> consulted? COMPLETE AUTHORIZATION FORM IF NECESSARY. IF SAME AS IN C.1, WRITE "SAME AS IN C.1" _____ PHYSICIAN'S LAST NAME _____ FIRST NAME OR _____ FACILITY NAME _____ STREET ADDRESS _____ CITY STATE	53C.2 What is the full name and address of the doctor or medical facility you <u>last</u> consulted? COMPLETE AUTHORIZATION FORM IF NECESSARY. IF SAME AS IN C.1, WRITE "SAME AS IN C.1" _____ PHYSICIAN'S LAST NAME _____ FIRST NAME OR _____ FACILITY NAME _____ STREET ADDRESS _____ CITY STATE

SITE 1	SITE 2	SITE 3
53D. SHOW PARTICIPANT HAND CARD Q. What treatments or medicines (do/did) you take for cancer of the (SITE)? CODE ALL THAT APPLY Radiation 1 36/ Chemotherapy 2 37/ Surgery 3 38/ OTHER... (SPECIFY) . 4 39/ _____ NONE 0	53D. SHOW PARTICIPANT HAND CARD Q. What treatments or medicines (do/did) you take for cancer of the (SITE)? CODE ALL THAT APPLY Radiation 1 56/ Chemotherapy 2 57/ Surgery 3 58/ OTHER... (SPECIFY) 4 59/ _____ NONE 0	53D. SHOW PARTICIPANT HAND CARD Q. What treatments or medicines (do/did) you take for cancer of the (SITE)? CODE ALL THAT APPLY Radiation 1 76/ Chemotherapy 2 77/ Surgery 3 78/ OTHER... (SPECIFY) 4 79/ _____ NONE 0
53E. During what month and year did you first receive (EACH TREATMENT CODED IN Q.53D) for cancer of the (SITE)? RADIATION - MONTH YR 40-43/ CHEMO- THERAPY - MONTH YR 44-47/ SURGERY - MONTH YR 48-51/ OTHER - MONTH YR 52-55/	53E. During what month and year did you first receive (EACH TREATMENT CODED IN Q.53D) for cancer of the (SITE)? RADIATION - MONTH YR 60-63/ CHEMO- THERAPY - MONTH YR 64-67/ SURGERY - MONTH YR 68-71/ OTHER - MONTH YR 72-75/	53E. During what month and year did you first receive (EACH TREATMENT CODED IN Q.53D) for cancer of the (SITE)? RADIATION - MO YR 10-13/ CHEMO- THERAPY - MONTH YR 14-17/ SURGERY - MONTH YR 18-21/ OTHER - MONTH YR 22-25/
IF SECOND SITE CODED IN Q.53 GO TO SITE 2, Q.53A.1, PAGE G-31.	IF THIRD SITE CODED IN Q.53 GO TO SITE 3, Q.53A.1, PAGE G-31.	
IF Q.52 CODED "3," ASK Q.54A	IF Q.52 CODED "3," ASK Q.54A	IF Q.52 CODED "3," ASK Q.54A
IF Q.52 CODED "1," SKIP TO Q.55, PAGE G-37.	IF Q.52 CODED "1," SKIP TO Q.55, PAGE G-37.	IF Q.52 CODED "1," SKIP TO Q.55 PAGE G-37.

SYSTEMIC (BODY) CANCER ONLY

BEGIN DECK 47

QUESTION 54 BODY PART 1	QUESTION 54 BODY PART 2	QUESTION 54 BODY PART 3
54A. In what part of your body (is/was) cancer located? RECORD VERBATIM 26-41/ _____ _____ _____	54A. In what part of your body (is/was) cancer located? RECORD VERBATIM 51-66/ _____ _____ _____	54A. In what part of your body (is/was) cancer located? RECORD VERBATIM 10-25/ _____ _____ _____
54B. What kind of cancer was it? 42/ _____ _____ _____	54B. What kind of cancer was it? 67/ _____ _____ _____	54B. What kind of cancer was it? 26/ _____ _____ _____
54C.1 In what month and year was cancer of the (BODY PART) first diagnosed? -- MONTH YEAR 43-46/	54C.1 In what month and year was cancer of the (BODY PART) first diagnosed? -- MONTH YEAR 68-71/	54C.1 In what month and year was cancer of the (BODY PART) first diagnosed? -- MONTH YEAR 27-30/
54C.2 When did you last consult a doctor for cancer of the (BODY PART)? -- MONTH YEAR 47-50/	54C.2 When did you last consult a doctor for cancer of the (BODY PART)? -- MONTH YEAR 72-75/	54C.2 When did you last consult a doctor for cancer of the (BODY PART)? -- MONTH YEAR 31-34/

35/R

QUESTION 54 BODY PART 1	QUESTION 54 BODY PART 2	QUESTION 54 BODY PART 3
54E. SHOW PARTICIPANT HAND CARD Q. What treatments or medicines (do/did) you take for cancer of the (BODY PART)? CODE ALL THAT APPLY Radiation 1 36/ Chemotherapy 2 37/ Surgery 3 38/ OTHER... (SPECIFY) . 4 39/ _____ NONE 0 40/R	54E. SHOW PARTICIPANT HAND CARD Q. What treatments or medicines (do/did) you take for cancer of the (BODY PART)? CODE ALL THAT APPLY Radiation 1 41/ Chemotherapy 2 42/ Surgery 3 43/ OTHER... (SPECIFY) 4 44/ _____ NONE 0 45/R	54E. SHOW PARTICIPANT HAND CARD Q. What treatments or medicines (do/did) you take for cancer of the (BODY PART)? CODE ALL THAT APPLY Radiation 1 46/ Chemotherapy 2 47/ Surgery 3 48/ OTHER... (SPECIFY) .. 4 49/ _____ NONE 0
54F. During what month and year did you first receive (EACH TREATMENT CODED IN E) for cancer of the (BODY PART)? RADIATION - MO YR 50-53/ CHEMO- THERAPY - MO YR 54-57/ SURGERY - MO YR 58-61/ OTHER - MO YR 62-65/	54F. During what month and year did you first receive (EACH TREATMENT CODED IN E) for cancer of the (BODY PART)? RADIATION - MO YR 67-70/ CHEMO- THERAPY - MO YR 71-74/ SURGERY - MO YR 75-78/ OTHER - MO YR BEGIN DECK 48 10-13/	54F. During what month and year did you first receive (EACH TREATMENT CODED IN E) for cancer of the (BODY PART)? RADIATION - MO YR 15-18/ CHEMO- THERAPY - MO YR 19-22/ SURGERY - MO YR 23-26/ OTHER - MO YR 27-30/
54G. IS THERE ANOTHER BODY PART AFFECTED? YES.... (GO TO Q.54A BODY PART 2) ... 1 NO.... (SKIP TO Q.55 PAGE G-37) 2 66/	54G. IS THERE ANOTHER BODY PART AFFECTED? YES.... (GO TO Q.54A BODY PART 3) ... 1 NO.... (SKIP TO Q.55 PAGE G-37) 2 14/	54G. IS THERE ANOTHER BODY PART AFFECTED? YES.... (GO TO NEW QUEX) 1 NO.... (SKIP TO Q.55 PAGE G-37) 2 31/

QUESTION 54 BODY PART 1	QUESTION 54 BODY PART 2	QUESTION 54 BODY PART 3
54D.1 What is the full name and address of the doctor or the medical facility where the diagnosis was <u>first</u> made? COMPLETE MEDICAL AUTHORIZATION FORM IF NECESSARY. _____ PHYSICIAN'S LAST NAME _____ FIRST NAME OR _____ FACILITY NAME _____ STREET ADDRESS _____ CITY STATE	54D.1 What is the full name and address of the doctor or the medical facility where the diagnosis was <u>first</u> made? COMPLETE MEDICAL AUTHORIZATION FORM IF NECESSARY. _____ PHYSICIAN'S LAST NAME _____ FIRST NAME OR _____ FACILITY NAME _____ STREET ADDRESS _____ CITY STATE	54D.1 What is the full name and address of the doctor or the medical facility where the diagnosis was <u>first</u> made? COMPLETE MEDICAL AUTHORIZATION FORM IF NECESSARY. _____ PHYSICIAN'S LAST NAME _____ FIRST NAME OR _____ FACILITY NAME _____ STREET ADDRESS _____ CITY STATE
54D.2 What is the full name and address of the doctor or medical facility you <u>last</u> consulted? COMPLETE MEDICAL AUTHORIZATION FORM IF NECESSARY. IF SAME AS IN D.1, WRITE "SAME AS IN D.1" _____ PHYSICIAN'S LAST NAME _____ FIRST NAME OR _____ FACILITY NAME _____ STREET ADDRESS _____ CITY STATE	54D.2 What is the full name and address of the doctor or medical facility you <u>last</u> consulted? COMPLETE MEDICAL AUTHORIZATION FORM IF NECESSARY. IF SAME AS IN D.1, WRITE "SAME AS IN D.1" _____ PHYSICIAN'S LAST NAME _____ FIRST NAME OR _____ FACILITY NAME _____ STREET ADDRESS _____ CITY STATE	54D.2 What is the full name and address of the doctor or medical facility you <u>last</u> consulted? COMPLETE MEDICAL AUTHORIZATION FORM IF NECESSARY. IF SAME AS IN D.1, WRITE "SAME AS IN D.1" _____ PHYSICIAN'S LAST NAME _____ FIRST NAME OR _____ FACILITY NAME _____ STREET ADDRESS _____ CITY STATE

55. At any time since (DATE OF LAST INTERVIEW) has a doctor told you that you had leukemia?

YES (ASK Q.55A THROUGH Q.55F) 1

32/

NO (GO TO Q.56, PAGE G-39) 2

55A. Thinking about the period between (DATE OF LAST INTERVIEW) and now, in what month and year was your leukemia diagnosed?

-
 MONTH YEAR

33-36/

55B. What is the name and address of the doctor or the medical facility where the diagnosis was made?
COMPLETE MEDICAL AUTHORIZATION FORM IF NECESSARY.

PHYSICIAN'S LAST NAME

37/

FIRST NAME

OR

FACILITY NAME

STREET ADDRESS

CITY

STATE

55C. What treatments or medicines have you taken for leukemia since (DATE OF LAST INTERVIEW)?

1) _____

38-40/

2) _____

41-43/

3) _____

44-46/

55D. For the period between (DATE OF LAST INTERVIEW) and now, during what month and year did you first receive (EACH TREATMENT OR MEDICINE IN C)?

MONTH YR.

TREATMENT 1 -

47-50/

TREATMENT 2 -

51-54/

TREATMENT 3 -

55-58/

55E. What is the name and address of the doctor or medical facility you last consulted about your leukemia?
COMPLETE MEDICAL AUTHORIZATION FORM IF NECESSARY.

PHYSICIAN'S LAST NAME	

FIRST NAME	

OR	

FACILITY NAME	

STREET ADDRESS	

_____	_____ _____ _____
CITY	STATE

59/

55F. During what month and year did you last consult (NAME IN Q.55E)?

____ ____ _____	-	____ ____ _____
MONTH		YEAR

60-63/

	A.	B.	C.	D.
56. Since (DATE OF LAST INTERVIEW) have you had . . .	FOR EACH YES, ASK A AND B. SHOW PARTICIPANT HAND CARD J. On what part of your body did you have (CONDITION)? Any other part?	Did you discuss (CONDITION) with a doctor since (DATE OF LAST INTERVIEW)?	ASK C THROUGH G FOR EACH "YES" AT B. What was the diagnosis?	What is the name and address of the doctor or medical facility? COMPLETE MEDICAL AUTHORIZATION FORM IF NECESSARY.
56.1 Patches of your skin change color YES 1 NO . . . (SKIP TO Q.56.2 BELOW) . 2 64/	☐ ☐ SITE CODE 65-66/ ☐ ☐ SITE CODE 67-68/ ☐ ☐ SITE CODE 69-70/	YES 1 NO . . . (SKIP TO Q.56.2 BELOW) . . . 2 71/	 72/	 PHYSICIAN'S LAST NAME/FACILITY 73/ FIRST NAME ADDRESS CITY STATE
56.2 Easier bruising of the skin than usual? YES 1 NO . . . (SKIP TO Q.56.3, PAGE G-43) . . . 2 74/	☐ ☐ SITE CODE 75-76/ ☐ ☐ SITE CODE 77-78/ ☐ ☐ SITE CODE 79-80/	BEGIN DECK 49 YES 1 NO . . . (SKIP TO Q.56.3, PAGE G-41) 2 10/	 11/	 PHYSICIAN'S LAST NAME/FACILITY 12/ FIRST NAME ADDRESS CITY STATE

CODES FOR Q.56	
CODES: (01) Scalp or Forehead	(12) Arm
(02) Eye Lid	(13) Hand
(03) Ear	(14) Arm or Hand, Not Otherwise Specified
(04) Nose	(15) Genitals
(05) Head or Neck, Not Otherwise Specified	(16) Leg
(06) Cheek, chin or jaw	(17) Foot
(07) Neck or Supraclavicular	(18) Leg or Foot, Not Otherwise Specified
(08) Vermilion	(19) Skin, Not Otherwise Specified
(09) Trunk, Front	(20) Upperlip, Not Otherwise Specified
(10) Trunk, Back	(21) Lowerlip, Not Otherwise Specified
(11) Trunk, Not Otherwise Specified	(22) Lip, Not Otherwise Specified

E. 56. ASK E THROUGH G FOR EACH "YES" AT B. During what month and year was that?	F. What is the name and address of the doctor or medical facility you last consulted about (CONDITION)? IF DIFFERENT DOCTOR IN D, COMPLETE AUTHORIZATION FORM.	G. During what month and year did you last consult (NAME FROM F)?
MONTH YEAR 13-16/	17/ PHYSICIAN'S LAST NAME FIRST NAME OR FACILITY NAME STREET ADDRESS CITY STATE	18-21/ MONTH YEAR (SKIP BACK TO Q.56.2, PAGE G-39)
MONTH YEAR 22-25/	26/ PHYSICIAN'S LAST NAME FIRST NAME OR FACILITY NAME STREET ADDRESS CITY STATE	27-30/ MONTH YEAR (GO TO Q.56.3, PAGE G-41)

	A.	B.	C.	D.
56. Since (DATE OF LAST INTERVIEW) have you had ...	IF YES AT Q.56.3, ASK A AND B. SHOW PARTICIPANT HAND CARD J. On what part of your body did you have (CONDITION)? Any other part?	Did you discuss (CONDITION) with a doctor since (DATE OF LAST INTERVIEW)?	ASK C THROUGH G FOR EACH "YES" AT B. What was the diagnosis?	What is the name and address of the doctor or medical facility? COMPLETE MEDICAL AUTHORIZATION FORM IF NECESSARY.
56.3 Skin that was extra sensitive or seemed to hurt for no reason? YES 1 NO. . . (SKIP TO Q.56.4 PAGE G-43) ... 2 31/	☐☐ SITE CODE 32-33/ ☐☐ SITE CODE 34-35/ ☐☐ SITE CODE 36-37/	YES 1 NO. . . (SKIP TO Q.56.4 PAGE G-43) 2 38/	_____ _____ 39/	_____ PHYSICIAN'S LAST NAME/FACILITY 40/ _____ FIRST NAME _____ ADDRESS _____ CITY STATE

CODES FOR Q.56

CODES: (01) Scalp or Forehead
 (02) Eye Lid
 (03) Ear
 (04) Nose
 (05) Head or Neck, Not Otherwise Specified
 (06) Cheek, chin or jaw
 (07) Neck or Supraclavicular
 (08) Vermilion
 (09) Trunk, Front
 (10) Trunk, Back
 (11) Trunk, Not Otherwise Specified
 (12) Arm
 (13) Hand

(14) Arm or Hand, Not Otherwise Specified
 (15) Genitals
 (16) Leg
 (17) Foot
 (18) Leg or Foot, Not Otherwise Specified
 (19) Skin, Not Otherwise Specified
 (20) Upperlip, Not Otherwise Specified
 (21) Lowerlip, Not Otherwise Specified
 (22) Lip, Not Otherwise Specified

E.	F.	G.
56. ASK E THROUGH G FOR EACH "YES" AT B. During what month and year was that? MONTH YEAR 41-44/	What is the name and address of the doctor or medical facility you last consulted about (CONDITION)? IF DIFFERENT DOCTOR IN D, COMPLETE AUTHORIZATION FORM. PHYSICIAN'S LAST NAME 45/ FIRST NAME OR FACILITY NAME STREET ADDRESS CITY STATE	During what month and year did you last consult (NAME FROM F)? MONTH YEAR 46-49/

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	A.	B.	C.
56. Aside from injury, since (DATE OF LAST INTERVIEW) have you had ...	ASK A THROUGH C FOR EACH YES IN Q.56.4 OR Q.56.5. Thinking about the period between (DATE OF LAST INTERVIEW) and now, when did you first notice (CONDITION)?	Which limbs or muscles were affected?	Do you still have (CONDITION)?
56.4 Persistent numbness of any of your limbs? YES 1 NO... (SKIP TO Q.56.5, BELOW) .. 2 50/	MONTH YEAR 51-54/	_____ _____ _____ 55-56/	YES 1 NO 2 57/
56.5 Persistent tingling sensations in any of your limbs? YES 1 NO. (SKIP TO Q.57.1, PAGE G-46) 2 58/	MONTH YEAR 59-62/	_____ _____ _____ 63-64/	YES 1 NO 2 65/

D.	E.	F.	G.
56. ASK D THROUGH G FOR EACH YES IN Q.56.4 OR Q.56.5. Between (DATE OF LAST INTERVIEW) and now, during what months and year(s) was the (CONDITION) most intense?	Did you see a doctor for (CONDITION) since (DATE OF LAST INTERVIEW)?	What was the diagnosis?	What is the name and address of the doctor who first made the diagnosis or the medical facility where the diagnosis was first made? COMPLETE MEDICAL AUTHORIZATION FORM IF NECESSARY.
____ MONTH ____ YEAR 66-69/ TO ____ MONTH ____ YEAR 70-73/	YES 1 NO. (SKIP BACK TO Q.56.5, PAGE G-43) ... 2 74/	_____ _____ _____ 75/	_____ PHYSICIAN'S LAST NAME 76/ _____ FIRST NAME OR _____ FACILITY NAME _____ STREET ADDRESS _____ CITY ____ STATE
____ MONTH ____ YEAR 77-80/ TO BEGIN DECK 50 ____ MONTH ____ YEAR 10-13/	YES 1 NO. (SKIP TO Q.57.1, PAGE G-46) ... 2 14/	_____ _____ _____ 15/	_____ PHYSICIAN'S LAST NAME 16/ _____ FIRST NAME OR _____ FACILITY NAME _____ STREET ADDRESS _____ CITY ____ STATE

H.	I.	J.
ASK H THROUGH J FOR EACH YES IN Q.56.4E OR Q.56.5E. During what month and year was that? MONTH YEAR 17-20/	What is the name and address of the doctor or medical facility you last consulted about (CONDITION)? IF DIFFERENT DOCTOR IN G, COMPLETE AUTHORIZATION FORM. _____ PHYSICIAN'S LAST NAME 21/ _____ FIRST NAME OR _____ FACILITY NAME _____ STREET ADDRESS _____ CITY STATE	During what month and year did you last consult (NAME FROM I)? MONTH YEAR 22-25/ (SKIP BACK TO Q.56.5, PAGE G-43)
 MONTH YEAR 14-17/	_____ PHYSICIAN'S LAST NAME 18/ _____ FIRST NAME OR _____ FACILITY NAME _____ STREET ADDRESS _____ CITY STATE	 MONTH YEAR 31-34/

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D.	E.	F.	G.
57. ASK D THROUGH G FOR EACH YES IN Q.57. Between (DATE OF LAST INTERVIEW) and now, during what months and year(s) was the (CONDITION) most intense?	Did you see a doctor for (CONDITION) since (DATE OF LAST INTERVIEW)?	What was the diagnosis?	What is the name and address of the doctor who first made the diagnosis or the medical facility where the diagnosis was first made? COMPLETE MEDICAL AUTHORIZATION FORM IF NECESSARY.
____ MONTH ____ YEAR 51-54/ TO ____ MONTH ____ YEAR 55-58/	YES 1 NO. (SKIP BACK TO Q.57.2 PAGE G-46) 2 59/	_____ _____ _____ 60/	_____ PHYSICIAN'S LAST NAME 61/ _____ FIRST NAME OR _____ FACILITY NAME _____ STREET ADDRESS _____ CITY ____ STATE
____ MONTH ____ YEAR 62-65/ TO ____ MONTH ____ YEAR 66-69/	YES 1 NO. (SKIP TO Q.58, PAGE G-49) 2 70/	_____ _____ _____ 71/	_____ PHYSICIAN'S LAST NAME 72/ _____ FIRST NAME OR _____ FACILITY NAME _____ STREET ADDRESS _____ CITY ____ STATE

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H.	I.	J.
57. During what month and year was that?	What is the name and address of the doctor or medical facility you last consulted about (CONDITION)? IF DIFFERENT DOCTOR IN G, COMPLETE AUTHORIZATION FORM.	During what month and year did you last consult (NAME FROM I)? BEGIN DECK 51
____ MONTH ____ YEAR 73-76/	____ PHYSICIAN'S LAST NAME ____ 77/ ____ FIRST NAME ____ OR ____ FACILITY NAME ____ ____ STREET ADDRESS ____ ____ CITY ____ STATE ____	____ MONTH ____ YEAR 10-13/ GO TO Q.57.2, PAGE G-46
____ MONTH ____ YEAR 14-17/	____ PHYSICIAN'S LAST NAME ____ 18/ ____ FIRST NAME ____ OR ____ FACILITY NAME ____ ____ STREET ADDRESS ____ ____ CITY ____ STATE ____	____ MONTH ____ YEAR 19-22/

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	A.	B.	C.
58. Aside from injury, since (DATE OF LAST INTERVIEW) have you had . . .	ASK A THROUGH C FOR EACH YES IN Q.58. Thinking about the period between (DATE OF LAST INTERVIEW) and now, when did you first notice (CONDITION)?	Which limbs or muscles were affected?	Do you still have (CONDITION)?
58.1 A reduction in grip strength YES 1 NO . . . (SKIP TO Q.IS51, IN I.S.R.B. PAGE 13) . 2 23/	MONTH YEAR 24-27/	_____ _____ _____ 28-29/	YES 1 NO 2 30/

D.	E.	F.	G.
58. ASK D THROUGH G FOR EACH YES IN Q.58. Between (DATE OF LAST INTERVIEW) and now, during what months and year(s) was the (CONDITION) most intense?	Did you see a doctor for (CONDITION) since (DATE OF LAST INTERVIEW)?	What was the diagnosis?	What is the name and address of the doctor who first made the diagnosis or the medical facility where the diagnosis was first made? COMPLETE MEDICAL AUTHORIZATION FORM IF NECESSARY.
 MONTH YEAR 31-34/ TO MONTH YEAR 35-38/	YES 1 NO.... (SKIP TO Q.59 PAGE G-52) ... 2 39/	_____ _____ _____ 40/	_____ PHYSICIAN'S LAST NAME 41/ _____ FIRST NAME OR _____ FACILITY NAME _____ STREET ADDRESS _____ CITY STATE

H.	I.	J.
58. During what month and year was that?	What is the name and address of the doctor or medical facility you last consulted about (CONDITION)? IF DIFFERENT DOCTOR IN G, COMPLETE AUTHORIZATION FORM.	During what month and year did you last consult (NAME FROM I)?
MONTH YEAR 42-45/	46/ PHYSICIAN'S LAST NAME FIRST NAME OR FACILITY NAME STREET ADDRESS CITY STATE	47-50/ MONTH YEAR

INTERVIEWER: BEFORE ASKING QUESTION 59 ON NEXT PAGE, SKIP TO Q.IS51, in I.S.R.B. on Page 13.

59. (Besides the prescribed medicines you told me about) are you currently taking any (other) prescribed medicines?

YES (ASK Q.59A) 1 51/

NO (SKIP TO SECTION H) 2

A. Please list the name of each medication and the condition for which it was prescribed.

MEDICATION	CONDITION	
1) _____	1) _____	52/
2) _____	2) _____	
3) _____	3) _____	

SECTION H: HEALTH HABITS**FOR THIS SECTION YOU WILL NEED:**

- Hand Card R
- Hand Card S
- Hand Card T
- Hand Card U
- Hand Card V
- Hand Card W
- Hand Card X
- Hand Card Y
- Hand Card Z
- Hand Card AA
- Hand Card BB
- Hand Card CC
- Hand Card DD
- Hand Card EE
- Hand Card FF

1A. WAS R INTERVIEWED IN 1985/1986 OR 1987/1988?

YES (SKIP TO Q.62, PAGE H-23) 1

NO 2

1B. THESE QUESTIONS ARE ASKED TO NEW PARTICIPANTS OR THOSE COMPLIANT ONLY AT BASELINE. The next set of questions refers to smoking habits.

Have you ever smoked at least as many as 5 packs of cigarettes, that is, 100 cigarettes, during your entire life?

YES 1 53/

NO (SKIP TO Q.22, PAGE H-9) 2

2. Do you now smoke cigarettes?

YES 1 54/

NO (SKIP TO Q.11, PAGE H-5) 2

CURRENT CIGARETTE SMOKER SECTION

3. On average, how many cigarettes do you smoke a day?

IF R ANSWERS BY GIVING NUMBER OF PACKS OF CIGARETTES, RECORD VERBATIM IN MARGIN.
THEN MULTIPLY THE NUMBER OF PACKS BY 20 AND ENTER THE NUMBER OF CIGARETTES
SMOKED.

ENTER NUMBER OF CIGARETTES: PER DAY 55-56/

(IF NOT EVERY DAY:) # PER MONTH 57-58/

OR

(IF NOT EVERY DAY:) # PER YEAR 59-60/

4. SHOW PARTICIPANT HAND CARD R. For how many years have you been smoking (NUMBER IN Q.3)
cigarettes (per day/per month/per year)?

Less than 2 years	01	61-62/
2-5 years	02	
6-10 years	03	
11-15 years	04	
16-20 years	05	
21-25 years	06	
26-30 years	07	
31-35 years	08	
36-40 years	09	
More than 40 years	10	

5. What brand of cigarettes do you usually smoke? (IF MORE THAN ONE BRAND OR NO REGULAR
BRAND MENTIONED ASK: Which one do you smoke the most?)

ENTER BRAND _____

OFFICE USE

63-65/

NO REGULAR BRAND (SKIP TO Q.8, PAGE H-3) 996

6. For how long now have you been smoking this particular brand?

ENTER DAYS:			66-67/
OR WEEKS:			68-69/
OR MONTHS:			70-71/
OR YEARS:			72-73/

7. What type of cigarettes are they? Are they . . . (READ EACH PAIR TOGETHER)

	CODE ONE NUMBER	
A. Filter tip or	1	74/
Non-filter tip?	2	

	CODE ONE NUMBER	
B. Regular size	1	75/
King size or	2	
100 Millimeter?	3	

8. SHOW PARTICIPANT HAND CARD S. Now I am going to show you a diagram of different size cigarettes. Please look at the picture of the (KIND OF CIGARETTE NAMED IN Q.7A AND Q.7B). Now, considering your style of smoking--for example, how long you usually leave the cigarette in an ashtray or just hold it in your hand--tell me the number which indicates how much of the cigarette you actually smoke.

SECTION 1	1	76/
SECTION 2	2	
SECTION 3	3	
SECTION 4	4	

9. During the period when you were smoking the most heavily on a regular basis, about how many cigarettes did you usually smoke in a day? (CONVERT PACKS TO NUMBER OF CIGARETTES BY MULTIPLYING NUMBER OF PACKS BY 20)

ENTER NUMBER OF CIGARETTES: PER DAY 77-78/

(IF NOT EVERY DAY:) # PER MONTH 79-80/

OR

BEGIN DECK 52

(IF NOT EVERY DAY:) # PER YEAR 10-11/

A. When was that?

FROM

-
MONTH YEAR

12-15/

TO

-
MONTH YEAR

16-19/

10. SHOW PARTICIPANT HAND CARD T. When you smoke cigarettes, how deeply do you usually inhale?
Would you say:

As deeply into the chest as possible 1 20/
Only partly into the chest 2
As far back as the throat 3
Well back into the mouth, or 4
Just puff and don't really draw it in at all 5
DON'T KNOW 8

SKIP TO Q.22, PAGE H-9

FORMER CIGARETTE SMOKER SECTION

11. How long has it been since you smoked cigarettes fairly regularly (RECORD NUMBER)?

ENTER DAYS: 21-22/

OR WEEKS: 23-24/

OR MONTHS: 25-26/

OR YEARS: 27-28/

NEVER SMOKED REGULARLY (SKIP TO Q.22, PAGE H-9) 1 29/

12. On the average, about how many cigarettes a day were you smoking at that time?

IF R ANSWERS BY GIVING NUMBER OF PACKS OF CIGARETTES, RECORD VERBATIM IN MARGIN.
THEN MULTIPLY THE NUMBER OF PACKS BY 20 AND ENTER THE NUMBER OF CIGARETTES
SMOKED.

ENTER NUMBER OF CIGARETTES: PER DAY 30-31/

(IF NOT EVERY DAY:) # PER MONTH 32-33/

OR

(IF NOT EVERY DAY:) # PER YEAR 34-35/

13. SHOW PARTICIPANT HAND CARD R. How long had you been smoking (NUMBER IN Q.12) cigarettes (per day/per month/per year)?

Less than 2 years	01	36-37/
2-5 years	02	
6-10 years	03	
11-15 years	04	
16-20 years	05	
21-25 years	06	
26-30 years	07	
31-35 years	08	
36-40 years	09	
More than 40 years	10	

14. You mentioned that you have not smoked regularly for (TIME IN Q.11). Did you ever stay off cigarettes for a longer period of time?

YES	1	38/
NO	(SKIP TO Q.16, BELOW)	2

15. How long did you stay off cigarettes at that time? (PROBE: About how long did you stay off?)

ENTER DAYS:		39-40/
OR WEEKS:		41-42/
OR MONTHS:		43-44/
OR YEARS:		45-46/

16. What brand of cigarettes did you usually smoke? (IF MORE THAN ONE BRAND OR NO REGULAR BRAND MENTIONED ASK: Which one did you smoke the most?)

ENTER BRAND _____

OFFICE USE

47-49/

NO REGULAR BRAND. (SKIP TO Q.19, PAGE H-7) 996

17. For how long did you smoke this particular brand?

ENTER DAYS:		50-51/
OR WEEKS:		52-53/
OR MONTHS:		54-55/
OR YEARS:		56-57/

18. What type of cigarettes were they? Were they ... (READ EACH PAIR TOGETHER)

	CODE ONE NUMBER	
A. Filter tip or	1	58/
Non-filter tip?	2	
	CODE ONE NUMBER	
B. Regular size	1	59/
King size or	2	
100 Millimeter?	3	

19. SHOW PARTICIPANT HAND CARD S. Now I am going to show you a diagram of different size cigarettes. Please look at the picture of the (KIND OF CIGARETTE IN Q.18A AND Q.18B). Now, considering your style of smoking—for example, how long you usually leave the cigarette in an ashtray or just hold it in your hand—tell me the number which indicates how much of the cigarette you actually smoked.

Section 1	1	60/
Section 2	2	
Section 3	3	
Section 4	4	

20. During the period when you were smoking the most heavily on a regular basis, about how many cigarettes did you usually smoke in a day?

ENTER NUMBER OF CIGARETTES: PER DAY 61-62/

(IF NOT EVERY DAY:) # PER MONTH 63-64/

OR

(IF NOT EVERY DAY:) # PER YEAR 65-66/

- A. When was that?

FROM

-
MONTH YEAR

67-70/

TO

-
MONTH YEAR

71-74/

21. SHOW PARTICIPANT HAND CARD T. When you smoked cigarettes, how deeply did you usually inhale?
Would you say:

As deeply into the chest as possible 1 75/
Only partly into the chest 2
As far back as the throat 3
Well back into the mouth, or 4
Just puff and don't really draw it in at all 5
DON'T KNOW 8

CURRENT PIPE SMOKER SECTION

22. During your entire life, have you smoked at least as many as 50 pipefuls of tobacco?

YES 1 76/
NO (SKIP TO Q.35, PAGE H-14) 2

23. Do you now smoke a pipe?

YES 1 77/
NO (SKIP TO Q.28, PAGE H-11) 2

24. About how many average sized pipefuls of tobacco do you usually smoke in a day?

ENTER NUMBER OF PIPEFULS OF TOBACCO: PER DAY 78-79/
BEGIN DECK 53

(IF NOT EVERY DAY:) # PER MONTH 10-11/

OR

(IF NOT EVERY DAY:) # PER YEAR 12-13/

25. SHOW PARTICIPANT HAND CARD R. For how many years have you been smoking (NUMBER IN Q.24) pipefuls (per day/per month/per year)?

Less than 2 years 01 14-15/
2-5 years 02
6-10 years 03
11-15 years 04
16-20 years 05
21-25 years 06
26-30 years 07
31-35 years 08
36-40 years 09
More than 40 years 10

26. During the period when you were smoking the most heavily, about how many pipefuls of tobacco did you usually smoke in a day?

ENTER NUMBER PER DAY 16-17/

(IF NOT EVERY DAY:) # PER MONTH 18-19/

OR

(IF NOT EVERY DAY:) # PER YEAR 20-21/

- A. When was that?

FROM

-
MONTH YEAR

22-25/

TO

-
MONTH YEAR

26-29/

27. SHOW PARTICIPANT HAND CARD T. When you smoke a pipe, how deeply do you usually inhale? Would you say:

As deeply into the chest as possible	1	30/
Only partly into the chest	2	
As far back as the throat	3	
Well back into the mouth, or	4	
Just puff and don't really draw it in at all	5	
DON'T KNOW	8	

SKIP TO Q.35, PAGE H-14

FORMER PIPE SMOKER SECTION

28. How long has it been since you smoked a pipe fairly regularly? (RECORD NUMBER)

ENTER DAYS: 31-32/

OR WEEKS: 33-34/

OR MONTHS: 35-36/

OR YEARS: 37-38/

NEVER SMOKED REGULARLY (SKIP TO Q.35, PAGE H-14) 1 39/

29. On the average, about how many pipefuls of tobacco a day were you smoking at that time?

ENTER NUMBER OF PIPEFULS OF TOBACCO: PER DAY 40-41/

(IF NOT EVERY DAY:) # PER MONTH 42-43/

OR

(IF NOT EVERY DAY:) # PER YEAR 44-45/

30. SHOW PARTICIPANT HAND CARD R. For how long did you smoke (NUMBER IN Q.29) pipefuls of tobacco (per day/per week/per month)?

Less than 2 years	01	46-47/
2-5 years	02	
6-10 years	03	
11-15 years	04	
16-20 years	05	
21-25 years	06	
26-30 years	07	
31-35 years	08	
36-40 years	09	
More than 40 years	10	

31. You mentioned that you have not smoked regularly for (TIME RECORDED IN Q.28). Did you ever not smoke a pipe for a longer period of time?

YES 1 48/

NO (SKIP TO Q.33, BELOW) 2

32. How long did you not smoke a pipe at that time?

ENTER DAYS: 49-50/

OR WEEKS: 51-52/

OR MONTHS: 53-54/

OR YEARS: 55-56/

33. During the period when you were smoking the most heavily on a regular basis, about how many pipefuls of tobacco did you usually smoke in a day?

ENTER NUMBER PER DAY 57-58/

(IF NOT EVERY DAY:) # PER MONTH 59-60/

OR

(IF NOT EVERY DAY:) # PER YEAR 61-62/

A. When was that?

FROM

-
MONTH YEAR 63-66/

TO

-
MONTH YEAR 67-70/

34. SHOW PARTICIPANT HAND CARD T. When you smoked a pipe, how deeply did you usually inhale?
Would you say:

As deeply into the chest as possible	1	71/
Only partly into the chest	2	
As far back as the throat	3	
Well back into the mouth, or	4	
Just puff and don't really draw it in at all	5	
DON'T KNOW	8	

B-157

CURRENT CIGAR SMOKER SECTION

35. During your entire life have you smoked at least as many as 50 cigars?

YES 1 72/
 NO (SKIP TO Q.51, PAGE H-19) 2

36. Do you now smoke cigars?

YES 1 73/
 NO (SKIP TO Q.42, PAGE H-17) 2

37. On average, about how many cigars a day do you now smoke?

ENTER NUMBER OF CIGARS: PER DAY 74-75/

(IF NOT EVERY DAY:) # PER MONTH 76-77/

OR

(IF NOT EVERY DAY:) # PER YEAR 78-79/

38. SHOW PARTICIPANT HAND CARD R. For how many years have you been smoking (NUMBER RECORDED IN Q.37) cigars (per day/per month/per year)?

Less than 2 years 01
 2-5 years 02
 6-10 years 03
 11-15 years 04
 16-20 years 05
 21-25 years 06
 26-30 years 07
 31-35 years 08
 36-40 years 09
 More than 40 years 10

BEGIN DECK 54
 10-11/

39. During the period when you were smoking the most heavily on a regular basis, about how many cigars did you usually smoke in a day.

ENTER NUMBER		PER DAY	12-13/
(IF NOT EVERY DAY:) #		PER MONTH	14-15/
OR			
(IF NOT EVERY DAY:) #		PER YEAR	16-17/

- A. When was that?

FROM		
	-	
MONTH		YEAR
		18-21/
TO		
	-	
MONTH		YEAR
		22-25/

40. SHOW PARTICIPANT HAND CARD T. When you smoke cigars, how deeply do you usually inhale? Would you say:

As deeply into the chest as possible	1	26/
Only partly into the chest	2	
As far back as the throat	3	
Well back into the mouth, or	4	
Just puff and don't really draw it in at all	5	
DON'T KNOW	8	

41. What type of cigars do you usually smoke?

ONLY CODE ONE TYPE

Filter tip or 1 27/

Non-filter tip? 2

A. SHOW PARTICIPANT HAND CARD U. Now I am going to show you a diagram of different size cigars. Please look at the picture of the (KIND OF CIGAR IN Q.41). Now considering your style of smoking--for example, how long you usually leave the cigar in an ashtray or just hold it in your hand--tell me the number which indicates how much of the cigar you actually smoke.

SECTION 1 1 28/

SECTION 2 2

SECTION 3 3

SECTION 4 4

SKIP TO Q.51, PAGE H-19

FORMER CIGAR SMOKER SECTION

42. How long has it been since you smoked cigars fairly regularly?

ENTER DAYS: 29-30/OR WEEKS: 31-32/OR MONTHS: 33-34/OR YEARS: 35-36/

NEVER SMOKED REGULARLY (SKIP TO Q.51, PAGE H-19) 1 37/

43. On the average, about how many cigars a day were you smoking at that time?

ENTER NUMBER OF CIGARS: PER DAY 38-39/(IF NOT EVERY DAY:) # PER MONTH 40-41/

OR

(IF NOT EVERY DAY:) # PER YEAR 42-43/

44. SHOW PARTICIPANT HAND CARD R. For how long did you smoke (NUMBER PER DAY IN Q.43) cigars per day?

Less than 2 years 01 44-45/

2-5 years 02

6-10 years 03

11-15 years 04

16-20 years 05

21-25 years 06

26-30 years 07

31-35 years 08

36-40 years 09

More than 40 years 10

45. You mentioned that you have not smoked regularly for (TIME RECORDED IN Q.42). Did you ever stay off cigars for a longer period of time?

YES 1

46/

NO (SKIP TO Q.47, BELOW) 2

46. How long did you stay off cigars at that time?

ENTER DAYS:

47-48/

OR WEEKS:

49-50/

OR MONTHS:

51-52/

OR YEARS:

53-54/

47. What type of cigars did you usually smoke just before you stopped smoking cigars regularly?

ONLY CODE ONE TYPE

Filter tip or 1

55/

Non-filter tip? 2

48. SHOW PARTICIPANT HAND CARD U. Now I am going to show you a diagram of different size cigars. Please look at the picture of the (KIND OF CIGAR IN Q.47). Now, considering your style of smoking—for example, how long you usually leave the cigar in an ashtray or just hold it in your hand—tell me the number which indicates how much of the cigar you actually smoke.

SECTION 1 1

56/

SECTION 2 2

SECTION 3 3

SECTION 4 4

49. During the period when you were smoking the most on a regular basis, about how many cigars did you usually smoke in a day?

ENTER NUMBER PER DAY 57-58/

(IF NOT EVERY DAY:) # PER MONTH 59-60/

OR

(IF NOT EVERY DAY:) # PER YEAR 61-62/

- A. When was that?

FROM

MONTH -- YEAR 63-66/

TO

MONTH -- YEAR 67-70/

50. SHOW PARTICIPANT HAND CARD T. When you smoked a cigar, how deeply did you usually inhale?
Would you say:

As deeply into the chest as possible 1 71/
Only partly into the chest 2
As far back as the throat 3
Well back into the mouth, or 4
Just puff and don't really draw it in at all 5
DON'T KNOW 8

51. IS PARTICIPANT CURRENTLY LIVING WITH A SPOUSE OR PARTNER? CHECK INFORMATION SHEET.

IS ANY "NO" CODED IN SECTION E: Q.2, PAGE E-3 , Q.6C, PAGE E-10, OR Q.8C, PAGE E-14?

YES 1 72/

NO (SKIP TO Q.53, PAGE H-20) 2

52. Does your (spouse/partner) smoke regularly any of the following?

	YES	NO	DON'T KNOW	
Cigarettes	1	2	8	73/
Cigars	1	2	8	74/
Pipe	1	2	8	75/

53. Approximately how much smoke is there in the air in your home?

A lot	1	76/
A little	2	
NONE (SKIP TO Q.56, PAGE H-21)	3	

54. SHOW PARTICIPANT HAND CARD V. Approximately how many hours a week are you exposed to this smoke in your home?

10 hours or less	1	77/
11 to 15 hours	2	
16 to 20 hours	3	
21 to 25 hours	4	
26 or more hours	5	

55. SHOW PARTICIPANT HAND CARD W. For how many years have you been exposed to smoke in this way? (CHECK ONLY ONE)

Less than 1 year	01	78-79/
1 to 4 years	02	
5 to 10 years	03	
11 to 15 years	04	
16 to 20 years	05	
21 to 30 years	06	
More than 30 years	07	
DON'T KNOW	98	

56. DOES R WORK? (IS "YES" CODED AT SECTION B, Q.4, PAGE B-5 OR "CURRENT JOB" CODED AT SECTION C, Q.1F PAGE C-2)?

BEGIN DECK 55

YES 1 10/

NO (SKIP TO Q.62, PAGE H-23) 2

A. Approximately how much smoke is there in the air in the transportation you take to and from work (For example, your car, the train, the bus, etc.)?

A lot 1 11/

A little 2

NONE (SKIP TO Q.59, PAGE H-22) 3

57. SHOW PARTICIPANT HAND CARD V. Approximately how many hours a week are you exposed to this smoke?

10 hours or less 1 12/

11 to 15 hours 2

16 to 20 hours 3

21 to 25 hours 4

26 or more hours 5

58. SHOW PARTICIPANT HAND CARD W. For how many years have you been exposed to this smoke?

Less than 1 year 01 13-14/

1 to 4 years 02

5 to 10 years 03

11 to 15 years 04

16 to 20 years 05

21 to 30 years 06

More than 30 years 07

DON'T KNOW 98

59. Approximately how much smoke is there in the air where you work?

A lot	1	15/
A little	2	
NONE	(SKIP TO Q.62, PAGE H-23)	3

60. SHOW PARTICIPANT HAND CARD V. Approximately how many hours a week are you exposed to this smoke?

10 hours or less	1	16/
11 to 15 hours	2	
16 to 20 hours	3	
21 to 25 hours	4	
26 or more hours	5	

61. For how many years have you been exposed to this smoke at work?

Less than 1 year	01	17-18/
1 to 4 years	02	
5 to 10 years	03	
11 to 15 years	04	
16 to 20 years	05	
21 to 30 years	06	
More than 30 years	07	

62. SHOW PARTICIPANT HAND CARD X. There are some questions that are asked in survey research that are difficult to ask directly because many people think they are too personal. While it is understandable that people feel this way, there is a real need for the information for the population as a whole. We now have a way that makes it possible for people to give information, without telling anyone about their own situation. Let me show you how this works; we will use the next question I have here as an example.

CONTINUE WITH CARD X. As you see, there are two questions on the card. One deals with the "real" question that the research is concerned with, the other is completely unrelated. Both questions can be answered "yes" or "no." One of the two questions is selected by chance and you answer it. (I'll show you how that works in a minute). I do not know which question you are answering. When all the questionnaires have been tallied, the researchers can tell how many people have smoked marijuana, but they have no way of knowing whether it was you or any other person in particular who has smoked marijuana.

HAND R COIN

It is very simple, as you will see. You will flip the coin. The question you will answer is selected by chance. In no way can a truthful answer prove harmful to you. There is no identifying information that can link you to your answers.

Please take the coin that you have been handed and flip it now. Don't tell me which side came up. If the coin shows heads, please answer only question 1. If the coin shows tails, please answer only question 2. I won't look to see if the coin comes up heads or tails; and you don't tell me which question you are answering. Just tell me if your answer is "yes" or "no."

YES	1	19/
NO	2	
DON'T KNOW	8	

- A. SHOW PARTICIPANT HAND CARD Y. Now let's do that again, using the next question. CONTINUE WITH CARD Y. Flip the coin again. If the coin turns up heads, please answer only question number 1. If the coin comes up tails, please answer only question number 2. Don't tell me the question. Is your answer "yes" or "no"?

YES	1	20/
NO	2	
DON'T KNOW	8	

IF PARTICIPANT INTERVIEWED IN CYCLES '85-'86 AND/OR '87-'88, GO TO Q.63, PAGE H-24.
OTHERWISE, SKIP TO Q.64, PAGE H-43.

SMOKING INTERVAL QUESTIONS

63. THIS SECTION FOR PARTICIPANTS INTERVIEWED IN CYCLES '85-'86 AND/OR CYCLE '87-'88.

IF PARTICIPANT NEW TO STUDY OR ONLY COMPLAINT AT BASELINE, DO NOT ASK THIS SECTION.

63a. The next set of questions refers to smoking habits.

63-1. Have you ever smoked at least as many as 5 packs of cigarettes, that is, 100 cigarettes, during your entire life?

YES 1 53/

NO (SKIP TO Q.63-14, PAGE H-30) 2

63-2. Do you now smoke cigarettes?

YES 1 54/

NO (SKIP TO Q.63-8, PAGE H-27) 2

CURRENT CIGARETTE SMOKER SECTION

63-3. On average, how many cigarettes do you smoke a day?

IF R ANSWERS BY GIVING NUMBER OF PACKS OF CIGARETTES, RECORD VERBATIM IN MARGIN. THEN MULTIPLY THE NUMBER OF PACKS BY 20 AND ENTER THE NUMBER OF CIGARETTES SMOKED.

ENTER NUMBER OF CIGARETTES: PER DAY 55-56/

(IF NOT EVERY DAY:) # PER MONTH 57-58/

OR

(IF NOT EVERY DAY:) # PER YEAR 59-60/

63-4. SHOW PARTICIPANT HAND CARD R. For how many years have you been smoking (NUMBER IN Q.63-3) cigarettes (per day/per month/per year)?

Less than 2 years	01	61-62/
2-5 years	02	
6-10 years	03	
11-15 years	04	
16-20 years	05	
21-25 years	06	
26-30 years	07	
31-35 years	08	
36-40 years	09	
More than 40 years	10	63-73/R

63-5. What type of cigarettes are they? Are they ... (READ EACH PAIR TOGETHER)

	CODE ONE NUMBER	
A. Filter tip or	1	74/
Non-filter tip?	2	
	CODE ONE NUMBER	
B. Regular size	1	75/
King size or	2	
100 Millimeter?	3	76/R

- 63-6. During the period when you were smoking the most heavily on a regular basis, about how many cigarettes did you usually smoke in a day?

ENTER NUMBER PER DAY 77-78/

(IF NOT EVERY DAY:) # PER MONTH 79-80/

OR

BEGIN DECK 52

(IF NOT EVERY DAY:) # PER YEAR 10-11/

A. When was that?

FROM

-
MONTH YEAR

12-15/

TO

-
MONTH YEAR

16-19/

- 63-7. SHOW PARTICIPANT HAND CARD T. When you smoke cigarettes, how deeply do you usually inhale?
Would you say:

As deeply into the chest as possible 1 20/
Only partly into the chest 2
As far back as the throat 3
Well back into the mouth, or 4
Just puff and don't really draw it in at all 5
DON'T KNOW 8

(SKIP TO Q.63-14, PAGE H-30)

FORMER CIGARETTE SMOKER SECTION

63-8. How long has it been since you smoked cigarettes fairly regularly? (RECORD NUMBER)

ENTER DAYS: 21-22/

OR WEEKS: 23-24/

OR MONTHS: 25-26/

OR YEARS: 27-28/

NEVER SMOKED REGULARLY (SKIP TO Q.63-14, PAGE H-30) 1 29/

63-9. On the average, about how many cigarettes a day were you smoking at that time?

IF R ANSWERS BY GIVING NUMBER OF PACKS OF CIGARETTES, RECORD VERBATIM IN MARGIN. THEN MULTIPLY THE NUMBER OF PACKS BY 20 AND ENTER THE NUMBER OF CIGARETTES SMOKED.

ENTER NUMBER OF CIGARETTES: PER DAY 30-31/

(IF NOT EVERY DAY:) # PER MONTH 32-33/

OR

(IF NOT EVERY DAY:) # PER YEAR 34-35/

B-171

63-10. SHOW PARTICIPANT HAND CARD R. How long had you been smoking (NUMBER IN Q.63-9)
cigarettes (per day/per week/per month)?

Less than 2 years	01	36-37/
2-5 years	02	
6-10 years	03	
11-15 years	04	
16-20 years	05	
21-25 years	06	
26-30 years	07	
31-35 years	08	
36-40 years	09	
More than 40 years	10	38-57/R

63-11. What type of cigarettes were they? Were they ... (READ EACH PAIR TOGETHER)

	CODE ONE NUMBER	
A. Filter tip or	1	58/
Non-filter tip?	2	
	CODE ONE NUMBER	
B. Regular size	1	59/
King size or	2	
100 Millimeter?	3	60/R

63-12. During the period when you were smoking the most heavily on a regular basis, about how many cigarettes did you usually smoke in a day?

ENTER NUMBER PER DAY 61-62/

(IF NOT EVERY DAY:) # PER MONTH 63-64/

OR

(IF NOT EVERY DAY:) # PER YEAR 65-66/

A. When was that?

FROM

-
MONTH YEAR

67-70/

TO

-
MONTH YEAR

71-74/

63-13. SHOW PARTICIPANT HAND CARD T. When you smoked cigarettes, how deeply did you usually inhale?
Would you say:

- As deeply into the chest as possible 1 75/
Only partly into the chest 2
As far back as the throat 3
Well back into the mouth, or 4
Just puff and don't really draw it in at all 5
DON'T KNOW 8

CURRENT PIPE SMOKER SECTION

63-14. During your entire life, have you smoked at least as many as 50 pipefuls of tobacco?

YES 1 76/

NO (SKIP TO Q.63-25, PAGE H-35) 2

63-15. Do you now smoke a pipe?

YES 1 77/

NO (SKIP TO Q.63-20, PAGE H-32) 2

63-16. About how many average sized pipefuls of tobacco do you usually smoke in a day?

ENTER NUMBER OF PIPEFULS OF TOBACCO:

PER DAY

78-79/

BEGIN DECK 53

(IF NOT EVERY DAY:)

PER MONTH

10-11/

OR

(IF NOT EVERY DAY:)

PER YEAR

12-13/

63-17. SHOW PARTICIPANT HAND CARD R. For how many years have you been smoking (NUMBER IN Q.63-16) pipefuls (per day/per month/per year)?

