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AUG 5 1980

NRC/TMI-80-121

Docket No.: 50-320

Mr. R. C. Arnold
Senior Vice President
Metropolitan Edison Company
100 Interpace Parkway
Parsippany, NJ 07054

THIS DOCUMENT CONTAINS
POOR QUALITY PAGES

Dear Mr. Arnold:

This letter is in response to Metropolitan Edison's request for guidance in three specific areas of the proposed TMI worker registry. The NRC's technical staff has discussed these areas with NIOSH, NRC consultants, and NRC's Office of the Executive Legal Director.

As a result of these discussions, we make the following recommendations:

Met-Ed's request #1: Clarification of which TMI worker groups are to be included in the worker registry.

NRC staff response: For purpose of the TMI worker registry, a worker shall be defined as any person who has been issued a personal radiation dosimeter at the TMI nuclear facility since March 28, 1979. Therefore, inclusion in the TMI worker registry should be based upon whether an individual was badged, not upon whether he was a nuclear or non-nuclear worker.

Met-Ed's request #2: Guidance on data to be included in Met-Ed medical program.

NRC staff response: If Met-Ed implements a medical examination program similar to the Department of the Navy's NAVMED P-5055, all the necessary baseline medical information should be obtained for the follow-up for long-term health effects.

At the time of the initial physical examination, information on the individual's medical history, occupational history and personal identifiers should be recorded. Examples of questionnaires used by NIOSH to obtain this data are included for your guidance (Enclosures 1 and 2). Of particular importance in the medical history is the information on the frequency, amount, and duration of tobacco use. A occupational history, including names, and addresses of previous employers and previous exposures to any carcinogenic substances, is vital for a long-term health effects study. To help insure the traceability of an individual, we also recommend that a worker provide the names and addresses of several next-of-kin.

POOR ORIGINAL

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OFFICE ►							
SURNAME ►							
DATE ►							

Met-Ed's request #3: Development of a form to be signed by a nuclear worker for release of personal information needed for the follow-up for long-term health effects in the nuclear power industry.

NRC staff response: The NRC staff recommends that a statement similar to the enclosed release of information statement (Enclosure 3) be signed by a nuclear worker when he begins work at the TMI site.

We hope the above responses to your requests are adequate. If there are additional questions, please contact us.

Sincerely,

Original signed by
John T. Collins
John T. Collins
Deputy Program Director
TMI Program Office

Enclosures:
1. NIOSH Health Questionnaire
2. NIOSH Health Questionnaire
3. TMI Worker Registry Consent Form

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U. S. Nuclear Regulatory Commission
Washington, DC 20555

Enclosure 1

NIOSH

CROUSE-HINDS
SYRACUSE, N. Y.

QUESTIONNAIRE

U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE / Public Health Service
Center for Disease Control / National Institute for Occupational Safety and Health

CDC/NIOSH (C) TF 2.46

INTERVIEWER: [|] (7-8) CHECKED BY: [|] (9-10)

DATE OF INTERVIEW: [|] — [|] — [|] (11-16)
MO DAY YR

LABEL

SUBJECT IDENTIFICATION

CASE NO. [| | |] [ ] (1-5)

LAST NAME: [ ] (17-35)

FIRST NAME: [ ] (36-48)

MIDDLE INITIAL: [ ] (49)

ADDRESS: [ ] (50-74)

CITY: [ ] (6-26) [0|1] (79-80)

STATE: [|] (27-28) ZIP CODE: [| | | |] (29-33)

PERSONAL DATA

1. TELEPHONE: [| |] — [| |] — [| | |] (34-43)
   AREA CODE

2. RACE/ETHNIC CODE:
   1. White, not of Hispanic Origin [ ] (44)
   2. Black, not of Hispanic Origin
   3. Hispanic
   4. American Indian or Alaskan Native
   5. Asian or Pacific Islander
   6. Other

3. SEX: 1. Male 2. Female [ ] (45)

4. What is your date of birth? (month/day/year) [|] — [|] — [|] (46-51)

RESPIRATORY

THESE HEALTH QUESTIONS ARE MAINLY ABOUT YOUR CHEST. PLEASE ANSWER YES OR NO, IF POSSIBLE. (IF A QUESTION DOES NOT APPEAR TO BE APPLICABLE, CHECK THE "NOT APPLICABLE" SPACE) IF YOU ARE IN DOUBT ABOUT WHETHER THE ANSWER IS YES OR NO, RECORD NO.

COUGH

1A. DO YOU USUALLY HAVE A COUGH? (COUNT A COUGH WITH FIRST SMOKE OR ON FIRST GOING OUT-OF-DOORS. EXCLUDE CLEARING OF THROAT)........................ 1 ☐ YES 2 ☐ NO (6)

IF YES:

B. DO YOU USUALLY COUGH AS MUCH AS 4 TO 6 TIMES A DAY, 4 OR MORE DAYS OUT OF THE WEEK?....... 1 ☐ YES 2 ☐ NO (7)

C. DO YOU USUALLY COUGH AT ALL ON GETTING UP, OR FIRST THING IN THE MORNING?....................... 1 ☐ YES 2 ☐ NO (8)

D. DO YOU USUALLY COUGH AT ALL DURING THE REST OF THE DAY OR AT NIGHT?.................................. 1 ☐ YES 2 ☐ NO (9)

If "YES" to 1A, B, C or D

E. DO YOU USUALLY COUGH LIKE THIS ON MOST DAYS FOR 3 CONSECUTIVE MONTHS OR MORE DURING THE YEAR?...... 1 ☐ YES 2 ☐ NO 9 ☐ N[illegible] (1C

F. FOR HOW MANY YEARS HAVE YOU HAD THIS COUGH? ☐☐ (11-12) NO. YRS. 9 ☐ NA (1[illegible]

PHLEGM

2A. DO YOU USUALLY BRING UP PHLEGM FROM YOUR CHEST?.... 1 ☐ YES 2 ☐ NO (1[illegible]

(Count phlegm with the first smoke or on first going out-of-doors. Exclude phlegm from the nose. Count swallowed phlegm)

IF YES:

B. DO YOU USUALLY BRING UP PHLEGM LIKE THIS AS MUCH AS TWICE A DAY, 4 OR MORE DAYS OUT OF THE WEEK?....... 1 ☐ YES 2 ☐ NO (1[illegible]

C. DO YOU USUALLY BRING UP PHLEGM AT ALL ON GETTING UP, OR FIRST THING IN THE MORNING?................ 1 ☐ YES 2 ☐ NO (1[illegible]

D. DO YOU USUALLY BRING UP PHLEGM AT ALL DURING THE REST OF THE DAY OR AT NIGHT?.................. 1 ☐ YES 2 ☐ NO (1[illegible]

PHLEGM (CON'T)

(If "YES" to 2A, B, C or D - previous page - Ask the following:)

E. DO YOU BRING UP PHLEGM LIKE THIS ON MOST DAYS FOR 3 CONSECUTIVE MONTHS OR MORE DURING THE YEAR? .... 1 ☐ YES 2 ☐ NO 9 ☐ NA (18)

F. FOR HOW MANY YEARS HAVE YOU HAD TROUBLE WITH PHLEGM? .... ☐☐ (19-20) NO. YRS. 9 ☐ NA (21)

EPISODES OF COUGH AND PHLEGM

3A. HAVE YOU HAD PERIODS OR EPISODES OF (increased*) COUGH AND PHLEGM LASTING FOR 3 WEEKS OR MORE EACH YEAR? 1 ☐ YES 2 ☐ NO (24)

*(For persons who usually have cough and/or phlegm)

IF YES:

B. FOR HOW LONG HAVE YOU HAD AT LEAST 1 SUCH EPISODE PER YEAR? ☐☐ (25-26) NO. YEARS 9 ☐ NA (27)

WHEEZING

4A. DOES YOUR CHEST EVER SOUND WHEEZY OR WHISTLING WHEN YOU HAVE A COLD? 1 ☐ YES 2 ☐ NO (28)

B. OCCASIONALLY APART FROM COLDS? 1 ☐ YES 2 ☐ NO (29)

C. MOST DAYS OR NIGHTS? 1 ☐ YES 2 ☐ NO (30)

IF YES: TO Q's 4A, B or C - ASK

D. FOR HOW MANY YEARS HAS THIS BEEN PRESENT? ☐☐ (31-32) NO. YEARS 9 ☐ NA (33)

4E. HAVE YOU EVER HAD AN ATTACK OF WHEEZING THAT HAS MADE YOU FEEL SHORT OF BREATH? .... 1 ☐ YES 2 ☐ NO (34)

IF YES:

F. HOW OLD WERE YOU WHEN YOU HAD YOUR FIRST SUCH ATTACK? ☐☐ (35-36) AGE/YRS. 9 ☐ NA (37)

G. HAVE YOU HAD 2 OR MORE SUCH EPISODES? 1 ☐ YES 2 ☐ NO 9 ☐ NA (38)

H. HAVE YOU EVER REQUIRED MEDICINE OR TREATMENT FOR THE(SE) ATTACK(S)? 1 ☐ YES 2 ☐ NO 9 ☐ NA (39)

BREATHLESSNESS

5A. IF YOU ARE DISABLED FROM WALKING BY ANY CONDITION OTHER THAN HEART OR LUNG DISEASE, PLEASE DESCRIBE AND PROCEED TO (section on Chest Colds & Chest Illnesses, 6A - next page)

NATURE OF CONDITION: ____________________

B. ARE YOU TROUBLED BY SHORTNESS OF BREATH WHEN HURRYING ON THE LEVEL OR WALKING UP A SLIGHT HILL?........................ 1 ☐ YES 2 ☐ NO (40)

IF YES: ASK

C. DO YOU HAVE TO WALK SLOWER THAN PEOPLE OF YOUR AGE ON THE LEVEL BECAUSE OF BREATHLESSNESS?..................... 1 ☐ YES 2 ☐ NO 9 ☐ NA

D. DO YOU EVER HAVE TO STOP FOR BREATH WHEN WALKING AT YOUR OWN PACE ON THE LEVEL?.................. 1 ☐ YES 2 ☐ NO 9 ☐ NA

E. DO YOU EVER HAVE TO STOP FOR BREATH AFTER WALKING ABOUT 100 YARDS (OR AFTER A FEW MINUTES) ON THE LEVEL?.. 1 ☐ YES 2 ☐ NO 9 ☐ NA

F. ARE YOU TOO BREATHLESS TO LEAVE THE HOUSE OR BREATHLESS ON DRESSING OR UNDRESSING?..................... 1 ☐ YES 2 ☐ NO 9 ☐ NA

CHEST COLDS AND CHEST ILLNESSES

6A IF YOU GET A COLD, DOES IT USUALLY GO TO YOUR CHEST? (USUALLY MEANS MORE THAN 1/2 THE TIME.) .... 1 ☐ YES 2 ☐ NO 9 ☐ NA (45)

B. DURING THE PAST 3 YEARS, HAVE YOU HAD ANY CHEST ILLNESSES THAT HAVE KEPT YOU OFF WORK, INDOORS AT HOME, OR IN BED?...... 1 ☐ YES 2 ☐ NO (46)

IF YES:

C. DID YOU PRODUCE PHLEGM WITH ANY OF THESE CHEST ILLNESSES?.............. 1 ☐ YES 2 ☐ NO 9 ☐ NA (47)

D. IN THE LAST 3 YEARS, HOW MANY SUCH ILLNESSES, WITH (INCREASED) PHLEGM, DID YOU HAVE WHICH LASTED A WEEK OR MORE?..............................
☐☐ NO. OF ILLNESSES (48-49)
☐ NO SUCH ILLNESSES
9 ☐ NA (50)

PAST ILLNESSES

1. DID YOU HAVE ANY LUNG TROUBLE BEFORE THE AGE OF 16?.............................. 1 ☐ YES 2 ☐ NO (51)

2. HAVE YOU EVER HAD ATTACKS OF BRONCHITIS? 1 ☐ YES 2 ☐ NO (52)

IF YES: ASK

3. WAS IT CONFIRMED BY A DOCTOR?....... 1 ☐ YES 2 ☐ NO 9 ☐ NA (53)

4. AT WHAT AGE WAS YOUR FIRST ATTACK?.. ☐☐ (54-55) AGE/YRS. 9 ☐ NA (56)

5. HAVE YOU EVER HAD PNEUMONIA? (INCLUDE BRONCHOPNEUMONIA).............. 1 ☐ YES 2 ☐ NO (57)

IF YES: ASK

6. WAS IT CONFIRMED BY A DOCTOR?...... 1 ☐ YES 2 ☐ NO 9 ☐ NA (58)

7. AT WHAT AGE DID YOU FIRST HAVE IT?. ☐☐ (59-60) AGE/YRS. 9 ☐ NA (61)

PAST ILLNESSES

8. HAVE YOU EVER HAD HAY FEVER?................ 1 [ ] YES 2 [ ] NO (62)

IF YES: ASK

9. WAS IT CONFIRMED BY A DOCTOR?..... 1 [ ] YES 2 [ ] NO 9 [ ] NA (63)

10. AT WHAT AGE DID IT START?......... [ ][ ] (64-65) AGE/YRS. 9 [ ] NA (66)

11. HAVE YOU EVER HAD CHRONIC BRONCHITIS?....... 1 [ ] YES 2 [ ] NO (67)

IF YES: ASK

12. DO YOU STILL HAVE IT?............. 1 [ ] YES 2 [ ] NO 9 [ ] NA (68)

13. WAS IT CONFIRMED BY A DOCTOR?..... 1 [ ] YES 2 [ ] NO 9 [ ] NA (69)

14. AT WHAT AGE DID IT START?......... [ ][ ] (70-71) AGE/YRS. 9 [ ] NA (72)

HAVE YOU EVER HAD EMPHYSEMA?.............. 1 [ ] YES 2 [ ] NO (73)

0 5 (79-80)

IF YES: ASK

15. DO YOU STILL HAVE IT?............. 1 [ ] YES 2 [ ] NO 9 [ ] NA (6)

16. WAS IT CONFIRMED BY A DOCTOR?.... 1 [ ] YES 2 [ ] NO 9 [ ] NA (7)

17. AT WHAT AGE DID IT START?........ [ ][ ] (8-9) AGE/YRS. 9 [ ] NA (10

18 HAVE YOU EVER HAD ASTHMA?................. 1 [ ] YES 2 [ ] NO (11)

IF YES: ASK

19. DO YOU STILL HAVE IT? 1 [ ] YES 2 [ ] NO 9 [ ] NA (1

20. WAS IT CONFIRMED BY A DOCTOR? 1 [ ] YES 2 [ ] NO 9 [ ] NA (1

21. AT WHAT AGE DID IT START?.... [ ][ ] (14-15) AGE/STARTED 9 [ ] NA (1

22. IF YOU NO LONGER HAVE IT, AT WHAT AGE DID IT STOP?........ [ ][ ] (17-18) AGE/STOPPED 9 [ ] NA (1

23. HAVE YOU EVER HAD ANY OTHER CHEST ILLNESSES? 1 [ ] YES 2 [ ] NO (2

IF YES, SPECIFY: ______________________________

PAST ILLNESSES

24. HAVE YOU EVER HAD ANY CHEST OPERATIONS? 1 [ ] YES 2 [ ] NO (21)

IF YES, SPECIFY: ____________________

____

25. HAVE YOU EVER HAD ANY CHEST INJURIES? 1 [ ] YES 2 [ ] NO (22)

IF YES, SPECIFY: ____________________

____

26. HAS A DOCTOR EVER TOLD YOU YOU HAD HEART TROUBLE? 1 [ ] YES 2 [ ] NO (23)

IF YES, ASK:

26. HAVE YOU HAD TREATMENT FOR HEART TROUBLE IN THE LAST 10 YEARS? 1 [ ] YES 2 [ ] NO 9 [ ] NA (24)

27. HAS A DOCTOR EVER TOLD YOU THAT YOU HAD HIGH BLOOD PRESSURE? 1 [ ] YES 2 [ ] NO (25)

IF YES, ASK:

28. HAVE YOU HAD ANY TREATMENT FOR HIGH BLOOD PRESSURE (HYPERTENSION) IN THE PAST 10 YEARS? 1 [ ] YES 2 [ ] NO 9 [ ] NA (26)

OCCUPATIONAL HISTORY

1. IN WHICH FOUNDRY AREA DO YOU CURRENTLY WORK? : ☐☐ (27-28)

- ☐ CORE ROOM 01
- ☐ IRON MOLD 02
- ☐ NON-FERROUS (ALUMINUM) MOLD 03
- ☐ IRON GRIND 04
- ☐ NON-FERROUS GRIND 05

2. WHAT SHIFT ARE YOU CURRENTLY WORKING? 1 ☐ 2 ☐ 3 ☐ (29)

3. WHAT IS YOUR CURRENT JOB TITLE?:____________________ CODE: ☐☐ (30-31)

4. WHAT MONTH AND YEAR DID YOU START ON THIS JOB? ☐☐ - ☐☐ (32-35)
MONTH YEAR

5. HAVE YOU HAD ANY OTHER FOUNDRY JOB AT CROUSE-HINDS?.......................... 1 ☐ YES 2 ☐ NO (36)

(Complete table below in reverse chronological order)

1. What area did you work in? (Use codes in Q. 1 for recording answer)
2. What was your job?
3. In what month & year did you start on this job?
4. In what month & year did you stop working on this job?

AREA	JOB TITLE	DATES OF EMPLOYMENT	COMMENTS
		☐☐ - ☐☐ (43-46) MO. YR.	
☐☐ (37-38)	☐☐ (39-42)	☐☐ - ☐☐ (47-50) MO. YR.	
		☐☐ - ☐☐ (57-60) MO. YR.	
☐☐ (51-52)	☐☐ (53-56)	☐☐ - ☐☐ (61-64) MO. YR.	
		☐☐ - ☐☐ (12-15) MO. YR.	
☐☐ (6-7)	☐☐ (8-11)	☐☐ - ☐☐ (16-19) MO. YR.	
		☐☐ - ☐☐ (26-29) MO. YR.	
☐☐ (20-21)	☐☐ (22-25)	☐☐ - ☐☐ (30-33) MO. YR.	

OCCUPATIONAL HISTORY

6. HAVE YOU HAD ANY FOUNDRY JOB(S) AT OTHER COMPANIES?...................... 1 ☐ YES 2 ☐ NO (34)

(Complete the table below in reverse chronological order)

1. What type of foundry?
2. What was your job?
3. In what month & year did you start on this job?
4. In what month & year did you stop working on this job?

TYPE OF FOUNDRY	JOB	TENURE FROM/TO	COMMENTS
		MO. - YR.	
		MO. - YR.	
		MO. - YR.	
		MO. - YR.	
		MO. - YR.	
		MO. - YR.	

7. HAVE YOU EVER HAD A JOB WHERE YOU WERE EXPOSED TO ANY OF THE FOLLOWING DUSTS?: (FOR EACH "YES", SPECIFY THE INDUSTRY, JOB, AND STARTING & STOPPING DATES)

EXPOSURE	RESPONSE	INDUSTRY	JOB	TENURE FROM/TO	
1. ALUMINUM	1 ☐ YES →			MO. YR.	(36-39)
	2 ☐ NO (35)			MO. YR.	(40-43)
2. ASBESTOS	1 ☐ YES →			MO. YR.	(45-48)
	2 ☐ NO (44)			MO. YR.	(49-50)
3. BERYLLIUM	1 ☐ YES →			MO. YR.	(54-57)
	2 ☐ NO (53)			MO. YR.	(58-61)
4. COAL	1 ☐ YES →			MO. YR.	(63-66)
	2 ☐ NO (62)			MO. YR.	(67-70) 0 9 (79-80)
5. GRAPHITE	1 ☐ YES →			MO. YR.	(7-10)
	2 ☐ NO (6)			MO. YR.	(11-14)
6. SILICA (Other than foundries)	1 ☐ YES →			MO. YR.	(16-19)
	2 ☐ NO (15)			MO. YR.	(20-23)

OCCUPATIONAL HISTORY (FOR EACH "YES", SPECIFY THE INDUSTRY, JOB, AND STARTING AND STOPPING DATES)

EXPOSURE	RESPONSE	INDUSTRY	JOB	TENURE FROM/TO	
7. TALC OR OTHER SILICATES	1 ☐ YES 2 ☐ NO (24)	______	______ ______	☐☐ ☐☐ MO. YR. ☐☐ ☐☐ MO. YR.	(25-28) (29-32)
8. TUNGSTEN CARBIDE	1 ☐ YES 2 ☐ NO (33)	______	______ ______	☐☐ ☐☐ MO. YR. ☐☐ ☐☐ MO. YR.	(34-37) (38-41)

TOBACCO SMOKING

1. HAVE YOU EVER SMOKED CIGARETTES? 1 ☐ YES 2 ☐ NO (42)

   (NO MEAN LESS THAN 20 PACKS OF CIGARETTES OR 12 OZ. OF TOBACCO IN A LIFETIME OR LESS THAN 1 CIGARETTE A DAY FOR 1 YEAR.

   (IF NO - END INTERVIEW)

IF YES: ASK

2. DO YOU NOW SMOKE CIGARETTES? (AS OF 1 MONTH AGO) 1 ☐ YES 2 ☐ NO 9 ☐ NA (4[illegible]

3. HOW OLD WERE YOU WHEN YOU FIRST STARTED REGULAR CIGARETTE SMOKING? ☐☐ AGE/YRS. (44-45) 9 ☐ NA (4[illegible]

4. IF YOU HAVE STOPPED SMOKING CIGARETTES COMPLETELY, HOW OLD WERE YOU WHEN YOU STOPPED? 1 ☐ STILL SMOKES (47) ☐☐ AGE/STOPPED (48-49)

ASK - PRESENT SMOKER ONLY

5. HOW MANY CIGARETTES PER DAY DO YOU SMOKE NOW? ☐☐ (50-51) CIG./DAY 9 ☐ NA (52)

6. ON THE AVERAGE OF THE ENTIRE TIME YOU SMOKED, HOW MANY CIGARETTES DID YOU SMOKE PER DAY? ☐☐ (53-54) CIG./DAY 9 ☐ NA (5[illegible]

7. DO OR DID YOU INHALE THE CIGARETTE SMOKE? (56)
   - 1 ☐ NOT AT ALL
   - 2 ☐ SLIGHTLY
   - 3 ☐ MODERATELY
   - 4 ☐ DEEPLY
   - 9 ☐ NOT APPLICABLE

[1 1] (79-80)

HHE 78-4
Enclosure 2

Department of Health, Education and Welfare

Public Health Service

Center for Disease Control

National Institute for Occupational Safety and Health

QUESTIONNAIRE

ASSURANCE OF CONFIDENTIALITY: The United States Public Health Service hereby gives its assurance that your identity and your relationship to any information obtained by reason of your participation in the Shell Study will be kept confidential in accordance with PHS Regulations (42 CFR 1.101-1.108) and will not otherwise be disclosed.