Less than 2 years 01 14-15/

2-5 years 02

6-10 years 03

11-15 years 04

16-20 years 05

21-25 years 06

26-30 years 07

31-35 years 08

36-40 years 09

More than 40 years 10

63-18. During the period when you were smoking the most heavily, about how many pipefuls of tobacco did you usually smoke in a day?

ENTER NUMBER PER DAY 16-17/

(IF NOT EVERY DAY:) # PER MONTH 18-19/

OR

(IF NOT EVERY DAY:) # PER YEAR 20-21/

A. When was that?

FROM

-
MONTH YEAR

22-25/

TO

-
MONTH YEAR

26-29/

63-19. SHOW PARTICIPANT HAND CARD T. When you smoke a pipe, how deeply do you usually inhale?
Would you say:

- As deeply into the chest as possible 1 30/
Only partly into the chest 2
As far back as the throat 3
Well back into the mouth, or 4
Just puff and don't really draw it in at all 5
DON'T KNOW 8

SKIP TO Q.63-25, PAGE H-35

FORMER PIPE SMOKER SECTION

63-20. How long has it been since you smoked a pipe fairly regularly? (RECORD NUMBER)

ENTER DAYS: 31-32/

OR WEEKS: 33-34/

OR MONTHS: 35-36/

OR YEARS: 37-38/

NEVER SMOKED REGULARLY (SKIP TO Q.63-25, PAGE H-35) 1 39/

63-21. On the average, about how many pipefuls of tobacco a day were you smoking at that time?

ENTER NUMBER OF PIPEFULS OF TOBACCO: PER DAY 40-41/

(IF NOT EVERY DAY:) # PER MONTH 42-43/

OR

(IF NOT EVERY DAY:) # PER YEAR 44-45/

63-22. SHOW PARTICIPANT HAND CARD R. For how long did you smoke (NUMBER IN Q.63-21) pipefuls of tobacco (per day/per week/per month)?

Less than 2 years	01	46-47/
2-5 years	02	
6-10 years	03	
11-15 years	04	
16-20 years	05	
21-25 years	06	
26-30 years	07	
31-35 years	08	
36-40 years	09	
More than 40 years	10	48-56/R

63-23. During the period when you were smoking the most heavily on a regular basis, about how many pipefuls of tobacco did you usually smoke in a day?

ENTER NUMBER		PER DAY	57-58/
(IF NOT EVERY DAY:) #		PER MONTH	59-60/
	OR		
(IF NOT EVERY DAY:) #		PER YEAR	61-62/

A. When was that?

FROM		
	-	
MONTH		YEAR
		63-66/
TO		
	-	
MONTH		YEAR
		67-70/

63-24. SHOW PARTICIPANT HAND CARD T. When you smoked a pipe, how deeply did you usually inhale?
Would you say:

As deeply into the chest as possible	1	71/
Only partly into the chest	2	
As far back as the throat	3	
Well back into the mouth, or	4	
Just puff and don't really draw it in at all	5	
DON'T KNOW	8	

CURRENT CIGAR SMOKER SECTION

63-25. During your entire life have you smoked at least as many as 50 cigars?

Yes 1 72/

No (SKIP TO Q.63-38, PAGE H-40) 2

63-26. Do you now smoke cigars?

Yes 1 73/

No (SKIP TO Q.63-32, PAGE H-38) 2

63-27. On average, about how many cigars a day do you now smoke?

ENTER NUMBER OF CIGARS: PER DAY 74-75/

(IF NOT EVERY DAY:) # PER MONTH 76-77/

OR

(IF NOT EVERY DAY:) # PER YEAR 78-79/

63-28. SHOW PARTICIPANT HAND CARD R. For how many years have you been smoking (# in Q.63-27) cigars (per day/per month/per year)?

Less than 2 years	01	10-11/
2-5 years	02	
6-10 years	03	
11-15 years	04	
16-20 years	05	
21-25 years	06	
26-30 years	07	
31-35 years	08	
36-40 years	09	
More than 40 years	10	

63-29. During the period when you were smoking the most heavily on a regular basis, about how many cigars did you usually smoke in a day?

ENTER NUMBER		PER DAY	12-13/
(IF NOT EVERY DAY:) #		PER MONTH	14-15/
	OR		
(IF NOT EVERY DAY:) #		PER YEAR	16-17/

A. When was that?

FROM

	--	
MONTH		YEAR

18-21/

TO

	--	
MONTH		YEAR

22-25/

63-30. SHOW PARTICIPANT HAND CARD T. When you smoke cigars, how deeply do you usually inhale?
Would you say:

As deeply into the chest as possible	1	26/
Only partly into the chest	2	
As far back as the throat	3	
Well back into the mouth, or	4	
Just puff and don't really draw it in at all	5	
DON'T KNOW	8	

63-31. What type of cigars do you usually smoke?

	CODE ONE NUMBER	
Filter tip or	1	27/
Non-filter tip?	2	

SKIP TO Q. 63-38, PAGE H-40

FORMER CIGAR SMOKER SECTION

63-32. How long has it been since you smoked cigars fairly regularly?

28/R

ENTER DAYS:

29-30/

OR WEEKS:

31-32/

OR MONTHS:

33-34/

OR YEARS:

35-36/

NEVER SMOKED REGULARLY (SKIP TO Q.63-38, PAGE H-40) 1

37/

63-33. On the average, about how many cigars a day were you smoking at that time?

ENTER NUMBER OF CIGARS: PER DAY

38-39/

(IF NOT EVERY DAY:) # PER MONTH

40-41/

OR

(IF NOT EVERY DAY:) # PER YEAR

42-43/

63-34. SHOW PARTICIPANT HAND CARD R. For how long did you smoke (NUMBER PER DAY IN Q.63-33) cigars per day?

Less than 2 years	01	44-45/
2-5 years	02	
6-10 years	03	
11-15 years	04	
16-20 years	05	
21-25 years	06	
26-30 years	07	
31-35 years	08	
36-40 years	09	
More than 40 years	10	46-54/R

63-35. What type of cigars did you usually smoke just before you stopped smoking cigars regularly?

	CODE ONE NUMBER	
Filter tip or	1	55/
Non-filter tip?	2	56/R

63-36. During the period when you were smoking the most on a regular basis, about how many cigars did you usually smoke in a day?

ENTER NUMBER		PER DAY	57-58/
(IF NOT EVERY DAY:) #		PER MONTH	59-60/
	OR		
(IF NOT EVERY DAY:) #		PER YEAR	61-62/

A. When was that?

	FROM	
	-	
MONTH		YEAR
		63-66/
	TO	
	-	
MONTH		YEAR
		67-70/

63-37. SHOW PARTICIPANT HAND CARD T. When you smoked a cigar, how deeply did you usually inhale?
Would you say:

As deeply into the chest as possible	1	71/
Only partly into the chest	2	
As far back as the throat	3	
Well back into the mouth, or	4	
Just puff and don't really draw it in at all	5	
DON'T KNOW	8	

63-38. DOES R CURRENTLY HAVE A SPOUSE OR PARTNER? IS ANY "NO" CODED IN SECTION E: Q.2, PAGE E-3; Q.6C, PAGE E-10; OR Q.8C, PAGE E-14.

YES	1	72/
NO (SKIP TO Q.63-40, BELOW)	2	

63-39. Does your (spouse/partner) smoke regularly any of the following? Does she smoke . . . ?

	YES	NO	DON'T KNOW	
Cigarettes	1	2	8	73/
Cigars	1	2	8	74/
Pipe	1	2	8	75/

63-40. Approximately how much smoke is there in the air in your home?

A lot	1	76/
A little	2	
NONE (SKIP TO Q.63-42, PAGE H-41)	3	

63-41. SHOW PARTICIPANT HAND CARD V. Approximately how many hours a week are you exposed to this smoke in your home?

10 hours or less	1	77/
11 to 15 hours	2	
16 to 20 hours	3	
21 to 25 hours	4	
26 or more hours	5	

63-42. DOES R WORK? IS "YES" CODED AT SECTION B, Q.4, PAGE B-5 OR "CURRENT JOB" CODED AT SECTION C. Q.1F, PAGE C-2?

YES	1	BEGIN DECK 55 10/
NO	(SKIP TO Q.64, PAGE H-43)	2

A. Approximately how much smoke is there in the air in the transportation you take to and from work for example, your car, the train, the bus, etc.?

A lot	1	11/
A little	2	
NONE	(SKIP TO Q.63-44, BELOW)	3

63-43. SHOW PARTICIPANT HAND CARD V. Approximately how many hours a week are you exposed to this smoke?

10 hours or less	1	12/
11 to 15 hours	2	
16 to 20 hours	3	
21 to 25 hours	4	
26 or more hours	5	13-14/R

63-44. Approximately how much smoke is there in the air where you work?

A lot	1	15/
A little	2	
NONE	(SKIP TO Q.64, PAGE H-43)	3

63-45. SHOW PARTICIPANT HAND CARD V. Approximately how many hours a week are you exposed to this smoke?

10 hours or less	1	16/
11 to 15 hours	2	
16 to 20 hours	3	
21 to 25 hours	4	
26 or more hours	5	

64. **ASK ALL RESPONDENTS.** Have you been arrested for a felony since (DATE OF LAST INTERVIEW)?

YES 1 21/

NO (SKIP TO Q.65, PAGE H-44) 2

64A. Have you ever been convicted of a felony since (DATE OF LAST INTERVIEW)?

YES 1 22/

NO (SKIP TO Q.65, PAGE H-44) 2

64B. How many felonies have you been convicted of?

ENTER NUMBER: 23-24/

64C. What month and year were you convicted of (this/your first) felony?

-
MONTH YEAR 25-28/

64D. On what charge wre you convicted?

_____ 29-30/

64E. HAS R EVER BEEN CONVICTED OF A SECOND FELONY? IS # IN Q.64B EQUAL TO 2 OR MORE?

YES 1 31/

NO (SKIP TO Q.65, PAGE H-44) 2

64F. What month and year were you convicted of this second felony?

MONTH YEAR 32-35/

64G. On what charge were you convicted?

_____ 36-37/

64H. HAS R EVER BEEN CONVICTED OF A THIRD FELONY? IS # IN Q.64B EQUAL TO 3 OR MORE?

YES (GO TO NEW QUEX) 1 38/

NO 2

65. Next, I'd like some information about drinking alcoholic beverages. Have you had any alcoholic beverages, including beer, wine, or liquor, since (DATE OF LAST INTERVIEW)?

YES 1 39/
NO (SKIP TO LIFETIME DRINKING
HISTORY SECTION, PAGE H-52) ... 2

66. Since (DATE OF LAST INTERVIEW) have you had a drink of beer?

YES 1 40/
NO (SKIP TO Q.72, PAGE H-46) 2

67. SHOW PARTICIPANT HAND CARD Z. How long has it been since your last drink of beer?

Today 01 41-42/
1-7 days ago 02
8-14 days ago 03
15-30 days ago 04
1 month ago 05
2-3 months ago 06
4-6 months ago 07
7-12 months ago 08
More than 1 year ago 09

68. As you think back over the period of time between (DATE OF LAST INTERVIEW) and now, about how many cans or bottles of beer would you drink on a typical day when you drank beer?

ENTER NUMBER OF CANS OR BOTTLES:

43-44/

69. SHOW PARTICIPANT HAND CARD AA. Again, thinking back over the period of time between (DATE OF LAST INTERVIEW) and now, about how regularly did you drink beer? PROBE IF NECESSARY: It's sometimes hard to remember. Just give me your best guess.

Most often than once a day	01	45-46/
Every day	02	
5 or 6 days a week	03	
3 or 4 days a week	04	
1 or 2 days a week	05	
Less often than once a week	06	
DON'T KNOW	98	

70. SHOW PARTICIPANT HAND CARD BB. How large were the cans or bottles that you usually drank?

Standard 12 oz. cans or bottles	1	47/
16 oz. (half quart) cans or bottles	2	
32 oz. (full quart) cans or bottles	3	
Less than 12 oz. cans or bottles	4	
More than 32 oz. cans or bottles	5	
Don't drink cans or bottles of beer	6	

71. SHOW PARTICIPANT HAND CARD CC. During the last 12 months that you drank since (DATE OF LAST INTERVIEW), how often did you have 8 or more cans of beer in a single day, that means 3 quarts or more?

Every day or nearly every day	01	48-49/
3-4 times a week	02	
Once or twice a week	03	
1-3 times a month	04	
7-11 times a year	05	
3-6 times a year	06	
Once or twice a year	07	
Never	08	

72. Since (DATE OF LAST INTERVIEW) have you had a drink of wine?

Yes	1	50/
No (SKIP TO Q.77, PAGE H-47)	2	

73. SHOW PARTICIPANT HAND CARD Z. How long has it been since your last drink of wine?

Today	01	51-52/
1-7 days ago	02	
8-14 days ago	03	
15-30 days ago	04	
1 month ago	05	
2-3 months ago	06	
4-6 months ago	07	
7-12 months ago	08	
More than 1 year ago	09	

74. As you think back over the period of time between (DATE OF LAST INTERVIEW) and now, about how many glasses/bottles of wine would you drink on a typical day when you drank wine?

3 or more bottles	1	53/
2 bottles	2	
About 1 bottle (7 - 8 wine glasses)	3	
5 - 6 wine glasses (3 water glasses)	4	
3 - 4 wine glasses (2 water glasses)	5	
1 - 2 wine glasses (1 water glass)	6	54/R

75. SHOW PARTICIPANT HAND CARD AA. Again, thinking back over the period of time between (DATE OF LAST INTERVIEW) and now, about how regularly did you drink wine? PROBE IF NECESSARY: It's sometimes hard to remember. Just give me your best guess.

More often than once a day	1	55/
Every day	2	
5 or 6 days a week	3	
3 or 4 days a week	4	
1 or 2 days a week	5	
Less often than once a week	6	
IF CANNOT DECIDE: DON'T KNOW	8	

76. SHOW PARTICIPANT HAND CARD CC. During the last 12 months that you drank since (DATE OF LAST INTERVIEW), how often did you have 8 or more glasses of wine in a single day (more than a fifth)?

Every day or nearly every day	01	56-57/
3-4 times a week	02	
Once or twice a week	03	
1-3 times a month	04	
7-11 times a year	05	
3-6 times a year	06	
Once or twice a year	07	
Never	08	

77. Since (DATE OF LAST INTERVIEW) have you had a drink containing liquor, such as whiskey, vodka, gin, brandy, etc.?

YES	1	58/
NO (SKIP TO Q.83, PAGE H-49)	2	

78. SHOW PARTICIPANT HAND CARD Z. How long has it been since your last drink of hard liquor?

Today	01	59-60/
1-7 days ago	02	
8-14 days ago	03	
15-30 days ago	04	
1 month ago	05	
2-3 months ago	06	
4-6 months ago	07	
7-12 months ago	08	
More than 1 year ago	09	

79. As you think back over the period of time between (DATE OF LAST INTERVIEW) and now, about how many drinks of hard liquor would you drink on a typical day in which you drank hard liquor? 1 BOTTLE = 17 DRINKS

ENTER NUMBER OF DRINKS: 61-62/

80. SHOW PARTICIPANT HAND CARD AA. Again, thinking back over the period of time between (DATE OF LAST INTERVIEW) and now, about how regularly did you drink hard liquor? PROBE IF NECESSARY: It's sometimes hard to remember. Just give me your best guess.

More often than once a day	1	63/
Every day	2	
5 or 6 days a week	3	
3 or 4 days a week	4	
1 or 2 days a week	5	
Less often than once a week	6	
DON'T KNOW	8	

81. SHOW PARTICIPANT HAND CARD DD. About how many ounces of hard liquor are there in the drinks that you usually drink?

One ounce (one shot)	1	64/
1.5 ounces (one jigger)	2	
2 ounces (2 shots)	3	
3 ounces (2 jiggers or 3 shots)	4	
4 ounces (4 shots)	5	
5 or more ounces (3 or more jiggers)	6	
Don't know	8	

82. SHOW PARTICIPANT HAND CARD CC. During the last 12 months that you drank since (DATE OF LAST INTERVIEW), how often did you have 8 or more drinks of hard liquor in a single day, that is a half pint or more?

Every day or nearly every day	01	65-66/
3-4 times a week	02	
Once or twice a week	03	
1-3 times a month	04	
7-11 times a year	05	
3-6 times a year	06	
Once or twice a year	07	
Never	08	

83. Have you had a drink of beer, wine or hard liquor in the last 12 months?

Yes	1	67/
NO	(SKIP TO LIFETIME DRINKING HISTORY SECTION, PAGE H-52)	2

84. SHOW PARTICIPANT HAND CARD EE. About how often during the past 12 months did you drink enough to feel high -- (that is, happier or more carefree than usual, maybe a little flushed or dizzy,) but not drunk, for more than 24 hours in a row, that is, for more than one full day?

5 or more times	01	68-69/
4 times	02	
3 times	03	
2 times	04	
Once	05	
Never in the past year, but sometime before that	06	
Never in my life	07	

85. Now I would like to ask you some questions about experiences that many people have had with drinking.
During the past year ...

	YES	NO	
A. Have you felt aggressive or angry while drinking?	1	2	70/
B. Have you gotten into a heated argument while drinking?	1	2	71/
C. Have you gotten into a fight while drinking?	1	2	72/
D. Have you deliberately tried to cut down or quit drinking, but didn't manage to do so?	1	2	73/
E. Were you afraid you might be an alcoholic or that you might become one?	1	2	74/
F. Once you started drinking, was it difficult for you to stop before you became completely intoxicated?	1	2	75/
G. Have you awakened the next day not being able to remember things you had done while drinking?	1	2	76/
H. Have you often taken a drink the first thing when you got up in the morning?	1	2	77/
I. Have your hands shaken a lot the morning after drinking?	1	2	78/
J. Have you sometimes gotten drunk when drinking by yourself? ..	1	2	79/
K. Have you sometimes kept on drinking after promising yourself not to?	1	2	80/

86. HAS R WORKED THE PAST YEAR?

YES 1 10/
NO (SKIP TO Q.87, BELOW) 2

During the past year:

YES NO

A. Have you stayed away from work because of a hangover? 1 2 11/
B. Have you gotten drunk when on the job? 1 2 12/
C. Have you lost a job, or nearly lost one, because of drinking? 1 2 13/
D. Has drinking led to your quitting a job? 1 2 14/
E. Has drinking hurt your chances for promotion or raises or a
better job? 1 2 15/

87. When you were growing up, do you think your father drank occasionally, drank frequently, had a drinking problem, or didn't he drink?

Drank occasionally 1 16/
Drank frequently 2
Had a drinking problem 3
Didn't drink 4
DON'T KNOW 8

88. When you were growing up, do you think your mother drank occasionally, drank frequently, had a drinking problem, or didn't she drink?

Drank occasionally 1 17/
Drank frequently 2
Had a drinking problem 3
Didn't drink 4
DON'T KNOW 8

LIFETIME DRINKING HISTORY SECTION

USE THESE DIRECTIONS TO COMPLETE THE ANSWER SHEET FOR LIFETIME DRINKING HISTORY. IF PARTICIPANT WAS LAST INTERVIEWED IN 1987/1988, USE DATE OF LAST INTERVIEW. OTHERWISE, ASK ABOUT TIME SINCE BEGAN DRINKING REGULARLY.

Now I am going to ask you questions about your drinking history. I'd like to start with [the year that you first began drinking regularly (i.e., at least once a month / the period since (DATE OF LAST INTERVIEW)), and work forward to the present. Please give me information as accurately as you can about what type of beverage you were drinking, how much and how often.

(FIRST) STAGE

Question A H 1.1 To begin I'm going to ask you about your drinking pattern [during the first year that you began to have at least one drink per month/since (DATE OF LAST INTERVIEW)]. [How old were you when you began regular drinking . . . approximately how old? / How old were you at the time of the last interview?] RECORD THE AGE ON THE ANSWER SHEET

TYPE

Question A H 1.2 [During the first year that you began to have at least one drink per month / Since (DATE OF LAST INTERVIEW)], what types of beverages would you usually consume in an average month? About what percentage of your drinking would be . . .? RECORD THE RELATIVE PERCENTAGES OF BEER, HARD LIQUOR OR WINE.
THIS SECTION SHOULD ADD UP TO 100%

QUANTITY

Question A H 1.3 When you drank about how much did you usually drink?

One drink (approximately) = 12 oz Beer
One drink (approximately) = 1.5 oz Liquor (40 % Alcohol)
One drink (approximately) = 5 oz Wine
One drink (approximately) = 3 oz Fortified Wine (e.g., Sherry)
One drink (approximately) = 17 ml Absolute Alcohol
One drink (approximately) = 13.6 g Absolute Alcohol

RECORD THE AVERAGE NUMBER OF DRINKS PER OCCASION

Question A H 1.4 What is the most or maximum number of drinks you would have in any one day? RECORD THE MAXIMUM NUMBER OF DRINKS. NOTE, THIS IS THE MAXIMUM NUMBER THAT THE PERSON ACTUALLY WOULD DRINK, NOT AN ESTIMATE OF HIS POTENTIAL CAPACITY.

FREQUENCY

Question A H 1.5 How many days per month would you generally drink (AVERAGE NUMBER OF DRINKS FROM A H 1.3.)? RECORD THE NUMBER OF DAYS UNDER THE FREQUENCY HEADING.

LIFETIME DRINKING HISTORY SECTION

USE THESE DIRECTIONS TO COMPLETE THE ANSWER SHEET FOR LIFETIME DRINKING HISTORY. IF PARTICIPANT WAS LAST INTERVIEWED IN 1987/1988, USE DATE OF LAST INTERVIEW. OTHERWISE, ASK ABOUT TIME SINCE BEGAN DRINKING REGULARLY.

Now I am going to ask you questions about your drinking history. I'd like to start with [the year that you first began drinking regularly (i.e., at least once a month / the period since (DATE OF LAST INTERVIEW)), and work forward to the present. Please give me information as accurately as you can about what type of beverage you were drinking, how much and how often.

(FIRST) STAGE

Question A H 1.1 To begin I'm going to ask you about your drinking pattern [during the first year that you began to have at least one drink per month/since (DATE OF LAST INTERVIEW)]. [How old were you when you began regular drinking . . . approximately how old? / How old were you at the time of the last interview?] RECORD THE AGE ON THE ANSWER SHEET.

TYPE

Question A H 1.2 [During the first year that you began to have at least one drink per month / Since (DATE OF LAST INTERVIEW)], what types of beverages would you usually consume in an average month? About what percentage of your drinking would be . . . ? RECORD THE RELATIVE PERCENTAGES OF BEER, HARD LIQUOR OR WINE. THIS SECTION SHOULD ADD UP TO 100%

QUANTITY

Question A H 1.3 When you drank about how much did you usually drink?

One drink (approximately) = 12 oz Beer
One drink (approximately) = 1.5 oz Liquor (40 % Alcohol)
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FREQUENCY

Question A H 1.5 How many days per month would you generally drink (AVERAGE NUMBER OF DRINKS FROM A H 1.3.)? RECORD THE NUMBER OF DAYS UNDER THE FREQUENCY HEADING.

STYLE

Question A H 1.6 How would you rate your usual style of drinking in an average month? Was it . . .?
(READ APPROPRIATE CATEGORIES. CIRCLE ONE).

- BLANK = ABSTINENT
1 = Occasional (LESS THAN 15 DAYS).
2 = Weekends mainly.
3 = At least 3 days heavy drinking in a period of time (BINGE
DRINKING)
4 = Frequent (15 OR MORE DRINKS PER MONTH).
-

LIFE EVENTS

Question A H 1.7 Did any important event or events occur during this period that altered your usual drinking habits? EXAMPLES ARE: LOSS OF SPOUSE, MEDICAL PROBLEMS, UNEMPLOYMENT, PRISON TERM, HOSPITALIZATION. RECORD THESE EVENTS BY CODING ALL THAT APPLY. IF NO IMPORTANT EVENT OCCURRED THAT INFLUENCED THE PERSON'S DRINKING BEHAVIOR, THEN LEAVE THIS SECTION BLANK

Question A H 1.8 What was your perception of this event? Would you say that it had a positive (+) or negative (-) effect on your life? RECORD "+" OR "-" BEFORE THE LIFE EVENT. IF NO (NEUTRAL) EFFECT, LEAVE BLANK.

CONTEXT

Question A H 1.9a What percentage of the time would you drink alone?
Question A H 1.9b What percentage of the time with at least one other person?
(RECORD THE APPROPRIATE VALUES BESIDE ALONE AND WITH OTHERS. THIS SECTION SHOULD ADD UP TO 100%)

TIME

Question A H 1.10 During what time of the day would you do most of your drinking? Could you give me the percentage of time during the evening, afternoon and morning?
(RECORD THE APPROPRIATE VALUES BESIDE MORNING, AFTERNOON AND EVENING. THIS SECTION SHOULD ADD TO 100%)

SUBSEQUENT PHASES

Instruction A: We have just discussed your drinking habits [at the point when you first began to drink regularly/since (DATE OF LAST INTERVIEW)]. Now I want you to think of when your drinking behavior was different in a significant way from this time. This could be the next 6 months or perhaps 2 or 5 years. Can you think of any events in your life that changed and may have altered your drinking habits (increased/decreased) at any time in your life? Events such as attending high school, college, enlisting, Vietnam, deaths in family, change of jobs.

ESTABLISH WHEN THE PERSON'S DRINKING BEHAVIOR FIRST CHANGED IN A SIGNIFICANT WAY FROM THAT RECORDED UNDER FIRST STAGE. SINCE THIS DRINKING HISTORY IS AIMED AT MAJOR TRENDS, SOME JUDGEMENT WILL BE NECESSARY IN DIFFERENTIATING IMPORTANT FROM MINOR CHANGES IN DRINKING PATTERNS. FILL IN THE AGE RANGE WHEN THE BEHAVIOR CHANGED UNDER SECOND STAGE, AND REPEAT THE QUESTIONS FOR TYPE, QUANTITY, FREQUENCY, STYLE, LIFE EVENTS, CONTEXT, AND TIME.

Instruction B: PROBE FURTHER INTO THE PERSON'S HISTORY TO NOTE CHANGES IN DRINKING BEHAVIOR. MAKE SURE THAT ALL THE YEARS ARE COVERED FROM THE YEAR WHEN THE INDIVIDUAL FIRST STARTED DRINKING ON A REGULAR BASIS (AT LEAST ONCE A MONTH) TO HIS PRESENT AGE OR FROM THE DATE OF LAST INTERVIEW TO NOW. AFTER CONDUCTING THE INTERVIEW, CARE SHOULD BE TAKEN TO ENSURE THAT ALL SECTIONS ARE COMPLETE AND THAT THE AGE RANGE RUNS IN A CHRONOLOGICAL SEQUENCE WITH NO OVERLAP OR AGE GAPS.

EXAMPLE: Participant started drinking at 16. He drank very little for 4 years.

At age 20, he drank a lot more, and more liquor than beer. He did this for 10 years.

At age 30, he decreased his drinking to only weekends. He did this type of drinking for 12 years.

At age 42, he quit drinking completely. He is 50 years old.

FIRST STAGE: From age 16 to 20.

SECOND STAGE: From age 20 to 30.

THIRD STAGE: From age 30 to 42.

FOURTH STAGE: From age 42 to present (50 yrs).

STYLE

Question A H 1.6 How would you rate your usual style of drinking in an average month? Was it . . . ? (READ APPROPRIATE CATEGORIES. CIRCLE ONE).

- BLANK = ABSTINENT
1 = Occasional (LESS THAN 15 DAYS).
2 = Weekends mainly.
3 = At least 3 days heavy drinking in a period of time (BINGE DRINKING)
4 = Frequent (15 OR MORE DRINKS PER MONTH).

LIFE EVENTS

Question A H 1.7 Did any important event or events occur during this period that altered your usual drinking habits? EXAMPLES ARE: LOSS OF SPOUSE, MEDICAL PROBLEMS, UNEMPLOYMENT, PRISON TERM, HOSPITALIZATION. RECORD THESE EVENTS BY CODING ALL THAT APPLY. IF NO IMPORTANT EVENT OCCURRED THAT INFLUENCED THE PERSON'S DRINKING BEHAVIOR, THEN LEAVE THIS SECTION BLANK

Question A H 1.8 Deleted SEE GREEN CARDS

CONTEXT

Question A H 1.9a What percentage of the time would you drink alone?

Question A H 1.9b What percentage of the time with at least one other person?

(RECORD THE APPROPRIATE VALUES BESIDE ALONE AND WITH OTHERS. THIS SECTION SHOULD ADD UP TO 100%)

TIME

Question A H 1.10 During what time of the day would you do most of your drinking? Could you give me the percentage of time during the evening, afternoon and morning? (RECORD THE APPROPRIATE VALUES BESIDE MORNING, AFTERNOON AND EVENING. THIS SECTION SHOULD ADD TO 100%)

SUBSEQUENT PHASES

Instruction A: We have just discussed your drinking habits [at the point when you first began to drink regularly/since (DATE OF LAST INTERVIEW)]. Now I want you to think of when your drinking behavior was different in a significant way from this time. This could be the next 6 months or perhaps 2 or 5 years. Can you think of any events in your life that changed and may have altered your drinking habits (increased/decreased) at any time in your life? Events such as attending high school, college, enlisting, Vietnam, deaths in family, change of jobs.

ESTABLISH WHEN THE PERSON'S DRINKING BEHAVIOR FIRST CHANGED IN A SIGNIFICANT WAY FROM THAT RECORDED UNDER FIRST STAGE. SINCE THIS DRINKING HISTORY IS AIMED AT MAJOR TRENDS, SOME JUDGEMENT WILL BE NECESSARY IN DIFFERENTIATING IMPORTANT FROM MINOR CHANGES IN DRINKING PATTERNS. FILL IN THE AGE RANGE WHEN THE BEHAVIOR CHANGED UNDER SECOND STAGE, AND REPEAT THE QUESTIONS FOR TYPE, QUANTITY, FREQUENCY, STYLE, LIFE EVENTS, CONTEXT, AND TIME.

Instruction B: PROBE FURTHER INTO THE PERSON'S HISTORY TO NOTE CHANGES IN DRINKING BEHAVIOR. MAKE SURE THAT ALL THE YEARS ARE COVERED FROM THE YEAR WHEN THE INDIVIDUAL FIRST STARTED DRINKING ON A REGULAR BASIS (AT LEAST ONCE A MONTH) TO HIS PRESENT AGE OR FROM THE DATE OF LAST INTERVIEW TO NOW. AFTER CONDUCTING THE INTERVIEW, CARE SHOULD BE TAKEN TO ENSURE THAT ALL SECTIONS ARE COMPLETE AND THAT THE AGE RANGE RUNS IN A CHRONOLOGICAL SEQUENCE WITH NO OVERLAP OR AGE GAPS.

EXAMPLE: Participant started drinking at 16. He drank very little for 4 years.

At age 20, he drank a lot more, and more liquor than beer. He did this for 10 years.

At age 30, he decreased his drinking to only weekends. He did this type of drinking for 12 years.

At age 42, he quit drinking completely. He is 50 years old.

FIRST STAGE: From age 16 to 20.

SECOND STAGE: From age 20 to 30.

THIRD STAGE: From age 30 to 42.

FOURTH STAGE: From age 42 to present (50 yrs).

ANSWER SHEET
LIFETIME DRINKING HISTORY

Q.AH1.1 STAGES AGE RANGE	Q.AH1.2 TYPE	Q.AH1.3/Q.AH1.4 QUANTITY	Q.AH1.5 FREQUENCY	Q.AH1.6 STYLE	Q.AH1.7 LIFE EVENTS OR CHANGES	Q.AH1.9 a & b CONTEXT	Q.AH1.10 TIME
Younger to Older	Percentage %	Drinks/Occasion	Days/Month	Circle One	Code All That Apply	Percentage %	Percentage %
BEGIN DECK 57							
FROM	Beer	(1.3) Average		1. Occasional	1 Family	a. Alone	Morning
TO	Liquor	(1.4) Maximum	31-32/	2. Weekends	2 Work	46-48/	52-54/
	Wine			3. Heavy/Binge	3 School	b. With Others	Afternoon
	T = 100%			4. Frequent	4 Medical	49-51/	55-57/
					5 Residence	T = 100%	Evening
					6 Legal-Jail		T = 100%
					34-39/		58-60/
BEGIN DECK 58							
FROM	Beer	(1.3) Average		1. Occasional	1 Family	a. Alone	Morning
TO	Liquor	(1.4) Maximum	31-32/	2. Weekends	2 Work	46-48/	52-54/
	Wine			3. Heavy/Binge	3 School	b. With Others	Afternoon
	T = 100%			4. Frequent	4 Medical	49-51/	55-57/
					5 Residence	T = 100%	Evening
					6 Legal-Jail		58-60/
					34-39/		T = 100%
BEGIN DECK 59							
FROM	Beer	(1.3) Average		1. Occasional	1 Family	a. Alone	Morning
TO	Liquor	(1.4) Maximum	31-32/	2. Weekends	2 Work	46-48/	52-54/
	Wine			3. Heavy/Binge	3 School	b. With Others	Afternoon
	T = 100%			4. Frequent	4 Medical	49-51/	55-57/
					5 Residence	T = 100%	Evening
					6 Legal-Jail		58-60/
					34-39/		T = 100%

1mo = .1 5mo = .4 9mo = .8
 2mo = .2 6mo = .5 10mo = .8
 3mo = .3 7mo = .6 11mo = .9
 4mo = .3 8mo = .7 12mo = 1.0

1 Drink (approx.) = 12 oz. beer
 1.5 oz. liquor
 5 oz. wine
 3 oz. fortified wine
 13.6 g absolute alcohol

Liquor: 1 mickey (12 oz) = 8 Drinks
 1 bottle (25 oz) = 17 Drinks
 Wine: 1 bottle (25 oz) = 5 Drinks
 4 bottle bottles = 20 Drinks

ANSWER SHEET
LIFETIME DRINKING HISTORY

Q.AH1.1 STAGES AGE RANGE	Q.AH1.2 TYPE	Q.AH1.3/Q.AH1.4 QUANTITY	Q.AH1.5 FREQUENCY	Q.AH1.6 STYLE	Q.AH1.7 LIFE EVENTS OR CHANGES	Q.AH1.9 a & b CONTEXT	Q.AH1.10 TIME
Younger to Older	Percentage %	Drinks/occasion	Days/Month	Circle One	Code All That Apply	Percentage %	Percentage %
BEGIN DECK 60							
FROM	Beer	(1.3) Average		1. Occasional	1 Family	a. Alone	Morning
TO	Liquor	(1.4) Maximum	31-32/	2. Weekends	2 Work	46-48/	52-54/
	Wine			3. Heavy/Binge	3 School	b. With Others	Afternoon
	T = 100%			4. Frequent	4 Medical	49-51/	55-57/
				33/	5 Residence	T = 100%	Evening
					6 Legal-Jail		58-60/
					34-39/		T = 100%
					40-45/		
BEGIN DECK 61							
FROM	Beer	(1.3) Average		1. Occasional	1 Family	a. Alone	Morning
TO	Liquor	(1.4) Maximum	31-32/	2. Weekends	2 Work	46-48/	52-54/
	Wine			3. Heavy/Binge	3 School	b. With Others	Afternoon
	T = 100%			4. Frequent	4 Medical	49-51/	55-57/
				33/	5 Residence	T = 100%	Evening
					6 Legal-Jail		58-60/
					34-39/		T = 100%
					40-45/		
BEGIN DECK 62							
FROM	Beer	(1.3) Average		1. Occasional	1 Family	a. Alone	Morning
TO	Liquor	(1.4) Maximum	31-32/	2. Weekends	2 Work	46-48/	52-54/
	Wine			3. Heavy/Binge	3 School	b. With Others	Afternoon
	T = 100%			4. Frequent	4 Medical	49-51/	55-57/
				33/	5 Residence	T = 100%	Evening
					6 Legal-Jail		58-60/
					34-39/		T = 100%
					40-45/		

Liquor: 1 mickey (12 oz) = 8 Drinks
1 bottle (25 oz) = 17 Drinks
Wine: 1 bottle (25 oz) = 5 Drinks
1 bottle fortified = 8 Drinks

1 Drink (approx.) = 12 oz. beer
1.5 oz. liquor
5 oz. wine
3 oz. fortified wine
13.6 g absolute alcohol

1mo = .1 5mo = .4 9mo = .8
2mo = .2 6mo = .5 10mo = .8
3mo = .3 7mo = .6 11mo = .9
4mo = .3 8mo = .7 12mo = 1.0

ANSWER SHEET
LIFETIME DRINKING HISTORY

Q.AH1.1 STAGES AGE RANGE	Q.AH1.2 TYPE	Q.AH1.3/Q.AH1.4 QUANTITY	Q.AH1.5 FREQUENCY	Q.AH1.6 STYLE	Q.AH1.7 LIFE EVENTS OR CHANGES	Q.AH1.9 a & b CONTEXT	Q.AH1.10 TIME
Younger to Older	Percentage %	Drinks/Occasion	Days/Month	Circle One	Code All That Apply	Percentage %	Percentage %
BEGIN DECK 63							
FROM	Beer	(1.3) Average		1. Occasional	1 Family	a. Alone	Morning
TO	Liquor	(1.4) Maximum	27-28/	2. Weekends	2 Work	48-48/	52-54/
	Wine		21-23/	3. Heavy/Binge	3 School	b. With Others	Afternoon
	T = 100%		29-30/	4. Frequent	4 Medical	49-51/	55-57/
				33/	5 Residence	T = 100%	58-60/
					6 Legal-Jail		T = 100%
BEGIN DECK 64							
FROM	Beer	(1.3) Average		1. Occasional	1 Family	a. Alone	Morning
TO	Liquor	(1.4) Maximum	27-28/	2. Weekends	2 Work	48-48/	52-54/
	Wine		21-23/	3. Heavy/Binge	3 School	b. With Others	Afternoon
	T = 100%		29-30/	4. Frequent	4 Medical	49-51/	55-57/
				33/	5 Residence	T = 100%	58-60/
					6 Legal-Jail		T = 100%

1mo = .1 5mo = .4 9mo = .8
2mo = .2 6mo = .5 10mo = .8
3mo = .3 7mo = .6 11mo = .9
4mo = .3 8mo = .7 12mo = 1.0

1 Drink (approx.) = 12 oz. beer
1.5 oz. liquor
5 oz. wine
3 oz. fortified wine
13.6 g absolute alcohol

Liquor: 1 mickey (12 oz) = 8 Drinks
1 bottle (25 oz) = 17 Drinks
Wine: 1 bottle (25 oz) = 5 Drinks
1 bottle fortified = 8 Drinks

89. IF R INTERVIEWED IN CYCLES '85-'86 AND/OR '87-'88, USE THE PHRASES IN BRACKETS. Now I am going to ask you some questions about using alcohol. [Since (DATE OF LAST INTERVIEW)], Has there ever been a period of two weeks when every day you were drinking 7 or more beers, 7 or more drinks of hard liquor or 7 or more glasses of wine?

YES (ASK Q.89A) 1 10/
NO (SKIP TO Q.90) 2

89A. How long has it been since you drank that much or do you still?
CODE MOST RECENT TIME POSSIBLE

Still or within last 2 weeks 1 11/
Within last month 2
Within last 6 months 3
Within last year 4
More than 1 year ago 5

90. [As you think back over the period of time between (DATE OF LAST INTERVIEW) and now], Has there ever been a couple of months or more when at least one evening a week, you drank 7 drinks, or 7 bottles of beer or 7 glasses of wine?

YES (ASK Q.90A) 1 12/
NO (SKIP TO Q.91, PAGE H-56) 2

90A. How long has it been since you drank 7 or more drinks at least once a week, or do you still?
CODE MOST RECENT TIME POSSIBLE

Still or within last 2 weeks 1 13/
Within last month 2
Within last 6 months 3
Within last year 4
More than 1 year ago. (ASK Q.90B) 5

90B. IF MORE THAN 1 YEAR AGO: How old were you then?

AGE

14-15/

B-205

May 15, 1992

17:06 pm

Field Version 1.1

91. [Since (DATE OF LAST INTERVIEW)]/Have you ever told a doctor about a problem you had with drinking?
- YES 1 16/
NO 2
92. [Since (DATE OF LAST INTERVIEW)]/Have friends, your doctor, your clergyman, or any other professional ever said you were drinking too much for your own good?
- YES 1 17/
NO 2
93. [Again, thinking back over the period of time between (DATE OF LAST INTERVIEW) and now]/Have you ever wanted to stop drinking but couldn't?
- YES 1 18/
NO 2
94. Some people promise themselves not to drink before 5 o'clock or never to drink alone, in order to control their drinking. [Since (DATE OF LAST INTERVIEW)]/Have you ever done anything like that?
- YES 1 19/
NO 2
95. [Since (DATE OF LAST INTERVIEW)]/Did you ever need a drink just after you had gotten up (that is, before breakfast)?
- YES 1 20/
NO 2
96. [Over the period of time since (DATE OF LAST INTERVIEW) and now]/Have you ever had job or school troubles because of drinking -- like missing too much work or drinking on the job or at school?
- YES 1 21/
NO 2
97. [Since (DATE OF LAST INTERVIEW)]/Did you ever lose a job or get kicked out of school on account of drinking?
- YES 1 22/
NO 2
98. [As you think back over the period of time between (DATE OF LAST INTERVIEW) and now]/Have you ever gotten into trouble driving because of drinking -- like having an accident or being arrested for drunk driving?
- YES 1 23/
NO 2

99. [Since (DATE OF LAST INTERVIEW)]/Have you ever been arrested or held at the police station because of drinking or for disturbing the peace while drinking?

YES 1 24/

NO 2

100. [Since (DATE OF LAST INTERVIEW)]/Have you ever gotten into physical fights while drinking?

YES 1 25/

NO 2

101. [As you think back over the period of time between (DATE OF LAST INTERVIEW) and now]/Have you ever gone on binges or benders, where you kept drinking for a couple of days or more without sobering up?

YES (ASK Q.101A AND Q.101B) 1 26/

NO (SKIP TO Q.102, NEXT PAGE) 2

101A. Did you neglect some of your usual responsibilities then?

YES 1 27/

NO 2

101B. How many times have you gone on binges or benders that lasted at least a couple of days?

28-29/

OF BENDERS

IF R SAYS 96 OR MORE, CODE 96 AND GO TO Q.102, NEXT PAGE. IF R SAYS "DON'T KNOW" ASK Q.101C.

101C. Was it just once or more often than that?

JUST ONCE (RECORD 01 ABOVE)

MORE THAN ONCE (RECORD 95 ABOVE)

STILL DON'T KNOW (RECORD 98 ABOVE)

102. [Since (DATE OF LAST INTERVIEW)]/Have you ever had blackouts while drinking, that is, where you drank enough so that you couldn't remember the next day what you had said or done?
- YES 1 30/
NO 2
103. [Since (DATE OF LAST INTERVIEW)]/Have you ever had "the shakes" after stopping or cutting down on drinking (for example, your hands shake so that your coffee rattles in the saucer or you have trouble lighting a cigarette)?
- YES (SKIP TO Q.104) 1 31/
NO (ASK Q.103A) 2
- 103A. [Since (DATE OF LAST INTERVIEW)]/Have you ever had fits or seizures after stopping or cutting down on drinking?
- YES (SKIP TO Q.104) 1 32/
NO (ASK Q.103B) 2
- 103B. [Since (DATE OF LAST INTERVIEW)]/Have you ever had the DT's (hallucinations and fever) when you quit drinking?
- YES (SKIP TO Q.104) 1 33/
NO (ASK Q.103C) 2
- 103C. [Since (DATE OF LAST INTERVIEW)]/Have you ever seen or heard things that weren't really there after cutting down on drinking?
- YES 1 34/
NO 2
104. There are several health problems that can result form long stretches of pretty heavy drinking. [Since (DATE OF LAST INTERVIEW)]/Did drinking ever cause you to have ...? CODE ALL THAT APPLY.
- A. liver disease or yellow jaundice 1 35/
B. vomiting blood or other stomach troubles 2 36/
C. trouble with tingling in the limbs 3 37/
D. memory troubles when you haven't been drinking (not blackouts) 4 38/
E. inflammation of yoiur pancreas or pancreatitis 5 39/
F. NONE 0
105. [During the period from (DATE OF LAST INTERVIEW) and now]/Have you ever continued to drink when you knew you had a serious physical illness that might be made worse by drinking?
- YES 1 40/
NO 2

106. Has there ever been a period in your life [since (DATE OF LAST INTERVIEW)], when you could not do your ordinary daily work well unless you had something to drink?

YES 1 41/

NO 2

107A. Now I am going to ask you about possible sleep problems. SHOW PARTICIPANT HAND CARD FF.
[Since (DATE OF LAST INTERVIEW)]/Would you please look at this card and tell me if you have any of these sleep problems. Other than on this trip, do you routinely have sleep problems such as ...
(READ a-l)?

B. IF YES TO ANY SLEEP PROBLEMS, ASK FOR EACH: How long have you had this problem?
(CONVERT INTO MONTHS)

	A. CURRENT PROBLEM	B. HOW LONG IN MONTHS	C. PAST PROBLEM
a. Trouble falling asleep	1		1 42-46/
b. Waking up during the night	2		2 47-51/
c. Waking up too early and can't go back to sleep	3		3 52-56/
d. Waking up unrefreshed	4		4 57-61/
e. Involuntarily falling asleep during the day	5		5 62-66/
f. Great or disabling fatigue during the day	6		6 67-71/
g. Frightening dreams	7		7 72-76/
h. Talking in your sleep	8		BEGIN DECK 66 8 10-14/
i. Sleepwalking	9		9 15-19/
j. Abnormal movement/activity during the night	10		10 20-24/
k. Sleep problems requiring medication	11		11 25-29/
l. Snore loudly in all sleeping positions	12		12 30-34/
m. IF NO CURRENT SLEEP PROBLEMS, CODE "1" 1			35/

C. IF NO TO ANY OF THESE PROBLEMS, ASK: Would you please look at this card and tell me if you have had any of these sleep problems in the past? CODE ALL THAT APPLY

IF NO PAST SLEEP PROBLEMS, CODE "1" 1 36/

IF R (HAS/HAD) ANY OF THE SLEEP PROBLEMS LISTED IN Q.107 ASK QS.108-110.
OTHERS SKIP TO Q.111, PAGE H-61.

108. SHOW PARTICIPANT HAND CARD FF. Did you consult a physician or other health care professional about (EACH SLEEP PROBLEM GIVEN IN Q.107)?

	YES	NO	
a. Trouble falling asleep	1	2	37/
b. Waking up during the night	1	2	38/
c. Waking up too early and can't go back to sleep	1	2	39/
d. Waking up unrefreshed	1	2	40/
e. Involuntarily falling asleep during the day	1	2	41/
f. Great or disabling fatigue during the day	1	2	42/
g. Frightening dreams	1	2	43/
h. Talking in your sleep	1	2	44/
i. Sleepwalking	1	2	45/
j. Abnormal movement/activity during the night	1	2	46/
k. Sleep problems requiring medication	1	2	47/
l. Snore loudly in all sleeping positions	1	2	48/

109. Did you take medication to relieve (READ EACH SLEEP PROBLEM GIVEN IN Q.107)?

	YES	NO	
a. Trouble falling asleep	1	2	49/
b. Waking up during the night	1	2	50/
c. Waking up too early and can't go back to sleep	1	2	51/
d. Waking up unrefreshed	1	2	52/
e. Involuntarily falling asleep during the day	1	2	53/
f. Great or disabling fatigue during the day	1	2	54/
g. Frightening dreams	1	2	55/
h. Talking in your sleep	1	2	56/
i. Sleepwalking	1	2	57/
j. Abnormal movement/activity during the night	1	2	58/
k. Sleep problems requiring medication	1	2	59/
l. Snore loudly in all sleeping positions	1	2	60/

110. Did (EACH SLEEP PROBLEM GIVEN IN Q.107, PAGE H-59) interfere with your life?

	YES	NO	
a. Trouble falling asleep	1	2	61/
b. Waking up during the night	1	2	62/
c. Waking up too early and can't go back to sleep	1	2	63/
d. Waking up unrefreshed	1	2	64/
e. Involuntarily falling asleep during the day	1	2	65/
f. Great or disabling fatigue during the day	1	2	66/
g. Frightening dreams	1	2	67/
h. Talking in your sleep	1	2	68/
i. Sleepwalking	1	2	69/
j. Abnormal movement/activity during the night	1	2	70/
k. Sleep problems requiring medication	1	2	71/
l. Snore loudly in all sleeping positions	1	2	72/

111. ASK THIS QUESTION FOR EVERYONE. On the average, how many hours do you sleep per night?

73-74/

HOURS

SECTION I: RECREATION, LEISURE, AND PHYSICAL ACTIVITIES

FOR THIS SECTION YOU WILL NEED:

- THE INTERVAL SUPPLEMENTAL RECORDING BOOK (I.S.R.B.)
- CALENDAR

10-17/R

1. Now we would like you to answer some questions about your leisure time activities. Have you ever participated three or more times in (READ EACH ITEM)?

	YES	NO	
Scuba diving	1	2	18/
Auto, boat, or motorcycle racing	1	2	19/
Skydiving	1	2	20/
Mountain climbing	1	2	21/
Hang gliding	1	2	22/
Plane racing or plane acrobatics, not including flight training or any assignments for the Armed Forces	1	2	23/
Surf board riding	1	2	24/
Sailing long distance in small sailing craft	1	2	25/
Skiing fast down a high mountain slope	1	2	26/

27/R

SKIP TO Q.IS 62 IN I.S.R.B. ON PAGE 15.

SECTION J: TOXIC SUBSTANCES**FOR THIS SECTION YOU WILL NEED****- HAND CARD E**

1. Have any of the recreation, leisure, and/or physical activities you've participated in since (DATE OF LAST INTERVIEW) brought you in contact with any of the following substances ...?	1A. FOR EACH SUBSTANCE CODED YES, ASK A THROUGH D. Since (DATE OF LAST INTERVIEW), in what month and year did your recreation, leisure and/or physical activities first bring you in contact with (SUBSTANCE)?	1B. Since (DATE OF LAST INTERVIEW), for how many years did you continue to come in contact with (SUBSTANCE)?
YES NO Asbestos? 1 2 28/	 MONTH YEAR 29-32/	 YEARS 33-34/
Industrial Chemicals? 1 2 35/	 MONTH YEAR 36-39/	 YEARS 40-41/
Insecticides or Pesticides? 1 2 42/	 MONTH YEAR 43-46/	 YEARS 47-48/
Degreasing Chemicals? 1 2 49/	 MONTH YEAR 50-53/	 YEARS 54-55/
Defoliants or Herbicides? 1 2 56/	 MONTH YEAR 57-60/	 YEARS 61-62/
X-ray or Nuclear Radiation? 1 2 63/	 MONTH YEAR 64-67/	 YEARS 68-69/

1. (Continued)

1C. Since (DATE OF LAST INTERVIEW), how many days per year did you come in contact with (SUBSTANCE)?	1D. On the days you came in contact with (SUBSTANCE) how often did you use protective clothing or gear or wash to remove (SUBSTANCE)-- all of the time, some of the time, or never?	1E. SHOW PARTICIPANT HAND CARD E. Which of the following did you use? CODE ALL THAT APPLY.
 DAYS 70-72/	73/ All of the time ..(ASK E) 1 Some of the time. .(ASK E) 2 Never 3	Air Filter 1 74/ Goggles 2 75/ Face Shield 3 76/ Special Clothing 4 77/ Washing Facilities 5 78/ Self Contained or Supplied Air Breathing Apparatus 6 79/ NONE 0 80/
 DAYS BEGIN DECK 68 10-12/	13/ All of the time ..(ASK E) 1 Some of the time. .(ASK E) 2 Never 3	Air Filter 1 14/ Goggles 2 15/ Face Shield 3 16/ Special Clothing 4 17/ Washing Facilities 5 18/ Self Contained or Supplied Air Breathing Apparatus 6 19/ NONE 0 20/
 DAYS 21-23/	24/ All of the time ..(ASK E) 1 Some of the time. .(ASK E) 2 Never 3	Air Filter 1 25/ Goggles 2 26/ Face Shield 3 27/ Special Clothing 4 28/ Washing Facilities 5 29/ Self Contained or Supplied Air Breathing Apparatus 6 30/ NONE 0 31/
 DAYS 32-34/	35/ All of the time ..(ASK E) 1 Some of the time. .(ASK E) 2 Never 3	Air Filter 1 36/ Goggles 2 37/ Face Shield 3 38/ Special Clothing 4 39/ Washing Facilities 5 40/ Self Contained or Supplied Air Breathing Apparatus 6 41/ NONE 0 42/
 DAYS 43-45/	46/ All of the time ..(ASK E) 1 Some of the time. .(ASK E) 2 Never 3	Air Filter 1 47/ Goggles 2 48/ Face Shield 3 49/ Special Clothing 4 50/ Washing Facilities 5 51/ Self Contained or Supplied Air Breathing Apparatus 6 52/ NONE 0 53/
 DAYS 54-56/	57/ All of the time ..(ASK E) 1 Some of the time. .(ASK E) 2 Never 3	Air Filter 1 58/ Goggles 2 59/ Face Shield 3 60/ Special Clothing 4 61/ Washing Facilities 5 62/ Self Contained or Supplied Air Breathing Apparatus 6 63/ NONE 0 64/

SECTION K: INCOME

FOR THIS SECTION YOU WILL NEED

• HAND CARD GG.

1. Now I have some questions about your income. SHOW PARTICIPANT HAND CARD GG. Please tell me which letter on this card best represents the total household income in 1991 before taxes or other deductions for all people in your household, not including roomers. This amount should include wages, net income from business, interest, dividends, pensions, and any other money income. Tell me the letter that comes closest.

A.	\$5,000 - \$9,999	01
B.	\$10,000 - \$14,999	02
C.	\$15,000 - \$19,999	03
D.	\$20,000 - \$24,999	04
E.	\$25,000 - \$29,999	05
F.	\$30,000 - \$34,999	06
G.	\$35,000 - \$39,999	07
H.	\$40,000 - \$44,999	08
I.	\$45,000 - \$49,999	09
J.	\$50,000 - \$54,999	10
K.	\$55,000 - \$59,999	11
L.	\$60,000 - \$64,999	12
M.	\$65,000 - \$69,999	13
N.	\$70,000 - \$74,999	14
O.	\$75,000 - \$79,999	15
P.	\$80,000 - \$84,999	16
Q.	\$85,000 - \$89,999	17
R.	\$90,000 - \$94,999	18
S.	\$95,000 - \$99,999	19
T.	\$100,000 or more	20

65/R
66-67/

2. Did you earn any income from any job during 1991? Do not include income from retirement plans or pensions.

YES (ASK Q.2A) 1 68/

NO (SKIP TO Q.3) 2

2A. SHOW PARTICIPANT HAND CARD GG. In which of these groups did your earnings from jobs in 1991 fall -- that is, before taxes or other deductions? Tell me the letter that come closest. THE AMOUNT IN Q.2A SHOULD BE EQUAL TO OR LESS THAN AMOUNT IN Q.1.

A.	\$5,000 - \$9,999	01	69-70/
B.	\$10,000 - \$14,999	02	
C.	\$15,000 - \$19,999	03	
D.	\$20,000 - \$24,999	04	
E.	\$25,000 - \$29,999	05	
F.	\$30,000 - \$34,999	06	
G.	\$35,000 - \$39,999	07	
H.	\$40,000 - \$44,999	08	
I.	\$45,000 - \$49,999	09	
J.	\$50,000 - \$54,999	10	
K.	\$55,000 - \$59,999	11	
L.	\$60,000 - \$64,999	12	
M.	\$65,000 - \$69,999	13	
N.	\$70,000 - \$74,999	14	
O.	\$75,000 - \$79,999	15	
P.	\$80,000 - \$84,999	16	
Q.	\$85,000 - \$89,999	17	
R.	\$90,000 - \$94,999	18	
S.	\$95,000 - \$99,999	19	
T.	\$100,000 or more	20	

3a. HAVE PARTICIPANT COMPLETE DIETARY ASSESSMENT FORM.

3b. INTERVIEWER:

RECORD TIME ENDED

: AM
PM

71-74/

B-217

INTERVIEWER REMARKS

INTERVIEWER: Please complete these remarks as soon as you have finished the questionnaire.

1. Length of the interview:

75-77/

MINUTES

BEGIN DECK 69

2. Date of the interview:

10-15/

MONTH

DAY

YEAR

3. Race of Respondent:

White	1	16/
Black	2	
Other	3	

4. In general, what was the respondent's attitude toward the interview?

Friendly and interested	1	17/
Cooperative but not particularly interested	2	
Impatient and restless	3	
Hostile	4	

5. In general, was the respondent's understanding of the questions ...

Good?	1	18/
Fair?	2	
Poor?	3	

6. List questions that confused, angered, or caused discomfort to the respondent or questions that you feel the respondent did not answer truthfully. EXPLAIN.

NONE 0 19/

Section	Question
A. 20-21/	22-26/
B. 27-28/	29-33/
C. 34-35/	36-40/

Describe Problem: _____ 41/

7. List questions with skip errors, questions that were confusing to you, or questions that otherwise didn't work. EXPLAIN.

NONE 0 42/

Section	Question
A. 43-44/	45-49/
B. 50-51/	52-56/
C. 57-58/	59-63/

Describe Problem: _____ 64/

8. Please record your interviewer ID #: 65-70/

9. Please sign your name here: _____

BEGIN DECK 70

10. PRINT THE RESPONDENT'S FULL NAME:

FIRST

MIDDLE

10-39/

LAST

40-59/

**LOG OF AUTHORIZATION FORMS TO BE RETURNED
TO AIR FORCE BY PARTICIPANT**

A Verification on Participant Condition		B Verification on Dependent Condition		C Patient's Name	D Condition to be Verified	E Q.# where Doctor or Facility Info is recorded
Y	N	Y	N	_____	_____	_____
Y	N	Y	N	_____	_____	_____
Y	N	Y	N	_____	_____	_____
Y	N	Y	N	_____	_____	_____
Y	N	Y	N	_____	_____	_____
Y	N	Y	N	_____	_____	_____
Y	N	Y	N	_____	_____	_____
Y	N	Y	N	_____	_____	_____
Y	N	Y	N	_____	_____	_____
Y	N	Y	N	_____	_____	_____
Y	N	Y	N	_____	_____	_____
Y	N	Y	N	_____	_____	_____
Y	N	Y	N	_____	_____	_____
Y	N	Y	N	_____	_____	_____
Y	N	Y	N	_____	_____	_____

INFORMATION SHEET
1992 AIR FORCE HEALTH STUDY

05/13/92

CASE-ID

RESPONDENT

SOCIAL SECURITY NUMBER

DATE OF LAST INTERVIEW

01 DATE OF BIRTH

02 DEGREE LAST OBTAINED

03 MILITARY STATUS : Discharged, Retired or Separate

BRANCH : Non-active Duty

COUNTRY :

DATE OF ASSIGNMENT :

04A SPOUSES/PARTNERS NAMED IN ROUND III : *****

04 MARITAL STATUS AT LAST INTERVIEW : Married

05 PARTNER AT LAST INTERVIEW? (ID#/NAME): No

06 SPOUSE AT LAST INTERVIEW? (ID#/NAME): Yes

07 SPOUSES/PARTNERS SINCE LAST INTERVIEW:

☐	☐	-----	-----	-----	-----
		LAST	FIRST	MIDDLE	MAIDEN
☐	☐	-----	-----	-----	-----
☐	☐	-----	-----	-----	-----
☐	☐	-----	-----	-----	-----

05/13/92
4563

CHILDREN'S RECORD FORM

Respondent's Biological Children

(Interviewer: please emphasize these are his "natural" children)

[illegible]

B-222

(SG) : INFORMATION MISSING
 1, 82+, 85+ DEF - 'YES': BIRTH DEFECT, OR LEARNING DISABILITY, OR PHYSICAL, MENTAL, OR MOTOR IMPAIRMENTS HAVE BEEN REPORTED
 . . . NONE OF THESE
 2, DEF - PREPRINT 'YES' AND 'NO'

PRIVACY ACT STATEMENT—EPIDEMIOLOGIC STUDY

AUTHORITY: Section 133, 1071-87, 3012, 5031 and 8012, Title 10, United States Code and Executive Order 9397.

PRINCIPAL AND PURPOSE(S): The purpose of requesting personal information is to assist medical/technical personnel in developing records relative to your participation in an approved epidemiologic investigation. The Social Security (SSN) and Armed Forces Service Number (AFSN) are necessary to identify the person and records.

ROUTINE USES: This information will be used to initiate, coordinate, and conduct the investigation. It will be used to compile statistical data, but information allowing identification of the individual volunteer will not be included. Data and results from this investigation may be used to supplement other approved research studies conducted at the USAF School of Aerospace Medicine or at other Federal agencies engaged in the conduct of similar studies.

WHETHER DISCLOSURE IS MANDATORY OR VOLUNTARY, AND EFFECT ON INDIVIDUAL FOR NOT PROVIDING INFORMATION: Disclosure or requested information is voluntary. If the information is not furnished, acceptance as a subject is not possible. This is an all-inclusive Privacy Act Statement which will apply to all request for personnel during the time you are a volunteer subject. A copy of this form will be placed in your investigation subject folder as evidence of this notification.

Your signature merely acknowledges that you have been advised of the foregoing. If requested, a copy of this form will be furnished to you.

Signature of Volunteer

AFSN

SSN

DATE



DEPARTMENT OF THE AIR FORCE
USAF SCHOOL OF AEROSPACE MEDICINE (AFSC)
BROOKS AIR FORCE BASE, TEXAS 78235

Participant Medical
Authorization Form

AUTHORIZATION FOR RELEASE OF MEDICAL INFORMATION

Patient's Name: _____

Social Security Number: _____ - _____ - _____

Name of Doctor: _____

Name of Facility: _____

Address of Facility: _____

Condition: _____

Date of Medical Care: _____

Condition: _____

Date of Medical Care: _____

Condition: _____

Date of Medical Care: _____

Condition: _____

Date of Medical Care: _____

The United States Air Force, under the direction of the White House, is currently conducting a study of Air Force personnel exposed to the complex environment of Southeast Asia. Part of this study examines the past medical history of Vietnam veterans and their families.

As a participant in this study, medical information is needed to validate data which was provided during a personal interview, self-administered questionnaire, and/or physical examination. The data will be maintained in compliance with the Privacy Act of 1974. No individually recognizable data will be released. Only statistical aggregate data will be released to the U.S. Congress and to the U.S. Public.

You are hereby authorized and requested to release the complete clinical record to:

USAFSAM/EKEO
Brooks AFB TX 78235
Attn: Mr. Vince Elequin

The authorization is null and void 120 days after the date signed below without expressed revocation, although it may be revoked by the undersigned at any time except to the extent that action has been taken in reliance thereon.

Witness: _____ Date Signed: _____

Signature: _____ Date Signed: _____

Case ID#: ! ____ ! ____ ! ____ ! ____ ! ____ !

AFTER COMPLETING AUTHORIZATION FORMS, CONTINUE FILLING OUT QUESTIONNAIRE

HEALTH CARE PROVIDER FORM
SECTION F: CHILD AND FAMILY HEALTH

FOR EACH PARTICIPANT'S CHILDREN THAT HAS CANCER, A DISABILITY, OR DEFECT, COLLECT INFORMATION REGARDING (1) THE DOCTOR WHO FIRST DESCRIBED THE CONDITION, (2) THE DIAGNOSIS ITSELF, AND (3) THE DOCTOR WHO LAST SAW THE CHILD. IF CHILD HAS MORE THAN ONE KIND OF CANCER, DEFECT, OR DISABILITY, FILL OUT A NEW FORM FOR EACH CONDITION. COMPLETE A YELLOW MEDICAL AUTHORIZATION FORM FOR EACH DOCTOR THAT HAS SEEN THE CHILD.

29 What is the child's name? 30 What is (CHILD'S) date of birth?

Last First MI DD YY

Is (CHILD'S) defect or disability best described as a learning disability, physical or motor impairment, mental impairment, cancer, or birth defect? (CIRCLE APPROPRIATE NUMBER)

- Learning disability 1
Physical or motor impairment 2
Mental impairment 3
Cancer 4
Birth defect 5

COLUMN 1: What is the name and address of the medical facility and doctor(s) who first described (diagnosed) the child's cancer, defect, or disability?

31-A	Facility Name:
31-A	Building:
31-A	Street:
	City State Zip Code
31-B	Physician Name:
31-C	Physician Name:

COLUMN 2: THE DIAGNOSIS ITSELF

32-A What is/was the diagnosis? (PROBE: That is, the doctor's description of the cancer, defect, or disability.)

32-B	MI	YY

In what month and year did the doctor(s) FIRST describe the cancer, defect, or disability?

32-B MI YY

In what month and year did the child LAST see a doctor about this cancer, defect, or disability?

32-C MI YY

COLUMN 3: What is the name and address of the medical facility and doctor(s) who LAST saw the child about the cancer, defect or disability?

• IF MEDICAL FACILITY AND DOCTOR INFORMATION IS THE SAME FOR THE FIRST AND LAST VISITS, CHECK BOX, GO TO NEXT HEALTH CARE PROVIDER FORM.

• IF BOX IS NOT CHECKED, COMPLETE PHYSICIAN/FACILITY INFORMATION BELOW.

33-A	Facility Name:
33-A	Building:
33-A	Street:
	City State Zip Code
33-B	Physician Name:
33-C	Physician Name:

34. COMPLETE A YELLOW MEDICAL AUTHORIZATION FORM FOR EACH DOCTOR SEEN.

35. IF OTHER CANCERS, BIRTH DEFECTS, OR DISABILITIES FOR THIS CHILD, FILL OUT ANOTHER HEALTH CARE PROVIDER FORM.

**SELF-ADMINISTERED FORM 2
RESIDENCE HISTORY
(FROM PAGE G-7 IN INTERVAL QUEX)**

We would like you to tell us all the places you've lived since you were born. Please list all the places you've lived for more than 12 months starting with the first place since birth.

EXAMPLE: I lived in Chicago, Illinois for 6 years.

CITY/TOWN	STATE	COUNTRY	# YEARS
Chicago	IL		6

A. What is the name of the (first/next) city or town you lived in for more than 12 months since birth?	B. What state is that in?	C. What country is that in? (IF OTHER THAN USA)	D. How many years did you live there?
CITY/TOWN	STATE	COUNTRY	# YEARS

1.	_____	____ ____ _____	_____
2.	_____	____ ____ _____	_____
3.	_____	____ ____ _____	_____
4.	_____	____ ____ _____	_____
5.	_____	____ ____ _____	_____
6.	_____	____ ____ _____	_____
7.	_____	____ ____ _____	_____
8.	_____	____ ____ _____	_____
9.	_____	____ ____ _____	_____
10.	_____	____ ____ _____	_____

_____|_____|_____|_____|_____|_____|
CASE ID

A.
What is the name of the
(first/next) city or town
you lived in for more than
12 months since birth?

CITY/TOWN

B.
What
state
is that
in?

STATE

C.
What country
is that in?
(IF OTHER
THAN USA)

COUNTRY

D.
How many years
did you live there?

YEARS

11.	_____	____ ____	_____
12.	_____	____ ____	_____
13.	_____	____ ____	_____
14.	_____	____ ____	_____
15.	_____	____ ____	_____
16.	_____	____ ____	_____
17.	_____	____ ____	_____
18.	_____	____ ____	_____
19.	_____	____ ____	_____
20.	_____	____ ____	_____

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DECK A _____

Case ID

01-06

INTERVIEWER: ASK A THROUGH G FOR EACH CONDITION CODED YES.

		A	B
Since (DATE OF LAST INTERVIEW) has a doctor told you for the first time that you had...?		Between (DATE OF LAST INTERVIEW) and now, in what month and year <u>did</u> a doctor first tell you that you had (CONDITION)?	What is the full name and address of the doctor who first made the diagnosis or the medical facility where the diagnosis was first made? REVIEW MEDICAL AUTHORIZATION FORMS. IF FORM NOT COMPLETED FOR THIS DOCTOR, COMPLETE FORM NOW.
Question # 10-11/	YES 1 NO 2 12/	 MONTH YEAR 13-16/	PHYSICIAN'S LAST NAME 17/ FIRST NAME OR FACILITY NAME STREET ADDRESS CITY STATE
Question # 18-19/	YES 1 NO 2 20/	 MONTH YEAR 21-24/	PHYSICIAN'S LAST NAME 25/ FIRST NAME OR FACILITY NAME STREET ADDRESS CITY STATE

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CASE ID:

1992 Air Force Health Study (#4563)

SELF-ADMINISTERED FORM 1

INTERVIEWER: CODE ONE

PERIOD 1.....1

PERIOD 2.....2 10/

PERIOD 3.....3

BEGIN DECK

SIDE A: FOR YOU

There are many reasons that some couples find it difficult or impossible to conceive a child. Please read this card and circle the number on Side A for each reason which applied to you for this period. Side B provides reasons appropriate for your spouse. Circle as many responses as appropriate.

For each reason, please record the year this occurred or became known to you.

- A. Vasectomy 01 11-12 YEAR: 19 13-14/
- B. Prostatectomy 02 15-16/ 19 17-18/
- C. Sterility due to other surgery
(PLEASE SPECIFY)

_____ 03 19-20/ 19 22-23/
21/
- D. Sterility due to injury, accident, or illness
(PLEASE SPECIFY)

_____ 04 24-25/ 19 27-28/
26/
- E. Impotence 05 29-30/ 19 31-32/
- F. Other medical or physical condition (PLEASE SPECIFY)

_____ 06 33-34/ 19 36-37/
35/
- G. Sterility due to unknown causes 07 38-39/ 19 40-41/
- H. No reason applies to me; reasons
only apply to my spouse 08 42-43/

PLEASE USE SIDE B FOR REASONS APPROPRIATE
FOR YOUR SPOUSE

NO MEDICAL RELEASE REQUIRED.

SELF-ADMINISTERED FORM 1

SIDE B: FOR YOUR SPOUSE

Please circle the number on Side B for each reason which applied to your spouse for this period. Circle as many responses as appropriate.

For each reason, please record the year this occurred or became known to you.

- A. Tubal ligation 01 44-45 YEAR: 19 46-47/
- B. Hysterectomy 02 48-49/ 19 50-51/
- C. Infertility due to other surgery
(PLEASE SPECIFY)

_____ 03 52-53/ 19 55-56/
54/
- D. Infertility due to injury, accident, or illness
(PLEASE SPECIFY)

_____ 04 57-58/ 19 60-61/
59/
- E. Other medical or physical condition (PLEASE SPECIFY)

_____ 05 62-63/ 19 65-66/
64/
- F. Infertility due to unknown causes 06 67-68/ 19 69-70/
- G. No reason applies to my spouse;
reasons only apply to me 07 71-72/

INSTRUCTIONS

Please use an ordinary No. 2 pencil to answer all questions. Fill in the appropriate response circles completely, or write requested information in the boxes provided. The form is designed to be read by optical-scanning equipment, so it is important that you make **NO STRAY MARKS** and keep any write-in responses **WITHIN** the spaces provided. Should you need to change a response, erase the incorrect mark completely. If you have any comments, please write them on a separate piece of paper.

EXAMPLE 1.

MARK YOUR AVERAGE USE OF EACH SPECIFIC FOOD FOR A PERIOD OF TIME REQUESTED. FOR EXAMPLE, IF A FOOD SUCH AS TOMATOES IS EATEN 4 TIMES A WEEK DURING THE APPROXIMATE 3 MONTHS THAT IT IS IN SEASON, THEN THE AVERAGE USE WOULD BE ONCE PER WEEK.

VEGETABLES									
Tomatoes (1) or Tomato juice (small glass)	☐	☐	☒	☐	☐	☐	☐	☐	☐
String beans (1/2 cup)	☐	☐	☒	☐	☐	☐	☐	☐	☐
Broccoli (1/2 cup)	☐	☐	☒	☐	☐	☐	☐	☐	☐
Cabbage, cauliflower, or Brussels sprouts (1/2 cup)	☐	☐	☒	☐	☐	☐	☐	☐	☐
Carrots, raw (1/2 carrot or 2-4 sticks)	☐	☐	☒	☐	☐	☐	☐	☐	☐
Carrots, cooked (1/2 cup)	☐	☐	☒	☐	☐	☐	☐	☐	☐

EXAMPLE 2.

KEEP HANDWRITING WITHIN BORDERS OF THE RESPONSE BOX.
What kind of cold breakfast cereal do you usually use?
 (e.g. Kelloggs Cracklin Oat Bran)

6. Which cold breakfast cereal do you usually eat? ☒ Yes ☐ Don't eat cold breakfast cereal

Specify brand and type
 Kelloggs Cracklin Oat Bran

EXAMPLE 3.

MARK "YES" OR "NO" AND THE NUMBER OF YEARS AND DOSE OF A VITAMIN PREPARATION

Zinc? ☐ No ☒ Yes	If YES,	{ <table border="0" style="display: inline-table;"> <tr> <td>How many years?</td> <td>☐ 0-1 yr.</td> <td>☒ 2-4 years</td> <td>☐ 5-9 years</td> <td>☐ 10+ years</td> <td>☐ Don't know</td> </tr> <tr> <td>What dose per day?</td> <td>☐ Less than 25 mg.</td> <td>☐ 25 to 74 mg.</td> <td>☐ 75 to 100 mg.</td> <td>☒ 101 mg. or more</td> <td>☐ Don't know</td> </tr> </table>	How many years?	☐ 0-1 yr.	☒ 2-4 years	☐ 5-9 years	☐ 10+ years	☐ Don't know	What dose per day?	☐ Less than 25 mg.	☐ 25 to 74 mg.	☐ 75 to 100 mg.	☒ 101 mg. or more	☐ Don't know
How many years?	☐ 0-1 yr.	☒ 2-4 years	☐ 5-9 years	☐ 10+ years	☐ Don't know									
What dose per day?	☐ Less than 25 mg.	☐ 25 to 74 mg.	☐ 75 to 100 mg.	☒ 101 mg. or more	☐ Don't know									
Calcium? (Include Calcium in Dolomite and Turns, etc.) ☒ No ☐ Yes	If YES,	{ <table border="0" style="display: inline-table;"> <tr> <td>How many years?</td> <td>☐ 0-1 yr.</td> <td>☐ 2-4 years</td> <td>☐ 5-9 years</td> <td>☐ 10+ years</td> <td>☐ Don't know</td> </tr> <tr> <td>What dose per day?</td> <td>☐ Less than 400 mg.</td> <td>☐ 400 to 900 mg.</td> <td>☐ 901 to 1300 mg.</td> <td>☐ 1301 mg. or more</td> <td>☐ Don't know</td> </tr> </table>	How many years?	☐ 0-1 yr.	☐ 2-4 years	☐ 5-9 years	☐ 10+ years	☐ Don't know	What dose per day?	☐ Less than 400 mg.	☐ 400 to 900 mg.	☐ 901 to 1300 mg.	☐ 1301 mg. or more	☐ Don't know
How many years?	☐ 0-1 yr.	☐ 2-4 years	☐ 5-9 years	☐ 10+ years	☐ Don't know									
What dose per day?	☐ Less than 400 mg.	☐ 400 to 900 mg.	☐ 901 to 1300 mg.	☐ 1301 mg. or more	☐ Don't know									

THANK YOU FOR COMPLETING THE FOOD FREQUENCY QUESTIONNAIRE.

DIET ASSESSMENT

ID:

1. Do you currently take multiple vitamins? (Please report individual vitamins under question 2.)

☐ No ☐ Yes → If yes, a) How many do you take per week? ☐ 2 or less ☐ 3-5 ☐ 6-9 ☐ 10 or more

b) What specific brand do you usually use? →

Specify exact brand and type

2. Not counting multiple vitamins, do you take any of the following preparations:

a) Vitamin A?

☐ No ☐ Yes, seasonal only
☐ Yes, most months

If Yes,

How many years? → ☐ 0-1 yr. ☐ 2-4 yrs. ☐ 5-9 yrs. ☐ 10+ yrs. ☐ Don't know
What dose per day? → ☐ Less than 8,000 IU ☐ 8,000 to 12,000 IU ☐ 13,000 to 22,000 IU ☐ 23,000 IU or more ☐ Don't know

b) Vitamin C?

☐ No ☐ Yes, seasonal only
☐ Yes, most months

If Yes,

How many years? → ☐ 0-1 yr. ☐ 2-4 yrs. ☐ 5-9 yrs. ☐ 10+ yrs. ☐ Don't know
What dose per day? → ☐ Less than 400 mg. ☐ 400 to 700 mg. ☐ 750 to 1250 mg. ☐ 1300 mg. or more ☐ Don't know

c) Vitamin B₆?

☐ No ☐ Yes → If yes,

How many years? → ☐ 0-1 yr. ☐ 2-4 yrs. ☐ 5-9 yrs. ☐ 10+ yrs. ☐ Don't know
What dose per day? → ☐ Less than 10 mg. ☐ 10 to 39 mg. ☐ 40 to 79 mg. ☐ 80 mg. or more ☐ Don't know

d) Vitamin E?

☐ No ☐ Yes → If yes,

How many years? → ☐ 0-1 yr. ☐ 2-4 yrs. ☐ 5-9 yrs. ☐ 10+ yrs. ☐ Don't know
What dose per day? → ☐ Less than 100 IU ☐ 100 to 250 IU ☐ 300 to 500 IU ☐ 600 IU or more ☐ Don't know

e) Selenium?

☐ No ☐ Yes → If yes,

How many years? → ☐ 0-1 yr. ☐ 2-4 yrs. ☐ 5-9 yrs. ☐ 10+ yrs. ☐ Don't know
What dose per day? → ☐ Less than 80 mcg. ☐ 80 to 130 mcg. ☐ 140 to 250 mcg. ☐ 260 mcg. or more ☐ Don't know

f) Iron?

☐ No ☐ Yes → If yes,

How many years? → ☐ 0-1 yr. ☐ 2-4 yrs. ☐ 5-9 yrs. ☐ 10+ yrs. ☐ Don't know
What dose per day? → ☐ Less than 51 mg. ☐ 51 to 200 mg. ☐ 201 to 400 mg. ☐ 401 mg. or more ☐ Don't know

g) Zinc?

☐ No ☐ Yes → If yes,

How many years? → ☐ 0-1 yr. ☐ 2-4 yrs. ☐ 5-9 yrs. ☐ 10+ yrs. ☐ Don't know
What dose per day? → ☐ Less than 25 mg. ☐ 25 to 74 mg. ☐ 75 to 100 mg. ☐ 101 mg. or more ☐ Don't know

h) Calcium?

(Exclude Calcium in Dairy Foods.)

☐ No ☐ Yes → If yes,

How many years? → ☐ 0-1 yr. ☐ 2-4 yrs. ☐ 5-9 yrs. ☐ 10+ yrs. ☐ Don't know
What dose per day? → ☐ Less than 400 mg. ☐ 400 to 900 mg. ☐ 901 to 1300 mg. ☐ 1301 mg. or more ☐ Don't know

i) Are there other supplements that you take on a regular basis? Please mark if yes:

☐ Folic acid

☐ Cod liver Oil

☐ Iodine

☐ Beta-Carotene

☐ Other (please specify):

☐ Vitamin D

☐ Copper

☐ Magnesium

☐ B-Complex Vitamins

☐ Omega-3 Fatty-acids

☐ Brewer's Yeast

3. For each food listed, fill in the circle indicating how often on average you have used the amount specified during the past year.

AVERAGE USE LAST YEAR

	Never, or less than once per month	1-3 per mo.	1 per week	2-4 per week	5-6 per week	1 per day	2-3 per day	4-5 per day	6+ per day
DAIRY FOODS									
Skim or low fat milk (8 oz. glass)	☐	☐	☒	☐	☐	☐	☐	☐	☐
Whole milk (8 oz. glass)	☐	☐	☒	☐	☐	☐	☐	☐	☐
Cream, e.g. coffee, whipped (Tbs)	☐	☐	☒	☐	☐	☐	☐	☐	☐
Sour cream (Tbs)	☐	☐	☒	☐	☐	☐	☐	☐	☐
Non-dairy coffee whitener (tsp.)	☐	☐	☒	☐	☐	☐	☐	☐	☐
Sherbet or ice milk (½ cup)	☐	☐	☒	☐	☐	☐	☐	☐	☐
Ice cream (½ cup)	☐	☐	☒	☐	☐	☐	☐	☐	☐
Yogurt (1 cup)	☐	☐	☒	☐	☐	☐	☐	☐	☐
Cottage or ricotta cheese (½ cup)	☐	☐	☒	☐	☐	☐	☐	☐	☐
Cream cheese (1 oz.)	☐	☐	☒	☐	☐	☐	☐	☐	☐
Other cheese, e.g. American, cheddar, etc., plain or as part of a dish (1 slice or 1 oz. serving)	☐	☐	☒	☐	☐	☐	☐	☐	☐
Margarine (pat.), added to food or bread; exclude use in cooking	☐	☐	☒	☐	☐	☐	☐	☐	☐
Butter (pat.), added to food or bread; exclude use in cooking	☐	☐	☒	☐	☐	☐	☐	☐	☐

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3. (Continued) Please fill in your average use, during the past year, of each specified food.

Please try to average your seasonal use of foods over the entire year. For example, if a food such as cantaloupe is eaten 4 times a week during the approximate 3 months that it is in season, then the average use would be once per week.

	Never, or less than once per month	1-3 per mo.	1 per week	2-4 per week	5-6 per week	1 per day	2-3 per day	4-5 per day	6- per day
FRUITS									
Raisins (1 oz. or small pack) or grapes	☐	☐	☐	☐	☐	☐	☐	☐	☐
Prunes (1/2 cup)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Bananas (1)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Cantaloupe (1/2 melon)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Watermelon (1 slice)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Fresh apples or pears (1)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Apple juice or cider (small glass)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Oranges (1)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Orange juice (small glass)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Grapefruit (1/2)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Grapefruit juice (small glass)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Other fruit juices (small glass)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Strawberries, fresh, frozen or canned (1/2 cup)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Blueberries, fresh, frozen or canned (1/2 cup)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Peaches, apricots or plums (1 fresh, or 1/2 cup canned)	☐	☐	☐	☐	☐	☐	☐	☐	☐

	Never, or less than once per month	1-3 per mo.	1 per week	2-4 per week	5-6 per week	1 per day	2-3 per day	4-5 per day	6- per day
VEGETABLES									
Tomatoes (1)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Tomato juice (small glass)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Tomato sauce (1/2 cup) e.g. spaghetti sauce	☐	☐	☐	☐	☐	☐	☐	☐	☐
Red chili sauce (1 Tbs)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Tofu or soybeans (3-4 oz.)	☐	☐	☐	☐	☐	☐	☐	☐	☐
String beans (1/2 cup)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Broccoli (1/2 cup)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Cabbage or cole slaw (1/2 cup)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Cauliflower (1/2 cup)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Brussels sprouts (1/2 cup)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Carrots, raw (1/2 carrot or 2-4 sticks)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Carrots, cooked (1/2 cup)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Corn (1 ear or 1/2 cup frozen or canned)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Peas, or lima beans (1/2 cup fresh, frozen, canned)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Mixed vegetables (1/2 cup)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Beans or lentils, baked or dried (1/2 cup)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Yellow (winter) squash (1/2 cup)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Eggplant, zucchini, or other summer squash (1/2 cup)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Yams or sweet potatoes (1/2 cup)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Spinach, cooked (1/2 cup)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Spinach, raw as in salad	☐	☐	☐	☐	☐	☐	☐	☐	☐
Kale, mustard or chard greens (1/2 cup)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Iceberg or head lettuce (serving)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Romaine or leaf lettuce (serving)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Celery (4" stick)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Beets (1/2 cup)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Alfalfa sprouts (1/2 cup)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Garlic, fresh or powdered (1 clove or shake)	☐	☐	☐	☐	☐	☐	☐	☐	☐

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	Never, or less than once per month	1-3 per mo.	1 per week	2-4 per week	5-6 per week	1 per day	2-3 per day	4-5 per day	6- per day
EGGS, MEAT, ETC.									
Eggs (1)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Chicken or turkey, with skin (4-6 oz.)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Chicken or turkey, without skin (4-6 oz.)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Bacon (2 slices)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Hot dogs (1)	☐	☐	☐	☐	☐	☐	☐	☐	☐

3. (Continued) Please fill in your average use,
during the past year, of each specified food.

	Never, or less than once per month	1-3 per mo.	1 per week	2-4 per week	5-6 per week	1 per day	2-3 per day	4-5 per day	6- per day
MEATS (CONTINUED)									
Processed meats, e.g. sausage, salami, bologna, etc. (piece or slice)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Liver (3-4 oz.)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Hamburger (1 patty)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Beef, pork, or lamb as a sandwich or mixed dish, e.g. stew, casserole, lasagne, etc.	☐	☐	☐	☐	☐	☐	☐	☐	☐
Beef, pork, or lamb as a main dish, e.g. steak, roast, ham, etc. (4-6 oz.)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Canned tuna fish (3-4 oz.)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Dark meat fish, e.g. mackerel, salmon, sardines, bluefish, swordfish (3-5 oz.)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Other fish (3-5 oz.)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Shrimp, lobster, scallops as a main dish	☐	☐	☐	☐	☐	☐	☐	☐	☐

	Never, or less than once per month	1-3 per mo.	1 per week	2-4 per week	5-6 per week	1 per day	2-3 per day	4-5 per day	6- per day
BREADS, CEREALS, STARCHES									
Cold breakfast cereal (1 cup)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Cooked oatmeal (1 cup)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Other cooked breakfast cereal (1 cup)	☐	☐	☐	☐	☐	☐	☐	☐	☐
White bread (slice), including pita bread	☐	☐	☐	☐	☐	☐	☐	☐	☐
Dark bread (slice)	☐	☐	☐	☐	☐	☐	☐	☐	☐
English muffins, bagels, or rolls (1)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Muffins or biscuits (1)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Brown rice (1 cup)	☐	☐	☐	☐	☐	☐	☐	☐	☐
White rice (1 cup)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Pasta, e.g. spaghetti, noodles, etc. (1 cup)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Other grains, e.g. bulgur, kasha, couscous, etc. (1 cup)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Pancakes or waffles (serving)	☐	☐	☐	☐	☐	☐	☐	☐	☐
French fried potatoes (4 oz.)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Potatoes, baked, boiled (1) or mashed (1 cup)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Potato chips or corn chips (small bag or 1 oz.)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Crackers, Triskets, Wheat Thins (1)	☐	☐	☐	☐	☐	☐	☐	☐	☐
Pizza (2 slices)	☐	☐	☐	☐	☐	☐	☐	☐	☐

	Never, or less than once per month	1-3 per mo.	1 per week	2-4 per week	5-6 per week	1 per day	2-3 per day	4-5 per day	6- per day
BEVERAGES									
CARBONATED BEVERAGES	Low Calorie (sugar-free) types	Low calorie cola, e.g. Tab with caffeine	☐	☐	☐	☐	☐	☐	☐
		Low calorie caffeine-free cola, e.g. Pepsi Free	☐	☐	☐	☐	☐	☐	☐
		Other low calorie carbonated beverage, e.g. Fresca, Diet 7-Up, diet ginger ale	☐	☐	☐	☐	☐	☐	☐
	Regular types (not sugar-free)	Coke, Pepsi, or other cola with sugar	☐	☐	☐	☐	☐	☐	☐
		Caffeine Free Coke, Pepsi, or other cola with sugar	☐	☐	☐	☐	☐	☐	☐
		Other carbonated beverage with sugar, e.g. 7-Up, ginger ale	☐	☐	☐	☐	☐	☐	☐
OTHER BEVERAGES	Hawaiian Punch, lemonade, or other non-carbonated fruit drinks (1 glass, bottle, can)	☐	☐	☐	☐	☐	☐	☐	☐
	Decaffeinated coffee (1 cup)	☐	☐	☐	☐	☐	☐	☐	☐
	Coffee (1 cup)	☐	☐	☐	☐	☐	☐	☐	☐
	Tea (1 cup), not herbal teas	☐	☐	☐	☐	☐	☐	☐	☐
	Beer (1 glass, bottle, can)	☐	☐	☐	☐	☐	☐	☐	☐
	Red wine (4 oz. glass)	☐	☐	☐	☐	☐	☐	☐	☐
	White wine (4 oz. glass)	☐	☐	☐	☐	☐	☐	☐	☐
Liquor, e.g. whiskey, gin, etc. (1 drink or shot)	☐	☐	☐	☐	☐	☐	☐	☐	

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3. (Continued) Please fill in your average use during the past year, of each specified food.

Chocolate (bars or pieces) e.g. Hershey's, M&M's			(W)			(D)						2	3	3	3	3	3
Candy bars, e.g. Snickers, Milky Way, Reeses			(W)			(D)						4	4	4	4	4	4
Candy without chocolate (1 oz.)			(W)			(D)						8	9	9	9	9	9
Cookies, home baked (1)			(W)			(D)						6	6	6	6	6	6
Cookies, ready made (1)			(W)			(D)						7	7	7	7	7	7
Brownies (1)			(W)			(D)						8	8	8	8	8	8
Doughnuts (1)			(W)			(D)						9	9	9	9	9	9
Cake, home baked (slice)			(W)			(D)						0	0	0	A	0	0
Cake, ready made (slice)			(W)			(D)						1	1	1	B	1	1
Sweet roll, coffee cake or other pastry, home baked (serving)			(W)			(D)						2	2	2	G	2	2
Sweet roll, coffee cake or other pastry, ready made (serving)			(W)			(D)						3	3	3	L	3	3
Pie, homemade (slice)			(W)			(D)						4	4	4	M	4	4
Pie, ready made (slice)			(W)			(D)						5	5	5	N	5	5
Jams, jellies, preserves, syrup, or honey (1 Tbs)			(W)			(D)						6	6	6	O	6	6
Peanut butter (Tbs)			(W)			(D)						7	7	7	P	7	7
Popcorn (1 cup)			(W)			(D)						8	8	8	R	8	8
Nuts (small packet or 1 oz.)			(W)			(D)						9	9	9	S	9	9
Bran, added to food (1 Tbs)			(W)			(D)						0	0	0	T	0	0
Wheat germ (1 Tbs)			(W)			(D)						1	1	1	U	1	1
Chowder or cream soup (1 cup)			(W)			(D)						2	2	2	V	2	2
Oil and vinegar dressing, e.g. Italian (1 Tbs)			(W)			(D)						3	3	3	W	3	3
Mayonnaise or other creamy salad dressing (1 Tbs)			(W)			(D)						4	4	4	X	4	4
Mustard, dry or prepared (1 tsp)			(W)			(D)						5	5	5	Y	5	5
Pepper (1 shake)			(W)			(D)						6	6	6	Z	6	6
Salt (1 shake)			(W)			(D)						7	7	7	a	7	7
			(W)			(D)						8	8	8	b	8	8
			(W)			(D)						9	9	9	c	9	9
			(W)			(D)						0	0	0	d	0	0

4. How much of the visible fat on your meats do you remove before eating?

☐ Remove all visible fat

☐ Remove majority

☐ Remove small part of fat

☐ Remove none

☐ (Don't eat meat)

5. What kind of fat do you usually use for frying and sautising? (Exclude "Pam"-type spray)

☐ Real butter ☐ Vegetable oil ☐ Lard

☐ Margarine ☐ Vegetable shortening

8. What kind of fat do you usually use for baking?

☐ Real butter ☐ Vegetable oil ☐ Lard

☐ Margarine ☐ Vegetable shortening

7. What form of margarine do you usually use?

☐ None ☐ Stick ☐ Tub ☐ Spread

☐ Low-calorie stick ☐ Low-calorie tub

8. How often do you eat food that is fried at home?
(Exclude the use of "Pam"-type spray)

☐ Daily ☐ 4-6 times per week

☐ 1-3 times per week ☐ Less than once a week

9. How often do you eat fried food away from home?
(e.g. french fries, fried chicken, fried fish)

☐ Daily ☐ 4-6 times per week

☐ 1-3 times per week ☐ Less than once a week

10. How many teaspoons of sugar do you add to your beverages or food each day? tsp. 

11. What type of cooking oil do you usually use? 	Specify type and brand					
	4	4	4	4	4	4
	5	5	5	5	5	5

12. What kind of cold breakfast cereal do you usually use? →

Specify type and brand

7	7	7	7	7	7	7
8	8	8	8	8	8	8
9	9	9	9	9	9	9

13. Are there any other important foods that you usually eat at least once per week?

Include for example: pâté, tortillas, yeast, cream sauce, custard, horseradish, parsnips, rhubarb, radishes, fava beans, carrot juice, coconut, avocado, mango, papaya, dried apricots, dates, figs.

(Do not include dry spices and do not list something that has been listed in the previous sections.)

Other foods that you usually use at least once per week	Usual serving size	Servings per week
(a)		
(b)		
(c) B-237		
(d)		

Project No: 4563

**Air Force Health Study
Third Followup Examinations
1992-1993**

Interval Supplementary Recording Book

CASE ID #

Project No: 4563

**Air Force Health Study
Third Followup Examinations
1992-1993**

Interval Supplementary Recording Book

May 15, 1992

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11:24 am

Field Version 1.1

OCCUPATIONAL EXPOSURE TO HEAVY METALS AND VIBRATING POWER TOOLS

THIS SECTION CONTAINS QUESTIONS IS1 - IS17

IS1. Now I am going to ask you a few questions about equipment or metals you may have been regularly exposed to at work in any of the jobs you have ever had, not just the recent one(s) that you just told me about.

First, in any job you have held, have you ever worked for 30 days or more with vibrating power equipment or tools?

YES 1
NO (SKIP TO Q.IS5) 2

IS2. In what year did you start working with vibrating power equipment or tools?

RECORD YEAR: 1 9 |__|__|

IS3. In what year did you last work with vibrating power equipment or tools?

RECORD YEAR: 1 9 |__|__|

IS4. For how many months in all did you work with vibrating power equipment or tools?

RECORD NUMBER OF MONTHS: |__|__|

IS5. In any job you have held, have you ever worked for 30 days or more with lead?

YES 1
NO (SKIP TO Q.IS9) 2

IS6. In what year did you start working with lead?

RECORD YEAR: 1 9 |__|__|

IS7. In what year did you last work with lead?

RECORD YEAR: 1 9 |__|__|

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IS8. For how many months in all did you work with lead?

RECORD NUMBER OF MONTHS: |__|__|

IS9. In any job you have held, have you ever worked for 30 days or more with mercury--either metallic mercury or mercury vapor?

YES 1
NO (SKIP TO Q.IS13) 2

IS10. In what year did you start working with mercury?

RECORD YEAR: 1 9 |__|__|

IS11. In what year did you last work with mercury?

RECORD YEAR: 1 9 |__|__|

IS12. For how many months in all did you work with mercury?

RECORD NUMBER OF MONTHS: |__|__|

IS13. In any job you have held, have you ever worked for 30 days or more with any other heavy metal, such as chromium, nickel, or copper?

YES 1

NO 2

(IF ANY CIVILIAN JOBS, RETURN TO SECTION C,
Q.21, PAGE C-13 IN INTERVAL Q. IF NO CIVILIAN
JOBS, RETURN TO SECTION D, Q.1, PAGE D-1 IN
INTERVAL Q.)

IS14. What (other) type(s) of heavy metals did you work with? CODE ALL THAT APPLY:

CHROMIUM 01
NICKEL 02
COOPER 03
CADMIUM 04
MANGANESE 05
ARSENIC 06
SELENIUM 07
MOLYBDENUM 08
OTHER (SPECIFY) 97

IS15. In what year did you start working with one of these (other) heavy metals?

RECORD YEAR: 1 9 |__|__|

IS16. In what year did you last work with one of these (other) heavy metals?

RECORD YEAR: 1 9 |__|__|

IS17. For how many months in all did you work with one or more of these (other) heavy metals?

RECORD NUMBER OF MONTHS: |__|__| MONTHS

IF ANY CIVILIAN JOBS, RETURN TO SECTION C, Q.21 ON PAGE C-13 IN INTERVAL Q.
IF NO CIVILIAN JOBS, RETURN TO SECTION D, Q.1 ON PAGE D-1 IN INTERVAL Q.

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FAMILY HEALTH HISTORY

THIS SECTION CONTAINS QUESTIONS IS18 - IS24

IS18. The next few questions are about (other) possible medical conditions of your immediate family, that is, your biological mother, father, sisters, and brothers.

First, has anyone in your immediate family ever had diabetes or sugar diabetes? Do not count stepparents or adopted, step or half brothers and sisters.

YES	1
NO (SKIP TO Q. IS21)	2
DON'T KNOW (SKIP TO Q. IS21)	8

IS19. Which members of your immediate family have or had diabetes? CODE ALL THAT APPLY.

MOTHER	1
FATHER	2
SISTER(S)	3
BROTHER(S)	4

IS20. Did any of these family members first have diabetes when they were younger than age 30?

YES	1
NO	2

IS21. Has anyone in your immediate family ever had heart trouble or heart disease? (Do not count stepparents or adopted, step or half brothers and sisters.)

YES	1
NO	2
DON'T KNOW	8

(SKIP BACK TO SECTION F, Q.28
ON PAGE F-15 IN INTERVAL Q)

(SKIP BACK TO SECTION F, Q.28
ON PAGE F-15 IN INTERVAL Q)

IS22. Which members of your immediate family have or had heart trouble or heart disease? CIRCLE ALL THAT APPLY.

MOTHER	1
FATHER	2
SISTER(S)	3
BROTHER(S)	4

IS23. What type or types of heart trouble or heart disease did (he/she/they) have? CODE ALL THAT APPLY.

HYPERTENSION OR HIGH BLOOD PRESSURE 1
A STROKE 2
A HEART ATTACK 3
OTHER HEART TROUBLE OR DISEASE 4
SPECIFY: _____

IS24. Did any of these family members first have heart trouble or heart disease when they were younger than age 45?

YES 1
NO 2

SKIP BACK TO SECTION F, Q.28 ON PAGE F-15 IN THE INTERVAL QUESTIONNAIRE

DIABETES

THIS SECTION CONTAINS QUESTIONS IS25 - IS49

- IS25. Have you ever been told by a doctor or other health professional, such as a nurse or physician's assistant, that you had diabetes or sugar diabetes? (Do not include pre-, potential, or borderline diabetes.)

YES 1

(SKIP BACK TO SECTION G, Q.37
ON PAGE G-14 IN INTERVAL Q)

NO 2

- IS26. How old were you when the (doctor/health professional) first told you that you had diabetes?

YEARS OLD |__|__|

- IS27. What is the full name and address of the doctor who first made the diagnosis, or the medical facility where the diagnosis was first made? REVIEW MEDICAL AUTHORIZATION FORMS. COMPLETE NEW MEDICAL AUTHORIZATION FORM, IF NECESSARY.

LAST NAME

FIRST NAME

OR

FACILITY NAME

STREET ADDRESS

CITY

STATE

- IS28. Have you ever been told that you have acidosis or ketoacidosis due to a high blood sugar level?

YES 1

NO 2

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IS29. IF PARTICIPANT MENTIONED INSULIN AS ONE OF THE MEDICATIONS THAT HE IS CURRENTLY TAKING FOR HIS DIABETES IN RESPONSE TO QUESTION 36E IN SECTION G OF THE INTERVAL QUESTIONNAIRE, VERIFY THIS WITH PARTICIPANT, THEN CIRCLE "YES" FOR THIS QUESTION.

OTHERWISE ASK: Have you ever taken insulin injections?

YES 1
NO (SKIP TO Q. IS35) 2

IS30. Have you been taking insulin injections for most of the past 12 months?

YES 1
NO 2

IS31. IF PARTICIPANT MENTIONED INSULIN AS ONE OF THE MEDICATIONS THAT HE IS CURRENTLY TAKING FOR HIS DIABETES IN RESPONSE TO QUESTION 1E IN SECTION G OF THE INTERVAL QUESTIONNAIRE, VERIFY THIS WITH PARTICIPANT, THEN CIRCLE "YES" FOR THIS QUESTION.

OTHERWISE ASK: Are you now taking insulin injections?

YES 1
NO 2

IS32. How many years (have you been taking/did you take) insulin injections?

YEARS |__|__| [LESS THAN A YEAR = 00]

IS33. Have you ever had an insulin reaction?

YES 1
NO (SKIP TO Q. IS35) 2

IS34. About how many insulin reactions have you had during the past 12 months?

ENTER NUMBER: |__|__| [NONE = 00]

IS35. During the past 12 months, about how often, either on your own or with the help of a family member or friend, did you check your blood for glucose or sugar?

NEVER 0

TIMES PER DAY |__|__|__|

OR

TIMES PER WEEK |__|__|__|

OR

TIMES PER MONTH |__|__|__|

OR

TIMES PER YEAR |__|__|__|

IS36. In the past 12 months, about how many times has a health professional checked your blood for glucose or sugar?

TIMES |__|__| NONE = 00

IS37. IF PARTICIPANT HAS NEVER CHECKED HIS OWN BLOOD GLUCOSE OR SUGAR LEVEL OR HAD IT CHECK BY A PROFESSIONAL (HIS ANSWER TO QUESTION IS35 WAS "NEVER" AND HIS ANSWER TO QUESTION IS36 WAS "NONE") CIRCLE "0" (NO TEST IN PAST 12 MONTHS) FOR THIS QUESTION.

OTHERWISE ASK: Based on all your blood sugar tests during the past 12 months, how often would you say your blood sugar level has been too high? Would you say always, most of the time, some of the time, rarely, or never?

NO TEST IN PAST 12 MONTHS	0
ALWAYS	1
MOST OF THE TIME	2
SOME OF THE TIME	3
RARELY	4
NEVER	5

IS38. IF PARTICIPANT MENTIONED DIABETES PILLS (OR ORAL HYPOGLYCEMICS) AS MEDICATIONS THAT HE IS CURRENTLY TAKING FOR HIS DIABETES IN RESPONSE TO QUESTION 36E IN SECTION G OF THE INTERVAL QUESTIONNAIRE, VERIFY THIS WITH PARTICIPANT, THEN CIRCLE "YES" FOR THIS QUESTION.

OTHERWISE ASK: Have you ever taken diabetes pills?

YES 1
NO (SKIP TO Q. IS43) 2

IS39. Have you been taking diabetes pills most of the past 12 months?

YES 1
NO 2

IS40. IF PARTICIPANT MENTIONED DIABETES PILLS (OR ORAL HYPOGLYCEMICS) AS MEDICATIONS THAT HE IS CURRENTLY TAKING FOR HIS DIABETES IN RESPONSE TO QUESTION 1E IN SECTION G OF THE INTERVAL QUESTIONNAIRE, VERIFY THIS WITH PARTICIPANT, THEN CIRCLE "YES" FOR THIS QUESTION.

OTHERWISE ASK: Are you now taking diabetes pills?

YES 1
NO (SKIP TO Q. IS43) 2

IS41. IF PARTICIPANT GAVE YOU THE NAME OF THE MEDICINE IN QUESTION 1E IN SECTION G OF THE INTERVAL QUESTIONNAIRE, RECORD IT AGAIN BELOW.

OTHERWISE ASK: What is the name of the medicine that you are taking?

SPECIFY: _____

IS42. How many years (have you been taking/did you take) diabetes pills?

YEARS |__|__| LESS THAN A YEAR = 00

IS43. Has a doctor, nurse, or other health professional ever given you a diet or instructions on what foods to eat for your diabetes?

YES 1
NO (SKIP TO Q. IS46) 2

IS44. Do you now follow the diet or instructions for your diabetes?

YES 1
NO 2

IS45. How many years (have you been/were you) following a diet or instructions for your diabetes?

YEARS |__| |__| LESS THAN A YEAR = 00

IS46. Do you carry or wear anything that identifies you as having diabetes?