CDC/NIOSH (C) TF 2.29A
01-78 EXP. 07-78

INTERVIEWER: [|] (40-41)

DATE OF INTERVIEW: [|] — [|] — [|] (42-47)
MO DAY YR

LABEL

SUBJECT IDENTIFICATION

CASE NO. [| | |] [ ] (1-5)

LAST NAME: [ ] (7-25)

FIRST NAME: [ ] (26-38)

MIDDLE INITIAL: [ ] (39)

/ / / /0/1/ (76-80)
First 3 ltrs last name

ADDRESS: [ ]

CITY: [ ] (6-26)

STATE: [|] (27-28) ZIP CODE: [| | | |] (29-33)

PERSONAL DATA

1. TELEPHONE: [| |] — [| |] — [| | |] (34-43)
AREA CODE

2. RACE/ETHNIC CODE: [ ] (44)
   1. White, not of Hispanic Origin
   2. Black, not of Hispanic Origin
   3. Hispanic
   4. American Indian or Alaskan Native
   5. Asian or Pacific Islander

3. SEX: 1. Male 2. Female [ ] (45)

4. What is your date of birth? (month/day/year) [|] — [|] — [|] (46-51)

5. What is the last grade of school you completed? [|] (52-53)

ELEMENTARY = 01 – 08 SECONDARY = 09 – 12 COLLEGE = 13 (1 year)
14 (2 years)
15 (3 years)
16 (4 years)
17 (5 years)
18 (6 years)
19 (7 or more years)

6. Under federal law, people participating in our surveys DO NOT have to tell us their social security number. However it is very useful and helps us do follow-up studies. May I have your social security number?

REFUSAL: 2 [ ] (54)

SOCIAL SECURITY NUMBER: [| |] — [|] — [| | |] (55-63)

First 3 ltrs last nme /__/__/__/0/2/ (76-

OCCUPATIONAL HISTORY

Now I'm going to ask you about the jobs you've held, since you started working regularly. I'd like to begin with your present job, here at Shell Chemical Co. and go back to your first job.

1. What department do/did you work in?
2. What is/was your occupation or job title?
3. What exactly is/was your main job or activity? (What kind of work do/did you do most of the time?)
4. In what month and year did you start on this job?
5. And in what month and year did you stop working on this job? (DO NOT ASK FOR CURRENT JOB.)
6. Have you held any other jobs at Shell Chemical Co. ?

(ASK Q's 1-5 FOR EACH JOB. RECORD INFORMATION BELOW. ASK Q. 6 UNTIL UNPRODUCTIVE.)

DEPARTMENT	JOB TITLE	DATES OF EMPLOYMENT	WORK DESCRIPTION
		MO. - YR. (12-15)	
(6-7)	(8-11)	MO. - YR. (16-19)	
		MO. - YR. (26-29)	
(20-21)	(22-25)	MO. - YR. (30-33)	
		MO. - YR. (40-43)	
(34-35)	(36-39)	MO. - YR. (44-47)	
		MO. - YR. (54-57)	
(48-49)	(50-53)	MO. - YR. (58-61)	
		MO. - YR. (68-71)	
(62-63)	(64-67)	MO. - YR. (72-75)	
		MO. - YR. (12-15)	
(6-7)	(8-11)	MO. - YR. (16-19)	
		MO. - YR. (26-29)	
(20-21)	(22-25)	MO. - YR. (30-33)	

OCCUPATIONAL HISTORY - PREVIOUS EMPLOYMENT

1 [ ] YES 2 [ ] NO (6)

1. What is the name of the company?
2. What kind of company (was) is it; what do they (did) do there?
3. In what year did he start working there?
4. And, in what year did he stop working there?
5. What was his occupation or job title?
6. What exactly was his main job or activity? (What kind of work did he do most of the time?)
7. Did he work in any area where he was exposed to dust, fumes, gases, chemicals, or other substances?

IF YES: 8. What was he exposed to? ______________________

9. Can you think of any other jobs? (REPEAT Q's 2-8 FOR EACH JOB. REPEAT Q. 9 UNTIL YOU ASCERTAIN THAT YOU HAVE RECORDED ALL OF THE HUSBAND'S JOBS.)

NAME OF EMPLOYER	TYPE COMPANY	TENURE FROM/TO	JOB TITLE	WORK DESCRIPTION	EXPOSURES
		MO. YR. / MO. YR.			
	(7)	(8-15)			(16-21)

NAME OF EMPLOYER	TYPE COMPANY	TENURE FROM/TO	JOB TITLE	WORK DESCRIPTION	EXPOSURES
		MO. YR. / MO. YR.			
	(22)	(23-30)			(31-36)

NAME OF EMPLOYER	TYPE COMPANY	TENURE FROM/TO	JOB TITLE	WORK DESCRIPTION	EXPOSURES
		MO. YR. / MO. YR.			
	(37)	(38-45)			(46-51)

NAME OF EMPLOYER	TYPE COMPANY	TENURE FROM/TO	JOB TITLE	WORK DESCRIPTION	EXPOSURES
		MO. YR. / MO. YR.			
	(52)	(53-60)			(61-66)

First 3 ltrs last name /_/_/_/ 0/6/ (76-80)

OCCUPATIONAL HISTORY (Con't)

					MO. YR.
7. Have you ever worked in the vicinity of a DBCP drumming operation?	1/__/YES	2/__/NO (6)	8/__/DK	FROM: TO:	/__/__/-/__/__/ 7-10 /__/__/-/__/__/11-14
8. Have you ever worked in the vicinity of DBCP production?	1/__/YES	2/__/NO (15)	8/__/DK	FROM: TO:	/__/__/-/__/__/16-19 /__/__/-/__/__/20-23
9. Have you ever been exposed to a DBCP spill?	1/__/YES	2/__/NO (24)	8/__/DK	FROM: TO:	/__/__/-/__/__/25-28 /__/__/-/__/__/29-32
10. Did any of the DBCP chemical get on your skin?	1/__/YES (33)	2/__/NO	8/__/DK	FROM: TO:	/__/__/-/__/__/34-37 /__/__/-/__/__/38-41

11. Do you have any health problems that you feel are related to substances or physical agents present in your work environment? 1/__/YES 2/__/NO 8/__/DK (42)

COMMENTS:____

____

____

CODE: /__/__/ (43-44)

First 3 ltrs last name /__/__/__/ 0 / 7/ (76-80)

DATES OF EMPLOYMENT "In what month and year did you start working with this?

"And in what month and year, did you stop working with this?

SUBSTANCE	RESPONSE	DATES OF EMPLOYMENT	SUBSTANCE	RESPONSE	DATES OF EMPLOYMENT
1. Weed killers	1 YES / 2 NO / 8 DK (6)	7-10 MO. YR. / MO. YR. 11-14		1 YES / 2 NO / 8 DK (60)	(61-64) MO. YR. / MO. YR. (65-68)
2. Pesticides	1 YES / 2 NO / 8 DK (15)	16-19 MO. YR. / MO. YR. 20-23		1 YES / 2 NO / 8 DK (6)	(7-10) MO. YR. / MO. YR. (11-14)
3. Chemicals	1 YES / 2 NO / 8 DK (24)	25-28 MO. YR. / MO. YR. 29-32		1 YES / 2 NO / 8 DK (15)	(16-19) MO. YR. / MO. YR. (20-23)
4. Degreasers or other solvents	1 YES / 2 NO / 8 DK (33)	34-37 MO. YR. / MO. YR. 38-41		1 YES / 2 NO / 8 DK (24)	(25-28) MO. YR. / MO. YR. (29-32)
5. Ionizing Radiation	1 YES / 2 NO / 8 DK (42)	43-46 MO. YR. / MO. YR. 47-50		1 YES / 2 NO / 8 DK (33)	(34-37) MO. YR. / MO. YR. (38-41)

First 3 ltrs last name /_/_/_/ 0/ 8/ (76-80)

MEDICATIONS

Now I'm going to read a list of medications. In the last three months, have you taken any of the following medicines?