YES 1
NO 2

IS47. IF PARTICIPANT WAS DIAGNOSED WITH DIABETES SINCE HIS LAST INTERVIEW, AND GAVE YOU THE DATE WHEN HE LAST SAW A DOCTOR ABOUT HIS DIABETES IN QUESTION 36F IN SECTION G OF THE INTERVAL QUESTIONNAIRE, CIRCLE THE CATEGORY BELOW THAT CONTAINS THAT DATE.

OTHERWISE ASK: When did you last see or talk to a doctor or other health professional about your diabetes?

DURING PAST 2 WEEKS	1
OVER 2 WEEKS TO 6 MONTHS	2
OVER 6 MONTHS TO 12 MONTHS	3
OVER 12 MONTHS TO 2 YEARS ..	4
OVER 2 YEARS TO 5 YEARS	5
OVER 5 YEARS AGO	6

(SKIP BACK TO SECTION G, Q.37
ON PAGE G-14 IN INTERVAL Q)

(SKIP BACK TO SECTION G, Q.37
ON PAGE G-14 IN INTERVAL Q)

(SKIP BACK TO SECTION G, Q.37
ON PAGE G-14 IN INTERVAL Q)

IS48. Was the doctor or other health professional pleased with the degree of control you have over the level of sugar or glucose in your blood?

YES 1
NO 2

IS49. About how many times a year do you see a doctor or other health professional about your diabetes?

LESS THAN ONCE A YEAR 1
ONCE A YEAR 2
TWICE A YEAR 3
3 TO 4 TIMES A YEAR 4
5 OR MORE TIMES A YEAR 5
NO REGULAR SCHEDULE 6

SKIP BACK TO SECTION G, Q.37 ON PAGE G-14 IN THE INTERVAL QUESTIONNAIRE.

HEPATITIS B

THIS SECTION CONTAINS QUESTION IS50

IS50. Vaccination against hepatitis B has been recommended for health care workers and others at risk for hepatitis B infection since a plasma-derived vaccine first became available in June 1982. The hepatitis B vaccine is different from the hepatitis A vaccine, because the hepatitis B is administered in the arm. Since June of 1982, have you ever been vaccinated against the hepatitis B virus (HBV)?

YES	1
NO	2

SKIP BACK TO SECTION G, Q.51 ON PAGE G-30 IN THE INTERVAL QUESTIONNAIRE

PAIN IN LEGS

THIS SECTION CONTAINS QUESTIONS IS51 - IS61

IS51. Do you get a pain in either or both of your legs while walking?

YES 1
NO (SKIP TO Q. IS61) 2

IS52. Does this pain ever begin when you are standing still or sitting?

YES 1
NO 2

(SKIP BACK TO SECTION G, Q.59
ON PAGE G-54 IN INTERVAL Q)

IS53. Do you get this pain in either or both of your calf muscles?

YES 1

NO 2

(SKIP BACK TO SECTION G, Q.59
ON PAGE G-54 IN INTERVAL Q)

IS54. Do you get it when you walk uphill or hurry?

YES 1

NO 2
NEVER HURRIES OR WALKS UPHILL 0

(SKIP BACK TO SECTION G, Q.59
ON PAGE G-54 IN INTERVAL Q)

IS55. Do you get it when you walk at an ordinary pace on level ground?

YES 1
NO 2

IS56. Does the pain ever disappear while you are still walking?

YES 1
NO 2

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IS57. What do you usually do if you get it when you are walking?

STOP 1
SLOW DOWN 2
CONTINUE AT

(SKIP BACK TO SECTION G, Q.59
ON PAGE G-54 IN INTERVAL Q)

SAME PACE 3

IS58. What happens to it if you stand still or rest; does the pain usually continue for more than 10 minutes, or does it usually disappear in 10 minutes or less?

USUALLY CONTINUES MORE THAN 10 MINUTES 1
USUALLY DISAPPEARS IN 10 MINUTES OR LESS 2

IS59. When you get this pain, have you ever noticed a change in the color of your legs when you get this pain?

YES 1

(SKIP BACK TO SECTION G, Q.59
ON PAGE G-54 IN INTERVAL Q)

NO 2

IS60. Would you say that you notice this change in color always, most of the time, some of the time, rarely or never?

ALWAYS 1
MOST OF THE TIME 2
SOME OF THE TIME 3
RARELY 4
NEVER 5

SKIP BACK TO SECTION G, Q.59 ON PAGE G-54 IN THE INTERVAL QUESTIONNAIRE

IS61. Did you ever get a pain in your legs while walking that went away when you rested, but no longer get it because you took medicine or had surgery for this condition? [NOTE TO INTERVIEWER: THE MEDICINE THAT THE PARTICIPANT MAY HAVE TAKEN ARE VASODILATING DRUGS. TYPES OF SURGERY WOULD INCLUDE REVASCULARIZATION, ENDARTECTOMY OR ANGIOPLASTY ON THE PARTICIPANT'S LEGS.]

YES 1
NO 2

SKIP BACK TO SECTION G, Q.59 ON PAGE G-54 IN THE INTERVAL QUESTIONNAIRE

PHYSICAL EXERCISE

THIS SECTION CONTAINS QUESTIONS IS62 - IS77

IS62. These next few questions are about physical exercise. INTERVIEWER: FROM OBSERVATION OR PREVIOUS INFORMATION, IS R PHYSICALLY HANDICAPPED?

YES 1
NO (SKIP TO Q. IS65) 2

IS63. HAND R CALENDAR. In the past two weeks, beginning Monday (DATE) and ending this past Sunday (DATE), have you done any exercises, sports, or physically active hobbies?

YES 1
NO (SKIP TO Q. IS69) 2
DON'T KNOW (SKIP TO Q. IS69) 8

IS64. What were they? RECORD IN QUESTION IS65.

PROBE: Anything else?

READ ONLY CATEGORIES IN Q. IS65 THAT PARTICIPANT COULD PERFORM WITH HIS HANDICAP.

IS65. HAND R CALENDAR. In the past two weeks (outlined on that calendar), beginning Monday (DATE) and ending this past Sunday (DATE), have you done any of the following exercises, sports, or physically active hobbies . . .	Yes No		IS66. How many times in the past 2 weeks did you [go/do] (ACTIVITY)?	IS67. On the average, how many minutes did you actually spend doing (ACTIVITY) each time?	IS68. What usually happened to your heart rate or breathing when you [did/went] (ACTIVITY)? Did you have a small, moderate, or large increase or no increase at all in your heartbreathing? (1 = SMALL, 2 = MODERATE, 3 = LARGE, 0 = NONE, 8 = DON'T KNOW)
	Yes	No			
A. Walking for exercise?	1	2	_ _ _	_ _ _	1 2 3 0 8
B. Gardening or yard work?	1	2	_ _ _	_ _ _	1 2 3 0 8
C. Stretching exercises?	1	2	_ _ _	_ _ _	
D. Weightlifting or other exercises to increase muscle strength?	1	2	_ _ _	_ _ _	1 2 3 0 8
E. Jogging or running?	1	2	_ _ _	_ _ _	1 2 3 0 8
F. Hiking?	1	2	_ _ _	_ _ _	1 2 3 0 8

IS65. HAND R CALENDAR. In the past two weeks (outlined on that calendar), beginning Monday (DATE) and ending this past Sunday (DATE), have you done any of the following exercises, sports, or physically active hobbies . . .	IS66. How many times in the past 2 weeks did you [go/do] (ACTIVITY)?		IS67. On the average, how many minutes did you actually spend doing (ACTIVITY) each time?	IS68. What usually happened to your heart rate or breathing when you [did/went] (ACTIVITY)? Did you have a small, moderate, or large increase or no increase at all in your heartbreathing? (1 = SMALL, 2 = MODERATE, 3 = LARGE, 0 = NONE, 8 = DON'T KNOW)
	Yes	No		
G. Aerobics or aerobic dancing?	1 2			1 2 3 0 8
H. Calisthenics or general exercise?	1 2			1 2 3 0 8
I. Riding a bicycle or exercise bike?	1 2			1 2 3 0 8
J. Stair climbing?	1 2			1 2 3 0 8
K. Swimming for exercise?	1 2			1 2 3 0 8
L. Playing tennis?	1 2			1 2 3 0 8
M. Bowling?	1 2			

IS65. HAND R CALENDAR. In the past two weeks (outlined on that calendar), beginning Monday (DATE) and ending this past Sunday (DATE), have you done any of the following exercises, sports, or physically active hobbies . . .	IS66. How many times in the past 2 weeks did you [go/do] (ACTIVITY)?	IS67. On the average, how many minutes did you actually spend doing (ACTIVITY) each time?	IS68. What usually happened to your heart rate or breathing when you [did/went] (ACTIVITY)? Did you have a small, moderate, or large increase or no increase at all in your heartbreathing? (1 = SMALL, 2 = MODERATE, 3 = LARGE, 0 = NONE, 8 = DON'T KNOW)
	Yes	No	
N. Playing golf?	1	2	
O. Playing baseball or softball?	1	2	1 2 3 0 8
P. Playing handball, racquetball, or squash?	1	2	1 2 3 0 8
Q. Skiing? (1) Downhill?	1	2 (SKIP TO R)	
(2) Cross-country?	1	2	1 2 3 0 8
R. Water skiing?	1	2	

IS65. HAND R CALENDAR. In the past two weeks (outlined on that calendar), beginning Monday (DATE) and ending this past Sunday (DATE), have you done any of the following exercises, sports, or physically active hobbies . . . <u>Yes</u> <u>No</u>	IS66. How many times in the past 2 weeks did you [go/do] (ACTIVITY)?	IS67. On the average, how many minutes did you actually spend doing (ACTIVITY) each time?	IS68. What usually happened to your heart rate or breathing when you [did/went] (ACTIVITY)? Did you have a small, moderate, or large increase or no increase at all in your heartbreathing? (1 = SMALL, 2 = MODERATE, 3 = LARGE, 0 = NONE, 8 = DON'T KNOW)
S. Playing basketball? 1 2	__ __	__ __	1 2 3 0 8
T. Playing volleyball? 1 2	__ __	__ __	1 2 3 0 8
U. Playing soccer? 1 2	__ __	__ __	1 2 3 0 8
V. Playing football? 1 2	__ __	__ __	1 2 3 0 8

IS65. HAND R CALENDAR. In the past two weeks (outlined on that calendar), beginning Monday (DATE) and ending this past Sunday (DATE), have you done any of the following exercises, sports, or physically active hobbies . . . <u>Yes</u> <u>No</u>	IS66. How many times in the past 2 weeks did you [go/do] (ACTIVITY)?	IS67. On the average, how many minutes did you actually spend doing (ACTIVITY) each time?	IS68. What usually happened to your heart rate or breathing when you [did/went] (ACTIVITY)? Did you have a small, moderate, or large increase or no increase at all in your heartbreathing? (1 = SMALL, 2 = MODERATE, 3 = LARGE, 0 = NONE, 8 = DON'T KNOW)
W. Have you done any (other) exercises, sports, or physically active hobbies in the past 2 weeks? 1 2 (SKIP TO Q. IS69) (1) What were they? Anything else? IF LISTED ACTIVITY, MARK "YES" FOR THAT ACTIVITY. OTHERWISE, SPECIFY: _____	_ _ _	_ _ _	1 2 3 0 8
(2) Anything else? IF "YES", CIRCLE AND SPECIFY: _____	_ _ _	_ _ _	1 2 3 0 8

IS69. Overall, was the amount of physical exercise you did over the past two weeks fairly typical for you? That is, would you say that you were physically more active, less active, or about as active as you usually are during a typical two week period?

MORE ACTIVE	1
LESS ACTIVE	2
ABOUT AS ACTIVE	3

IS70. Do you exercise or play sports regularly?

YES	1
NO (SKIP TO Q. IS72)	2

IS71. For how long have you exercised or played sports regularly? RECORD NUMBER AND CIRCLE APPROPRIATE UNIT OF TIME:

☐ ☐ ☐ ☐ DAYS	1
WEEKS	2
MONTHS	3
YEARS	4

IS72. Would you say that you are physically more active, less active, or about as active as other persons your age?

MORE ACTIVE	1
LESS ACTIVE (SKIP TO Q. IS73B)	2
ABOUT AS ACTIVE (SKIP TO Q. IS74)	3

IS73A. Is that a lot more active or a little more active?

A LOT MORE (SKIP TO Q. IS74)	1
A LITTLE MORE (SKIP TO Q. IS74)	2

IS73B. Is that a lot less active or a little less active?

A LOT LESS	3
A LITTLE LESS	4

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IS74. IF R IS NOT CURRENTLY WORKING, SKIP TO Q. IS76.

OTHERWISE ASK: How much hard physical work is required on your (current) job? Would you say a great deal, a moderate amount, a little, or none?

GREAT DEAL	1
MODERATE AMOUNT	2
A LITTLE	3
NONE	4

(SKIP BACK TO SECTION J, Q.1
ON PAGE J-1 IN INTERVAL Q)

IS75. About how many hours per day do you perform hard physical work on your job?

HOURS PER DAY |__|__|

SKIP BACK TO SECTION J, Q.1 ON PAGE J-1 IN THE INTERVAL QUESTIONNAIRE

IS76. How much hard physical exercise is required in your main daily activity? Would you say a great deal, a moderate amount, a little, or none?

GREAT DEAL	1
MODERATE AMOUNT	2
A LITTLE	3
NONE	4

(SKIP BACK TO SECTION J, Q.1
ON PAGE J-1 IN INTERVAL Q)

IS77. About how many hours per day do you perform hard physical work in your main daily activity?

HOURS PER DAY |__|__|

SKIP BACK TO SECTION J, Q.1 ON PAGE J-1 IN THE INTERVAL QUESTIONNAIRE

APPENDIX C

Physical Examination

1992 Examiner's Handbook and Physical Examination Forms

AIR FORCE HEALTH STUDY

EXAMINER'S HANDBOOK - 1992

6 January 1992

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9. Radiographic Examination
10. Doppler Testing of Peripheral Pulses
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A. General Instructions

The Air Force Health Study is a multiyear effort to determine whether or not Air Force personnel who were engaged in the aerial spraying of herbicides in Vietnam have developed significant adverse health effects from that exposure. Detailed surveys of the world's literature have been used in designing the questionnaires, physical examination protocol, and laboratory procedure.

This phase of the study involves a follow-up cross-sectional assessment of the subject's health at the time of examination. It is important that examiners remain unaware of the subject's status as a RANCH HAND participant or as a comparison subject. The physician examiner is tasked to examine and objectively record his findings. The examining physician is not, and cannot be expected to arrive at any definitive diagnosis, since the full history and the laboratory results will not be available to him. Medical history, laboratory results and physical examination findings will be evaluated by an independent diagnostician employed by the contractor. This diagnostician will formulate diagnoses and differential diagnoses, if appropriate. Additional procedures to treat or evaluate emergency or urgent medical conditions will be directed only by this physician. In addition, he will present a detailed analysis and debriefing to the study subject and provide a copy of the analysis to the subject's personal physician, if authorized by the participant.

The physicians performing examinations for the study should be aware that the report of examination will become a permanent record. This report will be referred to not only in the near future as the cross-sectional data is analyzed, but also at the time of future follow-up phases of project. These examinations will define the health status of the subjects at a point in time and will establish the presence or absence of abnormal physical findings. After statistical review of the study groups, these findings may permit definition of a chronic effect due to exposure. An inaccurate examination may lead to fallacious study results in two ways: a presumed syndrome may be defined which does not in fact exist, or a syndrome which in fact exists may not be defined with enough validity to warrant further actions.

The examining physician is responsible for recording a complete and detailed report of the physical examination. In this role, the examining physician is tasked with collecting evidence of the presence or absence of physical signs of abnormality only. All items on the physical examination report form must be completed. It is imperative that the physician make such additional remarks as may be required to adequately describe existing physical and mental impairments. Since clinical endpoints have not been well defined following chronic exposure to Herbicide Orange, the examining physician and the diagnostician must not definitively ascribe

abnormalities to herbicide exposure during the course of the examination or during the patient's debriefing. If, during the examination, the physician discovers evidence of acute serious illness requiring immediate treatment, the normal emergency or urgent care procedure of the medical facility would apply.

The Air Force is not responsible for the cost of such care. If, during the examination, there is evidence of illness requiring nonemergency medical attention, the diagnostician should inform the subject and offer to forward, or have forwarded, pertinent information to the subject's physician. A clear record of any such advice and treatment should be recorded. The ultimate value of the study will lie in the collection of complete, accurate and, whenever possible, quantitative data permitting the most stringent and powerful statistical analysis. For this reason, the physical examination protocol requires exact measurements in many instances and the use of defined meanings of semiquantitative indicators in other places.

B. Conduct of the Examination

1. OVERVIEW:

Upon arrival at the examining facility, the subject should be briefed by the on-site monitor and a representative of the contractor on the appointments which have been arranged, their times, and locations. Consent forms covering all examination procedures shall be provided to each participant. The participant may still decline to participate in any individual portion of the examination, even if he previously signed a consent form.

The examination will be conducted in a manner identical to the process used in prior phases of the study and detailed in the subsequent sections of this handbook and in the Statement of Work.

- (a) Hemocult screening of three specimens
- (b) Blood pressure determination using automated equipment
- (c) Drawing of approximately 350 cc of blood from 500 volunteers to be processed and tested for levels of 2,3,7,8 TCDD. Blood will be drawn and processed in accordance with CDC procedures.

Vietnam Combat questionnaires will only be given to those subjects who did not participate in the 1985 or 1987 examination:

2. PSYCHOLOGICAL BATTERY

a. General

This battery yields objective numerical data. The individual tests were chosen to insure an adequate analysis of one of the major alleged manifestations of herbicide toxicity. Each test either validates one of the other tests, or is considered to be a "definitive" test for analysis of a suspected psycho/neuropathic effect.

b. Specific Tests: Symptom checklist R-90, Millon Multiaxial Clinical Inventory, instruments will be used.

c. Examination Results: Forward all test materials as scored with annotations, interpretations, and impressions to the diagnostician for inclusion in the subject's examination file.

d. The psychologist in charge will conduct a one-to-one test debriefing with each subject to estimate the test-by-test and overall accuracy and validity of the test results and to discuss the results of the tests with the participant. A form for this purpose should be developed and should be filled out completely before forwarding, with the subject's raw data, to the diagnostician. If applicable, input from the testing technician is encouraged.

3. ELECTROCARDIOGRAM

a. A standard 12-lead scalar electrogram is required. If an arrhythmia is observed, a 1-minute rhythm strip is requested, in addition. This electrocardiogram will be accomplished after a minimum of 4-hour abstinence for smoking, food, and liquid intake.

b. Mounting: Mount the tracing in the usual manner of the laboratory for the recorder used.

c. Disposition: Forward the mounted tracing and rhythm strip, if obtained, to the diagnostician.

d. Interpretation: The electrocardiograms will be interpreted by cardiologists at the examination center. Contractor proposals to use automated ECG interpretation will be reviewed by the AF.

4. VISUAL ACUITY SCREENING AND INTRAOCULAR PRESSURE

Screening for near and distant visual acuity will be conducted using equipment and procedures selected by the contractor and approved by the Air Force. Intraocular pressure to screen for the presence of glaucoma will be conducted using tonometry

equipment, which does not come in contact with the cornea, selected by the contractor and approved by the Air Force.

5. PULMONARY FUNCTION TESTING

Standard evaluation of pulmonary function will be conducted on each participant following at least 4 hours abstention from the use of tobacco products and will include as a minimum forced expiratory volume at 1 second, total vital capacity and the ratio of the two measurements.

6. SCREENING AUDIOMETRY

Screening of hearing will be conducted using equipment and procedures selected by the contractor and approved by the Air Force.

7. AUTOMATED BLOOD PRESSURE DETERMINATION

Pressure, and electronic device will be used to take all blood pressure, measurements. The device to be used will be selected by the contractor and approved by the Air Force.

8. STOOL EXAMINATION FOR OCCULT BLOOD

Three stool specimens from each participant will be tested for the presence of occult blood. Participants with positive tests will be advised and appropriate follow-up will be arranged.

9. RADIOGRAPHIC EXAMINATION

- a. Examination: A standard 14x17 in., standing, roentgenogram in the PA position.
- b. Interpretation: A board-certified radiologist at the examination center will interpret the roentgenogram and record the results and forward them to the diagnostician.

10. DOPPLER TESTING OF PERIPHERAL PULSES

A Doppler device shall be used to quantitatively measure the peripheral pulses. This procedure will be conducted after a minimum of 4 hour abstinence from smoking, food, and liquid intake.

11. ASSESSMENT OF TESTICULAR SIZE

Contractor will suggest method to assess testicular size.

12. MEASUREMENT OF HEIGHT AND WEIGHT

Determine height in meters and weight in kilograms on each participant. Determine the circumference of the waist at the navel and the circumference of the neck, all in centimeters.

13. VIBROTACTILE THRESHOLD TESTING

Measurement of the vibrotactile threshold in both great toes will be performed using the method of limits and techniques described in Section 4.2, reference 3.

14. LABORATORY PROCEDURES:

a. General Instructions; First Day: The patient should report in the morning in a fasting state having had water only after midnight.

b. General Instructions; Second Day: Serum hormone levels should be determined from specimens collected on the morning of the second day. Hormonal levels appear to oscillate rapidly in a random fashion. Distributions drift with time suggesting diurnal variations and some are affected by nonfasting state. Therefore, patients should be fasting prior to drawing blood for hormone analysis. Serum for dioxin determination will be drawn on 200 participants who consent to this procedure. Sufficient blood will be drawn to bring the total volume over the 2 days to 450 cc from these volunteers. Participants should also be informed that they should abstain from the use of alcohol for 24 hours prior to the scheduled start of the physical examination.

c. Specific Tests to be Performed

- (1) Hematocrit
- (2) Hemoglobin
- (3) Erythrocyte sedimentation rate
- (4) RBC indices
- (5) White blood cell count with differential

- (6) Platelet count
- (7) Urinalysis
- (8) Serum creatinine
- (9) Fasting plasma glucose
- (10) 2-Hour postprandial plasma glucose (accompanied by dipstick test for urine glucose)
- (11) Urobilinogen
- (12) High resolution serum protein electrophoresis to detect adherent B cell clones
- (13) Cholesterol & HDL cholesterol
- (14) Triglycerides
- (15) Bilirubin (total and direct)
- (16) AST
- (17) ALT
- (18) GGT
- (19) Alkaline phosphatase
- (20) LDH
- (21) Hepatitis A antibody
- *(22) Hepatitis B surface antigen
- *(23) Hepatitis B, core antibody
- *(24) Hepatitis B, surface antibody
- *(25) Hepatitis C antibody
- (26) Stool hemocult (3 times)
- (27) Creatine phosphokinase (CPK)

*Testing to be done by USAF on serum drawn
and sent by the contractor

- (28) RPR; if positive, send serum to AL/AOELM, Brooks AFB
- (29) Lupus panel (contractor suggested tests)
- (30) Testosterone; total and free
- (31) Thyroid profile (T₄, TSH)
The technique for TSH must be sensitive to hypo- as well as hyperthyroid conditions.
- (32) Prothrombin time
- (33) Serum insulin
- (34) Alpha 1 C hemoglobin
- (35) Rheumatoid Factor
- (36) Serum dioxin determination (to be done by the Centers for Disease Control) on a subset of up to 500 participants selected by the Air Force
- (37) Serum amylase
- (38) Serum ACTH
- (39) Serum LH
- (40) Serum FSH
- (41) Serum glucagon
- (42) Serum estradiol
- (43) Sex hormone binding globulin (SHBG)
- ** (44) Serum proinsulin
- ** (45) Serum C peptide
- ** (46) Islet cell antibodies

**To be done only on participants known to be diabetic (2-hr postprandial glucose > 140 mg/dl.)

d. The following immunological assays will be performed on blood from participants randomly selected using selection procedures outlined in Section 3.1.2.2.2 of the Statement of Work.

- (1) CD3 cells (total T lymphocytes)
- (2) CD4 cells (helper T cells)
- (3) CD5 cells (B cell subset)
- (4) CD8 cells (suppressor T cells)
- (5) CD14 cells (monocytes)
- (6) CD16/56 cells (NK cells)
- (7) CD20 cells (B cells)
- (8) CD25 cells (activated T cells)
- (9) CD45 cells (to be used as a quality control marker)
- (10) Contractor will suggest an approach to detect T cell clones.
- (11) Protein profile
- (12) Delayed hypersensitivity skin tests
- (13) Data from double-labeled cells will be collected for the following combinations:
 - (a) CD3 with CD 25 (refinement of activated T cells)
 - (b) CD5 with CD 20 (B cell subset)
 - (c) CD4/CD8 ratio
 - (d) CD4 with CD8 (abnormal or early T cells)
 - (e) CD3 with CD 16/56 (NK-like T cells)

PARTICIPANT LABEL	CASE NUMBER	GROUP NUMBER
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9
	0 1 2 3 4 5 6 7 8 9	EXAMINER I.D. NO.
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9



FORM AFHS-1 FAMILY AND PERSONAL HISTORY

YEAR 10 FOLLOW UP

FAMILY HISTORY												
DARKEN NONE OR EACH KNOWN OCCURRENCE OF:	SELF	RELATIVES						CURRENT FAMILY			NONE	
		GRANDPARENTS		PARENTS		SIBLINGS		CHILDREN				
		MATERNAL	PATERNAL	MOTHER	FATHER	SISTERS	BROTHERS	WIFE	GIRLS	BOYS		
1. ADOPTED	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
2. DIABETES	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
3. EPILEPSY	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
4. STROKE	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
5. HIGH BLOOD PRESSURE	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
6. HARDENING OF ARTERIES	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
7. HEART TROUBLE/ANGINA	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
8. BLOOD DISEASE	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
9. LEUKEMIA	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
10. LUNG CANCER	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
11. OTHER CANCER	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
12. SMOKING HISTORY	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
13. STOMACH TROUBLE	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
14. NERVOUS TROUBLE	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
15. SLEEPING TROUBLE	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
16. ALCOHOLISM	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
17. ALZHEIMER'S DISEASE	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
18. PARKINSON'S DISEASE	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
19. MENTAL DISTURBANCE(S)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
20. ARTHRITIS	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
21. BIRTH DEFECTS	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
22. ALLERGIES	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
23. OTHER MEDICAL TROUBLES	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

(Y) (N) COMMENTS?

SUMMARY OF GENERAL HEALTH QUALITY THROUGHOUT LIFE												
RELATION	LIVE BIRTHS		LIFETIME HEALTH IS/WAS?				(Y) (N) COMMENTS?					
	# GIRLS	# BOYS	EXCELLENT	GOOD	FAIR	POOR						
NATURAL MOTHER			☐	☐	☐	☐						
NATURAL FATHER			☐	☐	☐	☐						
SELF			☐	☐	☐	☐						
SPOUSE 1 (N/A)			☐	☐	☐	☐						
SPOUSE 2 (N/A)			☐	☐	☐	☐						
FAMILY MEMBERS	AGE IN YEARS		IF DECEASED—									
B = BROTHER S = SISTER C = CHILD	SEX F M	AT PRESENT IF ALIVE?	AT TIME OF DEATH?	CAUSE OF DEATH								
				CANCER HEART	ACCIDENT STROKE	OTHER SUICIDE		?				
MOTHER	●			☐	☐	☐		☐				
FATHER	●			☐	☐	☐		☐				
(B) (S) (C)	(F) (M)			☐	☐	☐	☐					
(B) (S) (C)	(F) (M)			☐	☐	☐	☐					
(B) (S) (C)	(F) (M)			☐	☐	☐	☐					
(B) (S) (C)	(F) (M)			☐	☐	☐	☐					
(B) (S) (C)	(F) (M)			☐	☐	☐	☐					
(B) (S) (C)	(F) (M)			☐	☐	☐	☐					

SUMMARY OF TREATMENTS

MONTH/YEAR OF LAST EXAM

- ☐ ☐ WERE ANY NEW ABNORMALITIES FOUND AT YOUR LAST PHYSICAL EXAMINATION?
☐ ☐ ARE YOU CURRENTLY RECEIVING ANY MEDICATIONS OR TREATMENTS?
☐ ☐ HAVE YOU EVER TAKEN ANY MEDICATIONS OR TREATMENTS FOR LONGER THAN 1 MONTH?
☐ ☐ HAVE YOU EVER HAD A SERIOUS ILLNESS?
☐ ☐ HAVE YOU EVER HAD A SERIOUS INJURY?
☐ ☐ HAVE YOU EVER HAD A SURGICAL OPERATION?

HOW MANY TIMES HAVE YOU BEEN HOSPITALIZED? 0 1 2 3 4 5 6 7 8 9 or more

YEAR	AGE	DESCRIPTION OF OPERATION/INJURY/ILLNESS	MEDICATION/TREATMENT

PERSONAL HISTORY

DARKEN THE ☐ BUBBLE IF YOU HAVE EVER EXPERIENCED ONE OF THE FOLLOWING CONDITIONS, OTHERWISE DARKEN ☐.

YES NO	YES NO	YES NO	
☐ CATARACTS	☐ HEPATITIS	☐ MINOR ARTHRITIS	ANY REPEATING OCCURRENCES IN THE LAST YEAR?
☐ TONSILLITIS	☐ WORMS	☐ RHEUMATOID ARTHRITIS	
☐ SINUSITIS	☐ COLITIS	☐ SEVERE ARTHRITIS	
☐ GOITER	☐ HEMORRHOIDS	☐ SYSTEMIC LUPUS	
☐ HAY FEVER	☐ KIDNEY STONES	ERYTHEMATOSUS	YES NO
☐ ASTHMA	☐ KIDNEY TROUBLE	☐ SCLERODERMA	☐ PNEUMONIA
☐ BRONCHITIS	☐ BLADDER TROUBLE	☐ RHEUMATIC FEVER	☐ KIDNEY INFECTIONS
☐ PLEURISY	☐ PROSTATE TROUBLE	☐ CANCER OR TUMOR	☐ SKIN BOILS
☐ PNEUMONIA	☐ SYPHILIS	☐ VARICOSE VEINS	☐ OTHER INFECTIONS
☐ TUBERCULOSIS	☐ GONORRHEA	☐ PHLEBITIS	DESCRIBE OTHER SKIN TROUBLE OR INFECTIONS
☐ HEART TROUBLE	☐ FAINTING	☐ HERNIA (RUPTURE)	
☐ STOMACH TROUBLE	☐ FITS OR CONVULSIONS	☐ ANEMIA	
☐ ULCERS	☐ DEPRESSION	☐ POLIO	
☐ GALLSTONES	☐ NERVOUS BREAKDOWN	☐ MUMPS	
☐ JAUNDICE	☐ PARALYSIS	☐ MALARIA	
☐ LIVER TROUBLE	☐ MUSCLE PAIN	☐ GOUT	
☐ SKIN TROUBLE	☐ MUSCLE WEAKNESS	☐ DIABETES	
☐ ACNE	☐ NUMBNESS	☐ MEASLES	
☐ EXCESS HAIR GROWTH	☐ LOSS OF SENSATION	☐ DYSENTERY	
☐ OTHER SKIN TROUBLE	☐ LOSS OF SEX DRIVE		

☐ ☐ COMMENTS?

FORM QA AUDIT BY:

1 2 3 4 5 6

DATE

INITIALS

SUMMARY OF HABITS

How often do you:

	never	less than 12 times/year	1-4 times/month	2-3 times/week	daily
use non-prescription stimulants to stay alert (no-doze, etc)	☐	☐	☐	☐	☐
use non-prescription sleep aids	☐	☐	☐	☐	☐
use alcohol to help me sleep	☐	☐	☐	☐	☐
take tryptophan to help me sleep	☐	☐	☐	☐	☐
take vitamins	☐	☐	☐	☐	☐

Please indicate below how much you consume on a weekly basis each of the following :
(If your intake is less than once a week for an item than put a "0" in the space provided)

_____ to _____ 12 oz. cups caffeinated coffee a week	_____ to _____ cigarettes a week
_____ to _____ 12 oz. cups decaf coffee a week	_____ to _____ cigars a week
_____ to _____ 12 oz. cups caffeinated tea a week	_____ to _____ bowls of pipe tobacco a week
_____ to _____ 12 oz. cups decaf tea a week	_____ to _____ pinches of chew a week
_____ to _____ 12 oz. cans sugar cola a week	_____ to _____ 12 oz. cans of regular beer a week
_____ to _____ 12 oz. cans decaf cola a week	_____ to _____ 12 oz. cans of light beer a week
_____ to _____ 12 oz. cans diet cola a week	_____ to _____ 4 oz. glasses of wine a week
_____ to _____ 12 oz. cans decaf diet cola a week	_____ to _____ mixed drinks a week
_____ to _____ 12 oz. cups bottled water a week	_____ to _____ oz. unmixed liquor a week
_____ to _____ 12 oz. cups tap water a week	

Which of the following do you use most often
in your coffee? (Choose one from each column)

☐ sugar	☐ cream
☐ saccharin	☐ milk
☐ equal	☐ powdered creamer
☐ n/a	☐ n/a

Which one of the three following food
types do you prefer most?

- ☐ steak, salty foods
- ☐ bread, sweets
- ☐ dairy products

Which of the following do you use most often
in your tea? (Choose one from each column)

☐ sugar	☐ cream
☐ saccharin	☐ milk
☐ equal	☐ powdered creamer
☐ n/a	☐ n/a

When does your highest energy period
occur? (choose one of the following)

- ☐ energetic all day
- ☐ following meals (especially breakfast and dinner)
- ☐ first thing in the morning

Yes No

☐ ☐ Do you have any physical or nervous complaints or concerns?

☐ ☐ Do you have any allergies or severe reactions to:
medicines, foods, plants, chemicals, etc? Please specify below.

Comments :

Form QA audit done by :
ID# Initials Date

① ② ③ ④ ⑤ ⑥

PARTICIPANT LABEL	CASE NUMBER	GROUP NUMBER
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9
	0 1 2 3 4 5 6 7 8 9	EXAMINER I.D.
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9

FORM AFHS-1B
FAMILY AND PERSONAL HISTORY CONTINUED
YEAR 10 FOLLOWUP



GENERAL HEALTH QUALITY OF FAMILY MEMBERS (CONTINUED)

PLEASE NOTE: Only add those family members who you were unable to record on the orange sheet because of a lack of space - you do not have to repeat any relatives.

Family members B = Brother S = Sister C = Child		Sex F M		Age in years At present if alive At time of death		If deceased - what was the cause of death ?						
						heart	cancer	stroke	accident	suicide	other	?
B	S	C	F	M		☐	☐	☐	☐	☐	☐	☐
B	S	C	F	M		☐	☐	☐	☐	☐	☐	☐
B	S	C	F	M		☐	☐	☐	☐	☐	☐	☐
B	S	C	F	M		☐	☐	☐	☐	☐	☐	☐
B	S	C	F	M		☐	☐	☐	☐	☐	☐	☐
B	S	C	F	M		☐	☐	☐	☐	☐	☐	☐
B	S	C	F	M		☐	☐	☐	☐	☐	☐	☐
B	S	C	F	M		☐	☐	☐	☐	☐	☐	☐
B	S	C	F	M		☐	☐	☐	☐	☐	☐	☐
B	S	C	F	M		☐	☐	☐	☐	☐	☐	☐
B	S	C	F	M		☐	☐	☐	☐	☐	☐	☐

Comments :

My natural mother gave birth to _____ boys and _____ girls. I was the _____th child born.

I have sired _____ boy children and _____ girl children.

SUMMARY OF WORK AND LEISURE HOURS

I _____ will retire/ _____ did retire from military service on : _____ at age _____ years.

I _____ will retire/ _____ did retire from work as a civilian on: _____ at age _____ years.
(month/year)

I sleep _____ hours per night during the workweek and _____ hours on other nights.

I take naps _____ times per week for an average of _____ hours per week.

If currently employed, please complete the following:

1. I work _____ hours per day _____ days per week.
2. I average _____ hours paid overtime per week _____ hours unpaid overtime per week.
3. I receive _____ vacation days per year plus _____ paid holidays per year.

SUMMARY OF BODY WEIGHT CHANGES

My current weight range is between _____ lbs and _____ lbs.

My preferred weight range is between _____ lbs and _____ lbs.

The most I ever weighed was _____ lbs and that was between the ages of _____ and _____ years.

The most fit I have ever been was between ages _____ and _____ years, when I weighed _____ lbs and was _____ ft _____ inches tall at the time.

The most weight I ever lost during one period was _____ lbs due to :

☐ Illness/Injury
☐ Stress
☐ Dieting
☐ Exercise
☐ Depression
☐ Other

Comments :

PARTICIPANT LABEL

CASE NUMBER

GROUP NUMBER

0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9

0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9

DIAGNOSTICIAN ID NO.



FORM AFHS-2A

REVIEW OF SYSTEMS

YEAR 10
FOLLOW UP

Please ANSWER ALL QUESTIONS. If in doubt, GUESS Yes or No.

If you are bothered by or concerned about the following conditions, darken the (Y) (YES) Bubble.
Otherwise mark (N) for NO.

The Doctor or Nurse will ask about the details later.

QUESTIONNAIRE

HAVE YOU COMMENTED BELOW? (Y) (N)

- (Y) (N) ANY FOODS THAT TEND TO DISAGREE (WHICH ONES?)
- (Y) (N) FREQUENT ITCH OR RASH? (WHERE/WHEN?)
- (Y) (N) SWELLING, LUMP OR SORENESS ANYWHERE ON BODY? (WHERE?)
- (Y) (N) NUMBNESS OR TINGLING? (WHERE?)
- (Y) (N) TWITCHING MUSCLES? (WHERE?)

HOW MANY TIMES DO YOU
WAKE FROM SLEEP TO URINATE?

0 1 2 3 4 5 6 7 8 9 OR MORE

YES NO

- (Y) (N) 1. SEVERE HEADACHES OR HEAD PAINS
- (Y) (N) 2. ANY DISTURBANCE IN VISION
- (Y) (N) 3. PAIN OR DISCOMFORT IN EYES
- (Y) (N) 4. WEAR GLASSES (OR CONTACT LENSES?)
- (Y) (N) 5. CONSTANT NOISE IN EARS
- (Y) (N) 6. HARD OF HEARING
- (Y) (N) 7. EAR ACHE WITH COLDS
- (Y) (N) 8. EAR ACHE WITH PLANE FLIGHTS
- (Y) (N) 9. CHRONIC RUNNING EARS
- (Y) (N) 10. CHRONIC STUFFY OR RUNNY NOSE
- (Y) (N) 11. NEED TO USE NOSE DROPS FREQUENTLY
- (Y) (N) 12. BAD NOSE BLEEDS AT TIMES
- (Y) (N) 13. FREQUENT SEVERE COLDS OR SORE THROAT
- (Y) (N) 14. ANY KNOWN DENTAL PROBLEMS
- (Y) (N) 15. SORENESS OR BLEEDING OF GUMS
- (Y) (N) 16. MORE THAN A YEAR SINCE TEETH CHECKED
- (Y) (N) 17. SORE MOUTH OR TONGUE
- (Y) (N) 18. GOITER OR THYROID TROUBLE
- (Y) (N) 19. THYROID TEST TOO HIGH
- (Y) (N) 20. THYROID TEST TOO LOW
- (Y) (N) 21. FEELING OF LUMP IN THE THROAT
- (Y) (N) 22. NEED TO TAKE THYROID MEDICINE
- (Y) (N) 23. HOARSENESS AT TIMES
- (Y) (N) 24. RECENT OR CHRONIC COUGH
- (Y) (N) 25. CHRONIC COUGHING UP OF SPUTUM
- (Y) (N) 26. EVER COUGHING UP OF SPUTUM
- (Y) (N) 27. ACHE ALL OVER
- (Y) (N) 28. HAVING CHILLS OR FEVER
- (Y) (N) 29. SEVERE SOAKING NIGHT SWEATS
- (Y) (N) 30. LIVED WITH ANYONE HAVING T.B.

Q1 - 60 COMMENTS? → (Y) (N)

YES NO

- (Y) (N) 31. WORRIED ABOUT YOUR HEART
- (Y) (N) 32. BLOOD PRESSURE TOO HIGH
- (Y) (N) 33. BLOOD PRESSURE TOO LOW
- (Y) (N) 34. PAINS IN HEART OR CHEST
- (Y) (N) 35. POUNDING OR SKIPPING OF HEART
- (Y) (N) 36. HEART STARTS RACING SUDDENLY
- (Y) (N) 37. SHORTNESS OF BREATH OR WHEEZING
- (Y) (N) 38. TROUBLE GETTING A DEEP BREATH
- (Y) (N) 39. SWELLING ANKLES
- (Y) (N) 40. LEG CRAMPS IN BED OR SITTING STILL
- (Y) (N) 41. LEG CRAMPS WHILE WALKING
- (Y) (N) 42. PAIN OR TROUBLE WITH SWALLOWING
- (Y) (N) 43. POOR APPETITE RECENTLY
- (Y) (N) 44. POOR APPETITE ALWAYS
- (Y) (N) 45. NAUSEA OR VOMITING
- (Y) (N) 46. VOMITING OF BLOOD
- (Y) (N) 47. BELCHING, BLOATING OR INDIGESTION
- (Y) (N) 48. YELLOW SKIN OR EYES (JAUNDICE)
- (Y) (N) 49. BURNING OR HUNGER PAINS IN STOMACH
- (Y) (N) 50. USE ANTACIDS FOR STOMACH BURNING
- (Y) (N) 51. SORENESS OR PAIN IN STOMACH, ABDOMEN
- (Y) (N) 52. SUSPECT ULCERS OR STOMACH TROUBLE
- (Y) (N) 53. CRAMPS IN STOMACH OR LOW DOWN
- (Y) (N) 54. LOOSE BOWELS OR DIARRHEA
- (Y) (N) 55. BLACK OR TARRY STOOLS (BOWEL MOVEMENT)
- (Y) (N) 56. FRESH OR BRIGHT BLOOD WITH STOOLS
- (Y) (N) 57. MUCUS (SLIME OR PHLEGM) IN STOOLS
- (Y) (N) 58. CONSTIPATION
- (Y) (N) 59. USE LAXATIVES FREQUENTLY
- (Y) (N) 60. USE ENEMAS FREQUENTLY

PLEASE DO NOT MARK IN THIS SPACE

QUESTIONNAIRE (CONTINUED)

YES NO

- ☐ ☐ 61. RECENT CHANGE IN BOWEL HABITS
- ☐ ☐ 62. RECTAL TROUBLE OR PAIN
- ☐ ☐ 63. PAIN IN THE KIDNEY REGION
- ☐ ☐ 64. BLOOD OR PUS IN URINE
- ☐ ☐ 65. ALBUMIN IN URINE
- ☐ ☐ 66. SUGAR IN URINE
- ☐ ☐ 67. SPELLS OF FREQUENT URINATION
- ☐ ☐ 68. SEVERE BURNING OR PAIN ON URINATION
- ☐ ☐ 69. PAINS OVER BLADDER OR LOW DOWN
- ☐ ☐ 70. TROUBLE STARTING URINE
- ☐ ☐ 71. URINARY STREAM HAS BECOME WEAK
- ☐ ☐ 72. HARD TO EMPTY BLADDER COMPLETELY
- ☐ ☐ 73. LOSE CONTROL OF PASSING URINE
- ☐ ☐ 74. PAINFUL OR SORE GENITALS (PRIVATES)
- ☐ ☐ 75. SWOLLEN OR PAINFUL JOINTS
- ☐ ☐ 76. STIFFNESS OF MUSCLES OR JOINTS
- ☐ ☐ 77. SEVERE PAINS IN ARMS OR LEGS
- ☐ ☐ 78. PAINFUL FEET
- ☐ ☐ 79. BACKACHE
- ☐ ☐ 80. PAINS IN NECK
- ☐ ☐ 81. EASY TO SUNBURN
- ☐ ☐ 82. SUBJECT TO ACNE
- ☐ ☐ 83. SUBJECT TO BOILS OR INFECTION
- ☐ ☐ 84. SUBJECT TO ATHLETE'S FOOT, SKIN FUNGUS
- ☐ ☐ 85. SUBJECT TO HIVES OR SKIN REACTIONS
- ☐ ☐ 86. EASY BLEEDING OR BRUISING
- ☐ ☐ 87. MOLE OR SORE WHICH IS NOT HEALING
- ☐ ☐ 88. SEVERE DIZZINESS
- ☐ ☐ 89. GENERALIZED WEAKNESS
- ☐ ☐ 90. MUSCLE WEAKNESS

Q61 - 118 COMMENTS? → ☐ ☐

YES NO

- ☐ ☐ 91. NAIL BITING
- ☐ ☐ 92. SLEEP WALKING
- ☐ ☐ 93. BED WETTING AFTER AGE 12
- ☐ ☐ 94. CHRONICALLY TIRED OR OVERWORKED
- ☐ ☐ 95. IRREGULAR LIVING HABITS
- ☐ ☐ 96. CAN'T GO TO SLEEP OR STAY ASLEEP
- ☐ ☐ 97. NEARLY ALWAYS IN POOR HEALTH
- ☐ ☐ 98. CONSIDERED TO BE A NERVOUS PERSON
- ☐ ☐ 99. FROM SICKLY OR NERVOUS FAMILY
- ☐ ☐ 100. TREMBLE AND SWEAT EASILY
- ☐ ☐ 101. HAVE TROUBLE MAKING UP YOUR MIND
- ☐ ☐ 102. EASILY MIXED UP OR CONFUSED
- ☐ ☐ 103. CLUMSY OR HAVE FREQUENT ACCIDENTS
- ☐ ☐ 104. FEEL SAD, LONELY OR DEPRESSED
- ☐ ☐ 105. CRY OFTEN
- ☐ ☐ 106. WISH I WERE DEAD
- ☐ ☐ 107. WORRY CONTINUALLY
- ☐ ☐ 108. UPSET BY LITTLE THINGS
- ☐ ☐ 109. A PERFECTIONIST
- ☐ ☐ 110. SENSITIVE OR FEELINGS EASILY HURT
- ☐ ☐ 111. OFTEN MISUNDERSTOOD
- ☐ ☐ 112. OFTEN ACT ON SUDDEN IMPULSE
- ☐ ☐ 113. EASILY ANGERED OR HAVE VIOLENT RAGES
- ☐ ☐ 114. FREQUENTLY KEYED UP AND JITTERY
- ☐ ☐ 115. EASILY SCARED BY SUDDEN NOISE
- ☐ ☐ 116. HAVE BAD DREAMS OR THOUGHTS
- ☐ ☐ 117. SUSPECT A SERIOUS DISEASE OR CANCER
- ☐ ☐ 118. HAVING TROUBLE GETTING ALONG WITH SOMEONE AT HOME OR AT WORK

REVIEWER'S COMMENTS:

FORM QA AUDIT BY:

ID 1 2 3 4 5 6

DATE

INITIALS

PARTICIPANT LABEL	CASE NUMBER	GROUP NUMBER	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	EXAMINER I.D.	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
FORM AFHS-3A PHYSICAL EXAMINATION (PART 1)			YEAR 10 FOLLOW UP

GENERAL PHYSICAL APPEARANCE			
APPEARANCE	APPEARANCE VS STATED AGE	APPEARANCE OF ILLNESS OR DISTRESS	HAIR DISTRIBUTION
☐ WELL NOURISHED ☐ OBESSE ☐ UNDER NOURISHED	☐ SAME AS ☐ OLDER THAN ☐ YOUNGER THAN	☐ NO ☐ YES	☐ NORMAL ☐ ABNORMAL

☒ ☐ COMMENTS?

NOTE: FILL IN VITAL SIGNS WITH MAXIMUM VALUES IF REFUSED.

VITAL SIGNS							
HEIGHT CM	WEIGHT (UNDRESSED) KG	TEMPERATURE ORAL °F	SITTING BLOOD PRESSURE NONDOMINANT ARM, HEART LEVEL		PULSE RATE	PBs PER MINUTE	PULSE IS: ☐ REGULAR ☐ IRREGULAR ☐ IRREGULARLY IRREGULAR ☒ ☐ COMMENTS?
			SYSTOLIC	DIASTOLIC			
0 0	0 0 0 0	9 0 0	0 0 0	0 0 0	0 0 0	0 0	
1 1 1	1 1 1 1	10 1 1	1 1 1	1 1 1	1 1 1	1 1	
2 2 2	2 2 2 2	2 2	2 2 2	2 2	2 2 2	2	
3 3 3	3 3 3 3	3 3	3 3	3 3	3 3 3	3	
4 4	4 4 4	4 4	4 4	4 4	4 4	4	
5 5	5 5 5	5 5	5 5	5 5	5 5	5	
6 6	6 6 6	6 6	6 6	6 6	6 6	6	
7 7	7 7 7	7 7	7 7	7 7	7 7	7	
8 8	8 8 8	8 8	8 8	8 8	8 8	8	
9 9	9 9 9	9 9	9 9	9 9	9 9	9	

EYES						
SUMMARY	FUNDOSCOPIC EXAM				EXTERNAL OBSERVATION	
☐ NORMAL ☐ ABNORMAL ☐ REFUSED	YES ☐ NO ☐	☐ LIGHT REFLEX ☐ A-V NICKING ☐ ARTERIOLAR SPASM ☐ PAPILLEDEMA ☐ (B) (L) (R) FUNDI WERE VISUALIZED (B = BOTH, L = LEFT ONLY, R = RIGHT ONLY)	YES ☐ NO ☐	☐ HEMORRHAGES ☐ EXUDATES ☐ DISK PALLOR ☐ ↑ CUPPING ☐ DIABETIC RETINOPATHY	YES ☐ NO ☐	☐ ARCUS SENILIS PRESENT ☐ ABNORMAL OCULAR PIGMENTATION
☐ LEFT EYE ABSENT ☐ RIGHT EYE ABSENT	☒ ☐ COMMENTS?					

CODES

(N) = NO OR NONE (X) = COULD NOT EXAMINE
 (Y) = YES (L) = LEFT
 (R) = REFUSED (R) = RIGHT

PHYSICAL EXAMINATION

(FORM 3 PART 1 SIDE 2)

ENT/NECK

ENT ARE

☐ NORMAL
☐ ABNORMAL
☐ REFUSED

TYMPANIC MEMBRANE INTACT?
 EAR IRRIGATED TO REMOVE WAX?
 NASAL MUCOSA ULCERATED?

LEFT
 (N) (Y) (X)
 (N) (Y)
 (N) (Y) (X)

RIGHT
 (N) (Y) (X)
 (N) (Y)
 (N) (Y) (X)

(Y) (N) COMMENTS?

NECK AREA IS

☐ NORMAL
☐ ABNORMAL
☐ REFUSED

PAROTID GLAND ENLARGED?
 CAROTID BRUIT PRESENT?
 CAROTID PULSE IS:

(N) (Y)
 (N) (Y)
 (N) (D) (A)

(N) (Y)
 (N) (Y)
 (N) (D) (A)

(N = NORMAL D = DIMINISHED A = ABSENT)

THYROID GLAND

PALPABLE
 (N) (Y)

ENLARGED
 (N) (Y)

NODULES
 (N) (Y)

TENDER
 (N) (Y)

OTHER
 (N) (Y)

(Y) (N) COMMENTS?

THORAX AND LUNGS

☐ NORMAL
☐ ABNORMAL
☐ REFUSED

(Y) (N) ASYMMETRICAL EXPANSION

(Y) (N) HYPERRESONANCE

(Y) (N) DULLNESS

(Y) (N) WHEEZES

(Y) (N) RALES
 ← (NOTE LOCATION)

(Y) (N) SUSPECTED COPD
 ← (DESCRIBE)

(Y) (N) COMMENTS?

WAIST

0	0	0
1	1	1
2	2	2
3	3	3
4	4	
5	5	
6	6	
7	7	
8	8	
9	9	

CIRCUMFERENCE (CM)

CHEST AT NIPPLE LEVEL

EXPIRATION		
0	0	0
1	1	1
2	2	
3	3	
4	4	
5	5	
6	6	
7	7	
8	8	
9	9	

INSPIRATION		
0	0	0
1	1	1
2	2	
3	3	
4	4	
5	5	
6	6	
7	7	
8	8	
9	9	

NECK

0	0	0
1	1	1
2	2	
3	3	
4	4	
5	5	
6	6	
7	7	
8	8	
9	9	

HEART

HEART EXAM IS:

☐ NORMAL
☐ ABNORMAL
☐ REFUSED

MURMUR?