Medication	Response	Name	Codes
1. Oral contrapceptives, birth control pills, pills to regulate periods, or medicines for hot flashes (6)	1 ☐ YES 2 ☐ NO 8 ☐ DK	Name: ______	☐☐-☐☐ (7-10) ☐☐-☐☐ (11-14)
2. Estrogens, female hormones (15)	1 ☐ YES 2 ☐ NO 8 ☐ DK	Name: ______	☐☐-☐☐ (16-19) ☐☐-☐☐ (20-23)
3. Steroids, corti-steroids (24)	1 ☐ YES 2 ☐ NO 8 ☐ DK	Name: ______	☐☐-☐☐ (25-28) ☐☐-☐☐ (29-32)
4. Androgens, male hormones, testosterone (33)	1 ☐ YES 2 ☐ NO 8 ☐ DK	Name: ______	☐☐-☐☐ (34-37) ☐☐-☐☐ (38-41)
5. Thyroid pills (42)	1 ☐ YES 2 ☐ NO 8 ☐ DK	Name: ______	☐☐-☐☐ (43-46) ☐☐-☐☐ (47-50)
6. Insulin (51)	1 ☐ YES 2 ☐ NO 8 ☐ DK	Name: ______	☐☐-☐☐ (52-55) ☐☐-☐☐ (56-59)

MEDICATIONS

Now I'm going to read a list of medications. In the last three months, have you taken any of the following medicines?

Medication	Response	Name	Codes
7. Pills for diabetes / / / / 0 / 9 /(76-80) (60)	1 ☐ YES 2 ☐ NO 8 ☐ DK	Name: ______	(61-64) (65-68)
8. Diet pills prescribed for weight control (6)	1 ☐ YES 2 ☐ NO 8 ☐ DK	Name: ______	(7-10) (11-14)
9. Diuretics or water pills (15)	1 ☐ YES 2 ☐ NO 8 ☐ DK	Name: ______	(16-19) (20-23)
10. Pills for gout (24)	1 ☐ YES 2 ☐ NO 8 ☐ DK	Name: ______	(25-28) (29-32)
11. Medicines for high cholesterol or high triglycerides (33)	1 ☐ YES 2 ☐ NO 8 ☐ DK	Name: ______	(34-37) (38-41)
12. High blood pressure pills (42)	1 ☐ YES 2 ☐ NO 8 ☐ DK	Name: ______	(43-46) (47-50) (51-54)

MEDICATIONS

Now I'm going to read a list of medications. In the last three months, have you taken any of the following medicines?

Question	Response	Name	Codes
13. Anticoagulants or blood thinners (55)	1 [ ] YES 2 [ ] NO 8 [ ] DK (51)	Name: ____ ____ ____	[ ][ ]-[ ][ ] (56-59) [ ][ ]-[ ][ ] (60-63)
14. Phenothiazine medicines, like thorazine trilafon, stelazine, prolixin or mellaril / / / / 1 / 0 / (76-80) (64)	1 [ ] YES 2 [ ] NO 8 [ ] DK (42)	Name: ____ ____ ____	[ ][ ]-[ ][ ] (65-68) [ ][ ]-[ ][ ] (69-72)
15. Heart regulating medicines. Things for irregular heart beats, like nitroglycerine or digitalis. (6)	1 [ ] YES 2 [ ] NO 8 [ ] DK (33)	Name: ____ ____ ____ ____ ____	[ ][ ]-[ ][ ] (7-10) [ ][ ]-[ ][ ] (11-14) [ ][ ]-[ ][ ] (15-18)
16. Have you taken any other medication in the last three (3) months? (19) /_/_/_/_1_/_1_/ (76-80)	1 [ ] YES 2 [ ] NO 8 [ ] DK (24)	Name: ____ ____ ____ ____ ____ ____ ____	[ ][ ]-[ ][ ] (20-23) [ ][ ]-[ ][ ] (24-27) [ ][ ]-[ ][ ] (28-31) [ ][ ]-[ ][ ] (32-35) [ ][ ]-[ ][ ] (36-39) [ ][ ]-[ ][ ] (40-43)

WEIGHT HISTORY

1. Has your weight changed in the past two weeks?

NO.................. ☐ 1
GAINED.............. ☐ 2
LOST................ ☐ 3
(DON'T KNOW)........ ☐ 8 (6)

IF GAINED OR LOST ASK:

2. What was the net change in pounds?.......................... ☐☐☐ LBS. (7-9)

3. How many pounds did you weigh when you were 18?.................. ☐☐☐ LBS. (10-12)

4. What is the most you have ever weighed (excluding pregnancies)?.. ☐☐☐ LBS. (13-15)

HEALTH HISTORY

I'm now going to read a list of health conditions. Have you ever been told by a doctor that you had any of the following conditions. Please answer YES or NO to each one.

(READ EACH CONDITION AND RECORD A RESPONSE. IF YES, ASK THE SECONDARY QUESTION)

IF YES ASK:

DATE: In what year were you first told about this conditon?

CONDITION	RESPONSE	DATE	
1. Kidney or bladder condition	1 ☐ YES → 2 ☐ NO 8 ☐ DK (16)	19 ☐☐ (17-18)	What kind of a kidney condition? SPECIFY: ____ CODE: ☐☐ (19-20) ☐☐ (21-22)
2. Heart Attack	1 ☐ YES → 2 ☐ NO 3 ☐ MULT. 8 ☐ DK (23)	19 ☐☐ (24-25)	
3. Angina or angina pectoris	1 ☐ YES → 2 ☐ NO 8 ☐ DK (26)	19 ☐☐ (27-28)	

SECONDARY QUESTION

IF YES ASK:

DATE In what year were you first told about this condition?

CONDITION	RESPONSE	DATE	
4. Any other cardiovascular disease	1 ☐ YES 2 ☐ NO 8 ☐ DK (29)	19 ☐☐ (30-31)	What kind of cardiovascular disease? SPECIFY: ____ CODE: ☐☐ (32-33)
5. HIGH cholesterol	1 ☐ YES 2 ☐ NO 8 ☐ DK (34)	19 ☐☐ (35-36)	
6. High triglycerides	1 ☐ YES 2 ☐ NO 8 ☐ DK (37)	19 ☐☐ (38-39)	
7. Liver condition or jaundice	1 ☐ YES 2 ☐ NO 8 ☐ DK (40)	19 ☐☐ (41-42)	IF YES: What kind of liver condition? 1 ☐ Hepatitis 3 ☐ Cirrhosis 2 ☐ Enlarged liver 4 ☐ Other Specify ____ (43)

IF YES ASK:

TREATMENT: Did you receive medical or surgical treatment (for this condition?)

IF YES ASK:

DATE: In what year were you first treated (for this condition?)

CONDITION	TOLD? RESPONSE	TREATED? RESPONSE	TREATMENT DATE	
8. High blood pressure	1 ☐ YES 2 ☐ NO 8 ☐ DK (44)	1 ☐ YES 2 ☐ NO 8 ☐ DK (45)	19 ☐☐ (46-47)	

IF YES ASK:

TREATMENT: Did you receive medical or surgical treatment (for this condition?)

IF YES ASK:

DATE: In what year were you first treated (for this condition?)

CONDITION	TOLD? RESPONSE	TREATED? RESPONSE	TREATMENT DATE	
9. Cancer	1 ☐ YES 2 ☐ NO 8 ☐ DK (48)	1 ☐ YES 2 ☐ NO 8 ☐ DK (49)	19 ☐☐ (50-51)	IF YES: What type of cancer? (52-53) SPECIFY SITE:______ CODE: /__/__/ Were you treated with: (54-56) Chemotherapy? 1 /__/ Surgery 3 /__/ Radiotherapy? 2 /__/ (Can be all three)
10. Asthma	1 ☐ YES 2 ☐ NO 8 ☐ DK (57)	1 ☐ YES 2 ☐ NO 8 ☐ DK (58)	19 ☐☐ (59-60)	
11. Stroke	1 ☐ YES 2 ☐ NO 8 ☐ DK (61)	1 ☐ YES 2 ☐ NO 8 ☐ DK (62)	19 ☐☐ (63-64)	

QUES. 12-14 ARE FOR MALE RESPONDENTS ONLY

CONDITION	TOLD? RESPONSE	TREATED? RESPONSE	TREATMENT DATE	
12. Mumps	1 ☐ YES 2 ☐ NO 8 ☐ DK (65)	1 ☐ YES 2 ☐ NO 8 ☐ DK (66)	19 ☐☐ (67-68)	IF YES ASK: Did the mumps involve your testicles? 1 ☐ YES 2 ☐ NO 8 ☐ DK (69) /__/__/__/__/ 1 / 2 / (76-80)
13. Prostate Infection	1 ☐ YES 2 ☐ NO 8 ☐ DK (6)	1 ☐ YES 2 ☐ NO 8 ☐ DK (7)	19 ☐☐ (8-9)	
14. Epididymitis (testicular pain & swelling)	1 ☐ YES 2 ☐ NO 8 ☐ DK (10)	1 ☐ YES 2 ☐ NO 8 ☐ DK (11)	19 ☐☐ (12-13)	

IF YES ASK:

TREATMENT: Did you receive medical or surgical treatment (for this condition?)

IF YES ASK:

DATE: In what year were you first treated (for this condition?)

CONDITION	TOLD? RESPONSE	TREATED? RESPONSE	TREATMENT DATE
15 Thyroid condition	1 ☐ YES 2 ☐ NO 8 ☐ DK (14)	1 ☐ YES 2 ☐ NO 8 ☐ DK (15)	19 ☐☐ (16-17)
16 Gall bladder condition	1 ☐ YES 2 ☐ NO 8 ☐ DK (18)	1 ☐ YES 2 ☐ NO 8 ☐ DK (19)	19 ☐☐ (20-21)
17 Diabetes	1 ☐ YES 2 ☐ NO 8 ☐ DK (22)	1 ☐ YES 2 ☐ NO 8 ☐ DK (23)	19 ☐☐ (24-25)
18 Anemia	1 ☐ YES 2 ☐ NO 8 ☐ DK (26)	1 ☐ YES 2 ☐ NO 8 ☐ DK (27)	19 ☐☐ (28-29)
19 Ulcers	1 ☐ YES 2 ☐ NO 8 ☐ DK (30)	1 ☐ YES 2 ☐ NO 8 ☐ DK (31)	19 ☐☐ (32-33)
20 Arthritis or rheumatism	1 ☐ YES 2 ☐ NO 8 ☐ DK (34)	1 ☐ YES 2 ☐ NO 8 ☐ DK (35)	19 ☐☐ (36-37)

CONDITION	RESPONSE	DATE		
21. Have you ever had a hernia operation?	1 ☐ YES → 2 ☐ NO 8 ☐ DK (38)	19 ☐☐ (39-40)	______ ______ ______ ______	Which side: 1/__/RIGHT 2/__/LEFT (41)

22 In the last five years, were you hospitalized for any other illness or injury? .... 1 ☐ YES 2 ☐ NO (42)

IF YES ASK:

CONDITION Why were you hospitalized?

DATE In what year were you hospitalized?

CONDITION	DATE	CONDITION	DATE	CONDITION	DATE
23. ______ ______ ______ ☐☐ (43-44)	→ 19 ☐☐ (45-46)	25. ______ ______ ______ ☐☐ (47-48)	→ 19 ☐☐ (49-50)	27. ______ ______ ______ ☐☐ (51-52)	→ 19 ☐☐ (53-54)
24. ______ ______ ______ ☐☐ (55-56)	→ 19 ☐☐ (57-58)	26 ______ ______ ______ ☐☐ (59-60)	→ 19 ☐☐ (61-62)	28 ______ ______ ______ ☐☐ (63-64)	→ 19 ☐☐ (65-66)

First 3 ltrs last name /_/_/_/ 1 / 3 / (76-80)

FAMILY HISTORY

1. Is your father alive? .... 1 ☐ YES 2 ☐ NO 8 ☐ DK (6)

2. Is your mother alive? .... 1 ☐ YES 2 ☐ NO 8 ☐ DK (7)

3. How old is your father? or (How old was your father when he died?) .... ☐☐ AGE (8-9)

4. How old is your mother? or (How old was your mother when she died?) .... ☐☐ AGE (10-11)

5. What is the total number of children you have had, not including step children, foster children, or children by adoption? .... ☐☐ CHILDREN (12-13)

7. What is the total number of brothers, sisters, half-brothers, and half-sisters you have had? .... ☐☐ BROTHERS/SISTERS (14-15)

IF SUBJECT HAS BROTHERS OR SISTERS ASK:

8. Of these, how many are living? .... ☐☐ BRO/SIS LIVING (16-17)

Has (Did) your father had (have) any of the following disorders?

1. Heart attack or angina? .... 1 ☐ YES 2 ☐ NO 8 ☐ DK (18)

IF YES ASK:

2. Did this occur before he was 60? .... 1 ☐ YES 2 ☐ NO 8 ☐ DK (19)

3. High blood pressure or hypertension? .... 1 ☐ YES 2 ☐ NO 8 ☐ DK (20)

4. High cholesterol, high triglycerides or high blood fats? .... 1 ☐ YES 2 ☐ NO 8 ☐ DK (21)

FAMILY HISTORY (Continued)

5. Strokes, apoplexy, cerebral vascular disease? .... 1 ☐ YES 2 ☐ NO 8 ☐ DK (22)

6. Diabetes? .... 1 ☐ YES 2 ☐ NO 8 ☐ DK (23)

Has (did) your mother had (have) any of the following disorders?

7. Heart attack or angina? .... 1 ☐ YES 2 ☐ NO 8 ☐ DK (24)

IF YES ASK:

8. Did this occur before she was 60? .... 1 ☐ YES 2 ☐ NO 8 ☐ DK (25)

9. High blood pressure or hypertension? .... 1 ☐ YES 2 ☐ NO 8 ☐ DK (26)

10. Strokes, apoplexy, cerebral vascular disease? .... 1 ☐ YES 2 ☐ NO 8 ☐ DK (27)

11. High cholesterol, high triglycerides, or high blood fats? .... 1 ☐ YES 2 ☐ NO 8 ☐ DK (28)

12. Diabetes? .... 1 ☐ YES 2 ☐ NO 8 ☐ DK (29)

(IF SUBJECT HAS NO CHILDREN: GO TO Q. 18).

How many of your children whether living or not, have had the following disorders?

13. Heart attack or angina before age 60? .... ☐☐ (30-31)

14. High blood pressure or hypertension? .... ☐☐ (32-33)

15. Strokes, apoplexy, cerebral vascular disease? .... ☐☐ (34-35)

16. High cholesterol, high triglycerides, or high blood fats? .... ☐☐ (36-37)

17. Diabetes? .... ☐☐ (38-39)

FAMILY HISTORY (Continued)

(IF SUBJECT HAS NO BROTHERS, HALF-BROTHERS, SISTERS, OR HALF-SISTERS: GO TO Q. 23.