☐ NO
☐ YES, PROBABLY FUNCTIONAL
☐ YES, SUSPECT ORGANIC
☐ YES, ORGANIC

INDICATE CHEST AREA(S)
 TO WHICH MURMUR WAS
 PROJECTED MOST INTENSELY.

(MARK Ns IF NO MURMUR)

ABNORMAL HEART SOUNDS?

S1 (N) (Y) S2 (N) (Y) S3 (N) (Y) S4 (N) (Y)

(Y) (N) DISPLACED APICAL IMPULSE?

(Y) (N) PRECORDIAL THRUST?

	SYSTOLIC		DIASTOLIC	
AORTIC	(N) (Y)	(N) (Y)	(N) (Y)	(N) (Y)
PULMONIC	(N) (Y)	(N) (Y)	(N) (Y)	(N) (Y)
APEX	(N) (Y)	(N) (Y)	(N) (Y)	(N) (Y)
LLSB	(N) (Y)	(N) (Y)	(N) (Y)	(N) (Y)

(Y) (N) HEART COMMENTS?

FORM QA AUDIT DONE BY:

ID NUMBER:
 1 2 3 4 5 6

INITIALS DATE

PARTICIPANT LABEL	CASE NUMBER	GROUP NUMBER	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	EXAMINER I.D.	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	

FORM AFHS-3B PHYSICAL EXAMINATION (PART 2)

YEAR 10
FOLLOW-UP

ABDOMEN

Y N ABDOMEN ABNORMALITY COMMENTS?

YES ☐	NO ☐	HEPATOMEGALY ☐	TOTAL LIVER SPAN 	0 1 2 3 CM
☐ NORMAL ☐ ABNORMAL ☐ REFUSED	☐	LIVER TENDERNESS ☐	Y N MASS SIZE, UNITS, LOCATION, TYPE, COMMENT?	0 1 2 3 4 5 6 7 8 9
☐	☐	SPLENOMEGALY ☐		
☐	☐	SPLEEN TENDERNESS ☐		
☐	☐	OTHER MASS?		

EXTREMITIES

UPPER LIMBS	AMPUTATION(S) N L R	PITTING EDEMA N L R	NON-PITTING EDEMA N L R	CLUBBED NAILS N L R	VARICOSITIES N L R	TOE HAIR LOSS N L R
(N = NONE OR NORMAL FOR BOTH LIMBS, L = LEFT LIMB ONLY, R = RIGHT LIMB ONLY)						
LOWER LIMBS	N L R	N L R	N L R	N L R	N L R	N L R

EXTREMITY EXAM WAS: ☐ NORMAL ☐ ABNORMAL ☐ REFUSED

Y N DESCRIBE ABSENCES &/OR ABNORMALITIES

PERIPHERAL PULSES

N L R FEMORAL BRUIT(S) PRESENT?

(N = NONE, L = LEFT, R = RIGHT)

	RADIAL		FEMORAL		POPLITEAL		DORSALIS PEDIS		POSTERIOR TIBIAL	
	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT
NORMAL	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
DIMINISHED	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
ABSENT	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
COULD NOT EXAMINE	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

Y N PULSE COMMENTS

MUSCULATURE

☐ NORMAL ☐ ABNORMAL ☐ REFUSED	STRAIGHT LEG RAISE ABNORMAL? ☐	NO ☐	YES ☐	CNE ☒	Y N COMMENTS?
	ANY WEAKNESS NOTED?	☐	☐	☒	
	ANY TENDERNESS NOTED?	☐	☐	☒	
	ANY ATROPHY NOTED?	☐	☐	☒	
	ABNORMAL CONSISTENCY?	☐	☐	☒	
	OTHER ABNORMALITY?	☐	☐	☒	

SPINE

☐ NORMAL ☐ ABNORMAL ☐ REFUSED	ANY SCOLIOSIS NOTED? ☐	NO ☐	YES ☐	CNE ☒	SPINAL TENDERNESS ☐ NONE NOTED	Y N COMMENTS?
	ANY KYPHOSIS NOTED?	☐	☐	☒	☐ CERVICAL AREA	
	PELVIC TILT NOTED?	☐	☐	☒	☐ THORACIC AREA	
	↓ RANGE OF MOTION?	☐	☐	☒	☐ LUMBAR AREA	
					☐ SACRAL AREA	

GENITOURINARY EXAM

(PE PART 2 CONTINUED)

GENITOURINARY EXAM

- ☐ NORMAL
☐ ABNORMAL
☐ REFUSED

TESTES

- NORMAL
 LEFT ☐
 RIGHT ☐

- ENLARGED
☐
☐

- NODULE
☐
☐

- ATROPHIC
☐
☐

- ABSENT
☐
☐

- OTHER
☐
☐

YES NO REFUSED

- ☐ ☐ ☐ RIGHT INGUINAL HERNIA?
☐ ☐ ☐ LEFT INGUINAL HERNIA?
☐ ☐ ☐ SCROTAL MASS PRESENT?

YES NO REFUSED

- ☐ ☐ ☐ VARICOCELE
☐ ☐ ☐ EPIDIDYMAL ABNORMALITY
☐ ☐ ☐ SCROTAL MASS SIZE
 (DIAMETER IN CM)

Y N COMMENTS:

RECTAL EXAM

- RECTAL EXAM
☐ NORMAL
☐ ABNORMAL
☐ REFUSED

- HEMORRHOIDS
 EXTERNAL
 INTERNAL

- NONE APPARENT
☐
☐

- REFUSED
☐
☐

- BLEEDING
☐
☐

- THROMBOSED
☐
☐

- OTHER
☐
☐

YES NO REFUSED

- ☐ ☐ ☐ PROSTATIC ENLARGEMENT?
☐ ☐ ☐ RECTAL MASS(ES)?

Y N COMMENTS?

LYMPH NODES

- ☐ NORMAL

- CERVICAL
 OCCIPITAL
 SUPRACLAVICULAR
 AXILLARY
 EPITROCHLEAR
 INGUINAL
 FEMORAL

- NORMAL ENLARGED TENDER HARD FIXED CONFLUENT OTHER
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Y N COMMENTS:

SUMMARY OF FOLLOW-UP INDICATED OR RECOMMENDED

SUMMARY OF FINDINGS ENTIRE EXAM WAS:

- ☐ ALL NORMAL
☐ NORMAL WITH NOTED VARIATIONS
☐ ABNORMAL AS SUMMARIZED
☐ REFUSED ENTIRE EXAM

- ☐ ☐ ANY OTHER TESTS INDICATED?
☐ ☐ ANY OTHER TESTS ORDERED?
☐ ☐ OTHER TESTS DESCRIBED?

Y N COMMENTS:

FORM QA AUDIT BY:

1 2 3 4 5 6

INITIALS:

PRINTED NAME OF EXAMINING PHYSICIAN

INITIALS / DATE

DATE:

PARTICIPANT LABEL	CASE NUMBER	GROUP NUMBER	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
		EXAMINER I.D.	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	

FORM AFHS-4 DERMATOLOGIC EXAMINATION AND BIOPSY

YEAR 10 FOLLOW UP

FOR POSITIVE FINDINGS NOTE TYPE AND LOCATION ON ANATOMIC CHART AND DARKEN THE APPROPRIATE CIRCLE BELOW

SKIN

EXAM WAS:

☐ NORMAL

☐ ABNORMAL

☐ REFUSED

ANATOMICAL CHART USED? ☐ Y ☐ N

YES	NO	TYPE		YES	NO	TYPE	
☐	☐	1	COMEDONES	☐	☐	13	ACTINIC KERATOSES
☐	☐	2	ACNEIFORM LESIONS	☐	☐	14	PETECHIAE
☐	☐	3	ACNEIFORM SCARS	☐	☐	15	ECCHYMOSES
☐	☐	4	DEPIGMENTATION	☐	☐	16	CONJUNCTIVAL ABNORMALITY
☐	☐	5	INCLUSION CYSTS	☐	☐	17	ORAL MUCOSAL ABNORMALITY
☐	☐	6	CUTIS RHOMBOIDALIS	☐	☐	18	FINGER NAIL ABNORMALITY
☐	☐	7	HYPERPIGMENTATION	☐	☐	19	TOE NAIL ABNORMALITY
☐	☐	8	JAUNDICE	☐	☐	20	DERMATOGRAPHIA
☐	☐	9	SPIDER ANGIOMATA	☐	☐	21	SUSPECTED BASAL CELL CARCINOMA
☐	☐	10	PALMAR ERYTHEMA	☐	☐	22	SUSPECTED SQUAMOUS CELL CARCINOMA
☐	☐	11	SUSPECTED MELANOMA	☐	☐	23	NEVUS
☐	☐	12	PALMAR KERATOSES	☐	☐	24	VITILIGO
				☐	☐	25	OTHER ABNORMALITY(IES)

SKIN BIOPSY

☐ BIOPSY NOT INDICATED

☐ BIOPSY INDICATED, IF SO

☐ BIOPSY REFUSED

☐ BIOPSY PERFORMED, IF SO

☐ REFERRED

SAMPLES 0 1 2 3 4 5 6 7 8 9

YES ☐ CONSENT FORM OBTAINED

SAMPLE # TYPE AND LOCATION CODE(S)	☐ Y ☐ N COMMENT(S)/SUSPECTED DIAGNOSIS

PHYSICAL FEATURES

☐ Y ☐ N ☐ X WEARING COLORED OR TINTED CONTACTS?

EYE COLOR

LEFT

RIGHT

BROWN ☐

HAZEL ☐

GREEN ☐

GREY ☐

BLUE ☐

ABSENT ☐

HAIR COLOR

SOLID COLOR

GREYS

BLACKS 1 34 44 51

BROWNS 5 11 36 38 39 48 54

BLONDS 14 103 101

REDS 33 29

BALD 0 X NOT NEEDED

SKIN COLOR

NN

X 1 2 3 4 5 6 7 8 9 10 11 12

Y N COMMENTS?

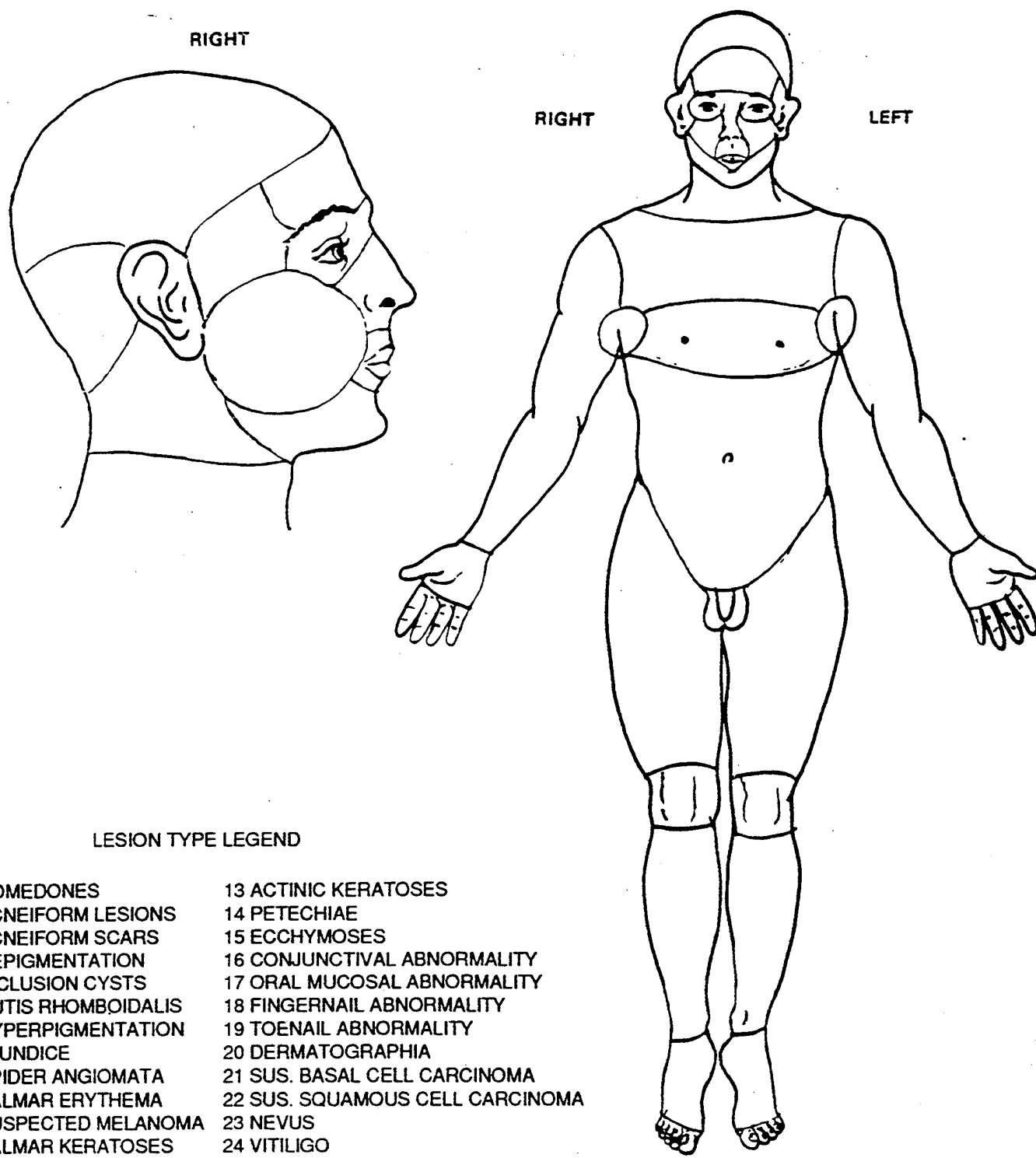
☐ Y ☐ N IS HAIR DYED OR ALTERED?

PRINTED NAME OF EXAMINING PHYSICIAN	INITIALS / DATE	FORM QA AUDIT DONE BY:
		ID. NUMBER 1 2 3 4 5 6 7 8 9 INITIALS DATE

PARTICIPANT LABEL	CASE NUMBER	GROUP NUMBER	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	EXAMINER I.D.	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	YEAR 10 FOLLOW UP

FORM AFHS-9

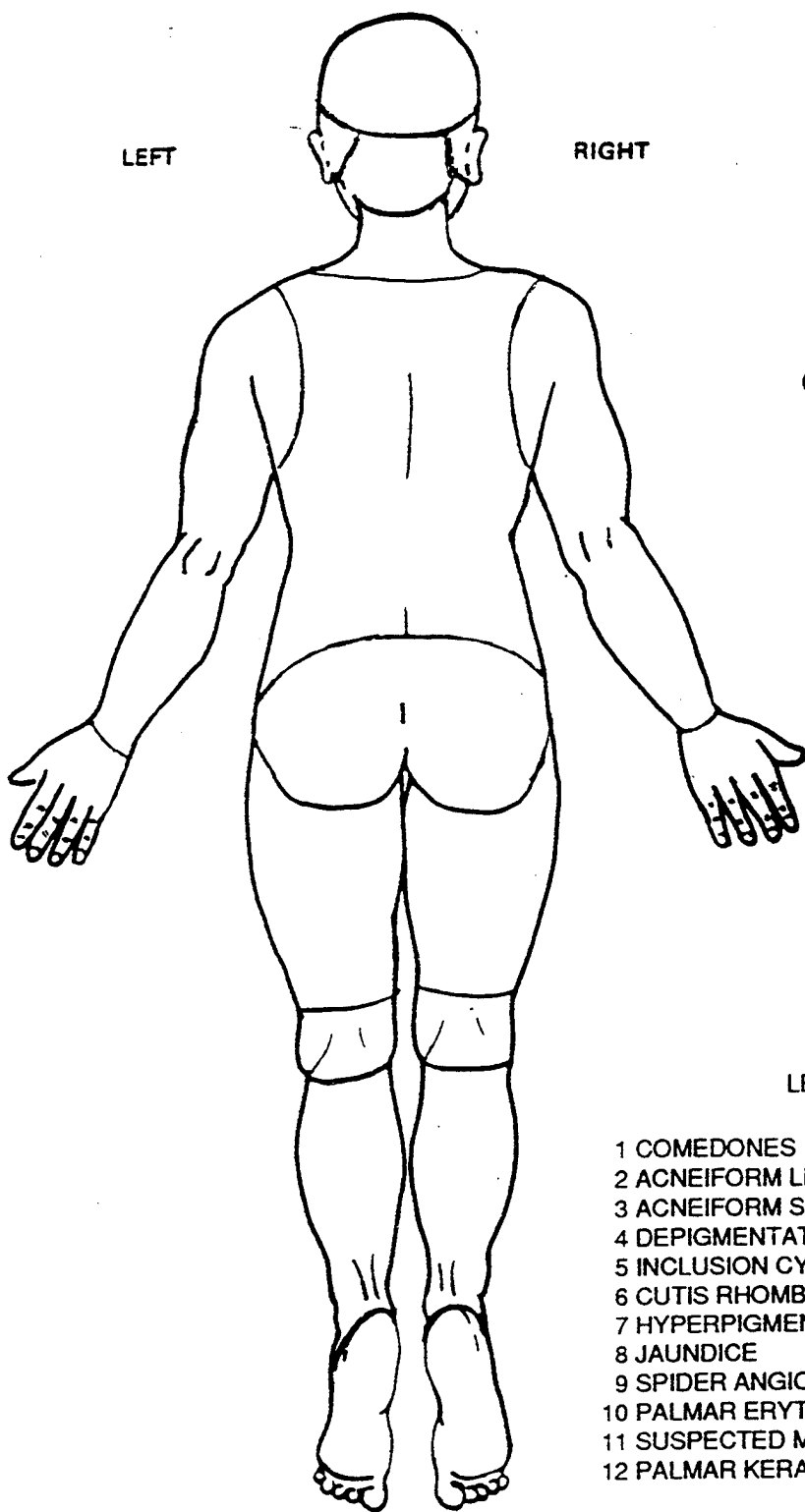
ANATOMICAL CHART



LESION TYPE LEGEND

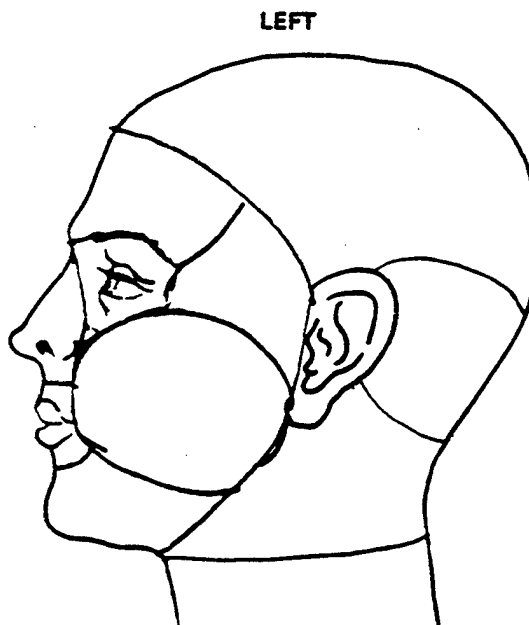
1 COMEDONES	13 ACTINIC KERATOSES
2 ACNEIFORM LESIONS	14 PETECHIAE
3 ACNEIFORM SCARS	15 ECCHYMOSES
4 DEPIGMENTATION	16 CONJUNCTIVAL ABNORMALITY
5 INCLUSION CYSTS	17 ORAL MUCOSAL ABNORMALITY
6 CUTIS RHOMBOIDALIS	18 FINGERNAIL ABNORMALITY
7 HYPERPIGMENTATION	19 TOENAIL ABNORMALITY
8 JAUNDICE	20 DERMATOGRAPHIA
9 SPIDER ANGIOMATA	21 SUS. BASAL CELL CARCINOMA
10 PALMAR ERYTHEMA	22 SUS. SQUAMOUS CELL CARCINOMA
11 SUSPECTED MELANOMA	23 NEVUS
12 PALMAR KERATOSES	24 VITILIGO
	25 OTHER ABNORMALITY

(OVER)



LEFT

RIGHT



LEFT

LESION TYPE LEGEND

1 COMEDONES	13 ACTINIC KERATOSES
2 ACNEIFORM LESIONS	14 PETECHIAE
3 ACNEIFORM SCARS	15 ECCHYMOSES
4 DEPIGMENTATION	16 CONJUNCTIVAL ABNORMALITY
5 INCLUSION CYSTS	17 ORAL MUCOSAL ABNORMALITY
6 CUTIS RHOMBOIDALIS	18 FINGERNAIL ABNORMALITY
7 HYPERPIGMENTATION	19 TOENAIL ABNORMALITY
8 JAUNDICE	20 DERMATOGRAPHIA
9 SPIDER ANGIOMATA	21 SUS. BASAL CELL CARCINOMA
10 PALMAR ERYTHEMA	22 SUS. SQUAMOUS CELL CARCINOMA
11 SUSPECTED MELANOMA	23 NEVUS
12 PALMAR KERATOSES	24 VITILIGO
	25 OTHER ABNORMALITY

PRINTED NAME OF EXAMING PHYSICIAN	SIGNATURE	DATE



**YEAR 10
FOLLOW UP**

CRANIAL NERVES AND MENTAL STATUS

CODES: (X) = COULD NOT EXAMINE, (N) = NO; NOT NORMAL, (Y) = YES, NORMAL
(R) = DEVIATED TO RIGHT SIDE, (L) = DEVIATED TO LEFT SIDE

MENINGEAL IRRITATION AND SENSORY SYSTEM

	- ABNORMAL -					(Y) (N) COMMENTS
	NORMAL	LEFT	RIGHT	BOTH	CNE	
STRAIGHT LEG RAISING	☐	☐	☐	☐	(X)	
LIGHT TOUCH	☐	☐	☐	☐	(X)	
PIN PRICK	☐	☐	☐	☐	(X)	
VIBRATION AT ANKLE (128 HZ)	☐	☐	☐	☐	(X)	
POSITION (GREAT TOE)	☐	☐	☐	☐	(X)	

CRANIAL NERVES (I, VII)

LEFT	RIGHT		(Y) (N) COMMENTS (I, VII)
(X) (N) (Y)	(X) (N) (Y)	SENSE OF SMELL PRESENT?	
(X) (N) (Y)	(X) (N) (Y)	SMILE NORMAL?	
(X) (N) (Y)	(X) (N) (Y)	PALPEBRAL FISSURE NORMAL?	

CRANIAL NERVES (II)

LEFT	RIGHT		(Y) (N) COMMENTS (II)
(X) (N) (Y)	(X) (N) (Y)	FUNDOSCOPIC EXAM NORMAL?	
(X) (N) (Y)	(X) (N) (Y)	ABSENCE OF DISK PALLOR/ATROPHY?	
(X) (N) (Y)	(X) (N) (Y)	ABSENCE OF EXUDATE?	
(X) (N) (Y)	(X) (N) (Y)	ABSENCE OF PAPILLEDEMA?	
(X) (N) (Y)	(X) (N) (Y)	ABSENCE OF HEMORRHAGE?	

CRANIAL NERVES (III, IV, VI)

LEFT	RIGHT		(Y) (N) COMMENTS (III, IV, VI)
(X) (N) (Y)	(X) (N) (Y)	VISUAL FIELDS NORMAL TO CONFRONTATION?	
(X) (N) (Y)	(X) (N) (Y)	PUPILS EQUAL SIZE? DIFFERENCE → ① ② ③ ④ mm	
(X) (N) (Y)	(X) (N) (Y)	PUPIL SHAPE/POSITION ROUND & NORMAL? →	
(X) (N) (Y)	(X) (N) (Y)	LIGHT REACTION NORMAL?	
(X) (N) (Y)	(X) (N) (Y)	EYE MOVEMENT NORMAL?	
(X) (N) (Y)	(X) (N) (Y)	HORIZONTAL NYSTAGMUS	
(X) (N) (Y)	(X) (N) (Y)	VERTICAL NYSTAGMUS	
(X) (N) (Y)	(X) (N) (Y)	ROTARY NYSTAGMUS	
(X) (N) (Y)	(X) (N) (Y)	EYEBALL POSITION NORMAL? →	
(X) (N) (Y)	(X) (N) (Y)	PTOSIS ABSENT?	
(X) (N) (Y)	(X) (N) (Y)	CORNEAL REFLEX NORMAL?	

DRAW ABNORMAL POSITIONS

(O) - CONTACT LENSES NOT REMOVED

CRANIAL NERVES (V, IX, XI, XII)

LEFT	RIGHT		(Y) (N) COMMENTS (V, IX, XI, XII)
(X) (N) (Y)	(X) (N) (Y)	TRIGEMINAL V1 SENSORY NORMAL?	
(X) (N) (Y)	(X) (N) (Y)	TRIGEMINAL V2 SENSORY NORMAL?	
(X) (N) (Y)	(X) (N) (Y)	TRIGEMINAL V3 SENSORY NORMAL?	
(X) (N) (Y)	(X) (N) (Y)	PALATE REFLEX NORMAL?	
(Y) (N)	(R) (L)	TONGUE PROTRUDES TO MIDDLE, NOT DEVIATED?	
(Y) (N)	(R) (L)	TONGUE NORMAL, NOT ATROPHIED?	
(Y) (N)	(R) (L)	CLENCH JAW SYMMETRIC (NOT DEVIATED)?	
(Y) (N)	(R) (L)	PALATE & UVULA MOVEMENT (NOT DEVIATED)?	
(Y) (N) MENTAL STATUS GROSSLY ORIENTED & NORMAL?			
(Y) (N) COMMENTS			

IMPRESSION OF ENTIRE NEUROLOGIC EXAM

- ☐ COMPLETELY NORMAL EXAM
☐ NORMAL WITH MINOR VARIATIONS NOTED
☐ ABNORMAL WITH NO FOLLOW-UP NEEDED
☐ ABNORMAL WITH FOLLOW-UP RECOMMENDED

(Y) (N) COMMENTS

FORM QA AUDIT DONE BY:

① ② ③ ④ ⑤ ⑥ INITIALS

DATE: INITIALS:

PRINTED NAME OF EXAMINING PHYSICIAN

PARTICIPANT LABEL

CASE NUMBER

GROUP NUMBER

0 1 2 3 4 5 6 7 8 9
 0 1 2 3 4 5 6 7 8 9
 0 1 2 3 4 5 6 7 8 9
 0 1 2 3 4 5 6 7 8 9
 0 1 2 3 4 5 6 7 8 9
 0 1 2 3 4 5 6 7 8 9

0 1 2 3 4 5 6 7 8 9
 0 1 2 3 4 5 6 7 8 9
 EXAMINER I.D.
 0 1 2 3 4 5 6 7 8 9
 0 1 2 3 4 5 6 7 8 9
 0 1 2 3 4 5 6 7 8 9



FORM AFHS-8

VIETNAM COMBAT INDEX

YEAR 10
FOLLOW-UP

VERSION 1.0 JRW:SCF 585

INSTRUCTIONS

INSTRUCTIONS ARE INCLUDED WITH EACH QUESTION. BELOW IS AN EXAMPLE OF THE CORRECT WAY TO ANSWER EACH QUESTION.

EXAMPLE: DO YOU PLAN TO DO ANY OF THE FOLLOWING NEXT WEEK? (PLEASE BLACKEN EITHER "YES" OR "NO")

YES NO

- ☐ (N) VISIT A RELATIVE
☒ (Y) GO TO A MUSEUM
☐ (N) GO TO A MOVIE

(I WILL VISIT A RELATIVE
 AND GO TO A MOVIE NEXT
 WEEK)

AIRCRAFT

PLEASE INDICATE WHETHER YOU SERVED OR FLEW IN ANY OF THE FOLLOWING AIRCRAFT WHILE IN VIETNAM:
 (DO NOT INCLUDE TRANSPORTATION TO OR FROM VIETNAM)

WERE YOU EVER A
 CREW MEMBER?

☒ YES ☐ NO

YES

NO

☒ (Y)☐ (N) F-4☒ (Y)☐ (N) F-5☒ (Y)☐ (N) F-105☒ (Y)☐ (N) B-52☒ (Y)☐ (N) B-66

YES

NO

☒ (Y)☐ (N) C-7☒ (Y)☐ (N) C-54☒ (Y)☐ (N) C-118☒ (Y)☐ (N) C-123☒ (Y)☐ (N) C-130

YES NO

☒ (Y) ☐ (N) C-130 (GUNSHIP)☒ (Y) ☐ (N) HELICOPTER GUNSHIP☒ (Y) ☐ (N) OTHER AIRCRAFT

SPECIFY

EXPERIENCES

BELOW IS A LIST OF DIFFERENT COMBAT ROLES AND FLYING EXPERIENCES THAT AIR FORCE PERSONNEL HAD DURING THE VIETNAM WAR. FOR EACH STATEMENT, PLEASE BLACKEN THE "YES" CIRCLE IF YOU HAD THAT EXPERIENCE DURING THE VIETNAM WAR OR THE "NO" CIRCLE IF YOU DID NOT. PLEASE BLACKEN EITHER "YES" OR "NO" FOR EACH EXPERIENCE.

YES NO

☒ (Y) ☐ (N) RECEIVED COMBAT PAY

☒ (Y) ☐ (N) CRASH LANDED, BAILED OUT, OR SHOT DOWN

☒ (Y) ☐ (N) RECEIVED SNIPER OR SAPPER FIRE IN OR
 AROUND BASE

☒ (Y) ☐ (N) MOVED KILLED OR WOUNDED PERSONNEL

☒ (Y) ☐ (N) SERVED AS A FORWARD AIR CONTROLLER (FAC)

☒ (Y) ☐ (N) FLEW IN THE SAME AIRCRAFT WHEN FELLOW
 CREWMEMBER WAS WOUNDED OR KILLED

☒ (Y) ☐ (N) FLEW IN THE SAME FORMATION OR ON
 THE SAME SORTIE WHEN A FELLOW
 CREWMEMBER WAS WOUNDED OR KILLED

YES NO

☒ (Y) ☐ (N) FLEW IN AN AIRCRAFT THAT RECEIVED
 BATTLE DAMAGE

☒ (Y) ☐ (N) RECEIVED INCOMING ARTILLERY OR ROCKET
 FIRE AT HOME BASE OR CAMP

☒ (Y) ☐ (N) ENCOUNTERED MINES OR BOOBY TRAPS

☒ (Y) ☐ (N) KILLED VC OR NVA IN STRAFING OR
 BOMBING RUNS

☒ (Y) ☐ (N) WOUNDED

☒ (Y) ☐ (N) HAD A CLOSE FRIEND KILLED IN ACTION

☒ (Y) ☐ (N) ENGAGED VC OR NVA IN A FIREFIGHT

☒ (Y) ☐ (N) CAPTURED BY THE ENEMY

PARTICIPANT LABEL	CASE NUMBER	GROUP NUMBER
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9
	0 1 2 3 4 5 6 7 8 9	EXAMINER I.D.
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9



FORM AFHS-10

ELECTROCARDIOGRAM REPORT

YEAR 10
FOLLOW-UP

ECG EXAM WAS/IS:
FOLLOW-UP RECOMMENDED?
PARTICIPANT COMPLY
WITH 4 HOUR ABSTINENCE
TECHNICALLY
RHYTHM: NORMAL SINUS

☐ NORMAL ☐ ABNORMAL ☐ REFUSED
☐ NO ☐ YES
☐ YES ☐ NO
☐ SATISFACTORY ☐ UNSATISFACTORY
☐ YES ☐ NO

RATE

TACHYCARDIA
>100

BRADYCARDIA
<50

0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9

0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

INTERVALS

PR ☐ NORMAL ☐ PROLONGED
QRS ☐ NORMAL ☐ PROLONGED
QT ☐ NORMAL ☐ PROLONGED
AXIS: ☐ NORMAL ☐ RIGHT ☐ LEFT

MORPHOLOGY

P-WAVE: ☐ NORMAL ☐ ABNORMAL
QRS ☐ NORMAL ☐ ABNORMAL
☐ RBBB ☐ LBBB
ST-T ☐ NORMAL ☐ ABNORMAL
Q-WAVE ☐ NORMAL ☐ ABNORMAL
U-WAVE ☐ PRESENT ☐ ABSENT

CHAMBER ENLARGEMENT

RIGHT ATRIAL ☐ Y ☐ N
LEFT ATRIAL ☐ Y ☐ N
RIGHT VENTRIC ☐ Y ☐ N
LEFT VENTRIC ☐ Y ☐ N

PRIOR INFARCTION ☐ Y ☐ N

- INFERIOR ☐
- ANTEROSEPTAL ☐
- ANTERIOR ☐
- LATERAL ☐

ARRHYTHMIA? ☐ Yes
IF YES → RHYTHM STRIP ATTACHED ☐ Y ☐ N
→ NOTE TYPE
☐ ATRIAL FLUTTER
☐ ATRIAL FIBRILLATION
☐ JUNCTIONAL RHYTHM
☐ MULTIFOCAL ATRIAL RHYTHM
☐ MULTIFOCAL ☐ PVCs ☐ PACS
☐ UNIFOCAL ☐ PVCs ☐ PACS
☐ OTHER
- A-V NODAL ☐ Y ☐ N
1st° A-V BLOCK ☐
2nd° A-V BLOCK ☐
3rd° A-V BLOCK ☐

OTHER ☐ LOW QRS VOLTAGE ☐ ANEURYSM ☐ INFERIOR ☐ ANTERIOR ☐ ANTEROSEPTAL ☐ LATERAL
☐ EARLY REPOLARIZATION ☐ PRE EXCITATION ☐ WPW ☐ LGL ☐ OTHER

☐ Y ☐ N COMMENTS

TECHNICIANS ID# INITIALS
1 2 3 4 5 6

PRINTED NAME OF CARDIOLOGIST

ID # INITIALS

FORM QA AUDIT DONE BY:
ID# INITIALS

1 2 3 4 5 6

PARTICIPANT LABEL	CASE NUMBER	GROUP NUMBER
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9
	0 1 2 3 4 5 6 7 8 9	EXAMINER I.D.
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9

FORM AFHS-11

RADIOLOGY EXAMINATION

YEAR 10 FOLLOW-UP

CHEST X-RAY EXAM WAS: ☐ NORMAL, NO FINDINGS ☐ NORMAL WITH FINDINGS ☐ ABNORMAL ☐ NEED PRIOR FILMS(S) ☐ REFUSED

FILM QUALITY IS: ☐ GOOD ☐ FAIR ☐ REPEAT ☐ WAS REPEATED

FOLLOW-UP NEEDED: ☐ YES ☐ NO

COMMENTS/RECOMMENDATIONS:

NORMAL	ABNORMAL	(PLEASE NOTE THE LOCATIONS IN ABOVE DIAGRAM)
☒ ☐ LUNGS	☐ ☐ GRANULOMATOUS CHANGES ☐ OLD ☐ SUSPECT ☐ ☐ INFILTRATE ☐ ACUTE ☐ CHRONIC ☐ ☐ HYPERINFLATION ☐ COPD ☐ OTHER	☐ ☐ LESION/NODULE/DENSITY ☐ BENIGN ☐ SUSPECT ☐ CALCIFIED ☐ ☐ INTERSTITIAL MARKINGS ☐ ☐ OTHER: →
☒ ☐ ARTERIAL VASCULATURE	☐ DILATED/TORTUOUS AORTA ☐ ASC ☐ DESC ☐ ARCH ☐ AORTIC ANEURYSM ☐ ASC ☐ DESC ☐ ARCH	☐ CALCIFICATIONS ☐ ASC ☐ DESC ☐ ARCH ☐ OTHER: →
☒ ☐ VENOUS VASCULATURE	☐ A-V MALFORMATION ☐ PULMONARY VENOUS CONGESTION	☐ OTHER →
☒ ☐ DIAPHRAGMS	☐ ELEVATED ☐ HIATAL HERNIA	☐ OTHER →
HEART NORMAL CHAMBER ↑ ☒ ☐	☐ ☐ ATRIAL ☐ ☐ VENTRICULAR ☐ ☐ OTHER →	PLEURA NORMAL ☒ ☐ RIGHT ☒ ☐ LEFT ☒ ☐ THICKENED ☐ ☐ APICAL ☐ ☐ BASE ☐ ☐ OTHER →
BONEY STRUCTURES NORMAL ☒ ☐	PRIOR FRACTURES: ☐ STERNUM ☐ SPINE ☐ CLAVICLE ☐ RIBS DEGENERATIVE CHANGES: ☐ CERVICAL ☐ DORSAL SPINAL CURVATURE: ☐ SCOLIOSIS ☐ KYPHOSIS	RIB ABNORMALITY ☐ CERVICAL ☐ HYPOPLASTIC ☐ FUSED POST SURGICAL CHANGES ☐ PRIOR THORACTOMY ☐ PRIOR CARDIAC SURGERY ☐ PACEMAKER ☐ OTHER: →

DATE OF EXAM	X-RAY TECHNICIAN: ID# 1 2 3 4 5 6 INITIALS 1 2 3 4 5 6

ABDOMINAL EVALUATION

TECHNICALLY SATISFACTORY? ☐ Y ☐ N ☐ R

ABNORMALITIES:

MASSSES ☐ Y ☐ N

ABNORMAL CALCIFICATIONS ☐

ABNORMAL BOWEL GAS PATTERN ☐

ABNORMAL BONEY STRUCTURES ☐

OTHER (USE COMMENT AREA AT RIGHT) ☐

FOLLOW-UP NEEDED? ☐

COMMENTS/RECOMMENDATIONS:

TECHNICIAN	ID #	INITIALS
1 2 3 4 5 6		
1 2 3 4 5 6		

TESTICULAR ULTRASOUND STUDY

RIGHT TESTICLE

PRESENT ☐

ABSENT ☐

REFUSED ☐

LENGTH cm

0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

WIDTH cm

0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

AP DIAMETER cm

0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

VOLUME

0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9

VOLUME:

NORMAL ☐

ABNORMAL ☐

(IF VOLUME ABNORMAL:)

VOLUME ENLARGED ☐ Y ☐ N

VOLUME DECREASED ☐ Y ☐ N

OTHER FINDINGS ☐ Y ☐ N

MASS ☐ Y ☐ N

CYST ☐ Y ☐ N

OTHER ☐ Y ☐ N

NEEDS FURTHER WORK-UP ☐ Y ☐ N

SIGNIFICANT: ☐ Y ☐ N

☐ Y ☐ N

☐ Y ☐ N

☐ Y ☐ N

☐ Y ☐ N

LEFT TESTICLE

PRESENT ☐

ABSENT ☐

REFUSED ☐

LENGTH cm

0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

WIDTH cm

0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

AP DIAMETER cm

0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

VOLUME

0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9

VOLUME:

NORMAL ☐

ABNORMAL ☐

(IF VOLUME ABNORMAL:)

VOLUME ENLARGED ☐ Y ☐ N

VOLUME DECREASED ☐ Y ☐ N

OTHER FINDINGS ☐ Y ☐ N

MASS ☐ Y ☐ N

CYST ☐ Y ☐ N

OTHER ☐ Y ☐ N

NEEDS FURTHER WORK-UP ☐ Y ☐ N

SIGNIFICANT: ☐ Y ☐ N

☐ Y ☐ N

☐ Y ☐ N

☐ Y ☐ N

☐ Y ☐ N

TECHNICIAN	ID #	INITIALS
1 2 3 4 5 6		

☐ Y ☐ N COMMENTS:

PRINTED NAME OF RADIOLOGIST

ID #

INITIALS

FORM QA AUDIT

DONE BY:

1 2 3 4 5 6

INITIALS

PARTICIPANT LABEL	CASE NUMBER	GROUP NUMBER	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	EXAMINER I.D.	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	

FORM AFHS-12 SKIN TEST FOR DELAYED CUTANEOUS HYPERSENSITIVITY

YEAR 10
FOLLOW-UP

☐ ☐ IS PARTICIPANT TAKING SYSTEMIC CORTICOSTEROIDS OR IMMUNOSUPPRESSANTS?
SPECIFY NON-COMPLIANCE AND/OR MEDICATION(S), DOSAGE(S) & FUNCTION(S) BELOW:

ANTIGENS TESTED - 48 HR READINGS - GREATEST INDURATION IN MM

ANTIGEN ADMINISTERED				INITIALS	MUMPS (2 CFU) (0.05 ml)	CANDIDA ALBICANS (1:1000 w/v) (0.1 ml)
MILITARY TIME	DATE					
	MO	DAY	YR		COMMENTS:	COMMENTS:
0 0 0 0	0 0	0 0	0	ID #		
1 1 1 1	1 1	1 1	1			
2 2 2 2	2 2	2 2	2			
3 3 3 3	3 3	3 3	3			
4 4 4 4	4 4	4 4	4			
5 5 5 5	5 5	5 5	5			
6 6 6 6	6 6	6 6	6			
7 7 7 7	7 7	7 7	7			
8 8 8 8	8 8	8 8	8			
9 9 9 9	9 9	9 9	9			

TRICHOPHYTON (1:1000 w/v) (0.1 ml)				INITIALS	STAPH-PHAGE-LYSATE (0.05 ml) (STAPH = 6.0 TO 9 X 10 ⁶ CPU) (PHAGE = 0.5 TO 5 X 10 ⁷ PFU)	READ # ① ② ③
MILITARY TIME	DATE					
	MO	DAY	YR		COMMENTS:	
	0 0	0 0	0	ID #		
	1 1	1 1	1			
	2 2	2 2	2			
	3 3	3 3	3			
	4 4	4 4	4			
	5 5	5 5	5			
	6 6	6 6	6			
	7 7	7 7	7			
	8 8	8 8	8			
	9 9	9 9	9			

INTERPRETATION

- ☐ NOT TESTED ☐ NOT INTERPRETABLE ☐ REFUSED
☐ POSSIBLY ABNORMAL (ALL <5 mm I) ☐ ☐ FORM LETTER EXPLANATION GIVEN PARTICIPANT?
☐ FOLLOW-UP NEEDED
☐ NORMAL DELAYED CUTANEOUS HYPERSENSITIVITY (≥TEST ≥5 mm I)
☐ OTHER

☐ COMMENTS/RECOMMENDATIONS:

PRINTED NAME OF ALLERGIST	ID#	INITIALS	DATE	FORM QA AUDIT BY:
				① ② ③ ④ ⑤ ⑥ INITIALS DATE

PARTICIPANT LABEL	CASE NUMBER	GROUP NUMBER	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	DIAGNOSTICIAN ID NO.	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	

FORM AFHS - 14

VASCULAR LABORATORY - DOPPLER

YEAR 10
FOLLOW UP

yes no

☒ ☐ Are films attached? How Many? _____

☒ ☐ Did participant comply with 4 hour abstinence requirement?

	Right				Left					
Radial	cne ☒	0	1	2	3	cne ☒	0	1	2	3
Femoral	cne ☒	0	1	2	3	cne ☒	0	1	2	3
Popliteal	cne ☒	0	1	2	3	cne ☒	0	1	2	3
Dorsalis Pedis	cne ☒	0	1	2	3	cne ☒	0	1	2	3
Posterior Tibial	cne ☒	0	1	2	3	cne ☒	0	1	2	3

Follow-up: ☒ ☐

Comments/Recommendations:

☐ Participant refused

PRINTED NAME OF R.V.T.

ID#

INITIALS

ID#

TECHNICIAN
INITIALS

1 2 3 4 5 6

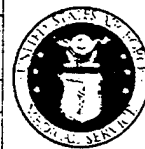
FORM QA AUDIT DONE BY:

ID#

INITIALS

1 2 3 4 5 6

PARTICIPANT LABEL	CASE NUMBER	GROUP NUMBER
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9
	0 1 2 3 4 5 6 7 8 9	EXAMINER I.D.
	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9
FORM AFHS - 15 VIBROTACTILE THRESHOLD MEASUREMENT		
		YEAR 10 FOLLOW-UP



TRIAL #1

DESCENDING

RIGHT	LEFT
0 0.0	0 0.0
1 1.1	1 1.1
2 2.2	2 2.2
3 3.3	3 3.3
4 4.4	4 4.4
5 5.5	5 5.5
6 6.6	6 6.6
7 7.7	7 7.7
8 8.8	8 8.8
9 9.9	9 9.9

TRIAL #2

ASCENDING

RIGHT	LEFT
0 0.0	0 0.0
1 1.1	1 1.1
2 2.2	2 2.2
3 3.3	3 3.3
4 4.4	4 4.4
5 5.5	5 5.5
6 6.6	6 6.6
7 7.7	7 7.7
8 8.8	8 8.8
9 9.9	9 9.9

TRIAL #3

DESCENDING

RIGHT	LEFT
0 0.0	0 0.0
1 1.1	1 1.1
2 2.2	2 2.2
3 3.3	3 3.3
4 4.4	4 4.4
5 5.5	5 5.5
6 6.6	6 6.6
7 7.7	7 7.7
8 8.8	8 8.8
9 9.9	9 9.9

TRIAL #4

ASCENDING

RIGHT	LEFT
0 0.0	0 0.0
1 1.1	1 1.1
2 2.2	2 2.2
3 3.3	3 3.3
4 4.4	4 4.4
5 5.5	5 5.5
6 6.6	6 6.6
7 7.7	7 7.7
8 8.8	8 8.8
9 9.9	9 9.9

TRIAL #5

DESCENDING

RIGHT	LEFT
0 0.0	0 0.0
1 1.1	1 1.1
2 2.2	2 2.2
3 3.3	3 3.3
4 4.4	4 4.4
5 5.5	5 5.5
6 6.6	6 6.6
7 7.7	7 7.7
8 8.8	8 8.8
9 9.9	9 9.9

TRIAL #6

ASCENDING

RIGHT	LEFT
0 0.0	0 0.0
1 1.1	1 1.1
2 2.2	2 2.2
3 3.3	3 3.3
4 4.4	4 4.4
5 5.5	5 5.5
6 6.6	6 6.6
7 7.7	7 7.7
8 8.8	8 8.8
9 9.9	9 9.9

TRIAL #7

DESCENDING

RIGHT	LEFT
0 0.0	0 0.0
1 1.1	1 1.1
2 2.2	2 2.2
3 3.3	3 3.3
4 4.4	4 4.4
5 5.5	5 5.5
6 6.6	6 6.6
7 7.7	7 7.7
8 8.8	8 8.8
9 9.9	9 9.9

- ☐ REFUSED
☐ COULD NOT EXAMINE
☐ COMMENT?

EXAMINER NAME	ID#	INITIALS

QA AUDIT BY: INITIALS
1 2 3 4 5 6

PARTICIPANT LABEL	CASE NUMBER	GROUP NUMBER
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9
	0 1 2 3 4 5 6 7 8 9	EXAMINER ID
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9



FORM AFHS-20 AUDIOLOGY

YEAR 10
FOLLOW UP

AUDIOMETER: MAICO 40 ANSI 1969 888 = NO RESPONSE 999 = NOT TESTED

PURE TONE AUDIOMETRY RESULTS

FREQUENCY IN HERTZ

LEFT EAR

HZ

RIGHT EAR

250	500	1000	2000	3000	4000	6000	8000	HZ	250	500	1000	2000	3000	4000	6000	8000
00	00	00	00	00	00	00	00	DB	00	00	00	00	00	00	00	00
1	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2		2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3		3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4		4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5		5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6		6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7		7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8		8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9		9	9	9	9	9	9	9	9

RELIABILITY:

HEARING AID USE:

TINNITUS:

(Y) (N) COMMENTS?

☐ GOOD ☐ FAIR ☐ QUESTIONABLE ☐ REFUSED TEST	☐ NONE ☐ LEFT EAR ☐ RIGHT EAR ☐ BOTH EARS	NONE (L) (R) (B) MILD (L) (R) (B) MODERATE (L) (R) (B) SEVERE (L) (R) (B)

INTERPRETATION

HEARING ABILITY

LOW FREQUENCIES (250 HZ to 500 HZ)

MID FREQUENCIES (1000 HZ to 2000 HZ)

HIGH FREQUENCIES (3000 HZ to 8000 HZ)

	AS	AD	AS	AD	AS	AD
NORMAL LOSS (0-25 Db)	☐	☐	☐	☐	☐	☐
MILD LOSS (30-40 Db)	☐	☐	☐	☐	☐	☐
MODERATE LOSS (45-60 Db)	☐	☐	☐	☐	☐	☐
SEVERE LOSS (65-85 Db)	☐	☐	☐	☐	☐	☐
PROFOUND LOSS (90-110+ Db)	☐	☐	☐	☐	☐	☐
COULD NOT EXAMINE	☒	☒	☒	☒	☒	☒
	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT

SUMMARY AND RECOMMENDATIONS

☐ NORMAL HEARING BILATERALLY ☐ ABNORMAL FINDINGS ☐ REFUSED EXAM	YES (Y) NO (N) ☐ (Y) ☐ (N) ADDITIONAL TESTS RECOMMENDED? ☐ (Y) ☐ (N) CONSIDER HEARING AID CONSULTATION AND/OR TRIAL?

(Y) (N) RECOMMENDATIONS OR OTHER COMMENTS?

PRINTED NAME OF AUDIOLOGIST

INITIALS: / DATE:

FORM QA AUDIT DONE BY:

ID # 1 2 3 4 5 6

INITIALS:

DATE:

PARTICIPANT LABEL	CASE NUMBER	GROUP NUMBER	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	EXAMINER I.D.	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	
FORM AFHS-21 TITMUS VISION SCREEN & TONOMETRY			YEAR 10 FOLLOW UP

FAR VISION TESTS (20 FEET)																	
☐ NORMAL ☐ ABNORMAL		TARGET:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	NOT TESTED
		SNELLEN EQUIVALENTS	$\frac{20}{200}$	$\frac{20}{100}$	$\frac{20}{70}$	$\frac{20}{50}$	$\frac{20}{40}$	$\frac{20}{35}$	$\frac{20}{30}$	$\frac{20}{25}$	$\frac{20}{22}$	$\frac{20}{20}$	$\frac{20}{18}$	$\frac{20}{17}$	$\frac{20}{15}$	$\frac{20}{13}$	
LEFT	CORRECTED	_____	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒
RIGHT	CORRECTED	_____	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒
LEFT	UNCORRECTED	_____	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒
RIGHT	UNCORRECTED	_____	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒

STEREO DEPTH PERCEPTION												
☐ NORMAL ☐ ABNORMAL		STEREO DEPTH (SHEPARD-FRY %)	1	2	3	4	5	6	7	8	9	NOT TESTED
			15%	30%	50%	60%	70%	80%	85%	90%	95%	
			☐	☐	☐	☐	☐	☐	☐	☐	☐	☒

COLOR VISION (STANDARD ISHIHARA PLATES)								
☐ NORMAL (4-6 CORRECT) ☐ PARTIALLY COLOR BLIND ☐ COLOR BLIND (ONLY 1 CORRECT)		A	B	C	D	E	F	NOT TESTED
		12	5	26	6	16	0	
		☐	☐	☐	☐	☐	☐	☒

VERTICAL STEREO FOCUS													
HYPERPHORIA?		PRISM	1	2	3	4	5	6	7	NOT TESTED			
NONE	LEFT	RT	BOTH	CNE	DIOPTERS:	$1\frac{1}{2}$	1	$\frac{1}{2}$	*	$\frac{1}{2}$	1	$1\frac{1}{2}$	
☐	☐	☐	☐	☒		☐	☐	☐	☐	☐	☐	☐	☒

LATERAL STEREO FOCUS																		
☐ NORMAL ☐ ESOPHORIA ☐ EXOPHORIA		ESOPHORIA										EXOPHORIA						
		PRISM	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	NOT TESTED
		DIOPTERS:	7	6	5	4	3	2	1	*	1	2	3	4	5	6	7	
		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒	

NEAR VISION TESTS (14 INCHES)																	
☐ NORMAL ☐ ABNORMAL		TARGET:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	NOT TESTED
		SNELLEN EQUIVALENTS	$\frac{20}{200}$	$\frac{20}{100}$	$\frac{20}{70}$	$\frac{20}{50}$	$\frac{20}{40}$	$\frac{20}{35}$	$\frac{20}{30}$	$\frac{20}{25}$	$\frac{20}{22}$	$\frac{20}{20}$	$\frac{20}{18}$	$\frac{20}{17}$	$\frac{20}{15}$	$\frac{20}{13}$	
LEFT	CORRECTED	_____	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒
RIGHT	CORRECTED	_____	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒
LEFT	UNCORRECTED	_____	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒
RIGHT	UNCORRECTED	_____	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☒

TONOMETRY (NON CONTACT TONOMETER)												
NORMAL ABNORMAL NOT TESTED LEFT ☐ ☐ ☒ PRESSURE			LEFT EYE					RIGHT EYE				
RIGHT ☐ ☐ ☒ MM HG			0 1 2 3 4					0 1 2 3 4				
			0 1 2 3 4 5 6 7 8 9					0 1 2 3 4 5 6 7 8 9				

☒ (Y) (N) ADDITIONAL TESTS RECOMMENDED?	☒ (Y) (N) COMMENTS?	FORM QA AUDIT BY: 1 2 3 4 5 6 INITIALS:

PARTICIPANT LABEL

CASE NUMBER

GROUP NUMBER

0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9

EXAMINER I.D.



FORM AFHS - 22

HEMOCCULT EXAM

10 YEAR
FOLLOW UP

PART 1 Please record the date of each stool sampled below and describe any alterations from the hemoccult diet. The clinic will complete part 2.

PACKET 1

PACKET 2

PACKET 3

Date of smear:

/ /

/ /

/ /

Comply with diet?

(Y) (N)

(Y) (N)

(Y) (N)

Comments:

PART 2 SKD HEMOCCULT II SLIDE SAMPLE KIT EXAMINATION RESULTS
(to be completed by the clinic)

PACKET 1

PACKET 2

PACKET 3

RESULTS :

☐
☐
☐

("+" = Positive, "-" = No Reaction or Negative, "x" = No Sample Provided)

SLIDE SAMPLE KIT WAS:

- ☐ Complete (all 3 packets)
☐ Incomplete (< 3 packets)
☐ Sampled at rectal exam (0 packets)

HEMOCCULT EXAM WAS :

- ☐ All negative
☐ At least 1 positive

Comments/Recommendations:

PRINTED NAME OF GASTROENTEROLOGIST

ID#

INITIALS

DATE

FORM QA AUDIT DONE BY

ID# INITIALS DATE

①②③④⑤⑥



FORM AFHS - 31

EVALUATIONYEAR 10
FOLLOW-UP

Dear Health Study Participant:

To serve you and future study participants in the best way possible, please complete this short evaluation form. The form may be completed and delivered to the Health Study Logistic Coordinator following your outbriefing at the Scripps Clinic on the third day of your examination.

	excellent	good	satisfactory	unsatisfactory
Initial phone contact and recruitment	☐	☐	☐	☐
Travel agent contact and travel arrangements	☐	☐	☐	☐
Logistics Information Packet (mailed)	☐	☐	☐	☐
Airport/Hotel shuttle service	☐	☐	☐	☐
Hotel/Clinic van service	☐	☐	☐	☐
Hotel accommodations	☐	☐	☐	☐
Evening orientation meeting	☐	☐	☐	☐
Wives orientation meeting	☐	☐	☐	☐
Cafeteria meals at the Clinic	☐	☐	☐	☐
Examination schedule at the Clinic	☐	☐	☐	☐
Technicians (e.g., blood draw)	☐	☐	☐	☐
Interviews	☐	☐	☐	☐
Nursing Staff	☐	☐	☐	☐
Psychologists	☐	☐	☐	☐
Examining physicians	☐	☐	☐	☐
Clinical outbriefing	☐	☐	☐	☐
Air Force Health Study Monitor	☐	☐	☐	☐
Overall clinical experience	☐	☐	☐	☐

Did any examining physician ask about your specific duties in Southeast Asia? ☐yes ☐no
(If yes, please see the Air Force On-site Monitor)

Additional comments or acknowledgements: _____

Name: _____

(not required)

Mailing Address:

Air Force Health Study M/S D4
Science Applications International Corporation
10260 Campus Point Drive
San Diego, California 92121

APPENDIX D
Statistical Methods

Table D-1.
Summary of Statistical Analysis Situations by Dependent Variable Form,
Exposure Estimate, Analysis Cohort, and Analysis Type

Dependent Variable Form	Exposure Estimate	Analysis Cohort	Analysis Type	Statistical Method	Independent Variables
Continuous	Group (Ranch Hands vs. Comparisons)	All RH & C	Unadjusted	t-Test	Group
			Adjusted	Analysis of Covariance	Group; Covariates; Group x Covariates; Covariates x Covariates
			Longitudinal*	Analysis of Covariance	Group; Age in 1992; 1982 Measurement
	Log ₂ (Initial)	RH > 10 ppt lipid-adjusted current dioxin	Unadjusted	Linear Regression	Log ₂ (Initial)
			Adjusted	Linear Regression	Log ₂ (Initial); Covariates; Log ₂ (Initial) x Covariates; Covariates x Covariates
			Longitudinal*	Linear Regression	Log ₂ (Initial); Age in 1992; 1982 Measurement
	Categorized Dioxin	All RH with a current dioxin measurement, C ≤ 10 ppt lipid-adjusted current dioxin	Unadjusted	Analysis of Variance	DXCAT
			Adjusted	Analysis of Covariance	DXCAT; Covariates; DXCAT x Covariates; Covariates x Covariates
			Longitudinal*	Analysis of Covariance	DXCAT; Age in 1992; 1982 Measurement
	Log ₂ (Current + 1)	All RH with a current dioxin measurement	Unadjusted	Linear Regression	Log ₂ (Current + 1)
			Adjusted	Linear Regression	Log ₂ (Current + 1); Covariates; Log ₂ (Current + 1) x Covariates; Covariates x Covariates
Discrete	Group (Ranch Hands vs. Comparisons)	All RH & C	Unadjusted	Chi-Square Contingency Table	Group
			Adjusted	Logistic Regression	Group; Covariates; Group x Covariates; Covariates x Covariates

Table D-1. (Continued)
Summary of Statistical Analysis Situations by Dependent Variable Form,
Exposure Estimate, Analysis Cohort, and Analysis Type

Dependent Variable Form	Exposure Estimate	Analysis Cohort	Analysis Type	Statistical Method	Independent Variables
Discrete (Continued)			Longitudinal**	Logistic Regression	Group; Age in 1992
	Log ₂ (Initial)	RH > 10 ppt lipid-adjusted current-dioxin	Unadjusted	Logistic Regression	Log ₂ (Initial)
			Adjusted	Logistic Regression	Log ₂ (Initial); Covariates; Log ₂ (Initial) x Covariates; Covariates x Covariates
			Longitudinal**	Logistic Regression	Log ₂ (Initial); Age in 1992
	Categorized Dioxin	All RH with a current dioxin measurement, C ≤ 10 ppt lipid-adjusted current dioxin	Unadjusted	Logistic Regression	DXCAT
			Adjusted	Logistic Regression	DXCAT; Covariates; DXCAT x Covariates; Covariates x Covariates
			Longitudinal**	Logistic Regression	DXCAT; Age in 1992
	Log ₂ (Current + 1)	All RH with a current dioxin measurement	Unadjusted	Logistic Regression	Log ₂ (Current + 1)
			Adjusted	Logistic Regression	Log ₂ (Current + 1); Covariates; Log ₂ (Current + 1) x Covariates; Covariates x Covariates

* Dependent variable usually paired difference score of (1992 to 1982) dependent variable values. For some clinical areas, paired difference scores will be (1992 to 1985) differences.

** Analysis performed subject to the constraint that participant was normal at the 1982 Baseline (or 1985) examination.

Note: Log₂(Initial) = Logarithm (base 2) of estimated initial dioxin level.

Log₂(Current + 1) = Logarithm (base 2) of (current dioxin level + 1).

DXCAT = Categorized dioxin (incorporating group membership — three categories for Ranch Hands, one category for Comparisons).

RH = Ranch Hand.

C = Comparison.

Analyses using log₂(initial) and categorized dioxin exposure estimates adjusted for percent body fat at the time of duty in SEA and change in percent body fat from the time of duty in SEA to the date of the blood draw for dioxin.

Table D-2.
Approximate Power to Detect an Initial Dioxin Effect
at a 5 Percent Level of Significance
(Discrete Dependent Variable)

Prevalence of Condition	Relative Risk						
	1.10	1.20	1.30	1.40	1.50	1.75	2.00
0.005	0.06	0.07	0.10	0.14	0.19	0.37	0.59
0.01	0.06	0.09	0.15	0.22	0.32	0.62	0.85
0.02	0.07	0.13	0.24	0.39	0.55	0.87	0.98
0.03	0.08	0.18	0.33	0.52	0.71	0.95	1.00
0.04	0.09	0.22	0.41	0.63	0.81	0.98	1.00
0.05	0.10	0.25	0.49	0.72	0.88	1.00	1.00
0.10	0.15	0.42	0.73	0.92	0.98	1.00	1.00
0.15	0.19	0.54	0.85	0.97	1.00	1.00	1.00
0.20	0.22	0.63	0.91	0.99	1.00	1.00	1.00

Table D-3.
Approximate Power to Detect an Categorized Dioxin Effect (Low plus High
Ranch Hands versus Comparisons) at a 5 Percent Level of Significance
(Discrete Dependent Variable)

Prevalence of Condition	Relative Risk						
	1.10	1.20	1.30	1.40	1.50	1.75	2.00
0.005	0.05	0.06	0.06	0.08	0.09	0.13	0.17
0.01	0.05	0.06	0.08	0.10	0.13	0.20	0.29
0.02	0.06	0.08	0.11	0.15	0.20	0.35	0.51
0.03	0.06	0.09	0.14	0.20	0.28	0.48	0.67
0.04	0.06	0.11	0.17	0.25	0.35	0.59	0.79
0.05	0.07	0.12	0.20	0.30	0.41	0.69	0.86
0.10	0.08	0.18	0.33	0.50	0.66	0.92	0.99
0.15	0.10	0.24	0.44	0.64	0.80	0.98	1.00
0.20	0.11	0.28	0.52	0.74	0.88	0.99	1.00

Table D-4.
Approximate Power to Detect a Lipid-Adjusted Current Dioxin Effect
at a 5 Percent Level of Significance
(Discrete Dependent Variable)

Prevalence of Condition	Relative Risk						
	1.10	1.20	1.30	1.40	1.50	1.75	2.00
0.005	0.06	0.09	0.15	0.23	0.33	0.64	0.88
0.01	0.07	0.14	0.25	0.40	0.57	0.90	0.99
0.02	0.09	0.22	0.43	0.66	0.84	0.99	1.00
0.03	0.11	0.31	0.58	0.82	0.94	1.00	1.00
0.04	0.13	0.38	0.70	0.90	0.98	1.00	1.00
0.05	0.15	0.45	0.78	0.95	0.99	1.00	1.00
0.10	0.25	0.71	0.96	1.00	1.00	1.00	1.00
0.15	0.33	0.84	0.99	1.00	1.00	1.00	1.00
0.20	0.39	0.90	1.00	1.00	1.00	1.00	1.00

Table D-5.
Approximate Power to Detect a Whole-Weight Current Dioxin Effect
at a 5 Percent Level of Significance
(Discrete Dependent Variable)

Prevalence of Condition	Relative Risk						
	1.10	1.20	1.30	1.40	1.50	1.75	2.00
0.005	0.06	0.10	0.17	0.27	0.40	0.74	0.94
0.01	0.08	0.16	0.30	0.48	0.66	0.95	1.00
0.02	0.11	0.27	0.51	0.75	0.91	1.00	1.00
0.03	0.13	0.37	0.67	0.89	0.98	1.00	1.00
0.04	0.16	0.46	0.79	0.95	0.99	1.00	1.00
0.05	0.19	0.54	0.86	0.98	1.00	1.00	1.00
0.10	0.31	0.80	0.98	1.00	1.00	1.00	1.00
0.15	0.41	0.91	1.00	1.00	1.00	1.00	1.00
0.20	0.49	0.96	1.00	1.00	1.00	1.00	1.00

Table D-6.
Approximate Power to Detect an Initial Dioxin Effect
at a 5 Percent Level of Significance
(Continuous Dependent Variable)

Mean Change	Coefficient of Variation ($100\sigma/\mu$)				
	5	10	25	50	75
0.005	0.99	0.59	0.14	0.07	0.06
0.01	1.00	0.99	0.41	0.14	0.09
0.02	1.00	1.00	0.94	0.41	0.21
0.03	1.00	1.00	1.00	0.74	0.41
0.04	1.00	1.00	1.00	0.94	0.64
0.05	1.00	1.00	1.00	0.99	0.83
0.10	1.00	1.00	1.00	1.00	1.00

Table D-7.
Approximate Power to Detect an Categorized Dioxin Effect (Low plus High
Ranch Hands versus Comparisons) at a 5 Percent Level of Significance
(Continuous Dependent Variable)

Mean Change	Coefficient of Variation ($100\sigma/\mu$)				
	5	10	25	50	75
0.005	0.46	0.15	0.07	0.05	0.05
0.01	0.96	0.46	0.12	0.07	0.06
0.02	1.00	0.96	0.32	0.12	0.08
0.03	1.00	1.00	0.61	0.20	0.12
0.04	1.00	1.00	0.85	0.32	0.17
0.05	1.00	1.00	0.96	0.46	0.24
0.10	1.00	1.00	1.00	0.96	0.70

Table D-8.
Approximate Power to Detect a Lipid-Adjusted Current Dioxin Effect
at a 5 Percent Level of Significance
(Continuous Dependent Variable)

Mean Change	Coefficient of Variation ($100\sigma/\mu$)				
	5	10	25	50	75
0.005	0.86	0.33	0.09	0.06	0.05
0.01	1.00	0.86	0.23	0.09	0.07
0.02	1.00	1.00	0.68	0.23	0.13
0.03	1.00	1.00	0.95	0.44	0.23
0.04	1.00	1.00	1.00	0.68	0.37
0.05	1.00	1.00	1.00	0.86	0.52
0.10	1.00	1.00	1.00	1.00	0.98

Table D-9.
Approximate Power to Detect a Whole-Weight Current Dioxin Effect
at a 5 Percent Level of Significance
(Continuous Dependent Variable)

Mean Change	Coefficient of Variation ($100\sigma/\mu$)				
	5	10	25	50	75
0.005	1.00	0.72	0.17	0.08	0.06
0.01	1.00	1.00	0.53	0.17	0.10
0.02	1.00	1.00	0.98	0.53	0.27
0.03	1.00	1.00	1.00	0.86	0.53
0.04	1.00	1.00	1.00	0.98	0.77
0.05	1.00	1.00	1.00	1.00	0.92
0.10	1.00	1.00	1.00	1.00	1.00

APPENDIX E-1.

Dependent Variable-Covariate Associations for the General Health Assessment

This appendix contains results of tests of association between each dependent variable and candidate covariates for the adjusted analysis of each dependent variable. Pearson's chi-square test (continuity-adjusted for 2×2 tables) is used for significance testing of the associations between each discrete dependent variable and the candidate covariate. When a candidate covariate is continuous in nature (for example, age), the covariate is discretized prior to the analysis of the discrete dependent variable. Pearson's correlation coefficient is used for significance testing of the associations between each continuous dependent variable and a continuous candidate covariate. When a candidate covariate is discrete in nature, means (transformed back to the original scale, if necessary) are presented and an analysis of variance is used to investigate the difference between the means.

Table E-1-1.
Dependent Variable-Covariate Associations for the General Health Assessment

Dependent Variable	Level	Age			Race		
		Born ≥1942	Born <1942	p-Value	Black	Non-Black	p-Value
Self-Perception of Health	Fair or Poor	(n=954) 7.4%	(n=1,277) 9.6%	0.082	(n=131) 8.4%	(n=2,100) 8.7%	0.999
Appearance of Illness or Distress	Yes	(n=956) 1.2%	(n=1,277) 2.4%	0.041	(n=131) 1.5%	(n=2,102) 1.9%	0.999
Relative Age Appearance	Older	(n=956) 5.9%	(n=1,277) 6.0%	0.998	(n=131) 1.5%	(n=2,102) 6.2%	0.045
Body Fat (continuous) ^a		(n=956) r=0.009	(n=1,277)	0.681	(n=131) x̄=22.01	(n=2,102) x̄=21.88	0.784
(discrete)	Obese	25.0%	25.9%	0.657	29.0%	25.3%	0.402
Sedimentation Rate (continuous) ^b		(n=955) r=0.214	(n=1,277)	<0.001	(n=131) x̄=8.97	(n=2,101) x̄=8.07	0.179
(discrete)	Abnormal	17.4%	17.7%	0.891	22.9%	17.2%	0.124

^a Analysis performed on natural logarithm scale; means transformed from natural logarithm scale.

^b Analysis performed on natural logarithm of sedimentation rate + 0.1 scale; means transformed from natural logarithm of sedimentation rate + 0.1 scale.

Table E-1-1. (Continued)
Dependent Variable-Covariate Associations for the General Health Assessment

Dependent Variable	Level	Occupation				Personality Type		
		Officer	Enlisted Flyer	Enlisted Groundcrew	p-Value	Type A	Type B	p-Value
Self-Perception of Health	Fair or Poor	(n=869) 5.9%	(n=365) 11.2%	(n=997) 10.2%	0.001	(n=954) 8.7%	(n=1,275) 8.7%	0.999
Appearance of Illness or Distress	Yes	(n=869) 1.7%	(n=365) 1.9%	(n=999) 2.0%	0.907	--	--	--
Relative Age Appearance	Older	(n=869) 3.6%	(n=365) 8.0%	(n=999) 7.2%	0.001	--	--	--
Body Fat (continuous) ^a (discrete)	Obese	(n=869) $\bar{x}=21.64$ 22.7%	(n=365) $\bar{x}=21.65$ 23.3%	(n=999) $\bar{x}=22.20$ 28.8%	0.039 0.005	-- --	-- --	-- --
Sedimentation Rate (continuous) ^b (discrete)	Abnormal	(n=869) $\bar{x}=7.64$ 14.0%	(n=364) $\bar{x}=9.27$ 22.3%	(n=999) $\bar{x}=8.15$ 18.9%	0.002 0.001	(n=954) $\bar{x}=7.46$ 14.9%	(n=1,276) $\bar{x}=8.63$ 19.5%	<0.001 0.005

Dependent Variable	Level	Caloric Intake (kcal/day)		
		$\leq 2,000$	$> 2,000$	p-Value
Body Fat (continuous) ^a (discrete)	Obese	(n=1,322) $r = -0.070$ 27.1%	(n=907) 23.3%	0.001 0.048

^a Analysis performed on natural logarithm scale; means transformed from natural logarithm scale.

^b Analysis performed on natural logarithm of sedimentation rate + 0.1 scale; means transformed from natural logarithm of sedimentation rate + 0.1 scale.

--: Covariate not applicable for dependent variable.

APPENDIX E-2.

Interaction Tables for the General Health Assessment

This appendix contains exposure analyses results of interactions between covariates and group or dioxin. Results are presented for each 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 9 are given in the heading of each subtable. A summary of the interactions described in this appendix follows.

Appendix E-2 Table	Chapter 9 Table	Dependent Variable	Model	Covariate
E-2-1	9-3	Self-Perception of Health	4 5 6	Age Age Age
E-2-2	9-4	Appearance of Illness or Distress	4 5 6	Age Age Age
E-2-3	9-5	Relative Age Appearance	4	Occupation
E-2-4	9-6	Body Fat (Continuous)	4	Occupation
E-2-5	9-7	Body Fat with Adjustment for Caloric Intake (Continuous)	3 4	Caloric Intake Occupation
E-2-6	9-8	Body Fat (Discrete)	4	Occupation
E-2-7	9-9	Body Fat with Adjustment for Caloric Intake (Discrete)	4	Occupation

Table E-2-1.
Interaction Table for Self-Perception of Health

a) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Age: Table 9-3)					
Current Dioxin Category Summary Statistics				Analysis Results for Log ₂ (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent Fair or Poor	Adjusted Relative Risk (95% C.I.) ^a	p-Value
Born ≥ 1942	Low	99	5.1	1.26 (0.98,1.61)	0.067
	Medium	97	4.1		
	High	171	11.7		
Born < 1942	Low	196	7.7	1.12 (0.91,1.39)	0.287
	Medium	203	11.8		
	High	128	18.0		

b) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Age: Table 9-3)					
Current Dioxin Category Summary Statistics				Analysis Results for Log ₂ (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent Fair or Poor	Adjusted Relative Risk (95% C.I.) ^a	p-Value
Born ≥ 1942	Low	103	3.9	1.27 (1.01,1.59)	0.041
	Medium	96	7.3		
	High	168	10.7		
Born < 1942	Low	197	7.6	1.14 (0.95,1.37)	0.172
	Medium	201	11.4		
	High	129	18.6		

c) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Age: Table 9-3)					
Current Dioxin Category Summary Statistics				Analysis Results for Log ₂ (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent Fair or Poor	Adjusted Relative Risk (95% C.I.) ^a	p-Value
Born ≥ 1942	Low	103	3.9	1.18 (0.94,1.49)	0.161
	Medium	96	7.3		
	High	168	10.7		
Born < 1942	Low	196	7.6	1.04 (0.86,1.27)	0.678
	Medium	201	11.4		
	High	129	18.6		

^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 E-2-2.
Interaction Table for Appearance of Illness or Distress

a) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Age: Table 9-4)					
Current Dioxin Category Summary Statistics				Analysis Results for Log₂ (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent Yes	Adjusted Relative Risk (95% C.I.)^a	p-Value
Born ≥ 1942	Low	99	0.0	1.25 (0.63,2.50)	0.523
	Medium	97	0.0		
	High	171	1.8		
Born < 1942	Low	196	3.6	0.87 (0.57,1.33)	0.512
	Medium	203	2.0		
	High	128	3.1		

b) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Age: Table 9-4)					
Current Dioxin Category Summary Statistics				Analysis Results for Log₂ (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent Yes	Adjusted Relative Risk (95% C.I.)^a	p-Value
Born ≥ 1942	Low	103	0.0	1.19 (0.64,2.24)	0.583
	Medium	96	1.0		
	High	168	1.2		
Born < 1942	Low	197	3.6	0.86 (0.62,1.20)	0.383
	Medium	201	2.0		
	High	129	3.1		

c) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Age: Table 9-4)					
Current Dioxin Category Summary Statistics				Analysis Results for Log₂ (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent Yes	Adjusted Relative Risk (95% C.I.)^a	p-Value
Born ≥ 1942	Low	103	0.0	1.16 (0.62,2.19)	0.643
	Medium	96	1.0		
	High	168	1.2		
Born < 1942	Low	196	3.6	0.83 (0.59,1.18)	0.299
	Medium	201	2.0		
	High	129	3.1		

^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 E-2-3.
Interaction Table for Relative Age Appearance

a) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Occupation: Table 9-5)					
Current Dioxin Category Summary Statistics				Analysis Results for Log ₂ (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent Older	Adjusted Relative Risk (95% C.I.) ^a	p-Value
Officer	Low	193	4.1	0.45 (0.24,0.83)	0.011
	Medium	141	1.4		
	High	14	0.0		
Enlisted Flyer	Low	31	12.9	0.92 (0.59,1.44)	0.706
	Medium	57	7.0		
	High	62	9.7		
Enlisted Groundcrew	Low	71	5.6	1.11 (0.85,1.46)	0.443
	Medium	102	2.0		
	High	223	7.6		

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

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

Table E-2-4.
Interaction Table for Body Fat (Percent)
(Continuous)

a) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Occupation: Table 9-6)					
Current Dioxin Category Summary Statistics				Analysis Results for Log ₂ (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Adjusted Mean	Adjusted Slope (Std. Error) ^a	p-Value
Officer	Low	193	20.63	0.089 (0.015)	<0.001
	Medium	141	23.16		
	High	14	23.79		
Enlisted Flyer	Low	31	19.14	0.082 (0.015)	<0.001
	Medium	57	21.65		
	High	62	23.31		
Enlisted Groundcrew	Low	71	19.11	0.051 (0.007)	<0.001
	Medium	102	21.88		
	High	223	23.27		

^a Slope and standard error based on natural logarithm of body fat versus log₂ (current dioxin + 1).

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

Table E-2-5.
Interaction Table for Body Fat (Percent) with Adjustment for Caloric Intake
(Continuous)

a) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Caloric Intake: Table 9-7)					
Stratum	Dioxin Category	n	Adjusted Mean^a	Difference of Adjusted Mean vs. Comparisons (95% C.I.)^b	p-Value^c
≤2,000 Kcal/Day	Comparison	629	21.94		
	Background RH	205	21.96	0.03 --	0.886
	Low RH	162	22.18	0.24 --	0.245
	High RH	162	21.95	0.01 --	0.949
	Low plus High RH	324	21.72	0.13 --	0.425
>2,000 Kcal/Day	Comparison	432	22.13		
	Background RH	169	21.65	-0.48 --	0.023
	Low RH	98	22.09	-0.04 --	0.869
	High RH	96	21.36	0.77 --	0.003
	Low plus High RH	194	21.72	-0.41 --	0.046

b) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Occupation: Table 9-7)					
Current Dioxin Category Summary Statistics				Analysis Results for Log₂ (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Adjusted Mean	Adjusted Slope (Std. Error)^d	p-Value
Officer	Low	193	20.60	0.090 (0.015)	<0.001
	Medium	141	23.14		
	High	14	23.78		
Enlisted Flyer	Low	31	19.12	0.082 (0.015)	<0.001
	Medium	57	21.70		
	High	61	23.19		
Enlisted Groundcrew	Low	71	19.32	0.049 (0.007)	<0.001
	Medium	102	21.97		
	High	222	23.25		

^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 body fat versus log₂ (current dioxin + 1).

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.

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

Table E-2-6.
Interaction Table for Body Fat
(Discrete)

a) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Occupation: Table 9-8)					
Current Dioxin Category Summary Statistics				Analysis Results for Log_e (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent Obese	Adjusted Relative Risk (95% C.I.)^a	p-Value
Officer	Low	193	13.0	2.10 (1.45,3.03)	<0.001
	Medium	141	29.8		
	High	14	50.0		
Enlisted Flyer	Low	31	6.5	1.89 (1.31,2.72)	0.001
	Medium	57	19.3		
	High	62	34.4		
Enlisted Groundcrew	Low	71	11.3	1.29 (1.12,1.50)	0.001
	Medium	102	27.5		
	High	223	36.0		

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

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

Table E-2-7.
Interaction Table for Body Fat with Adjustment for Caloric Intake
(Discrete)

a) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Occupation: Table 9-9)					
Current Dioxin Category Summary Statistics				Analysis Results for Log _e (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent Obese	Adjusted Relative Risk (95% C.I.) ^a	p-Value
Officer	Low	193	13.0	2.10 (1.45,3.03)	<0.001
	Medium	141	29.8		
	High	14	50.0		
Enlisted Flyer	Low	31	6.5	1.82 (1.25,2.64)	0.002
	Medium	57	19.3		
	High	61	34.4		
Enlisted Groundcrew	Low	71	11.3	1.29 (1.11,1.50)	0.001
	Medium	102	27.5		
	High	222	36.0		

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

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

APPENDIX E-3.

General Health Analysis Tables Occupation Removed from Final Model

This appendix contains results of exposure analyses after occupation has been removed from those final dioxin models (Models 2 through 6) that contained occupation. These analyses are performed to investigate the relationship of the dependent variable to dioxin without removing any effects due to occupation. The format of these tables closely parallels the adjusted panels of Chapter 9 tables. A summary of the tables found in this appendix follows.

Appendix E-3 Table	Chapter 9 Table	Dependent Variable
E-3-1	9-3	Self-Perception of Health
E-3-2	9-4	Relative Age Appearance
E-3-3	9-6	Body Fat (Continuous)
E-3-4	9-7	Body Fat with Adjustment for Caloric Intake (Continuous)
E-3-5	9-8	Body Fat (Discrete)
E-3-6	9-9	Body Fat with Adjustment for Caloric Intake (Discrete)
E-3-7	9-10	Sedimentation Rate (Continuous)
E-3-8	9-11	Sedimentation Rate (Discrete)

Table E-3-1.
Analysis of Self-Perception of Health
Occupation Removed from Final Model

a) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED			
Analysis Results for Log_e (Initial Dioxin)^a			
n	Adj. Relative Risk (95% C.I.)^b	p-Value	Covariate Remarks
520	1.30 (1.06,1.58)	0.010	AGE (p=0.025)

^a Adjusted for percent body fat at time of duty in SEA, change in percent body fat from time of duty in SEA to the date of the blood draw for dioxin, and covariates specified under "Covariate Remarks" column.

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

b) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED				
Dioxin Category	n	Adj. Relative Risk (95% C.I.)^{ab}	p-Value	Covariate Remarks
Comparison	1,061			AGE (p=0.003)
Background RH	374	0.95 (0.59,1.53)	0.842	
Low RH	260	1.50 (0.94,2.39)	0.090	
High RH	260	2.55 (1.68,3.89)	<0.001	
Low plus High RH	520	1.98 (1.39,2.82)	<0.001	

^a Relative risk and confidence interval relative to Comparisons.

^b Adjusted for percent body fat at time of duty in SEA, change in percent body fat from time of duty in SEA to the date of the blood draw for dioxin, and covariates specified under "Covariate Remarks" column.

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 E-3-1. (Continued)
Analysis of Self-Perception of Health
Occupation Removed from Final Model

c) MODELS 4, 5, AND 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED				
Model^a	Analysis Results for Log₂ (Current Dioxin + 1)			
	n	Adj. Relative Risk (95% C.I.)^b	p-Value	Covariate Remarks
4	894	1.35 (1.16,1.57)	<0.001	AGE (p=0.001)
5	894	1.33 (1.16,1.53)	<0.001	AGE (p=0.001)
6 ^c	893	1.25 (1.08,1.45)	0.003	AGE (p=0.003)

^a Model 4: Log₂ (lipid-adjusted current dioxin + 1).

Model 5: Log₂ (whole-weight current dioxin + 1).

Model 6: Log₂ (whole-weight current dioxin + 1), adjusted for log₂ total lipids.

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

^c Adjusted for log₂ total lipids in addition to covariates specified under "Covariate Remarks" column.

Table E-3-2.
Analysis for Relative Age Appearance
Occupation Removed from Final Model

a) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED				
Dioxin Category	n	Adj. Relative Risk (95% C.I.)^{ab}	p-Value	Covariate Remarks
Comparison	1,063			RACE (p=0.007)
Background RH	374	0.67 (0.38,1.18)	0.166	
Low RH	260	0.70 (0.36,1.35)	0.285	
High RH	260	1.30 (0.77,2.19)	0.329	
Low plus High RH	520	1.00 (0.64,1.55)	0.984	

^a Relative risk and confidence interval relative to Comparisons.

^b Adjusted for percent body fat at time of duty in SEA, change in percent body fat from time of duty in SEA to the date of the blood draw for dioxin, and covariates specified under "Covariate Remarks" column.

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 E-3-3.
Analysis of Body Fat (Percent) (Continuous)
Occupation Removed from Final Model

a) MODELS 4, 5, AND 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED							
Model ^b	Current Dioxin Category Adjusted Mean ^a /(n)			Analysis Results for Log ₂ (Current Dioxin + 1)			
	Low	Medium	High	R ²	Adj. Slope (Std. Error) ^c	p-Value	Covariate Remarks
4	20.07 (295)	22.34 (300)	23.16 (299)	0.089	0.0489 (0.0053)	<0.001	AGE (p=0.127)
5	20.00 (300)	22.32 (297)	23.30 (297)	0.098	0.0439 (0.0045)	<0.001	AGE (p=0.173)
6 ^d	20.11 (299)	22.34 (297)	23.17 (297)	0.092	0.0412 (0.0047)	<0.001	

^a Transformed from natural logarithm scale.

^b Model 4: Log₂ (lipid-adjusted current dioxin + 1).

Model 5: Log₂ (whole-weight current dioxin + 1).

Model 6: Log₂ (whole-weight current dioxin + 1), adjusted for log₂ total lipids.

^c Slope and standard error based on natural logarithm of body fat versus log₂ (current dioxin + 1).

^d Adjusted for log₂ total lipids.

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 E-3-4.
Analysis of Body Fat (Percent) with Adjustment for Caloric Intake (Continuous)
Occupation Removed from Final Model

a) MODELS 4, 5, AND 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED							
Model ^b	Current Dioxin Category Adjusted Mean ^a /(n)			Analysis Results for Log ₂ (Current Dioxin + 1)			
	Low	Medium	High	R ²	Adj. Slope (Std. Error) ^c	p-Value	Covariate Remarks
4	20.10 (295)	22.32 (300)	23.12 (297)	0.095	0.0481 (0.0053)	<0.001	AGE*CALINT (p=0.081)
5	20.03 (300)	22.32 (297)	23.26 (295)	0.104	0.0432 (0.0045)	<0.001	AGE*CALINT (p=0.095)
6 ^d	20.12 (299)	22.32 (297)	23.18 (295)	0.100	0.0422 (0.0048)	<0.001	AGE*CALINT (p=0.101)

^a Transformed from natural logarithm scale.

^b Model 4: Log₂ (lipid-adjusted current dioxin + 1).

Model 5: Log₂ (whole-weight current dioxin + 1).

Model 6: Log₂ (whole-weight current dioxin + 1), adjusted for log₂ total lipids.

^c Slope and standard error based on natural logarithm of body fat versus log₂ (current dioxin + 1).

^d Adjusted for log₂ total lipids in addition to covariates specified under "Covariate Remarks" column.

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 E-3-5.
Analysis of Body Fat (Discrete)
Occupation Removed from Final Model

a) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED				
Analysis Results for Log ₂ (Current Dioxin + 1)				
Model ^a	n	Adj. Relative Risk (95% C.I.) ^b	p-Value	Covariate Remarks
4	894	1.42 (1.27,1.58)	<0.001	AGE*RACE (p=0.059)

^a Model 4: Log₂ (lipid-adjusted current dioxin + 1).

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

Table E-3-6.
Analysis of Body Fat (Percent) with Adjustment for Caloric Intake (Discrete)
Occupation Removed from Final Model

a) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED				
Analysis Results for Log ₂ (Current Dioxin + 1)				
Model ^a	n	Adj. Relative Risk (95% C.I.) ^b	p-Value	Covariate Remarks
4	892	1.41 (1.26,1.58)	<0.001	AGE*RACE (p=0.061) CALINT (p=0.407)

^a Model 4: Log₂ (lipid-adjusted current dioxin + 1).

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

Table E-3-7.
Analysis of Sedimentation Rate (mm/hr) (Continuous)
Occupation Removed from Final Model

a) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED					
Dioxin Category	n	Adj. Mean ^{ab}	Difference of Adj. Mean vs. Comparisons (95% C.I.) ^c	p-Value ^d	Covariate Remarks
Comparison	1,062	8.04			AGE*PERS (p=0.004)
Background RH	374	7.71	-0.33 --	0.409	
Low RH	259	8.69	0.66 --	0.176	
High RH	260	9.21	1.18 --	0.019	
Low plus High RH	519	8.95	0.90 --	0.017	

^a Transformed from natural logarithm scale of sedimentation rate + 0.1.

^b Adjusted for percent body fat at time of duty in SEA, change in percent body fat from time of duty in SEA to the date of the blood draw for dioxin, and covariates specified under "Covariate Remarks" column.

^c Difference of adjusted means after transformation to original scale; confidence interval on difference of adjusted means not presented because analysis was performed on natural logarithm scale of sedimentation rate + 0.1.

^d P-value is based on difference of means on natural logarithm scale of sedimentation rate + 0.1.

Note: 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.

b) MODELS 4, 5, AND 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED							
Model ^b	Current Dioxin Category Adjusted Mean ^a /(n)			Analysis Results for Log ₂ (Current Dioxin + 1)			
	Low	Medium	High	R ²	Adj. Slope (Std. Error) ^c	p-Value	Covariate Remarks
4	7.29 (295)	8.27 (299)	9.53 (299)	0.067	0.0746 (0.0198)	<0.001	AGE (p<0.001) PERS (p=0.008)
5	7.22 (300)	8.32 (296)	9.57 (297)	0.072	0.0733 (0.0168)	<0.001	AGE (p<0.001) PERS (p=0.008)
6 ^d	7.54 (299)	8.37 (296)	9.06 (297)	0.086	0.0524 (0.0182)	0.004	AGE (p<0.001) PERS (p=0.003)

^a Transformed from natural logarithm scale of sedimentation rate + 0.1.

^b Model 4: Log₂ (lipid-adjusted current dioxin + 1).

Model 5: Log₂ (whole-weight current dioxin + 1).

Model 6: Log₂ (whole-weight current dioxin + 1), adjusted for log₂ total lipids.

^c Slope and standard error based on natural logarithm of sedimentation rate of + 0.1 versus log₂ (current dioxin + 1).

^d Adjusted for log₂ total lipids in addition to covariates specified under "Covariate Remarks" column.

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 E-3-8.
Analysis of Sedimentation Rate (Discrete)
Occupation Removed from Final Model

a) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED				
Dioxin Category	n	Adj. Relative Risk (95% C.I.)^{ab}	p-Value	Covariate Remarks
Comparison	1,062			AGE*PERS (p=0.005)
Background RH	374	0.78 (0.56,1.11)	0.167	
Low RH	259	1.28 (0.91,1.81)	0.150	
High RH	260	1.25 (0.88,1.78)	0.213	
Low plus High RH	519	1.27 (0.97,1.66)	0.086	

^a Relative risk and confidence interval relative to Comparisons.

^b Adjusted for percent body fat at time of duty in SEA, change in percent body fat from time of duty in SEA to the date of the blood draw for dioxin, and covariates specified under "Covariate Remarks" column.

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.

b) MODELS 4 AND 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED				
Analysis Results for Log₂ (Current Dioxin + 1)				
Model^a	n	Adj. Relative Risk (95% C.I.)^b	p-Value	Covariate Remarks
4	894	1.20 (1.06,1.35)	0.003	AGE (p=0.003)
6 ^c	893	1.15 (1.02,1.29)	0.021	AGE (p=0.004) RACE (p=0.064)

^a Model 4: Log₂ (lipid-adjusted current dioxin + 1).

Model 6: Log₂ (whole-weight current dioxin + 1), adjusted for log₂ total lipids.

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

^c Adjusted for log₂ total lipids in addition to covariates specified under "Covariate Remarks" column.

APPENDIX F-1.

Dependent Variable-Covariate Associations for the Neoplasia Assessment and Re-Analysis of Table 10-14

This appendix contains results of tests of association between each dependent variable and candidate covariates for the adjusted analysis. Pearson's chi-square test (continuity-adjusted for 2×2 tables) is used for significance testing of the associations between each discrete dependent variable and the candidate covariate. When a candidate covariate is continuous in nature (for example, age), the covariate is discretized prior to the analysis of the discrete dependent variable. Pearson's correlation coefficient is used for significance testing of the associations between the natural logarithm of prostate-specific antigen in its continuous form and a continuous candidate covariate. When a candidate covariate is discrete in nature, means transformed from the natural logarithm scale to the original scale are presented, and an analysis of variance is used to investigate the difference between the means on the natural logarithm scale.

Also included in this appendix is a re-analysis of Table 10-14, which showed results of the variable melanoma with a participant miscoded. After the analyses were well underway, an error in the classification of one participant's race was discovered. He was listed in the data base as Black, when he was actually non-Black. The participant was a 50-year-old enlisted flyer Comparison, with a current serum dioxin value < 10 ppt. This participant had a melanoma and was excluded from the analyses of melanomas because he was erroneously coded as Black. Appendix Table F-1-2 shows results of additional analyses of melanomas performed with this participant properly coded as non-Black. These results did not indicate any change in conclusions based on this misclassification.

Table F-1-1.
Dependent Variable-Covariate Associations for the Neoplasia Assessment

Dependent Variable	Level	Age			Race		
		Born ≥1942	Born <1942	p-Value	Black	Non-Black	p-Value
Any Skin Neoplasm		(n=881)	(n=1,203)				
	Yes	25.3%	32.8%	<0.001	--	--	--
Malignant Skin Neoplasm		(n=881)	(n=1,203)				
	Yes	7.6%	16.3%	<0.001	--	--	--
Benign Skin Neoplasm		(n=951)	(n=1,263)		(n=130)	(n=2,084)	
	Yes	18.5%	18.5%	0.999	18.5%	18.5%	0.999
Skin Neoplasm of Uncertain Behavior or Unspecified Nature		(n=881)	(n=1,203)				
	Yes	0.5%	0.6%	0.927	--	--	--
Any Basal Cell Carcinoma		(n=881)	(n=1,203)				
	Yes	6.0%	14.1%	<0.001	--	--	--
Basal Cell Carcinoma on Eye, Ear, Face, Head, or Neck		(n=881)	(n=1,203)				
	Yes	4.2%	11.5%	<0.001	--	--	--
Basal Cell Carcinoma on Trunk		(n=881)	(n=1,203)				
	Yes	1.9%	4.2%	0.007	--	--	--
Basal Cell Carcinoma on Upper Extremities		(n=881)	(n=1,203)				
	Yes	0.8%	2.5%	0.006	--	--	--
Basal Cell Carcinoma on Lower Extremities		(n=881)	(n=1,203)				
	Yes	0.1%	0.3%	0.847	--	--	--
Squamous Cell Carcinoma		(n=881)	(n=1,203)				
	Yes	0.8%	1.6%	0.163	--	--	--
Nonmelanoma		(n=881)	(n=1,203)				
	Yes	6.7%	15.6%	<0.001	--	--	--
Melanoma		(n=881)	(n=1,203)				
	Yes	1.0%	1.0%	0.999	--	--	--
Any Systemic Neoplasm		(n=954)	(n=1,269)		(n=130)	(n=2,093)	
	Yes	14.1%	25.8%	<0.001	21.5%	20.7%	0.904
Malignant Systemic Neoplasm		(n=954)	(n=1,269)		(n=130)	(n=2,093)	
	Yes	1.5%	6.9%	<0.001	3.9%	4.6%	0.841
Benign Systemic Neoplasm		(n=954)	(n=1,269)		(n=130)	(n=2,093)	
	Yes	12.0%	18.9%	<0.001	17.7%	15.8%	0.657
Systemic Neoplasm of Uncertain Behavior or Unspecified Nature		(n=954)	(n=1,269)		(n=130)	(n=2,093)	
	Yes	1.2%	2.1%	0.142	0.8%	1.7%	0.639
Malignant Systemic Neoplasm of Eye, Ear, Face, Head, or Neck		(n=954)	(n=1,269)		(n=130)	(n=2,093)	
	Yes	0.3%	1.3%	0.021	0.8%	0.9%	0.999
Malignant Systemic Neoplasm of Oral Cavity, Pharynx, or Larynx		(n=954)	(n=1,269)		(n=130)	(n=2,093)	
	Yes	0.1%	0.7%	0.074	0.8%	0.4%	0.999

--: Covariate not applicable for dependent variable.

Table F-1-1. (Continued)
Dependent Variable-Covariate Associations for the Neoplasia Assessment

Dependent Variable	Level	Occupation			p-Value
		Officer	Enlisted Flyer	Enlisted Groundcrew	
Any Skin Neoplasm	Yes	(n=847) 33.4%	(n=337) 28.5%	(n=900) 26.4%	0.005
Malignant Skin Neoplasm	Yes	(n=847) 16.7%	(n=337) 13.4%	(n=900) 8.6%	<0.001
Benign Skin Neoplasm	Yes	(n=860) 19.1%	(n=362) 16.0%	(n=992) 18.9%	0.419
Skin Neoplasm of Uncertain Behavior or Unspecified Nature	Yes	(n=847) 0.6%	(n=337) 0.0%	(n=900) 0.7%	0.336
Any Basal Cell Carcinoma	Yes	(n=847) 13.8%	(n=337) 12.2%	(n=900) 7.1%	<0.001
Basal Cell Carcinoma on Eye, Ear, Face, Head, or Neck	Yes	(n=847) 10.5%	(n=337) 10.1%	(n=900) 5.8%	0.001
Basal Cell Carcinoma on Trunk	Yes	(n=847) 5.1%	(n=337) 3.0%	(n=900) 1.6%	<0.001
Basal Cell Carcinoma on Upper Extremities	Yes	(n=847) 3.1%	(n=337) 0.6%	(n=900) 1.0%	0.001
Basal Cell Carcinoma on Lower Extremities	Yes	(n=847) 0.2%	(n=337) 0.0%	(n=900) 0.2%	0.678
Squamous Cell Carcinoma	Yes	(n=847) 1.8%	(n=337) 1.2%	(n=900) 0.8%	0.173
Nonmelanoma	Yes	(n=847) 15.6%	(n=337) 13.4%	(n=900) 7.8%	<0.001
Melanoma	Yes	(n=847) 1.3%	(n=337) 0.0%	(n=900) 1.1%	0.120
Any Systemic Neoplasm	Yes	(n=863) 22.3%	(n=363) 23.1%	(n=997) 18.6%	0.069
Malignant Systemic Neoplasm	Yes	(n=863) 6.3%	(n=363) 6.6%	(n=997) 2.4%	<0.001
Benign Systemic Neoplasm	Yes	(n=863) 15.3%	(n=363) 18.2%	(n=997) 15.7%	0.429
Systemic Neoplasm of Uncertain Behavior or Unspecified Nature	Yes	(n=863) 2.4%	(n=363) 0.6%	(n=997) 1.4%	0.043
Malignant Systemic Neoplasm of Eye, Ear, Face, Head, or Neck	Yes	(n=863) 0.9%	(n=363) 1.7%	(n=997) 0.6%	0.191
Malignant Systemic Neoplasm of Oral Cavity, Pharynx, or Larynx	Yes	(n=863) 0.4%	(n=363) 1.1%	(n=997) 0.3%	0.126

Table F-1-1. (Continued)
Dependent Variable-Covariate Associations for the Neoplasia Assessment

Dependent Variable	Level	Skin Color ^a			Hair Color		
		Non-Peach	Peach	p-Value	Black or Dark Brown	Other ^b	p-Value
Any Skin Neoplasm	Yes	(n=433) 24.5%	(n=1,646) 30.9%	0.011	(n=1,427) 28.3%	(n=653) 32.3%	0.071
Malignant Skin Neoplasm	Yes	(n=433) 9.7%	(n=1,646) 13.4%	0.050	(n=1,427) 11.7%	(n=653) 14.6%	0.081
Benign Skin Neoplasm	Yes	(n=553) 16.8%	(n=1,655) 19.0%	0.285	(n=1,550) 18.2%	(n=659) 19.1%	0.650
Skin Neoplasm of Uncertain Behavior or Unspecified Nature	Yes	(n=433) 0.7%	(n=1,646) 0.5%	0.876	(n=1,427) 0.5%	(n=653) 0.6%	0.976
Any Basal Cell Carcinoma	Yes	(n=433) 8.3%	(n=1,646) 11.3%	0.089	(n=1,427) 9.9%	(n=653) 12.4%	0.098
Basal Cell Carcinoma on Eye, Ear, Face, Head, or Neck	Yes	(n=433) 6.9%	(n=1,646) 8.8%	0.247	(n=1,427) 7.3%	(n=653) 10.9%	0.008
Basal Cell Carcinoma on Trunk	Yes	(n=433) 2.1%	(n=1,646) 3.5%	0.173	(n=1,427) 3.2%	(n=653) 3.4%	0.901
Basal Cell Carcinoma on Upper Extremities	Yes	(n=433) 1.2%	(n=1,646) 1.9%	0.367	(n=1,427) 1.5%	(n=653) 2.3%	0.303
Basal Cell Carcinoma on Lower Extremities	Yes	(n=433) 0.2%	(n=1,646) 0.2%	0.999	(n=1,427) 0.1%	(n=653) 0.3%	0.792
Squamous Cell Carcinoma	Yes	(n=433) 0.7%	(n=1,646) 1.4%	0.352	(n=1,427) 1.1%	(n=653) 1.5%	0.570
Nonmelanoma	Yes	(n=433) 8.8%	(n=1,646) 12.7%	0.031	(n=1,427) 10.9%	(n=653) 14.1%	0.042
Melanoma	Yes	(n=433) 0.9%	(n=1,646) 1.0%	0.999	(n=1,427) 1.1%	(n=653) 0.8%	0.706
Any Systemic Neoplasm		--	--	--	--	--	--
Malignant Systemic Neoplasm		--	--	--	--	--	--
Benign Systemic Neoplasm		--	--	--	--	--	--
Systemic Neoplasm of Uncertain Behavior or Unspecified Nature		--	--	--	--	--	--
Malignant Systemic Neoplasm of Eye, Ear, Face, Head, or Neck		--	--	--	--	--	--
Malignant Systemic Neoplasm of Oral Cavity, Pharynx, or Larynx		--	--	--	--	--	--

^a Non-Peach = Dark, medium, or pale skin.

Peach = Dark peach or pale peach skin.

^b Other = Bald, light brown, blonde, or red hair.

--: Covariate not applicable for dependent variable.

Table F-1-1. (Continued)
Dependent Variable-Covariate Associations for the Neoplasia Assessment

Dependent Variable	Level	Eye Color			p-Value
		Brown	Hazel or Green	Gray or Blue	
Any Skin Neoplasm	Yes	(n=619) 27.0%	(n=562) 31.0%	(n=897) 30.4%	0.242
Malignant Skin Neoplasm	Yes	(n=619) 10.8%	(n=562) 12.5%	(n=897) 13.8%	0.222
Benign Skin Neoplasm	Yes	(n=742) 17.9%	(n=566) 20.0%	(n=898) 18.0%	0.579
Skin Neoplasm of Uncertain Behavior or Unspecified Nature	Yes	(n=619) 1.0%	(n=562) 0.5%	(n=897) 0.2%	0.144
Any Basal Cell Carcinoma	Yes	(n=619) 8.9%	(n=562) 11.4%	(n=897) 11.5%	0.224
Basal Cell Carcinoma on Eye, Ear, Face, Head, or Neck	Yes	(n=619) 7.3%	(n=562) 8.7%	(n=897) 9.0%	0.458
Basal Cell Carcinoma on Trunk	Yes	(n=619) 2.3%	(n=562) 4.1%	(n=897) 3.3%	0.198
Basal Cell Carcinoma on Upper Extremities	Yes	(n=619) 0.8%	(n=562) 2.5%	(n=897) 2.0%	0.073
Basal Cell Carcinoma on Lower Extremities	Yes	(n=619) 0.2%	(n=562) 0.2%	(n=897) 0.2%	0.961
Squamous Cell Carcinoma	Yes	(n=619) 0.8%	(n=562) 0.9%	(n=897) 1.8%	0.162
Nonmelanoma	Yes	(n=619) 10.0%	(n=562) 12.1%	(n=897) 12.9%	0.219
Melanoma	Yes	(n=619) 1.0%	(n=562) 0.7%	(n=897) 1.1%	0.745
Any Systemic Neoplasm		--	--	--	--
Malignant Systemic Neoplasm		--	--	--	--
Benign Systemic Neoplasm		--	--	--	--
Systemic Neoplasm of Uncertain Behavior or Unspecified Nature		--	--	--	--
Malignant Systemic Neoplasm of Eye, Ear, Face, Head, or Neck		--	--	--	--
Malignant Systemic Neoplasm of Oral Cavity, Pharynx, or Larynx		--	--	--	--

--: Covariate not applicable for dependent variable.