How many of your brothers and sisters, or half-brothers and half-sisters, whether living or not, have had the following disorders?

18. Heart attack or angina before 60? . . . . [. |] (40-41)

19. High blood pressure or hypertension? . . . . [|] (42-43)

20. Strokes, apoplexy, cerebral vascular disease? . . . . [|] (44-45)

21. High cholesterol, high triglycerides, or high blood fats? . . . . [|] (46-47)

22. Diabetes? . . . . [|] (48-49)

READ: For some health problems it is important to know whether the father and mothere were related to each other before they married. For this reason, we are asking the next two questions.

23. Are your parents (not step-, foster or adoptive) first or second cousins to each other? . . . . 1 ☐ YES 2 ☐ NO 8 ☐ DK (50)

24. Are you a first or second cousin to your present spouse? . . . . 1 ☐ YES 2 ☐ NO 8 ☐ DK (51)

First 3 ltrs last name /_/_/_/ 1 / 4 / (76-80)

In this part of the interview, I'll be asking you about your social habits.

SMOKING HISTORY

1. Do you now smoke cigarettes? .... 1 ☐ YES   2 ☐ NO (6)

> **IF NO:**
>
> 2. Have you ever smoked cigarettes? .... 1 ☐ YES   2 ☐ NO 7

IF NO TO Q. 1 AND Q. 2: GO TO ALCOHOL CONSUMPTION

> **ASK EX-SMOKERS:**
>
> 3. How old were you when you gave up smoking cigarettes? .... ☐☐ AGE (8-9)

4. How old were you when you started smoking cigarettes regularly? .... ☐☐ AGE (10-11)

5. On the average, how many cigarettes do/did you smoke a day? .... ☐☐ CIG/DAY (12-13)

6. Do/did you inhale the cigarette smoke? .... 1 ☐ YES   2 ☐ NO (14)

ALCOHOL CONSUMPTION

READ: Since lipid levels may be affected by the consumption of alcoholic beverages, everyone is being asked the following question or questions concerning alcohol consumption.

1. During the past year, have you had at least one drink of beer, wine, or liquor? .... 1 ☐ YES   2 ☐ NO (15)

(**IF NO:** END INTERVIEW)

2. About how often do you drink some kind of alcoholic beverage?

   Daily or almost every day? .... ☐ 1 (16)

   Three or four times a week? .... ☐ 2 (17)

   Once or twice a week? .... ☐ 3 (18)

   Once or twice a month? .... ☐ 4 (19)

   Less often than once a month? .... ☐ 5 (20)

   (DON'T KNOW) .... ☐ 6 (21)

ALCOHOL CONSUMPTION (Continued)

3. When you drink beer, about how many bottles or cans of beer do you drink?..........	☐☐	BEER	(22-23)
4. When you drink wine, about how many glasses of wine do you drink?..........	☐☐	WINE	(24-25)
5. When you drink highballs, cocktails, or mixed drinks, about how many do you drink?	☐☐	COCKTAILS	(26-27)
6. When you drink liqueurs or other alcoholic drinks, about how many do you drink?	☐☐	LIQUEURS	(28-29)
7. During this past week about how many bottles or cans of beer did you drink?..........	☐☐	BEER	(30-31)
8. During this past week, about how many glasses of wine did you drink?	☐☐	WINE	(32-33)
9. During this past week, about how many highballs, cocktails or mixed drinks did you have?..........	☐☐	COCKTAILS	(34-35)
10. During this past week, about how many drinks of liqueurs or other alcoholic beverages did you drink?	☐☐	LIQUEURS	(36-37)

First 3 ltrs last name /_/_/_/ 1 / 5 / (76-80)

FOR FEMALE RESPONDENTS ONLY

MENSTRUAL HISTORY

Now I'm going to ask you a few questions about your menstrual periods.

1. How old were you when you had your first period? .... [|] AGE (6-7)

2. Are you still having periods at all? .... 1 [ ] YES 2 [ ] NO (8)

IF NO:

3. At what age did you have your last period? .... [|] AGE (9-10)

4. Did your periods: stop naturally? .... [ ] 1
   - stop due to surgery .... [ ] 2
   - stop due to radiation? .... [ ] 3
   - stop due to other reason? .... [ ] 4
   - stop for some unknown reason? .... [ ] 5 (11)

IF "OTHER REASON": Specify ____________________

IF YES:

5. About how many days are there from the first day of one period to the first day of your next period? .... [|] DAYS (12-13)

6. About how many days does your period last, that is until the bleeding completely stops? .... [|] DAYS (14-15)

ASK ALL RESPONDENTS

7. Since leaving high school, have you noticed any of the following changes in your menstrual cycle?

Irregular periods?	1 [ ] YES	2 [ ] NO (16)
Skipping periods?	1 [ ] YES	2 [ ] NO (17)
Increased flow?	1 [ ] YES	2 [ ] NO (18)
Decreased flow?	1 [ ] YES	2 [ ] NO (19)
Increased pain or cramping?	1 [ ] YES	2 [ ] NO (20)
Some other change?	1 [ ] YES	2 [ ] NO (21)

IF "OTHER CHANGE" : Specify ____________________

NO CHANGE	1 [ ] YES	2 [ ] NO (22)

MENSTRUAL HISTORY (Cont'd)

IF ANY REPORTED CHANGE

8. In what year did you first notice this change? .... 19 [|] (23-24)

9. About how long did you have this? .... [| |] MONTHS (25-27)

10 When you first noticed this, were you taking birth control pills? 1 [ ] YES 2 [ ] NO (28)

IF YES: 11. About how many months had you been taking the pill? .. [| |] MONTHS (29-31)

IF NOT TAKING THE PILL:

12. Did you have an IUD when you first noticed this change? .... 1 [ ] YES 2 [ ] NO (32)

IF YES: 13. About how many months had you had your IUD? ...... [| |] MONTHS (33-35)

First 3 ltrs last name /_/_/_/4/0/ (76-80)

FOR FEMALE RESPONDENTS ONLY

Now I will ask you some questions about some possible physical changes which people may occasionally have.

1. Have you noticed any increase in your facial hair 1 /__/ YES 2 /__/NO 8 /__/DK (36)

IF YES:

2. Date first noticed /__/__/-/__/__/ (37-40)
Month Year

3. Have you noticed any increase in your body hair? 1 /__/ YES 2 /__/NO 8 /__/DK (41)

IF YES:

4. Date first noticed /__/__/-/__/__/ (42-45)
Month Year

5. Have you noticed any change in your breast size? 1 /__/ YES 2 /__/NO 8 /__/DK (46)

IF YES:

6. What type of change 1 /__/ Increase? 2 /__/ Decreased? (47)

7. Date first noticed /__/__/-/__/__/ (48-51)
Month Year

8. Have you noticed any change in your muscle size? 1 /__/ YES 2 /__/NO 8 /__/DK (52)

IF YES:

9. Describe: ______________________________

____

______________________________ CODE: / / (53-54)

Now I am going to ask you a question of a general nature.

10. Have you ever traveled in the tropics? 1/__/YES 2/__/NO 8/__/DK (55)

IF YES:

11. Where? ______________________________ CODE: / / / (56-57)

12. When? /__/__/-/__/__/ (58-61)
Month Year

First 3 ltrs last name /_/_/_/ 1 /6/ (76-80)

FOR MALE RESPONDENTS ONLY

Now I will ask you some questions about some possible physical changes which people may occasionally have.