Table F-1-1. (Continued)
Dependent Variable-Covariate Associations for the Neoplasia Assessment

Dependent Variable	Level	Skin Reaction to Sun after at Least 2 Hours Exposure				p-Value
		No Reaction	Becomes Red	Burns	Painfully Burns	
Any Skin Neoplasm	Yes	(n=800) 24.3%	(n=832) 32.8%	(n=301) 32.2%	(n=147) 35.4%	<0.001
Malignant Skin Neoplasm	Yes	(n=800) 7.6%	(n=832) 15.0%	(n=301) 16.3%	(n=147) 19.1%	<0.001
Benign Skin Neoplasm	Yes	(n=905) 17.6%	(n=846) 19.4%	(n=310) 18.1%	(n=148) 19.6%	0.773
Skin Neoplasm of Uncertain Behavior or Unspecified Nature	Yes	(n=800) 0.6%	(n=832) 0.5%	(n=301) 0.7%	(n=147) 0.0%	0.786
Any Basal Cell Carcinoma	Yes	(n=800) 5.6%	(n=832) 13.6%	(n=301) 13.6%	(n=147) 15.7%	<0.001
Basal Cell Carcinoma on Eye, Ear, Face, Head, or Neck	Yes	(n=800) 4.3%	(n=832) 10.3%	(n=301) 11.0%	(n=147) 15.0%	<0.001
Basal Cell Carcinoma on Trunk	Yes	(n=800) 1.4%	(n=832) 4.5%	(n=301) 4.7%	(n=147) 3.4%	0.002
Basal Cell Carcinoma on Upper Extremities	Yes	(n=800) 0.9%	(n=832) 2.4%	(n=301) 2.0%	(n=147) 2.7%	0.093
Basal Cell Carcinoma on Lower Extremities	Yes	(n=800) 0.3%	(n=832) 0.2%	(n=301) 0.0%	(n=147) 0.0%	0.777
Squamous Cell Carcinoma	Yes	(n=800) 0.9%	(n=832) 1.2%	(n=301) 2.0%	(n=147) 2.0%	0.389
Nonmelanoma	Yes	(n=800) 6.8%	(n=832) 14.4%	(n=301) 15.6%	(n=147) 17.7%	<0.001
Melanoma	Yes	(n=800) 0.9%	(n=832) 0.7%	(n=301) 1.3%	(n=147) 2.7%	0.141
Any Systemic Neoplasm		--	--	--	--	--
Malignant Systemic Neoplasm		--	--	--	--	--
Benign Systemic Neoplasm		--	--	--	--	--
Systemic Neoplasm of Uncertain Behavior or Unspecified Nature		--	--	--	--	--
Malignant Systemic Neoplasm of Eye, Ear, Face, Head, or Neck		--	--	--	--	--
Malignant Systemic Neoplasm of Oral Cavity, Pharynx, or Larynx		--	--	--	--	--

--: Covariate not applicable for dependent variable.

Table F-1-1. (Continued)
Dependent Variable-Covariate Associations for the Neoplasia Assessment

Dependent Variable	Level	Skin Reaction to Sun after Repeated Exposures				p-Value
		Deeply Tanned	Moderately Tanned	Mildly Tanned	Freckled-No Tan	
Any Skin Neoplasm	Yes	(n=601) 25.5%	(n=1,070) 30.3%	(n=358) 33.2%	(n=44) 40.9%	0.017
Malignant Skin Neoplasm	Yes	(n=601) 7.8%	(n=1,070) 13.1%	(n=358) 16.5%	(n=44) 36.4%	<0.001
Benign Skin Neoplasm	Yes	(n=672) 17.9%	(n=1,112) 19.4%	(n=367) 18.5%	(n=46) 6.5%	0.159
Skin Neoplasm of Uncertain Behavior or Unspecified Nature	Yes	(n=601) 1.2%	(n=1,070) 0.1%	(n=358) 0.3%	(n=44) 2.3%	0.006
Any Basal Cell Carcinoma	Yes	(n=601) 6.5%	(n=1,070) 10.9%	(n=358) 14.3%	(n=44) 31.8%	<0.001
Basal Cell Carcinoma on Eye, Ear, Face, Head, or Neck	Yes	(n=601) 5.5%	(n=1,070) 8.3%	(n=358) 10.6%	(n=44) 31.8%	<0.001
Basal Cell Carcinoma on Trunk	Yes	(n=601) 1.2%	(n=1,070) 3.7%	(n=358) 4.8%	(n=44) 6.8%	0.004
Basal Cell Carcinoma on Upper Extremities	Yes	(n=601) 0.5%	(n=1,070) 2.0%	(n=358) 3.1%	(n=44) 4.6%	0.011
Basal Cell Carcinoma on Lower Extremities	Yes	(n=601) 0.5%	(n=1,070) 0.0%	(n=358) 0.3%	(n=44) 0.0%	0.156
Squamous Cell Carcinoma	Yes	(n=601) 0.5%	(n=1,070) 1.5%	(n=358) 1.4%	(n=44) 4.6%	0.067
Nonmelanoma	Yes	(n=601) 7.2%	(n=1,070) 12.3%	(n=358) 15.6%	(n=44) 34.1%	<0.001
Melanoma	Yes	(n=601) 0.7%	(n=1,070) 1.1%	(n=358) 1.1%	(n=44) 2.3%	0.663
Any Systemic Neoplasm		--	--	--	--	--
Malignant Systemic Neoplasm		--	--	--	--	--
Benign Systemic Neoplasm		--	--	--	--	--
Systemic Neoplasm of Uncertain Behavior or Unspecified Nature		--	--	--	--	--
Malignant Systemic Neoplasm of Eye, Ear, Face, Head, or Neck		--	--	--	--	--
Malignant Systemic Neoplasm of Oral Cavity, Pharynx, or Larynx		--	--	--	--	--

--: Covariate not applicable for dependent variable.

Table F-1-1. (Continued)
Dependent Variable-Covariate Associations for the Neoplasia Assessment

Dependent Variable	Level	Composite Sun Reaction Index ^c			p-Value
		Low	Medium	High	
Any Skin Neoplasm	Yes	(n=1,451) 28.5%	(n=461) 30.8%	(n=169) 36.7%	0.071
Malignant Skin Neoplasm	Yes	(n=1,451) 10.5%	(n=461) 15.8%	(n=169) 21.9%	<0.001
Benign Skin Neoplasm	Yes	(n=1,561) 19.0%	(n=477) 17.0%	(n=172) 18.0%	0.594
Skin Neoplasm of Uncertain Behavior or Unspecified Nature	Yes	(n=1,451) 0.6%	(n=461) 0.2%	(n=169) 0.6%	0.578
Any Basal Cell Carcinoma	Yes	(n=1,451) 8.8%	(n=461) 13.5%	(n=169) 18.9%	<0.001
Basal Cell Carcinoma on Eye, Ear, Face, Head, or Neck	Yes	(n=1,451) 7.0%	(n=461) 9.3%	(n=169) 18.3%	<0.001
Basal Cell Carcinoma on Trunk	Yes	(n=1,451) 2.6%	(n=461) 5.2%	(n=169) 3.6%	0.018
Basal Cell Carcinoma on Upper Extremities	Yes	(n=1,451) 1.3%	(n=461) 2.8%	(n=169) 3.0%	0.049
Basal Cell Carcinoma on Lower Extremities	Yes	(n=1,451) 0.2%	(n=461) 0.2%	(n=169) 0.0%	0.837
Squamous Cell Carcinoma	Yes	(n=1,451) 1.0%	(n=461) 2.0%	(n=169) 1.8%	0.204
Nonmelanoma	Yes	(n=1,451) 9.8%	(n=461) 15.2%	(n=169) 20.7%	<0.001
Melanoma	Yes	(n=1,451) 0.8%	(n=461) 1.1%	(n=169) 2.4%	0.163
Any Systemic Neoplasm		--	--	--	--
Malignant Systemic Neoplasm		--	--	--	--
Benign Systemic Neoplasm		--	--	--	--
Systemic Neoplasm of Uncertain Behavior or Unspecified Nature		--	--	--	--
Malignant Systemic Neoplasm of Eye, Ear, Face, Head, or Neck		--	--	--	--
Malignant Systemic Neoplasm of Oral Cavity, Pharynx, or Larynx		--	--	--	--

^c Low = Painfully burns after at least 2 hours exposure or freckles with no tan after repeated exposures.
Medium = Burns after at least 2 hours exposure or mildly tans after repeated exposures.
High = All other reactions.

--: Covariate not applicable for dependent variable.

Table F-1-1. (Continued)
Dependent Variable-Covariate Associations for the Neoplasia Assessment

Dependent Variable	Level	Average Lifetime Residential Latitude			Asbestos Exposure		
		<37°	≥37°	p-Value	No	Yes	p-Value
Any Skin Neoplasm		(n=1,004)	(n=1,058)		(n=1,522)	(n=562)	
	Yes	31.7%	28.0%	0.074	29.7%	29.4%	0.923
Malignant Skin Neoplasm		(n=1,004)	(n=1,058)		(n=1,522)	(n=562)	
	Yes	15.2%	10.3%	0.001	13.3%	10.7%	0.121
Benign Skin Neoplasm		(n=1,083)	(n=1,108)		(n=1,602)	(n=612)	
	Yes	17.7%	19.3%	0.368	18.1%	19.4%	0.505
Skin Neoplasm of Uncertain Behavior or Unspecified Nature		(n=1,004)	(n=1,058)		(n=1,522)	(n=562)	
	Yes	0.7%	0.4%	0.489	0.4%	0.9%	0.296
Any Basal Cell Carcinoma		(n=1,004)	(n=1,058)		(n=1,522)	(n=562)	
	Yes	13.5%	8.1%	<0.001	11.2%	9.3%	0.238
Basal Cell Carcinoma on Eye, Ear, Face, Head, or Neck		(n=1,004)	(n=1,058)		(n=1,522)	(n=562)	
	Yes	10.9%	6.1%	<0.001	8.6%	7.8%	0.632
Basal Cell Carcinoma on Trunk		(n=1,004)	(n=1,058)		(n=1,522)	(n=562)	
	Yes	4.2%	2.3%	0.019	3.8%	1.8%	0.034
Basal Cell Carcinoma on Upper Extremities		(n=1,004)	(n=1,058)		(n=1,522)	(n=562)	
	Yes	2.3%	1.3%	0.137	2.1%	0.9%	0.094
Basal Cell Carcinoma on Lower Extremities		(n=1,004)	(n=1,058)		(n=1,522)	(n=562)	
	Yes	0.1%	0.3%	0.654	0.1%	0.4%	0.635
Squamous Cell Carcinoma		(n=1,004)	(n=1,058)		(n=1,522)	(n=562)	
	Yes	1.7%	0.9%	0.129	1.5%	0.7%	0.264
Nonmelanoma		(n=1,004)	(n=1,058)		(n=1,522)	(n=562)	
	Yes	14.9%	9.1%	<0.001	12.6%	9.8%	0.090
Melanoma		(n=1,004)	(n=1,058)		(n=1,522)	(n=562)	
	Yes	0.6%	1.4%	0.102	1.1%	0.9%	0.936
Any Systemic Neoplasm		--	--	--	(n=1,607)	(n=616)	
	Yes				20.9%	20.3%	0.748
Malignant Systemic Neoplasm		--	--	--	(n=1,607)	(n=616)	
	Yes				4.8%	4.1%	0.531
Benign Systemic Neoplasm		--	--	--	(n=1,607)	(n=616)	
	Yes				16.1%	15.6%	0.836
Systemic Neoplasm of Uncertain Behavior or Unspecified Nature		--	--	--	(n=1,607)	(n=616)	
	Yes				1.7%	1.5%	0.780
Malignant Systemic Neoplasm of Eye, Ear, Face, Head, or Neck		--	--	--	(n=1,607)	(n=616)	
	Yes				0.9%	0.8%	0.983
Malignant Systemic Neoplasm of Oral Cavity, Pharynx, or Larynx		--	--	--	(n=1,607)	(n=616)	
	Yes				0.4%	0.5%	0.999

--: Covariate not applicable for dependent variable.

Table F-1-1. (Continued)
Dependent Variable-Covariate Associations for the Neoplasia Assessment

Dependent Variable	Level	Ionizing Radiation Exposure			Industrial Chemical Exposure		
		No	Yes	p-Value	No	Yes	p-Value
Any Skin Neoplasm	Yes	(n=1,588) 28.6%	(n=496) 32.9%	0.078	(n=868) 30.3%	(n=1,216) 29.1%	0.591
Malignant Skin Neoplasm	Yes	(n=1,588) 12.0%	(n=496) 14.5%	0.168	(n=868) 13.7%	(n=1,216) 11.8%	0.231
Benign Skin Neoplasm	Yes	(n=1,674) 17.9%	(n=540) 20.4%	0.214	(n=915) 18.8%	(n=1,299) 18.2%	0.784
Skin Neoplasm of Uncertain Behavior or Unspecified Nature	Yes	(n=1,588) 0.6%	(n=496) 0.4%	0.933	(n=868) 0.5%	(n=1,216) 0.6%	0.960
Any Basal Cell Carcinoma	Yes	(n=1,588) 10.1%	(n=496) 12.5%	0.149	(n=868) 11.5%	(n=1,216) 10.0%	0.311
Basal Cell Carcinoma on Eye, Ear, Face, Head, or Neck	Yes	(n=1,588) 7.9%	(n=496) 10.1%	0.145	(n=868) 9.1%	(n=1,216) 7.9%	0.369
Basal Cell Carcinoma on Trunk	Yes	(n=1,588) 3.1%	(n=496) 3.6%	0.650	(n=868) 3.9%	(n=1,216) 2.7%	0.159
Basal Cell Carcinoma on Upper Extremities	Yes	(n=1,588) 1.8%	(n=496) 1.6%	0.905	(n=868) 2.0%	(n=1,216) 1.6%	0.714
Basal Cell Carcinoma on Lower Extremities	Yes	(n=1,588) 0.3%	(n=496) 0.0%	0.595	(n=868) 0.0%	(n=1,216) 0.3%	0.237
Squamous Cell Carcinoma	Yes	(n=1,588) 1.1%	(n=496) 1.6%	0.543	(n=868) 1.6%	(n=1,216) 1.0%	0.285
Nonmelanoma	Yes	(n=1,588) 11.3%	(n=496) 13.7%	0.166	(n=868) 13.3%	(n=1,216) 10.9%	0.110
Melanoma	Yes	(n=1,588) 1.0%	(n=496) 1.0%	0.999	(n=868) 0.6%	(n=1,216) 1.3%	0.149
Any Systemic Neoplasm	Yes	(n=1,677) 20.6%	(n=546) 21.1%	0.877	(n=918) 23.9%	(n=1,305) 18.5%	0.003
Malignant Systemic Neoplasm	Yes	(n=1,677) 4.2%	(n=546) 5.7%	0.200	(n=918) 5.8%	(n=1,305) 3.8%	0.033
Benign Systemic Neoplasm	Yes	(n=1,677) 16.2%	(n=546) 15.2%	0.642	(n=918) 18.3%	(n=1,305) 14.3%	0.012
Systemic Neoplasm of Uncertain Behavior or Unspecified Nature	Yes	(n=1,677) 1.6%	(n=546) 2.0%	0.586	(n=918) 2.0%	(n=1,305) 1.5%	0.455
Malignant Systemic Neoplasm of Eye, Ear, Face, Head, or Neck	Yes	(n=1,677) 0.8%	(n=546) 1.1%	0.759	(n=918) 1.1%	(n=1,305) 0.8%	0.571
Malignant Systemic Neoplasm of Oral Cavity, Pharynx, or Larynx	Yes	(n=1,677) 0.3%	(n=546) 0.9%	0.132	(n=918) 0.5%	(n=1,305) 0.4%	0.812

Table F-1-1. (Continued)
Dependent Variable-Covariate Associations for the Neoplasia Assessment

Dependent Variable	Level	Herbicide Exposure			Insecticide Exposure		
		No	Yes	p-Value	No	Yes	p-Value
Any Skin Neoplasm		(n=786)	(n=1,298)		(n=650)	(n=1,434)	
	Yes	27.5%	30.9%	0.109	28.5%	30.1%	0.472
Malignant Skin Neoplasm		(n=786)	(n=1,298)		(n=650)	(n=1,434)	
	Yes	11.5%	13.3%	0.237	11.5%	13.1%	0.352
Benign Skin Neoplasm		(n=838)	(n=1,376)		(n=700)	(n=1,514)	
	Yes	17.5%	19.0%	0.409	18.3%	18.6%	0.924
Skin Neoplasm of Uncertain Behavior or Unspecified Nature		(n=786)	(n=1,298)		(n=650)	(n=1,434)	
	Yes	0.6%	0.5%	0.827	0.6%	0.5%	0.964
Any Basal Cell Carcinoma		(n=786)	(n=1,298)		(n=650)	(n=1,434)	
	Yes	9.2%	11.6%	0.100	9.1%	11.4%	0.135
Basal Cell Carcinoma on Eye, Ear, Face, Head, or Neck		(n=786)	(n=1,298)		(n=650)	(n=1,434)	
	Yes	7.4%	9.0%	0.221	7.4%	8.9%	0.300
Basal Cell Carcinoma on Trunk		(n=786)	(n=1,298)		(n=650)	(n=1,434)	
	Yes	2.4%	3.7%	0.139	2.8%	3.4%	0.520
Basal Cell Carcinoma on Upper Extremities		(n=786)	(n=1,298)		(n=650)	(n=1,434)	
	Yes	1.7%	1.9%	0.876	1.5%	1.9%	0.710
Basal Cell Carcinoma on Lower Extremities		(n=786)	(n=1,298)		(n=650)	(n=1,434)	
	Yes	0.3%	0.2%	0.999	0.0%	0.3%	0.419
Squamous Cell Carcinoma		(n=786)	(n=1,298)		(n=650)	(n=1,434)	
	Yes	1.5%	1.1%	0.490	1.7%	1.1%	0.308
Nonmelanoma		(n=786)	(n=1,298)		(n=650)	(n=1,434)	
	Yes	10.8%	12.5%	0.284	10.8%	12.3%	0.339
Melanoma		(n=786)	(n=1,298)		(n=650)	(n=1,434)	
	Yes	0.8%	1.2%	0.520	1.1%	1.0%	0.999
Any Systemic Neoplasm		(n=839)	(n=1,384)		(n=701)	(n=1,522)	
	Yes	19.3%	21.6%	0.215	20.8%	20.7%	0.988
Malignant Systemic Neoplasm		(n=839)	(n=1,384)		(n=701)	(n=1,522)	
	Yes	4.4%	4.7%	0.835	4.9%	4.5%	0.771
Benign Systemic Neoplasm		(n=839)	(n=1,384)		(n=701)	(n=1,522)	
	Yes	14.5%	16.8%	0.184	15.8%	16.0%	0.987
Systemic Neoplasm of Uncertain Behavior or Unspecified Nature		(n=839)	(n=1,384)		(n=701)	(n=1,522)	
	Yes	1.3%	1.9%	0.399	1.7%	1.6%	0.999
Malignant Systemic Neoplasm of Eye, Ear, Face, Head, or Neck		(n=839)	(n=1,384)		(n=701)	(n=1,522)	
	Yes	0.7%	1.0%	0.627	0.9%	0.9%	0.999
Malignant Systemic Neoplasm of Oral Cavity, Pharynx, or Larynx		(n=839)	(n=1,384)		(n=701)	(n=1,522)	
	Yes	0.4%	0.5%	0.858	0.4%	0.5%	0.999

Table F-1-1. (Continued)
Dependent Variable-Covariate Associations for the Neoplasia Assessment

Dependent Variable	Level	Degreasing Chemical Exposure		
		No	Yes	p-Value
Any Skin Neoplasm	Yes	(n=770) 30.9%	(n=1,314) 28.8%	0.343
Malignant Skin Neoplasm	Yes	(n=770) 14.4%	(n=1,314) 11.6%	0.069
Benign Skin Neoplasm	Yes	(n=820) 18.4%	(n=1,394) 18.5%	0.999
Skin Neoplasm of Uncertain Behavior or Unspecified Nature	Yes	(n=770) 0.4%	(n=1,314) 0.6%	0.724
Any Basal Cell Carcinoma	Yes	(n=770) 11.6%	(n=1,314) 10.1%	0.341
Basal Cell Carcinoma on Eye, Ear, Face, Head, or Neck	Yes	(n=770) 9.0%	(n=1,314) 8.1%	0.530
Basal Cell Carcinoma on Trunk	Yes	(n=770) 3.9%	(n=1,314) 2.8%	0.222
Basal Cell Carcinoma on Upper Extremities	Yes	(n=770) 2.0%	(n=1,314) 1.7%	0.776
Basal Cell Carcinoma on Lower Extremities	Yes	(n=770) 0.1%	(n=1,314) 0.2%	0.999
Squamous Cell Carcinoma	Yes	(n=770) 1.7%	(n=1,314) 1.0%	0.237
Nonmelanoma	Yes	(n=770) 13.4%	(n=1,314) 11.0%	0.115
Melanoma	Yes	(n=770) 1.3%	(n=1,314) 0.8%	0.429
Any Systemic Neoplasm	Yes	(n=822) 22.0%	(n=1,401) 20.0%	0.277
Malignant Systemic Neoplasm	Yes	(n=822) 5.4%	(n=1,401) 4.1%	0.255
Benign Systemic Neoplasm	Yes	(n=822) 16.3%	(n=1,401) 15.7%	0.755
Systemic Neoplasm of Uncertain Behavior or Unspecified Nature	Yes	(n=822) 2.2%	(n=1,401) 1.4%	0.190
Malignant Systemic Neoplasm of Eye, Ear, Face, Head, or Neck	Yes	(n=822) 1.1%	(n=1,401) 0.8%	0.607
Malignant Systemic Neoplasm of Oral Cavity, Pharynx, or Larynx	Yes	(n=822) 0.5%	(n=1,401) 0.4%	0.999

Table F-1-1. (Continued)
Dependent Variable-Covariate Associations for the Neoplasia Assessment

Dependent Variable	Level	Lifetime Cigarette Smoking History (Pack-years)			p-Value
		0	>0-10	>10	
Any Skin Neoplasm		--	--	--	--
Malignant Skin Neoplasm		--	--	--	--
Benign Skin Neoplasm		--	--	--	--
Skin Neoplasm of Uncertain Behavior or Unspecified Nature		--	--	--	--
Any Basal Cell Carcinoma		--	--	--	--
Basal Cell Carcinoma on Eye, Ear, Face, Head, or Neck		--	--	--	--
Basal Cell Carcinoma on Trunk		--	--	--	--
Basal Cell Carcinoma on Upper Extremities		--	--	--	--
Basal Cell Carcinoma on Lower Extremities		--	--	--	--
Squamous Cell Carcinoma		--	--	--	--
Nonmelanoma		--	--	--	--
Melanoma		--	--	--	--
Any Systemic Neoplasm		(n=608)	(n=680)	(n=932)	
	Yes	19.7%	18.1%	23.3%	0.031
Malignant Systemic Neoplasm		(n=608)	(n=680)	(n=932)	
	Yes	4.3%	2.7%	6.2%	0.003
Benign Systemic Neoplasm		(n=608)	(n=680)	(n=932)	
	Yes	15.6%	15.4%	16.5%	0.815
Systemic Neoplasm of Uncertain Behavior or Unspecified Nature		(n=608)	(n=680)	(n=932)	
	Yes	1.2%	1.5%	2.0%	0.376
Malignant Systemic Neoplasm of Eye, Ear, Face, Head, or Neck		(n=608)	(n=680)	(n=932)	
	Yes	0.7%	0.4%	1.4%	0.102
Malignant Systemic Neoplasm of Oral Cavity, Pharynx, or Larynx		(n=608)	(n=680)	(n=932)	
	Yes	0.3%	0.2%	0.8%	0.176

--: Covariate not applicable for dependent variable.

Table F-1-1. (Continued)
Dependent Variable-Covariate Associations for the Neoplasia Assessment

Dependent Variable	Level	Lifetime Alcohol History (Drink-years)			p-Value
		0	>0-40	>40	
Any Skin Neoplasm		--	--	--	--
Malignant Skin Neoplasm		--	--	--	--
Benign Skin Neoplasm		--	--	--	--
Skin Neoplasm of Uncertain Behavior or Unspecified Nature		--	--	--	--
Any Basal Cell Carcinoma		--	--	--	--
Basal Cell Carcinoma on Eye, Ear, Face, Head, or Neck		--	--	--	--
Basal Cell Carcinoma on Trunk		--	--	--	--
Basal Cell Carcinoma on Upper Extremities		--	--	--	--
Basal Cell Carcinoma on Lower Extremities		--	--	--	--
Squamous Cell Carcinoma		--	--	--	--
Nonmelanoma		--	--	--	--
Melanoma		--	--	--	--
Any Systemic Neoplasm	Yes	(n=134) 20.2%	(n=1,487) 19.9%	(n=560) 21.4%	0.746
Malignant Systemic Neoplasm	Yes	(n=134) 2.2%	(n=1,487) 4.3%	(n=560) 5.5%	0.209
Benign Systemic Neoplasm	Yes	(n=134) 19.4%	(n=1,487) 15.1%	(n=560) 16.1%	0.405
Systemic Neoplasm of Uncertain Behavior or Unspecified Nature	Yes	(n=134) 0.0%	(n=1,487) 1.8%	(n=560) 1.6%	0.304
Malignant Systemic Neoplasm of Eye, Ear, Face, Head, or Neck	Yes	(n=134) 1.5%	(n=1,487) 0.8%	(n=560) 1.1%	0.659
Malignant Systemic Neoplasm of Oral Cavity, Pharynx, or Larynx	Yes	(n=134) 0.8%	(n=1,487) 0.3%	(n=560) 0.7%	0.465

--: Covariate not applicable for dependent variable.

Table F-1-1. (Continued)
Dependent Variable-Covariate Associations for the Neoplasia Assessment

Dependent Variable	Level	Age			Race		
		Born ≥ 1942	Born < 1942	p-Value	Black	Non-Black	p-Value
Malignant Systemic Neoplasm of Esophagus	Yes	(n=954) 0.0%	(n=1,269) 0.1%	0.999	(n=130) 0.0%	(n=2,093) 0.1%	0.999
Malignant Systemic Neoplasm of Brain	Yes	(n=954) 0.0%	(n=1,269) 0.2%	0.609	(n=130) 0.0%	(n=2,093) 0.1%	0.999
Malignant Systemic Neoplasm of Thymus, Heart, or Mediastinum	Yes	(n=954) 0.2%	(n=1,269) 0.0%	0.359	(n=130) 0.0%	(n=2,093) 0.1%	0.999
Malignant Systemic Neoplasm of Thyroid Gland	Yes	(n=954) 0.0%	(n=1,269) 0.3%	0.219	(n=130) 0.0%	(n=2,093) 0.2%	0.999
Malignant Systemic Neoplasm of Bronchus or Lung	Yes	(n=954) 0.1%	(n=1,269) 0.7%	0.074	(n=130) 0.0%	(n=2,093) 0.5%	0.909
Malignant Systemic Neoplasm of Colon or Rectum	Yes	(n=954) 0.3%	(n=1,269) 0.5%	0.807	(n=130) 0.0%	(n=2,093) 0.4%	0.970
Malignant Systemic Neoplasm of Kidney or Bladder	Yes	(n=954) 0.2%	(n=1,269) 0.7%	0.175	(n=130) 0.8%	(n=2,093) 0.5%	0.999
Malignant Systemic Neoplasm of Prostate	Yes	(n=954) 0.1%	(n=1,269) 3.0%	<0.001	(n=130) 2.3%	(n=2,093) 1.7%	0.880
Malignant Systemic Neoplasm of Testicles	Yes	(n=954) 0.0%	(n=1,269) 0.2%	0.358	(n=130) 0.0%	(n=2,093) 0.1%	0.999
Malignant Systemic Neoplasm of Ill-Defined Sites	Yes	(n=954) 0.0%	(n=1,269) 0.3%	0.219	(n=130) 0.0%	(n=2,093) 0.2%	0.999
Malignant Systemic Neoplasm of Connective and Other Soft Tissues	Yes	(n=954) 0.1%	(n=1,269) 0.1%	0.999	(n=130) 0.0%	(n=2,093) 0.1%	0.999
Carcinoma in Situ of the Penis, Other, and Unspecified Sites	Yes	(n=954) 0.1%	(n=1,269) 0.1%	0.999	(n=130) 0.0%	(n=2,093) 0.1%	0.999
Hodgkin's Disease	Yes	(n=954) 0.0%	(n=1,269) 0.2%	0.609	(n=130) 0.0%	(n=2,093) 0.1%	0.999
Leukemia	Yes	(n=954) 0.1%	(n=1,269) 0.1%	0.999	(n=130) 0.0%	(n=2,093) 0.1%	0.999
Non-Hodgkin's Lymphoma	Yes	(n=954) 0.1%	(n=1,269) 0.3%	0.559	(n=130) 0.0%	(n=2,093) 0.2%	0.999
Other Malignant Systemic Neoplasms of Lymphoid and Histiocytic Tissue	Yes	(n=954) 0.0%	(n=1,269) 0.2%	0.609	(n=130) 0.0%	(n=2,093) 0.1%	0.999
Multiple Myeloma	Yes	(n=954) 0.1%	(n=1,269) 0.0%	0.886	(n=130) 0.0%	(n=2,093) 0.1%	0.999
Any Skin or Systemic Neoplasm	Yes	(n=949) 35.0%	(n=1,255) 48.8%	<0.001	(n=129) 34.9%	(n=2,075) 43.4%	0.072
Prostate-Specific Antigen (continuous - ng/ml) ^d	ASL	(n=2,163) r=0.299		<0.001	(n=128) x̄=1.094	(n=2,034) x̄=1.015	0.336
(discrete)	BSL	(n=953) 2.1%	(n=1,269) 3.2%	0.166	(n=130) 1.5%	(n=2,092) 2.8%	0.573
(discrete)	Abnormal	1.1%	6.8%	<0.001	9.2%	4.0%	0.009

^d Analysis based on natural logarithm of prostate-specific antigen for measurements at or above sensitivity level; means transformed from natural logarithm of prostate-specific antigen scale.

Note: ASL - At or above sensitivity limit.
BSL - Below sensitivity limit.

Table F-1-1. (Continued)
Dependent Variable-Covariate Associations for the Neoplasia Assessment

Dependent Variable	Level	Occupation			p-Value
		Officer	Enlisted Flyer	Enlisted Groundcrew	
Malignant Systemic Neoplasm of Esophagus	Yes	(n=863) 0.0%	(n=363) 0.3%	(n=997) 0.0%	0.077
Malignant Systemic Neoplasm of Brain	Yes	(n=863) 0.1%	(n=363) 0.3%	(n=997) 0.0%	0.309
Malignant Systemic Neoplasm of Thymus, Heart, or Mediastinum	Yes	(n=863) 0.1%	(n=363) 0.0%	(n=997) 0.1%	0.817
Malignant Systemic Neoplasm of Thyroid Gland	Yes	(n=863) 0.4%	(n=363) 0.0%	(n=997) 0.1%	0.308
Malignant Systemic Neoplasm of Bronchus or Lung	Yes	(n=863) 0.6%	(n=363) 0.8%	(n=997) 0.2%	0.240
Malignant Systemic Neoplasm of Colon or Rectum	Yes	(n=863) 0.7%	(n=363) 0.6%	(n=997) 0.1%	0.117
Malignant Systemic Neoplasm of Kidney or Bladder	Yes	(n=863) 0.9%	(n=363) 0.3%	(n=997) 0.2%	0.068
Malignant Systemic Neoplasm of Prostate	Yes	(n=863) 2.9%	(n=363) 2.7%	(n=997) 0.6%	0.001
Malignant Systemic Neoplasm of Testicles	Yes	(n=863) 0.1%	(n=363) 0.3%	(n=997) 0.1%	0.725
Malignant Systemic Neoplasm of Ill-Defined Sites	Yes	(n=863) 0.2%	(n=363) 0.3%	(n=997) 0.1%	0.717
Malignant Systemic Neoplasm of Connective and Other Soft Tissues	Yes	(n=863) 0.1%	(n=363) 0.0%	(n=997) 0.1%	0.817
Carcinoma in Situ of the Penis, Other, and Unspecified Sites	Yes	(n=863) 0.1%	(n=363) 0.0%	(n=997) 0.1%	0.817
Hodgkin's Disease	Yes	(n=863) 0.2%	(n=363) 0.0%	(n=997) 0.0%	0.207
Leukemia	Yes	(n=863) 0.0%	(n=363) 0.3%	(n=997) 0.1%	0.336
Non-Hodgkin's Lymphoma	Yes	(n=863) 0.4%	(n=363) 0.3%	(n=997) 0.1%	0.519
Other Malignant Systemic Neoplasms of Lymphoid and Histiocytic Tissue	Yes	(n=863) 0.1%	(n=363) 0.0%	(n=997) 0.1%	0.817
Multiple Myeloma	Yes	(n=863) 0.0%	(n=363) 0.0%	(n=997) 0.1%	0.541
Any Skin or Systemic Neoplasm	Yes	(n=854) 47.1%	(n=360) 45.3%	(n=990) 38.4%	0.001
Prostate-Specific Antigen (continuous - ng/ml) ^d	ASL	(n=834) $\bar{x}=1.123$	(n=355) $\bar{x}=1.121$	(n=973) $\bar{x}=0.901$	<0.001
(discrete)	BSL	(n=863) 3.4%	(n=362) 1.9%	(n=997) 2.4%	0.277
(discrete)	Abnormal	5.5%	6.1%	2.1%	0.003

^d Analysis based on natural logarithm of prostate-specific antigen for measurements at or above sensitivity level; means transformed from natural logarithm of prostate-specific antigen scale.

Note: ASL - At or above sensitivity limit.

BSL - Below sensitivity limit.

Table F-1-1. (Continued)
Dependent Variable-Covariate Associations for the Neoplasia Assessment

Dependent Variable	Level	Skin Color ^a			Hair Color		
		Non-Peach	Peach	p-Value	Black or Dark Brown	Other ^b	p-Value
Malignant Systemic Neoplasm of Esophagus		--	--	--	--	--	--
Malignant Systemic Neoplasm of Brain		--	--	--	--	--	--
Malignant Systemic Neoplasm of Thymus, Heart, or Mediastinum		--	--	--	--	--	--
Malignant Systemic Neoplasm of Thyroid Gland		--	--	--	--	--	--
Malignant Systemic Neoplasm of Bronchus or Lung		--	--	--	--	--	--
Malignant Systemic Neoplasm of Colon or Rectum		--	--	--	--	--	--
Malignant Systemic Neoplasm of Kidney or Bladder		--	--	--	--	--	--
Malignant Systemic Neoplasm of Prostate		--	--	--	--	--	--
Malignant Systemic Neoplasm of Testicles		--	--	--	--	--	--
Malignant Systemic Neoplasm of Ill-Defined Sites		--	--	--	--	--	--
Malignant Systemic Neoplasm of Connective and Other Soft Tissues		--	--	--	--	--	--
Carcinoma in Situ of the Penis, Other, and Unspecified Sites		--	--	--	--	--	--
Hodgkin's Disease		--	--	--	--	--	--
Leukemia		--	--	--	--	--	--
Non-Hodgkin's Lymphoma		--	--	--	--	--	--
Other Malignant Systemic Neoplasms of Lymphoid and Histiocytic Tissue		--	--	--	--	--	--
Multiple Myeloma		--	--	--	--	--	--
Any Skin or Systemic Neoplasm	Yes	(n=551) 37.0%	(n=1,647) 44.7%	0.002	(n=1,545) 41.6%	(n=654) 45.7%	0.079
Prostate-Specific Antigen (continuous - ng/ml)		--	--	--	--	--	--
(discrete)		--	--	--	--	--	--
(discrete)		--	--	--	--	--	--

^a Non-Peach = Dark, medium, or pale skin.

Peach = Dark peach or pale peach skin.

^b Other = Bald, light brown, blonde, or red hair.

--: Covariate not applicable for dependent variable.

Table F-1-1. (Continued)
Dependent Variable-Covariate Associations for the Neoplasia Assessment

Dependent Variable	Level	Eye Color			p-Value
		Brown	Hazel or Green	Gray or Blue	
Malignant Systemic Neoplasm of Esophagus		--	--	--	--
Malignant Systemic Neoplasm of Brain		--	--	--	--
Malignant Systemic Neoplasm of Thymus, Heart, or Mediastinum		--	--	--	--
Malignant Systemic Neoplasm of Thyroid Gland		--	--	--	--
Malignant Systemic Neoplasm of Bronchus or Lung		--	--	--	--
Malignant Systemic Neoplasm of Colon or Rectum		--	--	--	--
Malignant Systemic Neoplasm of Kidney or Bladder		--	--	--	--
Malignant Systemic Neoplasm of Prostate		--	--	--	--
Malignant Systemic Neoplasm of Testicles		--	--	--	--
Malignant Systemic Neoplasm of Ill-Defined Sites		--	--	--	--
Malignant Systemic Neoplasm of Connective and Other Soft Tissues		--	--	--	--
Carcinoma in Situ of the Penis, Other, and Unspecified Sites		--	--	--	--
Hodgkin's Disease		--	--	--	--
Leukemia		--	--	--	--
Non-Hodgkin's Lymphoma		--	--	--	--
Other Malignant Systemic Neoplasms of Lymphoid and Histiocytic Tissue		--	--	--	--
Multiple Myeloma		--	--	--	--
Any Skin or Systemic Neoplasm	Yes	(n=740) 38.0%	(n=564) 46.1%	(n=892) 44.6%	0.005
Prostate-Specific Antigen (continuous - ng/ml)		--	--	--	--
(discrete)		--	--	--	--
(discrete)		--	--	--	--

--: Covariate not applicable for dependent variable.

Table F-1-1. (Continued)
Dependent Variable-Covariate Associations for the Neoplasia Assessment

Dependent Variable	Level	Skin Reaction to Sun after at Least 2 Hours Exposure				p-Value
		No Reaction	Becomes Red	Burns	Painfully Burns	
Malignant Systemic Neoplasm of Esophagus		--	--	--	--	--
Malignant Systemic Neoplasm of Brain		--	--	--	--	--
Malignant Systemic Neoplasm of Thymus, Heart, or Mediastinum		--	--	--	--	--
Malignant Systemic Neoplasm of Thyroid Gland		--	--	--	--	--
Malignant Systemic Neoplasm of Bronchus or Lung		--	--	--	--	--
Malignant Systemic Neoplasm of Colon or Rectum		--	--	--	--	--
Malignant Systemic Neoplasm of Kidney or Bladder		--	--	--	--	--
Malignant Systemic Neoplasm of Prostate		--	--	--	--	--
Malignant Systemic Neoplasm of Testicles		--	--	--	--	--
Malignant Systemic Neoplasm of Ill-Defined Sites		--	--	--	--	--
Malignant Systemic Neoplasm of Connective and Other Soft Tissues		--	--	--	--	--
Carcinoma in Situ of the Penis, Other, and Unspecified Sites		--	--	--	--	--
Hodgkin's Disease		--	--	--	--	--
Leukemia		--	--	--	--	--
Non-Hodgkin's Lymphoma		--	--	--	--	--
Other Malignant Systemic Neoplasms of Lymphoid and Histiocytic Tissue		--	--	--	--	--
Multiple Myeloma		--	--	--	--	--
Any Skin or Systemic Neoplasm	Yes	(n=902) 39.9%	(n=842) 44.5%	(n=308) 43.2%	(n=147) 50.0%	0.073
Prostate-Specific Antigen (continuous - ng/ml)		--	--	--	--	--
(discrete)		--	--	--	--	--
(discrete)		--	--	--	--	--

--: Covariate not applicable for dependent variable.

Table F-1-1. (Continued)
Dependent Variable-Covariate Associations for the Neoplasia Assessment

Dependent Variable	Level	Skin Reaction to Sun after Repeated Exposures				p-Value
		Deeply Tanned	Moderately Tanned	Mildly Tanned	Freckled-No Tan	
Malignant Systemic Neoplasm of Esophagus		--	--	--	--	--
Malignant Systemic Neoplasm of Brain		--	--	--	--	--
Malignant Systemic Neoplasm of Thymus, Heart, or Mediastinum		--	--	--	--	--
Malignant Systemic Neoplasm of Thyroid Gland		--	--	--	--	--
Malignant Systemic Neoplasm of Bronchus or Lung		--	--	--	--	--
Malignant Systemic Neoplasm of Colon or Rectum		--	--	--	--	--
Malignant Systemic Neoplasm of Kidney or Bladder		--	--	--	--	--
Malignant Systemic Neoplasm of Prostate		--	--	--	--	--
Malignant Systemic Neoplasm of Testicles		--	--	--	--	--
Malignant Systemic Neoplasm of Ill-Defined Sites		--	--	--	--	--
Malignant Systemic Neoplasm of Connective and Other Soft Tissues		--	--	--	--	--
Carcinoma in Situ of the Penis, Other, and Unspecified Sites		--	--	--	--	--
Hodgkin's Disease		--	--	--	--	--
Leukemia		--	--	--	--	--
Non-Hodgkin's Lymphoma		--	--	--	--	--
Other Malignant Systemic Neoplasms of Lymphoid and Histiocytic Tissue		--	--	--	--	--
Multiple Myeloma		--	--	--	--	--
Any Skin or Systemic Neoplasm	Yes	(n=667) 38.8%	(n=1,109) 43.6%	(n=365) 46.3%	(n=46) 45.7%	0.089
Prostate-Specific Antigen (continuous - ng/ml)		--	--	--	--	--
(discrete)		--	--	--	--	--
(discrete)		--	--	--	--	--

--: Covariate not applicable for dependent variable.

Table F-1-1. (Continued)
Dependent Variable-Covariate Associations for the Neoplasia Assessment

Dependent Variable	Level	Composite Sun Reaction Index ^c			p-Value
		Low	Medium	High	
Malignant Systemic Neoplasm of Esophagus		--	--	--	--
Malignant Systemic Neoplasm of Brain		--	--	--	--
Malignant Systemic Neoplasm of Thymus, Heart, or Mediastinum		--	--	--	--
Malignant Systemic Neoplasm of Thyroid Gland		--	--	--	--
Malignant Systemic Neoplasm of Bronchus or Lung		--	--	--	--
Malignant Systemic Neoplasm of Colon or Rectum		--	--	--	--
Malignant Systemic Neoplasm of Kidney or Bladder		--	--	--	--
Malignant Systemic Neoplasm of Prostate		--	--	--	--
Malignant Systemic Neoplasm of Testicles		--	--	--	--
Malignant Systemic Neoplasm of Ill-Defined Sites		--	--	--	--
Malignant Systemic Neoplasm of Connective and Other Soft Tissues		--	--	--	--
Carcinoma in Situ of the Penis, Other, and Unspecified Sites		--	--	--	--
Hodgkin's Disease		--	--	--	--
Leukemia		--	--	--	--
Non-Hodgkin's Lymphoma		--	--	--	--
Other Malignant Systemic Neoplasms of Lymphoid and Histiocytic Tissue		--	--	--	--
Multiple Myeloma		--	--	--	--
Any Skin or Systemic Neoplasm	Yes	(n=1,554) 42.1%	(n=475) 43.2%	(n=171) 48.5%	0.266
Prostate-Specific Antigen (continuous - ng/ml)		--	--	--	--
(discrete)		--	--	--	--
(discrete)		--	--	--	--

^c Low = Painfully burns after at least 2 hours exposure or freckles with no tan after repeated exposures.
Medium = Burns after at least 2 hours exposure or mildly tans after repeated exposures.
High = All other reactions.

--: Covariate not applicable for dependent variable.

Table F-1-1. (Continued)
Dependent Variable-Covariate Associations for the Neoplasia Assessment

Dependent Variable	Level	Average Lifetime Residential Latitude			Asbestos Exposure		
		<37°	≥37°	p-Value	No	Yes	p-Value
Malignant Systemic Neoplasm of Esophagus	Yes	--	--	--	(n=1,607) 0.0%	(n=616) 0.2%	0.618
Malignant Systemic Neoplasm of Brain	Yes	--	--	--	(n=1,607) 0.1%	(n=616) 0.0%	0.932
Malignant Systemic Neoplasm of Thymus, Heart, or Mediastinum	Yes	--	--	--	(n=1,607) 0.1%	(n=616) 0.2%	0.999
Malignant Systemic Neoplasm of Thyroid Gland	Yes	--	--	--	(n=1,607) 0.3%	(n=616) 0.0%	0.496
Malignant Systemic Neoplasm of Bronchus or Lung	Yes	--	--	--	(n=1,607) 0.4%	(n=616) 0.5%	0.999
Malignant Systemic Neoplasm of Colon or Rectum	Yes	--	--	--	(n=1,607) 0.4%	(n=616) 0.5%	0.996
Malignant Systemic Neoplasm of Kidney or Bladder	Yes	--	--	--	(n=1,607) 0.6%	(n=616) 0.3%	0.711
Malignant Systemic Neoplasm of Prostate	Yes	--	--	--	(n=1,607) 2.0%	(n=616) 1.1%	0.233
Malignant Systemic Neoplasm of Testicles	Yes	--	--	--	(n=1,607) 0.1%	(n=616) 0.2%	0.999
Malignant Systemic Neoplasm of Ill-Defined Sites	Yes	--	--	--	(n=1,607) 0.0%	(n=616) 0.2%	0.999
Malignant Systemic Neoplasm of Connective and Other Soft Tissues	Yes	--	--	--	(n=1,607) 0.1%	(n=616) 0.2%	0.999
Carcinoma in Situ of the Penis, Other, and Unspecified Sites	Yes	--	--	--	(n=1,607) 0.1%	(n=616) 0.2%	0.999
Hodgkin's Disease	Yes	--	--	--	(n=1,607) 0.1%	(n=616) 0.0%	0.932
Leukemia	Yes	--	--	--	(n=1,607) 0.1%	(n=616) 0.0%	0.932
Non-Hodgkin's Lymphoma	Yes	--	--	--	(n=1,607) 0.3%	(n=616) 0.2%	0.999
Other Malignant Systemic Neoplasms of Lymphoid and Histiocytic Tissue	Yes	--	--	--	(n=1,607) 0.1%	(n=616) 0.0%	0.932
Multiple Myeloma	Yes	--	--	--	(n=1,607) 0.0%	(n=616) 0.2%	0.999
Any Skin or Systemic Neoplasm	Yes	(n=1,077) 44.5%	(n=1,104) 41.5%	0.172	(n=1,592) 42.9%	(n=612) 42.8%	0.999
Prostate-Specific Antigen (continuous - ng/ml) ^d	ASL	--	--	--	(n=1,558) x̄=1.021	(n=604) x̄=1.017	0.928
(discrete)	BSL	--	--	--	(n=1,606) 3.0%	(n=616) 2.0%	0.227
(discrete)	Abnormal	--	--	--	4.4%	4.1%	0.795

^d Analysis based on natural logarithm of prostate-specific antigen for measurements at or above sensitivity level; means transformed from natural logarithm at prostate-specific antigen scale.

--: Covariate not applicable for dependent variable.

Note: ASL - At or above sensitivity limit.

BSL - Below sensitivity limit.

Table F-1-1. (Continued)
Dependent Variable-Covariate Associations for the Neoplasia Assessment

Dependent Variable	Level	Ionizing Radiation Exposure			Industrial Chemical Exposure		
		No	Yes	p-Value	No	Yes	p-Value
Malignant Systemic Neoplasm of Esophagus	Yes	(n=1,677) 0.1%	(n=546) 0.0%	0.999	(n=918) 0.1%	(n=1,305) 0.0%	0.860
Malignant Systemic Neoplasm of Brain	Yes	(n=1,677) 0.1%	(n=546) 0.0%	0.999	(n=918) 0.2%	(n=1,305) 0.0%	0.333
Malignant Systemic Neoplasm of Thymus, Heart, or Mediastinum	Yes	(n=1,677) 0.1%	(n=546) 0.2%	0.988	(n=918) 0.0%	(n=1,305) 0.2%	0.640
Malignant Systemic Neoplasm of Thyroid Gland	Yes	(n=1,677) 0.2%	(n=546) 0.0%	0.575	(n=918) 0.1%	(n=1,305) 0.2%	0.877
Malignant Systemic Neoplasm of Bronchus or Lung	Yes	(n=1,677) 0.4%	(n=546) 0.7%	0.442	(n=918) 0.3%	(n=1,305) 0.5%	0.685
Malignant Systemic Neoplasm of Colon or Rectum	Yes	(n=1,677) 0.4%	(n=546) 0.4%	0.999	(n=918) 0.5%	(n=1,305) 0.3%	0.595
Malignant Systemic Neoplasm of Kidney or Bladder	Yes	(n=1,677) 0.4%	(n=546) 0.9%	0.207	(n=918) 0.8%	(n=1,305) 0.3%	0.229
Malignant Systemic Neoplasm of Prostate	Yes	(n=1,677) 1.6%	(n=546) 2.4%	0.273	(n=918) 2.2%	(n=1,305) 1.5%	0.265
Malignant Systemic Neoplasm of Testicles	Yes	(n=1,677) 0.2%	(n=546) 0.0%	0.751	(n=918) 0.0%	(n=1,305) 0.2%	0.386
Malignant Systemic Neoplasm of Ill-Defined Sites	Yes	(n=1,677) 0.2%	(n=546) 0.0%	0.575	(n=918) 0.3%	(n=1,305) 0.1%	0.389
Malignant Systemic Neoplasm of Connective and Other Soft Tissues	Yes	(n=1,677) 0.1%	(n=546) 0.0%	0.999	(n=918) 0.1%	(n=1,305) 0.1%	0.999
Carcinoma in Situ of the Penis, Other, and Unspecified Sites	Yes	(n=1,677) 0.1%	(n=546) 0.2%	0.988	(n=918) 0.0%	(n=1,305) 0.2%	0.640
Hodgkin's Disease	Yes	(n=1,677) 0.1%	(n=546) 0.0%	0.999	(n=918) 0.1%	(n=1,305) 0.1%	0.999
Leukemia	Yes	(n=1,677) 0.1%	(n=546) 0.2%	0.988	(n=918) 0.2%	(n=1,305) 0.0%	0.333
Non-Hodgkin's Lymphoma	Yes	(n=1,677) 0.2%	(n=546) 0.4%	0.777	(n=918) 0.4%	(n=1,305) 0.1%	0.192
Other Malignant Systemic Neoplasms of Lymphoid and Histiocytic Tissue	Yes	(n=1,677) 0.1%	(n=546) 0.2%	0.988	(n=918) 0.2%	(n=1,305) 0.0%	0.333
Multiple Myeloma	Yes	(n=1,677) 0.1%	(n=546) 0.0%	0.999	(n=918) 0.1%	(n=1,305) 0.0%	0.999
Any Skin or Systemic Neoplasm	Yes	(n=1,665) 42.0%	(n=539) 45.5%	0.173	(n=911) 45.7%	(n=1,293) 40.9%	0.031
Prostate-Specific Antigen (continuous - ng/ml) ^d	ASL	(n=1,635) $\bar{x}$ =0.995	(n=527) $\bar{x}$ =1.017	0.007	(n=895) $\bar{x}$ =1.054	(n=1,267) $\bar{x}$ =0.996	0.085
(discrete)	BSL	(n=1,676) 2.5%	(n=546) 3.5%	0.253	(n=917) 2.4%	(n=1,305) 2.9%	0.548
(discrete)	Abnormal	3.7%	6.2%	0.016	5.0%	3.8%	0.213

^d Analysis based on natural logarithm of prostate-specific antigen for measurements at or above sensitivity level; means transformed from natural logarithm of prostate-specific antigen scale.

Note: ASL - At or above sensitivity limit.

BSL - Below sensitivity limit.

Table F-1-1. (Continued)
Dependent Variable-Covariate Associations for the Neoplasia Assessment

Dependent Variable	Level	Herbicide Exposure			Insecticide Exposure		
		No	Yes	p-Value	No	Yes	p-Value
Malignant Systemic Neoplasm of Esophagus	Yes	(n=839) 0.1%	(n=1,384) 0.0%	0.800	(n=701) 0.0%	(n=1,522) 0.1%	0.999
Malignant Systemic Neoplasm of Brain	Yes	(n=839) 0.0%	(n=1,384) 0.1%	0.710	(n=701) 0.1%	(n=1,522) 0.1%	0.999
Malignant Systemic Neoplasm of Thymus, Heart, or Mediastinum	Yes	(n=839) 0.0%	(n=1,384) 0.1%	0.710	(n=701) 0.0%	(n=1,522) 0.1%	0.842
Malignant Systemic Neoplasm of Thyroid Gland	Yes	(n=839) 0.2%	(n=1,384) 0.1%	0.999	(n=701) 0.3%	(n=1,522) 0.1%	0.797
Malignant Systemic Neoplasm of Bronchus or Lung	Yes	(n=839) 0.4%	(n=1,384) 0.5%	0.858	(n=701) 0.6%	(n=1,522) 0.4%	0.813
Malignant Systemic Neoplasm of Colon or Rectum	Yes	(n=839) 0.5%	(n=1,384) 0.4%	0.943	(n=701) 0.6%	(n=1,522) 0.3%	0.634
Malignant Systemic Neoplasm of Kidney or Bladder	Yes	(n=839) 0.5%	(n=1,384) 0.5%	0.999	(n=701) 1.0%	(n=1,522) 0.3%	0.049
Malignant Systemic Neoplasm of Prostate	Yes	(n=839) 1.3%	(n=1,384) 2.0%	0.283	(n=701) 1.6%	(n=1,522) 1.8%	0.781
Malignant Systemic Neoplasm of Testicles	Yes	(n=839) 0.0%	(n=1,384) 0.2%	0.451	(n=701) 0.0%	(n=1,522) 0.2%	0.579
Malignant Systemic Neoplasm of Ill-Defined Sites	Yes	(n=839) 0.4%	(n=1,384) 0.1%	0.307	(n=701) 0.3%	(n=1,522) 0.1%	0.797
Malignant Systemic Neoplasm of Connective and Other Soft Tissues	Yes	(n=839) 0.2%	(n=1,384) 0.0%	0.277	(n=701) 0.1%	(n=1,522) 0.1%	0.999
Carcinoma in Situ of the Penis, Other, and Unspecified Sites	Yes	(n=839) 0.1%	(n=1,384) 0.1%	0.999	(n=701) 0.1%	(n=1,522) 0.1%	0.999
Hodgkin's Disease	Yes	(n=839) 0.1%	(n=1,384) 0.1%	0.999	(n=701) 0.1%	(n=1,522) 0.1%	0.999
Leukemia	Yes	(n=839) 0.1%	(n=1,384) 0.1%	0.999	(n=701) 0.0%	(n=1,522) 0.1%	0.842
Non-Hodgkin's Lymphoma	Yes	(n=839) 0.2%	(n=1,384) 0.2%	0.999	(n=701) 0.1%	(n=1,522) 0.3%	0.941
Other Malignant Systemic Neoplasms of Lymphoid and Histiocytic Tissue	Yes	(n=839) 0.1%	(n=1,384) 0.1%	0.999	(n=701) 0.1%	(n=1,522) 0.1%	0.999
Multiple Myeloma	Yes	(n=839) 0.0%	(n=1,384) 0.1%	0.999	(n=701) 0.0%	(n=1,522) 0.1%	0.999
Any Skin or Systemic Neoplasm	Yes	(n=837) 39.6%	(n=1,367) 44.9%	0.015	(n=698) 41.6%	(n=1,506) 43.5%	0.417
Prostate-Specific Antigen (continuous - ng/ml) ^d	ASL	(n=819) $\bar{x}$ =1.043	(n=1,343) $\bar{x}$ =1.006	0.286	(n=683) $\bar{x}$ =1.013	(n=1,479) $\bar{x}$ =1.023	0.722
(discrete)	BSL	(n=839) 2.4%	(n=1,386) 2.9%	0.561	(n=701) 2.6%	(n=1,521) 2.8%	0.904
(discrete)	Abnormal	4.3%	4.3%	0.957	5.4%	3.8%	0.083

^d Analysis based on natural logarithm of prostate-specific antigen for measurements at or above sensitivity level; means transformed from natural logarithm of prostate-specific antigen scale.

Note: ASL - At or above sensitivity limit.

BSL - Below sensitivity limit.

Table F-1-1. (Continued)
Dependent Variable-Covariate Associations for the Neoplasia Assessment

Dependent Variable	Level	Degreasing Chemical Exposure		
		No	Yes	p-Value
Malignant Systemic Neoplasm of Esophagus		(n=822)	(n=1,401)	
	Yes	0.0%	0.1%	0.999
Malignant Systemic Neoplasm of Brain		(n=822)	(n=1,401)	
	Yes	0.2%	0.0%	0.265
Malignant Systemic Neoplasm of Thymus, Heart, or Mediastinum		(n=822)	(n=1,401)	
	Yes	0.0%	0.1%	0.726
Malignant Systemic Neoplasm of Thyroid Gland		(n=822)	(n=1,401)	
	Yes	0.4%	0.1%	0.290
Malignant Systemic Neoplasm of Bronchus or Lung		(n=822)	(n=1,401)	
	Yes	0.2%	0.6%	0.432
Malignant Systemic Neoplasm of Colon or Rectum		(n=822)	(n=1,401)	
	Yes	0.5%	0.4%	0.905
Malignant Systemic Neoplasm of Kidney or Bladder		(n=822)	(n=1,401)	
	Yes	0.7%	0.4%	0.370
Malignant Systemic Neoplasm of Prostate		(n=822)	(n=1,401)	
	Yes	2.2%	1.5%	0.303
Malignant Systemic Neoplasm of Testicles		(n=822)	(n=1,401)	
	Yes	0.1%	0.1%	0.999
Malignant Systemic Neoplasm of Ill-Defined Sites		(n=822)	(n=1,401)	
	Yes	0.2%	0.1%	0.983
Malignant Systemic Neoplasm of Connective and Other Soft Tissues		(n=822)	(n=1,401)	
	Yes	0.1%	0.1%	0.999
Carcinoma in Situ of the Penis, Other, and Unspecified Sites		(n=822)	(n=1,401)	
	Yes	0.1%	0.1%	0.999
Hodgkin's Disease		(n=822)	(n=1,401)	
	Yes	0.1%	0.1%	0.999
Leukemia		(n=822)	(n=1,401)	
	Yes	0.0%	0.1%	0.726
Non-Hodgkin's Lymphoma		(n=822)	(n=1,401)	
	Yes	0.4%	0.1%	0.546
Other Malignant Systemic Neoplasms of Lymphoid and Histiocytic Tissue		(n=822)	(n=1,401)	
	Yes	0.1%	0.1%	0.999
Multiple Myeloma		(n=822)	(n=1,401)	
	Yes	0.0%	0.1%	0.999
Any Skin or Systemic Neoplasm		(n=817)	(n=1,387)	
	Yes	43.3%	42.3%	0.521
Prostate-Specific Antigen (continuous - ng/ml) ^d	ASL	(n=800) $\bar{x}$ =1.045	(n=1,362) $\bar{x}$ =1.005	0.254
(discrete)	BSL	(n=822) 2.6%	(n=1,400) 2.8%	0.904
(discrete)	Abnormal	4.7%	4.1%	0.451

^d Analysis based on natural logarithm of prostate-specific antigen for measurements at or above sensitivity level; means transformed from natural logarithm of prostate-specific antigen scale.

Note: ASL - At or above sensitivity limit.

BSL - Below sensitivity limit.

Table F-1-1. (Continued)
Dependent Variable-Covariate Associations for the Neoplasia Assessment

Dependent Variable	Level	Lifetime Cigarette Smoking History (Pack-years)			p-Value
		0	>0-10	>10	
Malignant Systemic Neoplasm of Esophagus	Yes	(n=608) 0.0%	(n=680) 0.0%	(n=932) 0.1%	0.501
Malignant Systemic Neoplasm of Brain	Yes	(n=608) 0.0%	(n=680) 0.2%	(n=932) 0.1%	0.662
Malignant Systemic Neoplasm of Thymus, Heart, or Mediastinum	Yes	(n=608) 0.0%	(n=680) 0.0%	(n=932) 0.2%	0.251
Malignant Systemic Neoplasm of Thyroid Gland	Yes	(n=608) 0.3%	(n=680) 0.2%	(n=932) 0.1%	0.587
Malignant Systemic Neoplasm of Bronchus or Lung	Yes	(n=608) 0.0%	(n=680) 0.2%	(n=932) 1.0%	0.008
Malignant Systemic Neoplasm of Colon or Rectum	Yes	(n=608) 0.3%	(n=680) 0.3%	(n=932) 0.5%	0.707
Malignant Systemic Neoplasm of Kidney or Bladder	Yes	(n=608) 0.2%	(n=680) 0.2%	(n=932) 1.0%	0.027
Malignant Systemic Neoplasm of Prostate	Yes	(n=608) 2.0%	(n=680) 1.3%	(n=932) 1.9%	0.586
Malignant Systemic Neoplasm of Testicles	Yes	(n=608) 0.0%	(n=680) 0.0%	(n=932) 0.3%	0.125
Malignant Systemic Neoplasm of Ill-Defined Sites	Yes	(n=608) 0.3%	(n=680) 0.0%	(n=932) 0.2%	0.361
Malignant Systemic Neoplasm of Connective and Other Soft Tissues	Yes	(n=608) 0.0%	(n=680) 0.0%	(n=932) 0.2%	0.251
Carcinoma in Situ of the Penis, Other, and Unspecified Sites	Yes	(n=608) 0.2%	(n=680) 0.2%	(n=932) 0.0%	0.482
Hodgkin's Disease	Yes	(n=608) 0.3%	(n=680) 0.0%	(n=932) 0.0%	0.070
Leukemia	Yes	(n=608) 0.2%	(n=680) 0.2%	(n=932) 0.0%	0.482
Non-Hodgkin's Lymphoma	Yes	(n=608) 0.3%	(n=680) 0.0%	(n=932) 0.3%	0.331
Other Malignant Sytemic Neoplasms of Lymphoid and Histiocytic Tissue	Yes	(n=608) 0.2%	(n=680) 0.0%	(n=932) 0.1%	0.601
Multiple Myeloma	Yes	(n=608) 0.0%	(n=680) 0.2%	(n=932) 0.0%	0.322
Any Skin or Systemic Neoplasm	Yes	(n=603) 41.6%	(n=673) 41.8%	(n=925) 44.5%	0.411
Prostate-Specific Antigen (continuous - ng/ml)	ASL		(n=2,160) r=-0.008		0.708
(discrete)	BSL	(n=607) 2.3%	(n=680) 2.5%	(n=932) 3.1%	0.588
(discrete)	Abnormal	4.5%	4.9%	3.8%	0.545

^d Analysis based on natural logarithm of prostate-specific antigen for measurements at or above sensitivity level; means transformed from natural logarithm of prostate-specific antigen scale.

Note: ASL - At or above sensitivity limit.

BSL - Below sensitivity limit.

Table F-1-1. (Continued)
Dependent Variable-Covariate Associations for the Neoplasia Assessment

Dependent Variable	Level	Lifetime Alcohol History (Drink-years)			p-Value
		0	>0-40	> 40	
Malignant Systemic Neoplasm of Esophagus	Yes	(n=134) 0.0%	(n=1,487) 0.1%	(n=560) 0.0%	0.792
Malignant Systemic Neoplasm of Brain	Yes	(n=134) 0.8%	(n=1,487) 0.0%	(n=560) 0.2%	0.017
Malignant Systemic Neoplasm of Thymus, Heart, or Mediastinum	Yes	(n=134) 0.0%	(n=1,487) 0.1%	(n=560) 0.0%	0.627
Malignant Systemic Neoplasm of Thyroid Gland	Yes	(n=134) 0.0%	(n=1,487) 0.2%	(n=560) 0.2%	0.872
Malignant Systemic Neoplasm of Bronchus or Lung	Yes	(n=134) 0.0%	(n=1,487) 0.5%	(n=560) 0.4%	0.622
Malignant Systemic Neoplasm of Colon or Rectum	Yes	(n=134) 0.0%	(n=1,487) 0.4%	(n=560) 0.5%	0.682
Malignant Systemic Neoplasm of Kidney or Bladder	Yes	(n=134) 0.0%	(n=1,487) 0.3%	(n=560) 1.3%	0.014
Malignant Systemic Neoplasm of Prostate	Yes	(n=134) 0.0%	(n=1,487) 1.6%	(n=560) 2.1%	0.198
Malignant Systemic Neoplasm of Testicles	Yes	(n=134) 0.0%	(n=1,487) 0.2%	(n=560) 0.0%	0.496
Malignant Systemic Neoplasm of Ill-Defined Sites	Yes	(n=134) 0.0%	(n=1,487) 0.3%	(n=560) 0.0%	0.393
Malignant Systemic Neoplasm of Connective and Other Soft Tissues	Yes	(n=134) 0.0%	(n=1,487) 0.1%	(n=560) 0.0%	0.627
Carcinoma in Situ of the Penis, Other, and Unspecified Sites	Yes	(n=134) 0.0%	(n=1,487) 0.1%	(n=560) 0.0%	0.627
Hodgkin's Disease	Yes	(n=134) 0.0%	(n=1,487) 0.1%	(n=560) 0.2%	0.711
Leukemia	Yes	(n=134) 0.8%	(n=1,487) 0.1%	(n=560) 0.0%	0.032
Non-Hodgkin's Lymphoma	Yes	(n=134) 0.0%	(n=1,487) 0.2%	(n=560) 0.4%	0.685
Other Malignant Systemic Neoplasms of Lymphoid and Histiocytic Tissue	Yes	(n=134) 0.0%	(n=1,487) 0.0%	(n=560) 0.4%	0.055
Multiple Myeloma	Yes	(n=134) 0.0%	(n=1,487) 0.1%	(n=560) 0.0%	0.792
Any Skin or Systemic Neoplasm	Yes	(n=132) 37.1%	(n=1,474) 41.6%	(n=566) 46.8%	0.046
Prostate-Specific Antigen (continuous - ng/ml) ^d	ASL		(n=2,124) r=-0.033		0.124
(discrete)	BSL	(n=134) 1.5%	(n=1,486) 2.8%	(n=560) 2.5%	0.666
(discrete)	Abnormal	4.5%	4.7%	3.0%	0.245

^d Analysis based on natural logarithm of prostate-specific antigen for measurements at or above sensitivity level; means transformed from natural logarithm of prostate-specific antigen scale.

Note: ASL - At or above sensitivity limit.
BSL - Below sensitivity limit.

Table F-1-2.
Analysis of Melanoma
Miscoded Non-Black Participant Recoded
Re-Analysis of Table 10-14

a) MODEL 1: RANCH HANDS VS. COMPARISONS — UNADJUSTED					
Occupational Category	Group	n	Percent Yes	Est. Relative Risk (95% C.I.)	p-Value
<i>All</i>	<i>Ranch Hand</i>	886	1.2	<i>1.36 (0.59,3.15)</i>	<i>0.618</i>
	<i>Comparison</i>	1,199	0.9		
Officer	Ranch Hand	357	1.7	1.66 (0.50,5.48)	0.596
	Comparison	490	1.0		
Enlisted Flyer	Ranch Hand	150	0.0	--	--
	Comparison	188	0.5		
Enlisted Groundcrew	Ranch Hand	379	1.3	1.38 (0.40,4.80)	0.852
	Comparison	521	1.0		

b) MODEL 1: RANCH HANDS VS. COMPARISONS — ADJUSTED			
Occupational Category	Adj. Relative Risk (95% C.I.)	p-Value	Covariate Remarks^a
<i>All</i>	<i>1.24 (0.53,2.90)</i>	<i>0.613</i>	LAT (p=0.040)
Officer	1.57 (0.47,5.23)	0.460	IC (p=0.011)
Enlisted Flyer	--	--	DC (p=0.052)
Enlisted Groundcrew	1.23 (0.35,4.32)	0.747	

^a Covariates and associated p-values correspond to final model based on all participants with available data.

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

Table F-1-2. (Continued)
Analysis of Melanoma
Miscoded Non-Black Participant Recoded
Re-Analysis of Table 10-14

c) MODEL 2: RANCH HANDS — INITIAL DIOXIN — UNADJUSTED				
Initial Dioxin Category Summary Statistics			Analysis Results for Log ₂ (Initial Dioxin) ^a	
Initial Dioxin	n	Percent Yes	Estimated Relative Risk (95% C.I.) ^b	p-Value
Low	152	2.0	0.61 (0.30,1.24)	0.136
Medium	161	1.2		
High	164	1.2		

d) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED				
Analysis Results for Log ₂ (Initial Dioxin) ^c				
n	Adj. Relative Risk (95% C.I.) ^b	p-Value	Covariate Remarks	
477	0.43 (0.18,0.99)	0.021	SKIN (p=0.047) HAIR (p=0.003) IC (p=0.013) DC (p=0.008)	

^a Adjusted for percent body fat at the time of duty in SEA and change in percent body fat from the time of duty in SEA to the date of the blood draw for dioxin.

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

^c Adjusted for percent body fat at the time of duty in SEA, change in percent body fat from the time of duty in SEA to the date of the blood draw for dioxin, and covariates specified under "Covariate Remarks" column.

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

Table F-1-2. (Continued)
Analysis of Melanoma
Miscoded Non-Black Participant Recoded
Re-Analysis of Table 10-14

e) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — UNADJUSTED				
Dioxin Category	n	Percent Yes	Est. Relative Risk (95% C.I.)^{ab}	p-Value
Comparison	1,003	0.9		
Background RH	356	0.8	0.94 (0.25,3.51)	0.921
Low RH	232	2.2	2.46 (0.81,7.45)	0.111
High RH	245	0.8	0.90 (0.19,4.23)	0.895
Low plus High RH	477	1.5	1.65 (0.61,4.49)	0.326

f) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED				
Dioxin Category	n	Adj. Relative Risk (95% C.I.)^{ac}	p-Value	Covariate Remarks
Comparison	991			LAT (p=0.033) IC (p=0.048) DC (p=0.053)
Background RH	355	0.97 (0.25,3.76)	0.964	
Low RH	230	2.34 (0.74,7.40)	0.148	
High RH	245	0.93 (0.19,4.53)	0.930	
Low plus High RH	475	1.64 (0.58,4.63)	0.351	

^a Relative risk and confidence interval relative to Comparisons.

^b Adjusted for percent body fat at the time of duty in SEA and change in percent body fat from the time of duty in SEA to the date of the blood draw for dioxin.

^c Adjusted for percent body fat at the time of duty in SEA, change in percent body fat from the time of duty in SEA to the date of the blood draw for dioxin, and covariates specified under "Covariate Remarks" column.

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 F-1-2. (Continued)
Analysis of Melanoma
Miscoded Non-Black Participant Recoded
Re-Analysis of Table 10-14

g) MODELS 4, 5, AND 6: RANCH HANDS — CURRENT DIOXIN — UNADJUSTED					
Model^a	Current Dioxin Category Percent Yes/(n)			Analysis Results for Log₂ (Current Dioxin + 1)	
	Low	Medium	High	Est. Relative Risk (95% C.I.)^b	p-Value
4	0.7 (281)	2.2 (272)	0.7 (280)	0.98 (0.64,1.50)	0.934
5	1.1 (285)	1.1 (268)	1.4 (280)	0.99 (0.69,1.42)	0.944
6 ^c	1.1 (284)	1.1 (268)	1.4 (280)	1.02 (0.69,1.51)	0.938

h) MODELS 4, 5, AND 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED				
Model^a	Analysis Results for Log₂ (Current Dioxin + 1)			
	n	Adj. Relative Risk (95% C.I.)^b	p-Value	Covariate Remarks
4	830	1.01 (0.64,1.57)	0.982	HAIR (p=0.086) LAT (p=0.019) IC (p=0.130) DC (p=0.044)
5	830	1.01 (0.69,1.48)	0.950	HAIR (p=0.087) LAT (p=0.019) IC (p=0.130) DC (p=0.043)
6 ^d	829	1.03 (0.69,1.54)	0.869	HAIR (p=0.088) LAT (p=0.020) IC (p=0.135) DC (p=0.044)

^a Model 4: Log₂ (lipid-adjusted current dioxin + 1).
Model 5: Log₂ (whole-weight current dioxin + 1).
Model 6: Log₂ (whole-weight current dioxin + 1), adjusted for log₂ total lipids.

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

^c Adjusted for log₂ total lipids.

^d Adjusted for log₂ total lipids in addition to covariates specified under "Covariate Remarks" column.

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.

APPENDIX F-2.

Interaction Tables for the Neoplasia 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 10, Neoplasia Assessment, are given in the heading of each subtable. A summary of the interactions described in this appendix follows.

Appendix F-2 Table	Chapter 10 Table	Dependent Variable	Model	Covariate
F-2-1	10-3	Any Skin Neoplasms	5	Skin Color,
			6	Industrial Chemical Exposure
F-2-2	10-4	Malignant Skin Neoplasms	2	Skin Color,
			3	Industrial Chemical Exposure
F-2-3	10-5	Benign Skin Neoplasms	5	Insecticide Exposure
			6	Industrial Chemical Exposure, Insecticide Exposure
F-2-4	10-7	Basal Cell Carcinoma (All Sites Combined)	5	Skin Color
			6	Skin Color
F-2-5	10-9	Basal Cell Carcinoma (Trunk)	6	Asbestos Exposure
			3	Insecticide Exposure
F-2-6	10-13	Nonmelanoma	4	Insecticide Exposure
			5	Insecticide Exposure
F-2-7	10-16	Malignant Systemic Neoplasms	6	Insecticide Exposure
			6	Insecticide Exposure
F-2-8	10-18	Systemic Neoplasms of Uncertain Behavior or Unspecified Nature	2	Lifetime Cigarette Smoking History
			4	Degreasing Chemical Exposure
F-2-9	10-19	Malignant Systemic Neoplasms (Eye, Ear, Face, Head, and Neck)	5	Lifetime Cigarette Smoking History, Degreasing Chemical Exposure
			6	Lifetime Cigarette Smoking History, Degreasing Chemical Exposure
F-2-10	10-28	Malignant Systemic Neoplasms (Prostate)	4	Asbestos Exposure
			5	Asbestos Exposure
F-2-11	10-38	Any Skin or Systemic Neoplasms	6	Asbestos Exposure
			2	Lifetime Cigarette Smoking History
F-2-12	10-40	Prostate-Specific Antigen (Continuous)	3	Lifetime Cigarette Smoking History, Degreasing Chemical Exposure
			3	Lifetime Cigarette Smoking History, Degreasing Chemical Exposure
F-2-13	10-41	Prostate-Specific Antigen (Discrete)	3	Degreasing Chemical Exposure
			4	Degreasing Chemical Exposure
F-2-13	10-41	Prostate-Specific Antigen (Discrete)	5	Degreasing Chemical Exposure
			6	Degreasing Chemical Exposure

Table F-2-1.
Interaction Table for Any Skin Neoplasms

a) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Skin Color: Table 10-3)					
Current Dioxin Category Summary Statistics				Analysis Results for Log₂ (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent Yes	Adjusted Relative Risk (95% C.I.)^a	p-Value
Non-Peach	Low	60	36.7	0.74 (0.57,0.94)	0.016
	Medium	56	23.2		
	High	55	16.4		
Peach	Low	225	32.0	0.98 (0.89,1.08)	0.685
	Medium	211	36.0		
	High	224	30.4		

b) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Industrial Chemical Exposure: Table 10-3)					
Current Dioxin Category Summary Statistics				Analysis Results for Log₂ (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent Yes	Adjusted Relative Risk (95% C.I.)^a	p-Value
No	Low	145	36.6	0.83 (0.71,0.97)	0.018
	Medium	122	31.2		
	High	89	20.2		
Yes	Low	140	29.3	1.01 (0.90,1.12)	0.928
	Medium	145	35.2		
	High	190	31.1		

Table F-2-1. (Continued)
Interaction Table for Any Skin Neoplasms

c) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Skin Color: Table 10-3)					
Current Dioxin Category Summary Statistics				Analysis Results for Log₂ (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent Yes	Adjusted Relative Risk (95% C.I.)^a	p-Value
Non-Peach	Low	60	36.7	0.69 (0.53,0.89)	0.004
	Medium	56	23.2		
	High	55	16.4		
Peach	Low	224	32.1	0.91 (0.82,1.01)	0.091
	Medium	211	36.0		
	High	224	30.4		

d) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Industrial Chemical Exposure: Table 10-3)					
Current Dioxin Category Summary Statistics				Analysis Results for Log₂ (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent Yes	Adjusted Relative Risk (95% C.I.)^a	p-Value
No	Low	145	36.6	0.78 (0.66,0.91)	0.002
	Medium	122	31.2		
	High	89	20.2		
Yes	Low	139	29.5	0.93 (0.83,1.05)	0.261
	Medium	145	35.2		
	High	190	31.1		

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

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

Table F-2-2.
Interaction Table for Malignant Skin Neoplasms

a) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Insecticide Exposure: Table 10-4)					
Initial Dioxin Category Summary Statistics				Analysis Results for Log₂ (Initial Dioxin)	
Stratum	Initial Dioxin	n	Percent Yes	Adjusted Relative Risk (95% C.I.)^a	p-Value
No	Low	30	10.0	1.27 (0.84,1.93)	0.262
	Medium	34	8.8		
	High	41	17.1		
Yes	Low	120	18.3	0.64 (0.47,0.87)	0.004
	Medium	125	14.4		
	High	122	5.7		

b) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Industrial Chemical Exposure: Table 10-4)					
Stratum	Dioxin Category	n	Percent Yes	Adjusted Relative Risk (95% C.I.)^b	p-Value
No	Comparison	407	11.3		
	Background RH	181	18.2	1.64 (0.99,2.72)	0.055
	Low RH	96	19.8	1.98 (1.06,3.69)	0.032
	High RH	75	4.0	0.36 (0.11,1.22)	0.102
	Low plus High RH	171	12.9	1.23 (0.69,2.17)	0.485
Yes	Comparison	577	12.1		
	Background RH	173	10.4	0.81 (0.46,1.44)	0.472
	Low RH	132	15.9	1.15 (0.66,2.00)	0.626
	High RH	169	10.1	0.97 (0.54,1.72)	0.910
	Low plus High RH	301	12.6	1.06 (0.68,1.64)	0.805

Table F-2-2. (Continued)
Interaction Table for Malignant Skin Neoplasms

c) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Insecticide Exposure: Table 10-4)					
Stratum	Dioxin Category	n	Percent Yes	Adjusted Relative Risk (95% C.I.) ^b	p-Value
No	Comparison	369	9.2		
	Background RH	85	14.1	1.50 (0.72,3.12)	0.274
	Low RH	44	9.1	0.80 (0.26,2.46)	0.695
	High RH	61	14.8	2.02 (0.89,4.56)	0.093
	Low plus High RH	105	12.4	1.40 (0.69,2.83)	0.350
Yes	Comparison	615	13.3		
	Background RH	269	14.5	1.09 (0.71,1.68)	0.677
	Low RH	184	19.6	1.57 (0.99,2.47)	0.054
	High RH	183	6.0	0.51 (0.26,0.99)	0.047
	Low plus High RH	367	12.8	1.04 (0.70,1.56)	0.833

^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 F-2-3.
Interaction Table for Benign Skin Neoplasms

a) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Skin Color: Table 10-5)					
Current Dioxin Category Summary Statistics				Analysis Results for Log₂ (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent Yes	Adjusted Relative Risk (95% C.I.)^a	p-Value
Non-Peach	Low	71	25.4	0.69 (0.53,0.89)	0.005
	Medium	78	18.0		
	High	69	8.7		
Peach	Low	227	19.4	0.97 (0.86,1.08)	0.555
	Medium	212	21.2		
	High	226	20.4		

b) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Skin Color: Table 10-5)					
Current Dioxin Category Summary Statistics				Analysis Results for Log₂ (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent Yes	Adjusted Relative Risk (95% C.I.)^a	p-Value
Non-Peach	Low	71	25.4	0.66 (0.51,0.85)	0.002
	Medium	78	18.0		
	High	69	8.7		
Peach	Low	226	19.5	0.92 (0.82,1.04)	0.175
	Medium	212	21.2		
	High	226	20.4		

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

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

Table F-2-4.
Interaction Table for Basal Cell Carcinoma (All Sites Combined)

a) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Asbestos Exposure: Table 10-7)					
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.) ^a	p-Value
No	Low	209	11.0	0.99 (0.84,1.17)	0.889
	Medium	195	14.4		
	High	199	9.1		
Yes	Low	73	15.1	0.69 (0.51,0.92)	0.011
	Medium	71	8.5		
	High	78	7.7		

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

Note: Model 6: Low = ≤46 ppq; Medium = >46-128 ppq; High = >128 ppq.

Table F-2-5.
Interaction Table for Basal Cell Carcinoma (Trunk)

a) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Insecticide Exposure: Table 10-9)					
Stratum	Dioxin Category	n	Percent Yes	Adjusted Relative Risk (95% C.I.)^a	p-Value
No	Comparison	369	2.2		
	Background RH	85	0.0	--	--
	Low RH	44	4.6	2.10 (0.18,24.34)	0.553
	High RH	61	6.6	4.10 (0.44,38.34)	0.215
	Low plus High RH	105	5.7	3.07 (0.38,24.55)	0.289
Yes	Comparison	613	3.3		
	Background RH	269	4.1	0.73 (0.32,1.66)	0.452
	Low RH	184	4.9	1.02 (0.42,2.47)	0.974
	High RH	183	1.6	0.38 (0.10,1.42)	0.152
	Low plus High RH	367	3.3	0.73 (0.32,1.64)	0.444

b) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Insecticide Exposure: Table 10-9)					
Current Dioxin Category Summary Statistics				Analysis Results for Log₂ (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent Yes	Adjusted Relative Risk (95% C.I.)^b	p-Value
No	Low	72	0.0	1.71 (1.06,2.77)	0.028
	Medium	54	5.6		
	High	64	4.7		
Yes	Low	209	4.3	0.91 (0.66,1.26)	0.575
	Medium	215	4.2		
	High	215	2.3		

c) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Insecticide Exposure: Table 10-9)					
Current Dioxin Category Summary Statistics				Analysis Results for Log₂ (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent Yes	Adjusted Relative Risk (95% C.I.)^b	p-Value
No	Low	71	0.0	1.61 (1.05,2.49)	0.030
	Medium	53	5.7		
	High	67	4.5		
Yes	Low	214	4.7	0.89 (0.68,1.17)	0.416
	Medium	215	4.7		
	High	213	1.4		

Table F-2-5. (Continued)
Interaction Table for Basal Cell Carcinoma (Trunk)

d) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Insecticide Exposure: Table 10-9)					
Current Dioxin Category Summary Statistics				Analysis Results for Log₂ (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent Yes	Adjusted Relative Risk (95% C.I.)^b	p-Value
No	Low	71	0.0	1.68 (1.07,2.63)	0.024
	Medium	53	5.7		
	High	67	4.5		
Yes	Low	213	4.7	0.91 (0.69,1.21)	0.538
	Medium	215	4.7		
	High	213	1.4		

^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 zero 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 >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 F-2-6.
Interaction Table for Nonmelanoma

a) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Insecticide Exposure: Table 10-13)					
Initial Dioxin Category Summary Statistics				Analysis Results for Log ₂ (Initial Dioxin)	
Stratum	Initial Dioxin	n	Percent Yes	Adjusted Relative Risk (95% C.I.) ^a	p-Value
No	Low	30	10.0	1.17 (0.76,1.83)	0.475
	Medium	34	8.8		
	High	41	12.2		
Yes	Low	120	17.5	0.65 (0.48,0.88)	0.006
	Medium	125	13.6		
	High	122	5.7		

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

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

Table F-2-7.
Interaction Table for Malignant Systemic Neoplasms

a) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Lifetime Cigarette Smoking History: Table 10-16)					
Initial Dioxin Category Summary Statistics				Analysis Results for Log₂ (Initial Dioxin)	
Stratum	Initial Dioxin	n	Percent Yes	Adjusted Relative Risk (95% C.I.)^a	p-Value
0 Pack-years	Low	45	8.9	0.29 (0.07,1.17)	0.081
	Medium	38	2.6		
	High	53	0.0		
>0-10 Pack-years	Low	50	8.0	0.48 (0.19,1.19)	0.112
	Medium	44	2.3		
	High	66	1.5		
>10 Pack-years	Low	75	5.3	0.96 (0.62,1.50)	0.872
	Medium	90	13.3		
	High	53	3.8		

b) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Degreasing Chemical Exposure: Table 10-16)					
Current Dioxin Category Summary Statistics				Analysis Results for Log₂ (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent Yes	Adjusted Relative Risk (95% C.I.)^b	p-Value
No	Low	152	2.0	1.51 (1.05,2.16)	0.026
	Medium	111	11.7		
	High	64	4.7		
Yes	Low	140	5.7	0.86 (0.63,1.18)	0.362
	Medium	185	6.0		
	High	233	2.6		

c) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Lifetime Cigarette Smoking History: Table 10-16)					
Current Dioxin Category Summary Statistics				Analysis Results for Log₂ (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent Yes	Adjusted Relative Risk (95% C.I.)^b	p-Value
0 Pack-years	Low	88	4.6	0.80 (0.48,1.33)	0.390
	Medium	80	6.3		
	High	77	1.3		
>0-10 Pack-years	Low	94	1.1	1.00 (0.61,1.63)	0.993
	Medium	75	6.7		
	High	100	1.0		
>10 Pack-years	Low	115	7.8	1.22 (0.94,1.59)	0.144
	Medium	137	4.4		
	High	119	10.1		

Table F-2-7. (Continued)
Interaction Table for Malignant Systemic Neoplasms

d) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Degreasing Chemical Exposure: Table 10-16)					
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.) ^b	p-Value
No	Low	147	3.4	1.43 (1.04,1.96)	0.030
	Medium	115	7.0		
	High	65	9.2		
Yes	Low	150	6.0	0.94 (0.73,1.20)	0.603
	Medium	177	4.5		
	High	231	3.5		

e) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Lifetime Cigarette Smoking History: Table 10-16)					
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.) ^b	p-Value
0 Pack-years	Low	88	4.6	0.79 (0.47,1.33)	0.373
	Medium	80	6.3		
	High	77	1.3		
>0-10 Pack-years	Low	94	1.1	0.99 (0.60,1.62)	0.963
	Medium	75	6.7		
	High	100	1.0		
>10 Pack-years	Low	114	7.9	1.20 (0.90,1.59)	0.218
	Medium	137	4.4		
	High	119	10.1		

f) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Degreasing Chemical Exposure: Table 10-16)					
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.) ^b	p-Value
No	Low	147	3.4	1.40 (1.00,1.96)	0.047
	Medium	115	7.0		
	High	65	9.2		
Yes	Low	149	6.0	0.91 (0.70,1.20)	0.511
	Medium	177	4.5		
	High	231	3.5		

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

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

--: Adjusted relative risk, confidence interval, and p-value not presented due to zero abnormalities.

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 F-2-8.

Interaction Table for Systemic Neoplasms of Uncertain Behavior or Unspecified Nature

a) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Asbestos Exposure: Table 10-18)					
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.) ^a	p-Value
No	Low	222	2.7	0.67 (0.42,1.09)	0.110
	Medium	209	1.4		
	High	216	0.9		
Yes	Low	71	0.0	2.18 (1.02,4.65)	0.045
	Medium	87	1.2		
	High	81	2.5		

b) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Asbestos Exposure: Table 10-18)					
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.) ^a	p-Value
No	Low	221	2.3	0.75 (0.54,1.05)	0.092
	Medium	212	2.4		
	High	214	0.5		
Yes	Low	77	0.0	1.98 (0.96,4.09)	0.064
	Medium	80	1.3		
	High	82	2.4		

c) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Asbestos Exposure: Table 10-18)					
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.) ^a	p-Value
No	Low	221	2.3	0.72 (0.51,1.01)	0.058
	Medium	212	2.4		
	High	214	0.5		
Yes	Low	76	0.0	1.93 (0.92,4.05)	0.080
	Medium	80	1.3		
	High	82	2.4		

^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 F-2-9.

Interaction Table for Malignant Systemic Neoplasms (Eye, Ear, Face, Head, and Neck)

a) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Lifetime Cigarette Smoking History: Table 10-19)					
Initial Dioxin Category Summary Statistics				Analysis Results for Log _e (Initial Dioxin)	
Stratum	Initial Dioxin	n	Percent Yes	Adjusted Relative Risk (95% C.I.) ^a	p-Value
0 Pack-years	Low	45	2.2	0.12 (0.00,7.11)	0.309
	Medium	38	0.0		
	High	53	0.0		
>0-10 Pack-years	Low	50	4.0	0.12 (0.00,4.09)	0.236
	Medium	44	0.0		
	High	66	0.0		
>10 Pack-years	Low	75	1.3	1.24 (0.58,2.67)	0.576
	Medium	90	0.0		
	High	53	3.8		

b) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Lifetime Cigarette Smoking History: Table 10-19)					
Stratum	Dioxin Category	n	Percent Yes	Adjusted Relative Risk (95% C.I.) ^b	p-Value
0 Pack-years	Comparison	281	0.0		
	Background RH	109	0.9	--	--
	Low RH	69	1.5	--	--
	High RH	67	0.0	--	--
	Low plus High RH	136	0.7	--	--
>0-10 Pack-years	Comparison	324	0.0		
	Background RH	109	0.0	--	--
	Low RH	67	3.0	--	0.029*
	High RH	93	0.0	--	--
	Low plus High RH	160	1.3	--	--
>10 Pack-years	Comparison	455	1.3		
	Background RH	153	1.3	0.98 (0.18,5.21)	0.982
	Low RH	119	0.8	0.50 (0.06,4.37)	0.534
	High RH	99	2.0	2.30 (0.23,23.29)	0.481
	Low plus High RH	218	1.4	1.06 (0.24,4.72)	0.936

Table F-2-9. (Continued)
Interaction Table for Malignant Systemic Neoplasms (Eye, Ear, Face, Head, and Neck)

c) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Degreasing Chemical Exposure: Table 10-19)					
Stratum	Dioxin Category	n	Percent Yes	Adjusted Relative Risk (95% C.I.)^b	p-Value
No	Comparison	375	0.3		
	Background RH	181	0.6	2.14 (0.13,35.25)	0.595
	Low RH	94	4.3	15.44 (1.65,144.23)	0.016
	High RH	52	1.9	9.04 (0.53,155.09)	0.129
	Low plus High RH	146	3.4	13.63 (1.55,120.01)	0.019
Yes	Comparison	685	0.7		
	Background RH	190	1.1	1.67 (0.30,9.28)	0.556
	Low RH	161	0.0	--	--
	High RH	207	0.5	0.85 (0.10,7.51)	0.880
	Low plus High RH	368	0.3	0.34 (0.04,3.07)	0.340

^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.

* P-value given is based on continuity-adjusted chi-square statistic from unadjusted analysis.

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 F-2-10.
Interaction Table for Malignant Systemic Neoplasms (Prostate)

a) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Degreasing Chemical Exposure: Table 10-28)					
Stratum	Dioxin Category	n	Percent Yes	Adjusted Relative Risk (95% C.I.)^a	p-Value
No	Comparison	375	2.7		
	Background RH	181	0.0	--	--
	Low RH	94	4.3	0.92 (0.24,3.49)	0.907
	High RH	52	3.9	1.67 (0.30,9.45)	0.560
	Low plus High RH	146	4.1	1.09 (0.33,3.58)	0.889
Yes	Comparison	687	1.8		
	Background RH	191	2.6	1.24 (0.40,3.79)	0.708
	Low RH	161	1.2	0.37 (0.08,1.78)	0.213
	High RH	207	1.0	0.47 (0.10,2.26)	0.348
	Low plus High RH	368	1.1	0.41 (0.12,1.39)	0.152

b) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Degreasing Chemical Exposure: Table 10-28)					
Current Dioxin Category Summary Statistics				Analysis Results for Log₂ (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent Yes	Adjusted Relative Risk (95% C.I.)^b	p-Value
No	Low	152	0.0	1.95 (1.07,3.53)	0.029
	Medium	111	3.6		
	High	64	3.1		
Yes	Low	141	2.1	0.69 (0.40,1.19)	0.187
	Medium	185	2.2		
	High	233	0.9		

c) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Degreasing Chemical Exposure: Table 10-28)					
Current Dioxin Category Summary Statistics				Analysis Results for Log₂ (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent Yes	Adjusted Relative Risk (95% C.I.)^b	p-Value
No	Low	147	0.0	1.85 (1.09,3.16)	0.024
	Medium	115	2.6		
	High	65	4.6		
Yes	Low	151	2.7	0.81 (0.54,1.20)	0.289
	Medium	177	1.1		
	High	231	1.3		

Table F-2-10. (Continued)
Interaction Table for Malignant Systemic Neoplasms (Prostate)

d) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Degreasing Chemical Exposure: Table 10-28)					
Current Dioxin Category Summary Statistics				Analysis Results for Log₂ (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent Yes	Adjusted Relative Risk (95% C.I.)^b	p-Value
No	Low	147	0.0	1.74 (0.99,3.05)	0.053
	Medium	115	2.6		
	High	65	4.6		
Yes	Low	150	2.7	0.76 (0.49,1.16)	0.201
	Medium	177	1.1		
	High	231	1.3		

^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 >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 F-2-11.
Interaction Table for Any Skin or Systemic Neoplasms

a) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Eye Color: Table 10-38)					
Current Dioxin Category Summary Statistics				Analysis Results for Log₂ (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent Yes	Adjusted Relative Risk (95% C.I.)^a	p-Value
Brown	Low	78	47.4	0.90 (0.76,1.06)	0.213
	Medium	97	41.2		
	High	110	31.8		
Hazel or Green	Low	81	40.7	1.24 (1.03,1.50)	0.022
	Medium	82	53.7		
	High	79	55.7		
Gray or Blue	Low	132	46.2	0.90 (0.77,1.04)	0.154
	Medium	108	51.9		
	High	106	34.9		

b) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Eye Color: Table 10-38)					
Current Dioxin Category Summary Statistics				Analysis Results for Log₂ (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent Yes	Adjusted Relative Risk (95% C.I.)^a	p-Value
Brown	Low	81	49.4	0.90 (0.78,1.05)	0.180
	Medium	95	36.8		
	High	109	33.9		
Hazel or Green	Low	83	41.0	1.22 (1.04,1.43)	0.014
	Medium	83	50.6		
	High	76	59.2		
Gray or Blue	Low	132	46.2	0.94 (0.83,1.07)	0.385
	Medium	106	46.2		
	High	108	40.7		

Table F-2-11. (Continued)
Interaction Table for Any Skin or Systemic Neoplasms

c) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Eye Color: Table 10-38)					
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.) ^a	p-Value
Brown	Low	81	49.4	0.86 (0.74,1.00)	0.055
	Medium	95	36.8		
	High	109	33.9		
Hazel or Green	Low	82	41.5	1.16 (0.98,1.36)	0.087
	Medium	83	50.6		
	High	76	59.2		
Gray or Blue	Low	132	46.2	0.91 (0.80,1.04)	0.186
	Medium	106	46.2		
	High	108	40.7		

^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 F-2-12.
Interaction Table for Prostate-Specific Antigen (ng/ml)
(Continuous)

a) MODEL 1: RANCH HANDS VS. COMPARISONS — ADJUSTED (Group-by-Insecticide Exposure: Table 10-40)						
Stratum	Occupational Category	Group	n	Adjusted Mean^a	Difference of Adjusted Means (95% C.I.)^b	p-Value^c
<i>No</i>	<i>All</i>	<i>Ranch Hand</i>	<i>213</i>	<i>0.943</i>	<i>-0.161 --</i>	<i>0.012</i>
		<i>Comparison</i>	<i>455</i>	<i>1.104</i>		
<i>Yes</i>	<i>All</i>	<i>Ranch Hand</i>	<i>687</i>	<i>1.087</i>	<i>0.063 --</i>	<i>0.152</i>
		<i>Comparison</i>	<i>768</i>	<i>1.024</i>		
<i>No</i>	<i>Officer</i>	<i>Ranch Hand</i>	<i>79</i>	<i>0.934</i>	<i>-0.258 --</i>	<i>0.018</i>
		<i>Comparison</i>	<i>160</i>	<i>1.192</i>		
	<i>Enlisted Flyer</i>	<i>Ranch Hand</i>	<i>30</i>	<i>1.052</i>	<i>-0.157 --</i>	<i>0.386</i>
		<i>Comparison</i>	<i>77</i>	<i>1.208</i>		
	<i>Enlisted Groundcrew</i>	<i>Ranch Hand</i>	<i>104</i>	<i>0.899</i>	<i>-0.093 --</i>	<i>0.268</i>
		<i>Comparison</i>	<i>218</i>	<i>0.992</i>		
<i>Yes</i>	<i>Officer</i>	<i>Ranch Hand</i>	<i>269</i>	<i>1.225</i>	<i>0.118 --</i>	<i>0.101</i>
		<i>Comparison</i>	<i>316</i>	<i>1.107</i>		
	<i>Enlisted Flyer</i>	<i>Ranch Hand</i>	<i>121</i>	<i>1.157</i>	<i>0.047 --</i>	<i>0.668</i>
		<i>Comparison</i>	<i>121</i>	<i>1.111</i>		
	<i>Enlisted Groundcrew</i>	<i>Ranch Hand</i>	<i>297</i>	<i>0.921</i>	<i>0.022 --</i>	<i>0.690</i>
		<i>Comparison</i>	<i>331</i>	<i>0.900</i>		

b) MODEL 2: RANCH HANDS — INITIAL DIOXIN — ADJUSTED (Initial Dioxin-by-Age: Table 10-40)					
Initial Dioxin Category Summary Statistics				Analysis Results for Log₂ (Initial Dioxin)	
Stratum	Initial Dioxin	n	Adjusted Mean^a	Adjusted Slope (Std. Error)^d	p-Value
Born ≥ 1942	Low	54	0.776	0.002 (0.037)	0.949
	Medium	71	0.664		
	High	108	0.781		
Born < 1942	Low	113	1.267	-0.094 (0.039)	0.016
	Medium	95	1.072		
	High	60	0.898		

Table F-2-12. (Continued)
Interaction Table for Prostate-Specific Antigen (ng/ml)
(Continuous)

c) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Insecticide Exposure: Table 10-40)					
Stratum	Dioxin Category	n	Adjusted Mean ^a	Differences of Adjusted Means vs. Comparisons (95% C.I.) ^b	p-Value ^c
No	Comparison	379	1.099		
	Background RH	89	0.833	-0.266 --	0.001
	Low RH	47	0.939	-0.160 --	0.157
	High RH	66	0.962	-0.137 --	0.165
	Low plus High RH	113	0.951	-0.148 --	0.062
Yes	Comparison	635	1.009		
	Background RH	267	1.036	0.027 --	0.612
	Low RH	197	1.095	0.087 --	0.159
	High RH	179	1.004	-0.005 --	0.939
	Low plus High RH	376	1.050	0.041 --	0.408

^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 prostate-specific antigen versus log₂ initial dioxin.

Note: Analysis based on measurements at or above 0.2 ng/ml (sensitivity limit) only.

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 F-2-13.
Interaction Table for Prostate-Specific Antigen
(Discrete)

a) MODEL 1: RANCH HANDS VS. COMPARISONS — ADJUSTED (Group-by-Lifetime Cigarette Smoking History: Table 10-41)						
Stratum	Occupational Category	Group	n	Percent Abnormal	Adj. Relative Risk (95% C.I.)	p-Value
0 Pack-years	All	Ranch Hand	254	3.9	0.85 (0.37,1.96)	0.706
		Comparison	353	4.8		
>0-10 Pack-years	All	Ranch Hand	296	4.7	1.16 (0.55,2.44)	0.691
		Comparison	384	5.0		
>10 Pack-years	All	Ranch Hand	392	2.3	0.47 (0.21,1.07)	0.073
		Comparison	540	4.8		
0 Pack-years	Officer	Ranch Hand	131	4.6	0.97 (0.40,2.35)	0.944
		Comparison	194	5.7		
	Enlisted Flyer	Ranch Hand	25	4.0	0.84 (0.23,3.04)	0.790
		Comparison	27	3.7		
	Enlisted Groundcrew	Ranch Hand	98	3.1	0.53 (0.16,1.80)	0.311
		Comparison	132	3.8		
>0-10 Pack-years	Officer	Ranch Hand	95	7.4	1.43 (0.57,3.61)	0.443
		Comparison	142	7.0		
	Enlisted Flyer	Ranch Hand	52	5.8	1.24 (0.42,3.70)	0.696
		Comparison	61	8.2		
	Enlisted Groundcrew	Ranch Hand	149	2.7	0.79 (0.28,2.27)	0.663
		Comparison	181	2.2		
>10 Pack-years	Officer	Ranch Hand	134	3.0	0.58 (0.22,1.53)	0.271
		Comparison	166	4.8		
	Enlisted Flyer	Ranch Hand	83	4.8	0.50 (0.16,1.59)	0.240
		Comparison	114	7.0		
	Enlisted Groundcrew	Ranch Hand	175	0.6	0.32 (0.10,1.00)	0.049
		Comparison	260	3.9		

Table F-2-13. (Continued)
Interaction Table for Prostate-Specific Antigen
(Discrete)

b) MODEL 3: RANCH HANDS AND COMPARISONS BY DIOXIN CATEGORY — ADJUSTED (Dioxin Category-by-Insecticide Exposure: Table 10-41)					
Stratum	Dioxin Category	n	Percent Abnormal	Adjusted Relative Risk (95% C.I.)^a	p-Value
No	Comparison	391	6.7		
	Background RH	90	1.1	0.07 (0.01,0.60)	0.015
	Low RH	48	2.1	0.14 (0.02,1.15)	0.066
	High RH	67	7.5	0.81 (0.26,2.54)	0.712
	Low plus High RH	115	5.2	0.45 (0.16,1.30)	0.141
Yes	Comparison	653	4.0		
	Background RH	275	2.6	0.47 (0.19,1.15)	0.100
	Low RH	202	6.4	1.23 (0.58,2.59)	0.593
	High RH	185	2.2	0.63 (0.21,1.92)	0.414
	Low plus High RH	387	4.4	1.01 (0.51,1.98)	0.986

c) MODEL 4: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Degreasing Chemical Exposure: Table 10-41)					
Current Dioxin Category Summary Statistics				Analysis Results for Log_e (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent Abnormal	Adjusted Relative Risk (95% C.I.)^b	p-Value
No	Low	152	0.7	1.65 (1.04,2.61)	0.033
	Medium	111	7.2		
	High	64	4.7		
Yes	Low	140	2.1	0.88 (0.61,1.26)	0.492
	Medium	185	6.5		
	High	233	2.2		

Table F-2-13. (Continued)
Interaction Table for Prostate-Specific Antigen
(Discrete)

d) MODEL 5: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Degreasing Chemical Exposure: Table 10-41)					
Current Dioxin Category Summary Statistics				Analysis Results for Log₂ (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent Abnormal	Adjusted Relative Risk (95% C.I.)^b	p-Value
No	Low	147	0.7	1.68 (1.13,2.52)	0.011
	Medium	115	5.2		
	High	65	7.7		
Yes	Low	150	2.7	0.91 (0.66,1.24)	0.550
	Medium	177	5.1		
	High	231	3.0		

e) MODEL 6: RANCH HANDS — CURRENT DIOXIN — ADJUSTED (Current Dioxin-by-Degreasing Chemical Exposure: Table 10-41)					
Current Dioxin Category Summary Statistics				Analysis Results for Log₂ (Current Dioxin + 1)	
Stratum	Current Dioxin	n	Percent Abnormal	Adjusted Relative Risk (95% C.I.)^b	p-Value
No	Low	147	0.7	1.61 (1.06,2.44)	0.025
	Medium	115	5.2		
	High	65	7.7		
Yes	Low	149	2.7	0.87 (0.62,1.22)	0.411
	Medium	177	5.1		
	High	231	3.0		

^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 ≤ 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.