1. Have you noticed any decrease in your facial hair, in your beard? 1/__/YES 2/__/NO 8/__/DK (6)

   IF YES:

   2. Date first noticed: /__/__/-/__/__/ (7-10)
      Mo. Yr.

3. Have you noticed any decrease in your body hair? 1/__/YES 2/__/NO 8/__/DK (11)

   IF YES:

   4. Date first noticed: /__/__/-/__/__/ (12-15)
      Mo. Yr.

5. Have you noticed any change in your breast size? 1/__/YES 2/__/NO 8/__/DK (16)

   IF YES:

   6. Date first noticed: /__/__/-/__/__/ (17-20)
      Mo. Yr.

   7. Type of change 1/__/Increase 2/__/Decrease (21)

8. Have you noticed any loss in your muscle size? 1/__/YES 2/__/NO 8/__/DK (22)

   IF YES: SPECIFY______________________ CODE: / / / (23-24)

Now I am going to ask you a question of a general nature.

9. Have you ever traveled in the tropics? 1/__/YES 2/__/NO 8/__/DK (25)

   IF YES:

   10. Where?______________________ CODE: / / / (26-27)

   11. When? /__/__/-/__/__/ (28-31)
       Mo. Yr.

First 3 ltrs last name /__/__/__/_1_/_7_/

ASK FOR ALL MARRIAGES:

II. PREVIOUS SPOUSE

Marriage Date: /__/__/-/__/__/ (6-9)
Mo. Yr.

1. Have you had trouble having a family? 1/__/YES 2/__/NO 8/__/DK (13)

2. How many children were born alive in this marriage? /__/__/No. of children (14-15)

3. What are the birth dates of your 4 youngest children born during this marriage?

1/__/__/-/__/__/ Mo. Yr. (16-19) 2/__/__/-/__/__/ Mo. Yr. (20-23) 3/__/__/-/__/__/ Mo. Yr. (24-27) 4/__/__/-/__/__/ Mo. Yr. (28-31)

4. How many miscarriages or spontaneous abortions occurred? /__/__/No. (32-33)

5. Date(s): 1/__/__/-/__/__/ Mo. Yr. (34-37) 2/__/__/-/__/__/ Mo. Yr. (38-41) 3/__/__/-/__/__/ Mo. Yr. (42-45)

6. How many stillbirths occurred? /__/__/No. of stillbirths (46-47)

7. Date(s): 1/__/__/-/__/__/ Mo. Yr. (48-51) 2/__/__/-/__/__/ Mo. Yr. (52-55) 3/__/__/-/__/__/ Mo. Yr. (56-59)

8. How many children, born alive, were born with a defect? /__/__/No. of children (60-61)

9. Specify type of birth defect or malformation and the date of birth: /__/__/__/2/0/

Type:______________________ Type:______________________

Birth date: /__/__/-/__/__/ (6-9) Mo. Yr. Birth date: /__/__/-/__/__/ (14-17) Mo. Yr.

CODE: /__/__/ /__/__/ (10-13) CODE: /__/__/ /__/__/ (18-21)

10. What is the birth date of your spouse? /__/__/-/__/__/ (22-25) Mo. Yr.

11. Do you or your spouse use anything to prevent pregnancy?.................. 1/__/YES 2/__/NO 8/__/DK (26)

IF YES:

12. What were or are you using? 1/__/PILL 2/__/IUD 3/__/DIAPHRAGM (27)

4/__/HYSTERECTOMY 5/__/TUBES TIED 6/__/OTHER:______________________

Specify CODE: /__/__/ (28-29)

First 3 ltrs last name /__/__/__/2/1/ (76-80)

ASK FOR ALL MARRIAGES: (6-9)

III. PREVIOUS SPOUSE

Marriage Date: /__/__/-/__/__/
Mo. Yr.

1. Have you had trouble having a family? 1/__/YES 2/__/NO 8/__/DK (13)

2. How many children were born alive in this marriage? /__/__/No. of children (14-15)

3. What are the birth dates of your 4 youngest children born during this marriage?

1/__/__/-/__/__/ Mo. Yr. (16-19) 2/__/__/-/__/__/ Mo. Yr. (20-23) 3/__/__/-/__/__/ Mo. Yr. (24-27) 4/__/__/-/__/__/ Mo. Yr. (28-31)

4. How many miscarriages or spontaneous abortions occurred? /__/__/No. (32-33)

5. Date(s): 1/__/__/-/__/__/ Mo. Yr. (34-37) 2/__/__/-/__/__/ Mo. Yr. (38-41) 3/__/__/-/__/__/ Mo. Yr. (42-45)

6. How many stillbirths occurred? /__/__/No. of stillbirths (46-47)

7. Date(s): 1/__/__/-/__/__/ Mo. Yr. (48-51) 2/__/__/-/__/__/ Mo. Yr. (52-55) 3/__/__/-/__/__/ Mo. Yr. (56-59)

8. How many children, born alive, were born with a defect? /__/__/No. of children (60-61)

9. Specify type of birth defect or malformation and the date of birth: /__/__/__/22/

Type:______________________ Type:______________________

Birth date: /__/__/-/__/__/ (6-9) Mo. Yr.   Birth date: /__/__/-/__/__/ (14-17) Mo. Yr.

CODE: /__/__/ /__/__/ (10-13)   CODE: /__/__/ /__/__/ (18-21)

10. What is the birth date of your spouse? /__/__/-/__/__/ (22-25) Mo. Yr.

11. Do you or your spouse use anything to prevent pregnancy?.................. 1/__/YES 2/__/NO 8/__/DK (26)

IF YES:

12. What were or are you using? 1/__/PILL 2/__/IUD 3/__/DIAPHRAGM (27)

4/__/HYSTERECTOMY 5/__/TUBES TIED 6/__/OTHER:______________________
Specify CODE: /__/__/ (28-29)

First 3 ltrs last name /__/__/__/ 2 / 3 / (76-80)

TMI WORKER REGISTRY CONSENT FORM

Background Information

In April 1979 the Nuclear Regulatory Commission (NRC) and the National Institute for Occupational Safety and Health (NIOSH) began a cooperative effort to establish a registry of workers at the Three Mile Island (TMI) nuclear facility. The purpose of the registry is to assure that all the necessary information is available for a possible epidemiological study of long-term health effects in workers at this facility. The types of information needed include medical examination data, medical history, exposure data, occupational history and some personal identifiers.

Since the TMI worker registry is designed to provide data for a possible future epidemiological study of the large TMI worker population, there would be no immediate personal benefit to any particular individual listed in the registry. However, it is hoped that the combined information from many workers at several facilities would provide information on possible health effects in workers in nuclear industries. This information may eventually benefit the workers listed in the TMI registry, as well as many other nuclear workers. This type of data would be valuable to the NRC in determining whether its regulatory policies adequately protect the health of the worker at NRC-licensed facilities.

You, as a worker, must voluntarily agree to have certain information about yourself included in the data for a health effects study. Metropolitan Edison will consider as confidential all medical and other personal information that you provide to them. If the Federal government proceeds with an epidemiological study, this information will be considered confidential in accordance with the Privacy Act of 1974 (Public Law 93-579). Information gathered for the registry will be used for statistical purposes only. No

personal information on the workers will ever be disclosed.

Consent

I have read the above background information on the TMI worker registry and understand the purpose of the registry.

I understand that the registry will include information on my medical examinations, medical history, occupational history, radiation exposure records and some personal identifiers (necessary to locate workers in long-term health effects studies).

I understand that my signature on this form indicates my willingness to provide the information necessary for a possible long-term health effects study of the TMI worker population.

All of my present questions about the TMI worker registry have been answered to my satisfaction. Future questions can be directed to the Nuclear Regulatory Commission, Office of Standards Development, Chief, Radiological Health Standards Branch, Washington, D.C. 20555, (301-443-5860).

Signature ______________________ Date ________________

Name ______________________
(Please print)

Address ______________________

____

A copy of this form will be provided for your own records.